TENDER DOCUMENT

FOR

Distribution Network for Aurangabad Division of Right Main Canal (RMC), Bihar Portion under North Koel Reservoir Project, Jharkhand and Bihar

Estimated Cost (Rs. 50.81 Crores)

TENDER NO: WAP/NK/RMC/DIST/AURANGABAD/2025

PRICE SCHEDULE

Issued to M/s

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WAPCOS

(भारत सरकार का उपक्रम–जल शक्ति मंत्रालय)

(A Government of India Undertaking-Ministry of Jal Shakti)

Preamble to the Price Schedule

1. In case of Percentage Rate Tenders, contractor shall fill up the usual printed form, stating at what percentage below/above (in figures as well as in words) the total estimated cost given in Price Schedule; he will be willing to execute the work. The tender submitted shall be treated as invalid if :-
    - The contractor does not quote percentage above/below/ at per on the total amount of tender or any section/sub head of the tender.
    - The percentage above/below/ at per is not quoted in figures & words both on the total amount of tender or any section/sub head of the tender.
    - The percentage quoted above/below/ at per is different in figures & words on the total amount of tender or any section/sub head of the tender.
2. In case the lowest tendered amount (amount worked on the basis of percentage above/below) of two or more contractors is same, such lowest contractors will be asked to submit sealed revised offer in the form of letter mentioning percentage above/ below on estimated cost of tender including all sub sections/sub heads as the case may be, but the revised percentage quoted above/below on tendered cost or on each sub section/ sub head should not be higher than the percentage quoted at the time of submission of tender. The lowest tender shall be decided on the basis of revised offers.
3. In case any of such contractor refuses to submit revised offer, then it shall be treated as withdrawal of his tender before acceptance and 50% of earnest money shall be forfeited.
4. If the revised tendered amount of two more contractors received in revised offer is again found to be equal, the lowest tender, among such contractors, shall be decided by draw of lots in the presence of Evaluation Committee of the Employer and the lowest contractors those have quoted equal amount of their tenders.
5. In case all the lowest contractors those have quoted same tendered amount, refuse to submit revised offers, then tenders are to be recalled after forfeiting 50% of EMD of each bidder.
6. Contractor(s), whose earnest money is forfeited because of non-submission of revised offer, shall not be allowed to participate in the re-tendering process of the work.
7. Only percentage rate quoted tenders shall be considered. Any tender containing item rates is liable to be rejected. Percentage quoted by the contractor in percentage rate tender shall be accurately filled in figures and words, so that there is no discrepancy.
8. In Percentage Rate Tender, the tenderer shall quote percentage below/above (in figures as well as in words) at which he will be willing to execute the work. He shall also work out the total amount of his offer and the same should be written in figures as well as in words in such a way that no interpolation is possible. In case of figures, the word 'Rs.'

should be written before the figure of rupees and word ‘P’ after the decimal figures, e.g. ‘Rs. 2.15P and in case of words, the word ‘Rupees’ should precede and the word ‘Paisa’ should be written at the end.

9. Contractor should satisfy himself with the total amount of the contract (as worked out in the Price Schedule) for the execution of the complete work.
10. Any error, if any in the Price Schedule, Design, Drawings to be bought in the notice of WAPCOS on or before Pre-BID meeting.

PRICE SCHEDULE

WAPCOS LIMITED						
Quoting Sheet for the Bidder						
NIT No:	WAP/NK/RMC/DIST/AURANGABAD/2025					
Name of Work:	Distribution Network for Aurangabad Division of RMC, Bihar Portion					
Name of the Firm:						
	BOQ Amount(in Rs)	**Above or Below or At par**	**% in Figures**	**% In Words**	**Amount Above or Below or At par**	**Total Cost**
I	**II**	**I**	**IV**	**V**	**VI= (II*IV)**	**VII= (II+VI)**
PERCENTAGE RATE • **Total Amount**	**₹ 50,80,95,078/-**					
					Total in figure	
Total in words						

Note:

1. The estimated amounts for items are given in the Estimate.
2. The tenderer has to quote their offer in percentage above/below/ at-par the estimated amount.
3. The percentage rate shall be quoted up to 2 decimals.
4. **The Percentage (%) rate quoted for the contract shall be inclusive of all charges, except GST @18% as indicated in the Price Schedule**. GST as applicable shall be paid on submission of proof and Bill shall be accepted only after Bill is uploaded at GST Portal, subject to receipt of the same by Employer on back to back terms.
5. **The rate for carriage of materials shall be on actual lead at site at the time of execution, if the lead is more than provided in the BOQ, nothing will be paid extra. However, if the lead is less than the BOQ, then a proportionate rate will be deducted.**
6. **The final rates on which the works is to be executed are to be approved by the competent authority based on the Financial Bids submitted by the Bidders. In case any item scheduled/non-scheduled whose rates have not been included in the BOQ, then the rate shall be decided by the competent authority for payment.**
7. The payment will be made as per the actual work done and item wise measurement basis.
8. Rate filled at any other place in the document shall not be considered.
9. Where there is a discrepancy between the words and figures, the lesser of the two will only be taken in to consideration.
10. Where there is an arithmetical discrepancy in the page total as well as grand total, the corrected total by the Employer will govern.
11. The rates quoted shall be for carrying out the work in conformity to the IS Standards and Technical Specifications and other Terms and Conditions set out in the Bid Document
12. All pages in the BOQ should be signed without omission. All corrections/over writing should be properly attested by the Bidder.
13. Change in the Quantities - If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item/items, the rates as in the agreement for the relevant items shall be paid.
14. The Method of measurement of completed work for payment shall be in accordance with the requirement as stated in the individual section of Technical Specifications or as per CPWD Specifications.
15. The contractor shall carry out the site establishment works/temporary works at his own cost. Nothing shall be paid over and above the contract amount.

Bihar Distribution Network- Aurangabad Division
(Total Cost – Rs. 50.81 Crores)

Summary of Cost

Sr. No.	Name of Canal	Cost (Rs. in Cr.)
1.	Kataiya Minor	0.81
2.	Kapasiya Dy.	20.74
3.	Deo Minor	1.40
4.	Hetampur Dy.	7.53
5.	Rasalpur-I Minor	2.47
6.	Rasalpur-II Minor	2.75
7.	Sondih-I Sub Dy.	3.31
8.	Sondih-II Sub Dy.	4.39
9.	Sondih-III Sub Dy.	4.68
10.	Mahuwan Sub Dy.	2.73
	Total	**50.81**

Aurangabad Division – Kataiya Minor
(Total Cost – Rs. 0.81 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND
ABSTRACT OF COST (KATAIYA MINOR)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	KATAIYA MINOR	1	Job	4275221.83	0.00	₹ 42,75,221.83	AOC Earthwork Kataiya mr.	7
2	Falls							
	KATAIYA MINOR							
	0.914 m Fall at CH. 1.640 Km	1	No.	558052.65	4694.11	₹ 5,62,746.76	Fall (AOC) Kataiya mr.	11
	1.220 m Fall at Ch. 2.580 Km	1	No.	655793.65	5860.03	₹ 6,61,653.68		12
3	*Repair of Structures*							
	KATAIYA MINOR	7	No.	220649.0502	1471.56	₹ 2,22,120.61	Abstract (Repair St.)	19
	APPROACH ROAD	2	No.	521018.55	7578.59	₹ 10,57,194.29	Approach Road AOC	28
4	Outlets							
	KATAIYA MINOR	10	No.	127744.47	1100.17	₹ 12,88,446.41	Outlet-AOC	32
5	Kilometer Stone	4	No.	3853.40	0.00	₹ 15,413.60	Rates '!F61	64
	TOTAL (In Rs.)					**8082797.17**		
	TOTAL (In Lacs)					**80.83**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

KATAIYA MR (0.000 TO 3.050 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.222	0.111	11.100	3.322	1.661	166.100
200	100	1.026	0.624	62.400	2.813	3.068	306.750
300	100	1.177	1.102	110.150	0.978	1.896	189.550
400	100	0.620	0.899	89.850	1.383	1.181	118.050
500	100	0.438	0.529	52.900	1.455	1.419	141.900
600	100	0.202	0.320	32.000	2.408	1.932	193.150
700	100	0.082	0.142	14.200	3.299	2.854	285.350
800	100	0.000	0.041	4.100	4.903	4.101	410.100
900	100	0.035	0.018	1.750	4.865	4.884	488.400
1000	100	1.156	0.596	59.550	0.840	2.853	285.250
1100	100	0.431	0.794	79.350	1.740	1.290	129.000
1200	100	0.000	0.216	21.550	5.508	3.624	362.400
1300	100	0.701	0.351	35.050	2.126	3.817	381.700
1400	100	0.214	0.458	45.750	2.540	2.333	233.300
1500	100	0.294	0.254	25.400	2.878	2.709	270.900
1600	100	0.000	0.147	14.700	5.100	3.989	398.900
1700	100	1.010	0.505	50.500	1.692	3.396	339.600
1800	100	0.377	0.694	69.350	2.154	1.923	192.300
1900	100	0.084	0.231	23.050	2.290	2.222	222.200
2000	100	0.000	0.042	4.200	4.330	3.310	331.000
2100	100	1.703	0.852	85.150	2.306	3.318	331.800
2200	100	0.273	0.988	98.800	1.968	2.137	213.700
2300	100	0.266	0.270	26.950	2.087	2.028	202.750
2400	100	0.000	0.133	13.300	4.663	3.375	337.500
2500	100	0.000	0.000	0.000	7.490	6.077	607.650
2600	100	0.628	0.314	31.400	1.647	4.569	456.850
2700	100	1.214	0.921	92.100	1.823	1.735	173.500
2800	100	0.027	0.621	62.050	2.404	2.114	211.350
2900	100	0.000	0.014	1.350	4.910	3.657	365.700
3000	100	0.000	0.000	0.000	8.594	6.752	675.200
Total				**1218.000**			**9021.900**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1218.000**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9021.900**
NET QUANTITY OF EARTHWORK IN FILLING							**7803.90**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
KATAIYA MINOR (0.000 TO 3.050 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.650	650	2.85	1852.50	Sqm
0.650 - 1.300	650	2.39	1553.50	Sqm
1.300 - 2.200	900	2.07	1863.00	Sqm
2.200 - 2.600	400	1.76	704.00	Sqm
2.600 - 3.050	450	1.50	675.00	Sqm
	TOTAL		**6648.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.650	650	2.850	0.15	277.88	Cum
0.650 - 1.300	650	2.390	0.15	233.03	Cum
1.300 - 2.200	900	2.070	0.15	279.45	Cum
2.200 - 2.600	400	1.760	0.15	105.60	Cum
2.600 - 3.050	450	1.500	0.15	101.25	Cum
	TOTAL			**997.20**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KATAIYA MINOR						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	6648.00	Sqm	**11.80**	78475.58425
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	1218.00	Cum	**156.50**	190617
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	487.20	Cum	**17.22**	8388.372881
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	7803.90	Cum	**165.12**	1288548.44
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2341.17	Cum	**174.89**	409447.22
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1950.98	Cum	**217.92**	425156.47
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3511.76	Cum	**319.14**	1120741.49
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			997.20	Cum	**196.10**	195550.92
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	9021.90	Cum	**61.88**	558296.33
TOTAL COST OF EARTHWORK (in Rs.)						**4275221.83**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**42.752**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR KATAIYA MINOR				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***6648.00***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	1218.000	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	487.2	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	7803.900	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2341.17	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1950.98	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3511.76	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	997.20	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	9021.90	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KATAIYA MINOR								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.640 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	61.495	Cum	**195.20**	12003.91			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.32	Cum	**6381.70**	53071.37	2.69	3.74	7.48
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.64	Cum	**6914.20**	239520.26	14.29	14.90	29.79
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.56	Cum	**8151.40**	4557.77	0.32	0.22	0.44
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.82	MT	**73574.90**	60023.44			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	139.12	Sqm	**578.60**	80497.45			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4879.72			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	**694.61**	127.63			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.18	Cum	**1237.00**	227.30			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.18	Cum	**1377.70**	253.15			0.18
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.18	Cum	**516.50**	94.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.90	Sqm	**63.20**	562.66			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	18.59	Cum	**149.30**	2774.97			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	18.856	Cum	**1075.00**	20270.54			
	Coarse Aggregates (100 Km lead)	37.902	Cum	**1398.00**	52986.96			
	Cement (30 km lead)	17.301	MT	**742.00**	12837.50			
	Boulder (60 Km lead)	0.18	Cum	**1159.00**	212.97			
	Brick (30 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	0.82	MT	**742.00**	605.33			
	TOTAL (In Rs.)				**558052.65**			
	TOTAL (in Rs.)				**558052.65**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	18.86	Cum	**584.64**	11024.16	1102.42		
	Coarse Aggregate	37.90	Cum	**944.26**	35789.32	3578.93		
	Boulders	0.18	Cum	**694.61**	127.63	12.76		
	Total					4694.11		
	For 1 nos. fall, Total Seigniorage charges					**4694.11**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.220 METER AT CH. 2.580 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	91.166	Cum	**195.20**	17795.70			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.91	Cum	**6381.70**	56869.21	2.89	4.01	8.02
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	45.11	Cum	**6914.20**	311933.77	18.61	19.40	38.80
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.61	Cum	**8151.40**	4972.88	0.35	0.24	0.48
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.53	MT	**73574.90**	39085.08			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	167.39	Sqm	**578.60**	96851.88			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.88	Sqm	**680.10**	4001.03			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.07	Cum	**694.61**	46.89			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.07	Cum	**1237.00**	83.50			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.07	Cum	**1377.70**	92.99			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.07	Cum	**516.50**	34.86			0.07
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.40	Sqm	**63.20**	657.36			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	18.42	Cum	**149.30**	2749.64			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.647	Cum	**1075.00**	25420.99			
	Coarse Aggregates (100 Km lead)	47.368	Cum	**1398.00**	66221.12			
	Cement (30 km lead)	21.843	MT	**742.00**	16207.57			
	Boulder (60 Km lead)	0.07	Cum	**1159.00**	78.23			
	Brick (30 km lead)	352.00	No.	**3.18**	1119.36			
	Steel (30 Km lead)	0.53	MT	**742.00**	394.17			
	TOTAL (In Rs.)				**655793.65**			
	TOTAL (in Rs.)				**655793.65**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.65	Cum	**584.64**	13825.24	1382.52		
	Coarse Aggregate	47.37	Cum	**944.26**	44728.15	4472.82		
	Boulders	0.07	Cum	**694.61**	46.89	4.69		
	Total					5860.03		
	For 1 nos. fall, Total Seigniorage charges					**5860.03**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KATAIYA MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.640 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.25*	*1.718*	*1.947*	*8.372*	*Cum*
	Section 2-2	*2*	*2.75*	*1.050*	*1.947*	*11.244*	*Cum*
	Section 3-3	*2*	*1.70*	*1.170*	*1.747*	*6.950*	*Cum*
	Section 5-5	*2*	*2.41*	*1.868*	*1.947*	*17.498*	*Cum*
	Section 6-6	*2*	*1.00*	*1.170*	*1.747*	*4.088*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.950*	*0.850*	*0.505*	*Cum*
	U/S Floor	*1*	*2.25*	*0.950*	*1.764*	*3.771*	*Cum*
	D/S Floor	*1*	*2.75*	*0.950*	*0.850*	*2.221*	*Cum*
		1	*2.00*	*0.950*	*0.650*	*1.235*	*Cum*
	D/S Key Floor	*1*	*0.66*	*0.950*	*1.000*	*0.629*	*Cum*
	Toe Wall D/S Portion	*1*	*5.05*	*0.750*	*0.900*	*3.409*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						61.50	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.950*	*0.150*	*0.08*	*Cum*
		1	*0.78*	*0.950*	*0.150*	*0.11*	*Cum*
		1	*4.38*	*0.950*	*0.150*	*0.62*	*Cum*
		1	*0.28*	*0.950*	*0.150*	*0.04*	*Cum*
		1	*0.56*	*0.950*	*0.150*	*0.08*	*Cum*
		1	*0.95*	*0.950*	*0.150*	*0.14*	*Cum*
		1	*0.54*	*0.950*	*0.150*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.25*	*1.718*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*2.75*	*1.050*	*0.150*	*0.87*	*Cum*
	Section 3-3	*2*	*1.70*	*1.170*	*0.150*	*0.60*	*Cum*
	Section 5-5	*2*	*2.41*	*1.868*	*0.150*	*1.35*	*Cum*
	Section 6-6	*2*	*1.00*	*1.170*	*0.150*	*0.35*	*Cum*
	Toe Wall D/S Portion	*1*	*5.05*	*0.750*	*0.300*	*1.14*	*Cum*
	Toe Wall D/S Portion	*1*	*4.75*	*0.450*	*0.600*	*1.28*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**8.32**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.09*	*0.934*	*1.614*	*3.29*	*Cum*
		2	*1.09*	*1.568*	*0.500*	*1.71*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.600*	*0.500*	*1.65*	*Cum*
		2	*2.75*	*0.900*	*0.500*	*2.48*	*Cum*
	Section 3-3	*2*	*1.40*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.40*	*0.660*	*0.700*	*1.29*	*Cum*
		2	*1.40*	*1.020*	*0.500*	*1.43*	*Cum*
	Section 5-5	*2*	*2.36*	*0.450*	*0.450*	*0.96*	*Cum*
		2	*2.36*	*0.934*	*1.614*	*7.12*	*Cum*
		2	*2.36*	*1.568*	*0.500*	*3.70*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*0.660*	*0.700*	*1.34*	*Cum*
		2	*1.45*	*1.020*	*0.500*	*1.48*	*Cum*
	Floor	*1*	*0.63*	*0.950*	*0.700*	*0.42*	*Cum*
		1	*5.00*	*0.950*	*0.500*	*2.38*	*Cum*
		1	*0.40*	*0.950*	*0.200*	*0.08*	*Cum*
		1	*0.20*	*0.950*	*0.339*	*0.06*	*Cum*
		1	*1.80*	*0.950*	*0.500*	*0.86*	*Cum*
		1	*0.66*	*0.950*	*0.850*	*0.53*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.00*	*0.950*	*1.225*	*1.16*	*Cum*
	TOTAL					**34.64**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.950*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.89*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.89*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.56**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**34.64**	**0.00**	**0.104**	**7850.000**	**815.81**	**Kg**
	Total Weight in Metric Tonne					**0.82**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.09*		*0.450*	*1.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.09*		*1.614*	*7.05*	*Sqm*
		4		*0.934*	*1.614*	*6.03*	*Sqm*
		4	*1.09*		*0.500*	*2.18*	*Sqm*
		4		*1.568*	*0.500*	*3.14*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.40*		*0.450*	*2.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.40*		*0.700*	*3.92*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*1.40*		*0.500*	*2.80*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 5-5	*4*	*2.36*		*0.450*	*4.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.36*		*1.614*	*15.25*	*Sqm*
		4		*0.934*	*1.614*	*6.03*	*Sqm*
		4	*2.36*		*0.500*	*4.72*	*Sqm*
		4		*1.568*	*0.500*	*3.14*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.700*	*4.06*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.950*	*0.700*	*1.33*	*Sqm*
		2	*5.00*		*0.500*	*5.00*	*Sqm*
		2		*0.950*	*0.500*	*0.95*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*0.950*	*0.200*	*0.38*	*Sqm*
		2	*0.20*		*0.339*	*0.14*	*Sqm*
		2		*0.950*	*0.339*	*0.64*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*0.950*	*0.500*	*0.95*	*Sqm*
		2	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*0.950*	*0.850*	*1.62*	*Sqm*
	Crest	*2*	*1.00*		*1.225*	*2.44*	*Sqm*
		2		*0.950*	*1.225*	*2.33*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.05*		*0.300*	*3.03*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.75*		*0.600*	*5.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**139.12**	**Sqm**
6	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.050*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.350*	*0.300*	**0.18**	**Cum**
8	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.350*	*0.150*	**0.18**	**Cum**
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.89*	*0.450*		*4.45*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.89*	*0.450*		*4.45*	*Sqm*
	TOTAL					**8.90**	**Sqm**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.433		2.43	**Cum**
	Abutment						
	Section 1-1	2	*1.25*	*0.969*		*2.425*	*Cum*
	Section 2-2	2	*2.75*	*0.756*		*4.158*	*Cum*
	Section 3-3	2	*1.70*	*0.570*		*1.938*	*Cum*
	Section 5-5	2	*2.41*	*0.969*		*4.662*	*Cum*
	Section 6-6	2	*1.00*	*0.570*		*1.140*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.05*	*0.150*	*0.600*	*1.515*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**18.59**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.220 METER AT CH. 2.580 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.31*	*1.872*	*1.806*	*8.831*	*Cum*
	Section 2-2	*2*	*3.50*	*1.290*	*1.806*	*16.308*	*Cum*
	Section 3-3	*2*	*2.70*	*1.170*	*1.606*	*10.147*	*Cum*
	below bridge	*2*	*6.50*	*1.170*	*1.550*	*23.576*	*Cum*
	Section 5-5	*2*	*2.27*	*2.022*	*1.806*	*16.561*	*Cum*
	Section 6-6	*2*	*0.96*	*1.020*	*1.606*	*3.129*	*Cum*
	U/S Key Floor	*1*	*0.58*	*0.750*	*0.650*	*0.280*	*Cum*
	U/S Floor	*1*	*2.50*	*0.750*	*2.270*	*4.256*	*Cum*
	D/S Floor	*1*	*3.50*	*0.750*	*1.050*	*2.756*	*Cum*
	D/S Key Floor	*1*	*0.76*	*0.750*	*1.400*	*0.801*	*Cum*
	Toe Wall D/S Portion	*1*	*4.70*	*0.750*	*0.900*	*3.173*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						91.17	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.750*	*0.150*	*0.06*	*Cum*
		1	*0.56*	*0.750*	*0.150*	*0.06*	*Cum*
		1	*5.33*	*0.750*	*0.150*	*0.60*	*Cum*
		1	*0.57*	*0.750*	*0.150*	*0.06*	*Cum*
		1	*1.31*	*0.750*	*0.150*	*0.15*	*Cum*
		1	*1.40*	*0.750*	*0.150*	*0.16*	*Cum*
		1	*0.54*	*0.750*	*0.150*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.31*	*1.872*	*0.150*	*0.73*	*Cum*
	Section 2-2	*2*	*3.50*	*1.290*	*0.150*	*1.35*	*Cum*
	Section 3-3	*2*	*2.70*	*1.170*	*0.150*	*0.95*	*Cum*
	Section 5-5	*2*	*2.27*	*2.022*	*0.150*	*1.38*	*Cum*
	Section 6-6	*2*	*0.96*	*1.020*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*4.70*	*0.750*	*0.300*	*1.06*	*Cum*
	Toe Wall D/S Portion	*1*	*4.40*	*0.450*	*0.600*	*1.19*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.91**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.16*	*1.011*	*1.870*	*4.37*	*Cum*
		2	*1.16*	*1.722*	*0.700*	*2.79*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.645*	*0.650*	*2.93*	*Cum*
		2	*3.50*	*0.990*	*0.700*	*4.85*	*Cum*
	Section 3-3	*2*	*2.42*	*0.450*	*0.450*	*0.98*	*Cum*
		2	*2.42*	*0.585*	*0.450*	*1.27*	*Cum*
		2	*2.42*	*0.870*	*0.500*	*2.10*	*Cum*
	Section 5-5	*2*	*2.22*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.22*	*1.011*	*1.870*	*8.41*	*Cum*
		2	*2.22*	*1.722*	*0.700*	*5.36*	*Cum*
	Section 6-6	*2*	*1.39*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.39*	*0.585*	*0.450*	*0.73*	*Cum*
		2	*1.39*	*0.870*	*0.500*	*1.21*	*Cum*
	Floor	*1*	*0.58*	*0.750*	*0.500*	*0.22*	*Cum*
		1	*6.00*	*0.750*	*0.700*	*3.15*	*Cum*
		1	*0.71*	*0.750*	*0.600*	*0.32*	*Cum*
		1	*0.20*	*0.750*	*0.350*	*0.05*	*Cum*
		1	*0.40*	*0.750*	*0.254*	*0.08*	*Cum*
		1	*2.80*	*0.750*	*0.500*	*1.05*	*Cum*
		1	*0.76*	*0.750*	*1.250*	*0.71*	*Cum*
	Crest	*1*	*1.04*	*0.750*	*1.514*	*1.19*	*Cum*
	TOTAL					**45.11**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.750*	*0.150*	*0.09*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.56*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.56*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.61**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.15% of M-20	**45.11**	**0.00**	**0.068**	**7850.000**	**531.2**	**Kg**
	Total Reinforcement Steel (in kg)					*531.2*	*Kg*
	Total Weight in Metric Tonne					**0.53**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.16*		*0.450*	*2.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.16*		*1.870*	*8.65*	*Sqm*
		4		*1.011*	*1.870*	*7.56*	*Sqm*
		4	*1.16*		*0.700*	*3.24*	*Sqm*
		4		*1.722*	*0.700*	*4.82*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.650*	*9.10*	*Sqm*
		4		*0.645*	*0.650*	*1.68*	*Sqm*
		4	*3.50*		*0.700*	*9.80*	*Sqm*
		4		*0.990*	*0.700*	*2.77*	*Sqm*
	Section 3-3	*4*	*2.42*		*0.450*	*4.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.42*		*0.450*	*4.35*	*Sqm*
		4		*0.585*	*0.450*	*1.05*	*Sqm*
		4	*2.42*		*0.500*	*4.83*	*Sqm*
		4		*0.870*	*0.500*	*1.74*	*Sqm*
	Section 5-5	*4*	*2.22*		*0.450*	*4.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.22*		*1.870*	*16.63*	*Sqm*
		4		*1.011*	*1.870*	*7.56*	*Sqm*
		4	*2.22*		*0.700*	*6.23*	*Sqm*
		4		*1.722*	*0.700*	*4.82*	*Sqm*
	Section 6-6	*4*	*1.39*		*0.450*	*2.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.39*		*0.450*	*2.50*	*Sqm*
		4		*0.585*	*0.450*	*1.05*	*Sqm*
		4	*1.39*		*0.500*	*2.78*	*Sqm*
		4		*0.870*	*0.500*	*1.74*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*0.750*	*0.500*	*0.75*	*Sqm*
		2	*6.00*		*0.700*	*8.40*	*Sqm*
		2		*0.750*	*0.700*	*1.05*	*Sqm*
		2	*0.71*		*0.600*	*0.85*	*Sqm*
		2		*0.750*	*0.600*	*0.90*	*Sqm*
		2	*0.20*		*0.350*	*0.14*	*Sqm*
		2		*0.750*	*0.350*	*0.53*	*Sqm*
		2	*0.40*		*0.254*	*0.20*	*Sqm*
		2		*0.750*	*0.254*	*0.38*	*Sqm*
		2	*2.80*		*0.500*	*2.80*	*Sqm*
		2		*0.750*	*0.500*	*0.75*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*0.750*	*1.250*	*1.88*	*Sqm*
	Crest	*2*	*1.04*		*1.514*	*3.16*	*Sqm*
		2		*0.750*	*1.514*	*2.27*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.70*		*0.300*	*2.82*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.40*		*0.600*	*5.28*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**167.39**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.961*		*5.88*	*Sqm*
	TOTAL					**5.88**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.150*	*0.300*	**0.07**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.150*	*0.150*	**0.07**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.56*	*0.450*		*5.20*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.56*	*0.450*		*5.20*	*Sqm*
	TOTAL					**10.40**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.673		3.67	**Cum**
	Abutment						
	Section 1-1	2	*1.31*	*0.665*		*1.737*	*Cum*
	Section 2-2	2	*3.50*	*0.637*		*4.459*	*Cum*
	Section 3-3	2	*2.70*	*0.527*		*2.846*	*Cum*
	Section 5-5	2	*2.27*	*0.665*		*3.016*	*Cum*
	Section 6-6	2	*0.96*	*0.527*		*1.007*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.70*	*0.150*	*0.600*	*1.410*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**18.42**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KATAIYA MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.838 M)	0.180	₹ 1,888.70
2	FALL (0.914 M) / BRIDGE	0.910	₹ 16,440.64
3	CULVERT	1.115	₹ 0.00
4	FALL (0.914 M)	1.240	₹ 4,403.54
5	CULVERT	1.480	₹ 46,583.72
6	FALL (0.914 M)	1.640	₹ 17,020.14
7	CULVERT	2.100	₹ 23,534.86
8	FALL (0.924 M)	2.134	₹ 29,045.44
9	FALL (1.220 M)	2.580	₹ 65,761.34
10	CULVERT	2.730	₹ 15,970.68
Total In Rs.			**₹ 2,20,649.05**
Total In Lakhs.			**₹ 2.21**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		2.000	₹ 10,42,037.10
Total In Rs.			**₹ 10,42,037.10**
Total In Lakhs.			**₹ 10.42**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KATAIYA MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR HR OF FALL (Ch.-0.180 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.000	Sqm	**11.80**	1888.70			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**1888.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL/CULVERT (Ch.-0.910 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.75	Cum	**5021.30**	3749.71	0.09	0.24	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.041	Sqm	**340.20**	2395.31	0.36	0.10	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.041	Sqm	**63.20**	444.98	0.01		
5	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.405	Cum	**6381.7**	2584.59	0.13	0.18	0.36
6	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.368	Cum	**6914.20**	2543.71	0.15	0.16	0.32
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.682	Cum	**1075.00**	733.37			
		Coarse Aggregates (100 Km lead)	0.681	Cum	**1398.00**	951.89			
		Cement (30 km lead)	0.745	MT	**742.00**	552.47			
		Brick (30 km lead)	373.00	No.	**3.18**	1186.14			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**16440.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.68	Cum	**584.64**	398.84	39.88		
		Coarse Aggregate	0.68	Cum	**944.26**	642.94	64.29		
		Total					**104.18**		
AOC FOR CULVERT (Ch.-1.115 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch.-1.240 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	48.280	Sqm	**63.20**	3051.32	0.07		
3		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.072	MT	**742.00**	53.74			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**4403.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CULVERT (CH.- 1.480 KM)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.75	Cum	**5021.30**	3749.71	0.09	0.24	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.041	Sqm	**340.20**	2395.31	0.36	0.10	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.041	Sqm	**63.20**	444.98	0.01		
5	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.240	Cum	**6381.7**	20676.71	1.05	1.46	2.92
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	16.560	Sqm	**578.60**	9581.62			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.800	Cum	**1075.00**	1934.74			
		Coarse Aggregates (100 Km lead)	2.916	Cum	**1398.00**	4076.57			
		Cement (30 km lead)	1.511	MT	**742.00**	1121.42			
		Brick (30 km lead)	373.00	No.	**3.18**	1186.14			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**46583.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.80	Cum	**584.64**	1052.21	105.22		
		Coarse Aggregate	2.92	Cum	**944.26**	2753.46	275.35		
		Total					**380.57**		
		AOC FOR FALL (Ch.-1.640 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.828	Cum	**2492.58**	17020.14			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17020.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR CULVERT(Ch.-2.100 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.96	Cum	**5021.30**	9856.37	0.23	0.63	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	17.837	Sqm	**340.20**	6068.11	0.92	0.26	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	17.837	Sqm	**63.20**	1127.29	0.03		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.889	Cum	**1075.00**	955.19			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.178	MT	**742.00**	873.74			
		Brick (30 km lead)	981.00	No.	**3.18**	3119.58			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**23534.86**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.89	Cum	**584.64**	519.48	51.95		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**51.95**		
		AOC FOR FALL (Ch.-2.134 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.430	Cum	**6381.7**	15507.53	0.79	1.09	2.19
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.420	Sqm	**578.60**	7186.21			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.094	Cum	**1075.00**	1175.51			
		Coarse Aggregates (100 Km lead)	2.187	Cum	**1398.00**	3057.43			
		Cement (30 km lead)	0.787	MT	**742.00**	584.19			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**29045.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.09	Cum	**584.64**	639.30	63.93		
		Coarse Aggregate	2.19	Cum	**944.26**	2065.10	206.51		
		Total					**270.44**		
		AOC FOR FALL (Ch.-2.580 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.670	Cum	**6381.7**	36184.24	1.84	2.55	5.10
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	26.820	Sqm	**578.60**	15518.05			
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	19.973	Sqm	**63.20**	1262.28	0.03		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.552	Cum	**1075.00**	2742.86			
		Coarse Aggregates (100 Km lead)	5.103	Cum	**1398.00**	7133.99			
		Cement (30 km lead)	1.867	MT	**742.00**	1385.34			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**65761.34**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.55	Cum	**584.64**	1491.71	149.17		
		Coarse Aggregate	5.10	Cum	**944.26**	4818.56	481.86		
		Total					**631.03**		
		AOC FOR CULVERT (Ch.-2.730 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	155.000	Sqm	**11.80**	1829.68			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.26	Cum	**5021.30**	6336.24	0.15	0.40	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	11.467	Sqm	**340.20**	3900.93	0.59	0.17	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	11.467	Sqm	**63.20**	724.69	0.02		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.571	Cum	**1075.00**	614.05			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.757	MT	**742.00**	561.69			
		Brick (30 km lead)	630.00	No.	**3.18**	2003.40			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**15970.68**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.57	Cum	**584.64**	333.95	33.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**33.40**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KATAIYA MR								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.180 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				160.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-0.910 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				110.00	Sqm
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
		Parapet Wall	2	2.1336	0.25	0.7	*0.75*	*Cum*
		TOTAL					0.75	Cum
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	2.1336		1.65	*7.04*	*Sqm*
		TOTAL					7.04	Sqm
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	2	2.1336		1.65	*7.04*	*Sqm*
		TOTAL					7.04	Sqm
5	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		Wing Wall D/S	1	3.00	0.45	0.30	*0.41*	*Cum*
		TOTAL					***0.41***	***Cum***
6	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Crest	1	0.67	0.91	0.60	*0.37*	*Cum*
		TOTAL					***0.37***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.115 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.240 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				110.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	3.048		1.65	*20.12*	*Sqm*
		Abutment	2	8.5344		1.65	*28.16*	*Sqm*
		TOTAL					**48.28**	**Sqm**

QUANTITIES OF REPAIRING WORK FOR CULVERT (CH.- 1.480 KM)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	0.7	*0.75*	*Cum*
		TOTAL					**0.75**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336		1.65	*7.04*	*Sqm*
		TOTAL					**7.04**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.1336		1.65	*7.04*	*Sqm*
		TOTAL					**7.04**	**Sqm**
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Wing Wall D/S	2	3.00	0.45	1.20	*3.24*	*Cum*
		TOTAL					***3.24***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall D/S	4	3.00		1.20	*14.40*	Sqm
			4		0.45	1.20	*2.16*	Sqm
		TOTAL					**16.56**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.640 Km)								
1		**New Fall has been Proposed**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings	4	1.20	0.45	0.70	*1.51*	*Cum*
		Abutment	2	4.27	0.45	1.20	*4.61*	*Cum*
		Well	1	1.31	0.45	1.20	*0.71*	*Cum*
		TOTAL					***6.83***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT(Ch.-2.100 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			1				**130.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.2672	0.25	0.92	*1.96*	*Cum*
		TOTAL					**1.96**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.2672		2.09	*17.84*	*Sqm*
		TOTAL					**17.84**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.2672		2.09	*17.84*	*Sqm*
		TOTAL					**17.84**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.134 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Wing Wall D/S	1	3.00	0.45	1.80	*2.43*	*Cum*
		TOTAL					***2.43***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall D/S	2	3.00		1.80	*10.80*	Sqm
			2		0.45	1.80	*1.62*	Sqm
		TOTAL					**12.42**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.580 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Left Abutment	1	7.00	0.45	1.80	*5.67*	*Cum*
		TOTAL					***5.67***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Left Abutment	2	7.00		1.80	*25.20*	Sqm
			2		0.45	1.80	*1.62*	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**26.82**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall Top	4	3		0.75	*9.00*	*Sqm*
		Abutment	2	7.3152		0.75	*10.97*	*Sqm*
		TOTAL					**19.97**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.730 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**155.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.7432	0.25	0.92	*1.26*	*Cum*
		TOTAL					**1.26**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.7432		2.09	*11.47*	*Sqm*
		TOTAL					**11.47**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.7432		2.09	*11.47*	*Sqm*
		TOTAL					**11.47**	**Sqm**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 2 no., Total Seigniorage charges					**15157.19**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	584.64	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	944.26	6467.19	646.72			
		Total					1100.17			
		For 10 nos. outlet, Total Seigniorage charges					**11001.73**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15% I like the coffee				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15% I like the coffee				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.15	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15% I like the coffee				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.473	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.40**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.50	nos	569.00	853.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	7.00	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	**Reference**		**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.40**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Kapasiya Dy.
(Total Cost – Rs. 20.74 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (KAPASIYA DISTRIBUTARY)								
S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	KAPASIYA DISTRIBUTARY	1	Job	37396161.47	0.00	₹ 3,73,96,161.47	AOC Earthwork Kapasiya Dy.	32
	NARCHI MINOR	1	Job	7343232.18	0.00	₹ 73,43,232.18	AOC Earthwork Narchi mr.	34
	BAHUARA MINOR	1	Job	4735164.82	0.00	₹ 47,35,164.82	AOC Earthwork Bahuara mr.	36
	YARI MINOR	1	Job	7369524.85	0.00	₹ 73,69,524.85	AOC Earthwork Yari mr.	38
	NEPUA MINOR	1	Job	2910822.99	0.00	₹ 29,10,822.99	AOC Earthwork Nepua mr.	40
	AMAR BIGHA MINOR	1	Job	6103550.66	0.00	₹ 61,03,550.66	AOC Earthwork Amar Bigha mr.	42
	CHATRA SUB DISTRIBUTARY	1	Job	15365554.94	0.00	₹ 1,53,65,554.94	AOC Earthwork Chatara Sub Dy.	44
	DABURA-I MINOR	1	Job	13126873.49	0.00	₹ 1,31,26,873.49	AOC Earthwork Dabura-I Mr.	46
	AKUNA MINOR	1	Job	8505669.75	0.00	₹ 85,05,669.75	AOC Earthwork Akauna mr.	48
2	HR							
	NARCHI MINOR	1	No.	1952456.78	13372.29	₹ 19,65,829.07	HR (AOC) Narchi mr.	77
	BAHUARA MINOR	1	No.	1912954.90	13364.00	₹ 19,26,318.90	HR (AOC) Bahuara mr.	85
	YARI MINOR	1	No.	2473202.42	15864.59	₹ 24,89,067.01	HR (AOC) Yari mr.	79
	NEPUA MINOR	1	No.	2945439.64	23583.27	₹ 29,69,022.91	HR (AOC) Nepua mr.	87
	AMAR BIGHA MINOR	1	No.	1931475.93	13479.44	₹ 19,44,955.37	HR (AOC) Amar Bigha mr.	89
	CHATRA SUB DISTRIBUTARY	1	No.	3037545.77	19297.06	₹ 30,56,842.83	HR (AOC) Chatra Sub Dy.	81
	DABURA-I MINOR	1	No.	2549203.71	15810.43	₹ 25,65,014.15	HR (AOC) Dabura-I mr.	83
	AKUNA MINOR	1	No.	4051904.23	29551.66	₹ 40,81,455.89	HR (AOC) Akauna mr.	91
3	Falls							
	KAPASIYA DISTRIBUTARY :							
	1.829 m Fall at Ch. 0.720 Km	1	No.	5905327.84	56819.99	₹ 59,62,147.83	Fall (AOC) Kapasiya Dy.	141
	0.305 m Fall at Ch. 5.680 Km	1	No.	1864768.92	17285.47	₹ 18,82,054.39		143
	1.524 m Fall at Ch. 9.220 Km	1	No.	3334570.35	31316.17	₹ 33,65,886.52		144
	0.610 m Fall at Ch. 9.380 Km	1	No.	1851201.34	17217.94	₹ 18,68,419.28		145
	NARCHI MINOR							
	1.372 m Fall at Ch. 0.050 Km	1	No.	1077954.92	9432.63	₹ 10,87,387.54	Fall (AOC) Narchi mr.	146
	0.610 m Fall at Ch. 0.835 Km	1	No.	664651.54	5697.24	₹ 6,70,348.79		147
	1.520 m Fall at Ch. 1.750 Km	1	No.	1104288.88	9503.64	₹ 11,13,792.52		149
	0.457 m Fall at Ch. 2.250 Km	1	No.	756721.26	6428.23	₹ 7,63,149.48		150
	BAHUARA MINOR							
	1.828 m Fall at Ch. 0.035 Km	1	No.	1136558.00	9840.15	₹ 11,46,398.15	Fall (AOC) Bahuara mr.	151
	1.220 m Fall at Ch. 1.350 Km	1	No.	686467.07	5810.61	₹ 6,92,277.69		153
	0.914 m Fall at Ch. 2.250 Km	1	No.	304388.49	2437.61	₹ 3,06,826.10		154
	1.371 m Fall at Ch. 2.500 Km	1	No.	424697.97	3424.49	₹ 4,28,122.46		155
	0.610 m Fall at Ch. 2.750 Km	1	No.	262046.96	2097.37	₹ 2,64,144.33		156
	YARI MINOR							
	0.457 m Fall at Ch. 0.000 Km	1	No.	516318.59	4513.48	₹ 5,20,832.08	Fall (AOC) Yari mr.	158
	0.914 m Fall at Ch. 1.100 Km	1	No.	761464.66	6535.31	₹ 7,67,999.96		159
	0.610 m Fall at Ch. 1.600 Km	1	No.	562034.69	4844.14	₹ 5,66,878.83		160
	1.829 m Fall at Ch. 3.170 Km	1	No.	1097795.98	9469.67	₹ 11,07,265.66		161

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
	NEPUA MINOR							
	1.067 m Fall at Ch. 0.000 Km	1	No.	793012.19	6883.70	₹ 7,99,895.89	Fall (AOC) Nepua mr.	163
	0.914 m Fall at Ch. 0.750 Km	1	No.	468547.00	3893.64	₹ 4,72,440.64		164
	1.829 m Fall at Ch. 1.250 Km	1	No.	1582272.77	13212.52	₹ 15,95,485.29		165
	0.914 m Fall at Ch. 1.400 Km	1	No.	467589.40	3858.53	₹ 4,71,447.93		166
	1.524 m Fall at Ch. 1.600 Km	1	No.	715140.24	5989.32	₹ 7,21,129.57		167
	AMAR BIGHA MINOR							
	0.610 m Fall at Ch. 1.650 Km	1	No.	561014.83	4788.83	₹ 5,65,803.66	Fall (AOC) Amar Bigha mr.	169
	1.830 m Fall at Ch. 2.450 Km	1	No.	951921.12	8123.47	₹ 9,60,044.58		170
	CHATRA SUB DISTRIBUTARY							
	0.610 m Fall at Ch. 0.400 Km	1	No.	873239.52	7681.11	₹ 8,80,920.63	Fall (AOC) Chatra Sub Dy.	172
	0.610 m Fall at Ch. 4.700 Km	1	No.	528841.21	4471.61	₹ 5,33,312.82		173
	DABURA-I MINOR							
	0.914 m Fall cum culvert at Ch. 0.650 Km	1	No.	1581013.01	13049.69	₹ 15,94,062.70	Fall (AOC) Dabura-I mr.	174
	AKUNA MINOR							
	0.305 m Fall at Ch. 0.225 Km	1	No.	734110.17	6406.28	₹ 7,40,516.45	Fall (AOC) Akauna mr.	175
	Bridge cum fall 0.305 m at Ch. 0.620 km	1	No.	1438823.24	11743.92	₹ 14,50,567.15		176
	0.610 m Fall at Ch. 4.950 Km	1	No.	460508.80	3820.83	₹ 4,64,329.63		177
	Bridge cum fall 0.610 m at Ch. 5.240 km	1	No.	949409.86	6514.01	₹ 9,55,923.87		178
4	BRIDGE							
	KAPASIYA DISTRIBUTARY :							
	Ch. 3.430 Km	1	No.	2423957.20	13767.68	₹ 24,37,724.88	Slab-AOC Kapasiya mr.	278
	Ch. 5.120 Km	1	No.	2407190.89	13690.35	₹ 24,20,881.24		280
	Ch. 6.410 Km	1	No.	2407019.01	13676.98	₹ 24,20,695.99		282
	Ch. 9.845 Km	1	No.	2523270.14	15274.77	₹ 25,38,544.91		283
	Ch. 10.900 Km	1	No.	2315788.23	13338.88	₹ 23,29,127.12		285
	CHATRA SUB DISTRIBUTARY							
	Ch. 1.400 Km	1	No.	1794689.36	10245.95	₹ 18,04,935.31	Slab-AOC Chatra Sub Dy.	287
5	*Brick Section*	1	No.	6664096.76	17707.58	₹ 66,81,804.33	Brick Sec	306
6	*Repair of Structures*							
	KAPASIYA DISTRIBUTARY	24	No.	1188275.122	7272.36	₹ 11,95,547.48	Abstract (Repair St.) Kapasiya Dy.	307
	NARCHI MINOR	8	No.	137536.3754	992.64	₹ 1,38,529.01	Abstract (Repair St.) Narchi mr.	308
	BAHUARA MINOR	8	No.	205942.8105	855.72	₹ 2,06,798.53	Abstract (Repair St.) Bahuara mr.	309
	YARI MINOR	11	No.	91925.4502	345.91	₹ 92,271.36	Abstract (Repair St.) Yari mr.	310
	NEPUA MINOR	3	No.	13328.89488	47.69	₹ 13,376.58	Abstract (Repair St.) Nepua mr.	311
	AMAR BIGHA MINOR	4	No.	138496.7161	977.86	₹ 1,39,474.57	Abstract (Repair St.) Amar Bigha mr.	312
	CHATRA SUB DISTRIBUTARY	9	No.	229391.8404	1899.45	₹ 2,31,291.29	Abstract (Repair St.) Chatra Sub Dy.	313
	DABURA-I MINOR	7	No.	116467.1303	637.02	₹ 1,17,104.15	Abstract (Repair St.) Dabura-I mr.	314
	AKAUNA MINOR	10	No.	355134.183	3697.73	₹ 3,58,831.91	Abstract (Repair St.) Akauna mr.	315
	APPROACH ROAD	10	No.	521018.55	7578.59	₹ 52,85,971.45	Approach Road AOC	398
7	Outlets							
	KAPASIYA DISTRIBUTARY	50	No.	127744.47	1100.17	₹ 64,42,232.03		402

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
	NARCHI MINOR	13	No.	127744.47	1100.17	₹ 16,74,980.33	Outlet-AOC	402
	BAHUARA MINOR	6	No.	127744.47	1100.17	₹ 7,73,067.84		402
	YARI MINOR	17	No.	127744.47	1100.17	₹ 21,90,358.89		402
	NEPUA MINOR	4	No.	127744.47	1100.17	₹ 5,15,378.56		402
	AMAR BIGHA MINOR	9	No.	127744.47	1100.17	₹ 11,59,601.77		402
	CHATRA SUB DISTRIBUTARY	15	No.	127744.47	1100.17	₹ 19,32,669.61		402
	DABURA-I MINOR	19	No.	127744.47	1100.17	₹ 24,48,048.17		402
	AKUNA MINOR	24	No.	127744.47	1100.17	₹ 30,92,271.38		402
8	Kilometer Stone	57	No.	3853.40	0.00	₹ 2,19,643.80	Rates '!F61	434
	TOTAL (In Rs.)					**207436036.16**		
	TOTAL (In Lacs)					**2074.36**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

KAPASIYA DISTY (0.000 TO 18.750 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.839	0.420	41.950	11.909	5.955	595.450
200	100	2.752	1.796	179.550	10.190	11.050	1104.950
300	100	2.725	2.739	273.850	10.824	10.507	1050.700
400	100	2.722	2.724	272.350	11.400	11.112	1111.200
500	100	2.819	2.771	277.050	11.720	11.560	1156.000
600	100	3.163	2.991	299.100	9.908	10.814	1081.400
700	100	2.382	2.773	277.250	2.314	6.111	611.100
800	100	2.326	2.354	235.400	8.547	5.431	543.050
900	100	4.248	3.287	328.700	9.167	8.857	885.700
1000	100	3.064	3.656	365.600	9.788	9.478	947.750
1100	100	3.460	3.262	326.200	10.258	10.023	1002.300
1200	100	3.904	3.682	368.200	10.535	10.397	1039.650
1300	100	3.919	3.912	391.150	8.849	9.692	969.200
1400	100	4.874	4.397	439.650	9.112	8.981	898.050
1500	100	5.293	5.084	508.350	9.822	9.467	946.700
1600	100	5.740	5.517	551.650	10.599	10.211	1021.050
1700	100	7.307	6.524	652.350	9.128	9.864	986.350
1800	100	6.659	6.983	698.300	9.423	9.276	927.550
1900	100	5.697	6.178	617.800	5.502	7.463	746.250
2000	100	5.682	5.690	568.950	5.339	5.421	542.050
2100	100	0.000	2.841	284.100	4.718	5.029	502.850
2200	100	5.734	2.867	286.700	5.160	4.939	493.900
2300	100	5.798	5.766	576.600	5.377	5.269	526.850
2400	100	5.867	5.833	583.250	5.789	5.583	558.300
2500	100	6.076	5.972	597.150	5.007	5.398	539.800
2600	100	6.204	6.140	614.000	5.083	5.045	504.500
2700	100	6.382	6.293	629.300	5.154	5.119	511.850
2800	100	7.783	7.083	708.250	1.212	3.183	318.300
2900	100	6.825	7.304	730.400	8.438	4.825	482.500
3000	100	5.267	6.046	604.600	6.283	7.361	736.050
3100	100	3.982	4.625	462.450	5.997	6.140	614.000
3200	100	3.218	3.600	360.000	5.388	5.693	569.250
3300	100	2.656	2.937	293.700	5.426	5.407	540.700
3400	100	3.308	2.982	298.200	5.945	5.686	568.550
3500	100	3.742	3.525	352.500	3.694	4.820	481.950
3600	100	4.139	3.941	394.050	4.035	3.865	386.450
3700	100	3.743	3.941	394.100	4.633	4.334	433.400
3800	100	3.630	3.687	368.650	5.744	5.189	518.850
3900	100	3.687	3.659	365.850	6.584	6.164	616.400
4000	100	5.362	4.525	452.450	7.590	7.087	708.700
4100	100	5.037	5.200	519.950	6.296	6.943	694.300
4200	100	4.534	4.786	478.550	5.305	5.801	580.050

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	3.797	4.166	416.550	5.570	5.438	543.750
4400	100	3.311	3.554	355.400	5.667	5.619	561.850
4500	100	3.036	3.174	317.350	7.728	6.698	669.750
4600	100	8.265	5.651	565.050	7.144	7.436	743.600
4700	100	16.447	12.356	1235.600	5.587	6.366	636.550
4800	100	2.446	9.447	944.650	3.823	4.705	470.500
4900	100	3.954	3.200	320.000	4.351	4.087	408.700
5000	100	4.318	4.136	413.600	3.206	3.779	377.850
5100	100	3.131	3.725	372.450	2.432	2.819	281.900
5200	100	2.261	2.696	269.600	4.177	3.305	330.450
5300	100	2.922	2.592	259.150	4.096	4.137	413.650
5400	100	3.641	3.282	328.150	4.100	4.098	409.800
5500	100	4.379	4.010	401.000	4.126	4.113	411.300
5600	100	5.041	4.710	471.000	4.092	4.109	410.900
5700	100	6.854	5.948	594.750	4.353	4.223	422.250
5800	100	6.015	6.435	643.450	3.548	3.951	395.050
5900	100	5.516	5.766	576.550	2.702	3.125	312.500
6000	100	4.485	5.001	500.050	3.319	3.011	301.050
6100	100	3.798	4.142	414.150	4.255	3.787	378.700
6200	100	3.306	3.552	355.200	5.289	4.772	477.200
6300	100	2.944	3.125	312.500	6.380	5.835	583.450
6400	100	2.794	2.869	286.900	5.774	6.077	607.700
6500	100	2.449	2.622	262.150	5.803	5.789	578.850
6600	100	2.602	2.526	252.550	6.049	5.926	592.600
6700	100	2.776	2.689	268.900	6.928	6.489	648.850
6800	100	2.981	2.879	287.850	7.142	7.035	703.500
6900	100	3.192	3.087	308.650	7.377	7.260	725.950
7000	100	3.423	3.308	330.750	7.610	7.494	749.350
7100	100	3.670	3.547	354.650	7.839	7.725	772.450
7200	100	5.408	4.539	453.900	6.609	7.224	722.400
7300	100	4.237	4.823	482.250	6.846	6.728	672.750
7400	100	3.324	3.781	378.050	7.958	7.402	740.200
7500	100	2.414	2.869	286.900	9.104	8.531	853.100
7600	100	1.870	2.142	214.200	10.310	9.707	970.700
7700	100	0.844	1.357	135.700	7.672	8.991	899.100
7800	100	1.726	1.285	128.500	8.860	8.266	826.600
7900	100	1.777	1.752	175.150	9.152	9.006	900.600
8000	100	1.937	1.857	185.700	9.476	9.314	931.400
8100	100	2.258	2.098	209.750	9.924	9.700	970.000
8200	100	2.760	2.509	250.900	10.320	10.122	1012.200
8300	100	9.554	6.157	615.700	4.715	7.518	751.750
8400	100	4.778	7.166	716.600	5.723	5.219	521.900
8500	100	13.711	9.245	924.450	7.885	6.804	680.400
8600	100	9.469	11.590	1159.000	4.914	6.400	639.950
8700	100	8.627	9.048	904.800	6.900	5.907	590.700

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	6.479	7.553	755.300	7.113	7.007	700.650
8900	100	4.808	5.644	564.350	7.934	7.524	752.350
9000	100	4.579	4.694	469.350	6.302	7.118	711.800
9100	100	2.648	3.614	361.350	11.564	8.933	893.300
9200	100	1.164	1.906	190.600	8.303	9.934	993.350
9300	100	5.259	3.212	321.150	6.135	7.219	721.900
9400	100	7.503	6.381	638.100	4.005	5.070	507.000
9500	100	5.524	6.514	651.350	5.591	4.798	479.800
9600	100	4.332	4.928	492.800	3.796	4.694	469.350
9700	100	3.499	3.916	391.550	4.440	4.118	411.800
9800	100	3.233	3.366	336.600	5.533	4.987	498.650
9900	100	0.784	2.009	200.850	8.685	7.109	710.900
10000	100	0.882	0.833	83.300	6.438	7.562	756.150
10100	100	1.303	1.093	109.250	4.969	5.704	570.350
10200	100	1.909	1.606	160.600	4.385	4.677	467.700
10300	100	1.701	1.805	180.500	4.475	4.430	443.000
10400	100	1.778	1.740	173.950	4.517	4.496	449.600
10500	100	1.852	1.815	181.500	4.531	4.524	452.400
10600	100	1.970	1.911	191.100	4.307	4.419	441.900
10700	100	2.160	2.065	206.500	4.469	4.388	438.800
10800	100	2.409	2.285	228.450	7.150	5.810	580.950
10900	100	9.924	6.167	616.650	6.457	6.804	680.350
11000	100	3.459	6.692	669.150	2.571	4.514	451.400
11100	100	4.091	3.775	377.500	1.620	2.096	209.550
11200	100	4.739	4.415	441.500	1.185	1.403	140.250
11300	100	5.649	5.194	519.400	1.309	1.247	124.700
11400	100	7.668	6.659	665.850	3.081	2.195	219.500
11500	100	7.758	7.713	771.300	3.371	3.226	322.600
11600	100	9.040	8.399	839.900	3.603	3.487	348.700
11700	100	8.949	8.995	899.450	2.762	3.183	318.250
11800	100	8.929	8.939	893.900	1.997	2.380	237.950
11900	100	8.730	8.830	882.950	2.790	2.394	239.350
12000	100	8.621	8.676	867.550	2.536	2.663	266.300
12100	100	9.120	8.871	887.050	2.707	2.622	262.150
12200	100	8.370	8.745	874.500	1.893	2.300	230.000
12300	100	7.146	7.758	775.800	4.012	2.953	295.250
12400	100	6.700	6.923	692.300	4.442	4.227	422.700
12500	100	6.012	6.356	635.600	4.122	4.282	428.200
12600	100	5.635	5.824	582.350	4.426	4.274	427.400
12700	100	5.300	5.468	546.750	4.387	4.407	440.650
12800	100	5.000	5.150	515.000	4.071	4.229	422.900
12900	100	2.825	3.913	391.250	2.819	3.445	344.500
13000	100	3.728	3.277	327.650	3.284	3.052	305.150
13100	100	2.986	3.357	335.700	2.960	3.122	312.200
13200	100	2.011	2.499	249.850	3.481	3.221	322.050

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
13300	100	2.376	2.194	219.350	4.547	4.014	401.400
13400	100	2.384	2.380	238.000	4.168	4.358	435.750
13500	100	4.380	3.382	338.200	4.814	4.491	449.100
13600	100	3.066	3.723	372.300	5.706	5.260	526.000
13700	100	2.001	2.534	253.350	6.736	6.221	622.100
13800	100	1.216	1.609	160.850	7.841	7.289	728.850
13900	100	0.691	0.954	95.350	9.042	8.442	844.150
14000	100	0.384	0.538	53.750	10.354	9.698	969.800
14100	100	0.237	0.311	31.050	11.854	11.104	1110.400
14200	100	0.169	0.203	20.300	13.480	12.667	1266.700
14300	100	0.131	0.150	15.000	15.161	14.321	1432.050
14400	100	10.521	5.326	532.600	1.216	8.189	818.850
14500	100	2.244	6.383	638.250	3.068	2.142	214.200
14600	100	2.415	2.330	232.950	3.039	3.054	305.350
14700	100	2.596	2.506	250.550	3.269	3.154	315.400
14800	100	2.849	2.723	272.250	3.998	3.634	363.350
14900	100	2.438	2.644	264.350	5.419	4.709	470.850
15000	100	2.705	2.572	257.150	1.911	3.665	366.500
15100	100	4.131	3.418	341.800	2.467	2.189	218.900
15200	100	2.392	3.262	326.150	3.015	2.741	274.100
15300	100	0.731	1.562	156.150	5.521	4.268	426.800
15400	100	4.136	2.434	243.350	1.651	3.586	358.600
15500	100	3.527	3.832	383.150	1.718	1.685	168.450
15600	100	2.882	3.205	320.450	3.018	2.368	236.800
15700	100	1.124	2.003	200.300	4.033	3.526	352.550
15800	100	1.883	1.504	150.350	4.470	4.252	425.150
15900	100	3.043	2.463	246.300	3.173	3.822	382.150
16000	100	6.357	4.700	470.000	3.904	3.539	353.850
16100	100	5.435	5.896	589.600	3.420	3.662	366.200
16200	100	4.546	4.991	499.050	2.945	3.183	318.250
16300	100	3.754	4.150	415.000	2.076	2.511	251.050
16400	100	2.839	3.297	329.650	2.661	2.369	236.850
16500	100	2.035	2.437	243.700	3.483	3.072	307.200
16600	100	1.395	1.715	171.500	4.604	4.044	404.350
16700	100	1.344	1.370	136.950	5.519	5.062	506.150
16800	100	0.786	1.065	106.500	4.622	5.071	507.050
16900	100	0.479	0.633	63.250	5.450	5.036	503.600
17000	100	0.097	0.288	28.800	6.296	5.873	587.300
17100	100	1.553	0.825	82.500	1.638	3.967	396.700
17200	100	1.432	1.493	149.250	2.001	1.820	181.950
17300	100	1.342	1.387	138.700	2.421	2.211	221.100
17400	100	1.254	1.298	129.800	2.883	2.652	265.200
17500	100	1.169	1.212	121.150	3.389	3.136	313.600
17600	100	1.087	1.128	112.800	3.917	3.653	365.300
17700	100	1.012	1.050	104.950	4.472	4.195	419.450

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
17800	100	0.944	0.978	97.800	5.061	4.767	476.650
17900	100	0.882	0.913	91.300	5.690	5.376	537.550
18000	100	5.067	2.975	297.450	2.195	3.943	394.250
18100	100	3.736	4.402	440.150	2.029	2.112	211.200
18200	100	2.594	3.165	316.500	2.807	2.418	241.800
18300	100	1.796	2.195	219.500	2.789	2.798	279.800
18400	100	1.043	1.420	141.950	4.107	3.448	344.800
18500	100	0.600	0.822	82.150	5.406	4.757	475.650
18600	100	0.316	0.458	45.800	5.069	5.238	523.750
18700	100	0.245	0.281	28.050	4.067	4.568	456.800
18750	50	5.713	2.979	148.950	8.045	6.056	302.800
Total				**72232.100**			**103115.950**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**72232.100**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**103115.950**
NET QUANTITY OF EARTHWORK IN FILLING							**30883.85**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK NARCHI MR (0.000 TO 3.700 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	5.049	2.525	252.450	1.881	0.941	94.050
200	100	3.148	4.099	409.850	2.218	2.050	204.950
300	100	1.611	2.380	237.950	2.743	2.481	248.050
400	100	1.008	1.310	130.950	4.410	3.577	357.650
500	100	0.907	0.958	95.750	5.420	4.915	491.500
600	100	0.720	0.814	81.350	4.190	4.805	480.500
700	100	0.299	0.510	50.950	4.607	4.399	439.850
800	100	0.217	0.258	25.800	5.542	5.075	507.450
900	100	1.189	0.703	70.300	1.226	3.384	338.400
1000	100	0.531	0.860	86.000	1.723	1.475	147.450
1100	100	0.327	0.429	42.900	3.142	2.433	243.250
1200	100	0.571	0.449	44.900	2.749	2.946	294.550
1300	100	0.902	0.737	73.650	2.080	2.415	241.450
1400	100	0.355	0.629	62.850	2.028	2.054	205.400
1500	100	0.287	0.321	32.100	2.764	2.396	239.600
1600	100	0.287	0.287	28.700	3.526	3.145	314.500
1700	100	0.249	0.268	26.800	5.438	4.482	448.200
1800	100	4.082	2.166	216.550	3.617	4.528	452.750
1900	100	0.964	2.523	252.300	0.969	2.293	229.300
2000	100	0.362	0.663	66.300	2.235	1.602	160.200
2100	100	8.893	4.628	462.750	6.138	4.187	418.650
2200	100	0.768	4.831	483.050	4.861	5.500	549.950
2300	100	1.325	1.047	104.650	4.869	4.865	486.500
2400	100	8.645	4.985	498.500	6.191	5.530	553.000
2500	100	1.856	5.251	525.050	7.952	7.072	707.150
2600	100	2.352	2.104	210.400	2.723	5.338	533.750
2700	100	0.256	1.304	130.400	6.495	4.609	460.900
2800	100	0.000	0.128	12.800	12.035	9.265	926.500
2900	100	1.944	0.972	97.200	4.787	8.411	841.100
3000	100	1.738	1.841	184.100	3.889	4.338	433.800
3100	100	0.909	1.324	132.350	3.799	3.844	384.400
3200	100	0.374	0.642	64.150	3.616	3.708	370.750
3300	100	0.024	0.199	19.900	6.034	4.825	482.500
3400	100	1.665	0.845	84.450	2.228	4.131	413.100
3500	100	0.963	1.314	131.400	4.564	3.396	339.600
3600	100	0.379	0.671	67.100	5.222	4.893	489.300
3700	100	0.000	0.190	18.950	7.369	6.296	629.550
Total				**5515.600**			**15159.550**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**5515.600**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**15159.550**
NET QUANTITY OF EARTHWORK IN FILLING							**9643.95**

Chainge	Length	Earthwork in Cutting			Earthwork in filling		
		Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK BAHAURA MR (0.000 TO 2.800 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.432	0.216	21.600	3.530	1.765	176.500
200	100	0.357	0.395	39.450	3.546	3.538	353.800
300	100	0.286	0.322	32.150	3.687	3.617	361.650
400	100	0.408	0.347	34.700	2.594	3.141	314.050
500	100	0.151	0.280	27.950	4.270	3.432	343.200
600	100	0.000	0.076	7.550	4.457	4.364	436.350
700	100	0.000	0.000	0.000	7.673	6.065	606.500
800	100	0.135	0.068	6.750	6.228	6.951	695.050
900	100	0.937	0.536	53.600	2.333	4.281	428.050
1000	100	0.067	0.502	50.200	4.035	3.184	318.400
1100	100	0.000	0.034	3.350	4.045	4.040	404.000
1200	100	1.296	0.648	64.800	2.333	3.189	318.900
1300	100	0.030	0.663	66.300	4.517	3.425	342.500
1400	100	2.484	1.257	125.700	0.920	2.719	271.850
1500	100	0.001	1.243	124.250	3.752	2.336	233.600
1600	100	1.172	0.587	58.650	2.261	3.007	300.650
1700	100	1.121	1.147	114.650	2.004	2.133	213.250
1800	100	0.000	0.561	56.050	4.024	3.014	301.400
1900	100	0.223	0.112	11.150	3.548	3.786	378.600
2000	100	1.942	1.083	108.250	4.687	4.118	411.750
2100	100	0.616	1.279	127.900	2.274	3.481	348.050
2200	100	0.243	0.430	42.950	3.580	2.927	292.700
2300	100	0.733	0.488	48.800	2.228	2.904	290.400
2400	100	0.136	0.435	43.450	4.710	3.469	346.900
2500	100	2.152	1.144	114.400	1.945	3.328	332.750
2600	100	0.613	1.383	138.250	2.626	2.286	228.550
2700	100	0.313	0.463	46.300	4.969	3.798	379.750
2800	100	0.293	0.303	30.300	4.765	4.867	486.700
Total				**1599.450**			**9915.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1599.450**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9915.850**
NET QUANTITY OF EARTHWORK IN FILLING							**8316.40**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK YARI MR (0.000 TO 4.200 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.016	0.008	0.800	3.361	1.681	168.050
200	100	0.645	0.331	33.050	2.050	2.706	270.550
300	100	0.577	0.611	61.100	1.739	1.895	189.450
400	100	0.431	0.504	50.400	2.858	2.299	229.850
500	100	1.726	1.079	107.850	2.063	2.461	246.050
600	100	0.461	1.094	109.350	6.277	4.170	417.000
700	100	7.133	3.797	379.700	3.966	5.122	512.150
800	100	0.439	3.786	378.600	1.998	2.982	298.200
900	100	0.237	0.338	33.800	1.160	1.579	157.900
1000	100	0.052	0.145	14.450	3.428	2.294	229.400
1100	100	3.667	1.860	185.950	1.174	2.301	230.100
1200	100	0.723	2.195	219.500	4.389	2.782	278.150
1300	100	0.413	0.568	56.800	3.740	4.065	406.450
1400	100	0.341	0.377	37.700	1.754	2.747	274.700
1500	100	0.130	0.236	23.550	3.258	2.506	250.600
1600	100	1.223	0.677	67.650	2.585	2.922	292.150
1700	100	0.652	0.938	93.750	3.580	3.083	308.250
1800	100	0.186	0.419	41.900	4.802	4.191	419.100
1900	100	0.000	0.093	9.300	6.041	5.422	542.150
2000	100	0.023	0.012	1.150	5.172	5.607	560.650
2100	100	0.171	0.097	9.700	3.945	4.559	455.850
2200	100	0.282	0.227	22.650	3.833	3.889	388.900
2300	100	0.446	0.364	36.400	2.869	3.351	335.100
2400	100	0.617	0.532	53.150	2.003	2.436	243.600
2500	100	1.068	0.843	84.250	0.627	1.315	131.500
2600	100	0.985	1.027	102.650	1.180	0.904	90.350
2700	100	1.270	1.128	112.750	1.258	1.219	121.900
2800	100	0.206	0.738	73.800	2.957	2.108	210.750
2900	100	0.111	0.159	15.850	6.050	4.504	450.350
3000	100	0.015	0.063	6.300	9.323	7.687	768.650
3100	100	0.000	0.008	0.750	17.194	13.259	1325.850
3200	100	1.328	0.664	66.400	1.684	9.439	943.900
3300	100	0.138	0.733	73.300	5.481	3.583	358.250
3400	100	0.279	0.209	20.850	2.302	3.892	389.150
3500	100	1.809	1.044	104.400	0.757	1.530	152.950
3600	100	2.492	2.151	215.050	1.837	1.297	129.700
3700	100	0.206	1.349	134.900	3.506	2.672	267.150
3800	100	0.489	0.348	34.750	2.012	2.759	275.900
3900	100	0.956	0.723	72.250	0.996	1.504	150.400
4000	100	0.000	0.478	47.800	5.397	3.197	319.650

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4100	100	0.543	0.272	27.150	2.223	3.810	381.000
4200	100	0.065	0.304	30.400	6.957	4.590	459.000
Total				**3251.850**			**14630.750**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**3251.850**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**14630.750**
NET QUANTITY OF EARTHWORK IN FILLING							**11378.90**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK NEAPUA MR (0.000 TO 1.850 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.656	0.828	82.800	1.018	0.509	50.900
200	100	0.414	1.035	103.500	1.388	1.203	120.300
300	100	0.005	0.210	20.950	4.965	3.177	317.650
400	100	0.665	0.335	33.500	5.393	5.179	517.900
500	100	0.280	0.473	47.250	5.733	5.563	556.300
600	100	0.290	0.285	28.500	3.801	4.767	476.700
700	100	0.000	0.145	14.500	3.949	3.875	387.500
800	100	1.140	0.570	57.000	0.714	2.332	233.150
900	100	1.363	1.252	125.150	1.301	1.008	100.750
1000	100	1.233	1.298	129.800	1.001	1.151	115.100
1100	100	0.005	0.619	61.900	6.543	3.772	377.200
1200	100	0.000	0.003	0.250	12.711	9.627	962.700
1300	100	0.283	0.142	14.150	4.139	8.425	842.500
1400	100	2.197	1.240	124.000	2.503	3.321	332.100
1500	100	0.076	1.137	113.650	2.417	2.460	246.000
1600	100	4.741	2.409	240.850	1.676	2.047	204.650
1700	100	1.883	3.312	331.200	2.763	2.220	221.950
1800	100	0.227	1.055	105.500	4.741	3.752	375.200
1850	50	0.319	0.273	13.650	3.768	4.255	212.725
Total				**1648.100**			**6651.275**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**1648.100**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**6651.275**
NET QUANTITY OF EARTHWORK IN FILLING							**5003.18**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK AMARBIGHA MR (0.000 TO 2.600 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.696	0.848	84.800	2.639	1.320	131.950
200	100	1.542	1.619	161.900	3.058	2.849	284.850
300	100	0.956	1.249	124.900	3.747	3.403	340.250
400	100	0.728	0.842	84.200	2.555	3.151	315.100
500	100	0.795	0.762	76.150	2.421	2.488	248.800
600	100	0.900	0.848	84.750	5.447	3.934	393.400
700	100	0.405	0.653	65.250	5.884	5.666	566.550
800	100	0.345	0.375	37.500	7.014	6.449	644.900
900	100	0.401	0.373	37.300	8.345	7.680	767.950
1000	100	0.269	0.335	33.500	9.295	8.820	882.000
1100	100	0.012	0.141	14.050	9.780	9.538	953.750
1200	100	4.635	2.324	232.350	3.334	6.557	655.700
1300	100	2.443	3.539	353.900	2.036	2.685	268.500
1400	100	1.245	1.844	184.400	4.300	3.168	316.800
1500	100	0.651	0.948	94.800	3.982	4.141	414.100
1600	100	0.030	0.341	34.050	6.875	5.429	542.850
1700	100	1.213	0.622	62.150	2.801	4.838	483.800
1800	100	0.207	0.710	71.000	4.978	3.890	388.950
1900	100	6.027	3.117	311.700	4.631	4.805	480.450
2000	100	0.661	3.344	334.400	2.467	3.549	354.900
2100	100	0.000	0.331	33.050	8.610	5.539	553.850
2200	100	2.130	1.065	106.500	0.726	4.668	466.800
2300	100	0.200	1.165	116.500	2.067	1.397	139.650
2400	100	0.000	0.100	10.000	8.407	5.237	523.700
2500	100	1.931	0.966	96.550	1.055	4.731	473.100
2600	100	0.011	0.971	97.100	6.253	3.654	365.400
Total				**2942.750**			**11958.050**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**2942.750**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**11958.050**
NET QUANTITY OF EARTHWORK IN FILLING							**9015.30**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK CHATARA SUB DY (0.000 TO 6.100 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	2.347	1.174	117.350	2.547	1.274	127.350
200	100	8.868	5.608	560.750	1.697	2.122	212.200
300	100	0.720	4.794	479.400	3.424	2.561	256.050
400	100	2.341	1.531	153.050	4.212	3.818	381.800
500	100	1.360	1.851	185.050	3.597	3.905	390.450
600	100	0.704	1.032	103.200	3.377	3.487	348.700
700	100	0.250	0.477	47.700	3.345	3.361	336.100
800	100	0.715	0.483	48.250	1.918	2.632	263.150
900	100	0.415	0.565	56.500	3.677	2.798	279.750
1000	100	0.282	0.349	34.850	4.957	4.317	431.700
1100	100	0.158	0.220	22.000	4.556	4.757	475.650
1200	100	0.068	0.113	11.300	4.237	4.397	439.650
1300	100	0.012	0.040	4.000	3.971	4.104	410.400
1400	100	5.428	2.720	272.000	7.446	5.709	570.850
1500	100	0.389	2.909	290.850	2.728	5.087	508.700
1600	100	1.243	0.816	81.600	3.835	3.282	328.150
1700	100	2.395	1.819	181.900	3.464	3.650	364.950
1800	100	3.918	3.157	315.650	3.193	3.329	332.850
1900	100	5.632	4.775	477.500	2.906	3.050	304.950
2000	100	1.886	3.759	375.900	3.066	2.986	298.600
2100	100	3.762	2.824	282.400	2.933	3.000	299.950
2200	100	5.017	4.390	438.950	1.678	2.306	230.550
2300	100	2.885	3.951	395.100	1.881	1.780	177.950
2400	100	2.635	2.760	276.000	2.020	1.951	195.050
2500	100	2.822	2.729	272.850	1.453	1.737	173.650
2600	100	2.121	2.472	247.150	3.538	2.496	249.550
2700	100	1.900	2.011	201.050	4.123	3.831	383.050
2800	100	1.901	1.901	190.050	3.353	3.738	373.800
2900	100	1.952	1.927	192.650	2.806	3.080	307.950
3000	100	0.456	1.204	120.400	4.390	3.598	359.800
3100	100	0.217	0.337	33.650	2.950	3.670	367.000
3200	100	4.180	2.199	219.850	2.408	2.679	267.900
3300	100	0.889	2.535	253.450	4.406	3.407	340.700
3400	100	0.477	0.683	68.300	4.301	4.354	435.350
3500	100	0.067	0.272	27.200	3.410	3.856	385.550
3600	100	0.000	0.034	3.350	5.243	4.327	432.650
3700	100	0.000	0.000	0.000	6.203	5.723	572.300
3800	100	0.040	0.020	2.000	7.178	6.691	669.050
3900	100	0.479	0.260	25.950	2.869	5.024	502.350
4000	100	0.289	0.384	38.400	3.038	2.954	295.350
4100	100	0.166	0.228	22.750	3.688	3.363	336.300
4200	100	0.100	0.133	13.300	4.041	3.865	386.450

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.155	0.128	12.750	3.369	3.705	370.500
4400	100	0.121	0.138	13.800	3.160	3.265	326.450
4500	100	0.082	0.102	10.150	2.868	3.014	301.400
4600	100	0.000	0.041	4.100	5.283	4.076	407.550
4700	100	0.391	0.196	19.550	2.779	4.031	403.100
4800	100	0.035	0.213	21.300	3.708	3.244	324.350
4900	100	0.000	0.018	1.750	8.067	5.888	588.750
5000	100	0.132	0.066	6.600	3.699	5.883	588.300
5100	100	0.000	0.066	6.600	5.596	4.648	464.750
5200	100	1.166	0.583	58.300	2.638	4.117	411.700
5300	100	0.612	0.889	88.900	2.560	2.599	259.900
5400	100	0.299	0.456	45.550	2.581	2.571	257.050
5500	100	0.029	0.164	16.400	4.617	3.599	359.900
5600	100	0.000	0.015	1.450	7.363	5.990	599.000
5700	100	0.000	0.000	0.000	11.389	9.376	937.600
5800	100	0.359	0.180	17.950	1.245	6.317	631.700
5900	100	0.000	0.180	17.950	3.560	2.403	240.250
6000	100	0.090	0.045	4.500	6.032	4.796	479.600
6100	100	0.310	0.200	20.000	6.843	6.438	643.750
Total				**7511.200**			**23399.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**7511.200**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**23399.850**
NET QUANTITY OF EARTHWORK IN FILLING							**15888.65**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK DABURA-I MR (0.000 TO 5.600 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.665	0.333	33.250	2.696	1.348	134.800
200	100	0.654	0.660	65.950	2.657	2.677	267.650
300	100	0.642	0.648	64.800	2.605	2.631	263.100
400	100	0.639	0.641	64.050	2.551	2.578	257.800
500	100	0.621	0.630	63.000	3.772	3.162	316.150
600	100	0.173	0.397	39.700	6.780	5.276	527.600
700	100	1.808	0.991	99.050	0.910	3.845	384.500
800	100	0.460	1.134	113.400	3.372	2.141	214.100
900	100	2.402	1.431	143.100	1.044	2.208	220.800
1000	100	2.039	2.221	222.050	1.667	1.356	135.550
1100	100	0.599	1.319	131.900	1.917	1.792	179.200
1200	100	0.003	0.301	30.100	4.952	3.435	343.450
1300	100	1.225	0.614	61.400	3.893	4.423	442.250
1400	100	0.753	0.989	98.900	3.929	3.911	391.100
1500	100	0.403	0.578	57.800	4.255	4.092	409.200
1600	100	0.143	0.273	27.300	5.467	4.861	486.100
1700	100	0.036	0.090	8.950	5.898	5.683	568.250
1800	100	0.094	0.065	6.500	6.470	6.184	618.400
1900	100	4.250	2.172	217.200	3.458	4.964	496.400
2000	100	0.220	2.235	223.500	7.134	5.296	529.600
2100	100	0.433	0.327	32.650	5.711	6.423	642.250
2200	100	0.673	0.553	55.300	4.364	5.038	503.750
2300	100	0.000	0.337	33.650	6.693	5.529	552.850
2400	100	0.006	0.003	0.300	5.316	6.005	600.450
2500	100	0.183	0.095	9.450	4.126	4.721	472.100
2600	100	0.596	0.390	38.950	3.157	3.642	364.150
2700	100	0.328	0.462	46.200	4.354	3.756	375.550
2800	100	0.669	0.499	49.850	4.702	4.528	452.800
2900	100	1.048	0.859	85.850	1.607	3.155	315.450
3000	100	0.766	0.907	90.700	1.905	1.756	175.600
3100	100	0.439	0.603	60.250	3.779	2.842	284.200
3200	100	0.931	0.685	68.500	5.529	4.654	465.400
3300	100	0.675	0.803	80.300	6.618	6.074	607.350
3400	100	0.342	0.509	50.850	6.933	6.776	677.550
3500	100	0.159	0.251	25.050	8.032	7.483	748.250
3600	100	0.020	0.090	8.950	9.168	8.600	860.000
3700	100	0.000	0.010	1.000	10.348	9.758	975.800
3800	100	0.000	0.000	0.000	12.076	11.212	1121.200
3900	100	0.000	0.000	0.000	13.522	12.799	1279.900
4000	100	0.000	0.000	0.000	15.353	14.438	1443.750
4100	100	1.073	0.537	53.650	2.387	8.870	887.000
4200	100	0.513	0.793	79.300	3.010	2.699	269.850

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.605	0.559	55.900	2.761	2.886	288.550
4400	100	0.824	0.715	71.450	3.920	3.341	334.050
4500	100	0.000	0.412	41.200	6.533	5.227	522.650
4600	100	0.000	0.000	0.000	8.744	7.639	763.850
4700	100	0.000	0.000	0.000	10.975	9.860	985.950
4800	100	2.810	1.405	140.500	2.267	6.621	662.100
4900	100	0.815	1.813	181.250	1.468	1.868	186.750
5000	100	0.312	0.564	56.350	3.055	2.262	226.150
5100	100	0.204	0.258	25.800	1.878	2.467	246.650
5200	100	3.858	2.031	203.100	1.919	1.899	189.850
5300	100	0.536	2.197	219.700	2.760	2.340	233.950
5400	100	0.000	0.268	26.800	3.643	3.202	320.150
5500	100	0.000	0.000	0.000	6.386	5.015	501.450
5600	100	0.000	0.000	0.000	12.273	9.330	932.950
Total				**3664.700**			**27656.250**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**3664.700**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**27656.250**
NET QUANTITY OF EARTHWORK IN FILLING							**23991.55**

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK AKAUNA MR (0.000 TO 5.900 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	1.332	0.666	66.600	2.167	1.084	108.350
200	100	0.087	0.710	70.950	2.734	2.451	245.050
300	100	0.577	0.332	33.200	3.132	2.933	293.300
400	100	0.167	0.372	37.200	3.419	3.276	327.550
500	100	0.018	0.093	9.250	4.055	3.737	373.700
600	100	0.000	0.009	0.900	4.991	4.523	452.300
700	100	1.474	0.737	73.700	2.556	3.774	377.350
800	100	0.858	1.166	116.600	2.571	2.564	256.350
900	100	0.346	0.602	60.200	2.643	2.607	260.700
1000	100	0.072	0.209	20.900	2.790	2.717	271.650
1100	100	0.017	0.045	4.450	3.061	2.926	292.550
1200	100	2.813	1.415	141.500	2.351	2.706	270.600
1300	100	2.321	2.567	256.700	2.239	2.295	229.500
1400	100	1.670	1.996	199.550	2.696	2.468	246.750
1500	100	0.971	1.321	132.050	4.523	3.610	360.950
1600	100	3.259	2.115	211.500	1.131	2.827	282.700
1700	100	1.613	2.436	243.600	2.123	1.627	162.700
1800	100	1.169	1.391	139.100	3.143	2.633	263.300
1900	100	0.848	1.009	100.850	4.266	3.705	370.450
2000	100	1.342	1.095	109.500	2.913	3.590	358.950
2100	100	0.964	1.153	115.300	3.978	3.446	344.550
2200	100	1.153	1.059	105.850	2.437	3.208	320.750
2300	100	1.138	1.146	114.550	2.355	2.396	239.600
2400	100	1.052	1.095	109.500	2.770	2.563	256.250
2500	100	0.983	1.018	101.750	3.231	3.001	300.050
2600	100	0.933	0.958	95.800	3.891	3.561	356.100
2700	100	0.874	0.904	90.350	3.847	3.869	386.900
2800	100	0.306	0.590	59.000	4.537	4.192	419.200
2900	100	0.243	0.275	27.450	3.295	3.916	391.600
3000	100	0.804	0.524	52.350	1.706	2.501	250.050
3100	100	0.253	0.529	52.850	4.219	2.963	296.250
3200	100	0.220	0.237	23.650	4.042	4.131	413.050
3300	100	0.473	0.347	34.650	2.418	3.230	323.000
3400	100	0.209	0.341	34.100	2.917	2.668	266.750
3500	100	0.122	0.166	16.550	3.671	3.294	329.400
3600	100	0.067	0.095	9.450	3.673	3.672	367.200
3700	100	1.274	0.671	67.050	1.015	2.344	234.400
3800	100	0.744	1.009	100.900	1.751	1.383	138.300
3900	100	0.466	0.605	60.500	2.705	2.228	222.800
4000	100	0.346	0.406	40.600	3.879	3.292	329.200
4100	100	0.430	0.388	38.800	2.062	2.971	297.050
4200	100	0.141	0.286	28.550	3.000	2.531	253.100

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.027	0.084	8.400	3.422	3.211	321.100
4400	100	0.000	0.014	1.350	4.255	3.839	383.850
4500	100	0.000	0.000	0.000	5.194	4.725	472.450
4600	100	3.226	1.613	161.300	3.209	4.202	420.150
4700	100	2.143	2.685	268.450	3.347	3.278	327.800
4800	100	1.443	1.793	179.300	2.732	3.040	303.950
4900	100	0.571	1.007	100.700	2.179	2.456	245.550
5000	100	5.242	2.907	290.650	3.401	2.790	279.000
5100	100	1.062	3.152	315.200	2.956	3.179	317.850
5200	100	0.654	0.858	85.800	5.013	3.985	398.450
5300	100	1.076	0.865	86.500	4.956	4.985	498.450
5400	100	1.068	1.072	107.200	4.348	4.652	465.200
5500	100	1.095	1.082	108.150	4.076	4.212	421.200
5600	100	1.299	1.197	119.700	3.205	3.641	364.050
5700	100	0.826	1.063	106.250	4.685	3.945	394.500
5800	100	2.255	1.541	154.050	3.459	4.072	407.200
5900	100	0.826	1.541	154.050	6.142	4.801	480.050
Total				**5654.900**			**19041.100**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**5654.900**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**19041.100**
NET QUANTITY OF EARTHWORK IN FILLING							**13386.20**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
KAPASIYA DISTRIBUTARY (0.000 TO 18.360 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 2.785	2785	10.78	30022.30	Sqm
2.785 - 3.950	1165	9.91	11545.15	Sqm
3.950 - 7.770	3820	9.31	35564.20	Sqm
7.770 - 12.500	4800	8.20	39360.00	Sqm
12.500 - 12.810	310	7.85	2433.50	Sqm
12.810 - 15.240	2430	7.54	18322.20	Sqm
15.240 - 17.065	1825	5.86	10694.50	Sqm
17.065 - 18.360	1295	5.20	6734.00	Sqm
	TOTAL		**154675.85**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 2.785	2785	10.780	0.15	4503.35	Cum
2.785 - 3.950	1165	9.910	0.15	1731.77	Cum
3.950 - 7.770	3820	9.310	0.15	5334.63	Cum
7.770 - 12.500	4800	8.200	0.15	5904.00	Cum
12.500 - 12.810	310	7.850	0.15	365.03	Cum
12.810 - 15.240	2430	7.540	0.15	2748.33	Cum
15.240 - 17.065	1825	5.860	0.15	1604.18	Cum
17.065 - 18.360	1295	5.200	0.15	1010.10	Cum
	TOTAL			**23201.38**	**Cum**

NARCHI MINOR (0.000 TO 3.800 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 1.150	1150	3.39	3898.50	Sqm
1.150 - 1.815	665	2.80	1862.00	Sqm
1.815 - 2.550	735	2.42	1778.70	Sqm
2.550 - 3.010	460	2.10	966.00	Sqm
3.010 - 3.800	790	1.66	1311.40	Sqm
	TOTAL		**9816.60**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 1.150	2300	3.39	0.15	1169.55	Cum
1.150 - 1.815	1850	2.80	0.15	777.00	Cum
1.815 - 2.550	800	2.42	0.15	290.40	Cum
2.550 - 3.010	801	2.10	1.15	1934.42	Cum
3.010 - 3.800	802	1.66	2.15	2862.34	Cum
	TOTAL			**7033.70**	**Cum**

BHAHUARA MINOR (0.000 TO 2.850 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 0.100	100	2.470	247.00	Sqm
0.100 - 1.550	1450	2.080	3016.00	Sqm
1.550 -2.100	550	1.650	907.50	Sqm
2.100 -2.850	750	1.300	975.00	Sqm
	TOTAL		**5145.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 0.100	100	2.47	0.15	37.05	Cum
0.100 - 1.550	1450	2.08	0.15	452.40	Cum
1.550 -2.100	550	1.65	0.15	136.13	Cum
2.100 -2.850	750	1.30	1.15	1121.25	Cum
	TOTAL			**1746.83**	**Cum**

YARI MINOR (0.000 TO 4.190 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 0.550	550	4.22	2321.00	Sqm
0.550 - 2.100	1550	3.58	5549.00	Sqm
2.100 - 2.590	490	3.06	1499.40	Sqm
2.590 - 2.900	310	2.72	843.20	Sqm
2.900 -3.850	950	2.32	2204.00	Sqm
3.850 - 4.030	180	1.64	295.20	Sqm
4.030 - 4.190	160	1.30	208.00	Sqm
	TOTAL		**12919.80**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 0.550	550	4.22	0.15	348.15	Cum
0.550 - 2.100	1550	3.58	0.15	832.35	Cum
2.100 - 2.590	490	3.06	0.15	224.91	Cum
2.590 - 2.900	310	2.72	0.15	126.48	Cum
2.900 -3.850	950	2.32	1.15	2534.60	Cum
3.850 - 4.030	180	1.64	2.15	634.68	Cum
4.030 - 4.190	160	1.3	3.15	655.20	Cum
	TOTAL			**5356.37**	**Cum**

NEPUA MR. (0.000 TO 1.900 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 -0.060	60	2.79	167.40	Sqm
0.060 - 0.450	390	2.38	928.20	Sqm
0.450 - 0.500	50	1.99	99.50	Sqm
0.500 - 1.900	1400	1.75	2450.00	Sqm
	TOTAL		**3645.10**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 -0.060	60	2.79	0.15	25.11	Cum
0.060 - 0.450	390	2.38	0.15	139.23	Cum
0.450 - 0.500	50	1.99	0.15	14.93	Cum
0.500 - 1.900	1400	1.75	0.15	367.50	Cum
	TOTAL			**546.77**	**Cum**

AMAR BIGHA MR (0.000 TO 2.655 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 0.305	305	3.12	951.60	Sqm
0.305 - 1.890	1585	2.85	4517.25	Sqm
1.890- 2.200	310	2.54	787.40	Sqm
2.200 - 2.550	350	2.17	759.50	Sqm
2.550 - 2.655	105	1.70	178.50	Sqm
	TOTAL		**7194.25**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 0.305	305	3.12	0.15	142.74	Cum
0.305 - 1.890	1585	2.85	0.15	677.59	Cum
1.890- 2.200	310	2.54	0.15	118.11	Cum
2.200 - 2.550	350	2.17	0.15	113.93	Cum
2.550 - 2.655	105	1.70	1.15	205.28	Cum
	TOTAL			**1257.64**	**Cum**

DABURA - 1 MIINOR (0.000 TO 5.600 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 0.050	50	4.42	221.00	Sqm
0.050 - 2.320	2270	4.42	10033.40	Sqm
2.320 - 3.400	1080	3.89	4201.20	Sqm
3.400 - 4.055	655	3.46	2266.30	Sqm
4.055 - 4.250	195	3.09	602.55	Sqm
4.250 - 4.850	600	2.78	1668.00	Sqm
4.850 - 5.200	350	2.39	836.50	Sqm
5.200 - 5.400	200	1.98	396.00	Sqm
5.400 - 5.600	200	1.25	250.00	Sqm
	TOTAL		**20474.95**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 0.050	50	4.420	0.15	33.15	Cum
0.050 - 2.320	2270	4.420	0.15	1505.01	Cum
2.320 - 3.400	1080	3.890	0.15	630.18	Cum
3.400 - 4.055	655	3.460	0.15	339.95	Cum
4.055 - 4.250	195	3.090	0.15	90.38	Cum
4.250 - 4.850	600	2.780	0.15	250.20	Cum
4.850 - 5.200	350	2.390	0.15	125.48	Cum
5.200 - 5.400	200	1.980	0.15	59.40	Cum
5.400 - 5.600	200	1.250	0.15	37.50	Cum
	TOTAL			**3071.24**	**Cum**

CHATARA SUB - DY. (0.000 TO 7.000 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 2.940	2940	5.72	16816.80	Sqm
2.940 - 3.900	960	3.11	2985.60	Sqm
3.900 - 4.700	800	2.74	2192.00	Sqm
4.700 - 5.550	850	2.37	2014.50	Sqm
5.550 - 5.785	235	1.96	460.60	Sqm
5.785 - 7.000	1215	1.68	2041.20	Sqm
	TOTAL		**26510.70**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 2.940	2940	5.72	0.15	2522.52	Cum
2.940 - 3.900	960	3.11	1.15	3433.44	Cum
3.900 - 4.700	800	2.74	2.15	4712.80	Cum
4.700 - 5.550	850	2.37	3.15	6345.68	Cum
5.550 - 5.785	235	1.96	4.15	1911.49	Cum
5.785 - 7.000	1215	1.68	5.15	10512.18	Cum
	TOTAL			**29438.11**	**Cum**

AKAUNA MIINOR (0.000 TO 5.600 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 1.450	1450	5.120	7424.00	Sqm
1.450 - 2.500	1050	4.270	4483.50	Sqm
2.500 - 3.400	900	3.550	3195.00	Sqm
3.400 - 4.150	750	3.13	2347.50	Sqm
4.150 - 4.300	150	2.74	411.00	Sqm
4.300 - 4.950	650	2.31	1501.50	Sqm
4.950 - 5.100	150	1.83	274.50	Sqm
5.100 - 5.600	500	1.440	720.00	Sqm
	TOTAL		**20357.00**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 1.450	1450	5.120	0.15	1113.60	Cum
1.450 - 2.500	1050	4.270	0.15	672.53	Cum
2.500 - 3.400	900	3.550	0.15	479.25	Cum
3.400 - 4.150	750	3.130	0.15	352.13	Cum
4.150 - 4.300	150	2.740	0.15	61.65	Cum
4.300 - 4.950	650	2.310	0.15	225.23	Cum
4.950 - 5.100	150	1.830	0.15	41.18	Cum
5.100 - 5.600	500	1.440	0.15	108.00	Cum
	TOTAL			**3053.55**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KAPASIYA DISTRIBUTARY						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	154675.85	Sqm	**11.80**	1825854.046
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	72232.10	Cum	**156.50**	11304323.65
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	28892.84	Cum	**17.22**	497462.8808
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	30883.85	Cum	**165.12**	5099416.56
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	9265.16	Cum	**174.89**	1620382.96
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	7720.96	Cum	**217.92**	1682552.15
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	13897.73	Cum	**319.14**	4435322.35
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			23201.38	Cum	**196.10**	4549790.13

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	103115.95	Cum	**61.88**	6381056.76
TOTAL COST OF EARTHWORK (in Rs.)						**37396161.47**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**373.962**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
		ABSTRACT OF QUANTITY OF EARTHWORK FOR NARCHI MINOR				
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	9816.60	Sqm	**11.80**	115878.9742
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	5515.60	Cum	**156.50**	863191.4
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	2206.24	Cum	**17.22**	37985.96836
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	9643.95	Cum	**165.12**	1592370.07
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2893.19	Cum	**174.89**	505989.12
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2410.99	Cum	**217.92**	525402.40
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4339.78	Cum	**319.14**	1384996.59
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			7033.70	Cum	**196.10**	1379309.16

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	15159.55	Cum	**61.88**	938108.50
TOTAL COST OF EARTHWORK (in Rs.)						**7343232.18**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**73.432**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
		ABSTRACT OF QUANTITY OF EARTHWORK FOR BAHUARA MINOR				
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	5145.50	Sqm	**11.80**	60739.48838
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	1599.45	Cum	**156.50**	250313.925
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	639.78	Cum	**17.22**	11015.42119
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	8316.40	Cum	**165.12**	1373170.37
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2494.92	Cum	**174.89**	436336.56
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2079.10	Cum	**217.92**	453077.47
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3742.38	Cum	**319.14**	1194343.15
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			1746.83	Cum	**196.10**	342552.38

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	9915.85	Cum	**61.88**	613616.05
TOTAL COST OF EARTHWORK (in Rs.)						**4735164.82**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**47.352**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR YARI MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	12919.80	Sqm	**11.80**	152510.357
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	3251.85	Cum	**156.50**	508914.525
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1300.74	Cum	**17.22**	22395.50932
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	11378.90	Cum	**165.12**	1878838.00
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	3413.67	Cum	**174.89**	597016.75
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2844.73	Cum	**217.92**	619922.47
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5120.51	Cum	**319.14**	1634157.97
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			5356.37	Cum	**196.10**	1050384.16

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	14630.75	Cum	**61.88**	905385.11
TOTAL COST OF EARTHWORK (in Rs.)						**7369524.85**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**73.695**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR NEPUA MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	3645.10	Sqm	**11.80**	43028.18173
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	1648.10	Cum	**156.50**	257927.65
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	659.24	Cum	**17.22**	11350.47401
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	5003.18	Cum	**165.12**	826104.05
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1500.95	Cum	**174.89**	262501.58
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1250.79	Cum	**217.92**	272572.97
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	2251.43	Cum	**319.14**	718520.97
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			546.77	Cum	**196.10**	107220.62

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	6651.28	Cum	**61.88**	411596.49
TOTAL COST OF EARTHWORK (in Rs.)						**2910822.99**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**29.108**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR AMARBIGHA MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	7194.25	Sqm	**11.80**	84923.73225
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	2942.75	Cum	**156.50**	460540.375
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1177.10	Cum	**17.22**	20266.73588
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	9015.30	Cum	**165.12**	1488569.92
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2704.59	Cum	**174.89**	473005.75
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	2253.83	Cum	**217.92**	491153.54
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4056.89	Cum	**319.14**	1294714.28
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			5356.37	Cum	**196.10**	1050384.16

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	11958.05	Cum	**61.88**	739992.17
TOTAL COST OF EARTHWORK (in Rs.)						**6103550.66**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**61.036**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR CHATARA SUB DY.						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	26510.70	Sqm	**11.80**	312942.6401
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	7511.20	Cum	**156.50**	1175502.8
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	3004.48	Cum	**17.22**	51729.67684
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	15888.65	Cum	**165.12**	2623469.71
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	4766.60	Cum	**174.89**	833629.80
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	3972.16	Cum	**217.92**	865613.65
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	7149.89	Cum	**319.14**	2281816.69
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			29438.11	Cum	**196.10**	5772812.39

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	23399.85	Cum	**61.88**	1448037.58
TOTAL COST OF EARTHWORK (in Rs.)						**15365554.94**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**153.656**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR DABURA MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	20474.95	Sqm	**11.80**	241694.2936
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	3664.70	Cum	**156.50**	573525.55
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1465.88	Cum	**17.22**	25238.8096
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	23991.55	Cum	**165.12**	3961387.82
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	7197.47	Cum	**174.89**	1258764.65
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	5997.89	Cum	**217.92**	1307059.64
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	10796.20	Cum	**319.14**	3445498.47
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			3071.24	Cum	**196.10**	602270.65

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	27656.25	Cum	**61.88**	1711433.59
TOTAL COST OF EARTHWORK (in Rs.)						**13126873.49**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**131.269**

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR AKAUNA MINOR						
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	20357.00	Sqm	**11.80**	240301.9658
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	5654.90	Cum	**156.50**	884991.85
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	2261.96	Cum	**17.22**	38945.32825
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	13386.20	Cum	**165.12**	2210275.27
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	4015.86	Cum	**174.89**	702333.76
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	3346.55	Cum	**217.92**	729280.18
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	6023.79	Cum	**319.14**	1922432.34
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			3053.55	Cum	**196.10**	598801.16

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	19041.10	Cum	**61.88**	1178307.91
TOTAL COST OF EARTHWORK (in Rs.)						**8505669.75**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**85.057**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR KAPASIYA DISTRIBUTARY				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***154675.85***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	72232.100	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	28892.84	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	30883.850	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	9265.16	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	7720.96	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	13897.73	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	23201.38	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	103115.95	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR NARCHI MR.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***9816.60***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	5515.600	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2206.24	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	9643.950	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2893.19	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2410.99	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4339.78	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	7033.70	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	15159.55	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR BAHAURA MR.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***5145.50***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	1599.450	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	639.78	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	8316.400	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2494.92	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2079.10	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3742.38	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	1746.83	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	9915.85	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR YARI MINOR			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***12919.80***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	3251.850	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1300.74	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	11378.900	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	3413.67	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2844.73	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5120.51	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	5356.37	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	14630.75	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR NEPUA MINOR			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***3645.10***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	1648.100	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	659.24	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	5003.175	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	1500.95	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1250.79	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	2251.43	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	546.77	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	6651.28	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR AMARBIGHA MINOR			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***7194.25***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	2942.750	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1177.1	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	9015.300	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2704.59	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2253.83	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4056.89	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	5356.37	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	11958.05	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR CHATARA SUB DY.			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***26510.70***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	7511.200	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	3004.48	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	15888.650	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	4766.60	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3972.16	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	7149.89	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	29438.11	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	23399.85	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR DABURA MINOR			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***20474.95***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	3664.700	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1465.88	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	23991.550	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	7197.47	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	5997.89	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	10796.20	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	3071.24	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	27656.25	Cum

S.No.	Items	No.	Quantity	Unit
	DETAILS OF QUANTITIES FOR EARTH WORK FOR AKAUNA MINOR			
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***20357.00***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	5654.900	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2261.96	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	13386.200	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	4015.86	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3346.55	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	6023.79	Cum

S.No.	Items	No.	Quantity	Unit
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	3053.55	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	19041.10	Cum

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF NARCHI MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.000	0.500	**2.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.270	0.200	**1.47**
	(h) is head of water above sill of gate in m	1.270	0.3	**1.570**
	Weight of lift gate excluding embedded parts	**0.77**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.77	1.9
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.9	579.98
	Weight of screw hoist with all accessories	**0.58**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.570	400	628
	Columns with bracings/Anchors/Stiffeners	**0.628**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.57	400	628
	Beams with cross beams/stiffeners	**0.628**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.256	10%	0.1256
	Railing/ Chequered plate/Ladder etc	**0.1256**		**T**
Total Weight of One Gate		**2.73**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF YARI MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.800	0.500	**3.30**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.640	0.200	**1.84**
	(h) is head of water above sill of gate in m	1.640	0.3	**1.940**
	Weight of lift gate excluding embedded parts	**1.49**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	1.49	3.7
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	4	1114.66
	Weight of screw hoist with all accessories	**1.11**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.940	400	776
	Columns with bracings/Anchors/Stiffeners	**0.776**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.94	400	776
	Beams with cross beams/stiffeners	**0.776**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.552	10%	0.1552
	Railing/ Chequered plate/Ladder etc	**0.1552**		**T**
Total Weight of One Gate		**4.31**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF CHATARA SUB DISTRIBUTARY				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	2.000	0.500	**2.50**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.440	0.200	**1.64**
	(h) is head of water above sill of gate in m	1.440	0.3	**1.740**
	Weight of lift gate excluding embedded parts	**0.89**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.89	1.0
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	300.00
	Weight of screw hoist with all accessories	**0.30**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.740	400	696
	Columns with bracings/Anchors/Stiffeners	**0.696**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.74	400	696
	Beams with cross beams/stiffeners	**0.696**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.392	10%	0.1392
	Railing/ Chequered plate/Ladder etc	**0.1392**		**T**
Total Weight of Two Gate		**5.44**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF DABURA-I MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.500	0.500	**2.00**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.285	0.200	**1.49**
	(h) is head of water above sill of gate in m	1.285	0.3	**1.585**
	Weight of lift gate excluding embedded parts	**0.58**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist**	**2.50 xWt of gate**		
		2.5	0.58	1.5
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.5	437.83
	Weight of screw hoist with all accessories	**0.44**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.585	400	634
	Columns with bracings/Anchors/Stiffeners	**0.634**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.585	400	634
	Beams with cross beams/stiffeners	**0.634**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.268	10%	0.1268
	Railing/ Chequered plate/Ladder etc	**0.1268**		**T**
Total Weight of Two Gate		**4.83**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF BHAHUARA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.370	0.500	**1.87**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.245	0.200	**1.45**
	(h) is head of water above sill of gate in m	1.245	0.3	**1.545**
	Weight of lift gate excluding embedded parts	**0.52**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.52	1.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.3	387.00
	Weight of screw hoist with all accessories	**0.39**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.545	400	618
	Columns with bracings/Anchors/Stiffeners	**0.618**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.545	400	618
	Beams with cross beams/stiffeners	**0.618**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.236	10%	0.1236
	Railing/ Chequered plate/Ladder etc	**0.1236**		**T**
Total Weight of One Gate		**2.26**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF AKAUNA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.800	0.500	**2.30**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.310	0.200	**1.51**
	(h) is head of water above sill of gate in m	1.310	0.3	**1.610**
	Weight of lift gate excluding embedded parts	**0.72**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.72	1.8
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.8	537.73
	Weight of screw hoist with all accessories	**0.54**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.610	400	644
	Columns with bracings/Anchors/Stiffeners	**0.644**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.61	400	644
	Beams with cross beams/stiffeners	**0.644**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.288	10%	0.1288
	Railing/ Chequered plate/Ladder etc	**0.1288**		**T**
Total Weight of Two Gate		**5.34**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF AMAR BIGHA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.850	0.500	**2.35**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.235	0.200	**1.44**
	(h) is head of water above sill of gate in m	1.235	0.3	**1.535**
	Weight of lift gate excluding embedded parts	**0.69**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist**	**2.50 xWt of gate**		
		2.5	0.69	1.7
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	518.37
	Weight of screw hoist with all accessories	**0.52**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.535	400	614
	Columns with bracings/Anchors/Stiffeners	**0.614**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.535	400	614
	Beams with cross beams/stiffeners	**0.614**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.228	10%	0.1228
	Railing/ Chequered plate/Ladder etc	**0.1228**		**T**
Total Weight of One Gate		**2.56**		**T**

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF NEPUA MINOR				
Calculation procedure of Gate's weight for estimation purpose				
1	**Weight of 1 Vertical lift gate including embedded parts**	**0.1332x(L^2XHxh)^0.659**		
	(L) is length = clear vent width in m + 0.50m.	1.370	0.500	**1.87**
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.050	0.200	**1.25**
	(h) is head of water above sill of gate in m	1.050	0.3	**1.350**
	Weight of lift gate excluding embedded parts	**0.43**		**T**
2	**Capacity of screw hoist in tone including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)**	**2.50 xWt of gate**		
		2.5	0.43	1.1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.1	321.82
	Weight of screw hoist with all accessories	**0.32**		**T**
3	**Weight of hoist bridge:**			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.350	400	540
	Columns with bracings/Anchors/Stiffeners	**0.54**		**T**
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.35	400	540
	Beams with cross beams/stiffeners	**0.54**		**T**
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.08	10%	0.108
	Railing/ Chequered plate/Ladder etc	**0.108**		**T**
Total Weight of One Gate		**1.94**		**T**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND ANALYSIS OF RATE OF HEAD REGULATOR GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST HR FOR NARCHI MR OFFTAKING FROM RD-2+820 KM (RT.) AT KAPASIYA DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	144.189	Cum	**156.50**	22565.51			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.99	Cum	**6381.70**	127546.57	6.48	8.99	17.99
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	82.74	Cum	**6914.20**	572065.01	34.13	35.58	71.15
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	20.14	Cum	**8151.40**	164199.74	11.42	7.86	15.91
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.39	MT	**73574.90**	175791.12			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.73	MT	**160035.11**	437676.59			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	282.25	Sqm	**578.60**	163312.40			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.92	Sqm	**680.10**	6747.95			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.78	Cum	**694.61**	2625.63			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.78	Cum	**1237.00**	4675.86			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.32	Cum	**1377.70**	1818.56			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.32	Cum	**516.50**	681.78			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.54	Sqm	**63.20**	223.94			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	Cum	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully	26.55	Sqm	**149.30**	3964.61			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	52.427	Cum	**1075.00**	56359.14			
	Coarse Aggregates (100 Km lead)	106.376	Cum	**1398.00**	148713.16			
	Cement (30 km lead)	52.026	MT	**742.00**	38603.56			
	Boulder (60 Km lead)	3.78	Cum	**1159.00**	4381.02			
	Steel (30 Km lead)	5.12	MT	**742.00**	3802.13			
	TOTAL (In Rs.)				**1952456.78**			
	TOTAL (In Rs.)				**1952456.78**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	52.43	Cum	**584.64**	30650.98	3065.10		
	Coarse Aggregate	106.38	Cum	**944.26**	100446.27	10044.63		
	Boulders	3.78	Cum	**694.61**	2625.63	262.56		
	Total					13372.29		
	For 1 nos. HR, Total Seigniorage charges					**13372.29**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR YARI MR OFFTAKING FROM RD-7+760 KM (RT.) AT KAPASIYA DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	166.173	Cum	**156.50**	26006.01			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.56	Cum	**6381.70**	150326.37	7.63	10.60	21.20
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	97.26	Cum	**6914.20**	672488.65	40.12	41.82	83.65
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.74	Cum	**8151.40**	193537.95	13.46	9.26	18.76
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.91	MT	**73574.90**	214116.39			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	4.31	MT	**160035.11**	689443.69			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	319.21	Sqm	**578.60**	184694.40			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.04	Sqm	**680.10**	6828.75			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.94	Cum	**694.61**	4125.98			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.94	Cum	**1237.00**	7347.78			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.85	Cum	**1377.70**	2545.99			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.85	Cum	**516.50**	954.49			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.28	Sqm	**63.20**	207.13			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	30.32	Sqm	**149.30**	4526.06			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	61.683	Cum	**1075.00**	66308.70			
	Coarse Aggregates (100 Km lead)	125.450	Cum	**1398.00**	175379.73			
	Cement (30 km lead)	61.215	MT	**742.00**	45421.44			
	Boulder (60 Km lead)	5.94	Cum	**1159.00**	6884.46			
	Steel (30 Km lead)	7.22	MT	**742.00**	5355.95			
	TOTAL (In Rs.)				**2473202.42**			
	TOTAL (In Rs.)				**2473202.42**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	61.68	Cum	**584.64**	36062.06	3606.21		
	Coarse Aggregate	125.45	Cum	**944.26**	118457.84	11845.78		
	Boulders	5.94	Cum	**694.61**	4125.98	412.60		
	Total					15864.59		
	For 1 nos. HR, Total Seigniorage charges					**15864.59**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR CHATARA SUB DY OFFTAKING FROM RD-15+240 KM (LT.) AT KAPASIYA DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	202.670	Cum	**156.50**	31717.81			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	26.35	Cum	**6381.70**	168168.97	8.54	11.86	23.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	117.75	Cum	**6914.20**	814162.16	48.57	50.63	101.27
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	30.47	Cum	**8151.40**	248348.85	17.27	11.88	24.07
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.77	MT	**73574.90**	277102.16			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	5.44	MT	**160035.11**	870780.47			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	364.46	Sqm	**578.60**	210879.29			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.27	Sqm	**680.10**	7666.63			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	9.05	Cum	**694.61**	6282.75			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.05	Cum	**1237.00**	11188.67			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	2.61	Cum	**1377.70**	3591.66			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.61	Cum	**516.50**	1346.52			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.02	Sqm	**63.20**	253.79			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	no	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	32.64	Sqm	**149.30**	4872.64			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	74.374	Cum	**1075.00**	79951.90			
	Coarse Aggregates (100 Km lead)	151.659	Cum	**1398.00**	212019.84			
	Cement (30 km lead)	74.386	MT	**742.00**	55194.07			
	Boulder (60 Km lead)	9.05	Cum	**1159.00**	10483.16			
	Steel (30 Km lead)	9.21	MT	**742.00**	6831.92			
	TOTAL (In Rs.)				**3037545.77**			
	TOTAL (In Rs.)				**3037545.77**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	74.37	Cum	**584.64**	43481.94	4348.19		
	Coarse Aggregate	151.66	Cum	**944.26**	143205.91	14320.59		
	Boulders	9.05	Cum	**694.61**	6282.75	628.27		
	Total					19297.06		
	For 1 nos. HR, Total Seigniorage charges					**19297.06**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR DABURA-I MR OFFTAKING FROM RD-2+940 KM (RT.) AT CHATARA SUB DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	165.615	Cum	**156.50**	25918.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.05	Cum	**6381.70**	147124.16	7.47	10.37	20.75
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	95.26	Cum	**6914.20**	658666.70	39.30	40.96	81.93
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.43	Cum	**8151.40**	207289.27	14.42	9.92	20.09
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.90	MT	**73574.90**	213334.60			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	4.83	MT	**160035.11**	773422.15			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	311.57	Sqm	**578.60**	180275.91			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.04	Sqm	**680.10**	6828.75			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	6.48	Cum	**694.61**	4501.07			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.48	Cum	**1237.00**	8015.76			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.98	Cum	**1377.70**	2727.85			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.98	Cum	**516.50**	1022.67			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.59	Sqm	**63.20**	226.64			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	no	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.52	Sqm	**149.30**	4258.71			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	61.255	Cum	**1075.00**	65849.16			
	Coarse Aggregates (100 Km lead)	124.744	Cum	**1398.00**	174392.63			
	Cement (30 km lead)	61.184	MT	**742.00**	45398.69			
	Boulder (60 Km lead)	6.48	Cum	**1159.00**	7510.32			
	Steel (30 Km lead)	7.73	MT	**742.00**	5737.43			
	TOTAL (In Rs.)				**2549203.71**			
	TOTAL (In Rs.)				**2549203.71**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	61.26	Cum	**584.64**	35812.14	3581.21		
	Coarse Aggregate	124.74	Cum	**944.26**	117791.12	11779.11		
	Boulders	6.48	Cum	**694.61**	4501.07	450.11		
	Total					15810.43		
	For 1 nos. HR, Total Seigniorage charges					**15810.43**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR BHAHUARA MR OFFTAKING FROM RD-3+920 KM (RT.) AT KAPASIYA DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	147.380	Cum	**156.50**	23065.02			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.03	Cum	**6381.70**	121423.54	6.16	8.56	17.12
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	88.31	Cum	**6914.20**	610564.17	36.43	37.97	75.94
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	16.69	Cum	**8151.40**	136059.05	9.46	6.51	13.19
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.36	MT	**73574.90**	173398.54			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.26	MT	**160035.11**	362094.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	291.53	Sqm	**578.60**	168678.98			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.65	Sqm	**680.10**	5886.13			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.08	Cum	**694.61**	1444.09			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.08	Cum	**1237.00**	2571.72			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.90	Cum	**1377.70**	1245.72			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.90	Cum	**516.50**	467.02			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.56	Sqm	**63.20**	225.23			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	8.00	Cum	**5588.70**	44709.60			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.84	Sqm	**149.30**	4306.25			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.043	Cum	**1075.00**	57021.51			
	Coarse Aggregates (100 Km lead)	107.158	Cum	**1398.00**	149806.39			
	Cement (30 km lead)	52.055	MT	**742.00**	38624.76			
	Boulder (60 Km lead)	2.08	Cum	**1159.00**	2409.56			
	Steel (30 Km lead)	4.62	MT	**742.00**	3427.56			
	TOTAL (In Rs.)				**1912954.90**			
	TOTAL (In Rs.)				**1912954.90**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.04	Cum	**584.64**	31011.21	3101.12		
	Coarse Aggregate	107.16	Cum	**944.26**	101184.68	10118.47		
	Boulders	2.08	Cum	**694.61**	1444.09	144.41		
	Total					13364.00		
	For 1 nos. HR, Total Seigniorage charges					**13364.00**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF COST HR FOR NEPUA MR OFFTAKING FROM RD-7+760 KM (RT.) AT KAPASIYA DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	299.101	Cum	**156.50**	46809.34			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	31.76	Cum	**6381.70**	202701.80	10.29	14.29	28.59
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	157.29	Cum	**6914.20**	1087516.40	64.88	67.63	135.27
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.38	Cum	**8151.40**	223220.57	15.53	10.68	21.63
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.68	MT	**73574.90**	344331.42			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.94	MT	**160035.11**	310292.37			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	414.78	Sqm	**578.60**	239988.92			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.24	Sqm	**680.10**	6966.40			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	8.21	Cum	**694.61**	5701.36			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	8.21	Cum	**1237.00**	10153.30			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	0.89	Cum	**1377.70**	1227.53			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.89	Cum	**516.50**	460.20			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.65	Sqm	**63.20**	230.99			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	48.92	Sqm	**149.30**	7304.08			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	92.607	Cum	**1075.00**	99552.31			
	Coarse Aggregates (100 Km lead)	186.378	Cum	**1398.00**	260557.06			
	Cement (30 km lead)	90.699	MT	**742.00**	67298.78			
	Boulder (60 Km lead)	8.21	Cum	**1159.00**	9513.07			
	Steel (30 Km lead)	6.62	MT	**742.00**	4911.23			
	TOTAL (In Rs.)				**2945439.64**			
	TOTAL (In Rs.)				**2945439.64**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	92.61	Cum	**584.64**	54141.64	5414.16		
	Coarse Aggregate	186.38	Cum	**944.26**	175989.71	17598.97		
	Boulders	8.21	Cum	**694.61**	5701.36	570.14		
	Total					23583.27		
	For 1 nos. HR, Total Seigniorage charges					**23583.27**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR AMAR BIGHA MINOR OFFTAKING FROM RD-12+810 KM (RT.) AT KAPASIYA DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	142.235	Cum	**156.50**	22259.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.93	Cum	**6381.70**	127188.97	6.46	8.97	17.94
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	84.81	Cum	**6914.20**	586399.65	34.98	36.47	72.94
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.43	Cum	**8151.40**	158373.72	11.02	7.58	15.35
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.38	MT	**73574.90**	174844.76			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.56	MT	**160035.11**	409744.43			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	281.16	Sqm	**578.60**	162678.90			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.53	Sqm	**680.10**	6478.63			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.38	Cum	**694.61**	2344.31			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.38	Cum	**1237.00**	4174.88			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	1.22	Cum	**1377.70**	1682.17			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.22	Cum	**516.50**	630.65			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.43	Sqm	**63.20**	216.88			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.19	Sqm	**149.30**	4058.78			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.015	Cum	**1075.00**	56990.73			
	Coarse Aggregates (100 Km lead)	107.445	Cum	**1398.00**	150207.49			
	Cement (30 km lead)	52.458	MT	**742.00**	38923.96			
	Boulder (60 Km lead)	3.38	Cum	**1159.00**	3911.63			
	Steel (30 Km lead)	4.94	MT	**742.00**	3663.08			
	TOTAL (In Rs.)				**1931475.93**			
	TOTAL (In Rs.)				**1931475.93**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.01	Cum	**584.64**	30994.47	3099.45		
	Coarse Aggregate	107.44	Cum	**944.26**	101455.59	10145.56		
	Boulders	3.38	Cum	**694.61**	2344.31	234.43		
	Total					13479.44		
	For 1 nos. HR, Total Seigniorage charges					**13479.44**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST HR FOR AKAUNA MR OFFTAKING FROM RD-18+360 KM (TAIL) AT KAPASIYA DISTRIBUTARY								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	357.594	Cum	**156.50**	55963.47			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	44.05	Cum	**6381.70**	281087.37	14.27	19.82	39.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	191.84	Cum	**6914.20**	1326390.24	79.13	82.49	164.98
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	35.44	Cum	**8151.40**	288887.24	20.09	13.82	28.00
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.85	MT	**73574.90**	356556.78			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	5.34	MT	**160035.11**	855071.03			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	485.48	Sqm	**578.60**	280899.17			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.24	Sqm	**680.10**	6966.40			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	8.21	Cum	**694.61**	5701.36			
10	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	8.21	Cum	**1237.00**	10153.30			
11	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)	2.40	Cum	**1377.70**	3309.79			
12	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.40	Cum	**516.50**	1240.84			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.65	Sqm	**63.20**	230.99			
14	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	no	**5588.70**	11177.40			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	4.20	Sqm	**66.00**	277.20			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	10.50	RM	**499.80**	5247.90			
17	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	53.95	Sqm	**149.30**	8055.41			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
18	**Carriage of materials**							
	Coarse Sand (60 Km lead)	116.132	Cum	**1075.00**	124841.52			
	Coarse Aggregates (100 Km lead)	235.020	Cum	**1398.00**	328558.10			
	Cement (30 km lead)	113.498	MT	**742.00**	84215.27			
	Boulder (60 Km lead)	8.21	Cum	**1159.00**	9513.07			
	Steel (30 Km lead)	10.19	MT	**742.00**	7560.38			
	TOTAL (In Rs.)				**4051904.23**			
	TOTAL (In Rs.)				**4051904.23**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	116.13	Cum	**584.64**	67895.21	6789.52		
	Coarse Aggregate	235.02	Cum	**944.26**	221920.08	22192.01		
	Boulders	8.21	Cum	**694.61**	5701.36	570.14		
	Total					29551.66		
	For 1 nos. HR, Total Seigniorage charges					**29551.66**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF NARCHI MR OFFTAKING FROM RD-2+820 KM (RT.) AT KAPASIYA DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*1.68*	*2.770*	*9.318*	*Cum*
	Section B-B	*2*	*5.25*	*1.77*	*2.120*	*39.445*	*Cum*
	Section C-C	*2*	*0.55*	*1.59*	*2.120*	*3.679*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.62*	*1.31*	*2.770*	*13.145*	*Cum*
	Left Bank Sec a to d	1	3.43	2.83	2.120	*20.580*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.320*	*2.588*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.72*	*2.00*	*2.320*	*25.320*	*Cum*
	Floor						
	U/S key	*1*	*1.4025*	*3.176*	*0.850*	*3.786*	*Cum*
	Floor	*1*	*3.539*	*3.176*	*0.650*	*7.306*	*Cum*
		1	*0.418*	*2.000*	*0.450*	*0.376*	*Cum*
		1	*0.718*	*2.000*	*0.350*	*0.503*	*Cum*
		1	*0.418*	*2.000*	*0.300*	*0.836*	*Cum*
		1	*3.079*	*2.000*	*0.950*	*5.850*	*Cum*
		1	*0.9*	*2.000*	*0.200*	*0.360*	*Cum*
		1	*0.135*	*2.000*	*0.200*	*0.054*	*Cum*
		1	*1.262*	*2.000*	*0.650*	*1.641*	*Cum*
		1	*0.725*	*2.000*	*0.650*	*0.943*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.000*	*0.600*	*2.640*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*1.200*	*2.040*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*1.400*	*3.780*	*Cum*
						144.19	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*3.673*	*0.150*	*0.35*	*Cum*
		1	*1.751*	*2.497*	*0.150*	*0.66*	*Cum*
		1	*1.269*	*2.000*	*0.150*	*0.38*	*Cum*
		1	*0.670*	*2.000*	*0.150*	*0.20*	*Cum*
		1	*3.338*	*2.000*	*0.150*	*1.00*	*Cum*
		1	*0.973*	*2.000*	*0.150*	*0.29*	*Cum*
		1	*0.187*	*2.000*	*0.150*	*0.06*	*Cum*
		1	*0.567*	*2.000*	*0.150*	*0.17*	*Cum*
		1	*0.692*	*2.000*	*0.150*	*0.21*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.000*	*1.682*	*0.300*	*1.01*	*Cum*
	Section B-B	*2*	*5.250*	*1.772*	*0.300*	*5.58*	*Cum*
	Section C-C	*2*	*0.545*	*1.592*	*0.300*	*0.52*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.617*	*1.312*	*0.300*	*1.42*	*Cum*
	Left Bank Sec a to d	*1*	*3.429*	*2.831*	*0.150*	*1.46*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.507*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.723*	*2.004*	*0.300*	*3.27*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.000*	*0.850*	*0.300*	*0.51*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.000*	*0.450*	*0.900*	*0.81*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**19.99**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.00*	*0.82*	*0.50*	*0.82*	*Cum*
		2	*1.00*	*1.05*	*0.77*	*1.62*	*Cum*
		2	*1.00*	*1.28*	*1.20*	*3.08*	*Cum*
	Section B-B	*2*	*5.25*	*1.10*	*0.92*	*10.59*	*Cum*
		2	*5.25*	*1.37*	*0.90*	*12.97*	*Cum*
	Section C-C	*2*	*0.55*	*1.01*	*0.62*	*0.68*	*Cum*
		2	*0.55*	*1.19*	*1.20*	*1.56*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.62*	*0.45*	*0.50*	*0.81*	*Cum*
		1	*3.62*	*0.68*	*0.77*	*1.90*	*Cum*
		1	*3.62*	*0.91*	*1.20*	*3.96*	*Cum*
	Left Bank						
	Section a-a	*1*		2.685	*0.50*	*1.34*	*Sqm*
		1		*2.54*	*0.20*	*0.51*	*Sqm*
		1		*1.40*	*1.27*	*1.78*	*Sqm*
						3.63	***Sqm***
	Section b-b	*1*		*2.69*	*0.50*	*1.34*	*Sqm*
		1		*2.22*	*0.20*	*0.44*	*Sqm*
		1		*1.35*	*1.27*	*1.71*	*Sqm*
						3.50	***Sqm***
	Section c-c	*1*		*2.69*	*0.50*	*1.34*	*Sqm*
		1		*1.76*	*0.20*	*0.35*	*Sqm*
		1		*1.12*	*1.27*	*1.42*	*Sqm*
						3.11	***Sqm***
	Section d-d	*1*		*2.69*	*0.50*	*1.34*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.27*	*0.61*	*Sqm*
						2.05	***Sqm***
	Bottom Key	*1*	*3.43*	*1.40*	*0.70*	*3.37*	*Cum*
	Top Stem Area	*1*	*3.43*	*3.07*		*10.54*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*0.62*	*0.33*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.72*	*1.60*	*0.90*	*7.86*	*Cum*
		2	*2.72*	*1.27*	*0.62*	*4.28*	*Cum*
		2	*2.72*	*0.74*	*0.50*	*2.03*	*Cum*
	TOTAL					**67.20**	**Cum**
	Floor						
	U/S key	*1*	*1.40*	*3.18*	*0.70*	*3.12*	*Cum*
	Floor	*1*	*3.54*	*3.18*	*0.50*	*5.62*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.25*	*Cum*
		1	*0.72*	*2.00*	*0.20*	*0.29*	*Cum*
		1	*0.42*	*2.00*	*0.30*	*0.25*	*Cum*
		1	*3.08*	*2.00*	*0.50*	*3.08*	*Cum*
		1	*0.90*	*2.00*	*0.20*	*0.36*	*Cum*
		1	*0.14*	*2.00*		*0.27*	*Cum*
		1	*0.53*	*2.00*	*0.30*	*0.32*	*Cum*
		1	*1.26*	*2.00*	*0.50*	*1.26*	*Cum*
	D/S key	*1*	*0.73*	*2.00*	*0.50*	*0.73*	*Cum*
	TOTAL					**82.74**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.66*	*3.18*	*0.20*	*2.32*	*Cum*
		1	*0.67*	*2.00*	*0.20*	*0.27*	*Cum*
		1	*3.08*	*2.00*	*0.20*	*1.23*	*Cum*
		1	*0.95*	*2.00*	*0.20*	*0.38*	*Cum*
		1	*1.26*	*2.00*	*0.20*	*0.50*	*Cum*
	Top Slab	*1*	*5.25*	*2.80*	*0.39*	*5.74*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.80*	*0.08*	*0.89*	*Cum*
	Dirt wall	*2*	*5.80*	*0.82*	*0.50*	*4.75*	*Cum*
		2	*5.80*	*0.40*	*0.43*	*1.97*	*Cum*
	Parapet	*2*	*3.64*	*0.45*	*0.18*	*0.57*	*Cum*
		2	*3.64*	*0.35*	*0.25*	*0.64*	*Cum*
		2	*3.64*	*0.22*	*0.55*	*0.87*	*Cum*
	TOTAL					**20.14**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.260*	*29*		*1.578*	*149.197*	*Kg*
a2	*10*	*5.650*	*16*		*0.616*	*55.728*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.180*	*19*		*0.616*	*37.247*	*Kg*
a5	*10*	*5.550*	*10*		*0.616*	*34.214*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.156*	*8*		*0.888*	*50.819*	*Kg*
	12	*2.700*	*27*		*0.888*	*64.714*	*Kg*
	floor raft						
	12	*3.394*	*8*		*0.888*	*24.103*	*Kg*
	12	*7.464*	*16*		*0.888*	*106.013*	*Kg*
	12	*2.700*	*63*		*0.888*	*150.998*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*67.20*	*0.25%*	*0.17*	*7850*	*1318.73*	*Kg*
	TOTAL Weight of steel (in kg)					2389.28	Kg
	TOTAL Weight of Steel (in Tonne)					**2.39**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.73		**2.73**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.00*		*0.50*	*2.00*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.00*		*0.77*	*3.08*	*Sqm*
		4		*1.05*	*0.77*	*3.24*	*Sqm*
		4	*1.00*		*1.20*	*4.80*	*Sqm*
		4		*1.28*	*1.20*	*6.15*	*Sqm*
	Section B-B	*4*	*5.25*		*0.92*	*19.32*	*Sqm*
		4		*1.10*	*0.92*	*4.03*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.37	0.90	4.94	Sqm
	Section C-C	4	0.55		0.62	1.35	Sqm
		4		1.01	0.62	2.49	Sqm
		4	0.55		1.20	2.62	Sqm
		4		1.19	1.20	5.72	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.62		0.50	3.62	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.62		0.77	5.57	Sqm
		2		0.68	0.77	1.05	Sqm
		2	3.62		1.20	8.68	Sqm
		2		0.91	1.20	2.19	Sqm
	Left Bank						
	Bottom Key	2	3.43		0.70	4.80	Sqm
		2		1.40	0.70	1.96	Sqm
	Section a-a	2	1.14		0.50	1.14	Sqm
		2		2.69	0.50	2.69	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.54	0.20	1.01	Sqm
		2	1.14		1.27	2.90	Sqm
		2		1.40	1.27	3.56	Sqm
	Section b-b	2	1.14		0.50	1.14	Sqm
		2		2.69	0.50	2.69	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.22	0.20	0.89	Sqm
		2	1.14		1.27	2.90	Sqm
		2		1.35	1.27	3.43	Sqm
	Section c-c	2	1.14		0.50	1.14	Sqm
		2		2.69	0.50	2.69	Sqm
		2	1.14		0.20	0.46	Sqm
		2		1.76	0.20	0.70	Sqm
		2	1.14		1.27	2.90	Sqm
		2		1.12	1.27	2.84	Sqm
	Section d-d	2	1.14		0.50	1.14	Sqm
		2		2.69	0.50	2.69	Sqm
		2	1.14		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.14		1.27	2.90	Sqm
		2		0.48	1.27	1.22	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.83	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		0.62	1.26	Sqm
		4		0.53	0.62	1.30	Sqm
		4	0.51		0.50	1.01	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.72		0.90	9.80	Sqm
		4		1.60	0.90	5.77	Sqm
		4	2.72		0.62	6.75	Sqm
		4		1.27	0.62	3.14	Sqm
		4	2.72		0.50	5.45	Sqm
		4		0.74	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.40		0.70	1.96	Sqm
		2		3.18	0.70	4.45	Sqm
	Floor	2	3.54		0.50	3.54	Sqm
		2		3.18	0.50	3.18	Sqm
		2	0.42		0.30	0.25	Sqm
		2		2.00	0.30	1.20	Sqm
		2	0.72		0.20	0.29	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.42			0.84	Sqm
		2		2.00		4.00	Sqm
		2	3.08		0.50	3.08	Sqm
		2		2.00	0.50	2.00	Sqm
		2	0.90		0.20	0.36	Sqm
		2		2.00	0.20	0.80	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.00*		*4.00*	*Sqm*
		2	*0.531*		*0.3*	*0.32*	*Sqm*
		2		*2*	*0.30*	*1.20*	*Sqm*
		2	*1.26*		*0.50*	*1.26*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*2.00*	*0.50*	*2.00*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.00*		*0.30*	*1.20*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.00*		*0.90*	*3.60*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.39*	*4.10*	*Sqm*
		2		*2.80*	*0.39*	*2.19*	*Sqm*
	Dirt wall	*4*	*5.80*		*0.50*	*11.59*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.80*		*0.43*	*9.85*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.64*		*0.18*	*2.55*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.64*		*0.25*	*3.64*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.64*		*0.55*	*8.01*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**282.25**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.26*		*9.92*	*Sqm*
	TOTAL					**9.92**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*1.40*	*3.78*	***Cum***
	TOTAL					**3.78**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.00*	*0.15*	*0.66*	*Cum*
	TOTAL					**1.32**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.91*	*0.48*		*1.83*	*Sqm*
	On Abutment Top	*2*	*4.54*	*0.45*		*1.71*	*Sqm*
	TOTAL					**3.54**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.00*	*0.97*		*1.946*	*Cum*
	Section B-B	*2*	*5.25*	*1.32*		*13.808*	*Cum*
	Section C-C	*2*	*0.55*	*1.08*		*1.179*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.62*	*0.80*		*2.904*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.69*		*0.697*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.72*	*1.11*		*6.022*	*Cum*
	TOTAL					**26.55**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF YARI MR OFFTAKING FROM RD-7+760 KM (RT.) AT KAPASIYA DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*2.19*	*1.63*	*2.675*	*19.013*	*Cum*
	Section B-B	*2*	*5.25*	*1.78*	*2.435*	*45.536*	*Cum*
	Section C-C	*2*	*0.50*	*1.60*	*2.435*	*3.898*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.40*	*1.26*	*2.675*	*11.426*	*Cum*
	Left Bank Sec a to d	1	3.25	2.70	2.025	*17.726*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.320*	*2.588*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.73*	*2.02*	*2.320*	*25.584*	*Cum*
	Floor						
	U/S key	*1*	*1.403*	*3.176*	*0.850*	*3.786*	*Cum*
	Floor	*1*	*3.397*	*3.176*	*0.650*	*7.013*	*Cum*
		1	*0.649*	*2.800*	*0.650*	*1.180*	*Cum*
		1	*1.179*	*2.800*	*0.403*	*1.330*	*Cum*
		1	*0.424*	*2.800*	*0.000*	*1.188*	*Cum*
		1	*2.528*	*2.800*	*1.100*	*7.786*	*Cum*
		1	*1.268*	*2.800*	*0.200*	*0.710*	*Cum*
		1	*0.135*	*2.800*	*0.200*	*0.076*	*Cum*
		1	*1.490*	*2.800*	*0.650*	*2.712*	*Cum*
		1	*0.800*	*2.800*	*0.950*	*2.128*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*2.800*	*0.600*	*3.696*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.800*	*0.850*	*1.200*	*2.856*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*2.200*	*5.940*	*Cum*
						166.17	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.618*	*4.411*	*0.150*	*0.41*	*Cum*
		1	*1.621*	*3.246*	*0.150*	*0.79*	*Cum*
		1	*1.280*	*2.800*	*0.150*	*0.54*	*Cum*
		1	*2.028*	*2.800*	*0.150*	*0.85*	*Cum*
		1	*2.588*	*2.800*	*0.150*	*1.09*	*Cum*
		1	*1.423*	*2.800*	*0.150*	*0.60*	*Cum*
		1	*0.292*	*2.800*	*0.150*	*0.12*	*Cum*
		1	*0.894*	*2.800*	*0.150*	*0.38*	*Cum*
		1	*0.692*	*2.800*	*0.150*	*0.29*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*2.187*	*1.625*	*0.300*	*2.13*	*Cum*
	Section B-B	*2*	*5.250*	*1.781*	*0.300*	*5.61*	*Cum*
	Section C-C	*2*	*0.500*	*1.601*	*0.300*	*0.48*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.404*	*1.255*	*0.300*	*1.28*	*Cum*
	Left Bank Sec a to d	*1*	*3.248*	*2.695*	*0.150*	*1.31*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.507*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.733*	*2.018*	*0.300*	*3.31*	*Cum*
	Toe Wall Base D/S Portion	*1*	*2.800*	*0.850*	*0.300*	*0.71*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*2.800*	*0.450*	*0.900*	*1.13*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*12*	*0.600*	*0.600*	*0.300*	*1.30*	*Cum*
	TOTAL					**23.56**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*2.19*	*0.82*	*0.50*	*1.79*	*Cum*
		2	*2.19*	*1.02*	*0.68*	*3.02*	*Cum*
		2	*2.19*	*1.23*	*1.20*	*6.43*	*Cum*
	Section B-B	*2*	*5.25*	*1.10*	*0.94*	*10.80*	*Cum*
		2	*5.25*	*1.38*	*1.20*	*17.40*	*Cum*
	Section C-C	*2*	*0.50*	*1.01*	*0.64*	*0.64*	*Cum*
		2	*0.50*	*1.20*	*1.50*	*1.80*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.40*	*0.45*	*0.50*	*0.77*	*Cum*
		1	*3.40*	*0.65*	*0.68*	*1.50*	*Cum*
		1	*3.40*	*0.86*	*1.20*	*3.49*	*Cum*
	Left Bank						
	Section a-a	*1*		2.543	*0.50*	*1.27*	*Sqm*
		1		*2.39*	*0.20*	*0.48*	*Sqm*
		1		*1.36*	*1.18*	*1.60*	*Sqm*
						3.35	***Sqm***
	Section b-b	*1*		*2.54*	*0.50*	*1.27*	*Sqm*
		1		*2.13*	*0.20*	*0.43*	*Sqm*
		1		*1.30*	*1.18*	*1.53*	*Sqm*
						3.23	***Sqm***
	Section c-c	*1*		*2.54*	*0.50*	*1.27*	*Sqm*
		1		*1.71*	*0.20*	*0.34*	*Sqm*
		1		*1.10*	*1.18*	*1.29*	*Sqm*
						2.90	***Sqm***
	Section d-d	*1*		*2.54*	*0.50*	*1.27*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.18*	*0.56*	*Sqm*
						1.93	***Sqm***
	Bottom Key	*1*	*3.25*	*1.33*	*0.70*	*3.03*	*Cum*
	Top Stem Area	*1*	*3.25*	*2.85*		*9.26*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*0.62*	*0.33*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.73*	*1.62*	*0.90*	*7.96*	*Cum*
		2	*2.73*	*1.28*	*0.62*	*4.32*	*Cum*
		2	*2.73*	*0.75*	*0.50*	*2.04*	*Cum*
	TOTAL					**75.40**	**Cum**
	Floor						
	U/S key	*1*	*1.40*	*3.18*	*0.70*	*3.12*	*Cum*
	Floor	*1*	*3.40*	*3.18*	*0.50*	*5.39*	*Cum*
		1	*0.65*	*2.80*	*0.50*	*0.91*	*Cum*
		1	*1.18*	*2.80*	*0.25*	*0.84*	*Cum*
		1	*0.42*	*2.80*		*1.19*	*Cum*
		1	*2.53*	*2.80*	*0.65*	*4.60*	*Cum*
		1	*1.27*	*2.80*	*0.20*	*0.71*	*Cum*
		1	*0.14*	*2.80*		*0.38*	*Cum*
		1	*0.30*	*2.80*		*0.85*	*Cum*
		1	*1.49*	*2.80*	*0.50*	*2.09*	*Cum*
	D/S key	*1*	*0.80*	*2.80*	*0.80*	*1.79*	*Cum*
	TOTAL					**97.26**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.52*	*3.18*	*0.20*	*2.23*	*Cum*
		1	*1.69*	*2.80*	*0.20*	*0.95*	*Cum*
		1	*3.08*	*2.80*	*0.20*	*1.72*	*Cum*
		1	*0.95*	*2.80*	*0.20*	*0.53*	*Cum*
		1	*1.49*	*2.80*	*0.20*	*0.83*	*Cum*
	Top Slab	*1*	*5.25*	*3.60*	*0.38*	*7.12*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.60*	*0.08*	*1.15*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*4.44*	*0.45*	*0.18*	*0.69*	*Cum*
		2	*4.44*	*0.35*	*0.25*	*0.78*	*Cum*
		2	*4.44*	*0.22*	*0.55*	*1.07*	*Cum*
	TOTAL					**23.74**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.060*	*36*		*1.578*	*230.661*	*Kg*
a2	*10*	*5.650*	*18*		*0.616*	*62.694*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.980*	*21*		*0.616*	*51.524*	*Kg*
a5	*10*	*5.550*	*15*		*0.616*	*51.320*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*54*		*0.888*	*119.888*	*Kg*
x2	*16*	*1.265*	*54*		*1.578*	*107.803*	*Kg*
x3	*10*	*2.850*	*24*		*0.616*	*42.166*	*Kg*
	Floor R/F						
	U/S Key						
	12	*6.833*	*11*		*0.888*	*66.722*	*Kg*
	12	*3.440*	*26*		*0.888*	*79.396*	*Kg*
	floor raft						
	12	*4.179*	*11*		*0.888*	*40.807*	*Kg*
	12	*8.714*	*22*		*0.888*	*170.180*	*Kg*
	12	*3.440*	*75*		*0.888*	*229.027*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*75.40*	*0.25%*	*0.19*	*7850*	*1479.73*	*Kg*
	TOTAL Weight of steel (in kg)					2910.18	Kg
	TOTAL Weight of Steel (in Tonne)					**2.91**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		4.31		**4.31**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*2.19*		*0.50*	*4.37*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*2.19*		*0.68*	*5.90*	*Sqm*
		4		*1.02*	*0.68*	*2.76*	*Sqm*
		4	*2.19*		*1.20*	*10.50*	*Sqm*
		4		*1.23*	*1.20*	*5.88*	*Sqm*
	Section B-B	*4*	*5.25*		*0.94*	*19.64*	*Sqm*
		4		*1.10*	*0.94*	*4.12*	*Sqm*
		4	*5.25*		*1.20*	*25.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.38	1.20	6.63	Sqm
	Section C-C	4	0.50		0.64	1.27	Sqm
		4		1.01	0.64	2.57	Sqm
		4	0.50		1.50	3.00	Sqm
		4		1.20	1.50	7.21	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.40		0.50	3.40	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.40		0.68	4.59	Sqm
		2		0.65	0.68	0.88	Sqm
		2	3.40		1.20	8.17	Sqm
		2		0.86	1.20	2.05	Sqm
	Left Bank						
	Bottom Key	2	3.25		0.70	4.55	Sqm
		2		1.33	0.70	1.86	Sqm
	Section a-a	2	1.08		0.50	1.08	Sqm
		2		2.54	0.50	2.54	Sqm
		2	1.08		0.20	0.43	Sqm
		2		2.39	0.20	0.96	Sqm
		2	1.08		1.18	2.54	Sqm
		2		1.36	1.18	3.20	Sqm
	Section b-b	2	1.08		0.50	1.08	Sqm
		2		2.54	0.50	2.54	Sqm
		2	1.08		0.20	0.43	Sqm
		2		2.13	0.20	0.85	Sqm
		2	1.08		1.18	2.54	Sqm
		2		1.30	1.18	3.06	Sqm
	Section c-c	2	1.08		0.50	1.08	Sqm
		2		2.54	0.50	2.54	Sqm
		2	1.08		0.20	0.43	Sqm
		2		1.71	0.20	0.68	Sqm
		2	1.08		1.18	2.54	Sqm
		2		1.10	1.18	2.57	Sqm
	Section d-d	2	1.08		0.50	1.08	Sqm
		2		2.54	0.50	2.54	Sqm
		2	1.08		0.20	0.43	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.08		1.18	2.54	Sqm
		2		0.48	1.18	1.13	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.83	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		0.62	1.26	Sqm
		4		0.53	0.62	1.30	Sqm
		4	0.51		0.50	1.01	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.73		0.90	9.84	Sqm
		4		1.62	0.90	5.82	Sqm
		4	2.73		0.62	6.78	Sqm
		4		1.28	0.62	3.16	Sqm
		4	2.73		0.50	5.47	Sqm
		4		0.75	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.40		0.70	1.96	Sqm
		2		3.18	0.70	4.45	Sqm
	Floor	2	3.40		0.50	3.40	Sqm
		2		3.18	0.50	3.18	Sqm
		2	0.65		0.50	0.65	Sqm
		2		2.80	0.50	2.80	Sqm
		2	1.18		0.25	0.60	Sqm
		2		2.80	0.25	1.42	Sqm
		2	0.42			0.85	Sqm
		2		2.80		5.60	Sqm
		2	2.53		0.65	3.29	Sqm
		2		2.80	0.65	3.64	Sqm
		2	1.27		0.20	0.51	Sqm
		2		2.80	0.20	1.12	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.80*		*5.60*	*Sqm*
		2	*0.30*			*0.61*	*Sqm*
		2		*2.8*		*5.60*	*Sqm*
		2	*1.49*		*0.50*	*1.49*	*Sqm*
		2		*2.80*	*0.50*	*2.80*	*Sqm*
	D/S key	*2*	*0.80*		*0.80*	*1.28*	*Sqm*
		2		*2.80*	*0.80*	*4.48*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*2.80*		*0.30*	*1.68*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*2.80*		*0.90*	*5.04*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*3.60*	*0.38*	*2.71*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.44*		*0.18*	*3.11*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.44*		*0.25*	*4.44*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.44*		*0.55*	*9.77*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**319.21**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.28*		*10.04*	*Sqm*
	TOTAL					**10.04**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*2.20*	*5.94*	***Cum***
	TOTAL					**5.94**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*2.80*	*0.15*	*0.92*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*2.80*	*0.15*	*0.92*	*Cum*
	TOTAL					**1.85**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.76*	*0.48*		*1.69*	*Sqm*
	On Abutment Top	*2*	*5.98*	*0.45*		*1.59*	*Sqm*
	TOTAL					**3.28**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*2.19*	*0.88*		*3.849*	*Cum*
	Section B-B	*2*	*5.25*	*1.47*		*15.467*	*Cum*
	Section C-C	*2*	*0.50*	*1.25*		*1.246*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.40*	*0.81*		*2.770*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.69*		*0.703*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.73*	*1.15*		*6.280*	*Cum*
	TOTAL					**30.32**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR CHATARA SUB DY OFFTAKING FROM RD-15+240 KM (LT.) AT KAPASIYA DISTRIBUTARY							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.04*	*1.78*	*2.940*	*10.899*	*Cum*
	Section B-B	*2*	*5.25*	*1.87*	*2.607*	*51.298*	*Cum*
	Section C-C	*2*	*0.50*	*1.69*	*2.607*	*4.416*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.09*	*1.41*	*2.940*	*12.844*	*Cum*
	Left Bank Sec a to d	1	3.87	3.06	2.290	*27.142*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*1.10*	*2.607*	*2.994*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.85*	*2.02*	*2.607*	*29.948*	*Cum*
	Floor						
	U/S key	*1*	*1.530*	*5.93*	*0.850*	*7.712*	*Cum*
	Floor	*1*	*3.794*	*5.93*	*0.650*	*14.624*	*Cum*
		1	*0.418*	*3.950*	*0.450*	*0.743*	*Cum*
		1	*0.718*	*3.950*	*0.350*	*0.993*	*Cum*
		1	*0.368*	*3.950*	*0.350*	*1.454*	*Cum*
		1	*3.079*	*3.950*	*1.000*	*12.162*	*Cum*
		1	*0.968*	*3.950*	*0.200*	*0.765*	*Cum*
		1	*0.135*	*3.950*	*0.200*	*0.107*	*Cum*
		1	*1.257*	*3.950*	*0.650*	*3.227*	*Cum*
		1	*0.803*	*3.950*	*0.963*	*3.054*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*3.950*	*0.600*	*5.214*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.950*	*0.850*	*1.200*	*4.029*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*3.350*	*9.045*	*Cum*
						202.67	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.618*	*6.710*	*0.150*	*0.62*	*Cum*
		1	*1.987*	*4.730*	*0.150*	*1.41*	*Cum*
		1	*1.280*	*3.950*	*0.150*	*0.76*	*Cum*
		1	*0.782*	*3.950*	*0.150*	*0.46*	*Cum*
		1	*3.088*	*3.950*	*0.150*	*1.83*	*Cum*
		1	*1.131*	*3.950*	*0.150*	*0.67*	*Cum*
		1	*0.023*	*3.950*	*0.150*	*0.01*	*Cum*
		1	*0.922*	*3.950*	*0.150*	*0.55*	*Cum*
		1	*0.692*	*3.950*	*0.150*	*0.41*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.039*	*1.784*	*0.300*	*1.11*	*Cum*
	Section B-B	*2*	*5.250*	*1.874*	*0.300*	*5.90*	*Cum*
	Section C-C	*2*	*0.500*	*1.694*	*0.300*	*0.51*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.090*	*1.414*	*0.300*	*1.31*	*Cum*
	Left Bank Sec a to d	*1*	*3.872*	*3.061*	*0.150*	*1.78*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.522*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.847*	*2.018*	*0.300*	*3.45*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.950*	*0.850*	*0.300*	*1.01*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*3.950*	*0.450*	*0.900*	*1.60*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*16*	*0.600*	*0.600*	*0.300*	*1.73*	*Cum*
	TOTAL					**26.35**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.04*	*0.82*	*0.50*	*0.85*	*Cum*
		2	*1.04*	*1.10*	*0.94*	*2.15*	*Cum*
		2	*1.04*	*1.38*	*1.20*	*3.45*	*Cum*
	Section B-B	*2*	*5.25*	*1.15*	*1.09*	*13.13*	*Cum*
		2	*5.25*	*1.47*	*1.22*	*18.84*	*Cum*
	Section C-C	*2*	*0.50*	*1.06*	*0.79*	*0.84*	*Cum*
		2	*0.50*	*1.29*	*1.52*	*1.96*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.09*	*0.45*	*0.50*	*0.70*	*Cum*
		1	*3.09*	*0.73*	*0.94*	*2.13*	*Cum*
		1	*3.09*	*1.01*	*1.20*	*3.76*	*Cum*
	Left Bank						
	Section a-a	*1*		*2.94*	*0.50*	*1.47*	*Sqm*
		1		*2.79*	*0.20*	*0.56*	*Sqm*
		1		*1.56*	*1.44*	*2.25*	*Sqm*
						4.27	***Sqm***
	Section b-b	*1*		*2.94*	*0.50*	*1.47*	*Sqm*
		1		*2.40*	*0.20*	*0.48*	*Sqm*
		1		*1.44*	*1.44*	*2.07*	*Sqm*
						4.02	***Sqm***
	Section c-c	*1*		*2.94*	*0.50*	*1.47*	*Sqm*
		1		*1.86*	*0.20*	*0.37*	*Sqm*
		1		*1.17*	*1.44*	*1.69*	*Sqm*
						3.53	***Sqm***
	Section d-d	*1*		*2.94*	*0.50*	*1.47*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.44*	*0.69*	*Sqm*
						2.26	***Sqm***
	Bottom Key	*1*	*3.87*	*1.77*	*0.70*	*4.80*	*Cum*
	Top Stem Area	*1*	*3.87*	*3.52*		*13.63*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.52*	*0.70*	*1.02*	*0.74*	*Cum*
		2	*0.52*	*0.53*	*0.79*	*0.43*	*Cum*
		2	*0.52*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.85*	*1.62*	*1.02*	*9.37*	*Cum*
		2	*2.85*	*1.28*	*0.79*	*5.74*	*Cum*
		2	*2.85*	*0.75*	*0.50*	*2.12*	*Cum*
	TOTAL					**84.81**	**Cum**
	Floor						
	U/S key	*1*	*1.53*	*5.93*	*0.70*	*6.35*	*Cum*
	Floor	*1*	*3.79*	*5.93*	*0.50*	*11.25*	*Cum*
		1	*0.42*	*3.95*	*0.30*	*0.50*	*Cum*
		1	*0.72*	*3.95*	*0.20*	*0.57*	*Cum*
		1	*0.37*	*3.95*	*0.35*	*0.51*	*Cum*
		1	*3.08*	*3.95*	*0.55*	*6.69*	*Cum*
		1	*0.97*	*3.95*	*0.20*	*0.76*	*Cum*
		1	*0.14*	*3.95*		*0.53*	*Cum*
		1	*0.18*	*3.95*		*0.72*	*Cum*
		1	*1.26*	*3.95*	*0.50*	*2.48*	*Cum*
	D/S key	*1*	*0.80*	*3.95*	*0.81*	*2.58*	*Cum*
	TOTAL					**117.75**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.91*	*5.93*	*0.20*	*4.64*	*Cum*
		1	*0.67*	*3.95*	*0.20*	*0.53*	*Cum*
		1	*3.08*	*3.95*	*0.20*	*2.43*	*Cum*
		1	*0.95*	*3.95*	*0.20*	*0.75*	*Cum*
		1	*1.26*	*3.95*	*0.20*	*1.00*	*Cum*
	Top Slab	*1*	*5.25*	*4.75*	*0.39*	*9.74*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*4.75*	*0.08*	*1.51*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*5.59*	*0.45*	*0.18*	*0.87*	*Cum*
		2	*5.59*	*0.35*	*0.25*	*0.98*	*Cum*
		2	*5.59*	*0.22*	*0.55*	*1.34*	*Cum*
	TOTAL					**30.47**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*20*	*5.410*	*34*		*2.466*	*453.567*	*Kg*
a2	*10*	*5.730*	*38*		*0.616*	*134.228*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*5.270*	*23*		*0.616*	*74.721*	*Kg*
a5	*10*	*5.492*	*21*		*0.616*	*71.098*	*Kg*
	Dirt Wall						
d1	*12*	*4.700*	*26*		*0.888*	*108.477*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.601*	*78*		*0.888*	*180.095*	*Kg*
x2	*16*	*1.365*	*78*		*1.578*	*168.024*	*Kg*
x3	*10*	*4.650*	*24*		*0.616*	*68.797*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.647*	*16*		*0.888*	*108.612*	*Kg*
	12	*4.590*	*30*		*0.888*	*122.237*	*Kg*
	floor raft						
	12	*4.224*	*16*		*0.888*	*59.995*	*Kg*
	12	*7.459*	*32*		*0.888*	*211.884*	*Kg*
	12	*4.590*	*65*		*0.888*	*264.846*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*84.81*	*0.25%*	*0.21*	*7850*	*1664.35*	*Kg*
	TOTAL Weight of steel (in kg)					3766.26	Kg
	TOTAL Weight of Steel (in Tonne)					**3.77**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		5.44		**5.44**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.04*		*0.50*	*2.08*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.04*		*0.94*	*3.91*	*Sqm*
		4		*1.10*	*0.94*	*4.14*	*Sqm*
		4	*1.04*		*1.20*	*4.99*	*Sqm*
		4		*1.38*	*1.20*	*6.64*	*Sqm*
	Section B-B	*4*	*5.25*		*1.09*	*22.89*	*Sqm*
		4		*1.15*	*1.09*	*5.00*	*Sqm*
		4	*5.25*		*1.22*	*25.56*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.47	1.22	7.18	Sqm
	Section C-C	4	0.50		0.79	1.58	Sqm
		4		1.06	0.79	3.34	Sqm
		4	0.50		1.52	3.03	Sqm
		4		1.29	1.52	7.85	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.09		0.50	3.09	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.09		0.94	5.81	Sqm
		2		0.73	0.94	1.38	Sqm
		2	3.09		1.20	7.42	Sqm
		2		1.01	1.20	2.43	Sqm
	Left Bank						
	Bottom Key	2	3.87		0.70	5.42	Sqm
		2		1.77	0.70	2.48	Sqm
	Section a-a	2	1.29		0.50	1.29	Sqm
		2		2.94	0.50	2.94	Sqm
		2	1.29		0.20	0.52	Sqm
		2		2.79	0.20	1.12	Sqm
		2	1.29		1.44	3.72	Sqm
		2		1.56	1.44	4.49	Sqm
	Section b-b	2	1.29		0.50	1.29	Sqm
		2		2.94	0.50	2.94	Sqm
		2	1.29		0.20	0.52	Sqm
		2		2.40	0.20	0.96	Sqm
		2	1.29		1.44	3.72	Sqm
		2		1.44	1.44	4.14	Sqm
	Section c-c	2	1.29		0.50	1.29	Sqm
		2		2.94	0.50	2.94	Sqm
		2	1.29		0.20	0.52	Sqm
		2		1.86	0.20	0.74	Sqm
		2	1.29		1.44	3.72	Sqm
		2		1.17	1.44	3.37	Sqm
	Section d-d	2	1.29		0.50	1.29	Sqm
		2		2.94	0.50	2.94	Sqm
		2	1.29		0.20	0.52	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.29		1.44	3.72	Sqm
		2		0.48	1.44	1.38	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.52		1.02	2.12	Sqm
		4		0.70	1.02	2.85	Sqm
		4	0.52		0.79	1.65	Sqm
		4		0.53	0.79	1.66	Sqm
		4	0.52		0.50	1.04	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.85		1.02	11.58	Sqm
		4		1.62	1.02	6.58	Sqm
		4	2.85		0.79	9.00	Sqm
		4		1.28	0.79	4.03	Sqm
		4	2.85		0.50	5.69	Sqm
		4		0.75	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.53		0.70	2.14	Sqm
		2		5.93	0.70	8.30	Sqm
	Floor	2	3.79		0.50	3.79	Sqm
		2		5.93	0.50	5.93	Sqm
		2	0.42		0.30	0.25	Sqm
		2		3.95	0.30	2.37	Sqm
		2	0.72		0.20	0.29	Sqm
		2		3.95	0.20	1.58	Sqm
		2	0.37			0.74	Sqm
		2		3.95		7.90	Sqm
		2	3.08		0.55	3.39	Sqm
		2		3.95	0.55	4.35	Sqm
		2	0.97		0.20	0.39	Sqm
		2		3.95	0.20	1.58	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.95*		*7.90*	*Sqm*
		2	*0.1834*			*0.37*	*Sqm*
		2		*3.95*		*7.90*	*Sqm*
		2	*1.26*		*0.50*	*1.26*	*Sqm*
		2		*3.95*	*0.50*	*3.95*	*Sqm*
	D/S key	*2*	*0.80*		*0.81*	*1.31*	*Sqm*
		2		*3.95*	*0.81*	*6.42*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*3.95*		*0.30*	*2.37*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*3.95*		*0.90*	*7.11*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.39*	*4.10*	*Sqm*
		2		*4.75*	*0.39*	*3.71*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*5.59*		*0.18*	*3.91*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*5.59*		*0.25*	*5.59*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*5.59*		*0.55*	*12.30*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**364.46**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.56*		*11.27*	*Sqm*
	TOTAL					**11.27**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*3.35*	*9.05*	***Cum***
	TOTAL					**9.05**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.95*	*0.15*	*1.30*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.95*	*0.15*	*1.30*	*Cum*
	TOTAL					**2.61**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*2.16*	*0.48*		*2.07*	*Sqm*
	On Abutment Top	*2*	*4.96*	*0.45*		*1.94*	*Sqm*
	TOTAL					**4.02**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.04*	*1.15*		*2.398*	*Cum*
	Section B-B	*2*	*5.25*	*1.74*		*18.295*	*Cum*
	Section C-C	*2*	*0.50*	*1.46*		*1.462*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.09*	*0.77*		*2.393*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.52*	*0.69*		*0.717*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.85*	*1.29*		*7.370*	*Cum*
	TOTAL					**32.64**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF DABURA-I MR OFFTAKING FROM RD-2+940 KM (RT.) AT CHATARA SUB DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.02*	*1.69*	*2.785*	*9.626*	*Cum*
	Section B-B	*2*	*5.25*	*1.78*	*2.335*	*43.666*	*Cum*
	Section C-C	*2*	*0.50*	*1.60*	*2.335*	*3.738*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.74*	*1.32*	*2.785*	*10.066*	*Cum*
	Left Bank Sec a to d	1	3.51	2.85	2.135	*21.309*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.490*	*2.783*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.73*	*2.02*	*2.490*	*27.459*	*Cum*
	Floor						
	U/S key	*1*	*1.4135*	*4.864*	*0.850*	*5.844*	*Cum*
	Floor	*1*	*3.562*	*4.864*	*0.650*	*11.262*	*Cum*
		1	*0.418*	*3.000*	*0.450*	*0.564*	*Cum*
		1	*0.718*	*3.000*	*0.350*	*0.754*	*Cum*
		1	*0.418*	*3.000*	*0.300*	*1.254*	*Cum*
		1	*3.079*	*3.000*	*0.950*	*8.775*	*Cum*
		1	*0.9*	*3.000*	*0.200*	*0.540*	*Cum*
		1	*0.135*	*3.000*	*0.200*	*0.081*	*Cum*
		1	*1.24*	*3.000*	*0.650*	*2.418*	*Cum*
		1	*0.775*	*3.000*	*0.850*	*1.976*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*3.000*	*0.600*	*3.960*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.000*	*0.850*	*1.200*	*3.060*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*2.400*	*6.480*	*Cum*
						165.61	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.618*	*6.728*	*0.150*	*0.62*	*Cum*
		1	*1.771*	*4.864*	*0.150*	*1.29*	*Cum*
		1	*1.280*	*3.000*	*0.150*	*0.58*	*Cum*
		1	*0.670*	*3.000*	*0.150*	*0.30*	*Cum*
		1	*3.338*	*3.000*	*0.150*	*1.50*	*Cum*
		1	*0.948*	*3.000*	*0.150*	*0.43*	*Cum*
		1	*0.092*	*3.000*	*0.150*	*0.04*	*Cum*
		1	*0.782*	*3.000*	*0.150*	*0.35*	*Cum*
		1	*0.692*	*3.000*	*0.150*	*0.31*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.022*	*1.691*	*0.300*	*1.04*	*Cum*
	Section B-B	*2*	*5.250*	*1.781*	*0.300*	*5.61*	*Cum*
	Section C-C	*2*	*0.500*	*1.601*	*0.300*	*0.48*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.736*	*1.321*	*0.300*	*1.08*	*Cum*
	Left Bank Sec a to d	*1*	*3.507*	*2.846*	*0.150*	*1.50*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.508*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.733*	*2.018*	*0.300*	*3.31*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.000*	*0.850*	*0.300*	*0.77*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*3.000*	*0.450*	*0.900*	*1.22*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*13*	*0.600*	*0.600*	*0.300*	*1.40*	*Cum*
	TOTAL					**23.05**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.02*	*0.82*	*0.50*	*0.84*	*Cum*
		2	*1.02*	*1.06*	*0.79*	*1.69*	*Cum*
		2	*1.02*	*1.29*	*1.20*	*3.17*	*Cum*
	Section B-B	*2*	*5.25*	*1.10*	*0.94*	*10.80*	*Cum*
		2	*5.25*	*1.38*	*1.10*	*15.95*	*Cum*
	Section C-C	*2*	*0.50*	*1.01*	*0.64*	*0.64*	*Cum*
		2	*0.50*	*1.20*	*1.40*	*1.68*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*2.74*	*0.45*	*0.50*	*0.62*	*Cum*
		1	*2.74*	*0.69*	*0.79*	*1.47*	*Cum*
		1	*2.74*	*0.92*	*1.20*	*3.02*	*Cum*
	Left Bank						
	Section a-a	*1*		2.708	*0.50*	*1.35*	*Sqm*
		1		*2.56*	*0.20*	*0.51*	*Sqm*
		1		*1.44*	*1.29*	*1.85*	*Sqm*
						3.72	***Sqm***
	Section b-b	*1*		*2.71*	*0.50*	*1.35*	*Sqm*
		1		*2.27*	*0.20*	*0.45*	*Sqm*
		1		*1.38*	*1.29*	*1.77*	*Sqm*
						3.58	***Sqm***
	Section c-c	*1*		*2.71*	*0.50*	*1.35*	*Sqm*
		1		*1.78*	*0.20*	*0.36*	*Sqm*
		1		*1.13*	*1.29*	*1.45*	*Sqm*
						3.16	***Sqm***
	Section d-d	*1*		*2.71*	*0.50*	*1.35*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.29*	*0.62*	*Sqm*
						2.07	***Sqm***
	Bottom Key	*1*	*3.51*	*1.41*	*0.70*	*3.47*	*Cum*
	Top Stem Area	*1*	*3.51*	*3.13*		*10.98*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*0.79*	*0.42*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.73*	*1.62*	*0.90*	*7.96*	*Cum*
		2	*2.73*	*1.28*	*0.79*	*5.51*	*Cum*
		2	*2.73*	*0.75*	*0.50*	*2.04*	*Cum*
	TOTAL					**71.08**	**Cum**
	Floor						
	U/S key	*1*	*1.41*	*4.86*	*0.70*	*4.81*	*Cum*
	Floor	*1*	*3.56*	*4.86*	*0.50*	*8.66*	*Cum*
		1	*0.42*	*3.00*	*0.30*	*0.38*	*Cum*
		1	*0.72*	*3.00*	*0.20*	*0.43*	*Cum*
		1	*0.42*	*3.00*	*0.30*	*0.38*	*Cum*
		1	*3.08*	*3.00*	*0.50*	*4.62*	*Cum*
		1	*0.90*	*3.00*	*0.20*	*0.54*	*Cum*
		1	*0.14*	*3.00*		*0.41*	*Cum*
		1	*0.53*	*3.00*	*0.30*	*0.48*	*Cum*
		1	*1.24*	*3.00*	*0.50*	*1.86*	*Cum*
	D/S key	*1*	*0.78*	*3.00*	*0.70*	*1.63*	*Cum*
	TOTAL					**95.26**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.66*	*4.86*	*0.20*	*3.56*	*Cum*
		1	*0.67*	*3.00*	*0.20*	*0.40*	*Cum*
		1	*3.08*	*3.00*	*0.20*	*1.85*	*Cum*
		1	*0.95*	*3.00*	*0.20*	*0.57*	*Cum*
		1	*1.26*	*3.00*	*0.20*	*0.76*	*Cum*
	Top Slab	*1*	*5.25*	*3.80*	*0.39*	*7.76*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*3.80*	*0.08*	*1.21*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*4.64*	*0.45*	*0.18*	*0.72*	*Cum*
		2	*4.64*	*0.35*	*0.25*	*0.82*	*Cum*
		2	*4.64*	*0.22*	*0.55*	*1.12*	*Cum*
	TOTAL					**25.43**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.360*	*37*		*1.578*	*254.585*	*Kg*
a2	*10*	*5.750*	*19*		*0.616*	*67.348*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.180*	*21*		*0.616*	*54.113*	*Kg*
a5	*10*	*5.490*	*15*		*0.616*	*50.766*	*Kg*
	Dirt Wall						
d1	*12*	*4.530*	*26*		*0.888*	*104.554*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.551*	*62*		*0.888*	*140.401*	*Kg*
x2	*16*	*1.315*	*62*		*1.578*	*128.666*	*Kg*
x3	*10*	*3.700*	*24*		*0.616*	*54.742*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.199*	*12*		*0.888*	*76.687*	*Kg*
	12	*3.640*	*27*		*0.888*	*87.243*	*Kg*
	floor raft						
	12	*3.918*	*12*		*0.888*	*41.736*	*Kg*
	12	*7.440*	*24*		*0.888*	*158.508*	*Kg*
	12	*3.640*	*65*		*0.888*	*210.031*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*71.08*	*0.25%*	*0.18*	*7850*	*1394.85*	*Kg*
	TOTAL Weight of steel (in kg)					2899.56	Kg
	TOTAL Weight of Steel (in Tonne)					**2.90**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		4.83		**4.83**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.02*		*0.50*	*2.04*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.02*		*0.79*	*3.21*	*Sqm*
		4		*1.06*	*0.79*	*3.31*	*Sqm*
		4	*1.02*		*1.20*	*4.91*	*Sqm*
		4		*1.29*	*1.20*	*6.20*	*Sqm*
	Section B-B	*4*	*5.25*		*0.94*	*19.64*	*Sqm*
		4		*1.10*	*0.94*	*4.12*	*Sqm*
		4	*5.25*		*1.10*	*23.10*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.38	1.10	6.08	Sqm
	Section C-C	4	0.50		0.64	1.27	Sqm
		4		1.01	0.64	2.57	Sqm
		4	0.50		1.40	2.80	Sqm
		4		1.20	1.40	6.72	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.74		0.50	2.74	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.74		0.79	4.30	Sqm
		2		0.69	0.79	1.08	Sqm
		2	2.74		1.20	6.57	Sqm
		2		0.92	1.20	2.21	Sqm
	Left Bank						
	Bottom Key	2	3.51		0.70	4.91	Sqm
		2		1.41	0.70	1.98	Sqm
	Section a-a	2	1.17		0.50	1.17	Sqm
		2		2.71	0.50	2.71	Sqm
		2	1.17		0.20	0.47	Sqm
		2		2.56	0.20	1.02	Sqm
		2	1.17		1.29	3.00	Sqm
		2		1.44	1.29	3.71	Sqm
	Section b-b	2	1.17		0.50	1.17	Sqm
		2		2.71	0.50	2.71	Sqm
		2	1.17		0.20	0.47	Sqm
		2		2.27	0.20	0.91	Sqm
		2	1.17		1.29	3.00	Sqm
		2		1.38	1.29	3.54	Sqm
	Section c-c	2	1.17		0.50	1.17	Sqm
		2		2.71	0.50	2.71	Sqm
		2	1.17		0.20	0.47	Sqm
		2		1.78	0.20	0.71	Sqm
		2	1.17		1.29	3.00	Sqm
		2		1.13	1.29	2.90	Sqm
	Section d-d	2	1.17		0.50	1.17	Sqm
		2		2.71	0.50	2.71	Sqm
		2	1.17		0.20	0.47	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.17		1.29	3.00	Sqm
		2		0.48	1.29	1.23	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.83	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		0.79	1.61	Sqm
		4		0.53	0.79	1.66	Sqm
		4	0.51		0.50	1.02	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.73		0.90	9.84	Sqm
		4		1.62	0.90	5.82	Sqm
		4	2.73		0.79	8.64	Sqm
		4		1.28	0.79	4.03	Sqm
		4	2.73		0.50	5.47	Sqm
		4		0.75	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.41		0.70	1.98	Sqm
		2		4.86	0.70	6.81	Sqm
	Floor	2	3.56		0.50	3.56	Sqm
		2		4.86	0.50	4.86	Sqm
		2	0.42		0.30	0.25	Sqm
		2		3.00	0.30	1.80	Sqm
		2	0.72		0.20	0.29	Sqm
		2		3.00	0.20	1.20	Sqm
		2	0.42			0.84	Sqm
		2		3.00		6.00	Sqm
		2	3.08		0.50	3.08	Sqm
		2		3.00	0.50	3.00	Sqm
		2	0.90		0.20	0.36	Sqm
		2		3.00	0.20	1.20	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.00*		*6.00*	*Sqm*
		2	*0.531*		*0.3*	*0.32*	*Sqm*
		2		*3*	*0.30*	*1.80*	*Sqm*
		2	*1.24*		*0.50*	*1.24*	*Sqm*
		2		*3.00*	*0.50*	*3.00*	*Sqm*
	D/S key	*2*	*0.78*		*0.70*	*1.09*	*Sqm*
		2		*3.00*	*0.70*	*4.20*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*3.00*		*0.30*	*1.80*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*3.00*		*0.90*	*5.40*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.39*	*4.08*	*Sqm*
		2		*3.80*	*0.39*	*2.96*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*4.64*		*0.18*	*3.25*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*4.64*		*0.25*	*4.64*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*4.64*		*0.55*	*10.21*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**311.57**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.28*		*10.04*	*Sqm*
	TOTAL					**10.04**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*2.40*	*6.48*	***Cum***
	TOTAL					**6.48**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.00*	*0.15*	*0.99*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.00*	*0.15*	*0.99*	*Cum*
	TOTAL					**1.98**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.93*	*0.48*		*1.85*	*Sqm*
	On Abutment Top	*2*	*4.82*	*0.45*		*1.74*	*Sqm*
	TOTAL					**3.59**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.02*	*0.99*		*2.018*	*Cum*
	Section B-B	*2*	*5.25*	*1.45*		*15.215*	*Cum*
	Section C-C	*2*	*0.50*	*1.20*		*1.196*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*2.74*	*0.92*		*2.510*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.75*		*0.763*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.73*	*1.25*		*6.823*	*Cum*
	TOTAL					**28.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF BHAHUARA MR OFFTAKING FROM RD-3+920 KM (RT.) AT KAPASIYA DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.73*	*1.69*	*3.068*	*17.960*	*Cum*
	Section B-B	*2*	*5.25*	*1.69*	*2.287*	*40.679*	*Cum*
	Section C-C	*2*	*0.50*	*1.51*	*2.287*	*3.463*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.69*	*1.32*	*3.068*	*14.916*	*Cum*
	Left Bank Sec a to d	1	3.01	2.84	2.128	*18.171*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*1.10*	*2.487*	*2.703*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.64*	*1.89*	*2.487*	*24.827*	*Cum*
	Floor						
	U/S key	*1*	*1.4085*	*3.176*	*0.850*	*3.802*	*Cum*
	Floor	*1*	*3.551*	*3.176*	*0.650*	*7.331*	*Cum*
		1	*0.418*	*1.370*	*0.450*	*0.258*	*Cum*
		1	*0.718*	*1.370*	*0.350*	*0.344*	*Cum*
		1	*0.418*	*1.370*	*0.300*	*0.573*	*Cum*
		1	*3.079*	*1.370*	*0.950*	*4.007*	*Cum*
		1	*0.9*	*1.370*	*0.200*	*0.247*	*Cum*
		1	*0.135*	*1.370*	*0.200*	*0.037*	*Cum*
		1	*1.959*	*1.370*	*0.650*	*1.744*	*Cum*
		1	*0.7985*	*1.370*	*0.945*	*1.034*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.370*	*0.600*	*1.808*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.370*	*0.850*	*1.200*	*1.397*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*0.770*	*2.079*	*Cum*
						147.38	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*3.086*	*0.150*	*0.29*	*Cum*
		1	*1.762*	*1.865*	*0.150*	*0.49*	*Cum*
		1	*1.269*	*1.370*	*0.150*	*0.26*	*Cum*
		1	*0.670*	*1.370*	*0.150*	*0.14*	*Cum*
		1	*3.338*	*1.370*	*0.150*	*0.69*	*Cum*
		1	*0.973*	*1.370*	*0.150*	*0.20*	*Cum*
		1	*0.727*	*1.370*	*0.150*	*0.15*	*Cum*
		1	*0.900*	*1.370*	*0.150*	*0.18*	*Cum*
		1	*0.692*	*1.370*	*0.150*	*0.14*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.733*	*1.689*	*0.300*	*1.76*	*Cum*
	Section B-B	*2*	*5.250*	*1.694*	*0.300*	*5.34*	*Cum*
	Section C-C	*2*	*0.500*	*1.514*	*0.300*	*0.45*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.686*	*1.319*	*0.300*	*1.46*	*Cum*
	Left Bank Sec a to d	*1*	*3.011*	*2.836*	*0.150*	*1.28*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.494*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.636*	*1.894*	*0.300*	*2.99*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.370*	*0.850*	*0.300*	*0.35*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.370*	*0.450*	*0.900*	*0.55*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*10*	*0.600*	*0.600*	*0.300*	*1.08*	*Cum*
	TOTAL					**19.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.73*	*0.82*	*0.50*	*1.42*	*Cum*
		2	*1.73*	*1.05*	*0.78*	*2.84*	*Cum*
		2	*1.73*	*1.29*	*1.49*	*6.66*	*Cum*
	Section B-B	*2*	*5.25*	*1.06*	*0.79*	*8.77*	*Cum*
		2	*5.25*	*1.29*	*1.20*	*16.26*	*Cum*
	Section C-C	*2*	*0.50*	*0.97*	*0.49*	*0.47*	*Cum*
		2	*0.50*	*1.11*	*1.50*	*1.67*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.69*	*0.45*	*0.50*	*0.83*	*Cum*
		1	*3.69*	*0.68*	*0.78*	*1.96*	*Cum*
		1	*3.69*	*0.92*	*1.49*	*5.05*	*Cum*
	Left Bank						
	Section a-a	*1*		2.697	*0.50*	*1.35*	*Sqm*
		1		*2.55*	*0.20*	*0.51*	*Sqm*
		1		*1.44*	*1.28*	*1.84*	*Sqm*
						3.70	***Sqm***
	Section b-b	*1*		*2.70*	*0.50*	*1.35*	*Sqm*
		1		*2.27*	*0.20*	*0.45*	*Sqm*
		1		*1.37*	*1.28*	*1.75*	*Sqm*
						3.56	***Sqm***
	Section c-c	*1*		*2.70*	*0.50*	*1.35*	*Sqm*
		1		*1.77*	*0.20*	*0.35*	*Sqm*
		1		*1.13*	*1.28*	*1.44*	*Sqm*
						3.14	***Sqm***
	Section d-d	*1*		*2.70*	*0.50*	*1.35*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.28*	*0.61*	*Sqm*
						2.06	***Sqm***
	Bottom Key	*1*	*3.01*	*1.41*	*0.70*	*2.97*	*Cum*
	Top Stem Area	*1*	*3.01*	*3.11*		*9.37*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.49*	*0.70*	*1.20*	*0.83*	*Cum*
		2	*0.49*	*0.53*	*0.49*	*0.25*	*Cum*
		2	*0.49*	*0.35*	*0.50*	*0.17*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.64*	*1.49*	*1.20*	*9.42*	*Cum*
		2	*2.64*	*1.21*	*0.49*	*3.12*	*Cum*
		2	*2.64*	*0.74*	*0.50*	*1.95*	*Cum*
	TOTAL					**74.02**	**Cum**
	Floor						
	U/S key	*1*	*1.41*	*3.18*	*0.70*	*3.13*	*Cum*
	Floor	*1*	*3.55*	*3.18*	*0.50*	*5.64*	*Cum*
		1	*0.42*	*1.37*	*0.30*	*0.17*	*Cum*
		1	*0.72*	*1.37*	*0.20*	*0.20*	*Cum*
		1	*0.42*	*1.37*	*0.30*	*0.17*	*Cum*
		1	*3.08*	*1.37*	*0.50*	*2.11*	*Cum*
		1	*0.90*	*1.37*	*0.20*	*0.25*	*Cum*
		1	*0.14*	*1.37*		*0.18*	*Cum*
		1	*0.53*	*1.37*	*0.30*	*0.22*	*Cum*
		1	*1.96*	*1.37*	*0.50*	*1.34*	*Cum*
	D/S key	*1*	*0.80*	*1.37*	*0.80*	*0.87*	*Cum*
	TOTAL					**88.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.55*	*3.18*	*0.20*	*2.26*	*Cum*
		1	*0.67*	*1.37*	*0.20*	*0.18*	*Cum*
		1	*3.08*	*1.37*	*0.20*	*0.84*	*Cum*
		1	*0.95*	*1.37*	*0.20*	*0.26*	*Cum*
		1	*1.26*	*1.37*	*0.20*	*0.35*	*Cum*
	Top Slab	*1*	*5.25*	*2.17*	*0.33*	*3.72*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.17*	*0.08*	*0.69*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.01*	*0.45*	*0.18*	*0.47*	*Cum*
		2	*3.01*	*0.35*	*0.25*	*0.53*	*Cum*
		2	*3.01*	*0.22*	*0.55*	*0.72*	*Cum*
	TOTAL					**16.69**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*2.630*	*29*		*1.578*	*120.365*	*Kg*
a2	*10*	*5.650*	*11*		*0.616*	*38.313*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*2.550*	*18*		*0.616*	*28.296*	*Kg*
a5	*10*	*5.550*	*8*		*0.616*	*27.371*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*36*		*0.888*	*79.925*	*Kg*
x2	*16*	*1.265*	*36*		*1.578*	*71.868*	*Kg*
x3	*10*	*2.070*	*24*		*0.616*	*30.626*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.757*	*6*		*0.888*	*41.315*	*Kg*
	12	*2.069*	*30*		*0.888*	*55.100*	*Kg*
	floor raft						
	12	*4.171*	*6*		*0.888*	*22.216*	*Kg*
	12	*7.852*	*12*		*0.888*	*83.643*	*Kg*
	12	*2.069*	*69*		*0.888*	*126.729*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*74.02*	*0.25%*	*0.19*	*7850*	*1452.73*	*Kg*
	TOTAL Weight of steel (in kg)					2356.76	Kg
	TOTAL Weight of Steel (in Tonne)					**2.36**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.26		**2.26**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.73*		*0.50*	*3.47*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.73*		*0.78*	*5.39*	*Sqm*
		4		*1.05*	*0.78*	*3.28*	*Sqm*
		4	*1.73*		*1.49*	*10.33*	*Sqm*
		4		*1.29*	*1.49*	*7.68*	*Sqm*
	Section B-B	*4*	*5.25*		*0.79*	*16.59*	*Sqm*
		4		*1.06*	*0.79*	*3.34*	*Sqm*
		4	*5.25*		*1.20*	*25.14*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.29	1.20	6.20	Sqm
	Section C-C	4	0.50		0.49	0.98	Sqm
		4		0.97	0.49	1.90	Sqm
		4	0.50		1.50	2.99	Sqm
		4		1.11	1.50	6.67	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.69		0.50	3.69	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.69		0.78	5.74	Sqm
		2		0.68	0.78	1.07	Sqm
		2	3.69		1.49	10.98	Sqm
		2		0.92	1.49	2.74	Sqm
	Left Bank						
	Bottom Key	2	3.01		0.70	4.22	Sqm
		2		1.41	0.70	1.97	Sqm
	Section a-a	2	1.00		0.50	1.00	Sqm
		2		2.70	0.50	2.70	Sqm
		2	1.00		0.20	0.40	Sqm
		2		2.55	0.20	1.02	Sqm
		2	1.00		1.28	2.57	Sqm
		2		1.44	1.28	3.68	Sqm
	Section b-b	2	1.00		0.50	1.00	Sqm
		2		2.70	0.50	2.70	Sqm
		2	1.00		0.20	0.40	Sqm
		2		2.27	0.20	0.91	Sqm
		2	1.00		1.28	2.57	Sqm
		2		1.37	1.28	3.51	Sqm
	Section c-c	2	1.00		0.50	1.00	Sqm
		2		2.70	0.50	2.70	Sqm
		2	1.00		0.20	0.40	Sqm
		2		1.77	0.20	0.71	Sqm
		2	1.00		1.28	2.57	Sqm
		2		1.13	1.28	2.88	Sqm
	Section d-d	2	1.00		0.50	1.00	Sqm
		2		2.70	0.50	2.70	Sqm
		2	1.00		0.20	0.40	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.00		1.28	2.57	Sqm
		2		0.48	1.28	1.23	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		1.20	2.37	Sqm
		4		0.70	1.20	3.35	Sqm
		4	0.49		0.49	0.97	Sqm
		4		0.53	0.49	1.03	Sqm
		4	0.49		0.50	0.99	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.64		1.20	12.62	Sqm
		4		1.49	1.20	7.15	Sqm
		4	2.64		0.49	5.17	Sqm
		4		1.21	0.49	2.37	Sqm
		4	2.64		0.50	5.27	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.41		0.70	1.97	Sqm
		2		3.18	0.70	4.45	Sqm
	Floor	2	3.55		0.50	3.55	Sqm
		2		3.18	0.50	3.18	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.37	0.30	0.82	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.37	0.20	0.55	Sqm
		2	0.42			0.84	Sqm
		2		1.37		2.74	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.37	0.50	1.37	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.37	0.20	0.55	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.37*		*2.74*	*Sqm*
		2	*0.531*		*0.3*	*0.32*	*Sqm*
		2		*1.37*	*0.30*	*0.82*	*Sqm*
		2	*1.96*		*0.50*	*1.96*	*Sqm*
		2		*1.37*	*0.50*	*1.37*	*Sqm*
	D/S key	*2*	*0.80*		*0.80*	*1.27*	*Sqm*
		2		*1.37*	*0.80*	*2.18*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.37*		*0.30*	*0.82*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.37*		*0.90*	*2.47*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.33*	*3.43*	*Sqm*
		2		*2.17*	*0.33*	*1.42*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.01*		*0.18*	*2.11*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.01*		*0.25*	*3.01*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.01*		*0.55*	*6.62*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**291.53**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*1.97*		*8.65*	*Sqm*
	TOTAL					**8.65**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*0.77*	*2.08*	***Cum***
	TOTAL					**2.08**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.37*	*0.15*	*0.45*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.37*	*0.15*	*0.45*	*Cum*
	TOTAL					**0.90**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.92*	*0.48*		*1.84*	*Sqm*
	On Abutment Top	*2*	*5.42*	*0.45*		*1.72*	*Sqm*
	TOTAL					**3.56**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	4			**8.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.73*	*1.11*		*3.851*	*Cum*
	Section B-B	*2*	*5.25*	*1.28*		*13.433*	*Cum*
	Section C-C	*2*	*0.50*	*1.14*		*1.139*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.69*	*0.96*		*3.546*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.49*	*0.70*		*0.690*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.64*	*1.17*		*6.184*	*Cum*
	TOTAL					**28.84**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF NEPUA MR OFFTAKING FROM RD-7+760 KM (RT.) AT KAPASIYA DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*1*	*5.53*	*6.65*	*2.410*	*88.573*	*Cum*
	Section B-B	*2*	*5.25*	*2.06*	*3.912*	*84.411*	*Cum*
	Section C-C	*1*	*0.50*	*7.60*	*1.750*	*6.654*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.01*	*1.34*	*2.810*	*11.315*	*Cum*
	Left Bank Sec a to d	1	3.43	2.84	2.160	*21.057*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.970*	*3.339*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*2.04*	*2.970*	*33.307*	*Cum*
	Floor						
	U/S key	*1*	*1.4325*	*5.5225*	*0.750*	*5.933*	*Cum*
	Floor	*1*	*3.575*	*5.5225*	*0.750*	*14.807*	*Cum*
		1	*0.084*	*1.350*	*0.150*	*0.017*	*Cum*
		1	*4.618*	*1.350*	*0.750*	*4.676*	*Cum*
		1	*0.64*	*1.350*	*0.000*	*0.864*	*Cum*
		1	*3.742*	*1.350*	*1.450*	*7.325*	*Cum*
		1	*1.528*	*1.350*	*0.450*	*0.928*	*Cum*
		1	*0.135*	*1.350*	*0.450*	*0.082*	*Cum*
		1	*1.794*	*1.350*	*0.900*	*2.180*	*Cum*
		1	*0.9875*	*1.350*	*1.700*	*2.266*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.350*	*0.600*	*1.782*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.350*	*0.850*	*1.200*	*1.377*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*3.040*	*8.208*	*Cum*
						299.10	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.624*	*2.600*	*0.150*	*0.24*	*Cum*
		1	*1.454*	*1.671*	*0.150*	*0.36*	*Cum*
		1	*1.270*	*1.350*	*0.150*	*0.26*	*Cum*
		1	*3.319*	*1.350*	*0.150*	*0.67*	*Cum*
		1	*3.771*	*1.350*	*0.150*	*0.76*	*Cum*
		1	*1.029*	*1.350*	*0.150*	*0.21*	*Cum*
		1	*1.640*	*1.350*	*0.150*	*0.33*	*Cum*
		1	*1.285*	*1.350*	*0.150*	*0.26*	*Cum*
		1	*0.692*	*1.350*	*0.150*	*0.14*	*Cum*
	PCC Below Abutment						
	Section A-A	*1*	*5.525*	*6.652*	*0.300*	*11.03*	*Cum*
	Section B-B	*2*	*5.250*	*2.055*	*0.300*	*6.47*	*Cum*
	Section C-C	*1*	*0.500*	*7.604*	*0.300*	*1.14*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.014*	*1.336*	*0.300*	*1.21*	*Cum*
	Left Bank Sec a to d	*1*	*3.429*	*2.843*	*0.150*	*1.46*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.511*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.750*	*2.039*	*0.300*	*3.36*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.350*	*0.850*	*0.300*	*0.34*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.350*	*0.450*	*0.900*	*0.55*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*16*	*0.600*	*0.600*	*0.300*	*1.73*	*Cum*
	TOTAL					**31.76**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*5.53*	*0.82*	*0.50*	*4.53*	*Cum*
		2	*5.53*	*1.06*	*0.81*	*9.51*	*Cum*
		2	*5.53*	*1.31*	*0.80*	*11.55*	*Cum*
	Section B-B	*2*	*5.25*	*1.24*	*1.44*	*18.74*	*Cum*
		2	*5.25*	*1.66*	*2.17*	*37.71*	*Cum*
	Section C-C	*2*	*0.50*	*0.82*	*0.50*	*0.41*	*Cum*
		2	*0.50*	*0.41*	*1.32*	*0.54*	*Cum*
		2	*0.50*	*1.58*	*0.95*	*1.50*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.01*	*0.45*	*0.50*	*0.68*	*Cum*
		1	*3.01*	*0.69*	*0.81*	*1.69*	*Cum*
		1	*3.01*	*0.94*	*1.20*	*3.39*	*Cum*
	Left Bank						
	Section a-a	*1*		2.745	*0.50*	*1.37*	*Sqm*
		1		*2.60*	*0.20*	*0.52*	*Sqm*
		1		*1.46*	*1.31*	*1.92*	*Sqm*
						3.81	***Sqm***
	Section b-b	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*2.31*	*0.20*	*0.46*	*Sqm*
		1		*1.39*	*1.31*	*1.83*	*Sqm*
						3.66	***Sqm***
	Section c-c	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*1.82*	*0.20*	*0.36*	*Sqm*
		1		*1.15*	*1.31*	*1.51*	*Sqm*
						3.24	***Sqm***
	Section d-d	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.31*	*0.63*	*Sqm*
						2.10	***Sqm***
	Bottom Key	*1*	*3.43*	*1.43*	*0.70*	*3.44*	*Cum*
	Top Stem Area	*1*	*3.43*	*3.20*		*10.98*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*1.27*	*0.68*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*1.64*	*0.90*	*8.11*	*Cum*
		2	*2.75*	*1.29*	*1.27*	*8.99*	*Cum*
		2	*2.75*	*0.75*	*0.50*	*2.05*	*Cum*
	TOTAL					**125.32**	**Cum**
	Floor						
	U/S key	*1*	*1.43*	*5.52*	*0.60*	*4.75*	*Cum*
	Floor	*1*	*3.58*	*5.52*	*0.60*	*11.85*	*Cum*
		1	*0.08*	*1.35*		*0.11*	*Cum*
		1	*4.62*	*1.35*	*0.60*	*3.74*	*Cum*
		1	*0.64*	*1.35*		*0.86*	*Cum*
		1	*3.74*	*1.35*	*1.00*	*5.05*	*Cum*
		1	*1.53*	*1.35*	*0.45*	*0.93*	*Cum*
		1	*0.14*	*1.35*		*0.18*	*Cum*
		1	*0.45*	*1.35*		*0.61*	*Cum*
		1	*1.79*	*1.35*	*0.75*	*1.82*	*Cum*
	D/S key	*1*	*0.99*	*1.35*	*1.55*	*2.07*	*Cum*
	TOTAL					**157.29**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.72*	*5.52*	*0.20*	*4.11*	*Cum*
		1	*4.76*	*1.35*	*0.20*	*1.29*	*Cum*
		1	*5.08*	*1.35*	*0.20*	*1.37*	*Cum*
		1	*0.95*	*1.35*	*0.20*	*0.26*	*Cum*
		1	*1.80*	*1.35*	*0.20*	*0.48*	*Cum*
	Top Slab	*1*	*5.25*	*4.44*	*0.38*	*8.78*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*4.44*	*0.08*	*1.42*	*Cum*
	Dirt wall	*2*	*5.75*	0.82	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*5.28*	*0.45*	*0.18*	*0.82*	*Cum*
		2	*5.28*	*0.35*	*0.25*	*0.93*	*Cum*
		2	*5.28*	*0.22*	*0.55*	*1.27*	*Cum*
	TOTAL					**27.38**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.900*	*37*		*1.578*	*286.117*	*Kg*
a2	*10*	*5.650*	*22*		*0.616*	*76.626*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.820*	*21*		*0.616*	*62.398*	*Kg*
a5	*10*	*5.550*	*18*		*0.616*	*61.584*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.551*	*74*		*0.888*	*167.575*	*Kg*
x2	*16*	*1.315*	*74*		*1.578*	*153.569*	*Kg*
x3	*10*	*4.340*	*24*		*0.616*	*64.211*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.434*	*15*		*0.888*	*98.988*	*Kg*
	12	*4.279*	*28*		*0.888*	*106.357*	*Kg*
	floor raft						
	12	*6.797*	*15*		*0.888*	*90.506*	*Kg*
	12	*14.435*	*30*		*0.888*	*384.420*	*Kg*
	12	*4.279*	*129*		*0.888*	*490.004*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*125.32*	*0.25%*	*0.31*	*7850*	*2459.40*	*Kg*
	TOTAL Weight of steel (in kg)					4680.01	Kg
	TOTAL Weight of Steel (in Tonne)					**4.68**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		1.94		**1.94**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*5.53*		*0.50*	*11.05*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.53*		*0.81*	*17.90*	*Sqm*
		4		*1.06*	*0.81*	*3.44*	*Sqm*
		4	*5.53*		*0.80*	*17.68*	*Sqm*
		4		*1.31*	*0.80*	*4.18*	*Sqm*
	Section B-B	*4*	*5.25*		*1.44*	*30.28*	*Sqm*
		4		*1.24*	*1.44*	*7.14*	*Sqm*
		4	*5.25*		*2.17*	*45.57*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.66	2.17	14.37	Sqm
	Section C-C	4	0.50		0.50	1.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	0.50		1.32	2.64	Sqm
		4		0.41	1.32	2.16	Sqm
		4	0.50		0.95	1.90	Sqm
		4		1.58	0.95	6.01	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.01		0.50	3.01	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.01		0.81	4.88	Sqm
		2		0.69	0.81	1.12	Sqm
		2	3.01		1.20	7.23	Sqm
		2		0.94	1.20	2.25	Sqm
	Left Bank						
	Bottom Key	2	3.43		0.70	4.80	Sqm
		2		1.43	0.70	2.01	Sqm
	Section a-a	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.60	0.20	1.04	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.46	1.31	3.83	Sqm
	Section b-b	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.31	0.20	0.92	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.39	1.31	3.65	Sqm
	Section c-c	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		1.82	0.20	0.73	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.15	1.31	3.01	Sqm
	Section d-d	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.14		1.31	2.99	Sqm
		2		0.48	1.31	1.26	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.84	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		1.27	2.60	Sqm
		4		0.53	1.27	2.67	Sqm
		4	0.51		0.50	1.02	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.75		0.90	9.90	Sqm
		4		1.64	0.90	5.90	Sqm
		4	2.75		1.27	13.97	Sqm
		4		1.29	1.27	6.54	Sqm
		4	2.75		0.50	5.50	Sqm
		4		0.75	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.43		0.60	1.72	Sqm
		2		5.52	0.60	6.63	Sqm
	Floor	2	3.58		0.60	4.29	Sqm
		2		5.52	0.60	6.63	Sqm
		2	0.08			0.17	Sqm
		2		1.35		2.70	Sqm
		2	4.62		0.60	5.54	Sqm
		2		1.35	0.60	1.62	Sqm
		2	0.64			1.28	Sqm
		2		1.35		2.70	Sqm
		2	3.74		1.00	7.48	Sqm
		2		1.35	1.00	2.70	Sqm
		2	1.53		0.45	1.38	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.35*	*0.45*	*1.22*	*Sqm*
		2	*0.14*			*0.27*	*Sqm*
		2		*1.35*		*2.70*	*Sqm*
		2	*0.45375*			*0.91*	*Sqm*
		2		*1.35*		*2.70*	*Sqm*
		2	*1.79*		*0.75*	*2.69*	*Sqm*
		2		*1.35*	*0.75*	*2.03*	*Sqm*
	D/S key	*2*	*0.99*		*1.55*	*3.06*	*Sqm*
		2		*1.35*	*1.55*	*4.19*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.35*		*0.30*	*0.81*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.35*		*0.90*	*2.43*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*4.44*	*0.38*	*3.34*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*5.28*		*0.18*	*3.70*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*5.28*		*0.25*	*5.28*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*5.28*		*0.55*	*11.62*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**414.78**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.33*		*10.24*	*Sqm*
	TOTAL					**10.24**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*3.04*	*8.21*	***Cum***
	TOTAL					**8.21**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.35*	*0.15*	*0.45*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.35*	*0.15*	*0.45*	*Cum*
	TOTAL					**0.89**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.97*	*0.48*		*1.89*	*Sqm*
	On Abutment Top	*2*	*11.67*	*0.45*		*1.77*	*Sqm*
	TOTAL					**3.65**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*5.53*	*0.86*		*9.514*	*Cum*
	Section B-B	*2*	*5.25*	*2.46*		*25.830*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section C-C	2	*0.50*	*1.39*		*1.389*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.01*	*0.94*		*2.836*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.93*		*0.952*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.75*	*1.53*		*8.401*	*Cum*
	TOTAL					**48.92**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF AMAR BIGHA MR OFFTAKING FROM RD-12+810 KM (RT.) AT KAPASIYA DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.80*	*1.66*	*2.731*	*16.311*	*Cum*
	Section B-B	*2*	*5.25*	*1.74*	*2.070*	*37.862*	*Cum*
	Section C-C	*2*	*0.50*	*1.56*	*2.070*	*3.233*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.52*	*1.29*	*2.731*	*12.402*	*Cum*
	Left Bank Sec a to d	1	3.38	2.77	2.080	*19.475*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*1.10*	*2.270*	*2.507*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.69*	*1.76*	*2.270*	*21.504*	*Cum*
	Floor						
	U/S key	*1*	*1.373*	*3.0515*	*0.850*	*3.561*	*Cum*
	Floor	*1*	*3.529*	*3.0515*	*0.650*	*7.000*	*Cum*
		1	*0.418*	*1.850*	*0.450*	*0.348*	*Cum*
		1	*0.718*	*1.850*	*0.350*	*0.465*	*Cum*
		1	*0.418*	*1.850*	*0.300*	*0.773*	*Cum*
		1	*3.079*	*1.850*	*0.950*	*5.411*	*Cum*
		1	*0.900*	*1.850*	*0.200*	*0.333*	*Cum*
		1	*0.135*	*1.850*	*0.200*	*0.050*	*Cum*
		1	*2.015*	*1.850*	*0.650*	*2.423*	*Cum*
		1	*0.725*	*1.850*	*0.650*	*0.872*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*1.850*	*0.600*	*2.442*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.850*	*0.850*	*1.200*	*1.887*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*1.250*	*3.375*	*Cum*
						142.24	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.629*	*3.520*	*0.150*	*0.33*	*Cum*
		1	*1.690*	*2.320*	*0.150*	*0.59*	*Cum*
		1	*1.269*	*1.850*	*0.150*	*0.35*	*Cum*
		1	*0.670*	*1.850*	*0.150*	*0.19*	*Cum*
		1	*3.338*	*1.850*	*0.150*	*0.93*	*Cum*
		1	*0.973*	*1.850*	*0.150*	*0.27*	*Cum*
		1	*0.946*	*1.850*	*0.150*	*0.26*	*Cum*
		1	*0.567*	*1.850*	*0.150*	*0.16*	*Cum*
		1	*0.692*	*1.850*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section A-A	*2*	*1.800*	*1.659*	*0.300*	*1.79*	*Cum*
	Section B-B	*2*	*5.250*	*1.742*	*0.300*	*5.49*	*Cum*
	Section C-C	*2*	*0.500*	*1.562*	*0.300*	*0.47*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.523*	*1.289*	*0.300*	*1.36*	*Cum*
	Left Bank Sec a to d	*1*	*3.379*	*2.771*	*0.150*	*1.40*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.502*	*1.100*	*0.300*	*0.33*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.689*	*1.762*	*0.300*	*2.84*	*Cum*
	Toe Wall Base D/S Portion	*1*	*1.850*	*0.850*	*0.300*	*0.47*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*1.850*	*0.450*	*0.900*	*0.75*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*8*	*0.600*	*0.600*	*0.300*	*0.86*	*Cum*
	TOTAL					**19.93**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*1.80*	*0.82*	*0.50*	*1.48*	*Cum*
		2	*1.80*	*1.04*	*0.73*	*2.74*	*Cum*
		2	*1.80*	*1.26*	*1.20*	*5.44*	*Cum*
	Section B-B	*2*	*5.25*	*1.08*	*0.87*	*9.87*	*Cum*
		2	*5.25*	*1.34*	*0.90*	*12.68*	*Cum*
	Section C-C	*2*	*0.50*	*0.99*	*0.57*	*0.56*	*Cum*
		2	*0.50*	*1.16*	*1.20*	*1.39*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.52*	*0.45*	*0.50*	*0.79*	*Cum*
		1	*3.52*	*0.67*	*0.73*	*1.72*	*Cum*
		1	*3.52*	*0.89*	*1.20*	*3.76*	*Cum*
	Left Bank						
	Section a-a	*1*		2.626	*0.50*	*1.31*	*Sqm*
		1		*2.48*	*0.20*	*0.50*	*Sqm*
		1		*1.40*	*1.23*	*1.73*	*Sqm*
						3.53	***Sqm***
	Section b-b	*1*		*2.63*	*0.50*	*1.31*	*Sqm*
		1		*2.20*	*0.20*	*0.44*	*Sqm*
		1		*1.34*	*1.23*	*1.65*	*Sqm*
						3.40	***Sqm***
	Section c-c	*1*		*2.63*	*0.50*	*1.31*	*Sqm*
		1		*1.74*	*0.20*	*0.35*	*Sqm*
		1		*1.11*	*1.23*	*1.37*	*Sqm*
						3.03	***Sqm***
	Section d-d	*1*		*2.63*	*0.50*	*1.31*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.23*	*0.59*	*Sqm*
						2.00	***Sqm***
	Bottom Key	*1*	*3.38*	*1.37*	*0.70*	*3.25*	*Cum*
	Top Stem Area	*1*	*3.38*	*2.99*		*10.11*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.50*	*0.70*	*0.90*	*0.63*	*Cum*
		2	*0.50*	*0.53*	*0.57*	*0.30*	*Cum*
		2	*0.50*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.69*	*1.56*	*0.90*	*7.56*	*Cum*
		2	*2.69*	*1.25*	*0.57*	*3.82*	*Cum*
		2	*2.69*	*0.74*	*0.50*	*2.00*	*Cum*
	TOTAL					**68.28**	**Cum**
	Floor						
	U/S key	*1*	*1.37*	*3.05*	*0.70*	*2.93*	*Cum*
	Floor	*1*	*3.53*	*3.05*	*0.50*	*5.38*	*Cum*
		1	*0.42*	*1.85*	*0.30*	*0.23*	*Cum*
		1	*0.72*	*1.85*	*0.20*	*0.27*	*Cum*
		1	*0.42*	*1.85*	*0.30*	*0.77*	*Cum*
		1	*3.08*	*1.85*	*0.50*	*2.85*	*Cum*
		1	*0.90*	*1.85*	*0.20*	*0.33*	*Cum*
		1	*0.14*	*1.85*		*0.25*	*Cum*
		1	*0.53*	*1.85*	*0.30*	*0.98*	*Cum*
		1	*2.02*	*1.85*	*0.50*	*1.86*	*Cum*
	D/S key	*1*	*0.73*	*1.85*	*0.50*	*0.67*	*Cum*
	TOTAL					**84.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.60*	*3.05*	*0.20*	*2.20*	*Cum*
		1	*0.67*	*1.85*	*0.20*	*0.25*	*Cum*
		1	*3.08*	*1.85*	*0.20*	*1.14*	*Cum*
		1	*0.95*	*1.85*	*0.20*	*0.35*	*Cum*
		1	*2.02*	*1.85*	*0.20*	*0.75*	*Cum*
	Top Slab	*1*	*5.25*	*2.65*	*0.38*	*5.24*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*2.65*	*0.08*	*0.84*	*Cum*
	Dirt wall	*2*	*5.75*	*0.82*	*0.50*	*4.72*	*Cum*
		2	*5.75*	*0.40*	*0.43*	*1.96*	*Cum*
	Parapet	*2*	*3.49*	*0.45*	*0.18*	*0.54*	*Cum*
		2	*3.49*	*0.35*	*0.25*	*0.61*	*Cum*
		2	*3.49*	*0.22*	*0.55*	*0.84*	*Cum*
	TOTAL					**19.43**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*3.110*	*29*		*1.578*	*142.332*	*Kg*
a2	*10*	*5.650*	*13*		*0.616*	*45.279*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*3.030*	*9*		*0.616*	*16.811*	*Kg*
a5	*10*	*5.550*	*9*		*0.616*	*30.792*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.501*	*42*		*0.888*	*93.246*	*Kg*
x2	*16*	*1.265*	*42*		*1.578*	*83.847*	*Kg*
x3	*10*	*2.550*	*24*		*0.616*	*37.727*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.043*	*8*		*0.888*	*50.017*	*Kg*
	12	*2.550*	*27*		*0.888*	*61.118*	*Kg*
	floor raft						
	12	*3.394*	*8*		*0.888*	*24.103*	*Kg*
	12	*8.223*	*16*		*0.888*	*116.793*	*Kg*
	12	*2.550*	*69*		*0.888*	*156.191*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*68.28*	*0.25%*	*0.17*	*7850*	*1339.90*	*Kg*
	TOTAL Weight of steel (in kg)					2376.42	Kg
	TOTAL Weight of Steel (in Tonne)					**2.38**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		2.56		**2.56**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*1.80*		*0.50*	*3.60*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*1.80*		*0.73*	*5.26*	*Sqm*
		4		*1.04*	*0.73*	*3.04*	*Sqm*
		4	*1.80*		*1.20*	*8.64*	*Sqm*
		4		*1.26*	*1.20*	*6.04*	*Sqm*
	Section B-B	*4*	*5.25*		*0.87*	*18.27*	*Sqm*
		4		*1.08*	*0.87*	*3.76*	*Sqm*
		4	*5.25*		*0.90*	*18.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.34	0.90	4.83	Sqm
	Section C-C	4	0.50		0.57	1.14	Sqm
		4		0.99	0.57	2.26	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.16	1.20	5.58	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.52		0.50	3.52	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.52		0.73	5.15	Sqm
		2		0.67	0.73	0.98	Sqm
		2	3.52		1.20	8.46	Sqm
		2		0.89	1.20	2.13	Sqm
	Left Bank						
	Bottom Key	2	3.38		0.70	4.73	Sqm
		2		1.37	0.70	1.92	Sqm
	Section a-a	2	1.13		0.50	1.13	Sqm
		2		2.63	0.50	2.63	Sqm
		2	1.13		0.20	0.45	Sqm
		2		2.48	0.20	0.99	Sqm
		2	1.13		1.23	2.77	Sqm
		2		1.40	1.23	3.45	Sqm
	Section b-b	2	1.13		0.50	1.13	Sqm
		2		2.63	0.50	2.63	Sqm
		2	1.13		0.20	0.45	Sqm
		2		2.20	0.20	0.88	Sqm
		2	1.13		1.23	2.77	Sqm
		2		1.34	1.23	3.30	Sqm
	Section c-c	2	1.13		0.50	1.13	Sqm
		2		2.63	0.50	2.63	Sqm
		2	1.13		0.20	0.45	Sqm
		2		1.74	0.20	0.70	Sqm
		2	1.13		1.23	2.77	Sqm
		2		1.11	1.23	2.73	Sqm
	Section d-d	2	1.13		0.50	1.13	Sqm
		2		2.63	0.50	2.63	Sqm
		2	1.13		0.20	0.45	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.13		1.23	2.77	Sqm
		2		0.48	1.23	1.18	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.90	1.81	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.50		0.57	1.14	Sqm
		4		0.53	0.57	1.20	Sqm
		4	0.50		0.50	1.00	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.69		0.90	9.68	Sqm
		4		1.56	0.90	5.62	Sqm
		4	2.69		0.57	6.13	Sqm
		4		1.25	0.57	2.84	Sqm
		4	2.69		0.50	5.38	Sqm
		4		0.74	0.50	1.48	Sqm
	Floor						
	U/S key	2	1.37		0.70	1.92	Sqm
		2		3.05	0.70	4.27	Sqm
	Floor	2	3.53		0.50	3.53	Sqm
		2		3.05	0.50	3.05	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.85	0.30	1.11	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.85	0.20	0.74	Sqm
		2	0.42			0.84	Sqm
		2		1.85		3.70	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.85	0.50	1.85	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.85	0.20	0.74	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.85*		*3.70*	*Sqm*
		2	*0.53*		*0.30*	*0.32*	*Sqm*
		2		*1.85*	*0.30*	*1.11*	*Sqm*
		2	*2.02*		*0.50*	*2.02*	*Sqm*
		2		*1.85*	*0.50*	*1.85*	*Sqm*
	D/S key	*2*	*0.73*		*0.50*	*0.73*	*Sqm*
		2		*1.85*	*0.50*	*1.85*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*1.85*		*0.30*	*1.11*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*1.85*		*0.90*	*3.33*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*2.65*	*0.38*	*2.00*	*Sqm*
	Dirt wall	*4*	*5.75*		*0.50*	*11.50*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.75*		*0.43*	*9.78*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*3.49*		*0.18*	*2.44*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*3.49*		*0.25*	*3.49*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*3.49*		*0.55*	*7.68*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**281.16**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.17*		*9.53*	*Sqm*
	TOTAL					**9.53**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*1.25*	*3.38*	***Cum***
	TOTAL					**3.38**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*1.85*	*0.15*	*0.61*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*1.85*	*0.15*	*0.61*	*Cum*
	TOTAL					**1.22**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.85*	*0.48*		*1.77*	*Sqm*
	On Abutment Top	*2*	*5.55*	*0.45*		*1.66*	*Sqm*
	TOTAL					**3.43**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*1.80*	*0.94*		*3.370*	*Cum*
	Section B-B	*2*	*5.25*	*1.25*		*13.136*	*Cum*
	Section C-C	*2*	*0.50*	*1.03*		*1.026*	*Cum*
	U/S Transition wall						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Right Bank (Section D-D)	1	*3.52*	*0.86*		*3.019*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.50*	*0.67*		*0.671*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.69*	*1.11*		*5.964*	*Cum*
	TOTAL					**27.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF AKAUNA MR OFFTAKING FROM RD-18+360 KM (TAIL) AT KAPASIYA DISTRIBUTARY						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section A-A	*1*	*5.26*	*6.65*	*2.410*	*84.293*	*Cum*
	Section B-B	*2*	*5.25*	*2.06*	*3.912*	*84.411*	*Cum*
	Section C-C	*1*	*2.48*	*7.60*	*1.750*	*32.961*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.01*	*1.34*	*2.810*	*11.315*	*Cum*
	Left Bank Sec a to d	1	3.43	2.84	2.160	*21.057*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*1.10*	*2.970*	*3.339*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*2.04*	*2.970*	*33.307*	*Cum*
	Floor						
	U/S key	*1*	*1.4325*	*5.5225*	*0.750*	*5.933*	*Cum*
	Floor	*1*	*3.575*	*5.5225*	*0.750*	*14.807*	*Cum*
		1	*0.084*	*3.640*	*0.150*	*0.046*	*Cum*
		1	*4.618*	*3.640*	*0.750*	*12.607*	*Cum*
		1	*0.64*	*3.640*	*0.000*	*2.330*	*Cum*
		1	*3.742*	*3.640*	*1.450*	*19.750*	*Cum*
		1	*1.528*	*3.640*	*0.450*	*2.503*	*Cum*
		1	*0.135*	*3.640*	*0.450*	*0.221*	*Cum*
		1	*1.794*	*3.640*	*0.900*	*5.877*	*Cum*
		1	*0.9875*	*3.640*	*1.700*	*6.111*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*1*	*2.200*	*3.640*	*0.600*	*4.805*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.640*	*0.850*	*1.200*	*3.713*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*3.000*	*0.900*	*3.040*	*8.208*	*Cum*
						357.59	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor						
		1	*0.626*	*6.368*	*0.150*	*0.60*	*Cum*
		1	*1.769*	*4.485*	*0.150*	*1.19*	*Cum*
		1	*1.250*	*3.640*	*0.150*	*0.68*	*Cum*
		1	*5.655*	*3.640*	*0.150*	*3.09*	*Cum*
		1	*3.852*	*3.640*	*0.150*	*2.10*	*Cum*
		1	*1.763*	*3.640*	*0.150*	*0.96*	*Cum*
		1	*0.153*	*3.640*	*0.150*	*0.08*	*Cum*
		1	*1.741*	*3.640*	*0.150*	*0.95*	*Cum*
		1	*0.692*	*3.640*	*0.150*	*0.38*	*Cum*
	PCC Below Abutment						
	Section A-A	*1*	*5.258*	*6.652*	*0.300*	*10.49*	*Cum*
	Section B-B	*2*	*5.250*	*2.055*	*0.300*	*6.47*	*Cum*
	Section C-C	*1*	*2.477*	*7.604*	*0.300*	*5.65*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.014*	*1.336*	*0.300*	*1.21*	*Cum*
	Left Bank Sec a to d	*1*	*3.429*	*2.843*	*0.150*	*1.46*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.511*	*1.100*	*0.300*	*0.34*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.750*	*2.039*	*0.300*	*3.36*	*Cum*
	Toe Wall Base D/S Portion	*1*	*3.640*	*0.850*	*0.300*	*0.93*	*Cum*
	Toe Wall Stem D/S Portion	*1*	*3.640*	*0.450*	*0.900*	*1.47*	*Cum*
	Toe Wall Base (For Brick Pitching)	*1*	*2.200*	*0.450*	*0.300*	*0.30*	*Cum*
	Toe Wall Stem (For Brick Pitching)	*1*	*2.200*	*0.300*	*0.900*	*0.59*	*Cum*
	D/S Portion C.C. Blocks (600x600x300)mm	*16*	*0.600*	*0.600*	*0.300*	*1.73*	*Cum*
	TOTAL					**44.05**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section A-A	*2*	*5.26*	*0.82*	*0.50*	*4.31*	*Cum*
		2	*5.26*	*1.06*	*0.81*	*9.05*	*Cum*
		2	*5.26*	*1.31*	*0.80*	*10.99*	*Cum*
	Section B-B	*2*	*5.25*	*1.24*	*1.44*	*18.74*	*Cum*
		2	*5.25*	*1.66*	*2.17*	*37.71*	*Cum*
	Section C-C	*2*	*2.48*	*0.82*	*0.50*	*2.03*	*Cum*
		2	*2.48*	*0.41*	*1.32*	*2.68*	*Cum*
		2	*2.48*	*1.58*	*0.95*	*7.45*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	*1*	*3.01*	*0.45*	*0.50*	*0.68*	*Cum*
		1	*3.01*	*0.69*	*0.81*	*1.69*	*Cum*
		1	*3.01*	*0.94*	*1.20*	*3.39*	*Cum*
	Left Bank						
	Section a-a	*1*		2.745	*0.50*	*1.37*	*Sqm*
		1		*2.60*	*0.20*	*0.52*	*Sqm*
		1		*1.46*	*1.31*	*1.92*	*Sqm*
						3.81	***Sqm***
	Section b-b	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*2.31*	*0.20*	*0.46*	*Sqm*
		1		*1.39*	*1.31*	*1.83*	*Sqm*
						3.66	***Sqm***
	Section c-c	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*1.82*	*0.20*	*0.36*	*Sqm*
		1		*1.15*	*1.31*	*1.51*	*Sqm*
						3.24	***Sqm***
	Section d-d	*1*		*2.75*	*0.50*	*1.37*	*Sqm*
		1		*0.48*	*0.20*	*0.10*	*Sqm*
		1		*0.48*	*1.31*	*0.63*	*Sqm*
						2.10	***Sqm***
	Bottom Key	*1*	*3.43*	*1.43*	*0.70*	*3.44*	*Cum*
	Top Stem Area	*1*	*3.43*	*3.20*		*10.98*	*Cum*
	D/S Transition wall						
	Sec 4-4	*2*	*0.51*	*0.70*	*0.90*	*0.64*	*Cum*
		2	*0.51*	*0.53*	*1.27*	*0.68*	*Cum*
		2	*0.51*	*0.35*	*0.50*	*0.18*	*Cum*
	Avg. of Sec 1-1 & 3-3	*2*	*2.75*	*1.64*	*0.90*	*8.11*	*Cum*
		2	*2.75*	*1.29*	*1.27*	*8.99*	*Cum*
		2	*2.75*	*0.75*	*0.50*	*2.05*	*Cum*
	TOTAL					**133.79**	**Cum**
	Floor						
	U/S key	*1*	*1.43*	*5.52*	*0.60*	*4.75*	*Cum*
	Floor	*1*	*3.58*	*5.52*	*0.60*	*11.85*	*Cum*
		1	*0.08*	*3.64*		*0.31*	*Cum*
		1	*4.62*	*3.64*	*0.60*	*10.09*	*Cum*
		1	*0.64*	*3.64*		*2.33*	*Cum*
		1	*3.74*	*3.64*	*1.00*	*13.62*	*Cum*
		1	*1.53*	*3.64*	*0.45*	*2.50*	*Cum*
		1	*0.14*	*3.64*		*0.49*	*Cum*
		1	*0.45*	*3.64*		*1.65*	*Cum*
		1	*1.79*	*3.64*	*0.75*	*4.90*	*Cum*
	D/S key	*1*	*0.99*	*3.64*	*1.55*	*5.57*	*Cum*
	TOTAL					**191.84**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Floor	*1*	*3.72*	*5.52*	*0.20*	*4.11*	*Cum*
		1	*4.76*	*3.64*	*0.20*	*3.47*	*Cum*
		1	*5.08*	*3.64*	*0.20*	*3.70*	*Cum*
		1	*0.95*	*3.64*	*0.20*	*0.69*	*Cum*
		1	*1.80*	*3.64*	*0.20*	*1.31*	*Cum*
	Top Slab	*1*	*5.25*	*4.44*	*0.38*	*8.78*	*Cum*
	75mm Th. Wearing coat on top slab	*1*	*4.25*	*4.44*	*0.08*	*1.42*	*Cum*
	Dirt wall	*2*	*7.73*	0.82	*0.50*	*6.34*	*Cum*
		2	*7.73*	*0.40*	*0.43*	*2.63*	*Cum*
	Parapet	*2*	*5.28*	*0.45*	*0.18*	*0.82*	*Cum*
		2	*5.28*	*0.35*	*0.25*	*0.93*	*Cum*
		2	*5.28*	*0.22*	*0.55*	*1.27*	*Cum*
	TOTAL					**35.44**	**Cum**
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	**Length**	**Nos.**		**Weight per m**	**Quantity**	**Unit**
	Slab Per Span						
a1	*16*	*4.900*	*37*		*1.578*	*286.117*	*Kg*
a2	*10*	*5.650*	*22*		*0.616*	*76.626*	*Kg*
a3	*10*	*5.150*	*2*		*0.616*	*6.350*	*Kg*
a4	*10*	*4.820*	*21*		*0.616*	*62.398*	*Kg*
a5	*10*	*5.550*	*18*		*0.616*	*61.584*	*Kg*
	Dirt Wall						
d1	*12*	*4.460*	*26*		*0.888*	*102.938*	*Kg*
d2	*12*	*5.550*	*14*		*0.888*	*68.975*	*Kg*
	Crash Barrier						
x1	*12*	*2.551*	*74*		*0.888*	*167.575*	*Kg*
x2	*16*	*1.315*	*74*		*1.578*	*153.569*	*Kg*
x3	*10*	*4.340*	*24*		*0.616*	*64.211*	*Kg*
	Floor R/F						
	U/S Key						
	12	*7.434*	*15*		*0.888*	*98.988*	*Kg*
	12	*4.279*	*28*		*0.888*	*106.357*	*Kg*
	floor raft						
	12	*6.797*	*15*		*0.888*	*90.506*	*Kg*
	12	*14.435*	*30*		*0.888*	*384.420*	*Kg*
	12	*4.279*	*129*		*0.888*	*490.004*	*Kg*
	0.25 % Skin Reinforcement for Transition walls	*133.79*	*0.25%*	*0.33*	*7850*	*2625.56*	*Kg*
	TOTAL Weight of steel (in kg)					4846.17	Kg
	TOTAL Weight of Steel (in Tonne)					**4.85**	**MT**
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		5.34		**5.34**	**MT**
	*Separate sheet attached						
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section A-A	*4*	*5.26*		*0.50*	*10.52*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*5.26*		*0.81*	*17.04*	*Sqm*
		4		*1.06*	*0.81*	*3.44*	*Sqm*
		4	*5.26*		*0.80*	*16.83*	*Sqm*
		4		*1.31*	*0.80*	*4.18*	*Sqm*
	Section B-B	*4*	*5.25*		*1.44*	*30.28*	*Sqm*
		4		*1.24*	*1.44*	*7.14*	*Sqm*
		4	*5.25*		*2.17*	*45.57*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.66	2.17	14.37	Sqm
	Section C-C	4	2.48		0.50	4.95	Sqm
		4		0.82	0.50	1.64	Sqm
		4	2.48		1.32	13.08	Sqm
		4		0.41	1.32	2.16	Sqm
		4	2.48		0.95	9.41	Sqm
		4		1.58	0.95	6.01	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.01		0.50	3.01	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.01		0.81	4.88	Sqm
		2		0.69	0.81	1.12	Sqm
		2	3.01		1.20	7.23	Sqm
		2		0.94	1.20	2.25	Sqm
	Left Bank						
	Bottom Key	2	3.43		0.70	4.80	Sqm
		2		1.43	0.70	2.01	Sqm
	Section a-a	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.60	0.20	1.04	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.46	1.31	3.83	Sqm
	Section b-b	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.31	0.20	0.92	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.39	1.31	3.65	Sqm
	Section c-c	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		1.82	0.20	0.73	Sqm
		2	1.14		1.31	2.99	Sqm
		2		1.15	1.31	3.01	Sqm
	Section d-d	2	1.14		0.50	1.14	Sqm
		2		2.75	0.50	2.75	Sqm
		2	1.14		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.14		1.31	2.99	Sqm
		2		0.48	1.31	1.26	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.84	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		1.27	2.60	Sqm
		4		0.53	1.27	2.67	Sqm
		4	0.51		0.50	1.02	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.75		0.90	9.90	Sqm
		4		1.64	0.90	5.90	Sqm
		4	2.75		1.27	13.97	Sqm
		4		1.29	1.27	6.54	Sqm
		4	2.75		0.50	5.50	Sqm
		4		0.75	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.43		0.60	1.72	Sqm
		2		5.52	0.60	6.63	Sqm
	Floor	2	3.58		0.60	4.29	Sqm
		2		5.52	0.60	6.63	Sqm
		2	0.08			0.17	Sqm
		2		3.64		7.28	Sqm
		2	4.62		0.60	5.54	Sqm
		2		3.64	0.60	4.37	Sqm
		2	0.64			1.28	Sqm
		2		3.64		7.28	Sqm
		2	3.74		1.00	7.48	Sqm
		2		3.64	1.00	7.28	Sqm
		2	1.53		0.45	1.38	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.64*	*0.45*	*3.28*	*Sqm*
		2	*0.14*			*0.27*	*Sqm*
		2		*3.64*		*7.28*	*Sqm*
		2	*0.45375*			*0.91*	*Sqm*
		2		*3.64*		*7.28*	*Sqm*
		2	*1.79*		*0.75*	*2.69*	*Sqm*
		2		*3.64*	*0.75*	*5.46*	*Sqm*
	D/S key	*2*	*0.99*		*1.55*	*3.06*	*Sqm*
		2		*3.64*	*1.55*	*11.28*	*Sqm*
	Toe Wall Base D/S Portion	*2*	*3.64*		*0.30*	*2.18*	*Sqm*
		2		*0.85*	*0.30*	*0.51*	*Sqm*
	Toe Wall Stem D/S Portion	*2*	*3.64*		*0.90*	*6.55*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	Top Slab	*2*	*5.25*		*0.38*	*3.95*	*Sqm*
		2		*4.44*	*0.38*	*3.34*	*Sqm*
	Dirt wall	*4*	*7.73*		*0.50*	*15.45*	*Sqm*
		4		*0.82*	*0.50*	*1.64*	*Sqm*
		4	*7.73*		*0.43*	*13.14*	*Sqm*
		4		*0.40*	*0.43*	*0.68*	*Sqm*
	Parapet	*4*	*5.28*		*0.18*	*3.70*	*Sqm*
		4		*0.45*	*0.18*	*0.31*	*Sqm*
		4	*5.28*		*0.25*	*5.28*	*Sqm*
		4		*0.35*	*0.25*	*0.35*	*Sqm*
		4	*5.28*		*0.55*	*11.62*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**485.48**	**Sqm**
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.20*	*2.33*		*10.24*	*Sqm*
	TOTAL					**10.24**	**Sqm**
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**(WRD M-002)**						
	Boulder Apron in D/S Portion	*1*	*3.00*	*0.90*	*3.04*	*8.21*	***Cum***
	TOTAL					**8.21**	**Cum**
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I. (WRD 5.2.2)						
	In D/S Portion below C.C. Blocks	*1*	*2.20*	*3.64*	*0.15*	*1.20*	*Cum*
	In D/S Portion below Stone Chips	*1*	*2.20*	*3.64*	*0.15*	*1.20*	*Cum*
	TOTAL					**2.40**	**Cum**
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	*2*	*1.97*	*0.48*		*1.89*	*Sqm*
	On Abutment Top	*2*	*11.67*	*0.45*		*1.77*	*Sqm*
	TOTAL					**3.65**	**Sqm**
12	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2	1			**2.00**	**No.**
13	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications**. (3.18 PWD NH SOR CHHATISGARH 2025)**	2	5.25	0.40		**4.20**	**Sqm**
14	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. **(RCD 15.22 - (ii))**	2	5.25			**10.50**	**RM**
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compa.cted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Abutment						
	Section A-A	*2*	*5.26*	*0.86*		*9.054*	*Cum*
	Section B-B	*2*	*5.25*	*2.46*		*25.830*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section C-C	2	*2.48*	*1.39*		*6.881*	*Cum*
	U/S Transition wall						
	Right Bank (Section D-D)	1	*3.01*	*0.94*		*2.836*	*Cum*
	D/S Transition wall						
	Sec 4-4	2	*0.51*	*0.93*		*0.952*	*Cum*
	Avg. of Sec 1-1 & 3-3	2	*2.75*	*1.53*		*8.401*	*Cum*
	TOTAL					**53.95**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KAPASIYA DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC OF SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH. 0.720 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	475.00	Cum	**195.20**	92720.59			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	66.14	Cum	**6381.70**	422108.46	21.43	29.76	59.53
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	448.53	Cum	**6914.20**	3101202.58	185.02	192.87	385.73
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	11.23	Cum	**8151.40**	91557.99	6.37	4.38	8.87
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	7.41	MT	**73574.90**	545300.55			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	783.52	Sqm	**578.60**	453343.29			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	55.04	Sqm	**680.10**	37435.42			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	9.59	Cum	**694.61**	6657.84			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	9.59	Cum	**1237.00**	11856.65			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	19.17	Cum	**1377.70**	26410.51			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	19.17	Cum	**516.50**	9901.31			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	19.25	Sqm	**63.20**	1216.32			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	129.43	Cum	**149.30**	19324.17			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	227.01	Cum	**1075.00**	244037.46			
	Coarse Aggregates (100 Km lead)	454.14	Cum	**1398.00**	634881.44			
	Cement (30 km lead)	212.82	MT	**742.00**	157909.76			
	Boulder (60 Km lead)	9.59	Cum	**1159.00**	11109.02			
	Brick (30 km lead)	3302.00	No.	**3.18**	10500.36			
	Steel (30 Km lead)	7.41	MT	**742.00**	5499.33			
	TOTAL (In Rs.)				**5905327.84**			
	TOTAL (In Rs.)				**5905327.84**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	227.01	Cum	**584.64**	132720.06	13272.01		
	Coarse Aggregate	454.14	Cum	**944.26**	428822.00	42882.20		
	Boulders	9.59	Cum	**694.61**	6657.84	665.78		
	Total					56819.99		
	For 1 nos. fall, Total Seigniorage charges					**56819.99**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.5.680							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	202.15	Cum	**195.20**	39459.69			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	28.88	Cum	**6381.70**	184288.03	9.36	12.99	25.99
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	126.30	Cum	**6914.20**	873285.44	52.10	54.31	108.62
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.61	Cum	**8151.40**	13084.95	0.91	0.63	1.27
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.98	MT	**73574.90**	145896.08			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	346.36	Sqm	**578.60**	200405.19			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	48.74	Sqm	**680.10**	33150.79			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.96	Cum	**694.61**	4834.49			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.96	Cum	**1237.00**	8609.52			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	6.96	Cum	**1377.70**	9588.79			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	6.96	Cum	**516.50**	3594.84			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.70	Sqm	**63.20**	1118.94			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	54.77	Cum	**149.30**	8177.87			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	67.93	Cum	**1075.00**	73026.17			
	Coarse Aggregates (100 Km lead)	135.88	Cum	**1398.00**	189958.41			
	Cement (30 km lead)	62.37	MT	**742.00**	46275.99			
	Boulder (60 Km lead)	6.96	Cum	**1159.00**	8066.64			
	Brick (30 km lead)	2924.00	No.	**3.18**	9298.32			
	Steel (30 Km lead)	1.98	MT	**742.00**	1471.36			
	TOTAL (In Rs.)				**1864768.92**			
	TOTAL (In Rs.)				**1864768.92**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	67.93	Cum	**584.64**	39715.37	3971.54		
	Coarse Aggregate	135.88	Cum	**944.26**	128304.81	12830.48		
	Boulders	6.96	Cum	**694.61**	4834.49	483.45		
	Total					17285.47		
	For 1 nos. fall, Total Seigniorage charges					**17285.47**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.9.220 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	380.63	Cum	**195.20**	74299.66			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	35.12	Cum	**6381.70**	224147.50	11.38	15.81	31.61
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	252.48	Cum	**6914.20**	1745666.98	104.15	108.56	217.13
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.78	Cum	**8151.40**	14477.74	1.01	0.69	1.40
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.96	MT	**73574.90**	291641.14			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	530.79	Sqm	**578.60**	307115.29			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	42.85	Sqm	**680.10**	29140.58			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.54	Cum	**694.61**	3844.67			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.54	Cum	**1237.00**	6846.80			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	5.54	Cum	**1377.70**	7625.57			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	5.54	Cum	**516.50**	2858.83			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.62	Sqm	**63.20**	1303.06			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	101.19	Cum	**149.30**	15108.39			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	125.06	Cum	**1075.00**	134442.47			
	Coarse Aggregates (100 Km lead)	250.14	Cum	**1398.00**	349700.32			
	Cement (30 km lead)	116.53	MT	**742.00**	86467.68			
	Boulder (60 Km lead)	5.54	Cum	**1159.00**	6415.07			
	Brick (30 km lead)	2570.00	No.	**3.18**	8172.60			
	Steel (30 Km lead)	3.96	MT	**742.00**	2941.19			
	TOTAL (In Rs.)				**3334570.35**			
	TOTAL (In Rs.)				**3334570.35**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	125.06	Cum	**584.64**	73116.70	7311.67		
	Coarse Aggregate	250.14	Cum	**944.26**	236200.31	23620.03		
	Boulders	5.54	Cum	**694.61**	3844.67	384.47		
	Total					31316.17		
	For 1 nos. fall, Total Seigniorage charges					**31316.17**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.9.380 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	174.50	Cum	**195.20**	34062.97			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	27.38	Cum	**6381.70**	174739.57	8.87	12.32	24.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	128.28	Cum	**6914.20**	886987.71	52.92	55.16	110.33
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.47	Cum	**8151.40**	12015.69	0.84	0.57	1.16
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S.	2.01	MT	**73574.90**	148185.26			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	346.55	Sqm	**578.60**	200514.00			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	42.85	Sqm	**680.10**	29140.58			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.54	Cum	**694.61**	3844.67			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design,	5.54	Cum	**1237.00**	6846.80			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	5.54	Cum	**1377.70**	7625.57			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification	5.54	Cum	**516.50**	2858.83			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.06	Sqm	**63.20**	1078.27			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from	40.84	Cum	**149.30**	6097.19			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	68.06	Cum	**1075.00**	73163.44			
	Coarse Aggregates (100 Km lead)	136.13	Cum	**1398.00**	190313.62			
	Cement (30 km lead)	62.62	MT	**742.00**	46467.67			
	Boulder (60 Km lead)	5.54	Cum	**1159.00**	6415.07			
	Brick (30 km lead)	2570.00	No.	**3.18**	8172.60			
	Steel (30 Km lead)	2.01	MT	**742.00**	1494.44			
	TOTAL (In Rs.)				**1851201.34**			
	TOTAL (In Rs.)				**1851201.34**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	68.06	Cum	**584.64**	39790.02	3979.00		
	Coarse Aggregate	136.13	Cum	**944.26**	128544.73	12854.47		
	Boulders	5.54	Cum	**694.61**	3844.67	384.47		
	Total					17217.94		
	For 1 nos. fall, Total Seigniorage charges					**17217.94**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR NARCHI MINOR							
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH.0.050							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	99.25	Cum	**195.20**	19373.48			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.50	Cum	**6381.70**	86123.59	4.37	6.07	12.15
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	73.18	Cum	**6914.20**	505982.42	30.19	31.47	62.93
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.84	Cum	**8151.40**	6829.20	0.48	0.33	0.66
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.72	MT	**73574.90**	126798.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	223.76	Sqm	**578.60**	129467.11			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.07	Sqm	**680.10**	6169.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.96	Cum	**694.61**	666.83			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.96	Cum	**1237.00**	1187.52			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.96	Cum	**1377.70**	1322.59			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.96	Cum	**516.50**	495.84			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.48	Sqm	**63.20**	725.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	32.97	Cum	**149.30**	4923.04			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	37.87	Cum	**1075.00**	40707.18			
	Coarse Aggregates (100 Km lead)	75.74	Cum	**1398.00**	105888.26			
	Cement (30 km lead)	35.03	MT	**742.00**	25995.50			
	Boulder (60 Km lead)	0.96	Cum	**1159.00**	1112.64			
	Brick (30 km lead)	544.00	No.	**3.18**	1729.92			
	Steel (30 Km lead)	1.72	MT	**742.00**	1278.76			
	TOTAL (In Rs.)				**1077954.92**			
	TOTAL (In Rs.)				**1077954.92**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	37.87	Cum	**584.64**	22138.65	2213.86		
	Coarse Aggregate	75.74	Cum	**944.26**	71520.78	7152.08		
	Boulders	0.96	Cum	**694.61**	666.83	66.68		
	For 1 nos. fall, Total Seigniorage charges					**9432.63**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.0.835							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	68.28	Cum	**195.20**	13329.15			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.58	Cum	**6381.70**	67504.84	3.43	4.76	9.52
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	41.35	Cum	**6914.20**	285895.73	17.06	17.78	35.56
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5386.04	0.37	0.26	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.97	MT	**73574.90**	71645.07			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	155.37	Sqm	**578.60**	89897.95			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.07	Sqm	**680.10**	6169.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.84	Cum	**694.61**	583.47			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.84	Cum	**1237.00**	1039.08			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.84	Cum	**1377.70**	1157.27			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.84	Cum	**516.50**	433.86			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.32	Sqm	**63.20**	588.71			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	17.95	Cum	**149.30**	2680.51			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	22.80	Cum	**1075.00**	24507.67			
	Coarse Aggregates (100 Km lead)	45.60	Cum	**1398.00**	63751.99			
	Cement (30 km lead)	20.86	MT	**742.00**	15476.91			
	Boulder (60 Km lead)	0.84	Cum	**1159.00**	973.56			
	Brick (30 km lead)	544.00	No.	**3.18**	1729.92			
	Steel (30 Km lead)	0.97	MT	**742.00**	722.54			
	TOTAL (In Rs.)				**664651.54**			
	TOTAL (In Rs.)				**664651.54**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	22.80	Cum	**584.64**	13328.53	1332.85		
	Coarse Aggregate	45.60	Cum	**944.26**	43060.41	4306.04		
	Boulders	0.84	Cum	**694.61**	583.47	58.35		
	Total					5697.24		
	For 1 nos. fall, Total Seigniorage charges					**5697.24**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH.1.750							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	128.67	Cum	**195.20**	25116.78			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.41	Cum	**6381.70**	79193.44	4.02	5.58	11.17
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	75.09	Cum	**6914.20**	519193.75	30.98	32.29	64.58
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.06	Cum	**8151.40**	8636.61	0.60	0.41	0.84
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.77	MT	**73574.90**	130109.23			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	238.73	Sqm	**578.60**	138128.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.07	Sqm	**680.10**	6169.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.49	Cum	**694.61**	337.58			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.49	Cum	**1237.00**	601.18			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.49	Cum	**1377.70**	669.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.49	Cum	**516.50**	251.02			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.60	Sqm	**63.20**	1112.00			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	35.85	Cum	**149.30**	5351.74			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	38.29	Cum	**1075.00**	41158.07			
	Coarse Aggregates (100 Km lead)	76.58	Cum	**1398.00**	107064.07			
	Cement (30 km lead)	35.60	MT	**742.00**	26412.55			
	Boulder (60 Km lead)	0.49	Cum	**1159.00**	563.27			
	Brick (30 km lead)	544.00	No.	**3.18**	1729.92			
	Steel (30 Km lead)	1.77	MT	**742.00**	1312.15			
	TOTAL (In Rs.)				**1104288.88**			
	TOTAL (In Rs.)				**1104288.88**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	38.29	Cum	**584.64**	22383.86	2238.39		
	Coarse Aggregate	76.58	Cum	**944.26**	72314.96	7231.50		
	Boulders	0.49	Cum	**694.61**	337.58	33.76		
	Total					9503.64		
	For 1 nos. fall, Total Seigniorage charges					**9503.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.2.250							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	100.14	Cum	**195.20**	19546.53			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.51	Cum	**6381.70**	60675.71	3.08	4.28	8.56
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	49.80	Cum	**6914.20**	344337.67	20.54	21.41	42.83
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.56	Cum	**8151.40**	4536.74	0.32	0.22	0.44
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.17	MT	**73574.90**	86290.54			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	174.38	Sqm	**578.60**	100896.24			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	6.32	Sqm	**680.10**	4296.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.28	Cum	**694.61**	196.92			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.28	Cum	**1237.00**	350.69			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.28	Cum	**1377.70**	390.58			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.28	Cum	**516.50**	146.43			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.92	Sqm	**63.20**	563.57			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	19.04	Cum	**149.30**	2842.24			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.91	Cum	**1075.00**	27853.47			
	Coarse Aggregates (100 Km lead)	51.83	Cum	**1398.00**	72452.72			
	Cement (30 km lead)	23.94	MT	**742.00**	17762.90			
	Boulder (60 Km lead)	0.28	Cum	**1159.00**	328.58			
	Brick (30 km lead)	379.00	No.	**3.18**	1205.22			
	Steel (30 Km lead)	1.17	MT	**742.00**	870.24			
	TOTAL (In Rs.)				**756721.26**			
	TOTAL (In Rs.)				**756721.26**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.91	Cum	**584.64**	15148.14	1514.81		
	Coarse Aggregate	51.83	Cum	**944.26**	48937.20	4893.72		
	Boulders	0.28	Cum	**694.61**	196.92	19.69		
	Total					6428.23		
	For 1 nos. fall, Total Seigniorage charges					**6428.23**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MINOR							
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.0.035							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	102.10	Cum	**195.20**	19929.66			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.88	Cum	**6381.70**	75804.01	3.85	5.35	10.69
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	79.11	Cum	**6914.20**	546974.07	32.63	34.02	68.03
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.79	Cum	**8151.40**	6462.14	0.45	0.31	0.63
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.86	MT	**73574.90**	137070.94			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	248.35	Sqm	**578.60**	143696.92			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.12	Sqm	**680.10**	4839.25			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.40	Cum	**694.61**	280.80			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.40	Cum	**1237.00**	500.06			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.40	Cum	**1377.70**	556.94			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.40	Cum	**516.50**	208.80			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.16	Sqm	**63.20**	768.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.48	Cum	**149.30**	4102.41			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.67	Cum	**1075.00**	42646.56			
	Coarse Aggregates (100 Km lead)	79.35	Cum	**1398.00**	110931.80			
	Cement (30 km lead)	36.93	MT	**742.00**	27402.40			
	Boulder (60 Km lead)	0.40	Cum	**1159.00**	468.53			
	Brick (30 km lead)	426.00	No.	**3.18**	1354.68			
	Steel (30 Km lead)	1.86	MT	**742.00**	1382.36			
	TOTAL (In Rs.)				**1136558.00**			
	TOTAL (In Rs.)				**1136558.00**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.67	Cum	**584.64**	23193.38	2319.34		
	Coarse Aggregate	79.35	Cum	**944.26**	74927.37	7492.74		
	Boulders	0.40	Cum	**694.61**	280.80	28.08		
	For 1 nos. fall, Total Seigniorage charges					**9840.15**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.350							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	79.15	Cum	**195.20**	15449.92			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.81	Cum	**6381.70**	56236.41	2.86	3.97	7.93
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	44.72	Cum	**6914.20**	309219.01	18.45	19.23	38.46
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.61	Cum	**8151.40**	5004.06	0.35	0.24	0.48
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.05	MT	**73574.90**	77489.85			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	162.81	Sqm	**578.60**	94201.59			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.94	Sqm	**680.10**	4037.75			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.92	Sqm	**63.20**	626.65			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	22.16	Cum	**149.30**	3308.99			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.44	Cum	**1075.00**	25193.13			
	Coarse Aggregates (100 Km lead)	46.88	Cum	**1398.00**	65534.16			
	Cement (30 km lead)	21.65	MT	**742.00**	16065.16			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	356.00	No.	**3.18**	1132.08			
	Steel (30 Km lead)	1.05	MT	**742.00**	781.48			
	TOTAL (In Rs.)				**686467.07**			
	TOTAL (In Rs.)				**686467.07**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.44	Cum	**584.64**	13701.31	1370.13		
	Coarse Aggregate	46.88	Cum	**944.26**	44264.15	4426.42		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					5810.61		
	For 1 nos. fall, Total Seigniorage charges					**5810.61**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.2.250							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	33.88	Cum	**195.20**	6613.21			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.27	Cum	**6381.70**	20847.11	1.06	1.47	2.94
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.17	Cum	**6914.20**	132540.01	7.91	8.24	16.49
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.36	Cum	**8151.40**	2969.23	0.21	0.14	0.29
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.45	MT	**73574.90**	33214.34			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	86.34	Sqm	**578.60**	49953.82			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.92	Sqm	**63.20**	374.16			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.41	Cum	**149.30**	1405.20			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	9.85	Cum	**1075.00**	10593.97			
	Coarse Aggregates (100 Km lead)	19.71	Cum	**1398.00**	27559.26			
	Cement (30 km lead)	9.17	MT	**742.00**	6805.82			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (30 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.45	MT	**742.00**	334.97			
	TOTAL (In Rs.)				**304388.49**			
	TOTAL (In Rs.)				**304388.49**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	9.85	Cum	**584.64**	5761.54	576.15		
	Coarse Aggregate	19.71	Cum	**944.26**	18614.53	1861.45		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2437.61		
	For 1 nos. fall, Total Seigniorage charges					**2437.61**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.371 METER AT CH.2.500							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	46.59	Cum	**195.20**	9093.81			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	4.00	Cum	**6381.70**	25526.32	1.30	1.80	3.60
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.59	Cum	**6914.20**	190761.51	11.38	11.86	23.73
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.46	Cum	**8151.40**	3788.81	0.26	0.18	0.37
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.65	MT	**73574.90**	47804.57			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	121.84	Sqm	**578.60**	70498.55			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.72	Sqm	**63.20**	487.97			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.56	Cum	**149.30**	1875.25			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	13.84	Cum	**1075.00**	14883.23			
	Coarse Aggregates (100 Km lead)	27.69	Cum	**1398.00**	38716.73			
	Cement (30 km lead)	12.94	MT	**742.00**	9601.72			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (30 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.65	MT	**742.00**	482.11			
	TOTAL (In Rs.)				**424697.97**			
	TOTAL (In Rs.)				**424697.97**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	13.84	Cum	**584.64**	8094.26	809.43		
	Coarse Aggregate	27.69	Cum	**944.26**	26150.69	2615.07		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					3424.49		
	For 1 nos. fall, Total Seigniorage charges					**3424.49**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.2.750							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	20.20	Cum	**195.20**	3943.60			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.90	Cum	**6381.70**	18479.65	0.94	1.30	2.61
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	16.36	Cum	**6914.20**	113103.59	6.75	7.03	14.07
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.36	Cum	**8151.40**	2969.23	0.21	0.14	0.29
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.39	MT	**73574.90**	28343.60			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	76.02	Sqm	**578.60**	43984.05			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.92	Sqm	**63.20**	374.16			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	4.70	Cum	**149.30**	701.74			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	8.48	Cum	**1075.00**	9115.08			
	Coarse Aggregates (100 Km lead)	16.96	Cum	**1398.00**	23712.79			
	Cement (30 km lead)	7.89	MT	**742.00**	5856.23			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (30 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.39	MT	**742.00**	285.84			
	TOTAL (In Rs.)				**262046.96**			
	TOTAL (In Rs.)				**262046.96**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	8.48	Cum	**584.64**	4957.25	495.72		
	Coarse Aggregate	16.96	Cum	**944.26**	16016.48	1601.65		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2097.37		
	For 1 nos. fall, Total Seigniorage charges					**2097.37**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR YARI MINOR								
AOC OF SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.0.000								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	35.45	Cum	**195.20**	6920.37			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.25	Cum	**6381.70**	71802.52	3.65	5.06	10.13
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	29.15	Cum	**6914.20**	201542.68	12.02	12.53	25.07
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.72	Cum	**8151.40**	5835.26	0.41	0.28	0.57
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.69	MT	**73574.90**	50506.31			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	122.50	Sqm	**578.60**	70880.61			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.18	Sqm	**680.10**	6243.32			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.32	Cum	**694.61**	916.89			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.32	Cum	**1237.00**	1632.84			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.32	Cum	**1377.70**	1818.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.32	Cum	**516.50**	681.78			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.28	Sqm	**63.20**	586.32			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	5.68	Cum	**149.30**	848.11			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.88	Cum	**1075.00**	19217.12			
	Coarse Aggregates (100 Km lead)	35.76	Cum	**1398.00**	49992.39			
	Cement (30 km lead)	16.08	MT	**742.00**	11927.89			
	Boulder (60 Km lead)	1.32	Cum	**1159.00**	1529.88			
	Brick (30 km lead)	550.00	No.	**3.18**	1749.00			
	Steel (30 Km lead)	0.69	MT	**742.00**	509.35			
	TOTAL (In Rs.)				**516318.59**			
	TOTAL (In Rs.)				**516318.59**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.88	Cum	**584.64**	10451.25	1045.13		
	Coarse Aggregate	35.76	Cum	**944.26**	33766.68	3376.67		
	Boulders	1.32	Cum	**694.61**	916.89	91.69		
	Total					4513.48		
	For 1 nos. fall, Total Seigniorage charges					**4513.48**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.100							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	91.11	Cum	**195.20**	17784.65			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.39	Cum	**6381.70**	72662.26	3.69	5.12	10.25
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	48.28	Cum	**6914.20**	333841.16	19.92	20.76	41.52
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.70	Cum	**8151.40**	5722.28	0.40	0.27	0.55
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.14	MT	**73574.90**	83660.13			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	171.84	Sqm	**578.60**	99428.47			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.18	Sqm	**680.10**	6243.32			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.94	Cum	**694.61**	650.15			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.94	Cum	**1237.00**	1157.83			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.94	Cum	**1377.70**	1289.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.94	Cum	**516.50**	483.44			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.50	Sqm	**63.20**	600.65			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	26.81	Cum	**149.30**	4002.16			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	26.16	Cum	**1075.00**	28121.31			
	Coarse Aggregates (100 Km lead)	52.33	Cum	**1398.00**	73151.39			
	Cement (30 km lead)	24.00	MT	**742.00**	17810.98			
	Boulder (60 Km lead)	0.94	Cum	**1159.00**	1084.82			
	Brick (30 km lead)	550.00	No.	**3.18**	1749.00			
	Steel (30 Km lead)	1.14	MT	**742.00**	843.71			
	TOTAL (In Rs.)				**761464.66**			
	TOTAL (In Rs.)				**761464.66**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	26.16	Cum	**584.64**	15293.81	1529.38		
	Coarse Aggregate	52.33	Cum	**944.26**	49409.11	4940.91		
	Boulders	0.94	Cum	**694.61**	650.15	65.02		
	Total					6535.31		
	For 1 nos. fall, Total Seigniorage charges					**6535.31**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.600							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	46.50	Cum	**195.20**	9076.82			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.90	Cum	**6381.70**	69548.25	3.53	4.90	9.81
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.91	Cum	**6914.20**	227564.17	13.58	14.15	28.30
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.68	Cum	**8151.40**	5534.84	0.38	0.26	0.54
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.78	MT	**73574.90**	57027.26			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	136.96	Sqm	**578.60**	79245.83			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.18	Sqm	**680.10**	6243.32			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.94	Cum	**694.61**	650.15			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.94	Cum	**1237.00**	1157.83			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.94	Cum	**1377.70**	1289.53			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.94	Cum	**516.50**	483.44			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.37	Sqm	**63.20**	592.06			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	8.39	Cum	**149.30**	1253.00			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	19.32	Cum	**1075.00**	20770.46			
	Coarse Aggregates (100 Km lead)	38.65	Cum	**1398.00**	54032.00			
	Cement (30 km lead)	17.49	MT	**742.00**	12979.37			
	Boulder (60 Km lead)	0.94	Cum	**1159.00**	1084.82			
	Brick (30 km lead)	550.00	No.	**3.18**	1749.00			
	Steel (30 Km lead)	0.78	MT	**742.00**	575.12			
	TOTAL (In Rs.)				**562034.69**			
	TOTAL (In Rs.)				**562034.69**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.32	Cum	**584.64**	11296.04	1129.60		
	Coarse Aggregate	38.65	Cum	**944.26**	36495.18	3649.52		
	Boulders	0.94	Cum	**694.61**	650.15	65.02		
	Total					4844.14		
	For 1 nos. fall, Total Seigniorage charges					**4844.14**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH.3.170							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	98.13	Cum	**195.20**	19155.70			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.63	Cum	**6381.70**	74227.02	3.77	5.23	10.47
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	75.93	Cum	**6914.20**	525009.27	31.32	32.65	65.30
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.77	Cum	**8151.40**	6289.01	0.44	0.30	0.61
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.79	MT	**73574.90**	131566.59			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	244.16	Sqm	**578.60**	141270.29			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.20	Sqm	**680.10**	5579.54			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.36	Cum	**694.61**	250.06			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.36	Cum	**1237.00**	445.32			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.36	Cum	**1377.70**	495.97			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.36	Cum	**516.50**	185.94			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.19	Sqm	**63.20**	770.44			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	25.96	Cum	**149.30**	3875.34			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	38.19	Cum	**1075.00**	41049.65			
	Coarse Aggregates (100 Km lead)	76.38	Cum	**1398.00**	106778.07			
	Cement (30 km lead)	35.53	MT	**742.00**	26361.73			
	Boulder (60 Km lead)	0.36	Cum	**1159.00**	417.24			
	Brick (30 km lead)	492.00	No.	**3.18**	1564.56			
	Steel (30 Km lead)	1.79	MT	**742.00**	1326.84			
	TOTAL (In Rs.)				**1097795.98**			
	TOTAL (In Rs.)				**1097795.98**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	38.19	Cum	**584.64**	22324.90	2232.49		
	Coarse Aggregate	76.38	Cum	**944.26**	72121.79	7212.18		
	Boulders	0.36	Cum	**694.61**	250.06	25.01		
	Total					9469.67		
	For 1 nos. fall, Total Seigniorage charges					**9469.67**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR FOR NEPUA MINOR								
AOC OF SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH.0.000								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	79.53	Cum	**195.20**	15524.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.65	Cum	**6381.70**	74317.42	3.77	5.24	10.48
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	51.35	Cum	**6914.20**	355019.80	21.18	22.08	44.16
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.72	Cum	**8151.40**	5882.21	0.41	0.28	0.57
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.21	MT	**73574.90**	88967.47			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	174.93	Sqm	**578.60**	101213.80			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.24	Sqm	**680.10**	4924.94			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.82	Cum	**694.61**	568.89			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.82	Cum	**1237.00**	1013.10			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.82	Cum	**1377.70**	1128.34			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.82	Cum	**516.50**	423.01			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.57	Sqm	**63.20**	604.98			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	22.42	Cum	**149.30**	3347.34			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	27.60	Cum	**1075.00**	29670.91			
	Coarse Aggregates (100 Km lead)	55.21	Cum	**1398.00**	77182.05			
	Cement (30 km lead)	25.36	MT	**742.00**	18819.11			
	Boulder (60 Km lead)	0.82	Cum	**1159.00**	949.22			
	Brick (30 km lead)	434.00	No.	**3.18**	1380.12			
	Steel (30 Km lead)	1.21	MT	**742.00**	897.23			
	TOTAL (In Rs.)				**793012.19**			
	TOTAL (In Rs.)				**793012.19**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Aggregate	27.60	Cum	**584.64**	16136.56	1613.66		
		55.21	Cum	**944.26**	52131.56	5213.16		
	Boulders	0.82	Cum	**694.61**	568.89	56.89		
	Total					6883.70		
	For 1 nos. fall, Total Seigniorage charges					**6883.70**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.0.750							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	54.18	Cum	**195.20**	10575.12			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.45	Cum	**6381.70**	47555.28	2.41	3.35	6.71
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	28.21	Cum	**6914.20**	195026.42	11.64	12.13	24.26
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.52	Cum	**8151.40**	4233.39	0.29	0.20	0.41
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.66	MT	**73574.90**	48873.35			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	119.98	Sqm	**578.60**	69423.23			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.15	Sqm	**680.10**	3505.24			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.18	Sqm	**63.20**	517.10			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	25.52	Cum	**149.30**	3809.41			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.68	Cum	**1075.00**	16861.08			
	Coarse Aggregates (100 Km lead)	31.37	Cum	**1398.00**	43861.74			
	Cement (30 km lead)	14.34	MT	**742.00**	10643.32			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	309.00	No.	**3.18**	982.62			
	Steel (30 Km lead)	0.66	MT	**742.00**	492.89			
	TOTAL (In Rs.)				**468547.00**			
	TOTAL (In Rs.)				**468547.00**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.68	Cum	**584.64**	9169.92	916.99		
	Coarse Aggregate	31.37	Cum	**944.26**	29625.82	2962.58		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					3893.64		
	For 1 nos. fall, Total Seigniorage charges					**3893.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH.1.250							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	225.96	Cum	**195.20**	44107.62			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.65	Cum	**6381.70**	99868.42	5.07	7.04	14.08
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	99.15	Cum	**6914.20**	685556.27	40.90	42.64	85.27
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	9.37	Cum	**8151.40**	76362.40	5.31	3.65	7.40
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.70	MT	**73574.90**	198995.30			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	340.25	Sqm	**578.60**	196870.30			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.16	Sqm	**680.10**	3507.28			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.85	Sqm	**63.20**	432.74			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	37.46	Cum	**149.30**	5592.15			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.33	Cum	**1075.00**	57330.81			
	Coarse Aggregates (100 Km lead)	106.76	Cum	**1398.00**	149244.41			
	Cement (30 km lead)	51.28	MT	**742.00**	38051.37			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	309.00	No.	**3.18**	982.62			
	Steel (30 Km lead)	2.70	MT	**742.00**	2006.86			
	TOTAL (In Rs.)				**1582272.77**			
	TOTAL (In Rs.)				**1582272.77**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.33	Cum	**584.64**	31179.43	3117.94		
	Coarse Aggregate	106.76	Cum	**944.26**	100805.10	10080.51		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					13212.52		
	For 1 nos. fall, Total Seigniorage charges					**13212.52**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.400							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	65.84	Cum	**195.20**	12851.38			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.45	Cum	**6381.70**	47555.28	2.41	3.35	6.71
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.88	Cum	**6914.20**	192743.74	11.50	11.99	23.97
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.52	Cum	**8151.40**	4233.39	0.29	0.20	0.41
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.66	MT	**73574.90**	48301.31			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	119.27	Sqm	**578.60**	69007.53			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.15	Sqm	**680.10**	3505.24			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.18	Sqm	**63.20**	517.10			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	30.16	Cum	**149.30**	4502.31			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.54	Cum	**1075.00**	16708.47			
	Coarse Aggregates (100 Km lead)	31.09	Cum	**1398.00**	43464.82			
	Cement (30 km lead)	14.21	MT	**742.00**	10542.27			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	309.00	No.	**3.18**	982.62			
	Steel (30 Km lead)	0.66	MT	**742.00**	487.12			
	TOTAL (In Rs.)				**467589.40**			
	TOTAL (In Rs.)				**467589.40**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.54	Cum	**584.64**	9086.92	908.69		
	Coarse Aggregate	31.09	Cum	**944.26**	29357.72	2935.77		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					3858.53		
	For 1 nos. fall, Total Seigniorage charges					**3858.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.1.600							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	103.52	Cum	**195.20**	20207.86			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.91	Cum	**6381.70**	56885.56	2.89	4.01	8.02
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.24	Cum	**6914.20**	319706.51	19.07	19.88	39.77
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.68	Cum	**8151.40**	5513.20	0.38	0.26	0.53
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.09	MT	**73574.90**	80118.01			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	171.57	Sqm	**578.60**	99269.18			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.15	Sqm	**680.10**	3505.24			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.01	Sqm	**63.20**	695.64			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	34.54	Cum	**149.30**	5157.04			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	24.16	Cum	**1075.00**	25969.67			
	Coarse Aggregates (100 Km lead)	48.32	Cum	**1398.00**	67554.76			
	Cement (30 km lead)	22.35	MT	**742.00**	16580.15			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	309.00	No.	**3.18**	982.62			
	Steel (30 Km lead)	1.09	MT	**742.00**	807.99			
	TOTAL (In Rs.)				**715140.24**			
	TOTAL (In Rs.)				**715140.24**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	24.16	Cum	**584.64**	14123.64	1412.36		
	Coarse Aggregate	48.32	Cum	**944.26**	45628.94	4562.89		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					5989.32		
	For 1 nos. fall, Total Seigniorage charges					**5989.32**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR FOR AMAR BIGHA MINOR								
AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.650								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	44.80	Cum	**195.20**	8744.31			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.27	Cum	**6381.70**	59167.20	3.00	4.17	8.34
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.38	Cum	**6914.20**	237698.31	14.18	14.78	29.57
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.61	Cum	**8151.40**	5004.55	0.35	0.24	0.49
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.81	MT	**73574.90**	59566.86			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	134.64	Sqm	**578.60**	77900.59			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4882.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.59	Cum	**694.61**	412.08			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.59	Cum	**1237.00**	733.85			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.59	Cum	**1377.70**	817.32			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.59	Cum	**516.50**	306.41			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.91	Sqm	**63.20**	562.83			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.24	Cum	**149.30**	4066.34			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	19.19	Cum	**1075.00**	20633.79			
	Coarse Aggregates (100 Km lead)	38.39	Cum	**1398.00**	53675.64			
	Cement (30 km lead)	17.53	MT	**742.00**	13009.54			
	Boulder (60 Km lead)	0.59	Cum	**1159.00**	687.58			
	Brick (30 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	0.81	MT	**742.00**	600.73			
	TOTAL (In Rs.)				**561014.83**			
	TOTAL (In Rs.)				**561014.83**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.19	Cum	**584.64**	11221.71	1122.17		
	Coarse Aggregate	38.39	Cum	**944.26**	36254.47	3625.45		
	Boulders	0.59	Cum	**694.61**	412.08	41.21		
	Total					4788.83		
	For 1 nos. fall, Total Seigniorage charges					**4788.83**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH.2.450							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	107.45	Cum	**195.20**	20973.61			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.80	Cum	**6381.70**	68922.20	3.50	4.86	9.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	64.06	Cum	**6914.20**	442897.91	26.42	27.54	55.09
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.88	Cum	**8151.40**	7193.20	0.50	0.34	0.70
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.51	MT	**73574.90**	110989.60			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	216.60	Sqm	**578.60**	125322.72			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.42	Sqm	**680.10**	3688.86			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.34	Cum	**694.61**	234.43			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.34	Cum	**1237.00**	417.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.34	Cum	**1377.70**	464.97			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.34	Cum	**516.50**	174.32			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.00	Sqm	**63.20**	885.05			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	44.75	Cum	**149.30**	6680.50			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	32.75	Cum	**1075.00**	35204.47			
	Coarse Aggregates (100 Km lead)	65.51	Cum	**1398.00**	91576.70			
	Cement (30 km lead)	30.42	MT	**742.00**	22573.68			
	Boulder (60 Km lead)	0.34	Cum	**1159.00**	391.16			
	Brick (30 km lead)	325.00	No.	**3.18**	1033.50			
	Steel (30 Km lead)	1.51	MT	**742.00**	1119.33			
	TOTAL (In Rs.)				**951921.12**			
	TOTAL (In Rs.)				**951921.12**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	32.75	Cum	**584.64**	19145.99	1914.60		
	Coarse Aggregate	65.51	Cum	**944.26**	61854.23	6185.42		
	Boulders	0.34	Cum	**694.61**	234.43	23.44		
	Total					8123.47		
	For 1 nos. fall, Total Seigniorage charges					**8123.47**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR CHATARA SUB-DY.								
AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.0.400								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	81.42	Cum	**195.20**	15893.78			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.92	Cum	**6381.70**	88818.35	4.51	6.26	12.53
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.25	Cum	**6914.20**	381981.04	22.79	23.76	47.51
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.85	Cum	**8151.40**	6903.54	0.48	0.33	0.67
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.30	MT	**73574.90**	95723.92			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	182.22	Sqm	**578.60**	105435.37			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.26	Sqm	**680.10**	6974.43			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.51	Cum	**694.61**	1745.21			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.51	Cum	**1237.00**	3107.96			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.51	Cum	**1377.70**	3461.47			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.51	Cum	**516.50**	1297.71			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.24	Sqm	**63.20**	583.70			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	41.52	Cum	**149.30**	6198.27			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.35	Cum	**1075.00**	32625.15			
	Coarse Aggregates (100 Km lead)	60.71	Cum	**1398.00**	84867.57			
	Cement (30 km lead)	27.78	MT	**742.00**	20611.61			
	Boulder (60 Km lead)	2.51	Cum	**1159.00**	2911.99			
	Brick (30 km lead)	615.00	No.	**3.18**	1955.70			
	Steel (30 Km lead)	1.30	MT	**742.00**	965.37			
	TOTAL (In Rs.)				**873239.52**			
	TOTAL (In Rs.)				**873239.52**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.35	Cum	**584.64**	17743.22	1774.32		
	Coarse Aggregate	60.71	Cum	**944.26**	57322.64	5732.26		
	Boulders	2.51	Cum	**694.61**	1745.21	174.52		
	Total					7681.11		
	For 1 nos. fall, Total Seigniorage charges					**7681.11**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.700							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	48.50	Cum	**195.20**	9468.01			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.53	Cum	**6381.70**	54456.74	2.76	3.84	7.68
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.39	Cum	**6914.20**	223956.03	13.36	13.93	27.86
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.56	Cum	**8151.40**	4585.90	0.32	0.22	0.44
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.76	MT	**73574.90**	56123.07			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	130.67	Sqm	**578.60**	75604.77			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.99	Sqm	**680.10**	4074.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.32	Cum	**694.61**	225.05			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.32	Cum	**1237.00**	400.79			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.32	Cum	**1377.70**	446.37			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.32	Cum	**516.50**	167.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.88	Sqm	**63.20**	560.95			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	24.59	Cum	**149.30**	3671.94			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	17.99	Cum	**1075.00**	19336.45			
	Coarse Aggregates (100 Km lead)	35.98	Cum	**1398.00**	50300.63			
	Cement (30 km lead)	16.44	MT	**742.00**	12202.15			
	Boulder (60 Km lead)	0.32	Cum	**1159.00**	375.52			
	Brick (30 km lead)	359.00	No.	**3.18**	1141.62			
	Steel (30 Km lead)	0.76	MT	**742.00**	566.00			
	TOTAL (In Rs.)				**528841.21**			
	TOTAL (In Rs.)				**528841.21**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	17.99	Cum	**584.64**	10516.15	1051.62		
	Coarse Aggregate	35.98	Cum	**944.26**	33974.87	3397.49		
	Boulders	0.32	Cum	**694.61**	225.05	22.51		
	Total					4471.61		
	For 1 nos. fall, Total Seigniorage charges					**4471.61**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR DABURA-I MR.							
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.0.650							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	140.23	Cum	**195.20**	27372.53			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	19.69	Cum	**6381.70**	125679.93	6.38	8.86	17.72
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	88.35	Cum	**6914.20**	610858.93	36.44	37.99	75.98
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.99	Cum	**8151.40**	114022.19	7.93	5.46	11.05
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.86	MT	**73574.90**	210459.50			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	354.16	Sqm	**578.60**	204915.33			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.18	Sqm	**680.10**	6246.04			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.44	Cum	**694.61**	1000.24			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.44	Cum	**1237.00**	1781.28			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.44	Cum	**1377.70**	1983.89			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.44	Cum	**516.50**	743.76			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.60	Sqm	**63.20**	416.93			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	48.87	Cum	**149.30**	7295.80			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	52.31	Cum	**1075.00**	56230.44			
	Coarse Aggregates (100 Km lead)	104.75	Cum	**1398.00**	146447.01			
	Cement (30 km lead)	50.76	MT	**742.00**	37660.77			
	Boulder (60 Km lead)	1.44	Cum	**1159.00**	1668.96			
	Brick (30 km lead)	551.00	No.	**3.18**	1752.18			
	Steel (30 Km lead)	2.86	MT	**742.00**	2122.48			
	TOTAL (In Rs.)				**1581013.01**			
	TOTAL (In Rs.)				**1581013.01**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	52.31	Cum	**584.64**	30580.99	3058.10		
	Coarse Aggregate	104.75	Cum	**944.26**	98915.63	9891.56		
	Boulders	1.44	Cum	**694.61**	1000.24	100.02		
	For 1 nos. fall, Total Seigniorage charges					**13049.69**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR AKAUNA MR.							
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.225							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	86.33	Cum	**195.20**	16852.15			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.16	Cum	**6381.70**	84004.77	4.26	5.92	11.85
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	44.54	Cum	**6914.20**	307974.77	18.37	19.15	38.31
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.80	Cum	**8151.40**	6503.23	0.45	0.31	0.63
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.05	MT	**73574.90**	77178.05			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	158.08	Sqm	**578.60**	91464.87			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.36	Sqm	**680.10**	6365.74			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.82	Cum	**694.61**	1266.97			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.82	Cum	**1237.00**	2256.29			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.82	Cum	**1377.70**	2512.92			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.82	Cum	**516.50**	942.10			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.40	Sqm	**63.20**	594.34			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	32.95	Cum	**149.30**	4919.07			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.39	Cum	**1075.00**	27291.97			
	Coarse Aggregates (100 Km lead)	50.78	Cum	**1398.00**	70995.67			
	Cement (30 km lead)	23.09	MT	**742.00**	17133.53			
	Boulder (60 Km lead)	1.82	Cum	**1159.00**	2114.02			
	Brick (30 km lead)	561.00	No.	**3.18**	1783.98			
	Steel (30 Km lead)	1.05	MT	**742.00**	778.34			
	TOTAL (In Rs.)				**734110.17**			
	TOTAL (In Rs.)				**734110.17**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.39	Cum	**584.64**	14842.77	1484.28		
	Coarse Aggregate	50.78	Cum	**944.26**	47953.05	4795.31		
	Boulders	1.82	Cum	**694.61**	1266.97	126.70		
	For 1 nos. fall, Total Seigniorage charges					**6406.28**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.620							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	109.07	Cum	**195.20**	21289.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	20.05	Cum	**6381.70**	127973.83	6.50	9.02	18.05
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	74.05	Cum	**6914.20**	511981.85	30.54	31.84	63.68
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.51	Cum	**8151.40**	126438.81	8.79	6.05	12.25
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.65	MT	**73574.90**	194802.40			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	336.12	Sqm	**578.60**	194481.56			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.36	Sqm	**680.10**	6365.74			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.82	Cum	**694.61**	1266.97			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.82	Cum	**1237.00**	2256.29			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.82	Cum	**1377.70**	2512.92			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.82	Cum	**516.50**	942.10			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.17	Sqm	**63.20**	389.74			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.27	Cum	**149.30**	4072.05			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	46.91	Cum	**1075.00**	50432.50			
	Coarse Aggregates (100 Km lead)	93.98	Cum	**1398.00**	131388.27			
	Cement (30 km lead)	45.84	MT	**742.00**	34010.99			
	Boulder (60 Km lead)	1.82	Cum	**1159.00**	2114.02			
	Brick (30 km lead)	561.00	No.	**3.18**	1783.98			
	Steel (30 Km lead)	2.65	MT	**742.00**	1964.57			
	TOTAL (In Rs.)				**1438823.24**			
	TOTAL (In Rs.)				**1438823.24**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	46.91	Cum	**584.64**	27427.78	2742.78		
	Coarse Aggregate	93.98	Cum	**944.26**	88744.41	8874.44		
	Boulders	1.82	Cum	**694.61**	1266.97	126.70		
	Total					11743.92		
	For 1 nos. fall, Total Seigniorage charges					**11743.92**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.950							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	62.04	Cum	**195.20**	12110.15			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.58	Cum	**6381.70**	48357.67	2.46	3.41	6.82
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.36	Cum	**6914.20**	189163.69	11.29	11.76	23.53
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.55	Cum	**8151.40**	4515.47	0.31	0.22	0.44
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.64	MT	**73574.90**	47404.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	117.41	Sqm	**578.60**	67931.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.35	Sqm	**680.10**	3635.81			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.20	Cum	**694.61**	140.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.20	Cum	**1237.00**	250.49			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.20	Cum	**1377.70**	278.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.20	Cum	**516.50**	104.59			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.19	Sqm	**63.20**	580.74			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	20.87	Cum	**149.30**	3115.16			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	15.39	Cum	**1075.00**	16544.46			
	Coarse Aggregates (100 Km lead)	30.79	Cum	**1398.00**	43038.72			
	Cement (30 km lead)	14.05	MT	**742.00**	10428.58			
	Boulder (60 Km lead)	0.20	Cum	**1159.00**	234.70			
	Brick (30 km lead)	320.00	No.	**3.18**	1017.60			
	Steel (30 Km lead)	0.64	MT	**742.00**	478.07			
	TOTAL (In Rs.)				**460508.80**			
	TOTAL (In Rs.)				**460508.80**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	15.39	Cum	**584.64**	8997.72	899.77		
	Coarse Aggregate	30.79	Cum	**944.26**	29069.91	2906.99		
	Boulders	0.20	Cum	**694.61**	140.66	14.07		
	Total					3820.83		
	For 1 nos. fall, Total Seigniorage charges					**3820.83**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	AOC OF SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.5.240							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	48.91	Cum	**195.20**	9546.75			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.21	Cum	**6381.70**	52418.44	2.66	3.70	7.39
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	44.97	Cum	**6914.20**	310950.20	18.55	19.34	38.68
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	8.39	Cum	**8151.40**	68394.32	4.76	3.27	6.63
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.33	MT	**73574.90**	245137.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	198.76	Sqm	**578.60**	115003.65			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	2.49	Sqm	**63.20**	157.67			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.75	Cum	**149.30**	1753.74			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	26.31	Cum	**1075.00**	28279.80			
	Coarse Aggregates (100 Km lead)	52.70	Cum	**1398.00**	73671.09			
	Cement (30 km lead)	25.97	MT	**742.00**	19269.70			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (30 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	3.33	MT	**742.00**	2472.20			
	TOTAL (In Rs.)				**949409.86**			
	TOTAL (In Rs.)				**949409.86**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	26.31	Cum	**584.64**	15380.00	1538.00		
	Coarse Aggregate	52.70	Cum	**944.26**	49760.13	4976.01		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					6514.01		
	For 1 nos. fall, Total Seigniorage charges					**6514.01**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KAPASIYA DISTRIBUTARY.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.829 AT Ch. 0.720 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.91*	*2.869*	*2.721*	*29.860*	*Cum*
	Section 2-2	*2*	*6.50*	*1.795*	*3.451*	*80.529*	*Cum*
	Section 3-3	*2*	*4.20*	*1.577*	*2.296*	*30.415*	*Cum*
	Section 5-5	*2*	*7.93*	*3.019*	*2.721*	*130.244*	*Cum*
	Section 6-6	*2*	*4.18*	*1.577*	*2.296*	*30.237*	*Cum*
	U/S Key Floor	*1*	*0.75*	*7.700*	*1.350*	*7.796*	*Cum*
	U/S Floor	*1*	*2.40*	*7.700*	*3.437*	*63.489*	*Cum*
	D/S Floor	*1*	*-0.55*	*7.700*	*0.950*	*-4.016*	*Cum*
		1	*12.78*	*7.700*	*0.750*	*73.776*	*Cum*
	D/S Key Floor	*1*	*0.94*	*7.700*	*2.100*	*15.159*	*Cum*
	Toe Wall D/S Portion	*1*	*19.95*	*0.750*	*0.900*	*13.464*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.50*	*0.600*	*0.750*	*4.050*	*Cum*
						475.00	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*7.700*	*0.150*	*0.63*	*Cum*
		1	*1.34*	*7.700*	*0.150*	*1.55*	*Cum*
		1	*0.64*	*7.700*	*1.150*	*5.70*	*Cum*
		1	*0.78*	*7.700*	*2.150*	*12.86*	*Cum*
		1	*9.13*	*7.700*	*0.150*	*10.55*	*Cum*
		1	*0.88*	*7.700*	*0.150*	*1.02*	*Cum*
		1	*1.89*	*7.700*	*0.150*	*2.18*	*Cum*
		1	*2.18*	*7.700*	*0.150*	*2.52*	*Cum*
		1	*0.54*	*7.700*	*0.150*	*0.63*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.91*	*2.869*	*0.150*	*1.65*	*Cum*
	Section 2-2	*2*	*6.50*	*1.795*	*0.150*	*3.50*	*Cum*
	Section 3-3	*2*	*4.20*	*1.577*	*0.150*	*1.99*	*Cum*
	Section 5-5	*2*	*7.93*	*3.019*	*0.150*	*7.18*	*Cum*
	Section 6-6	*2*	*4.18*	*1.577*	*0.150*	*1.98*	*Cum*
	Toe Wall D/S Portion	*1*	*19.95*	*0.750*	*0.300*	*4.49*	*Cum*
	Toe Wall D/S Portion	*1*	*19.65*	*0.450*	*0.600*	*5.30*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.600*	*0.150*	*0.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.50*	*0.300*	*0.600*	*1.62*	*Cum*
	TOTAL					**66.14**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*1.510*	*3.532*	*18.79*	*Cum*
		2	*1.76*	*2.719*	*0.950*	*9.11*	*Cum*
	Section 2-2	*2*	*6.50*	*0.450*	*0.450*	*2.63*	*Cum*
		2	*6.50*	*0.973*	*1.742*	*22.02*	*Cum*
		2	*6.50*	*1.645*	*2.475*	*52.93*	*Cum*
	Section 3-3	*2*	*3.64*	*0.450*	*0.450*	*1.47*	*Cum*
		2	*3.64*	*0.864*	*1.378*	*8.65*	*Cum*
		2	*3.64*	*1.427*	*0.850*	*8.82*	*Cum*
	Section 5-5	*2*	*7.88*	*0.450*	*0.450*	*3.19*	*Cum*
		2	*7.88*	*1.510*	*3.532*	*84.06*	*Cum*
		2	*7.88*	*2.719*	*0.850*	*36.44*	*Cum*
	Section 6-6	*2*	*5.07*	*0.450*	*0.450*	*2.06*	*Cum*
		2	*5.07*	*0.863*	*1.378*	*12.07*	*Cum*
		2	*5.07*	*1.427*	*0.750*	*10.86*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.40*	*5.50*	*0.50*	*-2.20*	*Cum*
	Floor	*1*	*0.75*	*7.700*	*1.200*	*6.93*	*Cum*
		1	*1.85*	*7.700*	*0.600*	*8.55*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.55*	*7.700*	*0.875*	*3.71*	*Cum*
		1	*8.60*	*7.700*	*1.150*	*76.15*	*Cum*
		1	*0.72*	*7.700*	*0.575*	*3.19*	*Cum*
		1	*0.33*	*7.700*	*0.700*	*1.75*	*Cum*
		1	*4.18*	*7.700*	*0.850*	*27.33*	*Cum*
		1	*0.94*	*7.700*	*1.950*	*14.08*	*Cum*
	Crest	*1*	*1.68*	*7.700*	*2.730*	*35.22*	*Cum*
	TOTAL					**448.53**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.25*	*7.700*	*0.150*	*1.44*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*21.38*	*0.450*	*0.050*	*0.48*	*Cum*
	On Abutment Top (Right Side)	*1*	*21.38*	*0.450*	*0.050*	*0.48*	*Cum*
	Slab Bridge	*1*	*1.85*	*5.500*	*0.328*	*3.34*	*Cum*
	Wearing coat	*1*	*1.85*	*4.500*	*0.070*	*0.58*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**11.23**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.31*		*1.578*	*113.0*	*Kg*
a2	*10*	*9*	*5.90*		*0.616*	*32.7*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.23*		*0.616*	*26.1*	*Kg*
a5	*10*	*7*	*5.85*		*0.616*	*25.2*	*Kg*
x1	*12*	*32*	*2.50*		*0.888*	*71.0*	*Kg*
x2	*16*	*32*	*1.37*		*1.578*	*68.9*	*Kg*
x3	*10*	*24*	*1.75*		*0.616*	*25.9*	*Kg*
	Taking Skin reinforcement @0.2% of M-20	**448.53**	**0.002**	**0.897**	**7850.0**	**7041.87**	**Kg**
	Total Reinforecement in kg					**7411.50**	**Kg**
	Total Weight in Metric Tonne					**7.41**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*3.532*	*24.90*	*Sqm*
		4		*1.510*	*3.532*	*21.33*	*Sqm*
		4	*1.76*		*0.950*	*6.70*	*Sqm*
		4		*2.719*	*0.950*	*10.33*	*Sqm*
	Section 2-2	*4*	*6.50*		*0.450*	*11.70*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.50*		*1.742*	*45.29*	*Sqm*
		4		*0.973*	*1.742*	*6.78*	*Sqm*
		4	*6.50*		*2.475*	*64.35*	*Sqm*
		4		*1.645*	*2.475*	*16.29*	*Sqm*
	Section 3-3	*4*	*3.64*		*0.450*	*6.55*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.64*		*1.378*	*20.04*	*Sqm*
		4		*0.864*	*1.378*	*4.76*	*Sqm*
		4	*3.64*		*0.850*	*12.36*	*Sqm*
		4		*1.427*	*0.850*	*4.85*	*Sqm*
	Section 5-5	*4*	*7.88*		*0.450*	*14.19*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.88*		*3.532*	*111.38*	*Sqm*
		4		*1.510*	*3.532*	*21.33*	*Sqm*
		4	*7.88*		*0.850*	*26.80*	*Sqm*
		4		*2.719*	*0.850*	*9.24*	*Sqm*
	Section 6-6	*4*	*5.07*		*0.450*	*9.13*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.07*		*1.378*	*27.97*	*Sqm*
		4		*0.863*	*1.378*	*4.76*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*5.07*		*0.750*	*15.22*	*Sqm*
		4		*1.427*	*0.750*	*4.28*	*Sqm*
	Floor	*2*	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*7.700*	*1.200*	*18.48*	*Sqm*
		2	*1.85*		*0.600*	*2.22*	*Sqm*
		2		*7.700*	*0.600*	*9.24*	*Sqm*
		2	*0.55*		*0.875*	*0.96*	*Sqm*
		2		*7.700*	*0.875*	*13.48*	*Sqm*
		2	*8.60*		*1.150*	*19.78*	*Sqm*
		2		*7.700*	*1.150*	*17.71*	*Sqm*
		2	*0.7195*		*0.575*	*0.83*	*Sqm*
		2		*7.700*	*0.575*	*8.86*	*Sqm*
		2	*0.33*		*0.70*	*0.46*	*Sqm*
		2		*7.700*	*0.700*	*10.78*	*Sqm*
		2	*4.18*		*0.850*	*7.10*	*Sqm*
		2		*7.700*	*0.850*	*13.09*	*Sqm*
		2	*0.94*		*1.950*	*3.66*	*Sqm*
		2		*7.700*	*1.950*	*30.03*	*Sqm*
	Crest	*2*	*1.68*		*2.730*	*9.15*	*Sqm*
		2		*7.700*	*2.730*	*42.04*	*Sqm*
	Slab Bridge	*2*	*1.85*		*0.328*	*1.21*	*Sqm*
		2		*5.500*	*0.328*	*3.61*	*Sqm*
		1	*1.85*	*5.500*		*10.18*	*Sqm*
	Toe Wall D/S Portion	*2*	*19.95*		*0.300*	*11.97*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*19.65*		*0.600*	*23.58*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.150*	*2.70*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.50*		*0.600*	*10.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**783.52**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.50*	*6.116*		*55.04*	*Sqm*
	TOTAL					**55.04**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.50*	*7.100*	*0.300*	**9.59**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.50*	*7.100*	*0.300*	**19.17**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*21.38*	*0.450*		*9.62*	*Sqm*
	On Abutment Top (Right Side)	*1*	*21.38*	*0.450*		*9.62*	*Sqm*
	TOTAL					**19.25**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		57.210		57.21	Cum
	Abutment						
	Section 1-1	2	*1.91*	*1.410*		*5.393*	*Cum*
	Section 2-2	2	*6.50*	*1.645*		*21.385*	*Cum*
	Section 3-3	2	*4.20*	*1.020*		*8.568*	*Cum*
	Section 5-5	2	*7.93*	*1.360*		*21.563*	*Cum*
	Section 6-6	2	*4.18*	*1.020*		*8.519*	*Cum*
	Toe wall	2	*19.95*	*0.150*	*0.600*	*5.984*	*Cum*
		2	*4.50*	0.150	*0.600*	*0.810*	*Cum*
	TOTAL					**129.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.5.680						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.07*	*1.833*	*2.201*	*8.666*	*Cum*
	Section 2-2	*2*	*2.75*	*1.650*	*2.201*	*19.974*	*Cum*
	Section 3-3	*2*	*2.45*	*1.530*	*2.001*	*15.001*	*Cum*
	Section 5-5	*2*	*7.76*	*1.983*	*2.201*	*67.703*	*Cum*
	Section 6-6	*2*	*4.32*	*1.530*	*2.001*	*26.452*	*Cum*
	U/S Key Floor	*1*	*0.63*	*6.400*	*0.850*	*3.400*	*Cum*
	U/S Floor	*1*	*2.00*	*6.400*	*1.155*	*14.784*	*Cum*
	D/S Floor	*1*	*2.75*	*6.400*	*0.850*	*14.960*	*Cum*
		1	*2.75*	*6.400*	*0.650*	*11.440*	*Cum*
	D/S Key Floor	*1*	*0.65*	*6.400*	*0.950*	*3.952*	*Cum*
	Toe Wall D/S Portion	*1*	*18.10*	*0.750*	*0.900*	*12.218*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.00*	*0.600*	*0.750*	*3.600*	*Cum*
						202.15	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*6.400*	*0.150*	*0.52*	*Cum*
		1	*0.78*	*6.400*	*0.150*	*0.75*	*Cum*
		1	*4.33*	*6.400*	*0.150*	*4.15*	*Cum*
		1	*0.28*	*6.400*	*0.150*	*0.27*	*Cum*
		1	*1.14*	*6.400*	*0.150*	*1.09*	*Cum*
		1	*0.89*	*6.400*	*0.150*	*0.86*	*Cum*
		1	*0.54*	*6.400*	*0.150*	*0.52*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.07*	*1.833*	*0.150*	*0.59*	*Cum*
	Section 2-2	*2*	*2.75*	*1.650*	*0.150*	*1.36*	*Cum*
	Section 3-3	*2*	*2.45*	*1.530*	*0.150*	*1.12*	*Cum*
	Section 5-5	*2*	*7.76*	*1.983*	*0.150*	*4.61*	*Cum*
	Section 6-6	*2*	*4.32*	*1.530*	*0.150*	*1.98*	*Cum*
	Toe Wall D/S Portion	*1*	*18.10*	*0.750*	*0.300*	*4.07*	*Cum*
	Toe Wall D/S Portion	*1*	*17.80*	*0.450*	*0.600*	*4.81*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.600*	*0.150*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.300*	*0.600*	*1.44*	*Cum*
	TOTAL					**28.88**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.92*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.92*	*0.992*	*1.805*	*3.31*	*Cum*
		2	*0.92*	*1.683*	*0.500*	*1.56*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.900*	*1.500*	*7.43*	*Cum*
		2	*2.75*	*1.500*	*0.500*	*4.13*	*Cum*
	Section 3-3	*2*	*1.94*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.94*	*0.840*	*1.300*	*4.24*	*Cum*
		2	*1.94*	*1.380*	*0.500*	*2.68*	*Cum*
	Section 5-5	*2*	*7.71*	*0.450*	*0.450*	*3.12*	*Cum*
		2	*7.71*	*0.992*	*1.805*	*27.60*	*Cum*
		2	*7.71*	*1.683*	*0.500*	*12.98*	*Cum*
	Section 6-6	*2*	*5.09*	*0.450*	*0.450*	*2.06*	*Cum*
		2	*5.09*	*0.840*	*1.300*	*11.11*	*Cum*
		2	*5.09*	*1.380*	*0.500*	*7.02*	*Cum*
	Floor	*1*	*0.63*	*6.400*	*0.700*	*2.80*	*Cum*
		1	*4.75*	*6.400*	*0.500*	*15.20*	*Cum*
		1	*0.40*	*6.400*	*0.200*	*0.51*	*Cum*
		1	*0.20*	*6.400*	*0.539*	*0.69*	*Cum*
		1	*2.55*	*6.400*	*0.500*	*8.16*	*Cum*
		1	*0.65*	*6.400*	*0.800*	*3.33*	*Cum*
	Crest	*1*	*0.87*	*6.400*	*1.095*	*6.12*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**126.30**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*6.400*	*0.150*	*0.72*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.67*	*0.450*	*0.050*	*0.44*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.67*	*0.450*	*0.050*	*0.44*	*Cum*
	TOTAL					**1.61**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**126.30**	**0.002**	**0.253**	**7850.0**	**1982.96**	**Kg**
	Total Weight in Metric Tonne					**1.98**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.92*		*0.450*	*1.66*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.92*		*1.805*	*6.67*	*Sqm*
		4		*0.992*	*1.805*	*7.16*	*Sqm*
		4	*0.92*		*0.500*	*1.85*	*Sqm*
		4		*1.683*	*0.500*	*3.37*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*1.500*	*16.50*	*Sqm*
		4		*0.900*	*1.500*	*5.40*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.500*	*0.500*	*3.00*	*Sqm*
	Section 3-3	*4*	*1.94*		*0.450*	*3.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.94*		*1.300*	*10.09*	*Sqm*
		4		*0.840*	*1.300*	*4.37*	*Sqm*
		4	*1.94*		*0.500*	*3.88*	*Sqm*
		4		*1.380*	*0.500*	*2.76*	*Sqm*
	Section 5-5	*4*	*7.71*		*0.450*	*13.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.71*		*1.805*	*55.68*	*Sqm*
		4		*0.992*	*1.805*	*7.16*	*Sqm*
		4	*7.71*		*0.500*	*15.42*	*Sqm*
		4		*1.683*	*0.500*	*3.37*	*Sqm*
	Section 6-6	*4*	*5.09*		*0.450*	*9.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.09*		*1.300*	*26.44*	*Sqm*
		4		*0.840*	*1.300*	*4.37*	*Sqm*
		4	*5.09*		*0.500*	*10.17*	*Sqm*
		4		*1.380*	*0.500*	*2.76*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*6.400*	*0.700*	*8.96*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*6.400*	*0.500*	*6.40*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*6.400*	*0.200*	*2.56*	*Sqm*
		2	*0.20*		*0.539*	*0.22*	*Sqm*
		2		*6.400*	*0.539*	*6.89*	*Sqm*
		2	*2.55*		*0.500*	*2.55*	*Sqm*
		2		*6.400*	*0.500*	*6.40*	*Sqm*
		2	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*6.400*	*0.800*	*10.24*	*Sqm*
	Crest	*2*	*0.87*		*1.095*	*1.91*	*Sqm*
		2		*6.400*	*1.095*	*14.02*	*Sqm*
	Toe Wall D/S Portion	*2*	*18.10*		*0.300*	*10.86*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*17.80*		*0.600*	*21.36*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.150*	*2.40*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.600*	*9.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**346.36**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.00*	*6.093*		*48.74*	*Sqm*
	TOTAL					**48.74**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.00*	*5.800*	*0.300*	**6.96**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.00*	*5.800*	*0.150*	**6.96**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.67*	*0.450*		*8.85*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.67*	*0.450*		*8.85*	*Sqm*
	TOTAL					**17.70**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.613		2.61	Cum
	Abutment						
	Section 1-1	2	*1.07*	*1.260*		*2.706*	*Cum*
	Section 2-2	2	*2.75*	*1.260*		*6.930*	*Cum*
	Section 3-3	2	*2.45*	*1.243*		*6.091*	*Cum*
	Section 5-5	2	*7.76*	*1.260*		*19.545*	*Cum*
	Section 6-6	2	*4.32*	*1.243*		*10.740*	*Cum*
	Toe wall	2	*18.10*	*0.150*	*0.600*	*5.430*	*Cum*
		2	*4.00*	0.150	*0.600*	*0.720*	*Cum*
	TOTAL					**54.77**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.9.220 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.51*	*2.549*	*3.204*	*24.599*	*Cum*
	Section 2-2	*2*	*5.50*	*1.635*	*3.204*	*57.624*	*Cum*
	Section 3-3	*2*	*3.20*	*1.515*	*3.004*	*29.127*	*Cum*
	Section 5-5	*2*	*7.11*	*2.699*	*3.204*	*123.021*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*3.004*	*35.592*	*Cum*
	U/S Key Floor	*1*	*0.75*	*5.520*	*1.350*	*5.589*	*Cum*
	U/S Floor	*1*	*1.87*	*5.520*	*2.854*	*29.492*	*Cum*
	D/S Floor	*1*	*7.17*	*5.520*	*0.950*	*37.610*	*Cum*
		1	*3.42*	*5.520*	*0.750*	*14.146*	*Cum*
	D/S Key Floor	*1*	*0.89*	*5.520*	*1.900*	*9.308*	*Cum*
	Toe Wall D/S Portion	*1*	*16.52*	*0.750*	*0.900*	*11.151*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.75*	*0.600*	*0.750*	*3.375*	*Cum*
						380.63	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.520*	*0.150*	*0.45*	*Cum*
		1	*1.34*	*5.520*	*0.150*	*1.11*	*Cum*
		1	*0.32*	*5.520*	*0.150*	*0.26*	*Cum*
		1	*0.49*	*5.520*	*0.150*	*0.41*	*Cum*
		1	*7.70*	*5.520*	*0.150*	*6.37*	*Cum*
		1	*0.67*	*5.520*	*0.150*	*0.56*	*Cum*
		1	*1.13*	*5.520*	*0.150*	*0.94*	*Cum*
		1	*1.96*	*5.520*	*0.150*	*1.62*	*Cum*
		1	*0.54*	*5.520*	*0.150*	*0.45*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.51*	*2.549*	*0.150*	*1.15*	*Cum*
	Section 2-2	*2*	*5.50*	*1.635*	*0.150*	*2.70*	*Cum*
	Section 3-3	*2*	*3.20*	*1.515*	*0.150*	*1.45*	*Cum*
	Section 5-5	*2*	*7.11*	*2.699*	*0.150*	*5.76*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*0.150*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*16.52*	*0.750*	*0.300*	*3.72*	*Cum*
	Toe Wall D/S Portion	*1*	*16.22*	*0.450*	*0.600*	*4.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.600*	*0.150*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.300*	*0.600*	*1.35*	*Cum*
	TOTAL					**35.12**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.36*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.36*	*1.350*	*2.999*	*10.98*	*Cum*
		2	*1.36*	*2.399*	*0.950*	*6.18*	*Cum*
	Section 2-2	*2*	*5.50*	*0.450*	*0.450*	*2.23*	*Cum*
		2	*5.50*	*0.893*	*1.475*	*14.48*	*Cum*
		2	*5.50*	*1.485*	*0.950*	*15.52*	*Cum*
	Section 3-3	*2*	*2.69*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*2.69*	*0.833*	*1.275*	*5.71*	*Cum*
		2	*2.69*	*1.365*	*0.750*	*5.51*	*Cum*
	Section 5-5	*2*	*7.07*	*0.450*	*0.450*	*2.86*	*Cum*
		2	*7.07*	*1.350*	*2.999*	*57.22*	*Cum*
		2	*7.07*	*2.399*	*0.600*	*20.35*	*Cum*
	Section 6-6	*2*	*4.69*	*0.450*	*0.450*	*1.90*	*Cum*
		2	*4.69*	*0.810*	*1.200*	*9.12*	*Cum*
		2	*4.69*	*1.320*	*0.750*	*9.29*	*Cum*
	Floor	*1*	*0.75*	*5.520*	*1.200*	*4.97*	*Cum*
		1	*1.52*	*5.520*	*0.600*	*5.04*	*Cum*
		1	*0.35*	*5.520*	*0.775*	*1.50*	*Cum*
		1	*7.13*	*5.520*	*0.950*	*37.37*	*Cum*
		1	*0.64*	*5.520*	*0.475*	*1.69*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.28*	*5.520*	*0.613*	*0.93*	*Cum*
		1	*3.22*	*5.520*	*0.750*	*13.32*	*Cum*
		1	*0.89*	*5.520*	*1.750*	*8.57*	*Cum*
	Crest	*1*	*1.26*	*5.520*	*2.309*	*16.11*	*Cum*
	TOTAL					**252.48**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*5.520*	*0.150*	*0.75*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*22.91*	*0.450*	*0.050*	*0.52*	*Cum*
	On Abutment Top (Right Side)	*1*	*22.91*	*0.450*	*0.050*	*0.52*	*Cum*
	TOTAL					**1.78**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**252.48**	**0.002**	**0.505**	**7850.0**	**3963.87**	**Kg**
	Total Weight in Metric Tonne					**3.96**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.36*		*0.450*	*2.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.36*		*2.999*	*16.27*	*Sqm*
		4		*1.350*	*2.999*	*16.19*	*Sqm*
		4	*1.36*		*0.950*	*5.15*	*Sqm*
		4		*2.399*	*0.950*	*9.12*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.450*	*9.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.50*		*1.475*	*32.45*	*Sqm*
		4		*0.893*	*1.475*	*5.27*	*Sqm*
		4	*5.50*		*0.950*	*20.90*	*Sqm*
		4		*1.485*	*0.950*	*5.64*	*Sqm*
	Section 3-3	*4*	*2.69*		*0.450*	*4.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.69*		*1.275*	*13.72*	*Sqm*
		4		*0.833*	*1.275*	*4.25*	*Sqm*
		4	*2.69*		*0.750*	*8.07*	*Sqm*
		4		*1.365*	*0.750*	*4.10*	*Sqm*
	Section 5-5	*4*	*7.07*		*0.450*	*12.72*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.07*		*2.999*	*84.80*	*Sqm*
		4		*1.350*	*2.999*	*16.19*	*Sqm*
		4	*7.07*		*0.600*	*16.97*	*Sqm*
		4		*2.399*	*0.600*	*5.76*	*Sqm*
	Section 6-6	*4*	*4.69*		*0.450*	*8.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.69*		*1.200*	*22.51*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.69*		*0.750*	*14.07*	*Sqm*
		4		*1.320*	*0.750*	*3.96*	*Sqm*
	Floor	*2*	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*5.520*	*1.200*	*13.25*	*Sqm*
		2	*1.52*		*0.600*	*1.83*	*Sqm*
		2		*5.520*	*0.600*	*6.62*	*Sqm*
		2	*0.35*		*0.775*	*0.54*	*Sqm*
		2		*5.52*	*0.775*	*8.56*	*Sqm*
		2	*7.13*		*0.950*	*13.54*	*Sqm*
		2		*5.520*	*0.950*	*10.49*	*Sqm*
		2	*0.64*		*0.475*	*0.61*	*Sqm*
		2		*5.520*	*0.475*	*5.24*	*Sqm*
		2	*0.28*		*0.613*	*0.34*	*Sqm*
		2		*5.520*	*0.613*	*6.76*	*Sqm*
		2	*3.217*		*0.750*	*4.83*	*Sqm*
		2		*5.520*	*0.750*	*8.28*	*Sqm*
		2	*0.89*		*1.750*	*3.11*	*Sqm*
		2		*5.520*	*1.750*	*19.32*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*2*	*1.26*		*2.309*	*5.84*	*Sqm*
		2		*5.520*	*2.309*	*25.49*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.52*		*0.300*	*9.91*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.22*		*0.600*	*19.46*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.150*	*2.25*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.600*	*9.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**530.79**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.75*	*5.713*		*42.85*	*Sqm*
	TOTAL					**42.85**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*4.920*	*0.300*	**5.54**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.75*	*4.920*	*0.150*	**5.54**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*22.91*	*0.450*		*10.31*	*Sqm*
	On Abutment Top (Right Side)	*1*	*22.91*	*0.450*		*10.31*	*Sqm*
	TOTAL					**20.62**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		27.364		27.36	Cum
	Abutment						
	Section 1-1	2	*1.51*	*1.595*		*4.804*	*Cum*
	Section 2-2	2	*5.50*	*1.571*		*17.281*	*Cum*
	Section 3-3	2	*3.20*	*1.192*		*7.629*	*Cum*
	Section 5-5	2	*7.11*	*2.030*		*28.879*	*Cum*
	Section 6-6	2	*4.03*	*1.192*		*9.608*	*Cum*
	Toe wall	2	*16.52*	*0.150*	*0.600*	*4.956*	*Cum*
		2	*3.75*	0.150	*0.600*	*0.675*	*Cum*
	TOTAL					**101.19**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.9.380 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.18*	*1.956*	*1.815*	*8.368*	*Cum*
	Section 2-2	*2*	*3.50*	*1.590*	*1.815*	*20.201*	*Cum*
	Section 3-3	*2*	*1.70*	*1.470*	*1.615*	*8.072*	*Cum*
	Section 5-5	*2*	*7.24*	*2.106*	*1.815*	*55.314*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*1.615*	*19.135*	*Cum*
	U/S Key Floor	*1*	*0.63*	*5.520*	*0.850*	*2.933*	*Cum*
	U/S Floor	*1*	*2.75*	*5.520*	*1.510*	*22.922*	*Cum*
	D/S Floor	*1*	*3.47*	*5.520*	*0.850*	*16.258*	*Cum*
		1	*0.65*	*5.520*	*0.650*	*2.332*	*Cum*
	D/S Key Floor	*1*	*0.70*	*5.520*	*1.150*	*4.444*	*Cum*
	Toe Wall D/S Portion	*1*	*16.52*	*0.750*	*0.900*	*11.151*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.75*	*0.600*	*0.750*	*3.375*	*Cum*
						174.50	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.520*	*0.150*	*0.45*	*Cum*
		1	*0.78*	*5.520*	*0.150*	*0.65*	*Cum*
		1	*0.57*	*5.520*	*0.150*	*0.47*	*Cum*
		1	*0.07*	*5.520*	*0.150*	*0.06*	*Cum*
		1	*5.21*	*5.520*	*0.150*	*4.31*	*Cum*
		1	*0.35*	*5.520*	*0.150*	*0.29*	*Cum*
		1	*0.24*	*5.520*	*0.150*	*0.20*	*Cum*
		1	*1.12*	*5.520*	*0.150*	*0.93*	*Cum*
		1	*0.54*	*5.520*	*0.150*	*0.45*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.18*	*1.956*	*0.150*	*0.69*	*Cum*
	Section 2-2	*2*	*3.50*	*1.590*	*0.150*	*1.67*	*Cum*
	Section 3-3	*2*	*1.70*	*1.470*	*0.150*	*0.75*	*Cum*
	Section 5-5	*2*	*7.24*	*2.106*	*0.150*	*4.57*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*0.150*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*16.52*	*0.750*	*0.300*	*3.72*	*Cum*
	Toe Wall D/S Portion	*1*	*16.22*	*0.450*	*0.600*	*4.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.600*	*0.150*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.300*	*0.600*	*1.35*	*Cum*
	TOTAL					**27.38**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*1.053*	*2.010*	*4.35*	*Cum*
		2	*1.03*	*1.806*	*0.550*	*2.04*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.870*	*1.400*	*8.53*	*Cum*
		2	*3.50*	*1.440*	*0.550*	*5.54*	*Cum*
	Section 3-3	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*0.810*	*1.200*	*2.31*	*Cum*
		2	*1.19*	*1.320*	*0.500*	*1.57*	*Cum*
	Section 5-5	*2*	*7.19*	*0.450*	*0.450*	*2.91*	*Cum*
		2	*7.19*	*1.053*	*2.010*	*30.44*	*Cum*
		2	*7.19*	*1.806*	*0.500*	*12.99*	*Cum*
	Section 6-6	*2*	*4.69*	*0.450*	*0.450*	*1.90*	*Cum*
		2	*4.69*	*0.810*	*1.200*	*9.12*	*Cum*
		2	*4.69*	*1.320*	*0.500*	*6.19*	*Cum*
	Floor	*1*	*0.63*	*5.520*	*0.700*	*2.42*	*Cum*
		1	*1.57*	*5.520*	*0.500*	*4.34*	*Cum*
		1	*4.68*	*5.520*	*0.550*	*14.20*	*Cum*
		1	*0.40*	*5.520*	*0.200*	*0.44*	*Cum*
		1	*0.25*	*5.520*	*0.532*	*0.73*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.80*	*5.520*	*0.500*	*4.97*	*Cum*
		1	*0.70*	*5.520*	*1.000*	*3.86*	*Cum*
	Crest	*1*	*0.96*	*5.520*	*1.335*	*7.10*	*Cum*
	TOTAL					**128.28**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*5.520*	*0.150*	*0.62*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*18.96*	*0.450*	*0.050*	*0.43*	*Cum*
	On Abutment Top (Right Side)	*1*	*18.96*	*0.450*	*0.050*	*0.43*	*Cum*
	TOTAL					**1.47**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**128.28**	**0.002**	**0.257**	**7850.0**	**2014.07**	**Kg**
	Total Weight in Metric Tonne					**2.01**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*2.010*	*8.27*	*Sqm*
		4		*1.053*	*2.010*	*8.47*	*Sqm*
		4	*1.03*		*0.550*	*2.26*	*Sqm*
		4		*1.806*	*0.550*	*3.97*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*1.400*	*19.60*	*Sqm*
		4		*0.870*	*1.400*	*4.87*	*Sqm*
		4	*3.50*		*0.550*	*7.70*	*Sqm*
		4		*1.440*	*0.550*	*3.17*	*Sqm*
	Section 3-3	*4*	*1.19*		*0.450*	*2.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*1.200*	*5.71*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*1.19*		*0.500*	*2.38*	*Sqm*
		4		*1.320*	*0.500*	*2.64*	*Sqm*
	Section 5-5	*4*	*7.19*		*0.450*	*12.94*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.19*		*2.010*	*57.82*	*Sqm*
		4		*1.053*	*2.010*	*8.47*	*Sqm*
		4	*7.19*		*0.500*	*14.38*	*Sqm*
		4		*1.806*	*0.500*	*3.61*	*Sqm*
	Section 6-6	*4*	*4.69*		*0.450*	*8.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.69*		*1.200*	*22.51*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.69*		*0.500*	*9.38*	*Sqm*
		4		*1.320*	*0.500*	*2.64*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*5.520*	*0.700*	*7.73*	*Sqm*
		2	*1.57*		*0.500*	*1.57*	*Sqm*
		2		*5.520*	*0.500*	*5.52*	*Sqm*
		2	*4.68*		*0.550*	*5.15*	*Sqm*
		2		*5.520*	*0.550*	*6.07*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*5.520*	*0.200*	*2.21*	*Sqm*
		2	*0.25*		*0.532*	*0.27*	*Sqm*
		2		*5.520*	*0.532*	*5.87*	*Sqm*
		2	*1.800*		*0.500*	*1.80*	*Sqm*
		2		*5.520*	*0.500*	*5.52*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*5.520*	*1.000*	*11.04*	*Sqm*
	Crest	*2*	*0.96*		*1.335*	*2.57*	*Sqm*
		2		*5.520*	*1.335*	*14.74*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.52*		*0.300*	*9.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.22*		*0.600*	*19.46*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.150*	*2.25*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.600*	*9.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**346.55**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.75*	*5.713*		*42.85*	*Sqm*
	TOTAL					**42.85**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*4.920*	*0.300*	**5.54**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.75*	*4.920*	*0.150*	**5.54**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*18.96*	*0.450*		*8.53*	*Sqm*
	On Abutment Top (Right Side)	*1*	*18.96*	*0.450*		*8.53*	*Sqm*
	TOTAL					**17.06**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.581		8.58	Cum
	Abutment						
	Section 1-1	2	*1.18*	*0.740*		*1.744*	*Cum*
	Section 2-2	2	*3.50*	*0.742*		*5.195*	*Cum*
	Section 3-3	2	*1.70*	*0.787*		*2.675*	*Cum*
	Section 5-5	2	*7.24*	*0.740*		*10.709*	*Cum*
	Section 6-6	2	*4.03*	*0.782*		*6.303*	*Cum*
	Toe wall	2	*16.52*	*0.150*	*0.600*	*4.956*	*Cum*
		2	*3.75*	0.150	*0.600*	*0.675*	*Cum*
	TOTAL					**40.84**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NARCHI MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH.0.050						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.34*	*2.065*	*2.091*	*11.607*	*Cum*
	Section 2-2	*2*	*4.00*	*1.242*	*2.091*	*20.776*	*Cum*
	Section 3-3	*2*	*2.70*	*1.122*	*1.891*	*11.457*	*Cum*
	Section 5-5	*2*	*2.59*	*2.215*	*2.091*	*23.978*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*1.891*	*4.702*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.200*	*0.850*	*1.169*	*Cum*
	U/S Floor	*1*	*3.50*	*2.200*	*1.155*	*8.894*	*Cum*
	D/S Floor	*1*	*1.87*	*2.200*	*0.850*	*3.489*	*Cum*
		1	*3.00*	*2.200*	*0.650*	*4.290*	*Cum*
	D/S Key Floor	*1*	*0.80*	*2.200*	*1.550*	*2.728*	*Cum*
	Toe Wall D/S Portion	*1*	*6.46*	*0.750*	*0.900*	*4.361*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						99.25	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.200*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*2.200*	*0.150*	*0.26*	*Cum*
		1	*0.93*	*2.200*	*0.150*	*0.31*	*Cum*
		1	*0.35*	*2.200*	*0.150*	*0.12*	*Cum*
		1	*5.70*	*2.200*	*0.150*	*1.88*	*Cum*
		1	*0.49*	*2.200*	*0.150*	*0.16*	*Cum*
		1	*1.14*	*2.200*	*0.150*	*0.38*	*Cum*
		1	*1.57*	*2.200*	*0.150*	*0.52*	*Cum*
		1	*0.54*	*2.200*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.34*	*2.065*	*0.150*	*0.83*	*Cum*
	Section 2-2	*2*	*4.00*	*1.242*	*0.150*	*1.49*	*Cum*
	Section 3-3	*2*	*2.70*	*1.122*	*0.150*	*0.91*	*Cum*
	Section 5-5	*2*	*2.59*	*2.215*	*0.150*	*1.72*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*0.150*	*0.37*	*Cum*
	Toe Wall D/S Portion	*1*	*6.46*	*0.750*	*0.300*	*1.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.16*	*0.450*	*0.600*	*1.66*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**13.50**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*1.108*	*2.192*	*5.80*	*Cum*
		2	*1.19*	*1.915*	*0.750*	*3.43*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.696*	*0.820*	*4.57*	*Cum*
		2	*4.00*	*1.092*	*0.750*	*6.55*	*Cum*
	Section 3-3	*2*	*2.36*	*0.450*	*0.450*	*0.96*	*Cum*
		2	*2.36*	*0.636*	*0.620*	*1.86*	*Cum*
		2	*2.36*	*0.972*	*0.600*	*2.76*	*Cum*
	Section 5-5	*2*	*2.54*	*0.450*	*0.450*	*1.03*	*Cum*
		2	*2.54*	*1.108*	*2.192*	*12.35*	*Cum*
		2	*2.54*	*1.915*	*0.500*	*4.87*	*Cum*
	Section 6-6	*2*	*1.67*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.67*	*0.636*	*0.620*	*1.32*	*Cum*
		2	*1.67*	*0.972*	*0.600*	*1.95*	*Cum*
	Floor	*1*	*0.63*	*2.200*	*0.700*	*0.96*	*Cum*
		1	*1.84*	*2.200*	*0.500*	*2.03*	*Cum*
		1	*0.63*	*2.200*	*0.200*	*0.28*	*Cum*
		1	*5.37*	*2.200*	*0.750*	*8.85*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*2.200*	*0.500*	*0.22*	*Cum*
		1	*0.38*	*2.200*	*0.350*	*0.29*	*Cum*
		1	*2.80*	*2.200*	*0.600*	*3.70*	*Cum*
		1	*0.80*	*2.200*	*1.400*	*2.46*	*Cum*
	Crest	*1*	*1.08*	*2.200*	*1.747*	*4.16*	*Cum*
	TOTAL					**73.18**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*2.200*	*0.150*	*0.26*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.75*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.75*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**0.84**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**73.18**	**0.00**	**0.220**	**7850.0**	**1723.39**	**Kg**
	Total Weight in Metric Tonne					**1.72**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.19*		*0.450*	*2.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*2.192*	*10.47*	*Sqm*
		4		*1.108*	*2.192*	*9.71*	*Sqm*
		4	*1.19*		*0.750*	*3.58*	*Sqm*
		4		*1.915*	*0.750*	*5.75*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.820*	*13.12*	*Sqm*
		4		*0.696*	*0.820*	*2.28*	*Sqm*
		4	*4.00*		*0.750*	*12.00*	*Sqm*
		4		*1.092*	*0.750*	*3.28*	*Sqm*
	Section 3-3	*4*	*2.36*		*0.450*	*4.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.36*		*0.620*	*5.86*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*2.36*		*0.600*	*5.67*	*Sqm*
		4		*0.972*	*0.600*	*2.33*	*Sqm*
	Section 5-5	*4*	*2.54*		*0.450*	*4.58*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.54*		*2.192*	*22.31*	*Sqm*
		4		*1.108*	*2.192*	*9.71*	*Sqm*
		4	*2.54*		*0.500*	*5.09*	*Sqm*
		4		*1.915*	*0.500*	*3.83*	*Sqm*
	Section 6-6	*4*	*1.67*		*0.450*	*3.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.67*		*0.620*	*4.14*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*1.67*		*0.600*	*4.01*	*Sqm*
		4		*0.972*	*0.600*	*2.33*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.200*	*0.700*	*3.08*	*Sqm*
		2	*1.84*		*0.500*	*1.84*	*Sqm*
		2		*2.200*	*0.500*	*2.20*	*Sqm*
		2	*0.63*		*0.200*	*0.25*	*Sqm*
		2		*2.200*	*0.200*	*0.88*	*Sqm*
		2	*5.37*		*0.750*	*8.05*	*Sqm*
		2		*2.200*	*0.750*	*3.30*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*2.200*	*0.500*	*2.20*	*Sqm*
		2	*0.38*		*0.350*	*0.27*	*Sqm*
		2		*2.200*	*0.350*	*1.54*	*Sqm*
		2	*2.80*		*0.600*	*3.36*	*Sqm*
		2		*2.200*	*0.600*	*2.64*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.200*	*1.400*	*6.16*	*Sqm*
	Crest	*2*	*1.08*		*1.747*	*3.78*	*Sqm*
		2		*2.200*	*1.747*	*7.69*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.46*		*0.300*	*3.88*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.16*		*0.600*	*7.39*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**223.76**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.268*		*9.07*	*Sqm*
	TOTAL					**9.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.600*	*0.300*	**0.96**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.600*	*0.150*	**0.96**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.75*	*0.450*		*5.74*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.75*	*0.450*		*5.74*	*Sqm*
	TOTAL					**11.48**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		15.002		15.00	Cum
	Abutment						
	Section 1-1	2	*1.34*	*0.660*		*1.774*	*Cum*
	Section 2-2	2	*4.00*	*0.650*		*5.200*	*Cum*
	Section 3-3	2	*2.70*	*0.694*		*3.746*	*Cum*
	Section 5-5	2	*2.59*	*0.660*		*3.417*	*Cum*
	Section 6-6	2	*1.11*	*0.694*		*1.537*	*Cum*
	Toe wall	2	*6.46*	*0.150*	*0.600*	*1.938*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**32.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NARCHI MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.0.835						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*1.608*	*1.785*	*5.956*	*Cum*
	Section 2-2	*2*	*3.20*	*1.242*	*1.785*	*14.189*	*Cum*
	Section 3-3	*2*	*1.50*	*1.122*	*1.585*	*5.335*	*Cum*
	Section 5-5	*2*	*2.68*	*1.758*	*1.785*	*16.839*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*1.585*	*3.941*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.000*	*0.850*	*1.063*	*Cum*
	U/S Floor	*1*	*2.00*	*2.000*	*1.510*	*6.040*	*Cum*
	D/S Floor	*1*	*3.00*	*2.000*	*0.850*	*5.100*	*Cum*
		1	*2.00*	*2.000*	*0.650*	*2.600*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.000*	*0.850*	*1.063*	*Cum*
	Toe Wall D/S Portion	*1*	*6.46*	*0.750*	*0.900*	*4.361*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						68.28	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.000*	*0.150*	*0.16*	*Cum*
		1	*0.78*	*2.000*	*0.150*	*0.23*	*Cum*
		1	*0.03*	*2.000*	*0.150*	*0.01*	*Cum*
		1	*0.07*	*2.000*	*0.150*	*0.02*	*Cum*
		1	*4.25*	*2.000*	*0.150*	*1.27*	*Cum*
		1	*0.35*	*2.000*	*0.150*	*0.11*	*Cum*
		1	*0.64*	*2.000*	*0.150*	*0.19*	*Cum*
		1	*0.78*	*2.000*	*0.150*	*0.23*	*Cum*
		1	*0.54*	*2.000*	*0.150*	*0.16*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.04*	*1.608*	*0.150*	*0.50*	*Cum*
	Section 2-2	*2*	*3.20*	*1.242*	*0.150*	*1.19*	*Cum*
	Section 3-3	*2*	*1.50*	*1.122*	*0.150*	*0.50*	*Cum*
	Section 5-5	*2*	*2.68*	*1.758*	*0.150*	*1.42*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*0.150*	*0.37*	*Cum*
	Toe Wall D/S Portion	*1*	*6.46*	*0.750*	*0.300*	*1.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.16*	*0.450*	*0.600*	*1.66*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.58**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.89*	*0.450*	*0.450*	*0.36*	*Cum*
		2	*0.89*	*0.879*	*1.430*	*2.23*	*Cum*
		2	*0.89*	*1.458*	*0.550*	*1.42*	*Cum*
	Section 2-2	*2*	*3.20*	*0.450*	*0.450*	*1.30*	*Cum*
		2	*3.20*	*0.696*	*0.820*	*3.65*	*Cum*
		2	*3.20*	*1.092*	*0.550*	*3.84*	*Cum*
	Section 3-3	*2*	*1.16*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.16*	*0.636*	*0.620*	*0.92*	*Cum*
		2	*1.16*	*0.972*	*0.500*	*1.13*	*Cum*
	Section 5-5	*2*	*2.64*	*0.450*	*0.450*	*1.07*	*Cum*
		2	*2.64*	*0.879*	*1.430*	*6.63*	*Cum*
		2	*2.64*	*1.458*	*0.500*	*3.85*	*Cum*
	Section 6-6	*2*	*1.67*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.67*	*0.636*	*0.620*	*1.32*	*Cum*
		2	*1.67*	*0.972*	*0.500*	*1.62*	*Cum*
	Floor	*1*	*0.63*	*2.000*	*0.700*	*0.88*	*Cum*
		1	*1.04*	*2.000*	*0.500*	*1.04*	*Cum*
		1	*3.97*	*2.000*	*0.550*	*4.36*	*Cum*
		1	*0.20*	*2.000*	*0.400*	*0.16*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.28*	*2.000*	*0.250*	*0.14*	*Cum*
		1	*1.80*	*2.000*	*0.500*	*1.80*	*Cum*
		1	*0.63*	*2.000*	*0.700*	*0.88*	*Cum*
	Crest	*1*	*0.81*	*2.000*	*0.995*	*1.61*	*Cum*
	TOTAL					**41.35**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*2.000*	*0.150*	*0.20*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.35*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.35*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**41.35**	**0.00**	**0.124**	**7850.0**	**973.77**	**Kg**
	Total Weight in Metric Tonne					**0.97**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.89*		*0.450*	*1.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.89*		*1.430*	*5.08*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*0.89*		*0.550*	*1.95*	*Sqm*
		4		*1.458*	*0.550*	*3.21*	*Sqm*
	Section 2-2	*4*	*3.20*		*0.450*	*5.76*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.20*		*0.820*	*10.50*	*Sqm*
		4		*0.696*	*0.820*	*2.28*	*Sqm*
		4	*3.20*		*0.550*	*7.04*	*Sqm*
		4		*1.092*	*0.550*	*2.40*	*Sqm*
	Section 3-3	*4*	*1.16*		*0.450*	*2.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.16*		*0.620*	*2.89*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*1.16*		*0.500*	*2.33*	*Sqm*
		4		*0.972*	*0.500*	*1.94*	*Sqm*
	Section 5-5	*4*	*2.64*		*0.450*	*4.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.64*		*1.430*	*15.10*	*Sqm*
		4		*0.879*	*1.430*	*5.03*	*Sqm*
		4	*2.64*		*0.500*	*5.28*	*Sqm*
		4		*1.458*	*0.500*	*2.92*	*Sqm*
	Section 6-6	*4*	*1.67*		*0.450*	*3.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.67*		*0.620*	*4.14*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*1.67*		*0.500*	*3.34*	*Sqm*
		4		*0.972*	*0.500*	*1.94*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.000*	*0.700*	*2.80*	*Sqm*
		2	*1.04*		*0.500*	*1.04*	*Sqm*
		2		*2.000*	*0.500*	*2.00*	*Sqm*
		2	*3.97*		*0.550*	*4.36*	*Sqm*
		2		*2.000*	*0.550*	*2.20*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.000*	*0.400*	*1.60*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*2.000*	*0.250*	*1.00*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*2.000*	*0.500*	*2.00*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.000*	*0.700*	*2.80*	*Sqm*
	Crest	*2*	*0.81*		*0.995*	*1.61*	*Sqm*
		2		*2.000*	*0.995*	*3.98*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*6.46*		*0.300*	*3.88*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.16*		*0.600*	*7.39*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**155.37**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.268*		*9.07*	*Sqm*
	TOTAL					**9.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.400*	*0.300*	**0.84**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.400*	*0.150*	**0.84**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.35*	*0.450*		*4.66*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.35*	*0.450*		*4.66*	*Sqm*
	TOTAL					**9.32**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.356		2.36	Cum
	Abutment						
	Section 1-1	2	*1.04*	*0.710*		*1.473*	*Cum*
	Section 2-2	2	*3.20*	*0.700*		*4.480*	*Cum*
	Section 3-3	2	*1.50*	*0.678*		*2.034*	*Cum*
	Section 5-5	2	*2.68*	*0.710*		*3.810*	*Cum*
	Section 6-6	2	*1.11*	*0.678*		*1.502*	*Cum*
	Toe wall	2	*6.46*	*0.150*	*0.600*	*1.938*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**17.95**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NARCHI MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH.1.750						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.42*	*2.154*	*2.842*	*17.416*	*Cum*
	Section 2-2	*2*	*4.00*	*1.242*	*2.842*	*28.238*	*Cum*
	Section 3-3	*2*	*3.70*	*1.122*	*2.642*	*21.936*	*Cum*
	Section 5-5	*2*	*2.57*	*2.304*	*2.842*	*33.657*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*2.642*	*6.569*	*Cum*
	U/S Key Floor	*1*	*0.68*	*1.410*	*1.050*	*0.999*	*Cum*
	U/S Floor	*1*	*1.75*	*1.410*	*2.720*	*6.712*	*Cum*
	D/S Floor	*1*	*2.50*	*1.410*	*0.950*	*3.349*	*Cum*
		1	*2.00*	*1.410*	*0.750*	*2.115*	*Cum*
	D/S Key Floor	*1*	*0.83*	*1.410*	*1.650*	*1.919*	*Cum*
	Toe Wall D/S Portion	*1*	*5.87*	*0.750*	*0.900*	*3.962*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						128.67	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.410*	*0.150*	*0.11*	*Cum*
		1	*1.01*	*1.410*	*0.150*	*0.21*	*Cum*
		1	*0.23*	*1.410*	*0.150*	*0.05*	*Cum*
		1	*0.35*	*1.410*	*0.150*	*0.07*	*Cum*
		1	*5.66*	*1.410*	*0.150*	*1.20*	*Cum*
		1	*0.57*	*1.410*	*0.150*	*0.12*	*Cum*
		1	*1.53*	*1.410*	*0.150*	*0.32*	*Cum*
		1	*0.07*	*1.410*	*0.150*	*0.01*	*Cum*
		1	*0.60*	*1.410*	*0.150*	*0.13*	*Cum*
		1	*1.68*	*1.410*	*0.150*	*0.35*	*Cum*
		1	*0.54*	*1.410*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.42*	*2.154*	*0.150*	*0.92*	*Cum*
	Section 2-2	*2*	*4.00*	*1.242*	*0.150*	*1.49*	*Cum*
	Section 3-3	*2*	*3.70*	*1.122*	*0.150*	*1.25*	*Cum*
	Section 5-5	*2*	*2.57*	*2.304*	*0.150*	*1.78*	*Cum*
	Section 6-6	*2*	*1.11*	*1.122*	*0.150*	*0.37*	*Cum*
	Toe Wall D/S Portion	*1*	*5.87*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.57*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**12.41**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.27*	*0.450*	*0.450*	*0.52*	*Cum*
		2	*1.27*	*1.152*	*2.340*	*6.86*	*Cum*
		2	*1.27*	*2.004*	*0.850*	*4.34*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.696*	*0.820*	*4.57*	*Cum*
		2	*4.00*	*1.092*	*0.850*	*7.43*	*Cum*
	Section 3-3	*2*	*3.36*	*0.450*	*0.450*	*1.36*	*Cum*
		2	*3.36*	*0.636*	*0.620*	*2.65*	*Cum*
		2	*3.36*	*0.972*	*0.600*	*3.92*	*Cum*
	Section 5-5	*2*	*2.53*	*0.450*	*0.450*	*1.02*	*Cum*
		2	*2.53*	*1.152*	*2.340*	*13.62*	*Cum*
		2	*2.53*	*2.004*	*0.600*	*6.07*	*Cum*
	Section 6-6	*2*	*1.67*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.67*	*0.636*	*0.620*	*1.32*	*Cum*
		2	*1.67*	*0.972*	*0.600*	*1.95*	*Cum*
	Floor	*1*	*0.68*	*1.410*	*0.900*	*0.86*	*Cum*
		1	*1.29*	*1.410*	*0.600*	*1.09*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.73*	*1.410*	*0.200*	*0.20*	*Cum*
		1	*5.46*	*1.410*	*0.850*	*6.55*	*Cum*
		1	*0.20*	*1.410*	*0.550*	*0.16*	*Cum*
		1	*0.27*	*1.410*	*0.400*	*0.15*	*Cum*
		1	*1.80*	*1.410*	*0.650*	*1.65*	*Cum*
		1	*0.05*	*1.410*	*0.625*	*0.04*	*Cum*
		1	*1.95*	*1.410*	*0.600*	*1.65*	*Cum*
		1	*0.83*	*1.410*	*1.500*	*1.74*	*Cum*
	Crest	*1*	*1.16*	*1.410*	*1.890*	*3.08*	*Cum*
	TOTAL					**75.09**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.85*	*1.410*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.55*	*0.450*	*0.050*	*0.44*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.55*	*0.450*	*0.050*	*0.44*	*Cum*
	TOTAL					**1.06**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**75.09**	**0.00**	**0.225**	**7850.0**	**1768.39**	**Kg**
	Total Weight in Metric Tonne					**1.77**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.27*		*0.450*	*2.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.27*		*2.340*	*11.91*	*Sqm*
		4		*1.152*	*2.340*	*10.78*	*Sqm*
		4	*1.27*		*0.850*	*4.33*	*Sqm*
		4		*2.004*	*0.850*	*6.81*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.820*	*13.12*	*Sqm*
		4		*0.696*	*0.820*	*2.28*	*Sqm*
		4	*4.00*		*0.850*	*13.60*	*Sqm*
		4		*1.092*	*0.850*	*3.71*	*Sqm*
	Section 3-3	*4*	*3.36*		*0.450*	*6.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.36*		*0.620*	*8.34*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*3.36*		*0.600*	*8.07*	*Sqm*
		4		*0.972*	*0.600*	*2.33*	*Sqm*
	Section 5-5	*4*	*2.53*		*0.450*	*4.55*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.53*		*2.340*	*23.64*	*Sqm*
		4		*1.152*	*2.340*	*10.78*	*Sqm*
		4	*2.53*		*0.600*	*6.06*	*Sqm*
		4		*2.004*	*0.600*	*4.81*	*Sqm*
	Section 6-6	*4*	*1.67*		*0.450*	*3.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.67*		*0.620*	*4.14*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*1.67*		*0.600*	*4.01*	*Sqm*
		4		*0.972*	*0.600*	*2.33*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.410*	*0.900*	*2.54*	*Sqm*
		2	*1.29*		*0.600*	*1.54*	*Sqm*
		2		*1.410*	*0.600*	*1.69*	*Sqm*
		2	*0.73*		*0.200*	*0.29*	*Sqm*
		2		*1.410*	*0.200*	*0.56*	*Sqm*
		2	*5.46*		*0.850*	*9.29*	*Sqm*
		2		*1.410*	*0.850*	*2.40*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*1.410*	*0.550*	*1.55*	*Sqm*
		2	*0.27*		*0.400*	*0.22*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.410*	*0.400*	*1.13*	*Sqm*
		2	*1.80*		*0.650*	*2.34*	*Sqm*
		2		*1.410*	*0.650*	*1.83*	*Sqm*
		2	*0.05*		*0.625*	*0.06*	*Sqm*
		2		*1.410*	*0.625*	*1.76*	*Sqm*
		2	*1.95*		*0.600*	*2.34*	*Sqm*
		2		*1.410*	*0.600*	*1.69*	*Sqm*
		2	*0.83*		*1.500*	*2.48*	*Sqm*
		2		*1.410*	*1.500*	*4.23*	*Sqm*
	Crest	*2*	*1.16*		*1.890*	*4.37*	*Sqm*
		2		*1.410*	*1.890*	*5.33*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.87*		*0.300*	*3.52*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.57*		*0.600*	*6.68*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**238.73**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.268*		*9.07*	*Sqm*
	TOTAL					**9.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.810*	*0.300*	**0.49**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.810*	*0.150*	**0.49**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.55*	*0.450*		*8.80*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.55*	*0.450*		*8.80*	*Sqm*
	TOTAL					**17.60**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.708		8.71	Cum
	Abutment						
	Section 1-1	2	*1.42*	*1.365*		*3.883*	*Cum*
	Section 2-2	2	*4.00*	*0.932*		*7.453*	*Cum*
	Section 3-3	2	*3.70*	*0.693*		*5.128*	*Cum*
	Section 5-5	2	*2.57*	*1.365*		*7.016*	*Cum*
	Section 6-6	2	*1.11*	*0.693*		*1.536*	*Cum*
	Toe wall	2	*5.87*	*0.150*	*0.600*	*1.761*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**35.85**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NARCHI MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.2.250						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.95*	*1.833*	*2.795*	*9.750*	*Cum*
	Section 2-2	*2*	*2.50*	*1.650*	*2.795*	*23.059*	*Cum*
	Section 3-3	*2*	*2.20*	*1.530*	*2.595*	*17.470*	*Cum*
	Section 5-5	*2*	*2.52*	*1.983*	*2.795*	*27.962*	*Cum*
	Section 6-6	*2*	*1.03*	*1.530*	*2.595*	*8.155*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.230*	*0.850*	*0.653*	*Cum*
	U/S Floor	*1*	*1.75*	*1.230*	*1.307*	*2.813*	*Cum*
	D/S Floor	*1*	*2.50*	*1.230*	*0.850*	*2.614*	*Cum*
		1	*2.50*	*1.230*	*0.650*	*1.999*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.230*	*0.850*	*0.653*	*Cum*
	Toe Wall D/S Portion	*1*	*5.42*	*0.750*	*0.900*	*3.659*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						100.14	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.230*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*1.230*	*0.150*	*0.14*	*Cum*
		1	*3.27*	*1.230*	*0.150*	*0.60*	*Cum*
		1	*0.28*	*1.230*	*0.150*	*0.05*	*Cum*
		1	*1.14*	*1.230*	*0.150*	*0.21*	*Cum*
		1	*0.78*	*1.230*	*0.150*	*0.14*	*Cum*
		1	*0.54*	*1.230*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.95*	*1.833*	*0.150*	*0.52*	*Cum*
	Section 2-2	*2*	*2.50*	*1.650*	*0.150*	*1.24*	*Cum*
	Section 3-3	*2*	*2.20*	*1.530*	*0.150*	*1.01*	*Cum*
	Section 5-5	*2*	*2.52*	*1.983*	*0.150*	*1.50*	*Cum*
	Section 6-6	*2*	*1.03*	*1.530*	*0.150*	*0.47*	*Cum*
	Toe Wall D/S Portion	*1*	*5.42*	*0.750*	*0.300*	*1.22*	*Cum*
	Toe Wall D/S Portion	*1*	*5.12*	*0.450*	*0.600*	*1.38*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**9.51**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.80*	*0.450*	*0.450*	*0.32*	*Cum*
		2	*0.80*	*0.992*	*1.805*	*2.87*	*Cum*
		2	*0.80*	*1.683*	*0.500*	*1.35*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.900*	*1.500*	*6.75*	*Cum*
		2	*2.50*	*1.500*	*0.500*	*3.75*	*Cum*
	Section 3-3	*2*	*1.89*	*0.450*	*0.450*	*0.77*	*Cum*
		2	*1.89*	*0.840*	*1.300*	*4.13*	*Cum*
		2	*1.89*	*1.380*	*0.500*	*2.61*	*Cum*
	Section 5-5	*2*	*2.48*	*0.450*	*0.450*	*1.00*	*Cum*
		2	*2.48*	*0.992*	*1.805*	*8.87*	*Cum*
		2	*2.48*	*1.683*	*0.500*	*4.17*	*Cum*
	Section 6-6	*2*	*1.56*	*0.450*	*0.450*	*0.63*	*Cum*
		2	*1.56*	*0.840*	*1.300*	*3.41*	*Cum*
		2	*1.56*	*1.380*	*0.500*	*2.15*	*Cum*
	Floor	*1*	*0.63*	*1.230*	*0.700*	*0.54*	*Cum*
		1	*4.25*	*1.230*	*0.500*	*2.61*	*Cum*
		1	*0.40*	*1.230*	*0.200*	*0.10*	*Cum*
		1	*0.20*	*1.230*	*0.339*	*0.08*	*Cum*
		1	*2.30*	*1.230*	*0.500*	*1.41*	*Cum*
		1	*0.63*	*1.230*	*0.700*	*0.54*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.72*	*1.230*	*0.797*	*0.71*	*Cum*
	TOTAL					**49.80**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.230*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.91*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.91*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.56**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**49.80**	**0.00**	**0.149**	**7850.0**	**1172.83**	**Kg**
	Total Weight in Metric Tonne					**1.17**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.80*		*0.450*	*1.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.80*		*1.805*	*5.79*	*Sqm*
		4		*0.992*	*1.805*	*7.16*	*Sqm*
		4	*0.80*		*0.500*	*1.60*	*Sqm*
		4		*1.683*	*0.500*	*3.37*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*1.500*	*15.00*	*Sqm*
		4		*0.900*	*1.500*	*5.40*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.500*	*0.500*	*3.00*	*Sqm*
	Section 3-3	*4*	*1.89*		*0.450*	*3.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.89*		*1.300*	*9.83*	*Sqm*
		4		*0.840*	*1.300*	*4.37*	*Sqm*
		4	*1.89*		*0.500*	*3.78*	*Sqm*
		4		*1.380*	*0.500*	*2.76*	*Sqm*
	Section 5-5	*4*	*2.48*		*0.450*	*4.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.48*		*1.805*	*17.89*	*Sqm*
		4		*0.992*	*1.805*	*7.16*	*Sqm*
		4	*2.48*		*0.500*	*4.96*	*Sqm*
		4		*1.683*	*0.500*	*3.37*	*Sqm*
	Section 6-6	*4*	*1.56*		*0.450*	*2.81*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.56*		*1.300*	*8.12*	*Sqm*
		4		*0.840*	*1.300*	*4.37*	*Sqm*
		4	*1.56*		*0.500*	*3.12*	*Sqm*
		4		*1.380*	*0.500*	*2.76*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.230*	*0.700*	*1.72*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*1.230*	*0.500*	*1.23*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.230*	*0.200*	*0.49*	*Sqm*
		2	*0.20*		*0.339*	*0.14*	*Sqm*
		2		*1.230*	*0.339*	*0.83*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.230*	*0.500*	*1.23*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.230*	*0.700*	*1.72*	*Sqm*
	Crest	*2*	*0.72*		*0.797*	*1.15*	*Sqm*
		2		*1.230*	*0.797*	*1.96*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.42*		*0.300*	*3.25*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.12*		*0.600*	*6.14*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**174.38**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*2.106*		*6.32*	*Sqm*
	TOTAL					**6.32**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.630*	*0.300*	**0.28**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.630*	*0.150*	**0.28**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.91*	*0.450*		*4.46*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.91*	*0.450*		*4.46*	*Sqm*
	TOTAL					**8.92**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.053		1.05	Cum
	Abutment						
	Section 1-1	2	*0.95*	*1.197*		*2.278*	*Cum*
	Section 2-2	2	*2.50*	*0.785*		*3.925*	*Cum*
	Section 3-3	2	*2.20*	*0.596*		*2.622*	*Cum*
	Section 5-5	2	*2.52*	*1.197*		*6.039*	*Cum*
	Section 6-6	2	*1.03*	*0.596*		*1.224*	*Cum*
	Toe wall	2	*5.42*	*0.150*	*0.600*	*1.626*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**19.04**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH.0.035						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.53*	*2.261*	*1.985*	*13.738*	*Cum*
	Section 2-2	*2*	*4.00*	*1.164*	*1.985*	*18.484*	*Cum*
	Section 3-3	*2*	*3.70*	*1.044*	*1.785*	*13.790*	*Cum*
	Section 5-5	*2*	*2.27*	*2.411*	*1.985*	*21.747*	*Cum*
	Section 6-6	*2*	*0.99*	*1.044*	*1.785*	*3.694*	*Cum*
	U/S Key Floor	*1*	*0.69*	*1.370*	*1.100*	*1.036*	*Cum*
	U/S Floor	*1*	*3.50*	*1.370*	*3.128*	*14.999*	*Cum*
	D/S Floor	*1*	*3.88*	*1.370*	*1.000*	*5.316*	*Cum*
		1	*1.50*	*1.370*	*0.800*	*1.644*	*Cum*
	D/S Key Floor	*1*	*0.90*	*1.370*	*1.950*	*2.404*	*Cum*
	Toe Wall D/S Portion	*1*	*5.44*	*0.750*	*0.900*	*3.672*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						102.10	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.370*	*0.150*	*0.11*	*Cum*
		1	*1.06*	*1.370*	*0.150*	*0.22*	*Cum*
		1	*0.53*	*1.370*	*0.150*	*0.11*	*Cum*
		1	*0.42*	*1.370*	*0.150*	*0.09*	*Cum*
		1	*5.71*	*1.370*	*0.150*	*1.17*	*Cum*
		1	*0.57*	*1.370*	*0.150*	*0.12*	*Cum*
		1	*1.10*	*1.370*	*0.150*	*0.23*	*Cum*
		1	*0.07*	*1.370*	*0.150*	*0.01*	*Cum*
		1	*0.95*	*1.370*	*0.150*	*0.19*	*Cum*
		1	*2.01*	*1.370*	*0.150*	*0.41*	*Cum*
		1	*0.54*	*1.370*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.53*	*2.261*	*0.150*	*1.04*	*Cum*
	Section 2-2	*2*	*4.00*	*1.164*	*0.150*	*1.40*	*Cum*
	Section 3-3	*2*	*3.70*	*1.044*	*0.150*	*1.16*	*Cum*
	Section 5-5	*2*	*2.27*	*2.411*	*0.150*	*1.64*	*Cum*
	Section 6-6	*2*	*0.99*	*1.044*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*5.44*	*0.750*	*0.300*	*1.22*	*Cum*
	Toe Wall D/S Portion	*1*	*5.14*	*0.450*	*0.600*	*1.39*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**11.88**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.38*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.38*	*1.206*	*2.518*	*8.38*	*Cum*
		2	*1.38*	*2.111*	*0.950*	*5.54*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.657*	*0.690*	*3.63*	*Cum*
		2	*4.00*	*1.014*	*0.950*	*7.71*	*Cum*
	Section 3-3	*2*	*3.40*	*0.450*	*0.450*	*1.38*	*Cum*
		2	*3.40*	*0.597*	*0.490*	*1.99*	*Cum*
		2	*3.40*	*0.894*	*0.750*	*4.56*	*Cum*
	Section 5-5	*2*	*2.23*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.23*	*1.206*	*2.518*	*13.53*	*Cum*
		2	*2.23*	*2.111*	*0.650*	*6.11*	*Cum*
	Section 6-6	*2*	*1.51*	*0.450*	*0.450*	*0.61*	*Cum*
		2	*1.51*	*0.597*	*0.490*	*0.89*	*Cum*
		2	*1.51*	*0.894*	*0.700*	*1.89*	*Cum*
	Floor	*1*	*0.69*	*1.370*	*0.950*	*0.89*	*Cum*
		1	*1.61*	*1.370*	*0.650*	*1.44*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.80*	*1.370*	*0.300*	*0.33*	*Cum*
		1	*5.59*	*1.370*	*0.950*	*7.28*	*Cum*
		1	*0.20*	*1.370*	*0.650*	*0.18*	*Cum*
		1	*0.21*	*1.370*	*0.400*	*0.12*	*Cum*
		1	*1.30*	*1.370*	*0.750*	*1.34*	*Cum*
		1	*0.05*	*1.370*	*0.725*	*0.05*	*Cum*
		1	*2.45*	*1.370*	*0.700*	*2.35*	*Cum*
		1	*0.90*	*1.370*	*1.800*	*2.22*	*Cum*
	Crest	*1*	*1.25*	*1.370*	*2.123*	*3.63*	*Cum*
	TOTAL					**79.11**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.370*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.51*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.51*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.79**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**79.11**	**0.00**	**0.237**	**7850.0**	**1863.01**	**Kg**
	Total Weight in Metric Tonne					**1.86**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.38*		*0.450*	*2.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.38*		*2.518*	*13.90*	*Sqm*
		4		*1.206*	*2.518*	*12.14*	*Sqm*
		4	*1.38*		*0.950*	*5.25*	*Sqm*
		4		*2.111*	*0.950*	*8.02*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.690*	*11.04*	*Sqm*
		4		*0.657*	*0.690*	*1.81*	*Sqm*
		4	*4.00*		*0.950*	*15.20*	*Sqm*
		4		*1.014*	*0.950*	*3.85*	*Sqm*
	Section 3-3	*4*	*3.40*		*0.450*	*6.13*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.40*		*0.490*	*6.67*	*Sqm*
		4		*0.597*	*0.490*	*1.17*	*Sqm*
		4	*3.40*		*0.750*	*10.21*	*Sqm*
		4		*0.894*	*0.750*	*2.68*	*Sqm*
	Section 5-5	*4*	*2.23*		*0.450*	*4.01*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.23*		*2.518*	*22.44*	*Sqm*
		4		*1.206*	*2.518*	*12.14*	*Sqm*
		4	*2.23*		*0.650*	*5.79*	*Sqm*
		4		*2.111*	*0.650*	*5.49*	*Sqm*
	Section 6-6	*4*	*1.51*		*0.450*	*2.72*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.51*		*0.490*	*2.97*	*Sqm*
		4		*0.597*	*0.490*	*1.17*	*Sqm*
		4	*1.51*		*0.700*	*4.24*	*Sqm*
		4		*0.894*	*0.700*	*2.50*	*Sqm*
	Floor	*2*	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*1.370*	*0.950*	*2.60*	*Sqm*
		2	*1.61*		*0.650*	*2.10*	*Sqm*
		2		*1.370*	*0.650*	*1.78*	*Sqm*
		2	*0.80*		*0.300*	*0.48*	*Sqm*
		2		*1.370*	*0.300*	*0.82*	*Sqm*
		2	*5.59*		*0.950*	*10.63*	*Sqm*
		2		*1.370*	*0.950*	*2.60*	*Sqm*
		2	*0.20*		*0.650*	*0.26*	*Sqm*
		2		*1.370*	*0.650*	*1.78*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.370*	*0.400*	*1.10*	*Sqm*
		2	*1.30*		*0.750*	*1.95*	*Sqm*
		2		*1.370*	*0.750*	*2.06*	*Sqm*
		2	*0.05*		*0.725*	*0.07*	*Sqm*
		2		*1.370*	*0.725*	*1.99*	*Sqm*
		2	*2.45*		*0.700*	*3.43*	*Sqm*
		2		*1.370*	*0.700*	*1.92*	*Sqm*
		2	*0.90*		*1.800*	*3.24*	*Sqm*
		2		*1.370*	*1.800*	*4.93*	*Sqm*
	Crest	*2*	*1.25*		*2.123*	*5.29*	*Sqm*
		2		*1.370*	*2.123*	*5.82*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.44*		*0.300*	*3.26*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.14*		*0.600*	*6.17*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**248.35**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.033*		*7.12*	*Sqm*
	TOTAL					**7.12**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.770*	*0.300*	**0.40**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.770*	*0.150*	**0.40**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.51*	*0.450*		*6.08*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.51*	*0.450*		*6.08*	*Sqm*
	TOTAL					**12.16**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		14.229		14.23	**Cum**
	Abutment						
	Section 1-1	2	*1.53*	*0.420*		*1.286*	*Cum*
	Section 2-2	2	*4.00*	*0.420*		*3.360*	*Cum*
	Section 3-3	2	*3.70*	*0.506*		*3.744*	*Cum*
	Section 5-5	2	*2.27*	*0.420*		*1.908*	*Cum*
	Section 6-6	2	*0.99*	*0.506*		*1.003*	*Cum*
	Toe wall	2	*5.44*	*0.150*	*0.600*	*1.632*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**27.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH.1.350						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.878*	*2.298*	*10.832*	*Cum*
	Section 2-2	*2*	*2.50*	*1.146*	*2.298*	*13.168*	*Cum*
	Section 3-3	*2*	*2.70*	*1.026*	*2.098*	*11.624*	*Cum*
	Section 5-5	*2*	*2.27*	*2.028*	*2.298*	*21.125*	*Cum*
	Section 6-6	*2*	*0.96*	*1.026*	*2.098*	*4.129*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.050*	*0.650*	*0.392*	*Cum*
	U/S Floor	*1*	*2.50*	*1.050*	*2.270*	*5.959*	*Cum*
	D/S Floor	*1*	*3.00*	*1.050*	*1.050*	*3.308*	*Cum*
		1	*3.15*	*1.050*	*0.850*	*2.811*	*Cum*
	D/S Key Floor	*1*	*0.75*	*1.050*	*1.350*	*1.063*	*Cum*
	Toe Wall D/S Portion	*1*	*5.02*	*0.750*	*0.900*	*3.389*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						79.15	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*0.56*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*4.77*	*1.050*	*0.150*	*0.75*	*Cum*
		1	*0.49*	*1.050*	*0.150*	*0.08*	*Cum*
		1	*1.45*	*1.050*	*0.150*	*0.23*	*Cum*
		1	*1.34*	*1.050*	*0.150*	*0.21*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.878*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*2.50*	*1.146*	*0.150*	*0.86*	*Cum*
	Section 3-3	*2*	*2.70*	*1.026*	*0.150*	*0.83*	*Cum*
	Section 5-5	*2*	*2.27*	*2.028*	*0.150*	*1.38*	*Cum*
	Section 6-6	*2*	*0.96*	*1.026*	*0.150*	*0.30*	*Cum*
	Toe Wall D/S Portion	*1*	*5.02*	*0.750*	*0.300*	*1.13*	*Cum*
	Toe Wall D/S Portion	*1*	*4.72*	*0.450*	*0.600*	*1.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.81**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*0.450*	*0.450*	*0.49*	*Cum*
		2	*1.21*	*1.014*	*1.880*	*4.62*	*Cum*
		2	*1.21*	*1.728*	*0.700*	*2.93*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.648*	*0.660*	*2.14*	*Cum*
		2	*2.50*	*0.996*	*0.700*	*3.49*	*Cum*
	Section 3-3	*2*	*2.41*	*0.450*	*0.450*	*0.98*	*Cum*
		2	*2.41*	*0.588*	*0.460*	*1.30*	*Cum*
		2	*2.41*	*0.876*	*0.550*	*2.32*	*Cum*
	Section 5-5	*2*	*2.22*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.22*	*1.014*	*1.880*	*8.47*	*Cum*
		2	*2.22*	*1.728*	*0.550*	*4.22*	*Cum*
	Section 6-6	*2*	*1.47*	*0.450*	*0.450*	*0.60*	*Cum*
		2	*1.47*	*0.588*	*0.460*	*0.80*	*Cum*
		2	*1.47*	*0.876*	*0.700*	*1.81*	*Cum*
	Floor	*1*	*0.58*	*1.050*	*0.500*	*0.30*	*Cum*
		1	*5.50*	*1.050*	*0.700*	*4.04*	*Cum*
		1	*0.45*	*1.050*	*0.200*	*0.09*	*Cum*
		1	*0.35*	*1.050*	*0.175*	*0.06*	*Cum*
		1	*2.80*	*1.050*	*0.550*	*1.62*	*Cum*
		1	*0.75*	*1.050*	*1.200*	*0.95*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.99*	*1.050*	*1.515*	*1.58*	*Cum*
	TOTAL					**44.72**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.050*	*0.150*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.02*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.02*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.61**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**44.72**	**0.00**	**0.134**	**7850.0**	**1053.21**	**Kg**
	Total Weight in Metric Tonne					**1.05**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.21*		*0.450*	*2.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.21*		*1.880*	*9.11*	*Sqm*
		4		*1.014*	*1.880*	*7.63*	*Sqm*
		4	*1.21*		*0.700*	*3.39*	*Sqm*
		4		*1.728*	*0.700*	*4.84*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.660*	*6.60*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*2.50*		*0.700*	*7.00*	*Sqm*
		4		*0.996*	*0.700*	*2.79*	*Sqm*
	Section 3-3	*4*	*2.41*		*0.450*	*4.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.41*		*0.460*	*4.44*	*Sqm*
		4		*0.588*	*0.460*	*1.08*	*Sqm*
		4	*2.41*		*0.550*	*5.31*	*Sqm*
		4		*0.876*	*0.550*	*1.93*	*Sqm*
	Section 5-5	*4*	*2.22*		*0.450*	*4.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.22*		*1.880*	*16.71*	*Sqm*
		4		*1.014*	*1.880*	*7.63*	*Sqm*
		4	*2.22*		*0.550*	*4.89*	*Sqm*
		4		*1.728*	*0.550*	*3.80*	*Sqm*
	Section 6-6	*4*	*1.47*		*0.450*	*2.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.47*		*0.460*	*2.71*	*Sqm*
		4		*0.588*	*0.460*	*1.08*	*Sqm*
		4	*1.47*		*0.700*	*4.12*	*Sqm*
		4		*0.876*	*0.700*	*2.45*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*5.50*		*0.700*	*7.70*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
		2	*0.45*		*0.200*	*0.18*	*Sqm*
		2		*1.050*	*0.200*	*0.42*	*Sqm*
		2	*0.35*		*0.175*	*0.12*	*Sqm*
		2		*1.050*	*0.175*	*0.37*	*Sqm*
		2	*2.80*		*0.550*	*3.08*	*Sqm*
		2		*1.050*	*0.550*	*1.16*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*1.050*	*1.200*	*2.52*	*Sqm*
	Crest	*2*	*0.99*		*1.515*	*3.01*	*Sqm*
		2		*1.050*	*1.515*	*3.18*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.02*		*0.300*	*3.01*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.72*		*0.600*	*5.66*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**162.81**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.979*		*5.94*	*Sqm*
	TOTAL					**5.94**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.02*	*0.450*		*4.96*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.02*	*0.450*		*4.96*	*Sqm*
	TOTAL					**9.92**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.514		4.51	**Cum**
	Abutment						
	Section 1-1	2	*1.26*	*1.160*		*2.912*	*Cum*
	Section 2-2	2	*2.50*	*0.746*		*3.730*	*Cum*
	Section 3-3	2	*2.70*	*0.543*		*2.932*	*Cum*
	Section 5-5	2	*2.27*	*1.160*		*5.258*	*Cum*
	Section 6-6	2	*0.96*	*0.543*		*1.041*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.02*	*0.150*	*0.600*	*1.506*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**22.16**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.2.250						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*1.598*	*1.793*	*6.252*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*1.793*	*9.413*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*1.593*	*5.778*	*Cum*
	Section 5-5	*2*	*0.59*	*1.748*	*1.793*	*3.711*	*Cum*
	Section 6-6	*2*	*0.96*	*0.930*	*1.593*	*2.841*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
	U/S Floor	*1*	*2.00*	*0.700*	*1.764*	*2.470*	*Cum*
	D/S Floor	*1*	*2.50*	*0.700*	*0.850*	*1.488*	*Cum*
		1	*2.60*	*0.700*	*0.650*	*1.183*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
						33.88	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*3.88*	*0.700*	*0.150*	*0.41*	*Cum*
		1	*0.28*	*0.700*	*0.150*	*0.03*	*Cum*
		1	*1.14*	*0.700*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.09*	*1.598*	*0.150*	*0.52*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.930*	*0.150*	*0.54*	*Cum*
	Section 5-5	*2*	*0.59*	*1.748*	*0.150*	*0.31*	*Cum*
	Section 6-6	*2*	*0.96*	*0.930*	*0.150*	*0.27*	*Cum*
	TOTAL					**3.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.94*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.94*	*0.874*	*1.414*	*2.33*	*Cum*
		2	*0.94*	*1.448*	*0.500*	*1.36*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.600*	*0.500*	*1.50*	*Cum*
		2	*2.50*	*0.900*	*0.500*	*2.25*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.540*	*0.300*	*0.55*	*Cum*
		2	*1.71*	*0.780*	*0.550*	*1.47*	*Cum*
	Section 5-5	*2*	*0.55*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.55*	*0.874*	*1.414*	*1.35*	*Cum*
		2	*0.55*	*1.448*	*0.550*	*0.87*	*Cum*
	Section 6-6	*2*	*1.02*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.02*	*0.540*	*0.300*	*0.33*	*Cum*
		2	*1.02*	*0.780*	*0.500*	*0.80*	*Cum*
	Floor	*1*	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
		1	*4.50*	*0.700*	*0.500*	*1.58*	*Cum*
		1	*0.40*	*0.700*	*0.200*	*0.06*	*Cum*
		1	*0.30*	*0.700*	*0.307*	*0.06*	*Cum*
		1	*2.30*	*0.700*	*0.500*	*0.81*	*Cum*
		1	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
	Crest	*1*	*0.65*	*0.700*	*1.149*	*0.52*	*Cum*
	TOTAL					**19.17**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.700*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.58*	*0.450*	*0.050*	*0.15*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.58*	*0.450*	*0.050*	*0.15*	*Cum*
	TOTAL					**0.36**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**19.17**	**0.00**	**0.058**	**7850.0**	**451.44**	**Kg**
	Total Weight in Metric Tonne					**0.45**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.94*		*0.450*	*1.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.94*		*1.414*	*5.32*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*0.94*		*0.500*	*1.88*	*Sqm*
		4		*1.448*	*0.500*	*2.90*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.300*	*2.05*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.71*		*0.550*	*3.76*	*Sqm*
		4		*0.780*	*0.550*	*1.72*	*Sqm*
	Section 5-5	*4*	*0.55*		*0.450*	*0.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.55*		*1.414*	*3.10*	*Sqm*
		4		*0.874*	*1.414*	*4.94*	*Sqm*
		4	*0.55*		*0.550*	*1.21*	*Sqm*
		4		*1.448*	*0.550*	*3.19*	*Sqm*
	Section 6-6	*4*	*1.02*		*0.450*	*1.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.02*		*0.300*	*1.22*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.02*		*0.500*	*2.04*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*0.700*	*0.200*	*0.28*	*Sqm*
		2	*0.30*		*0.307*	*0.18*	*Sqm*
		2		*0.700*	*0.307*	*0.43*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
	Crest	*2*	*0.65*		*1.149*	*1.49*	*Sqm*
		2		*0.700*	*1.149*	*1.61*	*Sqm*
	TOTAL					**86.34**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.58*	*0.450*		*2.96*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.58*	*0.450*		*2.96*	*Sqm*
	TOTAL					**5.92**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.465		1.47	Cum
	Abutment						
	Section 1-1	2	*1.09*	*0.809*		*1.765*	*Cum*
	Section 2-2	2	*2.50*	*0.570*		*2.850*	*Cum*
	Section 3-3	2	*1.95*	*0.408*		*1.591*	*Cum*
	Section 5-5	2	*0.59*	*0.809*		*0.958*	*Cum*
	Section 6-6	2	*0.96*	*0.408*		*0.783*	*Cum*
	TOTAL					**9.41**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.371 METER AT CH.2.500						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.29*	*1.873*	*2.043*	*9.834*	*Cum*
	Section 2-2	*2*	*2.70*	*1.050*	*2.043*	*11.584*	*Cum*
	Section 3-3	*2*	*3.45*	*0.930*	*1.843*	*11.827*	*Cum*
	Section 5-5	*2*	*0.45*	*2.023*	*2.043*	*3.711*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.843*	*0.514*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
	U/S Floor	*1*	*3.00*	*0.700*	*2.421*	*5.084*	*Cum*
	D/S Floor	*1*	*2.75*	*0.700*	*0.850*	*1.636*	*Cum*
		1	*1.75*	*0.700*	*0.650*	*0.796*	*Cum*
	D/S Key Floor	*1*	*0.90*	*0.700*	*1.950*	*1.229*	*Cum*
						46.59	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*0.58*	*0.700*	*0.150*	*0.06*	*Cum*
		1	*0.28*	*0.700*	*0.150*	*0.03*	*Cum*
		1	*4.29*	*0.700*	*0.150*	*0.45*	*Cum*
		1	*0.42*	*0.700*	*0.150*	*0.04*	*Cum*
		1	*1.31*	*0.700*	*0.150*	*0.14*	*Cum*
		1	*0.14*	*0.700*	*0.150*	*0.01*	*Cum*
		1	*0.67*	*0.700*	*0.150*	*0.07*	*Cum*
		1	*1.40*	*0.700*	*0.150*	*0.15*	*Cum*
		1	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.29*	*1.873*	*0.150*	*0.72*	*Cum*
	Section 2-2	*2*	*2.70*	*1.050*	*0.150*	*0.85*	*Cum*
	Section 3-3	*2*	*3.45*	*0.930*	*0.150*	*0.96*	*Cum*
	Section 5-5	*2*	*0.45*	*2.023*	*0.150*	*0.27*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**4.00**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.78*	*0.450*	*0.450*	*0.31*	*Cum*
		2	*0.78*	*1.012*	*1.871*	*2.94*	*Cum*
		2	*0.78*	*1.723*	*0.700*	*1.87*	*Cum*
	Section 2-2	*2*	*2.70*	*0.450*	*0.500*	*1.22*	*Cum*
		2	*2.70*	*0.600*	*0.500*	*1.62*	*Cum*
		2	*2.70*	*0.900*	*0.700*	*3.40*	*Cum*
	Section 3-3	*2*	*3.21*	*0.450*	*0.450*	*1.30*	*Cum*
		2	*3.21*	*0.540*	*0.300*	*1.04*	*Cum*
		2	*3.21*	*0.780*	*0.600*	*3.00*	*Cum*
	Section 5-5	*2*	*0.49*	*0.450*	*0.450*	*0.20*	*Cum*
		2	*0.49*	*1.012*	*1.871*	*1.86*	*Cum*
		2	*0.49*	*1.723*	*0.500*	*0.85*	*Cum*
	Section 6-6	*2*	*0.62*	*0.450*	*0.450*	*0.25*	*Cum*
		2	*0.62*	*0.540*	*0.300*	*0.20*	*Cum*
		2	*0.62*	*0.780*	*0.500*	*0.48*	*Cum*
	Floor	*1*	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
		1	*1.53*	*0.700*	*0.500*	*0.54*	*Cum*
		1	*0.60*	*0.700*	*0.300*	*0.13*	*Cum*
		1	*4.02*	*0.700*	*0.700*	*1.97*	*Cum*
		1	*0.20*	*0.700*	*0.500*	*0.07*	*Cum*
		1	*0.30*	*0.700*	*0.300*	*0.06*	*Cum*
		1	*1.55*	*0.700*	*0.600*	*0.65*	*Cum*
		1	*0.10*	*0.700*	*0.550*	*0.04*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.90*	*0.700*	*0.500*	*0.67*	*Cum*
		1	*0.90*	*0.700*	*1.800*	*1.13*	*Cum*
	Crest	*1*	*1.01*	*0.700*	*2.123*	*1.50*	*Cum*
	TOTAL					**27.59**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*0.700*	*0.150*	*0.08*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.58*	*0.450*	*0.050*	*0.19*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.58*	*0.450*	*0.050*	*0.19*	*Cum*
	TOTAL					**0.46**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**27.59**	**0.00**	**0.083**	**7850.0**	**649.74**	**Kg**
	Total Weight in Metric Tonne					**0.65**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.78*		*0.450*	*1.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.78*		*1.871*	*5.80*	*Sqm*
		4		*1.012*	*1.871*	*7.57*	*Sqm*
		4	*0.78*		*0.700*	*2.17*	*Sqm*
		4		*1.723*	*0.700*	*4.82*	*Sqm*
	Section 2-2	*4*	*2.70*		*0.500*	*5.40*	*Sqm*
		4		*0.450*	*0.500*	*0.90*	*Sqm*
		4	*2.70*		*0.500*	*5.40*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.70*		*0.700*	*7.56*	*Sqm*
		4		*0.900*	*0.700*	*2.52*	*Sqm*
	Section 3-3	*4*	*3.21*		*0.450*	*5.78*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.21*		*0.300*	*3.85*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*3.21*		*0.600*	*7.70*	*Sqm*
		4		*0.780*	*0.600*	*1.87*	*Sqm*
	Section 5-5	*4*	*0.49*		*0.450*	*0.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.49*		*1.871*	*3.67*	*Sqm*
		4		*1.012*	*1.871*	*7.57*	*Sqm*
		4	*0.49*		*0.500*	*0.98*	*Sqm*
		4		*1.723*	*0.500*	*3.45*	*Sqm*
	Section 6-6	*4*	*0.62*		*0.450*	*1.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.62*		*0.300*	*0.74*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.62*		*0.500*	*1.23*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
		2	*1.53*		*0.500*	*1.53*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.60*		*0.300*	*0.36*	*Sqm*
		2		*0.700*	*0.300*	*0.42*	*Sqm*
		2	*4.02*		*0.700*	*5.62*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.30*		*0.300*	*0.18*	*Sqm*
		2		*0.700*	*0.300*	*0.42*	*Sqm*
		2	*1.55*		*0.600*	*1.86*	*Sqm*
		2		*0.700*	*0.600*	*0.84*	*Sqm*
		2	*0.10*		*0.550*	*0.11*	*Sqm*
		2		*0.700*	*0.550*	*0.77*	*Sqm*
		2	*1.90*		*0.500*	*1.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.90*		*1.800*	*3.24*	*Sqm*
		2		*0.700*	*1.800*	*2.52*	*Sqm*
	Crest	*2*	*1.01*		*2.123*	*4.28*	*Sqm*
		2		*0.700*	*2.123*	*2.97*	*Sqm*
	TOTAL					**121.84**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.58*	*0.450*		*3.86*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.58*	*0.450*		*3.86*	*Sqm*
	TOTAL					**7.72**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.842		3.84	**Cum**
	Abutment						
	Section 1-1	2	*1.29*	*0.702*		*1.803*	*Cum*
	Section 2-2	2	*2.70*	*0.600*		*3.240*	*Cum*
	Section 3-3	2	*3.45*	*0.423*		*2.919*	*Cum*
	Section 5-5	2	*0.45*	*0.702*		*0.630*	*Cum*
	Section 6-6	2	*0.15*	*0.423*		*0.127*	*Cum*
	TOTAL					**12.56**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BHAHUARA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.2.750						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*1.416*	*1.142*	*3.323*	*Cum*
	Section 2-2	*2*	*2.00*	*1.050*	*1.142*	*4.796*	*Cum*
	Section 3-3	*2*	*2.45*	*0.930*	*0.942*	*4.293*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*1.142*	*2.253*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.942*	*0.263*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
	U/S Floor	*1*	*2.00*	*0.700*	*1.460*	*2.044*	*Cum*
	D/S Floor	*1*	*2.00*	*0.700*	*0.850*	*1.190*	*Cum*
		1	*2.85*	*0.700*	*0.650*	*1.297*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
						20.20	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*3.38*	*0.700*	*0.150*	*0.35*	*Cum*
		1	*0.28*	*0.700*	*0.150*	*0.03*	*Cum*
		1	*1.39*	*0.700*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.03*	*1.416*	*0.150*	*0.44*	*Cum*
	Section 2-2	*2*	*2.00*	*1.050*	*0.150*	*0.63*	*Cum*
	Section 3-3	*2*	*2.45*	*0.930*	*0.150*	*0.68*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.150*	*0.30*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**2.90**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.88*	*0.450*	*0.450*	*0.36*	*Cum*
		2	*0.88*	*0.783*	*1.110*	*1.53*	*Cum*
		2	*0.88*	*1.266*	*0.500*	*1.11*	*Cum*
	Section 2-2	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.600*	*0.500*	*1.20*	*Cum*
		2	*2.00*	*0.900*	*0.500*	*1.80*	*Cum*
	Section 3-3	*2*	*2.21*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.21*	*0.540*	*0.300*	*0.72*	*Cum*
		2	*2.21*	*0.780*	*0.500*	*1.72*	*Cum*
	Section 5-5	*2*	*0.59*	*0.450*	*0.450*	*0.24*	*Cum*
		2	*0.55*	*0.783*	*1.110*	*0.95*	*Cum*
		2	*0.55*	*1.266*	*0.500*	*0.69*	*Cum*
	Section 6-6	*2*	*0.62*	*0.450*	*0.450*	*0.25*	*Cum*
		2	*0.62*	*0.540*	*0.300*	*0.20*	*Cum*
		2	*0.62*	*0.780*	*0.500*	*0.48*	*Cum*
	Floor	*1*	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
		1	*4.00*	*0.700*	*0.500*	*1.40*	*Cum*
		1	*0.40*	*0.700*	*0.200*	*0.06*	*Cum*
		1	*0.30*	*0.700*	*0.307*	*0.06*	*Cum*
		1	*2.55*	*0.700*	*0.500*	*0.89*	*Cum*
		1	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
	Crest	*1*	*0.65*	*0.700*	*0.845*	*0.38*	*Cum*
	TOTAL					**16.36**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.700*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.58*	*0.450*	*0.050*	*0.15*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.58*	*0.450*	*0.050*	*0.15*	*Cum*
	TOTAL					**0.36**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**16.36**	**0.00**	**0.049**	**7850.0**	**385.23**	**Kg**
	Total Weight in Metric Tonne					**0.39**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.88*		*0.450*	*1.58*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.88*		*1.110*	*3.90*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.88*		*0.500*	*1.76*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*2.21*		*0.450*	*3.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.21*		*0.300*	*2.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*2.21*		*0.500*	*4.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.59*		*0.450*	*1.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.55*		*1.110*	*2.43*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.55*		*0.500*	*1.10*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*0.62*		*0.450*	*1.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.62*		*0.300*	*0.74*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.62*		*0.500*	*1.23*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
		2	*4.00*		*0.500*	*4.00*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*0.700*	*0.200*	*0.28*	*Sqm*
		2	*0.30*		*0.307*	*0.18*	*Sqm*
		2		*0.700*	*0.307*	*0.43*	*Sqm*
		2	*2.55*		*0.500*	*2.55*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
	Crest	*2*	*0.65*		*0.845*	*1.10*	*Sqm*
		2		*0.700*	*0.845*	*1.18*	*Sqm*
	TOTAL					**76.02**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.58*	*0.450*		*2.96*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.58*	*0.450*		*2.96*	*Sqm*
	TOTAL					**5.92**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.061		1.06	**Cum**
	Abutment						
	Section 1-1	2	*1.03*	*0.295*		*0.607*	*Cum*
	Section 2-2	2	*2.00*	*0.296*		*1.184*	*Cum*
	Section 3-3	2	*2.45*	*0.284*		*1.392*	*Cum*
	Section 5-5	2	*0.63*	*0.295*		*0.372*	*Cum*
	Section 6-6	2	*0.15*	*0.284*		*0.085*	*Cum*
	TOTAL					**4.70**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR YARI MR.						
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH.0.000						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.416*	*0.444*	*1.206*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.444*	*2.331*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*0.244*	*0.998*	*Cum*
	Section 5-5	*2*	*2.73*	*1.566*	*0.444*	*3.799*	*Cum*
	Section 6-6	*2*	*1.12*	*0.930*	*0.244*	*0.509*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.800*	*0.850*	*1.488*	*Cum*
	U/S Floor	*1*	*1.75*	*2.800*	*1.307*	*6.404*	*Cum*
	D/S Floor	*1*	*2.50*	*2.800*	*0.850*	*5.950*	*Cum*
		1	*2.50*	*2.800*	*0.650*	*4.550*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.800*	*0.850*	*1.488*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.900*	*4.930*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						35.45	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.800*	*0.150*	*0.23*	*Cum*
		1	*0.78*	*2.800*	*0.150*	*0.33*	*Cum*
		1	*3.63*	*2.800*	*0.150*	*1.52*	*Cum*
		1	*0.28*	*2.800*	*0.150*	*0.12*	*Cum*
		1	*1.14*	*2.800*	*0.150*	*0.48*	*Cum*
		1	*0.78*	*2.800*	*0.150*	*0.33*	*Cum*
		1	*0.54*	*2.800*	*0.150*	*0.23*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.416*	*0.150*	*0.41*	*Cum*
	Section 2-2	*2*	*2.50*	*1.050*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*2.73*	*1.566*	*0.150*	*1.28*	*Cum*
	Section 6-6	*2*	*1.12*	*0.930*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*7.30*	*0.750*	*0.300*	*1.64*	*Cum*
	Toe Wall D/S Portion	*1*	*7.00*	*0.450*	*0.600*	*1.89*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**11.25**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.83*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.83*	*0.783*	*1.110*	*1.45*	*Cum*
		2	*0.83*	*1.266*	*0.500*	*1.06*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.600*	*0.500*	*1.50*	*Cum*
		2	*2.50*	*0.900*	*0.500*	*2.25*	*Cum*
	Section 3-3	*2*	*1.86*	*0.450*	*0.450*	*0.75*	*Cum*
		2	*1.86*	*0.540*	*0.300*	*0.60*	*Cum*
		2	*1.86*	*0.780*	*0.500*	*1.45*	*Cum*
	Section 5-5	*2*	*2.69*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*0.55*	*0.783*	*1.110*	*0.95*	*Cum*
		2	*0.55*	*1.266*	*0.500*	*0.69*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.540*	*0.300*	*0.55*	*Cum*
		2	*1.69*	*0.780*	*0.500*	*1.32*	*Cum*
	Floor	*1*	*0.63*	*2.800*	*0.700*	*1.23*	*Cum*
		1	*4.25*	*2.800*	*0.500*	*5.95*	*Cum*
		1	*0.40*	*2.800*	*0.200*	*0.22*	*Cum*
		1	*0.20*	*2.800*	*0.307*	*0.17*	*Cum*
		1	*2.30*	*2.800*	*0.500*	*3.22*	*Cum*
		1	*0.63*	*2.800*	*0.700*	*1.23*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.60*	*2.800*	*0.857*	*1.44*	*Cum*
	TOTAL					**29.15**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.800*	*0.150*	*0.25*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.31*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.31*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.72**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**29.15**	**0.00**	**0.087**	**7850.0**	**686.46**	**Kg**
	Total Weight in Metric Tonne					**0.69**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.83*		*0.450*	*1.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.83*		*1.110*	*3.71*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.83*		*0.500*	*1.67*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.86*		*0.450*	*3.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.86*		*0.300*	*2.23*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.86*		*0.500*	*3.72*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*2.69*		*0.450*	*4.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.55*		*1.110*	*2.43*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.55*		*0.500*	*1.10*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.300*	*2.02*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.69*		*0.500*	*3.37*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.800*	*0.700*	*3.92*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*2.800*	*0.500*	*2.80*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*2.800*	*0.200*	*1.12*	*Sqm*
		2	*0.20*		*0.307*	*0.12*	*Sqm*
		2		*2.800*	*0.307*	*1.72*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*2.800*	*0.500*	*2.80*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.800*	*0.700*	*3.92*	*Sqm*
	Crest	*2*	*0.60*		*0.857*	*1.03*	*Sqm*
		2		*2.800*	*0.857*	*4.80*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.30*		*0.300*	*4.38*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.00*		*0.600*	*8.40*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**122.50**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.295*		*9.18*	*Sqm*
	TOTAL					**9.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*2.200*	*0.300*	**1.32**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*2.200*	*0.150*	**1.32**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.31*	*0.450*		*4.64*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.31*	*0.450*		*4.64*	*Sqm*
	TOTAL					**9.28**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.771		1.77	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.071*		*0.137*	*Cum*
	Section 2-2	2	*2.50*	*0.071*		*0.357*	*Cum*
	Section 3-3	2	*2.20*	*0.071*		*0.314*	*Cum*
	Section 5-5	2	*2.73*	*0.071*		*0.390*	*Cum*
	Section 6-6	2	*1.12*	*0.071*		*0.160*	*Cum*
	Toe wall	2	*7.30*	*0.150*	*0.600*	*2.191*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**5.68**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR YARI MINOR						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.100						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*1.799*	*2.274*	*9.442*	*Cum*
	Section 2-2	*2*	*3.25*	*1.251*	*2.274*	*18.491*	*Cum*
	Section 3-3	*2*	*1.45*	*1.131*	*2.074*	*6.803*	*Cum*
	Section 5-5	*2*	*2.68*	*1.949*	*2.274*	*23.711*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*2.074*	*5.259*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.160*	*0.850*	*1.148*	*Cum*
	U/S Floor	*1*	*2.50*	*2.160*	*1.814*	*9.796*	*Cum*
	D/S Floor	*1*	*3.25*	*2.160*	*0.850*	*5.967*	*Cum*
		1	*1.75*	*2.160*	*0.650*	*2.457*	*Cum*
	D/S Key Floor	*1*	*0.70*	*2.160*	*1.150*	*1.739*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.900*	*4.498*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						91.11	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*2.160*	*0.150*	*0.25*	*Cum*
		1	*0.37*	*2.160*	*0.150*	*0.12*	*Cum*
		1	*0.07*	*2.160*	*0.150*	*0.02*	*Cum*
		1	*4.65*	*2.160*	*0.150*	*1.51*	*Cum*
		1	*0.35*	*2.160*	*0.150*	*0.11*	*Cum*
		1	*0.24*	*2.160*	*0.150*	*0.08*	*Cum*
		1	*1.12*	*2.160*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.799*	*0.150*	*0.62*	*Cum*
	Section 2-2	*2*	*3.25*	*1.251*	*0.150*	*1.22*	*Cum*
	Section 3-3	*2*	*1.45*	*1.131*	*0.150*	*0.49*	*Cum*
	Section 5-5	*2*	*2.68*	*1.949*	*0.150*	*1.56*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*0.150*	*0.38*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.300*	*1.50*	*Cum*
	Toe Wall D/S Portion	*1*	*6.36*	*0.450*	*0.600*	*1.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**11.39**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.00*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.00*	*0.975*	*1.749*	*3.42*	*Cum*
		2	*1.00*	*1.649*	*0.550*	*1.82*	*Cum*
	Section 2-2	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.701*	*0.835*	*3.80*	*Cum*
		2	*3.25*	*1.101*	*0.550*	*3.94*	*Cum*
	Section 3-3	*2*	*1.11*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.11*	*0.641*	*0.635*	*0.90*	*Cum*
		2	*1.11*	*0.981*	*0.500*	*1.09*	*Cum*
	Section 5-5	*2*	*2.63*	*0.450*	*0.450*	*1.07*	*Cum*
		2	*2.63*	*0.975*	*1.749*	*8.97*	*Cum*
		2	*2.63*	*1.649*	*0.500*	*4.34*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.641*	*0.635*	*1.37*	*Cum*
		2	*1.69*	*0.981*	*0.500*	*1.65*	*Cum*
	Floor	*1*	*0.63*	*2.160*	*0.700*	*0.95*	*Cum*
		1	*1.33*	*2.160*	*0.500*	*1.44*	*Cum*
		1	*0.05*	*2.160*	*0.525*	*0.06*	*Cum*
		1	*4.37*	*2.160*	*0.550*	*5.19*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*2.160*	*0.400*	*0.17*	*Cum*
		1	*0.28*	*2.160*	*0.250*	*0.15*	*Cum*
		1	*1.55*	*2.160*	*0.500*	*1.67*	*Cum*
		1	*0.70*	*2.160*	*1.000*	*1.51*	*Cum*
	Crest	*1*	*0.68*	*2.160*	*1.314*	*1.92*	*Cum*
	TOTAL					**48.28**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*2.160*	*0.150*	*0.23*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.56*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.56*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.70**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**48.28**	**0.00**	**0.145**	**7850.0**	**1137.07**	**Kg**
	Total Weight in Metric Tonne					**1.14**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.00*		*0.450*	*1.81*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.00*		*1.749*	*7.02*	*Sqm*
		4		*0.975*	*1.749*	*6.82*	*Sqm*
		4	*1.00*		*0.550*	*2.21*	*Sqm*
		4		*1.649*	*0.550*	*3.63*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*0.835*	*10.86*	*Sqm*
		4		*0.701*	*0.835*	*2.34*	*Sqm*
		4	*3.25*		*0.550*	*7.15*	*Sqm*
		4		*1.101*	*0.550*	*2.42*	*Sqm*
	Section 3-3	*4*	*1.11*		*0.450*	*2.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.11*		*0.635*	*2.82*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.11*		*0.500*	*2.22*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Section 5-5	*4*	*2.63*		*0.450*	*4.74*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.63*		*1.749*	*18.41*	*Sqm*
		4		*0.975*	*1.749*	*6.82*	*Sqm*
		4	*2.63*		*0.500*	*5.26*	*Sqm*
		4		*1.649*	*0.500*	*3.30*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.635*	*4.28*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.69*		*0.500*	*3.37*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.160*	*0.700*	*3.02*	*Sqm*
		2	*1.33*		*0.500*	*1.33*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*4.37*		*0.550*	*4.81*	*Sqm*
		2		*2.160*	*0.550*	*2.38*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.160*	*0.400*	*1.73*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*2.160*	*0.250*	*1.08*	*Sqm*
		2	*1.55*		*0.500*	*1.55*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*2.160*	*1.000*	*4.32*	*Sqm*
	Crest	*2*	*0.68*		*1.314*	*1.77*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.160*	*1.314*	*5.68*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.66*		*0.300*	*4.00*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.36*		*0.600*	*7.64*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**171.84**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.295*		*9.18*	*Sqm*
	TOTAL					**9.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.560*	*0.300*	**0.94**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.560*	*0.150*	**0.94**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.56*	*0.450*		*4.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.56*	*0.450*		*4.75*	*Sqm*
	TOTAL					**9.50**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		5.556		5.56	**Cum**
	Abutment						
	Section 1-1	2	*1.15*	*1.236*		*2.853*	*Cum*
	Section 2-2	2	*3.25*	*0.902*		*5.863*	*Cum*
	Section 3-3	2	*1.45*	*0.693*		*2.009*	*Cum*
	Section 5-5	2	*2.68*	*1.236*		*6.613*	*Cum*
	Section 6-6	2	*1.12*	*0.693*		*1.553*	*Cum*
	Toe wall	2	*6.66*	*0.150*	*0.600*	*1.999*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**26.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR YARI MR.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.600 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*1.617*	*0.915*	*3.080*	*Cum*
	Section 2-2	*2*	*3.00*	*1.251*	*0.915*	*6.868*	*Cum*
	Section 3-3	*2*	*1.70*	*1.131*	*0.715*	*2.749*	*Cum*
	Section 5-5	*2*	*2.71*	*1.767*	*0.915*	*8.773*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*0.715*	*1.813*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.160*	*0.850*	*1.148*	*Cum*
	U/S Floor	*1*	*2.00*	*2.160*	*1.460*	*6.307*	*Cum*
	D/S Floor	*1*	*3.00*	*2.160*	*0.850*	*5.508*	*Cum*
		1	*2.00*	*2.160*	*0.650*	*2.808*	*Cum*
	D/S Key Floor	*1*	*0.63*	*2.160*	*0.850*	*1.148*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.900*	*4.498*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						46.50	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*2.160*	*0.150*	*0.25*	*Cum*
		1	*4.38*	*2.160*	*0.150*	*1.42*	*Cum*
		1	*0.28*	*2.160*	*0.150*	*0.09*	*Cum*
		1	*0.64*	*2.160*	*0.150*	*0.21*	*Cum*
		1	*0.78*	*2.160*	*0.150*	*0.25*	*Cum*
		1	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.04*	*1.617*	*0.150*	*0.50*	*Cum*
	Section 2-2	*2*	*3.00*	*1.251*	*0.150*	*1.13*	*Cum*
	Section 3-3	*2*	*1.70*	*1.131*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.71*	*1.767*	*0.150*	*1.44*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*0.150*	*0.38*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.300*	*1.50*	*Cum*
	Toe Wall D/S Portion	*1*	*6.36*	*0.450*	*0.600*	*1.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.90**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.89*	*0.450*	*0.450*	*0.36*	*Cum*
		2	*0.89*	*0.884*	*1.445*	*2.28*	*Cum*
		2	*0.89*	*1.467*	*0.500*	*1.31*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.701*	*0.835*	*3.51*	*Cum*
		2	*3.00*	*1.101*	*0.500*	*3.30*	*Cum*
	Section 3-3	*2*	*1.36*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.36*	*0.641*	*0.635*	*1.11*	*Cum*
		2	*1.36*	*0.981*	*0.500*	*1.33*	*Cum*
	Section 5-5	*2*	*2.67*	*0.450*	*0.450*	*1.08*	*Cum*
		2	*0.55*	*0.884*	*1.445*	*1.40*	*Cum*
		2	*0.55*	*1.467*	*0.500*	*0.80*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.641*	*0.635*	*1.37*	*Cum*
		2	*1.69*	*0.981*	*0.500*	*1.65*	*Cum*
	Floor	*1*	*0.63*	*2.160*	*0.700*	*0.95*	*Cum*
		1	*5.00*	*2.160*	*0.500*	*5.40*	*Cum*
		1	*0.40*	*2.160*	*0.200*	*0.17*	*Cum*
		1	*0.20*	*2.160*	*0.307*	*0.13*	*Cum*
		1	*1.80*	*2.160*	*0.500*	*1.94*	*Cum*
		1	*0.63*	*2.160*	*0.700*	*0.95*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.65*	*2.160*	*1.010*	*1.42*	*Cum*
	TOTAL					**32.91**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*2.160*	*0.150*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.41*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.41*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.68**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.91**	**0.00**	**0.099**	**7850.0**	**775.09**	**Kg**
	Total Weight in Metric Tonne					**0.78**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.89*		*0.450*	*1.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.89*		*1.445*	*5.15*	*Sqm*
		4		*0.884*	*1.445*	*5.11*	*Sqm*
		4	*0.89*		*0.500*	*1.78*	*Sqm*
		4		*1.467*	*0.500*	*2.93*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.835*	*10.02*	*Sqm*
		4		*0.701*	*0.835*	*2.34*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.101*	*0.500*	*2.20*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.450*	*2.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.36*		*0.635*	*3.45*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.36*		*0.500*	*2.72*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Section 5-5	*4*	*2.67*		*0.450*	*4.80*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.55*		*1.445*	*3.17*	*Sqm*
		4		*0.884*	*1.445*	*5.11*	*Sqm*
		4	*0.55*		*0.500*	*1.10*	*Sqm*
		4		*1.467*	*0.500*	*2.93*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.635*	*4.28*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.69*		*0.500*	*3.37*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.160*	*0.700*	*3.02*	*Sqm*
		2	*5.00*		*0.500*	*5.00*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*2.160*	*0.200*	*0.86*	*Sqm*
		2	*0.20*		*0.307*	*0.12*	*Sqm*
		2		*2.160*	*0.307*	*1.33*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.160*	*0.700*	*3.02*	*Sqm*
	Crest	*2*	*0.65*		*1.010*	*1.31*	*Sqm*
		2		*2.160*	*1.010*	*4.36*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.66*		*0.300*	*4.00*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.36*		*0.600*	*7.64*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**136.96**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.295*		*9.18*	*Sqm*
	TOTAL					**9.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*1.560*	*0.300*	**0.94**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*1.560*	*0.150*	**0.94**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.41*	*0.450*		*4.68*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.41*	*0.450*		*4.68*	*Sqm*
	TOTAL					**9.37**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.465		2.47	**Cum**
	Abutment						
	Section 1-1	2	*1.04*	*0.175*		*0.364*	*Cum*
	Section 2-2	2	*3.00*	*0.211*		*1.267*	*Cum*
	Section 3-3	2	*1.70*	*0.175*		*0.595*	*Cum*
	Section 5-5	2	*2.71*	*0.175*		*0.950*	*Cum*
	Section 6-6	2	*1.12*	*0.175*		*0.392*	*Cum*
	Toe wall	2	*6.66*	*0.150*	*0.600*	*1.999*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**8.39**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR YARI MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH.3.170						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.53*	*2.268*	*1.938*	*13.459*	*Cum*
	Section 2-2	*2*	*4.00*	*1.170*	*1.938*	*18.140*	*Cum*
	Section 3-3	*2*	*3.70*	*1.050*	*1.738*	*13.504*	*Cum*
	Section 5-5	*2*	*2.29*	*2.418*	*1.938*	*21.481*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*1.738*	*3.650*	*Cum*
	U/S Key Floor	*1*	*0.66*	*1.200*	*1.000*	*0.795*	*Cum*
	U/S Floor	*1*	*3.50*	*1.200*	*3.129*	*13.142*	*Cum*
	D/S Floor	*1*	*4.00*	*1.200*	*1.000*	*4.800*	*Cum*
		1	*1.75*	*1.200*	*0.800*	*1.680*	*Cum*
	D/S Key Floor	*1*	*0.90*	*1.200*	*1.950*	*2.106*	*Cum*
	Toe Wall D/S Portion	*1*	*5.30*	*0.750*	*0.900*	*3.578*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						98.13	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*0.95*	*1.200*	*0.150*	*0.17*	*Cum*
		1	*0.58*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*0.42*	*1.200*	*0.150*	*0.08*	*Cum*
		1	*5.72*	*1.200*	*0.150*	*1.03*	*Cum*
		1	*0.49*	*1.200*	*0.150*	*0.09*	*Cum*
		1	*1.40*	*1.200*	*0.150*	*0.25*	*Cum*
		1	*0.14*	*1.200*	*0.150*	*0.03*	*Cum*
		1	*0.65*	*1.200*	*0.150*	*0.12*	*Cum*
		1	*2.01*	*1.200*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.53*	*2.268*	*0.150*	*1.04*	*Cum*
	Section 2-2	*2*	*4.00*	*1.170*	*0.150*	*1.40*	*Cum*
	Section 3-3	*2*	*3.70*	*1.050*	*0.150*	*1.17*	*Cum*
	Section 5-5	*2*	*2.29*	*2.418*	*0.150*	*1.66*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.30*	*0.750*	*0.300*	*1.19*	*Cum*
	Toe Wall D/S Portion	*1*	*5.00*	*0.450*	*0.600*	*1.35*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**11.63**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.38*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.38*	*1.209*	*2.530*	*8.45*	*Cum*
		2	*1.38*	*2.118*	*0.950*	*5.56*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.660*	*0.700*	*3.70*	*Cum*
		2	*4.00*	*1.020*	*0.950*	*7.75*	*Cum*
	Section 3-3	*2*	*3.40*	*0.450*	*0.450*	*1.38*	*Cum*
		2	*3.40*	*0.600*	*0.500*	*2.04*	*Cum*
		2	*3.40*	*0.900*	*0.800*	*4.90*	*Cum*
	Section 5-5	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*1.209*	*2.530*	*13.75*	*Cum*
		2	*2.25*	*2.118*	*0.650*	*6.19*	*Cum*
	Section 6-6	*2*	*1.53*	*0.450*	*0.450*	*0.62*	*Cum*
		2	*1.53*	*0.600*	*0.500*	*0.92*	*Cum*
		2	*1.53*	*0.900*	*0.700*	*1.92*	*Cum*
	Floor	*1*	*0.66*	*1.200*	*0.850*	*0.68*	*Cum*
		1	*1.61*	*1.200*	*0.650*	*1.25*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.80*	*1.200*	*0.300*	*0.29*	*Cum*
		1	*5.60*	*1.200*	*0.700*	*4.70*	*Cum*
		1	*0.20*	*1.200*	*0.700*	*0.17*	*Cum*
		1	*0.18*	*1.200*	*0.350*	*0.07*	*Cum*
		1	*1.55*	*1.200*	*0.800*	*1.49*	*Cum*
		1	*0.10*	*1.200*	*0.750*	*0.09*	*Cum*
		1	*2.15*	*1.200*	*0.700*	*1.81*	*Cum*
		1	*0.90*	*1.200*	*1.800*	*1.94*	*Cum*
	Crest	*1*	*1.25*	*1.200*	*2.134*	*3.19*	*Cum*
	TOTAL					**75.93**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.200*	*0.150*	*0.16*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.55*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.55*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.77**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**75.93**	**0.00**	**0.228**	**7850.0**	**1788.20**	**Kg**
	Total Weight in Metric Tonne					**1.79**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.38*		*0.450*	*2.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.38*		*2.530*	*13.98*	*Sqm*
		4		*1.209*	*2.530*	*12.24*	*Sqm*
		4	*1.38*		*0.950*	*5.25*	*Sqm*
		4		*2.118*	*0.950*	*8.05*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.700*	*11.20*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*4.00*		*0.950*	*15.20*	*Sqm*
		4		*1.020*	*0.950*	*3.88*	*Sqm*
	Section 3-3	*4*	*3.40*		*0.450*	*6.12*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.40*		*0.500*	*6.80*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*3.40*		*0.800*	*10.88*	*Sqm*
		4		*0.900*	*0.800*	*2.88*	*Sqm*
	Section 5-5	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*2.530*	*22.75*	*Sqm*
		4		*1.209*	*2.530*	*12.24*	*Sqm*
		4	*2.25*		*0.650*	*5.84*	*Sqm*
		4		*2.118*	*0.650*	*5.51*	*Sqm*
	Section 6-6	*4*	*1.53*		*0.450*	*2.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.53*		*0.500*	*3.05*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.53*		*0.700*	*4.27*	*Sqm*
		4		*0.900*	*0.700*	*2.52*	*Sqm*
	Floor	*2*	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*1.200*	*0.850*	*2.04*	*Sqm*
		2	*1.61*		*0.650*	*2.09*	*Sqm*
		2		*1.200*	*0.650*	*1.56*	*Sqm*
		2	*0.80*		*0.300*	*0.48*	*Sqm*
		2		*1.200*	*0.300*	*0.72*	*Sqm*
		2	*5.60*		*0.700*	*7.83*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*0.18*		*0.350*	*0.12*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.200*	*0.350*	*0.84*	*Sqm*
		2	*1.55*		*0.800*	*2.48*	*Sqm*
		2		*1.200*	*0.800*	*1.92*	*Sqm*
		2	*0.10*		*0.750*	*0.15*	*Sqm*
		2		*1.200*	*0.750*	*1.80*	*Sqm*
		2	*2.15*		*0.700*	*3.01*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*0.90*		*1.800*	*3.24*	*Sqm*
		2		*1.200*	*1.800*	*4.32*	*Sqm*
	Crest	*2*	*1.25*		*2.134*	*5.32*	*Sqm*
		2		*1.200*	*2.134*	*5.12*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.30*		*0.300*	*3.18*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.00*		*0.600*	*6.00*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**244.16**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.051*		*8.20*	*Sqm*
	TOTAL					**8.20**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.600*	*0.300*	**0.36**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.600*	*0.150*	**0.36**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.55*	*0.450*		*6.10*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.55*	*0.450*		*6.10*	*Sqm*
	TOTAL					**12.19**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		13.609		13.61	Cum
	Abutment						
	Section 1-1	2	*1.53*	*0.390*		*1.194*	*Cum*
	Section 2-2	2	*4.00*	*0.390*		*3.120*	*Cum*
	Section 3-3	2	*3.70*	*0.457*		*3.382*	*Cum*
	Section 5-5	2	*2.29*	*0.390*		*1.788*	*Cum*
	Section 6-6	2	*1.00*	*0.457*		*0.914*	*Cum*
	Toe wall	2	*5.30*	*0.150*	*0.600*	*1.590*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**25.96**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEPUA MINOR						
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH.0.000						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.23*	*1.799*	*1.768*	*7.802*	*Cum*
	Section 2-2	*2*	*3.00*	*1.251*	*1.768*	*13.271*	*Cum*
	Section 3-3	*2*	*1.70*	*1.131*	*1.568*	*6.030*	*Cum*
	Section 5-5	*2*	*2.58*	*1.949*	*1.768*	*17.794*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*1.568*	*3.976*	*Cum*
	U/S Key Floor	*1*	*0.63*	*2.160*	*0.850*	*1.148*	*Cum*
	U/S Floor	*1*	*2.75*	*2.160*	*2.017*	*11.981*	*Cum*
	D/S Floor	*1*	*3.00*	*2.160*	*0.850*	*5.508*	*Cum*
		1	*3.00*	*2.160*	*0.650*	*4.212*	*Cum*
	D/S Key Floor	*1*	*0.70*	*2.160*	*1.150*	*1.739*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.900*	*4.498*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						79.53	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*2.160*	*0.150*	*0.25*	*Cum*
		1	*0.50*	*2.160*	*0.150*	*0.16*	*Cum*
		1	*0.14*	*2.160*	*0.150*	*0.05*	*Cum*
		1	*4.43*	*2.160*	*0.150*	*1.43*	*Cum*
		1	*0.42*	*2.160*	*0.150*	*0.14*	*Cum*
		1	*1.49*	*2.160*	*0.150*	*0.48*	*Cum*
		1	*1.12*	*2.160*	*0.150*	*0.36*	*Cum*
		1	*0.54*	*2.160*	*0.150*	*0.18*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.23*	*1.799*	*0.150*	*0.66*	*Cum*
	Section 2-2	*2*	*3.00*	*1.251*	*0.150*	*1.13*	*Cum*
	Section 3-3	*2*	*1.70*	*1.131*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.58*	*1.949*	*0.150*	*1.51*	*Cum*
	Section 6-6	*2*	*1.12*	*1.131*	*0.150*	*0.38*	*Cum*
	Toe Wall D/S Portion	*1*	*6.66*	*0.750*	*0.300*	*1.50*	*Cum*
	Toe Wall D/S Portion	*1*	*6.36*	*0.450*	*0.600*	*1.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**11.65**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.08*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.08*	*0.975*	*1.749*	*3.67*	*Cum*
		2	*1.08*	*1.649*	*0.550*	*1.95*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.701*	*0.835*	*3.51*	*Cum*
		2	*3.00*	*1.101*	*0.550*	*3.63*	*Cum*
	Section 3-3	*2*	*1.36*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.36*	*0.641*	*0.635*	*1.11*	*Cum*
		2	*1.36*	*0.981*	*0.500*	*1.33*	*Cum*
	Section 5-5	*2*	*2.63*	*0.450*	*0.450*	*1.06*	*Cum*
		2	*2.63*	*0.975*	*1.749*	*8.96*	*Cum*
		2	*2.63*	*1.649*	*0.500*	*4.33*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.641*	*0.635*	*1.37*	*Cum*
		2	*1.69*	*0.981*	*0.500*	*1.65*	*Cum*
	Floor	*1*	*0.63*	*2.160*	*0.700*	*0.95*	*Cum*
		1	*1.45*	*2.160*	*0.500*	*1.57*	*Cum*
		1	*0.10*	*2.160*	*0.550*	*0.12*	*Cum*
		1	*4.20*	*2.160*	*0.600*	*5.44*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*2.160*	*0.400*	*0.17*	*Cum*
		1	*0.26*	*2.160*	*0.300*	*0.17*	*Cum*
		1	*2.80*	*2.160*	*0.500*	*3.02*	*Cum*
		1	*0.70*	*2.160*	*1.000*	*1.51*	*Cum*
	Crest	*1*	*0.97*	*2.160*	*1.392*	*2.93*	*Cum*
	TOTAL					**51.35**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*2.160*	*0.150*	*0.24*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.64*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.64*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.72**	**Cum**
12	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**51.35**	**0.00**	**0.154**	**7850.0**	**1209.21**	**Kg**
	Total Weight in Metric Tonne					**1.21**	**MT**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.08*		*0.450*	*1.94*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.08*		*1.749*	*7.53*	*Sqm*
		4		*0.975*	*1.749*	*6.82*	*Sqm*
		4	*1.08*		*0.550*	*2.37*	*Sqm*
		4		*1.649*	*0.550*	*3.63*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.835*	*10.02*	*Sqm*
		4		*0.701*	*0.835*	*2.34*	*Sqm*
		4	*3.00*		*0.550*	*6.60*	*Sqm*
		4		*1.101*	*0.550*	*2.42*	*Sqm*
	Section 3-3	*4*	*1.36*		*0.450*	*2.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.36*		*0.635*	*3.45*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.36*		*0.500*	*2.72*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Section 5-5	*4*	*2.63*		*0.450*	*4.73*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.63*		*1.749*	*18.39*	*Sqm*
		4		*0.975*	*1.749*	*6.82*	*Sqm*
		4	*2.63*		*0.500*	*5.26*	*Sqm*
		4		*1.649*	*0.500*	*3.30*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.635*	*4.28*	*Sqm*
		4		*0.641*	*0.635*	*1.63*	*Sqm*
		4	*1.69*		*0.500*	*3.37*	*Sqm*
		4		*0.981*	*0.500*	*1.96*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*2.160*	*0.700*	*3.02*	*Sqm*
		2	*1.45*		*0.500*	*1.45*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*4.20*		*0.600*	*5.04*	*Sqm*
		2		*2.160*	*0.600*	*2.59*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*2.160*	*0.400*	*1.73*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*2.160*	*0.300*	*1.30*	*Sqm*
		2	*2.80*		*0.500*	*2.80*	*Sqm*
		2		*2.160*	*0.500*	*2.16*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*2.160*	*1.000*	*4.32*	*Sqm*
	Crest	*2*	*0.97*		*1.392*	*2.71*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*2.160*	*1.392*	*6.01*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.66*		*0.300*	*4.00*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.36*		*0.600*	*7.64*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**174.93**	**Sqm**
6	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.069*		*7.24*	*Sqm*
	TOTAL					**7.24**	**Sqm**
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*1.560*	*0.300*	**0.82**	**Cum**
8	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*1.560*	*0.150*	**0.82**	**Cum**
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.64*	*0.450*		*4.79*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.64*	*0.450*		*4.79*	*Sqm*
	TOTAL					**9.57**	**Sqm**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		7.651		7.65	**Cum**
	Abutment						
	Section 1-1	2	*1.23*	*0.686*		*1.683*	*Cum*
	Section 2-2	2	*3.00*	*0.661*		*3.966*	*Cum*
	Section 3-3	2	*1.70*	*0.578*		*1.965*	*Cum*
	Section 5-5	2	*2.58*	*0.686*		*3.544*	*Cum*
	Section 6-6	2	*1.12*	*0.578*		*1.296*	*Cum*
	Toe wall	2	*6.66*	*0.150*	*0.600*	*1.999*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**22.42**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEPUA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.0.750						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*1.607*	*1.957*	*7.142*	*Cum*
	Section 2-2	*2*	*2.50*	*1.059*	*1.957*	*10.362*	*Cum*
	Section 3-3	*2*	*1.95*	*0.939*	*1.757*	*6.434*	*Cum*
	Section 5-5	*2*	*2.03*	*1.757*	*1.957*	*13.988*	*Cum*
	Section 6-6	*2*	*0.83*	*0.939*	*1.757*	*2.749*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	U/S Floor	*1*	*2.25*	*1.050*	*1.764*	*4.167*	*Cum*
	D/S Floor	*1*	*2.50*	*1.050*	*0.850*	*2.231*	*Cum*
		1	*2.25*	*1.050*	*0.650*	*1.536*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.750*	*0.900*	*3.101*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						54.18	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*4.32*	*1.050*	*0.150*	*0.68*	*Cum*
		1	*0.28*	*1.050*	*0.150*	*0.04*	*Cum*
		1	*0.70*	*1.050*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.14*	*1.607*	*0.150*	*0.55*	*Cum*
	Section 2-2	*2*	*2.50*	*1.059*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.939*	*0.150*	*0.55*	*Cum*
	Section 5-5	*2*	*2.03*	*1.757*	*0.150*	*1.07*	*Cum*
	Section 6-6	*2*	*0.83*	*0.939*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.750*	*0.300*	*1.03*	*Cum*
	Toe Wall D/S Portion	*1*	*4.29*	*0.450*	*0.600*	*1.16*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**7.45**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*0.450*	*0.450*	*0.40*	*Cum*
		2	*0.98*	*0.879*	*1.429*	*2.47*	*Cum*
		2	*0.98*	*1.457*	*0.500*	*1.43*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.605*	*0.515*	*1.56*	*Cum*
		2	*2.50*	*0.909*	*0.500*	*2.27*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.545*	*0.315*	*0.59*	*Cum*
		2	*1.71*	*0.789*	*0.500*	*1.35*	*Cum*
	Section 5-5	*2*	*1.99*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*1.99*	*0.879*	*1.429*	*5.00*	*Cum*
		2	*1.99*	*1.457*	*0.500*	*2.90*	*Cum*
	Section 6-6	*2*	*1.30*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.30*	*0.545*	*0.315*	*0.45*	*Cum*
		2	*1.30*	*0.789*	*0.500*	*1.03*	*Cum*
	Floor	*1*	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*
		1	*4.75*	*1.050*	*0.500*	*2.49*	*Cum*
		1	*0.40*	*1.050*	*0.200*	*0.08*	*Cum*
		1	*0.20*	*1.050*	*0.500*	*0.11*	*Cum*
		1	*2.05*	*1.050*	*0.500*	*1.08*	*Cum*
		1	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.88*	*1.050*	*1.134*	*1.05*	*Cum*
	TOTAL					**28.21**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.050*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.09*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.09*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.52**	**Cum**
12	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**28.21**	**0.00**	**0.085**	**7850.0**	**664.27**	**Kg**
	Total Weight in Metric Tonne					**0.66**	**MT**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.98*		*0.450*	*1.77*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.98*		*1.429*	*5.62*	*Sqm*
		4		*0.879*	*1.429*	*5.02*	*Sqm*
		4	*0.98*		*0.500*	*1.97*	*Sqm*
		4		*1.457*	*0.500*	*2.91*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.515*	*5.15*	*Sqm*
		4		*0.605*	*0.515*	*1.25*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.909*	*0.500*	*1.82*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.315*	*2.15*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*1.71*		*0.500*	*3.41*	*Sqm*
		4		*0.789*	*0.500*	*1.58*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section 5-5	*4*	*1.99*		*0.450*	*3.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.99*		*1.429*	*11.39*	*Sqm*
		4		*0.879*	*1.429*	*5.02*	*Sqm*
		4	*1.99*		*0.500*	*3.99*	*Sqm*
		4		*1.457*	*0.500*	*2.91*	*Sqm*
	Section 6-6	*4*	*1.30*		*0.450*	*2.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.30*		*0.315*	*1.64*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*1.30*		*0.500*	*2.61*	*Sqm*
		4		*0.789*	*0.500*	*1.58*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.050*	*0.200*	*0.42*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
	Crest	*2*	*0.88*		*1.134*	*2.00*	*Sqm*
		2		*1.050*	*1.134*	*2.38*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.59*		*0.300*	*2.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.29*		*0.600*	*5.15*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**119.98**	**Sqm**
6	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.718*		*5.15*	*Sqm*
	TOTAL					**5.15**	**Sqm**
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
8	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.09*	*0.450*		*4.09*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.09*	*0.450*		*4.09*	*Sqm*
	TOTAL					**8.18**	**Sqm**
10	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		12.326		12.33	**Cum**
	Abutment						
	Section 1-1	2	*1.14*	*0.979*		*2.224*	*Cum*
	Section 2-2	2	*2.50*	*0.583*		*2.915*	*Cum*
	Section 3-3	2	*1.95*	*0.434*		*1.694*	*Cum*
	Section 5-5	2	*2.03*	*0.979*		*3.984*	*Cum*
	Section 6-6	2	*0.83*	*0.434*		*0.724*	*Cum*
	Toe wall	2	*4.59*	*0.150*	*0.600*	*1.378*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**25.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEPUA MR.						
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH.1.250						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.52*	*2.157*	*2.903*	*19.061*	*Cum*
	Section 2-2	*2*	*3.50*	*1.579*	*2.903*	*32.087*	*Cum*
	Section 3-3	*2*	*5.20*	*1.459*	*2.703*	*41.014*	*Cum*
	Section 5-5	*2*	*1.92*	*2.307*	*2.653*	*23.539*	*Cum*
	Section 6-6	*2*	*0.46*	*0.939*	*2.703*	*2.355*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*4.00*	*5.500*	*2.829*	*62.238*	*Cum*
	D/S Floor	*1*	*3.50*	*5.500*	*1.000*	*19.250*	*Cum*
		1	*5.19*	*5.500*	*0.250*	*7.134*	*Cum*
		1	*5.50*	*1.050*	*0.800*	*4.620*	*Cum*
	D/S Key Floor	*1*	*0.85*	*5.500*	*1.750*	*8.181*	*Cum*
	Toe Wall D/S Portion	*1*	*4.60*	*0.750*	*0.900*	*3.102*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						225.96	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*0.95*	*1.050*	*0.150*	*0.15*	*Cum*
		1	*1.16*	*1.050*	*0.150*	*0.18*	*Cum*
		1	*0.35*	*1.050*	*0.150*	*0.06*	*Cum*
		1	*5.24*	*1.050*	*0.150*	*0.82*	*Cum*
		1	*0.49*	*1.050*	*0.150*	*0.08*	*Cum*
		1	*2.10*	*1.050*	*0.150*	*0.33*	*Cum*
		1	*0.14*	*1.050*	*0.150*	*0.02*	*Cum*
		1	*1.50*	*1.050*	*0.150*	*0.24*	*Cum*
		1	*1.79*	*1.050*	*0.150*	*0.28*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.52*	*2.157*	*0.150*	*0.98*	*Cum*
	Section 2-2	*2*	*3.50*	*1.579*	*0.300*	*3.32*	*Cum*
	Section 3-3	*2*	*5.20*	*1.459*	*0.300*	*4.55*	*Cum*
	Section 5-5	*2*	*1.92*	*2.307*	*0.150*	*1.33*	*Cum*
	Section 6-6	*2*	*0.46*	*0.939*	*0.150*	*0.13*	*Cum*
	Toe Wall D/S Portion	*1*	*4.60*	*0.750*	*0.300*	*1.03*	*Cum*
	Toe Wall D/S Portion	*1*	*4.30*	*0.450*	*0.600*	*1.16*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**15.65**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.30*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.30*	*1.153*	*2.344*	*7.01*	*Cum*
		2	*1.30*	*2.007*	*0.900*	*4.69*	*Cum*
	Section 2-2	*2*	*3.50*	*0.820*	*0.450*	*2.58*	*Cum*
		2	*3.50*	*0.975*	*0.515*	*3.51*	*Cum*
		2	*3.50*	*1.279*	*2.050*	*18.35*	*Cum*
	Section 3-3	*2*	*4.96*	*0.820*	*0.450*	*3.66*	*Cum*
		2	*4.96*	*0.915*	*0.315*	*2.86*	*Cum*
		2	*4.96*	*1.159*	*2.250*	*25.85*	*Cum*
	Section 5-5	*2*	*1.88*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.88*	*1.153*	*2.344*	*10.16*	*Cum*
		2	*1.88*	*2.007*	*0.650*	*4.90*	*Cum*
	Section 6-6	*2*	*1.04*	*0.450*	*0.450*	*0.42*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.04*	*0.545*	*0.315*	*0.36*	*Cum*
		2	*1.04*	*0.789*	*0.650*	*1.07*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.66*	*1.050*	*0.850*	*0.59*	*Cum*
		1	*7.50*	*1.050*	*0.650*	*5.12*	*Cum*
		1	*5.19*	*1.050*	*0.250*	*1.36*	*Cum*
		1	*0.22*	*1.050*	*0.350*	*0.08*	*Cum*
		1	*0.20*	*1.050*	*0.650*	*0.14*	*Cum*
		1	*2.30*	*1.050*	*0.750*	*1.81*	*Cum*
		1	*0.10*	*1.050*	*0.700*	*0.07*	*Cum*
		1	*2.90*	*1.050*	*0.650*	*1.98*	*Cum*
		1	*0.85*	*1.050*	*1.600*	*1.43*	*Cum*
	Crest	*1*	*1.23*	*1.050*	*1.989*	*2.57*	*Cum*
	TOTAL					**99.15**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*1.050*	*0.200*	*0.20*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.61*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.61*	*0.450*	*0.050*	*0.17*	*Cum*
	Slab Bridge	*1*	*1.85*	*5.500*	*0.328*	*3.34*	*Cum*
	Wearing coat	*1*	*1.85*	*4.500*	*0.070*	*0.58*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**9.37**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.31*		*1.578*	*113.0*	*Kg*
a2	*10*	*9*	*5.90*		*0.616*	*32.7*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.23*		*0.616*	*26.1*	*Kg*
a5	*10*	*7*	*5.85*		*0.616*	*25.2*	*Kg*
x1	*12*	*32*	*2.50*		*0.888*	*71.0*	*Kg*
x2	*16*	*32*	*1.37*		*1.578*	*68.9*	*Kg*
x3	*10*	*24*	*1.75*		*0.616*	*25.9*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**99.15**	**0.003**	**0.297**	**7850.0**	**2335.0**	**Kg**
	Total Reinforcement Steel (in kg)					*2704.7*	*Kg*
	Total Weight in Metric Tonne					**2.70**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.30*		*0.45*	*2.34*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.30*		*2.34*	*12.17*	*Sqm*
		4		*1.15*	*2.34*	*10.81*	*Sqm*
		4	*1.30*		*0.90*	*4.67*	*Sqm*
		4		*2.01*	*0.90*	*7.23*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.45*	*6.30*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.50*		*0.52*	*7.21*	*Sqm*
		4		*0.97*	*0.52*	*2.01*	*Sqm*
		4	*3.50*		*2.05*	*28.70*	*Sqm*
		4		*1.28*	*2.05*	*10.49*	*Sqm*
	Section 3-3	*4*	*4.96*		*0.45*	*8.92*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*4.96*		*0.32*	*6.24*	*Sqm*
		4		*0.91*	*0.32*	*1.15*	*Sqm*
		4	*4.96*		*2.25*	*44.60*	*Sqm*
		4		*1.16*	*2.25*	*10.43*	*Sqm*
	Section 5-5	*4*	*1.88*		*0.45*	*3.38*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.88*		*2.34*	*17.62*	*Sqm*
		4		*1.15*	*2.34*	*10.81*	*Sqm*
		4	*1.88*		*0.65*	*4.89*	*Sqm*
		4		*2.01*	*0.65*	*5.22*	*Sqm*
	Section 6-6	*4*	*1.04*		*0.45*	*1.88*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.04*		*0.32*	*1.31*	*Sqm*
		4		*0.54*	*0.32*	*0.69*	*Sqm*
		4	*1.04*		*0.65*	*2.71*	*Sqm*
		4		*0.79*	*0.65*	*2.05*	*Sqm*
	Floor	*2*	*0.66*		*0.85*	*1.13*	*Sqm*
		2		*1.05*	*0.85*	*1.79*	*Sqm*
		2	*7.50*		*0.65*	*9.75*	*Sqm*
		2		*1.05*	*0.65*	*1.37*	*Sqm*
		2	*5.188*		*0.25*	*2.59*	*Sqm*
		2		*1.05*	*0.25*	*0.53*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.22*		*0.35*	*0.16*	*Sqm*
		2		*1.05*	*0.35*	*0.74*	*Sqm*
		2	*0.20*		*0.65*	*0.26*	*Sqm*
		2		*1.05*	*0.65*	*1.37*	*Sqm*
		2	*0.100*		*0.70*	*0.14*	*Sqm*
		2		*1.05*	*0.70*	*1.47*	*Sqm*
		2	*2.900*		*0.65*	*3.77*	*Sqm*
		2		*1.05*	*0.65*	*1.37*	*Sqm*
		2	*2.30*		*0.75*	*3.45*	*Sqm*
		2		*1.05*	*0.75*	*1.58*	*Sqm*
		2	*0.85*		*1.60*	*2.72*	*Sqm*
		2		*1.05*	*1.60*	*3.36*	*Sqm*
	Crest	*2*	*1.23*		*1.99*	*4.90*	*Sqm*
		2		*1.05*	*1.99*	*4.18*	*Sqm*
	Slab	*2*	*3.70*		*0.66*	*4.85*	*Sqm*
		2		*11.00*	*0.66*	*14.43*	*Sqm*
		1	*3.70*	*11.00*		*40.70*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.60*		*0.30*	*2.76*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.30*		*0.60*	*5.16*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.15*	*0.90*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.60*	*3.60*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**340.25**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.719*		*5.16*	*Sqm*
	TOTAL					**5.16**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.61*	*0.450*		*3.42*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.61*	*0.450*		*3.42*	*Sqm*
	TOTAL					**6.85**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*3.059*		3.06	**Cum**
	Abutment						
	Section 1-1	2	*1.52*	*1.721*		*5.237*	*Cum*
	Section 2-2	2	*3.50*	*1.258*		*8.806*	*Cum*
	Section 3-3	2	*5.20*	*1.135*		*11.799*	*Cum*
	Section 5-5	2	*1.92*	*1.683*		*6.473*	*Cum*
	Section 6-6	2	*0.46*	*0.467*		*0.433*	*Cum*
	Toe wall	2	*4.60*	*0.150*	*0.600*	*1.379*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**37.46**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEPUA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.1.400						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*1.607*	*2.504*	*9.138*	*Cum*
	Section 2-2	*2*	*2.50*	*1.059*	*2.504*	*13.259*	*Cum*
	Section 3-3	*2*	*1.95*	*0.939*	*2.304*	*8.437*	*Cum*
	Section 5-5	*2*	*2.03*	*1.757*	*2.504*	*17.897*	*Cum*
	Section 6-6	*2*	*0.83*	*0.939*	*2.304*	*3.604*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	U/S Floor	*1*	*2.25*	*1.050*	*1.764*	*4.167*	*Cum*
	D/S Floor	*1*	*2.50*	*1.050*	*0.850*	*2.231*	*Cum*
		1	*2.25*	*1.050*	*0.650*	*1.536*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.750*	*0.900*	*3.101*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						65.84	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*4.32*	*1.050*	*0.150*	*0.68*	*Cum*
		1	*0.28*	*1.050*	*0.150*	*0.04*	*Cum*
		1	*0.70*	*1.050*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.14*	*1.61*	*0.150*	*0.55*	*Cum*
	Section 2-2	*2*	*2.50*	*1.06*	*0.150*	*0.79*	*Cum*
	Section 3-3	*2*	*1.95*	*0.94*	*0.150*	*0.55*	*Cum*
	Section 5-5	*2*	*2.03*	*1.76*	*0.150*	*1.07*	*Cum*
	Section 6-6	*2*	*0.83*	*0.94*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.75*	*0.300*	*1.03*	*Cum*
	Toe Wall D/S Portion	*1*	*4.29*	*0.45*	*0.600*	*1.16*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**7.45**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.91*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.91*	*0.879*	*1.429*	*2.28*	*Cum*
		2	*0.91*	*1.457*	*0.500*	*1.32*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.605*	*0.515*	*1.56*	*Cum*
		2	*2.50*	*0.909*	*0.500*	*2.27*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.545*	*0.315*	*0.59*	*Cum*
		2	*1.71*	*0.789*	*0.500*	*1.35*	*Cum*
	Section 5-5	*2*	*1.99*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*1.99*	*0.879*	*1.429*	*5.00*	*Cum*
		2	*1.99*	*1.457*	*0.500*	*2.90*	*Cum*
	Section 6-6	*2*	*1.30*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.30*	*0.545*	*0.315*	*0.45*	*Cum*
		2	*1.30*	*0.789*	*0.500*	*1.03*	*Cum*
	Floor	*1*	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*
		1	*4.75*	*1.050*	*0.500*	*2.49*	*Cum*
		1	*0.40*	*1.050*	*0.200*	*0.08*	*Cum*
		1	*0.20*	*1.050*	*0.500*	*0.11*	*Cum*
		1	*2.05*	*1.050*	*0.500*	*1.08*	*Cum*
		1	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*
	Crest	*1*	*0.88*	*1.050*	*1.134*	*1.05*	*Cum*
	TOTAL					**27.88**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.050*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.09*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.09*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.52**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**27.88**	**0.003**	**0.084**	**7850.0**	**656.49**	**Kg**
	Total Weight in Metric Tonne					**0.66**	**MT**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.91*		*0.450*	*1.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.91*		*1.429*	*5.19*	*Sqm*
		4		*0.879*	*1.429*	*5.02*	*Sqm*
		4	*0.91*		*0.500*	*1.82*	*Sqm*
		4		*1.457*	*0.500*	*2.91*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.515*	*5.15*	*Sqm*
		4		*0.605*	*0.515*	*1.25*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.909*	*0.500*	*1.82*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.315*	*2.15*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*1.71*		*0.500*	*3.41*	*Sqm*
		4		*0.789*	*0.500*	*1.58*	*Sqm*
	Section 5-5	*4*	*1.99*		*0.450*	*3.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.99*		*1.429*	*11.39*	*Sqm*
		4		*0.879*	*1.429*	*5.02*	*Sqm*
		4	*1.99*		*0.500*	*3.99*	*Sqm*
		4		*1.457*	*0.500*	*2.91*	*Sqm*
	Section 6-6	*4*	*1.30*		*0.450*	*2.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.30*		*0.315*	*1.64*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*1.30*		*0.500*	*2.61*	*Sqm*
		4		*0.789*	*0.500*	*1.58*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.40*		*0.200*	*0.16*	*Sqm*
		2		*1.050*	*0.200*	*0.42*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
	Crest	*2*	*0.88*		*1.134*	*2.00*	*Sqm*
		2		*1.050*	*1.134*	*2.38*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.59*		*0.300*	*2.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.29*		*0.600*	*5.15*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**119.27**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.718*		*5.15*	*Sqm*
	TOTAL					**5.15**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.09*	*0.450*		*4.09*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.09*	*0.450*		*4.09*	*Sqm*
	TOTAL					**8.18**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*		*12.236*		12.24	**Cum**
	Abutment						
	Section 1-1	*2*	*1.14*	*1.694*		*3.847*	*Cum*
	Section 2-2	*2*	*2.50*	*0.614*		*3.068*	*Cum*
	Section 3-3	*2*	*1.95*	*0.443*		*1.728*	*Cum*
	Section 5-5	*2*	*2.03*	*1.694*		*6.891*	*Cum*
	Section 6-6	*2*	*0.83*	*0.443*		*0.738*	*Cum*
	Toe wall	*2*	*4.59*	*0.150*	*0.600*	*1.378*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**30.16**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEPUA MR.						
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH.1.600						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.36*	*1.973*	*3.113*	*16.731*	*Cum*
	Section 2-2	*2*	*3.00*	*1.059*	*3.113*	*19.780*	*Cum*
	Section 3-3	*2*	*3.20*	*0.939*	*2.913*	*17.506*	*Cum*
	Section 5-5	*2*	*1.96*	*2.123*	*3.113*	*25.887*	*Cum*
	Section 6-6	*2*	*0.83*	*0.939*	*2.913*	*4.557*	*Cum*
	U/S Key Floor	*1*	*0.69*	*1.050*	*1.100*	*0.794*	*Cum*
	U/S Floor	*1*	*3.00*	*1.050*	*2.264*	*7.132*	*Cum*
	D/S Floor	*1*	*3.00*	*1.050*	*0.900*	*2.835*	*Cum*
		1	*4.46*	*1.050*	*0.200*	*0.937*	*Cum*
		1	*1.50*	*1.050*	*0.700*	*1.103*	*Cum*
		1	*2.00*	*1.050*	*0.550*	*1.155*	*Cum*
	D/S Key Floor	*1*	*0.81*	*1.050*	*0.770*	*0.657*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.750*	*0.900*	*3.101*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						103.52	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*1.06*	*1.050*	*0.150*	*0.17*	*Cum*
		1	*0.36*	*1.050*	*0.150*	*0.06*	*Cum*
		1	*0.28*	*1.050*	*0.150*	*0.04*	*Cum*
		1	*4.89*	*1.050*	*0.150*	*0.77*	*Cum*
		1	*0.49*	*1.050*	*0.150*	*0.08*	*Cum*
		1	*0.75*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*0.07*	*1.050*	*0.150*	*0.01*	*Cum*
		1	*0.62*	*1.050*	*0.150*	*0.10*	*Cum*
		1	*1.62*	*1.050*	*0.150*	*0.26*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.36*	*1.97*	*0.150*	*0.81*	*Cum*
	Section 2-2	*2*	*3.00*	*1.06*	*0.150*	*0.95*	*Cum*
	Section 3-3	*2*	*3.20*	*0.94*	*0.150*	*0.90*	*Cum*
	Section 5-5	*2*	*1.96*	*2.12*	*0.150*	*1.25*	*Cum*
	Section 6-6	*2*	*0.83*	*0.94*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.59*	*0.75*	*0.300*	*1.03*	*Cum*
	Toe Wall D/S Portion	*1*	*4.29*	*0.45*	*0.600*	*1.16*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.91**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.13*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.13*	*1.062*	*2.039*	*4.90*	*Cum*
		2	*1.13*	*1.823*	*0.750*	*3.09*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.605*	*0.515*	*1.87*	*Cum*
		2	*3.00*	*0.909*	*0.750*	*4.09*	*Cum*
	Section 3-3	*2*	*2.73*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.73*	*0.545*	*0.315*	*0.94*	*Cum*
		2	*2.73*	*0.789*	*0.600*	*2.59*	*Cum*
	Section 5-5	*2*	*1.92*	*0.450*	*0.450*	*0.78*	*Cum*
		2	*1.92*	*1.062*	*2.039*	*8.30*	*Cum*
		2	*1.92*	*1.823*	*0.550*	*3.84*	*Cum*
	Section 6-6	*2*	*1.49*	*0.450*	*0.450*	*0.60*	*Cum*
		2	*1.49*	*0.545*	*0.315*	*0.51*	*Cum*
		2	*1.49*	*0.789*	*0.550*	*1.29*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	*1*	*0.69*	*1.050*	*0.950*	*0.69*	*Cum*
		1	*6.00*	*1.050*	*0.550*	*3.47*	*Cum*
		1	*4.46*	*1.050*	*0.200*	*0.94*	*Cum*
		1	*0.58*	*1.050*	*0.350*	*0.21*	*Cum*
		1	*0.20*	*1.050*	*0.500*	*0.11*	*Cum*
		1	*1.30*	*1.050*	*0.600*	*0.82*	*Cum*
		1	*0.05*	*1.050*	*0.575*	*0.03*	*Cum*
		1	*1.95*	*1.050*	*0.550*	*1.13*	*Cum*
		1	*0.81*	*1.050*	*1.450*	*1.24*	*Cum*
	Crest	*1*	*1.12*	*1.050*	*1.739*	*2.05*	*Cum*
	TOTAL					**46.24**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.050*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*12.23*	*0.450*	*0.050*	*0.28*	*Cum*
	On Abutment Top (Right Side)	*1*	*12.23*	*0.450*	*0.050*	*0.28*	*Cum*
	TOTAL					**0.68**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**46.24**	**0.003**	**0.139**	**7850.0**	**1088.93**	**Kg**
	Total Weight in Metric Tonne					**1.09**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.13*		*0.450*	*2.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.13*		*2.039*	*9.23*	*Sqm*
		4		*1.062*	*2.039*	*8.66*	*Sqm*
		4	*1.13*		*0.750*	*3.39*	*Sqm*
		4		*1.823*	*0.750*	*5.47*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.515*	*6.18*	*Sqm*
		4		*0.605*	*0.515*	*1.25*	*Sqm*
		4	*3.00*		*0.750*	*9.00*	*Sqm*
		4		*0.909*	*0.750*	*2.73*	*Sqm*
	Section 3-3	*4*	*2.73*		*0.450*	*4.91*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.73*		*0.315*	*3.44*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*2.73*		*0.600*	*6.55*	*Sqm*
		4		*0.789*	*0.600*	*1.89*	*Sqm*
	Section 5-5	*4*	*1.92*		*0.450*	*3.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.92*		*2.039*	*15.63*	*Sqm*
		4		*1.062*	*2.039*	*8.66*	*Sqm*
		4	*1.92*		*0.550*	*4.22*	*Sqm*
		4		*1.823*	*0.550*	*4.01*	*Sqm*
	Section 6-6	*4*	*1.49*		*0.450*	*2.68*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.49*		*0.315*	*1.88*	*Sqm*
		4		*0.545*	*0.315*	*0.69*	*Sqm*
		4	*1.49*		*0.550*	*3.28*	*Sqm*
		4		*0.789*	*0.550*	*1.74*	*Sqm*
	Floor	*2*	*0.69*		*0.950*	*1.31*	*Sqm*
		2		*1.050*	*0.950*	*2.00*	*Sqm*
		2	*6.00*		*0.550*	*6.60*	*Sqm*
		2		*1.050*	*0.550*	*1.16*	*Sqm*
		2	*4.46*		*0.2*	*1.79*	*Sqm*
		2		*1.05*	*0.2*	*0.42*	*Sqm*
		2	*0.575*		*0.35*	*0.40*	*Sqm*
		2		*1.05*	*0.35*	*0.74*	*Sqm*
		2	*0.2*		*0.5*	*0.20*	*Sqm*
		2		*1.05*	*0.5*	*1.05*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.3*		*0.6*	*1.56*	*Sqm*
		2		*1.05*	*0.6*	*1.26*	*Sqm*
		2	*0.05*		*0.575*	*0.06*	*Sqm*
		2		*1.05*	*0.575*	*1.21*	*Sqm*
		2	*1.95*		*0.550*	*2.15*	*Sqm*
		2		*1.050*	*0.550*	*1.16*	*Sqm*
		2	*0.81*		*1.450*	*2.36*	*Sqm*
		2		*1.050*	*1.450*	*3.05*	*Sqm*
	Crest	*2*	*1.12*		*1.739*	*3.90*	*Sqm*
		2		*1.050*	*1.739*	*3.65*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.59*		*0.300*	*2.76*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.29*		*0.600*	*5.15*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**171.57**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.718*		*5.15*	*Sqm*
	TOTAL					**5.15**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*12.23*	*0.450*		*5.50*	*Sqm*
	On Abutment Top (Right Side)	*1*	*12.23*	*0.450*		*5.50*	*Sqm*
	TOTAL					**11.01**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*7.129*		*7.129*	**Cum**
	Abutment						
	Section 1-1	*2*	*1.36*	*2.733*		*7.443*	*Cum*
	Section 2-2	*2*	*3.00*	*0.651*		*3.906*	*Cum*
	Section 3-3	*2*	*3.20*	*0.475*		*3.040*	*Cum*
	Section 5-5	*2*	*1.96*	*2.702*		*10.584*	*Cum*
	Section 6-6	*2*	*0.83*	*0.475*		*0.791*	*Cum*
	Toe wall	*2*	*4.59*	*0.150*	*0.600*	*1.378*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**34.54**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR AMAR BIGHA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.1.650						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*1.536*	*1.146*	*3.640*	*Cum*
	Section 2-2	*2*	*2.50*	*1.170*	*1.146*	*6.704*	*Cum*
	Section 3-3	*2*	*2.20*	*1.050*	*0.946*	*4.371*	*Cum*
	Section 5-5	*2*	*2.44*	*1.686*	*1.146*	*9.433*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.946*	*1.987*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.730*	*0.850*	*0.919*	*Cum*
	U/S Floor	*1*	*2.00*	*1.730*	*1.460*	*5.052*	*Cum*
	D/S Floor	*1*	*2.50*	*1.730*	*0.850*	*3.676*	*Cum*
		1	*2.50*	*1.730*	*0.650*	*2.811*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.730*	*0.850*	*0.919*	*Cum*
	Toe Wall D/S Portion	*1*	*5.83*	*0.750*	*0.900*	*3.935*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						44.80	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.730*	*0.150*	*0.14*	*Cum*
		1	*0.78*	*1.730*	*0.150*	*0.20*	*Cum*
		1	*4.06*	*1.730*	*0.150*	*1.05*	*Cum*
		1	*0.28*	*1.730*	*0.150*	*0.07*	*Cum*
		1	*0.95*	*1.730*	*0.150*	*0.25*	*Cum*
		1	*0.78*	*1.730*	*0.150*	*0.20*	*Cum*
		1	*0.54*	*1.730*	*0.150*	*0.14*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.03*	*1.54*	*0.150*	*0.48*	*Cum*
	Section 2-2	*2*	*2.50*	*1.17*	*0.150*	*0.88*	*Cum*
	Section 3-3	*2*	*2.20*	*1.05*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*2.44*	*1.69*	*0.150*	*1.23*	*Cum*
	Section 6-6	*2*	*1.00*	*1.05*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.83*	*0.75*	*0.300*	*1.31*	*Cum*
	Toe Wall D/S Portion	*1*	*5.53*	*0.45*	*0.600*	*1.49*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**9.27**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.88*	*0.450*	*0.450*	*0.36*	*Cum*
		2	*0.88*	*0.843*	*1.310*	*1.95*	*Cum*
		2	*0.88*	*1.386*	*0.500*	*1.22*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.660*	*0.700*	*2.31*	*Cum*
		2	*2.50*	*1.020*	*0.500*	*2.55*	*Cum*
	Section 3-3	*2*	*1.90*	*0.450*	*0.450*	*0.77*	*Cum*
		2	*1.90*	*0.600*	*0.500*	*1.14*	*Cum*
		2	*1.90*	*0.900*	*0.500*	*1.71*	*Cum*
	Section 5-5	*2*	*2.40*	*0.450*	*0.450*	*0.97*	*Cum*
		2	*2.40*	*0.843*	*1.310*	*5.30*	*Cum*
		2	*2.40*	*1.386*	*0.500*	*3.33*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*0.600*	*0.500*	*0.87*	*Cum*
		2	*1.45*	*0.900*	*0.500*	*1.31*	*Cum*
	Floor	*1*	*0.63*	*1.730*	*0.700*	*0.76*	*Cum*
		1	*4.50*	*1.730*	*0.500*	*3.89*	*Cum*
		1	*0.50*	*1.730*	*0.200*	*0.17*	*Cum*
		1	*0.20*	*1.730*	*0.400*	*0.14*	*Cum*
		1	*2.30*	*1.730*	*0.500*	*1.99*	*Cum*
		1	*0.63*	*1.730*	*0.700*	*0.76*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.80*	*1.730*	*0.935*	*1.29*	*Cum*
	TOTAL					**34.38**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.730*	*0.150*	*0.17*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.90*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.90*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.61**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**34.38**	**0.003**	**0.103**	**7850.0**	**809.61**	**Kg**
	Total Weight in Metric Tonne					**0.81**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.88*		*0.450*	*1.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.88*		*1.310*	*4.62*	*Sqm*
		4		*0.843*	*1.310*	*4.42*	*Sqm*
		4	*0.88*		*0.500*	*1.77*	*Sqm*
		4		*1.386*	*0.500*	*2.77*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.700*	*7.00*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 3-3	*4*	*1.90*		*0.450*	*3.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.90*		*0.500*	*3.80*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.90*		*0.500*	*3.80*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 5-5	*4*	*2.40*		*0.450*	*4.32*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.40*		*1.310*	*12.57*	*Sqm*
		4		*0.843*	*1.310*	*4.42*	*Sqm*
		4	*2.40*		*0.500*	*4.80*	*Sqm*
		4		*1.386*	*0.500*	*2.77*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.730*	*0.700*	*2.42*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.730*	*0.500*	*1.73*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*1.730*	*0.200*	*0.69*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.730*	*0.400*	*1.38*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.730*	*0.500*	*1.73*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.730*	*0.700*	*2.42*	*Sqm*
	Crest	*2*	*0.80*		*0.935*	*1.49*	*Sqm*
		2		*1.730*	*0.935*	*3.24*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.83*		*0.300*	*3.50*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.53*		*0.600*	*6.64*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**134.64**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.051*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*1.130*	*0.300*	**0.59**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*1.130*	*0.150*	**0.59**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.90*	*0.450*		*4.45*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.90*	*0.450*		*4.45*	*Sqm*
	TOTAL					**8.91**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*		*6.891*		6.89	**Cum**
	Abutment						
	Section 1-1	*2*	*1.03*	*1.525*		*3.154*	*Cum*
	Section 2-2	*2*	*2.50*	*0.793*		*3.965*	*Cum*
	Section 3-3	*2*	*2.20*	*0.600*		*2.640*	*Cum*
	Section 5-5	*2*	*2.44*	*1.509*		*7.367*	*Cum*
	Section 6-6	*2*	*1.00*	*0.600*		*1.200*	*Cum*
	Toe wall	*2*	*5.83*	*0.150*	*0.600*	*1.749*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**27.24**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR AMAR BIGHA MR.						
	SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH.2.450						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.90*	*2.187*	*2.438*	*9.597*	*Cum*
	Section 2-2	*2*	*4.38*	*1.089*	*2.438*	*23.242*	*Cum*
	Section 3-3	*2*	*3.95*	*0.969*	*2.238*	*17.132*	*Cum*
	Section 5-5	*2*	*2.02*	*2.337*	*2.438*	*23.018*	*Cum*
	Section 6-6	*2*	*0.88*	*0.969*	*2.238*	*3.812*	*Cum*
	U/S Key Floor	*1*	*0.66*	*1.350*	*1.000*	*0.894*	*Cum*
	U/S Floor	*1*	*3.50*	*1.350*	*2.830*	*13.372*	*Cum*
	D/S Floor	*1*	*3.75*	*1.350*	*1.000*	*5.063*	*Cum*
		1	*5.47*	*1.350*	*0.200*	*1.477*	*Cum*
		1	*2.00*	*1.350*	*0.800*	*2.160*	*Cum*
		1	*2.25*	*1.350*	*0.650*	*1.974*	*Cum*
	D/S Key Floor	*1*	*0.91*	*1.350*	*0.770*	*0.949*	*Cum*
	Toe Wall D/S Portion	*1*	*5.05*	*0.750*	*0.900*	*3.406*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						107.45	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
		1	*0.95*	*1.350*	*0.150*	*0.19*	*Cum*
		1	*0.60*	*1.350*	*0.150*	*0.12*	*Cum*
		1	*0.42*	*1.350*	*0.150*	*0.09*	*Cum*
		1	*5.84*	*1.350*	*0.150*	*1.18*	*Cum*
		1	*0.57*	*1.350*	*0.150*	*0.11*	*Cum*
		1	*1.20*	*1.350*	*0.150*	*0.24*	*Cum*
		1	*0.14*	*1.350*	*0.150*	*0.03*	*Cum*
		1	*0.62*	*1.350*	*0.150*	*0.13*	*Cum*
		1	*2.07*	*1.350*	*0.150*	*0.42*	*Cum*
		1	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.90*	*2.19*	*0.150*	*0.59*	*Cum*
	Section 2-2	*2*	*4.38*	*1.09*	*0.150*	*1.43*	*Cum*
	Section 3-3	*2*	*3.95*	*0.97*	*0.150*	*1.15*	*Cum*
	Section 5-5	*2*	*2.02*	*2.34*	*0.150*	*1.42*	*Cum*
	Section 6-6	*2*	*0.88*	*0.97*	*0.150*	*0.26*	*Cum*
	Toe Wall D/S Portion	*1*	*5.05*	*0.75*	*0.300*	*1.14*	*Cum*
	Toe Wall D/S Portion	*1*	*4.75*	*0.45*	*0.600*	*1.28*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**10.80**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.67*	*0.450*	*0.450*	*0.27*	*Cum*
		2	*0.67*	*1.169*	*2.395*	*3.76*	*Cum*
		2	*0.67*	*2.037*	*0.950*	*2.60*	*Cum*
	Section 2-2	*2*	*4.38*	*0.450*	*0.450*	*1.77*	*Cum*
		2	*4.38*	*0.620*	*0.565*	*3.06*	*Cum*
		2	*4.38*	*0.939*	*0.950*	*7.81*	*Cum*
	Section 3-3	*2*	*3.19*	*0.450*	*0.450*	*1.29*	*Cum*
		2	*3.19*	*0.560*	*0.365*	*1.30*	*Cum*
		2	*3.19*	*0.819*	*0.750*	*3.92*	*Cum*
	Section 5-5	*2*	*1.98*	*0.450*	*0.450*	*0.80*	*Cum*
		2	*1.98*	*1.169*	*2.395*	*11.07*	*Cum*
		2	*1.98*	*2.037*	*0.650*	*5.24*	*Cum*
	Section 6-6	*2*	*1.36*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.36*	*0.560*	*0.365*	*0.56*	*Cum*
		2	*1.36*	*0.819*	*0.650*	*1.45*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	*1*	*0.66*	*1.350*	*0.850*	*0.76*	*Cum*
		1	*7.25*	*1.350*	*0.650*	*6.36*	*Cum*
		1	*5.47*	*1.350*	*0.200*	*1.48*	*Cum*
		1	*0.60*	*1.350*	*0.350*	*0.28*	*Cum*
		1	*0.20*	*1.350*	*0.650*	*0.18*	*Cum*
		1	*1.80*	*1.350*	*0.750*	*1.82*	*Cum*
		1	*0.10*	*1.350*	*0.700*	*0.09*	*Cum*
		1	*2.15*	*1.350*	*0.650*	*1.89*	*Cum*
		1	*0.91*	*1.350*	*1.850*	*2.28*	*Cum*
	Crest	*1*	*1.24*	*1.350*	*2.065*	*3.45*	*Cum*
	TOTAL					**64.06**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.350*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.56*	*0.450*	*0.050*	*0.35*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.56*	*0.450*	*0.050*	*0.35*	*Cum*
	TOTAL					**0.88**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**64.06**	**0.003**	**0.192**	**7850.0**	**1508.53**	**Kg**
	Total Weight in Metric Tonne					**1.51**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.67*		*0.450*	*1.21*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.67*		*2.395*	*6.44*	*Sqm*
		4		*1.169*	*2.395*	*11.19*	*Sqm*
		4	*0.67*		*0.950*	*2.56*	*Sqm*
		4		*2.037*	*0.950*	*7.74*	*Sqm*
	Section 2-2	*4*	*4.38*		*0.450*	*7.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.38*		*0.565*	*9.89*	*Sqm*
		4		*0.620*	*0.565*	*1.40*	*Sqm*
		4	*4.38*		*0.950*	*16.63*	*Sqm*
		4		*0.939*	*0.950*	*3.57*	*Sqm*
	Section 3-3	*4*	*3.19*		*0.450*	*5.74*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.19*		*0.365*	*4.66*	*Sqm*
		4		*0.560*	*0.365*	*0.82*	*Sqm*
		4	*3.19*		*0.750*	*9.57*	*Sqm*
		4		*0.819*	*0.750*	*2.46*	*Sqm*
	Section 5-5	*4*	*1.98*		*0.450*	*3.56*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.98*		*2.395*	*18.95*	*Sqm*
		4		*1.169*	*2.395*	*11.19*	*Sqm*
		4	*1.98*		*0.650*	*5.14*	*Sqm*
		4		*2.037*	*0.650*	*5.30*	*Sqm*
	Section 6-6	*4*	*1.36*		*0.450*	*2.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.36*		*0.365*	*1.99*	*Sqm*
		4		*0.560*	*0.365*	*0.82*	*Sqm*
		4	*1.36*		*0.650*	*3.54*	*Sqm*
		4		*0.819*	*0.650*	*2.13*	*Sqm*
	Floor	*2*	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*1.350*	*0.850*	*2.30*	*Sqm*
		2	*7.25*		*0.650*	*9.43*	*Sqm*
		2		*1.350*	*0.650*	*1.76*	*Sqm*
		2	*0.60*		*0.350*	*0.42*	*Sqm*
		2		*1.350*	*0.350*	*0.95*	*Sqm*
		2	*5.47*		*0.2*	*2.19*	*Sqm*
		2		*1.35*	*0.2*	*0.54*	*Sqm*
		2	*0.60*		*0.35*	*0.42*	*Sqm*
		2		*1.35*	*0.35*	*0.95*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.80*		*0.75*	*2.70*	*Sqm*
		2		*1.35*	*0.75*	*2.03*	*Sqm*
		2	*0.10*		*0.7*	*0.14*	*Sqm*
		2		*1.35*	*0.7*	*1.89*	*Sqm*
		2	*2.15*		*0.650*	*2.80*	*Sqm*
		2		*1.350*	*0.650*	*1.76*	*Sqm*
		2	*0.91*		*1.850*	*3.38*	*Sqm*
		2		*1.350*	*1.850*	*5.00*	*Sqm*
	Crest	*2*	*1.24*		*2.065*	*5.10*	*Sqm*
		2		*1.350*	*2.065*	*5.58*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.05*		*0.300*	*3.03*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.75*		*0.600*	*5.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**216.60**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.808*		*5.42*	*Sqm*
	TOTAL					**5.42**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.750*	*0.300*	**0.34**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.750*	*0.150*	**0.34**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*15.56*	*0.450*		*7.00*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.56*	*0.450*		*7.00*	*Sqm*
	TOTAL					**14.00**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		*11.591*		*11.591*	**Cum**
	Abutment						
	Section 1-1	*2*	*0.90*	*3.450*		*6.210*	*Cum*
	Section 2-2	*2*	*4.38*	*0.728*		*6.373*	*Cum*
	Section 3-3	*2*	*3.95*	*0.521*		*4.116*	*Cum*
	Section 5-5	*2*	*2.02*	*3.405*		*13.756*	*Cum*
	Section 6-6	*2*	*0.88*	*0.521*		*0.916*	*Cum*
	Toe wall	*2*	*5.05*	*0.150*	*0.600*	*1.514*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**44.75**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR CHATARA SUB DY.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.0.400						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.02*	*1.710*	*1.658*	*5.796*	*Cum*
	Section 2-2	*2*	*3.00*	*1.344*	*1.658*	*13.370*	*Cum*
	Section 3-3	*2*	*1.35*	*1.224*	*1.458*	*4.818*	*Cum*
	Section 5-5	*2*	*2.66*	*1.860*	*1.658*	*16.409*	*Cum*
	Section 6-6	*2*	*0.78*	*1.224*	*1.458*	*2.788*	*Cum*
	U/S Key Floor	*1*	*0.63*	*3.950*	*0.850*	*2.098*	*Cum*
	U/S Floor	*1*	*1.90*	*3.950*	*1.460*	*10.957*	*Cum*
	D/S Floor	*1*	*3.00*	*3.950*	*0.850*	*10.073*	*Cum*
		1	*2.10*	*3.950*	*0.650*	*5.392*	*Cum*
	D/S Key Floor	*1*	*0.63*	*3.950*	*0.850*	*2.098*	*Cum*
	Toe Wall D/S Portion	*1*	*7.96*	*0.750*	*0.900*	*5.373*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						81.42	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.950*	*0.150*	*0.32*	*Cum*
		1	*0.78*	*3.950*	*0.150*	*0.46*	*Cum*
		1	*4.23*	*3.950*	*0.150*	*2.50*	*Cum*
		1	*0.28*	*3.950*	*0.150*	*0.17*	*Cum*
		1	*0.79*	*3.950*	*0.150*	*0.47*	*Cum*
		1	*0.78*	*3.950*	*0.150*	*0.46*	*Cum*
		1	*0.54*	*3.950*	*0.150*	*0.32*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.02*	*1.71*	*0.150*	*0.52*	*Cum*
	Section 2-2	*2*	*3.00*	*1.34*	*0.150*	*1.21*	*Cum*
	Section 3-3	*2*	*1.35*	*1.22*	*0.150*	*0.50*	*Cum*
	Section 5-5	*2*	*2.66*	*1.86*	*0.150*	*1.48*	*Cum*
	Section 6-6	*2*	*0.78*	*1.22*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*7.96*	*0.75*	*0.300*	*1.79*	*Cum*
	Toe Wall D/S Portion	*1*	*7.66*	*0.45*	*0.600*	*2.07*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.600*	*0.90*	*Cum*
	TOTAL					**13.92**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.93*	*0.930*	*1.600*	*2.78*	*Cum*
		2	*0.93*	*1.560*	*0.500*	*1.46*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.747*	*0.990*	*4.44*	*Cum*
		2	*3.00*	*1.194*	*0.500*	*3.58*	*Cum*
	Section 3-3	*2*	*1.41*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.41*	*0.687*	*0.790*	*1.53*	*Cum*
		2	*1.41*	*1.074*	*0.500*	*1.52*	*Cum*
	Section 5-5	*2*	*2.71*	*0.450*	*0.450*	*1.10*	*Cum*
		2	*2.71*	*0.930*	*1.600*	*8.06*	*Cum*
		2	*2.71*	*1.560*	*0.500*	*4.22*	*Cum*
	Section 6-6	*2*	*1.32*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.32*	*0.687*	*0.790*	*1.43*	*Cum*
		2	*1.32*	*1.074*	*0.500*	*1.42*	*Cum*
	Floor	*1*	*0.63*	*3.950*	*0.700*	*1.73*	*Cum*
		1	*4.90*	*3.950*	*0.500*	*9.68*	*Cum*
		1	*0.26*	*3.950*	*0.200*	*0.20*	*Cum*
		1	*0.20*	*3.950*	*0.400*	*0.32*	*Cum*
		1	*1.90*	*3.950*	*0.500*	*3.75*	*Cum*
		1	*0.63*	*3.950*	*0.700*	*1.73*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.83*	*3.950*	*1.105*	*3.61*	*Cum*
	TOTAL					**55.25**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*3.950*	*0.150*	*0.39*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.26*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.26*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.85**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**55.25**	**0.003**	**0.166**	**7850.0**	**1301.04**	**Kg**
	Total Weight in Metric Tonne					**1.30**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.450*	*1.68*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*1.600*	*5.98*	*Sqm*
		4		*0.930*	*1.600*	*5.95*	*Sqm*
		4	*0.93*		*0.500*	*1.87*	*Sqm*
		4		*1.560*	*0.500*	*3.12*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.990*	*11.88*	*Sqm*
		4		*0.747*	*0.990*	*2.96*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.194*	*0.500*	*2.39*	*Sqm*
	Section 3-3	*4*	*1.41*		*0.450*	*2.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.41*		*0.790*	*4.47*	*Sqm*
		4		*0.687*	*0.790*	*2.17*	*Sqm*
		4	*1.41*		*0.500*	*2.83*	*Sqm*
		4		*1.074*	*0.500*	*2.15*	*Sqm*
	Section 5-5	*4*	*2.71*		*0.450*	*4.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.71*		*1.600*	*17.33*	*Sqm*
		4		*0.930*	*1.600*	*5.95*	*Sqm*
		4	*2.71*		*0.500*	*5.42*	*Sqm*
		4		*1.560*	*0.500*	*3.12*	*Sqm*
	Section 6-6	*4*	*1.32*		*0.450*	*2.37*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.32*		*0.790*	*4.16*	*Sqm*
		4		*0.687*	*0.790*	*2.17*	*Sqm*
		4	*1.32*		*0.500*	*2.64*	*Sqm*
		4		*1.074*	*0.500*	*2.15*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.950*	*0.700*	*5.53*	*Sqm*
		2	*4.90*		*0.500*	*4.90*	*Sqm*
		2		*3.950*	*0.500*	*3.95*	*Sqm*
		2	*0.26*		*0.200*	*0.10*	*Sqm*
		2		*3.950*	*0.200*	*1.58*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*3.950*	*0.400*	*3.16*	*Sqm*
		2	*1.90*		*0.500*	*1.90*	*Sqm*
		2		*3.950*	*0.500*	*3.95*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.950*	*0.700*	*5.53*	*Sqm*
	Crest	*2*	*0.83*		*1.105*	*1.83*	*Sqm*
		2		*3.950*	*1.105*	*8.73*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.96*		*0.300*	*4.78*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.66*		*0.600*	*9.19*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**182.22**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.051*		*10.26*	*Sqm*
	TOTAL					**10.26**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*3.350*	*0.300*	**2.51**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*3.350*	*0.150*	**2.51**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.26*	*0.450*		*4.62*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.26*	*0.450*		*4.62*	*Sqm*
	TOTAL					**9.24**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*		*13.839*		13.84	**Cum**
	Abutment						
	Section 1-1	*2*	*1.02*	*1.953*		*3.993*	*Cum*
	Section 2-2	*2*	*3.00*	*1.113*		*6.678*	*Cum*
	Section 3-3	*2*	*1.35*	*0.886*		*2.392*	*Cum*
	Section 5-5	*2*	*2.66*	*1.953*		*10.392*	*Cum*
	Section 6-6	*2*	*0.78*	*0.886*		*1.384*	*Cum*
	Toe wall	*2*	*7.96*	*0.150*	*0.600*	*2.388*	*Cum*
		2	*2.50*	*0.150*	*0.600*	*0.450*	*Cum*
	TOTAL					**41.52**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR CHATARA SUB DY.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.700						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.578*	*1.435*	*4.443*	*Cum*
	Section 2-2	*2*	*2.50*	*1.152*	*1.435*	*8.266*	*Cum*
	Section 3-3	*2*	*2.00*	*1.032*	*1.235*	*5.098*	*Cum*
	Section 5-5	*2*	*2.69*	*1.728*	*1.435*	*13.331*	*Cum*
	Section 6-6	*2*	*0.97*	*1.032*	*1.235*	*2.480*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.320*	*0.850*	*0.701*	*Cum*
	U/S Floor	*1*	*1.95*	*1.320*	*1.460*	*3.758*	*Cum*
	D/S Floor	*1*	*2.50*	*1.320*	*0.850*	*2.805*	*Cum*
		1	*2.30*	*1.320*	*0.650*	*1.973*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.320*	*0.850*	*0.701*	*Cum*
	Toe Wall D/S Portion	*1*	*5.33*	*0.750*	*0.900*	*3.598*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						48.50	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.320*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.320*	*0.150*	*0.15*	*Cum*
		1	*3.78*	*1.320*	*0.150*	*0.75*	*Cum*
		1	*0.28*	*1.320*	*0.150*	*0.06*	*Cum*
		1	*0.99*	*1.320*	*0.150*	*0.20*	*Cum*
		1	*0.78*	*1.320*	*0.150*	*0.15*	*Cum*
		1	*0.54*	*1.320*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.58*	*0.150*	*0.46*	*Cum*
	Section 2-2	*2*	*2.50*	*1.15*	*0.150*	*0.86*	*Cum*
	Section 3-3	*2*	*2.00*	*1.03*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.69*	*1.73*	*0.150*	*1.39*	*Cum*
	Section 6-6	*2*	*0.97*	*1.03*	*0.150*	*0.30*	*Cum*
	Toe Wall D/S Portion	*1*	*5.33*	*0.75*	*0.300*	*1.20*	*Cum*
	Toe Wall D/S Portion	*1*	*5.03*	*0.45*	*0.600*	*1.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.53**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.76*	*0.450*	*0.450*	*0.31*	*Cum*
		2	*0.76*	*0.864*	*1.380*	*1.80*	*Cum*
		2	*0.76*	*1.428*	*0.500*	*1.08*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.651*	*0.670*	*2.18*	*Cum*
		2	*2.50*	*1.002*	*0.500*	*2.51*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.591*	*0.470*	*0.95*	*Cum*
		2	*1.71*	*0.882*	*0.500*	*1.51*	*Cum*
	Section 5-5	*2*	*2.64*	*0.450*	*0.450*	*1.07*	*Cum*
		2	*2.64*	*0.864*	*1.380*	*6.30*	*Cum*
		2	*2.64*	*1.428*	*0.500*	*3.78*	*Cum*
	Section 6-6	*2*	*1.41*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.41*	*0.591*	*0.470*	*0.79*	*Cum*
		2	*1.41*	*0.882*	*0.500*	*1.25*	*Cum*
	Floor	*1*	*0.63*	*1.320*	*0.700*	*0.58*	*Cum*
		1	*4.45*	*1.320*	*0.500*	*2.94*	*Cum*
		1	*0.26*	*1.320*	*0.200*	*0.07*	*Cum*
		1	*0.20*	*1.320*	*0.400*	*0.11*	*Cum*
		1	*2.10*	*1.320*	*0.500*	*1.39*	*Cum*
		1	*0.63*	*1.320*	*0.700*	*0.58*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.75*	*1.320*	*0.955*	*0.95*	*Cum*
	TOTAL					**32.39**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.320*	*0.150*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.86*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.86*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.56**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.39**	**0.003**	**0.097**	**7850.0**	**762.80**	**Kg**
	Total Weight in Metric Tonne					**0.76**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.76*		*0.450*	*1.36*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.76*		*1.380*	*4.17*	*Sqm*
		4		*0.864*	*1.380*	*4.77*	*Sqm*
		4	*0.76*		*0.500*	*1.51*	*Sqm*
		4		*1.428*	*0.500*	*2.86*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.670*	*6.70*	*Sqm*
		4		*0.651*	*0.670*	*1.74*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.002*	*0.500*	*2.00*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.470*	*3.21*	*Sqm*
		4		*0.591*	*0.470*	*1.11*	*Sqm*
		4	*1.71*		*0.500*	*3.42*	*Sqm*
		4		*0.882*	*0.500*	*1.76*	*Sqm*
	Section 5-5	*4*	*2.64*		*0.450*	*4.76*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.64*		*1.380*	*14.59*	*Sqm*
		4		*0.864*	*1.380*	*4.77*	*Sqm*
		4	*2.64*		*0.500*	*5.29*	*Sqm*
		4		*1.428*	*0.500*	*2.86*	*Sqm*
	Section 6-6	*4*	*1.41*		*0.450*	*2.55*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.41*		*0.470*	*2.66*	*Sqm*
		4		*0.591*	*0.470*	*1.11*	*Sqm*
		4	*1.41*		*0.500*	*2.83*	*Sqm*
		4		*0.882*	*0.500*	*1.76*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.320*	*0.700*	*1.85*	*Sqm*
		2	*4.45*		*0.500*	*4.45*	*Sqm*
		2		*1.320*	*0.500*	*1.32*	*Sqm*
		2	*0.26*		*0.200*	*0.10*	*Sqm*
		2		*1.320*	*0.200*	*0.53*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.320*	*0.400*	*1.06*	*Sqm*
		2	*2.10*		*0.500*	*2.10*	*Sqm*
		2		*1.320*	*0.500*	*1.32*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.320*	*0.700*	*1.85*	*Sqm*
	Crest	*2*	*0.75*		*0.955*	*1.43*	*Sqm*
		2		*1.320*	*0.955*	*2.52*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.33*		*0.300*	*3.20*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.03*		*0.600*	*6.04*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**130.67**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.997*		*5.99*	*Sqm*
	TOTAL					**5.99**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.720*	*0.300*	**0.32**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.720*	*0.150*	**0.32**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.86*	*0.450*		*4.44*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.86*	*0.450*		*4.44*	*Sqm*
	TOTAL					**8.88**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*		*3.596*		3.60	**Cum**
	Abutment						
	Section 1-1	*2*	*0.98*	*1.624*		*3.186*	*Cum*
	Section 2-2	*2*	*2.50*	*0.761*		*3.805*	*Cum*
	Section 3-3	*2*	*2.00*	*0.573*		*2.292*	*Cum*
	Section 5-5	*2*	*2.69*	*1.624*		*8.731*	*Cum*
	Section 6-6	*2*	*0.97*	*0.573*		*1.115*	*Cum*
	Toe wall	*2*	*5.33*	*0.150*	*0.600*	*1.599*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**24.59**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR DABURA-I MR.						
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH.0.650						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*1.800*	*1.914*	*7.945*	*Cum*
	Section 2-2	*2*	*3.25*	*1.771*	*1.914*	*22.033*	*Cum*
	Section 3-3	*2*	*3.95*	*1.651*	*1.714*	*22.356*	*Cum*
	Section 5-5	*2*	*2.68*	*1.950*	*1.814*	*18.928*	*Cum*
	Section 6-6	*2*	*0.75*	*1.131*	*1.714*	*2.912*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*2.25*	*5.500*	*1.864*	*23.067*	*Cum*
	D/S Floor	*1*	*3.25*	*5.500*	*0.850*	*15.194*	*Cum*
		1	*4.42*	*5.500*	*0.100*	*2.431*	*Cum*
		1	*4.25*	*3.000*	*0.650*	*8.288*	*Cum*
	D/S Key Floor	*1*	*0.85*	*5.500*	*1.750*	*8.181*	*Cum*
	Toe Wall D/S Portion	*1*	*7.50*	*0.750*	*0.900*	*5.065*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						140.23	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.000*	*0.150*	*0.24*	*Cum*
		1	*0.78*	*3.000*	*0.150*	*0.35*	*Cum*
		1	*0.08*	*3.000*	*0.150*	*0.03*	*Cum*
		1	*4.70*	*3.000*	*0.150*	*2.12*	*Cum*
		1	*0.42*	*3.000*	*0.150*	*0.19*	*Cum*
		1	*2.64*	*3.000*	*0.150*	*1.19*	*Cum*
		1	*1.79*	*3.000*	*0.150*	*0.80*	*Cum*
		1	*0.54*	*3.000*	*0.150*	*0.24*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.800*	*0.150*	*0.62*	*Cum*
	Section 2-2	*2*	*3.25*	*1.771*	*0.300*	*3.45*	*Cum*
	Section 3-3	*2*	*3.95*	*1.651*	*0.300*	*3.91*	*Cum*
	Section 5-5	*2*	*2.68*	*1.950*	*0.150*	*1.57*	*Cum*
	Section 6-6	*2*	*0.75*	*1.131*	*0.150*	*0.25*	*Cum*
	Toe Wall D/S Portion	*1*	*7.50*	*0.750*	*0.300*	*1.69*	*Cum*
	Toe Wall D/S Portion	*1*	*7.20*	*0.450*	*0.600*	*1.95*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**19.69**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.93*	*0.975*	*1.749*	*3.16*	*Cum*
		2	*0.93*	*1.650*	*0.600*	*1.84*	*Cum*
	Section 2-2	*2*	*3.25*	*0.820*	*0.450*	*2.40*	*Cum*
		2	*3.25*	*1.071*	*0.835*	*5.81*	*Cum*
		2	*3.25*	*1.471*	*1.300*	*12.43*	*Cum*
	Section 3-3	*2*	*3.61*	*0.820*	*0.450*	*2.66*	*Cum*
		2	*3.61*	*1.011*	*0.635*	*4.63*	*Cum*
		2	*3.61*	*1.351*	*1.500*	*14.63*	*Cum*
	Section 5-5	*2*	*2.63*	*0.450*	*0.450*	*1.07*	*Cum*
		2	*2.63*	*0.975*	*1.749*	*8.97*	*Cum*
		2	*2.63*	*1.650*	*0.500*	*4.34*	*Cum*
	Section 6-6	*2*	*1.43*	*0.450*	*0.450*	*0.58*	*Cum*
		2	*1.43*	*0.641*	*0.635*	*1.16*	*Cum*
		2	*1.43*	*0.981*	*0.650*	*1.82*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*3.000*	*0.700*	*1.31*	*Cum*
		1	*5.50*	*3.000*	*0.500*	*8.25*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*4.42*	*3.000*	*0.100*	*1.33*	*Cum*
		1	*0.36*	*3.000*	*0.300*	*0.32*	*Cum*
		1	*0.20*	*3.000*	*0.400*	*0.24*	*Cum*
		1	*4.05*	*3.000*	*0.500*	*6.08*	*Cum*
		1	*0.85*	*3.000*	*1.600*	*4.08*	*Cum*
	Crest	*1*	*0.91*	*3.000*	*1.309*	*3.57*	*Cum*
	TOTAL					**88.35**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*3.000*	*0.150*	*0.32*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.33*	*0.450*	*0.050*	*0.16*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.33*	*0.450*	*0.050*	*0.16*	*Cum*
	Slab Bridge	*1*	*3.80*	*5.500*	*0.378*	*7.90*	*Cum*
	Wearing coat	*1*	*3.80*	*4.500*	*0.070*	*1.20*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.350*	*1.54*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**13.99**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*39*	*4.36*		*1.578*	*268.3*	*Kg*
a2	*10*	*19*	*6.00*		*0.616*	*70.3*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*22*	*4.18*		*0.616*	*56.7*	*Kg*
a5	*10*	*15*	*5.85*		*0.616*	*54.1*	*Kg*
x1	*12*	*62*	*2.55*		*0.888*	*140.4*	*Kg*
x2	*16*	*62*	*1.32*		*1.578*	*128.7*	*Kg*
x3	*10*	*24*	*3.70*		*0.616*	*54.7*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**88.35**	**0.003**	**0.265**	**7850.0**	**2080.6**	**Kg**
	Total Reinforcement Steel (in kg)					*2860.5*	*Kg*
	Total Weight in Metric Tonne					**2.86**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.45*	*1.67*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.93*		*1.75*	*6.49*	*Sqm*
		4		*0.97*	*1.75*	*6.82*	*Sqm*
		4	*0.93*		*0.60*	*2.23*	*Sqm*
		4		*1.65*	*0.60*	*3.96*	*Sqm*
	Section 2-2	*4*	*3.25*		*0.45*	*5.85*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.25*		*0.84*	*10.86*	*Sqm*
		4		*1.07*	*0.84*	*3.58*	*Sqm*
		4	*3.25*		*1.30*	*16.90*	*Sqm*
		4		*1.47*	*1.30*	*7.65*	*Sqm*
	Section 3-3	*4*	*3.61*		*0.45*	*6.50*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.61*		*0.64*	*9.17*	*Sqm*
		4		*1.01*	*0.64*	*2.57*	*Sqm*
		4	*3.61*		*1.50*	*21.66*	*Sqm*
		4		*1.35*	*1.50*	*8.11*	*Sqm*
	Section 5-5	*4*	*2.63*		*0.45*	*4.74*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.63*		*1.75*	*18.41*	*Sqm*
		4		*0.97*	*1.75*	*6.82*	*Sqm*
		4	*2.63*		*0.50*	*5.26*	*Sqm*
		4		*1.65*	*0.50*	*3.30*	*Sqm*
	Section 6-6	*4*	*1.43*		*0.45*	*2.57*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.43*		*0.64*	*3.62*	*Sqm*
		4		*0.64*	*0.64*	*1.63*	*Sqm*
		4	*1.43*		*0.65*	*3.71*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.98*	*0.65*	*2.55*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.00*	*0.70*	*4.20*	*Sqm*
		2	*5.50*		*0.50*	*5.50*	*Sqm*
		2		*3.00*	*0.50*	*3.00*	*Sqm*
		2	*4.420*		*0.10*	*0.88*	*Sqm*
		2		*3.00*	*0.10*	*0.60*	*Sqm*
		2	*0.36*		*0.30*	*0.21*	*Sqm*
		2		*3.00*	*0.30*	*1.80*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*3.00*	*0.40*	*2.40*	*Sqm*
		2	*4.05*		*0.50*	*4.05*	*Sqm*
		2		*3.00*	*0.50*	*3.00*	*Sqm*
		2	*0.85*		*1.60*	*2.72*	*Sqm*
		2		*3.00*	*1.60*	*9.60*	*Sqm*
	Crest	*2*	*0.91*		*1.31*	*2.38*	*Sqm*
		2		*3.00*	*1.31*	*7.85*	*Sqm*
	Slab	*2*	*7.60*		*0.76*	*11.49*	*Sqm*
		2		*11.00*	*0.76*	*16.63*	*Sqm*
		1	*7.60*	*11.00*		*83.60*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.50*		*0.30*	*4.50*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.20*		*0.60*	*8.64*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**354.16**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.296*		*9.18*	*Sqm*
	TOTAL					**9.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*2.400*	*0.300*	**1.44**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*2.400*	*0.150*	**1.44**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.33*	*0.450*		*3.30*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.33*	*0.450*		*3.30*	*Sqm*
	TOTAL					**6.60**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*11.296*		11.30	**Cum**
	Abutment						
	Section 1-1	2	*1.15*	*2.206*		*5.087*	*Cum*
	Section 2-2	2	*3.25*	*1.185*		*7.699*	*Cum*
	Section 3-3	2	*3.95*	*1.185*		*9.358*	*Cum*
	Section 5-5	2	*2.68*	*2.191*		*11.724*	*Cum*
	Section 6-6	2	*0.75*	*0.727*		*1.092*	*Cum*
	Toe wall	2	*7.50*	*0.150*	*0.600*	*2.251*	*Cum*
		2	*2.00*	*0.150*	*0.600*	*0.360*	*Cum*
	TOTAL					**48.87**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR AKAUNA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.225						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*1.449*	*2.193*	*5.898*	*Cum*
	Section 2-2	*2*	*2.00*	*1.266*	*2.193*	*11.105*	*Cum*
	Section 3-3	*2*	*2.80*	*1.146*	*1.993*	*12.790*	*Cum*
	Section 5-5	*2*	*2.80*	*1.599*	*2.193*	*19.644*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.993*	*5.221*	*Cum*
	U/S Key Floor	*1*	*0.63*	*3.640*	*0.850*	*1.934*	*Cum*
	U/S Floor	*1*	*1.65*	*3.640*	*1.155*	*6.937*	*Cum*
	D/S Floor	*1*	*2.00*	*3.640*	*0.850*	*6.188*	*Cum*
		1	*3.10*	*3.640*	*0.650*	*7.335*	*Cum*
	D/S Key Floor	*1*	*0.63*	*3.640*	*0.850*	*1.934*	*Cum*
	Toe Wall D/S Portion	*1*	*8.22*	*0.750*	*0.900*	*5.547*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						86.33	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.640*	*0.150*	*0.30*	*Cum*
		1	*0.74*	*3.640*	*0.150*	*0.41*	*Cum*
		1	*3.13*	*3.640*	*0.150*	*1.71*	*Cum*
		1	*0.28*	*3.640*	*0.150*	*0.15*	*Cum*
		1	*1.74*	*3.640*	*0.150*	*0.95*	*Cum*
		1	*0.78*	*3.640*	*0.150*	*0.43*	*Cum*
		1	*0.54*	*3.640*	*0.150*	*0.30*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.93*	*1.45*	*0.150*	*0.40*	*Cum*
	Section 2-2	*2*	*2.00*	*1.27*	*0.150*	*0.76*	*Cum*
	Section 3-3	*2*	*2.80*	*1.15*	*0.150*	*0.96*	*Cum*
	Section 5-5	*2*	*2.80*	*1.60*	*0.150*	*1.34*	*Cum*
	Section 6-6	*2*	*1.14*	*1.15*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*8.22*	*0.75*	*0.300*	*1.85*	*Cum*
	Toe Wall D/S Portion	*1*	*7.92*	*0.45*	*0.600*	*2.14*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.60*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.30*	*0.600*	*0.72*	*Cum*
	TOTAL					**13.16**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.70*	*0.450*	*0.450*	*0.28*	*Cum*
		2	*0.70*	*0.800*	*1.165*	*1.31*	*Cum*
		2	*0.70*	*1.299*	*0.500*	*0.91*	*Cum*
	Section 2-2	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.708*	*0.860*	*2.44*	*Cum*
		2	*2.00*	*1.116*	*0.500*	*2.23*	*Cum*
	Section 3-3	*2*	*2.45*	*0.450*	*0.450*	*0.99*	*Cum*
		2	*2.45*	*0.648*	*0.660*	*2.10*	*Cum*
		2	*2.45*	*0.996*	*0.500*	*2.44*	*Cum*
	Section 5-5	*2*	*2.76*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.76*	*0.800*	*1.165*	*5.14*	*Cum*
		2	*2.76*	*1.299*	*0.500*	*3.58*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.500*	*1.63*	*Cum*
	Floor	*1*	*0.63*	*3.640*	*0.700*	*1.59*	*Cum*
		1	*3.65*	*3.640*	*0.500*	*6.64*	*Cum*
		1	*0.31*	*3.640*	*0.200*	*0.22*	*Cum*
		1	*0.20*	*3.640*	*0.400*	*0.29*	*Cum*
		1	*2.90*	*3.640*	*0.500*	*5.28*	*Cum*
		1	*0.63*	*3.640*	*0.700*	*1.59*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.71*	*3.640*	*0.720*	*1.86*	*Cum*
	TOTAL					**44.54**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*3.640*	*0.150*	*0.33*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.45*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.45*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.80**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**44.54**	**0.003**	**0.134**	**7850.0**	**1048.97**	**Kg**
	Total Weight in Metric Tonne					**1.05**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.70*		*0.450*	*1.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.70*		*1.165*	*3.28*	*Sqm*
		4		*0.800*	*1.165*	*3.73*	*Sqm*
		4	*0.70*		*0.500*	*1.41*	*Sqm*
		4		*1.299*	*0.500*	*2.60*	*Sqm*
	Section 2-2	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*0.860*	*6.88*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*2.00*		*0.500*	*4.00*	*Sqm*
		4		*1.116*	*0.500*	*2.23*	*Sqm*
	Section 3-3	*4*	*2.45*		*0.450*	*4.41*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.45*		*0.660*	*6.47*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*2.45*		*0.500*	*4.90*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.76*		*0.450*	*4.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.76*		*1.165*	*12.85*	*Sqm*
		4		*0.800*	*1.165*	*3.73*	*Sqm*
		4	*2.76*		*0.500*	*5.52*	*Sqm*
		4		*1.299*	*0.500*	*2.60*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.500*	*3.28*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.640*	*0.700*	*5.10*	*Sqm*
		2	*3.65*		*0.500*	*3.65*	*Sqm*
		2		*3.640*	*0.500*	*3.64*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*3.640*	*0.200*	*1.46*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*3.640*	*0.400*	*2.91*	*Sqm*
		2	*2.90*		*0.500*	*2.90*	*Sqm*
		2		*3.640*	*0.500*	*3.64*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*3.640*	*0.700*	*5.10*	*Sqm*
	Crest	*2*	*0.71*		*0.720*	*1.02*	*Sqm*
		2		*3.640*	*0.720*	*5.24*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.22*		*0.300*	*4.93*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.92*		*0.600*	*9.50*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**158.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.340*		*9.36*	*Sqm*
	TOTAL					**9.36**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*3.040*	*0.300*	**1.82**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*3.040*	*0.150*	**1.82**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.45*	*0.450*		*4.70*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.45*	*0.450*		*4.70*	*Sqm*
	TOTAL					**9.40**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*	*10.425*			10.43	**Cum**
	Abutment						
	Section 1-1	*2*	*0.93*	*1.331*		*2.470*	*Cum*
	Section 2-2	*2*	*2.00*	*0.962*		*3.848*	*Cum*
	Section 3-3	*2*	*2.80*	*0.751*		*4.206*	*Cum*
	Section 5-5	*2*	*2.80*	*1.331*		*7.456*	*Cum*
	Section 6-6	*2*	*1.14*	*0.751*		*1.717*	*Cum*
	Toe wall	*2*	*8.22*	*0.150*	*0.600*	*2.465*	*Cum*
		2	*2.00*	*0.150*	*0.600*	*0.360*	*Cum*
	TOTAL					**32.95**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH.0.620						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.74*	*1.449*	*1.965*	*4.186*	*Cum*
	Section 2-2	*2*	*2.60*	*1.666*	*1.965*	*17.023*	*Cum*
	Section 3-3	*2*	*4.70*	*1.786*	*1.765*	*29.632*	*Cum*
	Section 5-5	*2*	*2.75*	*1.599*	*1.965*	*17.256*	*Cum*
	Section 6-6	*2*	*0.77*	*1.266*	*1.765*	*3.455*	*Cum*
	U/S Key Floor	*1*	*0.82*	*3.640*	*0.450*	*1.343*	*Cum*
	U/S Floor	*1*	*1.18*	*3.640*	*1.965*	*8.419*	*Cum*
	D/S Floor	*1*	*2.81*	*3.640*	*0.650*	*6.656*	*Cum*
		1	*5.00*	*3.640*	*0.650*	*11.830*	*Cum*
	D/S Key Floor	*1*	*0.63*	*3.640*	*0.850*	*1.934*	*Cum*
	Toe Wall D/S Portion	*1*	*8.20*	*0.750*	*0.900*	*5.535*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						109.07	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.640*	*0.150*	*0.30*	*Cum*
		1	*0.78*	*3.640*	*0.150*	*0.43*	*Cum*
		1	*3.38*	*3.640*	*0.150*	*1.84*	*Cum*
		1	*0.28*	*3.640*	*0.150*	*0.15*	*Cum*
		1	*3.64*	*3.640*	*0.150*	*1.99*	*Cum*
		1	*0.78*	*3.640*	*0.150*	*0.43*	*Cum*
		1	*0.54*	*3.640*	*0.150*	*0.30*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.74*	*1.449*	*0.150*	*0.32*	*Cum*
	Section 2-2	*2*	*2.60*	*1.666*	*0.300*	*2.60*	*Cum*
	Section 3-3	*2*	*4.70*	*1.786*	*0.300*	*5.04*	*Cum*
	Section 5-5	*2*	*2.75*	*1.599*	*0.150*	*1.32*	*Cum*
	Section 6-6	*2*	*0.77*	*1.266*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*8.20*	*0.750*	*0.300*	*1.85*	*Cum*
	Toe Wall D/S Portion	*1*	*7.90*	*0.450*	*0.600*	*2.13*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**20.05**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.40*	*0.450*	*0.450*	*0.16*	*Cum*
		2	*0.40*	*0.800*	*1.165*	*0.75*	*Cum*
		2	*0.40*	*1.299*	*0.500*	*0.52*	*Cum*
	Section 2-2	*2*	*2.60*	*0.820*	*0.450*	*1.92*	*Cum*
		2	*2.60*	*1.018*	*0.660*	*3.49*	*Cum*
		2	*2.60*	*1.366*	*1.200*	*8.52*	*Cum*
	Section 3-3	*2*	*4.35*	*0.820*	*0.450*	*3.21*	*Cum*
		2	*4.35*	*1.078*	*0.860*	*8.07*	*Cum*
		2	*4.35*	*1.486*	*1.100*	*14.23*	*Cum*
	Section 5-5	*2*	*2.76*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.76*	*0.800*	*1.165*	*5.14*	*Cum*
		2	*2.76*	*1.299*	*0.500*	*3.58*	*Cum*
	Section 6-6	*2*	*1.46*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.46*	*0.708*	*0.860*	*1.77*	*Cum*
		2	*1.46*	*1.116*	*0.650*	*2.11*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*3.640*	*0.700*	*1.59*	*Cum*
		1	*3.99*	*3.640*	*0.500*	*7.26*	*Cum*
		1	*0.31*	*3.640*	*0.200*	*0.22*	*Cum*
		1	*0.20*	*3.640*	*0.400*	*0.29*	*Cum*
		1	*4.80*	*3.640*	*0.500*	*8.74*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.63*	*3.640*	*0.700*	*1.59*	*Cum*
	Crest	*1*	*0.71*	*3.640*	*0.720*	*1.86*	*Cum*
	TOTAL					**74.05**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*3.640*	*0.150*	*0.33*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.85*	*0.450*	*0.050*	*0.15*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.85*	*0.450*	*0.050*	*0.15*	*Cum*
	Slab Bridge	*1*	*4.44*	*5.500*	*0.378*	*9.23*	*Cum*
	Wearing coat	*1*	*4.44*	*4.500*	*0.070*	*1.40*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.350*	*1.54*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**15.51**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*39*	*5.00*		*1.578*	*307.7*	*Kg*
a2	*10*	*22*	*6.00*		*0.616*	*81.4*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*22*	*4.92*		*0.616*	*66.7*	*Kg*
a5	*10*	*18*	*5.90*		*0.616*	*65.5*	*Kg*
x1	*12*	*74*	*2.55*		*0.888*	*167.6*	*Kg*
x2	*16*	*74*	*1.32*		*1.578*	*153.6*	*Kg*
x3	*10*	*24*	*3.70*		*0.616*	*54.7*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**74.05**	**0.003**	**0.222**	**7850.0**	**1743.8**	**Kg**
	Total Reinforcement Steel (in kg)					*2647.7*	*Kg*
	Total Weight in Metric Tonne					**2.65**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.40*		*0.45*	*0.73*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.40*		*1.17*	*1.88*	*Sqm*
		4		*0.80*	*1.17*	*3.73*	*Sqm*
		4	*0.40*		*0.50*	*0.81*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 2-2	*4*	*2.60*		*0.45*	*4.68*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*2.60*		*0.66*	*6.86*	*Sqm*
		4		*1.02*	*0.66*	*2.69*	*Sqm*
		4	*2.60*		*1.20*	*12.48*	*Sqm*
		4		*1.37*	*1.20*	*6.56*	*Sqm*
	Section 3-3	*4*	*4.35*		*0.45*	*7.83*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*4.35*		*0.86*	*14.97*	*Sqm*
		4		*1.08*	*0.86*	*3.71*	*Sqm*
		4	*4.35*		*1.10*	*19.15*	*Sqm*
		4		*1.49*	*1.10*	*6.54*	*Sqm*
	Section 5-5	*4*	*2.76*		*0.45*	*4.96*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.76*		*1.17*	*12.85*	*Sqm*
		4		*0.80*	*1.17*	*3.73*	*Sqm*
		4	*2.76*		*0.50*	*5.51*	*Sqm*
		4		*1.30*	*0.50*	*2.60*	*Sqm*
	Section 6-6	*4*	*1.46*		*0.45*	*2.62*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.46*		*0.86*	*5.01*	*Sqm*
		4		*0.71*	*0.86*	*2.44*	*Sqm*
		4	*1.46*		*0.65*	*3.79*	*Sqm*
		4		*1.12*	*0.65*	*2.90*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.64*	*0.70*	*5.10*	*Sqm*
		2	*3.99*		*0.50*	*3.99*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.64*	*0.50*	*3.64*	*Sqm*
		2	*0.31*		*0.20*	*0.12*	*Sqm*
		2		*3.64*	*0.20*	*1.46*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		*3.64*	*0.40*	*2.91*	*Sqm*
		2	*4.80*		*0.50*	*4.80*	*Sqm*
		2		*3.64*	*0.50*	*3.64*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*3.64*	*0.70*	*5.10*	*Sqm*
	Crest	*2*	*0.71*		*0.72*	*1.02*	*Sqm*
		2		*3.64*	*0.72*	*5.24*	*Sqm*
	Slab	*2*	*8.88*		*0.76*	*13.43*	*Sqm*
		2		*11.00*	*0.76*	*16.63*	*Sqm*
		1	*8.88*	*11.00*		*97.68*	*Sqm*
	Toe Wall D/S Portion	*2*	*8.20*		*0.30*	*4.92*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.90*		*0.60*	*9.48*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.15*	*1.20*	*Sqm*
		4		*0.60*	*0.15*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**336.12**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.340*		*9.36*	*Sqm*
	TOTAL					**9.36**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*3.040*	*0.300*	**1.82**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*3.040*	*0.150*	**1.82**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.85*	*0.450*		*3.08*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.85*	*0.450*		*3.08*	*Sqm*
	TOTAL					**6.17**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*2.255*		2.26	**Cum**
	Abutment						
	Section 1-1	2	*0.74*	*0.982*		*1.443*	*Cum*
	Section 2-2	2	*2.60*	*1.085*		*5.643*	*Cum*
	Section 3-3	2	*4.70*	*0.909*		*8.546*	*Cum*
	Section 5-5	2	*2.75*	*0.982*		*5.390*	*Cum*
	Section 6-6	2	*0.77*	*0.761*		*1.177*	*Cum*
	Toe wall	2	*8.20*	*0.150*	*0.600*	*2.460*	*Cum*
		2	*2.00*	*0.150*	*0.600*	*0.360*	*Cum*
	TOTAL					**27.27**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR AKAUNA MR.						
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH.4.950						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.506*	*2.293*	*6.699*	*Cum*
	Section 2-2	*2*	*2.50*	*1.080*	*2.293*	*12.382*	*Cum*
	Section 3-3	*2*	*1.95*	*0.960*	*2.093*	*7.836*	*Cum*
	Section 5-5	*2*	*2.52*	*1.656*	*2.293*	*19.130*	*Cum*
	Section 6-6	*2*	*0.87*	*0.960*	*2.093*	*3.476*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	U/S Floor	*1*	*2.00*	*1.050*	*1.460*	*3.066*	*Cum*
	D/S Floor	*1*	*2.55*	*1.050*	*0.850*	*2.276*	*Cum*
		1	*2.25*	*1.050*	*0.650*	*1.536*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.050*	*0.850*	*0.558*	*Cum*
	Toe Wall D/S Portion	*1*	*4.70*	*0.750*	*0.900*	*3.173*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						62.04	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*4.07*	*1.050*	*0.150*	*0.64*	*Cum*
		1	*0.28*	*1.050*	*0.150*	*0.04*	*Cum*
		1	*0.70*	*1.050*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.050*	*0.150*	*0.12*	*Cum*
		1	*0.54*	*1.050*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.51*	*0.150*	*0.44*	*Cum*
	Section 2-2	*2*	*2.50*	*1.08*	*0.150*	*0.81*	*Cum*
	Section 3-3	*2*	*1.95*	*0.96*	*0.150*	*0.56*	*Cum*
	Section 5-5	*2*	*2.52*	*1.66*	*0.150*	*1.25*	*Cum*
	Section 6-6	*2*	*0.87*	*0.96*	*0.150*	*0.25*	*Cum*
	Toe Wall D/S Portion	*1*	*4.70*	*0.75*	*0.300*	*1.06*	*Cum*
	Toe Wall D/S Portion	*1*	*4.40*	*0.45*	*0.600*	*1.19*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.60*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.30*	*0.600*	*0.54*	*Cum*
	TOTAL					**7.58**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.828*	*1.260*	*1.55*	*Cum*
		2	*0.75*	*1.356*	*0.500*	*1.01*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.615*	*0.550*	*1.69*	*Cum*
		2	*2.50*	*0.930*	*0.500*	*2.33*	*Cum*
	Section 3-3	*2*	*1.70*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.70*	*0.555*	*0.350*	*0.66*	*Cum*
		2	*1.70*	*0.810*	*0.500*	*1.37*	*Cum*
	Section 5-5	*2*	*2.48*	*0.450*	*0.450*	*1.00*	*Cum*
		2	*2.48*	*0.828*	*1.260*	*5.16*	*Cum*
		2	*2.48*	*1.356*	*0.500*	*3.36*	*Cum*
	Section 6-6	*2*	*1.27*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.27*	*0.555*	*0.350*	*0.49*	*Cum*
		2	*1.27*	*0.810*	*0.500*	*1.03*	*Cum*
	Floor	*1*	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*
		1	*4.50*	*1.050*	*0.500*	*2.36*	*Cum*
		1	*0.30*	*1.050*	*0.200*	*0.06*	*Cum*
		1	*0.20*	*1.050*	*0.400*	*0.08*	*Cum*
		1	*2.05*	*1.050*	*0.500*	*1.08*	*Cum*
		1	*0.63*	*1.050*	*0.700*	*0.46*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.74*	*1.050*	*0.880*	*0.68*	*Cum*
	TOTAL					**27.36**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.050*	*0.150*	*0.09*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.21*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.21*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.55**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**27.36**	**0.003**	**0.082**	**7850.0**	**644.30**	**Kg**
	Total Weight in Metric Tonne					**0.64**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.260*	*3.75*	*Sqm*
		4		*0.828*	*1.260*	*4.17*	*Sqm*
		4	*0.75*		*0.500*	*1.49*	*Sqm*
		4		*1.356*	*0.500*	*2.71*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.550*	*5.50*	*Sqm*
		4		*0.615*	*0.550*	*1.35*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.930*	*0.500*	*1.86*	*Sqm*
	Section 3-3	*4*	*1.70*		*0.450*	*3.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.70*		*0.350*	*2.37*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.70*		*0.500*	*3.39*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Section 5-5	*4*	*2.48*		*0.450*	*4.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.48*		*1.260*	*12.47*	*Sqm*
		4		*0.828*	*1.260*	*4.17*	*Sqm*
		4	*2.48*		*0.500*	*4.95*	*Sqm*
		4		*1.356*	*0.500*	*2.71*	*Sqm*
	Section 6-6	*4*	*1.27*		*0.450*	*2.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.27*		*0.350*	*1.78*	*Sqm*
		4		*0.555*	*0.350*	*0.78*	*Sqm*
		4	*1.27*		*0.500*	*2.54*	*Sqm*
		4		*0.810*	*0.500*	*1.62*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.30*		*0.200*	*0.12*	*Sqm*
		2		*1.050*	*0.200*	*0.42*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.050*	*0.400*	*0.84*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*1.050*	*0.500*	*1.05*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.050*	*0.700*	*1.47*	*Sqm*
	Crest	*2*	*0.74*		*0.880*	*1.30*	*Sqm*
		2		*1.050*	*0.880*	*1.85*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.70*		*0.300*	*2.82*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.40*		*0.600*	*5.28*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**117.41**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.782*		*5.35*	*Sqm*
	TOTAL					**5.35**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.450*	*0.300*	**0.20**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.450*	*0.150*	**0.20**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.21*	*0.450*		*4.59*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.21*	*0.450*		*4.59*	*Sqm*
	TOTAL					**9.19**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	*1*		*3.127*		3.13	**Cum**
	Abutment						
	Section 1-1	*2*	*0.97*	*1.457*		*2.827*	*Cum*
	Section 2-2	*2*	*2.50*	*0.647*		*3.235*	*Cum*
	Section 3-3	*2*	*1.95*	*0.472*		*1.840*	*Cum*
	Section 5-5	*2*	*2.52*	*1.457*		*7.340*	*Cum*
	Section 6-6	*2*	*0.87*	*0.472*		*0.816*	*Cum*
	Toe wall	*2*	*4.70*	*0.150*	*0.600*	*1.410*	*Cum*
		2	*1.50*	*0.150*	*0.600*	*0.270*	*Cum*
	TOTAL					**20.87**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 5.240 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.47*	*1.416*	*1.781*	*2.381*	*Cum*
	Section 2-2	*2*	*2.35*	*1.570*	*1.781*	*13.142*	*Cum*
	Section 3-3	*2*	*4.55*	*1.450*	*1.581*	*20.861*	*Cum*
	Section 5-5	*2*	*0.61*	*1.566*	*1.781*	*3.408*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.581*	*0.441*	*Cum*
	U/S Key Floor	*1*	*0.82*	*1.040*	*0.450*	*0.384*	*Cum*
	U/S Floor	*1*	*1.14*	*1.040*	*1.760*	*2.087*	*Cum*
	D/S Floor	*1*	*3.36*	*1.040*	*0.650*	*2.271*	*Cum*
		1	*5.00*	*1.040*	*0.650*	*3.380*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.040*	*0.850*	*0.553*	*Cum*
						48.91	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.040*	*0.150*	*0.08*	*Cum*
		1	*0.78*	*1.040*	*0.150*	*0.12*	*Cum*
		1	*3.88*	*1.040*	*0.150*	*0.60*	*Cum*
		1	*0.28*	*1.040*	*0.150*	*0.04*	*Cum*
		1	*2.89*	*1.040*	*0.150*	*0.45*	*Cum*
		1	*0.78*	*1.040*	*0.150*	*0.12*	*Cum*
		1	*0.54*	*1.040*	*0.150*	*0.08*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.47*	*1.416*	*0.150*	*0.20*	*Cum*
	Section 2-2	*2*	*2.35*	*1.570*	*0.300*	*2.21*	*Cum*
	Section 3-3	*2*	*4.55*	*1.450*	*0.300*	*3.96*	*Cum*
	Section 5-5	*2*	*0.61*	*1.566*	*0.150*	*0.29*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**8.21**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.40*	*0.450*	*0.450*	*0.16*	*Cum*
		2	*0.40*	*0.783*	*1.110*	*0.70*	*Cum*
		2	*0.40*	*1.266*	*0.500*	*0.51*	*Cum*
	Section 2-2	*2*	*2.35*	*0.820*	*0.450*	*1.73*	*Cum*
		2	*2.35*	*0.970*	*0.500*	*2.28*	*Cum*
		2	*2.35*	*1.270*	*1.200*	*7.16*	*Cum*
	Section 3-3	*2*	*4.35*	*0.820*	*0.450*	*3.21*	*Cum*
		2	*4.35*	*0.910*	*0.300*	*2.38*	*Cum*
		2	*4.35*	*1.150*	*1.200*	*12.01*	*Cum*
	Section 5-5	*2*	*2.76*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.76*	*0.783*	*1.110*	*4.79*	*Cum*
		2	*2.76*	*1.266*	*0.500*	*3.49*	*Cum*
	Section 6-6	*2*	*1.14*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.14*	*0.540*	*0.300*	*0.37*	*Cum*
		2	*1.14*	*0.780*	*0.650*	*1.16*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*1.040*	*0.700*	*0.46*	*Cum*
		1	*4.50*	*1.040*	*0.500*	*2.34*	*Cum*
		1	*0.31*	*1.040*	*0.200*	*0.06*	*Cum*
		1	*0.20*	*1.040*	*0.400*	*0.08*	*Cum*
		1	*4.05*	*1.040*	*0.500*	*2.11*	*Cum*
		1	*0.63*	*1.040*	*0.700*	*0.46*	*Cum*
	Crest	*1*	*0.73*	*1.040*	*0.830*	*0.63*	*Cum*
	TOTAL					**44.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.040*	*0.150*	*0.09*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*2.77*	*0.450*	*0.050*	*0.06*	*Cum*
	On Abutment Top (Right Side)	*1*	*2.77*	*0.450*	*0.050*	*0.06*	*Cum*
	Slab Bridge	*1*	*1.64*	*5.500*	*0.378*	*3.41*	*Cum*
	Wearing coat	*1*	*1.64*	*4.500*	*0.070*	*0.52*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.350*	*1.54*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**8.39**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*42.10*		*1.578*	*2059.6*	*Kg*
a2	*10*	*8*	*5.90*		*0.616*	*29.1*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.02*		*0.616*	*23.7*	*Kg*
a5	*10*	*6*	*5.80*		*0.616*	*21.5*	*Kg*
x1	*12*	*26*	*2.49*		*0.888*	*57.5*	*Kg*
x2	*16*	*26*	*1.27*		*1.578*	*51.9*	*Kg*
x3	*10*	*24*	*1.54*		*0.616*	*22.8*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**44.97**	**0.003**	**0.135**	**7850.0**	**1059.1**	**Kg**
	Total Reinforcement Steel (in kg)					*3331.8*	*Kg*
	Total Weight in Metric Tonne					**3.33**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.40*		*0.45*	*0.73*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.40*		*1.11*	*1.79*	*Sqm*
		4		*0.78*	*1.11*	*3.48*	*Sqm*
		4	*0.40*		*0.50*	*0.81*	*Sqm*
		4		*1.27*	*0.50*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.35*		*0.45*	*4.23*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*2.35*		*0.50*	*4.70*	*Sqm*
		4		*0.97*	*0.50*	*1.94*	*Sqm*
		4	*2.35*		*1.20*	*11.28*	*Sqm*
		4		*1.27*	*1.20*	*6.10*	*Sqm*
	Section 3-3	*4*	*4.35*		*0.45*	*7.83*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*4.35*		*0.30*	*5.22*	*Sqm*
		4		*0.91*	*0.30*	*1.09*	*Sqm*
		4	*4.35*		*1.20*	*20.89*	*Sqm*
		4		*1.15*	*1.20*	*5.52*	*Sqm*
	Section 5-5	*4*	*2.76*		*0.45*	*4.96*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.76*		*1.11*	*12.24*	*Sqm*
		4		*0.78*	*1.11*	*3.48*	*Sqm*
		4	*2.76*		*0.50*	*5.51*	*Sqm*
		4		*1.27*	*0.50*	*2.53*	*Sqm*
	Section 6-6	*4*	*1.14*		*0.45*	*2.06*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.14*		*0.30*	*1.37*	*Sqm*
		4		*0.54*	*0.30*	*0.65*	*Sqm*
		4	*1.14*		*0.65*	*2.98*	*Sqm*
		4		*0.78*	*0.65*	*2.03*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.04*	*0.70*	*1.46*	*Sqm*
		2	*4.50*		*0.50*	*4.50*	*Sqm*
		2		*1.04*	*0.50*	*1.04*	*Sqm*
		2	*0.31*		*0.20*	*0.12*	*Sqm*
		2		*1.04*	*0.20*	*0.42*	*Sqm*
		2	*0.20*		*0.40*	*0.16*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.04*	*0.40*	*0.83*	*Sqm*
		2	*4.05*		*0.50*	*4.05*	*Sqm*
		2		*1.04*	*0.50*	*1.04*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*1.04*	*0.70*	*1.46*	*Sqm*
	Crest	*2*	*0.73*		*0.83*	*1.21*	*Sqm*
		2		*1.04*	*0.83*	*1.73*	*Sqm*
	Slab	*2*	*3.28*		*0.76*	*4.96*	*Sqm*
		2		*11.00*	*0.76*	*16.63*	*Sqm*
		1	*3.28*	*11.00*		*36.08*	*Sqm*
	TOTAL					**198.76**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*2.77*	*0.450*		*1.25*	*Sqm*
	On Abutment Top (Right Side)	*1*	*2.77*	*0.450*		*1.25*	*Sqm*
	TOTAL					**2.49**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*1.411*		1.41	**Cum**
	Abutment						
	Section 1-1	2	*0.47*	*0.797*		*0.752*	*Cum*
	Section 2-2	2	*2.35*	*0.713*		*3.350*	*Cum*
	Section 3-3	2	*4.55*	*0.553*		*5.030*	*Cum*
	Section 5-5	2	*0.61*	*0.797*		*0.974*	*Cum*
	Section 6-6	2	*0.15*	*0.761*		*0.228*	*Cum*
	TOTAL					**11.75**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 3.430								
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	117.56	Cum	**195.20**	22947.82			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.77	Cum	**6381.70**	68723.51	3.49	4.85	9.69
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	58.43	Cum	**6914.20**	404015.45	24.10	25.13	50.25
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	65.25	Cum	**8151.40**	531872.53	37.00	25.45	51.55
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	6.03	MT	**73574.90**	443537.32			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	307.07	Sqm	**578.60**	177672.38			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh,)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	84.57	Cum	**149.30**	12625.78			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.42	Cum	**1075.00**	59575.68			
	Coarse Aggregates (100 Km lead)	111.49	Cum	**1398.00**	155864.38			
	Cement (30 km lead)	64.59	MT	**742.00**	47924.97			
	Steel (30 Km lead)	6.03	MT	**742.00**	4473.06			
	TOTAL (In Rs.)				**2423957.20**			
	TOTAL (In Rs.)				**2423957.20**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.42	Cum	**584.64**	32400.31	3240.03		
	Coarse Aggregate	111.49	Cum	**944.26**	105276.47	10527.65		
	Total					13767.68		
	For 1 nos. fall, Total Seigniorage charges					**13767.68**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 5.120								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	115.34	Cum	**195.20**	22514.52			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.68	Cum	**6381.70**	68154.00	3.46	4.81	9.61
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	56.23	Cum	**6914.20**	388764.73	23.19	24.18	48.36
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	66.97	Cum	**8151.40**	545863.95	37.97	26.12	52.90
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.84	MT	**73574.90**	429772.04			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	307.54	Sqm	**578.60**	177940.05			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	RM	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	84.33	Cum	**149.30**	12589.93			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.10	Cum	**1075.00**	59232.54			
	Coarse Aggregates (100 Km lead)	110.87	Cum	**1398.00**	154995.89			
	Cement (30 km lead)	64.62	MT	**742.00**	47950.53			
	Steel (30 Km lead)	5.84	MT	**742.00**	4334.23			
	TOTAL (In Rs.)				**2407190.89**			
	TOTAL (In Rs.)				**2407190.89**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.10	Cum	**584.64**	32213.69	3221.37		
	Coarse Aggregate	110.87	Cum	**944.26**	104689.86	10468.99		
	Total					13690.35		
	For 1 nos. fall, Total Seigniorage charges					**13690.35**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 6.410								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	120.35	Cum	**195.20**	23492.30			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.68	Cum	**6381.70**	68154.00	3.46	4.81	9.61
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	56.10	Cum	**6914.20**	387895.32	23.14	24.12	48.25
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	66.97	Cum	**8151.40**	545863.95	37.97	26.12	52.90
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.84	MT	**73574.90**	429590.48			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	307.40	Sqm	**578.60**	177859.67			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	Cum	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	87.46	Cum	**149.30**	13057.33			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.05	Cum	**1075.00**	59174.42			
	Coarse Aggregates (100 Km lead)	110.76	Cum	**1398.00**	154844.72			
	Cement (30 km lead)	64.57	MT	**742.00**	47912.05			
	Steel (30 Km lead)	5.84	MT	**742.00**	4332.40			
	TOTAL (In Rs.)				**2407019.01**			
	TOTAL (In Rs.)				**2407019.01**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.05	Cum	**584.64**	32182.08	3218.21		
	Coarse Aggregate	110.76	Cum	**944.26**	104587.75	10458.77		
	Total					13676.98		
	For 1 nos. fall, Total Seigniorage charges					**13676.98**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 9.845								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	72.24	Cum	**195.20**	14101.39			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.33	Cum	**6381.70**	72334.02	3.67	5.10	10.20
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	72.13	Cum	**6914.20**	498693.68	29.75	31.01	62.03
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	65.13	Cum	**8151.40**	530860.06	36.93	25.40	51.45
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.66	MT	**73574.90**	416530.74			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	326.47	Sqm	**578.60**	188894.81			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	Cum	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	76.00	Cum	**149.30**	11347.14			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	61.51	Cum	**1075.00**	66127.03			
	Coarse Aggregates (100 Km lead)	123.68	Cum	**1398.00**	172902.23			
	Cement (30 km lead)	70.35	MT	**742.00**	52199.90			
	Steel (30 Km lead)	5.66	MT	**742.00**	4200.70			
	TOTAL (In Rs.)				**2523270.14**			
	TOTAL (In Rs.)				**2523270.14**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	61.51	Cum	**584.64**	35963.26	3596.33		
	Coarse Aggregate	123.68	Cum	**944.26**	116784.45	11678.44		
	Total					15274.77		
	For 1 nos. fall, Total Seigniorage charges					**15274.77**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 10.900								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	69.18	Cum	**195.20**	13504.55			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.79	Cum	**6381.70**	68867.48	3.50	4.86	9.71
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	59.72	Cum	**6914.20**	412935.71	24.64	25.68	51.36
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	59.41	Cum	**8151.40**	484292.94	33.69	23.17	46.94
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	5.42	MT	**73574.90**	398621.71			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	302.29	Sqm	**578.60**	174906.87			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	5.20	Sqm	**66.00**	343.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	13.00	Sqm	**36993.21**	480911.73			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	62.37	Cum	**149.30**	9311.79			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	53.71	Cum	**1075.00**	57735.81			
	Coarse Aggregates (100 Km lead)	108.01	Cum	**1398.00**	150997.39			
	Cement (30 km lead)	61.82	MT	**742.00**	45869.57			
	Steel (30 Km lead)	5.42	MT	**742.00**	4020.08			
	TOTAL (In Rs.)				**2315788.23**			
	TOTAL (In Rs.)				**2315788.23**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	53.71	Cum	**584.64**	31399.69	3139.97		
	Coarse Aggregate	108.01	Cum	**944.26**	101989.13	10198.91		
	Total					13338.88		
	For 1 nos. fall, Total Seigniorage charges					**13338.88**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR CHATARA SUB DY AT - KM 1.400								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.00	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	60.21	Cum	**195.20**	11752.31			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.74	Cum	**6381.70**	62186.96	3.16	4.39	8.77
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.05	Cum	**6914.20**	318377.38	18.99	19.80	39.60
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.79	Cum	**8151.40**	356909.59	24.83	17.08	34.59
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.81	MT	**73574.90**	280009.35			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	240.74	Sqm	**578.60**	139291.60			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	4.40	Cum	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	Sqm	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	50.76	Cum	**149.30**	7578.78			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.26	Cum	**1075.00**	44356.00			
	Coarse Aggregates (100 Km lead)	82.96	Cum	**1398.00**	115978.98			
	Cement (30 km lead)	46.98	MT	**742.00**	34857.47			
	Steel (30 Km lead)	3.81	MT	**742.00**	2823.88			
	TOTAL (In Rs.)				**1794689.36**			
	TOTAL (In Rs.)				**1794689.36**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.26	Cum	**584.64**	24123.06	2412.31		
	Coarse Aggregate	82.96	Cum	**944.26**	78336.42	7833.64		
	Total					10245.95		
	For 1 nos. fall, Total Seigniorage charges					**10245.95**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 3.430							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*90.00*			**90.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.02*	*1.78*	*1.77*	*12.72*	*Cum*
		1	*5.92*	*2.03*	*1.77*	*21.26*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.93*	*0.88*	*1.77*	*24.80*	*Cum*
	Left abutment	*2*	*2.02*	*1.78*	*1.77*	*12.72*	*Cum*
		1	*5.92*	*2.03*	*1.77*	*21.26*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.93*	*0.88*	*1.77*	*24.80*	*Cum*
	TOTAL					**117.56**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.02*	*1.78*	*0.20*	*1.44*	*Cum*
		1	*5.92*	*2.03*	*0.20*	*2.41*	*Cum*
	Left abutment	*2*	*2.02*	*1.78*	*0.20*	*1.44*	*Cum*
		1	*5.92*	*2.03*	*0.20*	*2.41*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**10.77**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.92*	*1.83*	*0.20*	*2.17*	*Cum*
		1	*5.92*	*1.63*	*0.80*	*7.73*	*Cum*
		1	*5.92*	*1.03*	*1.38*	*8.37*	*Cum*
	Return wall	*2*	*1.92*	*1.58*	*0.20*	*1.21*	*Cum*
		2	*1.92*	*1.38*	*0.80*	*4.24*	*Cum*
		2	*1.92*	*0.69*	*1.98*	*5.26*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.92*	*1.83*	*0.20*	*2.17*	*Cum*
		1	*5.92*	*1.63*	*0.80*	*7.73*	*Cum*
		1	*5.92*	*1.03*	*1.38*	*8.37*	*Cum*
	Return wall	*2*	*1.92*	*1.58*	*0.20*	*1.21*	*Cum*
		2	*1.92*	*1.38*	*0.80*	*4.24*	*Cum*
		2	*1.92*	*0.69*	*1.98*	*5.26*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**58.43**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.52	6.50	0.64	*31.03*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.52*	*5.50*	*0.08*	*5.99*	*Cum*
	Dirt wall	*2*	*5.92*	*0.82*	*0.50*	*4.85*	*Cum*
		2	*5.92*	*0.40*	*0.30*	*1.42*	*Cum*
	Parapet	*2*	*14.52*	*0.44*	*0.18*	*2.26*	*Cum*
		2	*14.52*	*0.35*	*0.25*	*2.55*	*Cum*
		2	*14.52*	*0.22*	*0.55*	*3.50*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**65.25**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*64*	*9.38*		*2.466*	*1480.1*	*Kg*
a2	*12*	*59*	*7.50*		*0.888*	*392.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*46*	*9.30*		*0.616*	*263.7*	*Kg*
a5	*10*	*59*	*7.40*		*0.616*	*269.1*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*138*	*2.65*		*0.888*	*324.8*	*Kg*
x2	*16*	*138*	*1.55*		*1.578*	*336.5*	*Kg*
x3	*10*	*24*	*8.22*		*0.616*	*121.6*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.28*		*1.578*	*233.4*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*58.43*	*0.0025*	*0.146*	*7850.00*	*1146.742*	*Kg*
	Total Reinforcement Steel (in kg)					*6028.4*	*Kg*
	Total Weight in Metric Tonne					**6.03**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.92*		*0.20*	*2.37*	*Sqm*
		2		*1.83*	*0.20*	*0.73*	*Sqm*
		2	*5.92*		*0.80*	*9.47*	*Sqm*
		2		*1.63*	*0.80*	*2.61*	*Sqm*
		2	*5.92*		*1.38*	*16.30*	*Sqm*
		2		*1.03*	*1.38*	*2.83*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.58*	*0.20*	*0.63*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*
		2		*1.38*	*0.80*	*2.21*	*Sqm*
		2	*1.92*		*1.98*	*7.60*	*Sqm*
		2		*0.69*	*1.98*	*2.75*	*Sqm*
		2	*1.92*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.92*		*0.20*	*2.37*	*Sqm*
		2		*1.83*	*0.20*	*0.73*	*Sqm*
		2	*5.92*		*0.80*	*9.47*	*Sqm*
		2		*1.63*	*0.80*	*2.61*	*Sqm*
		2	*5.92*		*1.38*	*16.30*	*Sqm*
		2		*1.03*	*1.38*	*2.83*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.58*	*0.20*	*0.63*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*
		2		*1.38*	*0.80*	*2.21*	*Sqm*
		2	*1.92*		*1.98*	*7.60*	*Sqm*
		2		*0.69*	*1.98*	*2.75*	*Sqm*
		2	*1.92*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.52*		*0.64*	*9.55*	*Sqm*
		1	*7.52*	6.50		*48.87*	*Sqm*
		2		*6.50*	0.64	*8.26*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Dirt wall	*4*	*5.916*		*0.5*	*11.83*	*Sqm*
		4		*0.82*	0.50	*1.64*	*Sqm*
		4	*5.916*		*0.3*	*7.10*	*Sqm*
		4		*0.4*	0.30	*0.48*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Parapet	*4*	*14.52*		*0.18*	*10.16*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.52*		*0.25*	*14.52*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.52*		*0.55*	*31.94*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**307.07**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.92	1.32		*15.62*	*Cum*
	Right and left Return wall	4	2.02	2.40		*19.35*	*Cum*
	Extra slope	*2*	*7.9325*	*0.884*	*1.768*	*24.80*	*Cum*
		2	*7.9325*	*0.884*	*1.768*	*24.80*	*Cum*
	TOTAL					**84.57**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 5.120						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.01*	*1.76*	*1.75*	*12.37*	*Cum*
		1	*5.94*	*2.01*	*1.75*	*20.91*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.94*	*0.88*	*1.75*	*24.38*	*Cum*
	Left abutment	*2*	*2.01*	*1.76*	*1.75*	*12.37*	*Cum*
		1	*5.94*	*2.01*	*1.75*	*20.91*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.94*	*0.88*	*1.75*	*24.38*	*Cum*
	TOTAL					**115.34**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.01*	*1.76*	*0.20*	*1.41*	*Cum*
		1	*5.94*	*2.01*	*0.20*	*2.39*	*Cum*
	Left abutment	*2*	*2.01*	*1.76*	*0.20*	*1.41*	*Cum*
		1	*5.94*	*2.01*	*0.20*	*2.39*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**10.68**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.94*	*1.81*	*0.20*	*2.15*	*Cum*
		1	*5.94*	*1.61*	*0.80*	*7.65*	*Cum*
		1	*5.94*	*1.02*	*1.30*	*7.84*	*Cum*
	Return wall	*2*	*1.92*	*1.56*	*0.20*	*1.20*	*Cum*
		2	*1.92*	*1.36*	*0.80*	*4.17*	*Cum*
		2	*1.92*	*0.68*	*1.87*	*4.88*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.94*	*1.81*	*0.20*	*2.15*	*Cum*
		1	*5.94*	*1.61*	*0.80*	*7.65*	*Cum*
		1	*5.94*	*1.02*	*1.30*	*7.84*	*Cum*
	Return wall	*2*	*1.92*	*1.56*	*0.20*	*1.20*	*Cum*
		2	*1.92*	*1.36*	*0.80*	*4.17*	*Cum*
		2	*1.92*	*0.68*	*1.87*	*4.88*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**56.23**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.85	6.50	0.64	*32.40*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.85*	*5.50*	*0.08*	*6.13*	*Cum*
	Dirt wall	*2*	*5.94*	*0.82*	*0.50*	*4.87*	*Cum*
		2	*5.94*	*0.40*	*0.30*	*1.43*	*Cum*
	Parapet	*2*	*14.85*	*0.44*	*0.18*	*2.31*	*Cum*
		2	*14.85*	*0.35*	*0.25*	*2.61*	*Cum*
		2	*14.85*	*0.22*	*0.55*	*3.58*	*Cum*
	TOTAL					**66.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*64*	*8.91*		*2.466*	*1406.1*	*Kg*
a2	*12*	*56*	*7.50*		*0.888*	*372.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*46*	*8.83*		*0.616*	*250.4*	*Kg*
a5	*10*	*56*	*7.40*		*0.616*	*255.5*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*130*	*2.72*		*0.888*	*314.0*	*Kg*
x2	*16*	*130*	*1.62*		*1.578*	*331.3*	*Kg*
x3	*10*	*24*	*7.75*		*0.616*	*114.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.28*		*1.578*	*233.4*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*56.23*	*0.0025*	*0.141*	*7850.00*	*1103.455*	*Kg*
	Total Reinforcement Steel (in kg)					*5841.3*	*Kg*
	Total Weight in Metric Tonne					**5.84**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.94*		*0.20*	*2.38*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*5.94*		*0.80*	*9.50*	*Sqm*
		2		*1.61*	*0.80*	*2.58*	*Sqm*
		2	*5.94*		*1.30*	*15.44*	*Sqm*
		2		*1.02*	*1.30*	*2.64*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.56*	*0.20*	*0.62*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*
		2		*1.36*	*0.80*	*2.18*	*Sqm*
		2	*1.92*		*1.87*	*7.17*	*Sqm*
		2		*0.68*	*1.87*	*2.55*	*Sqm*
		2	*1.92*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.94*		*0.20*	*2.38*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*5.94*		*0.80*	*9.50*	*Sqm*
		2		*1.61*	*0.80*	*2.58*	*Sqm*
		2	*5.94*		*1.30*	*15.44*	*Sqm*
		2		*1.02*	*1.30*	*2.64*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.56*	*0.20*	*0.62*	*Sqm*
		2	*1.92*		*0.80*	*3.07*	*Sqm*
		2		*1.36*	*0.80*	*2.18*	*Sqm*
		2	*1.92*		*1.87*	*7.17*	*Sqm*
		2		*0.68*	*1.87*	*2.55*	*Sqm*
		2	*1.92*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.85*		*0.64*	*9.97*	*Sqm*
		1	*7.85*	6.50		*51.03*	*Sqm*
		2		*6.50*	0.64	*8.26*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Dirt wall	*4*	*5.939*		*0.5*	*11.88*	*Sqm*
		4		*0.82*	0.50	*1.64*	*Sqm*
		4	*5.939*		*0.3*	*7.13*	*Sqm*
		4		*0.4*	0.30	*0.48*	*Sqm*
	Parapet	*4*	*14.85*		*0.18*	*10.40*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.85*		*0.25*	*14.85*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.85*		*0.55*	*32.67*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**307.54**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.94	1.26		*15.00*	*Cum*
	Right and left Return wall	4	2.01	2.56		*20.56*	*Cum*
	Extra slope	*2*	*7.944*	*0.876*	*1.752*	*24.38*	*Cum*
		2	*7.944*	*0.876*	*1.752*	*24.38*	*Cum*
	TOTAL					**84.33**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 6.410						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.01*	*1.76*	*1.81*	*12.75*	*Cum*
		1	*5.94*	*2.01*	*1.81*	*21.55*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.94*	*0.90*	*1.81*	*25.88*	*Cum*
	Left abutment	*2*	*2.01*	*1.76*	*1.81*	*12.75*	*Cum*
		1	*5.94*	*2.01*	*1.81*	*21.55*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.94*	*0.90*	*1.81*	*25.88*	*Cum*
	TOTAL					**120.35**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.01*	*1.76*	*0.20*	*1.41*	*Cum*
		1	*5.94*	*2.01*	*0.20*	*2.39*	*Cum*
	Left abutment	*2*	*2.01*	*1.76*	*0.20*	*1.41*	*Cum*
		1	*5.94*	*2.01*	*0.20*	*2.39*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**10.68**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.94*	*1.81*	*0.20*	*2.15*	*Cum*
		1	*5.94*	*1.61*	*0.80*	*7.65*	*Cum*
		1	*5.94*	*1.02*	*1.30*	*7.84*	*Cum*
	Return wall	*2*	*1.91*	*1.56*	*0.20*	*1.19*	*Cum*
		2	*1.91*	*1.36*	*0.80*	*4.15*	*Cum*
		2	*1.91*	*0.68*	*1.87*	*4.85*	*Cum*
		2	*1.91*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.94*	*1.81*	*0.20*	*2.15*	*Cum*
		1	*5.94*	*1.61*	*0.80*	*7.65*	*Cum*
		1	*5.94*	*1.02*	*1.30*	*7.84*	*Cum*
	Return wall	*2*	*1.91*	*1.56*	*0.20*	*1.19*	*Cum*
		2	*1.91*	*1.36*	*0.80*	*4.15*	*Cum*
		2	*1.91*	*0.68*	*1.87*	*4.85*	*Cum*
		2	*1.91*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**56.10**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.85	6.50	0.64	*32.40*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.85*	*5.50*	*0.08*	*6.13*	*Cum*
	Dirt wall	*2*	*5.94*	*0.82*	*0.50*	*4.87*	*Cum*
		2	*5.94*	*0.40*	*0.30*	*1.43*	*Cum*
	Parapet	*2*	*14.85*	*0.44*	*0.18*	*2.31*	*Cum*
		2	*14.85*	*0.35*	*0.25*	*2.61*	*Cum*
		2	*14.85*	*0.22*	*0.55*	*3.58*	*Cum*
	TOTAL					**66.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*64*	*8.91*		*2.466*	*1406.1*	*Kg*
a2	*12*	*56*	*7.50*		*0.888*	*372.8*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*46*	*8.83*		*0.616*	*250.4*	*Kg*
a5	*10*	*56*	*7.40*		*0.616*	*255.5*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*130*	*2.72*		*0.888*	*314.0*	*Kg*
x2	*16*	*130*	*1.62*		*1.578*	*331.3*	*Kg*
x3	*10*	*24*	*7.75*		*0.616*	*114.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.28*		*1.578*	*233.4*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*56.10*	*0.0025*	*0.140*	*7850.00*	*1100.987*	*Kg*
	Total Reinforcement Steel (in kg)					*5838.8*	*Kg*
	Total Weight in Metric Tonne					**5.84**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.94*		*0.20*	*2.38*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*5.94*		*0.80*	*9.50*	*Sqm*
		2		*1.61*	*0.80*	*2.58*	*Sqm*
		2	*5.94*		*1.30*	*15.44*	*Sqm*
		2		*1.02*	*1.30*	*2.64*	*Sqm*
	Return wall	*2*	*1.91*		*0.20*	*0.76*	*Sqm*
		2		*1.56*	*0.20*	*0.62*	*Sqm*
		2	*1.91*		*0.80*	*3.05*	*Sqm*
		2		*1.36*	*0.80*	*2.18*	*Sqm*
		2	*1.91*		*1.87*	*7.12*	*Sqm*
		2		*0.68*	*1.87*	*2.55*	*Sqm*
		2	*1.91*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.94*		*0.20*	*2.38*	*Sqm*
		2		*1.81*	*0.20*	*0.72*	*Sqm*
		2	*5.94*		*0.80*	*9.50*	*Sqm*
		2		*1.61*	*0.80*	*2.58*	*Sqm*
		2	*5.94*		*1.30*	*15.44*	*Sqm*
		2		*1.02*	*1.30*	*2.64*	*Sqm*
	Return wall	*2*	*1.91*		*0.20*	*0.76*	*Sqm*
		2		*1.56*	*0.20*	*0.62*	*Sqm*
		2	*1.91*		*0.80*	*3.05*	*Sqm*
		2		*1.36*	*0.80*	*2.18*	*Sqm*
		2	*1.91*		*1.87*	*7.12*	*Sqm*
		2		*0.68*	*1.87*	*2.55*	*Sqm*
		2	*1.91*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.85*		*0.64*	*9.97*	*Sqm*
		1	*7.85*	6.50		*51.03*	*Sqm*
		2		*6.50*	0.64	*8.26*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Dirt wall	*4*	*5.939*		*0.5*	*11.88*	*Sqm*
		4		*0.82*	0.50	*1.64*	*Sqm*
		4	*5.939*		*0.3*	*7.13*	*Sqm*
		4		*0.4*	0.30	*0.48*	*Sqm*
	Parapet	*4*	*14.85*		*0.18*	*10.40*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.85*		*0.25*	*14.85*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.85*		*0.55*	*32.67*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**307.40**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.94	1.26		*15.00*	*Cum*
	Right and left Return wall	4	2.01	2.58		*20.69*	*Cum*
	Extra slope	*2*	*7.944*	*0.9025*	*1.805*	*25.88*	*Cum*
		2	*7.944*	*0.9025*	*1.805*	*25.88*	*Cum*
	TOTAL					**87.46**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 9.845						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.09*	*1.91*	*1.20*	*9.57*	*Cum*
		1	*5.79*	*2.19*	*1.20*	*15.19*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.89*	*0.60*	*1.20*	*11.36*	*Cum*
	Left abutment	*2*	*2.09*	*1.91*	*1.20*	*9.57*	*Cum*
		1	*5.79*	*2.19*	*1.20*	*15.19*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.89*	*0.60*	*1.20*	*11.36*	*Cum*
	TOTAL					**72.24**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.09*	*1.91*	*0.20*	*1.60*	*Cum*
		1	*5.79*	*2.19*	*0.20*	*2.53*	*Cum*
	Left abutment	*2*	*2.09*	*1.91*	*0.20*	*1.60*	*Cum*
		1	*5.79*	*2.19*	*0.20*	*2.53*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**11.33**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.79*	*1.99*	*0.20*	*2.30*	*Cum*
		1	*5.79*	*1.79*	*0.80*	*8.27*	*Cum*
		1	*5.79*	*1.10*	*1.88*	*12.03*	*Cum*
	Return wall	*2*	*1.99*	*1.71*	*0.20*	*1.36*	*Cum*
		2	*1.99*	*1.51*	*0.80*	*4.80*	*Cum*
		2	*1.99*	*0.75*	*2.35*	*7.06*	*Cum*
		2	*1.99*	*0.40*	*0.15*	*0.24*	*Cum*
	Left abutment	*1*	*5.79*	*1.99*	*0.20*	*2.30*	*Cum*
		1	*5.79*	*1.79*	*0.80*	*8.27*	*Cum*
		1	*5.79*	*1.10*	*1.88*	*12.03*	*Cum*
	Return wall	*2*	*1.99*	*1.71*	*0.20*	*1.36*	*Cum*
		2	*1.99*	*1.51*	*0.80*	*4.80*	*Cum*
		2	*1.99*	*0.75*	*2.35*	*7.06*	*Cum*
		2	*1.99*	*0.40*	*0.15*	*0.24*	*Cum*
	TOTAL					**72.13**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.52	6.50	0.64	*31.04*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.52*	*5.50*	*0.08*	*5.99*	*Cum*
	Dirt wall	*2*	*5.79*	*0.82*	*0.50*	*4.75*	*Cum*
		2	*5.79*	*0.40*	*0.30*	*1.39*	*Cum*
	Parapet	*2*	*14.52*	*0.44*	*0.18*	*2.26*	*Cum*
		2	*14.52*	*0.35*	*0.25*	*2.55*	*Cum*
		2	*14.52*	*0.22*	*0.55*	*3.50*	*Cum*
	TOTAL					**65.13**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*59*	*8.38*		*2.466*	*1219.2*	*Kg*
a2	*12*	*50*	*7.30*		*0.888*	*324.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.30*		*0.616*	*158.6*	*Kg*
a5	*10*	*38*	*7.20*		*0.616*	*168.7*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*126*	*2.55*		*0.888*	*285.4*	*Kg*
x2	*16*	*126*	*1.45*		*1.578*	*287.3*	*Kg*
x3	*10*	*24*	*7.42*		*0.616*	*109.8*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*72.13*	*0.0025*	*0.180*	*7850.00*	*1415.473*	*Kg*
	Total Reinforcement Steel (in kg)					*5661.3*	*Kg*
	Total Weight in Metric Tonne					**5.66**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.79*		*0.20*	*2.32*	*Sqm*
		2		*1.99*	*0.20*	*0.79*	*Sqm*
		2	*5.79*		*0.80*	*9.27*	*Sqm*
		2		*1.79*	*0.80*	*2.86*	*Sqm*
		2	*5.79*		*1.88*	*21.82*	*Sqm*
		2		*1.10*	*1.88*	*4.15*	*Sqm*
	Return wall	*2*	*1.99*		*0.20*	*0.80*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*1.99*		*0.80*	*3.19*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*1.99*		*2.35*	*9.38*	*Sqm*
		2		*0.75*	*2.35*	*3.54*	*Sqm*
		2	*1.99*		*0.15*	*0.60*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.79*		*0.20*	*2.32*	*Sqm*
		2		*1.99*	*0.20*	*0.79*	*Sqm*
		2	*5.79*		*0.80*	*9.27*	*Sqm*
		2		*1.79*	*0.80*	*2.86*	*Sqm*
		2	*5.79*		*1.88*	*21.82*	*Sqm*
		2		*1.10*	*1.88*	*4.15*	*Sqm*
	Return wall	*2*	*1.99*		*0.20*	*0.80*	*Sqm*
		2		*1.71*	*0.20*	*0.68*	*Sqm*
		2	*1.99*		*0.80*	*3.19*	*Sqm*
		2		*1.51*	*0.80*	*2.41*	*Sqm*
		2	*1.99*		*2.35*	*9.38*	*Sqm*
		2		*0.75*	*2.35*	*3.54*	*Sqm*
		2	*1.99*		*0.15*	*0.60*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.52*		*0.64*	*9.55*	*Sqm*
		1	*7.52*	6.50		*48.88*	*Sqm*
		2		*6.50*	0.64	*8.26*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	6.50		*45.50*	*Sqm*
		4		*6.50*	0.30	*7.80*	*Sqm*
	Dirt wall	*4*	*5.794*		*0.5*	*11.59*	*Sqm*
		4		*0.82*	0.50	*1.64*	*Sqm*
		4	*5.794*		*0.3*	*6.95*	*Sqm*
		4		*0.4*	0.30	*0.48*	*Sqm*
	Parapet	*4*	*14.52*		*0.18*	*10.16*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*14.52*		*0.25*	*14.52*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.52*		*0.55*	*31.94*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**326.47**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.79	2.22		*25.68*	*Cum*
	Right and left Return wall	4	2.09	3.30		*27.61*	*Cum*
	Extra slope	*2*	*7.8865*	*0.6*	*1.2*	*11.36*	*Cum*
		2	*7.8865*	*0.6*	*1.2*	*11.36*	*Cum*
	TOTAL					**76.00**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR KAPASIYA DY. AT - KM 10.900						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*90.00*			**90.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.02*	*1.77*	*1.20*	*8.57*	*Cum*
		1	*5.93*	*2.05*	*1.20*	*14.56*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.96*	*0.60*	*1.20*	*11.46*	*Cum*
	Left abutment	*2*	*2.02*	*1.77*	*1.20*	*8.57*	*Cum*
		1	*5.93*	*2.05*	*1.20*	*14.56*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.96*	*0.60*	*1.20*	*11.46*	*Cum*
	TOTAL					**69.18**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.02*	*1.77*	*0.20*	*1.43*	*Cum*
		1	*5.93*	*2.05*	*0.20*	*2.43*	*Cum*
	Left abutment	*2*	*2.02*	*1.77*	*0.20*	*1.43*	*Cum*
		1	*5.93*	*2.05*	*0.20*	*2.43*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**10.79**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.93*	*1.85*	*0.20*	*2.19*	*Cum*
		1	*5.93*	*1.65*	*0.80*	*7.81*	*Cum*
		1	*5.93*	*1.10*	*1.42*	*9.27*	*Cum*
	Return wall	*2*	*1.92*	*1.57*	*0.20*	*1.20*	*Cum*
		2	*1.92*	*1.37*	*0.80*	*4.20*	*Cum*
		2	*1.92*	*0.68*	*1.89*	*4.96*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.93*	*1.85*	*0.20*	*2.19*	*Cum*
		1	*5.93*	*1.65*	*0.80*	*7.81*	*Cum*
		1	*5.93*	*1.10*	*1.42*	*9.27*	*Cum*
	Return wall	*2*	*1.92*	*1.57*	*0.20*	*1.20*	*Cum*
		2	*1.92*	*1.37*	*0.80*	*4.20*	*Cum*
		2	*1.92*	*0.68*	*1.89*	*4.96*	*Cum*
		2	*1.92*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**59.72**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	7.52	6.50	0.54	*26.15*	*Cum*
	Approch Slab	*2*	*3.50*	*6.50*	*0.30*	*13.65*	*Cum*
	Wearing coat	*1*	*14.52*	*5.50*	*0.08*	*5.99*	*Cum*
	Dirt wall	*2*	*5.93*	*0.82*	*0.40*	*3.89*	*Cum*
		2	*5.93*	*0.40*	*0.30*	*1.42*	*Cum*
	Parapet	*2*	*14.52*	*0.44*	*0.18*	*2.26*	*Cum*
		2	*14.52*	*0.35*	*0.25*	*2.55*	*Cum*
		2	*14.52*	*0.22*	*0.55*	*3.50*	*Cum*
	TOTAL					**59.41**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*59*	*8.38*		*2.466*	*1219.2*	*Kg*
a2	*12*	*50*	*7.30*		*0.888*	*324.0*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*31*	*8.30*		*0.616*	*158.6*	*Kg*
a5	*10*	*38*	*7.20*		*0.616*	*168.7*	*Kg*
	APPROACH SLAB						
c1	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c2	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
c3	*12*	*86*	*3.70*		*0.888*	*282.5*	*Kg*
c4	*12*	*46*	*6.70*		*0.888*	*273.6*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*126*	*2.55*		*0.888*	*285.4*	*Kg*
x2	*16*	*126*	*1.45*		*1.578*	*287.3*	*Kg*
x3	*10*	*24*	*7.42*		*0.616*	*109.8*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*59.72*	*0.0025*	*0.149*	*7850.00*	*1172.061*	*Kg*
	Total Reinforcement Steel (in kg)					*5417.9*	*Kg*
	Total Weight in Metric Tonne					**5.42**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.93*		*0.20*	*2.37*	*Sqm*
		2		*1.85*	*0.20*	*0.74*	*Sqm*
		2	*5.93*		*0.80*	*9.49*	*Sqm*
		2		*1.65*	*0.80*	*2.63*	*Sqm*
		2	*5.93*		*1.42*	*16.82*	*Sqm*
		2		*1.10*	*1.42*	*3.12*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.57*	*0.20*	*0.63*	*Sqm*
		2	*1.92*		*0.80*	*3.08*	*Sqm*
		2		*1.37*	*0.80*	*2.19*	*Sqm*
		2	*1.92*		*1.89*	*7.26*	*Sqm*
		2		*0.68*	*1.89*	*2.58*	*Sqm*
		2	*1.92*		*0.15*	*0.58*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.93*		*0.20*	*2.37*	*Sqm*
		2		*1.85*	*0.20*	*0.74*	*Sqm*
		2	*5.93*		*0.80*	*9.49*	*Sqm*
		2		*1.65*	*0.80*	*2.63*	*Sqm*
		2	*5.93*		*1.42*	*16.82*	*Sqm*
		2		*1.10*	*1.42*	*3.12*	*Sqm*
	Return wall	*2*	*1.92*		*0.20*	*0.77*	*Sqm*
		2		*1.57*	*0.20*	*0.63*	*Sqm*
		2	*1.92*		*0.80*	*3.08*	*Sqm*
		2		*1.37*	*0.80*	*2.19*	*Sqm*
		2	*1.92*		*1.89*	*7.26*	*Sqm*
		2		*0.68*	*1.89*	*2.58*	*Sqm*
		2	*1.92*		*0.15*	*0.58*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*7.52*		*0.54*	*8.05*	*Sqm*
		1	*7.52*	*6.50*		*48.88*	*Sqm*
		2		*6.50*	*0.54*	*6.96*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	*6.50*		*45.50*	*Sqm*
		4		*6.50*	*0.30*	*7.80*	*Sqm*
	Dirt wall	*4*	*5.934*		*0.4*	*9.49*	*Sqm*
		4		*0.82*	*0.40*	*1.31*	*Sqm*
		4	*5.934*		*0.3*	*7.12*	*Sqm*
		4		*0.4*	*0.30*	*0.48*	*Sqm*
	Parapet	*4*	*14.52*		*0.18*	*10.16*	*Sqm*
		4		*0.44*	*0.18*	*0.31*	*Sqm*
		4	*14.52*		*0.25*	*14.52*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*14.52*		*0.55*	*31.94*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**302.29**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*6.50*	*0.40*		*5.20*	*Sqm*
	TOTAL					**5.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*6.50*			*13.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.93	1.55		*18.36*	*Cum*
	Right and left Return wall	4	2.02	2.61		*21.10*	*Cum*
	Extra slope	*2*	*7.9565*	*0.6*	*1.2*	*11.46*	*Cum*
		2	*7.9565*	*0.6*	*1.2*	*11.46*	*Cum*
	TOTAL					**62.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR CHATARA SUB DY. AT - KM 1.400						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.99*	*1.69*	*1.20*	*8.06*	*Cum*
		1	*5.03*	*1.98*	*1.20*	*11.94*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.02*	*0.60*	*1.20*	*10.11*	*Cum*
	Left abutment	*2*	*1.99*	*1.69*	*1.20*	*8.06*	*Cum*
		1	*5.03*	*1.98*	*1.20*	*11.94*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.02*	*0.60*	*1.20*	*10.11*	*Cum*
	TOTAL					**60.21**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.99*	*1.69*	*0.20*	*1.34*	*Cum*
		1	*5.03*	*1.98*	*0.20*	*1.99*	*Cum*
	Left abutment	*2*	*1.99*	*1.69*	*0.20*	*1.34*	*Cum*
		1	*5.03*	*1.98*	*0.20*	*1.99*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**9.74**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.03*	*1.78*	*0.20*	*1.79*	*Cum*
		1	*5.03*	*1.58*	*0.80*	*6.35*	*Cum*
		1	*5.03*	*1.00*	*1.19*	*5.98*	*Cum*
	Return wall	*2*	*1.89*	*1.47*	*0.20*	*1.11*	*Cum*
		2	*1.89*	*1.27*	*0.80*	*3.83*	*Cum*
		2	*1.89*	*0.63*	*1.56*	*3.74*	*Cum*
		2	*1.89*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*5.03*	*1.78*	*0.20*	*1.79*	*Cum*
		1	*5.03*	*1.58*	*0.80*	*6.35*	*Cum*
		1	*5.03*	*1.00*	*1.19*	*5.98*	*Cum*
	Return wall	*2*	*1.89*	*1.47*	*0.20*	*1.11*	*Cum*
		2	*1.89*	*1.27*	*0.80*	*3.83*	*Cum*
		2	*1.89*	*0.63*	*1.56*	*3.74*	*Cum*
		2	*1.89*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**46.05**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	5.54	5.50	0.54	*16.30*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*12.54*	*4.50*	*0.08*	*4.23*	*Cum*
	Dirt wall	*2*	*5.03*	*0.82*	*0.50*	*4.13*	*Cum*
		2	*5.03*	*0.40*	*0.10*	*0.40*	*Cum*
	Parapet	*2*	*12.54*	*0.44*	*0.18*	*1.95*	*Cum*
		2	*12.54*	*0.35*	*0.25*	*2.20*	*Cum*
		2	*12.54*	*0.22*	*0.55*	*3.02*	*Cum*
	TOTAL					**43.79**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*20*	*37*	*6.19*		*2.466*	*564.8*	*Kg*
a2	*12*	*28*	*6.10*		*0.888*	*151.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*22*	*6.11*		*0.616*	*82.9*	*Kg*
a5	*10*	*22*	*6.00*		*0.616*	*81.4*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*92*	*2.45*		*0.888*	*200.3*	*Kg*
x2	*16*	*92*	*1.45*		*1.578*	*209.8*	*Kg*
x3	*10*	*24*	*5.43*		*0.616*	*80.3*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*10*	*48*	*3.40*		*0.616*	*100.6*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*46.05*	*0.0025*	*0.115*	*7850.00*	*903.670*	*Kg*
	Total Reinforcement Steel (in kg)					*3805.8*	*Kg*
	Total Weight in Metric Tonne					**3.81**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.03*		*0.20*	*2.01*	*Sqm*
		2		*1.78*	*0.20*	*0.71*	*Sqm*
		2	*5.03*		*0.80*	*8.05*	*Sqm*
		2		*1.58*	*0.80*	*2.52*	*Sqm*
		2	*5.03*		*1.19*	*11.99*	*Sqm*
		2		*1.00*	*1.19*	*2.38*	*Sqm*
	Return wall	*2*	*1.89*		*0.20*	*0.76*	*Sqm*
		2		*1.47*	*0.20*	*0.59*	*Sqm*
		2	*1.89*		*0.80*	*3.02*	*Sqm*
		2		*1.27*	*0.80*	*2.03*	*Sqm*
		2	*1.89*		*1.56*	*5.89*	*Sqm*
		2		*0.63*	*1.56*	*1.98*	*Sqm*
		2	*1.89*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.03*		*0.20*	*2.01*	*Sqm*
		2		*1.78*	*0.20*	*0.71*	*Sqm*
		2	*5.03*		*0.80*	*8.05*	*Sqm*
		2		*1.58*	*0.80*	*2.52*	*Sqm*
		2	*5.03*		*1.19*	*11.99*	*Sqm*
		2		*1.00*	*1.19*	*2.38*	*Sqm*
	Return wall	*2*	*1.89*		*0.20*	*0.76*	*Sqm*
		2		*1.47*	*0.20*	*0.59*	*Sqm*
		2	*1.89*		*0.80*	*3.02*	*Sqm*
		2		*1.27*	*0.80*	*2.03*	*Sqm*
		2	*1.89*		*1.56*	*5.89*	*Sqm*
		2		*0.63*	*1.56*	*1.98*	*Sqm*
		2	*1.89*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*5.54*		*0.54*	*5.93*	*Sqm*
		1	*5.54*	5.50		*30.47*	*Sqm*
		2		*5.50*	0.54	*5.89*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Dirt wall	*4*	*5.032*		*0.5*	*10.06*	*Sqm*
		4		*0.82*	0.50	*1.64*	*Sqm*
		4	*5.032*		*0.1*	*2.01*	*Sqm*
		4		*0.4*	0.10	*0.16*	*Sqm*
	Parapet	*4*	*12.54*		*0.18*	*8.78*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*12.54*		*0.25*	*12.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*12.54*		*0.55*	*27.59*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**240.74**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch-14, Sl.No. 14.17, Pg. 60)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.03	1.32		*13.33*	*Cum*
	Right and left Return wall	4	1.99	2.16		*17.21*	*Cum*
	Extra slope	*2*	*7.0205*	*0.6*	*1.2*	*10.11*	*Cum*
		2	*7.0205*	*0.6*	*1.2*	*10.11*	*Cum*
	TOTAL					**50.76**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Bhahuara Minor	2100-2850	750.000	0.540	405.000	Cum	**5021.30**	₹ 20,33,626.50	46.66	129.60
2	Yari Minor	4030-4190	160.000	0.540	86.400	Cum	**5021.30**	₹ 4,33,840.32	9.95	27.65
3	Amar Bigha Minor	2550-2655	105.000	0.620	65.100	Cum	**5021.30**	₹ 3,26,886.63	7.50	20.83
4	Dabura-I Minor	5400-5600	200.000	0.530	106.000	Cum	**5021.30**	₹ 5,32,257.80	12.21	33.92
5	Akauna Minor	5100-5600	500.000	0.568	284.000	Cum	**5021.30**	₹ 14,26,049.20	32.72	90.88
	Total				***946.50***			***₹ 47,52,660.45***	***109.04***	***302.88***
6	**Carriage of materials**									
	Coarse Sand (60 Km lead)				302.880	Cum	**1075.00**	₹ 3,25,596.00		
	Cement (30 km lead)				109.037	MT	**742.00**	₹ 80,905.31		
	Brick (30 km lead)				473250.00	No.	**3.18**	₹ 15,04,935.00		
	Carriage of materials Total (In Rs.)							**₹ 19,11,436.31**		
	SUB TOTAL (In Rs.)							**₹ 66,64,096.76**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	302.88	Cum		**584.64**	177075.76	17707.58			
	Total						**₹ 17,707.58**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KAPASIYA DISTRIBUTARY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	BRIDGE	0.005	₹ 13,612.66
2	BRIDGE/ FALL (1.828 M)	0.720	₹ 5,630.74
3	CROSS DRAINAGE	1.040	₹ 6,880.10
4	FALL CUM BRG. (1.520 M)	1.865	₹ 37,488.48
5	FALL CUM BRG. (1.220 M)	2.785	₹ 48,698.76
6	HR FOR NARCHI MR.	2.820	₹ 0.00
7	BRIDGE	3.430	₹ 8,001.18
8	HR FOR BAHUARA MR	3.900	₹ 0.00
9	FALL (1.520 M)	3.950	₹ 37,368.82
10	CULVERT	4.740	₹ 7,906.11
11	BRIDGE	5.120	₹ 13,459.93
12	CROSS DRAINAGE	5.610	₹ 9,595.59
13	FALL (0.305 M)	5.680	₹ 0.00
14	BRIDGE	6.410	₹ 12,487.83
15	HR FOR YARI & NEPUA MR	7.760	₹ 0.00
16	FALL (0.610 M)	7.765	₹ 1,45,871.21
17	FALL (1.830 M)	8.250	₹ 3,786.62
18	FALL (1.830 M)	8.455	₹ 54,811.46
19	FALL (1.830 M)	8.640	₹ 3,786.62
20	FALL (1.524 M)	9.220	₹ 70,916.75
21	FALL (0.610 M)	9.380	₹ 17,273.58
22	BRIDGE	9.845	₹ 35,226.89
23	BRIDGE	10.900	₹ 32,348.70
24	BRIDGE	11.335	₹ 18,960.47
25	BRIDGE	11.495	₹ 51,577.83
26	BRIDGE	12.065	₹ 20,849.01
27	HR FOR AMAR BIGHA MR	12.810	₹ 24,325.09
28	BRIDGE	12.890	₹ 12,521.78
29	CROSS REGULATOR	13.080	₹ 3,442.08
30	BRIDGE	13.460	₹ 18,576.27
31	FALL CUM BRG. (1.830 M)	14.395	₹ 47,808.10
32	FALL CUM BRG. (0.610 M)	14.980	₹ 2,56,385.22
33	HR FOR CHATRA SUB DY.	15.240	₹ 0.00
34	BRIDGE	15.320	₹ 10,156.25
35	FALL (1.220 M)	15.340	₹ 30,272.81
36	FALL (1.220 M)	15.930	₹ 5,230.80
37	BRIDGE	16.675	₹ 9,308.84
38	FALL CUM BRG. (0.915 M)	17.065	₹ 63,567.10
39	FALL (1.220 M)	17.925	₹ 31,529.37
40	BRIDGE	18.315	₹ 15,712.27
41	HR FOR AKAUNA MR.	18.360	₹ 0.00
42	FALL (1.520 M)	18.750	₹ 2,899.81
Total In Rs.			**₹ 11,88,275.12**
Total In Lakhs.			**₹ 11.88**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF NARCHI MR. (KAPASIYA			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.372 M)	0.050	₹ 0.00
2	FALL (0.914 M)	0.480	₹ 11,878.65
3	BRIDGE	0.825	₹ 1,204.02
4	FALL NEW (0.610 M)	0.835	₹ 0.00
5	FALL (1.520 M)	1.750	₹ 11,777.44
6	BRIDGE	1.890	₹ 38,368.38
7	FALL CUM BRIDGE (1.829 M)	2.100	₹ 27,242.53
9	FALL (0.457 M)	2.250	₹ 0.00
10	FALL (1.829 M)	2.400	₹ 5,931.27
11	PIPE CULVERT	2.665	₹ 5,163.90
12	FALL (1.524 M)	2.850	₹ 5,415.73
13	FALL (0.610 M)	3.010	₹ 7,125.51
14	FALL (0.914 M)	3.400	₹ 23,428.94
Total In Rs.			**₹ 1,37,536.38**
Total In Lakhs.			**₹ 1.38**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BAHUARA MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.828 M)	0.035	₹ 20,862.89
2	BRIDGE	0.575	₹ 4,045.50
3	FALL CUM BRG. (0.914 M)	0.850	₹ 12,136.49
4	FALL (1.067 M)	1.150	₹ 1,770.66
5	FALL (1.220 M)	1.350	₹ 14,553.96
6	CULVERT/ FALL (1.067 M)	1.550	₹ 9,439.50
7	CULVERT	1.715	₹ 7,623.86
8	FALL (1.220 M)	1.850	₹ 18,479.00
9	FALL (1.220 M)	2.000	₹ 63,793.54
10	FALL (0.914 M)	2.250	₹ 17,497.91
11	BRIDGE	2.315	₹ 3,136.55
12	FALL (1.372 M)	2.500	₹ 9,421.95
13	FALL (0.610 M)	2.750	₹ 23,180.99
Total In Rs.			**₹ 2,05,942.81**
Total In Lakhs.			**₹ 2.06**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF YARI MINOR (KAPASIYA DY.)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.457 M)	0.000	₹ 0.00
2	FALL (0.762 M)	0.255	₹ 3,490.68
3	FALL (1.220 M)	0.450	₹ 3,018.51
4	FALL (1.220 M)	0.700	₹ 9,439.50
5	FALL (1.066 M)	1.100	₹ 16,451.03
6	PIPE CULVERT	1.530	₹ 0.00
7	FALL (1.676 M)	1.600	₹ 0.00
8	FALL (0.610 M)	3.170	₹ 16,451.03
9	PIPE CULVERT	3.275	₹ 4,069.13
10	FALL (1.220 M)	3.350	₹ 6,306.76
11	CULVERT/ FALL (0.914 M)	3.500	₹ 16,219.00
12	CULVERT/ FALL (1.220 M)	3.600	₹ 2,901.63
13	CULVERT/ FALL (1.220 M)	3.750	₹ 4,944.27
14	CULVERT/ FALL (1.220 M)	3.850	₹ 4,316.96
15	CULVERT/ FALL (0.914 M)	4.030	₹ 4,316.96
Total In Rs.			**₹ 91,925.45**
Total In Lakhs.			**₹ 0.92**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF NEPUA MINOR (KAPASIYA DY.)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.914 M)	0.000	₹ 0.00
2	PIPE CULVERT	0.135	₹ 2,748.06
3	BRG. CUM FALL (0.914 M)	0.325	₹ 1,878.02
4	H.R. PROP. MINOR -1	0.450	₹ 0.00
5	PIPE CULVERT	0.705	₹ 8,702.81
6	FALL (0.762 M)	0.750	₹ 0.00
7	H.R. PROP. MINOR -2	1.200	₹ 0.00
8	CULVERT/ FALL (1.829 M)	1.250	₹ 0.00
9	FALL (0.914 M)	1.400	₹ 0.00
10	FALL (1.220 M)	1.600	₹ 0.00
Total In Rs.			**₹ 13,328.89**
Total In Lakhs.			**₹ 0.13**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF AMAR BIGHA MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	BRIDGE	0.545	₹ 16,792.74
2	CULVERT/ FALL (1.220 M)	1.195	₹ 46,377.55
3	FALL (0.914 M)	1.650	₹ 0.00
4	FALL (1.520 M)	1.900	₹ 68,848.30
5	CULVERT/ FALL (1.520 M)	2.150	₹ 6,478.13
6	FALL (1.830 M)	2.450	₹ 0.00
Total In Rs.			**₹ 1,38,496.72**
Total In Lakhs.			**₹ 1.38**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF CHATARA SUB-DISTRIBUTARY (KAPASIYA DY.)			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	BRIDGE/ FALL (1.524 M)	0.050	₹ 2,578.01
2	FALL (0.457 M)	0.400	₹ 0.00
3	BRIDGE	1.400	₹ 5,832.64
4	BRIDGE	1.935	₹ 18,888.23
5	BRIDGE	2.205	₹ 19,058.66
6	BRIDGE / CR/ HR FOR DABURA-1 MR + FALL (0.305 M)	2.940	₹ 13,981.58
7	FALL (1.220 M)	3.200	₹ 28,087.26
8	BRIDGE/ FALL (0.610 M)	3.845	₹ 12,140.56
9	PIPE CULVERT (0.4 M DIA) 2 NOS.	4.555	₹ 5,163.90
10	FALL (0.762 M)	4.700	₹ 0.00
11	FALL (0.914 M)	4.930	₹ 61,004.20
12	FALL (1.368 M)	5.165	₹ 60,768.11
13	FALL (1.520 M)	5.785	₹ 1,888.70
Total In Rs.			**₹ 2,29,391.84**
Total In Lakhs.			**₹ 2.29**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF DABURA-I MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	CULVERT / FALL (1.220 M)	0.650	₹ 30,124.35
2	FALL (1.220 M)	0.900	₹ 8,388.78
3	FALL (1.220 M)	1.250	₹ 10,449.71
4	BRIDGE	1.905	₹ 25,396.77
5	BRIDGE CUM FALL (0.610 M)	2.850	₹ 10,490.44
6	BRIDGE CUM FALL (1.220 M)	4.050	₹ 4,480.22
7	BRIDGE CUM FALL (1.520 M)	4.800	₹ 5,252.49
8	FALL (1.520 M)	5.200	₹ 21,884.38
Total In Rs.			**₹ 1,16,467.13**
Total In Lakhs.			**₹ 1.16**

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF AKAUNA MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.830 M)	0.000	₹ 6,368.41
2	FALL (0.305M)	0.225	₹ 0.00
3	BRIDGE CUM FALL (0.305 M)	0.620	₹ 1,770.66
4	BRIDGE CUM FALL (1.220 M)	1.135	₹ 11,311.32
5	BRIDGE	1.600	₹ 40,430.30
6	BRIDGE	2.185	₹ 32,407.77
7	FALL (0.457 M)	3.005	₹ 2,42,270.38
8	BRIDGE CUM FALL (0.457 M)	3.610	₹ 3,440.05
9	BRIDGE CUM FALL (1.520 M)	4.600	₹ 9,681.86
10	FALL (0.610 M)	4.950	₹ 0.00
11	CULVERT	5.590	₹ 0.00
12	CULVERT	5.910	₹ 7,453.44
Total In Rs.			**₹ 3,55,134.18**
Total In Lakhs.			**₹ 3.55**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		10.000	₹ 52,10,185.50
Total In Rs.			**₹ 52,10,185.50**
Total In Lakhs.			**₹ 52.10**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KAPASIYA DISTRIBUTARY									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BRIDGE (Ch.-0.005 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.65	Cum	**5021.30**	8264.66	0.19	0.53	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	4.42	Sqm	**340.20**	1503.55	0.229	0.065	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.42	Sqm	**63.20**	279.32	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.59	Cum	**1075.00**	635.56			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.43	MT	**742.00**	315.61			
		Brick (30 km lead)	822.00	No.	**3.18**	2613.96			
TOTAL (In Rs.)						**13612.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.59	Cum	**584.64**	345.65	34.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.57**		
AOC FOR BRIDGE/FALL (Ch.-0.720 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	2.26	Cum	**2492.58**	5630.74			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**5630.74**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR CD WORK (Ch.-1.040 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	15.00	Sqm	**340.20**	5103.00	0.778	0.219	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	15.00	Sqm	**63.20**	948.00	0.02		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.22	Cum	**1075.00**	235.43			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.80	MT	**742.00**	593.67			
TOTAL (In Rs.)						**6880.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.22	Cum	**584.64**	128.04	12.80		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**12.80**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR BRIDGE/FALL (Ch.-1.865 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.65	Cum	**5021.30**	8275.10	0.19	0.53	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.74	Sqm	**340.20**	591.95	0.090	0.025	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.74	Sqm	**63.20**	109.97	0.00		
4	M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.57	Cum	**694.61**	3175.76			
5	5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.57	Cum	**1237.00**	5655.56			
6	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.35	Cum	**6381.70**	8615.30	0.44	0.61	1.22
7	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.58	Sqm	**578.60**	4964.39			
8		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.16	Cum	**1075.00**	1247.28			
		Coarse Aggregates (100 Km lead)	1.22	Cum	**1398.00**	1698.57			
		Cement (30 km lead)	0.72	MT	**742.00**	534.29			
		Brick (30 km lead)	824.00	No.	**3.18**	2620.32			
		TOTAL (In Rs.)				**37488.48**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.16	Cum	**584.64**	678.34	67.83		
		Coarse Aggregate	1.22	Cum	**944.26**	1147.28	114.73		
		Total					**182.56**		
		AOC FOR BRIDGE/FALL (Ch.-2.785 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.08	Cum	**5021.30**	5423.00	0.12	0.35	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.90	Sqm	**340.20**	986.58	0.150	0.042	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.90	Sqm	**63.20**	183.28	0.00		
4	M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	7.32	Cum	**694.61**	5081.21			
5	5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	7.32	Cum	**1237.00**	9048.90			
6	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.16	Cum	**6381.70**	13784.47	0.70	0.97	1.94
7	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	13.08	Sqm	**578.60**	7568.09			
8		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.36	Cum	**1075.00**	1461.94			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	1.94	Cum	**1398.00**	2717.71			
		Cement (30 km lead)	0.98	MT	**742.00**	726.37			
		Brick (30 km lead)	540.00	No.	**3.18**	1717.20			
		TOTAL (In Rs.)				**48698.76**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.36	Cum	**584.64**	795.08	79.51		
		Coarse Aggregate	1.94	Cum	**944.26**	1835.64	183.56		
		Total					**263.07**		
		AOC FOR NARCHI MR (Ch.-2.820 Km)							
1		**New Structure is proposed**							
		AOC FOR BRIDGE (Ch.-3.430 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	3.21	Cum	**2492.58**	8001.18			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**8001.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BAHUARA MR (Ch.-3.900 Km)							
1	**New Structure is proposed**								
		AOC FOR FALL (Ch.-3.950 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.20	Cum	**5021.30**	6025.56	0.14	0.38	
2	M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.94	Cum	**694.61**	3429.82			
3	5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.94	Cum	**1237.00**	6108.01			
4	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.62	Cum	**6381.70**	10338.35	0.52	0.73	1.46
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.08	Sqm	**578.60**	5832.29			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.11	Cum	**1075.00**	1196.48			
		Coarse Aggregates (100 Km lead)	1.46	Cum	**1398.00**	2038.28			
		Cement (30 km lead)	0.66	MT	**742.00**	492.04			
		Brick (30 km lead)	600.00	No.	**3.18**	1908.00			
		TOTAL (In Rs.)				**37368.82**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.11	Cum	**584.64**	650.70	65.07		
		Coarse Aggregate	1.46	Cum	**944.26**	1376.73	137.67		
		Total					**202.74**		
		AOC FOR CULVERT (Ch.-4.740 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	19.58	Sqm	**340.20**	6659.42	1.015	0.286	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.90	Sqm	**63.20**	183.28	0.004		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.29	Cum	**1075.00**	307.23			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.02	MT	**742.00**	756.19			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**7906.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.29	Cum	**584.64**	167.09	16.71		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**16.71**		
		AOC FOR BRIDGE (Ch.-5.120 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.40	Cum	**2492.58**	13459.93			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**13459.93**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CD WORK (Ch.-5.610 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.08	Cum	**6914.20**	7467.34	0.45	0.46	0.93
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.46	Cum	**1075.00**	499.23			
		Coarse Aggregates (100 Km lead)	0.93	Cum	**1398.00**	1298.46			
		Cement (30 km lead)	0.45	MT	**742.00**	330.56			
		TOTAL (In Rs.)				**9595.59**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.46	Cum	**584.64**	271.51	27.15		
		Coarse Aggregate	0.93	Cum	**944.26**	877.03	87.70		
		Total					**114.85**		
		AOC FOR BRIDGE (Ch.-6.410 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.01	Cum	**2492.58**	12487.83			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**12487.83**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR YARI & NEPUA MR (Ch.-7.760 Km)							
1	**New Structure is proposed**								
		AOC FOR FALL (Ch.-7.765 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.65	Cum	**6914.20**	87454.95	5.22	5.44	10.88
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	57.87	Sqm	**578.60**	33484.51			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.44	Cum	**1075.00**	5853.18			
		Coarse Aggregates (100 Km lead)	10.88	Cum	**1398.00**	15207.16			
		Cement (30 km lead)	5.22	MT	**742.00**	3871.42			
		TOTAL (In Rs.)				**145871.21**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.44	Cum	**584.64**	3179.80	317.98		
		Coarse Aggregate	10.88	Cum	**944.26**	10271.47	1027.15		
		Total					**1345.13**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-8.250 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.33	Cum	**5021.30**	1657.03	0.04	0.11	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.19	Sqm	**340.20**	1085.24	0.165	0.047	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.19	Sqm	**63.20**	201.61	0.00		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.15	Cum	**1075.00**	163.59			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.21	MT	**742.00**	154.46			
		Brick (30 km lead)	165.00	No.	**3.18**	524.70			
		TOTAL (In Rs.)				**3786.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.15	Cum	**584.64**	88.97	8.90		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**8.90**		
		AOC FOR FALL (Ch.-8.455 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.13	Cum	**6914.20**	28583.63	1.71	1.78	3.56
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	31.25	Sqm	**578.60**	18081.25			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.78	Cum	**1075.00**	1910.96			
		Coarse Aggregates (100 Km lead)	3.56	Cum	**1398.00**	4970.28			
		Cement (30 km lead)	1.71	MT	**742.00**	1265.33			
		TOTAL (In Rs.)				**54811.46**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.78	Cum	**584.64**	1039.28	103.93		
		Coarse Aggregate	3.56	Cum	**944.26**	3357.11	335.71		
		Total					**439.64**		
		AOC FOR FALL (Ch.-8.640 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.33	Cum	**5021.30**	1657.03	0.04	0.11	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.19	Sqm	**340.20**	1085.24	0.165	0.047	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.19	Sqm	**63.20**	201.61	0.00		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.15	Cum	**1075.00**	163.59			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.21	MT	**742.00**	154.46			
		Brick (30 km lead)	165.00	No.	**3.18**	524.70			
		TOTAL (In Rs.)				**3786.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.15	Cum	**584.64**	88.97	8.90		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**8.90**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-9.220 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	28.45	Cum	**2492.58**	70916.75			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**70916.75**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FALL (Ch.-9.380 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.93	Cum	**2492.58**	17273.58			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17273.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR BRIDGE (Ch. 9.845 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	14.13	Cum	**2492.58**	35226.89			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**35226.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch. 10.900 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.98	Cum	**2492.58**	32348.70			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**32348.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-11.335 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.07	Cum	**5021.30**	10394.09	0.24	0.66	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.56	Sqm	**340.20**	3253.16	0.496	0.140	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.56	Sqm	**63.20**	604.35	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.80	Cum	**1075.00**	862.16			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.75	MT	**742.00**	555.41			
		Brick (30 km lead)	1035.00	No.	**3.18**	3291.30			
		TOTAL (In Rs.)				**18960.47**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.80	Cum	**584.64**	468.89	46.89		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**46.89**		
		AOC FOR BRIDGE (Ch.-11.495 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.07	Cum	**5021.30**	10394.09	0.24	0.66	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	18.81	Sqm	**340.20**	6399.16	0.975	0.275	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	18.81	Sqm	**63.20**	1188.79	0.03		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.15	Cum	**6914.20**	21779.73	1.30	1.35	2.71
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	11.40	Sqm	**578.60**	6596.04			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.94	Cum	**1075.00**	1007.30			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.24	MT	**742.00**	921.41			
		Brick (30 km lead)	1035.00	No.	**3.18**	3291.30			
		TOTAL (In Rs.)				**51577.83**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.94	Cum	**584.64**	547.82	54.78		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**54.78**		
		AOC FOR BRIDGE (Ch.-12.065 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.50	Cum	**6914.20**	10371.30	0.62	0.65	1.29
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	13.00	Sqm	**578.60**	7521.80			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.65	Cum	**1075.00**	693.38			
		Coarse Aggregates (100 Km lead)	1.29	Cum	**1398.00**	1803.42			
		Cement (30 km lead)	0.62	MT	**742.00**	459.11			
		TOTAL (In Rs.)				**20849.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand	0.65	Cum	**584.64**	377.09	37.71		
		Coarse Aggregate	1.29	Cum	**944.26**	1218.10	121.81		
		Total					**159.52**		
		AOC FOR HR OF AMAR BIGHA MR (Ch.-12.810 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.76	Cum	**2492.58**	24325.09			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**24325.09**			
		AOC FOR BRIDGE (Ch.-12.890 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	27.30	Sqm	**340.20**	9287.46	1.415	0.399	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	27.30	Sqm	**63.20**	1725.36	0.04		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.40	Cum	**1075.00**	428.47			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.46	MT	**742.00**	1080.49			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**12521.78**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.40	Cum	**584.64**	233.03	23.30		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**23.30**		
		AOC FOR CR (Ch.-13.080 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	200.00	Sqm	**11.80**	2360.88			
2	RCD 8.09	Providing and applying two Coates of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade.	12.00	Sqm	**90.10**	1081.20			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**3442.08**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-13.460 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	40.50	Sqm	**340.20**	13778.10	2.100	0.591	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	40.50	Sqm	**63.20**	2559.60	0.06		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.59	Cum	**1075.00**	635.65			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.16	MT	**742.00**	1602.92			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**18576.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.59	Cum	**584.64**	345.70	34.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.57**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR BRIDGE/FALL (Ch.-14.395 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.66	Cum	**5021.30**	3314.06	0.08	0.21	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.19	Sqm	**340.20**	1085.24	0.165	0.047	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.19	Sqm	**63.20**	201.61	0.00		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.00	Cum	**6914.20**	20742.60	1.24	1.29	2.58
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	26.00	Sqm	**578.60**	15043.60			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.55	Cum	**1075.00**	1663.86			
		Coarse Aggregates (100 Km lead)	2.58	Cum	**1398.00**	3606.84			
		Cement (30 km lead)	1.48	MT	**742.00**	1100.90			
		Brick (30 km lead)	330.00	No.	**3.18**	1049.40			
TOTAL (In Rs.)						**47808.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.55	Cum	**584.64**	904.89	90.49		
		Coarse Aggregate	2.58	Cum	**944.26**	2436.19	243.62		
		Total					**334.11**		
AOC FOR FALL/BRIDGE (Ch.-14.980 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.51	Cum	**6914.20**	190219.32	11.35	11.83	23.66
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	20.66	Sqm	**578.60**	11951.79			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	11.83	Cum	**1075.00**	12717.14			
		Coarse Aggregates (100 Km lead)	23.66	Cum	**1398.00**	33076.41			
		Cement (30 km lead)	11.35	MT	**742.00**	8420.55			
TOTAL (In Rs.)						**256385.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	11.83	Cum	**584.64**	6916.23	691.62		
		Coarse Aggregate	23.66	Cum	**944.26**	22341.01	2234.10		
		Total					**2925.72**		
AOC FOR BRIDGE (Ch.-15.320 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.10	Cum	**5021.30**	5509.77	0.13	0.35	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.30	Sqm	**340.20**	1804.26	0.275	0.077	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	5.30	Sqm	**63.20**	335.18	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.43	Cum	**1075.00**	460.70			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.41	MT	**742.00**	303.70			
		Brick (30 km lead)	548.00	No.	**3.18**	1742.64			
		TOTAL (In Rs.)				**10156.25**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.43	Cum	**584.64**	250.55	25.06		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**25.06**		
		AOC FOR FALL (Ch.-15.340 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.02	Cum	**5021.30**	5121.73	0.12	0.33	
2	M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.92	Cum	**694.61**	1333.82			
3	5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.92	Cum	**1237.00**	2375.34			
4	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.62	Cum	**6381.70**	10338.35	0.52	0.73	1.46
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.08	Sqm	**578.60**	5832.29			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.06	Cum	**1075.00**	1134.56			
		Coarse Aggregates (100 Km lead)	1.46	Cum	**1398.00**	2038.28			
		Cement (30 km lead)	0.64	MT	**742.00**	476.65			
		Brick (30 km lead)	510.00	No.	**3.18**	1621.80			
		TOTAL (In Rs.)				**30272.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.06	Cum	**584.64**	617.03	61.70		
		Coarse Aggregate	1.46	Cum	**944.26**	1376.73	137.67		
		Total					**199.38**		
		AOC FOR FALL (Ch.-15.930 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	2.10	Cum	**2492.58**	5230.80			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**5230.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-16.675 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.01	Cum	**5021.30**	5050.62	0.12	0.32	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	4.86	Sqm	**340.20**	1653.90	0.252	0.071	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.86	Sqm	**63.20**	307.25	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.39	Cum	**1075.00**	422.31			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.38	MT	**742.00**	278.39			
		Brick (30 km lead)	502.00	No.	**3.18**	1596.36			
		TOTAL (In Rs.)				**9308.84**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.39	Cum	**584.64**	229.67	22.97		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**22.97**		
		AOC FOR FALL/BRIDGE (Ch.-17.065 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.91	Cum	**5021.30**	9574.76	0.22	0.61	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.66	Sqm	**340.20**	2947.37	0.449	0.126	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.66	Sqm	**63.20**	547.54	0.01		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.85	Cum	**6914.20**	33552.68	2.00	2.09	4.17
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.28	Sqm	**578.60**	3053.60			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.82	Cum	**1075.00**	3035.10			
		Coarse Aggregates (100 Km lead)	4.17	Cum	**1398.00**	5834.33			
		Cement (30 km lead)	2.68	MT	**742.00**	1991.18			
		Brick (30 km lead)	953.00	No.	**3.18**	3030.54			
		TOTAL (In Rs.)				**63567.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.82	Cum	**584.64**	1650.64	165.06		
		Coarse Aggregate	4.17	Cum	**944.26**	3940.72	394.07		
		Total					**559.14**		
		AOC FOR FALL (Ch.-17.925 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	24.75	Sqm	**340.20**	8419.95	1.283	0.361	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	24.75	Sqm	**63.20**	1564.20	0.04		
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.75	Cum	**6914.20**	12099.85	0.72	0.75	1.51
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.00	Sqm	**578.60**	4628.80			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.11	Cum	**1075.00**	1197.39			
		Coarse Aggregates (100 Km lead)	1.51	Cum	**1398.00**	2103.99			
		Cement (30 km lead)	2.04	MT	**742.00**	1515.19			
		TOTAL (In Rs.)				**31529.37**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.11	Cum	**584.64**	651.20	65.12		
		Coarse Aggregate	1.51	Cum	**944.26**	1421.11	142.11		
		Total					**207.23**		
		AOC FOR BRIDGE (Ch.-18.315 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.00	Sqm	**11.80**	1652.61			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.54	Cum	**5021.30**	7737.82	0.18	0.49	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.00	Sqm	**340.20**	2381.91	0.363	0.102	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.00	Sqm	**63.20**	442.49	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.60	Cum	**1075.00**	639.99			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.55	MT	**742.00**	408.83			
		Brick (30 km lead)	770.00	No.	**3.18**	2448.60			
		TOTAL (In Rs.)				**15712.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.60	Cum	**584.64**	348.06	34.81		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**34.81**		
		AOC FOR HR OF AKUNA MR (CH.-18.360 KM)							
	New Structure is proposed								
		AOC FOR FALL (Ch.-18.750 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.14	Cum	**6381.70**	861.53	0.04	0.06	0.12
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.06	Cum	**1075.00**	65.31			
		Coarse Aggregates (100 Km lead)	0.12	Cum	**1398.00**	169.86			
		Cement (30 km lead)	0.04	MT	**742.00**	32.46			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**2899.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.06	Cum	**584.64**	35.52	3.55		
		Coarse Aggregate	0.12	Cum	**944.26**	114.73	11.47		
		Total					**15.02**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF NARCHI MR									
AOC FOR FALL (Ch.-0.480 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.95	Cum	**6381.70**	6030.71	0.31	0.43	0.85
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.30	Cum	**6914.20**	2082.58	0.12	0.13	0.26
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.55	Cum	**1075.00**	596.38			
		Coarse Aggregates (100 Km lead)	1.11	Cum	**1398.00**	1551.13			
		Cement (30 km lead)	0.43	MT	**742.00**	319.38			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**11878.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.55	Cum	**584.64**	324.34	32.43		
		Coarse Aggregate	1.11	Cum	**944.26**	1047.69	104.77		
		Total					**137.20**		
AOC FOR BRIDGE (Ch.-0.825 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.63	Sqm	**340.20**	893.03	0.136	0.038	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.63	Sqm	**63.20**	165.90	0.00		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.04	Cum	**1075.00**	41.20			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.14	MT	**742.00**	103.89			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**1204.02**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.04	Cum	**584.64**	22.41	2.24		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**2.24**		
AOC FOR FALL (Ch.-1.750 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	4.73	Cum	**2492.58**	11777.44			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
TOTAL (In Rs.)						**11777.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR BRIDGE (Ch.-1.890 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.24	Cum	**6914.20**	22402.01	1.34	1.39	2.79
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	16.56	Sqm	**578.60**	9581.62			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.39	Cum	**1075.00**	1497.69			
		Coarse Aggregates (100 Km lead)	2.79	Cum	**1398.00**	3895.39			
		Cement (30 km lead)	1.34	MT	**742.00**	991.68			
		TOTAL (In Rs.)				**38368.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.39	Cum	**584.64**	814.52	81.45		
		Coarse Aggregate	2.79	Cum	**944.26**	2631.09	263.11		
		Total					**344.56**		
		AOC FOR FALL/BRIDGE (Ch.-2.100 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.00	Sqm	**11.80**	1652.61			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.38	Cum	**5021.30**	6929.39	0.16	0.44	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.27	Sqm	**340.20**	2133.05	0.325	0.092	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.27	Sqm	**63.20**	396.26	0.01		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.08	Cum	**6914.20**	7467.34	0.45	0.46	0.93
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.88	Sqm	**578.60**	3402.17			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.00	Cum	**1075.00**	1072.36			
		Coarse Aggregates (100 Km lead)	0.93	Cum	**1398.00**	1298.46			
		Cement (30 km lead)	0.94	MT	**742.00**	696.68			
		Brick (30 km lead)	690.00	No.	**3.18**	2194.20			
		TOTAL (In Rs.)				**27242.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.00	Cum	**584.64**	583.20	58.32		
		Coarse Aggregate	0.93	Cum	**944.26**	877.03	87.70		
		Total					**146.02**		
		AOC FOR FALL (Ch.-2.400 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.50	Cum	**6914.20**	3422.53	0.20	0.21	0.43
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.65	Sqm	**578.60**	1533.29			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.21	Cum	**1075.00**	228.81			
		Coarse Aggregates (100 Km lead)	0.43	Cum	**1398.00**	595.13			
		Cement (30 km lead)	0.20	MT	**742.00**	151.51			
		TOTAL (In Rs.)				**5931.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.21	Cum	**584.64**	124.44	12.44		
		Coarse Aggregate	0.43	Cum	**944.26**	401.97	40.20		
		Total					**52.64**		
		AOC FOR PIPE CULVERT (Ch.-2.665 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.35	Cum	**5021.30**	1732.35	0.04	0.11	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.14	Sqm	**340.20**	1066.53	0.163	0.046	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.14	Sqm	**63.20**	198.13	0.00		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.16	Cum	**1075.00**	167.88			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.21	MT	**742.00**	153.57			
		Brick (30 km lead)	172.00	No.	**3.18**	546.96			
		TOTAL (In Rs.)				**5163.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.16	Cum	**584.64**	91.30	9.13		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**9.13**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-2.850 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.45	Cum	**6914.20**	3111.39	0.19	0.19	0.39
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.45	Sqm	**578.60**	1417.57			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.19	Cum	**1075.00**	208.01			
		Coarse Aggregates (100 Km lead)	0.39	Cum	**1398.00**	541.03			
		Cement (30 km lead)	0.19	MT	**742.00**	137.73			
		TOTAL (In Rs.)				**5415.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	113.13	11.31		
		Coarse Aggregate	0.39	Cum	**944.26**	365.43	36.54		
		Total					**47.86**		
		AOC FOR FALL (Ch.-3.010 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.68	Cum	**6914.20**	4667.09	0.28	0.29	0.58
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	1.95	Sqm	**578.60**	1128.27			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.29	Cum	**1075.00**	312.02			
		Coarse Aggregates (100 Km lead)	0.58	Cum	**1398.00**	811.54			
		Cement (30 km lead)	0.28	MT	**742.00**	206.60			
		TOTAL (In Rs.)				**7125.51**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.29	Cum	**584.64**	169.69	16.97		
		Coarse Aggregate	0.58	Cum	**944.26**	548.14	54.81		
		Total					**71.78**		
		AOC FOR FALL (Ch.-3.400 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	10.45	Sqm	**340.20**	3555.09	0.542	0.153	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	10.45	Sqm	**63.20**	660.44	0.02		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.62	Cum	**6914.20**	11201.00	0.67	0.70	1.39
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	4.68	Sqm	**578.60**	2707.85			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.85	Cum	**1075.00**	912.86			
		Coarse Aggregates (100 Km lead)	1.39	Cum	**1398.00**	1947.69			
		Cement (30 km lead)	1.23	MT	**742.00**	909.43			
		TOTAL (In Rs.)				**23428.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand	0.85	Cum	**584.64**	496.46	49.65		
		Coarse Aggregate	1.39	Cum	**944.26**	1315.54	131.55		
		Total					**181.20**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF BAHUARA MINOR									
AOC FOR FALL (Ch.-0.035Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.37	Cum	**2492.58**	20862.89			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
TOTAL (In Rs.)						**20862.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR BRIDGE (Ch.-0.575 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.82	Sqm	**340.20**	3000.56	0.457	0.129	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.82	Sqm	**63.20**	557.42	0.01		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.13	Cum	**1075.00**	138.43			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.47	MT	**742.00**	349.08			
TOTAL (In Rs.)						**4045.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.13	Cum	**584.64**	75.29	7.53		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**7.53**		
AOC FOR FALL/BRIDGE (Ch.-0.850 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	26.46	Sqm	**340.20**	9001.69	1.372	0.386	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	26.46	Sqm	**63.20**	1672.27	0.04		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.39	Cum	**1075.00**	415.29			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.41	MT	**742.00**	1047.24			
TOTAL (In Rs.)						**12136.49**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.39	Cum	**584.64**	225.86	22.59		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**22.59**		
AOC FOR FALL(Ch.-1.150 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
TOTAL (In Rs.)						**1770.66**			
AOC FOR HR OF FALL (Ch.-1.350 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.84	Cum	**2492.58**	14553.96			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
TOTAL (In Rs.)						**14553.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**0.00**		
		AOC FOR FALL/BRIDGE (Ch.-1.550 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	20.58	Sqm	**340.20**	7001.32	1.067	0.300	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	20.58	Sqm	**63.20**	1300.66	0.03		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.30	Cum	**1075.00**	323.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.10	MT	**742.00**	814.52			
		TOTAL (In Rs.)				**9439.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.30	Cum	**584.64**	175.67	17.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**17.57**		
		AOC FOR CULVERT (Ch.-1.715 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.58	Cum	**5021.30**	2887.25	0.07	0.18	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.23	Sqm	**340.20**	1777.55	0.271	0.076	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	5.23	Sqm	**63.20**	330.22	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.26	Cum	**1075.00**	279.81			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.34	MT	**742.00**	255.95			
		Brick (30 km lead)	287.00	No.	**3.18**	912.66			
		TOTAL (In Rs.)				**7623.86**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.26	Cum	**584.64**	152.17	15.22		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**15.22**		
		AOC FOR BRIDGE (Ch.-1.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.58	Cum	**6914.20**	10889.87	0.65	0.68	1.35
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.10	Sqm	**578.60**	2950.86			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.68	Cum	**1075.00**	728.04			
		Coarse Aggregates (100 Km lead)	1.35	Cum	**1398.00**	1893.59			
		Cement (30 km lead)	0.65	MT	**742.00**	482.07			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**18479.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.68	Cum	**584.64**	395.95	39.59		
		Coarse Aggregate	1.35	Cum	**944.26**	1279.00	127.90		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**167.49**		
		AOC FOR FALL (Ch.-2.000 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.85	Cum	**6914.20**	40448.07	2.41	2.52	5.03
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	18.18	Sqm	**578.60**	10518.95			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.52	Cum	**1075.00**	2704.16			
		Coarse Aggregates (100 Km lead)	5.03	Cum	**1398.00**	7033.34			
		Cement (30 km lead)	2.41	MT	**742.00**	1790.54			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**63793.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.52	Cum	**584.64**	1470.66	147.07		
		Coarse Aggregate	5.03	Cum	**944.26**	4750.57	475.06		
		Total					**622.12**		
		AOC FOR FALL (Ch.-2.250 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.02	Cum	**2492.58**	17497.91			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**17497.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-2.315 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.75	Sqm	**340.20**	1275.75	0.194	0.055	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.75	Sqm	**63.20**	237.00	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.05	Cum	**1075.00**	58.86			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.20	MT	**742.00**	148.42			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**3136.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.05	Cum	**584.64**	32.01	3.20		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**3.20**		
		AOC FOR FALL (Ch.-2.500 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	3.78	Cum	**2492.58**	9421.95			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**9421.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR FALL (Ch.-2.750 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.30	Cum	**2492.58**	23180.99			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**23180.99**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF YARI MINOR									
AOC FOR FALL (Ch.-0.255 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.75	Sqm	**340.20**	1275.75	0.194	0.055	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.75	Sqm	**63.20**	237.00	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.05	Cum	**1075.00**	58.86			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.20	MT	**742.00**	148.42			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**3490.68**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.05	Cum	**584.64**	32.01	3.20		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**3.20**		
AOC FOR HR OF FALL (Ch.-0.450 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.75	Sqm	**340.20**	1275.75	0.194	0.055	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.75	Sqm	**63.20**	237.00	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.05	Cum	**1075.00**	58.86			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.20	MT	**742.00**	148.42			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**3018.51**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.05	Cum	**584.64**	32.01	3.20		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**3.20**		
AOC FOR FALL(Ch.-0.700 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	20.58	Sqm	**340.20**	7001.32	1.067	0.300	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	20.58	Sqm	**63.20**	1300.66	0.03		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.30	Cum	**1075.00**	323.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.10	MT	**742.00**	814.52			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**9439.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.30	Cum	**584.64**	175.67	17.57		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**17.57**		
AOC FOR FALL (Ch.-1.100 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.60	Cum	**2492.58**	16451.03			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**16451.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR PIPE CULVERT (Ch.-1.530 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-3.170 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.60	Cum	**2492.58**	16451.03			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**16451.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR PIPE CULVERT(Ch.-3.275 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.30	Sqm	**340.20**	2142.56	0.326	0.092	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.30	Sqm	**63.20**	398.03	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.09	Cum	**1075.00**	98.85			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.34	MT	**742.00**	249.26			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**4069.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	53.76	5.38		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**5.38**		
		AOC FOR FALL(Ch.-3.350 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	13.75	Sqm	**340.20**	4677.75	0.713	0.201	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	13.75	Sqm	**63.20**	869.00	0.02		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.20	Cum	**1075.00**	215.81			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.73	MT	**742.00**	544.20			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**6306.76**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	117.37	11.74		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**11.74**		
		AOC FOR CULVERT/FALL (Ch.-3.500 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.10	Cum	**6914.20**	7616.68	0.45	0.47	0.95
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.45	Cum	**6381.70**	2871.77	0.15	0.20	0.41
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.57	Sqm	**578.60**	1487.23			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.68	Cum	**1075.00**	726.90			
		Coarse Aggregates (100 Km lead)	1.35	Cum	**1398.00**	1890.62			
		Cement (30 km lead)	0.60	MT	**742.00**	445.36			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**16219.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.68	Cum	**584.64**	395.33	39.53		
		Coarse Aggregate	1.35	Cum	**944.26**	1276.99	127.70		
		Total					**167.23**		
		AOC FOR CULVERT/FALL (Ch.-3.600 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.15	Cum	**5021.30**	753.20	0.02	0.05	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.45	Sqm	**340.20**	493.29	0.075	0.021	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.45	Sqm	**63.20**	91.64	0.00		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.07	Cum	**1075.00**	74.36			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.09	MT	**742.00**	70.21			
		Brick (30 km lead)	75.00	No.	**3.18**	238.50			
		TOTAL (In Rs.)				**2901.63**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.07	Cum	**584.64**	40.44	4.04		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**4.04**		
		AOC FOR CULVERT/FALL (Ch.-3.750 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.45	Cum	**6381.70**	2871.77	0.15	0.20	0.41
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.20	Cum	**1075.00**	217.69			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.41	Cum	**1398.00**	566.19			
		Cement (30 km lead)	0.15	MT	**742.00**	108.18			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**4944.27**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	118.39	11.84		
		Coarse Aggregate	0.41	Cum	**944.26**	382.43	38.24		
		Total					**50.08**		
		AOC FOR CULVERT/FALL(Ch.-3.850 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.38	Cum	**6381.70**	2393.14	0.12	0.17	0.34
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.17	Cum	**1075.00**	181.41			
		Coarse Aggregates (100 Km lead)	0.34	Cum	**1398.00**	471.83			
		Cement (30 km lead)	0.12	MT	**742.00**	90.15			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**4316.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.17	Cum	**584.64**	98.66	9.87		
		Coarse Aggregate	0.34	Cum	**944.26**	318.69	31.87		
		Total					**41.73**		
		AOC FOR CULVERT/FALL(Ch.-4.030 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.38	Cum	**6381.70**	2393.14	0.12	0.17	0.34
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.17	Cum	**1075.00**	181.41			
		Coarse Aggregates (100 Km lead)	0.34	Cum	**1398.00**	471.83			
		Cement (30 km lead)	0.12	MT	**742.00**	90.15			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**4316.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.17	Cum	**584.64**	98.66	9.87		
		Coarse Aggregate	0.34	Cum	**944.26**	318.69	31.87		
		Total					**41.73**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF NEPUA MINOR									
AOC FOR PIPE CULVERT (Ch.-0.135Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.11	Cum	**6914.20**	725.99	0.04	0.05	0.09
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.09	Cum	**6381.70**	574.35	0.03	0.04	0.08
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.09	Cum	**1075.00**	92.07			
		Coarse Aggregates (100 Km lead)	0.17	Cum	**1398.00**	239.48			
		Cement (30 km lead)	0.07	MT	**742.00**	53.77			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**2748.06**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	50.07	5.01		
		Coarse Aggregate	0.17	Cum	**944.26**	161.75	16.18		
		Total					**21.18**		
AOC FOR BRIDGE/FALL (Ch.-0.325 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.09	Cum	**6914.20**	634.72	0.04	0.04	0.08
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.04	Cum	**1075.00**	42.43			
		Coarse Aggregates (100 Km lead)	0.08	Cum	**1398.00**	110.37			
		Cement (30 km lead)	0.04	MT	**742.00**	28.10			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**1878.02**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.04	Cum	**584.64**	23.08	2.31		
		Coarse Aggregate	0.08	Cum	**944.26**	74.55	7.45		
		Total					**9.76**		
AOC FOR PIPE CULVERT (Ch.-0.705 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.45	Cum	**5021.30**	2259.59	0.05	0.14	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.75	Sqm	**340.20**	3316.95	0.505	0.142	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.75	Sqm	**63.20**	616.20	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.29	Cum	**1075.00**	307.83			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.57	MT	**742.00**	424.35			
		Brick (30 km lead)	225.00	No.	**3.18**	715.50			
		TOTAL (In Rs.)				**8702.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.29	Cum	**584.64**	167.41	16.74		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**16.74**		
		AOC FOR CULVERT/FALL(Ch.-1.250 Km)							
1	**Structure is in good condition and does not requir any repair works.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF AMAR BIGHA MINOR									
AOC FOR BRIDGE (Ch.-0.545 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.69	Cum	**5021.30**	3464.70	0.08	0.22	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.27	Sqm	**340.20**	2133.05	0.325	0.092	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.27	Sqm	**63.20**	396.26	0.01		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.90	Cum	**6914.20**	6222.78	0.37	0.39	0.77
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.70	Cum	**1075.00**	751.79			
		Coarse Aggregates (100 Km lead)	0.77	Cum	**1398.00**	1082.05			
		Cement (30 km lead)	0.79	MT	**742.00**	582.60			
		Brick (30 km lead)	345.00	No.	**3.18**	1097.10			
TOTAL (In Rs.)						**16792.74**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.70	Cum	**584.64**	408.86	40.89		
		Coarse Aggregate	0.77	Cum	**944.26**	730.86	73.09		
		Total					**113.97**		
AOC FOR HR OF CULVERT/FALL (Ch.-1.195 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	63.37	Sqm	**340.20**	21559.83	3.285	0.925	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	63.37	Sqm	**63.20**	4005.24	0.10		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.35	Cum	**6914.20**	9334.17	0.56	0.58	1.16
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.35	Sqm	**578.60**	4252.71			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.51	Cum	**1075.00**	1618.69			
		Coarse Aggregates (100 Km lead)	1.16	Cum	**1398.00**	1623.08			
		Cement (30 km lead)	3.94	MT	**742.00**	2921.44			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**46377.55**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.51	Cum	**584.64**	880.33	88.03		
		Coarse Aggregate	1.16	Cum	**944.26**	1096.29	109.63		
		Total					**197.66**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (Ch.-1.900 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.81	Cum	**6914.20**	40203.98	2.40	2.50	5.00
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	27.87	Sqm	**578.60**	16123.45			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.50	Cum	**1075.00**	2687.84			
		Coarse Aggregates (100 Km lead)	5.00	Cum	**1398.00**	6990.89			
		Cement (30 km lead)	2.40	MT	**742.00**	1779.73			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**68848.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.50	Cum	**584.64**	1461.79	146.18		
		Coarse Aggregate	5.00	Cum	**944.26**	4721.90	472.19		
		Total					**618.37**		
AOC FOR FALL/CULVERT (Ch.-2.150 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.45	Cum	**6914.20**	3111.39	0.19	0.19	0.39
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.45	Sqm	**578.60**	1417.57			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.19	Cum	**1075.00**	208.01			
		Coarse Aggregates (100 Km lead)	0.39	Cum	**1398.00**	541.03			
		Cement (30 km lead)	0.19	MT	**742.00**	137.73			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**6478.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	113.13	11.31		
		Coarse Aggregate	0.39	Cum	**944.26**	365.43	36.54		
		Total					**47.86**		
AOC FOR FALL(Ch.-2.450 Km)									
1	**Structure is in good condition and does not requir any repair works.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF CHATARA SUB-DY									
AOC FOR BRIDGE/FALL (Ch.-0.050 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.23	Cum	**5021.30**	1154.90	0.03	0.07	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.09	Sqm	**340.20**	711.02	0.108	0.031	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.09	Sqm	**63.20**	132.09	0.00		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.10	Cum	**1075.00**	111.92			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.14	MT	**742.00**	102.38			
		Brick (30 km lead)	115.00	No.	**3.18**	365.70			
		TOTAL (In Rs.)				**2578.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.10	Cum	**584.64**	60.87	6.09		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**6.09**		
AOC FOR FALL (Ch.-1.400 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	2.34	Cum	**2492.58**	5832.64			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**5832.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR BRIDGE (Ch.-1.935 Km)									
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.07	Cum	**5021.30**	10394.09	0.24	0.66	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.41	Sqm	**340.20**	3199.58	0.488	0.137	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.41	Sqm	**63.20**	594.40	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.80	Cum	**1075.00**	859.69			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.74	MT	**742.00**	549.17			
		Brick (30 km lead)	1035.00	No.	**3.18**	3291.30			
		TOTAL (In Rs.)				**18888.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.80	Cum	**584.64**	467.54	46.75		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**46.75**		
AOC FOR BRIDGE (Ch.-2.205 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.49	Cum	**2492.58**	1221.36			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.96	Cum	**5021.30**	9816.64	0.23	0.63	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.88	Sqm	**340.20**	3021.83	0.460	0.130	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.88	Sqm	**63.20**	561.37	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.76	Cum	**1075.00**	811.93			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.70	MT	**742.00**	518.66			
		Brick (30 km lead)	977.00	No.	**3.18**	3106.86			
		TOTAL (In Rs.)				**19058.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.76	Cum	**584.64**	441.57	44.16		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**44.16**		
		AOC FOR BRIDGE/CR/HR FOR DABURA-1 MR+FALL (Ch.-2.940 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	RCD 8.09	Providing and applying two Coates of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade.	9.00	Sqm	91.70	825.30			
3	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.50	Cum	**2492.58**	1246.29			
4	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.15	Cum	**5021.30**	5774.50	0.13	0.37	
5	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.23	Sqm	**340.20**	1777.55	0.271	0.076	
6	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	5.23	Sqm	**63.20**	330.22	0.01		
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.44	Cum	**1075.00**	477.61			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.41	MT	**742.00**	305.10			
		Brick (30 km lead)	575.00	No.	**3.18**	1828.50			
		TOTAL (In Rs.)				**13981.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.44	Cum	**584.64**	259.75	25.97		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**25.97**		
		AOC FOR OF FALL (Ch.-3.200 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.03	Cum	**6914.20**	14001.26	0.84	0.87	1.74

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	15.00	Sqm	**578.60**	8679.00			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.87	Cum	**1075.00**	936.06			
		Coarse Aggregates (100 Km lead)	1.74	Cum	**1398.00**	2434.62			
		Cement (30 km lead)	0.84	MT	**742.00**	619.80			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**28087.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.87	Cum	**584.64**	509.08	50.91		
		Coarse Aggregate	1.74	Cum	**944.26**	1644.43	164.44		
		Total					**215.35**		
		AOC FOR FALL/BRIDGE (Ch.-3.845 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.21	Cum	**6914.20**	8345.49	0.50	0.52	1.04
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.52	Cum	**1075.00**	557.94			
		Coarse Aggregates (100 Km lead)	1.04	Cum	**1398.00**	1451.16			
		Cement (30 km lead)	0.50	MT	**742.00**	369.43			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**12140.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.52	Cum	**584.64**	303.44	30.34		
		Coarse Aggregate	1.04	Cum	**944.26**	980.17	98.02		
		Total					**128.36**		
		AOC FOR PIPE CULVERT (Ch.-4.555 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.35	Cum	**5021.30**	1732.35	0.04	0.11	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.14	Sqm	**340.20**	1066.53	0.163	0.046	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.14	Sqm	**63.20**	198.13	0.00		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.16	Cum	**1075.00**	167.88			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.21	MT	**742.00**	153.57			
		Brick (30 km lead)	172.00	No.	**3.18**	546.96			
		TOTAL (In Rs.)				**5163.90**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.16	Cum	**584.64**	91.30	9.13		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**9.13**		
		AOC FOR FALL (Ch.-4.930 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.69	Cum	**6914.20**	46279.56	2.76	2.88	5.76
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.88	Cum	**1075.00**	3094.03			
		Coarse Aggregates (100 Km lead)	5.76	Cum	**1398.00**	8047.35			
		Cement (30 km lead)	2.76	MT	**742.00**	2048.68			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**61004.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.88	Cum	**584.64**	1682.69	168.27		
		Coarse Aggregate	5.76	Cum	**944.26**	5435.47	543.55		
		Total					**711.82**		
		AOC FOR FALL (Ch.-5.165 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.69	Cum	**6914.20**	46279.56	2.76	2.88	5.76
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.88	Cum	**1075.00**	3094.03			
		Coarse Aggregates (100 Km lead)	5.76	Cum	**1398.00**	8047.35			
		Cement (30 km lead)	2.76	MT	**742.00**	2048.68			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**60768.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.88	Cum	**584.64**	1682.69	168.27		
		Coarse Aggregate	5.76	Cum	**944.26**	5435.47	543.55		
		Total					**711.82**		
		AOC FOR FALL (Ch.-5.785 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.00	Sqm	**11.80**	1888.70			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**1888.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF DABURA-I MINOR									
AOC FOR CULVERT/FALL (Ch.-0.650 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.38	Cum	**2492.58**	28353.69			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**30124.35**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL (Ch.-0.900 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.33	Cum	**5021.30**	1657.03	0.04	0.11	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.75	Sqm	**340.20**	935.55	0.143	0.040	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.75	Sqm	**63.20**	173.80	0.00		
5	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.41	Cum	**6381.70**	2584.59	0.13	0.18	0.36
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.33	Cum	**1075.00**	352.60			
		Coarse Aggregates (100 Km lead)	0.36	Cum	**1398.00**	509.57			
		Cement (30 km lead)	0.32	MT	**742.00**	234.41			
		Brick (30 km lead)	165.00	No.	**3.18**	524.70			
TOTAL (In Rs.)						**8388.78**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.33	Cum	**584.64**	191.76	19.18		
		Coarse Aggregate	0.36	Cum	**944.26**	344.18	34.42		
		Total					**53.59**		
AOC FOR FALL (Ch.-1.250 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.08	Cum	**6381.70**	6892.24	0.35	0.49	0.97
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.49	Cum	**1075.00**	522.45			
		Coarse Aggregates (100 Km lead)	0.97	Cum	**1398.00**	1358.86			
		Cement (30 km lead)	0.35	MT	**742.00**	259.64			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**10449.71**			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.49	Cum	**584.64**	284.14	28.41		
		Coarse Aggregate	0.97	Cum	**944.26**	917.82	91.78		
		Total					**120.20**		
		AOC FOR BRIDGE (Ch.-1.905 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.03	Cum	**6914.20**	14001.26	0.84	0.87	1.74
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.35	Sqm	**578.60**	5988.51			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.87	Cum	**1075.00**	936.06			
		Coarse Aggregates (100 Km lead)	1.74	Cum	**1398.00**	2434.62			
		Cement (30 km lead)	0.84	MT	**742.00**	619.80			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**25396.77**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.87	Cum	**584.64**	509.08	50.91		
		Coarse Aggregate	1.74	Cum	**944.26**	1644.43	164.44		
		Total					**215.35**		
		AOC FOR BRIDGE/FALL (Ch.-2.850 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.95	Cum	**5021.30**	4745.13	0.11	0.30	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.94	Sqm	**340.20**	1339.54	0.204	0.057	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.94	Sqm	**63.20**	248.85	0.01		
4	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.24	Cum	**6381.70**	1550.75	0.08	0.11	0.22
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.47	Cum	**1075.00**	504.43			
		Coarse Aggregates (100 Km lead)	0.22	Cum	**1398.00**	305.74			
		Cement (30 km lead)	0.40	MT	**742.00**	295.04			
		Brick (30 km lead)	472.00	No.	**3.18**	1500.96			
		TOTAL (In Rs.)				**10490.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.47	Cum	**584.64**	274.34	27.43		
		Coarse Aggregate	0.22	Cum	**944.26**	206.51	20.65		
		Total					**48.08**		
		AOC FOR BRIDGE/FALL (Ch.-4.050 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.41	Cum	**5021.30**	2071.29	0.05	0.13	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.44	Sqm	**340.20**	1169.44	0.178	0.050	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.44	Sqm	**63.20**	217.25	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.18	Cum	**1075.00**	195.85			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.23	MT	**742.00**	171.31			
		Brick (30 km lead)	206.00	No.	**3.18**	655.08			
		TOTAL (In Rs.)				**4480.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.18	Cum	**584.64**	106.51	10.65		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**10.65**		
		AOC FOR FALL/BRIDGE (Ch.-4.800 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.38	Cum	**5021.30**	1882.99	0.04	0.12	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	3.13	Sqm	**340.20**	1063.13	0.162	0.046	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	3.13	Sqm	**63.20**	197.50	0.00		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.17	Cum	**1075.00**	178.05			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.21	MT	**742.00**	155.74			
		Brick (30 km lead)	187.00	No.	**3.18**	594.66			
		TOTAL (In Rs.)				**5252.49**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.17	Cum	**584.64**	96.83	9.68		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**9.68**		
		AOC FOR FALL (Ch.-5.200 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.69	Cum	**6914.20**	11667.71	0.70	0.73	1.45
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.85	Sqm	**578.60**	5120.61			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.73	Cum	**1075.00**	780.05			
		Coarse Aggregates (100 Km lead)	1.45	Cum	**1398.00**	2028.85			
		Cement (30 km lead)	0.70	MT	**742.00**	516.50			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21884.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	424.23	42.42		
		Coarse Aggregate	1.45	Cum	**944.26**	1370.36	137.04		
		Total					**179.46**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF AKAUNA MINOR									
AOC FOR FALL (Ch.-0.000 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.38	Cum	**6914.20**	2592.83	0.15	0.16	0.32
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.80	Sqm	**578.60**	1620.08			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.16	Cum	**1075.00**	173.34			
		Coarse Aggregates (100 Km lead)	0.32	Cum	**1398.00**	450.86			
		Cement (30 km lead)	0.15	MT	**742.00**	114.78			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**6368.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.16	Cum	**584.64**	94.27	9.43		
		Coarse Aggregate	0.32	Cum	**944.26**	304.52	30.45		
		Total					**39.88**		
AOC FOR BRIDGE/FALL (Ch.-0.620 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**1770.66**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR BRIDGE/FALL (Ch.-1.135 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.90	Cum	**5021.30**	4519.17	0.10	0.29	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.50	Sqm	**340.20**	2551.50	0.389	0.110	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.50	Sqm	**63.20**	474.00	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.40	Cum	**1075.00**	427.31			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.50	MT	**742.00**	373.77			
		Brick (30 km lead)	450.00	No.	**3.18**	1431.00			
TOTAL (In Rs.)						**11311.32**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.40	Cum	**584.64**	232.39	23.24		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**23.24**		
AOC FOR BRIDGE (Ch.-1.600 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.12	Cum	**6914.20**	28469.22	1.70	1.77	3.54
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	6.65	Sqm	**578.60**	3847.11			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.77	Cum	**1075.00**	1903.31			
		Coarse Aggregates (100 Km lead)	3.54	Cum	**1398.00**	4950.39			
		Cement (30 km lead)	1.70	MT	**742.00**	1260.26			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**40430.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.77	Cum	**584.64**	1035.12	103.51		
		Coarse Aggregate	3.54	Cum	**944.26**	3343.67	334.37		
		Total					**437.88**		
		AOC FOR BRIDGE (Ch.-2.185 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.29	Cum	**6914.20**	22775.37	1.36	1.42	2.83
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.43	Sqm	**578.60**	3141.22			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.42	Cum	**1075.00**	1522.65			
		Coarse Aggregates (100 Km lead)	2.83	Cum	**1398.00**	3960.31			
		Cement (30 km lead)	1.36	MT	**742.00**	1008.21			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**32407.77**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.42	Cum	**584.64**	828.10	82.81		
		Coarse Aggregate	2.83	Cum	**944.26**	2674.94	267.49		
		Total					**350.30**		
		AOC FOR HR OF FALL (Ch.-3.005 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	26.39	Cum	**6914.20**	182486.48	10.89	11.35	22.70
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.99	Sqm	**578.60**	6357.19			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	11.35	Cum	**1075.00**	12200.16			
		Coarse Aggregates (100 Km lead)	22.70	Cum	**1398.00**	31731.78			
		Cement (30 km lead)	10.89	MT	**742.00**	8078.24			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**242270.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	11.35	Cum	**584.64**	6635.07	663.51		
		Coarse Aggregate	22.70	Cum	**944.26**	21432.79	2143.28		
		Total					**2806.79**		
		AOC FOR BRIDGE/FALL (Ch.-3.610 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.50	Sqm	**340.20**	2551.50	0.389	0.110	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.50	Sqm	**63.20**	474.00	0.01		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.11	Cum	**1075.00**	117.71			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.40	MT	**742.00**	296.84			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**3440.05**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.11	Cum	**584.64**	64.02	6.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**6.40**		
		AOC FOR BRIDGE/FALL (Ch.-4.600 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.75	Cum	**5021.30**	3765.98	0.09	0.24	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.25	Sqm	**340.20**	2126.25	0.324	0.091	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.25	Sqm	**63.20**	395.00	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.33	Cum	**1075.00**	356.09			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.42	MT	**742.00**	311.47			
		Brick (30 km lead)	375.00	No.	**3.18**	1192.50			
		TOTAL (In Rs.)				**9681.86**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.33	Cum	**584.64**	193.66	19.37		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**19.37**		
		AOC FOR CULVERT (Ch.-5.590Km)							
		New Structure as per site.							
		AOC FOR CULVERT (Ch.-5.910 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	16.25	Sqm	**340.20**	5528.25	0.842	0.237	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	16.25	Sqm	**63.20**	1027.00	0.02		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.24	Cum	**1075.00**	255.04			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.87	MT	**742.00**	643.15			
		Brick (30 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**7453.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.24	Cum	**584.64**	138.71	13.87		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**13.87**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KAPASIYA DISTRIBUTARY

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.005 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.048	0.45	0.6	*1.65*	*Cum*
		TOTAL					**1.65**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.05		1.45	*4.42*	*Sqm*
		TOTAL					**4.42**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.05		1.45	*4.42*	*Sqm*
		TOTAL					**4.42**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.720 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Parapet Wall	2	3.15	0.25	0.92	*1.45*	*Cum*
		Toe Wall for resting Brick Edging	*2*	*4.50*	*0.60*	*0.15*	*0.81*	*Cum*
		TOTAL					***2.26***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.040 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing Wall	1	12.00		1.25	*15.00*	*Sqm*
		TOTAL					**15.00**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing Wall	1	12.00		1.25	*15.00*	*Sqm*
		TOTAL					**15.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.865 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	1.2	0.45	0.6	*0.65*	*Cum*
		Slope Pitching D/S	2	2.5	2	0.1	*1.00*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**1.65**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	1.20		1.45	*1.74*	*Sqm*
		TOTAL					**1.74**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	1.20		1.45	*1.74*	*Sqm*
		TOTAL					**1.74**	***Sqm***
4	**WRD M-002**	**Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**						
		D/S Floor	1	2.50	6.10	0.3	*4.57*	*Cum*
		TOTAL					***4.57***	***Cum***
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	*2*	*2.50*	*0.60*	*0.15*	*0.45*	*Cum*
		Toe Wall for resting Brick Edging	*2*	*2.50*	*0.30*	*0.60*	*0.90*	*Cum*
		TOTAL					***1.35***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing walls	4	2.50		0.15	*1.50*	Sqm
			4		0.60	0.15	*0.36*	Sqm
			4	2.50		0.60	*6.00*	Sqm
			4		0.30	0.60	*0.72*	Sqm
		TOTAL					**8.58**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.785 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2	0.45	0.6	*1.08*	*Cum*
		TOTAL					**1.08**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	2.00		1.45	*2.90*	*Sqm*
		TOTAL					**2.90**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.00		1.45	*2.90*	*Sqm*
		TOTAL					**2.90**	***Sqm***
4	**WRD M-002**	**Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**						
		D/S Floor	1	4.00	6.10	0.3	*7.32*	*Cum*
		TOTAL					***7.32***	***Cum***
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	*2*	*4.00*	*0.60*	*0.15*	*0.72*	*Cum*
		Toe Wall for resting Brick Edging	*2*	*4.00*	*0.30*	*0.60*	*1.44*	*Cum*
		TOTAL					***2.16***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing walls	4	4.00		0.15	*2.40*	Sqm
			4		0.60	0.15	*0.36*	Sqm
			4	4.00		0.60	*9.60*	Sqm
			4		0.30	0.60	*0.72*	Sqm
		TOTAL					**13.08**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR HR OF NARCHI MR (Ch.-2.820 Km)								
1		**New Structure is proposed**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-3.430 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Parapet Wall	2	0.7	0.25	0.6	*0.21*	*Cum*
		Wing wall D/S	2	3.00	0.25	2	*3.00*	*Cum*
		TOTAL					***3.21***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR HR OF BAHUARA MR (Ch.-3.900 Km)								
1		**New Structure is proposed**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.950 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Slope Pitching D/S	2	3	2	0.1	*1.20*	*Cum*
		TOTAL					**1.20**	**Cum**
2	**WRD M-002**	**Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**						
		D/S Floor	1	3.00	5.49	0.3	*4.94*	*Cum*
		TOTAL					***4.94***	***Cum***
3	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	*2*	*3.00*	*0.60*	*0.15*	*0.54*	*Cum*
		Toe Wall for resting Brick Edging	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
		TOTAL					***1.62***	***Cum***
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	4	3.00		0.15	*1.80*	Sqm
			4		0.60	0.15	*0.36*	Sqm
		Toe Wall for resting Brick Edging	4	3.00		0.60	*7.20*	Sqm
			4		0.30	0.60	*0.72*	Sqm
		TOTAL					**10.08**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.740 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	1	2.00		1.45	*2.90*	*Sqm*
		Parapet	2	5.75		1.45	*16.68*	*Sqm*
		TOTAL					**19.58**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	1	2.00		1.45	*2.90*	*Sqm*
		Parapet	2	5.75		1.45	*16.68*	*Sqm*
		TOTAL					**2.90**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.120 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall D/S & U/S	4	3.00	0.25	1.8	*5.40*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***5.40***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-5.610 Km)								
1	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment	*2*	*4.00*	*0.45*	*0.15*	*0.54*	*Cum*
		Wing wall	*4*	*2.00*	*0.45*	*0.15*	*0.54*	*Cum*
		TOTAL					***1.08***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-6.410 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Parapet Wall	2	3.2	0.25	0.6	*0.96*	*Cum*
		Wing wall D/S & U/S	3	3.00	0.25	1.8	*4.05*	*Cum*
		TOTAL					***5.01***	***Cum***
QUANTITIES OF REPAIRING WORK FOR HR OF YARI & NEPUA MR (Ch.-7.760 Km)								
1		**New Structure is proposed**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.765 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment D/S	1	7.00	0.45	3.88	*12.23*	*Cum*
		Crest	1	4.60	0.60	0.15	*0.41*	*Cum*
		TOTAL					***12.65***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	7.00		3.884	*54.38*	Sqm
			2		0.45	3.884	*3.50*	Sqm
		TOTAL					**57.87**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.250 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Wing wall	1	2.2	0.25	0.6	*0.33*	*Cum*
		TOTAL					**0.33**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.455 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment D/S	1	6.00	0.25	2.5	*3.75*	*Cum*
		Crest	1	4.27	0.60	0.15	*0.38*	*Cum*
		TOTAL					***4.13***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	6.00		2.5	*30.00*	Sqm
			2		0.25	2.5	*1.25*	Sqm
		TOTAL					**31.25**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.640 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Wing wall	1	2.2	0.25	0.6	*0.33*	*Cum*
		TOTAL					**0.33**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.220 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	*3*	*2.50*	*0.45*	*2.20*	*7.43*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment	*2*	*3.00*	*0.45*	*2.20*	*5.94*	*Cum*
		Slab	*1*	*4.00*	*7.00*	*0.20*	*5.60*	*Cum*
		Floor	*1*	*3.87*	*4.08*	*0.60*	*9.49*	*Cum*
		TOTAL					***28.45***	***Cum***
2		***New Fall Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.380 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	*2*	*2.50*	*0.45*	*2.20*	*4.95*	*Cum*
		Abutment	*1*	*2.00*	*0.45*	*2.20*	*1.98*	*Cum*
		TOTAL					***6.93***	***Cum***
2		***New Fall Proposed Here***						

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch. 9.845 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	*2*	*6.50*	*0.45*	*2.20*	*12.87*	*Cum*
		Parapet	*2*	*4.60*	*0.45*	*0.31*	*1.26*	*Cum*
		TOTAL					***14.13***	***Cum***
2		***New Structure is Proposed Here***						

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch. 10.900 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	*2*	*6.00*	*0.45*	*2.20*	*11.88*	*Cum*
		Parapet	*2*	*4.00*	*0.45*	*0.31*	*1.10*	*Cum*
		TOTAL					***12.98***	***Cum***
2		***New Structure is Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-11.335 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.5	0.25	0.92	*2.07*	*Cum*
		TOTAL					**2.07**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.50		2.125	*9.56*	*Sqm*
		TOTAL					**9.56**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.50		2.125	*9.56*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**9.56**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-11.495 Km)						
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.5	0.25	0.92	*2.07*	*Cum*
		TOTAL					**2.07**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.50		2.09	*18.81*	*Sqm*
		TOTAL					**18.81**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.50		2.09	*18.81*	*Sqm*
		TOTAL					**18.81**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost**						
		Wing wall	2	3.50	0.30	1.5	*3.15*	*Cum*
		TOTAL					***3.15***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in**						
		Wing wall	2	3.50		1.5	*10.50*	Sqm
			2		0.30	1.5	*0.90*	Sqm
		TOTAL					**11.40**	**Sqm**

		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-12.065 Km)						
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall	1	3.00	0.25	2	*1.50*	*Cum*
		TOTAL					***1.50***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall	2	3.00		2	*12.00*	Sqm
			2		0.25	2	*1.00*	Sqm
		TOTAL					**13.00**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR HR OF AMAR BIGHA MR (Ch.-12.810 Km)						
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Abtment	*1*	*5.00*	*0.45*	*1.50*	*3.38*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Well Portion	*1*	*6.28*		*0.30*	*1.88*	*Cum*
		D/s Wing wall	*2*	*5.00*	*0.45*	*1.00*	*4.50*	*Cum*
		TOTAL					***9.76***	***Cum***
2		***New Structure is Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-12.890 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		U/S & D/S Wing Wall	4	3.50		1.95	*27.30*	*Sqm*
		TOTAL					**27.30**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		U/S & D/S Wing Wall	4	3.50		1.95	*27.30*	*Sqm*
		TOTAL					**27.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CR AT (CH.-13.080) KM								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**200.00**	**Sqm**
2	**RCD 8.09**	**Painting on Steel Surfaces (Providing and applying two coats of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade).**						
		CR GATE-1	*2*	*3.00*		*2.00*	*12.00*	*Sqm*
		TOTAL					**12.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-13.460 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	4.50		2.25	*40.50*	*Sqm*
		TOTAL					**40.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	4.50		2.25	*40.50*	*Sqm*
		TOTAL					**40.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-14.395 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.2	0.25	0.6	*0.66*	*Cum*
		TOTAL					**0.66**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet Wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.20		1.45	*3.19*	*Sqm*
		TOTAL					**3.19**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall D/S	2	3.00	0.25	2	*3.00*	*Cum*
		TOTAL					***3.00***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall D/S	4	3.00		2	*24.00*	Sqm
			4		0.25	2	*2.00*	Sqm
		TOTAL					**26.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-14.980 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	4.30	0.914	*27.51*	*Cum*
		TOTAL					***27.51***	***Cum***
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.914	*12.80*	Sqm
			2		4.30	0.914	*7.86*	Sqm
		TOTAL					**20.66**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR HR OF CHATRA SUB DY (CH.-15.240 KM)								
1		**New Structure is proposed**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-15.320 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.6576	0.25	0.6	*1.10*	*Cum*
		TOTAL					**1.10**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.66		1.45	*5.30*	*Sqm*
		TOTAL					**5.30**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.66		1.45	*5.30*	*Sqm*
		TOTAL					**5.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-15.340 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Slope Pitching D/S	2	3	1.7	0.1	*1.02*	*Cum*
		TOTAL					**1.02**	**Cum**
2	**WRD M-002**	**Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.**						
		D/S Floor	1	3.00	2.13	0.3	*1.92*	*Cum*
		TOTAL					***1.92***	***Cum***
3	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	*2*	*3.00*	*0.60*	*0.15*	*0.54*	*Cum*
		Toe Wall for resting Brick Edging	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
		TOTAL					***1.62***	***Cum***
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Toe Wall for resting Brick Edging	4	3.00		0.15	*1.80*	Sqm
			4		0.60	0.15	*0.36*	Sqm
		Toe Wall for resting Brick Edging	4	3.00		0.60	*7.20*	Sqm
			4		0.30	0.60	*0.72*	Sqm
		TOTAL					**10.08**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-15.930 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Abutment	*1*	*2.50*	*2.74*	*0.31*	*2.10*	*Cum*
		TOTAL					***2.10***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-16.675 Km)								
1	5.4.6	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.3528	0.25	0.6	*1.01*	*Cum*
		TOTAL					**1.01**	**Cum**
2	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.35		1.45	*4.86*	*Sqm*
		TOTAL					**4.86**	***Sqm***
3	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.35		1.45	*4.86*	*Sqm*
		TOTAL					**4.86**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-17.065 Km)								
1	5.4.6	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.14528	0.25	0.92	*1.91*	*Cum*
		TOTAL					**1.91**	**Cum**
2	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.15		2.09	*8.66*	*Sqm*
		TOTAL					**8.66**	***Sqm***
3	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.15		2.09	*8.66*	*Sqm*
		TOTAL					**8.66**	***Sqm***
4	5.3.5	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.00	2.65	0.305	*4.85*	*Cum*
		TOTAL					***4.85***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	6.00		0.305	*3.66*	Sqm
			2		2.65	0.305	*1.62*	Sqm
		TOTAL					**5.28**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-17.925 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		D/S Side wall	2	7.50		1.65	*24.75*	*Sqm*
		TOTAL					**24.75**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	7.50		1.65	*24.75*	*Sqm*
		TOTAL					**24.75**	***Sqm***
3	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	3.50	0.50	1	*1.75*	*Cum*
		TOTAL					***1.75***	***Cum***
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Crest	2	3.50		1	*7.00*	Sqm
			2		0.50	1	*1.00*	Sqm
		TOTAL					**8.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-18.315 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**140.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.35	0.25	0.92	*1.54*	*Cum*
		TOTAL					**1.54**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.35		2.09	*7.00*	*Sqm*
		TOTAL					**7.00**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.35		2.09	*7.00*	*Sqm*
		TOTAL					**7.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR HR OF AKUNA MR (CH.-18.360 KM)								
1		**New Structure is proposed**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.750 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment U/S	*1*	*1.00*	*0.45*	*0.30*	*0.14*	*Cum*
		TOTAL					**0.14**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF NARCHI MR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.480 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment top	*2*	*7.00*	*0.45*	*0.15*	*0.95*	*Cum*
		TOTAL					***0.95***	***Cum***
3	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	1.65	0.60	0.305	*0.30*	*Cum*
		TOTAL					***0.30***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.825 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	2.50		1.05	*2.63*	*Sqm*
		TOTAL					**2.63**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.50		1.05	*2.63*	*Sqm*
		TOTAL					**2.63**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.750 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*2.50*	*0.45*	*1.20*	*2.70*	*Cum*
		U/S Abutment	*1*	*5.00*	*0.45*	*0.90*	*2.03*	*Cum*
		TOTAL					***4.73***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.890 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Wing wall	1	2.00	0.45	1.2	*1.08*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S Wing wall	1	4.00	0.45	1.2	*2.16*	*Cum*
		TOTAL					***3.24***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Wing wall	2	2.00		1.2	*4.80*	Sqm
			2		0.45	1.2	*1.08*	Sqm
			2	4.00		1.2	*9.60*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**16.56**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-2.100 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**140.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3	0.25	0.92	*1.38*	*Cum*
		TOTAL					**1.38**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Wing wall	1	2.00	0.45	1.2	*1.08*	*Cum*
		TOTAL					***1.08***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
			2	2.00		1.2	*4.80*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**5.88**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.400 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion	1	2.20	0.45	0.5	*0.50*	*Cum*
		TOTAL					**0.50**	**Cum**
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Well Portion	2	2.20		0.5	*2.20*	Sqm
			2		0.45	0.5	*0.45*	Sqm
		TOTAL					**2.65**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.665 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	1.5	0.25	0.92	*0.35*	*Cum*
		TOTAL					**0.35**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	1.50		2.09	*3.14*	*Sqm*
		TOTAL					**3.14**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	1.50		2.09	*3.14*	*Sqm*
		TOTAL					**3.14**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.850 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion left side	1	2.00	0.45	0.5	*0.45*	*Cum*
		TOTAL					**0.45**	**Cum**
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Well Portion left side	2	2.00		0.5	*2.00*	Sqm
			2		0.45	0.5	*0.45*	Sqm
		TOTAL					**2.45**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.010 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion	2	1.50	0.45	0.5	*0.68*	*Cum*
		TOTAL					**0.68**	**Cum**
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Well Portion	2	1.50		0.5	*1.50*	Sqm
			2		0.45	0.5	*0.45*	Sqm
		TOTAL					**1.95**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.400 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		U/S Well Abutment Wall	1	5.00		2.09	*10.45*	*Sqm*
		TOTAL					**10.45**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		U/S Well Abutment Wall	1	5.00		2.09	*10.45*	*Sqm*
		TOTAL					**10.45**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion	2	1.50	0.45	1.20	*1.62*	*Cum*
		TOTAL					**1.62**	**Cum**
5	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Well Portion	2	1.50		1.20	*3.60*	Sqm
			2		0.45	1.20	*1.08*	Sqm
		TOTAL					**4.68**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF BAHUARA MINOR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.035Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*3.00*	*0.45*	*1.20*	*3.24*	*Cum*
		D/S Wing wall	*2*	*2.00*	*0.45*	*1.20*	*2.16*	*Cum*
		U/S Abutment	*1*	*2.50*	*0.45*	*1.20*	*1.35*	*Cum*
		D/S Abutment	*1*	*3.00*	*0.45*	*1.20*	*1.62*	*Cum*
		TOTAL					***8.37***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.575 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.00		1.47	*8.82*	*Sqm*
		TOTAL					**8.82**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.00		1.47	*8.82*	*Sqm*
		TOTAL					**8.82**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-0.850 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	7.00		1.47	*20.58*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**26.46**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	7.00		1.47	*20.58*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**26.46**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-1.150 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.350 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*1*	*2.00*	*0.45*	*1.20*	*1.08*	*Cum*
		D/S Wing wall	*1*	*2.00*	*0.45*	*1.20*	*1.08*	*Cum*
		U/S Abutment	*1*	*3.00*	*0.45*	*1.20*	*1.62*	*Cum*
		D/S Abutment	*1*	*3.00*	*0.45*	*1.20*	*1.62*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Crest	*1*	*1.46*	*0.60*	*0.50*	*0.44*	*Cum*
		TOTAL					***5.84***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-1.550 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.00		1.47	*14.70*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**20.58**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.00		1.47	*14.70*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**20.58**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.750 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	2.5	0.25	0.92	*0.58*	*Cum*
		TOTAL					**0.58**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	2.50		2.09	*5.23*	*Sqm*
		TOTAL					**5.23**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.50		2.09	*5.23*	*Sqm*
		TOTAL					**5.23**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S Floor	1	7.00	1.50	0.15	*1.58*	*Cum*
		TOTAL					***1.58***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	4	7.00		0.15	*4.20*	Sqm
			4		1.50	0.15	*0.90*	Sqm
		TOTAL					**5.10**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.000 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	1.50	0.3	*3.15*	*Cum*
		D/S abutment side wall	1	5.00	0.45	1.2	*2.70*	*Cum*
		TOTAL					***5.85***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.3	*4.20*	Sqm
			2		1.50	0.3	*0.90*	Sqm
			2	5.00		1.2	*12.00*	Sqm
			2		0.45	1.2	*1.08*	Sqm
		TOTAL					**18.18**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.250 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*2.00*	*0.45*	*1.50*	*2.70*	*Cum*
		D/S Wing wall	*2*	*1.00*	*0.45*	*1.50*	*1.35*	*Cum*
		U/S Abutment	*1*	*2.50*	*0.45*	*1.20*	*1.35*	*Cum*
		D/S Abutment	*1*	*3.00*	*0.45*	*1.20*	*1.62*	*Cum*
		TOTAL					***7.02***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.315 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	2.50		1.5	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.50		1.5	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.500 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*2.00*	*0.45*	*1.20*	*2.16*	*Cum*
		U/S Abutment	*1*	*3.00*	*0.45*	*1.20*	*1.62*	*Cum*
		TOTAL					***3.78***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.750 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*4.00*	*0.45*	*1.00*	*3.60*	*Cum*
		D/S Wing wall	*2*	*4.00*	*0.45*	*1.00*	*3.60*	*Cum*
		Slope Pitching	*1*	*2.00*	*1.00*	*0.15*	*0.30*	*Cum*
		Bed Bars	*2*	*2.00*	*0.45*	*1.00*	*1.80*	*Cum*
		TOTAL					***9.30***	***Cum***
		New Fall has been Proposed						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF YARI MINOR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.255 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		1.25	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		1.25	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.450 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		1.25	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		1.25	*3.75*	*Sqm*
		TOTAL					**3.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-0.700 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.00		1.47	*14.70*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**20.58**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.00		1.47	*14.70*	*Sqm*
		Wings	2	2.00		1.47	*5.88*	*Sqm*
		TOTAL					**20.58**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.100 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*2.00*	*0.45*	*1.00*	*1.80*	*Cum*
		D/S Abutment	*1*	*4.00*	*0.45*	*1.00*	*1.80*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Well Portion	*1*	*2.00*	*1.00*	*1.50*	*3.00*	*Cum*
		TOTAL					***6.60***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.530 Km)								
1		**Structure requires no repair work as it is newly constructed as per site.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.170 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		U/S Wing wall	*2*	*2.00*	*0.45*	*1.00*	*1.80*	*Cum*
		D/S Abutment	*1*	*4.00*	*0.45*	*1.00*	*1.80*	*Cum*
		Well Portion	*1*	*2.00*	*1.00*	*1.50*	*3.00*	*Cum*
		TOTAL					***6.60***	***Cum***
		New Fall has been Proposed						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT(Ch.-3.275 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment Wall	1	4.34		1.45	*6.30*	*Sqm*
		TOTAL					**6.30**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment Wall	1	4.34		1.45	*6.30*	*Sqm*
		TOTAL					**6.30**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-3.350 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	4.00		1.25	*10.00*	*Sqm*
		Wings	2	1.50		1.25	*3.75*	*Sqm*
		TOTAL					**13.75**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	4.00		1.25	*10.00*	*Sqm*
		Wings	2	1.50		1.25	*3.75*	*Sqm*
		TOTAL					**13.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-3.500 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	3.00	1.20	0.306	*1.10*	*Cum*
		TOTAL					***1.10***	***Cum***
3	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Slope Pitching	1	3.00	1.00	0.15	*0.45*	*Cum*
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	3.00		0.306	*1.84*	Sqm
			2		1.20	0.306	*0.73*	Sqm
		TOTAL					**2.57**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-3.600 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Abutment Wall	1	1	0.25	0.6	*0.15*	*Cum*
		TOTAL					**0.15**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment Wall	1	1.00		1.45	*1.45*	*Sqm*
		TOTAL					**1.45**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment Wall	1	1.00		1.45	*1.45*	*Sqm*
		TOTAL					**1.45**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-3.750 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Slope Pitching	1	3.00	1.00	0.15	*0.45*	*Cum*
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL(Ch.-3.850 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Slope Pitching	1	2.50	1.00	0.15	***0.38***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL(Ch.-4.030 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Slope Pitching	1	2.50	1.00	0.15	*0.38*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF NEPUA MINOR								
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.135Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	1.00	0.30	0.35	*0.11*	*Cum*
		TOTAL					***0.11***	***Cum***
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Slope Pitching	1	1.00	0.60	0.15	*0.09*	*Cum*
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.325 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	1.00	0.30	0.306	*0.09*	*Cum*
		TOTAL					***0.09***	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.705 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royalty as per specification and direction of E/I.**						
		Abutment Wall	1	1.2	0.25	1.5	*0.45*	*Cum*
		TOTAL					**0.45**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment Wall	1	3.00		3.25	*9.75*	*Sqm*
		TOTAL					**9.75**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment Wall	1	3.00		3.25	*9.75*	*Sqm*
		TOTAL					**9.75**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL(Ch.-1.250 Km)								
1		**New culvert/Fall is proposed here structure is completely damaged.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF AMAR BIGHA MINOR								
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.545 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	1	3	0.25	0.92	*0.69*	*Cum*
		TOTAL					**0.69**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Wing wall	1	2.00	0.45	1	*0.90*	*Cum*
		TOTAL					***0.90***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-1.195 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	1	3.00		3.25	*9.75*	*Sqm*
		Abutment	1	6.50		3.25	*21.13*	*Sqm*
		Inlet Well Outer wall	2	3.14		2.25	*14.13*	*Sqm*
		Inlet Well Inner wall	2	4.08		2.25	*18.37*	*Sqm*
		TOTAL					**63.37**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	1	3.00		3.25	*9.75*	*Sqm*
		Abutment	1	6.50		3.25	*21.13*	*Sqm*
		Inlet Well Outer wall	2	3.14		2.25	*14.13*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Inlet Well Inner wall	2	4.08		2.25	*18.37*	*Sqm*
		TOTAL					**63.37**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Abutment wall	1	2.00	0.45	1.5	*1.35*	*Cum*
		TOTAL					***1.35***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Abutment wall	2	2.00		1.5	*6.00*	Sqm
			2		0.45	1.5	*1.35*	Sqm
		TOTAL					**7.35**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.900 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Abutment wall	1	5.60	0.45	1.8	*4.54*	*Cum*
		Crest	1	1.40	0.60	1.52	*1.28*	*Cum*
		TOTAL					***5.81***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Abutment wall	2	5.60		1.8	*20.16*	Sqm
			2		0.45	1.8	*1.62*	Sqm
		Crest	2	1.40		1.52	*4.26*	Sqm
			2		0.60	1.52	*1.82*	Sqm
		TOTAL					**27.87**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-2.150 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Abutment wall	1	2.00	0.45	0.5	*0.45*	*Cum*
		TOTAL					***0.45***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Abutment wall	2	2.00		0.5	*2.00*	Sqm
			2		0.45	0.5	*0.45*	Sqm
		TOTAL					**2.45**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-2.450 Km)								
1		**New culvert/Fall is proposed here structure is completely damaged.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF CHATARA SUB-DY								
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.050 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	1	1	0.25	0.92	*0.23*	*Cum*
		TOTAL					**0.23**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	1.00		2.09	*2.09*	*Sqm*
		TOTAL					**2.09**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	1.00		2.09	*2.09*	*Sqm*
		TOTAL					**2.09**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.400 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand rail	*6*	*2.00*	*0.15*	*0.15*	*0.27*	*Cum*
		Parapet wall	2	4.5	0.25	0.92	*2.07*	*Cum*
		TOTAL					**2.34**	**Cum**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.935 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	2	4.5	0.25	0.92	*2.07*	*Cum*
		TOTAL					**2.07**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	4.50		2.09	*9.41*	*Sqm*
		TOTAL					**9.41**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	4.50		2.09	*9.41*	*Sqm*
		TOTAL					**9.41**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.205 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail	*2*	*2.00*	*0.15*	*0.15*	*0.09*	*Cum*
		Post	*5*	*2.00*	*0.20*	*0.20*	*0.40*	*Cum*
		TOTAL					***0.49***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	2	4.25	0.25	0.92	*1.96*	*Cum*
		TOTAL					**1.96**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	4.25		2.09	*8.88*	*Sqm*
		TOTAL					**8.88**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	4.25		2.09	*8.88*	*Sqm*
		TOTAL					**8.88**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/CR/HR FRO DABURA-1 MR+FALL (Ch.-2.940 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**RCD 8.09**	**Painting on Steel Surfaces (Providing and applying two coats of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade).**						
		CR GATE-1	*2*	*3.00*		*1.50*	*9.00*	*Sqm*
		TOTAL					**9.00**	**Sqm**
3	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail	*4*	*2.00*	*0.15*	*0.15*	*0.18*	*Cum*
		Post	*4*	*2.00*	*0.20*	*0.20*	*0.32*	*Cum*
		TOTAL					***0.50***	***Cum***
4	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	2	2.5	0.25	0.92	*1.15*	*Cum*
		TOTAL					**1.15**	**Cum**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
5	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.50		2.09	*5.23*	*Sqm*
		TOTAL					**5.23**	***Sqm***
6	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	2.50		2.09	*5.23*	*Sqm*
		TOTAL					**5.23**	***Sqm***
		New Structure is proposed						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.200 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Abutment wall	1	2.50	0.30	1.5	*1.13*	*Cum*
		D/S Side wall	1	3.00	0.30	1	*0.90*	*Cum*
		TOTAL					***2.03***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Abutment wall	2	2.50		1.5	*7.50*	Sqm
			2		0.30	1.5	*0.90*	Sqm
			2	3.00		1	*6.00*	Sqm
			2		0.30	1	*0.60*	Sqm
		TOTAL					**15.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-3.845 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	2.00	2.01	0.3	*1.21*	*Cum*
		TOTAL					***1.21***	***Cum***
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-4.555 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	1.5	0.25	0.92	*0.35*	*Cum*
		TOTAL					**0.35**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	1.50		2.09	*3.14*	*Sqm*
		TOTAL					**3.14**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	1.50		2.09	*3.14*	*Sqm*
		TOTAL					**3.14**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.930 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.00	1.83	0.61	*6.69*	*Cum*
		TOTAL					***6.69***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.165 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.00	1.83	0.61	*6.69*	*Cum*
		TOTAL					***6.69***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.785 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF DABURA-I MINOR								
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-0.650 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing wall	*2*	*2.00*	*0.30*	*1.50*	*1.80*	*Cum*
		Abutment	*2*	*2.50*	*0.30*	*1.50*	*2.25*	*Cum*
		Side walls	*2*	*7.50*	*0.30*	*1.00*	*4.50*	*Cum*
		Crest	*1*	*1.98*	*0.60*	*1.22*	*1.45*	*Cum*
		Parapet	*1*	*2.50*	*0.30*	*0.50*	*0.38*	*Cum*
		Slab	*1*	*2.50*	*2.00*	*0.20*	*1.00*	*Cum*
		TOTAL					***11.38***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.900 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.2	0.3	0.5	*0.33*	*Cum*
		TOTAL					**0.33**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.20		1.25	*2.75*	*Sqm*
		TOTAL					**2.75**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	2.20		1.25	*2.75*	*Sqm*
		TOTAL					**2.75**	***Sqm***
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment	2	3.00	0.45	0.15	*0.41*	*Cum*
		TOTAL					***0.41***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.250 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment top	2	3.00	0.45	0.15	*0.41*	*Cum*
		Side walls	2	5.00	0.45	0.15	*0.68*	*Cum*
		TOTAL					***1.08***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.905 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment	1	3.00	0.45	1.5	*2.03*	*Cum*
		TOTAL					***2.03***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment	2	3.00		1.5	*9.00*	Sqm
			2		0.45	1.5	*1.35*	Sqm
		TOTAL					**10.35**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.850 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall	2	3.15	0.3	0.5	*0.95*	*Cum*
		TOTAL					**0.95**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	1	3.15		1.25	*3.94*	*Sqm*
		TOTAL					**3.94**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	1	3.15		1.25	*3.94*	*Sqm*
		TOTAL					**3.94**	***Sqm***
4	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Crest	1	1.80	0.45	0.3	*0.24*	*Cum*
		TOTAL					***0.24***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-4.050 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.75	0.30	0.50	*0.41*	*Cum*
		TOTAL					**0.41**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.75		1.25	*3.44*	*Sqm*
		TOTAL					**3.44**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	2.75		1.25	*3.44*	*Sqm*
		TOTAL					**3.44**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-4.800 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.5	0.3	0.5	*0.38*	*Cum*
		TOTAL					**0.38**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall D/S	1	2.50		1.25	*3.13*	*Sqm*
		TOTAL					**3.13**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall D/S	1	2.50		1.25	*3.13*	*Sqm*
		TOTAL					**3.13**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.200 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall	1	2.50	0.45	1.5	*1.69*	*Cum*
		TOTAL					***1.69***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall	2	2.50		1.5	*7.50*	Sqm
			2		0.45	1.5	*1.35*	Sqm
		TOTAL					**8.85**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF AKAUNA MINOR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.000 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		U/S Abutment wall	1	2.50	0.30	0.5	*0.38*	*Cum*
		TOTAL					***0.38***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		U/S Abutment wall	2	2.50		0.5	*2.50*	Sqm
			2		0.30	0.5	*0.30*	Sqm
		TOTAL					**2.80**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.620 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.135 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall	2	3	0.3	0.5	*0.90*	*Cum*
		TOTAL					**0.90**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	2	3.00		1.25	*7.50*	*Sqm*
		TOTAL					**7.50**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	3.00		1.25	*7.50*	*Sqm*
		TOTAL					**7.50**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.600 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing Wall U/S	1	5.00	0.45	0.61	*1.37*	*Cum*
		Wing Wall D/S	2	5.00	0.45	0.61	*2.75*	*Cum*
		TOTAL					***4.12***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall U/S	2	5.00		0.61	*6.10*	Sqm
		Wing Wall D/S	2		0.45	0.61	*0.55*	Sqm
		TOTAL					**6.65**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.185 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing Wall U/S	1	4.00	0.45	0.61	*1.10*	*Cum*
		Wing Wall D/S	2	4.00	0.45	0.61	*2.20*	*Cum*
		TOTAL					***3.29***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall U/S	2	4.00		0.61	*4.88*	Sqm
		Wing Wall D/S	2		0.45	0.61	*0.55*	Sqm
		TOTAL					**5.43**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.005 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor Rise	1	5.00	2.20	0.763	*8.39*	*Cum*
		Abutment	2	5.00	1.20	1.5	*18.00*	*Cum*
		TOTAL					***26.39***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor Rise	2	5.00		0.763	*7.63*	Sqm
			2		2.20	0.763	*3.36*	Sqm
		TOTAL					**10.99**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-3.610 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	2	3.00		1.25	*7.50*	*Sqm*
		TOTAL					**7.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	3.00		1.25	*7.50*	*Sqm*
		TOTAL					**7.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-4.600 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet wall	2	2.5	0.3	0.5	*0.75*	*Cum*
		TOTAL					**0.75**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	2	2.50		1.25	*6.25*	*Sqm*
		TOTAL					**6.25**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	2.50		1.25	*6.25*	*Sqm*
		TOTAL					**6.25**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.590 Km)								
		New Structure as per site						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.910 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet wall	2	6.50		1.25	*16.25*	*Sqm*
		TOTAL					**16.25**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet wall	2	6.50		1.25	*16.25*	*Sqm*
		TOTAL					**16.25**	***Sqm***

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per RCD 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 10 no., Total Seigniorage charges					**75785.95**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025& PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025& PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 157 nos. outlet, Total Seigniorage charges					**172727.17**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*	*9.56*		*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**PL MARCH 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	Sl-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	Sl-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Head Mason	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	**Reference**		**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Deo Minor
(Total Cost – Rs. 1.40 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (DEO MINOR)								
S. No.	**Items**	**Qty.**	**Unit**	**Rate**	**Seigniorage Charges**	**Amount (Rs.) including Seigniorage Charges**	**Reference for Rate**	**Page No.**
1	Earthwork							
	DEO MINOR	1	No.	3970656.21	0.00	₹ 39,70,656.21	AOC Earthwork Deo mr	7
2	Falls							
	DEO MINOR							
	0.457 m Fall at Ch. 1.630 Km	1	No.	478482.76	4057.67	₹ 4,82,540.43	Fall (AOC) Deo Mr.	11
	1.066 m Fall at Ch. 1.900 Km	1	No.	1054836.41	9024.96	₹ 10,63,861.37		12
	0.610 m Fall at Ch. 2.250 Km	1	No.	374803.65	3083.77	₹ 3,77,887.42		13
	1.520 m Fall at Ch. 2.500 Km	1	No.	656271.76	5464.74	₹ 6,61,736.50		14
	0.915 m Fall at Ch. 2.800 Km	1	No.	1111681.20	9705.54	₹ 11,21,386.74		15
3	Pipe Culvert							
	Pipe Culvert at km 2.15	1	No.	360828.94	2845.11	₹ 3,63,674.05	Pipe Culvert AOC	32
4	*Brick Work*	1	No.	3371124.70	8957.62	₹ 33,80,082.32	Brick Sec	36
5	*Repair of Structures*							
	DEO MINOR	8	No.	475602.993	1646.20	₹ 4,77,249.19	Abstract (Repair St.)	37
	Approach Road	2	No.	521018.55	7578.59	₹ 10,57,194.29	Approach Road AOC	47
6	Outlets							
	DEO MINOR	8	No.	127744.47	1100.17	₹ 10,30,757.13	Outlet-AOC	51
7	Kilometer Stone	3	No.	3853.40	0.00	₹ 11,560.20	Rates '!F61	82
	TOTAL (In Rs.)					**13998585.85**		
	TOTAL (In Lacs)					**139.99**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

DEO MINOR

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	1.725	0.863	86.250	3.086	1.543	154.300
200	100	1.407	1.566	156.600	2.093	2.590	258.950
300	100	0.481	0.944	94.400	3.349	2.721	272.100
400	100	0.243	0.362	36.200	2.984	3.167	316.650
500	100	2.279	1.261	126.100	2.127	2.556	255.550
600	100	0.696	1.488	148.750	3.612	2.870	286.950
700	100	0.544	0.620	62.000	2.461	3.037	303.650
800	100	0.201	0.373	37.250	6.147	4.304	430.400
900	100	0.000	0.101	10.050	8.736	7.442	744.150
1000	100	3.779	1.890	188.950	1.467	5.102	510.150
1100	100	0.107	1.943	194.300	3.709	2.588	258.800
1200	100	0.104	0.106	10.550	5.979	4.844	484.400
1300	100	0.374	0.239	23.900	2.914	4.447	444.650
1400	100	0.000	0.187	18.700	5.882	4.398	439.800
1500	100	0.441	0.221	22.050	1.569	3.726	372.550
1600	100	0.000	0.221	22.050	4.494	3.032	303.150
1700	100	0.109	0.055	5.450	3.452	3.973	397.300
1800	100	0.000	0.055	5.450	5.941	4.697	469.650
1900	100	2.518	1.259	125.900	0.751	3.346	334.600
2000	100	0.421	1.470	146.950	2.852	1.802	180.150
2100	100	0.436	0.429	42.850	2.416	2.634	263.400
2200	100	0.353	0.395	39.450	2.796	2.606	260.600
2300	100	0.666	0.510	50.950	1.136	1.966	196.600
2400	100	0.341	0.504	50.350	2.510	1.823	182.300
2500	100	4.438	2.390	238.950	0.837	1.674	167.350
2600	100	0.526	2.482	248.200	3.252	2.045	204.450
2700	100	0.319	0.423	42.250	3.045	3.149	314.850
2800	100	0.922	0.621	62.050	1.941	2.493	249.300
Total				**2296.900**			**9056.750**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**2296.900**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**9056.750**
NET QUANTITY OF EARTHWORK IN FILLING							**6759.85**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
DEO MINOR (0.000 TO 2.850 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.360	360	2.650	954.00	Sqm
0.360 - 1.250	890	2.270	2020.30	Sqm
1.250 - 1.830	580	2.010	1165.80	Sqm
1.830 - 1.950	120	1.540	184.80	Sqm
1.950 - 2.850	900	1.260	1134.00	Sqm
	TOTAL		**5458.90**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.360	360	2.650	0.15	143.10	Cum
0.360 - 1.250	890	2.270	0.15	303.05	Cum
1.250 - 1.830	580	2.010	0.15	174.87	Cum
1.830 - 1.950	120	1.540	0.15	27.72	Cum
1.950 - 2.850	900	1.260	0.15	170.10	Cum
	TOTAL			**818.84**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR DEO MINOR						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	5458.90	Sqm	**11.80**	64438.98418
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	2296.90	Cum	**156.50**	359464.85
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	918.76	Cum	**17.22**	15818.76328
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	6759.85	Cum	**165.12**	1116159.13
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	2027.96	Cum	**174.89**	354669.05
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	1689.96	Cum	**217.92**	368276.63
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3041.93	Cum	**319.14**	970802.34
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			818.84	Cum	**196.10**	160573.54
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	9056.75	Cum	**61.88**	560452.92
TOTAL COST OF EARTHWORK (in Rs.)						**3970656.21**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**39.707**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR DEO MINOR				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***5458.90***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	2296.900	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	918.76	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	6759.850	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	2027.96	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1689.96	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3041.93	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	818.84	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	9056.75	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR DEO MINOR								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.630 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	23.83	Cum	**195.20**	4650.97			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.16	Cum	**6381.70**	52104.41	2.65	3.67	7.35
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	28.92	Cum	**6914.20**	199981.15	11.93	12.44	24.87
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.53	Cum	**8151.40**	4321.06	0.30	0.21	0.42
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.68	MT	**73574.90**	50115.00			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	125.91	Sqm	**578.60**	72853.10			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.48	Sqm	**680.10**	5084.43			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.13	Cum	**694.61**	91.17			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.13	Cum	**1237.00**	162.36			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.13	Cum	**1377.70**	180.82			0.13
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.13	Cum	**516.50**	67.79			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.07	Sqm	**63.20**	573.35			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	4.30	Cum	**149.30**	641.81			

15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	16.32	Cum	**1075.00**	17541.67			
	Coarse Aggregates (100 Km lead)	32.77	Cum	**1398.00**	45815.56			
	Cement (30 km lead)	14.88	MT	**742.00**	11038.55			
	Boulder (60 Km lead)	0.13	Cum	**1159.00**	152.12			
	Brick (15 km lead)	448.00	No.	**3.18**	1424.64			
	Steel (30 Km lead)	0.68	MT	**742.00**	505.41			
	TOTAL (In Rs.)				**478482.76**			
	TOTAL (In Rs.)				**478482.76**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	16.32	Cum	**584.64**	9540.06	954.01		
	Coarse Aggregate	32.77	Cum	**944.26**	30945.50	3094.55		
	Boulders	0.13	Cum	**694.61**	91.17	9.12		
	Total					4057.67		
	For 1 nos. fall, Total Seigniorage charges					**4057.67**		

	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 1.900 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	137.83	Cum	**195.20**	26904.01			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.11	Cum	**6381.70**	77250.69	3.92	5.45	10.89
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	64.66	Cum	**6914.20**	447105.89	26.67	27.81	55.61
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	8.22	Cum	**8151.40**	67030.92	4.66	3.21	6.50
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.80	MT	**73574.90**	132595.93			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	195.66	Sqm	**578.60**	113208.04			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.72	Sqm	**680.10**	3890.85			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.57	Sqm	**63.20**	352.20			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	36.69	Cum	**149.30**	5477.94			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	36.46	Cum	**1075.00**	39194.74			
	Coarse Aggregates (100 Km lead)	73.00	Cum	**1398.00**	102057.75			
	Cement (30 km lead)	35.26	MT	**742.00**	26162.08			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	343.00	No.	**3.18**	1090.74			
	Steel (30 Km lead)	1.80	MT	**742.00**	1337.22			
	TOTAL (In Rs.)				**1054836.41**			
	TOTAL (In Rs.)				**1054836.41**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	36.46	Cum	**584.64**	21316.11	2131.61		
	Coarse Aggregate	73.00	Cum	**944.26**	68933.51	6893.35		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					9024.96		
	For 1 nos. fall, Total Seigniorage charges					**9024.96**		

	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.250 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	32.39	Cum	**195.20**	6321.79			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	6.14	Cum	**6381.70**	39165.80	1.99	2.76	5.52
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	22.16	Cum	**6914.20**	153193.26	9.14	9.53	19.05
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.46	Cum	**8151.40**	3725.35	0.26	0.18	0.36
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.52	MT	**73574.90**	38390.02			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	102.70	Sqm	**578.60**	59421.30			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.24	Sqm	**680.10**	3560.32			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.06	Sqm	**63.20**	509.42			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	8.29	Cum	**149.30**	1237.19			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	12.47	Cum	**1075.00**	13402.24			
	Coarse Aggregates (100 Km lead)	24.94	Cum	**1398.00**	34864.68			
	Cement (30 km lead)	11.39	MT	**742.00**	8449.20			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	314.00	No.	**3.18**	998.52			
	Steel (30 Km lead)	0.52	MT	**742.00**	387.16			
	TOTAL (In Rs.)				**374803.65**			
	TOTAL (In Rs.)				**374803.65**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.47	Cum	**584.64**	7288.82	728.88		
	Coarse Aggregate	24.94	Cum	**944.26**	23548.87	2354.89		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					3083.77		
	For 1 nos. fall, Total Seigniorage charges					**3083.77**		

	SHARDA TYPE FALL OF HEIGHT 1.52 METER AT CH. 2.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	79.87	Cum	**195.20**	15590.53			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.59	Cum	**6381.70**	48468.48	2.46	3.42	6.84
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.90	Cum	**6914.20**	296620.75	17.70	18.45	36.89
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.59	Cum	**8151.40**	4789.48	0.33	0.23	0.46
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.01	MT	**73574.90**	74332.75			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	164.32	Sqm	**578.60**	95073.99			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.24	Sqm	**680.10**	3560.32			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.31	Sqm	**63.20**	651.67			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.58	Cum	**149.30**	3520.52			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	22.09	Cum	**1075.00**	23751.01			
	Coarse Aggregates (100 Km lead)	44.19	Cum	**1398.00**	61782.93			
	Cement (30 km lead)	20.49	MT	**742.00**	15203.76			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	314.00	No.	**3.18**	998.52			
	Steel (30 Km lead)	1.01	MT	**742.00**	749.64			
	TOTAL (In Rs.)				**656271.76**			
	TOTAL (In Rs.)				**656271.76**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	22.09	Cum	**584.64**	12917.01	1291.70		
	Coarse Aggregate	44.19	Cum	**944.26**	41730.43	4173.04		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					5464.74		
	For 1 nos. fall, Total Seigniorage charges					**5464.74**		

	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 2.800 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	122.93	Cum	**195.20**	23995.27			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	17.28	Cum	**6381.70**	110281.03	5.60	7.78	15.55
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	58.87	Cum	**6914.20**	407063.33	24.29	25.32	50.63
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.62	Cum	**8151.40**	127326.17	8.86	6.09	12.34
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.76	MT	**73574.90**	129230.18			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	192.19	Sqm	**578.60**	111199.54			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.24	Sqm	**680.10**	3560.32			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.50	Sqm	**63.20**	347.42			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	30.50	Cum	**149.30**	4553.91			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	39.18	Cum	**1075.00**	42122.64			
	Coarse Aggregates (100 Km lead)	78.52	Cum	**1398.00**	109776.41			
	Cement (30 km lead)	38.74	MT	**742.00**	28745.78			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	314.00	No.	**3.18**	998.52			
	Steel (30 Km lead)	1.76	MT	**742.00**	1303.28			
	TOTAL (In Rs.)				**1111681.20**			
	TOTAL (In Rs.)				**1111681.20**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	39.18	Cum	**584.64**	22908.45	2290.84		
	Coarse Aggregate	78.52	Cum	**944.26**	74146.98	7414.70		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					9705.54		
	For 1 nos. fall, Total Seigniorage charges					**9705.54**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR DEO MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.630 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.456*	*0.564*	*1.605*	*Cum*
	Section 2-2	*2*	*2.50*	*1.182*	*0.564*	*3.333*	*Cum*
	Section 3-3	*2*	*2.20*	*1.062*	*0.364*	*1.701*	*Cum*
	Section 5-5	*2*	*2.51*	*1.606*	*0.564*	*4.539*	*Cum*
	Section 6-6	*2*	*1.23*	*1.062*	*0.364*	*0.949*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.850*	*0.850*	*0.452*	*Cum*
	U/S Floor	*1*	*2.00*	*0.850*	*1.307*	*2.222*	*Cum*
	D/S Floor	*1*	*2.50*	*0.850*	*0.900*	*1.913*	*Cum*
		1	*2.50*	*0.850*	*0.700*	*1.488*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.850*	*0.850*	*0.452*	*Cum*
	Toe Wall D/S Portion	*1*	*5.43*	*0.750*	*0.900*	*3.665*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*1.75*	*1.150*	*0.750*	*1.509*	*Cum*
						23.83	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.850*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.850*	*0.150*	*0.10*	*Cum*
		1	*3.82*	*0.850*	*0.150*	*0.49*	*Cum*
		1	*0.28*	*0.850*	*0.150*	*0.04*	*Cum*
		1	*1.20*	*0.850*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*0.850*	*0.150*	*0.10*	*Cum*
		1	*0.54*	*0.850*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.456*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.50*	*1.182*	*0.150*	*0.89*	*Cum*
	Section 3-3	*2*	*2.20*	*1.062*	*0.150*	*0.70*	*Cum*
	Section 5-5	*2*	*2.51*	*1.606*	*0.150*	*1.21*	*Cum*
	Section 6-6	*2*	*1.23*	*1.062*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*5.43*	*0.750*	*0.300*	*1.22*	*Cum*
	Toe Wall D/S Portion	*1*	*5.13*	*0.450*	*0.600*	*1.39*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.75*	*1.150*	*0.150*	*0.30*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**8.16**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.803*	*1.177*	*1.42*	*Cum*
		2	*0.75*	*1.306*	*0.500*	*0.98*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.666*	*0.720*	*2.40*	*Cum*
		2	*2.50*	*1.032*	*0.500*	*2.58*	*Cum*
	Section 3-3	*2*	*1.89*	*0.450*	*0.450*	*0.77*	*Cum*
		2	*1.89*	*0.606*	*0.520*	*1.19*	*Cum*
		2	*1.89*	*0.912*	*0.500*	*1.73*	*Cum*
	Section 5-5	*2*	*2.46*	*0.450*	*0.450*	*1.00*	*Cum*
		2	*2.46*	*0.803*	*1.177*	*4.65*	*Cum*
		2	*2.46*	*1.306*	*0.500*	*3.22*	*Cum*
	Section 6-6	*2*	*1.68*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.68*	*0.606*	*0.520*	*1.06*	*Cum*
		2	*1.68*	*0.912*	*0.500*	*1.54*	*Cum*
	Floor	*1*	*0.63*	*0.850*	*0.700*	*0.37*	*Cum*
		1	*4.50*	*0.850*	*0.550*	*2.10*	*Cum*
		1	*0.25*	*0.850*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.850*	*0.400*	*0.07*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*2.30*	*0.850*	*0.500*	*0.98*	*Cum*
		1	*0.63*	*0.850*	*0.700*	*0.37*	*Cum*
	Crest	*1*	*0.72*	*0.850*	*0.742*	*0.46*	*Cum*
	TOTAL					**28.92**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.850*	*0.150*	*0.08*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.08*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.08*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.53**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**28.92**	**0.00**	**0.087**	**7850.0**	**681.14**	**Kg**
	Total Weight in Metric Tonne					**0.68**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.177*	*3.54*	*Sqm*
		4		*0.803*	*1.177*	*3.78*	*Sqm*
		4	*0.75*		*0.500*	*1.50*	*Sqm*
		4		*1.306*	*0.500*	*2.61*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.720*	*7.20*	*Sqm*
		4		*0.666*	*0.720*	*1.92*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.032*	*0.500*	*2.06*	*Sqm*
	Section 3-3	*4*	*1.89*		*0.450*	*3.41*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.89*		*0.520*	*3.94*	*Sqm*
		4		*0.606*	*0.520*	*1.26*	*Sqm*
		4	*1.89*		*0.500*	*3.79*	*Sqm*
		4		*0.912*	*0.500*	*1.82*	*Sqm*
	Section 5-5	*4*	*2.46*		*0.450*	*4.43*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.46*		*1.177*	*11.59*	*Sqm*
		4		*0.803*	*1.177*	*3.78*	*Sqm*
		4	*2.46*		*0.500*	*4.92*	*Sqm*
		4		*1.306*	*0.500*	*2.61*	*Sqm*
	Section 6-6	*4*	*1.68*		*0.450*	*3.03*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.68*		*0.520*	*3.50*	*Sqm*
		4		*0.606*	*0.520*	*1.26*	*Sqm*
		4	*1.68*		*0.500*	*3.37*	*Sqm*
		4		*0.912*	*0.500*	*1.82*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.850*	*0.700*	*1.19*	*Sqm*
		2	*4.50*		*0.550*	*4.95*	*Sqm*
		2		*0.850*	*0.550*	*0.94*	*Sqm*
		2	*0.25*		*0.200*	*0.10*	*Sqm*
		2		*0.850*	*0.200*	*0.34*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.850*	*0.400*	*0.68*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.850*	*0.500*	*0.85*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.850*	*0.700*	*1.19*	*Sqm*
	Crest	*2*	*0.72*		*0.742*	*1.07*	*Sqm*
		2		*0.850*	*0.742*	*1.26*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.43*		*0.300*	*3.26*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*5.13*		*0.600*	*6.16*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*1.150*	*0.150*	*0.69*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**125.91**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.136*		*7.48*	*Sqm*
	TOTAL					**7.48**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.250*	*0.300*	**0.13**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.250*	*0.150*	**0.13**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.08*	*0.450*		*4.54*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.08*	*0.450*		*4.54*	*Sqm*
	TOTAL					**9.07**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.330		1.33	**Cum**
	Abutment						
	Section 1-1	2	*0.98*	*0.062*		*0.121*	*Cum*
	Section 2-2	2	*2.50*	*0.062*		*0.311*	*Cum*
	Section 3-3	2	*2.20*	*0.041*		*0.181*	*Cum*
	Section 5-5	2	*2.51*	*0.062*		*0.311*	*Cum*
	Section 6-6	2	*1.23*	*0.041*		*0.101*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.43*	*0.150*	*0.600*	*1.629*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**4.30**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.066 METER AT CH. 1.900 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.49*	*1.762*	*2.548*	*13.356*	*Cum*
	Section 2-2	*2*	*2.50*	*1.940*	*2.548*	*24.716*	*Cum*
	Section 3-3	*2*	*3.50*	*1.820*	*2.348*	*29.914*	*Cum*
	below bridge	*2*	*6.50*	*1.820*	*1.550*	*36.673*	*Cum*
	Section 5-5	*2*	*2.21*	*1.912*	*2.548*	*21.489*	*Cum*
	Section 6-6	*2*	*0.26*	*1.002*	*2.348*	*1.223*	*Cum*
	U/S Key Floor	*1*	*0.59*	*0.600*	*0.700*	*0.247*	*Cum*
	U/S Floor	*1*	*2.50*	*0.600*	*2.066*	*3.099*	*Cum*
	D/S Floor	*1*	*3.00*	*0.600*	*1.000*	*1.800*	*Cum*
		1	*3.80*	*0.600*	*0.800*	*1.824*	*Cum*
	D/S Key Floor	*1*	*0.65*	*0.600*	*0.950*	*0.371*	*Cum*
	Toe Wall D/S Portion	*1*	*4.46*	*0.750*	*0.750*	*2.509*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.450*	*0.608*	*Cum*
						137.83	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.62*	*0.600*	*0.150*	*0.06*	*Cum*
		1	*5.14*	*0.600*	*0.150*	*0.46*	*Cum*
		1	*0.50*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*2.05*	*0.600*	*0.150*	*0.18*	*Cum*
		1	*0.90*	*0.600*	*0.150*	*0.08*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.49*	*1.762*	*0.150*	*0.79*	*Cum*
	Section 2-2	*2*	*2.50*	*1.940*	*0.300*	*2.91*	*Cum*
	Section 3-3	*2*	*3.50*	*1.820*	*0.300*	*3.82*	*Cum*
	Section 5-5	*2*	*2.21*	*1.912*	*0.150*	*1.27*	*Cum*
	Section 6-6	*2*	*0.26*	*1.002*	*0.150*	*0.08*	*Cum*
	Toe Wall D/S Portion	*1*	*4.46*	*0.750*	*0.300*	*1.00*	*Cum*
	Toe Wall D/S Portion	*1*	*4.16*	*0.450*	*0.450*	*0.84*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.150*	*0.20*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.600*	*0.300*	*0.27*	*Cum*
	TOTAL					**12.11**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.41*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.41*	*0.956*	*1.686*	*4.55*	*Cum*
		2	*1.41*	*1.612*	*0.650*	*2.96*	*Cum*
	Section 2-2	*2*	*2.65*	*0.820*	*0.500*	*2.17*	*Cum*
		2	*2.65*	*1.155*	*1.117*	*6.84*	*Cum*
		2	*2.65*	*1.640*	*1.100*	*9.56*	*Cum*
	Section 3-3	*2*	*3.22*	*0.820*	*0.500*	*2.64*	*Cum*
		2	*3.22*	*1.095*	*0.917*	*6.47*	*Cum*
		2	*3.22*	*1.520*	*1.300*	*12.74*	*Cum*
	Section 5-5	*2*	*2.16*	*0.450*	*0.450*	*0.88*	*Cum*
		2	*2.16*	*0.956*	*1.686*	*6.97*	*Cum*
		2	*2.16*	*1.612*	*0.650*	*4.53*	*Cum*
	Section 6-6	*2*	*1.02*	*0.450*	*0.450*	*0.41*	*Cum*
		2	*1.02*	*0.576*	*0.420*	*0.49*	*Cum*
		2	*1.02*	*0.852*	*0.500*	*0.87*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.59*	*0.600*	*0.550*	*0.19*	*Cum*
		1	*5.50*	*0.600*	*0.650*	*2.15*	*Cum*
		1	*0.57*	*0.600*	*0.350*	*0.12*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*3.60*	*0.600*	*0.500*	*1.08*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.65*	*0.600*	*0.800*	*0.31*	*Cum*
	Crest	*1*	*1.02*	*0.600*	*1.342*	*0.82*	*Cum*
	TOTAL					**64.66**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.600*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.19*	*0.450*	*0.050*	*0.14*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.19*	*0.450*	*0.050*	*0.14*	*Cum*
	Slab Bridge						
	Slab	*1*	*1.40*	*5.500*	*0.328*	*2.53*	*Cum*
	Wearing coat	*1*	*1.40*	*4.500*	*0.070*	*0.44*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**8.22**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*1.86*		*1.578*	*91.0*	*Kg*
a2	*10*	*7*	*5.88*		*0.616*	*25.4*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*1.78*		*0.616*	*20.8*	*Kg*
a5	*10*	*5*	*5.80*		*0.616*	*17.9*	*Kg*
x1	*12*	*22*	*2.50*		*0.888*	*48.8*	*Kg*
x2	*16*	*22*	*1.32*		*1.578*	*45.7*	*Kg*
x3	*12*	*20*	*1.30*		*0.888*	*23.1*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**64.66**	**0.00**	**0.194**	**7850.0**	**1522.9**	**Kg**
	Total Reinforcement Steel (in kg)					*1802.2*	*Kg*
	Total Weight in Metric Tonne					**1.80**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.41*		*0.450*	*2.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.41*		*1.686*	*9.52*	*Sqm*
		4		*0.956*	*1.686*	*6.45*	*Sqm*
		4	*1.41*		*0.650*	*3.67*	*Sqm*
		4		*1.612*	*0.650*	*4.19*	*Sqm*
	Section 2-2	*4*	*2.65*		*0.500*	*5.30*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.65*		*1.117*	*11.84*	*Sqm*
		4		*1.155*	*1.117*	*5.16*	*Sqm*
		4	*2.65*		*1.100*	*11.66*	*Sqm*
		4		*1.640*	*1.100*	*7.22*	*Sqm*
	Section 3-3	*4*	*3.22*		*0.500*	*6.45*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.22*		*0.917*	*11.83*	*Sqm*
		4		*1.095*	*0.917*	*4.02*	*Sqm*
		4	*3.22*		*1.300*	*16.76*	*Sqm*
		4		*1.520*	*1.300*	*7.90*	*Sqm*
	Section 5-5	*4*	*2.16*		*0.450*	*3.89*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.16*		*1.686*	*14.57*	*Sqm*
		4		*0.956*	*1.686*	*6.45*	*Sqm*
		4	*2.16*		*0.650*	*5.62*	*Sqm*
		4		*1.612*	*0.650*	*4.19*	*Sqm*
	Section 6-6	*4*	*1.02*		*0.450*	*1.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.02*		*0.420*	*1.71*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*1.02*		*0.500*	*2.04*	*Sqm*
		4		*0.852*	*0.500*	*1.70*	*Sqm*
	Floor	*2*	*0.59*		*0.550*	*0.65*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*5.50*		*0.650*	*7.15*	*Sqm*
		2		*0.600*	*0.650*	*0.78*	*Sqm*
		2	*0.57*		*0.350*	*0.40*	*Sqm*
		2		*0.600*	*0.350*	*0.42*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*3.60*		*0.500*	*3.60*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*0.600*	*0.800*	*0.96*	*Sqm*
	Crest	*2*	*1.02*		*1.342*	*2.73*	*Sqm*
		2		*0.600*	*1.342*	*1.61*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.46*		*0.300*	*2.68*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.16*		*0.450*	*3.74*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**195.66**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.907*		*5.72*	*Sqm*
	TOTAL					**5.72**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.19*	*0.450*		*2.79*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.19*	*0.450*		*2.79*	*Sqm*
	TOTAL					**5.57**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.177		3.18	**Cum**
	Abutment						
	Section 1-1	2	*1.49*	*1.540*		*4.582*	*Cum*
	Section 2-2	2	*2.50*	*1.822*		*9.110*	*Cum*
	Section 3-3	2	*3.50*	*1.612*		*11.281*	*Cum*
	Section 5-5	2	*2.21*	*1.540*		*6.793*	*Cum*
	Section 6-6	2	*0.26*	*0.530*		*0.276*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.46*	*0.150*	*0.450*	*1.338*	*Cum*
		2	*1.50*	0.150	*0.300*	*0.135*	*Cum*
	TOTAL					**36.69**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.250 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.434*	*1.316*	*3.678*	*Cum*
	Section 2-2	*2*	*1.99*	*1.068*	*1.316*	*5.588*	*Cum*
	Section 3-3	*2*	*2.45*	*0.948*	*1.116*	*5.184*	*Cum*
	Section 5-5	*2*	*2.10*	*1.584*	*1.316*	*8.774*	*Cum*
	Section 6-6	*2*	*0.85*	*0.948*	*1.116*	*1.792*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	U/S Floor	*1*	*1.75*	*0.600*	*1.460*	*1.533*	*Cum*
	D/S Floor	*1*	*2.00*	*0.600*	*0.900*	*1.080*	*Cum*
		1	*2.75*	*0.600*	*0.700*	*1.155*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.750*	*2.357*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.450*	*0.608*	*Cum*
						32.39	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*3.32*	*0.600*	*0.150*	*0.30*	*Cum*
		1	*0.28*	*0.600*	*0.150*	*0.03*	*Cum*
		1	*1.20*	*0.600*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.434*	*0.150*	*0.42*	*Cum*
	Section 2-2	*2*	*1.99*	*1.068*	*0.150*	*0.64*	*Cum*
	Section 3-3	*2*	*2.45*	*0.948*	*0.150*	*0.70*	*Cum*
	Section 5-5	*2*	*2.10*	*1.584*	*0.150*	*1.00*	*Cum*
	Section 6-6	*2*	*0.85*	*0.948*	*0.150*	*0.24*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.300*	*0.94*	*Cum*
	Toe Wall D/S Portion	*1*	*3.89*	*0.450*	*0.450*	*0.79*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.150*	*0.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.300*	*0.54*	*Cum*
	TOTAL					**6.14**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.792*	*1.140*	*1.36*	*Cum*
		2	*0.75*	*1.284*	*0.500*	*0.97*	*Cum*
	Section 2-2	*2*	*1.99*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*1.99*	*0.609*	*0.530*	*1.28*	*Cum*
		2	*1.99*	*0.918*	*0.500*	*1.82*	*Cum*
	Section 3-3	*2*	*2.20*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.20*	*0.549*	*0.330*	*0.80*	*Cum*
		2	*2.20*	*0.798*	*0.500*	*1.76*	*Cum*
	Section 5-5	*2*	*2.06*	*0.450*	*0.450*	*0.83*	*Cum*
		2	*2.06*	*0.792*	*1.140*	*3.72*	*Cum*
		2	*2.06*	*1.284*	*0.500*	*2.65*	*Cum*
	Section 6-6	*2*	*1.25*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.25*	*0.549*	*0.330*	*0.45*	*Cum*
		2	*1.25*	*0.798*	*0.500*	*0.99*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*3.75*	*0.600*	*0.550*	*1.24*	*Cum*
		1	*0.50*	*0.600*	*0.200*	*0.06*	*Cum*
		1	*0.20*	*0.600*	*0.400*	*0.05*	*Cum*
		1	*2.55*	*0.600*	*0.500*	*0.77*	*Cum*
		1	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
	Crest	*1*	*0.74*	*0.600*	*0.867*	*0.38*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**22.16**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.600*	*0.150*	*0.05*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.96*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.96*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.46**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**22.16**	**0.00**	**0.066**	**7850.0**	**521.78**	**Kg**
	Total Weight in Metric Tonne					**0.52**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.140*	*3.43*	*Sqm*
		4		*0.792*	*1.140*	*3.61*	*Sqm*
		4	*0.75*		*0.500*	*1.50*	*Sqm*
		4		*1.284*	*0.500*	*2.57*	*Sqm*
	Section 2-2	*4*	*1.99*		*0.450*	*3.58*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.99*		*0.530*	*4.21*	*Sqm*
		4		*0.609*	*0.530*	*1.29*	*Sqm*
		4	*1.99*		*0.500*	*3.98*	*Sqm*
		4		*0.918*	*0.500*	*1.84*	*Sqm*
	Section 3-3	*4*	*2.20*		*0.450*	*3.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.20*		*0.330*	*2.91*	*Sqm*
		4		*0.549*	*0.330*	*0.72*	*Sqm*
		4	*2.20*		*0.500*	*4.40*	*Sqm*
		4		*0.798*	*0.500*	*1.60*	*Sqm*
	Section 5-5	*4*	*2.06*		*0.450*	*3.71*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.06*		*1.140*	*9.40*	*Sqm*
		4		*0.792*	*1.140*	*3.61*	*Sqm*
		4	*2.06*		*0.500*	*4.12*	*Sqm*
		4		*1.284*	*0.500*	*2.57*	*Sqm*
	Section 6-6	*4*	*1.25*		*0.450*	*2.24*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.25*		*0.330*	*1.64*	*Sqm*
		4		*0.549*	*0.330*	*0.72*	*Sqm*
		4	*1.25*		*0.500*	*2.49*	*Sqm*
		4		*0.798*	*0.500*	*1.60*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*3.75*		*0.550*	*4.13*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*0.600*	*0.200*	*0.24*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.600*	*0.400*	*0.48*	*Sqm*
		2	*2.55*		*0.500*	*2.55*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
	Crest	*2*	*0.74*		*0.867*	*1.28*	*Sqm*
		2		*0.600*	*0.867*	*1.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.19*		*0.300*	*2.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.89*		*0.450*	*3.50*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**102.70**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.745*		*5.24*	*Sqm*
	TOTAL					**5.24**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.96*	*0.450*		*4.03*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.96*	*0.450*		*4.03*	*Sqm*
	TOTAL					**8.06**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.958		0.96	**Cum**
	Abutment						
	Section 1-1	2	*0.97*	*0.408*		*0.795*	*Cum*
	Section 2-2	2	*1.99*	*0.405*		*1.610*	*Cum*
	Section 3-3	2	*2.45*	*0.275*		*1.348*	*Cum*
	Section 5-5	2	*2.10*	*0.408*		*1.717*	*Cum*
	Section 6-6	2	*0.85*	*0.275*		*0.466*	*Cum*
	D/S protection						
	Toe wall	2	*4.19*	*0.150*	*0.450*	*1.257*	*Cum*
		2	*1.50*	0.150	*0.300*	*0.135*	*Cum*
	TOTAL					**8.29**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.52 METER AT CH. 2.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.88*	*1.980*	*2.556*	*8.907*	*Cum*
	Section 2-2	*2*	*3.94*	*1.068*	*2.556*	*21.505*	*Cum*
	Section 3-3	*2*	*3.00*	*0.948*	*2.356*	*13.401*	*Cum*
	Section 5-5	*2*	*1.99*	*2.130*	*2.556*	*21.679*	*Cum*
	Section 6-6	*2*	*0.85*	*0.948*	*2.356*	*3.784*	*Cum*
	U/S Key Floor	*1*	*0.58*	*0.600*	*0.650*	*0.224*	*Cum*
	U/S Floor	*1*	*1.75*	*0.600*	*2.670*	*2.804*	*Cum*
	D/S Floor	*1*	*2.75*	*0.600*	*1.150*	*1.898*	*Cum*
		1	*3.50*	*0.600*	*0.950*	*1.995*	*Cum*
	D/S Key Floor	*1*	*0.79*	*0.600*	*1.500*	*0.709*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.750*	*2.357*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.450*	*0.608*	*Cum*
						79.87	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.56*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*5.67*	*0.600*	*0.150*	*0.51*	*Cum*
		1	*0.50*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*1.47*	*0.600*	*0.150*	*0.13*	*Cum*
		1	*1.51*	*0.600*	*0.150*	*0.14*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.88*	*1.980*	*0.150*	*0.52*	*Cum*
	Section 2-2	*2*	*3.94*	*1.068*	*0.150*	*1.26*	*Cum*
	Section 3-3	*2*	*3.00*	*0.948*	*0.150*	*0.85*	*Cum*
	Section 5-5	*2*	*1.99*	*2.130*	*0.150*	*1.27*	*Cum*
	Section 6-6	*2*	*0.85*	*0.948*	*0.150*	*0.24*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.300*	*0.94*	*Cum*
	Toe Wall D/S Portion	*1*	*3.89*	*0.450*	*0.450*	*0.79*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.150*	*0.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.300*	*0.54*	*Cum*
	TOTAL					**7.59**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.65*	*0.450*	*0.450*	*0.27*	*Cum*
		2	*0.65*	*1.065*	*2.050*	*2.86*	*Cum*
		2	*0.65*	*1.830*	*0.800*	*1.92*	*Cum*
	Section 2-2	*2*	*3.94*	*0.450*	*0.450*	*1.60*	*Cum*
		2	*3.94*	*0.609*	*0.530*	*2.54*	*Cum*
		2	*3.94*	*0.918*	*0.800*	*5.79*	*Cum*
	Section 3-3	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.549*	*0.330*	*1.00*	*Cum*
		2	*2.75*	*0.798*	*0.650*	*2.85*	*Cum*
	Section 5-5	*2*	*1.95*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.95*	*1.065*	*2.050*	*8.50*	*Cum*
		2	*1.95*	*1.830*	*0.800*	*5.70*	*Cum*
	Section 6-6	*2*	*1.25*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.25*	*0.549*	*0.330*	*0.45*	*Cum*
		2	*1.25*	*0.798*	*0.650*	*1.29*	*Cum*
	Floor	*1*	*0.58*	*0.600*	*0.500*	*0.17*	*Cum*
		1	*6.00*	*0.600*	*0.800*	*2.88*	*Cum*
		1	*0.57*	*0.600*	*0.350*	*0.12*	*Cum*
		1	*0.20*	*0.600*	*0.550*	*0.07*	*Cum*
		1	*3.30*	*0.600*	*0.650*	*1.29*	*Cum*
		1	*0.79*	*0.600*	*1.350*	*0.64*	*Cum*
	Crest	*1*	*1.09*	*0.600*	*0.867*	*0.57*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**42.90**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.600*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.46*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.46*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.59**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**42.90**	**0.00**	**0.129**	**7850.0**	**1010.30**	**Kg**
	Total Weight in Metric Tonne					**1.01**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.65*		*0.450*	*1.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.65*		*2.050*	*5.37*	*Sqm*
		4		*1.065*	*2.050*	*8.73*	*Sqm*
		4	*0.65*		*0.800*	*2.09*	*Sqm*
		4		*1.830*	*0.800*	*5.86*	*Sqm*
	Section 2-2	*4*	*3.94*		*0.450*	*7.09*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.94*		*0.530*	*8.35*	*Sqm*
		4		*0.609*	*0.530*	*1.29*	*Sqm*
		4	*3.94*		*0.800*	*12.60*	*Sqm*
		4		*0.918*	*0.800*	*2.94*	*Sqm*
	Section 3-3	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.330*	*3.63*	*Sqm*
		4		*0.549*	*0.330*	*0.72*	*Sqm*
		4	*2.75*		*0.650*	*7.15*	*Sqm*
		4		*0.798*	*0.650*	*2.07*	*Sqm*
	Section 5-5	*4*	*1.95*		*0.450*	*3.51*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.95*		*2.050*	*15.97*	*Sqm*
		4		*1.065*	*2.050*	*8.73*	*Sqm*
		4	*1.95*		*0.800*	*6.23*	*Sqm*
		4		*1.830*	*0.800*	*5.86*	*Sqm*
	Section 6-6	*4*	*1.25*		*0.450*	*2.24*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.25*		*0.330*	*1.64*	*Sqm*
		4		*0.549*	*0.330*	*0.72*	*Sqm*
		4	*1.25*		*0.650*	*3.24*	*Sqm*
		4		*0.798*	*0.650*	*2.07*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*6.00*		*0.800*	*9.60*	*Sqm*
		2		*0.600*	*0.800*	*0.96*	*Sqm*
		2	*0.57*		*0.350*	*0.40*	*Sqm*
		2		*0.600*	*0.350*	*0.42*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*3.30*		*0.650*	*4.29*	*Sqm*
		2		*0.600*	*0.650*	*0.78*	*Sqm*
		2	*0.79*		*1.350*	*2.13*	*Sqm*
		2		*0.600*	*1.350*	*1.62*	*Sqm*
	Crest	*2*	*1.09*		*0.867*	*1.88*	*Sqm*
		2		*0.600*	*0.867*	*1.04*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.19*		*0.300*	*2.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.89*		*0.450*	*3.50*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**164.32**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.745*		*5.24*	*Sqm*
	TOTAL					**5.24**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.46*	*0.450*		*5.16*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.46*	*0.450*		*5.16*	*Sqm*
	TOTAL					**10.31**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		5.300		5.30	**Cum**
	Abutment						
	Section 1-1	2	*0.88*	*1.376*		*2.422*	*Cum*
	Section 2-2	2	*3.94*	*0.674*		*5.310*	*Cum*
	Section 3-3	2	*3.00*	*0.478*		*2.868*	*Cum*
	Section 5-5	2	*1.99*	*1.376*		*5.479*	*Cum*
	Section 6-6	2	*0.85*	*0.478*		*0.810*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.19*	*0.150*	*0.450*	*1.257*	*Cum*
		2	*1.50*	0.150	*0.300*	*0.135*	*Cum*
	TOTAL					**23.58**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 2.800 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*1.617*	*2.008*	*7.104*	*Cum*
	Section 2-2	*2*	*3.00*	*1.653*	*2.008*	*19.915*	*Cum*
	Section 3-3	*2*	*6.00*	*1.533*	*1.808*	*33.260*	*Cum*
	below bridge	*2*	*6.50*	*1.533*	*1.550*	*30.890*	*Cum*
	Section 5-5	*2*	*2.07*	*1.767*	*2.008*	*14.664*	*Cum*
	Section 6-6	*2*	*1.80*	*1.002*	*1.808*	*6.504*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	U/S Floor	*1*	*2.50*	*0.600*	*1.753*	*2.630*	*Cum*
	D/S Floor	*1*	*3.00*	*0.600*	*0.850*	*1.530*	*Cum*
		1	*7.25*	*0.600*	*0.650*	*2.828*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.600*	*0.850*	*0.319*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.750*	*2.357*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.450*	*0.608*	*Cum*
						122.93	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.42*	*0.600*	*0.150*	*0.04*	*Cum*
		1	*0.14*	*0.600*	*0.150*	*0.01*	*Cum*
		1	*4.60*	*0.600*	*1.150*	*3.17*	*Cum*
		1	*0.35*	*0.600*	*2.150*	*0.46*	*Cum*
		1	*5.62*	*0.600*	*0.150*	*0.51*	*Cum*
		1	*0.73*	*0.600*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.600*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.09*	*1.617*	*0.150*	*0.53*	*Cum*
	Section 2-2	*2*	*3.00*	*1.653*	*0.300*	*2.98*	*Cum*
	Section 3-3	*2*	*6.00*	*1.533*	*0.300*	*5.52*	*Cum*
	Section 5-5	*2*	*2.07*	*1.767*	*0.150*	*1.10*	*Cum*
	Section 6-6	*2*	*1.80*	*1.002*	*0.150*	*0.54*	*Cum*
	Toe Wall D/S Portion	*1*	*4.19*	*0.750*	*0.300*	*0.94*	*Cum*
	Toe Wall D/S Portion	*1*	*3.89*	*0.450*	*0.450*	*0.79*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.150*	*0.20*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.600*	*0.300*	*0.27*	*Cum*
	TOTAL					**17.28**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.87*	*0.450*	*0.450*	*0.35*	*Cum*
		2	*0.87*	*0.884*	*1.445*	*2.22*	*Cum*
		2	*0.87*	*1.467*	*0.600*	*1.53*	*Cum*
	Section 2-2	*2*	*3.00*	*0.820*	*0.500*	*2.46*	*Cum*
		2	*3.00*	*1.012*	*0.639*	*3.88*	*Cum*
		2	*3.00*	*1.353*	*1.000*	*8.12*	*Cum*
	Section 3-3	*2*	*6.70*	*0.820*	*0.500*	*5.49*	*Cum*
		2	*6.70*	*0.952*	*0.439*	*5.60*	*Cum*
		2	*6.70*	*1.233*	*1.200*	*19.83*	*Cum*
	Section 5-5	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.884*	*1.445*	*5.16*	*Cum*
		2	*2.02*	*1.467*	*0.500*	*2.97*	*Cum*
	Section 6-6	*2*	*1.10*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.10*	*0.576*	*0.420*	*0.53*	*Cum*
		2	*1.10*	*0.852*	*0.500*	*0.94*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*8.500*	*0.500*	*-6.97*	*Cum*
	Floor	*1*	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
		1	*5.50*	*0.600*	*0.500*	*1.65*	*Cum*
		1	*4.52*	*0.600*	*0.100*	*0.27*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.57*	*0.600*	*0.250*	*0.09*	*Cum*
		1	*0.20*	*0.600*	*0.450*	*0.05*	*Cum*
		1	*7.05*	*0.600*	*0.550*	*2.33*	*Cum*
		1	*0.63*	*0.600*	*0.700*	*0.26*	*Cum*
	Crest	*1*	*0.84*	*0.600*	*1.170*	*0.59*	*Cum*
	TOTAL					**58.87**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.600*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.11*	*0.450*	*0.050*	*0.14*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.11*	*0.450*	*0.050*	*0.14*	*Cum*
	Slab Bridge						
	Slab	*1*	*1.40*	*8.500*	*0.347*	*4.13*	*Cum*
	Wearing coat	*1*	*1.40*	*7.500*	*0.075*	*0.79*	*Cum*
	Dirt wall	*2*	*0.40*	*8.500*	*0.500*	*3.40*	*Cum*
	500 mm thick pedastial	*2*	*0.82*	*8.500*	*0.500*	*6.97*	*Cum*
	TOTAL					**15.62**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*47*	*1.86*		*1.578*	*138.0*	*Kg*
a2	*10*	*7*	*8.88*		*0.616*	*38.3*	*Kg*
a3	*10*	*2*	*8.40*		*0.616*	*10.4*	*Kg*
a4	*10*	*31*	*1.78*		*0.616*	*34.0*	*Kg*
a5	*10*	*5*	*8.80*		*0.616*	*27.1*	*Kg*
x1	*12*	*22*	*2.50*		*0.888*	*48.8*	*Kg*
x2	*16*	*22*	*1.32*		*1.578*	*45.7*	*Kg*
x3	*12*	*24*	*1.30*		*0.888*	*27.7*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**58.87**	**0.00**	**0.177**	**7850.0**	**1386.5**	**Kg**
	Total Reinforcement Steel (in kg)					*1756.4*	*Kg*
	Total Weight in Metric Tonne					**1.76**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.87*		*0.450*	*1.56*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.87*		*1.445*	*5.02*	*Sqm*
		4		*0.884*	*1.445*	*5.11*	*Sqm*
		4	*0.87*		*0.600*	*2.09*	*Sqm*
		4		*1.467*	*0.600*	*3.52*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.00*		*0.639*	*7.67*	*Sqm*
		4		*1.012*	*0.639*	*2.59*	*Sqm*
		4	*3.00*		*1.000*	*12.00*	*Sqm*
		4		*1.353*	*1.000*	*5.41*	*Sqm*
	Section 3-3	*4*	*6.70*		*0.500*	*13.40*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*6.70*		*0.439*	*11.77*	*Sqm*
		4		*0.952*	*0.439*	*1.67*	*Sqm*
		4	*6.70*		*1.200*	*32.16*	*Sqm*
		4		*1.233*	*1.200*	*5.92*	*Sqm*
	Section 5-5	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*1.445*	*11.69*	*Sqm*
		4		*0.884*	*1.445*	*5.11*	*Sqm*
		4	*2.02*		*0.500*	*4.04*	*Sqm*
		4		*1.467*	*0.500*	*2.93*	*Sqm*
	Section 6-6	*4*	*1.10*		*0.450*	*1.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.10*		*0.420*	*1.85*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*1.10*		*0.500*	*2.21*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.852*	*0.500*	*1.70*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*0.600*	*0.500*	*0.60*	*Sqm*
		2	*4.52*		*0.100*	*0.90*	*Sqm*
		2		*0.600*	*0.100*	*0.12*	*Sqm*
		2	*0.57*		*0.250*	*0.29*	*Sqm*
		2		*0.600*	*0.250*	*0.30*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*0.600*	*0.450*	*0.54*	*Sqm*
		2	*7.05*		*0.550*	*7.76*	*Sqm*
		2		*0.600*	*0.550*	*0.66*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.600*	*0.700*	*0.84*	*Sqm*
	Crest	*2*	*0.84*		*1.170*	*1.96*	*Sqm*
		2		*0.600*	*1.170*	*1.40*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.19*		*0.300*	*2.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.89*		*0.450*	*3.50*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.600*	*0.300*	*0.72*	*Sqm*
	TOTAL					**192.19**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.745*		*5.24*	*Sqm*
	TOTAL					**5.24**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.11*	*0.450*		*2.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.11*	*0.450*		*2.75*	*Sqm*
	TOTAL					**5.50**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.490		3.49	**Cum**
	Abutment						
	Section 1-1	2	*1.09*	*0.995*		*2.177*	*Cum*
	Section 2-2	2	*3.00*	*1.125*		*6.750*	*Cum*
	Section 3-3	2	*6.00*	*0.915*		*10.980*	*Cum*
	Section 5-5	2	*2.07*	*0.980*		*4.050*	*Cum*
	Section 6-6	2	*1.80*	*0.463*		*1.662*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.19*	*0.150*	*0.450*	*1.257*	*Cum*
		2	*1.50*	0.150	*0.300*	*0.135*	*Cum*
	TOTAL					**30.50**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT OF DEO MINOR AT KM 2.150									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	55.31	Cum	**156.50**	8655.70			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.51	Cum	**6381.70**	79809.99	4.05	5.63	11.26
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.02	Cum	**6914.20**	90038.25	5.37	5.60	11.20
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	96.14	Sqm	**578.60**	55627.97			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.26	MT	**73574.90**	18802.88			
7	M-151 RCD	Supplying 600 mm NP3 Pipe	7.50	Rm	**2532.61**	18994.58			
8	5.6.2.2	Labour Charges for Laying of 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**711.27**	5334.49			
9	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
10	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.39	Cum	**149.30**	1700.99			
11	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.19	Cum	**5021.30**	16027.99	0.37	1.02	

12	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	10.20	Sqm	**340.20**	3470.04	0.53	0.15	
13	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.20	Sqm	**63.20**	265.44	0.006		
14		**Carriage of materials**							
		Coarse Sand (60 Km lead)	12.40	Cum	**1075.00**	13327.47			
		Coarse Aggregates (100 Km lead)	22.45	Cum	**1398.00**	31391.50			
		Cement (30 km lead)	10.33	MT	**742.00**	7662.20			
		Steel (30 km lead)	0.26	MT	**742.00**	189.63			
		Boulder (60 km lead)	0.00	Cum	**1159.00**	0.00			
		Hume Pipe (30 Km Lead)	7.50	Rm	**919.00**	6892.50			
		TOTAL (In Rs.)				**360828.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	12.40	Cum	**584.64**	7248.16	724.82		
		Coarse Aggregate	22.45	Cum	**944.26**	21202.96	2120.30		
		Boulder	0.00	Cum	**694.61**	0.00	0.00		
		Total					**2845.11**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT DEO MR. AT KM 2.150							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.60*	*0.85*	*1.20*	*0.61*	*Cum*
	D/S Toe Wall	*1*	*0.60*	*0.85*	*1.20*	*0.61*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.35*	*1.00*	*1.20*	*8.04*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.35*	*1.05*	*2.10*	*14.77*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.35*	*1.00*	*1.20*	*10.44*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.35*	*1.05*	*2.10*	*19.18*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*0.60*	*0.45*	*0.69*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*0.60*	*0.45*	*0.96*	*Cum*
	TOTAL					**55.31**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.60*	*0.45*	*1.09*	*0.30*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.60*	*0.85*	*0.30*	*0.15*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.60*	*0.45*	*1.09*	*0.30*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*0.60*	*0.45*	*0.69*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*0.60*	*0.45*	*0.96*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.35*	*1.00*	*0.30*	*2.01*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.35*	*1.00*	*0.30*	*2.61*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.29*	*0.41*	*3.92*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.49*	*0.20*	*1.42*	*Cum*
	TOTAL					**12.51**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section A-A	*2*	*3.35*	*0.60*	*0.90*	*3.62*	*Cum*
		2	*3.35*	*0.45*	*0.33*	*0.99*	*Cum*
		2	*3.35*	*0.30*	*0.50*	*1.01*	*Cum*

	D/S Transition Walls (Left & Right)						
	Section B-B	*2*	*4.35*	*0.60*	*0.90*	*4.70*	*Cum*
		2	*4.35*	*0.45*	*0.33*	*1.29*	*Cum*
		2	*4.35*	*0.30*	*0.50*	*1.31*	*Cum*
	Collar Joint	*2*	*1.19*	*0.30*	*1.20*	*0.86*	*Cum*
	Deduct Hume Pipe Area	*2*		*0.37*		*-0.75*	*Cum*
	TOTAL					**13.02**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.60*		*1.09*	*1.31*	*Sqm*
		2		*0.45*	*1.09*	*0.98*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.60*		*1.09*	*1.31*	*Sqm*
		2		*0.45*	*1.09*	*0.98*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.60*	*0.45*	*0.54*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*0.60*	*0.45*	*0.54*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*3.35*		*0.30*	*4.02*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*4.35*		*0.30*	*5.22*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section A-A	*4*	*3.35*		*0.90*	*12.06*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*3.35*		*0.33*	*4.42*	*Sqm*
		4		*0.45*	*0.33*	*0.59*	*Sqm*
		4	*3.35*		*0.50*	*6.70*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section B-B	*4*	*4.35*		*0.90*	*15.66*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*4.35*		*0.33*	*5.74*	*Sqm*
		4		*0.45*	*0.33*	*0.59*	*Sqm*
		4	*4.35*		*0.50*	*8.70*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.41*	*6.08*	*Sqm*
		2		*1.29*	*0.41*	*1.04*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.20*	*5.85*	*Sqm*
		4		*0.49*	*0.20*	*0.38*	*Sqm*
	TOTAL					**96.14**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*13.02*	*0.25%*	*0.03*	*7850*	*255.56*	*Kg*
	TOTAL Weight of steel (in kg)					255.56	Kg
	TOTAL Weight of Steel (in Tonne)					**0.26**	**MT**
7	Providing 600 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**

8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.35*	*0.18*		*1.21*	*Cum*
	D/S Transitions Walls	*2*	*4.35*	*0.18*		*1.57*	*Cum*
	Above Hume Pipe	*1*	*8.62*			*8.62*	*Cum*
	TOTAL					**11.39**	**Cum**
10	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	3	2.66	0.2	*3.19*	*Cum*
	TOTAL					**3.19**	**Cum**
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**	**3**		**1.7**	**10.20**	*Sqm*
	TOTAL					**10.20**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**	**3**		**0.7**	**4.20**	*Sqm*
	TOTAL					**4.20**	***Sqm***

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Deo Minor	1950-2850	900.000	0.532	478.800	Cum	**5021.30**	₹ 24,04,198.44	55.16	153.22
	Total				***478.80***			***₹ 24,04,198.44***	***55.16***	***153.22***
2	**Carriage of materials**									
	Coarse Sand (60 Km lead)				153.216	Cum	**1075.00**	₹ 1,64,707.20		
	Cement (30 km lead)				55.158	MT	**742.00**	₹ 40,927.06		
	Brick (15 km lead)				239400.00	No.	**3.18**	₹ 7,61,292.00		
	Carriage of materials Total (In Rs.)							**₹ 9,66,926.26**		
	SUB TOTAL (In Rs.)							**₹ 33,71,124.70**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	153.22	Cum		**584.64**	89576.20	8957.62			
	Total						**₹ 8,957.62**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF DEO MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.610 M)	0.350	₹ 81,963.17
2	FALL (1.067 M)/ CULVERT	0.500	₹ 44,271.75
3	BRIDGE	0.775	₹ 20,902.86
4	FALL (1.220 M)	1.000	₹ 38,027.03
5	CD WORK	1.106	₹ 8,269.45
6	FALL (0.914 M)/ CULVERT	1.235	₹ 34,435.50
7	FALL (0.914 M)/ CULVERT	1.450	₹ 31,448.13
8	CD WORK	1.490	₹ 20,290.13
9	FALL (0.457 M)/CULVERT	1.630	₹ 0.00
10	FALL (1.066 M)/ CULVERT	1.900	₹ 92,634.24
11	CULVERT	2.150	₹ 28,607.34
12	FALL (0.610 M)	2.250	₹ 0.00
13	FALL (1.520 M)	2.500	₹ 74,753.40
Total In Rs.			**₹ 4,75,602.99**
Total In Lakhs.			**₹ 4.76**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		2.000	₹ 10,42,037.10
Total In Rs.			**₹ 10,42,037.10**
Total In Lakhs.			**₹ 10.42**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF DEO MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch. 0.350 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.50	Cum	**6914.20**	51828.84	3.09	3.22	6.45
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	23.49	Sqm	**578.60**	13592.01			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.22	Cum	**1075.00**	3465.03			
		Coarse Aggregates (100 Km lead)	6.45	Cum	**1398.00**	9012.29			
		Cement (30 km lead)	3.09	MT	**742.00**	2294.34			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**81963.17**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.22	Cum	**584.64**	1884.46	188.45		
		Coarse Aggregate	6.45	Cum	**944.26**	6087.23	608.72		
		Total					**797.17**		
		AOC FOR FALL (Ch.-0.500 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.18	Cum	**6914.20**	28933.85	1.73	1.80	3.60
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	9.60	Sqm	**578.60**	5556.93			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.80	Cum	**1075.00**	1934.38			
		Coarse Aggregates (100 Km lead)	3.60	Cum	**1398.00**	5031.18			
		Cement (30 km lead)	1.73	MT	**742.00**	1280.83			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**44271.75**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.80	Cum	**584.64**	1052.01	105.20		
		Coarse Aggregate	3.60	Cum	**944.26**	3398.24	339.82		
		Total					**445.03**		
		AOC FOR BRIDGE (Ch.-0.775 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.74	Cum	**5021.30**	8729.93	0.20	0.56	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	15.80	Sqm	**340.20**	5374.61	0.82	0.23	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	15.80	Sqm	**63.20**	998.46	0.02		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.79	Cum	**1075.00**	846.03			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.04	MT	**742.00**	773.88			
		Brick (15 km lead)	869.00	No.	**3.18**	2763.42			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**20902.86**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.79	Cum	**584.64**	460.11	46.01		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**46.01**		
		AOC FOR FALL (Ch.-1.000 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	4.32	Cum	**6381.70**	27568.94	0.50	1.38	
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.42	Sqm	**578.60**	7186.21			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.38	Cum	**1075.00**	1486.08			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.50	MT	**742.00**	369.27			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**38027.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.38	Cum	**584.64**	808.21	80.82		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**80.82**		
		AOC FOR CD WORKS (Ch.-1.106 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	155.00	Sqm	**11.80**	1829.68			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	14.04	Sqm	**340.20**	4776.41	0.73	0.20	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	14.04	Sqm	**63.20**	887.33	0.021		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.20	Cum	**1075.00**	220.36			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.75	MT	**742.00**	555.68			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**8269.45**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	119.84	11.98		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**11.98**		
		AOC FOR BRIDGE/FALL (Ch.-1.235 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	125.00	Sqm	**11.80**	1475.55			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	71.86	Sqm	**340.20**	24446.54	3.73	1.05	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	71.86	Sqm	**63.20**	4541.51	0.11		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.05	Cum	**1075.00**	1127.83			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.83	MT	**742.00**	2844.07			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**34435.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.05	Cum	**584.64**	613.37	61.34		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**61.34**		
		AOC FOR BRIDGE/FALL (Ch.-1.450 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.70	Cum	**5021.30**	8518.72	0.20	0.54	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	15.42	Sqm	**340.20**	5244.58	0.80	0.23	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	15.42	Sqm	**63.20**	974.30	0.02		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.07	Cum	**6914.20**	7397.14	0.44	0.46	0.92
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.82	Sqm	**578.60**	1629.29			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.23	Cum	**1075.00**	1320.10			
		Coarse Aggregates (100 Km lead)	0.92	Cum	**1398.00**	1286.26			
		Cement (30 km lead)	1.46	MT	**742.00**	1082.61			
		Brick (15 km lead)	848.00	No.	**3.18**	2696.64			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**31448.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.23	Cum	**584.64**	717.94	71.79		
		Coarse Aggregate	0.92	Cum	**944.26**	868.78	86.88		
		Total					**158.67**		
		AOC FOR CD WORKS (Ch.-1.490 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	135.00	Sqm	**11.80**	1593.59			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.85	Cum	**5021.30**	9297.74	0.21	0.59	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	12.34	Sqm	**340.20**	4199.56	0.64	0.18	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	12.34	Sqm	**63.20**	780.17	0.02		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.77	Cum	**1075.00**	830.72			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.87	MT	**742.00**	646.85			
		Brick (15 km lead)	925.00	No.	**3.18**	2941.50			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**20290.13**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.77	Cum	**584.64**	451.79	45.18		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**45.18**		
		AOC FOR FALL (Ch.-1.900 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	37.16	Cum	**2492.58**	92634.24			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**92634.24**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							

		AOC FOR BRIDGE (Ch.-2.150 Km)							
1	**New Structure is proposed at this location**								
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.48	Cum	**2492.58**	28607.34			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**28607.34**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-2.500 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	29.28	Cum	**2492.58**	72982.74			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**74753.40**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF DEO MINOR								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch. 0.350 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				150.00	Sqm
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Wing walls	2	3.00	0.45	1.2	*3.24*	*Cum*
		Floor	1	10.00	1.40	0.304	*4.26*	*Cum*
		TOTAL					***7.50***	***Cum***
3	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		Wing walls	4	3.00		1.2	14.40	Sqm
			4		0.45	1.2	2.16	Sqm
		Floor	2	10.00		0.304	*6.08*	Sqm
			2		1.40	0.304	*0.85*	Sqm
		TOTAL					**23.49**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.500 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				130.00	Sqm
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Floor	1	10.00	1.85	0.153	*2.83*	*Cum*
		Crest	1	1.85	0.60	1.22	*1.35*	*Cum*
		TOTAL					***4.18***	***Cum***
3	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		Floor	2	10.00		0.153	*3.06*	Sqm
			2		1.85	0.153	*0.57*	Sqm
		Crest	2	1.85		1.22	*4.51*	Sqm
			2		0.60	1.22	*1.46*	Sqm
		TOTAL					**9.60**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.775 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				120.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall U/S & D/S	2	3.77952	0.25	0.92	*1.74*	*Cum*
		TOTAL					**1.74**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall D/S	2	3.78		2.09	*15.80*	*Sqm*
		TOTAL					**15.80**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall D/S	2	3.78		2.09	*15.80*	*Sqm*
		TOTAL					**15.80**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.000 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Wing Wall	1	3.00	0.45	1.8	*2.43*	*Cum*
		Abutment Top	2	14.00	0.45	0.15	*1.89*	*Cum*
		TOTAL					**4.32**	***Cum***
3	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall	2	3.00		1.8	*10.80*	Sqm
			2		0.45	1.8	*1.62*	Sqm
		TOTAL					**12.42**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORKS (Ch.-1.106 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**155.00**	**Sqm**
		TOTAL					**155.00**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall D/S	2	5.20		1.35	*14.04*	*Sqm*
		TOTAL					**14.04**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet Wall D/S	2	5.20		1.35	*14.04*	*Sqm*
		TOTAL					**14.04**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.235 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**125.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.05		1.0596	*6.46*	*Sqm*
		Wing Wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment	2	8.00		1.5	*24.00*	*Sqm*
		TOTAL					**71.86**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.05		1.0596	*6.46*	*Sqm*
		Wing Wall	4	3.00		3.45	*41.40*	*Sqm*
		Abutment	2	8.00		1.5	*24.00*	*Sqm*
		TOTAL					**71.86**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.450 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall U/S & D/S	2	3.68808	0.25	0.92	*1.70*	*Cum*
		TOTAL					**1.70**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall D/S	2	3.69		2.09	*15.42*	*Sqm*
		TOTAL					**15.42**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall D/S	2	3.69		2.09	*15.42*	*Sqm*
		TOTAL					**15.42**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	1.30	1.83	0.45	*1.07*	*Cum*
		TOTAL					***1.07***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Crest	2	1.30		0.45	*1.17*	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			2		1.83	0.45	*1.65*	Sqm
		TOTAL					**2.82**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CD WORKS (Ch.-1.490 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**135.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Abutment U/S & D/S	2	4.572	0.45	0.45	*1.85*	*Cum*
		TOTAL					**1.85**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall D/S	2	4.57		1.35	*12.34*	*Sqm*
		TOTAL					**12.34**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall D/S	2	4.57		1.35	*12.34*	*Sqm*
		TOTAL					**12.34**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.900 Km)						
1		**New Fall is proposed at this location.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Side walls	2	12.00	0.46	2	*22.08*	*Cum*
		Wing Wall	4	3.00	0.4	2	*9.60*	*Cum*
		Floor	1	10.00	0.914	0.6	*5.48*	*Cum*
		TOTAL					**37.16**	**Cum**
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.150 Km)						
1		**New Structure is proposed at this location**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Parapet	2	6.00	0.475	0.61	*3.48*	*Cum*
		Wing Wall	4	5.00	0.4	1	*8.00*	*Cum*
		TOTAL					**11.48**	**Cum**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.500 Km)						
1		**New Fall is proposed at this location.**						
2	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
3	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Side walls	2	12.00	0.46	2	*22.08*	*Cum*
		Wing Wall	3	3.00	0.4	2	*7.20*	*Cum*
		TOTAL					**29.28**	**Cum**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per RCD 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 2 no., Total Seigniorage charges					**15157.19**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				

5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
		TOTAL (In Rs.)				**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 8 nos. outlet, Total Seigniorage charges					**8801.38**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					

		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13

		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	

	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15% I like the coffee				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	

	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15% I like the coffee				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					

	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.15	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15% I like the coffee				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	

	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.473	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.40**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	

		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**

12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**

13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					

	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	

						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9

		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					

		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					

		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**

20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	

		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**

		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**

22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	

						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	

		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	**Reference**		**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.40**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Hetampur Dy.
(Total Cost – Rs. 7.53 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND
ABSTRACT OF COST (HETAMPUR DISTRIBUTARY)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	HETAMPUR DISTRIBUTARY	1	Job	28318155.70	0.00	₹ 2,83,18,155.70	AOC Earthwork Hetampur DY.	10
2	Falls							
	HETAMPUR DISTRIBUTARY							
	1.676 m Fall at Ch. 1.930 Km	1	No.	3674363.58	34878.60	₹ 37,09,242.18	Fall (AOC) Hetampur Dy.	13
	0.914 m Fall at Ch. 2.400 Km	1	No.	2341191.36	21972.50	₹ 23,63,163.86		15
	1.220 m Fall at Ch. 4.380 Km	1	No.	2742006.72	25571.15	₹ 27,67,577.87		17
	1.520 m Fall at Ch. 5.980 Km	1	No.	2827790.16	25413.71	₹ 28,53,203.86		19
	1.220 m Fall at Ch. 6.280 Km	1	No.	3213324.97	28233.74	₹ 32,41,558.71		20
	1.372 m Fall at Ch. 6.470 Km	1	No.	2524733.23	22686.68	₹ 25,47,419.91		21
	0.610 m Fall at Ch. 8.790 Km	1	No.	1471565.81	13054.31	₹ 14,84,620.12		23
	1.220 m Fall at Ch. 9.170 Km	1	No.	2161108.43	19459.36	₹ 21,80,567.79		24
	1.220 m Fall at Ch. 9.520 Km	1	No.	2175053.80	19459.36	₹ 21,94,513.16		25
	0.914 m Fall at Ch. 9.650 Km	1	No.	1811637.20	16015.25	₹ 18,27,652.45		26
	0.914 m Fall at Ch. 11.460 Km	1	No.	2336388.46	20416.26	₹ 23,56,804.72		27
	1.220 m Fall at Ch. 12.510 Km	1	No.	1733415.18	15220.09	₹ 17,48,635.27		29
3	*Pipe Culvert*							
	At Km 14.020	1	No.	1046248.50	9399.32	₹ 10,55,647.83	Pipe Culvert AOC Hetampur Dy.	67
	At Km 14.150	1	No.	1046248.50	9399.32	₹ 10,55,647.83		69
4	*CD Work*							
	At Km13.875	1	No.	3528140.45	29351.47	₹ 35,57,491.92	C.D. Main canals-AOC	78
5	*Repair of Structures*							
	HETAMPUR DISTRIBUTARY	21	No.	1941540.606	10537.91	₹ 19,52,078.52	Abstract (Repair St.) Hetampur Dy.	83
	APPROACH ROAD	4	No.	521018.55	7578.59	₹ 21,14,388.58	Approach Road AOC	110
6	Outlets							
	HETAMPUR DISTRIBUTARY	61	No.	127744.47	1100.17	₹ 78,59,523.08	Outlet-AOC	114
7	Kilometer Stone	18	No.	3853.40	0.00	₹ 69,361.20	Rates '!F61	148
	TOTAL (In Rs.)					**₹ 7,52,57,254.53**		
	TOTAL (In Lacs)					**752.57**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

CONCRETE MIX RATIO TABLE

Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK
HETAMPUR DISTRIBUTARY (0.000 TO 23.600 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	3.335	1.668	166.750	5.407	2.704	270.350
200	100	1.191	2.263	226.300	5.303	5.355	535.500
300	100	0.058	0.625	62.450	11.742	8.523	852.250
400	100	1.465	0.762	76.150	5.035	8.389	838.850
500	100	4.902	3.184	318.350	3.624	4.330	432.950
600	100	2.898	3.900	390.000	5.200	4.412	441.200
700	100	2.599	2.749	274.850	7.011	6.106	610.550
800	100	1.612	2.106	210.550	3.972	5.492	549.150
900	100	1.233	1.423	142.250	2.428	3.200	320.000
1000	100	5.076	3.155	315.450	3.047	2.738	273.750
1100	100	2.200	3.638	363.800	2.346	2.697	269.650
1200	100	8.731	5.466	546.550	2.421	2.384	238.350
1300	100	1.571	5.151	515.100	5.085	3.753	375.300
1400	100	1.142	1.357	135.650	6.558	5.822	582.150
1500	100	0.618	0.880	88.000	6.758	6.658	665.800
1600	100	0.520	0.569	56.900	8.178	7.468	746.800
1700	100	0.697	0.609	60.850	1.710	4.944	494.400
1800	100	0.863	0.780	78.000	12.222	6.966	696.600
1900	100	1.105	0.984	98.400	13.715	12.969	1296.850
2000	100	6.200	3.653	365.250	2.999	8.357	835.700
2100	100	4.316	5.258	525.800	2.741	2.870	287.000
2200	100	2.900	3.608	360.800	2.242	2.492	249.150
2300	100	1.666	2.283	228.300	3.822	3.032	303.200
2400	100	12.213	6.940	693.950	1.676	2.749	274.900
2500	100	4.474	8.344	834.350	3.042	2.359	235.900
2600	100	3.696	4.085	408.500	3.374	3.208	320.800
2700	100	3.008	3.352	335.200	3.087	3.231	323.050
2800	100	2.827	2.918	291.750	2.998	3.043	304.250
2900	100	2.918	2.873	287.250	3.323	3.161	316.050
3000	100	3.082	3.000	300.000	3.257	3.290	329.000
3100	100	3.286	3.184	318.400	3.073	3.165	316.500
3200	100	2.710	2.998	299.800	2.542	2.808	280.750
3300	100	2.640	2.675	267.500	1.975	2.259	225.850
3400	100	2.518	2.579	257.900	3.299	2.637	263.700
3500	100	2.762	2.640	264.000	6.858	5.079	507.850
3600	100	2.121	2.442	244.150	6.387	6.623	662.250
3700	100	1.931	2.026	202.600	5.362	5.875	587.450
3800	100	1.983	1.957	195.700	4.328	4.845	484.500
3900	100	2.261	2.122	212.200	5.430	4.879	487.900
4000	100	5.347	3.804	380.400	3.314	4.372	437.200
4100	100	6.249	5.798	579.800	4.965	4.140	413.950
4200	100	5.720	5.985	598.450	2.492	3.729	372.850

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	3.725	4.723	472.250	4.591	3.542	354.150
4400	100	12.331	8.028	802.800	1.793	3.192	319.200
4500	100	8.252	10.292	1029.150	1.689	1.741	174.100
4600	100	5.340	6.796	679.600	1.180	1.435	143.450
4700	100	1.934	3.637	363.700	3.892	2.536	253.600
4800	100	0.892	1.413	141.300	4.989	4.441	444.050
4900	100	0.010	0.451	45.100	10.260	7.625	762.450
5000	100	7.088	3.549	354.900	4.792	7.526	752.600
5100	100	5.937	6.513	651.250	4.475	4.634	463.350
5200	100	4.840	5.389	538.850	5.005	4.740	474.000
5300	100	3.821	4.331	433.050	4.772	4.889	488.850
5400	100	3.590	3.706	370.550	3.186	3.979	397.900
5500	100	4.479	4.035	403.450	4.198	3.692	369.200
5600	100	2.320	3.400	339.950	8.131	6.165	616.450
5700	100	0.381	1.351	135.050	10.567	9.349	934.900
5800	100	4.310	2.346	234.550	4.393	7.480	748.000
5900	100	1.113	2.712	271.150	4.869	4.631	463.100
6000	100	4.588	2.851	285.050	5.277	5.073	507.300
6100	100	2.285	3.437	343.650	3.968	4.623	462.250
6200	100	0.987	1.636	163.600	9.614	6.791	679.100
6300	100	1.894	1.441	144.050	4.931	7.273	727.250
6400	100	0.153	1.024	102.350	7.364	6.148	614.750
6500	100	12.111	6.132	613.200	5.374	6.369	636.900
6600	100	9.480	10.796	1079.550	11.349	8.362	836.150
6700	100	8.812	9.146	914.600	1.514	6.432	643.150
6800	100	6.511	7.662	766.150	9.454	5.484	548.400
6900	100	4.666	5.589	558.850	3.796	6.625	662.500
7000	100	2.689	3.678	367.750	4.095	3.946	394.550
7100	100	3.982	3.336	333.550	5.306	4.701	470.050
7200	100	1.625	2.804	280.350	4.558	4.932	493.200
7300	100	1.293	1.459	145.900	5.751	5.155	515.450
7400	100	1.145	1.219	121.900	8.017	6.884	688.400
7500	100	0.558	0.852	85.150	4.224	6.121	612.050
7600	100	0.916	0.737	73.700	3.251	3.738	373.750
7700	100	1.733	1.325	132.450	2.406	2.829	282.850
7800	100	2.062	1.898	189.750	4.434	3.420	342.000
7900	100	3.255	2.659	265.850	3.541	3.988	398.750
8000	100	4.622	3.939	393.850	2.725	3.133	313.300
8100	100	5.973	5.298	529.750	2.923	2.824	282.400
8200	100	7.559	6.766	676.600	2.223	2.573	257.300
8300	100	12.927	10.243	1024.300	2.969	2.596	259.600
8400	100	14.491	13.709	1370.900	5.044	4.007	400.650
8500	100	12.644	13.568	1356.750	4.394	4.719	471.900
8600	100	9.027	10.836	1083.550	2.020	3.207	320.700
8700	100	7.373	8.200	820.000	5.703	3.862	386.150

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	5.693	6.533	653.300	1.129	3.416	341.600
8900	100	2.014	3.854	385.350	4.985	3.057	305.700
9000	100	0.894	1.454	145.400	9.414	7.200	719.950
9100	100	0.389	0.642	64.150	4.451	6.933	693.250
9200	100	3.284	1.837	183.650	2.853	3.652	365.200
9300	100	1.835	2.560	255.950	7.621	5.237	523.700
9400	100	2.576	2.206	220.550	4.233	5.927	592.700
9500	100	1.861	2.219	221.850	5.342	4.788	478.750
9600	100	3.989	2.925	292.500	2.854	4.098	409.800
9700	100	10.981	7.485	748.500	3.378	3.116	311.600
9800	100	7.070	9.026	902.550	3.075	3.227	322.650
9900	100	7.905	7.488	748.750	4.257	3.666	366.600
10000	100	1.457	4.681	468.100	1.873	3.065	306.500
10100	100	2.256	1.857	185.650	1.097	1.485	148.500
10200	100	2.357	2.307	230.650	1.083	1.090	109.000
10300	100	2.588	2.473	247.250	1.232	1.158	115.750
10400	100	2.872	2.730	273.000	1.443	1.338	133.750
10500	100	3.182	3.027	302.700	1.731	1.587	158.700
10600	100	3.543	3.363	336.250	2.095	1.913	191.300
10700	100	3.954	3.749	374.850	2.525	2.310	231.000
10800	100	4.351	4.153	415.250	3.280	2.903	290.250
10900	100	4.838	4.595	459.450	2.296	2.788	278.800
11000	100	3.577	4.208	420.750	4.045	3.171	317.050
11100	100	3.055	3.316	331.600	6.336	5.191	519.050
11200	100	7.232	5.144	514.350	0.373	3.355	335.450
11300	100	4.951	6.092	609.150	2.993	1.683	168.300
11400	100	3.839	4.395	439.500	3.937	3.465	346.500
11500	100	6.405	5.122	512.200	2.254	3.096	309.550
11600	100	1.894	4.150	414.950	6.933	4.594	459.350
11700	100	0.019	0.957	95.650	7.819	7.376	737.600
11800	100	1.009	0.514	51.400	12.105	9.962	996.200
11900	100	0.375	0.692	69.200	11.130	11.618	1161.750
12000	100	2.003	1.189	118.900	5.832	8.481	848.100
12100	100	1.948	1.976	197.550	5.737	5.785	578.450
12200	100	2.724	2.336	233.600	5.249	5.493	549.300
12300	100	3.614	3.169	316.900	6.015	5.632	563.200
12400	100	4.355	3.985	398.450	7.861	6.938	693.800
12500	100	0.696	2.526	252.550	6.490	7.176	717.550
12600	100	2.476	1.586	158.600	5.317	5.904	590.350
12700	100	0.916	1.696	169.600	5.615	5.466	546.600
12800	100	0.080	0.498	49.800	8.574	7.095	709.450
12900	100	3.939	2.010	200.950	3.056	5.815	581.500
13000	100	0.000	1.970	196.950	3.135	3.096	309.550
13100	100	0.432	0.216	21.600	10.687	6.911	691.100
13200	100	4.556	2.494	249.400	2.577	6.632	663.200

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
13300	100	1.063	2.810	280.950	6.743	4.660	466.000
13400	100	0.000	0.532	53.150	20.901	13.822	1382.200
13500	100	1.384	0.692	69.200	5.418	13.160	1315.950
13600	100	7.440	4.412	441.200	5.250	5.334	533.400
13700	100	12.086	9.763	976.300	6.090	5.670	567.000
13800	100	6.509	9.298	929.750	6.783	6.437	643.650
13900	100	2.034	4.272	427.150	6.466	6.625	662.450
14000	100	0.750	1.392	139.200	4.490	5.478	547.800
14100	100	0.793	0.772	77.150	4.289	4.390	438.950
14200	100	14.565	7.679	767.900	5.196	4.743	474.250
14300	100	0.000	7.283	728.250	14.686	9.941	994.100
14400	100	0.000	0.000	0.000	14.896	14.791	1479.100
14500	100	1.383	0.692	69.150	2.436	8.666	866.600
14600	100	1.408	1.396	139.550	3.502	2.969	296.900
14700	100	1.471	1.440	143.950	4.497	4.000	399.950
14800	100	1.026	1.249	124.850	5.000	4.749	474.850
14900	100	0.970	0.998	99.800	6.338	5.669	566.900
15000	100	1.816	1.393	139.300	6.500	6.419	641.900
15100	100	0.650	1.233	123.300	6.409	6.455	645.450
15200	100	0.839	0.745	74.450	6.100	6.255	625.450
15300	100	1.026	0.933	93.250	5.816	5.958	595.800
15400	100	1.081	1.054	105.350	5.963	5.890	588.950
15500	100	1.127	1.104	110.400	6.106	6.035	603.450
15600	100	1.838	1.483	148.250	4.109	5.108	510.750
15700	100	1.904	1.871	187.100	2.754	3.432	343.150
15800	100	1.889	1.897	189.650	4.775	3.765	376.450
15900	100	2.591	2.240	224.000	4.059	4.417	441.700
16000	100	3.302	2.947	294.650	3.362	3.711	371.050
16100	100	2.366	2.834	283.400	1.512	2.437	243.700
Total				**55648.000**			**79936.200**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**55648.000**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**79936.200**
NET QUANTITY OF EARTHWORK IN FILLING							**24288.20**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
HETAMPUR DISTRIBUTARY (0.000 TO 23.700 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 3.550	3550	8.280	29394.00	Sqm
3.550 - 5.700	2150	7.700	16555.00	Sqm
5.700 - 8.550	2850	6.940	19779.00	Sqm
8.550 - 9.950	1400	6.390	8946.00	Sqm
9.950 - 12.050	2100	5.460	11466.00	Sqm
12.050 - 13.550	1500	4.380	6570.00	Sqm
13.550 - 14.400	850	3.880	3298.00	Sqm
14.400 - 15.050	650	3.470	2255.50	Sqm
15.050 - 15.650	600	3.170	1902.00	Sqm
15.650 - 16.050	400	2.890	1156.00	Sqm
16.050 - 16.200	150	1.120	168.00	Sqm
	TOTAL		**101489.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 3.550	3550	8.280	0.15	4409.10	Cum
3.550 - 5.700	2150	7.700	0.15	2483.25	Cum
5.700 - 8.550	2850	6.940	0.15	2966.85	Cum
8.550 - 9.950	1400	6.390	0.15	1341.90	Cum
9.950 - 12.050	2100	5.460	0.15	1719.90	Cum
12.050 - 13.550	1500	4.380	0.15	985.50	Cum
13.550 - 14.400	850	3.880	0.15	494.70	Cum
14.400 - 15.050	650	3.470	0.15	338.33	Cum
15.050 - 15.650	600	3.170	0.15	285.30	Cum
15.650 - 16.050	400	2.890	0.15	173.40	Cum
16.050 - 16.200	150	1.120	0.15	25.20	Cum
	TOTAL			**15223.43**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR HETAMPUR DISTRIBUTARY						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	101489.50	Sqm	**11.80**	1198021.632
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	55648.00	Cum	**156.50**	8708912
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	22259.20	Cum	**17.22**	383248.0904
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	24288.20	Cum	**165.12**	4010369.47
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	7286.46	Cum	**174.89**	1274328.99
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	6072.05	Cum	**217.92**	1323221.14
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	10929.69	Cum	**319.14**	3488101.27
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			15223.43	Cum	**196.10**	2985313.64
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	79936.20	Cum	**61.88**	4946639.48
TOTAL COST OF EARTHWORK (in Rs.)						**28318155.70**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**283.182**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR HETAMPUR DISTRIBUTARY				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***101489.50***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	55648.000	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	22259.2	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	24288.200	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	7286.46	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	6072.05	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	10929.69	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	15223.43	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
		1	79936.20	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR HETAMPUR DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 1.930 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	377.15	Cum	**195.20**	73619.61			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	36.25	Cum	**6381.70**	231316.88	11.74	16.31	32.62
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	284.28	Cum	**6914.20**	1965573.95	117.27	122.24	244.48
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.01	Cum	**8151.40**	16382.48	1.14	0.78	1.59
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.46	MT	**73574.90**	328380.06			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	564.83	Sqm	**578.60**	326807.88			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	45.71	Sqm	**680.10**	31088.73			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.00	Cum	**694.61**	4167.66			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	6.00	Cum	**1237.00**	7422.00			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	6.00	Cum	**1377.70**	8266.20			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	6.00	Cum	**516.50**	3099.00			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.88	Sqm	**63.20**	1319.33			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	72.27	Cum	**149.30**	10789.94			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	139.34	Cum	**1075.00**	149785.82			
	Coarse Aggregates (100 Km lead)	278.69	Cum	**1398.00**	389610.55			
	Cement (30 km lead)	130.15	MT	**742.00**	96570.82			
	Boulder (60 Km lead)	6.00	Cum	**1159.00**	6954.00			
	Brick (15 km lead)	2742.00	No.	**3.18**	8719.56			
	Steel (30 Km lead)	4.46	MT	**742.00**	3311.70			
TOTAL (In Rs.)					**3674363.58**			
TOTAL (In Rs.)					**3674363.58**			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	139.34	Cum	**584.64**	81461.19	8146.12		
	Coarse Aggregate	278.69	Cum	**944.26**	263157.12	26315.71		
	Boulders	6.00	Cum	**694.61**	4167.66	416.77		
	Total					34878.60		
	For 1 nos. fall, Total Seigniorage charges					**34878.60**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.400 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	254.43	Cum	**195.20**	49664.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	30.78	Cum	**6381.70**	196443.20	9.97	13.85	27.70
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	169.22	Cum	**6914.20**	1170024.40	69.80	72.76	145.53
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.64	Cum	**8151.40**	13395.15	0.93	0.64	1.30
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.66	MT	**73574.90**	195470.99			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	398.21	Sqm	**578.60**	230405.47			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	42.86	Sqm	**680.10**	29145.69			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.63	Cum	**694.61**	3907.18			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.63	Cum	**1237.00**	6958.13			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	5.63	Cum	**1377.70**	7749.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	5.63	Cum	**516.50**	2905.31			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.59	Sqm	**63.20**	1174.63			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	56.40	Cum	**149.30**	8420.08			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	87.26	Cum	**1075.00**	93802.05			
	Coarse Aggregates (100 Km lead)	174.53	Cum	**1398.00**	243995.56			
	Cement (30 km lead)	80.71	MT	**742.00**	59885.83			
	Boulder (60 Km lead)	5.63	Cum	**1159.00**	6519.38			
	Brick (15 km lead)	2571.00	No.	**3.18**	8175.78			
	Steel (30 Km lead)	2.66	MT	**742.00**	1971.32			
	TOTAL (In Rs.)				**2341191.36**			
	TOTAL (In Rs.)				**2341191.36**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	87.26	Cum	**584.64**	51014.35	5101.44		
	Coarse Aggregate	174.53	Cum	**944.26**	164803.47	16480.35		
	Boulders	5.63	Cum	**694.61**	3907.18	390.72		
	Total					21972.50		
	For 1 nos. fall, Total Seigniorage charges					**21972.50**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.380 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	382.19	Cum	**195.20**	74603.54			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	32.06	Cum	**6381.70**	204584.41	10.39	14.43	28.85
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	202.05	Cum	**6914.20**	1397037.12	83.35	86.88	173.77
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.75	Cum	**8151.40**	14261.81	0.99	0.68	1.38
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.17	MT	**73574.90**	233397.04			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	443.49	Sqm	**578.60**	256606.14			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	42.86	Sqm	**680.10**	29145.69			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.97	Cum	**694.61**	3453.95			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.97	Cum	**1237.00**	6150.98			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.97	Cum	**1377.70**	6850.61			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.97	Cum	**516.50**	2568.30			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	19.93	Sqm	**63.20**	1259.72			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	130.59	Cum	**149.30**	19497.69			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	101.99	Cum	**1075.00**	109640.72			
	Coarse Aggregates (100 Km lead)	204.00	Cum	**1398.00**	285192.34			
	Cement (30 km lead)	94.73	MT	**742.00**	70286.55			
	Boulder (60 Km lead)	4.97	Cum	**1159.00**	5763.13			
	Brick (15 km lead)	2571.00	No.	**3.18**	8175.78			
	Steel (30 Km lead)	3.17	MT	**742.00**	2353.80			
	TOTAL (In Rs.)				**2742006.72**			
	TOTAL (In Rs.)				**2742006.72**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	101.99	Cum	**584.64**	59628.24	5962.82		
	Coarse Aggregate	204.00	Cum	**944.26**	192629.27	19262.93		
	Boulders	4.97	Cum	**694.61**	3453.95	345.39		
	Total					25571.15		
	For 1 nos. fall, Total Seigniorage charges					**25571.15**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH. 5.980 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	326.26	Cum	**195.20**	63686.05			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	30.14	Cum	**6381.70**	192344.37	9.77	13.56	27.13
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	203.26	Cum	**6914.20**	1405398.37	83.85	87.40	174.81
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.70	Cum	**8151.40**	13855.26	0.96	0.66	1.34
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.79	MT	**73574.90**	352190.88			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	448.91	Sqm	**578.60**	259737.52			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.00	Cum	**694.61**	2776.70			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.00	Cum	**1237.00**	4944.91			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.00	Cum	**1377.70**	5507.36			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.00	Cum	**516.50**	2064.71			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	19.19	Sqm	**63.20**	1212.80			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	87.54	Cum	**149.30**	13069.32			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	101.63	Cum	**1075.00**	109250.98			
	Coarse Aggregates (100 Km lead)	203.27	Cum	**1398.00**	284177.94			
	Cement (30 km lead)	94.57	MT	**742.00**	70174.60			
	Boulder (60 Km lead)	4.00	Cum	**1159.00**	4633.10			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	4.79	MT	**742.00**	3551.83			
	TOTAL (In Rs.)				**2827790.16**			
	TOTAL (In Rs.)				**2827790.16**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	101.63	Cum	**584.64**	59416.27	5941.63		
	Coarse Aggregate	203.27	Cum	**944.26**	191944.11	19194.41		
	Boulders	4.00	Cum	**694.61**	2776.70	277.67		
	Total					25413.71		
	For 1 nos. fall, Total Seigniorage charges					**25413.71**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 6.280 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	278.89	Cum	**195.20**	54439.19			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	34.87	Cum	**6381.70**	222534.86	11.30	15.69	31.38
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	203.47	Cum	**6914.20**	1406855.78	83.93	87.49	174.99
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.02	Cum	**8151.40**	203929.61	14.19	9.76	19.76
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	6.38	MT	**73574.90**	469122.58			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	451.65	Sqm	**578.60**	261324.76			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.00	Cum	**694.61**	2776.70			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.00	Cum	**1237.00**	4944.91			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.00	Cum	**1377.70**	5507.36			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.00	Cum	**516.50**	2064.71			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.16	Sqm	**63.20**	831.70			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	78.23	Cum	**149.30**	11679.02			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	112.94	Cum	**1075.00**	121413.01			
	Coarse Aggregates (100 Km lead)	226.13	Cum	**1398.00**	316136.51			
	Cement (30 km lead)	109.42	MT	**742.00**	81186.65			
	Boulder (60 Km lead)	4.00	Cum	**1159.00**	4633.10			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	6.38	MT	**742.00**	4731.08			
	TOTAL (In Rs.)				**3213324.97**			
	TOTAL (In Rs.)				**3213324.97**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	112.94	Cum	**584.64**	66030.60	6603.06		
	Coarse Aggregate	226.13	Cum	**944.26**	213530.08	21353.01		
	Boulders	4.00	Cum	**694.61**	2776.70	277.67		
	Total					28233.74		
	For 1 nos. fall, Total Seigniorage charges					**28233.74**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH. 6.470 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	273.43	Cum	**195.20**	53373.80			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	29.30	Cum	**6381.70**	186967.68	9.49	13.18	26.37
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	178.62	Cum	**6914.20**	1234990.52	73.68	76.81	153.61
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.57	Cum	**8151.40**	12829.65	0.89	0.61	1.24
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.21	MT	**73574.90**	309486.90			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	415.66	Sqm	**578.60**	240499.46			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.00	Cum	**694.61**	2776.70			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	4.00	Cum	**1237.00**	4944.91			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	4.00	Cum	**1377.70**	5507.36			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	4.00	Cum	**516.50**	2064.71			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.79	Sqm	**63.20**	1187.43			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.08	Cum	**149.30**	10015.34			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	90.60	Cum	**1075.00**	97398.02			
	Coarse Aggregates (100 Km lead)	181.22	Cum	**1398.00**	253347.45			
	Cement (30 km lead)	84.06	MT	**742.00**	62375.58			
	Boulder (60 Km lead)	4.00	Cum	**1159.00**	4633.10			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	4.21	MT	**742.00**	3121.16			
	TOTAL (In Rs.)				**2524733.23**			
	TOTAL (In Rs.)				**2524733.23**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	90.60	Cum	**584.64**	52970.02	5297.00		
	Coarse Aggregate	181.22	Cum	**944.26**	171120.07	17112.01		
	Boulders	4.00	Cum	**694.61**	2776.70	277.67		
	Total					22686.68		
	For 1 nos. fall, Total Seigniorage charges					**22686.68**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 8.790 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	138.02	Cum	**195.20**	26940.85			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	21.96	Cum	**6381.70**	140167.63	7.12	9.88	19.77
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	96.37	Cum	**6914.20**	666317.21	39.75	41.44	82.88
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.24	Cum	**8151.40**	10124.77	0.70	0.48	0.98
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.27	MT	**73574.90**	166978.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	279.11	Sqm	**578.60**	161494.32			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.46	Cum	**694.61**	2404.22			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.46	Cum	**1237.00**	4281.57			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.46	Cum	**1377.70**	4768.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.46	Cum	**516.50**	1787.74			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.50	Sqm	**63.20**	979.87			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	30.48	Cum	**149.30**	4550.29			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	51.81	Cum	**1075.00**	55692.58			
	Coarse Aggregates (100 Km lead)	103.63	Cum	**1398.00**	144869.87			
	Cement (30 km lead)	47.57	MT	**742.00**	35299.14			
	Boulder (60 Km lead)	3.46	Cum	**1159.00**	4011.59			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	2.27	MT	**742.00**	1683.97			
	TOTAL (In Rs.)				**1471565.81**			
	TOTAL (In Rs.)				**1471565.81**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	51.81	Cum	**584.64**	30288.47	3028.85		
	Coarse Aggregate	103.63	Cum	**944.26**	97850.38	9785.04		
	Boulders	3.46	Cum	**694.61**	2404.22	240.42		
	Total					13054.31		
	For 1 nos. fall, Total Seigniorage charges					**13054.31**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 9.170 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	184.91	Cum	**195.20**	36094.73			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	25.78	Cum	**6381.70**	164526.69	8.35	11.60	23.20
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	152.40	Cum	**6914.20**	1053729.56	62.87	65.53	131.06
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.46	Cum	**8151.40**	11927.54	0.83	0.57	1.16
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.59	MT	**73574.90**	264063.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	364.06	Sqm	**578.60**	210646.67			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.46	Cum	**694.61**	2404.22			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.46	Cum	**1237.00**	4281.57			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.46	Cum	**1377.70**	4768.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.46	Cum	**516.50**	1787.74			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.44	Sqm	**63.20**	1102.05			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	37.60	Cum	**149.30**	5613.75			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	77.70	Cum	**1075.00**	83532.30			
	Coarse Aggregates (100 Km lead)	155.42	Cum	**1398.00**	217282.14			
	Cement (30 km lead)	72.05	MT	**742.00**	53459.64			
	Boulder (60 Km lead)	3.46	Cum	**1159.00**	4011.59			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	3.59	MT	**742.00**	2663.07			
	TOTAL (In Rs.)				**2161108.43**			
	TOTAL (In Rs.)				**2161108.43**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	77.70	Cum	**584.64**	45429.14	4542.91		
	Coarse Aggregate	155.42	Cum	**944.26**	146760.25	14676.03		
	Boulders	3.46	Cum	**694.61**	2404.22	240.42		
	Total					19459.36		
	For 1 nos. fall, Total Seigniorage charges					**19459.36**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 9.520 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	235.88	Cum	**195.20**	46043.14			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	25.78	Cum	**6381.70**	164526.69	8.35	11.60	23.20
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	152.40	Cum	**6914.20**	1053729.56	62.87	65.53	131.06
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.46	Cum	**8151.40**	11927.54	0.83	0.57	1.16
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.59	MT	**73574.90**	264063.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	364.06	Sqm	**578.60**	210646.67			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.46	Cum	**694.61**	2404.22			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.46	Cum	**1237.00**	4281.57			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.46	Cum	**1377.70**	4768.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.46	Cum	**516.50**	1787.74			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.44	Sqm	**63.20**	1102.05			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	64.37	Cum	**149.30**	9610.71			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	77.70	Cum	**1075.00**	83532.30			
	Coarse Aggregates (100 Km lead)	155.42	Cum	**1398.00**	217282.14			
	Cement (30 km lead)	72.05	MT	**742.00**	53459.64			
	Boulder (60 Km lead)	3.46	Cum	**1159.00**	4011.59			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	3.59	MT	**742.00**	2663.07			
	TOTAL (In Rs.)				**2175053.80**			
	TOTAL (In Rs.)				**2175053.80**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	77.70	Cum	**584.64**	45429.14	4542.91		
	Coarse Aggregate	155.42	Cum	**944.26**	146760.25	14676.03		
	Boulders	3.46	Cum	**694.61**	2404.22	240.42		
	Total					19459.36		
	For 1 nos. fall, Total Seigniorage charges					**19459.36**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.650 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	227.78	Cum	**195.20**	44461.82			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	23.85	Cum	**6381.70**	152199.88	7.73	10.73	21.46
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	122.13	Cum	**6914.20**	844445.50	50.38	52.52	105.03
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.36	Cum	**8151.40**	11075.43	0.77	0.53	1.07
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.88	MT	**73574.90**	211616.87			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	323.91	Sqm	**578.60**	187411.87			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	32.19	Sqm	**680.10**	21895.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.46	Cum	**694.61**	2404.22			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	3.46	Cum	**1237.00**	4281.57			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	3.46	Cum	**1377.70**	4768.56			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	3.46	Cum	**516.50**	1787.74			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.21	Sqm	**63.20**	1087.94			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	67.93	Cum	**149.30**	10142.58			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	63.78	Cum	**1075.00**	68562.35			
	Coarse Aggregates (100 Km lead)	127.57	Cum	**1398.00**	178344.88			
	Cement (30 km lead)	58.88	MT	**742.00**	43686.79			
	Boulder (60 Km lead)	3.46	Cum	**1159.00**	4011.59			
	Brick (15 km lead)	1931.00	No.	**3.18**	6140.58			
	Steel (30 Km lead)	2.88	MT	**742.00**	2134.15			
	TOTAL (In Rs.)				**1811637.20**			
	TOTAL (In Rs.)				**1811637.20**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	63.78	Cum	**584.64**	37287.71	3728.77		
	Coarse Aggregate	127.57	Cum	**944.26**	120460.61	12046.06		
	Boulders	3.46	Cum	**694.61**	2404.22	240.42		
	Total					16015.25		
	For 1 nos. fall, Total Seigniorage charges					**16015.25**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 11.460 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	257.15	Cum	**195.20**	50196.06			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	28.83	Cum	**6381.70**	183976.42	9.34	12.97	25.95
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	142.71	Cum	**6914.20**	986693.48	58.87	61.36	122.73
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	19.06	Cum	**8151.40**	155389.08	10.81	7.43	15.06
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.34	MT	**73574.90**	319246.37			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	348.32	Sqm	**578.60**	201537.89			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	27.89	Sqm	**680.10**	18970.71			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.52	Cum	**694.61**	1750.42			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.52	Cum	**1237.00**	3117.24			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	2.52	Cum	**1377.70**	3471.80			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	2.52	Cum	**516.50**	1301.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.87	Sqm	**63.20**	750.02			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	79.83	Cum	**149.30**	11919.23			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	81.77	Cum	**1075.00**	87903.57			
	Coarse Aggregates (100 Km lead)	163.73	Cum	**1398.00**	228897.56			
	Cement (30 km lead)	79.02	MT	**742.00**	58629.22			
	Boulder (60 Km lead)	2.52	Cum	**1159.00**	2920.68			
	Brick (15 km lead)	1673.00	No.	**3.18**	5320.14			
	Steel (30 Km lead)	4.34	MT	**742.00**	3219.59			
	TOTAL (In Rs.)				**2336388.46**			
	TOTAL (In Rs.)				**2336388.46**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	81.77	Cum	**584.64**	47806.46	4780.65		
	Coarse Aggregate	163.73	Cum	**944.26**	154605.73	15460.57		
	Boulders	2.52	Cum	**694.61**	1750.42	175.04		
	Total					20416.26		
	For 1 nos. fall, Total Seigniorage charges					**20416.26**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 12.510 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	207.48	Cum	**195.20**	40499.70			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	20.28	Cum	**6381.70**	129447.97	6.57	9.13	18.26
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	119.83	Cum	**6914.20**	828496.11	49.43	51.52	103.05
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.15	Cum	**8151.40**	9386.74	0.65	0.45	0.91
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.82	MT	**73574.90**	207619.97			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	317.70	Sqm	**578.60**	183818.96			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	27.89	Sqm	**680.10**	18970.71			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.55	Cum	**694.61**	1075.26			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.55	Cum	**1237.00**	1914.88			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.55	Cum	**1377.70**	2132.68			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.55	Cum	**516.50**	799.54			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	16.77	Sqm	**63.20**	1059.67			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	61.82	Cum	**149.30**	9229.44			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	61.10	Cum	**1075.00**	65684.54			
	Coarse Aggregates (100 Km lead)	122.22	Cum	**1398.00**	170857.00			
	Cement (30 km lead)	56.65	MT	**742.00**	42036.50			
	Boulder (60 Km lead)	1.55	Cum	**1159.00**	1794.13			
	Brick (15 km lead)	1673.00	No.	**3.18**	5320.14			
	Steel (30 Km lead)	2.82	MT	**742.00**	2093.84			
	TOTAL (In Rs.)				**1733415.18**			
	TOTAL (In Rs.)				**1733415.18**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	61.10	Cum	**584.64**	35722.61	3572.26		
	Coarse Aggregate	122.22	Cum	**944.26**	115403.02	11540.30		
	Boulders	1.55	Cum	**694.61**	1075.26	107.53		
	Total					15220.09		
	For 1 nos. fall, Total Seigniorage charges					**15220.09**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR HETAMPUR DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 1.930 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.77*	*2.656*	*2.520*	*23.707*	*Cum*
	Section 2-2	*2*	*5.50*	*1.650*	*2.520*	*45.738*	*Cum*
	Section 3-3	*2*	*3.20*	*1.470*	*2.320*	*21.827*	*Cum*
	Section 5-5	*2*	*7.09*	*2.806*	*2.520*	*100.283*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*2.320*	*27.488*	*Cum*
	U/S Key Floor	*1*	*0.64*	*5.600*	*0.900*	*3.213*	*Cum*
	U/S Floor	*1*	*4.00*	*5.600*	*2.876*	*64.422*	*Cum*
	D/S Floor	*1*	*5.50*	*5.600*	*1.100*	*33.880*	*Cum*
		1	*7.57*	*5.600*	*0.300*	*12.709*	*Cum*
		1	*1.50*	*5.600*	*0.900*	*7.560*	*Cum*
		1	*2.00*	*5.600*	*0.900*	*10.080*	*Cum*
	D/S Key Floor	*1*	*0.95*	*5.600*	*2.150*	*11.438*	*Cum*
	Toe Wall D/S Portion	*1*	*16.60*	*0.750*	*0.900*	*11.205*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*4.00*	*0.600*	*0.750*	*3.600*	*Cum*
						377.15	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*0.84*	*5.600*	*0.150*	*0.70*	*Cum*
		1	*0.81*	*5.600*	*0.150*	*0.68*	*Cum*
		1	*0.43*	*5.600*	*0.150*	*0.36*	*Cum*
		1	*7.62*	*5.600*	*0.150*	*6.40*	*Cum*
		1	*0.78*	*5.600*	*0.150*	*0.65*	*Cum*
		1	*0.87*	*5.600*	*0.150*	*0.73*	*Cum*
		1	*0.07*	*5.600*	*0.150*	*0.06*	*Cum*
		1	*0.35*	*5.600*	*0.150*	*0.29*	*Cum*
		1	*2.24*	*5.600*	*0.150*	*1.88*	*Cum*
		1	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.77*	*2.656*	*0.150*	*1.41*	*Cum*
	Section 2-2	*2*	*5.50*	*1.650*	*0.150*	*2.72*	*Cum*
	Section 3-3	*2*	*3.20*	*1.470*	*0.150*	*1.41*	*Cum*
	Section 5-5	*2*	*7.09*	*2.806*	*0.150*	*5.97*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*0.150*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*16.60*	*0.750*	*0.300*	*3.74*	*Cum*
	Toe Wall D/S Portion	*1*	*16.30*	*0.450*	*0.600*	*4.40*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.600*	*0.150*	*0.72*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*4.00*	*0.300*	*0.600*	*1.44*	*Cum*
	TOTAL					**36.25**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.55*	*0.450*	*0.450*	*0.63*	*Cum*
		2	*1.55*	*1.403*	*3.176*	*13.78*	*Cum*
		2	*1.55*	*2.506*	*1.050*	*8.14*	*Cum*
	Section 2-2	*2*	*5.50*	*0.450*	*0.450*	*2.23*	*Cum*
		2	*5.50*	*0.900*	*1.500*	*14.85*	*Cum*
		2	*5.50*	*1.500*	*1.050*	*17.33*	*Cum*
	Section 3-3	*2*	*2.69*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*2.69*	*0.810*	*1.200*	*5.23*	*Cum*
		2	*2.69*	*1.320*	*0.800*	*5.68*	*Cum*
	Section 5-5	*2*	*7.05*	*0.450*	*0.450*	*2.85*	*Cum*
		2	*7.05*	*1.403*	*3.176*	*62.80*	*Cum*
		2	*7.05*	*2.506*	*0.750*	*26.49*	*Cum*
	Section 6-6	*2*	*4.69*	*0.450*	*0.450*	*1.90*	*Cum*
		2	*4.69*	*0.810*	*1.200*	*9.12*	*Cum*
		2	*4.69*	*1.320*	*0.750*	*9.29*	*Cum*
	Floor	*1*	*0.64*	*5.600*	*0.750*	*2.68*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*9.50*	*5.600*	*0.750*	*39.90*	*Cum*
		1	*7.57*	*5.600*	*0.300*	*12.71*	*Cum*
		1	*0.36*	*5.600*	*0.550*	*1.10*	*Cum*
		1	*0.30*	*5.600*	*0.650*	*1.09*	*Cum*
		1	*1.20*	*5.600*	*0.800*	*5.38*	*Cum*
		1	*0.05*	*5.600*	*0.775*	*0.22*	*Cum*
		1	*1.95*	*5.600*	*0.750*	*8.19*	*Cum*
		1	*0.95*	*5.600*	*2.000*	*10.64*	*Cum*
	Crest	*1*	*1.53*	*5.600*	*2.446*	*20.99*	*Cum*
	TOTAL					**284.28**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.15*	*5.600*	*0.150*	*0.97*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*23.20*	*0.450*	*0.050*	*0.52*	*Cum*
	On Abutment Top (Right Side)	*1*	*23.20*	*0.450*	*0.050*	*0.52*	*Cum*
	TOTAL					**2.01**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**284.28**	**0.002**	**0.569**	**7850.0**	**4463.21**	**Kg**
	Total Weight in Metric Tonne					**4.46**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.55*		*0.450*	*2.78*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.55*		*3.176*	*19.64*	*Sqm*
		4		*1.403*	*3.176*	*17.82*	*Sqm*
		4	*1.55*		*1.050*	*6.49*	*Sqm*
		4		*2.506*	*1.050*	*10.53*	*Sqm*
	Section 2-2	*4*	*5.50*		*0.450*	*9.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.50*		*1.500*	*33.00*	*Sqm*
		4		*0.900*	*1.500*	*5.40*	*Sqm*
		4	*5.50*		*1.050*	*23.10*	*Sqm*
		4		*1.500*	*1.050*	*6.30*	*Sqm*
	Section 3-3	*4*	*2.69*		*0.450*	*4.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.69*		*1.200*	*12.91*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*2.69*		*0.800*	*8.61*	*Sqm*
		4		*1.320*	*0.800*	*4.22*	*Sqm*
	Section 5-5	*4*	*7.05*		*0.450*	*12.68*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.05*		*3.176*	*89.53*	*Sqm*
		4		*1.403*	*3.176*	*17.82*	*Sqm*
		4	*7.05*		*0.750*	*21.14*	*Sqm*
		4		*2.506*	*0.750*	*7.52*	*Sqm*
	Section 6-6	*4*	*4.69*		*0.450*	*8.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.69*		*1.200*	*22.51*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.69*		*0.750*	*14.07*	*Sqm*
		4		*1.320*	*0.750*	*3.96*	*Sqm*
	Floor	*2*	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*5.600*	*0.750*	*8.40*	*Sqm*
		2	*9.50*		*0.750*	*14.25*	*Sqm*
		2		*5.600*	*0.750*	*8.40*	*Sqm*
		2	*7.565*		*0.300*	*4.54*	*Sqm*
		2		*5.600*	*0.300*	*3.36*	*Sqm*
		2	*0.36*		*0.550*	*0.39*	*Sqm*
		2		*5.600*	*0.550*	*6.16*	*Sqm*
		2	*0.30*		*0.650*	*0.39*	*Sqm*
		2		*5.600*	*0.650*	*7.28*	*Sqm*
		2	*1.20*		*0.800*	*1.92*	*Sqm*
		2		*5.600*	*0.800*	*8.96*	*Sqm*
		2	*0.050*		*0.775*	*0.08*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*5.600*	*0.775*	*8.68*	*Sqm*
		2	*1.950*		*0.750*	*2.93*	*Sqm*
		2		*5.600*	*0.750*	*8.40*	*Sqm*
		2	*0.95*		*2.000*	*3.80*	*Sqm*
		2		*5.600*	*2.000*	*22.40*	*Sqm*
	Crest	*2*	*1.53*		*2.446*	*7.50*	*Sqm*
		2		*5.600*	*2.446*	*27.40*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.60*		*0.300*	*9.96*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.30*		*0.600*	*19.56*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.150*	*2.40*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*4.00*		*0.600*	*9.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**564.83**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*4.00*	*5.714*		*45.71*	*Sqm*
	TOTAL					**45.71**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*4.00*	*5.000*	*0.300*	**6.00**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*4.00*	*5.000*	*0.150*	**6.00**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*23.20*	*0.450*		*10.44*	*Sqm*
	On Abutment Top (Right Side)	*1*	*23.20*	*0.450*		*10.44*	*Sqm*
	TOTAL					**20.88**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		25.564		25.56	**Cum**
	Abutment						
	Section 1-1	2	*1.77*	*1.091*		*3.864*	*Cum*
	Section 2-2	2	*5.50*	*1.082*		*11.902*	*Cum*
	Section 3-3	2	*3.20*	*0.739*		*4.726*	*Cum*
	Section 5-5	2	*7.09*	*1.031*		*14.622*	*Cum*
	Section 6-6	2	*4.03*	*0.731*		*5.892*	*Cum*
	D/S protection	2					
	Toe wall	2	*16.60*	*0.150*	*0.600*	*4.980*	*Cum*
		2	*4.00*	0.150	*0.600*	*0.720*	*Cum*
	TOTAL					**72.27**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.400 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.33*	*2.168*	*2.261*	*13.019*	*Cum*
	Section 2-2	*2*	*4.25*	*1.620*	*2.261*	*31.134*	*Cum*
	Section 3-3	*2*	*2.45*	*1.470*	*2.061*	*14.845*	*Cum*
	Section 5-5	*2*	*7.19*	*2.318*	*2.261*	*75.387*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*2.061*	*24.419*	*Cum*
	U/S Key Floor	*1*	*0.55*	*5.600*	*1.100*	*3.357*	*Cum*
	U/S Floor	*1*	*3.00*	*5.600*	*2.370*	*39.816*	*Cum*
	D/S Floor	*1*	*4.25*	*5.600*	*0.900*	*21.420*	*Cum*
		1	*2.75*	*5.600*	*0.700*	*10.780*	*Cum*
	D/S Key Floor	*1*	*0.75*	*5.600*	*1.350*	*5.670*	*Cum*
	Toe Wall D/S Portion	*1*	*16.60*	*0.750*	*0.900*	*11.205*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.75*	*0.600*	*0.750*	*3.375*	*Cum*
						254.43	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*1.06*	*5.600*	*0.150*	*0.89*	*Cum*
		1	*0.55*	*5.600*	*0.150*	*0.46*	*Cum*
		1	*0.21*	*5.600*	*0.150*	*0.18*	*Cum*
		1	*5.82*	*5.600*	*0.150*	*4.89*	*Cum*
		1	*0.57*	*5.600*	*0.150*	*0.48*	*Cum*
		1	*1.07*	*5.600*	*0.150*	*0.90*	*Cum*
		1	*1.34*	*5.600*	*0.150*	*1.13*	*Cum*
		1	*0.54*	*5.600*	*0.150*	*0.46*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.33*	*2.168*	*0.150*	*0.86*	*Cum*
	Section 2-2	*2*	*4.25*	*1.620*	*0.150*	*2.07*	*Cum*
	Section 3-3	*2*	*2.45*	*1.470*	*0.150*	*1.08*	*Cum*
	Section 5-5	*2*	*7.19*	*2.318*	*0.150*	*5.00*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*0.150*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*16.60*	*0.750*	*0.300*	*3.74*	*Cum*
	Toe Wall D/S Portion	*1*	*16.30*	*0.450*	*0.600*	*4.40*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.600*	*0.150*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.300*	*0.600*	*1.35*	*Cum*
	TOTAL					**30.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.10*	*0.450*	*0.450*	*0.45*	*Cum*
		2	*1.10*	*1.159*	*2.364*	*6.04*	*Cum*
		2	*1.10*	*2.018*	*0.700*	*3.12*	*Cum*
	Section 2-2	*2*	*4.25*	*0.450*	*0.450*	*1.72*	*Cum*
		2	*4.25*	*0.885*	*1.450*	*10.91*	*Cum*
		2	*4.25*	*1.470*	*0.700*	*8.75*	*Cum*
	Section 3-3	*2*	*1.94*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.94*	*0.810*	*1.200*	*3.77*	*Cum*
		2	*1.94*	*1.320*	*0.550*	*2.82*	*Cum*
	Section 5-5	*2*	*7.15*	*0.450*	*0.450*	*2.89*	*Cum*
		2	*7.15*	*1.159*	*2.364*	*39.17*	*Cum*
		2	*7.15*	*2.018*	*0.550*	*15.87*	*Cum*
	Section 6-6	*2*	*4.69*	*0.450*	*0.450*	*1.90*	*Cum*
		2	*4.69*	*0.810*	*1.200*	*9.12*	*Cum*
		2	*4.69*	*1.320*	*0.550*	*6.81*	*Cum*
	Floor	*1*	*0.55*	*5.600*	*0.950*	*2.90*	*Cum*
		1	*7.25*	*5.600*	*0.550*	*22.33*	*Cum*
		1	*5.70*	*5.600*	*0.150*	*4.78*	*Cum*
		1	*0.63*	*5.600*	*0.400*	*1.41*	*Cum*
		1	*0.25*	*5.600*	*0.425*	*0.60*	*Cum*
		1	*2.50*	*5.600*	*0.550*	*7.70*	*Cum*
		1	*0.75*	*5.600*	*1.200*	*5.04*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.11*	*5.600*	*1.664*	*10.35*	*Cum*
	TOTAL					**169.22**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.85*	*5.600*	*0.150*	*0.71*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*20.65*	*0.450*	*0.050*	*0.46*	*Cum*
	On Abutment Top (Right Side)	*1*	*20.65*	*0.450*	*0.050*	*0.46*	*Cum*
	TOTAL					**1.64**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**169.22**	**0.002**	**0.338**	**7850.0**	**2656.76**	**Kg**
	Total Weight in Metric Tonne					**2.66**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.10*		*0.450*	*1.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.10*		*2.364*	*10.43*	*Sqm*
		4		*1.159*	*2.364*	*10.96*	*Sqm*
		4	*1.10*		*0.700*	*3.09*	*Sqm*
		4		*2.018*	*0.700*	*5.65*	*Sqm*
	Section 2-2	*4*	*4.25*		*0.450*	*7.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.25*		*1.450*	*24.65*	*Sqm*
		4		*0.885*	*1.450*	*5.13*	*Sqm*
		4	*4.25*		*0.700*	*11.90*	*Sqm*
		4		*1.470*	*0.700*	*4.12*	*Sqm*
	Section 3-3	*4*	*1.94*		*0.450*	*3.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.94*		*1.200*	*9.31*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*1.94*		*0.550*	*4.27*	*Sqm*
		4		*1.320*	*0.550*	*2.90*	*Sqm*
	Section 5-5	*4*	*7.15*		*0.450*	*12.87*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.15*		*2.364*	*67.59*	*Sqm*
		4		*1.159*	*2.364*	*10.96*	*Sqm*
		4	*7.15*		*0.550*	*15.73*	*Sqm*
		4		*2.018*	*0.550*	*4.44*	*Sqm*
	Section 6-6	*4*	*4.69*		*0.450*	*8.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.69*		*1.200*	*22.51*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.69*		*0.550*	*10.32*	*Sqm*
		4		*1.320*	*0.550*	*2.90*	*Sqm*
	Floor	*2*	*0.55*		*0.950*	*1.04*	*Sqm*
		2		*5.600*	*0.950*	*10.64*	*Sqm*
		2	*7.25*		*0.550*	*7.98*	*Sqm*
		2		*5.600*	*0.550*	*6.16*	*Sqm*
		2	*0.63*		*0.400*	*0.50*	*Sqm*
		2		*5.600*	*0.400*	*4.48*	*Sqm*
		2	*0.25*		*0.425*	*0.21*	*Sqm*
		2		*5.600*	*0.425*	*4.76*	*Sqm*
		2	*2.50*		*0.550*	*2.75*	*Sqm*
		2		*5.600*	*0.550*	*6.16*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*5.600*	*1.200*	*13.44*	*Sqm*
	Crest	*2*	*1.11*		*1.664*	*3.70*	*Sqm*
		2		*5.600*	*1.664*	*18.64*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.60*		*0.300*	*9.96*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.30*		*0.600*	*19.56*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.150*	*2.25*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.600*	*9.00*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**398.21**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.75*	*5.714*		*42.86*	*Sqm*
	TOTAL					**42.86**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*5.000*	*0.300*	**5.63**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.75*	*5.000*	*0.150*	**5.63**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*20.65*	*0.450*		*9.29*	*Sqm*
	On Abutment Top (Right Side)	*1*	*20.65*	*0.450*		*9.29*	*Sqm*
	TOTAL					**18.59**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		13.995		14.00	**Cum**
	Abutment						
	Section 1-1	2	*1.33*	*1.052*		*2.794*	*Cum*
	Section 2-2	2	*4.25*	*1.052*		*8.942*	*Cum*
	Section 3-3	2	*2.45*	*0.767*		*3.758*	*Cum*
	Section 5-5	2	*7.19*	*1.030*		*14.808*	*Cum*
	Section 6-6	2	*4.03*	*0.800*		*6.444*	*Cum*
	D/S protection	2					
	Toe wall	2	*16.60*	*0.150*	*0.600*	*4.980*	*Cum*
		2	*3.75*	0.150	*0.600*	*0.675*	*Cum*
	TOTAL					**56.40**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.380 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.54*	*2.352*	*3.599*	*26.021*	*Cum*
	Section 2-2	*2*	*5.00*	*1.620*	*3.599*	*58.304*	*Cum*
	Section 3-3	*2*	*2.95*	*1.470*	*3.399*	*29.480*	*Cum*
	Section 5-5	*2*	*7.15*	*2.502*	*3.599*	*128.830*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*3.399*	*40.272*	*Cum*
	U/S Key Floor	*1*	*0.64*	*5.020*	*0.900*	*2.880*	*Cum*
	U/S Floor	*1*	*3.75*	*5.020*	*2.120*	*39.909*	*Cum*
	D/S Floor	*1*	*5.00*	*5.020*	*0.950*	*23.845*	*Cum*
		1	*3.25*	*5.020*	*0.750*	*12.236*	*Cum*
	D/S Key Floor	*1*	*0.80*	*5.020*	*1.550*	*6.225*	*Cum*
	Toe Wall D/S Portion	*1*	*16.02*	*0.750*	*0.900*	*10.814*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.75*	*0.600*	*0.750*	*3.375*	*Cum*
						382.19	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*5.020*	*0.150*	*0.41*	*Cum*
		1	*0.73*	*5.020*	*0.150*	*0.55*	*Cum*
		1	*0.95*	*5.020*	*0.150*	*0.72*	*Cum*
		1	*0.35*	*5.020*	*0.150*	*0.27*	*Cum*
		1	*6.74*	*5.020*	*0.150*	*5.08*	*Cum*
		1	*0.71*	*5.020*	*0.150*	*0.53*	*Cum*
		1	*1.45*	*5.020*	*0.150*	*1.09*	*Cum*
		1	*1.57*	*5.020*	*0.150*	*1.18*	*Cum*
		1	*0.54*	*5.020*	*0.150*	*0.41*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.54*	*2.352*	*0.150*	*1.08*	*Cum*
	Section 2-2	*2*	*5.00*	*1.620*	*0.150*	*2.43*	*Cum*
	Section 3-3	*2*	*2.95*	*1.470*	*0.150*	*1.30*	*Cum*
	Section 5-5	*2*	*7.15*	*2.502*	*0.150*	*5.37*	*Cum*
	Section 6-6	*2*	*4.03*	*1.470*	*0.150*	*1.78*	*Cum*
	Toe Wall D/S Portion	*1*	*16.02*	*0.750*	*0.300*	*3.60*	*Cum*
	Toe Wall D/S Portion	*1*	*15.72*	*0.450*	*0.600*	*4.24*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.600*	*0.150*	*0.68*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.75*	*0.300*	*0.600*	*1.35*	*Cum*
	TOTAL					**32.06**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*1.251*	*2.670*	*6.90*	*Cum*
		2	*1.03*	*2.202*	*0.850*	*3.87*	*Cum*
	Section 2-2	*2*	*5.00*	*0.450*	*0.450*	*2.03*	*Cum*
		2	*5.00*	*0.885*	*1.450*	*12.83*	*Cum*
		2	*5.00*	*1.470*	*0.850*	*12.50*	*Cum*
	Section 3-3	*2*	*2.44*	*0.450*	*0.450*	*0.99*	*Cum*
		2	*2.44*	*0.810*	*1.200*	*4.74*	*Cum*
		2	*2.44*	*1.320*	*0.600*	*3.86*	*Cum*
	Section 5-5	*2*	*7.11*	*0.450*	*0.450*	*2.88*	*Cum*
		2	*7.11*	*1.251*	*2.670*	*47.50*	*Cum*
		2	*7.11*	*2.202*	*0.600*	*18.79*	*Cum*
	Section 6-6	*2*	*4.77*	*0.450*	*0.450*	*1.93*	*Cum*
		2	*4.77*	*0.810*	*1.200*	*9.26*	*Cum*
		2	*4.77*	*1.320*	*0.600*	*7.55*	*Cum*
	Floor	*1*	*0.64*	*5.020*	*0.750*	*2.40*	*Cum*
		1	*8.75*	*5.020*	*0.600*	*26.36*	*Cum*
		1	*6.79*	*5.020*	*0.250*	*8.52*	*Cum*
		1	*0.25*	*5.020*	*0.500*	*0.63*	*Cum*
		1	*0.25*	*5.020*	*0.475*	*0.60*	*Cum*
		1	*3.00*	*5.020*	*0.600*	*9.04*	*Cum*
		1	*0.80*	*5.020*	*1.400*	*5.62*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.31*	*5.020*	*1.955*	*12.85*	*Cum*
	TOTAL					**202.05**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.00*	*5.020*	*0.150*	*0.75*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*22.15*	*0.450*	*0.050*	*0.50*	*Cum*
	On Abutment Top (Right Side)	*1*	*22.15*	*0.450*	*0.050*	*0.50*	*Cum*
	TOTAL					**1.75**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.2% of M-20	**202.05**	**0.00**	**0.404**	**7850.0**	**3172.24**	**Kg**
	Total Weight in Metric Tonne					**3.17**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*2.670*	*11.04*	*Sqm*
		4		*1.251*	*2.670*	*13.36*	*Sqm*
		4	*1.03*		*0.850*	*3.51*	*Sqm*
		4		*2.202*	*0.850*	*7.49*	*Sqm*
	Section 2-2	*4*	*5.00*		*0.450*	*9.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.00*		*1.450*	*29.00*	*Sqm*
		4		*0.885*	*1.450*	*5.13*	*Sqm*
		4	*5.00*		*0.850*	*17.00*	*Sqm*
		4		*1.470*	*0.850*	*5.00*	*Sqm*
	Section 3-3	*4*	*2.44*		*0.450*	*4.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.44*		*1.200*	*11.71*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*2.44*		*0.600*	*5.86*	*Sqm*
		4		*1.320*	*0.600*	*3.17*	*Sqm*
	Section 5-5	*4*	*7.11*		*0.450*	*12.80*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*7.11*		*2.670*	*75.93*	*Sqm*
		4		*1.251*	*2.670*	*13.36*	*Sqm*
		4	*7.11*		*0.600*	*17.06*	*Sqm*
		4		*2.202*	*0.600*	*5.28*	*Sqm*
	Section 6-6	*4*	*4.77*		*0.450*	*8.58*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.77*		*1.200*	*22.87*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.77*		*0.600*	*11.44*	*Sqm*
		4		*1.320*	*0.600*	*3.17*	*Sqm*
	Floor	*2*	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*5.020*	*0.750*	*7.53*	*Sqm*
		2	*8.75*		*0.600*	*10.50*	*Sqm*
		2		*5.020*	*0.600*	*6.02*	*Sqm*
		2	*6.792*		*0.250*	*3.40*	*Sqm*
		2		*5.020*	*0.250*	*2.51*	*Sqm*
		2	*0.25*		*0.500*	*0.25*	*Sqm*
		2		*5.020*	*0.500*	*5.02*	*Sqm*
		2	*0.25*		*0.475*	*0.24*	*Sqm*
		2		*5.020*	*0.475*	*4.77*	*Sqm*
		2	*3.00*		*0.600*	*3.60*	*Sqm*
		2		*5.020*	*0.600*	*6.02*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*5.020*	*1.400*	*14.06*	*Sqm*
	Crest	*2*	*1.31*		*1.955*	*5.12*	*Sqm*
		2		*5.020*	*1.955*	*19.63*	*Sqm*
	Toe Wall D/S Portion	*2*	*16.02*		*0.300*	*9.61*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*15.72*		*0.600*	*18.86*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.150*	*2.25*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.75*		*0.600*	*9.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**443.49**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.75*	*5.714*		*42.86*	*Sqm*
	TOTAL					**42.86**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.75*	*4.420*	*0.300*	**4.97**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.75*	*4.420*	*0.150*	**4.97**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*22.15*	*0.450*		*9.97*	*Sqm*
	On Abutment Top (Right Side)	*1*	*22.15*	*0.450*		*9.97*	*Sqm*
	TOTAL					**19.93**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		23.673		23.67	**Cum**
	Abutment						
	Section 1-1	2	*1.54*	*2.934*		*9.019*	*Cum*
	Section 2-2	2	*5.00*	*1.781*		*17.810*	*Cum*
	Section 3-3	2	*2.95*	*2.392*		*14.113*	*Cum*
	Section 5-5	2	*7.15*	*2.881*		*41.218*	*Cum*
	Section 6-6	2	*4.03*	*2.392*		*19.280*	*Cum*
	D/S protection	2					
	Toe wall	2	*16.02*	*0.150*	*0.600*	*4.806*	*Cum*
		2	*3.75*	0.150	*0.600*	*0.675*	*Cum*
	TOTAL					**130.59**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH. 5.980 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.74*	*2.412*	*2.900*	*24.293*	*Cum*
	Section 2-2	*2*	*5.00*	*1.470*	*2.900*	*42.630*	*Cum*
	Section 3-3	*2*	*3.70*	*1.350*	*2.700*	*26.973*	*Cum*
	Section 5-5	*2*	*6.15*	*2.562*	*2.900*	*91.409*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*2.700*	*25.151*	*Cum*
	U/S Key Floor	*1*	*0.64*	*4.700*	*0.900*	*2.697*	*Cum*
	U/S Floor	*1*	*3.75*	*4.700*	*2.570*	*45.296*	*Cum*
	D/S Floor	*1*	*5.00*	*4.700*	*1.000*	*23.500*	*Cum*
		1	*6.88*	*4.700*	*0.300*	*9.704*	*Cum*
		1	*1.50*	*4.700*	*0.800*	*5.640*	*Cum*
		1	*2.50*	*4.700*	*0.800*	*9.400*	*Cum*
	D/S Key Floor	*1*	*0.85*	*4.700*	*1.750*	*6.991*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.750*	*0.900*	*9.653*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						326.26	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
		1	*0.95*	*4.700*	*0.150*	*0.67*	*Cum*
		1	*0.69*	*4.700*	*0.150*	*0.49*	*Cum*
		1	*0.43*	*4.700*	*0.150*	*0.30*	*Cum*
		1	*7.16*	*4.700*	*0.150*	*5.05*	*Cum*
		1	*0.71*	*4.700*	*0.150*	*0.50*	*Cum*
		1	*0.69*	*4.700*	*0.150*	*0.49*	*Cum*
		1	*0.07*	*4.700*	*0.150*	*0.05*	*Cum*
		1	*1.05*	*4.700*	*0.150*	*0.74*	*Cum*
		1	*1.79*	*4.700*	*0.150*	*1.26*	*Cum*
		1	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.74*	*2.412*	*0.150*	*1.26*	*Cum*
	Section 2-2	*2*	*5.00*	*1.470*	*0.150*	*2.21*	*Cum*
	Section 3-3	*2*	*3.70*	*1.350*	*0.150*	*1.50*	*Cum*
	Section 5-5	*2*	*6.15*	*2.562*	*0.150*	*4.73*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.750*	*0.300*	*3.22*	*Cum*
	Toe Wall D/S Portion	*1*	*14.00*	*0.450*	*0.600*	*3.78*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**30.14**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.41*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.41*	*1.281*	*2.770*	*10.03*	*Cum*
		2	*1.41*	*2.262*	*0.950*	*6.07*	*Cum*
	Section 2-2	*2*	*5.00*	*0.450*	*0.450*	*2.03*	*Cum*
		2	*5.00*	*0.810*	*1.200*	*9.72*	*Cum*
		2	*5.00*	*1.320*	*0.950*	*12.54*	*Cum*
	Section 3-3	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.750*	*1.000*	*4.88*	*Cum*
		2	*3.25*	*1.200*	*0.700*	*5.46*	*Cum*
	Section 5-5	*2*	*6.11*	*0.450*	*0.450*	*2.47*	*Cum*
		2	*6.11*	*1.281*	*2.770*	*43.34*	*Cum*
		2	*6.11*	*2.262*	*0.650*	*17.96*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.650*	*6.32*	*Cum*
	Floor	*1*	*0.64*	*4.700*	*0.750*	*2.25*	*Cum*
		1	*8.75*	*4.700*	*0.650*	*26.73*	*Cum*
		1	*6.88*	*4.700*	*0.300*	*9.70*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.56*	*4.700*	*0.500*	*1.31*	*Cum*
		1	*0.25*	*4.700*	*0.575*	*0.68*	*Cum*
		1	*1.25*	*4.700*	*0.700*	*4.11*	*Cum*
		1	*0.05*	*4.700*	*0.675*	*0.16*	*Cum*
		1	*2.45*	*4.700*	*0.650*	*7.48*	*Cum*
		1	*0.85*	*4.700*	*1.600*	*6.39*	*Cum*
	Crest	*1*	*1.39*	*4.700*	*2.145*	*14.02*	*Cum*
	TOTAL					**203.26**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*1.05*	*4.700*	*0.150*	*0.74*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*21.32*	*0.450*	*0.050*	*0.48*	*Cum*
	On Abutment Top (Right Side)	*1*	*21.32*	*0.450*	*0.050*	*0.48*	*Cum*
	TOTAL					**1.70**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**203.26**	**0.00**	**0.610**	**7850.0**	**4786.83**	**Kg**
	Total Weight in Metric Tonne					**4.79**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.41*		*0.450*	*2.54*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.41*		*2.770*	*15.66*	*Sqm*
		4		*1.281*	*2.770*	*14.19*	*Sqm*
		4	*1.41*		*0.950*	*5.37*	*Sqm*
		4		*2.262*	*0.950*	*8.60*	*Sqm*
	Section 2-2	*4*	*5.00*		*0.450*	*9.00*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.00*		*1.200*	*24.00*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*5.00*		*0.950*	*19.00*	*Sqm*
		4		*1.320*	*0.950*	*5.02*	*Sqm*
	Section 3-3	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*1.000*	*13.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*3.25*		*0.700*	*9.10*	*Sqm*
		4		*1.200*	*0.700*	*3.36*	*Sqm*
	Section 5-5	*4*	*6.11*		*0.450*	*10.99*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.11*		*2.770*	*67.67*	*Sqm*
		4		*1.281*	*2.770*	*14.19*	*Sqm*
		4	*6.11*		*0.650*	*15.88*	*Sqm*
		4		*2.262*	*0.650*	*5.88*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.650*	*10.53*	*Sqm*
		4		*1.200*	*0.650*	*3.12*	*Sqm*
	Floor	*2*	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*4.700*	*0.750*	*7.05*	*Sqm*
		2	*8.75*		*0.650*	*11.38*	*Sqm*
		2		*4.700*	*0.650*	*6.11*	*Sqm*
		2	*6.882*		*0.300*	*4.13*	*Sqm*
		2		*4.700*	*0.300*	*2.82*	*Sqm*
		2	*0.56*		*0.500*	*0.56*	*Sqm*
		2		*4.700*	*0.500*	*4.70*	*Sqm*
		2	*0.25*		*0.575*	*0.29*	*Sqm*
		2		*4.700*	*0.575*	*5.41*	*Sqm*
		2	*1.25*		*0.700*	*1.75*	*Sqm*
		2		*4.700*	*0.700*	*6.58*	*Sqm*
		2	*0.050*		*0.675*	*0.07*	*Sqm*
		2		*4.700*	*0.675*	*6.35*	*Sqm*
		2	*2.450*		*0.650*	*3.19*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*4.700*	*0.650*	*6.11*	*Sqm*
		2	*0.85*		*1.600*	*2.72*	*Sqm*
		2		*4.700*	*1.600*	*15.04*	*Sqm*
	Crest	*2*	*1.39*		*2.145*	*5.97*	*Sqm*
		2		*4.700*	*2.145*	*20.16*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.30*		*0.300*	*8.58*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.00*		*0.600*	*16.80*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**448.91**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*4.100*	*0.300*	**4.00**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*4.100*	*0.150*	**4.00**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*21.32*	*0.450*		*9.59*	*Sqm*
	On Abutment Top (Right Side)	*1*	*21.32*	*0.450*		*9.59*	*Sqm*
	TOTAL					**19.19**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		26.267		26.27	**Cum**
	Abutment						
	Section 1-1	2	*1.74*	*1.655*		*5.748*	*Cum*
	Section 2-2	2	*5.00*	*1.443*		*14.430*	*Cum*
	Section 3-3	2	*3.70*	*1.148*		*8.492*	*Cum*
	Section 5-5	2	*6.15*	*1.610*		*19.808*	*Cum*
	Section 6-6	2	*3.45*	*1.148*		*7.918*	*Cum*
	D/S protection	2					
	Toe wall	2	*14.30*	*0.150*	*0.600*	*4.290*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**87.54**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 6.280 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.68*	*2.202*	*2.400*	*17.778*	*Cum*
	Section 2-2	*2*	*4.30*	*1.990*	*2.400*	*41.083*	*Cum*
	Section 3-3	*2*	*4.20*	*1.870*	*2.200*	*34.558*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*2.150*	*62.654*	*Cum*
	Section 6-6	*2*	*3.08*	*1.350*	*2.200*	*18.295*	*Cum*
	U/S Key Floor	*1*	*0.82*	*6.500*	*0.450*	*2.399*	*Cum*
	U/S Floor	*1*	*3.00*	*6.500*	*2.120*	*41.340*	*Cum*
	D/S Floor	*1*	*4.50*	*6.500*	*0.900*	*26.325*	*Cum*
		1	*6.16*	*6.500*	*0.250*	*10.007*	*Cum*
		1	*1.50*	*4.700*	*0.700*	*4.935*	*Cum*
	D/S Key Floor	*1*	*0.76*	*6.500*	*1.400*	*6.939*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.750*	*0.900*	*9.653*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						278.89	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
		1	*0.95*	*4.700*	*0.150*	*0.67*	*Cum*
		1	*0.14*	*4.700*	*0.150*	*0.10*	*Cum*
		1	*0.35*	*4.700*	*0.150*	*0.25*	*Cum*
		1	*6.47*	*4.700*	*0.150*	*4.56*	*Cum*
		1	*0.57*	*4.700*	*0.150*	*0.40*	*Cum*
		1	*2.58*	*4.700*	*0.150*	*1.82*	*Cum*
		1	*1.40*	*4.700*	*0.150*	*0.98*	*Cum*
		1	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.68*	*2.202*	*0.150*	*1.11*	*Cum*
	Section 2-2	*2*	*4.30*	*1.990*	*0.300*	*5.14*	*Cum*
	Section 3-3	*2*	*4.20*	*1.870*	*0.300*	*4.71*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*0.150*	*4.37*	*Cum*
	Section 6-6	*2*	*3.08*	*1.350*	*0.150*	*1.25*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.750*	*0.300*	*3.22*	*Cum*
	Toe Wall D/S Portion	*1*	*14.00*	*0.450*	*0.600*	*3.78*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**34.87**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.46*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.46*	*1.176*	*2.420*	*8.29*	*Cum*
		2	*1.46*	*2.052*	*0.800*	*4.78*	*Cum*
	Section 2-2	*2*	*4.30*	*0.820*	*0.500*	*3.53*	*Cum*
		2	*4.30*	*1.180*	*1.200*	*12.18*	*Cum*
		2	*4.30*	*1.690*	*1.600*	*23.26*	*Cum*
	Section 3-3	*2*	*3.75*	*0.820*	*0.500*	*3.08*	*Cum*
		2	*3.75*	*1.120*	*1.000*	*8.40*	*Cum*
		2	*3.75*	*1.570*	*1.800*	*21.20*	*Cum*
	Section 5-5	*2*	*6.15*	*0.450*	*0.450*	*2.49*	*Cum*
		2	*6.15*	*1.176*	*2.420*	*35.00*	*Cum*
		2	*6.15*	*2.052*	*0.550*	*13.88*	*Cum*
	Section 6-6	*2*	*3.87*	*0.450*	*0.450*	*1.57*	*Cum*
		2	*3.87*	*0.750*	*1.000*	*5.80*	*Cum*
		2	*3.87*	*1.200*	*0.550*	*5.10*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*6.500*	*0.300*	*-3.20*	*Cum*
	Floor	*1*	*0.69*	*4.700*	*0.950*	*3.07*	*Cum*
		1	*7.50*	*4.700*	*0.550*	*19.39*	*Cum*
		1	*6.16*	*4.700*	*0.250*	*7.24*	*Cum*
		1	*0.51*	*4.700*	*0.400*	*0.95*	*Cum*
		1	*0.20*	*4.700*	*0.500*	*0.47*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	1.30	4.700	0.600	3.67	Cum
		1	0.05	4.700	0.575	0.14	Cum
		1	2.95	4.700	0.550	7.63	Cum
		1	0.76	4.700	1.250	4.48	Cum
	Crest	1	1.24	4.700	1.800	10.50	Cum
	TOTAL					**203.47**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	1	0.95	4.700	0.200	0.89	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	14.62	0.450	0.050	0.33	Cum
	On Abutment Top (Right Side)	1	14.62	0.450	0.050	0.33	Cum
	Slab Bridge						
	Slab	1	5.50	6.500	0.435	15.55	Cum
	Wearing coat	1	5.50	5.500	0.070	2.12	Cum
	Dirt wall	2	0.40	6.500	0.500	2.60	Cum
	300 mm thick pedastial	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					**25.02**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	20	44	6.26		2.466	679.2	Kg
a2	12	28	7.20		0.888	179.0	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	6.18		0.616	99.1	Kg
a5	10	22	6.90		0.616	93.6	Kg
x1	12	92	2.60		0.888	212.4	Kg
x2	16	92	1.37		1.578	198.2	Kg
x3	12	24	5.40		0.888	115.0	Kg
	Taking Skin reinforcement @0.3% of M-20	**203.47**	**0.003**	**0.610**	**7850.0**	**4791.8**	**Kg**
	Total Reinforcement Steel (in kg)					6376.1	Kg
	Total Weight in Metric Tonne					**6.38**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.46		0.450	2.62	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.46		2.420	14.10	Sqm
		4		1.176	2.420	11.38	Sqm
		4	1.46		0.800	4.66	Sqm
		4		2.052	0.800	6.57	Sqm
	Section 2-2	4	4.30		0.500	8.60	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.30		1.200	20.64	Sqm
		4		1.180	1.200	5.66	Sqm
		4	4.30		1.600	27.53	Sqm
		4		1.690	1.600	10.82	Sqm
	Section 3-3	4	3.75		0.500	7.50	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.75		1.000	15.00	Sqm
		4		1.120	1.000	4.48	Sqm
		4	3.75		1.800	27.00	Sqm
		4		1.570	1.800	11.30	Sqm
	Section 5-5	4	6.15		0.450	11.07	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.15		2.420	59.53	Sqm
		4		1.176	2.420	11.38	Sqm
		4	6.15		0.550	13.53	Sqm
		4		2.052	0.550	4.51	Sqm
	Section 6-6	4	3.87		0.450	6.96	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.87		1.000	15.46	Sqm
		4		0.750	1.000	3.00	Sqm
		4	3.87		0.550	8.50	Sqm
		4		1.200	0.550	2.64	Sqm
	Floor	2	0.69		0.950	1.31	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*4.700*	*0.950*	*8.93*	*Sqm*
		2	*7.50*		*0.550*	*8.25*	*Sqm*
		2		*4.700*	*0.550*	*5.17*	*Sqm*
		2	*6.158*		*0.250*	*3.08*	*Sqm*
		2		*4.700*	*0.250*	*2.35*	*Sqm*
		2	*0.51*		*0.400*	*0.41*	*Sqm*
		2		*4.700*	*0.400*	*3.76*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*4.700*	*0.500*	*4.70*	*Sqm*
		2	*0.050*		*0.575*	*0.06*	*Sqm*
		2		*4.700*	*0.575*	*5.41*	*Sqm*
		2	*2.950*		*0.550*	*3.25*	*Sqm*
		2		*4.700*	*0.550*	*5.17*	*Sqm*
		2	*1.30*		*0.600*	*1.56*	*Sqm*
		2		*4.700*	*0.600*	*5.64*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*4.700*	*1.250*	*11.75*	*Sqm*
	Crest	*2*	*1.24*		*1.800*	*4.47*	*Sqm*
		2		*4.700*	*1.800*	*16.92*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.30*		*0.300*	*8.58*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.00*		*0.600*	*16.80*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**451.65**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*4.100*	*0.300*	**4.00**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*4.100*	*0.150*	**4.00**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*14.62*	*0.450*		*6.58*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.62*	*0.450*		*6.58*	*Sqm*
	TOTAL					**13.16**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		13.845		13.84	**Cum**
	Abutment						
	Section 1-1	2	1.68	*1.186*		*3.988*	*Cum*
	Section 2-2	2	4.30	*2.228*		*19.161*	*Cum*
	Section 3-3	2	4.20	*1.968*		*16.527*	*Cum*
	Section 5-5	2	6.20	*1.148*		*14.224*	*Cum*
	Section 6-6	2	3.08	*0.910*		*5.606*	*Cum*
	D/S protection	2					
	Toe wall	2	*14.30*	*0.150*	*0.600*	*4.290*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**78.23**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH. 6.470 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.47*	*2.294*	*2.310*	*15.548*	*Cum*
	Section 2-2	*2*	*4.75*	*1.470*	*2.310*	*32.259*	*Cum*
	Section 3-3	*2*	*3.70*	*1.350*	*2.110*	*21.079*	*Cum*
	Section 5-5	*2*	*6.18*	*2.444*	*2.310*	*69.735*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*2.110*	*19.655*	*Cum*
	U/S Key Floor	*1*	*0.68*	*4.700*	*1.050*	*3.331*	*Cum*
	U/S Floor	*1*	*3.75*	*4.700*	*2.322*	*40.925*	*Cum*
	D/S Floor	*1*	*4.75*	*4.700*	*0.950*	*21.209*	*Cum*
		1	*6.41*	*4.700*	*0.250*	*7.533*	*Cum*
		1	*1.00*	*4.700*	*0.750*	*3.525*	*Cum*
		1	*3.00*	*4.700*	*0.750*	*10.575*	*Cum*
	D/S Key Floor	*1*	*0.80*	*4.700*	*1.550*	*5.828*	*Cum*
	Toe Wall D/S Portion	*2*	*14.30*	*0.750*	*0.900*	*19.305*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						273.43	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
		1	*1.01*	*4.700*	*0.150*	*0.71*	*Cum*
		1	*0.91*	*4.700*	*0.150*	*0.64*	*Cum*
		1	*0.35*	*4.700*	*0.150*	*0.25*	*Cum*
		1	*6.48*	*4.700*	*0.150*	*4.57*	*Cum*
		1	*0.57*	*4.700*	*0.150*	*0.40*	*Cum*
		1	*0.53*	*4.700*	*0.150*	*0.37*	*Cum*
		1	*0.07*	*4.700*	*0.150*	*0.05*	*Cum*
		1	*1.65*	*4.700*	*0.150*	*1.16*	*Cum*
		1	*1.57*	*4.700*	*0.150*	*1.10*	*Cum*
		1	*0.54*	*4.700*	*0.150*	*0.38*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.47*	*2.294*	*0.150*	*1.01*	*Cum*
	Section 2-2	*2*	*4.75*	*1.470*	*0.150*	*2.09*	*Cum*
	Section 3-3	*2*	*3.70*	*1.350*	*0.150*	*1.50*	*Cum*
	Section 5-5	*2*	*6.18*	*2.444*	*0.150*	*4.53*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*14.30*	*0.750*	*0.300*	*3.22*	*Cum*
	Toe Wall D/S Portion	*1*	*14.00*	*0.450*	*0.600*	*3.78*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**29.30**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.24*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.24*	*1.222*	*2.572*	*7.80*	*Cum*
		2	*1.24*	*2.144*	*0.850*	*4.53*	*Cum*
	Section 2-2	*2*	*4.75*	*0.450*	*0.450*	*1.92*	*Cum*
		2	*4.75*	*0.810*	*1.200*	*9.23*	*Cum*
		2	*4.75*	*1.320*	*0.850*	*10.66*	*Cum*
	Section 3-3	*2*	*3.25*	*0.450*	*0.450*	*1.32*	*Cum*
		2	*3.25*	*0.750*	*1.000*	*4.88*	*Cum*
		2	*3.25*	*1.200*	*0.600*	*4.68*	*Cum*
	Section 5-5	*2*	*6.13*	*0.450*	*0.450*	*2.48*	*Cum*
		2	*6.13*	*1.222*	*2.572*	*38.53*	*Cum*
		2	*6.13*	*2.144*	*0.600*	*15.78*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.600*	*5.83*	*Cum*
	Floor	*1*	*0.68*	*4.700*	*0.900*	*2.86*	*Cum*
		1	*8.50*	*4.700*	*0.600*	*23.97*	*Cum*
		1	*6.41*	*4.700*	*0.250*	*7.53*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.27*	*4.700*	*0.400*	*0.51*	*Cum*
		1	*0.20*	*4.700*	*0.550*	*0.52*	*Cum*
		1	*0.80*	*4.700*	*0.650*	*2.44*	*Cum*
		1	*0.05*	*4.700*	*0.625*	*0.15*	*Cum*
		1	*2.95*	*4.700*	*0.600*	*8.32*	*Cum*
		1	*0.80*	*4.700*	*1.400*	*5.26*	*Cum*
	Crest	*1*	*1.22*	*4.700*	*1.957*	*11.20*	*Cum*
	TOTAL					**178.62**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*4.700*	*0.150*	*0.63*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*20.88*	*0.450*	*0.050*	*0.47*	*Cum*
	On Abutment Top (Right Side)	*1*	*20.88*	*0.450*	*0.050*	*0.47*	*Cum*
	TOTAL					**1.57**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**178.62**	**0.00**	**0.536**	**7850.0**	**4206.42**	**Kg**
	Total Weight in Metric Tonne					**4.21**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.24*		*0.450*	*2.24*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.24*		*2.572*	*12.78*	*Sqm*
		4		*1.222*	*2.572*	*12.57*	*Sqm*
		4	*1.24*		*0.850*	*4.22*	*Sqm*
		4		*2.144*	*0.850*	*7.29*	*Sqm*
	Section 2-2	*4*	*4.75*		*0.450*	*8.55*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.75*		*1.200*	*22.80*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.75*		*0.850*	*16.15*	*Sqm*
		4		*1.320*	*0.850*	*4.49*	*Sqm*
	Section 3-3	*4*	*3.25*		*0.450*	*5.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.25*		*1.000*	*13.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Section 5-5	*4*	*6.13*		*0.450*	*11.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.13*		*2.572*	*63.09*	*Sqm*
		4		*1.222*	*2.572*	*12.57*	*Sqm*
		4	*6.13*		*0.600*	*14.72*	*Sqm*
		4		*2.144*	*0.600*	*5.15*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.600*	*9.72*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*4.700*	*0.900*	*8.46*	*Sqm*
		2	*8.50*		*0.600*	*10.20*	*Sqm*
		2		*4.700*	*0.600*	*5.64*	*Sqm*
		2	*6.411*		*0.250*	*3.21*	*Sqm*
		2		*4.700*	*0.250*	*2.35*	*Sqm*
		2	*0.27*		*0.400*	*0.22*	*Sqm*
		2		*4.700*	*0.400*	*3.76*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*4.700*	*0.550*	*5.17*	*Sqm*
		2	*0.80*		*0.650*	*1.04*	*Sqm*
		2		*4.700*	*0.650*	*6.11*	*Sqm*
		2	*0.050*		*0.625*	*0.06*	*Sqm*
		2		*4.700*	*0.625*	*5.88*	*Sqm*
		2	*2.950*		*0.600*	*3.54*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*4.700*	*0.600*	*5.64*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*4.700*	*1.400*	*13.16*	*Sqm*
	Crest	*2*	*1.22*		*1.957*	*4.77*	*Sqm*
		2		*4.700*	*1.957*	*18.40*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.30*		*0.300*	*8.58*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*14.00*		*0.600*	*16.80*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**415.66**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*4.100*	*0.300*	**4.00**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*4.100*	*0.150*	**4.00**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*20.88*	*0.450*		*9.39*	*Sqm*
	On Abutment Top (Right Side)	*1*	*20.88*	*0.450*		*9.39*	*Sqm*
	TOTAL					**18.79**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		25.699		25.70	**Cum**
	Abutment						
	Section 1-1	2	*1.47*	*1.036*		*3.038*	*Cum*
	Section 2-2	2	*4.75*	*1.032*		*9.804*	*Cum*
	Section 3-3	2	*3.70*	*0.797*		*5.894*	*Cum*
	Section 5-5	2	*6.18*	*0.998*		*12.327*	*Cum*
	Section 6-6	2	*3.45*	*0.789*		*5.444*	*Cum*
	D/S protection	2					
	Toe wall	2	*14.30*	*0.150*	*0.600*	*4.290*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**67.08**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 8.790 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.16*	*1.836*	*1.739*	*7.430*	*Cum*
	Section 2-2	*2*	*3.50*	*1.470*	*1.739*	*17.894*	*Cum*
	Section 3-3	*2*	*1.70*	*1.350*	*1.539*	*7.064*	*Cum*
	Section 5-5	*2*	*6.27*	*1.986*	*1.739*	*43.316*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*1.539*	*14.336*	*Cum*
	U/S Key Floor	*1*	*0.52*	*4.150*	*0.850*	*1.834*	*Cum*
	U/S Floor	*1*	*2.25*	*4.150*	*1.460*	*13.633*	*Cum*
	D/S Floor	*1*	*3.50*	*4.150*	*0.850*	*12.346*	*Cum*
		1	*2.00*	*4.150*	*0.650*	*5.395*	*Cum*
	D/S Key Floor	*1*	*0.65*	*4.150*	*0.950*	*2.563*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.900*	*9.281*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						138.02	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
		1	*0.78*	*4.150*	*0.150*	*0.49*	*Cum*
		1	*0.11*	*4.150*	*0.150*	*0.07*	*Cum*
		1	*0.07*	*4.150*	*0.150*	*0.04*	*Cum*
		1	*4.92*	*4.150*	*0.150*	*3.06*	*Cum*
		1	*0.35*	*4.150*	*0.150*	*0.22*	*Cum*
		1	*0.59*	*4.150*	*0.150*	*0.37*	*Cum*
		1	*0.90*	*4.150*	*0.150*	*0.56*	*Cum*
		1	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.16*	*1.836*	*0.150*	*0.64*	*Cum*
	Section 2-2	*2*	*3.50*	*1.470*	*0.150*	*1.54*	*Cum*
	Section 3-3	*2*	*1.70*	*1.350*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*6.27*	*1.986*	*0.150*	*3.74*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.300*	*3.09*	*Cum*
	Toe Wall D/S Portion	*1*	*13.45*	*0.450*	*0.600*	*3.63*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**21.96**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.94*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.94*	*0.993*	*1.810*	*3.38*	*Cum*
		2	*0.94*	*1.686*	*0.550*	*1.74*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.810*	*1.200*	*6.80*	*Cum*
		2	*3.50*	*1.320*	*0.550*	*5.08*	*Cum*
	Section 3-3	*2*	*1.25*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.25*	*0.750*	*1.000*	*1.88*	*Cum*
		2	*1.25*	*1.200*	*0.500*	*1.50*	*Cum*
	Section 5-5	*2*	*6.23*	*0.450*	*0.450*	*2.52*	*Cum*
		2	*6.23*	*0.993*	*1.810*	*22.38*	*Cum*
		2	*6.23*	*1.686*	*0.500*	*10.50*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.500*	*4.86*	*Cum*
	Floor	*1*	*0.52*	*4.150*	*0.700*	*1.51*	*Cum*
		1	*5.75*	*4.150*	*0.500*	*11.93*	*Cum*
		1	*4.66*	*4.150*	*0.050*	*0.97*	*Cum*
		1	*0.28*	*4.150*	*0.250*	*0.29*	*Cum*
		1	*0.20*	*4.150*	*0.425*	*0.35*	*Cum*
		1	*1.80*	*4.150*	*0.500*	*3.74*	*Cum*
		1	*0.65*	*4.150*	*0.800*	*2.16*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.94*	*4.150*	*1.215*	*4.76*	*Cum*
	TOTAL					**96.37**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*4.150*	*0.150*	*0.47*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*17.23*	*0.450*	*0.050*	*0.39*	*Cum*
	On Abutment Top (Right Side)	*1*	*17.23*	*0.450*	*0.050*	*0.39*	*Cum*
	TOTAL					**1.24**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**96.37**	**0.00**	**0.289**	**7850.0**	**2269.50**	**Kg**
	Total Weight in Metric Tonne					**2.27**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.94*		*0.450*	*1.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.94*		*1.810*	*6.80*	*Sqm*
		4		*0.993*	*1.810*	*7.19*	*Sqm*
		4	*0.94*		*0.550*	*2.07*	*Sqm*
		4		*1.686*	*0.550*	*3.71*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*1.200*	*16.80*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*3.50*		*0.550*	*7.70*	*Sqm*
		4		*1.320*	*0.550*	*2.90*	*Sqm*
	Section 3-3	*4*	*1.25*		*0.450*	*2.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.25*		*1.000*	*5.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*1.25*		*0.500*	*2.50*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Section 5-5	*4*	*6.23*		*0.450*	*11.21*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.23*		*1.810*	*45.08*	*Sqm*
		4		*0.993*	*1.810*	*7.19*	*Sqm*
		4	*6.23*		*0.500*	*12.45*	*Sqm*
		4		*1.686*	*0.500*	*3.37*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.500*	*8.10*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Floor	*2*	*0.52*		*0.700*	*0.73*	*Sqm*
		2		*4.150*	*0.700*	*5.81*	*Sqm*
		2	*5.75*		*0.500*	*5.75*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*4.150*	*0.250*	*2.08*	*Sqm*
		2	*0.20*		*0.425*	*0.17*	*Sqm*
		2		*4.150*	*0.425*	*3.53*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*4.150*	*0.800*	*6.64*	*Sqm*
	Crest	*2*	*0.94*		*1.215*	*2.29*	*Sqm*
		2		*4.150*	*1.215*	*10.08*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.75*		*0.300*	*8.25*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.45*		*0.600*	*16.14*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**279.11**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*3.550*	*0.300*	**3.46**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*3.550*	*0.150*	**3.46**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*17.23*	*0.450*		*7.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*17.23*	*0.450*		*7.75*	*Sqm*
	TOTAL					**15.50**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.415		4.41	**Cum**
	Abutment						
	Section 1-1	2	*1.16*	*0.723*		*1.682*	*Cum*
	Section 2-2	2	*3.50*	*0.723*		*5.061*	*Cum*
	Section 3-3	2	*1.70*	*0.538*		*1.829*	*Cum*
	Section 5-5	2	*6.27*	*0.723*		*9.068*	*Cum*
	Section 6-6	2	*3.45*	*0.538*		*3.712*	*Cum*
	D/S protection	2					
	Toe wall	2	*13.75*	*0.150*	*0.600*	*4.125*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**30.48**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 9.170 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.49*	*2.202*	*1.740*	*11.379*	*Cum*
	Section 2-2	*2*	*4.50*	*1.470*	*1.740*	*23.020*	*Cum*
	Section 3-3	*2*	*2.45*	*1.350*	*1.540*	*10.187*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*1.740*	*50.706*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*1.540*	*14.345*	*Cum*
	U/S Key Floor	*1*	*0.54*	*4.150*	*1.050*	*2.353*	*Cum*
	U/S Floor	*1*	*3.25*	*4.150*	*2.170*	*29.268*	*Cum*
	D/S Floor	*1*	*4.50*	*4.150*	*0.950*	*17.741*	*Cum*
		1	*2.75*	*4.150*	*0.750*	*8.559*	*Cum*
	D/S Key Floor	*1*	*0.80*	*4.150*	*1.550*	*5.146*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.900*	*9.281*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						184.91	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
		1	*1.01*	*4.150*	*0.150*	*0.63*	*Cum*
		1	*0.46*	*4.150*	*0.150*	*0.29*	*Cum*
		1	*0.28*	*4.150*	*0.150*	*0.18*	*Cum*
		1	*6.21*	*4.150*	*0.150*	*3.86*	*Cum*
		1	*0.57*	*4.150*	*0.150*	*0.35*	*Cum*
		1	*1.00*	*4.150*	*0.150*	*0.62*	*Cum*
		1	*1.57*	*4.150*	*0.150*	*0.97*	*Cum*
		1	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.49*	*2.202*	*0.150*	*0.98*	*Cum*
	Section 2-2	*2*	*4.50*	*1.470*	*0.150*	*1.98*	*Cum*
	Section 3-3	*2*	*2.45*	*1.350*	*0.150*	*0.99*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*0.150*	*4.37*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.300*	*3.09*	*Cum*
	Toe Wall D/S Portion	*1*	*13.45*	*0.450*	*0.600*	*3.63*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**25.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.27*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.27*	*1.176*	*2.420*	*7.22*	*Cum*
		2	*1.27*	*2.052*	*0.800*	*4.17*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.810*	*1.200*	*8.75*	*Cum*
		2	*4.50*	*1.320*	*0.800*	*9.50*	*Cum*
	Section 3-3	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.750*	*1.000*	*3.00*	*Cum*
		2	*2.00*	*1.200*	*0.600*	*2.88*	*Cum*
	Section 5-5	*2*	*6.15*	*0.450*	*0.450*	*2.49*	*Cum*
		2	*6.15*	*1.176*	*2.420*	*35.01*	*Cum*
		2	*6.15*	*2.052*	*0.600*	*15.15*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.600*	*5.83*	*Cum*
	Floor	*1*	*0.54*	*4.150*	*0.900*	*2.02*	*Cum*
		1	*7.75*	*4.150*	*0.600*	*19.30*	*Cum*
		1	*6.14*	*4.150*	*0.200*	*5.09*	*Cum*
		1	*0.25*	*4.150*	*0.400*	*0.41*	*Cum*
		1	*0.20*	*4.150*	*0.500*	*0.42*	*Cum*
		1	*2.55*	*4.150*	*0.600*	*6.35*	*Cum*
		1	*0.80*	*4.150*	*1.400*	*4.65*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.24*	*4.150*	*1.805*	*9.31*	*Cum*
	TOTAL					**152.40**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*4.150*	*0.150*	*0.59*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.38*	*0.450*	*0.050*	*0.44*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.38*	*0.450*	*0.050*	*0.44*	*Cum*
	TOTAL					**1.46**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**152.40**	**0.00**	**0.457**	**7850.0**	**3589.04**	**Kg**
	Total Weight in Metric Tonne					**3.59**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.27*		*0.450*	*2.28*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.27*		*2.420*	*12.28*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*1.27*		*0.800*	*4.06*	*Sqm*
		4		*2.052*	*0.800*	*6.57*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*1.200*	*21.60*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.50*		*0.800*	*14.40*	*Sqm*
		4		*1.320*	*0.800*	*4.22*	*Sqm*
	Section 3-3	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*1.000*	*8.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Section 5-5	*4*	*6.15*		*0.450*	*11.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.15*		*2.420*	*59.54*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*6.15*		*0.600*	*14.76*	*Sqm*
		4		*2.052*	*0.600*	*4.92*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.600*	*9.72*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Floor	*2*	*0.54*		*0.900*	*0.97*	*Sqm*
		2		*4.150*	*0.900*	*7.47*	*Sqm*
		2	*7.75*		*0.600*	*9.30*	*Sqm*
		2		*4.150*	*0.600*	*4.98*	*Sqm*
		2	*0.25*		*0.400*	*0.20*	*Sqm*
		2		*4.150*	*0.400*	*3.32*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*2.55*		*0.600*	*3.06*	*Sqm*
		2		*4.150*	*0.600*	*4.98*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*4.150*	*1.400*	*11.62*	*Sqm*
	Crest	*2*	*1.24*		*1.805*	*4.49*	*Sqm*
		2		*4.150*	*1.805*	*14.98*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.75*		*0.300*	*8.25*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.45*		*0.600*	*16.14*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**364.06**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*3.550*	*0.300*	**3.46**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*3.550*	*0.150*	**3.46**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.38*	*0.450*		*8.72*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.38*	*0.450*		*8.72*	*Sqm*
	TOTAL					**17.44**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		15.249		15.25	**Cum**
	Abutment						
	Section 1-1	2	*1.49*	*0.544*		*1.616*	*Cum*
	Section 2-2	2	*4.50*	*0.544*		*4.896*	*Cum*
	Section 3-3	2	*2.45*	*0.372*		*1.823*	*Cum*
	Section 5-5	2	*6.20*	*0.544*		*6.740*	*Cum*
	Section 6-6	2	*3.45*	*0.372*		*2.567*	*Cum*
	D/S protection	2					
	Toe wall	2	*13.75*	*0.150*	*0.600*	*4.125*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**37.60**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 9.520 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.49*	*2.202*	*2.526*	*16.520*	*Cum*
	Section 2-2	*2*	*4.50*	*1.470*	*2.526*	*33.419*	*Cum*
	Section 3-3	*2*	*2.45*	*1.350*	*2.326*	*15.386*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*2.526*	*73.611*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*2.326*	*21.667*	*Cum*
	U/S Key Floor	*1*	*0.54*	*4.150*	*1.050*	*2.353*	*Cum*
	U/S Floor	*1*	*3.25*	*4.150*	*2.170*	*29.268*	*Cum*
	D/S Floor	*1*	*4.50*	*4.150*	*0.950*	*17.741*	*Cum*
		1	*2.75*	*4.150*	*0.750*	*8.559*	*Cum*
	D/S Key Floor	*1*	*0.80*	*4.150*	*1.550*	*5.146*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.900*	*9.281*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						235.88	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
		1	*1.01*	*4.150*	*0.150*	*0.63*	*Cum*
		1	*0.46*	*4.150*	*0.150*	*0.29*	*Cum*
		1	*0.28*	*4.150*	*0.150*	*0.18*	*Cum*
		1	*6.21*	*4.150*	*0.150*	*3.86*	*Cum*
		1	*0.57*	*4.150*	*0.150*	*0.35*	*Cum*
		1	*1.00*	*4.150*	*0.150*	*0.62*	*Cum*
		1	*1.57*	*4.150*	*0.150*	*0.97*	*Cum*
		1	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.49*	*2.202*	*0.150*	*0.98*	*Cum*
	Section 2-2	*2*	*4.50*	*1.470*	*0.150*	*1.98*	*Cum*
	Section 3-3	*2*	*2.45*	*1.350*	*0.150*	*0.99*	*Cum*
	Section 5-5	*2*	*6.20*	*2.352*	*0.150*	*4.37*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.300*	*3.09*	*Cum*
	Toe Wall D/S Portion	*1*	*13.45*	*0.450*	*0.600*	*3.63*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**25.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.27*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.27*	*1.176*	*2.420*	*7.22*	*Cum*
		2	*1.27*	*2.052*	*0.800*	*4.17*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.810*	*1.200*	*8.75*	*Cum*
		2	*4.50*	*1.320*	*0.800*	*9.50*	*Cum*
	Section 3-3	*2*	*2.00*	*0.450*	*0.450*	*0.81*	*Cum*
		2	*2.00*	*0.750*	*1.000*	*3.00*	*Cum*
		2	*2.00*	*1.200*	*0.600*	*2.88*	*Cum*
	Section 5-5	*2*	*6.15*	*0.450*	*0.450*	*2.49*	*Cum*
		2	*6.15*	*1.176*	*2.420*	*35.01*	*Cum*
		2	*6.15*	*2.052*	*0.600*	*15.15*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.600*	*5.83*	*Cum*
	Floor	*1*	*0.54*	*4.150*	*0.900*	*2.02*	*Cum*
		1	*7.75*	*4.150*	*0.600*	*19.30*	*Cum*
		1	*6.14*	*4.150*	*0.200*	*5.09*	*Cum*
		1	*0.25*	*4.150*	*0.400*	*0.41*	*Cum*
		1	*0.20*	*4.150*	*0.500*	*0.42*	*Cum*
		1	*2.55*	*4.150*	*0.600*	*6.35*	*Cum*
		1	*0.80*	*4.150*	*1.400*	*4.65*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.24*	*4.150*	*1.805*	*9.31*	*Cum*
	TOTAL					**152.40**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*4.150*	*0.150*	*0.59*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.38*	*0.450*	*0.050*	*0.44*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.38*	*0.450*	*0.050*	*0.44*	*Cum*
	TOTAL					**1.46**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**152.40**	**0.00**	**0.457**	**7850.0**	**3589.04**	**Kg**
	Total Weight in Metric Tonne					**3.59**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.27*		*0.450*	*2.28*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.27*		*2.420*	*12.28*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*1.27*		*0.800*	*4.06*	*Sqm*
		4		*2.052*	*0.800*	*6.57*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*1.200*	*21.60*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*4.50*		*0.800*	*14.40*	*Sqm*
		4		*1.320*	*0.800*	*4.22*	*Sqm*
	Section 3-3	*4*	*2.00*		*0.450*	*3.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.00*		*1.000*	*8.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Section 5-5	*4*	*6.15*		*0.450*	*11.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.15*		*2.420*	*59.54*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*6.15*		*0.600*	*14.76*	*Sqm*
		4		*2.052*	*0.600*	*4.92*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.600*	*9.72*	*Sqm*
		4		*1.200*	*0.600*	*2.88*	*Sqm*
	Floor	*2*	*0.54*		*0.900*	*0.97*	*Sqm*
		2		*4.150*	*0.900*	*7.47*	*Sqm*
		2	*7.75*		*0.600*	*9.30*	*Sqm*
		2		*4.150*	*0.600*	*4.98*	*Sqm*
		2	*0.25*		*0.400*	*0.20*	*Sqm*
		2		*4.150*	*0.400*	*3.32*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*2.55*		*0.600*	*3.06*	*Sqm*
		2		*4.150*	*0.600*	*4.98*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*4.150*	*1.400*	*11.62*	*Sqm*
	Crest	*2*	*1.24*		*1.805*	*4.49*	*Sqm*
		2		*4.150*	*1.805*	*14.98*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.75*		*0.300*	*8.25*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.45*		*0.600*	*16.14*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**364.06**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*3.550*	*0.300*	**3.46**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*3.550*	*0.150*	**3.46**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.38*	*0.450*		*8.72*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.38*	*0.450*		*8.72*	*Sqm*
	TOTAL					**17.44**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		15.249		15.25	**Cum**
	Abutment						
	Section 1-1	2	*1.49*	*1.340*		*3.980*	*Cum*
	Section 2-2	2	*4.50*	*1.300*		*11.700*	*Cum*
	Section 3-3	2	*2.45*	*1.028*		*5.037*	*Cum*
	Section 5-5	2	*6.20*	*1.340*		*16.603*	*Cum*
	Section 6-6	2	*3.45*	*1.028*		*7.093*	*Cum*
	D/S protection	2					
	Toe wall	2	*13.75*	*0.150*	*0.600*	*4.125*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**64.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.650 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.28*	*2.018*	*2.839*	*14.621*	*Cum*
	Section 2-2	*2*	*3.75*	*1.470*	*2.839*	*31.300*	*Cum*
	Section 3-3	*2*	*3.20*	*1.350*	*2.639*	*22.801*	*Cum*
	Section 5-5	*2*	*6.23*	*2.168*	*2.839*	*76.728*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*2.639*	*24.582*	*Cum*
	U/S Key Floor	*1*	*0.54*	*4.150*	*1.050*	*2.353*	*Cum*
	U/S Floor	*1*	*2.75*	*4.150*	*1.764*	*20.132*	*Cum*
	D/S Floor	*1*	*3.75*	*4.150*	*0.850*	*13.228*	*Cum*
		1	*2.00*	*4.150*	*0.650*	*5.395*	*Cum*
	D/S Key Floor	*1*	*0.76*	*4.150*	*1.400*	*4.430*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.900*	*9.281*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.25*	*0.600*	*0.750*	*2.925*	*Cum*
						227.78	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
		1	*0.78*	*4.150*	*0.150*	*0.49*	*Cum*
		1	*0.31*	*4.150*	*0.150*	*0.19*	*Cum*
		1	*0.28*	*4.150*	*0.150*	*0.18*	*Cum*
		1	*5.17*	*4.150*	*0.150*	*3.22*	*Cum*
		1	*0.57*	*4.150*	*0.150*	*0.35*	*Cum*
		1	*0.36*	*4.150*	*0.150*	*0.23*	*Cum*
		1	*1.40*	*4.150*	*0.150*	*0.87*	*Cum*
		1	*0.54*	*4.150*	*0.150*	*0.34*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.28*	*2.018*	*0.150*	*0.77*	*Cum*
	Section 2-2	*2*	*3.75*	*1.470*	*0.150*	*1.65*	*Cum*
	Section 3-3	*2*	*3.20*	*1.350*	*0.150*	*1.30*	*Cum*
	Section 5-5	*2*	*6.23*	*2.168*	*0.150*	*4.05*	*Cum*
	Section 6-6	*2*	*3.45*	*1.350*	*0.150*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*13.75*	*0.750*	*0.300*	*3.09*	*Cum*
	Toe Wall D/S Portion	*1*	*13.45*	*0.450*	*0.600*	*3.63*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.600*	*0.150*	*0.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.25*	*0.300*	*0.600*	*1.17*	*Cum*
	TOTAL					**23.85**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.05*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.05*	*1.084*	*2.114*	*4.82*	*Cum*
		2	*1.05*	*1.868*	*0.700*	*2.75*	*Cum*
	Section 2-2	*2*	*3.75*	*0.450*	*0.450*	*1.52*	*Cum*
		2	*3.75*	*0.810*	*1.200*	*7.29*	*Cum*
		2	*3.75*	*1.320*	*0.700*	*6.93*	*Cum*
	Section 3-3	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.750*	*1.000*	*4.13*	*Cum*
		2	*2.75*	*1.200*	*0.500*	*3.30*	*Cum*
	Section 5-5	*2*	*6.19*	*0.450*	*0.450*	*2.51*	*Cum*
		2	*6.19*	*1.084*	*2.114*	*28.37*	*Cum*
		2	*6.19*	*1.868*	*0.500*	*11.56*	*Cum*
	Section 6-6	*2*	*4.05*	*0.450*	*0.450*	*1.64*	*Cum*
		2	*4.05*	*0.750*	*1.000*	*6.08*	*Cum*
		2	*4.05*	*1.200*	*0.500*	*4.86*	*Cum*
	Floor	*1*	*0.54*	*4.150*	*0.900*	*2.02*	*Cum*
		1	*6.50*	*4.150*	*0.500*	*13.49*	*Cum*
		1	*5.14*	*4.150*	*0.200*	*4.26*	*Cum*
		1	*0.21*	*4.150*	*0.400*	*0.34*	*Cum*
		1	*0.20*	*4.150*	*0.400*	*0.33*	*Cum*
		1	*1.80*	*4.150*	*0.500*	*3.74*	*Cum*
		1	*0.76*	*4.150*	*1.250*	*3.96*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.07*	*4.150*	*1.514*	*6.72*	*Cum*
	TOTAL					**122.13**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*4.150*	*0.150*	*0.50*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*19.13*	*0.450*	*0.050*	*0.43*	*Cum*
	On Abutment Top (Right Side)	*1*	*19.13*	*0.450*	*0.050*	*0.43*	*Cum*
	TOTAL					**1.36**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**122.13**	**0.00**	**0.366**	**7850.0**	**2876.21**	**Kg**
	Total Weight in Metric Tonne					**2.88**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.05*		*0.450*	*1.89*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.05*		*2.114*	*8.89*	*Sqm*
		4		*1.084*	*2.114*	*9.17*	*Sqm*
		4	*1.05*		*0.700*	*2.94*	*Sqm*
		4		*1.868*	*0.700*	*5.23*	*Sqm*
	Section 2-2	*4*	*3.75*		*0.450*	*6.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.75*		*1.200*	*18.00*	*Sqm*
		4		*0.810*	*1.200*	*3.89*	*Sqm*
		4	*3.75*		*0.700*	*10.50*	*Sqm*
		4		*1.320*	*0.700*	*3.70*	*Sqm*
	Section 3-3	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*1.000*	*11.00*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Section 5-5	*4*	*6.19*		*0.450*	*11.14*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*6.19*		*2.114*	*52.33*	*Sqm*
		4		*1.084*	*2.114*	*9.17*	*Sqm*
		4	*6.19*		*0.500*	*12.38*	*Sqm*
		4		*1.868*	*0.500*	*3.74*	*Sqm*
	Section 6-6	*4*	*4.05*		*0.450*	*7.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.05*		*1.000*	*16.20*	*Sqm*
		4		*0.750*	*1.000*	*3.00*	*Sqm*
		4	*4.05*		*0.500*	*8.10*	*Sqm*
		4		*1.200*	*0.500*	*2.40*	*Sqm*
	Floor	*2*	*0.54*		*0.900*	*0.97*	*Sqm*
		2		*4.150*	*0.900*	*7.47*	*Sqm*
		2	*6.50*		*0.500*	*6.50*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*0.21*		*0.400*	*0.17*	*Sqm*
		2		*4.150*	*0.400*	*3.32*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*4.150*	*0.400*	*3.32*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*4.150*	*0.500*	*4.15*	*Sqm*
		2	*0.76*		*1.250*	*1.91*	*Sqm*
		2		*4.150*	*1.250*	*10.38*	*Sqm*
	Crest	*2*	*1.07*		*1.514*	*3.24*	*Sqm*
		2		*4.150*	*1.514*	*12.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.75*		*0.300*	*8.25*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*13.45*		*0.600*	*16.14*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.150*	*1.95*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.25*		*0.600*	*7.80*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**323.91**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.25*	*4.953*		*32.19*	*Sqm*
	TOTAL					**32.19**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.25*	*3.550*	*0.300*	**3.46**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.25*	*3.550*	*0.150*	**3.46**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*19.13*	*0.450*		*8.61*	*Sqm*
	On Abutment Top (Right Side)	*1*	*19.13*	*0.450*		*8.61*	*Sqm*
	TOTAL					**17.21**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		9.333		9.33	**Cum**
	Abutment						
	Section 1-1	2	*1.28*	*1.888*		*4.818*	*Cum*
	Section 2-2	2	*3.75*	*1.410*		*10.575*	*Cum*
	Section 3-3	2	*3.20*	*1.125*		*7.200*	*Cum*
	Section 5-5	2	*6.23*	*1.888*		*23.536*	*Cum*
	Section 6-6	2	*3.45*	*1.125*		*7.763*	*Cum*
	D/S protection	2					
	Toe wall	2	*13.75*	*0.150*	*0.600*	*4.125*	*Cum*
		2	*3.25*	0.150	*0.600*	*0.585*	*Cum*
	TOTAL					**67.93**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 11.460 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.27*	*1.971*	*2.611*	*13.082*	*Cum*
	Section 2-2	*2*	*3.75*	*1.942*	*2.611*	*38.029*	*Cum*
	Section 3-3	*2*	*4.45*	*1.822*	*2.411*	*39.096*	*Cum*
	Section 5-5	*2*	*5.85*	*2.121*	*2.461*	*61.040*	*Cum*
	Section 6-6	*2*	*2.85*	*1.302*	*2.411*	*17.880*	*Cum*
	U/S Key Floor	*1*	*0.82*	*6.500*	*0.800*	*4.264*	*Cum*
	U/S Floor	*1*	*2.50*	*6.500*	*1.765*	*28.681*	*Cum*
	D/S Floor	*1*	*4.00*	*6.500*	*0.900*	*23.400*	*Cum*
		1	*5.10*	*6.500*	*0.150*	*4.971*	*Cum*
		1	*4.75*	*3.400*	*0.700*	*11.305*	*Cum*
	D/S Key Floor	*1*	*0.66*	*6.500*	*1.000*	*4.306*	*Cum*
	Toe Wall D/S Portion	*1*	*12.44*	*0.750*	*0.900*	*8.397*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.00*	*0.600*	*0.750*	*2.700*	*Cum*
						257.15	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*3.400*	*0.150*	*0.28*	*Cum*
		1	*0.72*	*3.400*	*0.150*	*0.37*	*Cum*
		1	*0.40*	*3.400*	*0.150*	*0.20*	*Cum*
		1	*0.21*	*3.400*	*0.150*	*0.11*	*Cum*
		1	*5.20*	*3.400*	*0.150*	*2.65*	*Cum*
		1	*0.50*	*3.400*	*0.150*	*0.25*	*Cum*
		1	*3.31*	*3.400*	*0.150*	*1.69*	*Cum*
		1	*0.95*	*3.400*	*0.150*	*0.49*	*Cum*
		1	*0.54*	*3.400*	*0.150*	*0.28*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.27*	*1.971*	*0.150*	*0.75*	*Cum*
	Section 2-2	*2*	*3.75*	*1.942*	*0.300*	*4.37*	*Cum*
	Section 3-3	*2*	*4.45*	*1.822*	*0.300*	*4.86*	*Cum*
	Section 5-5	*2*	*5.85*	*2.121*	*0.150*	*3.72*	*Cum*
	Section 6-6	*2*	*2.85*	*1.302*	*0.150*	*1.11*	*Cum*
	Toe Wall D/S Portion	*1*	*12.44*	*0.750*	*0.300*	*2.80*	*Cum*
	Toe Wall D/S Portion	*1*	*12.14*	*0.450*	*0.600*	*3.28*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.600*	*0.150*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.300*	*0.600*	*1.08*	*Cum*
	TOTAL					**28.83**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.05*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.05*	*1.061*	*2.035*	*4.51*	*Cum*
		2	*1.05*	*1.821*	*0.700*	*2.67*	*Cum*
	Section 2-2	*2*	*3.75*	*0.820*	*0.500*	*3.08*	*Cum*
		2	*3.75*	*1.156*	*1.120*	*9.71*	*Cum*
		2	*3.75*	*1.642*	*1.200*	*14.78*	*Cum*
	Section 3-3	*2*	*4.02*	*0.820*	*0.500*	*3.30*	*Cum*
		2	*4.02*	*1.096*	*0.920*	*8.11*	*Cum*
		2	*4.02*	*1.522*	*1.400*	*17.15*	*Cum*
	Section 5-5	*2*	*5.80*	*0.450*	*0.450*	*2.35*	*Cum*
		2	*5.80*	*1.061*	*2.035*	*25.05*	*Cum*
		2	*5.80*	*1.821*	*0.550*	*11.62*	*Cum*
	Section 6-6	*2*	*3.61*	*0.450*	*0.450*	*1.46*	*Cum*
		2	*3.61*	*0.726*	*0.920*	*4.82*	*Cum*
		2	*3.61*	*1.152*	*0.550*	*4.57*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*6.500*	*0.300*	*-3.20*	*Cum*
	Floor	*1*	*0.61*	*3.400*	*0.650*	*1.35*	*Cum*
		1	*6.50*	*3.400*	*0.550*	*12.16*	*Cum*
		1	*5.10*	*3.400*	*0.150*	*2.60*	*Cum*
		1	*0.23*	*3.400*	*0.350*	*0.28*	*Cum*
		1	*0.20*	*3.400*	*0.450*	*0.31*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*4.55*	*3.400*	*0.550*	*8.51*	*Cum*
		1	*0.66*	*3.400*	*0.850*	*1.91*	*Cum*
	Crest	*1*	*1.04*	*3.400*	*1.470*	*5.18*	*Cum*
	TOTAL					**142.71**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*3.400*	*0.200*	*0.54*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.19*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.19*	*0.450*	*0.050*	*0.30*	*Cum*
	Slab Bridge						
	Slab	*1*	*4.20*	*6.500*	*0.385*	*10.51*	*Cum*
	Wearing coat	*1*	*4.20*	*5.500*	*0.070*	*1.62*	*Cum*
	Dirt wall	*2*	*0.40*	*6.500*	*0.500*	*2.60*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*6.500*	*0.300*	*3.20*	*Cum*
	TOTAL					**19.06**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*47*	*4.76*		*1.578*	*353.1*	*Kg*
a2	*10*	*21*	*7.00*		*0.616*	*90.6*	*Kg*
a3	*10*	*2*	*6.40*		*0.616*	*7.9*	*Kg*
a4	*10*	*27*	*4.68*		*0.616*	*77.9*	*Kg*
a5	*10*	*17*	*6.90*		*0.616*	*72.3*	*Kg*
x1	*12*	*70*	*2.55*		*0.888*	*158.5*	*Kg*
x2	*16*	*70*	*1.32*		*1.578*	*145.3*	*Kg*
x3	*12*	*20*	*4.10*		*0.888*	*72.8*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**142.71**	**0.003**	**0.428**	**7850.0**	**3360.7**	**Kg**
	Total Reinforcement Steel (in kg)					*4339.1*	*Kg*
	Total Weight in Metric Tonne					**4.34**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.05*		*0.450*	*1.88*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.05*		*2.035*	*8.51*	*Sqm*
		4		*1.061*	*2.035*	*8.63*	*Sqm*
		4	*1.05*		*0.700*	*2.93*	*Sqm*
		4		*1.821*	*0.700*	*5.10*	*Sqm*
	Section 2-2	*4*	*3.75*		*0.500*	*7.50*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.75*		*1.120*	*16.80*	*Sqm*
		4		*1.156*	*1.120*	*5.18*	*Sqm*
		4	*3.75*		*1.200*	*18.00*	*Sqm*
		4		*1.642*	*1.200*	*7.88*	*Sqm*
	Section 3-3	*4*	*4.02*		*0.500*	*8.05*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.02*		*0.920*	*14.81*	*Sqm*
		4		*1.096*	*0.920*	*4.03*	*Sqm*
		4	*4.02*		*1.400*	*22.53*	*Sqm*
		4		*1.522*	*1.400*	*8.52*	*Sqm*
	Section 5-5	*4*	*5.80*		*0.450*	*10.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.80*		*2.035*	*47.24*	*Sqm*
		4		*1.061*	*2.035*	*8.63*	*Sqm*
		4	*5.80*		*0.550*	*12.77*	*Sqm*
		4		*1.821*	*0.550*	*4.01*	*Sqm*
	Section 6-6	*4*	*3.61*		*0.450*	*6.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.61*		*0.920*	*13.28*	*Sqm*
		4		*0.726*	*0.920*	*2.67*	*Sqm*
		4	*3.61*		*0.550*	*7.94*	*Sqm*
		4		*1.152*	*0.550*	*2.53*	*Sqm*
	Floor	*2*	*0.61*		*0.650*	*0.80*	*Sqm*
		2		*3.400*	*0.650*	*4.42*	*Sqm*
		2	*6.50*		*0.550*	*7.15*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*3.400*	*0.550*	*3.74*	*Sqm*
		2	*5.098*		*0.150*	*1.53*	*Sqm*
		2		*3.400*	*0.150*	*1.02*	*Sqm*
		2	*0.23*		*0.350*	*0.16*	*Sqm*
		2		*3.400*	*0.350*	*2.38*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*3.400*	*0.450*	*3.06*	*Sqm*
		2	*4.55*		*0.550*	*5.01*	*Sqm*
		2		*3.400*	*0.550*	*3.74*	*Sqm*
		2	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*3.400*	*0.850*	*5.78*	*Sqm*
	Crest	*2*	*1.04*		*1.470*	*3.05*	*Sqm*
		2		*3.400*	*1.470*	*10.00*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.44*		*0.300*	*7.46*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*12.14*		*0.600*	*14.57*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.150*	*1.80*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.600*	*7.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**348.32**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*4.649*		*27.89*	*Sqm*
	TOTAL					**27.89**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*2.800*	*0.300*	**2.52**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.00*	*2.800*	*0.150*	**2.52**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.19*	*0.450*		*5.93*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.19*	*0.450*		*5.93*	*Sqm*
	TOTAL					**11.87**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		26.526		26.53	**Cum**
	Abutment						
	Section 1-1	2	1.27	*1.565*		*3.977*	*Cum*
	Section 2-2	2	3.75	*1.679*		*12.589*	*Cum*
	Section 3-3	2	4.45	*1.475*		*13.128*	*Cum*
	Section 5-5	2	5.85	*1.148*		*13.425*	*Cum*
	Section 6-6	2	2.85	*1.039*		*5.918*	*Cum*
	D/S protection	2					
	Toe wall	2	*12.44*	*0.150*	*0.600*	*3.732*	*Cum*
		2	*3.00*	0.150	*0.600*	*0.540*	*Cum*
	TOTAL					**79.83**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 12.510 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.43*	*2.154*	*2.831*	*17.404*	*Cum*
	Section 2-2	*2*	*4.25*	*1.422*	*2.831*	*34.218*	*Cum*
	Section 3-3	*2*	*2.70*	*1.302*	*2.631*	*18.498*	*Cum*
	Section 5-5	*2*	*5.81*	*2.304*	*2.831*	*75.780*	*Cum*
	Section 6-6	*2*	*3.22*	*1.302*	*2.631*	*22.047*	*Cum*
	U/S Key Floor	*1*	*0.54*	*2.320*	*1.050*	*1.315*	*Cum*
	U/S Floor	*1*	*2.50*	*2.320*	*1.765*	*10.237*	*Cum*
	D/S Floor	*1*	*4.75*	*2.320*	*0.950*	*10.469*	*Cum*
		1	*2.45*	*2.320*	*0.750*	*4.263*	*Cum*
	D/S Key Floor	*1*	*0.80*	*2.320*	*1.550*	*2.877*	*Cum*
	Toe Wall D/S Portion	*1*	*11.36*	*0.750*	*0.900*	*7.668*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*3.00*	*0.600*	*0.750*	*2.700*	*Cum*
						207.48	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.320*	*0.150*	*0.19*	*Cum*
		1	*1.01*	*2.320*	*0.150*	*0.35*	*Cum*
		1	*0.28*	*2.320*	*0.150*	*0.10*	*Cum*
		1	*0.28*	*2.320*	*0.150*	*0.10*	*Cum*
		1	*5.89*	*2.320*	*0.150*	*2.05*	*Cum*
		1	*0.57*	*2.320*	*0.150*	*0.20*	*Cum*
		1	*1.00*	*2.320*	*0.150*	*0.35*	*Cum*
		1	*1.57*	*2.320*	*0.150*	*0.54*	*Cum*
		1	*0.54*	*2.320*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.43*	*2.154*	*0.150*	*0.92*	*Cum*
	Section 2-2	*2*	*4.25*	*1.422*	*0.150*	*1.81*	*Cum*
	Section 3-3	*2*	*2.70*	*1.302*	*0.150*	*1.05*	*Cum*
	Section 5-5	*2*	*5.81*	*2.304*	*0.150*	*4.02*	*Cum*
	Section 6-6	*2*	*3.22*	*1.302*	*0.150*	*1.26*	*Cum*
	Toe Wall D/S Portion	*1*	*11.36*	*0.750*	*0.300*	*2.56*	*Cum*
	Toe Wall D/S Portion	*1*	*11.06*	*0.450*	*0.600*	*2.99*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.600*	*0.150*	*0.54*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*3.00*	*0.300*	*0.600*	*1.08*	*Cum*
	TOTAL					**20.28**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.20*	*0.450*	*0.450*	*0.49*	*Cum*
		2	*1.20*	*1.152*	*2.340*	*6.48*	*Cum*
		2	*1.20*	*2.004*	*0.800*	*3.85*	*Cum*
	Section 2-2	*2*	*4.25*	*0.450*	*0.450*	*1.72*	*Cum*
		2	*4.25*	*0.786*	*1.120*	*7.48*	*Cum*
		2	*4.25*	*1.272*	*0.800*	*8.65*	*Cum*
	Section 3-3	*2*	*2.27*	*0.450*	*0.450*	*0.92*	*Cum*
		2	*2.27*	*0.726*	*0.920*	*3.04*	*Cum*
		2	*2.27*	*1.152*	*0.600*	*3.14*	*Cum*
	Section 5-5	*2*	*5.77*	*0.450*	*0.450*	*2.33*	*Cum*
		2	*5.77*	*1.152*	*2.340*	*31.08*	*Cum*
		2	*5.77*	*2.004*	*0.600*	*13.86*	*Cum*
	Section 6-6	*2*	*3.79*	*0.450*	*0.450*	*1.54*	*Cum*
		2	*3.79*	*0.726*	*0.920*	*5.07*	*Cum*
		2	*3.79*	*1.152*	*0.600*	*5.24*	*Cum*
	Floor	*1*	*0.54*	*2.320*	*0.900*	*1.13*	*Cum*
		1	*7.25*	*2.320*	*0.600*	*10.09*	*Cum*
		1	*5.82*	*2.320*	*0.200*	*2.70*	*Cum*
		1	*0.25*	*2.320*	*0.400*	*0.23*	*Cum*
		1	*0.20*	*2.320*	*0.500*	*0.23*	*Cum*
		1	*2.25*	*2.320*	*0.600*	*3.13*	*Cum*
		1	*0.80*	*2.320*	*1.400*	*2.60*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*1.18*	*2.320*	*1.751*	*4.81*	*Cum*
	TOTAL					**119.83**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*2.320*	*0.150*	*0.31*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*18.63*	*0.450*	*0.050*	*0.42*	*Cum*
	On Abutment Top (Right Side)	*1*	*18.63*	*0.450*	*0.050*	*0.42*	*Cum*
	TOTAL					**1.15**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**119.83**	**0.00**	**0.359**	**7850.0**	**2821.89**	**Kg**
	Total Weight in Metric Tonne					**2.82**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.20*		*0.450*	*2.16*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.20*		*2.340*	*11.25*	*Sqm*
		4		*1.152*	*2.340*	*10.78*	*Sqm*
		4	*1.20*		*0.800*	*3.85*	*Sqm*
		4		*2.004*	*0.800*	*6.41*	*Sqm*
	Section 2-2	*4*	*4.25*		*0.450*	*7.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.25*		*1.120*	*19.04*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*4.25*		*0.800*	*13.60*	*Sqm*
		4		*1.272*	*0.800*	*4.07*	*Sqm*
	Section 3-3	*4*	*2.27*		*0.450*	*4.09*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.27*		*0.920*	*8.37*	*Sqm*
		4		*0.726*	*0.920*	*2.67*	*Sqm*
		4	*2.27*		*0.600*	*5.46*	*Sqm*
		4		*1.152*	*0.600*	*2.76*	*Sqm*
	Section 5-5	*4*	*5.77*		*0.450*	*10.38*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*5.77*		*2.340*	*53.96*	*Sqm*
		4		*1.152*	*2.340*	*10.78*	*Sqm*
		4	*5.77*		*0.600*	*13.84*	*Sqm*
		4		*2.004*	*0.600*	*4.81*	*Sqm*
	Section 6-6	*4*	*3.79*		*0.450*	*6.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.79*		*0.920*	*13.96*	*Sqm*
		4		*0.726*	*0.920*	*2.67*	*Sqm*
		4	*3.79*		*0.600*	*9.11*	*Sqm*
		4		*1.152*	*0.600*	*2.76*	*Sqm*
	Floor	*2*	*0.54*		*0.900*	*0.97*	*Sqm*
		2		*2.320*	*0.900*	*4.18*	*Sqm*
		2	*7.25*		*0.600*	*8.70*	*Sqm*
		2		*2.320*	*0.600*	*2.78*	*Sqm*
		2	*0.25*		*0.400*	*0.20*	*Sqm*
		2		*2.320*	*0.400*	*1.86*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*2.320*	*0.500*	*2.32*	*Sqm*
		2	*2.25*		*0.600*	*2.70*	*Sqm*
		2		*2.320*	*0.600*	*2.78*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*2.320*	*1.400*	*6.50*	*Sqm*
	Crest	*2*	*1.18*		*1.751*	*4.14*	*Sqm*
		2		*2.320*	*1.751*	*8.12*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.36*		*0.300*	*6.82*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*11.06*		*0.600*	*13.27*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.150*	*1.80*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*3.00*		*0.600*	*7.20*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**317.70**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*3.00*	*4.649*		*27.89*	*Sqm*
	TOTAL					**27.89**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*3.00*	*1.720*	*0.300*	**1.55**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*3.00*	*1.720*	*0.150*	**1.55**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*18.63*	*0.450*		*8.38*	*Sqm*
	On Abutment Top (Right Side)	*1*	*18.63*	*0.450*		*8.38*	*Sqm*
	TOTAL					**16.77**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		9.016		9.02	**Cum**
	Abutment						
	Section 1-1	2	*1.43*	*1.745*		*4.980*	*Cum*
	Section 2-2	2	*4.25*	*1.320*		*11.220*	*Cum*
	Section 3-3	2	*2.70*	*1.046*		*5.648*	*Cum*
	Section 5-5	2	*5.81*	*1.745*		*20.273*	*Cum*
	Section 6-6	2	*3.22*	*1.046*		*6.732*	*Cum*
	D/S protection	2					
	Toe wall	2	*11.36*	*0.150*	*0.600*	*3.408*	*Cum*
		2	*3.00*	0.150	*0.600*	*0.540*	*Cum*
	TOTAL					**61.82**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 14.020 OF HETAMPUR DY.									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	93.211	Cum	**156.50**	14587.59			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	29.22	Cum	**6381.70**	186504.82	9.47	13.15	26.30
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	54.265	Cum	**6914.20**	375200.31	22.38	23.33	46.67
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	184.975	Sqm	**578.60**	107026.74			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.06	MT	**73574.90**	78353.90			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.04	Cum	**694.61**	3500.83			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.04	Cum	**1237.00**	6234.48			
9	M-148 RCD	Supplying 1000 mm NP3 Pipe	7.50	Rm	**6002.82**	45021.15			
10	5.6.2.4	Labour Charges for Laying of 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	26.06	Sqm	**680.10**	17726.13			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	38.26	Cum	**149.30**	5711.82			
14	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.10	Cum	**5021.30**	5513.39	0.13	0.35	
15	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.222	Sqm	**340.20**	2116.72	0.32	0.09	
16	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.562	Sqm	**63.20**	161.92	0.004		
		Coarse Sand (60 Km lead)	36.927	Cum	**1075.00**	39697.01			
		Coarse Aggregates (100 Km lead)	72.971	Cum	**1398.00**	102012.76			
		Cement (30 km lead)	32.306	MT	**742.00**	23971.16			
		Steel (30 km lead)	1.065	MT	**742.00**	790.20			
		Boulder (60 km lead)	5.040	Cum	**1159.00**	5841.36			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
TOTAL (In Rs.)						**1046248.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	36.93	Cum	**584.64**	21589.27	2158.93		
		Coarse Aggregate	72.97	Cum	**944.26**	68903.13	6890.31		
		Boulder (60 km lead)	5.04	Cum	**694.61**	3500.83	350.08		
		Total					**9399.32**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 14.150 OF HETAMPUR DY.									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	93.211	Cum	**156.50**	14587.59			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	29.22	Cum	**6381.70**	186504.82	9.47	13.15	26.30
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	54.265	Cum	**6914.20**	375200.31	22.38	23.33	46.67
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	184.975	Sqm	**578.60**	107026.74			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	1.06	MT	**73574.90**	78353.90			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.04	Cum	**694.61**	3500.83			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	5.04	Cum	**1237.00**	6234.48			
9	M-148 RCD	Supplying 1000 mm NP3 Pipe	7.50	Rm	**6002.82**	45021.15			
10	5.6.2.4	Labour Charges for Laying of 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	26.06	Sqm	**680.10**	17726.13			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	38.26	Cum	**149.30**	5711.82			
14	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.10	Cum	**5021.30**	5513.39	0.13	0.35	
15	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.222	Sqm	**340.20**	2116.72	0.32	0.09	
16	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.562	Sqm	**63.20**	161.92	0.004		
17		**Carriage of materials**							
		Coarse Sand (60 Km lead)	36.927	Cum	**1075.00**	39697.01			
		Coarse Aggregates (100 Km lead)	72.971	MT	**1398.00**	102012.76			
		Cement (30 km lead)	32.306	MT	**742.00**	23971.16			
		Steel (30 km lead)	1.065	Cum	**742.00**	790.20			
		Boulder (60 km lead)	5.040	Rm	**1159.00**	5841.36			
		Hume Pipe (30 Km Lead)	7.500	0.87	**1470.00**	11025.00			
TOTAL (In Rs.)						**1046248.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	36.93	Cum	**584.64**	21589.27	2158.93		
		Coarse Aggregate	72.97	Cum	**944.26**	68903.13	6890.31		
		Boulder (60 km lead)	5.04	Cum	**694.61**	3500.83	350.08		
		Total					**9399.32**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 14.020 OF HETAMPUR DY.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.93*	*0.85*	*1.20*	*1.96*	*Cum*
	D/S Toe Wall	*1*	*1.93*	*0.85*	*1.20*	*1.96*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*1.20*	*1.46*	*Cum*
		2	*3.52*	*2.17*	*1.20*	*18.34*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.52*	*1.01*	*2.01*	*14.22*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.40*	*Cum*
		2	*4.37*	*2.13*	*1.20*	*22.37*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.37*	*1.01*	*2.01*	*17.65*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.43*	*0.45*	*1.64*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.44*	*0.45*	*2.31*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	TOTAL					**93.21**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.93*	*0.85*	*0.30*	*0.49*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.93*	*0.45*	*0.90*	*0.78*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.93*	*0.85*	*0.30*	*0.49*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.93*	*0.45*	*0.90*	*0.78*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*1.43*	*0.45*	*1.64*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.44*	*0.45*	*2.31*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*0.30*	*0.37*	*Cum*
		2	*3.52*	*2.17*	*0.30*	*4.59*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*4.37*	*2.13*	*0.30*	*5.59*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.83*	*0.34*	*4.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.63*	*0.37*	*3.47*	*Cum*
	TOTAL					**29.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.61*	*0.60*	*0.90*	*0.66*	*Cum*
		2	*0.61*	*0.45*	*0.84*	*0.46*	*Cum*
		2	*0.61*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.52*	*1.77*	*0.90*	*11.22*	*Cum*
		2	*3.52*	*1.49*	*0.84*	*8.79*	*Cum*
		2	*3.52*	*0.89*	*0.50*	*3.12*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.84*	*0.44*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.37*	*1.73*	*0.90*	*13.63*	*Cum*
		2	*4.37*	*1.46*	*0.84*	*10.70*	*Cum*
		2	*4.37*	*0.87*	*0.50*	*3.79*	*Cum*
	Collar Joint	*2*	*1.73*	*0.30*	*1.60*	*1.66*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.19*		*-1.19*	*Cum*
	TOTAL					**54.27**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.93*		*0.90*	*3.47*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.93*		*0.90*	*3.47*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.43*	*0.45*	*1.28*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.44*	*0.45*	*1.30*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.61*		*0.30*	*0.73*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.52*		*0.30*	*4.22*	*Sqm*
		4		*2.17*	*0.30*	*2.61*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.37*		*0.30*	*5.24*	*Sqm*
		4		*2.13*	*0.30*	*2.56*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.61*		*0.90*	*2.19*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.61*		*0.84*	*2.05*	*Sqm*
		4		*0.45*	*0.84*	*1.51*	*Sqm*
		4	*0.61*		*0.50*	*1.22*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*3.52*		*0.90*	*12.67*	*Sqm*
		4		*1.77*	*0.90*	*6.38*	*Sqm*
		4	*3.52*		*0.84*	*11.83*	*Sqm*
		4		*1.49*	*0.84*	*4.99*	*Sqm*
		4	*3.52*		*0.50*	*7.04*	*Sqm*
		4		*0.89*	*0.50*	*1.77*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.10*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.84*	*1.96*	*Sqm*
		4		*0.45*	*0.84*	*1.51*	*Sqm*
		4	*0.58*		*0.50*	*1.17*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.37*		*0.90*	*15.72*	*Sqm*
		4		*1.73*	*0.90*	*6.24*	*Sqm*
		4	*4.37*		*0.84*	*14.68*	*Sqm*
		4		*1.46*	*0.84*	*4.90*	*Sqm*
		4	*4.37*		*0.50*	*8.74*	*Sqm*
		4		*0.87*	*0.50*	*1.73*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.83*	*0.34*	*1.23*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.93*	*Sqm*
	TOTAL					**184.98**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*54.27*	*0.25%*	*0.14*	*7850*	*1064.95*	*Kg*
	TOTAL Weight of steel (in kg)					1064.95	Kg
	TOTAL Weight of Steel (in Tonne)					**1.06**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**5.04**	**Cum**
8	Providing 1000 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*4.34*	*3.00*		*13.03*	*Sqm*
	On Slopes in D/S Portion	*1*	*4.34*	*3.00*		*13.03*	*Sqm*
	TOTAL					**26.06**	**Sqm**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.52*	*1.01*	*2.01*	*14.22*	*Cum*
	D/S Transitions Walls	*2*	*4.37*	*1.01*	*2.01*	*17.65*	*Cum*
	Above Hume Pipe	*1*		*6.39*		*6.39*	*Cum*
	TOTAL					**38.26**	**Cum**
12	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	1.83	0.5	0.6	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2		1.83	1.7	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2		1.83	0.7	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 14.150 OF HETAMPUR DY.						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*100.00*		**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.93*	*0.85*	*1.20*	*1.96*	*Cum*
	D/S Toe Wall	*1*	*1.93*	*0.85*	*1.20*	*1.96*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*1.20*	*1.46*	*Cum*
		2	*3.52*	*2.17*	*1.20*	*18.34*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.52*	*1.01*	*2.01*	*14.22*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.40*	*Cum*
		2	*4.37*	*2.13*	*1.20*	*22.37*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.37*	*1.01*	*2.01*	*17.65*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.43*	*0.45*	*1.64*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.44*	*0.45*	*2.31*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	TOTAL					**93.21**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.93*	*0.85*	*0.30*	*0.49*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.93*	*0.45*	*0.90*	*0.78*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.93*	*0.85*	*0.30*	*0.49*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.93*	*0.45*	*0.90*	*0.78*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*1.43*	*0.45*	*1.64*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.44*	*0.45*	*2.31*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.61*	*1.00*	*0.30*	*0.37*	*Cum*
		2	*3.52*	*2.17*	*0.30*	*4.59*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*4.37*	*2.13*	*0.30*	*5.59*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.83*	*0.34*	*4.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.63*	*0.37*	*3.47*	*Cum*
	TOTAL					**29.22**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.61*	*0.60*	*0.90*	*0.66*	*Cum*
		2	*0.61*	*0.45*	*0.84*	*0.46*	*Cum*
		2	*0.61*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.52*	*1.77*	*0.90*	*11.22*	*Cum*
		2	*3.52*	*1.49*	*0.84*	*8.79*	*Cum*
		2	*3.52*	*0.89*	*0.50*	*3.12*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
		2	*0.58*	*0.45*	*0.84*	*0.44*	*Cum*
		2	*0.58*	*0.30*	*0.50*	*0.18*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.37*	*1.73*	*0.90*	*13.63*	*Cum*
		2	*4.37*	*1.46*	*0.84*	*10.70*	*Cum*
		2	*4.37*	*0.87*	*0.50*	*3.79*	*Cum*
	Collar Joint	*2*	*1.73*	*0.30*	*1.60*	*1.66*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.19*		*-1.19*	*Cum*
	TOTAL					**54.27**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.93*		*0.90*	*3.47*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.93*		*0.90*	*3.47*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.43*	*0.45*	*1.28*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.44*	*0.45*	*1.30*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.61*		*0.30*	*0.73*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.52*		*0.30*	*4.22*	*Sqm*
		4		*2.17*	*0.30*	*2.61*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.70*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.37*		*0.30*	*5.24*	*Sqm*
		4		*2.13*	*0.30*	*2.56*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.61*		*0.90*	*2.19*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.61*		*0.84*	*2.05*	*Sqm*
		4		*0.45*	*0.84*	*1.51*	*Sqm*
		4	*0.61*		*0.50*	*1.22*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Average of Section A-A & Section C-C	*4*	*3.52*		*0.90*	*12.67*	*Sqm*
		4		*1.77*	*0.90*	*6.38*	*Sqm*
		4	*3.52*		*0.84*	*11.83*	*Sqm*
		4		*1.49*	*0.84*	*4.99*	*Sqm*
		4	*3.52*		*0.50*	*7.04*	*Sqm*
		4		*0.89*	*0.50*	*1.77*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.58*		*0.90*	*2.10*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.84*	*1.96*	*Sqm*
		4		*0.45*	*0.84*	*1.51*	*Sqm*
		4	*0.58*		*0.50*	*1.17*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.37*		*0.90*	*15.72*	*Sqm*
		4		*1.73*	*0.90*	*6.24*	*Sqm*
		4	*4.37*		*0.84*	*14.68*	*Sqm*
		4		*1.46*	*0.84*	*4.90*	*Sqm*
		4	*4.37*		*0.50*	*8.74*	*Sqm*
		4		*0.87*	*0.50*	*1.73*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.83*	*0.34*	*1.23*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.93*	*Sqm*
	TOTAL					**184.98**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*54.27*	*0.25%*	*0.14*	*7850*	*1064.95*	*Kg*
	TOTAL Weight of steel (in kg)					1064.95	Kg
	TOTAL Weight of Steel (in Tonne)					**1.06**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*1.40*	*0.60*	*2.52*	*Cum*
	TOTAL					**5.04**	**Cum**
8	Providing 1000 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*4.34*	*3.00*		*13.03*	*Sqm*
	On Slopes in D/S Portion	*1*	*4.34*	*3.00*		*13.03*	*Sqm*
	TOTAL					**26.06**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.52*	*1.01*	*2.01*	*14.22*	*Cum*
	D/S Transitions Walls	*2*	*4.37*	*1.01*	*2.01*	*17.65*	*Cum*
	Above Hume Pipe	*1*		*6.39*		*6.39*	*Cum*
	TOTAL					**38.26**	**Cum**
12	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	1.83	0.5	0.6	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	2		1.83	1.7	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	2		1.83	0.7	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF HETAMPUR-DY.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
Cross Drainage at Ch. 13.875 K.M									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	140.37	Cum	**149.30**	20957.77			
3	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	73.25	Cum	**6381.70**	467437.21	23.73	32.96	65.92
4	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	199.35	Cum	**6914.20**	1378323.35	82.23	85.72	171.44
5	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	716.20	Sqm	**578.60**	414393.67			
7	**M-148 RCD**	Supplying 1000 mm NP3 Pipe	35.00	RM	**6002.82**	210098.70			
8	**5.6.2.4**	Labour Charges for Laying of 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	35.00	RM	**1713.33**	59966.57			
9	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.91	MT	**73574.90**	287838.26			
10	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	495.58	Cum	**195.20**	96737.58			
11		**Carriage of materials**							
		Coarse Sand 30 Km lead)	118.68	Cum	**1075.00**	127581.03			
		Coarse Aggregates (100 Km lead)	237.36	Cum	**1398.00**	331829.37			
		Cement (30 km lead)	105.96	MT	**742.00**	78624.10			
		Steel (30 Km lead)	3.91	MT	**742.00**	2902.84			
		Hume Pipe (60 Km)	35.00	RM	**1470.00**	51450.00			
TOTAL (In Rs.)						**₹ 35,28,140.45**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	118.68	Cum	**584.64**	69385.09	6938.51		
		Coarse Aggregate	237.36	Cum	**944.26**	224129.61	22412.96		
		Total					**29351.47**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF HETAMPUR DY.							
Cross Drainage at Ch. 13.875 Km							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*12.05*	*1.31*		*15.73*	*Cum*
		1	*6.04*	*2.36*		*14.26*	*Cum*
	Middle Portion	*1*	*3.66*	*24.92*		*91.21*	*Cum*
	Right Portion	*1*	*12.31*	*0.40*		*4.86*	*Cum*
		1	*6.04*	*2.37*		*14.32*	*Cum*
	TOTAL					**140.37**	**Cum**
3	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*12.05*	*1.35*	*0.30*	*4.87*	*Cum*
		1	*7.85*	*3.95*	*0.30*	*9.31*	*Cum*
	300 mm Thick Right Abutment	*1*	*12.31*	*1.48*	*0.30*	*5.46*	*Cum*
		1	*7.98*	*3.85*	*0.30*	*9.21*	*Cum*
	Below Pipe Section	*1*	*17.50*	*3.66*	*0.30*	*19.22*	*Cum*
		1	*17.50*	*0.75*		*13.05*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.15*	*2.50*	*0.20*	*6.15*	*Cum*
	Pipe Section	*6*	*0.30*	*3.56*	*1.60*	*10.25*	*Cum*
	Deduct Area of Pipe	*6*	*0.30*	*2.38*		*-4.28*	*Cum*
	TOTAL					**73.25**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*11.75*	*0.30*	*0.20*	*1.41*	*Cum*
		2	*11.75*	*0.67*	*2.49*	*39.49*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.82*	*3.98*	*27.22*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.26*	*0.30*	*0.35*	*0.90*	*Cum*
		2	*4.26*	*0.75*	*3.24*	*20.64*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*12.01*	*0.30*	*0.20*	*1.44*	*Cum*
		2	*12.01*	*0.89*	*2.93*	*62.50*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.82*	*3.50*	*23.99*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.26*	*0.86*	*3.21*	*23.46*	*Cum*
		2	*4.26*	*0.30*	*0.35*	*0.90*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.07*	*2.375*		*-5.08*	*Cum*
	TOTAL					**199.35**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
5	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*12.05*		*0.30*	7.23	*Sqm*
		2		*1.35*	*0.30*	0.81	*Sqm*
		2	7.85		0.30	4.71	*Sqm*
		2		3.95	0.30	2.37	*Sqm*
	300 mm Thick Right Abutment	2	*12.31*		*0.30*	7.39	*Sqm*
		2		*1.48*	*0.30*	0.89	*Sqm*
		2	7.98		0.30	4.79	*Sqm*
		2		3.85	0.30	2.31	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.15		0.20	4.92	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	12	0.30		1.60	5.76	*Sqm*
		12		3.56	1.60	68.35	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*11.75*		*0.20*	9.40	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*11.75*		*2.49*	117.17	*Sqm*
		4		0.67	2.49	6.72	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	4.16		3.98	66.23	*Sqm*
		4		0.82	3.98	13.09	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.26		0.35	5.97	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.26		3.24	55.18	*Sqm*
		4		0.75	3.24	9.68	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	4.16		3.50	58.19	*Sqm*
		4		0.82	3.50	11.53	*Sqm*
		4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	12.01		2.93	140.61	*Sqm*
		4		0.89	2.93	10.41	*Sqm*
		4	12.01		0.20	9.61	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.26		3.21	54.76	*Sqm*
		4		0.86	3.21	11.01	*Sqm*
		4	4.26		0.35	5.97	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
	TOTAL					**716.20**	***Sqm***
6	Providing 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1 m dia pipe	*14*	*2.50*			*35.00*	*RM*
	TOTAL					**35.00**	**RM**
7	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*199.35*	*0.0025*	*0.498*	*7850.00*	*3912.180*	*Kg*
	TOTAL					*3912.180*	*Kg*
	TOTAL					**3.91**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
8	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Left Portion	*1*	*12.05*	*1.35*	*2.79*	*45.33*	*Cum*
		1	*7.85*	*3.95*	*3.80*	*117.81*	*Cum*
	Middle Portion	*1*	*3.66*	*47.00*		*172.02*	*Cum*
	Right Portion	*1*	*12.31*	*1.48*	*3.23*	*58.71*	*Cum*
		1	*7.98*	*3.95*	*3.23*	*101.71*	*Cum*
	TOTAL					**495.58**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF HETAMPUR DISTRIBUTARY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.610 M)	0.050	₹ 1,48,750.58
2	FALL (1.220 M)/ BRIDGE	0.330	₹ 11,202.87
3	FALL (1.220 M)	0.490	₹ 30,679.61
4	BRIDGE	0.975	₹ 8,377.61
5	BRIDGE	1.195	₹ 26,302.23
6	FALL (1.676 M)	1.930	₹ 1,76,604.69
7	FALL (0.914 M)	2.400	₹ 1,30,407.92
8	BRIDGE	3.135	₹ 22,926.65
9	BRIDGE	3.450	₹ 28,658.31
10	FALL (1.220 M)/ CR	3.930	₹ 0.00
11	FALL (0.762 M)/ BRIDGE	4.110	₹ 0.00
12	FALL (1.220 M)	4.380	₹ 18,694.35
13	FALL (1.220 M)	4.980	₹ 1,38,358.11
14	CR & HR / BRIDGE	5.360	₹ 2,029.62
15	BRIDGE	5.460	₹ 2,00,842.07
16	BRIDGE	5.560	₹ 0.00
17	HR. FOR PROP. MR-1	5.700	₹ 0.00
18	FALL (1.220 M)	5.760	₹ 2,81,645.25
19	FALL (1.520 M)	5.980	₹ 52,205.39
20	FALL (1.220 M)/ BRIDGE	6.280	₹ 60,726.01
21	BRIDGE	6.460	₹ 10,237.73
22	FALL (1.372 M)	6.470	₹ 0.00
23	BRIDGE	7.060	₹ 13,136.00
24	BRIDGE	8.240	₹ 0.00
25	FALL (0.610 M)	8.790	₹ 40,847.96
26	FALL (1.220 M)	9.170	₹ 23,396.64
27	FALL (0.915 M)	9.390	₹ 1,73,838.76
28	FALL (1.220 M)	9.520	₹ 11,560.82
29	NEW FALL (0.914 M)	9.650	₹ 0.00
30	HR. FOR PROP. MR-2	9.950	₹ 0.00
31	BRIDGE	9.960	₹ 0.00
32	FALL (1.067 M)/ BRIDGE	11.145	₹ 36,756.64
33	FALL (0.915 M)/ CULVERT	11.460	₹ 3,925.81
34	BRIDGE	11.830	₹ 23,731.03
35	BRIDGE	12.395	₹ 0.00
36	FALL (1.220 M)	12.510	₹ 82,984.11
37	FALL (1.220 M)	12.865	₹ 32,494.39
38	FALL (1.220 M)/ BRIDGE	13.150	₹ 0.00
39	FALL (1.520 M)	13.415	₹ 39,216.57
40	FALL (1.520 M)	13.550	₹ 0.00
41	BRIDGE	13.615	₹ 0.00
42	FALL (1.520 M)	13.690	₹ 39,216.57
43	CROSS DRAINAGE	13.875	₹ 71,786.30
44	CROSS DRAINAGE	13.970	₹ 0.00
45	CULVERT	14.020	₹ 0.00

46	CULVERT	14.150	₹ 0.00
47	FALL (0.915 M)	14.470	₹ 60,633.82
48	FALL (0.305 M)/ BRIDGE	14.990	₹ 55,373.72
49	PIPE CULVERT (0.4 M DIA)	15.600	₹ 0.00
50	PROP. TAIL MR.	16.050	₹ 0.00
Total In Rs.			**₹ 19,41,540.61**
Total In Lakhs.			**₹ 19.42**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		4.000	₹ 20,84,074.20
Total In Rs.			**₹ 20,84,074.20**
Total In Lakhs.			**₹ 20.84**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF HETAMPUR DISTRIBUTARY									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
		AOC FOR FALL (Ch.-0.050 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.50	Sqm	**11.80**	1776.56			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	14.50	Sqm	**340.20**	4932.90	0.75	0.21	
3	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	11.59	Cum	**8151.40**	94477.05	6.57	4.52	9.16
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	41.90	Sqm	**578.60**	24242.78			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.73	Cum	**1075.00**	5086.80			
		Coarse Aggregates (100 Km lead)	9.16	Cum	**1398.00**	12800.54			
		Cement (30 km lead)	7.32	MT	**742.00**	5433.94			
		TOTAL (In Rs.)				**148750.58**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.73	Cum	**584.64**	2766.46	276.65		
		Coarse Aggregate	9.16	Cum	**944.26**	8645.95	864.60		
		Total					**1141.24**		
		AOC FOR FALL/ BRIDGE AT (CH- 0.330 KM)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	152.00	Sqm	**11.80**	1794.27			
3	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.53	Cum	**8151.40**	4298.84	0.30	0.21	0.42
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.06	Sqm	**578.60**	4084.34			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.21	Cum	**1075.00**	221.10			
		Coarse Aggregates (100 Km lead)	0.42	Cum	**1398.00**	582.44			
		Cement (30 km lead)	0.30	MT	**742.00**	221.87			
		TOTAL (In Rs.)				**11202.87**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.21	Cum	**584.64**	120.25	12.02		
		Coarse Aggregate	0.42	Cum	**944.26**	393.40	39.34		
		Total					**51.37**		
		AOC FOR FALL (Ch.-0.490 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.63	Cum	**6914.20**	18201.63	1.09	1.13	2.26
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.60	Sqm	**578.60**	7290.36			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.13	Cum	**1075.00**	1216.87			
		Coarse Aggregates (100 Km lead)	2.26	Cum	**1398.00**	3165.00			
		Cement (30 km lead)	1.09	MT	**742.00**	805.74			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**30679.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.13	Cum	**584.64**	661.80	66.18		
		Coarse Aggregate	2.26	Cum	**944.26**	2137.76	213.78		
		Total					**279.96**		
		AOC FOR BRIDGE(Ch.-0.975 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
3	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.40	Cum	**8151.40**	3246.30	0.23	0.16	0.31
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.29	Sqm	**578.60**	3058.48			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.16	Cum	**1075.00**	166.97			
		Coarse Aggregates (100 Km lead)	0.31	Cum	**1398.00**	439.84			
		Cement (30 km lead)	0.23	MT	**742.00**	167.55			
		TOTAL (In Rs.)				**8377.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.16	Cum	**584.64**	90.80	9.08		
		Coarse Aggregate	0.31	Cum	**944.26**	297.08	29.71		
		Total					**38.79**		
		AOC FOR FOR BRIDGE (Ch.-1.195 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.00	Sqm	**11.80**	2124.79			
3	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.08	Cum	**5021.30**	15488.58	0.36	0.99	
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.36	Sqm	**340.20**	1825.00	0.28	0.08	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	5.36	Sqm	**63.20**	339.04	0.01		
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.07	Cum	**1075.00**	1145.29			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.64	MT	**742.00**	475.98			
		Brick (15 km lead)	1542.00	No.	**3.18**	4903.56			
		TOTAL (In Rs.)				**26302.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.07	Cum	**584.64**	622.87	62.29		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**62.29**		
		AOC FOR FALL (Ch.-1.930 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	70.85	Cum	**2492.58**	176604.69			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**176604.69**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FALL (Ch.-2.400 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	52.32	Cum	**2492.58**	130407.92			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**130407.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FOR BRIDGE (Ch.-3.135 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.24	Cum	**5021.30**	11247.71	0.26	0.72	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	15.60	Sqm	**340.20**	5307.12	0.81	0.23	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	15.60	Sqm	**63.20**	985.92	0.02		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.94	Cum	**1075.00**	1015.40			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.09	MT	**742.00**	808.89			
		Brick (15 km lead)	1120.00	No.	**3.18**	3561.60			
		TOTAL (In Rs.)				**22926.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.94	Cum	**584.64**	552.23	55.22		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**55.22**		
		AOC FOR FOR FOR BRIDGE (Ch.-3.450 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.80	Cum	**5021.30**	14059.64	0.32	0.90	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	19.50	Sqm	**340.20**	6633.90	1.01	0.28	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	19.50	Sqm	**63.20**	1232.40	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.18	Cum	**1075.00**	1269.25			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.36	MT	**742.00**	1011.12			
		Brick (15 km lead)	1400.00	No.	**3.18**	4452.00			
		TOTAL (In Rs.)				**28658.31**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.18	Cum	**584.64**	690.28	69.03		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**69.03**		
		AOC FOR CR + FALL (Ch.-3.930 Km)							
1	**Structure is in good condition and does not requir any repair works.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR BRIDGE + FALL (Ch.-4.110 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-4.380 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.50	Cum	**2492.58**	18694.35			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**18694.35**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FALL (Ch.-4.980 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.00	Cum	**6914.20**	103690.74	6.19	6.45	12.90
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.84	Sqm	**578.60**	5114.64			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.45	Cum	**1075.00**	6932.26			
		Coarse Aggregates (100 Km lead)	12.90	Cum	**1398.00**	18030.33			
		Cement (30 km lead)	6.19	MT	**742.00**	4590.14			
		TOTAL (In Rs.)				**138358.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.45	Cum	**584.64**	3770.12	377.01		
		Coarse Aggregate	12.90	Cum	**944.26**	12178.34	1217.83		
		Total					**1594.85**		
		AOC FOR CR & HR /BRIDGE (Ch.-5.360 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.10	Cum	**5021.30**	502.13	0.01	0.03	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.95	Sqm	**340.20**	663.39	0.10	0.03	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.95	Sqm	**63.20**	123.24	0.00		
4	RCD 8.09	Providing and applying two Coates of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade.	4.65	Sqm	**91.70**	425.96	0.01		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.06	Cum	**1075.00**	65.01			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.12	MT	**742.00**	90.90			
		Brick (15 km lead)	50.00	No.	**3.18**	159.00			
		TOTAL (In Rs.)				**2029.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.06	Cum	**584.64**	35.35	3.54		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**3.54**		
		AOC FOR BRIDGE (Ch.-5.460 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.61	Cum	**2492.58**	18973.52			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.96	Cum	**5021.30**	9856.37	0.23	0.63	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	17.84	Sqm	**340.20**	6068.11	0.92	0.26	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	17.84	Sqm	**63.20**	1127.29	0.03		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.50	Cum	**6914.20**	93341.70	5.57	5.81	11.61
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	69.00	Sqm	**578.60**	39923.40			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.69	Cum	**1075.00**	7195.57			
		Coarse Aggregates (100 Km lead)	11.61	Cum	**1398.00**	16230.78			
		Cement (30 km lead)	6.75	MT	**742.00**	5005.75			
		Brick (15 km lead)	981.00	No.	**3.18**	3119.58			
		TOTAL (In Rs.)				**200842.07**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.69	Cum	**584.64**	3913.32	391.33		
		Coarse Aggregate	11.61	Cum	**944.26**	10962.86	1096.29		
		Total					**1487.62**		
		AOC FOR BRIDGE (Ch.-5.560 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-5.760 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.50	Cum	**6914.20**	176312.10	10.52	10.97	21.93
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	95.20	Sqm	**578.60**	55082.72			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	10.97	Cum	**1075.00**	11787.38			
		Coarse Aggregates (100 Km lead)	21.93	Cum	**1398.00**	30658.14			
		Cement (30 km lead)	10.52	MT	**742.00**	7804.91			
		TOTAL (In Rs.)				**281645.25**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	10.97	Cum	**584.64**	6410.58	641.06		
		Coarse Aggregate	21.93	Cum	**944.26**	20707.62	2070.76		
		Total					**2711.82**		
		AOC FOR FALL (Ch.-5.980 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	20.94	Cum	**2492.58**	52205.39			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**52205.39**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FALL/BRIDGE (Ch.-6.280 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	24.36	Cum	**2492.58**	60726.01			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**60726.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall cum Bridge has been proposed.							
		AOC FOR BRIDGE (Ch.-6.460 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.29	Cum	**5021.30**	1469.27	0.03	0.09	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	17.83	Sqm	**340.20**	6066.04	0.92	0.26	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	17.83	Sqm	**63.20**	1126.91	0.03		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.35	Cum	**1075.00**	380.51			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.98	MT	**742.00**	730.72			
		Brick (15 km lead)	146.00	No.	**3.18**	464.28			
		TOTAL (In Rs.)				**10237.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.35	Cum	**584.64**	206.94	20.69		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**20.69**		
		AOC FOR BRIDGE (Ch.-7.060 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.97	Cum	**5021.30**	4894.34	0.11	0.31	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	13.68	Sqm	**340.20**	4653.74	0.71	0.20	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	13.68	Sqm	**63.20**	864.54	0.02		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.51	Cum	**1075.00**	550.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.84	MT	**742.00**	624.73			
		Brick (15 km lead)	487.00	No.	**3.18**	1548.66			
		TOTAL (In Rs.)				**13136.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.51	Cum	**584.64**	299.12	29.91		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**29.91**		
		AOC FOR BRIDGE (Ch.-8.240 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-8.790 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	16.39	Cum	**2492.58**	40847.96			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**40847.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New fall cum Bridge has been proposed.								
		AOC FOR FALL (Ch.-9.170 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.39	Cum	**2492.58**	23396.64			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**23396.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.-9.390 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.37	Cum	**6914.20**	106296.70	6.34	6.61	13.22
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	64.37	Sqm	**578.60**	37246.61			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.61	Cum	**1075.00**	7106.48			
		Coarse Aggregates (100 Km lead)	13.22	Cum	**1398.00**	18483.47			
		Cement (30 km lead)	6.34	MT	**742.00**	4705.50			
		TOTAL (In Rs.)				**173838.76**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.61	Cum	**584.64**	3864.87	386.49		
		Coarse Aggregate	13.22	Cum	**944.26**	12484.41	1248.44		
		Total					**1634.93**		
		AOC FOR FALL (Ch.-9.520 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	4.64	Cum	**2492.58**	11560.82			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**11560.82**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-9.960 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL/BRIDGE (Ch.-11.145 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.13	Cum	**2492.58**	319.05			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.84	Cum	**5021.30**	9239.19	0.21	0.59	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	16.72	Sqm	**340.20**	5688.14	0.87	0.24	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	16.72	Sqm	**63.20**	1056.70	0.03		
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.32	Cum	**6914.20**	9104.18	0.54	0.57	1.13
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.11	Sqm	**578.60**	4114.60			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.40	Cum	**1075.00**	1504.04			
		Coarse Aggregates (100 Km lead)	1.13	Cum	**1398.00**	1583.09			
		Cement (30 km lead)	1.65	MT	**742.00**	1222.05			
		Brick (15 km lead)	920.00	No.	**3.18**	2925.60			
		TOTAL (In Rs.)				**36756.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.40	Cum	**584.64**	817.97	81.80		
		Coarse Aggregate	1.13	Cum	**944.26**	1069.27	106.93		
		Total					**188.72**		
		AOC FOR FALL/CULVERT (Ch.-11.460 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	1.58	Cum	**2492.58**	3925.81			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**3925.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-11.830 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.06	Cum	**2492.58**	159.53			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.10	Cum	**5021.30**	10560.40	0.24	0.67	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	19.11	Sqm	**340.20**	6501.55	0.99	0.28	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	19.11	Sqm	**63.20**	1207.81	0.03		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.95	Cum	**1075.00**	1023.42			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.26	MT	**742.00**	936.15			
		Brick (15 km lead)	1051.00	No.	**3.18**	3342.18			
		TOTAL (In Rs.)				**23731.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.95	Cum	**584.64**	556.59	55.66		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**55.66**		
		AOC FOR BRIDGE (Ch.-12.395 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-12.510 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	33.29	Cum	**2492.58**	82984.11			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**82984.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New fall cum Bridge has been proposed.								
		AOC FOR FALL (Ch.-12.865 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.70	Cum	**6914.20**	18668.34	1.11	1.16	2.32
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	14.70	Sqm	**578.60**	8505.42			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.16	Cum	**1075.00**	1248.08			
		Coarse Aggregates (100 Km lead)	2.32	Cum	**1398.00**	3246.16			
		Cement (30 km lead)	1.11	MT	**742.00**	826.40			
		TOTAL (In Rs.)				**32494.39**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.16	Cum	**584.64**	678.77	67.88		
		Coarse Aggregate	2.32	Cum	**944.26**	2192.57	219.26		
		Total					**287.13**		
		AOC FOR BRIDGE/FALL (Ch.-13.150 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-13.415 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	85.50	Sqm	**340.20**	29087.10	4.43	1.25	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	85.50	Sqm	**63.20**	5403.60	0.13		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.25	Cum	**1075.00**	1341.92			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.56	MT	**742.00**	3383.94			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**39216.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.25	Cum	**584.64**	729.81	72.98		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**72.98**		
		AOC FOR FALL (Ch.-13.550 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR BRIDGE (Ch.-13.615 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR FALL (Ch.-13.690 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	85.50	Sqm	**340.20**	29087.10	4.43	1.25	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	85.50	Sqm	**63.20**	5403.60	0.13		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.25	Cum	**1075.00**	1341.92			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	4.56	MT	**742.00**	3383.94			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**39216.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.25	Cum	**584.64**	729.81	72.98		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**72.98**		
		AOC FOR CD WORKS (Ch.-13.875 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	28.80	Cum	**2492.58**	71786.30			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**71786.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall cum Bridge has been proposed.							
		AOC FOR CROSS DRAINAGE (Ch.-13.970 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR CULVERT (Ch.-14.020 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR CULVERT (Ch.-14.150 Km)							
1		**Structure is in good condition and does not requir any repair works.**							
		AOC FOR FALL (Ch.-14.470 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	87.50	Sqm	**340.20**	29767.50	4.54	1.28	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	87.50	Sqm	**63.20**	5530.00	0.13		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.35	Cum	**6914.20**	9334.17	0.56	0.58	1.16
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	14.70	Sqm	**578.60**	8505.42			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.86	Cum	**1075.00**	1997.35			
		Coarse Aggregates (100 Km lead)	1.16	Cum	**1398.00**	1623.08			
		Cement (30 km lead)	5.22	MT	**742.00**	3876.30			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**60633.82**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.86	Cum	**584.64**	1086.26	108.63		
		Coarse Aggregate	1.16	Cum	**944.26**	1096.29	109.63		
		Total					**218.25**		
		AOC FOR BRIDGE/FALL (Ch.-14.990 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.38	Cum	**5021.30**	6929.39	0.16	0.44	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	12.54	Sqm	**340.20**	4266.11	0.65	0.18	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	12.54	Sqm	**63.20**	792.53	0.02		
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.99	Cum	**6914.20**	27593.87	1.65	1.72	3.43
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.69	Sqm	**578.60**	4447.33			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.34	Cum	**1075.00**	2516.33			
		Coarse Aggregates (100 Km lead)	3.43	Cum	**1398.00**	4798.18			
		Cement (30 km lead)	2.47	MT	**742.00**	1835.79			
		Brick (15 km lead)	690.00	No.	**3.18**	2194.20			
		TOTAL (In Rs.)				**55373.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.34	Cum	**584.64**	1368.51	136.85		
		Coarse Aggregate	3.43	Cum	**944.26**	3240.86	324.09		
		Total					**460.94**		
		AOC FOR CULVERT (Ch.-15.600 Km)							
1	**Structure is in good condition and does not requir any repair works.**								

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF HETAMPUR DISTRIBUTARY								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.050 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				150.50	Sqm
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		HR GATE Abutment	*1*	*2*		*7.25*	*14.50*	*Sqm*
		TOTAL					**14.50**	**Sqm**
3	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Quantitiy for 6m Railing						
		Hand Rail (2Nos)	*6*	*2.00*	*0.18*	*0.20*	*0.42*	*Cum*
		Post	*4*	*0.28*	*0.25*	*0.86*	*0.24*	*Cum*
		D/S Floor	*1*	*10.00*	*3.60*	*0.30*	*10.93*	*Cum*
		TOTAL					***11.59***	***Cum***
4	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		Hand Rail (2Nos)	12	2.00		0.20	*4.80*	Sqm
			12		0.18	0.20	*0.42*	Sqm
		Post	8	0.28		0.86	*1.89*	Sqm
			8		0.25	0.86	*1.72*	Sqm
			8	10.00		0.30	*24.32*	Sqm
			8		3.60	0.304	*8.75*	Sqm
		TOTAL					**41.90**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/ BRIDGE AT (CH- 0.330 KM)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				152.00	Sqm
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Quantitiy for 6m Railing						
		Hand Rail (2Nos)	*5*	*2.00*	*0.18*	*0.20*	*0.35*	*Cum*
		Post	*3*	*0.28*	*0.25*	*0.86*	*0.18*	*Cum*
		TOTAL					***0.53***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Hand Rail (2Nos)	10	2.00		0.20	*4.00*	Sqm
			10		0.18	0.20	*0.35*	Sqm
		Post	6	0.28		0.86	*1.42*	Sqm
			6		0.25	0.86	*1.29*	Sqm
		TOTAL					**7.06**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.490 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Bed Bar	1	5.85	0.45	1	*2.63*	*Cum*
		TOTAL					***2.63***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Bed Bar	2	5.85		1.00	*11.70*	Sqm
			2		0.45	1.00	*0.90*	Sqm
		TOTAL					**12.60**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-0.975 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.11**	**Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Quantitiy for 6m Railing						
		Hand Rail (2Nos)	*4*	*2.00*	*0.18*	*0.20*	*0.28*	*Cum*
		Post	*2*	*0.28*	*0.25*	*0.86*	*0.12*	*Cum*
		TOTAL					***0.40***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Hand Rail (2Nos)	8	2.00		0.20	*3.20*	Sqm
			8		0.18	0.20	*0.28*	Sqm
		Post	4	0.28		0.86	*0.95*	Sqm
			4		0.25	0.86	*0.86*	Sqm
		TOTAL					**5.29**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.195 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	6.7056	0.25	0.92	*3.08*	*Cum*
		TOTAL					**3.08**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	6.71		0.8	*5.36*	*Sqm*
		Abutment Top	4	1.00		0.8	*3.20*	*Sqm*
		Wing wall Top	4	3.00		0.8	*9.60*	*Sqm*
		TOTAL					**5.36**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	6.71		0.8	*5.36*	*Sqm*
		Abutment Top	4	1.00		0.8	*3.20*	*Sqm*
		Wing wall Top	4	3.00		0.8	*9.60*	*Sqm*
		TOTAL					**5.36**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.930 Km)								
1		**New fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	4	3.00	0.50	2.50	*15.00*	*Cum*
		Abutment U/S	2	4.00	0.50	2.50	*10.00*	*Cum*
		Abutment D/S	2	7.00	0.50	2.50	*17.50*	*Cum*
		Floor	1	5.00	5.21	0.60	*15.64*	*Cum*
		Bed bar	1	8.00	0.50	1.00	*4.00*	*Cum*
		Crest	1	5.21	0.91	1.83	*8.72*	*Cum*
		TOTAL					***70.85***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.400 Km)								
1		**New fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	3	3.00	0.50	2.50	*11.25*	*Cum*
		Abutment U/S	2	4.00	0.50	2.50	*10.00*	*Cum*
		Abutment D/S	1	7.00	0.50	2.50	*8.75*	*Cum*
		Floor	1	5.00	5.21	0.60	*15.64*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Crest	1	5.21	0.91	1.40	*6.68*	*Cum*
		TOTAL					***52.32***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.135 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4	0.35	0.8	*2.24*	*Cum*
		TOTAL					**2.24**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.00		1.95	*15.60*	*Sqm*
		TOTAL					**15.60**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.00		1.95	*15.60*	*Sqm*
		TOTAL					**15.60**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.450 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	5	0.35	0.8	*2.80*	*Cum*
		TOTAL					**2.80**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	5.00		1.95	*19.50*	*Sqm*
		TOTAL					**19.50**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	5.00		1.95	*19.50*	*Sqm*
		TOTAL					**19.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CR + FALL (Ch.-3.930 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-4.110 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.380 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		**New fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	3.00	0.50	2.50	*7.50*	*Cum*
		TOTAL					***7.50***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.980 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	9.14	5.39	0.304	*15.00*	*Cum*
		TOTAL					***15.00***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	9.14		0.30	*5.56*	Sqm
			2		5.39	0.30	*3.28*	Sqm
		TOTAL					**8.84**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CR & HR /BRIDGE (Ch.-5.360 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		CR gate Abutment Wall	2	0.5	0.2	0.5	*0.10*	*Cum*
		TOTAL					**0.10**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		CR gate Abutment Wall	2	0.50		1.95	*1.95*	*Sqm*
		TOTAL					**1.95**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		CR gate Abutment Wall	2	0.50		1.95	*1.95*	*Sqm*
		TOTAL					**1.95**	***Sqm***
4	**RCD 8.09**	**Painting on Steel Surfaces (Providing and applying two coats of ready mix paint of approved brand on steel surface after through cleaning of surface to give an even shade).**						
		CR GATE	*1*	*3.05*		*1.52*	*4.65*	*Sqm*
		TOTAL					**4.65**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.460 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	3.00	0.50	2.50	*7.50*	*Cum*
		Vertical Post	7	0.20	0.20	0.40	*0.11*	*Cum*
		TOTAL					***7.61***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.2672	0.25	0.92	*1.96*	*Cum*
		TOTAL					**1.96**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.27		2.09	*17.84*	*Sqm*
		TOTAL					**17.84**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.27		2.09	*17.84*	*Sqm*
		TOTAL					**17.84**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing Wall	4	3.00	0.45	2.5	*13.50*	*Cum*
		TOTAL					***13.50***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall	8	3.00		2.50	*60.00*	Sqm
			8		0.45	2.50	*9.00*	Sqm
		TOTAL					**69.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.560 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.760 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Abutment Wall	2	7.00	0.45	2	*12.60*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Wing Wall	2	3.00	0.45	2	*5.40*	*Cum*
		D/S Floor	1	3.00	5.00	0.5	*7.50*	*Cum*
		TOTAL					***25.50***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Wall	4	7.00		2.00	*56.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		Wing Wall	4	3.00		2.00	*24.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		D/S Floor	2	3.00		0.50	*3.00*	Sqm
			2		5.00	0.50	*5.00*	Sqm
		TOTAL					**95.20**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.980 Km)								
1		**New fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	3.00	0.50	2.20	*6.60*	*Cum*
		Abutment	2	1.20	0.50	2.20	*2.64*	*Cum*
		Crest	2	4.80	0.80	1.52	*11.70*	*Cum*
		TOTAL					***20.94***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-6.280 Km)								
1		**New fall cum Bridge has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	3.00	0.50	2.20	*6.60*	*Cum*
		Abutment	2	2.40	0.50	2.20	*5.28*	*Cum*
		Crest	1	4.80	0.80	1.22	*4.68*	*Cum*
		Parapet	2	3.20	0.45	0.80	*2.30*	*Cum*
		Slab	1	3.20	4.69	0.37	*5.49*	*Cum*
		TOTAL					***24.36***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-6.460 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royalty as per specification and direction of E/I.**						
		Parapet Wall	1	1	0.3	0.9754	*0.29*	*Cum*
		TOTAL					**0.29**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.96		2.25	*17.83*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**17.83**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.96		2.25	*17.83*	*Sqm*
		TOTAL					**17.83**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-7.060 Km)						
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall U/S	1	4.15	0.3	0.6706	*0.83*	*Cum*
		Parapet Wall D/S	1	0.7	0.3	0.6706	*0.14*	*Cum*
		TOTAL					**0.97**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.15		1.65	*13.68*	*Sqm*
		TOTAL					**13.68**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.15		1.65	*13.68*	*Sqm*
		TOTAL					**13.68**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-8.240 Km)						
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.790 Km)						
1		**New Fall cum Bridge has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	1.00	0.50	1.80	*1.80*	*Cum*
		Abutment	2	4.00	0.50	1.80	*7.20*	*Cum*
		Crest	1	2.99	0.60	1.22	*2.19*	*Cum*
		Parapet	1	3.20	0.45	0.80	*1.15*	*Cum*
		Slab	1	3.96	3.35	0.30	*4.05*	*Cum*
		TOTAL					***16.39***	***Cum***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.170 Km)						
1		**New Fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	1.00	0.50	1.80	*1.80*	*Cum*
		Abutment	2	3.00	0.50	1.80	*5.40*	*Cum*
		Crest	1	2.99	0.60	1.22	*2.19*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***9.39***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.390 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Abutment Wall	2	7.00	0.45	2	*12.60*	*Cum*
		D/S Floor	1	2.00	2.77	0.5	*2.77*	*Cum*
		TOTAL					***15.37***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Wall	4	7.00		2.00	*56.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		D/S Floor	2	2.00		0.50	*2.00*	Sqm
			2		2.77	0.50	*2.77*	Sqm
		TOTAL					**64.37**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.520 Km)								
1		**New Fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	2	2.00	0.50	1.50	*3.00*	*Cum*
		Crest	1	2.99	0.60	0.91	*1.64*	*Cum*
		TOTAL					***4.64***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-9.960 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-11.145 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Vertical Post	8	0.20	0.20	0.40	*0.13*	*Cum*
		TOTAL					***0.13***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royalty as per specification and direction of E/I.**						
		Parapet Wall	2	4	0.25	0.92	*1.84*	*Cum*
		TOTAL					**1.84**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.00		2.09	*16.72*	*Sqm*
		TOTAL					**16.72**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.00		2.09	*16.72*	*Sqm*
		TOTAL					**16.72**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Floor	1	3.00	2.93	0.15	*1.32*	*Cum*
		TOTAL					***1.32***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing Wall	8	3.00		0.15	*3.60*	Sqm
			8		2.93	0.15	*3.51*	Sqm
		TOTAL					**7.11**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-11.460 Km)								
1		**New Fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	1	3.00	0.35	1.50	*1.58*	*Cum*
		TOTAL					***1.58***	***Cum***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-11.830 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Vertical Post	4	0.20	0.20	0.40	*0.06*	*Cum*
		TOTAL					***0.06***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	4.572	0.25	0.92	*2.10*	*Cum*
		TOTAL					**2.10**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	4.57		2.09	*19.11*	*Sqm*
		TOTAL					**19.11**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	4.57		2.09	*19.11*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**19.11**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-12.395 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-12.510 Km)								
1		**New fall cum Bridge has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	4	3.00	0.50	1.80	*10.80*	*Cum*
		Abutment	2	12.00	0.50	1.80	*21.60*	*Cum*
		Crest	1	1.22	0.60	1.22	*0.89*	*Cum*
		TOTAL					***33.29***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-12.865 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Abutment Wall	2	2.00	0.45	1.5	*2.70*	*Cum*
		TOTAL					***2.70***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Wall	4	2.00		1.50	*12.00*	Sqm
			4		0.45	1.50	*2.70*	Sqm
		TOTAL					**14.70**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-13.150 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.415 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	2.00		2.45	*9.80*	*Sqm*
		Abutment U/S	2	3.00		3.45	*20.70*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*
		TOTAL					**85.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	2.00		2.45	*9.80*	*Sqm*
		Abutment U/S	2	3.00		3.45	*20.70*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**85.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.550 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-13.615 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.690 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	2.00		2.45	*9.80*	*Sqm*
		Abutment U/S	2	3.00		3.45	*20.70*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*
		TOTAL					**85.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	2.00		2.45	*9.80*	*Sqm*
		Abutment U/S	2	3.00		3.45	*20.70*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*
		TOTAL					**85.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORKS (Ch.-13.875 Km)								
1		**New CD Work has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings U/S & D/S	4	2.00	0.50	1.80	*7.20*	*Cum*
		Abutment	2	12.00	0.50	1.80	*21.60*	*Cum*
		TOTAL					***28.80***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.-13.970 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-14.020 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-14.150 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.470 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	1.00		2.45	*4.90*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment U/S	2	4.00		3.45	*27.60*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*
		TOTAL					**87.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S	2	3.00		3.45	*20.70*	*Sqm*
		Wing wall D/S	2	1.00		2.45	*4.90*	*Sqm*
		Abutment U/S	2	4.00		3.45	*27.60*	*Sqm*
		Abutment D/S	2	7.00		2.45	*34.30*	*Sqm*
		TOTAL					**87.50**	***Sqm***
3	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Wing wall	1	2.00	0.45	1.5	*1.35*	*Cum*
		TOTAL					***1.35***	***Cum***
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Wall	4	2.00		1.50	*12.00*	Sqm
			4		0.45	1.50	*2.70*	Sqm
		TOTAL					**14.70**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-14.990 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royalty as per specification and direction of E/I.**						
		Parapet Wall	2	3	0.25	0.92	*1.38*	*Cum*
		TOTAL					**1.38**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	3.00		2.09	*12.54*	*Sqm*
		TOTAL					**12.54**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	3.00		2.09	*12.54*	*Sqm*
		TOTAL					**12.54**	***Sqm***
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S floor	1	5.00	1.31	0.609	*3.99*	*Cum*
		TOTAL					***3.99***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Wall	2	5.00		0.61	*6.09*	Sqm
			2		1.31	0.61	*1.60*	Sqm
		TOTAL					**7.69**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-15.600 Km)						
1		**Structure requires no repair work.**						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 4 no., Total Seigniorage charges					**30314.38**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 61 nos. outlet, Total Seigniorage charges					**67110.56**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.15	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.473	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.40**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.40**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Rasalpur-I Minor
(Total Cost – Rs. 2.47 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (RASALPUR-I MINOR)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	RASALPUR-I MINOR	1	Job	10040939.32	0.00	₹ 1,00,40,939.32	AOC Earthwork Rasalpur-I	8
2	Falls							
	RASALPUR-I MINOR							
	1.524 m Fall at Ch. 0.000 Km	1	No.	935622.55	8171.73	₹ 9,43,794.28	Fall (AOC) Rasalpur-I	27
	1.524 m Fall at Ch. 0.925 Km	1	No.	860470.63	7344.38	₹ 8,67,815.01		28
	0.915 m Fall at Ch. 1.370 Km	1	No.	584175.25	4943.51	₹ 5,89,118.76		29
	1.067 m Fall at Ch. 2.600 Km	1	No.	620581.55	5256.85	₹ 6,25,838.40		30
3	*Pipe Culvert*							
	RASALPUR-I MINOR							
	Pipe Culvert At Km 4.300	1	No.	366396.04	2893.14	₹ 3,69,289.19	Pipe Culvert AOC Rasalpur-I	44
	Pipe Culvert At Km 4.610	1	No.	389893.34	3033.63	₹ 3,92,926.97		46
4	Slab Bridge							
	RASALPUR-I MINOR							
	Slab Bridge at km 1.875	1	No.	1382144.25	7177.85	₹ 13,89,322.10	Slab-AOC Rasalpur-I	12
	Slab Bridge at km 2.370	1	No.	1371291.85	7078.71	₹ 13,78,370.56		14
	Slab Bridge at km 3.335	1	No.	1345182.03	6828.00	₹ 13,52,010.03		16
5	*Brick Section*	1	No.	3796035.67	10086.68	₹ 38,06,122.35	Brick Sec	53
6	*Repair of Structures*							
	RASALPUR-I MINOR	9	No.	340486.6132	2013.10	₹ 3,42,499.71	Abstract (Repair St.) Rasalpur-I	54
	APPROACH ROAD	3	No.	521018.55	7578.59	₹ 15,85,791.43	Approach Road AOC	67
7	Outlets							
	RASALPUR-I MINOR	8	No.	127744.47	1100.17	₹ 10,30,757.13	Outlet-AOC	71
8	Kilometer Stone	5	No.	3853.40	0.00	₹ 19,267.00	Rates '!F61	104
	TOTAL (In Rs.)					**24733862.23**		
	TOTAL (In Lacs)					**247.34**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

RASALPUR MR (0.000 TO 5.100 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.327	0.164	16.350	2.780	1.390	139.000
200	100	0.231	0.279	27.900	3.546	3.163	316.300
300	100	0.000	0.116	11.550	6.684	5.115	511.500
400	100	0.369	0.185	18.450	2.482	4.583	458.300
500	100	0.295	0.332	33.200	3.329	2.906	290.550
600	100	0.070	0.183	18.250	4.277	3.803	380.300
700	100	3.373	1.722	172.150	2.382	3.330	332.950
800	100	0.518	1.946	194.550	0.995	1.689	168.850
900	100	0.000	0.259	25.900	5.558	3.277	327.650
1000	100	0.029	0.015	1.450	3.919	4.739	473.850
1100	100	1.356	0.693	69.250	1.648	2.784	278.350
1200	100	0.382	0.869	86.900	1.630	1.639	163.900
1300	100	0.000	0.191	19.100	4.780	3.205	320.500
1400	100	0.776	0.388	38.800	2.226	3.503	350.300
1500	100	0.253	0.515	51.450	2.604	2.415	241.500
1600	100	0.051	0.152	15.200	5.271	3.938	393.750
1700	100	0.013	0.032	3.200	7.649	6.460	646.000
1800	100	0.000	0.007	0.650	10.230	8.940	893.950
1900	100	0.087	0.044	4.350	7.100	8.665	866.500
2000	100	1.635	0.861	86.100	1.527	4.314	431.350
2100	100	0.791	1.213	121.300	3.908	2.718	271.750
2200	100	0.307	0.549	54.900	5.323	4.616	461.550
2300	100	0.119	0.213	21.300	7.166	6.245	624.450
2400	100	0.127	0.123	12.300	10.230	8.698	869.800
2500	100	0.000	0.064	6.350	11.691	10.961	1096.050
2600	100	0.942	0.471	47.100	1.135	6.413	641.300
2700	100	0.130	0.536	53.600	1.929	1.532	153.200
2800	100	0.970	0.550	55.000	5.648	3.789	378.850
2900	100	1.017	0.994	99.350	3.956	4.802	480.200
3000	100	0.478	0.748	74.750	3.689	3.823	382.250
3100	100	2.466	1.472	147.200	2.517	3.103	310.300
3200	100	1.916	2.191	219.100	4.842	3.680	367.950
3300	100	1.603	1.760	175.950	6.184	5.513	551.300
3400	100	0.226	0.915	91.450	5.675	5.930	592.950
3500	100	0.000	0.113	11.300	8.676	7.176	717.550
3600	100	0.377	0.189	18.850	2.862	5.769	576.900
3700	100	0.181	0.279	27.900	4.808	3.835	383.500
3800	100	0.012	0.097	9.650	7.092	5.950	595.000
3900	100	0.000	0.006	0.600	9.389	8.241	824.050
4000	100	0.000	0.000	0.000	10.258	9.824	982.350
4100	100	1.119	0.560	55.950	0.216	5.237	523.700
4200	100	1.142	1.131	113.050	0.284	0.250	25.000
4300	100	0.509	0.826	82.550	2.524	1.404	140.400
4400	100	0.214	0.362	36.150	5.320	3.922	392.200

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4500	100	3.755	1.985	198.450	0.373	2.847	284.650
4600	100	1.295	2.525	252.500	2.768	1.571	157.050
4700	100	0.004	0.650	64.950	4.976	3.872	387.200
4800	100	0.907	0.456	45.550	1.274	3.125	312.500
4900	100	0.131	0.519	51.900	4.290	2.782	278.200
5000	100	1.942	1.037	103.650	0.407	2.349	234.850
5100	100	2.380	2.161	216.100	0.082	0.245	24.450
Total				**3363.500**			**22006.800**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**3363.500**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**22006.800**
NET QUANTITY OF EARTHWORK IN FILLING							**18643.30**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
RASALPUR-I MINOR				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.050	50	2.560	128.00	Sqm
0.050 - 3.025	2975	2.220	6604.50	Sqm
3.050 - 4.040	990	1.960	1940.40	Sqm
4.040 - 4.150	110	1.480	162.80	Sqm
4.150 - 5.150	1000	1.230	1230.00	Sqm
	TOTAL		**10065.70**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.050	50	2.560	0.15	19.20	Cum
0.050 - 3.025	2975	2.220	0.15	990.68	Cum
3.050 - 4.040	990	1.960	0.15	291.06	Cum
4.040 - 4.150	110	1.480	0.15	24.42	Cum
4.150 - 5.150	1000	1.230	0.15	184.50	Cum
	TOTAL			**1509.86**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR RASALPUR-I MINOR						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	10065.70	Sqm	**11.80**	118819.4477
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	3363.50	Cum	**156.50**	526387.75
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1345.40	Cum	**17.22**	23164.4435
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	18643.30	Cum	**165.12**	3078306.39
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	5592.99	Cum	**174.89**	978158.02
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	4660.83	Cum	**215.90**	1006272.12
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	8389.49	Cum	**316.10**	2651916.21
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			1509.86	Cum	**196.10**	296082.57
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	22006.80	Cum	**61.88**	1361832.38
TOTAL COST OF EARTHWORK (in Rs.)						**10040939.32**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**100.409**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND DETAILS OF QUANTITIES FOR EARTH WORK FOR RASALPUR-I MINOR				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***10065.70***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation)** **Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	3363.500	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1345.4	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	18643.300	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	5592.99	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4660.83	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	8389.49	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	1509.86	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	22006.80	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR RASALPUR-I MR. AT - KM 1.875								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.00	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	55.24	Cum	**195.20**	10783.52			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.90	Cum	**6381.70**	56828.53	2.89	4.01	8.01
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	35.80	Cum	**6914.20**	247549.57	14.77	15.40	30.79
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	24.43	Cum	**8151.40**	199127.82	13.85	9.53	19.30
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.73	MT	**73574.90**	200785.71			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	178.35	Sqm	**578.60**	103194.98			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	38.14	Cum	**149.30**	5695.04			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.93	Cum	**1075.00**	31099.44			
	Coarse Aggregates (60 Km lead)	58.10	Cum	**1398.00**	81228.99			
	Cement (30 km lead)	31.51	MT	**742.00**	23376.72			
	Steel (30 Km lead)	2.73	MT	**742.00**	2024.92			
	TOTAL (In Rs.)				**1382144.25**			
	TOTAL (In Rs.)				**1382144.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.93	Cum	**584.64**	16913.47	1691.35		
	Coarse Aggregate	58.10	Cum	**944.26**	54865.01	5486.50		
	Total					7177.85		
	For 1 nos. fall, Total Seigniorage charges					**7177.85**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR RASALPUR-I MR. AT - KM 2.370								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.00	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	55.93	Cum	**195.20**	10918.30			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.97	Cum	**6381.70**	57233.64	2.91	4.04	8.07
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.80	Cum	**6914.20**	240644.38	14.36	14.97	29.93
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	24.43	Cum	**8151.40**	199127.82	13.85	9.53	19.30
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.71	MT	**73574.90**	199343.68			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	176.53	Sqm	**578.60**	102139.62			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	37.25	Cum	**149.30**	5562.07			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.53	Cum	**1075.00**	30668.50			
	Coarse Aggregates (60 Km lead)	57.30	Cum	**1398.00**	80108.15			
	Cement (30 km lead)	31.11	MT	**742.00**	23086.30			
	Steel (30 Km lead)	2.71	MT	**742.00**	2010.37			
	TOTAL (In Rs.)				**1371291.85**			
	TOTAL (In Rs.)				**1371291.85**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.53	Cum	**584.64**	16679.10	1667.91		
	Coarse Aggregate	57.30	Cum	**944.26**	54107.95	5410.80		
	Total					7078.71		
	For 1 nos. fall, Total Seigniorage charges					**7078.71**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR RASALPUR-I MR. AT - KM 3.335								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.00	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	54.46	Cum	**195.20**	10630.80			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.73	Cum	**6381.70**	55690.06	2.83	3.93	7.85
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	33.20	Cum	**6914.20**	229531.17	13.69	14.27	28.55
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.89	Cum	**8151.40**	194704.10	13.54	9.32	18.87
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.69	MT	**73574.90**	197696.33			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	172.49	Sqm	**578.60**	99803.06			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system.	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	36.99	Cum	**149.30**	5522.83			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	27.52	Cum	**1075.00**	29580.99			
	Coarse Aggregates (60 Km lead)	55.27	Cum	**1398.00**	77272.03			
	Cement (30 km lead)	30.06	MT	**742.00**	22307.88			
	Steel (30 Km lead)	2.69	MT	**742.00**	1993.76			
	TOTAL (In Rs.)				**1345182.03**			
	TOTAL (In Rs.)				**1345182.03**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	27.52	Cum	**584.64**	16087.66	1608.77		
	Coarse Aggregate	55.27	Cum	**944.26**	52192.33	5219.23		
	Total					6828.00		
	For 1 nos. fall, Total Seigniorage charges					**6828.00**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.875							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.79*	*1.45*	*1.20*	*6.22*	*Cum*
		1	*5.25*	*1.79*	*1.20*	*11.25*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.05*	*0.60*	*1.20*	*10.15*	*Cum*
	Left abutment	*2*	*1.79*	*1.45*	*1.20*	*6.22*	*Cum*
		1	*5.25*	*1.79*	*1.20*	*11.25*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.05*	*0.60*	*1.20*	*10.15*	*Cum*
	TOTAL					**55.24**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well as reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.79*	*1.45*	*0.20*	*1.04*	*Cum*
		1	*5.25*	*1.79*	*0.20*	*1.88*	*Cum*
	Left abutment	*2*	*1.79*	*1.45*	*0.20*	*1.04*	*Cum*
		1	*5.25*	*1.79*	*0.20*	*1.88*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**8.90**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.25*	*1.59*	*0.20*	*1.67*	*Cum*
		1	*5.25*	*1.39*	*0.80*	*5.82*	*Cum*
		1	*5.25*	*0.90*	*0.55*	*2.61*	*Cum*
		1	*5.25*	*0.82*	*0.50*	*2.15*	*Cum*
	Return wall	*2*	*1.79*	*1.25*	*0.20*	*0.89*	*Cum*
		2	*1.79*	*1.05*	*0.80*	*3.00*	*Cum*
		2	*1.79*	*0.52*	*0.82*	*1.54*	*Cum*
		2	*1.79*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*5.25*	*1.59*	*0.20*	*1.67*	*Cum*
		1	*5.25*	*1.39*	*0.80*	*5.82*	*Cum*
		1	*5.25*	*0.90*	*0.55*	*2.61*	*Cum*
		1	*5.25*	*0.82*	*0.50*	*2.15*	*Cum*
	Return wall	*2*	*1.79*	*1.25*	*0.20*	*0.89*	*Cum*
		2	*1.79*	*1.05*	*0.80*	*3.00*	*Cum*
		2	*1.79*	*0.52*	*0.82*	*1.54*	*Cum*
		2	*1.79*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**35.80**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.40	5.50	0.33	*4.33*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.40*	*4.50*	*0.08*	*3.17*	*Cum*
	Parapet	*2*	*9.40*	*0.44*	*0.18*	*1.46*	*Cum*
		2	*9.40*	*0.35*	*0.25*	*1.65*	*Cum*
		2	*9.40*	*0.22*	*0.55*	*2.26*	*Cum*
	TOTAL					**24.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*2.86*		*1.578*	*139.9*	*Kg*
a2	*10*	*12*	*5.90*		*0.616*	*43.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.78*		*0.616*	*32.6*	*Kg*
a5	*10*	*9*	*5.80*		*0.616*	*32.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*40*	*2.32*		*0.888*	*82.4*	*Kg*
x2	*16*	*40*	*1.27*		*1.578*	*80.4*	*Kg*
x3	*12*	*24*	*2.30*		*0.888*	*49.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*35.80*	*0.0025*	*0.090*	*7850.00*	*702.635*	*Kg*
	Total Reinforcement Steel (in kg)					*2729.0*	*Kg*
	Total Weight in Metric Tonne					**2.73**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.25*		*0.20*	*2.10*	*Sqm*
		2		*1.59*	*0.20*	*0.63*	*Sqm*
		2	*5.25*		*0.80*	*8.41*	*Sqm*
		2		*1.39*	*0.80*	*2.22*	*Sqm*
		2	*5.25*		*0.55*	*5.79*	*Sqm*
		2		*0.90*	*0.55*	*0.99*	*Sqm*
		2	*5.25*		*0.50*	*5.25*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.79*		*0.20*	*0.72*	*Sqm*
		2		*1.25*	*0.20*	*0.50*	*Sqm*
		2	*1.79*		*0.80*	*2.87*	*Sqm*
		2		*1.05*	*0.80*	*1.67*	*Sqm*
		2	*1.79*		*0.82*	*2.94*	*Sqm*
		2		*0.52*	*0.82*	*0.86*	*Sqm*
		2	*1.79*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.25*		*0.20*	*2.10*	*Sqm*
		2		*1.59*	*0.20*	*0.63*	*Sqm*
		2	*5.25*		*0.80*	*8.41*	*Sqm*
		2		*1.39*	*0.80*	*2.22*	*Sqm*
		2	*5.25*		*0.55*	*5.79*	*Sqm*
		2		*0.90*	*0.55*	*0.99*	*Sqm*
		2	*5.25*		*0.50*	*5.25*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.79*		*0.20*	*0.72*	*Sqm*
		2		*1.25*	*0.20*	*0.50*	*Sqm*
		2	*1.79*		*0.80*	*2.87*	*Sqm*
		2		*1.05*	*0.80*	*1.67*	*Sqm*
		2	*1.79*		*0.82*	*2.94*	*Sqm*
		2		*0.52*	*0.82*	*0.86*	*Sqm*
		2	*1.79*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.40*		*0.33*	*1.57*	*Sqm*
		1	*2.40*	5.50		*13.20*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.40*		*0.18*	*6.58*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.40*		*0.25*	*9.40*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	*9.40*		*0.55*	*20.68*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**178.35**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.25	0.82		*8.64*	*Cum*
	Right and left Return wall	4	1.79	1.29		*9.21*	*Cum*
	Extra slope	*2*	*7.0465*	*0.6*	*1.2*	*10.15*	*Cum*
		2	*7.0465*	*0.6*	*1.2*	*10.15*	*Cum*
	TOTAL					**38.14**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 2.370						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.89*	*1.43*	*1.20*	*6.47*	*Cum*
		1	*5.27*	*1.77*	*1.20*	*11.19*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.15*	*0.60*	*1.20*	*10.30*	*Cum*
	Left abutment	*2*	*1.89*	*1.43*	*1.20*	*6.47*	*Cum*
		1	*5.27*	*1.77*	*1.20*	*11.19*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.15*	*0.60*	*1.20*	*10.30*	*Cum*
	TOTAL					**55.93**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.89*	*1.43*	*0.20*	*1.08*	*Cum*
		1	*5.27*	*1.77*	*0.20*	*1.87*	*Cum*
	Left abutment	*2*	*1.89*	*1.43*	*0.20*	*1.08*	*Cum*
		1	*5.27*	*1.77*	*0.20*	*1.87*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**8.97**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.27*	*1.57*	*0.20*	*1.65*	*Cum*
		1	*5.27*	*1.37*	*0.80*	*5.77*	*Cum*
		1	*5.27*	*0.90*	*0.50*	*2.36*	*Cum*
		1	*5.27*	*0.82*	*0.50*	*2.16*	*Cum*
	Return wall	*2*	*1.79*	*1.23*	*0.20*	*0.88*	*Cum*
		2	*1.79*	*1.03*	*0.80*	*2.94*	*Cum*
		2	*1.79*	*0.52*	*0.77*	*1.42*	*Cum*
		2	*1.79*	*0.40*	*0.15*	*0.21*	*Cum*
	Left abutment	*1*	*5.27*	*1.57*	*0.20*	*1.65*	*Cum*
		1	*5.27*	*1.37*	*0.80*	*5.77*	*Cum*
		1	*5.27*	*0.90*	*0.50*	*2.36*	*Cum*
		1	*5.27*	*0.82*	*0.50*	*2.16*	*Cum*
	Return wall	*2*	*1.79*	*1.23*	*0.20*	*0.88*	*Cum*
		2	*1.79*	*1.03*	*0.80*	*2.94*	*Cum*
		2	*1.79*	*0.52*	*0.77*	*1.42*	*Cum*
		2	*1.79*	*0.40*	*0.15*	*0.21*	*Cum*
	TOTAL					**34.80**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.40	5.50	0.33	*4.33*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.40*	*4.50*	*0.08*	*3.17*	*Cum*
	Parapet	*2*	*9.40*	*0.44*	*0.18*	*1.46*	*Cum*
		2	*9.40*	*0.35*	*0.25*	*1.65*	*Cum*
		2	*9.40*	*0.22*	*0.55*	*2.26*	*Cum*
	TOTAL					**24.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*2.86*		*1.578*	*139.9*	*Kg*
a2	*10*	*12*	*5.90*		*0.616*	*43.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.78*		*0.616*	*32.6*	*Kg*
a5	*10*	*9*	*5.80*		*0.616*	*32.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*40*	*2.32*		*0.888*	*82.4*	*Kg*
x2	*16*	*40*	*1.27*		*1.578*	*80.4*	*Kg*
x3	*12*	*24*	*2.30*		*0.888*	*49.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*34.80*	*0.0025*	*0.087*	*7850.00*	*683.036*	*Kg*
	Total Reinforcement Steel (in kg)					*2709.4*	*Kg*
	Total Weight in Metric Tonne					**2.71**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.27*		*0.20*	*2.11*	*Sqm*
		2		*1.57*	*0.20*	*0.63*	*Sqm*
		2	*5.27*		*0.80*	*8.43*	*Sqm*
		2		*1.37*	*0.80*	*2.19*	*Sqm*
		2	*5.27*		*0.50*	*5.27*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*5.27*		*0.50*	*5.27*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.79*		*0.20*	*0.71*	*Sqm*
		2		*1.23*	*0.20*	*0.49*	*Sqm*
		2	*1.79*		*0.80*	*2.86*	*Sqm*
		2		*1.03*	*0.80*	*1.65*	*Sqm*
		2	*1.79*		*0.77*	*2.75*	*Sqm*
		2		*0.52*	*0.77*	*0.79*	*Sqm*
		2	*1.79*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.27*		*0.20*	*2.11*	*Sqm*
		2		*1.57*	*0.20*	*0.63*	*Sqm*
		2	*5.27*		*0.80*	*8.43*	*Sqm*
		2		*1.37*	*0.80*	*2.19*	*Sqm*
		2	*5.27*		*0.50*	*5.27*	*Sqm*
		2		*0.90*	*0.50*	*0.90*	*Sqm*
		2	*5.27*		*0.50*	*5.27*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.79*		*0.20*	*0.71*	*Sqm*
		2		*1.23*	*0.20*	*0.49*	*Sqm*
		2	*1.79*		*0.80*	*2.86*	*Sqm*
		2		*1.03*	*0.80*	*1.65*	*Sqm*
		2	*1.79*		*0.77*	*2.75*	*Sqm*
		2		*0.52*	*0.77*	*0.79*	*Sqm*
		2	*1.79*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.40*		*0.33*	*1.57*	*Sqm*
		1	*2.40*	5.50		*13.20*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.40*		*0.18*	*6.58*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.40*		*0.25*	*9.40*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.40*		*0.55*	*20.68*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**176.53**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh, Ch- 14, Sl.No. 14.17, Pg. 60)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.27	0.70		*7.38*	*Cum*
	Right and left Return wall	4	1.89	1.23		*9.27*	*Cum*
	Extra slope	*2*	*7.154*	*0.6*	*1.2*	*10.30*	*Cum*
		2	*7.154*	*0.6*	*1.2*	*10.30*	*Cum*
	TOTAL					**37.25**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 3.335						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.88*	*1.42*	*1.20*	*6.38*	*Cum*
		1	*5.27*	*1.67*	*1.20*	*10.56*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.15*	*0.60*	*1.20*	*10.29*	*Cum*
	Left abutment	*2*	*1.88*	*1.42*	*1.20*	*6.38*	*Cum*
		1	*5.27*	*1.67*	*1.20*	*10.56*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.15*	*0.60*	*1.20*	*10.29*	*Cum*
	TOTAL					**54.46**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.88*	*1.42*	*0.20*	*1.06*	*Cum*
		1	*5.27*	*1.67*	*0.20*	*1.76*	*Cum*
	Left abutment	*2*	*1.88*	*1.42*	*0.20*	*1.06*	*Cum*
		1	*5.27*	*1.67*	*0.20*	*1.76*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**8.73**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.28*	*1.46*	*0.20*	*1.54*	*Cum*
		1	*5.28*	*1.31*	*0.80*	*5.52*	*Cum*
		1	*5.28*	*0.89*	*0.45*	*2.11*	*Cum*
		1	*5.28*	*0.82*	*0.50*	*2.17*	*Cum*
	Return wall	*2*	*1.78*	*1.22*	*0.20*	*0.86*	*Cum*
		2	*1.78*	*1.02*	*0.80*	*2.89*	*Cum*
		2	*1.78*	*0.51*	*0.72*	*1.30*	*Cum*
		2	*1.78*	*0.40*	*0.15*	*0.21*	*Cum*
	Left abutment	*1*	*5.28*	*1.46*	*0.20*	*1.54*	*Cum*
		1	*5.28*	*1.31*	*0.80*	*5.52*	*Cum*
		1	*5.28*	*0.89*	*0.45*	*2.11*	*Cum*
		1	*5.28*	*0.82*	*0.50*	*2.17*	*Cum*
	Return wall	*2*	*1.78*	*1.22*	*0.20*	*0.86*	*Cum*
		2	*1.78*	*1.02*	*0.80*	*2.89*	*Cum*
		2	*1.78*	*0.51*	*0.72*	*1.30*	*Cum*
		2	*1.78*	*0.40*	*0.15*	*0.21*	*Cum*
	TOTAL					**33.20**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.20	5.50	0.33	*3.97*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.20*	*4.50*	*0.08*	*3.11*	*Cum*
	Parapet	*2*	*9.20*	*0.44*	*0.18*	*1.43*	*Cum*
		2	*9.20*	*0.35*	*0.25*	*1.61*	*Cum*
		2	*9.20*	*0.22*	*0.55*	*2.22*	*Cum*
	TOTAL					**23.89**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*2.86*		*1.578*	*139.9*	*Kg*
a2	*10*	*12*	*5.90*		*0.616*	*43.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.78*		*0.616*	*32.6*	*Kg*
a5	*10*	*9*	*5.80*		*0.616*	*32.2*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*40*	*2.32*		*0.888*	*82.4*	*Kg*
x2	*16*	*40*	*1.27*		*1.578*	*80.4*	*Kg*
x3	*12*	*24*	*2.30*		*0.888*	*49.0*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.27*		*1.578*	*233.2*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*33.20*	*0.0025*	*0.083*	*7850.00*	*651.492*	*Kg*
	Total Reinforcement Steel (in kg)					*2687.0*	*Kg*
	Total Weight in Metric Tonne					**2.69**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.28*		*0.20*	*2.11*	*Sqm*
		2		*1.46*	*0.20*	*0.58*	*Sqm*
		2	*5.28*		*0.80*	*8.45*	*Sqm*
		2		*1.31*	*0.80*	*2.09*	*Sqm*
		2	*5.28*		*0.45*	*4.76*	*Sqm*
		2		*0.89*	*0.45*	*0.80*	*Sqm*
		2	*5.28*		*0.50*	*5.28*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.78*		*0.20*	*0.71*	*Sqm*
		2		*1.22*	*0.20*	*0.49*	*Sqm*
		2	*1.78*		*0.80*	*2.84*	*Sqm*
		2		*1.02*	*0.80*	*1.63*	*Sqm*
		2	*1.78*		*0.72*	*2.56*	*Sqm*
		2		*0.51*	*0.72*	*0.73*	*Sqm*
		2	*1.78*		*0.15*	*0.53*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.28*		*0.20*	*2.11*	*Sqm*
		2		*1.46*	*0.20*	*0.58*	*Sqm*
		2	*5.28*		*0.80*	*8.45*	*Sqm*
		2		*1.31*	*0.80*	*2.09*	*Sqm*
		2	*5.28*		*0.45*	*4.76*	*Sqm*
		2		*0.89*	*0.45*	*0.80*	*Sqm*
		2	*5.28*		*0.50*	*5.28*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.78*		*0.20*	*0.71*	*Sqm*
		2		*1.22*	*0.20*	*0.49*	*Sqm*
		2	*1.78*		*0.80*	*2.84*	*Sqm*
		2		*1.02*	*0.80*	*1.63*	*Sqm*
		2	*1.78*		*0.72*	*2.56*	*Sqm*
		2		*0.51*	*0.72*	*0.73*	*Sqm*
		2	*1.78*		*0.15*	*0.53*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.20*		*0.33*	*1.44*	*Sqm*
		1	*2.20*	5.50		*12.10*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.20*		*0.18*	*6.44*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.20*		*0.25*	*9.20*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.20*		*0.55*	*20.24*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**172.49**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system.	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.28	0.70		*7.40*	*Cum*
	Right and left Return wall	4	1.88	1.20		*9.01*	*Cum*
	Extra slope	*2*	*7.147*	*0.6*	*1.2*	*10.29*	*Cum*
		2	*7.147*	*0.6*	*1.2*	*10.29*	*Cum*
	TOTAL					**36.99**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR RASALPUR-I MINOR								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.000 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	63.82	Cum	**195.20**	12458.34			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.40	Cum	**6381.70**	72751.29	3.69	5.13	10.26
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	63.52	Cum	**6914.20**	439160.46	26.20	27.31	54.62
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.82	Cum	**8151.40**	6656.47	0.46	0.32	0.65
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.50	MT	**73574.90**	110053.00			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	209.08	Sqm	**578.60**	120976.58			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.48	Sqm	**680.10**	5084.43			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.42	Cum	**694.61**	291.74			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.42	Cum	**1237.00**	519.54			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.42	Cum	**1377.70**	578.63			0.42
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.42	Cum	**516.50**	216.93			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.85	Sqm	**63.20**	749.05			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.32	Cum	**149.30**	1989.17			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	32.76	Cum	**1075.00**	35217.25			
	Coarse Aggregates (60 Km lead)	65.95	Cum	**1398.00**	92196.19			
	Cement (30 km lead)	30.36	MT	**742.00**	22524.78			
	Boulder (60 Km lead)	0.42	Cum	**1159.00**	486.78			
	Brick (15 km lead)	448.00	No.	**3.18**	1424.64			
	Steel (30 Km lead)	1.50	MT	**742.00**	1109.88			
	TOTAL (In Rs.)				**935622.55**			
	TOTAL (In Rs.)				**935622.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	32.76	Cum	**584.64**	19152.94	1915.29		
	Coarse Aggregate	65.95	Cum	**944.26**	62272.66	6227.27		
	Boulders	0.42	Cum	**694.61**	291.74	29.17		
	Total					8171.73		
	For 1 nos. fall, Total Seigniorage charges					**8171.73**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.925 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	109.89	Cum	**195.20**	21449.89			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.60	Cum	**6381.70**	67628.76	3.43	4.77	9.54
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	56.87	Cum	**6914.20**	393180.86	23.46	24.45	48.90
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.77	Cum	**8151.40**	6237.33	0.43	0.30	0.60
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.34	MT	**73574.90**	98530.58			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	195.91	Sqm	**578.60**	113352.46			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4884.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			0.26
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.78	Sqm	**63.20**	744.73			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.43	Cum	**149.30**	4692.31			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.52	Cum	**1075.00**	31733.42			
	Coarse Aggregates (60 Km lead)	59.31	Cum	**1398.00**	82914.08			
	Cement (30 km lead)	27.32	MT	**742.00**	20274.77			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	1.34	MT	**742.00**	993.68			
	TOTAL (In Rs.)				**860470.63**			
	TOTAL (In Rs.)				**860470.63**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.52	Cum	**584.64**	17258.26	1725.83		
	Coarse Aggregate	59.31	Cum	**944.26**	56003.18	5600.32		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					7344.38		
	For 1 nos. fall, Total Seigniorage charges					**7344.38**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 1.370 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	65.54	Cum	**195.20**	12793.15			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.69	Cum	**6381.70**	55476.76	2.82	3.91	7.82
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	36.43	Cum	**6914.20**	251872.96	15.03	15.66	31.33
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.61	Cum	**8151.40**	4938.85	0.34	0.24	0.48
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.86	MT	**73574.90**	63119.01			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	142.26	Sqm	**578.60**	82310.08			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4884.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			0.26
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.04	Sqm	**63.20**	571.19			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	21.13	Cum	**149.30**	3155.11			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	19.81	Cum	**1075.00**	21298.32			
	Coarse Aggregates (60 Km lead)	39.89	Cum	**1398.00**	55770.88			
	Cement (30 km lead)	18.19	MT	**742.00**	13494.61			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	0.86	MT	**742.00**	636.55			
	TOTAL (In Rs.)				**584175.25**			
	TOTAL (In Rs.)				**584175.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.81	Cum	**584.64**	11583.11	1158.31		
	Coarse Aggregate	39.89	Cum	**944.26**	37669.68	3766.97		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					4943.51		
	For 1 nos. fall, Total Seigniorage charges					**4943.51**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.600 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	73.85	Cum	**195.20**	14414.64			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.07	Cum	**6381.70**	57858.70	2.94	4.08	8.16
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.99	Cum	**6914.20**	269564.41	16.08	16.76	33.53
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.60	Cum	**8151.40**	4912.73	0.34	0.24	0.48
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.92	MT	**73574.90**	67552.47			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	149.35	Sqm	**578.60**	86416.10			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4884.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			0.26
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.58	Sqm	**63.20**	605.37			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.43	Cum	**149.30**	3498.39			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	21.08	Cum	**1075.00**	22660.29			
	Coarse Aggregates (60 Km lead)	42.43	Cum	**1398.00**	59313.25			
	Cement (30 km lead)	19.36	MT	**742.00**	14366.15			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	0.92	MT	**742.00**	681.26			
	TOTAL (In Rs.)				**620581.55**			
	TOTAL (In Rs.)				**620581.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	21.08	Cum	**584.64**	12323.83	1232.38		
	Coarse Aggregate	42.43	Cum	**944.26**	40062.32	4006.23		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					5256.85		
	For 1 nos. fall, Total Seigniorage charges					**5256.85**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR RASALPUR-I MINOR							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.37*	*2.096*	*1.097*	*6.291*	*Cum*
	Section 2-2	*2*	*3.50*	*1.182*	*1.097*	*9.077*	*Cum*
	Section 3-3	*2*	*3.95*	*1.062*	*0.897*	*7.526*	*Cum*
	Section 5-5	*2*	*2.39*	*2.246*	*1.097*	*11.785*	*Cum*
	Section 6-6	*2*	*1.02*	*1.062*	*0.897*	*1.940*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.400*	*0.650*	*0.523*	*Cum*
	U/S Floor	*1*	*2.75*	*1.400*	*2.574*	*9.910*	*Cum*
	D/S Floor	*1*	*3.50*	*1.400*	*1.050*	*5.145*	*Cum*
		1	*1.50*	*1.400*	*0.850*	*1.785*	*Cum*
		1	*2.75*	*1.400*	*0.700*	*2.695*	*Cum*
	D/S Key Floor	*1*	*0.81*	*1.400*	*1.600*	*1.820*	*Cum*
	Toe Wall D/S Portion	*1*	*5.56*	*0.750*	*0.900*	*3.753*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						63.82	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.400*	*0.150*	*0.11*	*Cum*
		1	*0.56*	*1.400*	*0.150*	*0.12*	*Cum*
		1	*5.67*	*1.400*	*0.150*	*1.19*	*Cum*
		1	*0.43*	*1.400*	*0.150*	*0.09*	*Cum*
		1	*1.05*	*1.400*	*0.150*	*0.22*	*Cum*
		1	*0.07*	*1.400*	*0.150*	*0.01*	*Cum*
		1	*1.37*	*1.400*	*0.150*	*0.29*	*Cum*
		1	*1.62*	*1.400*	*0.150*	*0.34*	*Cum*
		1	*0.54*	*1.400*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.37*	*2.096*	*0.150*	*0.86*	*Cum*
	Section 2-2	*2*	*3.50*	*1.182*	*0.150*	*1.24*	*Cum*
	Section 3-3	*2*	*3.95*	*1.062*	*0.150*	*1.26*	*Cum*
	Section 5-5	*2*	*2.39*	*2.246*	*0.150*	*1.61*	*Cum*
	Section 6-6	*2*	*1.02*	*1.062*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.56*	*0.750*	*0.300*	*1.25*	*Cum*
	Toe Wall D/S Portion	*1*	*5.26*	*0.450*	*0.600*	*1.42*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**11.40**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.14*	*1.123*	*2.244*	*5.76*	*Cum*
		2	*1.14*	*1.946*	*0.700*	*3.11*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.666*	*0.720*	*3.36*	*Cum*
		2	*3.50*	*1.032*	*0.700*	*5.06*	*Cum*
	Section 3-3	*2*	*3.64*	*0.450*	*0.450*	*1.48*	*Cum*
		2	*3.64*	*0.606*	*0.520*	*2.30*	*Cum*
		2	*3.64*	*0.912*	*0.600*	*3.99*	*Cum*
	Section 5-5	*2*	*2.35*	*0.450*	*0.450*	*0.95*	*Cum*
		2	*2.35*	*1.123*	*2.244*	*11.83*	*Cum*
		2	*2.35*	*1.946*	*0.700*	*6.40*	*Cum*
	Section 6-6	*2*	*1.47*	*0.450*	*0.450*	*0.60*	*Cum*
		2	*1.47*	*0.606*	*0.520*	*0.93*	*Cum*
		2	*1.47*	*0.912*	*0.550*	*1.48*	*Cum*
	Floor	*1*	*0.58*	*1.400*	*0.500*	*0.40*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*6.25*	*1.400*	*0.700*	*6.13*	*Cum*
		1	*0.30*	*1.400*	*0.300*	*0.13*	*Cum*
		1	*0.20*	*1.400*	*0.500*	*0.14*	*Cum*
		1	*1.30*	*1.400*	*0.600*	*1.09*	*Cum*
		1	*0.05*	*1.400*	*0.575*	*0.04*	*Cum*
		1	*2.70*	*1.400*	*0.550*	*2.08*	*Cum*
		1	*0.81*	*1.400*	*1.450*	*1.65*	*Cum*
	Crest	*1*	*1.10*	*1.400*	*1.787*	*2.75*	*Cum*
	TOTAL					**63.52**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.400*	*0.200*	*0.22*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.17*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.17*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.82**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**63.52**	**0.00**	**0.191**	**7850.0**	**1495.80**	**Kg**
	Total Weight in Metric Tonne					**1.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.14*		*0.450*	*2.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.14*		*2.244*	*10.26*	*Sqm*
		4		*1.123*	*2.244*	*10.08*	*Sqm*
		4	*1.14*		*0.700*	*3.20*	*Sqm*
		4		*1.946*	*0.700*	*5.45*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.720*	*10.08*	*Sqm*
		4		*0.666*	*0.720*	*1.92*	*Sqm*
		4	*3.50*		*0.700*	*9.80*	*Sqm*
		4		*1.032*	*0.700*	*2.89*	*Sqm*
	Section 3-3	*4*	*3.64*		*0.450*	*6.56*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.64*		*0.520*	*7.58*	*Sqm*
		4		*0.606*	*0.520*	*1.26*	*Sqm*
		4	*3.64*		*0.600*	*8.75*	*Sqm*
		4		*0.912*	*0.600*	*2.19*	*Sqm*
	Section 5-5	*4*	*2.35*		*0.450*	*4.23*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.35*		*2.244*	*21.08*	*Sqm*
		4		*1.123*	*2.244*	*10.08*	*Sqm*
		4	*2.35*		*0.700*	*6.57*	*Sqm*
		4		*1.946*	*0.700*	*5.45*	*Sqm*
	Section 6-6	*4*	*1.47*		*0.450*	*2.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.47*		*0.520*	*3.07*	*Sqm*
		4		*0.606*	*0.520*	*1.26*	*Sqm*
		4	*1.47*		*0.550*	*3.24*	*Sqm*
		4		*0.912*	*0.550*	*2.01*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.400*	*0.500*	*1.40*	*Sqm*
		2	*6.25*		*0.700*	*8.75*	*Sqm*
		2		*1.400*	*0.700*	*1.96*	*Sqm*
		2	*0.30*		*0.300*	*0.18*	*Sqm*
		2		*1.400*	*0.300*	*0.84*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*1.400*	*0.500*	*1.40*	*Sqm*
		2	*1.30*		*0.600*	*1.56*	*Sqm*
		2		*1.400*	*0.600*	*1.68*	*Sqm*
		2	*0.050*		*0.575*	*0.06*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.400*	*0.575*	*1.61*	*Sqm*
		2	*2.700*		*0.550*	*2.97*	*Sqm*
		2		*1.400*	*0.550*	*1.54*	*Sqm*
		2	*0.81*		*1.450*	*2.36*	*Sqm*
		2		*1.400*	*1.450*	*4.06*	*Sqm*
	Crest	*2*	*1.10*		*1.787*	*3.92*	*Sqm*
		2		*1.400*	*1.787*	*5.00*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.56*		*0.300*	*3.34*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.26*		*0.600*	*6.31*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**209.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.136*		*7.48*	*Sqm*
	TOTAL					**7.48**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.800*	*0.300*	**0.42**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.800*	*0.150*	**0.42**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.17*	*0.450*		*5.93*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.17*	*0.450*		*5.93*	*Sqm*
	TOTAL					**11.85**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		7.337		7.34	**Cum**
	Abutment						
	Section 1-1	2	*1.37*	*0.195*		*0.534*	*Cum*
	Section 2-2	2	*3.50*	*0.195*		*1.365*	*Cum*
	Section 3-3	2	*3.95*	*0.118*		*0.932*	*Cum*
	Section 5-5	2	*2.39*	*0.195*		*0.933*	*Cum*
	Section 6-6	2	*1.02*	*0.118*		*0.240*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.56*	*0.150*	*0.600*	*1.668*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**13.32**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.925 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.37*	*2.084*	*2.585*	*14.734*	*Cum*
	Section 2-2	*2*	*3.50*	*1.170*	*2.585*	*21.159*	*Cum*
	Section 3-3	*2*	*3.95*	*1.050*	*2.385*	*19.794*	*Cum*
	Section 5-5	*2*	*2.33*	*2.234*	*2.585*	*26.917*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*2.385*	*5.009*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.100*	*0.650*	*0.411*	*Cum*
	U/S Floor	*1*	*2.75*	*1.100*	*2.574*	*7.786*	*Cum*
	D/S Floor	*1*	*3.50*	*1.100*	*1.050*	*4.043*	*Cum*
		1	*1.50*	*1.100*	*0.850*	*1.403*	*Cum*
		1	*2.75*	*1.100*	*0.700*	*2.118*	*Cum*
	D/S Key Floor	*1*	*0.81*	*1.100*	*1.600*	*1.430*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						109.89	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.56*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*5.63*	*1.100*	*0.150*	*0.93*	*Cum*
		1	*0.43*	*1.100*	*0.150*	*0.07*	*Cum*
		1	*1.09*	*1.100*	*0.150*	*0.18*	*Cum*
		1	*0.07*	*1.100*	*0.150*	*0.01*	*Cum*
		1	*1.37*	*1.100*	*0.150*	*0.23*	*Cum*
		1	*1.62*	*1.100*	*0.150*	*0.27*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.37*	*2.084*	*0.150*	*0.85*	*Cum*
	Section 2-2	*2*	*3.50*	*1.170*	*0.150*	*1.23*	*Cum*
	Section 3-3	*2*	*3.95*	*1.050*	*0.150*	*1.24*	*Cum*
	Section 5-5	*2*	*2.33*	*2.234*	*0.150*	*1.56*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**10.60**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.14*	*1.117*	*2.224*	*5.68*	*Cum*
		2	*1.14*	*1.934*	*0.600*	*2.65*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.660*	*0.700*	*3.23*	*Cum*
		2	*3.50*	*1.020*	*0.500*	*3.57*	*Cum*
	Section 3-3	*2*	*3.65*	*0.450*	*0.450*	*1.48*	*Cum*
		2	*3.65*	*0.600*	*0.500*	*2.19*	*Cum*
		2	*3.65*	*0.900*	*0.600*	*3.94*	*Cum*
	Section 5-5	*2*	*2.35*	*0.450*	*0.450*	*0.95*	*Cum*
		2	*2.35*	*1.117*	*2.224*	*11.67*	*Cum*
		2	*2.35*	*1.934*	*0.600*	*5.45*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*0.600*	*0.500*	*0.87*	*Cum*
		2	*1.45*	*0.900*	*0.550*	*1.44*	*Cum*
	Floor	*1*	*0.58*	*1.100*	*0.500*	*0.32*	*Cum*
		1	*6.25*	*1.100*	*0.700*	*4.81*	*Cum*
		1	*0.26*	*1.100*	*0.300*	*0.08*	*Cum*
		1	*0.20*	*1.100*	*0.500*	*0.11*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.30*	*1.100*	*0.600*	*0.86*	*Cum*
		1	*0.05*	*1.100*	*0.575*	*0.03*	*Cum*
		1	*2.70*	*1.100*	*0.550*	*1.63*	*Cum*
		1	*0.81*	*1.100*	*1.450*	*1.30*	*Cum*
	Crest	*1*	*1.10*	*1.100*	*1.778*	*2.14*	*Cum*
	TOTAL					**56.87**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.100*	*0.200*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.09*	*0.450*	*0.050*	*0.29*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.09*	*0.450*	*0.050*	*0.29*	*Cum*
	TOTAL					**0.77**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**56.87**	**0.00**	**0.171**	**7850.0**	**1339.19**	**Kg**
	Total Weight in Metric Tonne					**1.34**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.14*		*0.450*	*2.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.14*		*2.224*	*10.16*	*Sqm*
		4		*1.117*	*2.224*	*9.94*	*Sqm*
		4	*1.14*		*0.600*	*2.74*	*Sqm*
		4		*1.934*	*0.600*	*4.64*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.700*	*9.79*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.50*		*0.500*	*7.00*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 3-3	*4*	*3.65*		*0.450*	*6.57*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.65*		*0.500*	*7.30*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*3.65*		*0.600*	*8.76*	*Sqm*
		4		*0.900*	*0.600*	*2.16*	*Sqm*
	Section 5-5	*4*	*2.35*		*0.450*	*4.23*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.35*		*2.224*	*20.89*	*Sqm*
		4		*1.117*	*2.224*	*9.94*	*Sqm*
		4	*2.35*		*0.600*	*5.64*	*Sqm*
		4		*1.934*	*0.600*	*4.64*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.45*		*0.550*	*3.19*	*Sqm*
		4		*0.900*	*0.550*	*1.98*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*6.25*		*0.700*	*8.75*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*1.100*	*0.300*	*0.66*	*Sqm*
		2	*0.20*		*0.500*	*0.20*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*1.30*		*0.600*	*1.56*	*Sqm*
		2		*1.100*	*0.600*	*1.32*	*Sqm*
		2	*0.050*		*0.575*	*0.06*	*Sqm*
		2		*1.100*	*0.575*	*1.27*	*Sqm*
		2	*2.700*		*0.550*	*2.97*	*Sqm*
		2		*1.100*	*0.550*	*1.21*	*Sqm*
		2	*0.81*		*1.450*	*2.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.100*	*1.450*	*3.19*	*Sqm*
	Crest	*2*	*1.10*		*1.778*	*3.90*	*Sqm*
		2		*1.100*	*1.778*	*3.91*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**195.91**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.052*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.09*	*0.450*		*5.89*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.09*	*0.450*		*5.89*	*Sqm*
	TOTAL					**11.78**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		5.680		5.68	**Cum**
	Abutment						
	Section 1-1	2	*1.37*	*1.665*		*4.555*	*Cum*
	Section 2-2	2	*3.50*	*0.792*		*5.541*	*Cum*
	Section 3-3	2	*3.95*	*0.608*		*4.802*	*Cum*
	Section 5-5	2	*2.33*	*1.665*		*7.762*	*Cum*
	Section 6-6	2	*1.00*	*0.608*		*1.215*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**31.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 1.370 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*1.719*	*1.987*	*7.798*	*Cum*
	Section 2-2	*2*	*3.00*	*1.170*	*1.987*	*13.949*	*Cum*
	Section 3-3	*2*	*1.70*	*1.050*	*1.787*	*6.380*	*Cum*
	Section 5-5	*2*	*2.41*	*1.869*	*1.987*	*17.870*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*1.787*	*3.753*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.100*	*0.850*	*0.584*	*Cum*
	U/S Floor	*1*	*2.75*	*1.100*	*1.765*	*5.339*	*Cum*
	D/S Floor	*1*	*2.75*	*1.100*	*0.850*	*2.571*	*Cum*
		1	*2.00*	*1.100*	*0.650*	*1.430*	*Cum*
	D/S Key Floor	*1*	*0.68*	*1.100*	*1.050*	*0.780*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						65.54	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.78*	*1.100*	*0.150*	*0.13*	*Cum*
		1	*4.78*	*1.100*	*0.150*	*0.79*	*Cum*
		1	*0.28*	*1.100*	*0.150*	*0.05*	*Cum*
		1	*0.64*	*1.100*	*0.150*	*0.11*	*Cum*
		1	*1.01*	*1.100*	*0.150*	*0.17*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.14*	*1.719*	*0.150*	*0.59*	*Cum*
	Section 2-2	*2*	*3.00*	*1.170*	*0.150*	*1.05*	*Cum*
	Section 3-3	*2*	*1.70*	*1.050*	*0.150*	*0.54*	*Cum*
	Section 5-5	*2*	*2.41*	*1.869*	*0.150*	*1.35*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**8.69**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.14*	*0.450*	*0.450*	*0.46*	*Cum*
		2	*1.14*	*0.935*	*1.615*	*3.45*	*Cum*
		2	*1.14*	*1.569*	*0.500*	*1.79*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.660*	*0.700*	*2.77*	*Cum*
		2	*3.00*	*1.020*	*0.500*	*3.06*	*Cum*
	Section 3-3	*2*	*1.40*	*0.450*	*0.450*	*0.57*	*Cum*
		2	*1.40*	*0.600*	*0.500*	*0.84*	*Cum*
		2	*1.40*	*0.900*	*0.500*	*1.26*	*Cum*
	Section 5-5	*2*	*2.36*	*0.450*	*0.450*	*0.96*	*Cum*
		2	*2.36*	*0.935*	*1.615*	*7.13*	*Cum*
		2	*2.36*	*1.569*	*0.500*	*3.71*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*0.600*	*0.500*	*0.87*	*Cum*
		2	*1.45*	*0.900*	*0.500*	*1.31*	*Cum*
	Floor	*1*	*0.63*	*1.100*	*0.700*	*0.48*	*Cum*
		1	*5.50*	*1.100*	*0.500*	*3.03*	*Cum*
		1	*0.21*	*1.100*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*1.100*	*0.400*	*0.09*	*Cum*
		1	*1.80*	*1.100*	*0.500*	*0.99*	*Cum*
		1	*0.68*	*1.100*	*0.900*	*0.67*	*Cum*
	Crest	*1*	*0.90*	*1.100*	*1.175*	*1.16*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**36.43**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.100*	*0.200*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.04*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.04*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.61**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**36.43**	**0.00**	**0.109**	**7850.0**	**857.89**	**Kg**
	Total Weight in Metric Tonne					**0.86**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.14*		*0.450*	*2.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.14*		*1.615*	*7.38*	*Sqm*
		4		*0.935*	*1.615*	*6.04*	*Sqm*
		4	*1.14*		*0.500*	*2.29*	*Sqm*
		4		*1.569*	*0.500*	*3.14*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.700*	*8.40*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 3-3	*4*	*1.40*		*0.450*	*2.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.40*		*0.500*	*2.80*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.40*		*0.500*	*2.80*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 5-5	*4*	*2.36*		*0.450*	*4.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.36*		*1.615*	*15.26*	*Sqm*
		4		*0.935*	*1.615*	*6.04*	*Sqm*
		4	*2.36*		*0.500*	*4.72*	*Sqm*
		4		*1.569*	*0.500*	*3.14*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.21*		*0.200*	*0.08*	*Sqm*
		2		*1.100*	*0.200*	*0.44*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.100*	*0.400*	*0.88*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.100*	*0.900*	*1.98*	*Sqm*
	Crest	*2*	*0.90*		*1.175*	*2.11*	*Sqm*
		2		*1.100*	*1.175*	*2.59*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**142.26**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.052*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.04*	*0.450*		*4.52*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.04*	*0.450*		*4.52*	*Sqm*
	TOTAL					**9.04**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.043		4.04	**Cum**
	Abutment						
	Section 1-1	2	*1.14*		*1.012*	*2.311*	*Cum*
	Section 2-2	2	*3.00*		*0.792*	*4.752*	*Cum*
	Section 3-3	2	*1.70*		*0.608*	*2.066*	*Cum*
	Section 5-5	2	*2.41*		*1.012*	*4.871*	*Cum*
	Section 6-6	2	*1.00*		*0.608*	*1.215*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**21.13**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.600 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*1.810*	*2.139*	*9.358*	*Cum*
	Section 2-2	*2*	*3.00*	*1.170*	*2.139*	*15.016*	*Cum*
	Section 3-3	*2*	*2.20*	*1.050*	*1.939*	*8.966*	*Cum*
	Section 5-5	*2*	*2.39*	*1.960*	*2.139*	*20.015*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*1.939*	*4.072*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.100*	*0.850*	*0.584*	*Cum*
	U/S Floor	*1*	*2.50*	*1.100*	*1.917*	*5.272*	*Cum*
	D/S Floor	*1*	*3.00*	*1.100*	*0.850*	*2.805*	*Cum*
		1	*2.50*	*1.100*	*0.650*	*1.788*	*Cum*
	D/S Key Floor	*1*	*0.70*	*1.100*	*1.150*	*0.886*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						73.85	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.78*	*1.100*	*0.150*	*0.13*	*Cum*
		1	*4.78*	*1.100*	*0.150*	*0.79*	*Cum*
		1	*0.28*	*1.100*	*0.150*	*0.05*	*Cum*
		1	*1.09*	*1.100*	*0.150*	*0.18*	*Cum*
		1	*1.12*	*1.100*	*0.150*	*0.18*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.21*	*1.810*	*0.150*	*0.66*	*Cum*
	Section 2-2	*2*	*3.00*	*1.170*	*0.150*	*1.05*	*Cum*
	Section 3-3	*2*	*2.20*	*1.050*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*2.39*	*1.960*	*0.150*	*1.40*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**9.07**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.00*	*0.450*	*0.450*	*0.40*	*Cum*
		2	*1.00*	*0.980*	*1.767*	*3.45*	*Cum*
		2	*1.00*	*1.660*	*0.500*	*1.66*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.660*	*0.700*	*2.77*	*Cum*
		2	*3.00*	*1.020*	*0.500*	*3.06*	*Cum*
	Section 3-3	*2*	*1.90*	*0.450*	*0.450*	*0.77*	*Cum*
		2	*1.90*	*0.600*	*0.500*	*1.14*	*Cum*
		2	*1.90*	*0.900*	*0.500*	*1.71*	*Cum*
	Section 5-5	*2*	*2.34*	*0.450*	*0.450*	*0.95*	*Cum*
		2	*2.34*	*0.980*	*1.767*	*8.12*	*Cum*
		2	*2.34*	*1.660*	*0.500*	*3.89*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.45*	*0.600*	*0.500*	*0.87*	*Cum*
		2	*1.45*	*0.900*	*0.500*	*1.31*	*Cum*
	Floor	*1*	*0.63*	*1.100*	*0.700*	*0.48*	*Cum*
		1	*5.50*	*1.100*	*0.500*	*3.03*	*Cum*
		1	*0.21*	*1.100*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*1.100*	*0.400*	*0.09*	*Cum*
		1	*2.30*	*1.100*	*0.500*	*1.27*	*Cum*
		1	*0.70*	*1.100*	*1.000*	*0.77*	*Cum*
	Crest	*1*	*0.97*	*1.100*	*1.323*	*1.41*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**38.99**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.100*	*0.150*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.64*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.64*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.60**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**38.99**	**0.00**	**0.117**	**7850.0**	**918.15**	**Kg**
	Total Weight in Metric Tonne					**0.92**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.00*		*0.450*	*1.79*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.00*		*1.767*	*7.05*	*Sqm*
		4		*0.980*	*1.767*	*6.93*	*Sqm*
		4	*1.00*		*0.500*	*1.99*	*Sqm*
		4		*1.660*	*0.500*	*3.32*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.700*	*8.40*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.020*	*0.500*	*2.04*	*Sqm*
	Section 3-3	*4*	*1.90*		*0.450*	*3.42*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.90*		*0.500*	*3.80*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.90*		*0.500*	*3.80*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 5-5	*4*	*2.34*		*0.450*	*4.22*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.34*		*1.767*	*16.56*	*Sqm*
		4		*0.980*	*1.767*	*6.93*	*Sqm*
		4	*2.34*		*0.500*	*4.69*	*Sqm*
		4		*1.660*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.21*		*0.200*	*0.08*	*Sqm*
		2		*1.100*	*0.200*	*0.44*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.100*	*0.400*	*0.88*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*1.100*	*1.000*	*2.20*	*Sqm*
	Crest	*2*	*0.97*		*1.323*	*2.57*	*Sqm*
		2		*1.100*	*1.323*	*2.91*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**149.35**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.052*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.64*	*0.450*		*4.79*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.64*	*0.450*		*4.79*	*Sqm*
	TOTAL					**9.58**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.247		4.25	**Cum**
	Abutment						
	Section 1-1	2	*1.21*		*1.212*	*2.929*	*Cum*
	Section 2-2	2	*3.00*		*0.792*	*4.752*	*Cum*
	Section 3-3	2	*2.20*		*0.600*	*2.642*	*Cum*
	Section 5-5	2	*2.39*		*1.212*	*5.786*	*Cum*
	Section 6-6	2	*1.00*		*0.600*	*1.200*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**23.43**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT AT KM 4.300 RASALPUR - I MR.									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	52.08	Cum	**156.50**	8150.07			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.32	Cum	**6381.70**	78602.36	3.99	5.54	11.09
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.672	Cum	**6914.20**	94530.22	5.64	5.88	11.76
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	97.820	Sqm	**578.60**	56598.44			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.27	MT	**73574.90**	19740.95			
9	M-151 RCD	Supplying 600 mm NP3 Pipe	7.50	Rm	**2532.61**	18994.58			
10	5.6.2.2	Labour Charges for Laying of 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**711.27**	5334.49			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
12	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.16	Cum	**149.30**	1666.26			
13	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.19	Cum	**5021.30**	16027.99	0.37	1.02	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
14	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	10.20	Sqm	**340.20**	3470.04	0.53	0.15	
15	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.20	Sqm	**63.20**	265.44	0.006		
16		**Carriage of materials**							
		Coarse Sand (60 Km lead)	12.59	Cum	**1075.00**	13536.24			
		Coarse Aggregates (60 Km lead)	22.84	Cum	**1398.00**	31934.49			
		Cement (30 km lead)	10.53	MT	**742.00**	7815.56			
		Steel (30 km lead)	0.27	MT	**742.00**	199.09			
		Boulder (60 km lead)	0.00	Cum	**1159.00**	0.00			
		Hume Pipe (30 Km Lead)	7.50	Rm	**919.00**	6892.50			
TOTAL (In Rs.)						**366396.04**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	12.59	Cum	**584.64**	7361.70	736.17		
		Coarse Aggregate	22.84	Cum	**944.26**	21569.72	2156.97		
		Boulder (60 km lead)	0.00	Cum	**694.61**	0.00	0.00		
		Total					**2893.14**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT AT KM 4.610 RASALPUR - I MR.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	52.08	Cum	**156.50**	8150.07			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.40	Cum	**6381.70**	79115.69	4.02	5.58	11.16
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	14.91	Cum	**6914.20**	103082.35	6.15	6.41	12.82
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	103.24	Sqm	**578.60**	59736.93			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.29	MT	**73574.90**	21526.91			
9	M-151 RCD	Supplying 600 mm NP3 Pipe	7.50	Rm	**2532.61**	18994.58			
10	5.6.2.2	Labour Charges for Laying of 600 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**711.27**	5334.49			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
12	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.16	Cum	**149.30**	1666.26			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	3.19	Cum	**5021.30**	16027.99	0.37	1.02	
14	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	10.200	Sqm	**340.20**	3470.04	0.53	0.15	
15	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.200	Sqm	**63.20**	265.44	0.006		
16		**Carriage of materials**							
		Coarse Sand (60 Km lead)	13.160	Cum	**1075.00**	14146.91			
		Coarse Aggregates (60 Km lead)	23.979	Cum	**1398.00**	33522.79			
		Cement (30 km lead)	11.069	MT	**742.00**	8213.48			
		Steel (30 km lead)	0.293	MT	**742.00**	217.10			
		Boulder (60 km lead)	0.000	Cum	**1159.00**	0.00			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
		TOTAL (In Rs.)				**389893.34**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	13.16	Cum	**584.64**	7693.81	769.38		
		Coarse Aggregate	23.98	Cum	**944.26**	22642.51	2264.25		
		Boulder	0.00	Cum	**694.61**	0.00	0.00		
		Total					**3033.63**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 4.300 RASALPUR - I MR.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.63*	*0.85*	*1.20*	*0.64*	*Cum*
	D/S Toe Wall	*1*	*0.63*	*0.85*	*1.20*	*0.64*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.10*	*1.00*	*1.20*	*7.45*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.10*	*1.05*	*2.10*	*13.69*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.10*	*1.00*	*1.20*	*9.85*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.10*	*1.05*	*2.10*	*18.10*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*0.63*	*0.45*	*0.72*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*0.63*	*0.45*	*1.00*	*Cum*
	TOTAL					**52.08**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.63*	*0.85*	*0.30*	*0.16*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.63*	*0.45*	*1.09*	*0.31*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.63*	*0.85*	*0.30*	*0.16*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.63*	*0.45*	*1.09*	*0.31*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*0.63*	*0.45*	*0.72*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*0.63*	*0.45*	*1.00*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.10*	*1.00*	*0.30*	*1.86*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.10*	*1.00*	*0.30*	*2.46*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.29*	*0.41*	*3.92*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.49*	*0.20*	*1.42*	*Cum*
	TOTAL					**12.32**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section A-A	*2*	*3.10*	*0.60*	*1.09*	*4.07*	*Cum*
		2	*3.10*	*0.45*	*0.30*	*0.84*	*Cum*
		2	*3.10*	*0.30*	*0.50*	*0.93*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section B-B	*2*	*4.10*	*0.60*	*1.09*	*5.38*	*Cum*
		2	*4.10*	*0.45*	*0.30*	*1.11*	*Cum*
		2	*4.10*	*0.30*	*0.50*	*1.23*	*Cum*
	Collar Joint	*2*	*1.19*	*0.30*	*1.20*	*0.86*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Deduct Hume Pipe Area	*2*		*0.37*		*-0.75*	*Cum*
	TOTAL					**13.67**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.63*		*1.09*	*1.37*	*Sqm*
		2		*0.45*	*1.09*	*0.98*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.63*		*1.09*	*1.37*	*Sqm*
		2		*0.45*	*1.09*	*0.98*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.63*	*0.45*	*0.56*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*0.63*	*0.45*	*0.56*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*3.10*		*0.30*	*3.72*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*4.10*		*0.30*	*4.92*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section A-A	*4*	*3.10*		*1.09*	*13.57*	*Sqm*
		4		*0.60*	*1.09*	*2.62*	*Sqm*
		4	*3.10*		*0.30*	*3.72*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*3.10*		*0.50*	*6.21*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section B-B	*4*	*4.10*		*1.09*	*17.94*	*Sqm*
		4		*0.60*	*1.09*	*2.62*	*Sqm*
		4	*4.10*		*0.30*	*4.92*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*4.10*		*0.50*	*8.21*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.41*	*6.08*	*Sqm*
		2		*1.29*	*0.41*	*1.04*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.20*	*5.85*	*Sqm*
		4		*0.49*	*0.20*	*0.38*	*Sqm*
	TOTAL					**97.82**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*13.67*	*0.25%*	*0.03*	*7850*	*268.31*	*Kg*
	TOTAL Weight of steel (in kg)					268.31	Kg
	TOTAL Weight of Steel (in Tonne)					**0.27**	**MT**
7	Providing 600 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.10*	*0.18*		*1.12*	*Cum*
	D/S Transitions Walls	*2*	*4.10*	*0.18*		*1.48*	*Cum*
	Above Hume Pipe	*1*	*8.57*			*8.57*	*Cum*
	TOTAL					**11.16**	**Cum**
10	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	3	2.66	0.2	*3.19*	*Cum*
	TOTAL					**3.19**	**Cum**
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**	**3**		**1.7**	**10.20**	*Sqm*
	TOTAL					**10.20**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**	**3**		**0.7**	**4.20**	*Sqm*
	TOTAL					**4.20**	***Sqm***

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 4.610 RASALPUR - I MR.						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.63*	*0.85*	*1.20*	*0.64*	*Cum*
	D/S Toe Wall	*1*	*0.63*	*0.85*	*1.20*	*0.64*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.10*	*1.00*	*1.20*	*7.45*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.10*	*1.05*	*2.10*	*13.69*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.10*	*1.00*	*1.20*	*9.85*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.10*	*1.05*	*2.10*	*18.10*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*0.63*	*0.45*	*0.72*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*0.63*	*0.45*	*1.00*	*Cum*
	TOTAL					**52.08**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.63*	*0.85*	*0.30*	*0.16*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.63*	*0.45*	*1.24*	*0.35*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.63*	*0.85*	*0.30*	*0.16*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.63*	*0.45*	*1.24*	*0.35*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*0.63*	*0.45*	*0.72*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*0.63*	*0.45*	*1.00*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*3.10*	*1.00*	*0.30*	*1.86*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*4.10*	*1.00*	*0.30*	*2.46*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.29*	*0.41*	*3.92*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.49*	*0.20*	*1.42*	*Cum*
	TOTAL					**12.40**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section A-A	*2*	*3.10*	*0.60*	*1.24*	*4.60*	*Cum*
		2	*3.10*	*0.45*	*0.30*	*0.84*	*Cum*
		2	*3.10*	*0.30*	*0.50*	*0.93*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section B-B	*2*	*4.10*	*0.60*	*1.24*	*6.09*	*Cum*
		2	*4.10*	*0.45*	*0.30*	*1.11*	*Cum*
		2	*4.10*	*0.30*	*0.50*	*1.23*	*Cum*
	Collar Joint	*2*	*1.19*	*0.30*	*1.20*	*0.86*	*Cum*
	Deduct Hume Pipe Area	*2*	*0.37*			*-0.75*	*Cum*
	TOTAL					**14.91**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.63*		*1.24*	*1.55*	*Sqm*
		2		*0.45*	*1.24*	*1.11*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.63*		*1.24*	*1.55*	*Sqm*
		2		*0.45*	*1.24*	*1.11*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.63*	*0.45*	*0.56*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*0.63*	*0.45*	*0.56*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*3.10*		*0.30*	*3.72*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*4.10*		*0.30*	*4.92*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section A-A	*4*	*3.10*		*1.24*	*15.35*	*Sqm*
		4		*0.60*	*1.24*	*2.97*	*Sqm*
		4	*3.10*		*0.30*	*3.72*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*3.10*		*0.50*	*6.21*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section B-B	*4*	*4.10*		*1.24*	*20.29*	*Sqm*
		4		*0.60*	*1.24*	*2.97*	*Sqm*
		4	*4.10*		*0.30*	*4.92*	*Sqm*
		4		*0.45*	*0.30*	*0.54*	*Sqm*
		4	*4.10*		*0.50*	*8.21*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.41*	*6.08*	*Sqm*
		2		*1.29*	*0.41*	*1.04*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.20*	*5.85*	*Sqm*
		4		*0.49*	*0.20*	*0.38*	*Sqm*
	TOTAL					**103.24**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*14.91*	*0.25%*	*0.04*	*7850*	*292.58*	*Kg*
	TOTAL Weight of steel (in kg)					292.58	Kg
	TOTAL Weight of Steel (in Tonne)					**0.29**	**MT**
7	Providing 600 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.10*	*0.18*		*1.12*	*Cum*
	D/S Transitions Walls	*2*	*4.10*	*0.18*		*1.48*	*Cum*
	Above Hume Pipe	*1*	*8.57*			*8.57*	*Cum*
	TOTAL					**11.16**	**Cum**
10	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	3	2.66	0.2	*3.19*	*Cum*
	TOTAL					**3.19**	**Cum**
11	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**	**3**		**1.7**	**10.20**	*Sqm*
	TOTAL					**10.20**	***Sqm***
12	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**	**3**		**0.7**	**4.20**	*Sqm*
	TOTAL					**4.20**	***Sqm***

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Rasalpur-I Minor	4125-5150	1025.000	0.526	539.150	Cum	**5021.30**	₹ 27,07,233.90	62.11	172.53
	Total				***539.15***			***₹ 27,07,233.90***	***62.11***	***172.53***
2	**Carriage of materials**									
	Coarse Sand (60 Km lead)				172.528	Cum	**1075.00**	₹ 1,85,467.60		
	Cement (30 km lead)				62.110	MT	**742.00**	₹ 46,085.68		
	Brick (15 km lead)				269575.00	No.	**3.18**	₹ 8,57,248.50		
	Carriage of materials Total (In Rs.)							**₹ 10,88,801.78**		
	SUB TOTAL (In Rs.)							**₹ 37,96,035.67**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	172.53	Cum		**584.64**	100866.77	10086.68			
	Total						**₹ 10,086.68**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF RASALPUR-I MINOR			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.524 M)	0.000	₹ 0.00
2	FALL (0.914 M)	0.310	₹ 43,999.22
3	FALL (1.524 M)	0.660	₹ 24,715.61
4	FALL (1.524 M)	0.925	₹ 19,455.65
5	FALL (0.915 M)	1.370	₹ 19,455.65
6	FALL (0.610 M)	1.825	₹ 0.00
7	CULVERT	1.875	₹ 46,620.11
8	CULVERT (NEW)	1.885	₹ 0.00
9	FALL (0.610 M)	1.990	₹ 1,869.64
10	CULVERT	2.165	₹ 0.00
11	CULVERT	2.370	₹ 0.00
12	FALL (1.067 M)	2.600	₹ 16,842.41
13	CULVERT	2.780	₹ 19,185.49
14	FALL (1.494 M)	3.025	₹ 6,950.30
15	CULVERT	3.335	₹ 63,662.19
16	FALL (0.792 M)	3.550	₹ 3,401.56
17	FALL (1.524 M)	4.040	₹ 52,718.88
18	CULVERT (NEW)	4.300	₹ 0.00
19	FALL (1.524 M)	4.500	₹ 2,666.31
20	CULVERT	4.610	₹ 18,943.61
21	FALL (1.524 M)	4.760	₹ 0.00
22	FALL (1.828 M)	4.995	₹ 0.00
23	FALL (0.808 M)	5.100	₹ 0.00
Total In Rs.			**₹ 3,40,486.61**
Total In Lakhs.			**₹ 3.40**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		3.000	₹ 15,63,055.65
Total In Rs.			**₹ 15,63,055.65**
Total In Lakhs.			**₹ 15.63**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF RASALPUR-I MINOR									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.0.310 Km)							
1	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	2.64	Cum	**156.50**	412.60			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.378	Cum	**2492.58**	942.20			
3	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	2.636	Sqm	**63.20**	166.62			
4	RCD M-151	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	5.00	Rm	**2532.61**	12663.05			
5	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.64	Cum	**6381.70**	16824.70	0.85	1.19	2.37
6	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.754	Cum	**6914.20**	5213.31	0.31	0.32	0.65
7	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	1.840	Sqm	**578.60**	1064.62			
8		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.511	Cum	**1075.00**	1623.89			
		Coarse Aggregates (60 Km lead)	3.021	Cum	**1398.00**	4223.64			
		Cement (30 km lead)	1.165	MT	**742.00**	864.59			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**43999.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.51	Cum	**584.64**	883.16	88.32		
		Coarse Aggregate	3.02	Cum	**944.26**	2852.80	285.28		
		Total					**373.60**		
		AOC FOR FALL (Ch.0.660 Km)							
1	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	4.54	Cum	**156.50**	710.14			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	1.435	Cum	**2492.58**	3575.91			
3	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	4.538	Sqm	**63.20**	286.78			
4	RCD M-151	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	5.00	Rm	**2532.61**	12663.05			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
5	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.29	Cum	**6381.70**	1857.46	0.09	0.13	0.26
6	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.291	Cum	**6914.20**	2012.45	0.12	0.13	0.25
7	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	4.250	Sqm	**578.60**	2459.28			
8		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.256	Cum	**1075.00**	275.34			
		Coarse Aggregates (60 Km lead)	0.512	Cum	**1398.00**	716.15			
		Cement (30 km lead)	0.214	MT	**742.00**	159.06			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**24715.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.26	Cum	**584.64**	149.75	14.97		
		Coarse Aggregate	0.51	Cum	**944.26**	483.71	48.37		
		Total					**63.35**		
		AOC FOR FALL (Ch.0.925 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.805	Cum	**2492.58**	19455.65			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**19455.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.1.370 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.805	Cum	**2492.58**	19455.65			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**19455.65**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.1.825 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT (Ch.1.875 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.59	Cum	**5021.30**	7968.80	0.18	0.51	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	14.421	Sqm	**340.20**	4906.02	33.226	4.615	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	14.421	Sqm	**63.20**	911.41	0.02		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.123	Cum	**1075.00**	5506.75			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	33.430	MT	**742.00**	24805.38			
		Brick (15 km lead)	793.00	No.	**3.18**	2521.74			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**46620.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.12	Cum	**584.64**	2994.85	299.49		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**299.49**		
		AOC FOR CULVERT FALL (Ch.1.990 Km)							
1	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	29.071	Sqm	**63.20**	1837.28	0.04		
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.044	MT	**742.00**	32.36			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**1869.64**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR CULVERT (Ch.2.165 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT (Ch.2.370 Km)							
1	**New Structure is proposed.**								
		AOC FOR FALL (Ch.2.600 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.757	Cum	**2492.58**	16842.41			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**16842.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed.							
		AOC FOR CULVERT (Ch.2.780 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	145.000	Sqm	**11.80**	1711.64			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.80	Cum	**6381.70**	11487.06	0.58	0.81	1.62
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	4.180	Sqm	**578.60**	2418.55			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.810	Cum	**1075.00**	870.75			
		Coarse Aggregates (60 Km lead)	1.620	Cum	**1398.00**	2264.76			
		Cement (30 km lead)	0.583	MT	**742.00**	432.73			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**19185.49**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.81	Cum	**584.64**	473.56	47.36		
		Coarse Aggregate	1.62	Cum	**944.26**	1529.70	152.97		
		Total					**200.33**		
		AOC FOR FALL (Ch.3.025 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.450	Cum	**6914.20**	3111.39	0.19	0.19	0.39
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.450	Sqm	**578.60**	1417.57			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.194	Cum	**1075.00**	208.01			
		Coarse Aggregates (60 Km lead)	0.387	Cum	**1398.00**	541.03			
		Cement (30 km lead)	0.186	MT	**742.00**	137.73			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**6950.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.19	Cum	**584.64**	113.13	11.31		
		Coarse Aggregate	0.39	Cum	**944.26**	365.43	36.54		
		Total					**47.86**		
		AOC FOR FALL (Ch.3.335 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.100	Cum	**6914.20**	42176.62	2.52	2.62	5.25
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	13.298	Sqm	**578.60**	7694.22			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.623	Cum	**1075.00**	2819.73			
		Coarse Aggregates (60 Km lead)	5.246	Cum	**1398.00**	7333.91			
		Cement (30 km lead)	2.516	MT	**742.00**	1867.06			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**63662.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand	2.62	Cum	**584.64**	1533.51	153.35		
		Coarse Aggregate	5.25	Cum	**944.26**	4953.59	495.36		
		Total					**648.71**		
		AOC FOR FALL (Ch.3.550 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	29.030	Sqm	**63.20**	1834.68	0.04		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.044	MT	**742.00**	32.31			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**3401.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FALL (Ch.4.040 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	4.32	Cum	**156.50**	676.16			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	20.300	Sqm	**340.20**	6906.06	46.771	6.496	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	26.100	Sqm	**63.20**	1649.52	0.04		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	6.496	Cum	**1075.00**	6983.20			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	46.810	MT	**742.00**	34733.28			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**52718.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	6.50	Cum	**584.64**	3797.82	379.78		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**379.78**		
		AOC FOR FALL (Ch 4.500 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	23.104	Sqm	**63.20**	1460.16	0.03		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.035	MT	**742.00**	25.71			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**2666.31**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT (Ch 4.610 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.600	Cum	**2492.58**	18943.61			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (60 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		Steel (30 Km lead)	0.00	MT	**742.00**	0.00			
TOTAL (In Rs.)						**18943.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL (Ch 4.760 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch 4.995 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch 5.100 Km)									
1	**Structure is in good condition and does not requir any repair works.**								

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF RASALPUR-I MINOR								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.0.310 Km)								
1	5.1.8	**Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.**						
		Above Hume Pipe	*1*	*4.88*	*0.90*	*0.60*	*2.64*	*Cum*
		TOTAL					**2.64**	**Cum**
2	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Well Portion	1	0.70	0.45	0.6	*0.19*	*Cum*
		Abutment D/S	1	0.70	0.45	0.6	*0.19*	*Cum*
		TOTAL					**0.38**	***Cum***
3	5.1.31	**Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I**						
		Above Hume Pipe	1	4.88	0.90	0.60	*2.64*	*Cum*
		TOTAL					**2.64**	***Cum***
4	M-1708	**Providing 600 mm RCC NP2 pipe**						
			2	2.50			5	Rm
		TOTAL					**5.00**	**Rm**
5	5.3.4	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment D/S	1	0.70	0.45	0.4	*0.13*	*Cum*
		TOTAL					**0.13**	***Cum***
6	5.3.5	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion	1	0.70	0.45	0.4	*0.13*	*Cum*
		Well Bed	1	3.14		0.2	*0.63*	*Cum*
		TOTAL					**0.75**	**Cum**
7	5.3.18	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	0.70		0.4	*0.56*	Sqm
			2		0.45	0.4	*0.36*	Sqm
		Well Portion	2	0.70		0.4	*0.56*	Sqm
			2		0.45	0.4	*0.36*	Sqm
		TOTAL					**1.84**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.0.660 Km)								
1	**5.1.8**	**Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.**						
		Above Hume Pipe	*1*	*4.60*	*1.07*	*0.92*	*4.54*	*Cum*
		TOTAL					**4.54**	**Cum**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Well Portion	1	0.70	0.45	0.92	*0.29*	*Cum*
		Abutment D/S	1	0.70	0.45	0.60	*0.19*	*Cum*
		Well Bed	1	3.14		0.304	*0.95*	*Cum*
		TOTAL					**1.43**	***Cum***
3	**5.1.31**	**Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I**						
		Above Hume Pipe	1	4.60	1.07	0.92	*4.54*	*Cum*
		TOTAL					**4.54**	***Cum***
4	**M-1708**	**Providing 600 mm RCC NP2 pipe**						
			2	2.50			5	Rm
		TOTAL					**5.00**	**Rm**
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment D/S	1	0.70	0.45	0.924	*0.29*	*Cum*
		TOTAL					**0.29**	***Cum***
6	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion	1	0.70	0.45	0.924	*0.29*	*Cum*
		TOTAL					**0.29**	**Cum**
7	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	0.70		0.924	*1.29*	Sqm
			2		0.45	0.924	*0.83*	Sqm
		Well Portion	2	0.70		0.924	*1.29*	Sqm
			2		0.45	0.924	*0.83*	Sqm
		TOTAL					**4.25**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.0.925 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Well Portion	1	0.35	0.45	1.52	*0.24*	*Cum*
		Abutment D/S	2	7.00	0.45	1.00	*6.30*	*Cum*
		Well Bed	1	4.21		0.3	*1.26*	*Cum*
		TOTAL					**7.81**	***Cum***
		New Fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.370 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Well Portion	1	0.35	0.45	1.52	*0.24*	*Cum*
		Abutment D/S	2	7.00	0.45	1.00	*6.30*	*Cum*
		Well Bed	1	4.21		0.3	*1.26*	*Cum*
		TOTAL					**7.81**	***Cum***
		New Fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.825 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.1.875 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet U/S & D/S	2	3.45	0.25	0.92	*1.59*	*Cum*
		TOTAL					**1.59**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet U/S & D/S	2	3.45		2.09	*14.42*	*Sqm*
		TOTAL					**14.42**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet U/S & D/S	2	3.45		2.09	*14.42*	*Sqm*
		TOTAL					**14.42**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.990 Km)								
1	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Well Top	1	0.35		1.05	*0.37*	*Sqm*
		Abutment D/S	1	4.00		2.45	*9.80*	*Sqm*
		Wing wall	4	1.00		1.05	*4.20*	*Sqm*
		Abutment	2	7.00		1.05	*14.70*	*Sqm*
		TOTAL					**29.07**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.2.165 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1		**Structure requires no repair work.**						
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.2.370 Km)						
1		**New Structure is proposed.**						
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.2.600 Km)						
1	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Well Portion	1	0.17	0.45	1.52	*0.12*	*Cum*
		Abutment D/S	2	6.50	0.45	1.00	*5.85*	*Cum*
		Well Bed	1	2.63		0.3	*0.79*	*Cum*
		TOTAL					**6.76**	***Cum***
		New Fall has been Proposed.						
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.2.780 Km)						
1	5.1.3	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**145.00**	**Sqm**
		TOTAL					**145.00**	**Sqm**
2	5.3.4	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment U/S & D/S top	2	10.00	0.45	0.2	*1.80*	*Cum*
		TOTAL					**1.80**	***Cum***
3	5.3.18	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	10.00		0.2	*4.00*	Sqm
			2		0.45	0.2	*0.18*	Sqm
		TOTAL					**4.18**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.3.025 Km)						
1	5.1.3	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
		TOTAL					**130.00**	**Sqm**
2	5.3.5	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Well Portion left side	1	2.00	0.45	0.5	*0.45*	*Cum*
		TOTAL					**0.45**	**Cum**
3	5.3.18	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S	2	2.00		0.5	*2.00*	Sqm
			2		0.45	0.5	*0.45*	Sqm
		TOTAL					**2.45**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.3.335 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
		TOTAL					**150.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		WINGS U/S	1	5.00	0.45	0.61	*1.37*	*Cum*
		WINGS D/S	1	5.00	0.45	0.61	*1.37*	*Cum*
		TOTAL					**2.75**	**Cum**
3	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		WINGS U/S	2	5.00		0.61	*6.10*	Sqm
			2		0.45	0.61	*0.55*	Sqm
		WINGS D/S	2	5.00		0.61	*6.10*	Sqm
			2		0.45	0.61	*0.55*	Sqm
		TOTAL					**13.30**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.3.550 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
		TOTAL					**130.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Well Top	1	0.31		1.05	*0.33*	*Sqm*
		Abutment D/S	1	4.00		2.45	*9.80*	*Sqm*
		Wing wall	4	1.00		1.05	*4.20*	*Sqm*
		Abutment	2	7.00		1.05	*14.70*	*Sqm*
		TOTAL					**29.03**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.4.040 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
		TOTAL					**150.00**	**Sqm**
2	**5.1.8**	**Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.**						
		Above Floor	*1*	*7.00*	*1.37*	*0.45*	*4.32*	*Cum*
		TOTAL					**4.32**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Abutment U/S & D/S	2	7.00		1.45	*20.30*	*Sqm*
		TOTAL					**20.30**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment U/S & D/S	2	7.00		1.45	*20.30*	*Sqm*
		D/S Parapet	1	4.00		1.45	*5.80*	*Sqm*
		TOTAL					**26.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch 4.500 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
		TOTAL					**100.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Well Top	1	0.31		1.05	*0.33*	*Sqm*
		Abutment D/S	1	2.44		2.45	*5.97*	*Sqm*
		Wing wall	4	1.00		1.05	*4.20*	*Sqm*
		Abutment	2	6.00		1.05	*12.60*	*Sqm*
		TOTAL					**23.10**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch 4.610 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment U/S & D/S	2	8.00	0.45	0.50	*3.60*	*Cum*
		Wing	4	2.00	0.45	0.50	*4.00*	*Cum*
		TOTAL					**7.60**	***Cum***
		New Culvert has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch 4.760 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch 4.995 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch 5.100 Km)								
1		**Structure requires no repair work.**						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per SOR 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (60 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 3 no., Total Seigniorage charges					**22735.78**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				

5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (60 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
		TOTAL (In Rs.)				**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 8 nos. outlet, Total Seigniorage charges					**8801.38**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**PL MARCH 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					Say, Rs	₹ 339.90	Per M^3

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**215.90**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**266.00**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**316.10**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**366.20**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**416.30**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Rasalpur-II Minor
(Total Cost – Rs. 2.75 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (RASALPUR-II SUB DY.)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	RASALPUR-II SUB DY.	1	Job	16644742.49	0.00	₹ 1,66,44,742.49	AOC Earthwork Rasalpur II Sub Dy.	8
2	Falls							
	RASALPUR-II SUB DY.							
	1.839 m Fall at Ch. 0.700 Km	1	No.	1492152.08	13043.94	₹ 15,05,196.02	Fall (AOC) Rasalpur-II Sub Dy.	12
	1.520 m Fall at Ch. 2.050 Km	1	No.	1160397.80	10063.90	₹ 11,70,461.70		13
	1.220 m Fall at Ch. 4.300 Km	1	No.	775859.56	6631.02	₹ 7,82,490.58		14
	0.304 m Fall at Ch. 4.900 Km	1	No.	531405.81	4533.54	₹ 5,35,939.35		15
3	*Slab Bridge*							
	RASALPUR-II SUB DY.							
	At Km 1.360	1	No.	1417679.56	7138.62	₹ 14,24,818.18	Slab-AOC Rasalpur-II Sub Dy.	28
4	*Repair of Structures*							
	RASALPUR-II SUB DY.	19	No.	687928.599	3431.77	₹ 6,91,360.36	Abstract (Repair St.) Rasalpur-II Sub Dy.	32
	APPROACH ROAD	4	No.	521018.55	7578.59	₹ 21,14,388.58	Approach Road AOC	49
5	Outlets							
	RASALPUR-II SUB DY.	20	No.	127744.47	1100.17	₹ 25,76,892.81	Outlet-AOC	54
6	Kilometer Stone	8	No.	3853.40	0.00	₹ 30,827.20	Rates '!F61	85
	TOTAL (In Rs.)					**27477117.27**		
	TOTAL (In Lacs)					**274.77**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

RASALPUR MR-II (0.000 TO 8.300 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.702	0.351	35.100	8.601	4.301	430.050
200	100	1.004	0.853	85.300	8.635	8.618	861.800
300	100	1.223	1.114	111.350	4.662	6.649	664.850
400	100	0.227	0.725	72.500	4.612	4.637	463.700
500	100	0.000	0.114	11.350	4.737	4.675	467.450
600	100	0.000	0.000	0.000	6.675	5.706	570.600
700	100	5.688	2.844	284.400	0.528	3.602	360.150
800	100	0.616	3.152	315.200	2.522	1.525	152.500
900	100	1.189	0.903	90.250	3.093	2.808	280.750
1000	100	1.646	1.418	141.750	2.643	2.868	286.800
1100	100	0.000	0.823	82.300	3.084	2.864	286.350
1200	100	0.000	0.000	0.000	6.853	4.969	496.850
1300	100	0.000	0.000	0.000	8.285	7.569	756.900
1400	100	0.000	0.000	0.000	10.429	9.357	935.700
1500	100	0.597	0.299	29.850	3.020	6.725	672.450
1600	100	0.963	0.780	78.000	5.872	4.446	444.600
1700	100	0.198	0.581	58.050	2.505	4.189	418.850
1800	100	0.412	0.305	30.500	2.805	2.655	265.500
1900	100	0.175	0.294	29.350	4.925	3.865	386.500
2000	100	0.000	0.088	8.750	10.814	7.870	786.950
2100	100	0.876	0.438	43.800	2.942	6.878	687.800
2200	100	0.692	0.784	78.400	4.191	3.567	356.650
2300	100	0.517	0.605	60.450	3.175	3.683	368.300
2400	100	0.341	0.429	42.900	3.895	3.535	353.500
2500	100	0.198	0.270	26.950	5.533	4.714	471.400
2600	100	0.064	0.131	13.100	7.478	6.506	650.550
2700	100	0.000	0.032	3.200	9.597	8.538	853.750
2800	100	0.287	0.144	14.350	4.022	6.810	680.950
2900	100	0.186	0.237	23.650	12.369	8.196	819.550
3000	100	0.000	0.093	9.300	10.260	11.315	1131.450
3100	100	0.000	0.000	0.000	11.777	11.019	1101.850
3200	100	2.634	1.317	131.700	1.460	6.619	661.850
3300	100	0.664	1.649	164.900	2.961	2.211	221.050
3400	100	0.615	0.640	63.950	2.202	2.582	258.150
3500	100	0.129	0.372	37.200	4.802	3.502	350.200
3600	100	0.000	0.065	6.450	6.374	5.588	558.800
3700	100	0.000	0.000	0.000	8.785	7.580	757.950
3800	100	0.000	0.000	0.000	11.022	9.904	990.350
3900	100	1.825	0.913	91.250	1.031	6.027	602.650
4000	100	0.722	1.274	127.350	2.075	1.553	155.300
4100	100	0.183	0.453	45.250	3.799	2.937	293.700
4200	100	0.028	0.106	10.550	6.943	5.371	537.100

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	2.686	1.357	135.700	1.821	4.382	438.200
4400	100	2.228	2.457	245.700	1.360	1.591	159.050
4500	100	1.648	1.938	193.800	1.265	1.313	131.250
4600	100	0.546	1.097	109.700	3.155	2.210	221.000
4700	100	0.237	0.392	39.150	3.805	3.480	348.000
4800	100	0.154	0.196	19.550	4.737	4.271	427.100
4900	100	0.147	0.151	15.050	4.321	4.529	452.900
5000	100	0.000	0.074	7.350	6.166	5.244	524.350
5100	100	0.000	0.000	0.000	9.182	7.674	767.400
5200	100	2.327	1.164	116.350	0.911	5.047	504.650
5300	100	2.478	2.403	240.250	1.177	1.044	104.400
5400	100	2.045	2.262	226.150	1.276	1.227	122.650
5500	100	1.004	1.525	152.450	2.208	1.742	174.200
5600	100	0.135	0.570	56.950	4.308	3.258	325.800
5700	100	0.607	0.371	37.100	1.040	2.674	267.400
5800	100	2.257	1.432	143.200	1.732	1.386	138.600
5900	100	0.241	1.249	124.900	4.124	2.928	292.800
6000	100	0.118	0.180	17.950	3.800	3.962	396.200
6100	100	0.000	0.059	5.900	3.488	3.644	364.400
6200	100	0.000	0.000	0.000	5.521	4.505	450.450
6300	100	0.000	0.000	0.000	8.008	6.765	676.450
6400	100	0.718	0.359	35.900	2.547	5.278	527.750
6500	100	0.259	0.489	48.850	3.864	3.206	320.550
6600	100	0.119	0.189	18.900	2.682	3.273	327.300
6700	100	0.000	0.060	5.950	4.414	3.548	354.800
6800	100	0.000	0.000	0.000	6.544	5.479	547.900
6900	100	0.835	0.418	41.750	1.000	3.772	377.200
7000	100	0.263	0.549	54.900	3.793	2.397	239.650
7100	100	0.435	0.349	34.900	2.419	3.106	310.600
7200	100	0.964	0.700	69.950	1.669	2.044	204.400
7300	100	0.235	0.600	59.950	2.951	2.310	231.000
7400	100	0.059	0.147	14.700	3.798	3.375	337.450
7500	100	0.000	0.030	2.950	5.593	4.696	469.550
7600	100	0.816	0.408	40.800	0.846	3.220	321.950
7700	100	0.404	0.610	61.000	1.426	1.136	113.600
7800	100	0.479	0.442	44.150	1.286	1.356	135.600
7900	100	0.061	0.270	27.000	3.094	2.190	219.000
8000	100	0.143	0.102	10.200	2.434	2.764	276.400
8100	100	0.582	0.363	36.250	2.508	2.471	247.100
8200	100	3.576	2.079	207.900	1.754	2.131	213.100
8300	100	0.443	2.010	200.950	2.124	1.939	193.900
Total				**5362.850**			**36108.200**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**5362.850**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**36108.200**
NET QUANTITY OF EARTHWORK							**30745.35**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
RASALPUR-II SUB DY.(0.000 TO 8.400 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.700	700	3.37	2359.00	Sqm
0.700 - 2.400	1700	2.93	4981.00	Sqm
2.400 - 3.660	1260	2.64	3326.40	Sqm
3.660 - 5.090	1430	2.31	3303.30	Sqm
5.090- 7.040	1950	2.12	4134.00	Sqm
7.040 - 8.400	136	1.38	187.68	Sqm
	TOTAL		**18291.38**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.700	700	3.370	0.15	353.85	Cum
0.700 - 2.400	1700	2.930	0.15	747.15	Cum
2.400 - 3.660	1260	2.640	0.15	498.96	Cum
3.660 - 5.090	1430	2.310	0.15	495.50	Cum
5.090- 7.040	1950	2.120	0.15	620.10	Cum
7.040 - 8.400	136	1.380	0.15	28.15	Cum
	TOTAL			**2743.71**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR RASALPUR-II SUB DY.						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	18291.38	Sqm	**11.80**	215918.5819
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	5362.85	Cum	**156.50**	839286.025
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	2145.14	Cum	**17.22**	36933.97825
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	30745.35	Cum	**165.12**	5076547.99
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	9223.61	Cum	**174.89**	1613116.28
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	7686.34	Cum	**217.92**	1675006.67
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	13835.41	Cum	**319.14**	4415431.95
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			2743.71	Cum	**196.10**	538040.94
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	36108.20	Cum	**61.88**	2234460.08
TOTAL COST OF EARTHWORK (in Rs.)						**16644742.49**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**166.447**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR RASALPUR-II SUB DY.				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***18291.38***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	5362.850	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2145.14	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	30745.350	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	9223.61	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	7686.34	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	13835.41	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	2743.71	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	36108.20	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR RASALPUR-II SUB DY.								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 1.839 METER AT CH. 0.700 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	158.036	Cum	**195.20**	30848.53			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.41	Cum	**6381.70**	91935.08	4.67	6.48	12.97
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	105.89	Cum	**6914.20**	732148.16	43.68	45.53	91.07
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.89	Cum	**8151.40**	7215.95	0.50	0.35	0.70
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.49	MT	**73574.90**	183475.31			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	298.33	Sqm	**578.60**	172611.52			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.07	Sqm	**680.10**	8205.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.57	Cum	**694.61**	395.93			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.57	Cum	**1237.00**	705.09			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.57	Cum	**1377.70**	785.29			0.57
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.57	Cum	**516.50**	294.41			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	14.03	Sqm	**63.20**	886.87			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	46.30	Cum	**149.30**	6912.62			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	52.361	Cum	**1075.00**	56287.95			
	Coarse Aggregates (100 Km lead)	105.301	Cum	**1398.00**	147210.27			
	Cement (30 km lead)	48.849	MT	**742.00**	36246.20			
	Boulder (60 Km lead)	0.57	Cum	**1159.00**	660.63			
	Brick (15 km lead)	723.00	No.	**3.18**	2299.14			
	Steel (30 Km lead)	2.49	MT	**742.00**	1850.34			
	TOTAL (In Rs.)				**1492152.08**			
	TOTAL (In Rs.)				**1492152.08**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	52.36	Cum	**584.64**	30612.27	3061.23		
	Coarse Aggregate	105.30	Cum	**944.26**	99431.16	9943.12		
	Boulders	0.57	Cum	**694.61**	395.93	39.59		
	Total					13043.94		
	For 1 nos. fall, Total Seigniorage charges					**13043.94**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH. 2.050 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	125.833	Cum	**195.20**	24562.63			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.96	Cum	**6381.70**	82723.50	4.20	5.83	11.67
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	79.38	Cum	**6914.20**	548851.67	32.74	34.13	68.27
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.88	Cum	**8151.40**	7203.47	0.50	0.34	0.70
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.87	MT	**73574.90**	137541.46			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	246.54	Sqm	**578.60**	142645.53			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.07	Sqm	**680.10**	8205.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.57	Cum	**694.61**	395.93			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.57	Cum	**1237.00**	705.09			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.57	Cum	**1377.70**	785.29			0.57
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.57	Cum	**516.50**	294.41			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.78	Sqm	**63.20**	807.58			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	36.92	Cum	**149.30**	5512.56			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	40.311	Cum	**1075.00**	43334.73			
	Coarse Aggregates (100 Km lead)	81.202	Cum	**1398.00**	113519.82			
	Cement (30 km lead)	37.445	MT	**742.00**	27784.45			
	Boulder (60 Km lead)	0.57	Cum	**1159.00**	660.63			
	Brick (15 km lead)	723.00	No.	**3.18**	2299.14			
	Steel (30 Km lead)	1.87	MT	**742.00**	1387.10			
	TOTAL (In Rs.)				**1160397.80**			
	TOTAL (In Rs.)				**1160397.80**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	40.31	Cum	**584.64**	23567.64	2356.76		
	Coarse Aggregate	81.20	Cum	**944.26**	76675.41	7667.54		
	Boulders	0.57	Cum	**694.61**	395.93	39.59		
	Total					10063.90		
	For 1 nos. fall, Total Seigniorage charges					**10063.90**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.300 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	84.330	Cum	**195.20**	16461.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.80	Cum	**6381.70**	62547.40	3.18	4.41	8.82
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	51.09	Cum	**6914.20**	353248.22	21.07	21.97	43.94
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5354.37	0.37	0.26	0.52
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.20	MT	**73574.90**	88523.51			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	179.41	Sqm	**578.60**	103809.05			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.43	Sqm	**680.10**	5055.86			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			0.26
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.66	Sqm	**63.20**	673.86			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	24.36	Cum	**149.30**	3637.01			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	26.635	Cum	**1075.00**	28633.12			
	Coarse Aggregates (100 Km lead)	53.540	Cum	**1398.00**	74848.91			
	Cement (30 km lead)	24.623	MT	**742.00**	18270.05			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	446.00	No.	**3.18**	1418.28			
	Steel (30 Km lead)	1.20	MT	**742.00**	892.76			
	TOTAL (In Rs.)				**775859.56**			
	TOTAL (In Rs.)				**775859.56**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	26.64	Cum	**584.64**	15572.16	1557.22		
	Coarse Aggregate	53.54	Cum	**944.26**	50555.67	5055.57		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					6631.02		
	For 1 nos. fall, Total Seigniorage charges					**6631.02**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.304 METER AT CH. 4.900 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	39.485	Cum	**195.20**	7707.43			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.75	Cum	**6381.70**	55829.31	2.83	3.94	7.87
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	32.57	Cum	**6914.20**	225194.88	13.44	14.01	28.01
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.55	Cum	**8151.40**	4454.21	0.31	0.21	0.43
5	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.77	MT	**73574.90**	56433.52			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	133.29	Sqm	**578.60**	77121.32			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.43	Sqm	**680.10**	5055.86			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			0.26
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.95	Sqm	**63.20**	565.56			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.82	Cum	**149.30**	1616.16			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	18.155	Cum	**1075.00**	19516.55			
	Coarse Aggregates (100 Km lead)	36.578	Cum	**1398.00**	51135.79			
	Cement (30 km lead)	16.579	MT	**742.00**	12301.90			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	446.00	No.	**3.18**	1418.28			
	Steel (30 Km lead)	0.77	MT	**742.00**	569.13			
	TOTAL (In Rs.)				**531405.81**			
	TOTAL (In Rs.)				**531405.81**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	18.15	Cum	**584.64**	10614.10	1061.41		
	Coarse Aggregate	36.58	Cum	**944.26**	34538.97	3453.90		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					4533.54		
	For 1 nos. fall, Total Seigniorage charges					**4533.54**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR RASALPUR-II SUB DY.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.839 METER AT CH. 0.700 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.52*	*2.394*	*2.667*	*19.359*	*Cum*
	Section 2-2	*2*	*4.50*	*1.290*	*2.667*	*30.964*	*Cum*
	Section 3-3	*2*	*4.20*	*1.170*	*2.467*	*24.246*	*Cum*
	Section 5-5	*2*	*3.00*	*2.544*	*2.667*	*40.729*	*Cum*
	Section 6-6	*2*	*1.18*	*1.170*	*2.467*	*6.812*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.360*	*0.650*	*0.508*	*Cum*
	U/S Floor	*1*	*3.50*	*1.360*	*2.689*	*12.800*	*Cum*
	D/S Floor	*1*	*4.50*	*1.360*	*1.350*	*8.262*	*Cum*
		1	*1.50*	*1.360*	*1.150*	*2.346*	*Cum*
		1	*3.00*	*1.360*	*0.850*	*3.468*	*Cum*
	D/S Key Floor	*1*	*0.88*	*1.360*	*1.850*	*2.202*	*Cum*
	Toe Wall D/S Portion	*1*	*6.06*	*0.750*	*0.900*	*4.091*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						158.04	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.360*	*0.150*	*0.11*	*Cum*
		1	*0.56*	*1.360*	*0.150*	*0.11*	*Cum*
		1	*7.27*	*1.360*	*0.150*	*1.48*	*Cum*
		1	*0.57*	*1.360*	*0.150*	*0.12*	*Cum*
		1	*1.10*	*1.360*	*0.150*	*0.22*	*Cum*
		1	*1.41*	*1.360*	*0.150*	*0.29*	*Cum*
		1	*1.45*	*1.360*	*0.150*	*0.29*	*Cum*
		1	*1.90*	*1.360*	*0.150*	*0.39*	*Cum*
		1	*0.54*	*1.360*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.52*	*2.394*	*0.150*	*1.09*	*Cum*
	Section 2-2	*2*	*4.50*	*1.290*	*0.150*	*1.74*	*Cum*
	Section 3-3	*2*	*4.20*	*1.170*	*0.150*	*1.47*	*Cum*
	Section 5-5	*2*	*3.00*	*2.544*	*0.150*	*2.29*	*Cum*
	Section 6-6	*2*	*1.18*	*1.170*	*0.150*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*6.06*	*0.750*	*0.300*	*1.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.76*	*0.450*	*0.600*	*1.56*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**14.41**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.29*	*0.450*	*0.450*	*0.52*	*Cum*
		2	*1.29*	*1.272*	*2.739*	*8.99*	*Cum*
		2	*1.29*	*2.244*	*1.000*	*5.79*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.720*	*0.900*	*5.83*	*Cum*
		2	*4.50*	*1.140*	*1.000*	*10.26*	*Cum*
	Section 3-3	*2*	*3.84*	*0.450*	*0.450*	*1.56*	*Cum*
		2	*3.84*	*0.660*	*0.700*	*3.55*	*Cum*
		2	*3.84*	*1.020*	*0.800*	*6.27*	*Cum*
	Section 5-5	*2*	*2.96*	*0.450*	*0.450*	*1.20*	*Cum*
		2	*2.96*	*1.272*	*2.739*	*20.60*	*Cum*
		2	*2.96*	*2.244*	*1.000*	*13.27*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.660*	*0.700*	*1.56*	*Cum*
		2	*1.69*	*1.020*	*0.700*	*2.41*	*Cum*
	Floor	*1*	*0.58*	*1.360*	*0.500*	*0.39*	*Cum*
		1	*8.00*	*1.360*	*1.000*	*10.88*	*Cum*
		1	*0.20*	*1.360*	*0.400*	*0.11*	*Cum*
		1	*0.20*	*1.360*	*0.700*	*0.19*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.30*	*1.360*	*0.800*	*1.41*	*Cum*
		1	*0.10*	*1.360*	*0.750*	*0.10*	*Cum*
		1	*2.90*	*1.360*	*0.700*	*2.76*	*Cum*
		1	*0.88*	*1.360*	*1.700*	*2.02*	*Cum*
	Crest	*1*	*1.25*	*1.360*	*2.169*	*3.70*	*Cum*
	TOTAL					**105.89**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.360*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.59*	*0.450*	*0.050*	*0.35*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.59*	*0.450*	*0.050*	*0.35*	*Cum*
	TOTAL					**0.89**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**105.89**	**0.00**	**0.318**	**7850.0**	**2493.72**	**Kg**
	Total Weight in Metric Tonne					**2.49**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.29*		*0.450*	*2.32*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.29*		*2.739*	*14.14*	*Sqm*
		4		*1.272*	*2.739*	*13.93*	*Sqm*
		4	*1.29*		*1.000*	*5.16*	*Sqm*
		4		*2.244*	*1.000*	*8.98*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*0.900*	*16.20*	*Sqm*
		4		*0.720*	*0.900*	*2.59*	*Sqm*
		4	*4.50*		*1.000*	*18.00*	*Sqm*
		4		*1.140*	*1.000*	*4.56*	*Sqm*
	Section 3-3	*4*	*3.84*		*0.450*	*6.91*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.84*		*0.700*	*10.75*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.84*		*0.800*	*12.29*	*Sqm*
		4		*1.020*	*0.800*	*3.26*	*Sqm*
	Section 5-5	*4*	*2.96*		*0.450*	*5.32*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.96*		*2.739*	*32.40*	*Sqm*
		4		*1.272*	*2.739*	*13.93*	*Sqm*
		4	*2.96*		*1.000*	*11.83*	*Sqm*
		4		*2.244*	*1.000*	*8.98*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.700*	*4.73*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*1.69*		*0.700*	*4.73*	*Sqm*
		4		*1.020*	*0.700*	*2.86*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.360*	*0.500*	*1.36*	*Sqm*
		2	*8.00*		*1.000*	*16.00*	*Sqm*
		2		*1.360*	*1.000*	*2.72*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.360*	*0.400*	*1.09*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*1.360*	*0.700*	*1.90*	*Sqm*
		2	*1.30*		*0.800*	*2.08*	*Sqm*
		2		*1.360*	*0.800*	*2.18*	*Sqm*
		2	*0.100*		*0.750*	*0.15*	*Sqm*
		2		*1.360*	*0.750*	*2.04*	*Sqm*
		2	*2.900*		*0.700*	*4.06*	*Sqm*
		2		*1.360*	*0.700*	*1.90*	*Sqm*
		2	*0.88*		*1.700*	*2.98*	*Sqm*
		2		*1.360*	*1.700*	*4.62*	*Sqm*
	Crest	*2*	*1.25*		*2.169*	*5.44*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.360*	*2.169*	*5.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.06*		*0.300*	*3.64*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.76*		*0.600*	*6.91*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**298.33**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.413*		*12.07*	*Sqm*
	TOTAL					**12.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.760*	*0.300*	**0.57**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*0.760*	*0.150*	**0.57**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*15.59*	*0.450*		*7.02*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.59*	*0.450*		*7.02*	*Sqm*
	TOTAL					**14.03**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		14.217		14.22	**Cum**
	Abutment						
	Section 1-1	2	*1.52*	*1.296*		*3.929*	*Cum*
	Section 2-2	2	*4.50*	*1.083*		*9.747*	*Cum*
	Section 3-3	2	*4.20*	*0.822*		*6.905*	*Cum*
	Section 5-5	2	*3.00*	*1.221*		*7.330*	*Cum*
	Section 6-6	2	*1.18*	*0.807*		*1.905*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.06*	*0.150*	*0.600*	*1.818*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**46.30**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.520 METER AT CH. 2.050 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.47*	*2.202*	*2.467*	*16.004*	*Cum*
	Section 2-2	*2*	*4.00*	*1.290*	*2.467*	*25.459*	*Cum*
	Section 3-3	*2*	*3.70*	*1.170*	*2.267*	*19.628*	*Cum*
	Section 5-5	*2*	*2.73*	*2.352*	*2.467*	*31.681*	*Cum*
	Section 6-6	*2*	*1.18*	*1.170*	*2.267*	*6.260*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.360*	*0.650*	*0.508*	*Cum*
	U/S Floor	*1*	*3.00*	*1.360*	*2.370*	*9.670*	*Cum*
	D/S Floor	*1*	*4.00*	*1.360*	*0.850*	*4.624*	*Cum*
		1	*2.00*	*1.360*	*0.650*	*1.768*	*Cum*
		1	*2.00*	*1.360*	*0.750*	*2.040*	*Cum*
	D/S Key Floor	*1*	*0.83*	*1.360*	*1.650*	*1.851*	*Cum*
	Toe Wall D/S Portion	*1*	*6.06*	*0.750*	*0.900*	*4.091*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						125.83	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.360*	*0.150*	*0.11*	*Cum*
		1	*0.56*	*1.360*	*0.150*	*0.11*	*Cum*
		1	*6.27*	*1.360*	*0.150*	*1.28*	*Cum*
		1	*0.50*	*1.360*	*0.150*	*0.10*	*Cum*
		1	*1.65*	*1.360*	*0.150*	*0.34*	*Cum*
		1	*0.14*	*1.360*	*0.150*	*0.03*	*Cum*
		1	*0.55*	*1.360*	*0.150*	*0.11*	*Cum*
		1	*1.68*	*1.360*	*0.150*	*0.34*	*Cum*
		1	*0.54*	*1.360*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.47*	*2.202*	*0.150*	*0.97*	*Cum*
	Section 2-2	*2*	*4.00*	*1.290*	*0.150*	*1.55*	*Cum*
	Section 3-3	*2*	*3.70*	*1.170*	*0.150*	*1.30*	*Cum*
	Section 5-5	*2*	*2.73*	*2.352*	*0.150*	*1.93*	*Cum*
	Section 6-6	*2*	*1.18*	*1.170*	*0.150*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*6.06*	*0.750*	*0.300*	*1.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.76*	*0.450*	*0.600*	*1.56*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**12.96**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.25*	*0.450*	*0.450*	*0.51*	*Cum*
		2	*1.25*	*1.176*	*2.420*	*7.10*	*Cum*
		2	*1.25*	*2.052*	*0.850*	*4.35*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.720*	*0.900*	*5.18*	*Cum*
		2	*4.00*	*1.140*	*0.850*	*7.75*	*Cum*
	Section 3-3	*2*	*3.34*	*0.450*	*0.450*	*1.35*	*Cum*
		2	*3.34*	*0.660*	*0.700*	*3.09*	*Cum*
		2	*3.34*	*1.020*	*0.700*	*4.77*	*Cum*
	Section 5-5	*2*	*2.69*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*2.69*	*1.176*	*2.420*	*15.29*	*Cum*
		2	*2.69*	*2.052*	*0.850*	*9.37*	*Cum*
	Section 6-6	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.660*	*0.700*	*1.56*	*Cum*
		2	*1.69*	*1.020*	*0.600*	*2.07*	*Cum*
	Floor	*1*	*0.58*	*1.360*	*0.500*	*0.39*	*Cum*
		1	*7.00*	*1.360*	*0.500*	*4.76*	*Cum*
		1	*0.18*	*1.360*	*0.350*	*0.08*	*Cum*
		1	*0.20*	*1.360*	*0.600*	*0.16*	*Cum*
		1	*1.80*	*1.360*	*0.700*	*1.71*	*Cum*
		1	*0.10*	*1.360*	*0.650*	*0.09*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*1.90*	*1.360*	*0.600*	*1.55*	*Cum*
		1	*0.83*	*1.360*	*1.500*	*1.68*	*Cum*
	Crest	*1*	*1.21*	*1.360*	*1.918*	*3.16*	*Cum*
	TOTAL					**79.38**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.360*	*0.200*	*0.24*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*14.20*	*0.450*	*0.050*	*0.32*	*Cum*
	On Abutment Top (Right Side)	*1*	*14.20*	*0.450*	*0.050*	*0.32*	*Cum*
	TOTAL					**0.88**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**79.38**	**0.00**	**0.238**	**7850.0**	**1869.41**	**Kg**
	Total Weight in Metric Tonne					**1.87**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.25*		*0.450*	*2.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.25*		*2.420*	*12.08*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*1.25*		*0.850*	*4.24*	*Sqm*
		4		*2.052*	*0.850*	*6.98*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.900*	*14.40*	*Sqm*
		4		*0.720*	*0.900*	*2.59*	*Sqm*
		4	*4.00*		*0.850*	*13.60*	*Sqm*
		4		*1.140*	*0.850*	*3.88*	*Sqm*
	Section 3-3	*4*	*3.34*		*0.450*	*6.01*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.34*		*0.700*	*9.35*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.34*		*0.700*	*9.35*	*Sqm*
		4		*1.020*	*0.700*	*2.86*	*Sqm*
	Section 5-5	*4*	*2.69*		*0.450*	*4.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.69*		*2.420*	*26.00*	*Sqm*
		4		*1.176*	*2.420*	*11.38*	*Sqm*
		4	*2.69*		*0.850*	*9.13*	*Sqm*
		4		*2.052*	*0.850*	*6.98*	*Sqm*
	Section 6-6	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.700*	*4.73*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*1.69*		*0.600*	*4.06*	*Sqm*
		4		*1.020*	*0.600*	*2.45*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.360*	*0.500*	*1.36*	*Sqm*
		2	*7.00*		*0.500*	*7.00*	*Sqm*
		2		*1.360*	*0.500*	*1.36*	*Sqm*
		2	*0.18*		*0.350*	*0.12*	*Sqm*
		2		*1.360*	*0.350*	*0.95*	*Sqm*
		2	*0.20*		*0.600*	*0.24*	*Sqm*
		2		*1.360*	*0.600*	*1.63*	*Sqm*
		2	*1.80*		*0.700*	*2.52*	*Sqm*
		2		*1.360*	*0.700*	*1.90*	*Sqm*
		2	*0.100*		*0.650*	*0.13*	*Sqm*
		2		*1.360*	*0.650*	*1.77*	*Sqm*
		2	*1.900*		*0.600*	*2.28*	*Sqm*
		2		*1.360*	*0.600*	*1.63*	*Sqm*
		2	*0.83*		*1.500*	*2.48*	*Sqm*
		2		*1.360*	*1.500*	*4.08*	*Sqm*
	Crest	*2*	*1.21*		*1.918*	*4.65*	*Sqm*
		2		*1.360*	*1.918*	*5.22*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.06*		*0.300*	*3.64*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.76*		*0.600*	*6.91*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**246.54**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.413*		*12.07*	*Sqm*
	TOTAL					**12.07**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.760*	*0.300*	**0.57**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*0.760*	*0.150*	**0.57**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*14.20*	*0.450*		*6.39*	*Sqm*
	On Abutment Top (Right Side)	*1*	*14.20*	*0.450*		*6.39*	*Sqm*
	TOTAL					**12.78**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		8.100		8.10	**Cum**
	Abutment						
	Section 1-1	2	*1.47*	*1.213*		*3.573*	*Cum*
	Section 2-2	2	*4.00*	*1.063*		*8.500*	*Cum*
	Section 3-3	2	*3.70*	*0.807*		*5.972*	*Cum*
	Section 5-5	2	*2.73*	*1.213*		*6.623*	*Cum*
	Section 6-6	2	*1.18*	*0.800*		*1.887*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.06*	*0.150*	*0.600*	*1.818*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**36.92**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.300 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.926*	*2.140*	*10.370*	*Cum*
	Section 2-2	*2*	*3.50*	*1.194*	*2.140*	*17.886*	*Cum*
	Section 3-3	*2*	*2.70*	*1.074*	*1.940*	*11.251*	*Cum*
	Section 5-5	*2*	*2.40*	*2.076*	*2.140*	*21.356*	*Cum*
	Section 6-6	*2*	*1.04*	*1.074*	*1.940*	*4.317*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.100*	*0.650*	*0.411*	*Cum*
	U/S Floor	*1*	*2.50*	*1.100*	*2.070*	*5.693*	*Cum*
	D/S Floor	*1*	*3.50*	*1.100*	*1.050*	*4.043*	*Cum*
		1	*3.00*	*1.100*	*0.850*	*2.805*	*Cum*
	D/S Key Floor	*1*	*0.75*	*1.100*	*1.350*	*1.114*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						84.33	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.56*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*5.27*	*1.100*	*0.150*	*0.87*	*Cum*
		1	*0.50*	*1.100*	*0.150*	*0.08*	*Cum*
		1	*1.45*	*1.100*	*0.150*	*0.24*	*Cum*
		1	*1.34*	*1.100*	*0.150*	*0.22*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.926*	*0.150*	*0.73*	*Cum*
	Section 2-2	*2*	*3.50*	*1.194*	*0.150*	*1.25*	*Cum*
	Section 3-3	*2*	*2.70*	*1.074*	*0.150*	*0.87*	*Cum*
	Section 5-5	*2*	*2.40*	*2.076*	*0.150*	*1.50*	*Cum*
	Section 6-6	*2*	*1.04*	*1.074*	*0.150*	*0.33*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**9.80**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*1.038*	*1.960*	*4.21*	*Cum*
		2	*1.03*	*1.776*	*0.700*	*2.57*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.672*	*0.740*	*3.48*	*Cum*
		2	*3.50*	*1.044*	*0.700*	*5.12*	*Cum*
	Section 3-3	*2*	*2.39*	*0.450*	*0.450*	*0.97*	*Cum*
		2	*2.39*	*0.612*	*0.540*	*1.58*	*Cum*
		2	*2.39*	*0.924*	*0.550*	*2.43*	*Cum*
	Section 5-5	*2*	*2.34*	*0.450*	*0.450*	*0.95*	*Cum*
		2	*2.34*	*1.038*	*1.960*	*9.54*	*Cum*
		2	*2.34*	*1.776*	*0.700*	*5.83*	*Cum*
	Section 6-6	*2*	*1.50*	*0.450*	*0.450*	*0.61*	*Cum*
		2	*1.50*	*0.612*	*0.540*	*0.99*	*Cum*
		2	*1.50*	*0.924*	*0.550*	*1.52*	*Cum*
	Floor	*1*	*0.58*	*1.100*	*0.500*	*0.32*	*Cum*
		1	*6.00*	*1.100*	*0.700*	*4.62*	*Cum*
		1	*0.15*	*1.100*	*0.300*	*0.05*	*Cum*
		1	*0.20*	*1.100*	*0.450*	*0.10*	*Cum*
		1	*2.80*	*1.100*	*0.550*	*1.69*	*Cum*
		1	*0.75*	*1.100*	*1.200*	*0.99*	*Cum*
	Crest	*1*	*1.00*	*1.100*	*1.554*	*1.71*	*Cum*
	TOTAL					**51.09**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.100*	*0.150*	*0.12*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.85*	*0.450*	*0.050*	*0.27*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.85*	*0.450*	*0.050*	*0.27*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**51.09**	**0.00**	**0.153**	**7850.0**	**1203.18**	**Kg**
	Total Weight in Metric Tonne					**1.20**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*1.960*	*8.10*	*Sqm*
		4		*1.038*	*1.960*	*8.14*	*Sqm*
		4	*1.03*		*0.700*	*2.89*	*Sqm*
		4		*1.776*	*0.700*	*4.97*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.740*	*10.36*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*3.50*		*0.700*	*9.80*	*Sqm*
		4		*1.044*	*0.700*	*2.92*	*Sqm*
	Section 3-3	*4*	*2.39*		*0.450*	*4.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.39*		*0.540*	*5.16*	*Sqm*
		4		*0.612*	*0.540*	*1.32*	*Sqm*
		4	*2.39*		*0.550*	*5.25*	*Sqm*
		4		*0.924*	*0.550*	*2.03*	*Sqm*
	Section 5-5	*4*	*2.34*		*0.450*	*4.22*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.34*		*1.960*	*18.37*	*Sqm*
		4		*1.038*	*1.960*	*8.14*	*Sqm*
		4	*2.34*		*0.700*	*6.56*	*Sqm*
		4		*1.776*	*0.700*	*4.97*	*Sqm*
	Section 6-6	*4*	*1.50*		*0.450*	*2.70*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.50*		*0.540*	*3.24*	*Sqm*
		4		*0.612*	*0.540*	*1.32*	*Sqm*
		4	*1.50*		*0.550*	*3.30*	*Sqm*
		4		*0.924*	*0.550*	*2.03*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*6.00*		*0.700*	*8.40*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
		2	*0.15*		*0.300*	*0.09*	*Sqm*
		2		*1.100*	*0.300*	*0.66*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*1.100*	*0.450*	*0.99*	*Sqm*
		2	*2.80*		*0.550*	*3.08*	*Sqm*
		2		*1.100*	*0.550*	*1.21*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*1.100*	*1.200*	*2.64*	*Sqm*
	Crest	*2*	*1.00*		*1.554*	*3.11*	*Sqm*
		2		*1.100*	*1.554*	*3.42*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**179.41**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.124*		*7.43*	*Sqm*
	TOTAL					**7.43**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.85*	*0.450*		*5.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.85*	*0.450*		*5.33*	*Sqm*
	TOTAL					**10.66**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.534		4.53	**Cum**
	Abutment						
	Section 1-1	2	*1.26*	*0.985*		*2.478*	*Cum*
	Section 2-2	2	*3.50*	*0.863*		*6.041*	*Cum*
	Section 3-3	2	*2.70*	*0.644*		*3.478*	*Cum*
	Section 5-5	2	*2.40*	*0.961*		*4.621*	*Cum*
	Section 6-6	2	*1.04*	*0.644*		*1.334*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**24.36**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.304 METER AT CH. 4.900 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.42*	*1.377*	*1.043*	*4.075*	*Cum*
	Section 2-2	*2*	*3.50*	*1.194*	*1.043*	*8.717*	*Cum*
	Section 3-3	*2*	*2.25*	*1.074*	*0.843*	*4.074*	*Cum*
	Section 5-5	*2*	*2.56*	*1.527*	*1.043*	*8.159*	*Cum*
	Section 6-6	*2*	*1.04*	*1.074*	*0.843*	*1.876*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.100*	*0.850*	*0.584*	*Cum*
	U/S Floor	*1*	*1.70*	*1.100*	*1.154*	*2.158*	*Cum*
	D/S Floor	*1*	*2.55*	*1.100*	*0.850*	*2.384*	*Cum*
		1	*2.50*	*1.100*	*0.650*	*1.788*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.100*	*0.850*	*0.584*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						39.48	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.56*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.74*	*1.100*	*0.150*	*0.12*	*Cum*
		1	*3.46*	*1.100*	*0.150*	*0.57*	*Cum*
		1	*0.28*	*1.100*	*0.150*	*0.05*	*Cum*
		1	*1.14*	*1.100*	*0.150*	*0.19*	*Cum*
		1	*0.78*	*1.100*	*0.150*	*0.13*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.42*	*1.377*	*0.150*	*0.59*	*Cum*
	Section 2-2	*2*	*3.50*	*1.194*	*0.150*	*1.25*	*Cum*
	Section 3-3	*2*	*2.25*	*1.074*	*0.150*	*0.72*	*Cum*
	Section 5-5	*2*	*2.56*	*1.527*	*0.150*	*1.17*	*Cum*
	Section 6-6	*2*	*1.04*	*1.074*	*0.150*	*0.33*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**8.75**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*0.763*	*1.044*	*1.90*	*Cum*
		2	*1.19*	*1.227*	*0.500*	*1.46*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.672*	*0.740*	*3.48*	*Cum*
		2	*3.50*	*1.044*	*0.500*	*3.65*	*Cum*
	Section 3-3	*2*	*1.94*	*0.450*	*0.450*	*0.78*	*Cum*
		2	*1.94*	*0.612*	*0.540*	*1.28*	*Cum*
		2	*1.94*	*0.924*	*0.500*	*1.79*	*Cum*
	Section 5-5	*2*	*2.52*	*0.450*	*0.450*	*1.02*	*Cum*
		2	*2.52*	*0.763*	*1.044*	*4.01*	*Cum*
		2	*2.52*	*1.227*	*0.500*	*3.09*	*Cum*
	Section 6-6	*2*	*1.50*	*0.450*	*0.450*	*0.61*	*Cum*
		2	*1.50*	*0.612*	*0.540*	*0.99*	*Cum*
		2	*1.50*	*0.924*	*0.500*	*1.38*	*Cum*
	Floor	*1*	*0.63*	*1.100*	*0.700*	*0.48*	*Cum*
		1	*4.25*	*1.100*	*0.500*	*2.34*	*Cum*
		1	*0.31*	*1.100*	*0.200*	*0.07*	*Cum*
		1	*0.20*	*1.100*	*0.400*	*0.09*	*Cum*
		1	*2.30*	*1.100*	*0.500*	*1.27*	*Cum*
		1	*0.63*	*1.100*	*0.700*	*0.48*	*Cum*
	Crest	*1*	*0.70*	*1.100*	*0.641*	*0.49*	*Cum*
	TOTAL					**32.57**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.100*	*0.150*	*0.10*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.94*	*0.450*	*0.050*	*0.22*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.94*	*0.450*	*0.050*	*0.22*	*Cum*
	TOTAL					**0.55**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**32.57**	**0.00**	**0.098**	**7850.0**	**767.02**	**Kg**
	Total Weight in Metric Tonne					**0.77**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.19*		*0.450*	*2.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*1.044*	*4.98*	*Sqm*
		4		*0.763*	*1.044*	*3.19*	*Sqm*
		4	*1.19*		*0.500*	*2.39*	*Sqm*
		4		*1.227*	*0.500*	*2.45*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.740*	*10.36*	*Sqm*
		4		*0.672*	*0.740*	*1.99*	*Sqm*
		4	*3.50*		*0.500*	*7.00*	*Sqm*
		4		*1.044*	*0.500*	*2.09*	*Sqm*
	Section 3-3	*4*	*1.94*		*0.450*	*3.49*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.94*		*0.540*	*4.19*	*Sqm*
		4		*0.612*	*0.540*	*1.32*	*Sqm*
		4	*1.94*		*0.500*	*3.88*	*Sqm*
		4		*0.924*	*0.500*	*1.85*	*Sqm*
	Section 5-5	*4*	*2.52*		*0.450*	*4.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.52*		*1.044*	*10.51*	*Sqm*
		4		*0.763*	*1.044*	*3.19*	*Sqm*
		4	*2.52*		*0.500*	*5.04*	*Sqm*
		4		*1.227*	*0.500*	*2.45*	*Sqm*
	Section 6-6	*4*	*1.50*		*0.450*	*2.70*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.50*		*0.540*	*3.24*	*Sqm*
		4		*0.612*	*0.540*	*1.32*	*Sqm*
		4	*1.50*		*0.500*	*3.00*	*Sqm*
		4		*0.924*	*0.500*	*1.85*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.100*	*0.200*	*0.44*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.100*	*0.400*	*0.88*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
	Crest	*2*	*0.70*		*0.641*	*0.90*	*Sqm*
		2		*1.100*	*0.641*	*1.41*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**133.29**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.124*		*7.43*	*Sqm*
	TOTAL					**7.43**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.94*	*0.450*		*4.47*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.94*	*0.450*		*4.47*	*Sqm*
	TOTAL					**8.95**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.727		0.73	**Cum**
	Abutment						
	Section 1-1	2	*1.42*	*0.239*		*0.679*	*Cum*
	Section 2-2	2	*3.50*	*0.239*		*1.673*	*Cum*
	Section 3-3	2	*2.25*	*0.144*		*0.648*	*Cum*
	Section 5-5	2	*2.56*	*0.961*		*4.924*	*Cum*
	Section 6-6	2	*1.04*	*0.144*		*0.299*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**10.82**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR RASALPUR-II SUB DY AT CH 1.360 KM .								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PI	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	121.755	Cum	**195.20**	23766.54			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.95	Cum	**6381.70**	50745.24	2.58	3.58	7.16
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	33.78	Cum	**6914.20**	233538.91	13.93	14.52	29.05
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	27.33	Cum	**8151.40**	222758.74	15.49	10.66	21.59
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.89	MT	**73574.90**	212382.47			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	211.20	Sqm	**578.60**	122202.61			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.20	Cum	**66.00**	277.20			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	10.50	Rm	**36993.21**	388428.71			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	85.36	Cum	**149.30**	12744.86			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.760	Cum	**1075.00**	30917.03			
	Coarse Aggregates (100 Km lead)	57.793	Cum	**1398.00**	80795.09			
	Cement (30 km lead)	32.004	MT	**742.00**	23746.99			
	Steel (30 Km lead)	2.89	MT	**742.00**	2141.87			
	TOTAL (In Rs.)				**1417679.56**			
	TOTAL (In Rs.) For RASALPUR-II SUB DY.				**1417679.56**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.76	Cum	**584.64**	16814.26	1681.43		
	Coarse Aggregate	57.79	Cum	**944.26**	54571.94	5457.19		
	Total					7138.62		
	For 1 nos. fall, Total Seigniorage charges					**7138.62**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR RASALPUR-II SUB DY.							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 1.360							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.01*	*1.66*	*2.15*	*14.37*	*Cum*
		1	*4.79*	*1.92*	*2.15*	*19.74*	*Cum*
	Extra for Slope (0.5:1)	*2*	*6.80*	*1.08*	*2.15*	*31.41*	*Cum*
	Left abutment	*2*	*2.01*	*1.66*	*2.15*	*14.37*	*Cum*
		1	*4.79*	*1.92*	*2.15*	*19.74*	*Cum*
	Extra for Slope (0.5:1)	*2*	*4.79*	*1.08*	*2.15*	*22.12*	*Cum*
	TOTAL					**121.75**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.92*	*1.49*	*0.20*	*1.14*	*Cum*
		1	*3.71*	*1.84*	*0.20*	*1.36*	*Cum*
	Left abutment	*2*	*1.92*	*1.49*	*0.20*	*1.14*	*Cum*
		1	*3.71*	*1.84*	*0.20*	*1.36*	*Cum*
	Levelling course	*2*	*5.25*	*3.50*	*0.08*	*2.94*	*Cum*
	TOTAL					**7.95**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*4.79*	*1.72*	*0.20*	*1.64*	*Cum*
		1	*4.79*	*1.57*	*0.80*	*6.00*	*Cum*
		1	*4.79*	*1.02*	*1.33*	*6.48*	*Cum*
		1	*4.79*	*0.82*	*0.45*	*1.77*	*Cum*
	Return wall	*2*	*1.91*	*1.46*	*0.20*	*1.12*	*Cum*
		2	*1.91*	*1.26*	*0.80*	*3.86*	*Cum*
		2	*1.91*	*0.63*	*1.55*	*3.74*	*Cum*
		2	*1.91*	*0.40*	*0.15*	*0.23*	*Cum*
	Left abutment	*1*	*4.79*	*1.72*	*0.20*	*1.64*	*Cum*
		1	*4.79*	*1.57*	*0.80*	*6.00*	*Cum*
		1	*4.79*	*1.02*	*1.33*	*6.48*	*Cum*
		1	*4.79*	*0.82*	*0.45*	*1.77*	*Cum*
	Return wall	*2*	*1.91*	*1.46*	*0.20*	*1.12*	*Cum*
		2	*1.91*	*1.26*	*0.80*	*3.86*	*Cum*
		2	*1.91*	*0.63*	*1.55*	*3.74*	*Cum*
		2	*1.91*	*0.40*	*0.15*	*0.23*	*Cum*
	TOTAL					**33.78**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	3.56	5.25	0.37	*6.90*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Approch Slab	*2*	*3.50*	*5.25*	*0.30*	*11.03*	*Cum*
	Wearing coat	*1*	*10.56*	*4.25*	*0.08*	*3.37*	*Cum*
	Parapet	*2*	*10.56*	*0.44*	*0.18*	*1.64*	*Cum*
		2	*10.56*	*0.35*	*0.25*	*1.85*	*Cum*
		2	*10.56*	*0.22*	*0.55*	*2.54*	*Cum*
	TOTAL					**27.33**	**Cum**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*37*	*4.12*		*1.578*	*240.6*	*Kg*
a2	*10*	*18*	*5.75*		*0.616*	*63.8*	*Kg*
a3	*10*	*2*	*5.15*		*0.616*	*6.3*	*Kg*
a4	*10*	*21*	*4.04*		*0.616*	*52.3*	*Kg*
a5	*10*	*14*	*5.65*		*0.616*	*48.8*	*Kg*
	APPROACH SLAB						
c1	*12*	*66*	*3.70*		*0.888*	*216.8*	*Kg*
c2	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
c3	*12*	*66*	*3.70*		*0.888*	*216.8*	*Kg*
c4	*12*	*46*	*5.45*		*0.888*	*222.5*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*60*	*2.37*		*0.888*	*126.3*	*Kg*
x2	*16*	*60*	*1.32*		*1.578*	*125.4*	*Kg*
x3	*12*	*24*	*3.46*		*0.888*	*73.7*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*33.78*	*0.0025*	*0.084*	*7850.00*	*662.868*	*Kg*
	Total Reinforcement Steel (in kg)					*2886.6*	*Kg*
	Total Weight in Metric Tonne					**2.89**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*4.79*		*0.20*	*1.91*	*Sqm*
		2		*1.72*	*0.20*	*0.69*	*Sqm*
		2	*4.79*		*0.80*	*7.66*	*Sqm*
		2		*1.57*	*0.80*	*2.51*	*Sqm*
		2	*4.79*		*1.33*	*12.71*	*Sqm*
		2		*1.02*	*1.33*	*2.71*	*Sqm*
		2	*4.79*		*0.45*	*4.31*	*Sqm*
		2		*0.82*	*0.45*	*0.74*	*Sqm*
	Return wall	*2*	*1.91*		*0.20*	*0.76*	*Sqm*
		2		*1.46*	*0.20*	*0.59*	*Sqm*
		2	*1.91*		*0.80*	*3.05*	*Sqm*
		2		*1.26*	*0.80*	*2.02*	*Sqm*
		2	*1.91*		*1.55*	*5.91*	*Sqm*
		2		*0.63*	*1.55*	*1.96*	*Sqm*
		2	*1.91*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*4.79*		*0.20*	*1.91*	*Sqm*
		2		*1.72*	*0.20*	*0.69*	*Sqm*
		2	*4.79*		*0.80*	*7.66*	*Sqm*
		2		*1.57*	*0.80*	*2.51*	*Sqm*
		2	*4.79*		*1.33*	*12.71*	*Sqm*
		2		*1.02*	*1.33*	*2.71*	*Sqm*
		2	*4.79*		*0.45*	*4.31*	*Sqm*
		2		*0.82*	*0.45*	*0.74*	*Sqm*
	Return wall	*2*	*1.91*		*0.20*	*0.76*	*Sqm*
		2		*1.46*	*0.20*	*0.59*	*Sqm*
		2	*1.91*		*0.80*	*3.05*	*Sqm*
		2		*1.26*	*0.80*	*2.02*	*Sqm*
		2	*1.91*		*1.55*	*5.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.63*	*1.55*	*1.96*	*Sqm*
		2	*1.91*		*0.15*	*0.57*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*3.56*		*0.37*	*2.63*	*Sqm*
		1	*3.56*	5.25		*18.69*	*Sqm*
		2		*5.25*	0.37	*3.87*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.25		*36.75*	*Sqm*
		4		*5.25*	0.30	*6.30*	*Sqm*
	Parapet	*4*	*10.56*		*0.18*	*7.39*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*10.56*		*0.25*	*10.56*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*10.56*		*0.55*	*23.23*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**211.20**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.25*	*0.40*		*4.20*	*Sqm*
	TOTAL					**4.20**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.25*			*10.50*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	4.79	1.52		*14.57*	*Cum*
	Right and left Return wall	4	2.01	2.15		*17.26*	*Cum*
	Extra slope	*2*	*6.795*	*1.075*	*2.15*	*31.41*	*Cum*
		2	*4.786*	*1.075*	*2.15*	*22.12*	*Cum*
	TOTAL					**85.36**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF RASALPUR-II SUB DY.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	DRAINAGE CROSSING	0.060	₹ 28,843.81
2	CULVERT	0.310	₹ 0.00
3	FALL (1.838 M)	0.700	₹ 66,801.14
4	FALL (1.220 M)	0.850	₹ 1,888.70
5	CULVERT	1.050	₹ 0.00
6	CD WORKS	1.080	₹ 0.00
7	BRIDGE (PROPOSED)	1.360	₹ 0.00
8	FALL (1.220 M)	1.455	₹ 0.00
9	FALL (0.610 M)	1.730	₹ 1,18,809.26
10	CULVERT	2.030	₹ 22,258.81
11	FALL (1.520 M)	2.050	₹ 24,227.88
12	FALL (1.067 M)	2.710	₹ 22,607.23
13	CULVERT	2.890	₹ 79,835.45
14	FALL (1.520 M)	3.200	₹ 0.00
15	CULVERT	3.490	₹ 2,435.73
16	FALL (1.520 M)	3.810	₹ 34,322.96
17	PIPE CULVERT	4.280	₹ 0.00
18	FALL (1.220 M) (NEW)	4.300	₹ 0.00
19	FALL (1.520 M)	4.535	₹ 30,284.85
20	CULVERT	4.730	₹ 9,347.09
21	FALL (0.305 M) (NEW)	4.900	₹ 0.00
22	FALL (1.520 M)	5.115	₹ 32,303.84
23	SUPER PASSAGE	5.255	₹ 35,565.30
24	CD WORKS	5.660	₹ 22,765.09
25	FALL (0.61 M)	5.695	₹ 56,826.53
26	CULVERT	5.815	₹ 9,403.38
27	CULVERT	6.315	₹ 7,930.56
28	FALL (1.220 M)	6.375	₹ 8,686.33
29	FALL (1.220 M)	6.870	₹ 15,923.41
30	SYPHON BRIDGE	7.020	₹ 0.00
31	CULVERT	7.260	₹ 8,096.11
32	FALL (1.220 M)	7.510	₹ 19,413.23
33	FALL (0.610 M)	8.077	₹ 29,351.91
34	CULVERT	8.200	₹ 0.00
Total In Rs.			**₹ 6,87,928.60**
Total In Lakhs.			**₹ 6.88**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		4.000	₹ 20,84,074.20
Total In Rs.			**₹ 20,84,074.20**
Total In Lakhs.			**₹ 20.84**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF RASALPUR-II SUB DY.									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR DRAINAGE CROSSING (Ch.-0.060 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.00	Sqm	**11.80**	1652.61			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	59.28	Sqm	**340.20**	20167.83	3.07	0.87	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	59.28	Sqm	**63.20**	3746.64	0.09		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.87	Cum	**1075.00**	930.44			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.16	MT	**742.00**	2346.29			
		TOTAL (In Rs.)				**28843.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.87	Cum	**584.64**	506.02	50.60		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**50.60**		
AOC FOR CULVERT (Ch.-0.310 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch.-0.700 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	26.80	Cum	**2492.58**	66801.14			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**66801.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New fall has been proposed.								
AOC FOR FALL (Ch.-0.850 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.00	Sqm	**11.80**	1888.70			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**1888.70**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR CULVERT (Ch.-1.050 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR CD WORK (Ch.-1.080 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch.-1.455 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch.-1.730 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	13.37	Cum	**6914.20**	92457.97	5.52	5.75	11.50
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.75	Cum	**1075.00**	6181.29			
		Coarse Aggregates (100 Km lead)	11.50	Cum	**1398.00**	16077.11			
		Cement (30 km lead)	5.52	MT	**742.00**	4092.89			
		TOTAL (In Rs.)				**118809.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.75	Cum	**584.64**	3361.70	336.17		
		Coarse Aggregate	11.50	Cum	**944.26**	10859.07	1085.91		
		Total					**1422.08**		
		AOC FOR CULVERT (CH.- 2.030 KM)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.52	Cum	**8151.40**	4210.20	0.29	0.20	0.41
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.35	Sqm	**578.60**	3096.67			
4	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.17	Mt	**73574.90**	12406.03			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.20	Cum	**1075.00**	216.54			
		Coarse Aggregates (100 Km lead)	0.41	Cum	**1398.00**	570.43			
		Cement (30 km lead)	0.29	MT	**742.00**	217.30			
		Steel (30 Km lead)	0.17	MT	**742.00**	125.11			
		TOTAL (In Rs.)				**22258.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.20	Cum	**584.64**	117.77	11.78		
		Coarse Aggregate	0.41	Cum	**944.26**	385.29	38.53		
		Total					**50.31**		
		AOC FOR FALL (Ch.-2.050 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.72	Cum	**2492.58**	24227.88			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**24227.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall has been proposed.							
		AOC FOR FALL (Ch.-2.710 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.20	Sqm	**340.20**	15717.24	2.40	0.67	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	46.20	Sqm	**63.20**	2919.84	0.069		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.67	Cum	**1075.00**	725.11			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.46	MT	**742.00**	1828.52			
		TOTAL (In Rs.)				**22607.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.67	Cum	**584.64**	394.35	39.44		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**39.44**		
		AOC FOR CULVERT (Ch.-2.890 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	1.45	Cum	**2492.58**	3620.90			
2	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.38	Cum	**8151.40**	27510.98	1.91	1.32	2.67
3	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.40	Mt	**73574.90**	29254.10			
4	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.38	Cum	**5021.30**	6929.39	0.16	0.44	
5	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.27	Sqm	**340.20**	2133.05	0.33	0.09	
6	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.27	Sqm	**63.20**	396.26	0.01		
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.85	Cum	**1075.00**	1988.10			
		Coarse Aggregates (100 Km lead)	2.67	Cum	**1398.00**	3727.42			
		Cement (30 km lead)	2.41	MT	**742.00**	1786.03			
		Brick (15 km lead)	690.00	No.	**3.18**	2194.20			
		Steel (30 Km lead)	0.40	MT	**742.00**	295.03			
		TOTAL (In Rs.)				**79835.45**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.85	Cum	**584.64**	1081.23	108.12		
		Coarse Aggregate	2.67	Cum	**944.26**	2517.63	251.76		
		Total					**359.89**		
		AOC FOR FALL (Ch.-3.200Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT (Ch.-3.490 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.45	Sqm	**340.20**	493.29	0.08	0.02	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.45	Sqm	**63.20**	91.64	0.002		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.02	Cum	**1075.00**	22.76			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.08	MT	**742.00**	57.39			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**2435.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.02	Cum	**584.64**	12.38	1.24		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**1.24**		
		AOC FOR FALL (Ch.-3.810 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	72.00	Sqm	**340.20**	24494.40	3.73	1.05	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	72.00	Sqm	**63.20**	4550.40	0.108		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.05	Cum	**1075.00**	1130.04			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.84	MT	**742.00**	2849.64			
		TOTAL (In Rs.)				**34322.96**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.05	Cum	**584.64**	614.57	61.46		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**61.46**		
		AOC FOR PIPE CULVERT (Ch.-4.280 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-4.535 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.15	Cum	**2492.58**	30284.85			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**30284.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		Fall is eleminated							
		AOC FOR CULVERT (Ch.-4.730 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.98	Cum	**5021.30**	4928.19	0.11	0.31	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.23	Sqm	**340.20**	758.51	0.12	0.03	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.23	Sqm	**63.20**	140.91	0.003		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.35	Cum	**1075.00**	372.61			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.23	MT	**742.00**	172.14			
		Brick (15 km lead)	490.00	No.	**3.18**	1558.20			
		TOTAL (In Rs.)				**9347.09**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.35	Cum	**584.64**	202.65	20.26		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**20.26**		
		AOC FOR FALL (Ch.-5.115 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.96	Cum	**2492.58**	32303.84			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**32303.84**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall Proposed							
		AOC FOR SUPER PASSAGE (Ch.-5.255 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.98	Cum	**5021.30**	4928.19	0.11	0.31	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	58.62	Sqm	**340.20**	19942.01	3.04	0.86	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	58.62	Sqm	**63.20**	3704.69	0.088		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.17	Cum	**1075.00**	1257.64			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.24	MT	**742.00**	2403.91			
		Brick (15 km lead)	490.00	No.	**3.18**	1558.20			
		TOTAL (In Rs.)				**35565.30**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.17	Cum	**584.64**	683.97	68.40		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**68.40**		
		AOC FOR CD WORK (Ch.-5.660 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.00	Sqm	**11.80**	2124.79			
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	45.00	Sqm	**340.20**	15309.00	2.33	0.66	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	45.00	Sqm	**63.20**	2844.00	0.068		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.66	Cum	**1075.00**	706.28			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.40	MT	**742.00**	1781.02			
		TOTAL (In Rs.)				**22765.09**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.66	Cum	**584.64**	384.11	38.41		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**38.41**		
		AOC FOR FALL (Ch.-5.695 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.40	Cum	**6914.20**	44222.69	2.64	2.75	5.50
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.75	Cum	**1075.00**	2956.52			
		Coarse Aggregates (100 Km lead)	5.50	Cum	**1398.00**	7689.69			
		Cement (30 km lead)	2.64	MT	**742.00**	1957.63			
		TOTAL (In Rs.)				**56826.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.75	Cum	**584.64**	1607.90	160.79		
		Coarse Aggregate	5.50	Cum	**944.26**	5193.90	519.39		
		Total					**680.18**		
		AOC FOR CULVERT (Ch.-5.815 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.16	Cum	**5021.30**	5843.42	0.13	0.37	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.64	Sqm	**340.20**	899.38	0.14	0.04	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.64	Sqm	**63.20**	167.08	0.004		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.41	Cum	**1075.00**	441.81			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.28	MT	**742.00**	204.11			
		Brick (15 km lead)	581.00	No.	**3.18**	1847.58			
		TOTAL (In Rs.)				**9403.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.41	Cum	**584.64**	240.28	24.03		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**24.03**		
		AOC FOR CULVERT (Ch.-6.315 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.98	Cum	**5021.30**	4928.19	0.11	0.31	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	2.23	Sqm	**340.20**	758.51	0.12	0.03	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.23	Sqm	**63.20**	140.91	0.003		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.35	Cum	**1075.00**	372.61			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.23	MT	**742.00**	172.14			
		Brick (15 km lead)	490.00	No.	**3.18**	1558.20			
		TOTAL (In Rs.)				**7930.56**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.35	Cum	**584.64**	202.65	20.26		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**20.26**		
		AOC FOR FALL (Ch.-6.375 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.00	Sqm	**11.80**	1888.70			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.84	Cum	**5021.30**	4224.16	0.10	0.27	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.91	Sqm	**340.20**	650.15	0.10	0.03	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.91	Sqm	**63.20**	120.78	0.003		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.30	Cum	**1075.00**	319.38			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.20	MT	**742.00**	147.55			
		Brick (15 km lead)	420.00	No.	**3.18**	1335.60			
		TOTAL (In Rs.)				**8686.33**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.30	Cum	**584.64**	173.70	17.37		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**17.37**		
		AOC FOR FALL (Ch.-6.870 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.00	Sqm	**11.80**	1062.40			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	32.40	Sqm	**340.20**	11022.48	1.68	0.47	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	32.40	Sqm	**63.20**	2047.68	0.049		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.47	Cum	**1075.00**	508.52			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.73	MT	**742.00**	1282.34			
		TOTAL (In Rs.)				**15923.41**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.47	Cum	**584.64**	276.56	27.66		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**27.66**		
		AOC FOR SYPHON BRIDGE (Ch.-7.020 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR CULVERT (Ch.-7.260 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.84	Cum	**5021.30**	4224.16	0.10	0.27	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	1.91	Sqm	**340.20**	650.15	0.10	0.03	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	1.91	Sqm	**63.20**	120.78	0.003		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.30	Cum	**1075.00**	319.38			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.20	MT	**742.00**	147.55			
		Brick (15 km lead)	420.00	No.	**3.18**	1335.60			
		TOTAL (In Rs.)				**8096.11**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand	0.30	Cum	**584.64**	173.70	17.37		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**17.37**		
		AOC FOR FALL (Ch.-7.510 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.00	Sqm	**11.80**	2124.79			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.95	Cum	**6914.20**	13453.95	0.80	0.84	1.67
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.84	Cum	**1075.00**	899.47			
		Coarse Aggregates (100 Km lead)	1.67	Cum	**1398.00**	2339.45			
		Cement (30 km lead)	0.80	MT	**742.00**	595.57			
		TOTAL (In Rs.)				**19413.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.84	Cum	**584.64**	489.18	48.92		
		Coarse Aggregate	1.67	Cum	**944.26**	1580.15	158.01		
		Total					**206.93**		
		AOC FOR FALL (Ch.-8.077 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	180.00	Sqm	**11.80**	2124.79			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.06	Cum	**6914.20**	21188.28	1.26	1.32	2.64
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.32	Cum	**1075.00**	1416.55			
		Coarse Aggregates (100 Km lead)	2.64	Cum	**1398.00**	3684.34			
		Cement (30 km lead)	1.26	MT	**742.00**	937.95			
		TOTAL (In Rs.)				**29351.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.32	Cum	**584.64**	770.39	77.04		
		Coarse Aggregate	2.64	Cum	**944.26**	2488.54	248.85		
		Total					**325.89**		
		AOC FOR CULVERT (Ch.-8.200 Km)							
1	**Structure is in good condition and does not requir any repair works.**								

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF RASALPUR-II SUB DY.								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR DRAINAGE CROSSING (Ch.-0.060 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				140.00	Sqm
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Side wall	*2*	*0.45*		*1.15*	*1.04*	*Sqm*
		Bottom Slab	*1*	*19.812*		*2.94*	*58.25*	*Sqm*
		TOTAL					**59.28**	**Sqm**
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Side wall	*2*	*0.45*		*1.15*	*1.04*	*Sqm*
		Bottom Slab	*1*	*19.812*		*2.94*	*58.25*	*Sqm*
		TOTAL					**59.28**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.310 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.700 Km)								
1		New fall has been proposed.						
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Wings	4	2.20	0.50	2.00	*8.80*	*Cum*
		Abutment	2	9.00	0.50	2.00	*18.00*	*Cum*
		TOTAL					***26.80***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.850 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				160.00	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.050 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.080 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.455 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.730 Km)								
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Floor D/S	1	8.00	1.83	0.91	*13.37*	*Cum*
		TOTAL					***13.37***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (CH.- 2.030 KM)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Hand Rail (2Nos)	*4*	*2.00*	*0.18*	*0.20*	*0.28*	*Cum*
		Post	*4*	*0.28*	*0.25*	*0.86*	*0.24*	*Cum*
		Total Quantity of Railing with 4 nos. through post					***0.52***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Hand Rail (2Nos)	4	2.00		0.20	*1.60*	Sqm
			4		0.18	0.20	*0.14*	Sqm
		Post	8	0.28		0.86	*1.89*	Sqm
			8		0.25	0.86	*1.72*	Sqm
		TOTAL					**5.35**	**Sqm**
4	**5.3.22**	**Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.**						
		RCC M-25 (Providing Skin Reinforcement @0.25%)	*0.52*	*0.0025*	*0.001*	######	*10.136*	*Kg*
		Total Reinforcement Steel (in kg)					*168.6*	*Kg*
		Total Weight in Metric Tonne					**0.17**	**MT**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.050 Km)								
1		**New fall has been proposed.**						
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wings	2	2.10	0.50	1.20	*2.52*	*Cum*
		Abutment	2	6.00	0.50	1.20	*7.20*	*Cum*
		TOTAL					***9.72***	***Cum***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.710 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	*4*	*3*		*1.65*	*19.80*	*Sqm*
		Side wall	*2*	*8*		*1.65*	*26.40*	*Sqm*
		TOTAL					**46.20**	**Sqm**
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	*4*	*3*		*1.65*	*19.80*	*Sqm*
		Side wall	*2*	*8*		*1.65*	*26.40*	*Sqm*
		TOTAL					**46.20**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.890 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	5.8.9	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Slab	1	2.44	2.29	0.25	*1.39*	*Cum*
		Post	*1*	*0.28*	*0.25*	*0.86*	*0.06*	*Cum*
		TOTAL					***1.45***	***Cum***
2	5.3.11	**Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Slab	1	3.00	4.50	0.25	*3.38*	*Cum*
		TOTAL					***3.38***	***Cum***
3	5.3.22	**Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.**						
		RCC M-25 (Providing Skin Reinforcement @0.25%)	*3.38*	*0.0025*	*0.008*	######	*66.234*	*Kg*
		Total Reinforcement Steel (in kg)					*397.6*	*Kg*
		Total Weight in Metric Tonne					**0.40**	**MT**
4	5.4.6	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.00	0.25	0.92	*1.38*	*Cum*
		TOTAL					**1.38**	**Cum**
5	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
6	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.200Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.490 Km)								
1	5.1.3	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	5.5.5	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet	*2*	*0.5*		*1.45*	*1.45*	*Sqm*
		TOTAL					**1.45**	**Sqm**
3	5.5.10	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet	*2*	*0.5*		*1.45*	*1.45*	*Sqm*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					**1.45**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.810 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	*4*	*3*		*2.25*	*27.00*	*Sqm*
		Side wall	*2*	*10*		*2.25*	*45.00*	*Sqm*
		TOTAL					**72.00**	**Sqm**
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	*4*	*3*		*2.25*	*27.00*	*Sqm*
		Side wall	*2*	*10*		*2.25*	*45.00*	*Sqm*
		TOTAL					**72.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-4.280 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.535 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing Wall	2	3.00	0.45	1.50	*4.05*	*Cum*
		Abutment	*2*	*6.00*	*0.45*	*1.50*	*8.10*	*Cum*
		TOTAL					***12.15***	***Cum***
		Fall is eleminated						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.730 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	0.92	*0.98*	*Cum*
		TOTAL					**0.98**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	2.09	*2.23*	*Cum*
		TOTAL					**2.23**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	2.09	*2.23*	*Cum*
		TOTAL					**2.23**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.115 Km)								
1		**New fall has been proposed.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Wing Wall	2	3.00	0.45	1.80	*4.86*	*Cum*
		Abutment	*2*	*5.00*	*0.45*	*1.80*	*8.10*	*Cum*
		TOTAL					***12.96***	***Cum***
QUANTITIES OF REPAIRING WORK FOR SUPER PASSAGE (Ch.-5.255 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	0.92	*0.98*	*Cum*
		TOTAL					**0.98**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Side wall	2	28.65	0.3048	3.3	*57.64*	**Sqm**
		Parapet Wall	2	2.13	0.25	0.92	*0.98*	**Sqm**
		TOTAL					**58.62**	**Sqm**
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Side wall	2	28.65	0.3048	3.3	*57.64*	**Sqm**
		Parapet Wall	2	2.1336	0.25	0.92	*0.98*	**Sqm**
		TOTAL					**58.62**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-5.660 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	4	5.00		2.25	*45.00*	**Sqm**
		TOTAL					**45.00**	**Sqm**
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	4	5.00		2.25	*45.00*	**Sqm**
		TOTAL					**45.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.695 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Floor D/S	1	8.00	1.31	0.61	*6.40*	*Cum*
		TOTAL					***6.40***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.815 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.52984	0.25	0.92	*1.16*	*Cum*
		TOTAL					**1.16**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.53	0.25	2.09	*2.64*	*Cum*
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.53	0.25	2.09	*2.64*	*Cum*
		TOTAL					**2.64**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-6.315 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.1336	0.25	0.92	*0.98*	*Cum*
		TOTAL					**0.98**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.13	0.25	2.09	*2.23*	*Cum*
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.13	0.25	2.09	*2.23*	*Cum*
		TOTAL					**2.23**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.375 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and**						
			1				**160.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	1.8288	0.25	0.92	*0.84*	*Cum*
		TOTAL					**0.84**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	1.83	0.25	2.09	*1.91*	*Cum*
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	1.83	0.25	2.09	*1.91*	*Cum*
		TOTAL					**1.91**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.870 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall	*2*	*3*		*1.65*	*9.90*	*Sqm*
		Abutment	*2*	*5*		*2.25*	*22.50*	*Sqm*
		TOTAL					**32.40**	**Sqm**
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall	*2*	*3*		*1.65*	*9.90*	*Sqm*
		Abutment	*2*	*5*		*2.25*	*22.50*	*Sqm*
		TOTAL					**32.40**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR SYPHON BRIDGE (Ch.-7.020 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-7.260 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	1.8288	0.25	0.92	*0.84*	*Cum*
		TOTAL					**0.84**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	1.83	0.25	2.09	*1.91*	*Cum*
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	1.83	0.25	2.09	*1.91*	*Cum*
		TOTAL					**1.91**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.510 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Floor D/S	1	6.00	1.07	0.30	*1.95*	*Cum*
		TOTAL					***1.95***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.077 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**180.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Floor D/S	1	5.00	0.67	0.91	*3.06*	*Cum*
		TOTAL					***3.06***	***Cum***
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-8.200 Km)								
1		**Structure requires no repair work.**						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per RCD 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 4 no., Total Seigniorage charges					**30314.38**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 20 nos. outlet, Total Seigniorage charges					**22003.46**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**WRD SOR 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	26000.00	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	75.00	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	60000.00	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	Sl-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	Sl-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Sondih-I Sub Dy.
(Total Cost – Rs. 3.31 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST (SONDIH-I SUB DISTRIBUTARY)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	SONDIH-I SUB DISTRIBUTARY	1	No.	22521178.43	0.00	₹ 2,25,21,178.43	AOC Earthwork Sondih-I Sub Dy.	8
2	Falls							
	SONDIH-I SUB DISTRIBUTARY							
	1.220 m Fall at Ch. 0.950 Km	1	No.	1078672.46	9481.67	₹ 10,88,154.13	Fall (AOC) Sondih-I Sub Dy.	12
	0.914 m Fall at Ch. 1.500 Km	1	No.	855968.36	7397.80	₹ 8,63,366.15		13
	0.914 m Fall at Ch. 3.700 Km	1	No.	814588.08	6973.95	₹ 8,21,562.02		14
	1.830 m Fall at Ch. 5.910 Km	1	No.	1062607.33	9246.87	₹ 10,71,854.20		15
3	*Pipe Culvert*							
	SONDIH-I SUB DISTRIBUTARY							
	At Km 4.990	1	No.	826696.95	7192.44	₹ 8,33,889.38	Pipe Culvert AOC Sondih-I Sub DY.	29
4	*Repair of Structures*							
	SONDIH-I SUB DISTRIBUTARY	19	No.	1331235.826	11231.48	₹ 13,42,467.30	Abstract (Repair St.) Sondih-I Sub Dy.	34
	APPROACH ROAD	4	No.	521018.55	7578.59	₹ 21,14,388.58	Approach Road AOC	52
5	Outlets							
	SONDIH-I SUB DISTRIBUTARY	19	No.	127744.47	1100.17	₹ 24,48,048.17	Outlet-AOC	56
6	Kilometer Stone	8	No.	3853.40	0.00	₹ 30,827.20	Rates '!F61	87
	TOTAL (In Rs.)					**33135735.57**		
	TOTAL (In Lacs)					**331.36**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK

SONDIH-I SUB DISTRIBUTARY (0.000 TO 7.00 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.980	0.490	49.000	17.560	8.780	878.000
200	100	1.001	0.991	99.050	16.390	16.975	1697.500
300	100	1.044	1.023	102.250	15.570	15.980	1598.000
400	100	1.113	1.079	107.850	14.748	15.159	1515.900
500	100	1.248	1.181	118.050	13.791	14.270	1426.950
600	100	0.912	1.080	108.000	8.039	10.915	1091.500
700	100	0.564	0.738	73.800	6.183	7.111	711.100
800	100	0.183	0.374	37.350	3.153	4.668	466.800
900	100	0.192	0.188	18.750	4.460	3.807	380.650
1000	100	3.536	1.864	186.400	1.721	3.091	309.050
1100	100	1.276	2.406	240.600	1.857	1.789	178.900
1200	100	0.623	0.950	94.950	2.441	2.149	214.900
1300	100	0.479	0.551	55.100	4.032	3.237	323.650
1400	100	0.000	0.240	23.950	23.299	13.666	1366.550
1500	100	0.000	0.000	0.000	23.572	23.436	2343.550
1600	100	1.288	0.644	64.400	1.796	12.684	1268.400
1700	100	0.879	1.084	108.350	4.783	3.290	328.950
1800	100	1.145	1.012	101.200	4.422	4.603	460.250
1900	100	0.225	0.685	68.500	4.525	4.474	447.350
2000	100	1.158	0.692	69.150	6.148	5.337	533.650
2100	100	0.399	0.779	77.850	10.080	8.114	811.400
2200	100	0.195	0.297	29.700	2.933	6.507	650.650
2300	100	0.214	0.205	20.450	2.019	2.476	247.600
2400	100	0.728	0.471	47.100	1.597	1.808	180.800
2500	100	2.195	1.462	146.150	0.991	1.294	129.400
2600	100	0.956	1.576	157.550	1.181	1.086	108.600
2700	100	0.259	0.608	60.750	2.083	1.632	163.200
2800	100	5.858	3.059	305.850	0.594	1.339	133.850
2900	100	0.048	2.953	295.300	6.433	3.514	351.350
3000	100	0.001	0.025	2.450	6.713	6.573	657.300
3100	100	0.307	0.154	15.400	4.414	5.564	556.350
3200	100	0.278	0.293	29.250	4.378	4.396	439.600
3300	100	0.698	0.488	48.800	1.091	2.735	273.450
3400	100	0.302	0.500	50.000	7.429	4.260	426.000
3500	100	0.534	0.418	41.800	5.104	6.267	626.650
3600	100	0.692	0.613	61.300	4.104	4.604	460.400
3700	100	1.807	1.250	124.950	4.818	4.461	446.100
3800	100	1.263	1.535	153.500	3.628	4.223	422.300
3900	100	0.532	0.898	89.750	3.681	3.655	365.450
4000	100	4.017	2.275	227.450	12.709	8.195	819.500
4100	100	0.251	2.134	213.400	4.005	8.357	835.700
4200	100	0.366	0.309	30.850	3.231	3.618	361.800

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.532	0.449	44.900	3.987	3.609	360.900
4400	100	0.147	0.340	33.950	3.370	3.679	367.850
4500	100	0.002	0.075	7.450	4.632	4.001	400.100
4600	100	0.000	0.001	0.100	5.535	5.084	508.350
4700	100	0.000	0.000	0.000	6.214	5.875	587.450
4800	100	0.000	0.000	0.000	6.764	6.489	648.900
4900	100	0.000	0.000	0.000	7.453	7.109	710.850
5000	100	0.000	0.000	0.000	8.775	8.114	811.400
5100	100	0.000	0.000	0.000	5.524	7.150	714.950
5200	100	0.000	0.000	0.000	5.813	5.669	566.850
5300	100	0.000	0.000	0.000	4.055	4.934	493.400
5400	100	0.000	0.000	0.000	8.222	6.139	613.850
5500	100	0.000	0.000	0.000	12.820	10.521	1052.100
5600	100	0.000	0.000	0.000	17.316	15.068	1506.800
5700	100	0.000	0.000	0.000	24.332	20.824	2082.400
5800	100	0.000	0.000	0.000	10.993	17.663	1766.250
5900	100	0.000	0.000	0.000	12.726	11.860	1185.950
6000	100	0.198	0.099	9.900	2.303	7.515	751.450
6100	100	0.219	0.209	20.850	5.770	4.037	403.650
6200	100	0.102	0.161	16.050	12.994	9.382	938.200
6300	100	0.000	0.051	5.100	10.014	11.504	1150.400
6400	100	0.000	0.000	0.000	7.489	8.752	875.150
6500	100	0.026	0.013	1.300	4.516	6.003	600.250
6600	100	2.875	1.451	145.050	2.302	3.409	340.900
6700	100	0.405	1.640	164.000	2.540	2.421	242.100
6800	100	0.506	0.456	45.550	1.884	2.212	221.200
6900	100	0.000	0.253	25.300	3.950	2.917	291.700
7000	100	0.000	0.000	0.000	7.979	5.965	596.450
Total				**4475.800**			**47798.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**4475.800**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**47798.850**
NET QUANTITY OF EARTHWORK IN FILLING							**43323.05**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
SONDIH-I SUB DISTRIBUTARY (0.000 TO 7.050 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 0.950	950	3.89	3695.50	Sqm
0.950 - 2.700	1750	3.39	5932.50	Sqm
2.700 - 4.100	1400	3.03	4242.00	Sqm
4.100 - 5.050	950	2.56	2432.00	Sqm
5.050 - 5.800	750	2.25	1687.50	Sqm
5.800 - 6.150	350	1.90	665.00	Sqm
6.150 - 6.625	475	1.64	779.00	Sqm
6.625 - 7.050	425	1.29	548.25	Sqm
	TOTAL		**19981.75**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 0.950	950	3.890	0.15	554.33	Cum
0.950 - 2.700	1750	3.390	0.15	889.88	Cum
2.700 - 4.100	1400	3.030	0.15	636.30	Cum
4.100 - 5.050	950	2.560	0.15	364.80	Cum
5.050 - 5.800	750	2.250	0.15	253.13	Cum
5.800 - 6.150	350	1.900	0.15	99.75	Cum
6.150 - 6.625	475	1.640	0.15	116.85	Cum
6.625 - 7.050	425	1.290	0.15	82.24	Cum
	TOTAL			**2997.26**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR SONDIH-I SUB DISTRIBUTARY						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	19981.75	Sqm	**11.80**	235872.3685
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	4475.80	Cum	**156.50**	700462.7
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1790.32	Cum	**17.22**	30824.85989
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	43323.05	Cum	**165.12**	7153327.01
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	12996.92	Cum	**174.89**	2273030.46
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	10830.76	Cum	**217.92**	2360239.76
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	19495.37	Cum	**319.14**	6221753.18
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			2997.26	Cum	**196.10**	587763.18
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	47798.85	Cum	**61.88**	2957904.91
TOTAL COST OF EARTHWORK (in Rs.)						**22521178.43**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**225.212**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR SONDIH-I SUB DISTRIBUTARY				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***19981.75***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	4475.800	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1790.32	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	43323.050	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	12996.92	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	10830.76	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	19495.37	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	2997.26	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	47798.85	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-I SUB DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 0.950 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	96.00	Cum	**195.20**	18739.97			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	13.16	Cum	**6381.70**	83976.22	4.26	5.92	11.84
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	73.44	Cum	**6914.20**	507788.47	30.29	31.58	63.16
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.80	Cum	**8151.40**	6522.30	0.45	0.31	0.63
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.73	MT	**73574.90**	127251.08			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	223.30	Sqm	**578.60**	129200.18			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.79	Sqm	**680.10**	8695.08			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.79	Cum	**694.61**	547.01			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.79	Cum	**1237.00**	974.14			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.79	Cum	**1377.70**	1084.94			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.79	Cum	**516.50**	406.74			0.79
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.04	Sqm	**63.20**	761.11			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.08	Cum	**149.30**	3446.35			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	37.81	Cum	**1075.00**	40649.37			
	Coarse Aggregates (100 Km lead)	76.42	Cum	**1398.00**	106838.28			
	Cement (30 km lead)	35.01	MT	**742.00**	25978.71			
	Boulder (60 Km lead)	0.79	Cum	**1159.00**	912.71			
	Brick (15 km lead)	767.00	No.	**3.18**	2439.06			
	Steel (30 Km lead)	1.73	MT	**742.00**	1283.32			
	TOTAL (In Rs.)				**1078672.46**			
	TOTAL (In Rs.)				**1078672.46**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	37.81	Cum	**584.64**	22107.21	2210.72		
	Coarse Aggregate	76.42	Cum	**944.26**	72162.46	7216.25		
	Boulders	0.79	Cum	**694.61**	547.01	54.70		
	Total					9481.67		
	For 1 nos. fall, Total Seigniorage charges					**9481.67**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	104.22	Cum	**195.20**	20343.46			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.82	Cum	**6381.70**	75418.36	3.83	5.32	10.64
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	55.32	Cum	**6914.20**	382484.61	22.82	23.79	47.57
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.72	Cum	**8151.40**	5906.79	0.41	0.28	0.57
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.30	MT	**73574.90**	95850.11			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.22	Sqm	**578.60**	108322.89			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.79	Sqm	**680.10**	8695.08			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.79	Cum	**694.61**	547.01			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.79	Cum	**1237.00**	974.14			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.79	Cum	**1377.70**	1084.94			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.79	Cum	**516.50**	406.74			0.79
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.53	Sqm	**63.20**	665.67			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	32.31	Cum	**149.30**	4824.21			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	29.39	Cum	**1075.00**	31591.79			
	Coarse Aggregates (100 Km lead)	59.57	Cum	**1398.00**	83279.10			
	Cement (30 km lead)	27.06	MT	**742.00**	20077.66			
	Boulder (60 Km lead)	0.79	Cum	**1159.00**	912.71			
	Brick (15 km lead)	767.00	No.	**3.18**	2439.06			
	Steel (30 Km lead)	1.30	MT	**742.00**	966.64			
	TOTAL (In Rs.)				**855968.36**			
	TOTAL (In Rs.)				**855968.36**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	29.39	Cum	**584.64**	17181.23	1718.12		
	Coarse Aggregate	59.57	Cum	**944.26**	56249.73	5624.97		
	Boulders	0.79	Cum	**694.61**	547.01	54.70		
	Total					7397.80		
	For 1 nos. fall, Total Seigniorage charges					**7397.80**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 3.700 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	81.70	Cum	**195.20**	15947.57			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.08	Cum	**6381.70**	77117.17	3.92	5.44	10.88
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	51.44	Cum	**6914.20**	355655.51	21.22	22.12	44.24
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.68	Cum	**8151.40**	5576.29	0.39	0.27	0.54
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.21	MT	**73574.90**	89126.77			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	179.60	Sqm	**578.60**	103914.16			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.52	Sqm	**680.10**	8511.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.56	Cum	**694.61**	390.72			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.56	Cum	**1237.00**	695.81			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.56	Cum	**1377.70**	774.96			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.56	Cum	**516.50**	290.53			0.56
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.44	Sqm	**63.20**	659.92			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	23.79	Cum	**149.30**	3551.69			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	27.82	Cum	**1075.00**	29909.90			
	Coarse Aggregates (100 Km lead)	56.22	Cum	**1398.00**	78589.51			
	Cement (30 km lead)	25.52	MT	**742.00**	18936.94			
	Boulder (60 Km lead)	0.56	Cum	**1159.00**	651.94			
	Brick (15 km lead)	750.00	No.	**3.18**	2385.00			
	Steel (30 Km lead)	1.21	MT	**742.00**	898.84			
	TOTAL (In Rs.)				**814588.08**			
	TOTAL (In Rs.)				**814588.08**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	27.82	Cum	**584.64**	16266.53	1626.65		
	Coarse Aggregate	56.22	Cum	**944.26**	53082.21	5308.22		
	Boulders	0.56	Cum	**694.61**	390.72	39.07		
	Total					6973.95		
	For 1 nos. fall, Total Seigniorage charges					**6973.95**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 5.910 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	116.63	Cum	**195.20**	22765.80			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.90	Cum	**6381.70**	69537.62	3.53	4.90	9.81
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	74.65	Cum	**6914.20**	516112.68	30.79	32.10	64.19
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.78	Cum	**8151.40**	6385.11	0.44	0.31	0.62
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.76	MT	**73574.90**	129337.12			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	236.32	Sqm	**578.60**	136732.27			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.14	Sqm	**680.10**	5533.29			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.12	Cum	**694.61**	83.35			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.12	Cum	**1237.00**	148.44			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.12	Cum	**1377.70**	165.32			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.12	Cum	**516.50**	61.98			0.12
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.51	Sqm	**63.20**	853.60			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	36.75	Cum	**149.30**	5487.21			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	37.31	Cum	**1075.00**	40104.34			
	Coarse Aggregates (100 Km lead)	74.74	Cum	**1398.00**	104487.31			
	Cement (30 km lead)	34.77	MT	**742.00**	25796.20			
	Boulder (60 Km lead)	0.12	Cum	**1159.00**	139.08			
	Brick (15 km lead)	488.00	No.	**3.18**	1551.84			
	Steel (30 Km lead)	1.76	MT	**742.00**	1304.36			
	TOTAL (In Rs.)				**1062607.33**			
	TOTAL (In Rs.)				**1062607.33**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	37.31	Cum	**584.64**	21810.79	2181.08		
	Coarse Aggregate	74.74	Cum	**944.26**	70574.53	7057.45		
	Boulders	0.12	Cum	**694.61**	83.35	8.34		
	Total					9246.87		
	For 1 nos. fall, Total Seigniorage charges					**9246.87**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-I SUB DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 0.950 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.30*	*2.070*	*1.767*	*9.477*	*Cum*
	Section 2-2	*2*	*3.50*	*1.338*	*1.767*	*16.550*	*Cum*
	Section 3-3	*2*	*2.95*	*1.218*	*1.567*	*11.261*	*Cum*
	Section 5-5	*2*	*3.28*	*2.220*	*1.567*	*22.827*	*Cum*
	Section 6-6	*2*	*1.25*	*1.218*	*1.567*	*4.779*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.650*	*0.850*	*0.877*	*Cum*
	U/S Floor	*1*	*2.75*	*1.650*	*2.070*	*9.393*	*Cum*
	D/S Floor	*1*	*5.25*	*1.650*	*0.850*	*7.363*	*Cum*
		1	*4.92*	*1.650*	*0.200*	*1.623*	*Cum*
		1	*3.25*	*1.650*	*0.650*	*3.486*	*Cum*
	D/S Key Floor	*1*	*0.75*	*1.650*	*1.350*	*1.671*	*Cum*
	Toe Wall D/S Portion	*1*	*6.59*	*0.750*	*0.900*	*4.448*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						96.00	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.650*	*0.150*	*0.13*	*Cum*
		1	*0.78*	*1.650*	*0.150*	*0.19*	*Cum*
		1	*5.50*	*1.650*	*0.150*	*1.36*	*Cum*
		1	*0.50*	*1.650*	*0.150*	*0.12*	*Cum*
		1	*1.70*	*1.650*	*0.150*	*0.42*	*Cum*
		1	*1.34*	*1.650*	*0.150*	*0.33*	*Cum*
		1	*0.54*	*1.650*	*0.150*	*0.13*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.30*	*2.070*	*0.150*	*0.80*	*Cum*
	Section 2-2	*2*	*3.50*	*1.338*	*0.150*	*1.40*	*Cum*
	Section 3-3	*2*	*2.95*	*1.218*	*0.150*	*1.08*	*Cum*
	Section 5-5	*2*	*3.28*	*2.220*	*0.150*	*2.19*	*Cum*
	Section 6-6	*2*	*1.25*	*1.218*	*0.150*	*0.46*	*Cum*
	Toe Wall D/S Portion	*1*	*6.59*	*0.750*	*0.300*	*1.48*	*Cum*
	Toe Wall D/S Portion	*1*	*6.29*	*0.450*	*0.600*	*1.70*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**13.16**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.07*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.07*	*1.110*	*2.200*	*5.23*	*Cum*
		2	*1.07*	*1.920*	*0.700*	*2.88*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.744*	*0.980*	*5.10*	*Cum*
		2	*3.50*	*1.188*	*0.700*	*5.82*	*Cum*
	Section 3-3	*2*	*2.57*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.57*	*0.684*	*0.780*	*2.74*	*Cum*
		2	*2.57*	*1.068*	*0.550*	*3.01*	*Cum*
	Section 5-5	*2*	*3.24*	*0.450*	*0.450*	*1.31*	*Cum*
		2	*3.24*	*1.110*	*2.200*	*15.81*	*Cum*
		2	*3.24*	*1.920*	*0.500*	*6.22*	*Cum*
	Section 6-6	*2*	*1.86*	*0.450*	*0.450*	*0.75*	*Cum*
		2	*1.86*	*0.684*	*0.780*	*1.99*	*Cum*
		2	*1.86*	*1.068*	*0.550*	*2.19*	*Cum*
	Floor	*1*	*0.63*	*1.650*	*0.700*	*0.72*	*Cum*
		1	*8.00*	*1.650*	*0.500*	*6.60*	*Cum*
		1	*4.92*	*1.650*	*0.200*	*1.62*	*Cum*
		1	*0.18*	*1.650*	*0.350*	*0.10*	*Cum*
		1	*0.20*	*1.650*	*0.450*	*0.15*	*Cum*
		1	*3.05*	*1.650*	*0.800*	*4.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.75*	*1.650*	*1.200*	*1.49*	*Cum*
	Crest	*1*	*1.06*	*1.650*	*1.603*	*2.80*	*Cum*
	TOTAL					**73.44**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.650*	*0.150*	*0.20*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.38*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.38*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.80**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**73.44**	**0.00**	**0.220**	**7850.0**	**1729.54**	**Kg**
	Total Weight in Metric Tonne					**1.73**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.07*		*0.450*	*1.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.07*		*2.200*	*9.42*	*Sqm*
		4		*1.110*	*2.200*	*9.77*	*Sqm*
		4	*1.07*		*0.700*	*3.00*	*Sqm*
		4		*1.920*	*0.700*	*5.38*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.980*	*13.72*	*Sqm*
		4		*0.744*	*0.980*	*2.92*	*Sqm*
		4	*3.50*		*0.700*	*9.80*	*Sqm*
		4		*1.188*	*0.700*	*3.33*	*Sqm*
	Section 3-3	*4*	*2.57*		*0.450*	*4.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.57*		*0.780*	*8.01*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*2.57*		*0.550*	*5.65*	*Sqm*
		4		*1.068*	*0.550*	*2.35*	*Sqm*
	Section 5-5	*4*	*3.24*		*0.450*	*5.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.24*		*2.200*	*28.49*	*Sqm*
		4		*1.110*	*2.200*	*9.77*	*Sqm*
		4	*3.24*		*0.500*	*6.47*	*Sqm*
		4		*1.920*	*0.500*	*3.84*	*Sqm*
	Section 6-6	*4*	*1.86*		*0.450*	*3.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.86*		*0.780*	*5.81*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*1.86*		*0.550*	*4.09*	*Sqm*
		4		*1.068*	*0.550*	*2.35*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.650*	*0.700*	*2.31*	*Sqm*
		2	*8.00*		*0.500*	*8.00*	*Sqm*
		2		*1.650*	*0.500*	*1.65*	*Sqm*
		2	*0.18*		*0.350*	*0.12*	*Sqm*
		2		*1.650*	*0.350*	*1.16*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*1.650*	*0.450*	*1.49*	*Sqm*
		2	*3.05*		*0.800*	*4.88*	*Sqm*
		2		*1.650*	*0.800*	*2.64*	*Sqm*
		2	*0.75*		*1.200*	*1.80*	*Sqm*
		2		*1.650*	*1.200*	*3.96*	*Sqm*
	Crest	*2*	*1.06*		*1.603*	*3.40*	*Sqm*
		2		*1.650*	*1.603*	*5.29*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.59*		*0.300*	*3.95*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.29*		*0.600*	*7.55*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**223.30**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.557*		*12.79*	*Sqm*
	TOTAL					**12.79**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.050*	*0.300*	**0.79**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.050*	*0.150*	**0.79**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.38*	*0.450*		*6.02*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.38*	*0.450*		*6.02*	*Sqm*
	TOTAL					**12.04**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		6.765		6.77	**Cum**
	Abutment						
	Section 1-1	2	*1.30*	*0.637*		*1.650*	*Cum*
	Section 2-2	2	*3.50*	*0.637*		*4.459*	*Cum*
	Section 3-3	2	*2.95*	*0.452*		*2.667*	*Cum*
	Section 5-5	2	*3.28*	*0.607*		*3.983*	*Cum*
	Section 6-6	2	*1.25*	*0.452*		*1.132*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.59*	*0.150*	*0.600*	*1.977*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**23.08**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 1.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.887*	*2.482*	*11.765*	*Cum*
	Section 2-2	*2*	*3.50*	*1.338*	*2.482*	*23.246*	*Cum*
	Section 3-3	*2*	*1.70*	*1.218*	*2.282*	*9.450*	*Cum*
	Section 5-5	*2*	*2.97*	*2.037*	*2.382*	*28.773*	*Cum*
	Section 6-6	*2*	*1.25*	*1.218*	*2.282*	*6.960*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.650*	*0.850*	*0.877*	*Cum*
	U/S Floor	*1*	*2.50*	*1.650*	*1.764*	*7.277*	*Cum*
	D/S Floor	*1*	*3.50*	*1.650*	*0.850*	*4.909*	*Cum*
		1	*4.79*	*1.650*	*0.100*	*0.791*	*Cum*
		1	*2.00*	*1.650*	*0.650*	*2.145*	*Cum*
	D/S Key Floor	*1*	*0.70*	*1.650*	*1.150*	*1.328*	*Cum*
	Toe Wall D/S Portion	*1*	*6.59*	*0.750*	*0.900*	*4.448*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						104.22	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.650*	*0.150*	*0.13*	*Cum*
		1	*0.78*	*1.650*	*0.150*	*0.19*	*Cum*
		1	*5.32*	*1.650*	*0.150*	*1.32*	*Cum*
		1	*0.42*	*1.650*	*0.150*	*0.10*	*Cum*
		1	*0.49*	*1.650*	*0.150*	*0.12*	*Cum*
		1	*1.12*	*1.650*	*0.150*	*0.28*	*Cum*
		1	*0.54*	*1.650*	*0.150*	*0.13*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.887*	*0.150*	*0.71*	*Cum*
	Section 2-2	*2*	*3.50*	*1.338*	*0.150*	*1.40*	*Cum*
	Section 3-3	*2*	*1.70*	*1.218*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.97*	*2.037*	*0.150*	*1.81*	*Cum*
	Section 6-6	*2*	*1.25*	*1.218*	*0.150*	*0.46*	*Cum*
	Toe Wall D/S Portion	*1*	*6.59*	*0.750*	*0.300*	*1.48*	*Cum*
	Toe Wall D/S Portion	*1*	*6.29*	*0.450*	*0.600*	*1.70*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**11.82**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*1.018*	*1.894*	*3.98*	*Cum*
		2	*1.03*	*1.737*	*0.600*	*2.15*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.744*	*0.980*	*5.10*	*Cum*
		2	*3.50*	*1.188*	*0.600*	*4.99*	*Cum*
	Section 3-3	*2*	*1.32*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.32*	*0.684*	*0.780*	*1.40*	*Cum*
		2	*1.32*	*1.068*	*0.500*	*1.41*	*Cum*
	Section 5-5	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*1.018*	*1.894*	*11.26*	*Cum*
		2	*2.92*	*1.737*	*0.500*	*5.07*	*Cum*
	Section 6-6	*2*	*1.86*	*0.450*	*0.450*	*0.75*	*Cum*
		2	*1.86*	*0.684*	*0.780*	*1.99*	*Cum*
		2	*1.86*	*1.068*	*0.500*	*1.99*	*Cum*
	Floor	*1*	*0.63*	*1.650*	*0.700*	*0.72*	*Cum*
		1	*6.00*	*1.650*	*0.500*	*4.95*	*Cum*
		1	*4.79*	*1.650*	*0.100*	*0.79*	*Cum*
		1	*0.26*	*1.650*	*0.300*	*0.13*	*Cum*
		1	*0.20*	*1.650*	*0.400*	*0.13*	*Cum*
		1	*1.80*	*1.650*	*0.500*	*1.49*	*Cum*
		1	*0.70*	*1.650*	*1.000*	*1.16*	*Cum*
	Crest	*1*	*1.02*	*1.650*	*1.372*	*2.31*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**55.32**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.650*	*0.150*	*0.20*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.70*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.70*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.72**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**55.32**	**0.003**	**0.166**	**7850.0**	**1302.76**	**Kg**
	Total Weight in Metric Tonne					**1.30**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*1.894*	*7.81*	*Sqm*
		4		*1.018*	*1.894*	*7.71*	*Sqm*
		4	*1.03*		*0.600*	*2.48*	*Sqm*
		4		*1.737*	*0.600*	*4.17*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.980*	*13.72*	*Sqm*
		4		*0.744*	*0.980*	*2.92*	*Sqm*
		4	*3.50*		*0.600*	*8.40*	*Sqm*
		4		*1.188*	*0.600*	*2.85*	*Sqm*
	Section 3-3	*4*	*1.32*		*0.450*	*2.37*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.32*		*0.780*	*4.11*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*1.32*		*0.500*	*2.63*	*Sqm*
		4		*1.068*	*0.500*	*2.14*	*Sqm*
	Section 5-5	*4*	*2.92*		*0.450*	*5.26*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.92*		*1.894*	*22.13*	*Sqm*
		4		*1.018*	*1.894*	*7.71*	*Sqm*
		4	*2.92*		*0.500*	*5.84*	*Sqm*
		4		*1.737*	*0.500*	*3.47*	*Sqm*
	Section 6-6	*4*	*1.86*		*0.450*	*3.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.86*		*0.780*	*5.81*	*Sqm*
		4		*0.684*	*0.780*	*2.13*	*Sqm*
		4	*1.86*		*0.500*	*3.72*	*Sqm*
		4		*1.068*	*0.500*	*2.14*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.650*	*0.700*	*2.31*	*Sqm*
		2	*6.00*		*0.500*	*6.00*	*Sqm*
		2		*1.650*	*0.500*	*1.65*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*1.650*	*0.300*	*0.99*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.650*	*0.400*	*1.32*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.650*	*0.500*	*1.65*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*1.650*	*1.000*	*3.30*	*Sqm*
	Crest	*2*	*1.02*		*1.372*	*2.80*	*Sqm*
		2		*1.650*	*1.372*	*4.53*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.59*		*0.300*	*3.95*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.29*		*0.600*	*7.55*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**187.22**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.557*		*12.79*	*Sqm*
	TOTAL					**12.79**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.050*	*0.300*	**0.79**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.050*	*0.150*	**0.79**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.70*	*0.450*		*5.27*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.70*	*0.450*		*5.27*	*Sqm*
	TOTAL					**10.53**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.191		4.19	**Cum**
	Abutment						
	Section 1-1	2	*1.26*	*1.525*		*3.831*	*Cum*
	Section 2-2	2	*3.50*	*1.118*		*7.826*	*Cum*
	Section 3-3	2	*1.70*	*0.876*		*2.978*	*Cum*
	Section 5-5	2	*2.97*	*1.495*		*8.865*	*Cum*
	Section 6-6	2	*1.25*	*0.876*		*2.194*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.59*	*0.150*	*0.600*	*1.977*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**32.31**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 3.700 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.20*	*1.869*	*1.949*	*8.772*	*Cum*
	Section 2-2	*2*	*3.50*	*1.320*	*1.949*	*18.009*	*Cum*
	Section 3-3	*2*	*1.70*	*1.200*	*1.749*	*7.136*	*Cum*
	Section 5-5	*2*	*2.97*	*2.019*	*1.849*	*22.167*	*Cum*
	Section 6-6	*2*	*1.23*	*1.200*	*1.749*	*5.142*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.350*	*0.850*	*0.717*	*Cum*
	U/S Floor	*1*	*2.50*	*1.350*	*1.764*	*5.954*	*Cum*
	D/S Floor	*1*	*3.50*	*1.350*	*0.850*	*4.016*	*Cum*
		1	*4.74*	*1.350*	*0.100*	*0.639*	*Cum*
		1	*2.00*	*1.350*	*0.650*	*1.755*	*Cum*
	D/S Key Floor	*1*	*0.68*	*1.350*	*1.050*	*0.957*	*Cum*
	Toe Wall D/S Portion	*1*	*6.20*	*0.750*	*0.900*	*4.185*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						81.70	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.350*	*0.150*	*0.16*	*Cum*
		1	*5.32*	*1.350*	*0.150*	*1.08*	*Cum*
		1	*0.42*	*1.350*	*0.150*	*0.09*	*Cum*
		1	*5.38*	*1.350*	*0.150*	*1.09*	*Cum*
		1	*1.01*	*1.350*	*0.150*	*0.20*	*Cum*
		1	*0.54*	*1.350*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.20*	*1.869*	*0.150*	*0.68*	*Cum*
	Section 2-2	*2*	*3.50*	*1.320*	*0.150*	*1.39*	*Cum*
	Section 3-3	*2*	*1.70*	*1.200*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*2.97*	*2.019*	*0.150*	*1.80*	*Cum*
	Section 6-6	*2*	*1.23*	*1.200*	*0.150*	*0.44*	*Cum*
	Toe Wall D/S Portion	*1*	*6.20*	*0.750*	*0.300*	*1.40*	*Cum*
	Toe Wall D/S Portion	*1*	*5.90*	*0.450*	*0.600*	*1.59*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**12.08**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*0.450*	*0.450*	*0.40*	*Cum*
		2	*0.98*	*1.009*	*1.864*	*3.68*	*Cum*
		2	*0.98*	*1.719*	*0.600*	*2.02*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.735*	*0.950*	*4.89*	*Cum*
		2	*3.50*	*1.170*	*0.600*	*4.91*	*Cum*
	Section 3-3	*2*	*1.33*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.33*	*0.675*	*0.750*	*1.34*	*Cum*
		2	*1.33*	*1.050*	*0.500*	*1.39*	*Cum*
	Section 5-5	*2*	*2.93*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.93*	*1.009*	*1.864*	*11.00*	*Cum*
		2	*2.93*	*1.719*	*0.500*	*5.03*	*Cum*
	Section 6-6	*2*	*1.75*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.75*	*0.675*	*0.750*	*1.77*	*Cum*
		2	*1.75*	*1.050*	*0.500*	*1.84*	*Cum*
	Floor	*1*	*0.63*	*1.350*	*0.700*	*0.59*	*Cum*
		1	*6.00*	*1.350*	*0.500*	*4.05*	*Cum*
		1	*4.74*	*1.350*	*0.100*	*0.64*	*Cum*
		1	*0.26*	*1.350*	*0.300*	*0.10*	*Cum*
		1	*0.20*	*1.350*	*0.400*	*0.11*	*Cum*
		1	*1.80*	*1.350*	*0.500*	*1.22*	*Cum*
		1	*0.68*	*1.350*	*0.900*	*0.82*	*Cum*
	Crest	*1*	*0.97*	*1.350*	*1.372*	*1.79*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**51.44**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.350*	*0.150*	*0.16*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.60*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.60*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.68**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**51.44**	**0.003**	**0.154**	**7850.0**	**1211.37**	**Kg**
	Total Weight in Metric Tonne					**1.21**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.98*		*0.450*	*1.76*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.98*		*1.864*	*7.30*	*Sqm*
		4		*1.009*	*1.864*	*7.52*	*Sqm*
		4	*0.98*		*0.600*	*2.35*	*Sqm*
		4		*1.719*	*0.600*	*4.13*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.950*	*13.30*	*Sqm*
		4		*0.735*	*0.950*	*2.79*	*Sqm*
		4	*3.50*		*0.600*	*8.40*	*Sqm*
		4		*1.170*	*0.600*	*2.81*	*Sqm*
	Section 3-3	*4*	*1.33*		*0.450*	*2.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.33*		*0.750*	*3.98*	*Sqm*
		4		*0.675*	*0.750*	*2.03*	*Sqm*
		4	*1.33*		*0.500*	*2.65*	*Sqm*
		4		*1.050*	*0.500*	*2.10*	*Sqm*
	Section 5-5	*4*	*2.93*		*0.450*	*5.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.93*		*1.864*	*21.81*	*Sqm*
		4		*1.009*	*1.864*	*7.52*	*Sqm*
		4	*2.93*		*0.500*	*5.85*	*Sqm*
		4		*1.719*	*0.500*	*3.44*	*Sqm*
	Section 6-6	*4*	*1.75*		*0.450*	*3.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.75*		*0.750*	*5.25*	*Sqm*
		4		*0.675*	*0.750*	*2.03*	*Sqm*
		4	*1.75*		*0.500*	*3.50*	*Sqm*
		4		*1.050*	*0.500*	*2.10*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.350*	*0.700*	*1.89*	*Sqm*
		2	*6.00*		*0.500*	*6.00*	*Sqm*
		2		*1.350*	*0.500*	*1.35*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*1.350*	*0.300*	*0.81*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.350*	*0.400*	*1.08*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.350*	*0.500*	*1.35*	*Sqm*
		2	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.350*	*0.900*	*2.43*	*Sqm*
	Crest	*2*	*0.97*		*1.372*	*2.65*	*Sqm*
		2		*1.350*	*1.372*	*3.70*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.20*		*0.300*	*3.72*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.90*		*0.600*	*7.08*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**179.60**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.503*		*12.52*	*Sqm*
	TOTAL					**12.52**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*0.750*	*0.300*	**0.56**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*0.750*	*0.150*	**0.56**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.60*	*0.450*		*5.22*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.60*	*0.450*		*5.22*	*Sqm*
	TOTAL					**10.44**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		3.998		4.00	**Cum**
	Abutment						
	Section 1-1	2	*1.20*	*0.896*		*2.158*	*Cum*
	Section 2-2	2	*3.50*	*0.906*		*6.342*	*Cum*
	Section 3-3	2	*1.70*	*0.656*		*2.230*	*Cum*
	Section 5-5	2	*2.97*	*0.866*		*5.143*	*Cum*
	Section 6-6	2	*1.23*	*0.656*		*1.607*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.20*	*0.150*	*0.600*	*1.860*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**23.79**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 5.910 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.53*	*2.262*	*2.515*	*17.414*	*Cum*
	Section 2-2	*2*	*4.00*	*1.164*	*2.515*	*23.420*	*Cum*
	Section 3-3	*2*	*5.20*	*1.044*	*2.315*	*25.135*	*Cum*
	Section 5-5	*2*	*2.27*	*2.412*	*2.265*	*24.830*	*Cum*
	Section 6-6	*2*	*0.99*	*1.044*	*2.315*	*4.790*	*Cum*
	U/S Key Floor	*1*	*0.65*	*0.800*	*0.950*	*0.494*	*Cum*
	U/S Floor	*1*	*3.50*	*0.800*	*2.880*	*8.064*	*Cum*
	D/S Floor	*1*	*4.00*	*0.800*	*1.050*	*3.360*	*Cum*
		1	*5.72*	*0.800*	*0.250*	*1.144*	*Cum*
		1	*2.50*	*0.800*	*0.850*	*1.700*	*Cum*
	D/S Key Floor	*1*	*0.85*	*0.800*	*1.750*	*1.190*	*Cum*
	Toe Wall D/S Portion	*1*	*4.87*	*0.750*	*0.900*	*3.287*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						116.63	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.800*	*0.150*	*0.07*	*Cum*
		1	*0.89*	*0.800*	*0.150*	*0.11*	*Cum*
		1	*6.72*	*0.800*	*0.150*	*0.81*	*Cum*
		1	*0.50*	*0.800*	*0.150*	*0.06*	*Cum*
		1	*1.70*	*0.800*	*0.150*	*0.20*	*Cum*
		1	*1.34*	*0.800*	*0.150*	*0.16*	*Cum*
		1	*0.54*	*0.800*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.53*	*2.262*	*0.150*	*1.04*	*Cum*
	Section 2-2	*2*	*4.00*	*1.164*	*0.150*	*1.40*	*Cum*
	Section 3-3	*2*	*5.20*	*1.044*	*0.150*	*1.63*	*Cum*
	Section 5-5	*2*	*2.27*	*2.412*	*0.150*	*1.64*	*Cum*
	Section 6-6	*2*	*0.99*	*1.044*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*4.87*	*0.750*	*0.300*	*1.10*	*Cum*
	Toe Wall D/S Portion	*1*	*4.57*	*0.450*	*0.600*	*1.23*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.90**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.31*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.31*	*1.206*	*2.520*	*7.94*	*Cum*
		2	*1.31*	*2.112*	*0.950*	*5.24*	*Cum*
	Section 2-2	*2*	*4.00*	*0.450*	*0.450*	*1.62*	*Cum*
		2	*4.00*	*0.657*	*0.690*	*3.63*	*Cum*
		2	*4.00*	*1.014*	*0.950*	*7.71*	*Cum*
	Section 3-3	*2*	*4.83*	*0.450*	*0.450*	*1.96*	*Cum*
		2	*4.83*	*0.597*	*0.490*	*2.82*	*Cum*
		2	*4.83*	*0.894*	*0.800*	*6.91*	*Cum*
	Section 5-5	*2*	*2.23*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.23*	*1.206*	*2.520*	*13.55*	*Cum*
		2	*2.23*	*2.112*	*0.700*	*6.59*	*Cum*
	Section 6-6	*2*	*1.44*	*0.450*	*0.450*	*0.58*	*Cum*
		2	*1.44*	*0.597*	*0.490*	*0.84*	*Cum*
		2	*1.44*	*0.894*	*0.650*	*1.67*	*Cum*
	Floor	*1*	*0.65*	*0.800*	*0.800*	*0.42*	*Cum*
		1	*7.50*	*0.800*	*0.700*	*4.20*	*Cum*
		1	*5.72*	*0.800*	*0.250*	*1.14*	*Cum*
		1	*0.18*	*0.800*	*0.350*	*0.05*	*Cum*
		1	*0.20*	*0.800*	*0.700*	*0.11*	*Cum*
		1	*2.30*	*0.800*	*0.800*	*1.47*	*Cum*
		1	*0.15*	*0.800*	*0.725*	*0.09*	*Cum*
		1	*2.85*	*0.800*	*0.650*	*1.48*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.85*	*0.800*	*1.600*	*1.09*	*Cum*
	Crest	*1*	*1.25*	*0.800*	*2.128*	*2.12*	*Cum*
	TOTAL					**74.65**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*0.800*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.01*	*0.450*	*0.050*	*0.34*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.01*	*0.450*	*0.050*	*0.34*	*Cum*
	TOTAL					**0.78**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**74.65**	**0.00**	**0.224**	**7850.0**	**1757.90**	**Kg**
	Total Weight in Metric Tonne					**1.76**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.31*		*0.450*	*2.35*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.31*		*2.520*	*13.16*	*Sqm*
		4		*1.206*	*2.520*	*12.16*	*Sqm*
		4	*1.31*		*0.950*	*4.96*	*Sqm*
		4		*2.112*	*0.950*	*8.03*	*Sqm*
	Section 2-2	*4*	*4.00*		*0.450*	*7.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.00*		*0.690*	*11.04*	*Sqm*
		4		*0.657*	*0.690*	*1.81*	*Sqm*
		4	*4.00*		*0.950*	*15.20*	*Sqm*
		4		*1.014*	*0.950*	*3.85*	*Sqm*
	Section 3-3	*4*	*4.83*		*0.450*	*8.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.83*		*0.490*	*9.46*	*Sqm*
		4		*0.597*	*0.490*	*1.17*	*Sqm*
		4	*4.83*		*0.800*	*15.45*	*Sqm*
		4		*0.894*	*0.800*	*2.86*	*Sqm*
	Section 5-5	*4*	*2.23*		*0.450*	*4.01*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.23*		*2.520*	*22.46*	*Sqm*
		4		*1.206*	*2.520*	*12.16*	*Sqm*
		4	*2.23*		*0.700*	*6.24*	*Sqm*
		4		*2.112*	*0.700*	*5.91*	*Sqm*
	Section 6-6	*4*	*1.44*		*0.450*	*2.59*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.44*		*0.490*	*2.82*	*Sqm*
		4		*0.597*	*0.490*	*1.17*	*Sqm*
		4	*1.44*		*0.650*	*3.74*	*Sqm*
		4		*0.894*	*0.650*	*2.32*	*Sqm*
	Floor	*2*	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*0.800*	*0.800*	*1.28*	*Sqm*
		2	*7.50*		*0.700*	*10.50*	*Sqm*
		2		*0.800*	*0.700*	*1.12*	*Sqm*
		2	*0.18*		*0.350*	*0.12*	*Sqm*
		2		*0.800*	*0.350*	*0.56*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*0.800*	*0.700*	*1.12*	*Sqm*
		2	*2.30*		*0.800*	*3.68*	*Sqm*
		2		*0.800*	*0.800*	*1.28*	*Sqm*
		2	*0.85*		*1.600*	*2.72*	*Sqm*
		2		*0.800*	*1.600*	*2.56*	*Sqm*
	Crest	*2*	*1.25*		*2.128*	*5.31*	*Sqm*
		2		*0.800*	*2.128*	*3.40*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.87*		*0.300*	*2.92*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.57*		*0.600*	*5.48*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**236.32**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.034*		*8.14*	*Sqm*
	TOTAL					**8.14**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.200*	*0.300*	**0.12**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.200*	*0.150*	**0.12**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*15.01*	*0.450*		*6.75*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.01*	*0.450*		*6.75*	*Sqm*
	TOTAL					**13.51**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		11.752		11.75	**Cum**
	Abutment						
	Section 1-1	2	*1.53*	*1.143*		*3.499*	*Cum*
	Section 2-2	2	*4.00*	*0.849*		*6.792*	*Cum*
	Section 3-3	2	*5.20*	*0.636*		*6.614*	*Cum*
	Section 5-5	2	*2.27*	*1.113*		*5.059*	*Cum*
	Section 6-6	2	*0.99*	*0.614*		*1.216*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.87*	*0.150*	*0.600*	*1.461*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**36.75**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT OF SONDIH I SUB DY									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR PIPE CULVERT AT KM 4.990									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	80.477	Cum	**156.50**	12594.63			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	25.45	Cum	**6381.70**	162432.64	8.25	11.45	22.91
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	39.342	Cum	**6914.20**	272017.37	16.23	16.92	33.83
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	159.922	Sqm	**578.60**	92531.03			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.77	MT	**73574.90**	56805.98			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.16	Cum	**694.61**	1500.36			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.16	Cum	**1237.00**	2671.92			
9	M-148 RCD	Supplying 1000 mm NP3 Pipe	7.50	Rm	**6002.82**	45021.15			
10	5.6.2.4	Labour Charges for Laying of 1000 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.43	Sqm	**680.10**	7095.47			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	38.05	Cum	**149.30**	5680.60			
14	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.10	Cum	**5021.30**	5513.39	0.13	0.35	
15	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.222	Sqm	**340.20**	2116.72	0.32	0.09	
16	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.562	Sqm	**63.20**	161.92	0.004		
17		**Carriage of materials**							
		Coarse Sand (60 Km lead)	28.813	Cum	**1075.00**	30973.96			
		Coarse Aggregates (100 Km lead)	56.742	Cum	**1398.00**	79324.72			
		Cement (30 km lead)	24.928	MT	**742.00**	18496.67			
		Steel (30 km lead)	0.772	MT	**742.00**	572.89			
		Boulder (60 km lead)	2.160	Cum	**1159.00**	2503.44			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1838.00**	13785.00			
		TOTAL (In Rs.)				**826696.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	28.81	Cum	**584.64**	16845.23	1684.52		
		Coarse Aggregate	56.74	Cum	**944.26**	53578.80	5357.88		
		Boulder	2.16	Cum	**694.61**	1500.36	150.04		
		Total					**7192.44**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 4.990 OF SONDIH I SUB DY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*1.14*	*0.85*	*1.20*	*1.16*	*Cum*
	D/S Toe Wall	*1*	*1.14*	*0.85*	*1.20*	*1.16*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*1.20*	*1.39*	*Cum*
		2	*3.14*	*1.97*	*1.20*	*14.83*	*Cum*
	Extra for Slope (.5:1)	*2*	*3.14*	*1.05*	*2.10*	*13.83*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.56*	*1.00*	*1.20*	*1.33*	*Cum*
		2	*4.05*	*1.95*	*1.20*	*18.94*	*Cum*
	Extra for Slope (.5:1)	*2*	*4.05*	*1.05*	*2.10*	*17.84*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.55*	*1.09*	*0.45*	*1.25*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*3.55*	*1.09*	*0.45*	*1.73*	*Cum*
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**80.48**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*1.14*	*0.85*	*0.30*	*0.29*	*Cum*
	U/S Curtain Wall Stem	*1*	*1.14*	*0.45*	*0.90*	*0.46*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*1.14*	*0.85*	*0.30*	*0.29*	*Cum*
	D/S Curtain Wall Stem	*1*	*1.14*	*0.45*	*0.90*	*0.46*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.55*	*1.09*	*0.45*	*1.25*	*Cum*
	Floor Apron (D/S Portion)	*1*	*3.55*	*1.09*	*0.45*	*1.73*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.58*	*1.00*	*0.30*	*0.35*	*Cum*
		2	*3.14*	*1.97*	*0.30*	*3.71*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.56*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*4.05*	*1.95*	*0.30*	*4.74*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.83*	*0.34*	*4.60*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.63*	*0.37*	*3.47*	*Cum*
	TOTAL					**25.45**	**Cum**

4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.58*	*0.30*	*0.50*	*0.17*	*Cum*
		2	*0.58*	*0.45*	*0.63*	*0.33*	*Cum*
		2	*0.58*	*0.60*	*0.90*	*0.63*	*Cum*
	Average of Section A-A & Section C-C	*2*	*3.14*	*0.73*	*0.50*	*2.30*	*Cum*
		2	*3.14*	*1.25*	*0.63*	*4.93*	*Cum*
		2	*3.14*	*1.57*	*0.90*	*8.86*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.56*	*0.30*	*0.50*	*0.17*	*Cum*
		2	*0.56*	*0.45*	*0.63*	*0.31*	*Cum*
		2	*0.56*	*0.60*	*0.90*	*0.60*	*Cum*
	Average of Section E-E & Section G-G	*2*	*4.05*	*0.73*	*0.50*	*2.94*	*Cum*
		2	*4.05*	*1.23*	*0.63*	*6.28*	*Cum*
		2	*4.05*	*1.55*	*0.90*	*11.29*	*Cum*
	Collar Joint	*2*	*1.73*	*0.30*	*1.60*	*1.66*	*Cum*
	Deduct Hume Pipe Area	*1*		*1.13*		*-1.13*	*Cum*
	TOTAL					**39.34**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*1.14*		*0.90*	*2.05*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*1.14*		*0.90*	*2.05*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*1.09*	*0.45*	*0.98*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*3.55*		*0.45*	*3.20*	*Sqm*
		2		*1.09*	*0.45*	*0.98*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.58*		*0.30*	*0.69*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*3.14*		*0.30*	*3.76*	*Sqm*
		4		*1.97*	*0.30*	*2.36*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.56*		*0.30*	*0.67*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*4.05*		*0.30*	*4.86*	*Sqm*
		4		*1.95*	*0.30*	*2.34*	*Sqm*

	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.58*		*0.90*	*2.08*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.58*		*0.63*	*1.46*	*Sqm*
		4		*0.45*	*0.63*	*1.13*	*Sqm*
		4	*0.58*		*0.50*	*1.16*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*3.14*		*0.90*	*11.29*	*Sqm*
		4		*1.57*	*0.90*	*5.65*	*Sqm*
		4	*3.14*		*0.63*	*7.90*	*Sqm*
		4		*1.25*	*0.63*	*3.14*	*Sqm*
		4	*3.14*		*0.50*	*6.27*	*Sqm*
		4		*0.73*	*0.50*	*1.47*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.56*		*0.90*	*2.00*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.56*		*0.63*	*1.40*	*Sqm*
		4		*0.45*	*0.63*	*1.13*	*Sqm*
		4	*0.56*		*0.50*	*1.11*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*4.05*		*0.90*	*14.57*	*Sqm*
		4		*1.55*	*0.90*	*5.58*	*Sqm*
		4	*4.05*		*0.63*	*10.20*	*Sqm*
		4		*1.23*	*0.63*	*3.11*	*Sqm*
		4	*4.05*		*0.50*	*8.09*	*Sqm*
		4		*0.73*	*0.50*	*1.45*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.34*	*5.03*	*Sqm*
		2		*1.83*	*0.34*	*1.23*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.37*	*10.95*	*Sqm*
		4		*0.63*	*0.37*	*0.93*	*Sqm*
	TOTAL					**159.92**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*39.34*	*0.25%*	*0.10*	*7850*	*772.08*	*Kg*
	TOTAL Weight of steel (in kg)					772.08	Kg
	TOTAL Weight of Steel (in Tonne)					**0.77**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**2.16**	**Cum**
8	Providing 1000 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**

10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.74*	*3.00*		*5.22*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.74*	*3.00*		*5.22*	*Sqm*
	TOTAL					**10.43**	**Sqm**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*3.14*	*1.05*	*2.10*	*13.83*	*Cum*
	D/S Transitions Walls	*2*	*4.05*	*1.05*	*2.10*	*17.84*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**38.05**	**Cum**
12	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	1.83	0.5	0.6	*1.10*	*Cum*
	TOTAL					**1.10**	**Cum**
13	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**	**1.83**		**1.7**	**6.22**	*Sqm*
	TOTAL					**6.22**	***Sqm***
14	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**	**1.83**		**0.7**	**2.56**	*Sqm*
	TOTAL					**2.56**	***Sqm***

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SONDIH-I SUB DISTRIBUTARY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	CD WORK	0.800	₹ 2,04,615.26
2	CULVERT	0.895	₹ 4,552.01
3	FALL (1.220 M)	0.950	₹ 0.00
4	FALL (0.610 M) + CULVERT	1.250	₹ 2,62,492.37
5	FALL (1.830 M)	1.350	₹ 60,834.84
6	FALL (0.914 M)	1.500	₹ 0.00
7	FALL (0.914 M)	1.780	₹ 1,82,244.45
8	FALL (1.830 M)	1.920	₹ 34,371.29
9	PIPE CULVERT	2.040	₹ 28,469.19
10	BRIDGE	2.125	₹ 36,704.23
11	PIPE CULVERT	2.432	₹ 0.00
12	FALL (1.830 M)	2.800	₹ 2,907.92
13	CROSS DRAINAGE	2.920	₹ 56,142.00
14	FALL (0.610 M)	3.320	₹ 1,19,818.78
15	BRIDGE	3.630	₹ 12,368.50
16	CROSS DRAINAGE	3.640	₹ 1,23,185.54
17	FALL (0.914 M)	3.700	₹ 0.00
18	FALL (0.914 M)	3.995	₹ 0.00
19	BRIDGE	4.005	₹ 0.00
20	CROSS DRAINAGE	4.210	₹ 13,760.20
21	CULVERT	4.990	₹ 0.00
22	FALL (1.220 M)	5.065	₹ 3,689.34
23	CROSS DRAINAGE	5.520	₹ 17,200.25
24	CROSS DRAINAGE	5.670	₹ 65,360.94
25	FALL (1.830 M)	5.910	₹ 24,853.36
26	BRIDGE	6.125	₹ 0.00
27	FALL (1.220 M)	6.600	₹ 77,665.36
Total In Rs.			**₹ 13,31,235.83**
Total In Lakhs.			**₹ 13.31**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		4.000	₹ 20,84,074.20
Total In Rs.			**₹ 20,84,074.20**
Total In Lakhs.			**₹ 20.84**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF SONDIH-I SUB DISTRIBUTARY									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CD WORK (Ch.-0.800 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.00	Cum	**2492.58**	29910.96			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	16.00	Cum	**6381.70**	102107.20	5.18	7.20	14.40
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	68.00	Sqm	**578.60**	39344.80			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	7.20	Cum	**1075.00**	7740.00			
		Coarse Aggregates (100 Km lead)	14.40	Cum	**1398.00**	20131.20			
		Cement (30 km lead)	5.18	MT	**742.00**	3846.53			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**204615.26**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	7.20	Cum	**584.64**	4209.41	420.94		
		Coarse Aggregate	14.40	Cum	**944.26**	13597.34	1359.73		
		Total					**1780.68**		
AOC FOR FOR CULVERT (Ch.-0.895 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.92	Sqm	**340.20**	3376.24	0.514	0.145	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.92	Sqm	**63.20**	627.22	0.01		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.14	Cum	**1075.00**	155.76			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.53	MT	**742.00**	392.79			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**4552.01**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.14	Cum	**584.64**	84.71	8.47		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**8.47**		
AOC FOR FOR FALL/CULVERT (Ch.-1.250 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.40	Cum	**5021.30**	7040.26	0.16	0.45	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.37	Sqm	**340.20**	2167.18	0.330	0.093	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.37	Sqm	**63.20**	402.60	0.01		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	26.03	Cum	**6914.20**	179988.45	10.74	11.19	22.39
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	29.58	Sqm	**578.60**	17113.71			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	11.74	Cum	**1075.00**	12615.46			
		Coarse Aggregates (100 Km lead)	22.39	Cum	**1398.00**	31297.40			
		Cement (30 km lead)	11.24	MT	**742.00**	8339.63			
		Brick (15 km lead)	701.00	No.	**3.18**	2229.18			
		TOTAL (In Rs.)				**262492.37**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	11.74	Cum	**584.64**	6860.93	686.09		
		Coarse Aggregate	22.39	Cum	**944.26**	21139.40	2113.94		
		Total					**2800.03**		
		AOC FOR FALL (Ch.-1.350 Km)							
1	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	18.00	Sqm	**63.20**	1137.60	0.03		
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.40	Cum	**6381.70**	34461.18	1.75	2.43	4.86
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	25.08	Sqm	**578.60**	14511.29			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.43	Cum	**1075.00**	2612.25			
		Coarse Aggregates (100 Km lead)	4.86	Cum	**1398.00**	6794.28			
		Cement (30 km lead)	1.78	MT	**742.00**	1318.24			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**60834.84**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.43	Cum	**584.64**	1420.68	142.07		
		Coarse Aggregate	4.86	Cum	**944.26**	4589.10	458.91		
		Total					**600.98**		
		AOC FOR FOR FALL/CULVERT (Ch.-1.780 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.00	Sqm	**11.80**	1888.70			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.75	Cum	**6914.20**	129624.99	7.73	8.06	16.12
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	23.83	Sqm	**578.60**	13786.55			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	8.06	Cum	**1075.00**	8666.10			
		Coarse Aggregates (100 Km lead)	16.12	Cum	**1398.00**	22539.92			
		Cement (30 km lead)	7.73	MT	**742.00**	5738.19			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**182244.45**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	8.06	Cum	**584.64**	4713.07	471.31		
		Coarse Aggregate	16.12	Cum	**944.26**	15224.28	1522.43		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**1993.74**		
		AOC FOR FOR FALL (Ch.-1.920 Km)							
1	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	19.50	Sqm	**63.20**	1232.40	0.03		
2	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.54	Cum	**6381.70**	3446.12	0.17	0.24	0.49
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.56	Cum	**6914.20**	17702.56	1.06	1.10	2.20
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.12	Sqm	**578.60**	5852.65			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.34	Cum	**1075.00**	1444.73			
		Coarse Aggregates (100 Km lead)	2.69	Cum	**1398.00**	3757.65			
		Cement (30 km lead)	1.26	MT	**742.00**	935.17			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**34371.29**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.34	Cum	**584.64**	785.72	78.57		
		Coarse Aggregate	2.69	Cum	**944.26**	2538.05	253.81		
		Total					**332.38**		
		AOC FOR PIPE CULVERT (Ch.-2.040 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	160.00	Sqm	**11.80**	1888.70			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.29	Cum	**5021.30**	11478.69	0.26	0.73	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	22.86	Sqm	**340.20**	7776.97	1.185	0.334	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	22.86	Sqm	**63.20**	1444.75	0.03		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.07	Cum	**1075.00**	1145.17			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.48	MT	**742.00**	1100.16			
		Brick (15 km lead)	1143.00	No.	**3.18**	3634.74			
		TOTAL (In Rs.)				**28469.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.07	Cum	**584.64**	622.80	62.28		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**62.28**		
		AOC FOR BRIDGE (Ch.-2.125 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	2.29	Cum	**5021.30**	11478.69	0.26	0.73	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	22.86	Sqm	**340.20**	7776.97	1.185	0.334	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	22.86	Sqm	**63.20**	1444.75	0.03		
4	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	0.92	Cum	**6381.70**	5839.26	0.30	0.41	0.82
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	4.27	Sqm	**578.60**	2470.62			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.48	Cum	**1075.00**	1587.80			
		Coarse Aggregates (100 Km lead)	0.82	Cum	**1398.00**	1151.25			
		Cement (30 km lead)	1.78	MT	**742.00**	1320.14			
		Brick (15 km lead)	1143.00	No.	**3.18**	3634.74			
		TOTAL (In Rs.)				**36704.23**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.48	Cum	**584.64**	863.53	86.35		
		Coarse Aggregate	0.82	Cum	**944.26**	777.60	77.76		
		Total					**164.11**		
		AOC FOR PIPE CULVERT (Ch.-2.432 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL (Ch.-2.800 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	26.86	Sqm	**63.20**	1697.58	0.04		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.04	MT	**742.00**	29.90			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**2907.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FOR CD WORK (Ch.-2.920 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.00	Sqm	**11.80**	1652.61			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	97.90	Sqm	**340.20**	33305.58	5.075	1.429	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	16.50	Sqm	**63.20**	1042.80	0.02		
4	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.26	Cum	**6381.70**	8040.94	0.41	0.57	1.13
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.40	Sqm	**578.60**	4281.64			
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.00	Cum	**1075.00**	2146.07			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	1.13	Cum	**1398.00**	1585.33			
		Cement (30 km lead)	5.51	MT	**742.00**	4087.03			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**56142.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.00	Cum	**584.64**	1167.14	116.71		
		Coarse Aggregate	1.13	Cum	**944.26**	1070.79	107.08		
		Total					**223.79**		
		AOC FOR FOR FALL(Ch.-3.320Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.17	Cum	**6914.20**	84150.45	5.02	5.23	10.47
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	17.75	Sqm	**578.60**	10268.23			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.23	Cum	**1075.00**	5625.89			
		Coarse Aggregates (100 Km lead)	10.47	Cum	**1398.00**	14632.55			
		Cement (30 km lead)	5.02	MT	**742.00**	3725.14			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**119818.78**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.23	Cum	**584.64**	3059.65	305.96		
		Coarse Aggregate	10.47	Cum	**944.26**	9883.36	988.34		
		Total					**1294.30**		
		AOC FOR BRIDGE(Ch.-3.630 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.24	Cum	**5021.30**	6213.86	0.14	0.40	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.98	Sqm	**340.20**	2713.10	0.413	0.116	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.98	Sqm	**63.20**	504.02	0.01		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.51	Cum	**1075.00**	550.87			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.57	MT	**742.00**	421.42			
		Brick (15 km lead)	618.00	No.	**3.18**	1965.24			
		TOTAL (In Rs.)				**12368.50**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.51	Cum	**584.64**	299.59	29.96		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**29.96**		
		AOC FOR FOR CD WORK (Ch.-3.640 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	5.50	Cum	**2492.58**	13709.19			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.00	Cum	**6381.70**	63817.00	3.24	4.50	9.00
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	42.00	Sqm	**578.60**	24301.20			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.50	Cum	**1075.00**	4837.50			
		Coarse Aggregates (100 Km lead)	9.00	Cum	**1398.00**	12582.00			
		Cement (30 km lead)	3.24	MT	**742.00**	2404.08			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				**123185.54**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.50	Cum	**584.64**	2630.88	263.09		
		Coarse Aggregate	9.00	Cum	**944.26**	8498.34	849.83		
		Total					**1112.92**		
		AOC FOR FOR FALL/CULVERT (Ch.-3.995 Km)							
		New fall is proposed with Culvert by BSRDCL							
		AOC FOR FOR BRIDGE (Ch.-4.005 Km)							
		New fall is proposed with Culvert by BSRDCL							
		AOC FOR CD WORK (Ch.-4.210 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	30.00	Sqm	**340.20**	10206.00	1.555	0.438	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	30.00	Sqm	**63.20**	1896.00	0.05		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.44	Cum	**1075.00**	470.85			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	1.60	MT	**742.00**	1187.35			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**13760.20**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.44	Cum	**584.64**	256.07	25.61		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**25.61**		
		AOC FOR FOR BRIDGE (Ch.-5.065 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.00	Sqm	**340.20**	2041.20	0.311	0.088	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	20.57	Sqm	**63.20**	1300.28	0.03		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.09	Cum	**1075.00**	94.17			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.34	MT	**742.00**	253.69			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				**3689.34**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	51.21	5.12		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**5.12**		
		AOC FOR FOR CD WORK (Ch.-5.520 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	37.50	Sqm	**340.20**	12757.50	1.944	0.548	

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	37.50	Sqm	**63.20**	2370.00	0.06		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.55	Cum	**1075.00**	588.56			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.00	MT	**742.00**	1484.19			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				**17200.25**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.55	Cum	**584.64**	320.09	32.01		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**32.01**		
		AOC FOR FOR CD WORK (Ch.-5.670 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	142.50	Sqm	**340.20**	48478.50	7.387	2.081	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	142.50	Sqm	**63.20**	9006.00	0.21		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.08	Cum	**1075.00**	2236.54			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	7.60	MT	**742.00**	5639.90			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				**65360.94**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.08	Cum	**584.64**	1216.34	121.63		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**121.63**		
		AOC FOR FOR FALL/CULVERT (Ch.-5.910 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.45	Cum	**2492.58**	23554.88			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				**24853.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New fall is proposed with Culvert							
		AOC FOR BRIDGE (Ch.-6.125 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FOR FALL(Ch.-6.600 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.00	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.59	Cum	**6914.20**	52505.77	3.13	3.27	6.53
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	15.17	Sqm	**578.60**	8778.48			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.27	Cum	**1075.00**	3510.28			
		Coarse Aggregates (100 Km lead)	6.53	Cum	**1398.00**	9130.00			
		Cement (30 km lead)	3.13	MT	**742.00**	2324.30			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**77665.36**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.27	Cum	**584.64**	1909.07	190.91		
		Coarse Aggregate	6.53	Cum	**944.26**	6166.73	616.67		
		Total					**807.58**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF SONDHI-I SUB DISTRIBUTARY								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.800 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				130.00	Sqm
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		U/S Wing wall	2	6.00	0.50	1.00	*6.00*	*Cum*
		D/S Wing wall	2	6.00	0.50	1.00	*6.00*	*Cum*
		TOTAL					***12.00***	***Cum***
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S Wing wall	2	8.00	0.50	1	*8.00*	*Cum*
		D/S Wing wall	2	8.00	0.50	1	*8.00*	*Cum*
		TOTAL					***16.00***	***Cum***
4	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		U/S Wing wall	4	8.00		1.00	*32.00*	Sqm
			4		0.50	1.00	*2.00*	Sqm
		D/S Wing wall	4	8.00		1.00	*32.00*	Sqm
			4		0.50	1.00	*2.00*	Sqm
		TOTAL					**68.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.895 Km)								
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall U/S	1	2.68		2.45	*6.57*	*Sqm*
		Parapet Wall D/S	1	2.68		1.25	*3.35*	*Sqm*
		TOTAL					**9.92**	***Sqm***
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Parapet Wall	1	2.68		2.45	*6.57*	*Sqm*
		Parapet Wall	1	2.68		1.25	*3.35*	*Sqm*
		TOTAL					**9.92**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-1.250 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				110.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3.048	0.25	0.92	*1.40*	*Cum*
		TOTAL					**1.40**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.05		2.09	*6.37*	*Sqm*
		TOTAL					**6.37**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.05		2.09	*6.37*	*Sqm*
		TOTAL					**6.37**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	10.06	2.13	1.213	*26.03*	*Cum*
		TOTAL					***26.03***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	10.06		1.21	*24.40*	Sqm
			2		2.13	1.21	*5.18*	Sqm
		TOTAL					**29.58**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.350 Km)								
1	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing walls	2	2.00		0.75	*3.00*	*Sqm*
		Abutment	2	10.00		0.75	*15.00*	*Sqm*
		TOTAL					**18.00**	***Sqm***
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment Left Side	1	10.00	0.45	1.2	*5.40*	*Cum*
		TOTAL					***5.40***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment Left Side	2	10.00		1.20	*24.00*	Sqm
			2		0.45	1.20	*1.08*	Sqm
		TOTAL					**25.08**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-1.780 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	11.28	1.83	0.909	*18.75*	*Cum*
		TOTAL					***18.75***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	11.28		0.91	*20.50*	Sqm
			2		1.83	0.91	*3.32*	Sqm
		TOTAL					**23.83**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.920 Km)								
1	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing walls	2	3.00		0.75	*4.50*	*Sqm*
		Abutment	2	10.00		0.75	*15.00*	*Sqm*
		TOTAL					**19.50**	***Sqm***
2	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Abutment Left Side	1	1.00	0.45	1.2	*0.54*	*Cum*
		TOTAL					***0.54***	***Cum***
3	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	1.83	0.70	2	*2.56*	*Cum*
		TOTAL					***2.56***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Crest	2	1.83		2.00	*7.32*	Sqm
			2		0.70	2.00	*2.80*	Sqm
		TOTAL					**10.12**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.040 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**160.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	9.144	0.25	0.5	*2.29*	*Cum*
		TOTAL					**2.29**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	9.14		1.25	*22.86*	*Sqm*
		TOTAL					**22.86**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	9.14		1.25	*22.86*	*Sqm*
		TOTAL					**22.86**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.125 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	9.144	0.25	0.5	*2.29*	*Cum*
		TOTAL					**2.29**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	9.14		1.25	*22.86*	*Sqm*
		TOTAL					**22.86**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	9.14		1.25	*22.86*	*Sqm*
		TOTAL					**22.86**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		D/S Wing wall Right Side	1	3.00	0.50	0.61	*0.92*	*Cum*
		TOTAL					***0.92***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Wing wall Right Side	2	3.00		0.61	*3.66*	Sqm
			2		0.50	0.61	*0.61*	Sqm
		TOTAL					**4.27**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.432 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.800 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**100.00**	**Sqm**
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing walls	2	3.05		0.75	*4.57*	*Sqm*
		Abutment	2	14.86		0.75	*22.29*	*Sqm*
		TOTAL					**26.86**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-2.920 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**140.00**	**Sqm**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.00		4.45	*44.50*	*Sqm*
		Wing walls	4	3.00		4.45	*53.40*	*Sqm*
		TOTAL					**97.90**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.00		0.75	*7.50*	*Sqm*
		Wing walls	4	3.00		0.75	*9.00*	*Sqm*
		TOTAL					**16.50**	***Sqm***
4	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		D/S Abutment Left Side	1	1.40	0.45	2	*1.26*	*Cum*
		TOTAL					***1.26***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Abutment Left Side	2	1.40		2.00	*5.60*	Sqm
			2		0.45	2.00	*1.80*	Sqm
		TOTAL					**7.40**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-3.320Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.49	1.83	1.213	*12.17*	*Cum*
		TOTAL					***12.17***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	5.49		1.21	*13.31*	Sqm
			2		1.83	1.21	*4.44*	Sqm
		TOTAL					**17.75**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-3.630 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	2.75	0.45	0.5	*1.24*	*Cum*
		TOTAL					**1.24**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	2	2.75		1.45	*7.98*	*Sqm*
		TOTAL					**7.98**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	2	2.75		1.45	*7.98*	*Sqm*
		TOTAL					**7.98**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-3.640 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S Wing wall Right Side	1	5.50	0.50	2.00	*5.50*	*Cum*
		TOTAL					***5.50***	***Cum***
3	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		D/S Wing wall Right Side	1	10.00	0.50	2	*10.00*	*Cum*
		TOTAL					***10.00***	***Cum***
4	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Wing wall Right Side	2	10.00		2.00	*40.00*	Sqm
			2		0.50	2.00	*2.00*	Sqm
		TOTAL					**42.00**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-3.995 Km)								
		New fall is proposed with Culvert by BSRDCL						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.005 Km)								
		New Culvert by BSRDCL						
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-4.210 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Side wall Top	2	20.00		0.75	*30.00*	*Sqm*
		TOTAL					**30.00**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Side wall Top	2	20.00		0.75	*30.00*	*Sqm*
		TOTAL					**30.00**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.065 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall Top	4	2.00		0.75	*6.00*	*Sqm*
		TOTAL					**6.00**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment Side wall Top	2	13.72		0.75	*20.57*	*Sqm*
		TOTAL					**20.57**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-5.520 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.00		0.75	*7.50*	*Sqm*
		Wing walls	4	10.00		0.75	*30.00*	*Sqm*
		TOTAL					**37.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.00		0.75	*7.50*	*Sqm*
		Wing walls	4	10.00		0.75	*30.00*	*Sqm*
		TOTAL					**37.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-5.670 Km)								
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Abutment	2	5.00		2.85	*28.50*	*Sqm*
		Wing walls	4	10.00		2.85	*114.00*	*Sqm*
		TOTAL					**142.50**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Abutment	2	5.00		2.85	*28.50*	*Sqm*
		Wing walls	4	10.00		2.85	*114.00*	*Sqm*
		TOTAL					**142.50**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-5.910 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		D/S abutment Side wall	2	7.00	0.45	1.50	*9.45*	*Cum*
		TOTAL					***9.45***	***Cum***
		New fall is proposed with Culvert						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-6.125 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-6.600 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.10	1.68	0.603	*6.16*	*Cum*
		Crest	1	1.68	0.70	1.22	*1.43*	*Cum*
		TOTAL					***7.59***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	6.10		0.60	*7.35*	Sqm
			2		1.68	0.60	*2.02*	Sqm
		Crest	2	1.68		1.22	*4.09*	Sqm
			2		0.70	1.22	*1.71*	Sqm
		TOTAL					**15.17**	**Sqm**

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 2 no., Total Seigniorage charges					**15157.19**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				

5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
		TOTAL (In Rs.)				**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 19 nos. outlet, Total Seigniorage charges					**20903.29**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	WRD SOR 2025 & PL MARCH
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					

		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	SI-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	SI-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13

		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	

	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	

	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					

	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	

	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	

		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**

12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**

13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					

	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	

						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9

		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					

		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**

19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**

20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	

		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**
		Total				384.44	
		Labour					
		Head Mason	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.4	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**

		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	

					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	

		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	

		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	**Reference**		**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**220.00**
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Sondih-II Sub Dy.
(Total Cost – Rs. 4.39 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND
ABSTRACT OF COST (SONDIH-II SUB DISTRIBUTARY)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	SONDIH-II SUB DISTRIBUTARY	1	Job	21545503.74	0.00	₹ 2,15,45,503.74	AOC Earthwork Sondih-Ii Sub Dy.	10
2	Falls							
	SONDIH-II SUB DISTRIBUTARY							
	0.762 m Fall at Ch. 0.624 Km	1	No.	687362.99	5919.01	₹ 6,93,282.00	Fall (AOC) Sondih-II Sub Dy.	14
	1.828 m Fall at Ch. 2.150 Km	1	No.	1466845.83	12900.06	₹ 14,79,745.88		15
	0.457 m Fall at Ch. 2.905 Km	1	No.	1040594.04	8834.02	₹ 10,49,428.06		16
	0.610 m Fall at Ch. 4.250 Km	1	No.	663408.31	5232.10	₹ 6,68,640.41		17
	1.524 m Fall at Ch. 7.500 Km	1	No.	939275.30	8069.19	₹ 9,47,344.49		18
3	*Cross Drainage Works*							
	SONDIH-II SUB DISTRIBUTARY							
	At Km 1.140	1	No.	2097367.93	17249.27	₹ 21,14,617.20	C.D. Main canals-AOC	35
	At Km 3.960	1	No.	3615135.88	30963.97	₹ 36,46,099.85		36
4	*Slab culvert*							
	SONDIH-II SUB DISTRIBUTARY							
	At Km 0.527	1	No.	1452670.62	7689.36	₹ 14,60,359.98	Slab-AOC	44
	At Km 4.877	1	No.	1434727.25	7583.64	₹ 14,42,310.89		46
	At Km 5.120	1	No.	1437462.00	7604.26	₹ 14,45,066.26		48
	At Km 5.150	1	No.	1434963.33	7583.64	₹ 14,42,546.98		50
5	*Repair of Structures*							
	SONDIH-II SUB DISTRIBUTARY	15	No.	1097537.888	8522.63	₹ 11,06,060.52	Abstract (Repair St.) Sondih-II Sub Dy.	63
	APPROACH ROAD	5	No.	521018.55	7578.59	₹ 26,42,985.72	Approach Road AOC	81
6	Outlets							
	SONDIH-II SUB DISTRIBUTARY	17	No.	127744.47	1100.17	₹ 21,90,358.89	Outlet-AOC	85
7	Kilometer Stone	9	No.	3853.40	0.00	₹ 34,680.60	Rates '!F61	116
	TOTAL (In Rs.)					**₹ 4,39,09,031.48**		
	TOTAL (In Lacs)					**439.09**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P

Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x X_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage Cost of =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

CONCRETE MIX RATIO TABLE

Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK
SONDIH SUB DY-II (0.000 TO 8.850 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	2.965	1.483	148.250	22.254	11.127	1112.700
200	100	1.779	2.372	237.200	16.910	19.582	1958.200
300	100	1.361	1.570	157.000	11.573	14.242	1424.150
400	100	1.063	1.212	121.200	7.281	9.427	942.700
500	100	0.249	0.656	65.600	7.984	7.633	763.250
600	100	0.004	0.127	12.650	6.031	7.008	700.750
700	100	0.862	0.433	43.300	3.076	4.554	455.350
800	100	0.031	0.447	44.650	5.893	4.485	448.450
900	100	0.608	0.320	31.950	1.823	3.858	385.800
1000	100	0.477	0.543	54.250	2.174	1.999	199.850
1100	100	0.120	0.299	29.850	5.584	3.879	387.900
1200	100	0.394	0.257	25.700	1.973	3.779	377.850
1300	100	0.037	0.216	21.550	4.486	3.230	322.950
1400	100	0.304	0.171	17.050	3.317	3.902	390.150
1500	100	0.650	0.477	47.700	2.365	2.841	284.100
1600	100	1.448	1.049	104.900	3.390	2.878	287.750
1700	100	0.651	1.050	104.950	4.129	3.760	375.950
1800	100	0.030	0.341	34.050	3.763	3.946	394.600
1900	100	3.796	1.913	191.300	3.079	3.421	342.100
2000	100	0.737	2.267	226.650	3.730	3.405	340.450
2100	100	0.118	0.428	42.750	5.118	4.424	442.400
2200	100	1.204	0.661	66.100	3.137	4.128	412.750
2300	100	0.098	0.651	65.100	6.733	4.935	493.500
2400	100	0.000	0.049	4.900	7.338	7.036	703.550
2500	100	0.000	0.000	0.000	9.217	8.278	827.750
2600	100	1.109	0.555	55.450	2.927	6.072	607.200
2700	100	0.907	1.008	100.800	2.349	2.638	263.800
2800	100	0.551	0.729	72.900	2.477	2.413	241.300
2900	100	0.782	0.667	66.650	1.341	1.909	190.900
3000	100	0.824	0.803	80.300	2.352	1.847	184.650
3100	100	0.734	0.779	77.900	1.979	2.166	216.550
3200	100	0.238	0.486	48.600	4.451	3.215	321.500
3300	100	0.021	0.130	12.950	7.427	5.939	593.900
3400	100	0.000	0.011	1.050	10.549	8.988	898.800
3500	100	7.974	3.987	398.700	3.896	7.223	722.250
3600	100	1.623	4.799	479.850	2.431	3.164	316.350
3700	100	0.464	1.044	104.350	2.651	2.541	254.100
3800	100	0.000	0.232	23.200	12.584	7.618	761.750
3900	100	0.610	0.305	30.500	2.979	7.782	778.150
4000	100	0.386	0.498	49.800	3.091	3.035	303.500
4100	100	0.178	0.282	28.200	3.946	3.519	351.850
4200	100	0.039	0.109	10.850	2.904	3.425	342.500

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	0.822	0.431	43.050	2.844	2.874	287.400
4400	100	0.578	0.700	70.000	3.396	3.120	312.000
4500	100	0.372	0.475	47.500	2.767	3.082	308.150
4600	100	0.000	0.186	18.600	4.107	3.437	343.700
4700	100	0.000	0.000	0.000	7.549	5.828	582.800
4800	100	0.471	0.236	23.550	3.047	5.298	529.800
4900	100	0.554	0.513	51.250	3.381	3.214	321.400
5000	100	1.099	0.827	82.650	3.262	3.322	332.150
5100	100	1.605	1.352	135.200	4.517	3.890	388.950
5200	100	1.066	1.336	133.550	5.239	4.878	487.800
5300	100	0.348	0.707	70.700	3.584	4.412	441.150
5400	100	0.000	0.174	17.400	4.768	4.176	417.600
5500	100	0.000	0.000	0.000	7.697	6.233	623.250
5600	100	0.000	0.000	0.000	7.514	7.606	760.550
5700	100	0.000	0.000	0.000	7.335	7.425	742.450
5800	100	0.000	0.000	0.000	7.156	7.246	724.550
5900	100	0.000	0.000	0.000	6.964	7.060	706.000
6000	100	0.000	0.000	0.000	6.785	6.875	687.450
6100	100	3.296	1.648	164.800	3.865	5.325	532.500
6200	100	1.598	2.447	244.700	2.055	2.960	296.000
6300	100	1.135	1.367	136.650	2.264	2.160	215.950
6400	100	0.814	0.975	97.450	2.113	2.189	218.850
6500	100	0.527	0.671	67.050	3.941	3.027	302.700
6600	100	0.333	0.430	43.000	2.940	3.441	344.050
6700	100	0.147	0.240	24.000	4.746	3.843	384.300
6800	100	0.000	0.074	7.350	7.152	5.949	594.900
6900	100	0.000	0.000	0.000	9.903	8.528	852.750
7000	100	2.929	1.465	146.450	5.585	7.744	774.400
7100	100	1.060	1.995	199.450	20.953	13.269	1326.900
7200	100	0.385	0.723	72.250	4.885	12.919	1291.900
7300	100	0.271	0.328	32.800	5.060	4.973	497.250
7400	100	0.070	0.171	17.050	10.488	7.774	777.400
7500	100	3.929	2.000	199.950	10.092	10.290	1029.000
7600	100	1.168	2.549	254.850	1.060	5.576	557.600
7700	100	0.864	1.016	101.600	0.781	0.921	92.050
7800	100	0.242	0.553	55.300	3.666	2.224	222.350
7900	100	0.000	0.121	12.100	7.005	5.336	533.550
8000	100	0.866	0.433	43.300	2.744	4.875	487.450
8100	100	0.424	0.645	64.500	3.104	2.924	292.400
8200	100	0.304	0.364	36.400	3.057	3.081	308.050
8300	100	0.130	0.217	21.700	5.453	4.255	425.500
8400	100	0.020	0.075	7.500	4.528	4.991	499.050
8500	100	5.064	2.542	254.200	6.948	5.738	573.800
8600	100	0.439	2.752	275.150	3.195	5.072	507.150
8700	100	0.030	0.235	23.450	2.839	3.017	301.700

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	0.000	0.015	1.500	9.481	6.160	616.000
8850	50	0.000	0.000	0.000	13.748	11.615	580.725
Total				**6838.600**			**46557.375**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**6838.600**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**46557.375**
NET QUANTITY OF EARTHWORK IN FILLING							**39718.78**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
SONDHI SUB DY-II (0.000 TO 8.850 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 2.750	2750	3.33	9157.50	Sqm
2.750 - 6.225	3475	2.93	10181.75	Sqm
6.225 - 7.500	1275	2.54	3238.50	Sqm
7.500 - 8.075	575	2.22	1276.50	Sqm
8.075 - 8.500	425	1.70	722.50	Sqm
8.500 - 8.900	400	1.45	580.00	Sqm
	TOTAL		**25156.75**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 2.750	2750	3.330	0.15	1373.63	Cum
2.750 - 6.225	3475	2.930	0.15	1527.26	Cum
6.225 - 7.500	1275	2.540	0.15	485.78	Cum
7.500 - 8.075	575	2.220	0.15	191.48	Cum
8.075 - 8.500	425	1.700	0.15	108.38	Cum
8.500 - 8.900	400	1.450	0.15	87.00	Cum
	TOTAL			**3773.51**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR SONDIH-II SUB DISTRIBUTARY						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	25156.75	Sqm	**11.80**	296960.0863
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	6838.60	Cum	**156.50**	1070240.9
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	2735.44	Cum	**17.22**	47097.47684
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	39718.78	Cum	**165.12**	6558203.68
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	11915.63	Cum	**174.89**	2083924.97
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	9929.69	Cum	**217.92**	2163878.86
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	17873.45	Cum	**319.14**	5704132.43
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			3773.51	Cum	**196.10**	739985.80

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	46557.38	Cum	**61.88**	2881079.52
TOTAL COST OF EARTHWORK (in Rs.)						**21545503.74**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**215.455**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR SONDIH-II SUB DISTRIBUTARY				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***25156.75***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	6838.600	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2735.44	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	39718.775	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	11915.63	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	9929.69	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	17873.45	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	3773.51	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	46557.38	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-II SUB DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 0.624 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	60.557	Cum	**195.20**	11820.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.85	Cum	**6381.70**	69215.86	3.51	4.88	9.76
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.15	Cum	**6914.20**	298342.34	17.80	18.55	37.11
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5405.11	0.38	0.26	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.02	MT	**73574.90**	74764.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	159.08	Sqm	**578.60**	92046.22			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.53	Sqm	**680.10**	7161.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.84	Cum	**694.61**	586.08			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.84	Cum	**1237.00**	1043.72			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.84	Cum	**1377.70**	1162.43			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.84	Cum	**516.50**	435.80			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.65	Sqm	**63.20**	610.15			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	13.62	Cum	**149.30**	2033.03			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.693	Cum	**1075.00**	25470.48			
	Coarse Aggregates (100 Km lead)	47.394	Cum	**1398.00**	66256.20			
	Cement (30 km lead)	21.689	MT	**742.00**	16093.33			
	Boulder (60 Km lead)	0.84	Cum	**1159.00**	977.91			
	Brick (15 km lead)	631.00	No.	**3.18**	2006.58			
	Steel (30 Km lead)	1.02	MT	**742.00**	753.99			
	TOTAL (In Rs.)				**687362.99**			
	TOTAL (In Rs.)				**687362.99**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.69	Cum	**584.64**	13852.15	1385.21		
	Coarse Aggregate	47.39	Cum	**944.26**	44751.85	4475.18		
	Boulders	0.84	Cum	**694.61**	586.08	58.61		
	Total					5919.01		
	For 1 nos. fall, Total Seigniorage charges					**5919.01**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH. 2.150 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	124.378	Cum	**195.20**	24278.67			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.14	Cum	**6381.70**	96629.75	4.91	6.81	13.63
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	104.05	Cum	**6914.20**	719442.28	42.92	44.74	89.49
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.93	Cum	**8151.40**	7591.20	0.53	0.36	0.74
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.45	MT	**73574.90**	180291.23			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	292.54	Sqm	**578.60**	169262.37			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.53	Sqm	**680.10**	7161.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.84	Cum	**694.61**	586.08			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.84	Cum	**1237.00**	1043.72			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.84	Cum	**1377.70**	1162.43			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.84	Cum	**516.50**	435.80			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.63	Sqm	**63.20**	861.45			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	35.13	Cum	**149.30**	5245.18			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	51.920	Cum	**1075.00**	55813.67			
	Coarse Aggregates (100 Km lead)	103.849	Cum	**1398.00**	145180.47			
	Cement (30 km lead)	48.356	MT	**742.00**	35879.96			
	Boulder (60 Km lead)	0.84	Cum	**1159.00**	977.91			
	Brick (15 km lead)	631.00	No.	**3.18**	2006.58			
	Steel (30 Km lead)	2.45	MT	**742.00**	1818.23			
	TOTAL (In Rs.)				**1466845.83**			
	TOTAL (In Rs.)				**1466845.83**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	51.92	Cum	**584.64**	30354.33	3035.43		
	Coarse Aggregate	103.85	Cum	**944.26**	98060.17	9806.02		
	Boulders	0.84	Cum	**694.61**	586.08	58.61		
	Total					12900.06		
	For 1 nos. fall, Total Seigniorage charges					**12900.06**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 2.905 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.628	Cum	**195.20**	13005.86			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.73	Cum	**6381.70**	74881.11	3.80	5.28	10.56
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	60.33	Cum	**6914.20**	417103.32	24.88	25.94	51.88
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	11.06	Cum	**8151.40**	90164.67	6.27	4.31	8.74
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.85	MT	**73574.90**	136029.16			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	208.62	Sqm	**578.60**	120708.97			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.36	Sqm	**680.10**	6365.74			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.51	Cum	**694.61**	354.25			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.51	Cum	**1237.00**	630.87			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.51	Cum	**1377.70**	702.63			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.51	Cum	**516.50**	263.42			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.66	Sqm	**63.20**	420.91			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.33	Cum	**149.30**	1393.12			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	35.534	Cum	**1075.00**	38199.13			
	Coarse Aggregates (100 Km lead)	71.179	Cum	**1398.00**	99507.91			
	Cement (30 km lead)	34.958	MT	**742.00**	25938.66			
	Boulder (60 Km lead)	0.51	Cum	**1159.00**	591.09			
	Brick (15 km lead)	561.00	No.	**3.18**	1783.98			
	Steel (30 Km lead)	1.85	MT	**742.00**	1371.85			
	TOTAL (In Rs.)				**1040594.04**			
	TOTAL (In Rs.)				**1040594.04**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	35.53	Cum	**584.64**	20774.64	2077.46		
	Coarse Aggregate	71.18	Cum	**944.26**	67211.26	6721.13		
	Boulders	0.51	Cum	**694.61**	354.25	35.43		
	Total					8834.02		
	For 1 nos. fall, Total Seigniorage charges					**8834.02**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 4.250 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	53.293	Cum	**195.20**	10402.81			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.91	Cum	**6381.70**	63231.76	3.21	4.46	8.92
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	37.89	Cum	**6914.20**	262013.21	15.63	16.29	32.59
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.61	Cum	**8151.40**	4984.87	0.35	0.24	0.48
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.89	MT	**73574.90**	65660.15			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	148.08	Sqm	**578.60**	85677.27			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	10.53	Sqm	**680.10**	7161.45			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.57	Cum	**694.61**	398.53			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.57	Cum	**1237.00**	709.73			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.57	Cum	**1377.70**	790.46			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.57	Cum	**516.50**	296.34			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.40	Sqm	**63.20**	594.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.25	Cum	**149.30**	1829.14			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	20.992	Cum	**1075.00**	22566.46			
	Coarse Aggregates (100 Km lead)	41.990	Cum	**1398.00**	58702.34			
	Cement (30 km lead)	19.189	MT	**742.00**	14238.01			
	Boulder (60 Km lead)	0.57	Cum	**1159.00**	664.98			
	Brick (15 km lead)	631.00	No.	**3.18**	2006.58			
	Steel (30 Km lead)	0.89	MT	**742.00**	662.18			
	TOTAL (In Rs.)				**663408.31**			
	TOTAL (In Rs.)				**663408.31**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	20.99	Cum	**584.64**	12272.80	1227.28		
	Coarse Aggregate	41.99	Cum	**944.26**	39649.69	3964.97		
	Boulders	0.57	Cum	**694.61**	398.53	39.85		
	Total					5232.10		
	For 1 nos. fall, Total Seigniorage charges					**5232.10**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 7.500 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	89.621	Cum	**195.20**	17493.98			
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.93	Cum	**6381.70**	69750.48	3.54	4.92	9.84
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	63.59	Cum	**6914.20**	439705.73	26.23	27.35	54.69
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.73	Cum	**8151.40**	5986.88	0.42	0.29	0.58
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.50	MT	**73574.90**	110189.64			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	212.47	Sqm	**578.60**	122933.90			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.18	Sqm	**680.10**	4884.48			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.26	Cum	**694.61**	182.34			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.26	Cum	**1237.00**	324.71			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.26	Cum	**1377.70**	361.65			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.26	Cum	**516.50**	135.58			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.05	Sqm	**63.20**	761.51			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.06	Cum	**149.30**	4189.54			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	32.551	Cum	**1075.00**	34991.80			
	Coarse Aggregates (100 Km lead)	65.108	Cum	**1398.00**	91021.49			
	Cement (30 km lead)	30.190	MT	**742.00**	22401.32			
	Boulder (60 Km lead)	0.26	Cum	**1159.00**	304.24			
	Brick (15 km lead)	430.00	No.	**3.18**	1367.40			
	Steel (30 Km lead)	1.50	Cum	**742.00**	1111.26			
	TOTAL (In Rs.)				**939275.30**			
	TOTAL (In Rs.)				**939275.30**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	32.55	Cum	**584.64**	19030.33	1903.03		
	Coarse Aggregate	65.11	Cum	**944.26**	61479.22	6147.92		
	Boulders	0.26	Cum	**694.61**	182.34	18.23		
	Total					8069.19		
	For 1 nos. fall, Total Seigniorage charges					**8069.19**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-II SUB DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 0.624 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.25*	*1.724*	*1.427*	*6.148*	*Cum*
	Section 2-2	*2*	*3.00*	*1.266*	*1.427*	*10.839*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*1.227*	*4.781*	*Cum*
	Section 5-5	*2*	*2.74*	*1.874*	*1.427*	*14.679*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.227*	*3.217*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.850*	*0.850*	*0.983*	*Cum*
	U/S Floor	*1*	*2.00*	*1.850*	*1.427*	*5.280*	*Cum*
	D/S Floor	*1*	*3.00*	*1.850*	*0.850*	*4.718*	*Cum*
		1	*2.00*	*1.850*	*0.650*	*2.405*	*Cum*
	D/S Key Floor	*1*	*0.65*	*1.850*	*0.950*	*1.142*	*Cum*
	Toe Wall D/S Portion	*1*	*6.43*	*0.750*	*0.900*	*4.340*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
						60.56	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*1.850*	*0.150*	*0.22*	*Cum*
		1	*4.38*	*1.850*	*0.150*	*1.21*	*Cum*
		1	*0.28*	*1.850*	*0.150*	*0.08*	*Cum*
		1	*0.59*	*1.850*	*0.150*	*0.16*	*Cum*
		1	*0.90*	*1.850*	*0.150*	*0.25*	*Cum*
		1	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.25*	*1.724*	*0.150*	*0.65*	*Cum*
	Section 2-2	*2*	*3.00*	*1.266*	*0.150*	*1.14*	*Cum*
	Section 3-3	*2*	*1.70*	*1.146*	*0.150*	*0.58*	*Cum*
	Section 5-5	*2*	*2.74*	*1.874*	*0.150*	*1.54*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.43*	*0.750*	*0.300*	*1.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.13*	*0.450*	*0.600*	*1.66*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**10.85**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*0.937*	*1.622*	*3.11*	*Cum*
		2	*1.03*	*1.574*	*0.500*	*1.61*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.708*	*0.860*	*3.65*	*Cum*
		2	*3.00*	*1.116*	*0.500*	*3.35*	*Cum*
	Section 3-3	*2*	*1.35*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.35*	*0.648*	*0.660*	*1.16*	*Cum*
		2	*1.35*	*0.996*	*0.500*	*1.35*	*Cum*
	Section 5-5	*2*	*2.70*	*0.450*	*0.450*	*1.09*	*Cum*
		2	*2.70*	*0.937*	*1.622*	*8.20*	*Cum*
		2	*2.70*	*1.574*	*0.500*	*4.25*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.500*	*1.64*	*Cum*
	Floor	*1*	*0.63*	*1.850*	*0.700*	*0.81*	*Cum*
		1	*5.00*	*1.850*	*0.500*	*4.63*	*Cum*
		1	*0.31*	*1.850*	*0.200*	*0.11*	*Cum*
		1	*0.20*	*1.850*	*0.400*	*0.15*	*Cum*
		1	*1.80*	*1.850*	*0.500*	*1.67*	*Cum*
		1	*0.65*	*1.724*	*0.800*	*0.90*	*Cum*
	Crest	*1*	*0.84*	*1.266*	*1.162*	*1.23*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					**43.15**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.850*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.73*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.73*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**43.15**	**0.00**	**0.129**	**7850.0**	**1016.16**	**Kg**
	Total Weight in Metric Tonne					**1.02**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.85*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*1.622*	*6.65*	*Sqm*
		4		*0.937*	*1.622*	*6.08*	*Sqm*
		4	*1.03*		*0.500*	*2.05*	*Sqm*
		4		*1.574*	*0.500*	*3.15*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.860*	*10.32*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*1.116*	*0.500*	*2.23*	*Sqm*
	Section 3-3	*4*	*1.35*		*0.450*	*2.43*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.660*	*3.57*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.35*		*0.500*	*2.70*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.70*		*0.450*	*4.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.70*		*1.622*	*17.52*	*Sqm*
		4		*0.937*	*1.622*	*6.08*	*Sqm*
		4	*2.70*		*0.500*	*5.40*	*Sqm*
		4		*1.574*	*0.500*	*3.15*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.500*	*3.28*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.850*	*0.700*	*2.59*	*Sqm*
		2	*5.00*		*0.500*	*5.00*	*Sqm*
		2		*1.850*	*0.500*	*1.85*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.850*	*0.200*	*0.74*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.850*	*0.400*	*1.48*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.850*	*0.500*	*1.85*	*Sqm*
		2	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*1.724*	*0.800*	*2.76*	*Sqm*
	Crest	*2*	*0.84*		*1.162*	*1.94*	*Sqm*
		2		*1.266*	*1.162*	*2.94*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*6.43*		*0.300*	*3.86*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.13*		*0.600*	*7.36*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**159.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.340*		*10.53*	*Sqm*
	TOTAL					**10.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*1.250*	*0.300*	**0.84**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*1.250*	*0.150*	**0.84**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.73*	*0.450*		*4.83*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.73*	*0.450*		*4.83*	*Sqm*
	TOTAL					**9.65**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.450		2.45	**Cum**
	Abutment						
	Section 1-1	2	*1.25*	*0.490*		*1.225*	*Cum*
	Section 2-2	2	*3.00*	*0.490*		*2.940*	*Cum*
	Section 3-3	2	*1.70*	*0.348*		*1.183*	*Cum*
	Section 5-5	2	*2.74*	*0.490*		*2.690*	*Cum*
	Section 6-6	2	*1.14*	*0.348*		*0.796*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.43*	*0.150*	*0.600*	*1.929*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**13.62**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.828 METER AT CH. 2.150 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.54*	*2.363*	*1.925*	*13.969*	*Cum*
	Section 2-2	*2*	*4.50*	*1.266*	*1.925*	*21.933*	*Cum*
	Section 3-3	*2*	*4.20*	*1.146*	*1.725*	*16.606*	*Cum*
	Section 5-5	*2*	*2.61*	*2.513*	*1.925*	*25.271*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.725*	*4.523*	*Cum*
	U/S Key Floor	*1*	*0.65*	*1.850*	*0.950*	*1.142*	*Cum*
	U/S Floor	*1*	*4.00*	*1.850*	*1.625*	*12.025*	*Cum*
	D/S Floor	*1*	*4.50*	*1.850*	*1.050*	*8.741*	*Cum*
		1	*6.27*	*1.850*	*0.300*	*3.479*	*Cum*
		1	*1.75*	*1.850*	*0.850*	*2.752*	*Cum*
		1	*2.75*	*1.850*	*0.850*	*4.324*	*Cum*
	D/S Key Floor	*1*	*0.90*	*1.850*	*1.950*	*3.247*	*Cum*
	Toe Wall D/S Portion	*1*	*6.43*	*0.750*	*0.900*	*4.340*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
						124.38	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
		1	*0.90*	*1.850*	*0.150*	*0.25*	*Cum*
		1	*1.08*	*1.850*	*0.150*	*0.30*	*Cum*
		1	*0.42*	*1.850*	*0.150*	*0.12*	*Cum*
		1	*6.24*	*1.850*	*0.150*	*1.73*	*Cum*
		1	*0.57*	*1.850*	*0.150*	*0.16*	*Cum*
		1	*1.35*	*1.850*	*0.150*	*0.37*	*Cum*
		1	*0.41*	*1.850*	*0.150*	*0.11*	*Cum*
		1	*1.15*	*1.850*	*0.150*	*0.32*	*Cum*
		1	*2.01*	*1.850*	*0.150*	*0.56*	*Cum*
		1	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.54*	*2.363*	*0.150*	*1.09*	*Cum*
	Section 2-2	*2*	*4.50*	*1.266*	*0.150*	*1.71*	*Cum*
	Section 3-3	*2*	*4.20*	*1.146*	*0.150*	*1.44*	*Cum*
	Section 5-5	*2*	*2.61*	*2.513*	*0.150*	*1.97*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.43*	*0.750*	*0.300*	*1.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.13*	*0.450*	*0.600*	*1.66*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**15.14**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.31*	*0.450*	*0.450*	*0.53*	*Cum*
		2	*1.31*	*1.257*	*2.688*	*8.85*	*Cum*
		2	*1.31*	*2.213*	*1.000*	*5.80*	*Cum*
	Section 2-2	*2*	*4.50*	*0.450*	*0.450*	*1.82*	*Cum*
		2	*4.50*	*0.708*	*0.860*	*5.48*	*Cum*
		2	*4.50*	*1.116*	*1.000*	*10.04*	*Cum*
	Section 3-3	*2*	*3.84*	*0.450*	*0.450*	*1.56*	*Cum*
		2	*3.84*	*0.648*	*0.660*	*3.28*	*Cum*
		2	*3.84*	*0.996*	*0.800*	*6.12*	*Cum*
	Section 5-5	*2*	*2.57*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.57*	*1.257*	*2.688*	*17.35*	*Cum*
		2	*2.57*	*2.213*	*0.700*	*7.96*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.700*	*2.29*	*Cum*
	Floor	*1*	*0.65*	*1.850*	*0.800*	*0.96*	*Cum*
		1	*8.50*	*1.850*	*0.700*	*11.01*	*Cum*
		1	*6.27*	*1.850*	*0.300*	*3.48*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.20*	*1.850*	*0.400*	*0.15*	*Cum*
		1	*0.20*	*1.850*	*0.700*	*0.26*	*Cum*
		1	*1.55*	*1.850*	*0.800*	*2.29*	*Cum*
		1	*0.10*	*1.850*	*0.750*	*0.14*	*Cum*
		1	*2.65*	*1.850*	*0.700*	*3.43*	*Cum*
		1	*0.90*	*1.850*	*1.800*	*3.00*	*Cum*
	Crest	*1*	*1.26*	*1.850*	*2.208*	*5.14*	*Cum*
	TOTAL					**104.05**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.850*	*0.150*	*0.25*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*15.15*	*0.450*	*0.050*	*0.34*	*Cum*
	On Abutment Top (Right Side)	*1*	*15.15*	*0.450*	*0.050*	*0.34*	*Cum*
	TOTAL					**0.93**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**104.05**	**0.00**	**0.312**	**7850.0**	**2450.44**	**Kg**
	Total Weight in Metric Tonne					**2.45**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.31*		*0.450*	*2.36*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.31*		*2.688*	*14.09*	*Sqm*
		4		*1.257*	*2.688*	*13.51*	*Sqm*
		4	*1.31*		*1.000*	*5.24*	*Sqm*
		4		*2.213*	*1.000*	*8.85*	*Sqm*
	Section 2-2	*4*	*4.50*		*0.450*	*8.10*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.50*		*0.860*	*15.48*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*4.50*		*1.000*	*18.00*	*Sqm*
		4		*1.116*	*1.000*	*4.46*	*Sqm*
	Section 3-3	*4*	*3.84*		*0.450*	*6.91*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.84*		*0.660*	*10.14*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*3.84*		*0.800*	*12.29*	*Sqm*
		4		*0.996*	*0.800*	*3.19*	*Sqm*
	Section 5-5	*4*	*2.57*		*0.450*	*4.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.57*		*2.688*	*27.61*	*Sqm*
		4		*1.257*	*2.688*	*13.51*	*Sqm*
		4	*2.57*		*0.700*	*7.19*	*Sqm*
		4		*2.213*	*0.700*	*6.20*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.700*	*4.60*	*Sqm*
		4		*0.996*	*0.700*	*2.79*	*Sqm*
	Floor	*2*	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*1.850*	*0.800*	*2.96*	*Sqm*
		2	*8.50*		*0.700*	*11.90*	*Sqm*
		2		*1.850*	*0.700*	*2.59*	*Sqm*
		2	*6.269*		*0.300*	*3.76*	*Sqm*
		2		*1.850*	*0.300*	*1.11*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.850*	*0.400*	*1.48*	*Sqm*
		2	*0.20*		*0.700*	*0.28*	*Sqm*
		2		*1.850*	*0.700*	*2.59*	*Sqm*
		2	*1.55*		*0.800*	*2.48*	*Sqm*
		2		*1.850*	*0.800*	*2.96*	*Sqm*
		2	*0.100*		*0.750*	*0.15*	*Sqm*
		2		*1.850*	*0.750*	*2.78*	*Sqm*
		2	*2.650*		*0.700*	*3.71*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.850*	*0.700*	*2.59*	*Sqm*
		2	*0.90*		*1.800*	*3.24*	*Sqm*
		2		*1.850*	*1.800*	*6.66*	*Sqm*
	Crest	*2*	*1.26*		*2.208*	*5.56*	*Sqm*
		2		*1.850*	*2.208*	*8.17*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.43*		*0.300*	*3.86*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.13*		*0.600*	*7.36*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**292.54**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.340*		*10.53*	*Sqm*
	TOTAL					**10.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*1.250*	*0.300*	**0.84**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*1.250*	*0.150*	**0.84**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*15.15*	*0.450*		*6.82*	*Sqm*
	On Abutment Top (Right Side)	*1*	*15.15*	*0.450*		*6.82*	*Sqm*
	TOTAL					**13.63**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		19.145		19.15	**Cum**
	Abutment						
	Section 1-1	2	*1.54*	*0.563*		*1.728*	*Cum*
	Section 2-2	2	*4.50*	*0.563*		*5.064*	*Cum*
	Section 3-3	2	*4.20*	*0.392*		*3.293*	*Cum*
	Section 5-5	2	*2.61*	*0.518*		*2.705*	*Cum*
	Section 6-6	2	*1.14*	*0.377*		*0.863*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.43*	*0.150*	*0.600*	*1.929*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**35.13**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 4.250 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.99*	*1.632*	*1.393*	*4.501*	*Cum*
	Section 2-2	*2*	*2.50*	*1.266*	*1.393*	*8.818*	*Cum*
	Section 3-3	*2*	*2.20*	*1.146*	*1.193*	*6.016*	*Cum*
	Section 5-5	*2*	*2.76*	*1.782*	*1.393*	*13.717*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*1.193*	*3.128*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	U/S Floor	*1*	*2.00*	*1.450*	*1.393*	*4.040*	*Cum*
	D/S Floor	*1*	*2.50*	*1.450*	*0.850*	*3.081*	*Cum*
		1	*2.50*	*1.450*	*0.650*	*2.356*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	Toe Wall D/S Portion	*1*	*6.03*	*0.750*	*0.900*	*4.070*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.25*	*0.600*	*0.750*	*2.025*	*Cum*
						53.29	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*3.88*	*1.450*	*0.150*	*0.84*	*Cum*
		1	*0.28*	*1.450*	*0.150*	*0.06*	*Cum*
		1	*1.14*	*1.450*	*0.150*	*0.25*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.99*	*1.632*	*0.150*	*0.48*	*Cum*
	Section 2-2	*2*	*2.50*	*1.266*	*0.150*	*0.95*	*Cum*
	Section 3-3	*2*	*2.20*	*1.146*	*0.150*	*0.76*	*Cum*
	Section 5-5	*2*	*2.76*	*1.782*	*0.150*	*1.48*	*Cum*
	Section 6-6	*2*	*1.14*	*1.146*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*6.03*	*0.750*	*0.300*	*1.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.73*	*0.450*	*0.600*	*1.55*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.600*	*0.150*	*0.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**9.91**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.77*	*0.450*	*0.450*	*0.31*	*Cum*
		2	*0.77*	*0.891*	*1.470*	*2.00*	*Cum*
		2	*0.77*	*1.482*	*0.500*	*1.13*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.708*	*0.860*	*3.04*	*Cum*
		2	*2.50*	*1.116*	*0.500*	*2.79*	*Cum*
	Section 3-3	*2*	*1.85*	*0.450*	*0.450*	*0.75*	*Cum*
		2	*1.85*	*0.648*	*0.660*	*1.58*	*Cum*
		2	*1.85*	*0.996*	*0.500*	*1.84*	*Cum*
	Section 5-5	*2*	*2.72*	*0.450*	*0.450*	*1.10*	*Cum*
		2	*2.72*	*0.891*	*1.470*	*7.12*	*Cum*
		2	*2.72*	*1.482*	*0.500*	*4.03*	*Cum*
	Section 6-6	*2*	*1.64*	*0.450*	*0.450*	*0.67*	*Cum*
		2	*1.64*	*0.648*	*0.660*	*1.40*	*Cum*
		2	*1.64*	*0.996*	*0.500*	*1.64*	*Cum*
	Floor	*1*	*0.63*	*1.450*	*0.700*	*0.63*	*Cum*
		1	*4.50*	*1.450*	*0.500*	*3.26*	*Cum*
		1	*0.31*	*1.450*	*0.200*	*0.09*	*Cum*
		1	*0.20*	*1.450*	*0.400*	*0.12*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*2.30*	*1.450*	*0.500*	*1.67*	*Cum*
		1	*0.63*	*1.632*	*0.700*	*0.71*	*Cum*
	Crest	*1*	*0.76*	*1.266*	*1.015*	*0.98*	*Cum*
	TOTAL					**37.89**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.450*	*0.150*	*0.14*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.45*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.45*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.61**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**37.89**	**0.00**	**0.114**	**7850.0**	**892.43**	**Kg**
	Total Weight in Metric Tonne					**0.89**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.77*		*0.450*	*1.38*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.77*		*1.470*	*4.50*	*Sqm*
		4		*0.891*	*1.470*	*5.24*	*Sqm*
		4	*0.77*		*0.500*	*1.53*	*Sqm*
		4		*1.482*	*0.500*	*2.96*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.860*	*8.60*	*Sqm*
		4		*0.708*	*0.860*	*2.44*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.116*	*0.500*	*2.23*	*Sqm*
	Section 3-3	*4*	*1.85*		*0.450*	*3.33*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.85*		*0.660*	*4.89*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.85*		*0.500*	*3.70*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Section 5-5	*4*	*2.72*		*0.450*	*4.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.72*		*1.470*	*15.99*	*Sqm*
		4		*0.891*	*1.470*	*5.24*	*Sqm*
		4	*2.72*		*0.500*	*5.44*	*Sqm*
		4		*1.482*	*0.500*	*2.96*	*Sqm*
	Section 6-6	*4*	*1.64*		*0.450*	*2.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.64*		*0.660*	*4.33*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.64*		*0.500*	*3.28*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.450*	*0.700*	*2.03*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.450*	*0.200*	*0.58*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.450*	*0.400*	*1.16*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.632*	*0.700*	*2.28*	*Sqm*
	Crest	*2*	*0.76*		*1.015*	*1.54*	*Sqm*
		2		*1.266*	*1.015*	*2.57*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.03*		*0.300*	*3.62*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.73*		*0.600*	*6.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**148.08**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.340*		*10.53*	*Sqm*
	TOTAL					**10.53**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*0.850*	*0.300*	**0.57**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*0.850*	*0.150*	**0.57**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.45*	*0.450*		*4.70*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.45*	*0.450*		*4.70*	*Sqm*
	TOTAL					**9.40**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.054		2.05	**Cum**
	Abutment						
	Section 1-1	2	*0.99*	*0.464*		*0.918*	*Cum*
	Section 2-2	2	*2.50*	*0.464*		*2.318*	*Cum*
	Section 3-3	2	*2.20*	*0.327*		*1.439*	*Cum*
	Section 5-5	2	*2.76*	*0.464*		*2.561*	*Cum*
	Section 6-6	2	*1.14*	*0.327*		*0.748*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.03*	*0.150*	*0.600*	*1.809*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**12.25**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 7.500 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.38*	*2.084*	*1.936*	*11.132*	*Cum*
	Section 2-2	*2*	*3.50*	*1.170*	*1.936*	*15.847*	*Cum*
	Section 3-3	*2*	*3.95*	*1.050*	*1.736*	*14.407*	*Cum*
	Section 5-5	*2*	*2.61*	*2.234*	*1.936*	*22.607*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*1.736*	*3.646*	*Cum*
	U/S Key Floor	*1*	*0.68*	*1.100*	*1.050*	*0.780*	*Cum*
	U/S Floor	*1*	*3.50*	*1.100*	*1.736*	*6.684*	*Cum*
	D/S Floor	*1*	*3.50*	*1.100*	*0.950*	*3.658*	*Cum*
		1	*5.06*	*1.100*	*0.200*	*1.113*	*Cum*
		1	*1.50*	*1.100*	*0.750*	*1.238*	*Cum*
		1	*2.50*	*1.100*	*0.750*	*2.063*	*Cum*
	D/S Key Floor	*1*	*0.80*	*1.100*	*1.550*	*1.364*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.900*	*3.510*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.75*	*0.600*	*0.750*	*1.575*	*Cum*
						89.62	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*1.01*	*1.100*	*0.150*	*0.17*	*Cum*
		1	*0.84*	*1.100*	*0.150*	*0.14*	*Cum*
		1	*0.28*	*1.100*	*0.150*	*0.05*	*Cum*
		1	*5.14*	*1.100*	*0.150*	*0.85*	*Cum*
		1	*0.50*	*1.100*	*0.150*	*0.08*	*Cum*
		1	*1.04*	*1.100*	*0.150*	*0.17*	*Cum*
		1	*0.07*	*1.100*	*0.150*	*0.01*	*Cum*
		1	*1.15*	*1.100*	*0.150*	*0.19*	*Cum*
		1	*1.57*	*1.100*	*0.150*	*0.26*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.38*	*2.084*	*0.150*	*0.86*	*Cum*
	Section 2-2	*2*	*3.50*	*1.170*	*0.150*	*1.23*	*Cum*
	Section 3-3	*2*	*3.95*	*1.050*	*0.150*	*1.24*	*Cum*
	Section 5-5	*2*	*2.61*	*2.234*	*0.150*	*1.75*	*Cum*
	Section 6-6	*2*	*1.00*	*1.050*	*0.150*	*0.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.750*	*0.300*	*1.17*	*Cum*
	Toe Wall D/S Portion	*1*	*4.90*	*0.450*	*0.600*	*1.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.600*	*0.150*	*0.32*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.75*	*0.300*	*0.600*	*0.63*	*Cum*
	TOTAL					**10.93**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*0.450*	*0.450*	*0.47*	*Cum*
		2	*1.15*	*1.117*	*2.224*	*5.74*	*Cum*
		2	*1.15*	*1.934*	*0.800*	*3.57*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.660*	*0.700*	*3.23*	*Cum*
		2	*3.50*	*1.020*	*0.800*	*5.71*	*Cum*
	Section 3-3	*2*	*3.65*	*0.450*	*0.450*	*1.48*	*Cum*
		2	*3.65*	*0.600*	*0.500*	*2.19*	*Cum*
		2	*3.65*	*0.900*	*0.650*	*4.27*	*Cum*
	Section 5-5	*2*	*2.58*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.58*	*1.117*	*2.224*	*12.82*	*Cum*
		2	*2.58*	*1.934*	*0.600*	*5.99*	*Cum*
	Section 6-6	*2*	*1.45*	*0.450*	*0.450*	*0.59*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.45*	*0.600*	*0.500*	*0.87*	*Cum*
		2	*1.45*	*0.900*	*0.600*	*1.57*	*Cum*
	Floor	*1*	*0.68*	*1.100*	*0.900*	*0.67*	*Cum*
		1	*7.00*	*1.100*	*0.600*	*4.62*	*Cum*
		1	*5.06*	*1.100*	*0.200*	*1.11*	*Cum*
		1	*0.28*	*1.100*	*0.350*	*0.11*	*Cum*
		1	*0.20*	*1.100*	*0.550*	*0.12*	*Cum*
		1	*1.30*	*1.100*	*0.650*	*0.93*	*Cum*
		1	*0.05*	*1.100*	*0.625*	*0.03*	*Cum*
		1	*2.45*	*1.100*	*0.600*	*1.62*	*Cum*
		1	*0.80*	*1.100*	*1.400*	*1.23*	*Cum*
	Crest	*1*	*1.10*	*1.100*	*1.814*	*2.20*	*Cum*
	TOTAL					**63.59**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*1.100*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.39*	*0.450*	*0.050*	*0.30*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.39*	*0.450*	*0.050*	*0.30*	*Cum*
	TOTAL					**0.73**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**63.59**	**0.00**	**0.191**	**7850.0**	**1497.65**	**Kg**
	Total Weight in Metric Tonne					**1.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.15*		*0.450*	*2.08*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.15*		*2.224*	*10.27*	*Sqm*
		4		*1.117*	*2.224*	*9.94*	*Sqm*
		4	*1.15*		*0.800*	*3.69*	*Sqm*
		4		*1.934*	*0.800*	*6.19*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.700*	*9.79*	*Sqm*
		4		*0.660*	*0.700*	*1.85*	*Sqm*
		4	*3.50*		*0.800*	*11.19*	*Sqm*
		4		*1.020*	*0.800*	*3.26*	*Sqm*
	Section 3-3	*4*	*3.65*		*0.450*	*6.57*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.65*		*0.500*	*7.30*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*3.65*		*0.650*	*9.50*	*Sqm*
		4		*0.900*	*0.650*	*2.34*	*Sqm*
	Section 5-5	*4*	*2.58*		*0.450*	*4.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.58*		*2.224*	*22.95*	*Sqm*
		4		*1.117*	*2.224*	*9.94*	*Sqm*
		4	*2.58*		*0.600*	*6.19*	*Sqm*
		4		*1.934*	*0.600*	*4.64*	*Sqm*
	Section 6-6	*4*	*1.45*		*0.450*	*2.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.45*		*0.500*	*2.90*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*1.45*		*0.600*	*3.48*	*Sqm*
		4		*0.900*	*0.600*	*2.16*	*Sqm*
	Floor	*2*	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.100*	*0.900*	*1.98*	*Sqm*
		2	*7.00*		*0.600*	*8.40*	*Sqm*
		2		*1.100*	*0.600*	*1.32*	*Sqm*
		2	*5.059*		*0.200*	*2.02*	*Sqm*
		2		*1.100*	*0.200*	*0.44*	*Sqm*
		2	*0.28*		*0.350*	*0.20*	*Sqm*
		2		*1.100*	*0.350*	*0.77*	*Sqm*
		2	*0.20*		*0.550*	*0.22*	*Sqm*
		2		*1.100*	*0.550*	*1.21*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*1.30*		*0.650*	*1.69*	*Sqm*
		2		*1.100*	*0.650*	*1.43*	*Sqm*
		2	*0.050*		*0.625*	*0.06*	*Sqm*
		2		*1.100*	*0.625*	*1.38*	*Sqm*
		2	*2.450*		*0.600*	*2.94*	*Sqm*
		2		*1.100*	*0.600*	*1.32*	*Sqm*
		2	*0.80*		*1.400*	*2.24*	*Sqm*
		2		*1.100*	*1.400*	*3.08*	*Sqm*
	Crest	*2*	*1.10*		*1.814*	*4.00*	*Sqm*
		2		*1.100*	*1.814*	*3.99*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.300*	*3.12*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.90*		*0.600*	*5.88*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.150*	*1.05*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.75*		*0.600*	*4.20*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**212.47**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.75*	*2.052*		*7.18*	*Sqm*
	TOTAL					**7.18**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.75*	*0.500*	*0.300*	**0.26**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.75*	*0.500*	*0.150*	**0.26**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.39*	*0.450*		*6.02*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.39*	*0.450*		*6.02*	*Sqm*
	TOTAL					**12.05**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		11.038		11.04	**Cum**
	Abutment						
	Section 1-1	2	*1.38*	*0.707*		*1.952*	*Cum*
	Section 2-2	2	*3.50*	*0.683*		*4.778*	*Cum*
	Section 3-3	2	*3.95*	*0.494*		*3.905*	*Cum*
	Section 5-5	2	*2.61*	*0.677*		*3.541*	*Cum*
	Section 6-6	2	*1.00*	*0.487*		*0.973*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.20*	*0.150*	*0.600*	*1.560*	*Cum*
		2	*1.75*	0.150	*0.600*	*0.315*	*Cum*
	TOTAL					**28.06**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 2.905 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.70*	*1.541*	*1.349*	*2.923*	*Cum*
	Section 2-2	*2*	*2.80*	*1.636*	*1.349*	*12.359*	*Cum*
	Section 3-3	*2*	*4.70*	*1.516*	*1.149*	*16.374*	*Cum*
	Section 5-5	*2*	*2.71*	*1.691*	*1.349*	*12.378*	*Cum*
	Section 6-6	*2*	*0.77*	*1.146*	*1.149*	*2.036*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	U/S Floor	*1*	*2.00*	*1.450*	*1.847*	*5.356*	*Cum*
	D/S Floor	*1*	*2.50*	*1.450*	*0.850*	*3.081*	*Cum*
		1	*5.00*	*1.450*	*0.650*	*4.713*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	Toe Wall D/S Portion	*1*	*6.03*	*0.750*	*0.900*	*4.069*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						66.63	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*3.88*	*1.450*	*0.150*	*0.84*	*Cum*
		1	*0.28*	*1.450*	*0.150*	*0.06*	*Cum*
		1	*3.64*	*1.450*	*0.150*	*0.79*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.70*	*1.541*	*0.150*	*0.32*	*Cum*
	Section 2-2	*2*	*2.80*	*1.636*	*0.150*	*1.37*	*Cum*
	Section 3-3	*2*	*4.70*	*1.516*	*0.150*	*2.14*	*Cum*
	Section 5-5	*2*	*2.71*	*1.691*	*0.150*	*1.38*	*Cum*
	Section 6-6	*2*	*0.77*	*1.146*	*0.150*	*0.27*	*Cum*
	Toe Wall D/S Portion	*1*	*6.03*	*0.750*	*0.300*	*1.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.73*	*0.450*	*0.600*	*1.55*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**11.73**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.48*	*0.450*	*0.450*	*0.19*	*Cum*
		2	*0.48*	*0.845*	*1.317*	*1.06*	*Cum*
		2	*0.48*	*1.391*	*0.500*	*0.66*	*Cum*
	Section 2-2	*2*	*2.80*	*0.820*	*0.500*	*2.30*	*Cum*
		2	*2.80*	*1.078*	*0.860*	*5.19*	*Cum*
		2	*2.80*	*1.486*	*1.000*	*8.32*	*Cum*
	Section 3-3	*2*	*4.35*	*0.820*	*0.500*	*3.57*	*Cum*
		2	*4.35*	*1.018*	*0.660*	*5.85*	*Cum*
		2	*4.35*	*1.366*	*1.200*	*14.27*	*Cum*
	Section 5-5	*2*	*2.74*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.74*	*0.845*	*1.317*	*6.09*	*Cum*
		2	*2.74*	*1.391*	*0.500*	*3.81*	*Cum*
	Section 6-6	*2*	*1.46*	*0.450*	*0.450*	*0.59*	*Cum*
		2	*1.46*	*0.648*	*0.660*	*1.25*	*Cum*
		2	*1.46*	*0.996*	*0.500*	*1.45*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.500*	*-4.51*	*Cum*
	Floor	*1*	*0.63*	*1.450*	*0.700*	*0.63*	*Cum*
		1	*4.50*	*1.450*	*0.500*	*3.26*	*Cum*
		1	*0.31*	*1.450*	*0.200*	*0.09*	*Cum*
		1	*0.20*	*1.450*	*0.400*	*0.12*	*Cum*
		1	*4.80*	*1.450*	*0.500*	*3.48*	*Cum*
		1	*0.63*	*1.450*	*0.700*	*0.63*	*Cum*
	Crest	*1*	*0.74*	*1.450*	*0.862*	*0.92*	*Cum*
	TOTAL					**60.33**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.450*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.40*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.40*	*0.450*	*0.050*	*0.17*	*Cum*
	Slab Bridge	*1*	*2.25*	*5.500*	*0.328*	*4.06*	*Cum*
	Wearing coat	*1*	*2.25*	*4.500*	*0.070*	*0.71*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
		2	*0.82*	*5.500*	*0.500*	*4.51*	*Cum*
	TOTAL					**11.06**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.71*		*1.578*	*132.6*	*Kg*
a2	*10*	*11*	*5.90*		*0.616*	*40.0*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.63*		*0.616*	*30.8*	*Kg*
a5	*10*	*8*	*5.85*		*0.616*	*28.9*	*Kg*
x1	*12*	*36*	*2.50*		*0.888*	*79.9*	*Kg*
x2	*16*	*36*	*1.37*		*1.578*	*77.5*	*Kg*
x3	*10*	*24*	*2.15*		*0.616*	*31.8*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**60.33**	**0.003**	**0.181**	**7850.0**	**1420.7**	**Kg**
	Total Reinforcement Steel (in kg)					*1848.9*	*Kg*
	Total Weight in Metric Tonne					**1.85**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.48*		*0.450*	*0.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.48*		*1.317*	*2.50*	*Sqm*
		4		*0.845*	*1.317*	*4.45*	*Sqm*
		4	*0.48*		*0.500*	*0.95*	*Sqm*
		4		*1.391*	*0.500*	*2.78*	*Sqm*
	Section 2-2	*4*	*2.80*		*0.500*	*5.60*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.80*		*0.860*	*9.63*	*Sqm*
		4		*1.078*	*0.860*	*3.71*	*Sqm*
		4	*2.80*		*1.000*	*11.20*	*Sqm*
		4		*1.486*	*1.000*	*5.94*	*Sqm*
	Section 3-3	*4*	*4.35*		*0.500*	*8.70*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.35*		*0.660*	*11.49*	*Sqm*
		4		*1.018*	*0.660*	*2.69*	*Sqm*
		4	*4.35*		*1.200*	*20.89*	*Sqm*
		4		*1.366*	*1.200*	*6.56*	*Sqm*
	Section 5-5	*4*	*2.74*		*0.450*	*4.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.74*		*1.317*	*14.42*	*Sqm*
		4		*0.845*	*1.317*	*4.45*	*Sqm*
		4	*2.74*		*0.500*	*5.48*	*Sqm*
		4		*1.391*	*0.500*	*2.78*	*Sqm*
	Section 6-6	*4*	*1.46*		*0.450*	*2.62*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.46*		*0.660*	*3.84*	*Sqm*
		4		*0.648*	*0.660*	*1.71*	*Sqm*
		4	*1.46*		*0.500*	*2.91*	*Sqm*
		4		*0.996*	*0.500*	*1.99*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.450*	*0.700*	*2.03*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.450*	*0.200*	*0.58*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.450*	*0.400*	*1.16*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*4.80*		*0.500*	*4.80*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.450*	*0.700*	*2.03*	*Sqm*
	Crest	*2*	*0.74*		*0.862*	*1.27*	*Sqm*
		2		*1.450*	*0.862*	*2.50*	*Sqm*
	Slab	*2*	*2.25*		*0.33*	*1.48*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*2.25*	*5.50*		*12.38*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.03*		*0.300*	*3.62*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.73*		*0.600*	*6.87*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**208.62**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.340*		*9.36*	*Sqm*
	TOTAL					**9.36**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.850*	*0.300*	**0.51**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.850*	*0.150*	**0.51**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.40*	*0.450*		*3.33*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.40*	*0.450*		*3.33*	*Sqm*
	TOTAL					**6.66**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.661		1.66	**Cum**
	Abutment						
	Section 1-1	2	*0.70*	*0.418*		*0.587*	*Cum*
	Section 2-2	2	*2.80*	*0.165*		*0.926*	*Cum*
	Section 3-3	2	*4.70*	*0.157*		*1.479*	*Cum*
	Section 5-5	2	*2.71*	*0.418*		*2.266*	*Cum*
	Section 6-6	2	*0.77*	*0.157*		*0.243*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.03*	*0.150*	*0.600*	*1.808*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**9.33**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORK									
S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
Cross Drainage at Ch. 1.140 K.M									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	338.48	Cum	**149.30**	50535.07			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	53.54	Cum	**6381.70**	341686.94	17.35	24.09	48.19
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	106.17	Cum	**6914.20**	734064.78	43.79	45.65	91.30
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	454.35	Sqm	**578.60**	262885.42			
5	**RCD M-148**	Providing 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	25.00	RM	**6002.82**	150070.50			
6	**5.6.2.5**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	25.00	RM	**1713.33**	42833.27			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.08	MT	**73574.90**	153296.34			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	42.76	Cum	**195.20**	8346.22			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	69.75	Cum	**1075.00**	**74976.81**			
		Coarse Aggregates (100 Km lead)	139.49	Cum	**1398.00**	**195009.46**			
		Cement (30 km lead)	61.14	MT	**742.00**	**45367.13**			
		Steel (30 Km lead)	2.08	MT	**742.00**	**1545.99**			
		Hume Pipe (30 Km)	25.00	RM	**1470.00**	**36750.00**			
TOTAL (In Rs.)						₹ 20,97,367.93			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	69.75	Cum	**584.64**	40776.23	4077.62		
		Coarse Aggregate	139.49	Cum	**944.26**	131716.47	13171.65		
		Total					**17249.27**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CROSS DRAINAGE WORK									
Cross Drainage at Ch. 3.960 K.M									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	476.14	Cum	**149.30**	71088.42			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	58.40	Cum	**6381.70**	372693.04	18.92	26.28	52.56
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	230.05	Cum	**6914.20**	1590585.92	94.89	98.92	197.84
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	727.72	Sqm	**578.60**	421060.89			
5	**RCD M-148**	Providing 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I	25.00	RM	**6002.82**	150070.50			
6	**5.6.2.5**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	25.00	RM	**1713.33**	42833.27			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	4.51	MT	**73574.90**	332165.51			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	130.32	Cum	**195.20**	25437.88			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	125.20	Cum	**1075.00**	**134590.02**			
		Coarse Aggregates (100 Km lead)	250.40	Cum	**1398.00**	**350059.26**			
		Cement (30 km lead)	113.82	MT	**742.00**	**84451.31**			
		Steel (30 Km lead)	4.51	MT	**742.00**	**3349.88**			
		Hume Pipe (30 Km)	25.00	RM	**1470.00**	**36750.00**			
TOTAL (In Rs.)						**₹ 36,15,135.88**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	125.20	Cum	**584.64**	73196.94	7319.69		
		Coarse Aggregate	250.40	Cum	**944.26**	236442.74	23644.27		
		Total					**30963.97**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORK							
Cross Drainage at Ch. 1.140 Km							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.55*	*1.10*	*1.96*	*24.85*	*Cum*
		1	*7.60*	*3.64*	*3.37*	*93.24*	*Cum*
	Middle Portion	*1*	*3.66*	*29.78*		*108.99*	*Cum*
	Right Portion	*1*	*11.55*	*1.14*	*2.08*	*27.26*	*Cum*
		1	*7.64*	*3.64*	*3.03*	*84.14*	*Cum*
	TOTAL					**338.48**	**Cum**
3	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*11.55*	*1.10*	*0.30*	*3.81*	*Cum*
		1	*7.60*	*3.64*	*0.30*	*8.30*	*Cum*
	300 mm Thick Right Abutment	*1*	*11.55*	*1.14*	*0.30*	*3.93*	*Cum*
		1	*7.64*	*3.64*	*0.30*	*8.35*	*Cum*
	Below Pipe Section	*1*	*10.32*	*3.66*	*0.30*	*11.33*	*Cum*
		1	*10.32*	*0.75*		*7.69*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.15*	*2.50*	*0.20*	*6.15*	*Cum*
	Pipe Section	*4*	*0.30*	*3.56*	*1.60*	*6.84*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*2.38*		*-2.85*	*Cum*
	TOTAL					**53.54**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*8.44*	*0.30*	*0.20*	*1.01*	*Cum*
		2	*8.44*	*0.55*	*1.66*	*15.42*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.87*	*2.79*	*20.16*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.06*	*0.30*	*0.20*	*0.49*	*Cum*
		2	*4.06*	*0.71*	*2.23*	*12.82*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*8.66*	*0.30*	*0.20*	*1.04*	*Cum*
		2	*8.66*	*0.72*	*1.78*	*22.09*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.87*	*2.80*	*20.30*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.22*	*0.79*	*2.29*	*15.36*	*Cum*
		2	*4.22*	*0.30*	*0.35*	*0.89*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*1.24*	*2.375*		*-5.91*	*Cum*
	TOTAL					**106.17**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
5	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*11.55*		*0.30*	6.93	*Sqm*
		2		*1.10*	*0.30*	0.66	*Sqm*
		2	7.60		0.30	4.56	*Sqm*
		2		3.64	0.30	2.18	*Sqm*
	300 mm Thick Right Abutment	2	*11.55*		*0.30*	6.93	*Sqm*
		2		*1.14*	*0.30*	0.68	*Sqm*
		2	7.64		0.30	4.58	*Sqm*
		2		3.64	0.30	2.18	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.15		0.20	4.92	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	8	0.30		1.60	3.84	*Sqm*
		8		3.56	1.60	45.57	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*8.44*		*0.20*	6.75	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*8.44*		*1.66*	56.14	*Sqm*
		4		0.55	1.66	3.66	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	4.16		2.79	46.43	*Sqm*
		4		0.87	2.79	9.69	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.06		0.20	3.25	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	4.06		2.23	36.17	*Sqm*
		4		0.71	2.23	6.31	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	4.16		2.80	46.64	*Sqm*
		4		0.87	2.80	9.76	*Sqm*
		4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	8.66		1.78	61.61	*Sqm*
		4		0.72	1.78	5.10	*Sqm*
		4	8.66		0.20	6.93	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.22		2.29	38.70	*Sqm*
		4		0.79	2.29	7.27	*Sqm*
		4	4.22		0.35	5.91	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
	TOTAL					**454.35**	***Sqm***
6	Providing 1000mm NP2 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1 m dia pipe	*10*	*2.50*			*25.00*	*RM*
	TOTAL					**25.00**	**RM**
7	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*106.17*	*0.0025*	*0.265*	*7850.00*	*2083.541*	*Kg*
	TOTAL					*2083.541*	*Kg*
	TOTAL					**2.08**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
8	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.55*	*0.67*		*7.68*	*Cum*
		1	*5.72*	*1.51*		*8.63*	*Cum*
	Middle Portion	*1*	*3.66*	*1.42*		*5.20*	*Cum*
	Right Portion	*1*	*11.55*	*1.51*		*17.44*	*Cum*
		1	*5.72*	*0.67*		*3.80*	*Cum*
	TOTAL					**42.76**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	Cross Drainage at Ch. 3.960 Km						
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*12.63*	*1.64*	*3.76*	*77.74*	*Cum*
		1	*8.13*	*3.76*	*3.76*	*115.03*	*Cum*
	Middle Portion	*1*	*3.66*	*34.27*		*125.43*	*Cum*
	Right Portion	*1*	*12.26*	*1.45*	*3.59*	*63.95*	*Cum*
		1	*7.95*	*3.76*	*3.14*	*94.00*	*Cum*
	TOTAL					**476.14**	**Cum**
3	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*12.63*	*1.64*	*0.30*	*6.20*	*Cum*
		1	*8.13*	*3.76*	*0.30*	*9.18*	*Cum*
	300 mm Thick Right Abutment	*1*	*12.26*	*1.45*	*0.30*	*5.34*	*Cum*
		1	*7.95*	*3.77*	*0.30*	*8.98*	*Cum*
	Below Pipe Section	*1*	*10.06*	*3.66*	*0.30*	*11.05*	*Cum*
		1	*10.06*	*0.75*		*7.50*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.15*	*2.50*	*0.20*	*6.15*	*Cum*
	Pipe Section	*4*	*0.30*	*3.56*	*1.60*	*6.84*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*2.38*		*-2.85*	*Cum*
	TOTAL					**58.40**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*12.33*	*0.30*	*0.20*	*1.48*	*Cum*
		2	*12.33*	*0.82*	*3.46*	*69.86*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.93*	*3.21*	*24.88*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.28*	*0.30*	*0.35*	*0.90*	*Cum*
		2	*4.28*	*0.88*	*3.33*	*24.99*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*11.96*	*0.30*	*0.20*	*1.44*	*Cum*
		2	*11.96*	*0.88*	*2.84*	*59.61*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*4.16*	*0.30*	*0.50*	*1.25*	*Cum*
		2	*4.16*	*0.93*	*3.22*	*25.03*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.22*	*0.91*	*3.03*	*23.18*	*Cum*
		2	*4.22*	*0.30*	*0.35*	*0.89*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.99*	*2.375*		*-4.70*	*Cum*
	TOTAL					**230.05**	**Cum**
5	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
	300 mm Thick Left Abutment	2	*12.63*		*0.30*	7.58	*Sqm*
		2		*1.64*	*0.30*	0.98	*Sqm*
		2	8.13		0.30	4.88	*Sqm*
		2		3.76	0.30	2.26	*Sqm*
	300 mm Thick Right Abutment	2	*12.26*		*0.30*	7.36	*Sqm*
		2		*1.45*	*0.30*	0.87	*Sqm*
		2	7.95		0.30	4.77	*Sqm*
		2		3.77	0.30	2.26	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.15		0.20	4.92	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	8	0.30		1.60	3.84	*Sqm*
		8		3.56	1.60	45.57	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*12.33*		*0.20*	9.86	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*12.33*		*3.46*	170.60	*Sqm*
		4		0.82	3.46	11.33	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	4.16		3.21	53.41	*Sqm*
		4		0.93	3.21	11.96	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.28		0.35	5.99	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.28		3.33	57.11	*Sqm*
		4		0.88	3.33	11.67	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	4.16		3.22	53.63	*Sqm*
		4		0.93	3.22	12.03	*Sqm*
		4	4.16		0.50	8.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	11.96		2.84	136.01	*Sqm*
		4		0.88	2.84	9.97	*Sqm*
		4	11.96		0.20	9.57	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.22		3.03	51.23	*Sqm*
		4		0.91	3.03	10.98	*Sqm*
		4	4.22		0.35	5.91	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
	TOTAL					**727.72**	***Sqm***
6	Providing 1000mm NP2 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1 m dia pipe	*10*	*2.50*			*25.00*	*RM*
	TOTAL					**25.00**	**RM**
7	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*230.05*	*0.0025*	*0.575*	*7850.00*	*4514.658*	*Kg*
	TOTAL					*4514.658*	*Kg*
	TOTAL					**4.51**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
8	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*12.63*	*2.01*		*25.41*	*Cum*
		1	*5.72*	*1.64*		*9.38*	*Cum*
	Middle Portion	*1*	*3.66*	*16.30*		*59.66*	*Cum*
	Right Portion	*1*	*12.26*	*2.00*		*24.57*	*Cum*
		1	*5.72*	*1.98*		*11.30*	*Cum*
	TOTAL					**130.32**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR SONDIH-II SUB DY. AT - KM 0.527								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	57.494	Cum	**195.20**	11222.74			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.24	Cum	**6381.70**	58966.01	2.99	4.16	8.32
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.00	Cum	**6914.20**	262746.13	15.68	16.34	32.68
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	26.90	Cum	**8151.40**	219255.76	15.25	10.49	21.25
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.93	MT	**73574.90**	215721.20			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	191.42	Sqm	**578.60**	110754.88			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system.	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.37	Cum	**149.30**	5877.88			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.989	Cum	**1075.00**	33312.68			
	Coarse Aggregates (100 Km lead)	62.246	Cum	**1398.00**	87019.98			
	Cement (30 km lead)	33.920	MT	**742.00**	25168.81			
	Steel (30 Km lead)	2.93	MT	**742.00**	2175.54			
	TOTAL (In Rs.)				**1452670.62**			
	TOTAL (In Rs.)				**1452670.62**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.99	Cum	**584.64**	18117.14	1811.71		
	Coarse Aggregate	62.25	Cum	**944.26**	58776.45	5877.65		
	Total					7689.36		
	For 1 nos. fall, Total Seigniorage charges					**7689.36**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR SONDIH-II SUB DY. AT - KM 4.877								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.000	Sqm	**11.80**	1180.44			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	57.494	Cum	**195.20**	11222.74			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.24	Cum	**6381.70**	58966.01	2.99	4.16	8.32
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.00	Cum	**6914.20**	262746.13	15.68	16.34	32.68
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.81	Cum	**8151.40**	210408.32	14.64	10.07	20.39
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.86	MT	**73574.90**	210758.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.40	Sqm	**578.60**	108427.52			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.37	Cum	**149.30**	5877.88			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.565	Cum	**1075.00**	32857.63			
	Coarse Aggregates (100 Km lead)	61.389	Cum	**1398.00**	85821.25			
	Cement (30 km lead)	33.305	MT	**742.00**	24712.17			
	Steel (30 Km lead)	2.86	MT	**742.00**	2125.50			
	TOTAL (In Rs.)				**1434727.25**			
	TOTAL (In Rs.)				**1434727.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.57	Cum	**584.64**	17869.66	1786.97		
	Coarse Aggregate	61.39	Cum	**944.26**	57966.79	5796.68		
	Total					7583.64		
	For 1 nos. fall, Total Seigniorage charges					**7583.64**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR SONDIH-II SUB DY. AT - KM 5.120								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	80.000	Sqm	**11.80**	944.35			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	62.485	Cum	**195.20**	12197.10			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including	9.43	Cum	**6381.70**	60148.29	3.05	4.24	8.48
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.00	Cum	**6914.20**	262746.13	15.68	16.34	32.68
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.81	Cum	**8151.40**	210408.32	14.64	10.07	20.39
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.86	MT	**73574.90**	210758.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.40	Sqm	**578.60**	108427.52			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	*RM*	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	42.36	Cum	**149.30**	6324.84			
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.649	Cum	**1075.00**	32947.24			
	Coarse Aggregates (100 Km lead)	61.555	Cum	**1398.00**	86054.34			
	Cement (30 km lead)	33.365	MT	**742.00**	24756.71			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	2.86	MT	**742.00**	2125.50			
TOTAL (In Rs.)					**1437462.00**			
TOTAL (In Rs.)					**1437462.00**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.65	Cum	**584.64**	17918.40	1791.84		
	Coarse Aggregate	61.56	Cum	**944.26**	58124.23	5812.42		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	Total					7604.26		
	For 1 nos. fall, Total Seigniorage charges					**7604.26**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR SONDIH-II SUB DY. AT - KM 5.150								
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	57.494	Cum	**195.20**	11222.74			
3	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.24	Cum	**6381.70**	58966.01	2.99	4.16	8.32
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	38.00	Cum	**6914.20**	262746.13	15.68	16.34	32.68
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	25.81	Cum	**8151.40**	210408.32	14.64	10.07	20.39
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.86	MT	**73574.90**	210758.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.40	Sqm	**578.60**	108427.52			
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	No.	**152.60**	1229.60			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh)	4.40	Sqm	**66.00**	290.40			
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	11.00	RM	**36993.21**	406925.31			
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2.00	No.	**5588.70**	11177.40			
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.37	Cum	**149.30**	5877.88			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	**Carriage of materials**							
	Coarse Sand (60 Km lead)	30.565	Cum	**1075.00**	32857.63			
	Coarse Aggregates (100 Km lead)	61.389	Cum	**1398.00**	85821.25			
	Cement (30 km lead)	33.305	MT	**742.00**	24712.17			
	Steel (30 Km lead)	2.86	MT	**742.00**	2125.50			
	TOTAL (In Rs.)				**1434963.33**			
	TOTAL (In Rs.)				**1434963.33**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	30.57	Cum	**584.64**	17869.66	1786.97		
	Coarse Aggregate	61.39	Cum	**944.26**	57966.79	5796.68		
	Total					7583.64		
	For 1 nos. fall, Total Seigniorage charges					**7583.64**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE ,SONDIH-II SUB DY. AT - KM 0.527							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	TOTAL					**57.49**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**9.24**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**38.00**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	3.31	5.50	0.33	*5.97*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*10.31*	*4.50*	*0.08*	*3.48*	*Cum*
	Parapet	*2*	*10.31*	*0.44*	*0.18*	*1.60*	*Cum*
		2	*10.31*	*0.35*	*0.25*	*1.81*	*Cum*
		2	*10.31*	*0.22*	*0.55*	*2.48*	*Cum*
	TOTAL					**26.90**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*3.76*		*1.578*	*183.9*	*Kg*
a2	*10*	*17*	*5.90*		*0.616*	*61.8*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.68*		*0.616*	*43.1*	*Kg*
a5	*10*	*12*	*5.80*		*0.616*	*42.9*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*54*	*2.32*		*0.888*	*111.3*	*Kg*
x2	*16*	*54*	*1.27*		*1.578*	*108.6*	*Kg*
x3	*12*	*24*	*3.21*		*0.888*	*68.4*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*38.00*	*0.0025*	*0.095*	*7850.00*	*745.769*	*Kg*
	Total Reinforcement Steel (in kg)					*2932.0*	*Kg*
	Total Weight in Metric Tonne					**2.93**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*3.31*		*0.33*	*2.17*	*Sqm*
		1	*3.31*	5.50		*18.21*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*10.31*		*0.18*	*7.22*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*10.31*		*0.25*	*10.31*	*Sqm*
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*10.31*		*0.55*	*22.68*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**191.42**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system.	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.22	0.78		*8.14*	*Cum*
	Right and left Return wall	4	1.91	1.40		*10.69*	*Cum*
	Extra slope	*2*	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
		2	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
	TOTAL					**39.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE ,SONDIH-II SUB DY. AT - KM 4.877						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*100.00*			**100.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	TOTAL					**57.49**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**9.24**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**38.00**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.91	5.50	0.33	*5.25*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.91*	*4.50*	*0.08*	*3.34*	*Cum*
	Parapet	*2*	*9.91*	*0.44*	*0.18*	*1.54*	*Cum*
		2	*9.91*	*0.35*	*0.25*	*1.74*	*Cum*
		2	*9.91*	*0.22*	*0.55*	*2.39*	*Cum*
	TOTAL					**25.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*3.37*		*1.578*	*164.9*	*Kg*
a2	*10*	*15*	*5.90*		*0.616*	*54.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.29*		*0.616*	*38.5*	*Kg*
a5	*10*	*11*	*5.80*		*0.616*	*39.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*48*	*2.32*		*0.888*	*98.9*	*Kg*
x2	*16*	*48*	*1.27*		*1.578*	*96.5*	*Kg*
x3	*12*	*24*	*2.81*		*0.888*	*59.9*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*38.00*	*0.0025*	*0.095*	*7850.00*	*745.769*	*Kg*
	Total Reinforcement Steel (in kg)					*2864.5*	*Kg*
	Total Weight in Metric Tonne					**2.86**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.91*		*0.33*	*1.91*	*Sqm*
		1	*2.91*	5.50		*16.01*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.91*		*0.18*	*6.94*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.91*		*0.25*	*9.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.91*		*0.55*	*21.80*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**187.40**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.22	0.78		*8.14*	*Cum*
	Right and left Return wall	4	1.91	1.40		*10.69*	*Cum*
	Extra slope	*2*	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
		2	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
	TOTAL					**39.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB CULVERT FOR SONDIH-II SUB DY. AT - KM 5.150						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*120.00*			**120.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*1.20*	*6.78*	*Cum*
		1	*5.22*	*1.87*	*1.20*	*11.70*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.13*	*0.60*	*1.20*	*10.27*	*Cum*
	TOTAL					**57.49**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Left abutment	*2*	*1.91*	*1.48*	*0.20*	*1.13*	*Cum*
		1	*5.22*	*1.87*	*0.20*	*1.95*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**9.24**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**38.00**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.91	5.50	0.33	*5.25*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.91*	*4.50*	*0.08*	*3.34*	*Cum*
	Parapet	*2*	*9.91*	*0.44*	*0.18*	*1.54*	*Cum*
		2	*9.91*	*0.35*	*0.25*	*1.74*	*Cum*
		2	*9.91*	*0.22*	*0.55*	*2.39*	*Cum*
	TOTAL					**25.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*3.37*		*1.578*	*164.9*	*Kg*
a2	*10*	*15*	*5.90*		*0.616*	*54.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.29*		*0.616*	*38.5*	*Kg*
a5	*10*	*11*	*5.80*		*0.616*	*39.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*48*	*2.32*		*0.888*	*98.9*	*Kg*
x2	*16*	*48*	*1.27*		*1.578*	*96.5*	*Kg*
x3	*12*	*24*	*2.81*		*0.888*	*59.9*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*38.00*	*0.0025*	*0.095*	*7850.00*	*745.769*	*Kg*
	Total Reinforcement Steel (in kg)					*2864.5*	*Kg*
	Total Weight in Metric Tonne					**2.86**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.91*		*0.33*	*1.91*	*Sqm*
		1	*2.91*	5.50		*16.01*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.91*		*0.18*	*6.94*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.91*		*0.25*	*9.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.91*		*0.55*	*21.80*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**187.40**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.22	0.78		*8.14*	*Cum*
	Right and left Return wall	4	1.91	1.40		*10.69*	*Cum*
	Extra slope	*2*	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
		2	*7.13*	*0.6*	*1.2*	*10.27*	*Cum*
	TOTAL					**39.37**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE ,SONDIH-II SUB DY. AT - KM 5.120						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*80.00*			**80.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Right abutment	*2*	*2.03*	*1.48*	*1.25*	*7.52*	*Cum*
		1	*5.27*	*1.87*	*1.25*	*12.31*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.31*	*0.63*	*1.25*	*11.41*	*Cum*
	Left abutment	*2*	*2.03*	*1.48*	*1.25*	*7.52*	*Cum*
		1	*5.27*	*1.87*	*1.25*	*12.31*	*Cum*
	Extra for Slope (0.5:1)	*2*	*7.31*	*0.63*	*1.25*	*11.41*	*Cum*
	TOTAL					**62.49**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	Right abutment	*2*	*2.03*	*1.48*	*0.20*	*1.20*	*Cum*
		1	*5.27*	*1.87*	*0.20*	*1.97*	*Cum*
	Left abutment	*2*	*2.03*	*1.48*	*0.20*	*1.20*	*Cum*
		1	*5.27*	*1.87*	*0.20*	*1.97*	*Cum*
	Levelling course	*2*	*5.50*	*3.50*	*0.08*	*3.08*	*Cum*
	TOTAL					**9.43**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Right abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	Left abutment	*1*	*5.22*	*1.62*	*0.20*	*1.69*	*Cum*
		1	*5.22*	*1.42*	*0.80*	*5.92*	*Cum*
		1	*5.22*	*0.92*	*0.66*	*3.17*	*Cum*
		1	*5.22*	*0.82*	*0.50*	*2.14*	*Cum*
	Return wall	*2*	*1.81*	*1.28*	*0.20*	*0.93*	*Cum*
		2	*1.81*	*1.08*	*0.80*	*3.12*	*Cum*
		2	*1.81*	*0.54*	*0.93*	*1.82*	*Cum*
		2	*1.81*	*0.40*	*0.15*	*0.22*	*Cum*
	TOTAL					**38.00**	**Cum**
5	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Slab	1	2.91	5.50	0.33	*5.25*	*Cum*
	Approch Slab	*2*	*3.50*	*5.50*	*0.30*	*11.55*	*Cum*
	Wearing coat	*1*	*9.91*	*4.50*	*0.08*	*3.34*	*Cum*
	Parapet	*2*	*9.91*	*0.44*	*0.18*	*1.54*	*Cum*
		2	*9.91*	*0.35*	*0.25*	*1.74*	*Cum*
		2	*9.91*	*0.22*	*0.55*	*2.39*	*Cum*
	TOTAL					**25.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
	SLAB						
a1	*16*	*31*	*3.37*		*1.578*	*164.9*	*Kg*
a2	*10*	*15*	*5.90*		*0.616*	*54.6*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.29*		*0.616*	*38.5*	*Kg*
a5	*10*	*11*	*5.80*		*0.616*	*39.3*	*Kg*
	APPROACH SLAB						
c1	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c2	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
c3	*12*	*74*	*3.70*		*0.888*	*243.1*	*Kg*
c4	*12*	*46*	*5.70*		*0.888*	*232.8*	*Kg*
	CRASH BARRIER FOR MAIN SLAB						
x1	*12*	*48*	*2.32*		*0.888*	*98.9*	*Kg*
x2	*16*	*48*	*1.27*		*1.578*	*96.5*	*Kg*
x3	*12*	*24*	*2.81*		*0.888*	*59.9*	*Kg*
	CRASH BARRIER FOR APPROACH SLAB						
y1	*12*	*116*	*2.32*		*0.888*	*239.0*	*Kg*
y2	*16*	*116*	*1.22*		*1.578*	*224.1*	*Kg*
y3	*12*	*48*	*3.40*		*0.888*	*144.9*	*Kg*
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*38.00*	*0.0025*	*0.095*	*7850.00*	*745.769*	*Kg*
	Total Reinforcement Steel (in kg)					*2864.5*	*Kg*
	Total Weight in Metric Tonne					**2.86**	**MT**
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Left abutment	*2*	*5.22*		*0.20*	*2.09*	*Sqm*
		2		*1.62*	*0.20*	*0.65*	*Sqm*
		2	*5.22*		*0.80*	*8.35*	*Sqm*
		2		*1.42*	*0.80*	*2.27*	*Sqm*
		2	*5.22*		*0.66*	*6.89*	*Sqm*
		2		*0.92*	*0.66*	*1.21*	*Sqm*
		2	*5.22*		*0.50*	*5.22*	*Sqm*
		2		*0.82*	*0.50*	*0.82*	*Sqm*
	Return wall	*2*	*1.81*		*0.20*	*0.72*	*Sqm*
		2		*1.28*	*0.20*	*0.51*	*Sqm*
		2	*1.81*		*0.80*	*2.89*	*Sqm*
		2		*1.08*	*0.80*	*1.73*	*Sqm*
		2	*1.81*		*0.93*	*3.36*	*Sqm*
		2		*0.54*	*0.93*	*1.00*	*Sqm*
		2	*1.81*		*0.15*	*0.54*	*Sqm*
		2		*0.40*	*0.15*	*0.12*	*Sqm*
	Slab	*2*	*2.91*		*0.33*	*1.91*	*Sqm*
		1	*2.91*	5.50		*16.01*	*Sqm*
		2		*5.50*	0.33	*3.61*	*Sqm*
	Approch Slab	*4*	*3.50*		*0.30*	*4.20*	*Sqm*
		2	*3.50*	5.50		*38.50*	*Sqm*
		4		*5.50*	0.30	*6.60*	*Sqm*
	Parapet	*4*	*9.91*		*0.18*	*6.94*	*Sqm*
		4		*0.44*	0.18	*0.31*	*Sqm*
		4	*9.91*		*0.25*	*9.91*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.35*	0.25	*0.35*	*Sqm*
		4	*9.91*		*0.55*	*21.80*	*Sqm*
		4		*0.22*	*0.55*	*0.48*	*Sqm*
	TOTAL					**187.40**	**Sqm**
8	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. **(PWD NH SOR Chattisgarh)**						
		2	*5.50*	*0.40*		*4.40*	*Sqm*
	TOTAL					**4.40**	**Sqm**
10	Providing and laying modular strip/box seal expansion joint including anchorage catering to a horizontal movement beyond 70 mm and upto 140 mm assembly comprising of edge beams, central beam, 2modules chloroprene seal, anchorage elements, support and control system. (RCD M-126)	*2*	*5.50*			*11.00*	*RM*
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.(RCD 14.09)	2				2.00	Nos
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Right and left abutment	2	5.22	0.78		*8.14*	*Cum*
	Right and left Return wall	4	2.03	1.40		*11.39*	*Cum*
	Extra slope	*2*	*7.305*	*0.625*	*1.25*	*11.41*	*Cum*
		2	*7.305*	*0.625*	*1.25*	*11.41*	*Cum*
	TOTAL					**42.36**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SONDIH-II SUB DISTRIBUTARY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	BRIDGE	0.430	₹ 26,027.72
2	FALL (0.762 M) (NEW)	0.624	₹ 0.00
3	FALL (1.370 M)	0.823	₹ 2,30,241.29
4	FALL (1.067 M)	1.150	₹ 73,146.74
5	BRIDGE	1.160	₹ 0.00
6	FALL (0.762 M)/ BRIDGE	1.520	₹ 67,573.87
7	FALL (1.372 M)	1.859	₹ 26,132.18
8	FALL (1.828 M)	2.150	₹ 64,713.08
9	BRIDGE	2.285	₹ 10,381.53
10	FALL (1.220 M)	2.550	₹ 43,552.79
11	BRIDGE/ FALL (0.457 M)(NEW)	2.905	₹ 0.00
12	FALL (1.830 M)	3.500	₹ 1,27,894.61
13	BRIDGE	3.695	₹ 21,884.38
14	FALL (1.830 M)	3.755	₹ 1,23,770.32
15	CD WORK NEW	3.960	₹ 0.00
16	FALL (0.610 M) (NEW)	4.250	₹ 0.00
17	BRIDGE	4.590	₹ 10,319.91
18	FALL (1.220 M)	4.750	₹ 88,187.92
19	CULVERT(NEW)	4.877	₹ 0.00
20	CULVERT(NEW)	5.120	₹ 0.00
21	CULVERT(NEW)	5.150	₹ 0.00
22	FALL (0.915 M) (ELIMINATED)	5.400	₹ 0.00
23	FALL (1.067 M)	6.100	₹ 12,870.57
24	FALL (1.220 M)	7.000	₹ 1,06,903.95
25	GT ROAD BRIDGE	7.030	₹ 0.00
26	FALL (1.524 M)	7.500	₹ 0.00
27	FALL/CULVERT (1.524 M)	7.950	₹ 63,937.03
28	FALL (1.524 M)	8.500	₹ 0.00
Total In Rs.			**₹ 10,97,537.89**
Total In Lakhs.			**₹ 10.98**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		5.000	₹ 26,05,092.75
Total In Rs.			**₹ 26,05,092.75**
Total In Lakhs.			**₹ 26.05**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF SONDIH-II SUB DISTRIBUTARY									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC FOR BRIDGE (Ch.-0.430 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	53.40	Sqm	**340.20**	18166.68	2.77	0.78	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	53.40	Sqm	**63.20**	3374.88	0.08		
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.78	Cum	**1075.00**	838.11			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	2.85	MT	**742.00**	2113.48			
		TOTAL (In Rs.)				**26027.72**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.78	Cum	**584.64**	455.81	45.58		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**45.58**		
AOC FOR FALL (Ch.-0.823 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	100.00	Sqm	**11.80**	1180.44			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	7.92	Cum	**2492.58**	19741.23			
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	18.90	Cum	**6914.20**	130706.38	7.80	8.13	16.26
4	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	71.48	Sqm	**578.60**	41360.82			
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	8.13	Cum	**1075.00**	8738.40			
		Coarse Aggregates (100 Km lead)	16.26	Cum	**1398.00**	22727.96			
		Cement (30 km lead)	7.80	MT	**742.00**	5786.06			
		TOTAL (In Rs.)				**230241.29**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	8.13	Cum	**584.64**	4752.39	475.24		
		Coarse Aggregate	16.26	Cum	**944.26**	15351.29	1535.13		
		Total					**2010.37**		
AOC FOR CD WORK (Ch.-1.140 Km)									
1		**New Structure has been Proposed.**							
AOC FOR FOR FALL (Ch.-1.150 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.20	Cum	**6914.20**	49772.21	2.97	3.10	6.19
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	13.64	Sqm	**578.60**	7890.54			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.10	Cum	**1075.00**	3327.53			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Aggregates (100 Km lead)	6.19	Cum	**1398.00**	8654.67			
		Cement (30 km lead)	2.97	MT	**742.00**	2203.30			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**73146.74**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.10	Cum	**584.64**	1809.68	180.97		
		Coarse Aggregate	6.19	Cum	**944.26**	5845.68	584.57		
		Total					**765.54**		
		AOC FOR FOR FALL/BRIDGE (Ch.-1.520 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.92	Cum	**5021.30**	4619.60	0.11	0.29	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.36	Sqm	**340.20**	2844.07	0.43	0.12	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.36	Sqm	**63.20**	528.35	0.01		
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.92	Cum	**6914.20**	40919.27	2.44	2.54	5.09
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.09	Sqm	**578.60**	4680.24			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.96	Cum	**1075.00**	3183.36			
		Coarse Aggregates (100 Km lead)	5.09	Cum	**1398.00**	7115.27			
		Cement (30 km lead)	2.99	MT	**742.00**	2220.91			
		Brick (15 km lead)	460.00	No.	**3.18**	1462.80			
		TOTAL (In Rs.)				**67573.87**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.96	Cum	**584.64**	1731.27	173.13		
		Coarse Aggregate	5.09	Cum	**944.26**	4805.91	480.59		
		Total					**653.72**		
		AOC FOR FALL (Ch.-1.859 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.59	Cum	**6914.20**	17938.60	1.07	1.12	2.23
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	3.08	Sqm	**578.60**	1782.44			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.12	Cum	**1075.00**	1199.29			
		Coarse Aggregates (100 Km lead)	2.23	Cum	**1398.00**	3119.26			
		Cement (30 km lead)	1.07	MT	**742.00**	794.10			
		TOTAL (In Rs.)				**26132.18**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.12	Cum	**584.64**	652.23	65.22		
		Coarse Aggregate	2.23	Cum	**944.26**	2106.86	210.69		
		Total					**275.91**		
		AOC FOR FOR FALL (Ch.-2.150 Km)							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	25.96	Cum	**2492.58**	64713.08			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.00	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.00	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**64713.08**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR BRIDGE (Ch.-2.285 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.00	Sqm	**11.80**	1534.57			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.45	Cum	**2492.58**	1112.94			
3	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.69	Cum	**5021.30**	3464.70	0.08	0.22	
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.27	Sqm	**340.20**	2133.05	0.33	0.09	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.27	Sqm	**63.20**	396.26	0.01		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.31	Cum	**1075.00**	335.77			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.41	MT	**742.00**	307.14			
		Brick (15 km lead)	345.00	No.	**3.18**	1097.10			
		TOTAL (In Rs.)				**10381.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.31	Cum	**584.64**	182.61	18.26		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**18.26**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FOR FALL (Ch.-2.550 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.54	Cum	**6914.20**	31392.55	1.87	1.95	3.90
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	5.55	Sqm	**578.60**	3213.10			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.95	Cum	**1075.00**	2098.75			
		Coarse Aggregates (100 Km lead)	3.90	Cum	**1398.00**	5458.71			
		Cement (30 km lead)	1.87	MT	**742.00**	1389.67			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
TOTAL (In Rs.)						**43552.79**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.95	Cum	**584.64**	1141.41	114.14		
		Coarse Aggregate	3.90	Cum	**944.26**	3687.01	368.70		
		Total					**482.84**		
AOC FOR FALL (Ch.-3.500 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.80	Cum	**6914.20**	74673.36	4.46	4.64	9.29
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	55.20	Sqm	**578.60**	31938.72			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.64	Cum	**1075.00**	4992.30			
		Coarse Aggregates (100 Km lead)	9.29	Cum	**1398.00**	12984.62			
		Cement (30 km lead)	4.46	MT	**742.00**	3305.61			
TOTAL (In Rs.)						**127894.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.64	Cum	**584.64**	2715.07	271.51		
		Coarse Aggregate	9.29	Cum	**944.26**	8770.29	877.03		
		Total					**1148.54**		
AOC FOR BRIDGE (Ch.-3.695Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.69	Cum	**6914.20**	11667.71	0.70	0.73	1.45
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.85	Sqm	**578.60**	5120.61			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.73	Cum	**1075.00**	780.05			
		Coarse Aggregates (100 Km lead)	1.45	Cum	**1398.00**	2028.85			
		Cement (30 km lead)	0.70	MT	**742.00**	516.50			
TOTAL (In Rs.)						**21884.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.73	Cum	**584.64**	424.23	42.42		
		Coarse Aggregate	1.45	Cum	**944.26**	1370.36	137.04		
		Total					**179.46**		
AOC FOR FALL (Ch.-3.755 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.44	Cum	**6914.20**	72184.25	4.31	4.49	8.98
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	53.60	Sqm	**578.60**	31012.96			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.49	Cum	**1075.00**	4825.89			
		Coarse Aggregates (100 Km lead)	8.98	Cum	**1398.00**	12551.80			
		Cement (30 km lead)	4.31	MT	**742.00**	3195.42			
		TOTAL (In Rs.)				**123770.32**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.49	Cum	**584.64**	2624.57	262.46		
		Coarse Aggregate	8.98	Cum	**944.26**	8477.94	847.79		
		Total					**1110.25**		
		AOC FOR CULVERT (Ch.-4.590 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
3	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.81	Cum	**5021.30**	4042.15	0.09	0.26	
4	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.32	Sqm	**340.20**	2488.56	0.38	0.11	
5	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.32	Sqm	**63.20**	462.31	0.01		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.36	Cum	**1075.00**	391.73			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.48	MT	**742.00**	358.33			
		Brick (15 km lead)	402.00	No.	**3.18**	1278.36			
		TOTAL (In Rs.)				**10319.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.36	Cum	**584.64**	213.04	21.30		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**21.30**		
		AOC FOR FALL (Ch.-4.750 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.43	Cum	**6914.20**	51337.94	3.06	3.19	6.39
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	38.40	Sqm	**578.60**	22218.24			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.19	Cum	**1075.00**	3432.21			
		Coarse Aggregates (100 Km lead)	6.39	Cum	**1398.00**	8926.93			
		Cement (30 km lead)	3.06	MT	**742.00**	2272.61			
		TOTAL (In Rs.)				**88187.92**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.19	Cum	**584.64**	1866.61	186.66		
		Coarse Aggregate	6.39	Cum	**944.26**	6029.57	602.96		
		Total					**789.62**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR CULVERT (Ch.-4.877 Km)									
New Structure has been Proposed.									
AOC FOR CULVERT(Ch.-5.120 Km)									
New Structure has been Proposed.									
AOC FOR BRIDGE (Ch.-5.150 Km)									
New Structure has been Proposed.									
AOC FOR FALL (Ch.-5.400 Km)									
1	**Structure has been eliminated as per regime section.**								

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (Ch.-6.100 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.29	Cum	**6914.20**	8886.13	0.53	0.55	1.11
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.51	Sqm	**578.60**	1451.82			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.55	Cum	**1075.00**	594.08			
		Coarse Aggregates (100 Km lead)	1.11	Cum	**1398.00**	1545.17			
		Cement (30 km lead)	0.53	MT	**742.00**	393.37			
TOTAL (In Rs.)						**12870.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.55	Cum	**584.64**	323.09	32.31		
		Coarse Aggregate	1.11	Cum	**944.26**	1043.66	104.37		
		Total					**136.68**		
AOC FOR CULVERT (Ch.-7.000 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.00	Sqm	**11.80**	1770.66			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	11.88	Cum	**5021.30**	59653.04	1.37	3.80	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	46.85	Sqm	**340.20**	15938.37	2.43	0.68	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	46.85	Sqm	**63.20**	2960.92	0.07		
5		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.49	Cum	**1075.00**	4822.03			
		Coarse Aggregates (100 Km lead)	0.00	Cum	**1398.00**	0.00			
		Cement (30 km lead)	3.87	MT	**742.00**	2869.73			
		Brick (15 km lead)	5940.00	No.	**3.18**	18889.20			
TOTAL (In Rs.)						**106903.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.49	Cum	**584.64**	2622.47	262.25		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**262.25**		
AOC FOR GT ROAD BRIDGE (Ch.-7.030 Km)									
1	**Structure is in good condition and does not requir any repair works.**								
AOC FOR FALL (Ch.-7.950 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.00	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.58	Cum	**5021.30**	2887.25	0.07	0.18	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	4.18	Sqm	**340.20**	1422.04	0.22	0.06	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.18	Sqm	**63.20**	264.18	0.01		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
5	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.72	Cum	**6914.20**	39529.83	2.36	2.46	4.92
6	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.16	Sqm	**578.60**	5878.28			
7		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.70	Cum	**1075.00**	2906.18			
		Coarse Aggregates (100 Km lead)	4.92	Cum	**1398.00**	6873.67			
		Cement (30 km lead)	2.65	MT	**742.00**	1964.48			
		Brick (15 km lead)	287.00	No.	**3.18**	912.66			
		TOTAL (In Rs.)				**63937.03**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.70	Cum	**584.64**	1580.53	158.05		
		Coarse Aggregate	4.92	Cum	**944.26**	4642.73	464.27		
		Total					**622.33**		
		AOC FOR FALL (Ch.-8.500 Km)							
1	**Structure is in good condition and does not requir any repair works.**								

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF SONDIH-II SUB DISTRIBUTARY								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.430 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				130.00	Sqm
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Wing wall	*4*	*3*		*4.45*	*53.40*	*Sqm*
		TOTAL					53.40	Sqm
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
		Wing wall	4	3.00		4.45	*53.40*	*Sqm*
		TOTAL					53.40	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.823 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				100.00	Sqm
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Abutment D/S wall	*2*	*3.50*	*0.45*	*1.60*	*5.04*	*Cum*
		Wing wall	*2*	*2.00*	*0.45*	*1.60*	*2.88*	*Cum*
		TOTAL					***7.92***	***Cum***
3	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		Abutment D/S wall	2	6.00	0.45	1.60	*8.64*	*Cum*
		Wing wall	2	3.00	0.45	1.60	*4.32*	*Cum*
		D/S Floor	1	7.00	1.85	0.46	*5.94*	*Cum*
		TOTAL					***18.90***	***Cum***
4	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		Abutment D/S wall	4	6.00		1.60	*38.40*	Sqm
			4		0.45	1.60	*2.88*	Sqm
		Wing wall	4	3.00		1.60	*19.20*	Sqm
			4		0.45	1.60	*2.88*	Sqm
		D/S Floor	2	7.00		0.46	*6.43*	Sqm
			2		1.85	0.46	*1.70*	Sqm
		TOTAL					71.48	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-1.140 Km)								
1		**New Structure has been Proposed.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.150 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	2.00	0.60	1.07	*1.28*	*Cum*
		D/S Floor Rise	1	7.00	1.85	0.46	*5.92*	*Cum*
		TOTAL					***7.20***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Crest	2	2.00		1.07	*4.27*	Sqm
			2		0.60	1.07	*1.28*	Sqm
		D/S Floor Rise	2	7.00		0.46	*6.40*	Sqm
			2		1.85	0.46	*1.69*	Sqm
		TOTAL					**13.64**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.160 Km)								
1		**Structure requires minimal repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-1.520 Km)								
1	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	4	0.25	0.92	*0.92*	*Cum*
		TOTAL					**0.92**	**Cum**
2	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.00		2.09	*8.36*	*Sqm*
		TOTAL					**8.36**	***Sqm***
3	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.00		2.09	*8.36*	*Sqm*
		TOTAL					**8.36**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor Rise	1	7.00	1.85	0.46	*5.92*	*Cum*
		TOTAL					***5.92***	***Cum***
5	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor Rise	2	7.00		0.46	*6.40*	Sqm
			2		1.85	0.46	*1.69*	Sqm
		TOTAL					**8.09**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.859 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	8.00	2.13	0.15	*2.59*	*Cum*
		TOTAL					***2.59***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	8.00		0.15	*2.43*	Sqm
			2		2.13	0.15	*0.65*	Sqm
		TOTAL					**3.08**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.150 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*8.53*	*0.45*	*1.80*	*13.83*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*1.80*	*9.72*	*Cum*
		Crest	*1*	*1.58*	*0.60*	*1.22*	*1.16*	*Cum*
		U/S Floor	*1*	*3.00*	*0.60*	*0.70*	*1.26*	*Cum*
		TOTAL					***25.96***	***Cum***
2		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.285 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail (2Nos)	*3*	*2.00*	*0.18*	*0.20*	*0.21*	*Cum*
		Post	*4*	*0.28*	*0.25*	*0.86*	*0.24*	*Cum*
		TOTAL					***0.45***	***Cum***
3	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	3	0.25	0.92	*0.69*	*Cum*
		TOTAL					**0.69**	**Cum**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.550 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	2.13	0.30	*4.54*	*Cum*
		TOTAL					***4.54***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.30	*4.26*	Sqm
			2		2.13	0.30	*1.30*	Sqm
		TOTAL					**5.55**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.500 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment D/S wall	2	4.00	0.45	2.00	*7.20*	*Cum*
		Wing wall	2	2.00	0.45	2.00	*3.60*	*Cum*
		TOTAL					***10.80***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S wall	4	4.00		2.00	*32.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		Wing wall	4	2.00		2.00	*16.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		TOTAL					**55.20**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.695Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Wing wall Left	1	2.50	0.45	1.50	*1.69*	*Cum*
		TOTAL					***1.69***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Wing wall Left	2	2.50		1.50	*7.50*	Sqm
			2		0.45	1.50	*1.35*	Sqm
		TOTAL					**8.85**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.755 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment D/S wall	2	4.00	0.45	2.00	*7.20*	*Cum*
		Wing wall	2	1.80	0.45	2.00	*3.24*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***10.44***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S wall	4	4.00		2.00	*32.00*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		Wing wall	4	1.80		2.00	*14.40*	Sqm
			4		0.45	2.00	*3.60*	Sqm
		TOTAL					**53.60**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.590 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	3.5	0.25	0.92	*0.81*	*Cum*
		TOTAL					**0.81**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.50		2.09	*7.32*	*Sqm*
		TOTAL					**7.32**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.50		2.09	*7.32*	*Sqm*
		TOTAL					**7.32**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.750 Km)						
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Abutment D/S wall	2	4.00	0.45	1.50	*5.40*	*Cum*
		Wing wall	2	1.50	0.45	1.50	*2.03*	*Cum*
		TOTAL					***7.43***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Abutment D/S wall	4	4.00		1.50	*24.00*	Sqm
			4		0.45	1.50	*2.70*	Sqm
		Wing wall	4	1.50		1.50	*9.00*	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			4		0.45	1.50	*2.70*	Sqm
		TOTAL					**38.40**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.877 Km)						
1		**New Structure has been Proposed.**						
		QUANTITIES OF REPAIRING WORK FOR CULVERT(Ch.-5.120 Km)						
1		**New Structure has been Proposed.**						
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.150 Km)						
1		**New Structure has been Proposed.**						
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.400 Km)						
1		**Structure has been eliminated as per regime section.**						
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.100 Km)						
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	1.20	0.15	*1.29*	*Cum*
		TOTAL					***1.29***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.15	*2.14*	Sqm
			2		1.20	0.15	*0.37*	Sqm
		TOTAL					**2.51**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-7.000 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Wing wall U/S & D/S	4	3	0.45	1.5	*8.10*	*Cum*
		Abutment	1	7	0.45	1.2	*3.78*	*Cum*
		TOTAL					**11.88**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Wing wall U/S & D/S	1	3.00		3.25	*9.75*	*Sqm*
		Abutment	2	7.00		2.65	*37.10*	*Sqm*
		TOTAL					**46.85**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Wing wall U/S & D/S	1	3.00		3.25	*9.75*	*Sqm*
		Abutment	2	7.00		2.65	*37.10*	*Sqm*
		TOTAL					**46.85**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR GT ROAD BRIDGE (Ch.-7.030 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.950 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	2.5	0.25	0.92	*0.58*	*Cum*
		TOTAL					**0.58**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	2.00		2.09	*4.18*	*Sqm*
		TOTAL					**4.18**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.00		2.09	*4.18*	*Sqm*
		TOTAL					**4.18**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	1.34	0.61	*5.72*	*Cum*
		TOTAL					***5.72***	***Cum***
6	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.61	*8.53*	Sqm
			2		1.34	0.61	*1.63*	Sqm
		TOTAL					**10.16**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.500 Km)								
1		**Structure requires no repair work.**						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 5 no., Total Seigniorage charges					**37892.97**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per SOR 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				

5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
		TOTAL (In Rs.)				**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 17 nos. outlet, Total Seigniorage charges					**18702.94**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**WRD SOR 2025 & PL MARCH**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	Sl-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	Sl-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	**Reference**		**Particular**	**Unit**	**Rate (in Rs.)**
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 9.5 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Sondih-III Sub Dy.
(Total Cost – Rs. 4.68 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (SONDIH-III SUB DISTRIBUTARY)								
S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	SONDIH-III SUB DISTRIBUTARY	1	Job	21589120.67	0.00	₹ 2,15,89,120.67	AOC Earthwork Sondih III Sub Dy.	9
2	Falls							
	SONDIH-III SUB DISTRIBUTARY							
	0.610 m Fall at Ch. 0.965 Km	1	No.	1331126.51	11134.22	₹ 13,42,260.73	Fall (AOC) Sondih III Sub Dy.	13
	1.448 m Fall at Ch. 1.465 Km	1	No.	1976337.40	16884.94	₹ 19,93,222.34		14
	1.829 m Fall at Ch. 2.170 Km	1	No.	1913623.35	16890.16	₹ 19,30,513.51		15
	1.829 m Fall at Ch. 4.300 Km	1	No.	1581859.71	13798.83	₹ 15,95,658.54		16
	0.457 m Fall at Ch. 4.450 Km	1	No.	680873.58	5924.19	₹ 6,86,797.77		17
	1.524 m Fall at Ch. 4.550 Km	1	No.	1309170.79	11438.49	₹ 13,20,609.27		18
	0.914 m Fall at Ch. 5.100 Km	1	No.	833627.65	7285.75	₹ 8,40,913.40		19
	0.910 m Fall at Ch. 6.800 Km	1	No.	675621.96	5767.82	₹ 6,81,389.77		20
	0.610 m Fall at Ch. 7.300 Km	1	No.	866441.30	7192.40	₹ 8,73,633.70		21
	0.915 m Fall at Ch. 7.660 Km	1	No.	964018.38	8023.70	₹ 9,72,042.08		22
	0.915 m Fall at Ch. 8.130 Km	1	No.	1055941.42	8886.53	₹ 10,64,827.95		23
	0.914 m Fall at Ch. 9.000 Km	1	No.	486203.87	4037.20	₹ 4,90,241.08		24
	0.610 m Fall at Ch. 9.450 Km	1	No.	347939.25	2833.33	₹ 3,50,772.58		25
	0.610 m Fall at Ch. 9.912 Km	1	No.	251482.29	1982.41	₹ 2,53,464.70		26
	1.220 m Fall at Ch. 10.060 Km	1	No.	354066.59	2827.14	₹ 3,56,893.74		27
	0.610 m Fall at Ch. 10.350 Km	1	No.	252448.49	1982.41	₹ 2,54,430.90		28
3	*Brick Section*	1	No.	3814693.74	10136.25	₹ 38,24,829.99	Brick Sec '!I11	74
4	*Repair of Structures*							
	SONDIH-III SUB DISTRIBUTARY	12	No.	1219997.333	4305.47	₹ 12,24,302.80	Abstract (Repair St.) Sondih III Sub Dy.	75
	APPROACH ROAD	3	No.	521018.55	7578.59	₹ 15,85,791.43	Approach Road AOC	93
5	Outlets							
	SONDIH-III SUB DISTRIBUTARY	27	No.	127744.47	1100.17	₹ 34,78,805.30	Outlet-AOC	97
6	Kilometer Stone	12	No.	3853.40	0.00	₹ 46,240.80	Rates '!F61	128
	TOTAL (In Rs.)					**46756763.03**		
	TOTAL (In Lacs)					**467.57**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
SONDIH-III SUB DISTRIBUTARY (0.000 TO 10.500 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	**Unit**
0.00 - 2.400	2400	4.05	9720.00	Sqm
2.400 - 5.650	3250	3.54	11505.00	Sqm
5.650 - 6.800	1150	3.1	3565.00	Sqm
6.800 - 7.650	850	2.75	2337.50	Sqm
7.650 - 8.200	550	2.44	1342.00	Sqm
8.200 - 8.850	650	2.00	1300.00	Sqm
8.850 - 9.450	600	1.64	984.00	Sqm
9.450 -10.500	1050	1.18	1239.00	Sqm
	TOTAL		**31992.50**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	**Unit**
0.00 - 2.400	2400	4.050	0.15	1458.00	Cum
2.400 - 5.650	3250	3.540	0.15	1725.75	Cum
5.650 - 6.800	1150	3.100	0.15	534.75	Cum
6.800 - 7.650	850	2.750	0.15	350.63	Cum
7.650 - 8.200	550	2.440	0.15	201.30	Cum
8.200 - 8.850	650	2.000	0.15	195.00	Cum
8.850 - 9.450	600	1.640	0.15	147.60	Cum
9.450 -10.500	1050	1.180	0.15	185.85	Cum
	TOTAL			**4798.88**	**Cum**

DETAIL QUANTITIES OF EARTHWORK
SONDIH-III SUB DISTRIBUTARY (0.000 TO 10.500 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	4.553	2.277	227.650	8.560	4.280	428.000
200	100	1.831	3.192	319.200	12.770	10.665	1066.500
300	100	1.646	1.739	173.850	12.940	12.855	1285.500
400	100	0.676	1.161	116.100	11.255	12.098	1209.750
500	100	0.125	0.401	40.050	9.354	10.305	1030.450
600	100	0.000	0.063	6.250	7.609	8.482	848.150
700	100	0.039	0.020	1.950	5.272	6.441	644.050
800	100	0.000	0.020	1.950	7.657	6.465	646.450
900	100	0.000	0.000	0.000	11.723	9.690	969.000
1000	100	0.501	0.251	25.050	6.141	8.932	893.200
1100	100	0.215	0.358	35.800	7.201	6.671	667.100
1200	100	0.000	0.108	10.750	9.090	8.146	814.550
1300	100	0.000	0.000	0.000	10.498	9.794	979.400
1400	100	0.000	0.000	0.000	11.973	11.236	1123.550
1500	100	2.836	1.418	141.800	2.862	7.418	741.750
1600	100	1.942	2.389	238.900	2.897	2.880	287.950
1700	100	1.301	1.622	162.150	3.256	3.077	307.650
1800	100	0.789	1.045	104.500	4.519	3.888	388.750
1900	100	0.000	0.395	39.450	8.351	6.435	643.500
2000	100	0.000	0.000	0.000	10.641	9.496	949.600
2100	100	0.000	0.000	0.000	8.987	9.814	981.400
2200	100	3.934	1.967	196.700	2.254	5.621	562.050
2300	100	1.320	2.627	262.700	5.867	4.061	406.050
2400	100	9.071	5.196	519.550	2.316	4.092	409.150
2500	100	0.720	4.896	489.550	2.281	2.299	229.850
2600	100	0.000	0.360	36.000	9.600	5.941	594.050
2700	100	0.000	0.000	0.000	11.737	10.669	1066.850
2800	100	0.000	0.000	0.000	8.625	10.181	1018.100
2900	100	0.000	0.000	0.000	10.754	9.690	968.950
3000	100	0.558	0.279	27.900	4.587	7.671	767.050
3100	100	0.165	0.362	36.150	5.836	5.212	521.150
3200	100	0.781	0.473	47.300	4.475	5.156	515.550
3300	100	1.053	0.917	91.700	3.754	4.115	411.450
3400	100	0.649	0.851	85.100	3.917	3.836	383.550
3500	100	0.334	0.492	49.150	2.808	3.363	336.250
3600	100	1.722	1.028	102.800	2.878	2.843	284.300
3700	100	1.798	1.760	176.000	3.067	2.973	297.250
3800	100	2.031	1.915	191.450	3.268	3.168	316.750
3900	100	2.540	2.286	228.550	2.532	2.900	290.000
4000	100	3.328	2.934	293.400	2.020	2.276	227.600
4100	100	2.292	2.810	281.000	2.205	2.113	211.250
4200	100	0.856	1.574	157.400	6.302	4.254	425.350

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4300	100	6.887	3.872	387.150	2.427	4.365	436.450
4400	100	1.404	4.146	414.550	1.048	1.738	173.750
4500	100	0.013	0.709	70.850	7.157	4.103	410.250
4600	100	2.218	1.116	111.550	2.060	4.609	460.850
4700	100	0.647	1.433	143.250	3.030	2.545	254.500
4800	100	0.000	0.324	32.350	9.905	6.468	646.750
4900	100	3.078	1.539	153.900	1.845	5.875	587.500
5000	100	0.840	1.959	195.900	4.266	3.056	305.550
5100	100	1.960	1.400	140.000	2.934	3.600	360.000
5200	100	0.885	1.423	142.250	3.469	3.202	320.150
5300	100	0.744	0.815	81.450	3.716	3.593	359.250
5400	100	0.603	0.674	67.350	3.999	3.858	385.750
5500	100	0.467	0.535	53.500	4.307	4.153	415.300
5600	100	0.400	0.434	43.350	4.669	4.488	448.800
5700	100	0.420	0.410	41.000	5.715	5.192	519.200
5800	100	0.121	0.271	27.050	6.662	6.189	618.850
5900	100	0.396	0.259	25.850	4.851	5.757	575.650
6000	100	0.642	0.519	51.900	3.723	4.287	428.700
6100	100	4.331	2.487	248.650	0.587	2.155	215.500
6200	100	1.357	2.844	284.400	2.471	1.529	152.900
6300	100	1.276	1.317	131.650	2.528	2.500	249.950
6400	100	1.055	1.166	116.550	3.062	2.795	279.500
6500	100	0.956	1.006	100.550	3.126	3.094	309.400
6600	100	0.348	0.652	65.200	3.170	3.148	314.800
6700	100	0.035	0.192	19.150	5.078	4.124	412.400
6800	100	1.325	0.680	68.000	2.520	3.799	379.900
6900	100	1.080	1.203	120.250	2.004	2.262	226.200
7000	100	0.564	0.822	82.200	3.681	2.843	284.250
7100	100	0.332	0.448	44.800	2.971	3.326	332.600
7200	100	0.015	0.174	17.350	1.721	2.346	234.600
7300	100	0.666	0.341	34.050	3.096	2.409	240.850
7400	100	0.556	0.611	61.100	2.527	2.812	281.150
7500	100	0.164	0.360	36.000	3.487	3.007	300.700
7600	100	0.033	0.099	9.850	3.719	3.603	360.300
7700	100	0.847	0.440	44.000	1.518	2.619	261.850
7800	100	0.746	0.797	79.650	0.962	1.240	124.000
7900	100	0.443	0.595	59.450	1.920	1.441	144.100
8000	100	0.235	0.339	33.900	2.992	2.456	245.600
8100	100	0.109	0.172	17.200	3.231	3.112	311.150
8200	100	0.752	0.431	43.050	3.218	3.225	322.450
8300	100	0.223	0.488	48.750	2.647	2.933	293.250
8400	100	1.464	0.844	84.350	2.081	2.364	236.400
8500	100	0.660	1.062	106.200	2.535	2.308	230.800
8600	100	0.481	0.571	57.050	2.354	2.445	244.450
8700	100	0.000	0.241	24.050	5.866	4.110	411.000

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
8800	100	0.706	0.353	35.300	2.828	4.347	434.700
8900	100	0.116	0.411	41.100	4.761	3.795	379.450
9000	100	0.740	0.428	42.800	2.608	3.685	368.450
9100	100	0.145	0.443	44.250	2.967	2.788	278.750
9200	100	0.000	0.073	7.250	6.637	4.802	480.200
9300	100	0.707	0.354	35.350	3.572	5.105	510.450
9400	100	0.268	0.488	48.750	3.072	3.322	332.200
9500	100	0.758	0.513	51.300	2.445	2.759	275.850
9600	100	0.430	0.594	59.400	3.555	3.000	300.000
9700	100	2.923	1.677	167.650	0.329	1.942	194.200
9800	100	0.898	1.911	191.050	2.169	1.249	124.900
9900	100	0.872	0.885	88.500	1.874	2.022	202.150
10000	100	0.750	0.811	81.100	2.078	1.976	197.600
10100	100	0.858	0.804	80.400	2.747	2.413	241.250
10200	100	0.597	0.728	72.750	3.015	2.881	288.100
10300	100	0.248	0.423	42.250	4.472	3.744	374.350
10400	100	0.548	0.398	39.800	2.388	3.430	343.000
10500	100	0.393	0.471	47.050	3.877	3.133	313.250
Total				**10314.450**			**47894.950**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**10314.450**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**47894.950**
NET QUANTITY OF EARTHWORK IN FILLING							**37580.50**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR SONDIH-III SUB DISTRIBUTARY						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	31992.50	Sqm	**11.80**	377651.9448
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	10314.45	Cum	**156.50**	1614211.425
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	4125.78	Cum	**17.22**	71035.67542
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	37580.50	Cum	**165.12**	6205140.35
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	11274.15	Cum	**174.89**	1971736.09
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	9395.12	Cum	**217.92**	2047385.64
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	16911.23	Cum	**319.14**	5397048.35
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			4798.88	Cum	**196.10**	941059.39
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	47894.95	Cum	**61.88**	2963851.80
TOTAL COST OF EARTHWORK (in Rs.)						**21589120.67**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**215.891**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR SONDIH-III SUB DISTRIBUTARY				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	*31992.50*	*Sqm*
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation) Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	10314.450	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	4125.78	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	37580.500	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	11274.15	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	9395.12	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	16911.23	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	4798.88	Cum
7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	47894.95	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-III SUB DISTRIBUTARY								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.965 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	106.266	Cum	**195.20**	20743.19			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.55	Cum	**6381.70**	118408.85	6.01	8.35	16.70
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	72.16	Cum	**6914.20**	498900.31	29.76	31.03	62.05
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.12	Cum	**8151.40**	98812.90	6.87	4.73	9.58
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.29	MT	**73574.90**	168201.80			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	305.12	Sqm	**578.60**	176544.97			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.31	Cum	**694.61**	911.68			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.31	Cum	**1237.00**	1623.56			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.31	Cum	**1377.70**	1808.23			1.31
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.31	Cum	**516.50**	677.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.60	Sqm	**63.20**	416.93			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	21.12	Cum	**149.30**	3153.15			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	44.104	Cum	**1075.00**	47412.00			
	Coarse Aggregates (100 Km lead)	89.642	Cum	**1398.00**	125319.66			
	Cement (30 km lead)	42.649	MT	**742.00**	31645.73			
	Boulder (60 Km lead)	1.31	Cum	**1159.00**	1521.19			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	2.29	MT	**742.00**	1696.31			
	TOTAL (In Rs.)				**1331126.51**			
	TOTAL (In Rs.)				**1331126.51**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	44.10	Cum	**584.64**	25785.07	2578.51		
	Coarse Aggregate	89.64	Cum	**944.26**	84645.45	8464.55		
	Boulders	1.31	Cum	**694.61**	911.68	91.17		
	Total					11134.22		
	For 1 nos. fall, Total Seigniorage charges					**11134.22**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.448 METER AT CH. 1.465 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	185.119	Cum	**195.20**	36135.31			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	21.55	Cum	**6381.70**	137532.28	6.98	9.70	19.40
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	122.98	Cum	**6914.20**	850310.81	50.73	52.88	105.76
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	12.25	Cum	**8151.40**	99837.65	6.94	4.78	9.68
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.48	MT	**73574.90**	256264.79			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	407.20	Sqm	**578.60**	235607.17			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.31	Cum	**694.61**	911.68			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.31	Cum	**1237.00**	1623.56			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.31	Cum	**1377.70**	1808.23			1.31
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.31	Cum	**516.50**	677.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.70	Sqm	**63.20**	486.72			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	4.00	No.	**5588.70**	22354.80			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	46.82	Cum	**149.30**	6990.43			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	67.356	Cum	**1075.00**	72407.93			
	Coarse Aggregates (100 Km lead)	136.147	Cum	**1398.00**	190334.07			
	Cement (30 km lead)	64.657	MT	**742.00**	47975.13			
	Boulder (60 Km lead)	1.31	Cum	**1159.00**	1521.19			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	3.48	MT	**742.00**	2584.42			
	TOTAL (In Rs.)				**1976337.40**			
	TOTAL (In Rs.)				**1976337.40**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	67.36	Cum	**584.64**	39379.13	3937.91		
	Coarse Aggregate	136.15	Cum	**944.26**	128558.54	12855.85		
	Boulders	1.31	Cum	**694.61**	911.68	91.17		
	Total					16884.94		
	For 1 nos. fall, Total Seigniorage charges					**16884.94**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH. 2.170 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	266.365	Cum	**195.20**	51994.37			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	17.73	Cum	**6381.70**	113151.62	5.74	7.98	15.96
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	137.24	Cum	**6914.20**	948935.90	56.61	59.02	118.03
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.09	Cum	**8151.40**	8903.90	0.62	0.43	0.86
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	3.23	MT	**73574.90**	237802.02			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	347.31	Sqm	**578.60**	200951.19			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.31	Cum	**694.61**	911.68			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.31	Cum	**1237.00**	1623.56			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	1.31	Cum	**1377.70**	1808.23			1.31
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	1.31	Cum	**516.50**	677.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.15	Sqm	**63.20**	957.40			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	68.81	Cum	**149.30**	10273.50			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	67.420	Cum	**1075.00**	72476.42			
	Coarse Aggregates (100 Km lead)	136.163	Cum	**1398.00**	190356.25			
	Cement (30 km lead)	62.977	MT	**742.00**	46729.25			
	Boulder (60 Km lead)	1.31	Cum	**1159.00**	1521.19			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	3.23	MT	**742.00**	2398.22			
	TOTAL (In Rs.)				**1913623.35**			
	TOTAL (In Rs.)				**1913623.35**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	67.42	Cum	**584.64**	39416.38	3941.64		
	Coarse Aggregate	136.16	Cum	**944.26**	128573.53	12857.35		
	Boulders	1.31	Cum	**694.61**	911.68	91.17		
	Total					16890.16		
	For 1 nos. fall, Total Seigniorage charges					**16890.16**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH. 4.300 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	227.596	Cum	**195.20**	44426.83			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	16.32	Cum	**6381.70**	104160.93	5.29	7.34	14.69
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	110.31	Cum	**6914.20**	762679.33	45.50	47.43	94.86
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.02	Cum	**8151.40**	8311.49	0.58	0.40	0.81
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.60	MT	**73574.90**	191126.38			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	309.96	Sqm	**578.60**	179344.31			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.93	Cum	**694.61**	645.99			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.93	Cum	**1237.00**	1150.41			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.93	Cum	**1377.70**	1281.26			0.93
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.93	Cum	**516.50**	480.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.15	Sqm	**63.20**	957.40			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	61.16	Cum	**149.30**	9130.53			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	55.174	Cum	**1075.00**	59312.22			
	Coarse Aggregates (100 Km lead)	111.289	Cum	**1398.00**	155581.33			
	Cement (30 km lead)	51.368	MT	**742.00**	38114.85			
	Boulder (60 Km lead)	0.93	Cum	**1159.00**	1077.87			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	2.60	MT	**742.00**	1927.50			
	TOTAL (In Rs.)				**1581859.71**			
	TOTAL (In Rs.)				**1581859.71**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	55.17	Cum	**584.64**	32257.02	3225.70		
	Coarse Aggregate	111.29	Cum	**944.26**	105085.29	10508.53		
	Boulders	0.93	Cum	**694.61**	645.99	64.60		
	Total					13798.83		
	For 1 nos. fall, Total Seigniorage charges					**13798.83**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 4.450 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	59.073	Cum	**195.20**	11531.08			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.07	Cum	**6381.70**	70672.49	3.59	4.98	9.97
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.08	Cum	**6914.20**	290977.56	17.36	18.10	36.19
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5341.90	0.37	0.26	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.99	MT	**73574.90**	72918.57			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	158.45	Sqm	**578.60**	91681.84			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.93	Cum	**694.61**	645.99			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.93	Cum	**1237.00**	1150.41			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.93	Cum	**1377.70**	1281.26			0.93
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.93	Cum	**516.50**	480.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.79	Sqm	**63.20**	619.03			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	14.40	Cum	**149.30**	2150.60			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.335	Cum	**1075.00**	25085.27			
	Coarse Aggregates (100 Km lead)	47.607	Cum	**1398.00**	66554.33			
	Cement (30 km lead)	21.319	MT	**742.00**	15818.92			
	Boulder (60 Km lead)	0.93	Cum	**1159.00**	1077.87			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	0.99	MT	**742.00**	735.38			
	TOTAL (In Rs.)				**680873.58**			
	TOTAL (In Rs.)				**680873.58**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.34	Cum	**584.64**	13642.65	1364.27		
	Coarse Aggregate	47.61	Cum	**944.26**	44953.21	4495.32		
	Boulders	0.93	Cum	**694.61**	645.99	64.60		
	Total					5924.19		
	For 1 nos. fall, Total Seigniorage charges					**5924.19**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 4.550 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	168.694	Cum	**195.20**	32929.13			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.87	Cum	**6381.70**	94906.48	4.82	6.69	13.38
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	89.76	Cum	**6914.20**	620626.64	37.03	38.60	77.19
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.88	Cum	**8151.40**	7134.15	0.50	0.34	0.69
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.11	MT	**73574.90**	155528.17			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	261.31	Sqm	**578.60**	151191.10			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.93	Cum	**694.61**	645.99			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.93	Cum	**1237.00**	1150.41			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.93	Cum	**1377.70**	1281.26			0.93
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.93	Cum	**516.50**	480.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.54	Sqm	**63.20**	792.28			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	55.87	Cum	**149.30**	8341.09			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	45.631	Cum	**1075.00**	49053.19			
	Coarse Aggregates (100 Km lead)	92.201	Cum	**1398.00**	128896.31			
	Cement (30 km lead)	42.341	MT	**742.00**	31417.13			
	Boulder (60 Km lead)	0.93	Cum	**1159.00**	1077.87			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	2.11	MT	**742.00**	1568.50			
	TOTAL (In Rs.)				**1309170.79**			
	TOTAL (In Rs.)				**1309170.79**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	45.63	Cum	**584.64**	26677.64	2667.76		
	Coarse Aggregate	92.20	Cum	**944.26**	87061.25	8706.13		
	Boulders	0.93	Cum	**694.61**	645.99	64.60		
	Total					11438.49		
	For 1 nos. fall, Total Seigniorage charges					**11438.49**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 5.100 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	73.254	Cum	**195.20**	14299.18			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	12.39	Cum	**6381.70**	79052.33	4.01	5.57	11.15
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	53.45	Cum	**6914.20**	369539.24	22.05	22.98	45.96
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.73	Cum	**8151.40**	5934.67	0.41	0.28	0.58
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.26	MT	**73574.90**	92606.02			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.49	Sqm	**578.60**	108479.22			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.60	Sqm	**680.10**	8569.26			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.93	Cum	**694.61**	645.99			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.93	Cum	**1237.00**	1150.41			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.93	Cum	**1377.70**	1281.26			0.93
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.93	Cum	**516.50**	480.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.42	Sqm	**63.20**	658.61			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	18.38	Cum	**149.30**	2744.16			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.840	Cum	**1075.00**	31003.22			
	Coarse Aggregates (100 Km lead)	58.618	Cum	**1398.00**	81947.54			
	Cement (30 km lead)	26.473	MT	**742.00**	19642.93			
	Boulder (60 Km lead)	0.93	Cum	**1159.00**	1077.87			
	Brick (15 km lead)	756.00	No.	**3.18**	2404.08			
	Steel (30 Km lead)	1.26	MT	**742.00**	933.93			
	TOTAL (In Rs.)				**833627.65**			
	TOTAL (In Rs.)				**833627.65**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.84	Cum	**584.64**	16861.14	1686.11		
	Coarse Aggregate	58.62	Cum	**944.26**	55350.35	5535.03		
	Boulders	0.93	Cum	**694.61**	645.99	64.60		
	Total					7285.75		
	For 1 nos. fall, Total Seigniorage charges					**7285.75**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.910 METER AT CH. 6.800 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	76.619	Cum	**195.20**	14956.01			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.17	Cum	**6381.70**	64925.42	3.30	4.58	9.16
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.34	Cum	**6914.20**	292729.69	17.46	18.21	36.41
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5382.98	0.37	0.26	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.00	MT	**73574.90**	73357.65			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	158.51	Sqm	**578.60**	91715.18			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.29	Sqm	**680.10**	6319.49			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.42	Cum	**694.61**	291.74			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.42	Cum	**1237.00**	519.54			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.42	Cum	**1377.70**	578.63			0.42
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.42	Cum	**516.50**	216.93			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.28	Sqm	**63.20**	649.85			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	29.03	Cum	**149.30**	4334.09			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	23.041	Cum	**1075.00**	24768.88			
	Coarse Aggregates (100 Km lead)	46.508	Cum	**1398.00**	65018.51			
	Cement (30 km lead)	21.135	MT	**742.00**	15682.10			
	Boulder (60 Km lead)	0.42	Cum	**1159.00**	486.78			
	Brick (15 km lead)	557.00	No.	**3.18**	1771.26			
	Steel (30 Km lead)	1.00	MT	**742.00**	739.81			
	TOTAL (In Rs.)				**675621.96**			
	TOTAL (In Rs.)				**675621.96**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	23.04	Cum	**584.64**	13470.58	1347.06		
	Coarse Aggregate	46.51	Cum	**944.26**	43915.87	4391.59		
	Boulders	0.42	Cum	**694.61**	291.74	29.17		
	Total					5767.82		
	For 1 nos. fall, Total Seigniorage charges					**5767.82**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 7.300 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	73.990	Cum	**195.20**	14442.81			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.11	Cum	**6381.70**	64531.54	3.28	4.55	9.10
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	46.57	Cum	**6914.20**	322025.26	19.21	20.03	40.05
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.73	Cum	**8151.40**	87473.49	6.08	4.19	8.48
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.50	MT	**73574.90**	110726.59			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	187.05	Sqm	**578.60**	108227.95			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	9.29	Sqm	**680.10**	6319.49			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.42	Cum	**694.61**	291.74			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.42	Cum	**1237.00**	519.54			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.42	Cum	**1377.70**	578.63			0.42
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.42	Cum	**516.50**	216.93			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.49	Sqm	**63.20**	410.10			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	19.07	Cum	**149.30**	2847.12			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	28.763	Cum	**1075.00**	30919.73			
	Coarse Aggregates (100 Km lead)	58.052	Cum	**1398.00**	81157.24			
	Cement (30 km lead)	28.573	MT	**742.00**	21201.01			
	Boulder (60 Km lead)	0.42	Cum	**1159.00**	486.78			
	Brick (15 km lead)	557.00	No.	**3.18**	1771.26			
	Steel (30 Km lead)	1.50	MT	**742.00**	1116.67			
	TOTAL (In Rs.)				**866441.30**			
	TOTAL (In Rs.)				**866441.30**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	28.76	Cum	**584.64**	16815.73	1681.57		
	Coarse Aggregate	58.05	Cum	**944.26**	54816.55	5481.66		
	Boulders	0.42	Cum	**694.61**	291.74	29.17		
	Total					7192.40		
	For 1 nos. fall, Total Seigniorage charges					**7192.40**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 7.660 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	100.723	Cum	**195.20**	19661.14			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.22	Cum	**6381.70**	65237.35	3.31	4.60	9.20
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	54.86	Cum	**6914.20**	379340.80	22.63	23.59	47.18
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.29	Cum	**8151.40**	83882.72	5.83	4.01	8.13
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.67	MT	**73574.90**	122803.22			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	203.43	Sqm	**578.60**	117705.69			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.30	Cum	**694.61**	208.38			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.30	Cum	**1237.00**	371.10			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.30	Cum	**1377.70**	413.31			0.30
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.30	Cum	**516.50**	154.95			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.54	Sqm	**63.20**	413.63			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	30.01	Cum	**149.30**	4480.95			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	32.205	Cum	**1075.00**	34620.39			
	Coarse Aggregates (100 Km lead)	64.813	Cum	**1398.00**	90608.48			
	Cement (30 km lead)	31.778	MT	**742.00**	23579.49			
	Boulder (60 Km lead)	0.30	Cum	**1159.00**	347.70			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	1.67	MT	**742.00**	1238.47			
	TOTAL (In Rs.)				**964018.38**			
	TOTAL (In Rs.)				**964018.38**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	32.21	Cum	**584.64**	18828.34	1882.83		
	Coarse Aggregate	64.81	Cum	**944.26**	61200.26	6120.03		
	Boulders	0.30	Cum	**694.61**	208.38	20.84		
	Total					8023.70		
	For 1 nos. fall, Total Seigniorage charges					**8023.70**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 8.130 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	100.123	Cum	**195.20**	19544.01			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	11.00	Cum	**6381.70**	70180.67	3.56	4.95	9.90
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	62.18	Cum	**6914.20**	429947.89	25.65	26.74	53.48
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.27	Cum	**8151.40**	83736.36	5.82	4.01	8.12
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.84	MT	**73574.90**	135485.29			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	216.81	Sqm	**578.60**	125447.99			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.30	Cum	**694.61**	208.38			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.30	Cum	**1237.00**	371.10			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.30	Cum	**1377.70**	413.31			0.30
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.30	Cum	**516.50**	154.95			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.19	Sqm	**63.20**	390.94			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	31.24	Cum	**149.30**	4663.39			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	35.694	Cum	**1075.00**	38370.92			
	Coarse Aggregates (100 Km lead)	71.790	Cum	**1398.00**	100363.11			
	Cement (30 km lead)	35.038	MT	**742.00**	25998.41			
	Boulder (60 Km lead)	0.30	Cum	**1159.00**	347.70			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	1.84	MT	**742.00**	1366.36			
	TOTAL (In Rs.)				**1055941.42**			
	TOTAL (In Rs.)				**1055941.42**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	35.69	Cum	**584.64**	20868.07	2086.81		
	Coarse Aggregate	71.79	Cum	**944.26**	67788.89	6778.89		
	Boulders	0.30	Cum	**694.61**	208.38	20.84		
	Total					8886.53		
	For 1 nos. fall, Total Seigniorage charges					**8886.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.000 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	62.085	Cum	**195.20**	12119.05			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	7.34	Cum	**6381.70**	46835.93	2.38	3.30	6.61
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	29.57	Cum	**6914.20**	204435.00	12.20	12.71	25.43
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.49	Cum	**8151.40**	4019.05	0.28	0.19	0.39
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.70	MT	**73574.90**	51231.13			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	125.83	Sqm	**578.60**	72804.01			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.72	Sqm	**680.10**	3890.85			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.17	Cum	**694.61**	118.78			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.17	Cum	**1237.00**	211.53			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.17	Cum	**1377.70**	235.59			0.17
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.17	Cum	**516.50**	88.32			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.50	Sqm	**63.20**	536.95			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	17.97	Cum	**149.30**	2682.55			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	16.209	Cum	**1075.00**	17424.54			
	Coarse Aggregates (100 Km lead)	32.594	Cum	**1398.00**	45565.96			
	Cement (30 km lead)	14.854	MT	**742.00**	11021.66			
	Boulder (60 Km lead)	0.17	Cum	**1159.00**	198.19			
	Brick (15 km lead)	343.00	No.	**3.18**	1090.74			
	Steel (30 Km lead)	0.70	MT	**742.00**	516.66			
	TOTAL (In Rs.)				**486203.87**			
	TOTAL (In Rs.)				**486203.87**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	16.21	Cum	**584.64**	9476.35	947.64		
	Coarse Aggregate	32.59	Cum	**944.26**	30776.90	3077.69		
	Boulders	0.17	Cum	**694.61**	118.78	11.88		
	Total					4037.20		
	For 1 nos. fall, Total Seigniorage charges					**4037.20**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.450 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	41.087	Cum	**195.20**	8020.17			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.63	Cum	**6381.70**	23173.06	1.18	1.63	3.27
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	22.45	Cum	**6914.20**	155246.43	9.26	9.65	19.31
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.43	Cum	**8151.40**	3464.43	0.24	0.17	0.34
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.53	MT	**73574.90**	38904.54			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	91.54	Sqm	**578.60**	52963.22			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.37	Sqm	**63.20**	465.73			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.46	Cum	**149.30**	1860.72			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.455	Cum	**1075.00**	12313.79			
	Coarse Aggregates (100 Km lead)	22.914	Cum	**1398.00**	32033.26			
	Cement (30 km lead)	10.679	MT	**742.00**	7924.16			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.53	MT	**742.00**	392.35			
	TOTAL (In Rs.)				**347939.25**			
	TOTAL (In Rs.)				**347939.25**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.45	Cum	**584.64**	6696.87	669.69		
	Coarse Aggregate	22.91	Cum	**944.26**	21636.42	2163.64		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2833.33		
	For 1 nos. fall, Total Seigniorage charges					**2833.33**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.912 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	25.881	Cum	**195.20**	5051.99			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.75	Cum	**6381.70**	17530.38	0.89	1.24	2.47
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.45	Cum	**6914.20**	106821.79	6.37	6.64	13.29
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.35	Cum	**8151.40**	2819.57	0.20	0.13	0.27
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.36	MT	**73574.90**	26769.39			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	74.33	Sqm	**578.60**	43005.95			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.79	Sqm	**63.20**	365.74			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	7.41	Cum	**149.30**	1106.95			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	8.014	Cum	**1075.00**	8615.46			
	Coarse Aggregates (100 Km lead)	16.032	Cum	**1398.00**	22413.04			
	Cement (30 km lead)	7.459	MT	**742.00**	5534.66			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.36	MT	**742.00**	269.97			
	TOTAL (In Rs.)				**251482.29**			
	TOTAL (In Rs.)				**251482.29**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	8.01	Cum	**584.64**	4685.53	468.55		
	Coarse Aggregate	16.03	Cum	**944.26**	15138.58	1513.86		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					1982.41		
	For 1 nos. fall, Total Seigniorage charges					**1982.41**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 10.060 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	43.727	Cum	**195.20**	8535.54			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	3.34	Cum	**6381.70**	21337.02	1.08	1.50	3.01
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	22.72	Cum	**6914.20**	157099.60	9.37	9.77	19.54
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.40	Cum	**8151.40**	3240.92	0.23	0.16	0.31
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.54	MT	**73574.90**	39368.94			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	100.98	Sqm	**578.60**	58425.67			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.73	Sqm	**63.20**	425.58			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	12.61	Cum	**149.30**	1883.17			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.430	Cum	**1075.00**	12287.01			
	Coarse Aggregates (100 Km lead)	22.864	Cum	**1398.00**	31963.22			
	Cement (30 km lead)	10.681	MT	**742.00**	7925.49			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.54	MT	**742.00**	397.03			
	TOTAL (In Rs.)				**354066.59**			
	TOTAL (In Rs.)				**354066.59**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.43	Cum	**584.64**	6682.31	668.23		
	Coarse Aggregate	22.86	Cum	**944.26**	21589.12	2158.91		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2827.14		
	For 1 nos. fall, Total Seigniorage charges					**2827.14**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 10.350 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	30.219	Cum	**195.20**	5898.66			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	2.75	Cum	**6381.70**	17530.38	0.89	1.24	2.47
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	15.45	Cum	**6914.20**	106821.79	6.37	6.64	13.29
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.35	Cum	**8151.40**	2819.57	0.20	0.13	0.27
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.36	MT	**73574.90**	26769.39			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	74.33	Sqm	**578.60**	43005.95			
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.79	Sqm	**63.20**	365.74			
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	8.21	Cum	**149.30**	1226.47			
10	**Carriage of materials**							
	Coarse Sand (60 Km lead)	8.014	Cum	**1075.00**	8615.46			
	Coarse Aggregates (100 Km lead)	16.032	Cum	**1398.00**	22413.04			
	Cement (30 km lead)	7.459	MT	**742.00**	5534.66			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	0.00	No.	**3.18**	0.00			
	Steel (30 Km lead)	0.36	MT	**742.00**	269.97			
	TOTAL (In Rs.)				**252448.49**			
	TOTAL (In Rs.)				**252448.49**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	8.01	Cum	**584.64**	4685.53	468.55		
	Coarse Aggregate	16.03	Cum	**944.26**	15138.58	1513.86		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					1982.41		
	For 1 nos. fall, Total Seigniorage charges					**1982.41**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SONDIH-III SUB DISTRIBUTARY							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.965 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.45*	*1.692*	*1.620*	*2.492*	*Cum*
	Section 2-2	*2*	*3.51*	*1.846*	*1.620*	*21.005*	*Cum*
	Section 3-3	*2*	*3.73*	*1.726*	*1.420*	*18.299*	*Cum*
	Section 5-5	*2*	*2.46*	*1.842*	*1.620*	*14.676*	*Cum*
	Section 6-6	*2*	*0.86*	*1.206*	*1.420*	*2.959*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*1.06*	*5.500*	*1.620*	*9.427*	*Cum*
	D/S Floor	*1*	*3.94*	*5.500*	*0.850*	*18.429*	*Cum*
		1	*3.80*	*5.500*	*0.200*	*4.180*	*Cum*
	D/S Key Floor	*1*	*0.63*	*5.500*	*0.850*	*2.922*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.900*	*4.880*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.50*	*2.650*	*0.750*	*4.969*	*Cum*
						106.27	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
		1	*0.78*	*2.350*	*0.150*	*0.28*	*Cum*
		1	*4.57*	*2.350*	*0.150*	*1.61*	*Cum*
		1	*0.28*	*2.350*	*0.150*	*0.10*	*Cum*
		1	*2.45*	*2.350*	*0.150*	*0.86*	*Cum*
		1	*0.78*	*2.350*	*0.150*	*0.28*	*Cum*
		1	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.45*	*1.692*	*0.150*	*0.23*	*Cum*
	Section 2-2	*2*	*3.51*	*1.846*	*0.300*	*3.89*	*Cum*
	Section 3-3	*2*	*3.73*	*1.726*	*0.300*	*3.87*	*Cum*
	Section 5-5	*2*	*2.46*	*1.842*	*0.150*	*1.36*	*Cum*
	Section 6-6	*2*	*0.86*	*1.206*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.300*	*1.63*	*Cum*
	Toe Wall D/S Portion	*1*	*6.93*	*0.450*	*0.600*	*1.87*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*2.50*	*2.650*	*0.150*	*0.99*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**18.55**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.38*	*0.450*	*0.450*	*0.15*	*Cum*
		2	*0.38*	*0.921*	*1.570*	*1.10*	*Cum*
		2	*0.38*	*1.542*	*0.500*	*0.59*	*Cum*
	Section 2-2	*2*	*3.51*	*0.820*	*0.450*	*2.59*	*Cum*
		2	*3.51*	*1.108*	*0.960*	*7.47*	*Cum*
		2	*3.51*	*1.546*	*1.000*	*10.86*	*Cum*
	Section 3-3	*2*	*3.36*	*0.820*	*0.450*	*2.48*	*Cum*
		2	*3.36*	*1.048*	*0.760*	*5.34*	*Cum*
		2	*3.36*	*1.426*	*1.200*	*11.48*	*Cum*
	Section 5-5	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*0.921*	*1.570*	*8.43*	*Cum*
		2	*2.92*	*1.542*	*0.500*	*4.49*	*Cum*
	Section 6-6	*2*	*1.58*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.58*	*0.678*	*0.760*	*1.63*	*Cum*
		2	*1.58*	*1.056*	*0.500*	*1.67*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*2.350*	*0.700*	*1.03*	*Cum*
		1	*5.00*	*2.350*	*0.500*	*5.88*	*Cum*
		1	*0.50*	*2.350*	*0.200*	*0.23*	*Cum*
		1	*0.20*	*2.350*	*0.400*	*0.19*	*Cum*
		1	*3.80*	*2.350*	*0.500*	*4.47*	*Cum*
		1	*0.63*	*2.350*	*0.700*	*1.03*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.77*	*2.350*	*1.075*	*1.95*	*Cum*
	TOTAL					**72.16**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*2.350*	*0.150*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.33*	*0.450*	*0.050*	*0.16*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.33*	*0.450*	*0.050*	*0.16*	*Cum*
	Slab Bridge	*1*	*3.15*	*5.500*	*0.328*	*5.68*	*Cum*
	Wearing coat	*1*	*3.15*	*4.500*	*0.070*	*0.99*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**12.12**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*3.61*		*1.578*	*176.6*	*Kg*
a2	*10*	*16*	*5.90*		*0.616*	*58.2*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.53*		*0.616*	*41.3*	*Kg*
a5	*10*	*11*	*5.85*		*0.616*	*39.7*	*Kg*
x1	*12*	*52*	*2.50*		*0.888*	*115.4*	*Kg*
x2	*16*	*52*	*1.27*		*1.578*	*103.8*	*Kg*
x3	*10*	*24*	*3.05*		*0.616*	*45.1*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**72.16**	**0.003**	**0.216**	**7850.0**	**1699.3**	**Kg**
	Total Reinforcement Steel (in kg)					*2286.1*	*Kg*
	Total Weight in Metric Tonne					**2.29**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.38*		*0.45*	*0.68*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.38*		*1.57*	*2.38*	*Sqm*
		4		*0.92*	*1.57*	*5.78*	*Sqm*
		4	*0.38*		*0.50*	*0.76*	*Sqm*
		4		*1.54*	*0.50*	*3.08*	*Sqm*
	Section 2-2	*4*	*3.51*		*0.45*	*6.32*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.51*		*0.96*	*13.49*	*Sqm*
		4		*1.11*	*0.96*	*4.25*	*Sqm*
		4	*3.51*		*1.00*	*14.05*	*Sqm*
		4		*1.55*	*1.00*	*6.18*	*Sqm*
	Section 3-3	*4*	*3.36*		*0.45*	*6.04*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.36*		*0.76*	*10.20*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*3.36*		*1.20*	*16.10*	*Sqm*
		4		*1.43*	*1.20*	*6.84*	*Sqm*
	Section 5-5	*4*	*2.92*		*0.45*	*5.25*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.92*		*1.57*	*18.31*	*Sqm*
		4		*0.92*	*1.57*	*5.78*	*Sqm*
		4	*2.92*		*0.50*	*5.83*	*Sqm*
		4		*1.54*	*0.50*	*3.08*	*Sqm*
	Section 6-6	*4*	*1.58*		*0.45*	*2.84*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.58*		*0.76*	*4.79*	*Sqm*
		4		*0.68*	*0.76*	*2.06*	*Sqm*
		4	*1.58*		*0.50*	*3.15*	*Sqm*
		4		*1.06*	*0.50*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.35*	*0.70*	*3.29*	*Sqm*
		2	*5.00*		*0.50*	*5.00*	*Sqm*
		2		*2.35*	*0.50*	*2.35*	*Sqm*
		2	*0.498*		*0.20*	*0.20*	*Sqm*
		2		*2.35*	*0.20*	*0.94*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*0.20*		*0.40*	*0.16*	*Sqm*
		2		2.35	*0.40*	*1.88*	*Sqm*
		2	*3.800*		*0.50*	*3.80*	*Sqm*
		2		*2.35*	*0.50*	*2.35*	*Sqm*
		2	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.35*	*0.70*	*3.29*	*Sqm*
	Crest	*2*	*0.77*		*1.08*	*1.66*	*Sqm*
		2		*2.35*	*1.08*	*5.05*	*Sqm*
	Slab	*2*	*6.30*		*0.66*	*8.27*	*Sqm*
		2		*11.00*	*0.66*	*14.43*	*Sqm*
		1	*6.30*	*11.00*		*69.30*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.23*		*0.30*	*4.34*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.93*		*0.60*	*8.32*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*2.65*	*0.15*	*1.59*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**305.12**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.750*	*0.300*	**1.31**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.750*	*0.150*	**1.31**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.33*	*0.450*		*3.30*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.33*	*0.450*		*3.30*	*Sqm*
	TOTAL					**6.60**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*2.709*		2.71	**Cum**
	Abutment						
	Section 1-1	2	*0.45*	*0.648*		*0.589*	*Cum*
	Section 2-2	2	*3.51*	*0.472*		*3.313*	*Cum*
	Section 3-3	2	*3.73*	*0.376*		*2.805*	*Cum*
	Section 5-5	2	*2.46*	*1.683*		*8.277*	*Cum*
	Section 6-6	2	*0.86*	*0.467*		*0.807*	*Cum*
	Toe wall	2	*7.23*	*0.150*	*0.600*	*2.169*	*Cum*
		2	*2.50*	*0.150*	*0.600*	*0.450*	*Cum*
	TOTAL					**21.12**	**Cum**
	SHARDA TYPE FALL OF HEIGHT 1.448 METER AT CH. 1.465 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.45*	*2.195*	*2.610*	*5.208*	*Cum*
	Section 2-2	*2*	*4.74*	*1.846*	*2.610*	*45.637*	*Cum*
	Section 3-3	*2*	*3.73*	*1.726*	*2.410*	*31.056*	*Cum*
	Section 5-5	*2*	*2.97*	*2.345*	*2.260*	*31.507*	*Cum*
	Section 6-6	*2*	*0.86*	*1.206*	*2.410*	*5.022*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*1.58*	*5.500*	*1.620*	*14.113*	*Cum*
	D/S Floor	*1*	*4.08*	*5.500*	*1.200*	*26.941*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*3.30*	*5.500*	*0.400*	*7.260*	*Cum*
	D/S Key Floor	*1*	*0.79*	*5.500*	*1.500*	*6.497*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.900*	*4.880*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.50*	*2.650*	*0.750*	*4.969*	*Cum*
						185.12	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
		1	*0.78*	*2.350*	*0.150*	*0.28*	*Cum*
		1	*0.28*	*2.350*	*0.150*	*0.10*	*Cum*
		1	*0.49*	*2.350*	*0.150*	*0.17*	*Cum*
		1	*6.19*	*2.350*	*0.150*	*2.18*	*Cum*
		1	*0.57*	*2.350*	*0.150*	*0.20*	*Cum*
		1	*1.42*	*2.350*	*0.150*	*0.50*	*Cum*
		1	*1.51*	*2.350*	*0.150*	*0.53*	*Cum*
		1	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.45*	*2.195*	*0.150*	*0.30*	*Cum*
	Section 2-2	*2*	*4.74*	*1.846*	*0.300*	*5.25*	*Cum*
	Section 3-3	*2*	*3.73*	*1.726*	*0.300*	*3.87*	*Cum*
	Section 5-5	*2*	*2.97*	*2.345*	*0.150*	*2.09*	*Cum*
	Section 6-6	*2*	*0.86*	*1.206*	*0.150*	*0.31*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.300*	*1.63*	*Cum*
	Toe Wall D/S Portion	*1*	*6.93*	*0.450*	*0.600*	*1.87*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*2.50*	*2.650*	*0.150*	*0.99*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**21.55**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.38*	*0.450*	*0.450*	*0.15*	*Cum*
		2	*0.38*	*1.173*	*2.408*	*2.14*	*Cum*
		2	*0.38*	*2.045*	*0.850*	*1.32*	*Cum*
	Section 2-2	*2*	*4.74*	*0.820*	*0.450*	*3.50*	*Cum*
		2	*4.74*	*1.108*	*0.960*	*10.08*	*Cum*
		2	*4.74*	*1.546*	*1.800*	*26.36*	*Cum*
	Section 3-3	*2*	*3.36*	*0.820*	*0.450*	*2.48*	*Cum*
		2	*3.36*	*1.048*	*0.760*	*5.34*	*Cum*
		2	*3.36*	*1.426*	*2.000*	*19.14*	*Cum*
	Section 5-5	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*1.173*	*2.408*	*16.46*	*Cum*
		2	*2.92*	*2.045*	*0.500*	*5.96*	*Cum*
	Section 6-6	*2*	*1.58*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.58*	*0.678*	*0.760*	*1.63*	*Cum*
		2	*1.58*	*1.056*	*0.500*	*1.67*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*2.350*	*0.700*	*1.03*	*Cum*
		1	*1.23*	*2.350*	*0.500*	*1.45*	*Cum*
		1	*0.35*	*2.350*	*0.675*	*0.56*	*Cum*
		1	*5.67*	*2.350*	*0.850*	*11.32*	*Cum*
		1	*0.60*	*2.350*	*0.400*	*0.56*	*Cum*
		1	*0.20*	*2.350*	*0.550*	*0.26*	*Cum*
		1	*3.30*	*2.350*	*0.650*	*5.04*	*Cum*
		1	*0.79*	*2.350*	*1.350*	*2.50*	*Cum*
	Crest	*1*	*1.11*	*2.350*	*1.898*	*4.94*	*Cum*
	TOTAL					**122.98**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*2.350*	*0.150*	*0.28*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.56*	*0.450*	*0.050*	*0.19*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*8.56*	*0.450*	*0.050*	*0.19*	*Cum*
	Slab Bridge	*1*	*3.15*	*5.500*	*0.328*	*5.68*	*Cum*
	Wearing coat	*1*	*3.15*	*4.500*	*0.070*	*0.99*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
		2	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**12.25**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*3.61*		*1.578*	*176.6*	*Kg*
a2	*10*	*16*	*5.90*		*0.616*	*58.2*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.53*		*0.616*	*41.3*	*Kg*
a5	*10*	*11*	*5.85*		*0.616*	*39.7*	*Kg*
x1	*12*	*52*	*2.50*		*0.888*	*115.4*	*Kg*
x2	*16*	*52*	*1.27*		*1.578*	*103.8*	*Kg*
x3	*10*	*24*	*3.05*		*0.616*	*45.1*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**122.98**	**0.003**	**0.369**	**7850.0**	**2896.2**	**Kg**
	Total Reinforcement Steel (in kg)					*3483.0*	*Kg*
	Total Weight in Metric Tonne					**3.48**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.38*		*0.45*	*0.68*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*0.38*		*2.41*	*3.66*	*Sqm*
		4		*1.17*	*2.41*	*11.29*	*Sqm*
		4	*0.38*		*0.85*	*1.29*	*Sqm*
		4		*2.05*	*0.85*	*6.95*	*Sqm*
	Section 2-2	*4*	*4.74*		*0.45*	*8.52*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*4.74*		*0.96*	*18.19*	*Sqm*
		4		*1.11*	*0.96*	*4.25*	*Sqm*
		4	*4.74*		*1.80*	*34.10*	*Sqm*
		4		*1.55*	*1.80*	*11.13*	*Sqm*
	Section 3-3	*4*	*3.36*		*0.45*	*6.04*	*Sqm*
		4		*0.82*	*0.45*	*1.48*	*Sqm*
		4	*3.36*		*0.76*	*10.20*	*Sqm*
		4		*1.05*	*0.76*	*3.19*	*Sqm*
		4	*3.36*		*2.00*	*26.84*	*Sqm*
		4		*1.43*	*2.00*	*11.41*	*Sqm*
	Section 5-5	*4*	*2.92*		*0.45*	*5.25*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*2.92*		*2.41*	*28.08*	*Sqm*
		4		*1.17*	*2.41*	*11.29*	*Sqm*
		4	*2.92*		*0.50*	*5.83*	*Sqm*
		4		*2.05*	*0.50*	*4.09*	*Sqm*
	Section 6-6	*4*	*1.58*		*0.45*	*2.84*	*Sqm*
		4		*0.45*	*0.45*	*0.81*	*Sqm*
		4	*1.58*		*0.76*	*4.79*	*Sqm*
		4		*0.68*	*0.76*	*2.06*	*Sqm*
		4	*1.58*		*0.50*	*3.15*	*Sqm*
		4		*1.06*	*0.50*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.70*	*0.88*	*Sqm*
		2		*2.35*	*0.70*	*3.29*	*Sqm*
		2	*1.234*		*0.5*	*1.23*	*Sqm*
		2		*2.35*	*0.50*	*2.35*	*Sqm*
		2	*0.35*		*0.675*	*0.47*	*Sqm*
		2		*2.35*	*0.68*	*3.17*	*Sqm*
		2	*5.67*		*0.85*	*9.63*	*Sqm*
		2		*2.35*	*0.85*	*4.00*	*Sqm*
		2	*0.598*		*0.40*	*0.48*	*Sqm*
		2		*2.35*	*0.40*	*1.88*	*Sqm*
		2	*0.20*		*0.55*	*0.22*	*Sqm*
		2		2.35	*0.55*	*2.59*	*Sqm*
		2	*3.300*		*0.65*	*4.29*	*Sqm*
		2		*2.35*	*0.65*	*3.06*	*Sqm*
		2	*0.79*		*1.35*	*2.13*	*Sqm*
		2		*2.35*	*1.35*	*6.35*	*Sqm*
	Crest	*2*	*1.11*		*1.90*	*4.21*	*Sqm*
		2		*2.35*	*1.90*	*8.92*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Slab	*2*	*6.30*		*0.66*	*8.27*	*Sqm*
		2		*11.00*	*0.66*	*14.43*	*Sqm*
		1	*6.30*	*11.00*		*69.30*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.23*		*0.30*	*4.34*	*Sqm*
		2		*0.75*	*0.30*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.93*		*0.60*	*8.32*	*Sqm*
		2		*0.45*	*0.60*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.15*	*1.50*	*Sqm*
		4		*2.65*	*0.15*	*1.59*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.60*	*6.00*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	TOTAL					**407.20**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.750*	*0.300*	**1.31**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.750*	*0.150*	**1.31**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.56*	*0.450*		*3.85*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.56*	*0.450*		*3.85*	*Sqm*
	TOTAL					**7.70**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	4.00			**4.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	*1*		*11.346*		11.35	**Cum**
	Abutment						
	Section 1-1	2	*0.45*	*1.388*		*1.262*	*Cum*
	Section 2-2	2	*4.74*	*1.403*		*13.289*	*Cum*
	Section 3-3	2	*3.73*	*1.192*		*8.899*	*Cum*
	Section 5-5	2	*2.97*	*1.334*		*7.931*	*Cum*
	Section 6-6	2	*0.86*	*0.854*		*1.476*	*Cum*
	Toe wall	2	*7.23*	*0.150*	*0.600*	*2.169*	*Cum*
		2	*2.50*	*0.150*	*0.600*	*0.450*	*Cum*
	TOTAL					**46.82**	**Cum**
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH. 2.170 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.60*	*2.423*	*4.018*	*31.057*	*Cum*
	Section 2-2	*2*	*4.97*	*1.326*	*4.018*	*52.927*	*Cum*
	Section 3-3	*2*	*4.98*	*1.206*	*3.818*	*45.889*	*Cum*
	Section 5-5	*2*	*2.81*	*2.573*	*4.018*	*58.122*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*3.818*	*11.364*	*Cum*
	U/S Key Floor	*1*	*0.58*	*2.350*	*0.650*	*0.878*	*Cum*
	U/S Floor	*1*	*3.25*	*2.350*	*3.279*	*25.043*	*Cum*
	D/S Floor	*1*	*5.00*	*2.350*	*1.450*	*17.038*	*Cum*
		1	*2.25*	*2.350*	*1.250*	*6.609*	*Cum*
		1	*3.00*	*2.350*	*0.900*	*6.345*	*Cum*
	D/S Key Floor	*1*	*0.89*	*2.350*	*1.900*	*3.963*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.900*	*4.880*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						266.36	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
		1	*0.56*	*2.350*	*0.150*	*0.20*	*Cum*
		1	*7.92*	*2.350*	*0.150*	*2.79*	*Cum*
		1	*0.64*	*2.350*	*0.150*	*0.22*	*Cum*
		1	*1.40*	*2.350*	*0.150*	*0.49*	*Cum*
		1	*0.14*	*2.350*	*0.150*	*0.05*	*Cum*
		1	*1.42*	*2.350*	*0.150*	*0.50*	*Cum*
		1	*1.96*	*2.350*	*0.150*	*0.69*	*Cum*
		1	*0.54*	*2.350*	*0.150*	*0.19*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.60*	*2.423*	*0.150*	*1.16*	*Cum*
	Section 2-2	*2*	*4.97*	*1.326*	*0.150*	*1.98*	*Cum*
	Section 3-3	*2*	*4.98*	*1.206*	*0.150*	*1.80*	*Cum*
	Section 5-5	*2*	*2.81*	*2.573*	*0.150*	*2.17*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*7.23*	*0.750*	*0.300*	*1.63*	*Cum*
	Toe Wall D/S Portion	*1*	*6.93*	*0.450*	*0.600*	*1.87*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**17.73**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.37*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.37*	*1.287*	*2.789*	*9.83*	*Cum*
		2	*1.37*	*2.273*	*1.100*	*6.85*	*Cum*
	Section 2-2	*2*	*4.97*	*0.450*	*0.450*	*2.01*	*Cum*
		2	*4.97*	*0.738*	*0.960*	*7.04*	*Cum*
		2	*4.97*	*1.176*	*1.100*	*12.85*	*Cum*
	Section 3-3	*2*	*4.61*	*0.450*	*0.450*	*1.87*	*Cum*
		2	*4.61*	*0.678*	*0.760*	*4.75*	*Cum*
		2	*4.61*	*1.056*	*0.850*	*8.27*	*Cum*
	Section 5-5	*2*	*2.77*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.77*	*1.287*	*2.789*	*19.86*	*Cum*
		2	*2.77*	*2.273*	*1.100*	*13.84*	*Cum*
	Section 6-6	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*0.678*	*0.760*	*1.82*	*Cum*
		2	*1.76*	*1.056*	*0.750*	*2.79*	*Cum*
	Floor	*1*	*0.58*	*2.350*	*0.500*	*0.68*	*Cum*
		1	*8.25*	*2.350*	*1.100*	*21.33*	*Cum*
		1	*0.62*	*2.350*	*0.450*	*0.66*	*Cum*
		1	*0.20*	*2.350*	*0.750*	*0.35*	*Cum*
		1	*2.05*	*2.350*	*0.850*	*4.09*	*Cum*
		1	*0.10*	*2.350*	*0.800*	*0.19*	*Cum*
		1	*2.90*	*2.350*	*0.750*	*5.11*	*Cum*
		1	*0.89*	*2.350*	*1.750*	*3.65*	*Cum*
	Crest	*1*	*1.32*	*2.350*	*2.269*	*7.04*	*Cum*
	TOTAL					**137.24**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*2.350*	*0.150*	*0.33*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.83*	*0.450*	*0.050*	*0.38*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.83*	*0.450*	*0.050*	*0.38*	*Cum*
	TOTAL					**1.09**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**137.24**	**0.00**	**0.412**	**7850.0**	**3232.11**	**Kg**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Total Weight in Metric Tonne					**3.23**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.37*		*0.450*	*2.47*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.37*		*2.789*	*15.28*	*Sqm*
		4		*1.287*	*2.789*	*14.35*	*Sqm*
		4	*1.37*		*1.100*	*6.03*	*Sqm*
		4		*2.273*	*1.100*	*10.00*	*Sqm*
	Section 2-2	*4*	*4.97*		*0.450*	*8.94*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.97*		*0.960*	*19.07*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*4.97*		*1.100*	*21.85*	*Sqm*
		4		*1.176*	*1.100*	*5.17*	*Sqm*
	Section 3-3	*4*	*4.61*		*0.450*	*8.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.61*		*0.760*	*14.00*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*4.61*		*0.850*	*15.66*	*Sqm*
		4		*1.056*	*0.850*	*3.59*	*Sqm*
	Section 5-5	*4*	*2.77*		*0.450*	*4.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.77*		*2.789*	*30.87*	*Sqm*
		4		*1.287*	*2.789*	*14.35*	*Sqm*
		4	*2.77*		*1.100*	*12.17*	*Sqm*
		4		*2.273*	*1.100*	*10.00*	*Sqm*
	Section 6-6	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*0.760*	*5.36*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.76*		*0.750*	*5.29*	*Sqm*
		4		*1.056*	*0.750*	*3.17*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*2.350*	*0.500*	*2.35*	*Sqm*
		2	*8.25*		*1.100*	*18.15*	*Sqm*
		2		*2.350*	*1.100*	*5.17*	*Sqm*
		2	*0.62*		*0.450*	*0.56*	*Sqm*
		2		*2.350*	*0.450*	*2.12*	*Sqm*
		2	*0.20*		*0.750*	*0.30*	*Sqm*
		2		*2.350*	*0.750*	*3.53*	*Sqm*
		2	*2.05*		*0.850*	*3.49*	*Sqm*
		2		*2.350*	*0.850*	*4.00*	*Sqm*
		2	*0.100*		*0.800*	*0.16*	*Sqm*
		2		*2.350*	*0.800*	*3.76*	*Sqm*
		2	*2.900*		*0.750*	*4.35*	*Sqm*
		2		*2.350*	*0.750*	*3.53*	*Sqm*
		2	*0.89*		*1.750*	*3.11*	*Sqm*
		2		*2.350*	*1.750*	*8.23*	*Sqm*
	Crest	*2*	*1.32*		*2.269*	*5.99*	*Sqm*
		2		*2.350*	*2.269*	*10.66*	*Sqm*
	Toe Wall D/S Portion	*2*	*7.23*		*0.300*	*4.34*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.93*		*0.600*	*8.32*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**347.31**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.750*	*0.300*	**1.31**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.50*	*1.750*	*0.150*	**1.31**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*16.83*	*0.450*		*7.57*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.83*	*0.450*		*7.57*	*Sqm*
	TOTAL					**15.15**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		14.350		14.35	**Cum**
	Abutment						
	Section 1-1	2	*1.60*	*3.290*		*10.495*	*Cum*
	Section 2-2	2	*4.97*	*1.170*		*11.623*	*Cum*
	Section 3-3	2	*4.98*	*0.906*		*9.029*	*Cum*
	Section 5-5	2	*2.81*	*3.290*		*18.496*	*Cum*
	Section 6-6	2	*1.23*	*0.891*		*2.199*	*Cum*
	D/S protection	2					
	Toe wall	2	*7.23*	*0.150*	*0.600*	*2.169*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**68.81**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.829 METER AT CH. 4.300 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.60*	*2.423*	*3.672*	*28.382*	*Cum*
	Section 2-2	*2*	*4.97*	*1.326*	*3.672*	*48.369*	*Cum*
	Section 3-3	*2*	*4.98*	*1.206*	*3.472*	*41.730*	*Cum*
	Section 5-5	*2*	*2.81*	*2.573*	*3.672*	*53.117*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*3.472*	*10.334*	*Cum*
	U/S Key Floor	*1*	*0.58*	*1.840*	*0.650*	*0.688*	*Cum*
	U/S Floor	*1*	*3.25*	*1.840*	*3.279*	*19.608*	*Cum*
	D/S Floor	*1*	*5.00*	*1.840*	*0.850*	*7.820*	*Cum*
		1	*2.25*	*1.840*	*0.650*	*2.691*	*Cum*
		1	*3.00*	*1.840*	*0.900*	*4.968*	*Cum*
	D/S Key Floor	*1*	*0.89*	*1.840*	*1.900*	*3.103*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.900*	*4.536*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						227.60	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
		1	*0.56*	*1.840*	*0.150*	*0.15*	*Cum*
		1	*7.92*	*1.840*	*0.150*	*2.19*	*Cum*
		1	*0.64*	*1.840*	*0.150*	*0.18*	*Cum*
		1	*1.40*	*1.840*	*0.150*	*0.39*	*Cum*
		1	*0.14*	*1.840*	*0.150*	*0.04*	*Cum*
		1	*1.42*	*1.840*	*0.150*	*0.39*	*Cum*
		1	*1.96*	*1.840*	*0.150*	*0.54*	*Cum*
		1	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.60*	*2.423*	*0.150*	*1.16*	*Cum*
	Section 2-2	*2*	*4.97*	*1.326*	*0.150*	*1.98*	*Cum*
	Section 3-3	*2*	*4.98*	*1.206*	*0.150*	*1.80*	*Cum*
	Section 5-5	*2*	*2.81*	*2.573*	*0.150*	*2.17*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.300*	*1.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.42*	*0.450*	*0.600*	*1.73*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**16.32**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.37*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.37*	*1.287*	*2.789*	*9.83*	*Cum*
		2	*1.37*	*2.273*	*1.100*	*6.85*	*Cum*
	Section 2-2	*2*	*4.97*	*0.450*	*0.450*	*2.01*	*Cum*
		2	*4.97*	*0.738*	*0.960*	*7.04*	*Cum*
		2	*4.97*	*1.176*	*1.100*	*12.85*	*Cum*
	Section 3-3	*2*	*4.61*	*0.450*	*0.450*	*1.87*	*Cum*
		2	*4.61*	*0.678*	*0.760*	*4.75*	*Cum*
		2	*4.61*	*1.056*	*0.850*	*8.27*	*Cum*
	Section 5-5	*2*	*2.77*	*0.450*	*0.450*	*1.12*	*Cum*
		2	*2.77*	*1.287*	*2.789*	*19.86*	*Cum*
		2	*2.77*	*2.273*	*0.500*	*6.29*	*Cum*
	Section 6-6	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*0.678*	*0.760*	*1.82*	*Cum*
		2	*1.76*	*1.056*	*0.500*	*1.86*	*Cum*
	Floor	*1*	*0.58*	*1.840*	*0.500*	*0.53*	*Cum*
		1	*8.25*	*1.840*	*0.500*	*7.59*	*Cum*
		1	*0.62*	*1.840*	*0.450*	*0.52*	*Cum*
		1	*0.20*	*1.840*	*0.750*	*0.28*	*Cum*
		1	*2.05*	*1.840*	*0.850*	*3.21*	*Cum*
		1	*0.10*	*1.840*	*0.800*	*0.15*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*2.90*	*1.840*	*0.750*	*4.00*	*Cum*
		1	*0.89*	*1.840*	*1.750*	*2.86*	*Cum*
	Crest	*1*	*1.32*	*1.840*	*2.269*	*5.51*	*Cum*
	TOTAL					**110.31**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.95*	*1.840*	*0.150*	*0.26*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*16.83*	*0.450*	*0.050*	*0.38*	*Cum*
	On Abutment Top (Right Side)	*1*	*16.83*	*0.450*	*0.050*	*0.38*	*Cum*
	TOTAL					**1.02**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**110.31**	**0.00**	**0.331**	**7850.0**	**2597.71**	**Kg**
	Total Weight in Metric Tonne					**2.60**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.37*		*0.450*	*2.47*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.37*		*2.789*	*15.28*	*Sqm*
		4		*1.287*	*2.789*	*14.35*	*Sqm*
		4	*1.37*		*1.100*	*6.03*	*Sqm*
		4		*2.273*	*1.100*	*10.00*	*Sqm*
	Section 2-2	*4*	*4.97*		*0.450*	*8.94*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.97*		*0.960*	*19.07*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*4.97*		*1.100*	*21.85*	*Sqm*
		4		*1.176*	*1.100*	*5.17*	*Sqm*
	Section 3-3	*4*	*4.61*		*0.450*	*8.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.61*		*0.760*	*14.00*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*4.61*		*0.850*	*15.66*	*Sqm*
		4		*1.056*	*0.850*	*3.59*	*Sqm*
	Section 5-5	*4*	*2.77*		*0.450*	*4.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.77*		*2.789*	*30.87*	*Sqm*
		4		*1.287*	*2.789*	*14.35*	*Sqm*
		4	*2.77*		*0.500*	*5.53*	*Sqm*
		4		*2.273*	*0.500*	*4.55*	*Sqm*
	Section 6-6	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*0.760*	*5.36*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.76*		*0.500*	*3.52*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Floor	*2*	*0.58*		*0.500*	*0.58*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*8.25*		*0.500*	*8.25*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.62*		*0.450*	*0.56*	*Sqm*
		2		*1.840*	*0.450*	*1.66*	*Sqm*
		2	*0.20*		*0.750*	*0.30*	*Sqm*
		2		*1.840*	*0.750*	*2.76*	*Sqm*
		2	*2.05*		*0.850*	*3.49*	*Sqm*
		2		*1.840*	*0.850*	*3.13*	*Sqm*
		2	*0.100*		*0.800*	*0.16*	*Sqm*
		2		*1.840*	*0.800*	*2.94*	*Sqm*
		2	*2.900*		*0.750*	*4.35*	*Sqm*
		2		*1.840*	*0.750*	*2.76*	*Sqm*
		2	*0.89*		*1.750*	*3.11*	*Sqm*
		2		*1.840*	*1.750*	*6.44*	*Sqm*
	Crest	*2*	*1.32*		*2.269*	*5.99*	*Sqm*
		2		*1.840*	*2.269*	*8.35*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.72*		*0.300*	*4.03*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.42*		*0.600*	*7.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**309.96**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.240*	*0.300*	**0.93**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.240*	*0.150*	**0.93**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*16.83*	*0.450*		*7.57*	*Sqm*
	On Abutment Top (Right Side)	*1*	*16.83*	*0.450*		*7.57*	*Sqm*
	TOTAL					**15.15**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		12.478		12.48	**Cum**
	Abutment						
	Section 1-1	2	*1.60*	*2.651*		*8.457*	*Cum*
	Section 2-2	2	*4.97*	*1.170*		*11.623*	*Cum*
	Section 3-3	2	*4.98*	*0.906*		*9.029*	*Cum*
	Section 5-5	2	*2.81*	*2.651*		*14.904*	*Cum*
	Section 6-6	2	*1.23*	*0.891*		*2.199*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.72*	*0.150*	*0.600*	*2.016*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**61.16**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 4.450 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.601*	*1.349*	*4.164*	*Cum*
	Section 2-2	*2*	*2.50*	*1.326*	*1.349*	*8.944*	*Cum*
	Section 3-3	*2*	*2.30*	*1.206*	*1.149*	*6.374*	*Cum*
	Section 5-5	*2*	*2.98*	*1.751*	*1.349*	*14.083*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*1.149*	*3.420*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.840*	*0.850*	*0.978*	*Cum*
	U/S Floor	*1*	*1.90*	*1.840*	*1.810*	*6.328*	*Cum*
	D/S Floor	*1*	*2.50*	*1.840*	*0.850*	*3.910*	*Cum*
		1	*2.60*	*1.840*	*0.650*	*3.110*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.840*	*0.850*	*0.978*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.900*	*4.536*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.50*	*0.600*	*0.750*	*2.250*	*Cum*
						59.07	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
		1	*0.73*	*1.840*	*0.150*	*0.20*	*Cum*
		1	*3.97*	*1.840*	*0.150*	*1.09*	*Cum*
		1	*0.28*	*1.840*	*0.150*	*0.08*	*Cum*
		1	*1.05*	*1.840*	*0.150*	*0.29*	*Cum*
		1	*0.78*	*1.840*	*0.150*	*0.22*	*Cum*
		1	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.601*	*0.150*	*0.46*	*Cum*
	Section 2-2	*2*	*2.50*	*1.326*	*0.150*	*0.99*	*Cum*
	Section 3-3	*2*	*2.30*	*1.206*	*0.150*	*0.83*	*Cum*
	Section 5-5	*2*	*2.98*	*1.751*	*0.150*	*1.57*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.300*	*1.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.42*	*0.450*	*0.600*	*1.73*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.600*	*0.150*	*0.45*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**11.07**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.74*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.74*	*0.875*	*1.417*	*1.84*	*Cum*
		2	*0.74*	*1.451*	*0.500*	*1.08*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.738*	*0.960*	*3.54*	*Cum*
		2	*2.50*	*1.176*	*0.500*	*2.94*	*Cum*
	Section 3-3	*2*	*1.92*	*0.450*	*0.450*	*0.78*	*Cum*
		2	*1.92*	*0.678*	*0.760*	*1.98*	*Cum*
		2	*1.92*	*1.056*	*0.500*	*2.03*	*Cum*
	Section 5-5	*2*	*2.94*	*0.450*	*0.450*	*1.19*	*Cum*
		2	*2.94*	*0.875*	*1.417*	*7.28*	*Cum*
		2	*2.94*	*1.451*	*0.500*	*4.26*	*Cum*
	Section 6-6	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*0.678*	*0.760*	*1.82*	*Cum*
		2	*1.76*	*1.056*	*0.500*	*1.86*	*Cum*
	Floor	*1*	*0.63*	*1.840*	*0.700*	*0.81*	*Cum*
		1	*4.40*	*1.840*	*0.500*	*4.05*	*Cum*
		1	*0.50*	*1.840*	*0.200*	*0.18*	*Cum*
		1	*0.20*	*1.840*	*0.400*	*0.15*	*Cum*
		1	*2.40*	*1.840*	*0.500*	*2.21*	*Cum*
		1	*0.63*	*1.840*	*0.700*	*0.81*	*Cum*
	Crest	*1*	*0.75*	*1.840*	*0.922*	*1.26*	*Cum*
	TOTAL					**42.08**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*1.840*	*0.150*	*0.17*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.88*	*0.450*	*0.050*	*0.24*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.88*	*0.450*	*0.050*	*0.24*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**42.08**	**0.00**	**0.126**	**7850.0**	**991.08**	**Kg**
	Total Weight in Metric Tonne					**0.99**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.74*		*0.450*	*1.33*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.74*		*1.417*	*4.20*	*Sqm*
		4		*0.875*	*1.417*	*4.96*	*Sqm*
		4	*0.74*		*0.500*	*1.48*	*Sqm*
		4		*1.451*	*0.500*	*2.90*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.960*	*9.60*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.176*	*0.500*	*2.35*	*Sqm*
	Section 3-3	*4*	*1.92*		*0.450*	*3.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.92*		*0.760*	*5.84*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.92*		*0.500*	*3.84*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Section 5-5	*4*	*2.94*		*0.450*	*5.29*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.94*		*1.417*	*16.65*	*Sqm*
		4		*0.875*	*1.417*	*4.96*	*Sqm*
		4	*2.94*		*0.500*	*5.87*	*Sqm*
		4		*1.451*	*0.500*	*2.90*	*Sqm*
	Section 6-6	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*0.760*	*5.36*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.76*		*0.500*	*3.52*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.840*	*0.700*	*2.58*	*Sqm*
		2	*4.40*		*0.500*	*4.40*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*1.840*	*0.200*	*0.74*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.840*	*0.400*	*1.47*	*Sqm*
		2	*2.40*		*0.500*	*2.40*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.840*	*0.700*	*2.58*	*Sqm*
	Crest	*2*	*0.75*		*0.922*	*1.37*	*Sqm*
		2		*1.840*	*0.922*	*3.39*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.72*		*0.300*	*4.03*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.42*		*0.600*	*7.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**158.45**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.240*	*0.300*	**0.93**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.240*	*0.150*	**0.93**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.88*	*0.450*		*4.90*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.88*	*0.450*		*4.90*	*Sqm*
	TOTAL					**9.79**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.610		1.61	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.432*		*0.833*	*Cum*
	Section 2-2	2	*2.50*	*0.960*		*4.800*	*Cum*
	Section 3-3	2	*2.30*	*0.300*		*1.380*	*Cum*
	Section 5-5	2	*2.98*	*0.432*		*2.576*	*Cum*
	Section 6-6	2	*1.23*	*0.300*		*0.740*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.72*	*0.150*	*0.600*	*2.016*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**14.40**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.910 METER AT CH. 6.800 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.19*	*1.601*	*1.982*	*7.546*	*Cum*
	Section 2-2	*2*	*2.50*	*1.326*	*1.982*	*13.141*	*Cum*
	Section 3-3	*2*	*2.70*	*1.206*	*1.782*	*11.605*	*Cum*
	Section 5-5	*2*	*2.97*	*1.751*	*1.982*	*20.604*	*Cum*
	Section 6-6	*2*	*1.14*	*1.206*	*1.782*	*4.878*	*Cum*
	U/S Key Floor	*1*	*0.61*	*1.300*	*0.800*	*0.637*	*Cum*
	U/S Floor	*1*	*2.50*	*1.300*	*1.810*	*5.883*	*Cum*
	D/S Floor	*1*	*2.50*	*1.300*	*0.900*	*2.925*	*Cum*
		1	*3.00*	*1.300*	*0.700*	*2.730*	*Cum*
	D/S Key Floor	*1*	*0.68*	*1.300*	*1.050*	*0.921*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.900*	*3.949*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						76.62	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.300*	*0.150*	*0.11*	*Cum*
		1	*0.73*	*1.300*	*0.150*	*0.14*	*Cum*
		1	*4.64*	*1.300*	*0.150*	*0.91*	*Cum*
		1	*0.35*	*1.300*	*0.150*	*0.07*	*Cum*
		1	*1.25*	*1.300*	*0.150*	*0.24*	*Cum*
		1	*1.01*	*1.300*	*0.150*	*0.20*	*Cum*
		1	*0.54*	*1.300*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.19*	*1.601*	*0.150*	*0.57*	*Cum*
	Section 2-2	*2*	*2.50*	*1.326*	*0.150*	*0.99*	*Cum*
	Section 3-3	*2*	*2.70*	*1.206*	*0.150*	*0.98*	*Cum*
	Section 5-5	*2*	*2.97*	*1.751*	*0.150*	*1.56*	*Cum*
	Section 6-6	*2*	*1.14*	*1.206*	*0.150*	*0.41*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.55*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.17**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.74*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.74*	*0.875*	*1.417*	*1.84*	*Cum*
		2	*0.74*	*1.451*	*0.500*	*1.07*	*Cum*
	Section 2-2	*2*	*2.50*	*0.450*	*0.450*	*1.01*	*Cum*
		2	*2.50*	*0.738*	*0.960*	*3.54*	*Cum*
		2	*2.50*	*1.176*	*0.500*	*2.94*	*Cum*
	Section 3-3	*2*	*2.36*	*0.450*	*0.450*	*0.95*	*Cum*
		2	*2.36*	*0.678*	*0.760*	*2.43*	*Cum*
		2	*2.36*	*1.056*	*0.500*	*2.49*	*Cum*
	Section 5-5	*2*	*2.93*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.93*	*0.875*	*1.417*	*7.25*	*Cum*
		2	*2.93*	*1.451*	*0.550*	*4.67*	*Cum*
	Section 6-6	*2*	*1.63*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.63*	*0.678*	*0.760*	*1.68*	*Cum*
		2	*1.63*	*1.056*	*0.500*	*1.72*	*Cum*
	Floor	*1*	*0.61*	*1.300*	*0.650*	*0.52*	*Cum*
		1	*5.00*	*1.300*	*0.550*	*3.58*	*Cum*
		1	*0.57*	*1.300*	*0.250*	*0.19*	*Cum*
		1	*0.20*	*1.300*	*0.400*	*0.10*	*Cum*
		1	*2.80*	*1.300*	*0.500*	*1.82*	*Cum*
		1	*0.68*	*1.300*	*0.900*	*0.79*	*Cum*
	Crest	*1*	*0.96*	*1.300*	*1.290*	*1.60*	*Cum*
	TOTAL					**42.34**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.300*	*0.150*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.43*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.43*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**42.34**	**0.00**	**0.127**	**7850.0**	**997.05**	**Kg**
	Total Weight in Metric Tonne					**1.00**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.74*		*0.450*	*1.33*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.74*		*1.417*	*4.20*	*Sqm*
		4		*0.875*	*1.417*	*4.96*	*Sqm*
		4	*0.74*		*0.500*	*1.48*	*Sqm*
		4		*1.451*	*0.500*	*2.90*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.450*	*4.50*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.50*		*0.960*	*9.60*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*1.176*	*0.500*	*2.35*	*Sqm*
	Section 3-3	*4*	*2.36*		*0.450*	*4.24*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.36*		*0.760*	*7.16*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*2.36*		*0.500*	*4.71*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Section 5-5	*4*	*2.93*		*0.450*	*5.27*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.93*		*1.417*	*16.58*	*Sqm*
		4		*0.875*	*1.417*	*4.96*	*Sqm*
		4	*2.93*		*0.550*	*6.44*	*Sqm*
		4		*1.451*	*0.550*	*3.19*	*Sqm*
	Section 6-6	*4*	*1.63*		*0.450*	*2.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.63*		*0.760*	*4.96*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.63*		*0.500*	*3.26*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Floor	*2*	*0.61*		*0.650*	*0.80*	*Sqm*
		2		*1.300*	*0.650*	*1.69*	*Sqm*
		2	*5.00*		*0.550*	*5.50*	*Sqm*
		2		*1.300*	*0.550*	*1.43*	*Sqm*
		2	*0.57*		*0.250*	*0.29*	*Sqm*
		2		*1.300*	*0.250*	*0.65*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.300*	*0.400*	*1.04*	*Sqm*
		2	*2.80*		*0.500*	*2.80*	*Sqm*
		2		*1.300*	*0.500*	*1.30*	*Sqm*
		2	*0.68*		*0.900*	*1.22*	*Sqm*
		2		*1.300*	*0.900*	*2.34*	*Sqm*
	Crest	*2*	*0.96*		*1.290*	*2.47*	*Sqm*
		2		*1.300*	*1.290*	*3.35*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.85*		*0.300*	*3.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.55*		*0.600*	*6.66*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**158.51**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.323*		*9.29*	*Sqm*
	TOTAL					**9.29**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.700*	*0.300*	**0.42**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.700*	*0.150*	**0.42**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.43*	*0.450*		*5.14*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.43*	*0.450*		*5.14*	*Sqm*
	TOTAL					**10.28**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.009		4.01	**Cum**
	Abutment						
	Section 1-1	2	*1.19*	*1.493*		*3.550*	*Cum*
	Section 2-2	2	*2.50*	*0.960*		*4.800*	*Cum*
	Section 3-3	2	*2.70*	*0.742*		*4.007*	*Cum*
	Section 5-5	2	*2.97*	*1.493*		*8.864*	*Cum*
	Section 6-6	2	*1.14*	*0.742*		*1.684*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.85*	*0.150*	*0.600*	*1.755*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**29.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 7.300 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*1.656*	*1.897*	*6.531*	*Cum*
	Section 2-2	*2*	*2.50*	*1.630*	*1.897*	*15.461*	*Cum*
	Section 3-3	*2*	*2.20*	*1.510*	*1.697*	*11.275*	*Cum*
	Section 5-5	*2*	*2.85*	*1.806*	*1.897*	*19.525*	*Cum*
	Section 6-6	*2*	*1.14*	*1.140*	*1.697*	*4.391*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.300*	*0.850*	*0.691*	*Cum*
	U/S Floor	*1*	*2.00*	*1.300*	*1.847*	*4.802*	*Cum*
	D/S Floor	*1*	*2.50*	*1.300*	*0.850*	*2.763*	*Cum*
		1	*2.50*	*1.300*	*0.650*	*2.113*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.300*	*0.850*	*0.691*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.900*	*3.949*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						73.99	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.300*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.300*	*0.150*	*0.15*	*Cum*
		1	*4.12*	*1.300*	*0.150*	*0.80*	*Cum*
		1	*0.28*	*1.300*	*0.150*	*0.06*	*Cum*
		1	*0.90*	*1.300*	*0.150*	*0.17*	*Cum*
		1	*0.78*	*1.300*	*0.150*	*0.15*	*Cum*
		1	*0.54*	*1.300*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.04*	*1.656*	*0.150*	*0.52*	*Cum*
	Section 2-2	*2*	*2.50*	*1.630*	*0.150*	*1.22*	*Cum*
	Section 3-3	*2*	*2.20*	*1.510*	*0.150*	*1.00*	*Cum*
	Section 5-5	*2*	*2.85*	*1.806*	*0.150*	*1.54*	*Cum*
	Section 6-6	*2*	*1.14*	*1.140*	*0.150*	*0.39*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.55*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.11**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.81*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.81*	*0.903*	*1.510*	*2.22*	*Cum*
		2	*0.81*	*1.506*	*0.500*	*1.23*	*Cum*
	Section 2-2	*2*	*2.50*	*0.820*	*0.500*	*2.05*	*Cum*
		2	*2.50*	*1.075*	*0.850*	*4.57*	*Cum*
		2	*2.50*	*1.480*	*1.000*	*7.40*	*Cum*
	Section 3-3	*2*	*1.86*	*0.820*	*0.500*	*1.52*	*Cum*
		2	*1.86*	*1.015*	*0.650*	*2.45*	*Cum*
		2	*1.86*	*1.360*	*1.200*	*6.05*	*Cum*
	Section 5-5	*2*	*2.81*	*0.450*	*0.450*	*1.14*	*Cum*
		2	*2.81*	*0.903*	*1.460*	*7.40*	*Cum*
		2	*2.81*	*1.506*	*0.500*	*4.23*	*Cum*
	Section 6-6	*2*	*1.63*	*0.450*	*0.450*	*0.66*	*Cum*
		2	*1.63*	*0.645*	*0.650*	*1.37*	*Cum*
		2	*1.63*	*0.990*	*0.500*	*1.61*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.500*	*-4.51*	*Cum*
	Floor	*1*	*0.63*	*1.300*	*0.700*	*0.57*	*Cum*
		1	*4.50*	*1.300*	*0.500*	*2.93*	*Cum*
		1	*0.55*	*1.300*	*0.200*	*0.14*	*Cum*
		1	*0.20*	*1.300*	*0.400*	*0.10*	*Cum*
		1	*2.30*	*1.300*	*0.500*	*1.50*	*Cum*
		1	*0.63*	*1.300*	*0.700*	*0.57*	*Cum*
	Crest	*1*	*0.81*	*1.300*	*1.010*	*1.06*	*Cum*
	TOTAL					**46.57**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.300*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.21*	*0.450*	*0.050*	*0.16*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.21*	*0.450*	*0.050*	*0.16*	*Cum*
	Slab Bridge	*1*	*2.10*	*5.500*	*0.328*	*3.79*	*Cum*
	Wearing coat	*1*	*2.10*	*4.500*	*0.070*	*0.66*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
		2	*0.82*	*5.500*	*0.500*	*4.51*	*Cum*
	TOTAL					**10.73**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.56*		*1.578*	*125.2*	*Kg*
a2	*10*	*11*	*5.90*		*0.616*	*40.0*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.48*		*0.616*	*29.0*	*Kg*
a5	*10*	*8*	*5.85*		*0.616*	*28.9*	*Kg*
x1	*12*	*34*	*2.50*		*0.888*	*75.5*	*Kg*
x2	*16*	*34*	*1.37*		*1.578*	*73.2*	*Kg*
x3	*10*	*24*	*2.00*		*0.616*	*29.6*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**46.57**	**0.003**	**0.140**	**7850.0**	**1096.8**	**Kg**
	Total Reinforcement Steel (in kg)					*1505.0*	*Kg*
	Total Weight in Metric Tonne					**1.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.81*		*0.450*	*1.47*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.81*		*1.510*	*4.92*	*Sqm*
		4		*0.903*	*1.510*	*5.45*	*Sqm*
		4	*0.81*		*0.500*	*1.63*	*Sqm*
		4		*1.506*	*0.500*	*3.01*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.50*		*0.850*	*8.50*	*Sqm*
		4		*1.075*	*0.850*	*3.66*	*Sqm*
		4	*2.50*		*1.000*	*10.00*	*Sqm*
		4		*1.480*	*1.000*	*5.92*	*Sqm*
	Section 3-3	*4*	*1.86*		*0.500*	*3.71*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*1.86*		*0.650*	*4.82*	*Sqm*
		4		*1.015*	*0.650*	*2.64*	*Sqm*
		4	*1.86*		*1.200*	*8.90*	*Sqm*
		4		*1.360*	*1.200*	*6.53*	*Sqm*
	Section 5-5	*4*	*2.81*		*0.450*	*5.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.81*		*1.460*	*16.38*	*Sqm*
		4		*0.903*	*1.460*	*5.27*	*Sqm*
		4	*2.81*		*0.500*	*5.61*	*Sqm*
		4		*1.506*	*0.500*	*3.01*	*Sqm*
	Section 6-6	*4*	*1.63*		*0.450*	*2.93*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.63*		*0.650*	*4.24*	*Sqm*
		4		*0.645*	*0.650*	*1.68*	*Sqm*
		4	*1.63*		*0.500*	*3.26*	*Sqm*
		4		*0.990*	*0.500*	*1.98*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.300*	*0.700*	*1.82*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*1.300*	*0.500*	*1.30*	*Sqm*
		2	*0.55*		*0.200*	*0.22*	*Sqm*
		2		*1.300*	*0.200*	*0.52*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.300*	*0.400*	*1.04*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.300*	*0.500*	*1.30*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.300*	*0.700*	*1.82*	*Sqm*
	Crest	*2*	*0.81*		*1.010*	*1.64*	*Sqm*
		2		*1.300*	*1.010*	*2.63*	*Sqm*
	Slab	*2*	*2.10*		*0.33*	*1.38*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*2.10*	*5.50*		*11.55*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.85*		*0.300*	*3.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.55*		*0.600*	*6.66*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**187.05**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.323*		*9.29*	*Sqm*
	TOTAL					**9.29**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.700*	*0.300*	**0.42**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.700*	*0.150*	**0.42**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.21*	*0.450*		*3.24*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.21*	*0.450*		*3.24*	*Sqm*
	TOTAL					**6.49**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.799		1.80	**Cum**
	Abutment						
	Section 1-1	2	*1.04*	*0.864*		*1.796*	*Cum*
	Section 2-2	2	*2.50*	*0.832*		*4.160*	*Cum*
	Section 3-3	2	*2.20*	*0.641*		*2.820*	*Cum*
	Section 5-5	2	*2.85*	*0.864*		*4.924*	*Cum*
	Section 6-6	2	*1.14*	*0.641*		*1.455*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.85*	*0.150*	*0.600*	*1.755*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**19.07**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 7.660 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*1.809*	*2.514*	*9.951*	*Cum*
	Section 2-2	*2*	*2.50*	*1.800*	*2.514*	*22.626*	*Cum*
	Section 3-3	*2*	*2.20*	*1.680*	*2.314*	*17.105*	*Cum*
	Section 5-5	*2*	*2.85*	*1.959*	*2.514*	*28.043*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*2.314*	*5.599*	*Cum*
	U/S Key Floor	*1*	*0.61*	*1.100*	*0.800*	*0.539*	*Cum*
	U/S Floor	*1*	*2.50*	*1.100*	*2.414*	*6.639*	*Cum*
	D/S Floor	*1*	*2.50*	*1.100*	*0.850*	*2.338*	*Cum*
		1	*2.50*	*1.100*	*0.650*	*1.788*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.100*	*0.850*	*0.584*	*Cum*
	Toe Wall D/S Portion	*1*	*5.50*	*0.750*	*0.900*	*3.713*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						100.72	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
		1	*0.73*	*1.100*	*0.150*	*0.12*	*Cum*
		1	*4.59*	*1.100*	*0.150*	*0.76*	*Cum*
		1	*0.35*	*1.100*	*0.150*	*0.06*	*Cum*
		1	*0.80*	*1.100*	*0.150*	*0.13*	*Cum*
		1	*1.01*	*1.100*	*0.150*	*0.17*	*Cum*
		1	*0.54*	*1.100*	*0.150*	*0.09*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.09*	*1.809*	*0.150*	*0.59*	*Cum*
	Section 2-2	*2*	*2.50*	*1.800*	*0.150*	*1.35*	*Cum*
	Section 3-3	*2*	*2.20*	*1.680*	*0.150*	*1.11*	*Cum*
	Section 5-5	*2*	*2.85*	*1.959*	*0.150*	*1.67*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*0.150*	*0.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.50*	*0.750*	*0.300*	*1.24*	*Cum*
	Toe Wall D/S Portion	*1*	*5.20*	*0.450*	*0.600*	*1.40*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.22**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.87*	*0.450*	*0.450*	*0.35*	*Cum*
		2	*0.87*	*0.980*	*1.765*	*3.00*	*Cum*
		2	*0.87*	*1.659*	*0.600*	*1.73*	*Cum*
	Section 2-2	*2*	*2.50*	*0.820*	*0.500*	*2.05*	*Cum*
		2	*2.50*	*1.160*	*1.133*	*6.57*	*Cum*
		2	*2.50*	*1.650*	*1.000*	*8.25*	*Cum*
	Section 3-3	*2*	*1.87*	*0.820*	*0.500*	*1.53*	*Cum*
		2	*1.87*	*1.100*	*0.933*	*3.84*	*Cum*
		2	*1.87*	*1.530*	*1.200*	*6.87*	*Cum*
	Section 5-5	*2*	*2.80*	*0.450*	*0.450*	*1.14*	*Cum*
		2	*2.80*	*0.980*	*1.765*	*9.69*	*Cum*
		2	*2.80*	*1.659*	*0.500*	*4.65*	*Cum*
	Section 6-6	*2*	*1.57*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.57*	*0.630*	*0.600*	*1.19*	*Cum*
		2	*1.57*	*0.960*	*0.500*	*1.51*	*Cum*
	Deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.500*	*-4.51*	*Cum*
	Floor	*1*	*0.61*	*1.100*	*0.650*	*0.44*	*Cum*
		1	*5.00*	*1.100*	*0.500*	*2.75*	*Cum*
		1	*0.52*	*1.100*	*0.250*	*0.14*	*Cum*
		1	*0.20*	*1.100*	*0.375*	*0.08*	*Cum*
		1	*2.30*	*1.100*	*0.500*	*1.27*	*Cum*
		1	*0.63*	*1.100*	*0.700*	*0.48*	*Cum*
	Crest	*1*	*0.86*	*1.100*	*1.285*	*1.21*	*Cum*
	TOTAL					**54.86**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.100*	*0.150*	*0.11*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.27*	*0.450*	*0.050*	*0.16*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.27*	*0.450*	*0.050*	*0.16*	*Cum*
	Slab Bridge	*1*	*1.90*	*5.500*	*0.328*	*3.43*	*Cum*
	Wearing coat	*1*	*1.90*	*4.500*	*0.070*	*0.60*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.300*	*1.32*	*Cum*
		2	*0.82*	*5.500*	*0.500*	*4.51*	*Cum*
	TOTAL					**10.29**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.36*		*1.578*	*115.5*	*Kg*
a2	*10*	*10*	*5.90*		*0.616*	*36.4*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.28*		*0.616*	*26.7*	*Kg*
a5	*10*	*7*	*5.85*		*0.616*	*25.2*	*Kg*
x1	*12*	*32*	*2.50*		*0.888*	*71.0*	*Kg*
x2	*16*	*32*	*1.37*		*1.578*	*68.9*	*Kg*
x3	*10*	*24*	*1.80*		*0.616*	*26.6*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**54.86**	**0.003**	**0.165**	**7850.0**	**1292.0**	**Kg**
	Total Reinforcement Steel (in kg)					*1669.1*	*Kg*
	Total Weight in Metric Tonne					**1.67**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.87*		*0.450*	*1.56*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.87*		*1.765*	*6.14*	*Sqm*
		4		*0.980*	*1.765*	*6.92*	*Sqm*
		4	*0.87*		*0.600*	*2.09*	*Sqm*
		4		*1.659*	*0.600*	*3.98*	*Sqm*
	Section 2-2	*4*	*2.50*		*0.500*	*5.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.50*		*1.133*	*11.33*	*Sqm*
		4		*1.160*	*1.133*	*5.26*	*Sqm*
		4	*2.50*		*1.000*	*10.00*	*Sqm*
		4		*1.650*	*1.000*	*6.60*	*Sqm*
	Section 3-3	*4*	*1.87*		*0.500*	*3.74*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*1.87*		*0.933*	*6.98*	*Sqm*
		4		*1.100*	*0.933*	*4.11*	*Sqm*
		4	*1.87*		*1.200*	*8.98*	*Sqm*
		4		*1.530*	*1.200*	*7.34*	*Sqm*
	Section 5-5	*4*	*2.80*		*0.450*	*5.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.80*		*1.765*	*19.79*	*Sqm*
		4		*0.980*	*1.765*	*6.92*	*Sqm*
		4	*2.80*		*0.500*	*5.61*	*Sqm*
		4		*1.659*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.57*		*0.450*	*2.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.57*		*0.600*	*3.77*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.57*		*0.500*	*3.14*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Floor	*2*	*0.61*		*0.650*	*0.80*	*Sqm*
		2		*1.100*	*0.650*	*1.43*	*Sqm*
		2	*5.00*		*0.500*	*5.00*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.52*		*0.250*	*0.26*	*Sqm*
		2		*1.100*	*0.250*	*0.55*	*Sqm*
		2	*0.20*		*0.375*	*0.15*	*Sqm*
		2		*1.100*	*0.375*	*0.83*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.100*	*0.500*	*1.10*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.100*	*0.700*	*1.54*	*Sqm*
	Slab	*2*	*1.90*		*0.33*	*1.25*	*Sqm*
		2		*5.50*	*0.33*	*3.61*	*Sqm*
		1	*1.90*	*5.50*		*10.45*	*Sqm*
	Crest	*2*	*0.86*		*1.285*	*2.20*	*Sqm*
		2		*1.100*	*1.285*	*2.83*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.50*		*0.300*	*3.30*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.20*		*0.600*	*6.24*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**203.43**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.00*	*2.232*		*8.93*	*Sqm*
	TOTAL					**8.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.500*	*0.300*	**0.30**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.500*	*0.150*	**0.30**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.27*	*0.450*		*3.27*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.27*	*0.450*		*3.27*	*Sqm*
	TOTAL					**6.54**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.164		4.16	**Cum**
	Abutment						
	Section 1-1	2	*1.09*	*1.554*		*3.400*	*Cum*
	Section 2-2	2	*2.50*	*0.905*		*4.523*	*Cum*
	Section 3-3	2	*2.20*	*1.263*		*5.557*	*Cum*
	Section 5-5	2	*2.85*	*1.554*		*8.848*	*Cum*
	Section 6-6	2	*1.09*	*0.693*		*1.511*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.50*	*0.150*	*0.600*	*1.650*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**30.01**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.450 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.488*	*1.920*	*5.543*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*1.920*	*9.072*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*1.720*	*7.038*	*Cum*
	Section 5-5	*2*	*2.37*	*1.638*	*1.920*	*14.901*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.720*	*0.480*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
	U/S Floor	*1*	*2.00*	*0.580*	*1.460*	*1.694*	*Cum*
	D/S Floor	*1*	*2.25*	*0.580*	*0.850*	*1.109*	*Cum*
		1	*2.50*	*0.580*	*0.650*	*0.943*	*Cum*
						41.09	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*3.63*	*0.580*	*0.150*	*0.32*	*Cum*
		1	*0.28*	*0.580*	*0.150*	*0.02*	*Cum*
		1	*1.14*	*0.580*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.488*	*0.150*	*0.43*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*2.37*	*1.638*	*0.150*	*1.16*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**3.63**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.819*	*1.230*	*1.50*	*Cum*
		2	*0.75*	*1.338*	*0.500*	*1.00*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.600*	*0.500*	*1.35*	*Cum*
		2	*2.25*	*0.900*	*0.500*	*2.03*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.540*	*0.300*	*0.64*	*Cum*
		2	*1.96*	*0.780*	*0.500*	*1.53*	*Cum*
	Section 5-5	*2*	*2.33*	*0.450*	*0.450*	*0.94*	*Cum*
		2	*2.33*	*0.819*	*1.230*	*4.68*	*Cum*
		2	*2.33*	*1.338*	*0.500*	*3.11*	*Cum*
	Section 6-6	*2*	*0.54*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.54*	*0.540*	*0.300*	*0.17*	*Cum*
		2	*0.54*	*0.780*	*0.500*	*0.42*	*Cum*
	Floor	*1*	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
		1	*4.25*	*0.580*	*0.500*	*1.23*	*Cum*
		1	*0.31*	*0.580*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.580*	*0.400*	*0.05*	*Cum*
		1	*2.30*	*0.580*	*0.500*	*0.67*	*Cum*
		1	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
	Crest	*1*	*0.74*	*0.580*	*0.865*	*0.37*	*Cum*
	TOTAL					**22.45**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.580*	*0.150*	*0.06*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.19*	*0.450*	*0.050*	*0.18*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.19*	*0.450*	*0.050*	*0.18*	*Cum*
	TOTAL					**0.43**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**22.45**	**0.00**	**0.067**	**7850.0**	**528.77**	**Kg**
	Total Weight in Metric Tonne					**0.53**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.230*	*3.67*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*0.75*		*0.500*	*1.49*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.300*	*2.35*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*2.33*		*0.450*	*4.19*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.33*		*1.230*	*11.44*	*Sqm*
		4		*0.819*	*1.230*	*4.03*	*Sqm*
		4	*2.33*		*0.500*	*4.65*	*Sqm*
		4		*1.338*	*0.500*	*2.68*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.450*	*0.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.54*		*0.300*	*0.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.54*		*0.500*	*1.08*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*0.580*	*0.200*	*0.23*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.580*	*0.400*	*0.46*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
	Crest	*2*	*0.74*		*0.865*	*1.27*	*Sqm*
		2		*0.580*	*0.865*	*1.00*	*Sqm*
	TOTAL					**91.54**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.19*	*0.450*		*3.68*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.19*	*0.450*		*3.68*	*Sqm*
	TOTAL					**7.37**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.455		1.46	**Cum**
	Abutment						
	Section 1-1	2	*0.97*	*0.940*		*1.824*	*Cum*
	Section 2-2	2	*2.25*	*0.600*		*2.700*	*Cum*
	Section 3-3	2	*2.20*	*0.432*		*1.901*	*Cum*
	Section 5-5	2	*2.37*	*0.940*		*4.454*	*Cum*
	Section 6-6	2	*0.15*	*0.432*		*0.130*	*Cum*
	TOTAL					**12.46**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 9.912 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.416*	*1.617*	*4.492*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*1.617*	*7.640*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*1.417*	*5.798*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*1.617*	*3.193*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.417*	*0.395*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
	U/S Floor	*1*	*2.00*	*0.580*	*1.460*	*1.694*	*Cum*
	D/S Floor	*1*	*2.25*	*0.580*	*0.850*	*1.109*	*Cum*
		1	*2.50*	*0.580*	*0.650*	*0.943*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
						25.88	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*3.63*	*0.580*	*0.150*	*0.32*	*Cum*
		1	*0.28*	*0.580*	*0.150*	*0.02*	*Cum*
		1	*1.14*	*0.580*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.416*	*0.150*	*0.42*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.150*	*0.30*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**2.75**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.74*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.74*	*0.783*	*1.110*	*1.29*	*Cum*
		2	*0.74*	*1.266*	*0.500*	*0.94*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.600*	*0.500*	*1.35*	*Cum*
		2	*2.25*	*0.900*	*0.500*	*2.03*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.540*	*0.300*	*0.64*	*Cum*
		2	*1.96*	*0.780*	*0.500*	*1.53*	*Cum*
	Section 5-5	*2*	*0.59*	*0.450*	*0.450*	*0.24*	*Cum*
		2	*0.59*	*0.783*	*1.110*	*1.02*	*Cum*
		2	*0.59*	*1.266*	*0.500*	*0.74*	*Cum*
	Section 6-6	*2*	*0.54*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.54*	*0.540*	*0.300*	*0.17*	*Cum*
		2	*0.54*	*0.780*	*0.500*	*0.42*	*Cum*
	Floor	*1*	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
		1	*4.25*	*0.580*	*0.500*	*1.23*	*Cum*
		1	*0.31*	*0.580*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.580*	*0.400*	*0.05*	*Cum*
		1	*2.30*	*0.580*	*0.500*	*0.67*	*Cum*
		1	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
	Crest	*1*	*0.74*	*0.580*	*0.865*	*0.37*	*Cum*
	TOTAL					**15.45**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Over Crest	*1*	*0.65*	*0.580*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.43*	*0.450*	*0.050*	*0.14*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.43*	*0.450*	*0.050*	*0.14*	*Cum*
	TOTAL					**0.35**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**15.45**	**0.00**	**0.046**	**7850.0**	**363.84**	**Kg**
	Total Weight in Metric Tonne					**0.36**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.74*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.74*		*1.110*	*3.30*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.74*		*0.500*	*1.49*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.300*	*2.35*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.59*		*0.450*	*1.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.59*		*1.110*	*2.60*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.59*		*0.500*	*1.17*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.450*	*0.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.54*		*0.300*	*0.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.54*		*0.500*	*1.08*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*0.580*	*0.200*	*0.23*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.580*	*0.400*	*0.46*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
	Crest	*2*	*0.74*		*0.865*	*1.27*	*Sqm*
		2		*0.580*	*0.865*	*1.00*	*Sqm*
	TOTAL					**74.33**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.43*	*0.450*		*2.89*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.43*	*0.450*		*2.89*	*Sqm*
	TOTAL					**5.79**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.666		0.67	**Cum**
	Abutment						
	Section 1-1	2	*0.98*	*0.646*		*1.267*	*Cum*
	Section 2-2	2	*2.25*	*0.602*		*2.709*	*Cum*
	Section 3-3	2	*2.20*	*0.416*		*1.832*	*Cum*
	Section 5-5	2	*0.63*	*0.646*		*0.815*	*Cum*
	Section 6-6	2	*0.15*	*0.416*		*0.125*	*Cum*
	TOTAL					**7.41**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 10.350 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.416*	*1.859*	*5.165*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*1.859*	*8.784*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*1.659*	*6.789*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*1.859*	*3.671*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*1.659*	*0.463*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
	U/S Floor	*1*	*2.00*	*0.580*	*1.460*	*1.694*	*Cum*
	D/S Floor	*1*	*4.25*	*0.580*	*0.850*	*2.095*	*Cum*
		1	*2.50*	*0.580*	*0.650*	*0.943*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
						30.22	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*3.63*	*0.580*	*0.150*	*0.32*	*Cum*
		1	*0.28*	*0.580*	*0.150*	*0.02*	*Cum*
		1	*1.14*	*0.580*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.416*	*0.150*	*0.42*	*Cum*
	Section 2-2	*2*	*2.25*	*1.050*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*2.20*	*0.930*	*0.150*	*0.61*	*Cum*
	Section 5-5	*2*	*0.63*	*1.566*	*0.150*	*0.30*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**2.75**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.74*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.74*	*0.783*	*1.110*	*1.29*	*Cum*
		2	*0.74*	*1.266*	*0.500*	*0.94*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.600*	*0.500*	*1.35*	*Cum*
		2	*2.25*	*0.900*	*0.500*	*2.03*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.540*	*0.300*	*0.64*	*Cum*
		2	*1.96*	*0.780*	*0.500*	*1.53*	*Cum*
	Section 5-5	*2*	*0.59*	*0.450*	*0.450*	*0.24*	*Cum*
		2	*0.59*	*0.783*	*1.110*	*1.02*	*Cum*
		2	*0.59*	*1.266*	*0.500*	*0.74*	*Cum*
	Section 6-6	*2*	*0.54*	*0.450*	*0.450*	*0.22*	*Cum*
		2	*0.54*	*0.540*	*0.300*	*0.17*	*Cum*
		2	*0.54*	*0.780*	*0.500*	*0.42*	*Cum*
	Floor	*1*	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
		1	*4.25*	*0.580*	*0.500*	*1.23*	*Cum*
		1	*0.31*	*0.580*	*0.200*	*0.04*	*Cum*
		1	*0.20*	*0.580*	*0.400*	*0.05*	*Cum*
		1	*2.30*	*0.580*	*0.500*	*0.67*	*Cum*
		1	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
	Crest	*1*	*0.74*	*0.580*	*0.865*	*0.37*	*Cum*
	TOTAL					**15.45**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Over Crest	*1*	*0.65*	*0.580*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*6.43*	*0.450*	*0.050*	*0.14*	*Cum*
	On Abutment Top (Right Side)	*1*	*6.43*	*0.450*	*0.050*	*0.14*	*Cum*
	TOTAL					**0.35**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**15.45**	**0.00**	**0.046**	**7850.0**	**363.84**	**Kg**
	Total Weight in Metric Tonne					**0.36**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.74*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.74*		*1.110*	*3.30*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.74*		*0.500*	*1.49*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.900*	*0.500*	*1.80*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.53*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.300*	*2.35*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*1.96*		*0.500*	*3.92*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.59*		*0.450*	*1.06*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.59*		*1.110*	*2.60*	*Sqm*
		4		*0.783*	*1.110*	*3.48*	*Sqm*
		4	*0.59*		*0.500*	*1.17*	*Sqm*
		4		*1.266*	*0.500*	*2.53*	*Sqm*
	Section 6-6	*4*	*0.54*		*0.450*	*0.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.54*		*0.300*	*0.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.54*		*0.500*	*1.08*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*0.580*	*0.200*	*0.23*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.580*	*0.400*	*0.46*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
	Crest	*2*	*0.74*		*0.865*	*1.27*	*Sqm*
		2		*0.580*	*0.865*	*1.00*	*Sqm*
	TOTAL					**74.33**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*6.43*	*0.450*		*2.89*	*Sqm*
	On Abutment Top (Right Side)	*1*	*6.43*	*0.450*		*2.89*	*Sqm*
	TOTAL					**5.79**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		0.666		0.67	**Cum**
	Abutment						
	Section 1-1	2	*0.98*	*0.874*		*1.715*	*Cum*
	Section 2-2	2	*2.25*	*0.600*		*2.700*	*Cum*
	Section 3-3	2	*2.20*	*0.432*		*1.902*	*Cum*
	Section 5-5	2	*0.63*	*0.874*		*1.102*	*Cum*
	Section 6-6	2	*0.15*	*0.432*		*0.130*	*Cum*
	TOTAL					**8.21**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 10.060 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*1.782*	*2.283*	*9.817*	*Cum*
	Section 2-2	*2*	*2.75*	*1.050*	*2.283*	*13.184*	*Cum*
	Section 3-3	*2*	*2.45*	*0.930*	*2.083*	*9.492*	*Cum*
	Section 5-5	*2*	*0.55*	*1.932*	*2.283*	*4.892*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*2.083*	*0.581*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
	U/S Floor	*1*	*1.33*	*0.580*	*2.183*	*1.684*	*Cum*
	D/S Floor	*1*	*4.11*	*0.580*	*0.950*	*2.265*	*Cum*
		1	*2.75*	*0.580*	*0.750*	*1.196*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.580*	*0.850*	*0.308*	*Cum*
						43.73	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*0.08*	*0.580*	*0.150*	*0.01*	*Cum*
		1	*0.14*	*0.580*	*0.150*	*0.01*	*Cum*
		1	*4.34*	*0.580*	*0.150*	*0.38*	*Cum*
		1	*0.42*	*0.580*	*0.150*	*0.04*	*Cum*
		1	*1.39*	*0.580*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*0.580*	*0.150*	*0.07*	*Cum*
		1	*0.54*	*0.580*	*0.150*	*0.05*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.21*	*1.782*	*0.150*	*0.64*	*Cum*
	Section 2-2	*2*	*2.75*	*1.050*	*0.150*	*0.87*	*Cum*
	Section 3-3	*2*	*2.45*	*0.930*	*0.150*	*0.68*	*Cum*
	Section 5-5	*2*	*0.55*	*1.932*	*0.150*	*0.32*	*Cum*
	Section 6-6	*2*	*0.15*	*0.930*	*0.150*	*0.04*	*Cum*
	TOTAL					**3.34**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.06*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.06*	*0.966*	*1.720*	*3.51*	*Cum*
		2	*1.06*	*1.632*	*0.600*	*2.07*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.600*	*0.500*	*1.65*	*Cum*
		2	*2.75*	*0.900*	*0.600*	*2.97*	*Cum*
	Section 3-3	*2*	*2.21*	*0.450*	*0.450*	*0.90*	*Cum*
		2	*2.21*	*0.540*	*0.300*	*0.72*	*Cum*
		2	*2.21*	*0.780*	*0.500*	*1.72*	*Cum*
	Section 5-5	*2*	*0.51*	*0.450*	*0.450*	*0.21*	*Cum*
		2	*0.51*	*0.966*	*1.720*	*1.70*	*Cum*
		2	*0.51*	*1.632*	*0.500*	*0.83*	*Cum*
	Section 6-6	*2*	*0.62*	*0.450*	*0.450*	*0.25*	*Cum*
		2	*0.62*	*0.540*	*0.300*	*0.20*	*Cum*
		2	*0.62*	*0.780*	*0.500*	*0.48*	*Cum*
	Floor	*1*	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
		1	*1.33*	*0.580*	*0.500*	*0.39*	*Cum*
		1	*0.10*	*0.580*	*0.550*	*0.03*	*Cum*
		1	*4.11*	*0.580*	*0.600*	*1.43*	*Cum*
		1	*0.26*	*0.580*	*0.300*	*0.04*	*Cum*
		1	*0.20*	*0.580*	*0.400*	*0.05*	*Cum*
		1	*2.55*	*0.580*	*0.500*	*0.74*	*Cum*
		1	*0.63*	*0.580*	*0.700*	*0.25*	*Cum*
	Crest	*1*	*0.94*	*0.580*	*1.460*	*0.79*	*Cum*
	TOTAL					**22.72**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*0.580*	*0.150*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.48*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.48*	*0.450*	*0.050*	*0.17*	*Cum*
	TOTAL					**0.40**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**22.72**	**0.00**	**0.068**	**7850.0**	**535.09**	**Kg**
	Total Weight in Metric Tonne					**0.54**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.06*		*0.450*	*1.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.06*		*1.720*	*7.27*	*Sqm*
		4		*0.966*	*1.720*	*6.65*	*Sqm*
		4	*1.06*		*0.600*	*2.54*	*Sqm*
		4		*1.632*	*0.600*	*3.92*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*0.600*	*0.500*	*1.20*	*Sqm*
		4	*2.75*		*0.600*	*6.60*	*Sqm*
		4		*0.900*	*0.600*	*2.16*	*Sqm*
	Section 3-3	*4*	*2.21*		*0.450*	*3.98*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.21*		*0.300*	*2.65*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*2.21*		*0.500*	*4.42*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Section 5-5	*4*	*0.51*		*0.450*	*0.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.51*		*1.720*	*3.51*	*Sqm*
		4		*0.966*	*1.720*	*6.65*	*Sqm*
		4	*0.51*		*0.500*	*1.02*	*Sqm*
		4		*1.632*	*0.500*	*3.26*	*Sqm*
	Section 6-6	*4*	*0.62*		*0.450*	*1.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.62*		*0.300*	*0.74*	*Sqm*
		4		*0.540*	*0.300*	*0.65*	*Sqm*
		4	*0.62*		*0.500*	*1.23*	*Sqm*
		4		*0.780*	*0.500*	*1.56*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
		2	*1.33*		*0.5*	*1.33*	*Sqm*
		2		*0.58*	*0.500*	*0.58*	*Sqm*
		2	*0.1*		*0.55*	*0.11*	*Sqm*
		2		*0.58*	*0.550*	*0.64*	*Sqm*
		2	*4.11*		*0.600*	*4.93*	*Sqm*
		2		*0.580*	*0.600*	*0.70*	*Sqm*
		2	*0.26*		*0.300*	*0.15*	*Sqm*
		2		*0.580*	*0.300*	*0.35*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.580*	*0.400*	*0.46*	*Sqm*
		2	*2.55*		*0.500*	*2.55*	*Sqm*
		2		*0.580*	*0.500*	*0.58*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.580*	*0.700*	*0.81*	*Sqm*
	Crest	*2*	*0.94*		*1.460*	*2.73*	*Sqm*
		2		*0.580*	*1.460*	*1.69*	*Sqm*
	TOTAL					**100.98**	**Sqm**
7	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.48*	*0.450*		*3.37*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	On Abutment Top (Right Side)	*1*	*7.48*	*0.450*		*3.37*	*Sqm*
	TOTAL					**6.73**	**Sqm**
8	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
9	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1	2.415			2.42	**Cum**
	Abutment						
	Section 1-1	2	*1.21*	*1.254*		*3.026*	*Cum*
	Section 2-2	2	*2.75*	*0.615*		*3.383*	*Cum*
	Section 3-3	2	*2.45*	*0.432*		*2.118*	*Cum*
	Section 5-5	2	*0.55*	*1.390*		*1.542*	*Cum*
	Section 6-6	2	*0.15*	*0.432*		*0.130*	*Cum*
	TOTAL					**12.61**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 9.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.09*	*1.671*	*2.227*	*8.124*	*Cum*
	Section 2-2	*2*	*3.00*	*1.122*	*2.227*	*14.992*	*Cum*
	Section 3-3	*2*	*1.45*	*1.002*	*2.027*	*5.890*	*Cum*
	Section 5-5	*2*	*2.24*	*1.821*	*2.227*	*18.196*	*Cum*
	Section 6-6	*2*	*0.93*	*1.002*	*2.027*	*3.770*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.700*	*0.850*	*0.372*	*Cum*
	U/S Floor	*1*	*1.22*	*0.700*	*2.227*	*1.902*	*Cum*
	D/S Floor	*1*	*5.25*	*0.700*	*0.850*	*3.124*	*Cum*
		1	*1.75*	*0.700*	*0.650*	*0.796*	*Cum*
	D/S Key Floor	*1*	*0.64*	*0.700*	*0.900*	*0.402*	*Cum*
	Toe Wall D/S Portion	*1*	*4.56*	*0.750*	*0.900*	*3.078*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*1.50*	*1.280*	*0.750*	*1.440*	*Cum*
						62.09	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.700*	*0.150*	*0.08*	*Cum*
		1	*4.82*	*0.700*	*0.150*	*0.51*	*Cum*
		1	*0.28*	*0.700*	*0.150*	*0.03*	*Cum*
		1	*0.17*	*0.700*	*0.150*	*0.02*	*Cum*
		1	*0.84*	*0.700*	*0.150*	*0.09*	*Cum*
		1	*0.54*	*0.700*	*0.150*	*0.06*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.09*	*1.671*	*0.150*	*0.55*	*Cum*
	Section 2-2	*2*	*3.00*	*1.122*	*0.150*	*1.01*	*Cum*
	Section 3-3	*2*	*1.45*	*1.002*	*0.150*	*0.44*	*Cum*
	Section 5-5	*2*	*2.24*	*1.821*	*0.150*	*1.23*	*Cum*
	Section 6-6	*2*	*0.93*	*1.002*	*0.150*	*0.28*	*Cum*
	Toe Wall D/S Portion	*1*	*4.56*	*0.750*	*0.300*	*1.03*	*Cum*
	Toe Wall D/S Portion	*1*	*4.26*	*0.450*	*0.600*	*1.15*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*1.280*	*0.150*	*0.29*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**7.34**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.94*	*0.450*	*0.450*	*0.38*	*Cum*
		2	*0.94*	*0.910*	*1.534*	*2.62*	*Cum*
		2	*0.94*	*1.521*	*0.500*	*1.43*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.636*	*0.620*	*2.37*	*Cum*
		2	*3.00*	*0.972*	*0.500*	*2.92*	*Cum*
	Section 3-3	*2*	*1.17*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.17*	*0.576*	*0.420*	*0.57*	*Cum*
		2	*1.17*	*0.852*	*0.500*	*1.00*	*Cum*
	Section 5-5	*2*	*2.20*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.20*	*0.910*	*1.534*	*6.15*	*Cum*
		2	*2.20*	*1.521*	*0.500*	*3.35*	*Cum*
	Section 6-6	*2*	*1.35*	*0.450*	*0.450*	*0.55*	*Cum*
		2	*1.35*	*0.576*	*0.420*	*0.66*	*Cum*
		2	*1.35*	*0.852*	*0.500*	*1.15*	*Cum*
	Floor	*1*	*0.63*	*0.700*	*0.700*	*0.31*	*Cum*
		1	*5.25*	*0.700*	*0.500*	*1.84*	*Cum*
		1	*0.50*	*0.700*	*0.200*	*0.07*	*Cum*
		1	*0.20*	*0.700*	*0.400*	*0.06*	*Cum*
		1	*1.55*	*0.700*	*0.500*	*0.54*	*Cum*
		1	*0.64*	*0.700*	*0.750*	*0.33*	*Cum*
	Crest	*1*	*0.84*	*0.700*	*1.189*	*0.70*	*Cum*
	TOTAL					**29.57**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*0.700*	*0.150*	*0.07*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*9.44*	*0.450*	*0.050*	*0.21*	*Cum*
	On Abutment Top (Right Side)	*1*	*9.44*	*0.450*	*0.050*	*0.21*	*Cum*
	TOTAL					**0.49**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**29.57**	**0.00**	**0.089**	**7850.0**	**696.31**	**Kg**
	Total Weight in Metric Tonne					**0.70**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.94*		*0.450*	*1.69*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.94*		*1.534*	*5.77*	*Sqm*
		4		*0.910*	*1.534*	*5.58*	*Sqm*
		4	*0.94*		*0.500*	*1.88*	*Sqm*
		4		*1.521*	*0.500*	*3.04*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.620*	*7.44*	*Sqm*
		4		*0.636*	*0.620*	*1.58*	*Sqm*
		4	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.972*	*0.500*	*1.94*	*Sqm*
	Section 3-3	*4*	*1.17*		*0.450*	*2.11*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.17*		*0.420*	*1.97*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*1.17*		*0.500*	*2.35*	*Sqm*
		4		*0.852*	*0.500*	*1.70*	*Sqm*
	Section 5-5	*4*	*2.20*		*0.450*	*3.96*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.20*		*1.534*	*13.51*	*Sqm*
		4		*0.910*	*1.534*	*5.58*	*Sqm*
		4	*2.20*		*0.500*	*4.40*	*Sqm*
		4		*1.521*	*0.500*	*3.04*	*Sqm*
	Section 6-6	*4*	*1.35*		*0.450*	*2.44*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.35*		*0.420*	*2.27*	*Sqm*
		4		*0.576*	*0.420*	*0.97*	*Sqm*
		4	*1.35*		*0.500*	*2.71*	*Sqm*
		4		*0.852*	*0.500*	*1.70*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.700*	*0.700*	*0.98*	*Sqm*
		2	*5.25*		*0.500*	*5.25*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.50*		*0.200*	*0.20*	*Sqm*
		2		*0.700*	*0.200*	*0.28*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.700*	*0.400*	*0.56*	*Sqm*
		2	*1.55*		*0.500*	*1.55*	*Sqm*
		2		*0.700*	*0.500*	*0.70*	*Sqm*
		2	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*0.700*	*0.750*	*1.05*	*Sqm*
	Crest	*2*	*0.84*		*1.189*	*2.00*	*Sqm*
		2		*0.700*	*1.189*	*1.66*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.56*		*0.300*	*2.74*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.26*		*0.600*	*5.11*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*1.280*	*0.150*	*0.77*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**125.83**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.907*		*5.72*	*Sqm*
	TOTAL					**5.72**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.380*	*0.300*	**0.17**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.380*	*0.150*	**0.17**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*9.44*	*0.450*		*4.25*	*Sqm*
	On Abutment Top (Right Side)	*1*	*9.44*	*0.450*		*4.25*	*Sqm*
	TOTAL					**8.50**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.671		2.67	**Cum**
	Abutment						
	Section 1-1	2	*1.09*	*1.293*		*2.823*	*Cum*
	Section 2-2	2	*3.00*	*0.712*		*4.274*	*Cum*
	Section 3-3	2	*1.45*	*0.532*		*1.543*	*Cum*
	Section 5-5	2	*2.24*	*0.940*		*4.218*	*Cum*
	Section 6-6	2	*0.93*	*0.432*		*0.802*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.56*	*0.150*	*0.600*	*1.368*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**17.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 4.550 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.48*	*2.241*	*3.067*	*20.324*	*Cum*
	Section 2-2	*2*	*4.25*	*1.326*	*3.067*	*34.568*	*Cum*
	Section 3-3	*2*	*2.95*	*1.206*	*2.867*	*20.400*	*Cum*
	Section 5-5	*2*	*2.85*	*2.391*	*3.067*	*41.777*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*2.867*	*8.533*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.840*	*0.850*	*0.978*	*Cum*
	U/S Floor	*1*	*2.46*	*1.840*	*2.767*	*12.535*	*Cum*
	D/S Floor	*1*	*5.79*	*1.840*	*1.150*	*12.247*	*Cum*
		1	*3.25*	*1.840*	*0.950*	*5.681*	*Cum*
	D/S Key Floor	*1*	*0.89*	*1.840*	*1.900*	*3.103*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.900*	*4.536*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.50*	*2.140*	*0.750*	*4.013*	*Cum*
						168.69	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*1.840*	*0.150*	*0.22*	*Cum*
		1	*1.21*	*1.840*	*0.150*	*0.33*	*Cum*
		1	*0.42*	*1.840*	*0.150*	*0.12*	*Cum*
		1	*6.31*	*1.840*	*0.150*	*1.74*	*Cum*
		1	*0.71*	*1.840*	*0.150*	*0.20*	*Cum*
		1	*0.87*	*1.840*	*0.150*	*0.24*	*Cum*
		1	*1.96*	*1.840*	*0.150*	*0.54*	*Cum*
		1	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.48*	*2.241*	*0.150*	*0.99*	*Cum*
	Section 2-2	*2*	*4.25*	*1.326*	*0.150*	*1.69*	*Cum*
	Section 3-3	*2*	*2.95*	*1.206*	*0.150*	*1.07*	*Cum*
	Section 5-5	*2*	*2.85*	*2.391*	*0.150*	*2.04*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.300*	*1.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.42*	*0.450*	*0.600*	*1.73*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*2.50*	*2.140*	*0.150*	*0.80*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**14.87**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.33*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.33*	*1.195*	*2.484*	*7.89*	*Cum*
		2	*1.33*	*2.091*	*0.800*	*4.44*	*Cum*
	Section 2-2	*2*	*4.25*	*0.450*	*0.450*	*1.72*	*Cum*
		2	*4.25*	*0.738*	*0.960*	*6.02*	*Cum*
		2	*4.25*	*1.176*	*0.800*	*8.00*	*Cum*
	Section 3-3	*2*	*2.57*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.57*	*0.678*	*0.760*	*2.65*	*Cum*
		2	*2.57*	*1.056*	*0.500*	*2.72*	*Cum*
	Section 5-5	*2*	*3.30*	*0.450*	*0.450*	*1.34*	*Cum*
		2	*3.30*	*1.195*	*2.484*	*19.62*	*Cum*
		2	*3.30*	*2.091*	*0.500*	*6.91*	*Cum*
	Section 6-6	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*0.678*	*0.760*	*1.82*	*Cum*
		2	*1.76*	*1.056*	*0.500*	*1.86*	*Cum*
	Floor	*1*	*0.63*	*1.840*	*0.700*	*0.81*	*Cum*
		1	*2.16*	*1.840*	*0.500*	*1.99*	*Cum*
		1	*0.30*	*1.840*	*0.650*	*0.36*	*Cum*
		1	*5.79*	*1.840*	*0.800*	*8.52*	*Cum*
		1	*0.65*	*1.840*	*0.500*	*0.60*	*Cum*
		1	*0.20*	*1.840*	*0.400*	*0.15*	*Cum*
		1	*3.05*	*1.840*	*0.500*	*2.81*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	*0.89*	*1.840*	*1.750*	*2.86*	*Cum*
	Crest	*1*	*1.22*	*1.840*	*1.964*	*4.41*	*Cum*
	TOTAL					**89.76**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.90*	*1.840*	*0.150*	*0.25*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*13.93*	*0.450*	*0.050*	*0.31*	*Cum*
	On Abutment Top (Right Side)	*1*	*13.93*	*0.450*	*0.050*	*0.31*	*Cum*
	TOTAL					**0.88**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**89.76**	**0.00**	**0.269**	**7850.0**	**2113.88**	**Kg**
	Total Weight in Metric Tonne					**2.11**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.33*		*0.450*	*2.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.33*		*2.484*	*13.20*	*Sqm*
		4		*1.195*	*2.484*	*11.87*	*Sqm*
		4	*1.33*		*0.800*	*4.25*	*Sqm*
		4		*2.091*	*0.800*	*6.69*	*Sqm*
	Section 2-2	*4*	*4.25*		*0.450*	*7.65*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*4.25*		*0.960*	*16.32*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*4.25*		*0.800*	*13.60*	*Sqm*
		4		*1.176*	*0.800*	*3.76*	*Sqm*
	Section 3-3	*4*	*2.57*		*0.450*	*4.63*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.57*		*0.760*	*7.82*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*2.57*		*0.500*	*5.14*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Section 5-5	*4*	*3.30*		*0.450*	*5.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.30*		*2.484*	*32.83*	*Sqm*
		4		*1.195*	*2.484*	*11.87*	*Sqm*
		4	*3.30*		*0.500*	*6.61*	*Sqm*
		4		*2.091*	*0.500*	*4.18*	*Sqm*
	Section 6-6	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*0.760*	*5.36*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.76*		*0.500*	*3.52*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.840*	*0.700*	*2.58*	*Sqm*
		2	*2.162*		*0.5*	*2.16*	*Sqm*
		2		*1.84*	*0.500*	*1.84*	*Sqm*
		2	*0.3*		*0.65*	*0.39*	*Sqm*
		2		*1.84*	*0.650*	*2.39*	*Sqm*
		2	*5.79*		*0.800*	*9.26*	*Sqm*
		2		*1.840*	*0.800*	*2.94*	*Sqm*
		2	*0.65*		*0.500*	*0.65*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.840*	*0.400*	*1.47*	*Sqm*
		2	*3.05*		*0.500*	*3.05*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.89*		*1.750*	*3.11*	*Sqm*
		2		*1.840*	*1.750*	*6.44*	*Sqm*
	Crest	*2*	*1.22*		*1.964*	*4.79*	*Sqm*
		2		*1.840*	*1.964*	*7.23*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.72*		*0.300*	*4.03*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall D/S Portion	*2*	*6.42*		*0.600*	*7.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*
		4		*2.140*	*0.150*	*1.28*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**261.31**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.240*	*0.300*	**0.93**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.240*	*0.150*	**0.93**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*13.93*	*0.450*		*6.27*	*Sqm*
	On Abutment Top (Right Side)	*1*	*13.93*	*0.450*		*6.27*	*Sqm*
	TOTAL					**12.54**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		18.837		18.84	**Cum**
	Abutment						
	Section 1-1	2	*1.48*	*2.094*		*6.192*	*Cum*
	Section 2-2	2	*4.25*	*1.122*		*9.537*	*Cum*
	Section 3-3	2	*2.95*	*0.854*		*5.039*	*Cum*
	Section 5-5	2	*2.85*	*2.052*		*11.690*	*Cum*
	Section 6-6	2	*1.23*	*0.854*		*2.108*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.72*	*0.150*	*0.600*	*2.016*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**55.87**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 5.100 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.21*	*1.875*	*1.521*	*6.879*	*Cum*
	Section 2-2	*2*	*3.50*	*1.326*	*1.521*	*14.118*	*Cum*
	Section 3-3	*2*	*1.70*	*1.206*	*1.321*	*5.417*	*Cum*
	Section 5-5	*2*	*2.92*	*2.025*	*1.521*	*18.012*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*1.321*	*3.932*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.840*	*0.850*	*0.978*	*Cum*
	U/S Floor	*1*	*1.31*	*1.840*	*1.470*	*3.549*	*Cum*
	D/S Floor	*1*	*4.69*	*1.840*	*0.900*	*7.765*	*Cum*
		1	*2.00*	*1.840*	*0.700*	*2.576*	*Cum*
	D/S Key Floor	*1*	*0.70*	*1.840*	*1.150*	*1.481*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.900*	*4.536*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.50*	*2.140*	*0.750*	*4.013*	*Cum*
						73.25	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*1.840*	*0.150*	*0.22*	*Cum*
		1	*0.31*	*1.840*	*0.150*	*0.08*	*Cum*
		1	*0.07*	*1.840*	*0.150*	*0.02*	*Cum*
		1	*5.21*	*1.840*	*0.150*	*1.44*	*Cum*
		1	*0.35*	*1.840*	*0.150*	*0.10*	*Cum*
		1	*0.25*	*1.840*	*0.150*	*0.07*	*Cum*
		1	*1.12*	*1.840*	*0.150*	*0.31*	*Cum*
		1	*0.54*	*1.840*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.21*	*1.875*	*0.150*	*0.68*	*Cum*
	Section 2-2	*2*	*3.50*	*1.326*	*0.150*	*1.39*	*Cum*
	Section 3-3	*2*	*1.70*	*1.206*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.92*	*2.025*	*0.150*	*1.78*	*Cum*
	Section 6-6	*2*	*1.23*	*1.206*	*0.150*	*0.45*	*Cum*
	Toe Wall D/S Portion	*1*	*6.72*	*0.750*	*0.300*	*1.51*	*Cum*
	Toe Wall D/S Portion	*1*	*6.42*	*0.450*	*0.600*	*1.73*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*2.50*	*2.140*	*0.150*	*0.80*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.50*	*0.300*	*0.600*	*0.90*	*Cum*
	TOTAL					**12.39**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.06*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.06*	*1.012*	*1.874*	*4.01*	*Cum*
		2	*1.06*	*1.725*	*0.550*	*2.00*	*Cum*
	Section 2-2	*2*	*3.50*	*0.450*	*0.450*	*1.42*	*Cum*
		2	*3.50*	*0.738*	*0.960*	*4.96*	*Cum*
		2	*3.50*	*1.176*	*0.550*	*4.53*	*Cum*
	Section 3-3	*2*	*1.32*	*0.450*	*0.450*	*0.54*	*Cum*
		2	*1.32*	*0.678*	*0.760*	*1.36*	*Cum*
		2	*1.32*	*1.056*	*0.500*	*1.40*	*Cum*
	Section 5-5	*2*	*2.88*	*0.450*	*0.450*	*1.17*	*Cum*
		2	*2.88*	*1.012*	*1.874*	*10.92*	*Cum*
		2	*2.88*	*1.725*	*0.500*	*4.97*	*Cum*
	Section 6-6	*2*	*1.76*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.76*	*0.678*	*0.760*	*1.82*	*Cum*
		2	*1.76*	*1.056*	*0.500*	*1.86*	*Cum*
	Floor	*1*	*0.63*	*1.840*	*0.700*	*0.81*	*Cum*
		1	*0.05*	*1.840*	*0.525*	*0.05*	*Cum*
		1	*4.69*	*1.840*	*0.550*	*4.75*	*Cum*
		1	*0.52*	*1.840*	*0.250*	*0.24*	*Cum*
		1	*0.20*	*1.840*	*0.400*	*0.15*	*Cum*
		1	*1.80*	*1.840*	*0.500*	*1.66*	*Cum*
		1	*0.70*	*1.840*	*1.000*	*1.29*	*Cum*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	*1*	*0.97*	*1.840*	*1.364*	*2.43*	*Cum*
	TOTAL					**53.45**	**Cum**
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.840*	*0.150*	*0.21*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.58*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.58*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.73**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**53.45**	**0.00**	**0.160**	**7850.0**	**1258.66**	**Kg**
	Total Weight in Metric Tonne					**1.26**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.06*		*0.450*	*1.90*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.06*		*1.874*	*7.92*	*Sqm*
		4		*1.012*	*1.874*	*7.59*	*Sqm*
		4	*1.06*		*0.550*	*2.32*	*Sqm*
		4		*1.725*	*0.550*	*3.80*	*Sqm*
	Section 2-2	*4*	*3.50*		*0.450*	*6.30*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.50*		*0.960*	*13.44*	*Sqm*
		4		*0.738*	*0.960*	*2.83*	*Sqm*
		4	*3.50*		*0.550*	*7.70*	*Sqm*
		4		*1.176*	*0.550*	*2.59*	*Sqm*
	Section 3-3	*4*	*1.32*		*0.450*	*2.38*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.32*		*0.760*	*4.02*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.32*		*0.500*	*2.64*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Section 5-5	*4*	*2.88*		*0.450*	*5.18*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.88*		*1.874*	*21.59*	*Sqm*
		4		*1.012*	*1.874*	*7.59*	*Sqm*
		4	*2.88*		*0.500*	*5.76*	*Sqm*
		4		*1.725*	*0.500*	*3.45*	*Sqm*
	Section 6-6	*4*	*1.76*		*0.450*	*3.17*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.76*		*0.760*	*5.36*	*Sqm*
		4		*0.678*	*0.760*	*2.06*	*Sqm*
		4	*1.76*		*0.500*	*3.52*	*Sqm*
		4		*1.056*	*0.500*	*2.11*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.840*	*0.700*	*2.58*	*Sqm*
		2	*0.05*		*0.525*	*0.05*	*Sqm*
		2		*1.84*	*0.525*	*1.93*	*Sqm*
		2	*4.69*		*0.550*	*5.16*	*Sqm*
		2		*1.840*	*0.550*	*2.02*	*Sqm*
		2	*0.52*		*0.250*	*0.26*	*Sqm*
		2		*1.840*	*0.250*	*0.92*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.840*	*0.400*	*1.47*	*Sqm*
		2	*1.80*		*0.500*	*1.80*	*Sqm*
		2		*1.840*	*0.500*	*1.84*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*1.840*	*1.000*	*3.68*	*Sqm*
	Crest	*2*	*0.97*		*1.364*	*2.64*	*Sqm*
		2		*1.840*	*1.364*	*5.02*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.72*		*0.300*	*4.03*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.42*		*0.600*	*7.70*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.150*	*1.50*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*2.140*	*0.150*	*1.28*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.50*		*0.600*	*6.00*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**187.49**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.50*	*2.520*		*12.60*	*Sqm*
	TOTAL					**12.60**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.50*	*1.240*	*0.300*	**0.93**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.50*	*1.240*	*0.150*	**0.93**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.58*	*0.450*		*5.21*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.58*	*0.450*		*5.21*	*Sqm*
	TOTAL					**10.42**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.709		4.71	**Cum**
	Abutment						
	Section 1-1	2	*1.21*	*0.535*		*1.290*	*Cum*
	Section 2-2	2	*3.50*	*0.531*		*3.717*	*Cum*
	Section 3-3	2	*1.70*	*0.523*		*1.778*	*Cum*
	Section 5-5	2	*2.92*	*0.535*		*3.129*	*Cum*
	Section 6-6	2	*1.23*	*0.523*		*1.291*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.72*	*0.150*	*0.600*	*2.016*	*Cum*
		2	*2.50*	0.150	*0.600*	*0.450*	*Cum*
	TOTAL					**18.38**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF BRICK WORK OF CANAL

S.No.	Name of Canal	Reaches (m)	Length (m)	Area (m2)	Quantity (m3)	Unit	Rates (As per Bihar SOR 2025)	Amount	Cement (MT)	Coarse Sand (Cum)
1	Sondhi-III Sub Dy	9450-10500	1050.000	0.516	541.800	Cum	5021.30	₹ 27,20,540.34	62.42	173.38
	Total				***541.80***			***₹ 27,20,540.34***	***62.42***	***173.38***
2	**Carriage of materials**									
	Coarse Sand (60 Km lead)				173.376	Cum	**1075.00**	₹ 1,86,379.20		
	Cement (30 km lead)				62.415	MT	**742.00**	₹ 46,312.20		
	Brick (15 km lead)				270900.00	No.	**3.18**	₹ 8,61,462.00		
	Carriage of materials Total (In Rs.)							**₹ 10,94,153.40**		
	SUB TOTAL (In Rs.)							**₹ 38,14,693.74**		
	Seigniorage @10%				**Rate**	**Amount in Rs.**	**10%**			
	Coarse Sand	173.38	Cum		**584.64**	101362.54	10136.25			
	Total						**₹ 10,136.25**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SONDIH-III SUB DISTRIBUTARY			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (0.610 M)/ BRIDGE	0.965	₹ 2,09,724.22
2	FALL (1.448 M)	1.465	₹ 65,801.59
3	FALL (1.829 M)	2.170	₹ 72,934.08
4	BRIDGE	2.260	₹ 3,803.87
5	FALL (1.524 M)/ BRIDGE	2.400	₹ 2,681.35
6	FALL (0.610 M)	2.650	₹ 1,00,960.02
7	BRIDGE	4.160	₹ 12,537.89
8	FALL (1.829M)	4.300	₹ 84,293.73
9	FALL (0.457 M)	4.450	₹ 0.00
10	FALL (1.524 M)	4.550	₹ 48,843.16
11	BRIDGE + FALL (0.305 M)	4.675	₹ 51,765.79
12	FALL (1.829 M)	4.850	₹ 1,20,978.52
13	FALL (0.914 M)	5.100	₹ 66,690.57
14	BRIDGE	5.852	₹ 0.00
15	FALL (0.914 M)	6.800	₹ 0.00
16	FALL (0.610 M)	7.300	₹ 28,514.62
17	FALL (0.915 M)	7.660	₹ 24,826.10
18	FALL (0.914 M)	8.130	₹ 33,412.81
19	FALL (1.524 M)	8.375	₹ 20,451.62
20	FALL (1.524 M)	8.750	₹ 37,112.28
21	CULVERT	8.795	₹ 10,319.91
22	FALL (0.914 M)	9.000	₹ 21,760.22
23	FALL (1.828 M)	9.235	₹ 18,714.38
24	FALL (0.610 M)	9.450	₹ 21,535.89
25	FALL (1.220 M)/ BRIDGE	9.700	₹ 56,674.44
26	FALL (0.610 M)	9.912	₹ 15,142.42
27	FALL (1.220 M)	10.060	₹ 60,233.00
28	FALL (0.610 M)	10.350	₹ 30,284.85
Total In Rs.			**₹ 12,19,997.33**
Total In Lakhs.			**₹ 12.20**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		3.000	₹ 15,63,055.65
Total In Rs.			**₹ 15,63,055.65**
Total In Lakhs.			**₹ 15.63**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF SONDIH-III SUB DISTRIBUTARY									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL MARCH 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC FOR FALL / BRIDGE (Ch.-0.965 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	83.524	Cum	**2492.58**	208189.65			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**209724.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL (Ch.-1.465 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	25.831	Cum	**2492.58**	64385.07			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**65801.59**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL (Ch.-2.170 Km)									
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	29.260	Cum	**2492.58**	72934.08			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**72934.08**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FOR CULVERT (Ch.-2.260 Km)									
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.918	Sqm	**340.20**	3034.06	0.46	0.13	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.459	Sqm	**63.20**	281.82	0.01		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.130	Cum	**1075.00**	139.98			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.469	MT	**742.00**	348.01			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**3803.87**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.13	Cum	**584.64**	76.13	7.61		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Total					**7.61**		
		AOC FOR FOR FALL/BRIDGE (Ch.-2.400 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.328	Cum	**2492.58**	818.19			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.210	Cum	**6914.20**	1449.92	0.09	0.09	0.18
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	0.000	Sqm	**578.60**	0.00			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.090	Cum	**1075.00**	96.93			
		Coarse Aggregates (100 Km lead)	0.180	Cum	**1398.00**	252.12			
		Cement (30 km lead)	0.087	MT	**742.00**	64.18			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**2681.35**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.09	Cum	**584.64**	52.72	5.27		
		Coarse Aggregate	0.18	Cum	**944.26**	170.29	17.03		
		Total					**22.30**		
		AOC FOR FALL (Ch.-2.650 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.412	Cum	**6914.20**	71990.43	4.29	4.48	8.95
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	12.363	Sqm	**578.60**	7153.23			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.477	Cum	**1075.00**	4812.93			
		Coarse Aggregates (100 Km lead)	8.954	Cum	**1398.00**	12518.10			
		Cement (30 km lead)	4.295	MT	**742.00**	3186.84			
		TOTAL (In Rs.)				**100960.02**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.48	Cum	**584.64**	2617.52	261.75		
		Coarse Aggregate	8.95	Cum	**944.26**	8455.18	845.52		
		Total					**1107.27**		
		AOC FOR BRIDGE (Ch.-4.160 Km)							
1	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.04	Cum	**5021.30**	5197.05	0.12	0.33	
2	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	9.405	Sqm	**340.20**	3199.58	0.49	0.14	
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	9.405	Sqm	**63.20**	594.40	0.01		
4	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.377	Cum	**2492.58**	938.46			
5		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	0.469	Cum	**1075.00**	503.65			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.621	MT	**742.00**	460.70			
		Brick (15 km lead)	517.00	No.	**3.18**	1644.06			
		TOTAL (In Rs.)				**12537.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.47	Cum	**584.64**	273.91	27.39		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**27.39**		
		AOC FOR FOR FALL (Ch.-4.300 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	33.818	Cum	**2492.58**	84293.73			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**84293.73**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FALL (Ch.-4.550 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	19.595	Cum	**2492.58**	48843.16			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**48843.16**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FOR FALL/BRIDGE (Ch.-4.675 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.69	Cum	**5021.30**	3464.70	0.08	0.22	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	6.270	Sqm	**340.20**	2133.05	0.33	0.09	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	6.270	Sqm	**63.20**	396.26	0.01		
5	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.05	Cum	**8151.4**	33013.17	2.30	1.58	3.20
6	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	0.646	Cum	**2492.58**	1609.27			
7		**Carriage of materials**							

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		Coarse Sand (60 Km lead)	1.892	Cum	**1075.00**	2033.73			
		Coarse Aggregates (100 Km lead)	3.200	Cum	**1398.00**	4472.90			
		Cement (30 km lead)	2.710	MT	**742.00**	2011.03			
		Brick (15 km lead)	345.00	No.	**3.18**	1097.10			
		TOTAL (In Rs.)				**51765.79**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.89	Cum	**584.64**	1106.05	110.60		
		Coarse Aggregate	3.20	Cum	**944.26**	3021.16	302.12		
		Total					**412.72**		
		AOC FOR FALL (Ch.-4.850 Km)							
1	5.3.11	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	4.50	Cum	**8151.4**	36681.30	2.55	1.76	3.56
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	7.934	Cum	**6914.20**	54856.71	3.27	3.41	6.82
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.739	Sqm	**578.60**	5056.16			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.167	Cum	**1075.00**	5554.08			
		Coarse Aggregates (100 Km lead)	10.378	Cum	**1398.00**	14508.68			
		Cement (30 km lead)	5.824	MT	**742.00**	4321.59			
		TOTAL (In Rs.)				**120978.52**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.17	Cum	**584.64**	3020.59	302.06		
		Coarse Aggregate	10.38	Cum	**944.26**	9799.69	979.97		
		Total					**1282.03**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-5.100 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	26.756	Cum	**2492.58**	66690.57			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**66690.57**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR BRIDGE (Ch.-5.852 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL(Ch.-6.800 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FOR FALL (Ch.-7.300 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.440	Cum	**2492.58**	28514.62			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**28514.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FOR FALL (Ch.-7.660 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	9.960	Cum	**2492.58**	24826.10			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**24826.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FALL (Ch.-8.130 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	13.405	Cum	**2492.58**	33412.81			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**33412.81**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FALL (Ch.-8.375Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.057	Cum	**6914.20**	14220.27	0.85	0.88	1.77
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	3.765	Sqm	**578.60**	2178.45			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.884	Cum	**1075.00**	950.70			
		Coarse Aggregates (100 Km lead)	1.769	Cum	**1398.00**	2472.70			
		Cement (30 km lead)	0.848	MT	**742.00**	629.50			
		TOTAL (In Rs.)				**20451.62**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.88	Cum	**584.64**	517.04	51.70		
		Coarse Aggregate	1.77	Cum	**944.26**	1670.15	167.02		
		Total					**218.72**		
		AOC FOR FALL (Ch.-8.750 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	3.765	Cum	**6914.20**	26032.25	1.55	1.62	3.24
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	6.327	Sqm	**578.60**	3660.61			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.619	Cum	**1075.00**	1740.39			
		Coarse Aggregates (100 Km lead)	3.238	Cum	**1398.00**	4526.63			
		Cement (30 km lead)	1.553	MT	**742.00**	1152.39			
		TOTAL (In Rs.)				**37112.28**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.62	Cum	**584.64**	946.51	94.65		
		Coarse Aggregate	3.24	Cum	**944.26**	3057.45	305.75		
		Total					**400.40**		
		AOC FOR FOR CULVERT (Ch.-8.795 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	110.000	Sqm	**11.80**	1298.48			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	0.81	Cum	**5021.30**	4042.15	0.09	0.26	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	7.315	Sqm	**340.20**	2488.56	0.38	0.11	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	7.315	Sqm	**63.20**	462.31	0.01		
6		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.364	Cum	**1075.00**	391.73			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.483	MT	**742.00**	358.33			
		Brick (15 km lead)	402.00	No.	**3.18**	1278.36			
		TOTAL (In Rs.)				**10319.91**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.36	Cum	**584.64**	213.04	21.30		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**21.30**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FOR FALL (Ch.-9.000 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.730	Cum	**2492.58**	21760.22			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21760.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FALL (Ch.-9.235 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.859	Cum	**6914.20**	12855.43	0.77	0.80	1.60
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	3.794	Sqm	**578.60**	2195.04			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.799	Cum	**1075.00**	859.45			
		Coarse Aggregates (100 Km lead)	1.599	Cum	**1398.00**	2235.38			
		Cement (30 km lead)	0.767	MT	**742.00**	569.08			
		TOTAL (In Rs.)				**18714.38**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.80	Cum	**584.64**	467.41	46.74		
		Coarse Aggregate	1.60	Cum	**944.26**	1509.85	150.99		
		Total					**197.73**		
		AOC FOR FOR FALL (Ch.-9.450 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	8.640	Cum	**2492.58**	21535.89			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**21535.89**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FALL /BRIDGE (Ch.-9.700 Km)							
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	5.717	Cum	**6914.20**	39529.83	2.36	2.46	4.92
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	10.159	Sqm	**578.60**	5878.28			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.458	Cum	**1075.00**	2642.77			
		Coarse Aggregates (100 Km lead)	4.917	Cum	**1398.00**	6873.67			
		Cement (30 km lead)	2.358	MT	**742.00**	1749.89			

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL MARCH 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		TOTAL (In Rs.)				**56674.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.46	Cum	**584.64**	1437.28	143.73		
		Coarse Aggregate	4.92	Cum	**944.26**	4642.73	464.27		
		Total					**608.00**		
		AOC FOR FOR FALL (Ch.-9.912 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	6.075	Cum	**2492.58**	15142.42			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**15142.42**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								
		AOC FOR FALL (Ch.-10.060 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	24.165	Cum	**2492.58**	60233.00			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**60233.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		AOC FOR FOR FALL (Ch.-10.350 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.150	Cum	**2492.58**	30284.85			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		Brick (15 km lead)	0.00	No.	**3.18**	0.00			
		TOTAL (In Rs.)				**30284.85**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
	New Fall has been Proposed Here								

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF SONDIH-III SUB DISTRIBUTARY								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL / BRIDGE (Ch.-0.965 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				130.00	Sqm
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Abutment wall	*2*	*5.50*	*0.50*	*2.50*	*13.75*	*Cum*
		Wing wall	*2*	*3.00*	*0.50*	*1.80*	*5.40*	*Cum*
		Slab	*1*	*5.50*	*0.40*	*4.88*	*10.73*	*Cum*
		Railing	*2*	*5.50*	*1.00*	*4.88*	*53.64*	*Cum*
		TOTAL					***83.52***	***Cum***
3		***New Fall/Bridge has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.465 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				120.00	Sqm
2	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Abutment D/S wall	*2*	*6.00*	*0.45*	*1.80*	*9.72*	*Cum*
		Wing wall	*2*	*2.50*	*0.45*	*1.80*	*4.05*	*Cum*
		Floor	*1*	*5.49*	*3.35*	*0.50*	*9.20*	*Cum*
		Crest	*1*	*3.35*	*0.70*	*1.22*	*2.86*	*Cum*
		TOTAL					***25.83***	***Cum***
3		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.170 Km)								
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		Abutment	*2*	*10.97*	*0.45*	*1.70*	*16.79*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*1.70*	*9.18*	*Cum*
		Crest	*1*	*2.13*	*0.70*	*1.22*	*1.82*	*Cum*
		U/S Floor	*1*	*3.00*	*0.70*	*0.70*	*1.47*	*Cum*
		TOTAL					***29.26***	***Cum***
2		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.260 Km)								
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
		Parapet Wall	2	2.13		2.09	*8.92*	*Sqm*
		TOTAL					**8.92**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	2.13		2.09	*4.46*	*Sqm*
		TOTAL					**4.46**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-2.400 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail (2Nos)	*3*	*2.00*	*0.18*	*0.20*	*0.21*	*Cum*
		Post	*2*	*0.28*	*0.25*	*0.86*	*0.12*	*Cum*
		TOTAL					***0.33***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	4	0.25	0.92	*0.92*	*Cum*
		TOTAL					**0.92**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.00		2.09	*8.36*	*Sqm*
		TOTAL					**8.36**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.00		2.09	*8.36*	*Sqm*
		TOTAL					**8.36**	***Sqm***
5	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Crest	1	0.40	2.62	0.20	*0.21*	*Cum*
		TOTAL					***0.21***	***Cum***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.650 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	8.00	2.13	0.61	*10.41*	*Cum*
		TOTAL					***10.41***	***Cum***
3	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	8.00		0.61	*9.76*	Sqm
			2		2.13	0.61	*2.60*	Sqm
		TOTAL					**12.36**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.160 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail (2Nos)	*2*	*2.00*	*0.18*	*0.20*	*0.14*	*Cum*
		Post	*4*	*0.28*	*0.25*	*0.86*	*0.24*	*Cum*
		TOTAL					***0.38***	***Cum***
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	4.5	0.25	0.92	*1.04*	*Cum*
		TOTAL					**1.04**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.50		2.09	*9.41*	*Sqm*
		TOTAL					**9.41**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.50		2.09	*9.41*	*Sqm*
		TOTAL					**9.41**	***Sqm***
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.300 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*9.14*	*0.45*	*2.00*	*16.46*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Wing wall	*4*	*3.00*	*0.45*	*2.00*	*10.80*	*Cum*
		Crest	*1*	*2.07*	*0.60*	*1.52*	*1.90*	*Cum*
		U/S Floor	*1*	*5.00*	*2.07*	*0.45*	*4.66*	*Cum*
		TOTAL					***33.82***	***Cum***
2		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.550 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.01*	*0.45*	*1.20*	*7.57*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*1.20*	*6.48*	*Cum*
		Crest	*1*	*1.98*	*0.60*	*0.91*	*1.09*	*Cum*
		U/S Floor	*1*	*5.00*	*1.98*	*0.45*	*4.46*	*Cum*
		TOTAL					***19.60***	***Cum***
2		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-4.675 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Hand Rail (2Nos)	*5*	*2.00*	*0.18*	*0.20*	*0.35*	*Cum*
		Post	*5*	*0.28*	*0.25*	*0.86*	*0.30*	*Cum*
		TOTAL					***0.65***	***Cum***
3	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royalty as per specification and direction of E/I.**						
		Parapet Wall	1	3	0.25	0.92	*0.69*	*Cum*
		TOTAL					**0.69**	**Cum**
4	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***
5	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		2.09	*6.27*	*Sqm*
		TOTAL					**6.27**	***Sqm***

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
6	**5.3.11**	**Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Slab	1	4.50	3	0.3	*4.05*	*Cum*
		TOTAL					**4.05**	**Cum**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.850 Km)								
1	**5.3.11**	**Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Slab	1	5.00	3	0.3	*4.50*	*Cum*
		TOTAL					**4.50**	**Cum**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	12.19	2.13	0.31	*7.93*	*Cum*
		TOTAL					***7.93***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	12.19		0.31	*7.44*	Sqm
			2		2.13	0.31	*1.30*	Sqm
		TOTAL					**8.74**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.100 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.62*	*0.45*	*1.80*	*12.34*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*1.80*	*9.72*	*Cum*
		Crest	*1*	*1.68*	*0.60*	*0.91*	*0.92*	*Cum*
		U/S Floor	*1*	*5.00*	*1.68*	*0.45*	*3.77*	*Cum*
		TOTAL					***26.76***	***Cum***
2		***New Fall has been Proposed Here***						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.852 Km)								
1		**Structure requires no repair work.**						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-6.800 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.300 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*8.00*	*0.45*	*1.50*	*10.80*	*Cum*
		Crest	*2*	*0.70*	*0.50*	*0.91*	*0.64*	*Cum*
		TOTAL					***11.44***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.660 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.00*	*0.45*	*1.20*	*7.56*	*Cum*
		Wing wall	*2*	*2.00*	*0.50*	*1.20*	*2.40*	*Cum*
		TOTAL					***9.96***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.130 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.00*	*0.45*	*1.20*	*7.56*	*Cum*
		Wing wall	*2*	*2.00*	*0.50*	*1.20*	*2.40*	*Cum*
		Floor	*1*	*4.00*	*1.40*	*0.50*	*2.80*	*Cum*
		Crest	*1*	*1.40*	*0.50*	*0.91*	*0.64*	*Cum*
		TOTAL					***13.40***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.375Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	2.00	1.37	0.31	*0.84*	*Cum*
		TOTAL					***0.84***	***Cum***
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	2.00		0.31	*1.22*	Sqm
			2		1.37	0.31	*0.84*	Sqm
		TOTAL					**2.06**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-8.750 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	9.00	1.37	0.31	*3.77*	*Cum*
		TOTAL					***3.77***	***Cum***
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	9.00		0.31	*5.49*	Sqm
			2		1.37	0.31	*0.84*	Sqm
		TOTAL					**6.33**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-8.795 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**110.00**	**Sqm**
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	1	3.5	0.25	0.92	*0.81*	*Cum*
		TOTAL					**0.81**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.50		2.09	*7.32*	*Sqm*
		TOTAL					**7.32**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.50		2.09	*7.32*	*Sqm*
		TOTAL					**7.32**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.000 Km)						
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*6.00*	*0.45*	*1.20*	*6.48*	*Cum*
		Wing wall	*2*	*2.50*	*0.45*	*1.00*	*2.25*	*Cum*
		TOTAL					***8.73***	***Cum***
		New Fall has been Proposed Here						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.235 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	5.00	1.22	0.31	*1.86*	*Cum*
		TOTAL					***1.86***	***Cum***
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	5.00		0.31	*3.05*	Sqm
			2		1.22	0.31	*0.74*	Sqm
		TOTAL					**3.79**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.450 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*4.50*	*0.45*	*1.50*	*6.08*	*Cum*
		Wing wall	*2*	*1.90*	*0.45*	*1.50*	*2.57*	*Cum*
		TOTAL					***8.64***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL /BRIDGE (Ch.-9.700 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	1.34	0.61	*5.72*	*Cum*
		TOTAL					***5.72***	***Cum***
2	**5.3.18**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.61	*8.53*	Sqm
			2		1.34	0.61	*1.63*	Sqm
		TOTAL					**10.16**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.912 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*3.50*	*0.45*	*1.30*	*4.10*	*Cum*
		Wing wall u/s	*2*	*2.20*	*0.45*	*1.00*	*1.98*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					***6.08***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-10.060 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.00*	*0.45*	*2.00*	*12.60*	*Cum*
		Wing wall	*4*	*2.50*	*0.45*	*2.00*	*9.00*	*Cum*
		Floor	*1*	*3.00*	*1.31*	*0.50*	*1.97*	*Cum*
		Crest	*1*	*1.31*	*0.50*	*0.91*	*0.60*	*Cum*
		TOTAL					***24.16***	***Cum***
		New Fall has been Proposed Here						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-10.350 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*6.00*	*0.45*	*1.50*	*8.10*	*Cum*
		Wing wall	*2*	*3.00*	*0.45*	*1.50*	*4.05*	*Cum*
		TOTAL					***12.15***	***Cum***
		New Fall has been Proposed Here						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	Item of Works	Qty.	Unit	Rate (As per RCD 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 3 no., Total Seigniorage charges					**22735.78**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 27 nos. outlet, Total Seigniorage charges					**29704.67**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	**WRD SOR 2025**
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					
		Unit: per Cum					

		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13

		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.184	

	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15%				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15%				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	

	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15%				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15%				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	

	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.147	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15%				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	

	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.41**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	

		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**

12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**

13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**

15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					

	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	

						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9

		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					

		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	**26000.00**	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	**75.00**	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	**60000.00**	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**

17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	SI-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	SI-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					

		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**

20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	

		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	
		Sand	0.034	cum	584.64	19.88	
		Jute	4	Kg	20.89	83.56	
		Total				384.44	
		Labour					
		Head Mason	1.50	nos	569.00	853.50	
		Unskilled Mazdoor	7.00	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	
	5.6.2.4	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			

		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	

						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	

		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	

		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.41**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67

Aurangabad Division – Mahuwan Sub Dy.
(Total Cost – Rs. 2.73 Crores)

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST (MAHAUWAN SUB DY.)								
S. No.	**Items**	**Qty.**	**Unit**	**Rate**	**Seigniorage Charges**	**Amount (Rs.) including Seigniorage**	**Reference for Rate**	**Page No.**
1	Earthwork							
	MAHAUWAN SUB DY.	1	Job	12119482.13	0.00	₹ 1,21,19,482.13	AOC Earthwork Mahuwan Sub Dy.	9
2	Falls							
	MAHAUWAN SUB DY.							
	0.610 m Fall at Ch. 0.900 Km	1	No.	1178306.55	10343.84	₹ 11,88,650.39	Fall (AOC) Mahuwan Sub dy	13
	0.914 m Fall at Ch. 2.00 Km	1	No.	732163.94	6336.94	₹ 7,38,500.88		14
	0.914 m Fall at Ch. 2.75 Km	1	No.	737020.85	6365.48	₹ 7,43,386.33		15
	0.762 m Fall at Ch. 3.00 Km	1	No.	566766.28	4859.38	₹ 5,71,625.66		17
	1.22 m Fall at Ch. 4.30 Km	1	No.	1174718.06	10246.79	₹ 11,84,964.85		18
	1.220 m Fall at Ch. 4.65 Km	1	No.	668071.08	5684.33	₹ 6,73,755.41		19
	1.220 m Fall at Ch. 5.025 Km	1	No.	652843.45	5518.53	₹ 6,58,361.99		21
	0.610 m Fall at Ch. 5.928 Km	1	No.	353067.67	2861.46	₹ 3,55,929.12		22
	0.914 m Fall at Ch. 6.185 Km	1	No.	389342.32	3162.33	₹ 3,92,504.65		23
	0.610 m Fall at Ch.6.436 Km	1	No.	356876.77	2895.42	₹ 3,59,772.20		25
	0.610 m Fall at Ch. 6.808 Km	1	No.	356062.67	2894.81	₹ 3,58,957.48		26
3	*Cross Drainage Works*							
	At Km 5.250	1	No.	1959005.15	16502.46	₹ 19,75,507.61	C.D. Main canals-AOC	60
4	*Pipe Culvert*							
	MAHAUWAN SUB DY.							
	At Km 6.000	1	No.	545454.37	4553.45	₹ 5,50,007.82	Pipe Culvert AOC	65
	At Km 6.740	1	No.	543469.46	4555.27	₹ 5,48,024.73		67
5	*Repair of Structures*							
	MAHAUWAN SUB DY.	9	No.	958309.8837	7691.29	₹ 9,66,001.18	Abstract (Repair St.) Mahuwan Sub dy.	76
	APPROACH ROAD	2	No.	521018.55	7578.59	₹ 10,57,194.29	Approach Road AOC	88
6	Outlets							
	MAHAUWAN SUB DY.	22	No.	127744.47	1100.17	₹ 28,34,582.09	Outlet-AOC	92
7	Kilometer Stone	8	No.	3853.40	0.00	₹ 30,827.20	Rates '!F61	124
	TOTAL (In Rs.)					**₹ 2,73,08,036.00**		
	TOTAL (In Lacs)					**273.08**		

	Carriage of Material Abstract		
1	Steel & Cement (30 Km)	M.T.	**742.00**
2	RCC Hume Pipe (30 Km)	Per Meter	
	150 mm dia	Per Meter	**82.00**
	600 mm dia	Per Meter	**919.00**
	1000 mm dia	Per Meter	**1470.00**
	1200 mm dia	Per Meter	**1838.00**
3	Bricks (15 Km)	Per 1000 no	**3.18**
4	Boulder (60 Km)	Cumecs	**1159.0**
5	Coarse Sand (60 Km)	Cumecs	**1075.00**
6	Stone Chips/Aggregate (100 Km)	Cumecs	**1398.0**

CARRIAGE OF MATERIAL BY TIPPER OF 18 CUM CAPACITY INCLUDING OVER HEAD CHARGES & C.P																		
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 18 cum x Xa_a)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 18 cum capacity (Tipper capacity 18 Cum x H)			Lead in KM			Carriage of Cost =[(18Hsa.Ls+18Hua.Lu+18Hka.Lk)+18 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$18X_a$	H_{Sa}	H_{ua}	H_{ka}	$18H_{Sa}$	$18H_{Ua}$	$18H_{Ka}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Boulder (60 Kms)	M^3	18	0.80	14.4	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	50	10	0	16695	1159.00
2	Stone Aggregate (100 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	90	10	0	23247	1398.00
3	Sand (60 Kms)	M^3	18	0.924	16.63	6507.00	9.10	11.10	22.20	163.80	199.80	399.60	45	10	5	17874	1075.00

CARRIAGE OF MATERIAL BY TIPPER OF 25 TONNES CAPACITY INCLUDING OVER HEAD CHARGES & C.P																	
Sr No	Name Of Materials	Unit	Gross Tipper Capacity Per Trip	(For Void) Multiplying Factor	Net Tipper capacity (Payable Quantity) Per Trip	Cost of Loading,Unloading & Stacking Per Trip of Tipper (Tipperr capacity 25 t x X_b)	Cost of Haulage Per cum			Cost of Haulage Per Tipper of 8 tonne capacity (Tipper capacity 8x H)			Lead in KM			Carriage of Cost =[(25Hsa.Ls+25Hua.Lu+25Hka.Lk)+25 X_a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveted Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
						$25X_b$	H_{Sb}	Hub	H_{Kb}	$25H_{Sb}$	$25H_{Ub}$	$25H_{Kb}$	L_S	L_U	L_K		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	**Cement & Steel (30 Kms)**	M.T	25	1	25	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	20	10	0	18550	742.00
2	**Brick ($9^{3/4}$x$4^{3/4}$x$2^{3/4}$) (15 Kms)**	Per % 0	5000	1	5000	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	10	5	0	15900	3180.00
3	**R.C.C hume, A.C. pipe (30 Km)**																
a	**150 mm dia**	mtr	225	1	225	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	82.00
b	**500 mm & 600 mm dia**	mtr	20	1	20	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	919.00
c	**900mm & 1000 mm dia**	mtr	12.5	1	12.5	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1470.00
d	**1100 & 1200 m dia**	mtr	10	1	10	13250.00	6.60	8.00	16.00	165.00	200.00	400.00	25	5	0	18375	1838.00

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND CONCRETE MIX RATIO TABLE						
Sl. No.	Mixes	Unit by Volume (Cum)	Crushed Aggregate			
			Cement (bags of 50 kg)	Sand (Cum)	Coarse Aggregate (Cum)	Boulder (Cum)
1	M -10 (1:3:6)	1.00	4.49	0.47	0.94	
2	M -15 (1:2:4)	1.00	6.48	0.45	0.90	
3	M -20 (1:1.5:3)	1.00	8.25	0.43	0.86	
4	M -25 (1:1:2)	1.00	11.34	0.39	0.79	
5	M-30 (1:0.75:1.5)	1.00	13.96	0.36	0.73	
6	RR Masonary (1:4)	1.00	2.880	0.40		1.00
7	Brick Work (1:4)	1.00	2.304	0.320		
8	Cement Plaster (1:4)	1.00	1.037	0.015		
9	Cement Punning	1.00	0.0015			

DETAIL QUANTITIES OF EARTHWORK
MAHUWAN SUB DY (0.000 TO 5.250 KM)

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.000	0.000	0.000	6.248	3.124	312.400
200	100	2.510	1.255	125.500	4.298	5.273	527.300
300	100	0.268	1.389	138.900	2.735	3.517	351.650
400	100	0.114	0.191	19.100	4.201	3.468	346.800
500	100	0.940	0.527	52.700	3.236	3.719	371.850
600	100	0.546	0.743	74.300	3.626	3.431	343.100
700	100	0.000	0.273	27.300	9.853	6.740	673.950
800	100	0.000	0.000	0.000	4.056	6.955	695.450
900	100	2.083	1.042	104.150	0.380	2.218	221.800
1000	100	0.281	1.182	118.200	2.133	1.257	125.650
1100	100	0.000	0.141	14.050	4.608	3.371	337.050
1200	100	0.492	0.246	24.600	5.542	5.075	507.500
1300	100	0.083	0.288	28.750	6.087	5.815	581.450
1400	100	0.000	0.042	4.150	7.472	6.780	677.950
1500	100	0.058	0.029	2.900	7.276	7.374	737.400
1600	100	0.000	0.029	2.900	10.159	8.718	871.750
1700	100	1.510	0.755	75.500	2.853	6.506	650.600
1800	100	0.717	1.114	111.350	4.385	3.619	361.900
1900	100	0.576	0.647	64.650	5.638	5.012	501.150
2000	100	1.111	0.844	84.350	4.316	4.977	497.700
2100	100	1.385	1.248	124.800	1.556	2.936	293.600
2200	100	0.551	0.968	96.800	2.094	1.825	182.500
2300	100	0.274	0.413	41.250	4.244	3.169	316.900
2400	100	0.310	0.292	29.200	8.113	6.179	617.850
2500	100	3.734	2.022	202.200	0.980	4.547	454.650
2600	100	0.744	2.239	223.900	4.537	2.759	275.850
2700	100	0.361	0.553	55.250	6.121	5.329	532.900
2800	100	1.809	1.085	108.500	4.383	5.252	525.200
2900	100	0.820	1.315	131.450	5.936	5.160	515.950
3000	100	1.478	1.149	114.900	5.359	5.648	564.750
3100	100	0.570	1.024	102.400	7.069	6.214	621.400
3200	100	0.000	0.285	28.500	13.381	10.225	1022.500
3300	100	0.206	0.103	10.300	7.751	10.566	1056.600
3400	100	0.208	0.207	20.700	5.092	6.422	642.150
3500	100	0.846	0.527	52.700	7.612	6.352	635.200
3600	100	1.095	0.971	97.050	3.953	5.783	578.250
3700	100	0.046	0.571	57.050	3.689	3.821	382.100
3800	100	0.000	0.023	2.300	4.167	3.928	392.800
3900	100	3.943	1.972	197.150	2.257	3.212	321.200
4000	100	0.719	2.331	233.100	3.810	3.034	303.350
4100	100	0.237	0.478	47.800	7.724	5.767	576.700
4200	100	0.000	0.119	11.850	7.747	7.736	773.550
4300	100	1.110	0.555	55.500	2.773	5.260	526.000

		Earthwork in Cutting			Earthwork in filling		
Chainge	Length	Area of Cutting	Average area of Cutting	Earth work in Cutting	Area of Filling	Average area of Filling	Earth work in Filling
m	m	sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	0.033	0.572	57.150	3.400	3.087	308.650
4500	100	0.000	0.017	1.650	2.284	2.842	284.200
4600	100	0.000	0.000	0.000	9.386	5.835	583.500
4700	100	0.952	0.476	47.600	2.882	6.134	613.400
4800	100	0.733	0.843	84.250	2.070	2.476	247.600
4900	100	0.302	0.518	51.750	2.119	2.095	209.450
5000	100	0.192	0.247	24.700	2.158	2.139	213.850
5100	100	1.917	1.055	105.450	1.938	2.048	204.800
5200	100	0.000	0.959	95.850	8.328	5.133	513.300
5250	50	0.000	0.000	0.000	24.262	16.295	814.750
Total				**3586.400**			**25799.850**
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							**3586.400**
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							**25799.850**
NET QUANTITY OF EARTHWORK IN FILLING							**22213.45**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
MAHAUWAN SUB DY. (0.000 TO 7.180 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Quantity**	
0.00 - 1.067	1067	3.46	3691.82	Sqm
1.067 - 2.000	933	3.01	2808.33	Sqm
2.000 - 2.896	896	2.79	2499.84	Sqm
2.896 - 4.115	1219	2.51	3059.69	Sqm
4.115 - 5.250	1135	2.18	2474.30	Sqm
5.250 - 5.600	350	1.76	616.00	Sqm
5.600 - 5.900	300	1.43	429.00	Sqm
5.900 -7.180	1280	1.16	1484.80	Sqm
	TOTAL		**17063.78**	**Sqm**

LIP CUTTING QUANTITY					
Reaches (km)	**Length (m)**	**Perimeter (m)**	**Thickness (m)**	**Quantity**	
0.00 - 1.067	1067	3.460	0.15	553.77	Cum
1.067 - 2.000	933	3.010	0.15	421.25	Cum
2.000 - 2.896	896	2.790	0.15	374.98	Cum
2.896 - 4.115	1219	2.510	0.15	458.95	Cum
4.115 - 5.250	1135	2.180	0.15	371.15	Cum
5.250 - 5.600	350	1.760	0.15	92.40	Cum
5.600 - 5.900	300	1.430	0.15	64.35	Cum
5.900 -7.180	1280	1.160	0.15	222.72	Cum
	TOTAL			**2559.57**	**Cum**

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR MAHAUWAN SUB DY.						
Sl. No.	**Reference Clause no.**	**Particular**	**Quantity**	**Unit**	**Rate (in Rs.)**	**Amount in Rs.**
1	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	17063.78	Sqm	**11.80**	201427.5128
2	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.				
		100% of Total Cutting for ordinary soil	3586.40	Cum	**156.50**	561271.6
3	**5.1.22**	*Extra for wet earth all complete as per specifications and direction of E/I.*	1434.56	Cum	**17.22**	24699.55706
4	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	22213.45	Cum	**165.12**	3667795.13
5	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)				
A.	**5.1.46.1**	Lead Beyond 150 m but upto 500 m (30 % of net filling)	6664.04	Cum	**174.89**	1165473.08
B.	**5.1.46.2**	Lead Beyond 500 m but upto 1 km (25% of net filling)	5553.36	Cum	**217.92**	1210188.76
C.	**5.1.46.4**	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	9996.05	Cum	**319.14**	3190140.19
6	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.				
			2559.57	Cum	**196.10**	501931.09

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
7	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	25799.85	Cum	**61.88**	1596555.21
TOTAL COST OF EARTHWORK (in Rs.)						**12119482.13**
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						**121.195**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND DETAILS OF QUANTITIES FOR EARTH WORK FOR MAHAUWAN SUB DY.				
S.No.	**Items**	**No.**	**Quantity**	**Unit**
1	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.			
	Separate sheet attached	1	***17063.78***	***Sqm***
2	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I. **(Total Excavation)** **Separate sheet attached.**			
a.	100% of Total Cutting for ordinary soil	1	3586.400	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1434.56	Cum
4	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.			
	Excavated earth to be used for filling	1	22213.450	Cum
5	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)			
a.	Lead Beyond 150 m but upto 500 m (30 % of net filling)	1	6664.04	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	5553.36	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	9996.05	Cum
6	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	1	2559.57	Cum

7	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.			
	Total quantity of filling	1	25799.85	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR MAHAUWAN SUB DY.								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.900 KM								
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	78.658	Cum	**195.20**	15354.12			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	16.78	Cum	**6381.70**	107078.06	5.44	7.55	15.10
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	68.30	Cum	**6914.20**	472247.37	28.17	29.37	58.74
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	11.03	Cum	**8151.40**	89940.75	6.26	4.30	8.72
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.12	MT	**73574.90**	155710.84			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	206.07	Sqm	**578.60**	119233.58			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	11.02	Sqm	**680.10**	7495.04			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.84	Cum	**694.61**	586.08			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.84	Cum	**1237.00**	1043.72			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.84	Cum	**1377.70**	1162.43			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.84	Cum	**516.50**	435.80			0.84
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.64	Sqm	**63.20**	419.72			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	8.58	Cum	**149.30**	1281.64			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.223	Cum	**1075.00**	44314.89			
	Coarse Aggregates (100 Km lead)	83.400	Cum	**1398.00**	116593.76			
	Cement (30 km lead)	39.867	MT	**742.00**	29581.11			
	Boulder (60 Km lead)	0.84	Cum	**1159.00**	977.91			
	Brick (15 km lead)	661.00	No.	**3.18**	2101.98			
	Steel (30 Km lead)	2.12	MT	**742.00**	1570.34			
	TOTAL (In Rs.)				**1178306.55**			
	TOTAL (In Rs.)				**1178306.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.22	Cum	**584.64**	24100.71	2410.07		
	Coarse Aggregate	83.40	Cum	**944.26**	78751.66	7875.17		
	Boulders	0.84	Cum	**694.61**	586.08	58.61		
	Total					10343.84		
	For 1 nos. fall, Total Seigniorage charges					**10343.84**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.000 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	69.061	Cum	**195.20**	13480.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.55	Cum	**6381.70**	67336.85	3.42	4.75	9.50
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.16	Cum	**6914.20**	326090.41	19.45	20.28	40.56
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.65	Cum	**8151.40**	5316.71	0.37	0.25	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.11	MT	**73574.90**	81717.80			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	167.00	Sqm	**578.60**	96626.18			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.51	Cum	**694.61**	354.25			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.51	Cum	**1237.00**	630.87			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.51	Cum	**1377.70**	702.63			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.51	Cum	**516.50**	263.42			0.51
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.00	Sqm	**63.20**	631.99			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	18.82	Cum	**149.30**	2809.60			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.282	Cum	**1075.00**	27178.60			
	Coarse Aggregates (100 Km lead)	51.081	Cum	**1398.00**	71411.73			
	Cement (30 km lead)	23.243	MT	**742.00**	17246.32			
	Boulder (60 Km lead)	0.51	Cum	**1159.00**	591.09			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	1.11	MT	**742.00**	824.12			
	TOTAL (In Rs.)				**732163.94**			
	TOTAL (In Rs.)				**732163.94**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.28	Cum	**584.64**	14781.11	1478.11		
	Coarse Aggregate	51.08	Cum	**944.26**	48234.08	4823.41		
	Boulders	0.51	Cum	**694.61**	354.25	35.43		
	Total					6336.94		
	For 1 nos. fall, Total Seigniorage charges					**6336.94**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.750 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	66.744	Cum	**195.20**	13028.48			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	10.19	Cum	**6381.70**	65007.59	3.30	4.58	9.17
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	47.82	Cum	**6914.20**	330640.35	19.73	20.56	41.13
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.64	Cum	**8151.40**	5247.38	0.37	0.25	0.51
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.13	MT	**73574.90**	82858.01			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	169.46	Sqm	**578.60**	98048.91			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.93	Sqm	**680.10**	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.51	Cum	**694.61**	354.25			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.51	Cum	**1237.00**	630.87			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.51	Cum	**1377.70**	702.63			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.51	Cum	**516.50**	263.42			0.51
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.83	Sqm	**63.20**	621.24			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	19.07	Cum	**149.30**	2847.03			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	25.398	Cum	**1075.00**	27302.65			
	Coarse Aggregates (100 Km lead)	51.312	Cum	**1398.00**	71734.28			
	Cement (30 km lead)	23.391	MT	**742.00**	17356.41			
	Boulder (60 Km lead)	0.51	Cum	**1159.00**	591.09			
	Brick (15 km lead)	535.00	No.	**3.18**	1701.30			
	Steel (30 Km lead)	1.13	MT	**742.00**	835.62			
	TOTAL (In Rs.)				**737020.85**			
	TOTAL (In Rs.)				**737020.85**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	25.40	Cum	**584.64**	14848.58	1484.86		
	Coarse Aggregate	51.31	Cum	**944.26**	48451.94	4845.19		
	Boulders	0.51	Cum	**694.61**	354.25	35.43		
	Total					6365.48		
	For 1 nos. fall, Total Seigniorage charges					**6365.48**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 3.000 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	44.755	Cum	**195.20**	8736.27			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	9.10	Cum	**6381.70**	58066.09	2.95	4.09	8.19
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	34.97	Cum	**6914.20**	241817.40	14.43	15.04	30.08
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.58	Cum	**8151.40**	4737.39	0.33	0.23	0.46
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.82	MT	**73574.90**	60599.10			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	139.61	Sqm	**578.60**	80778.63			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	8.42	Sqm	**680.10**	5729.16			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.43	Cum	**694.61**	300.07			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.43	Cum	**1237.00**	534.38			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.43	Cum	**1377.70**	595.17			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.43	Cum	**516.50**	223.13			0.43
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.05	Sqm	**63.20**	571.93			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.99	Cum	**149.30**	1491.32			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	19.360	Cum	**1075.00**	20811.97			
	Coarse Aggregates (100 Km lead)	39.158	Cum	**1398.00**	54742.53			
	Cement (30 km lead)	17.704	MT	**742.00**	13136.62			
	Boulder (60 Km lead)	0.43	Cum	**1159.00**	500.69			
	Brick (15 km lead)	505.00	No.	**3.18**	1605.90			
	Steel (30 Km lead)	0.82	MT	**742.00**	611.14			
	TOTAL (In Rs.)				**566766.28**			
	TOTAL (In Rs.)				**566766.28**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	19.36	Cum	**584.64**	11318.61	1131.86		
	Coarse Aggregate	39.16	Cum	**944.26**	36975.10	3697.51		
	Boulders	0.43	Cum	**694.61**	300.07	30.01		
	Total					4859.38		
	For 1 nos. fall, Total Seigniorage charges					**4859.38**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.300 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	97.186	Cum	**195.20**	18970.74			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	14.86	Cum	**6381.70**	94813.85	4.81	6.69	13.37
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	71.54	Cum	**6914.20**	494654.96	29.51	30.76	61.53
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	9.66	Cum	**8151.40**	78743.75	5.48	3.77	7.63
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	2.08	MT	**73574.90**	152955.06			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	212.55	Sqm	**578.60**	122980.05			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.83	Sqm	**680.10**	3966.34			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.27	Cum	**694.61**	187.54			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.27	Cum	**1237.00**	333.99			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.27	Cum	**1377.70**	371.98			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.27	Cum	**516.50**	139.46			0.27
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.72	Sqm	**63.20**	424.89			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	16.34	Cum	**149.30**	2439.26			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	41.216	Cum	**1075.00**	44307.40			
	Coarse Aggregates (100 Km lead)	82.799	Cum	**1398.00**	115752.97			
	Cement (30 km lead)	39.802	MT	**742.00**	29533.12			
	Boulder (60 Km lead)	0.27	Cum	**1159.00**	312.93			
	Brick (15 km lead)	349.00	No.	**3.18**	1109.82			
	Steel (30 Km lead)	2.08	MT	**742.00**	1542.55			
	TOTAL (In Rs.)				**1174718.06**			
	TOTAL (In Rs.)				**1174718.06**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	41.22	Cum	**584.64**	24096.63	2409.66		
	Coarse Aggregate	82.80	Cum	**944.26**	78183.76	7818.38		
	Boulders	0.27	Cum	**694.61**	187.54	18.75		
	Total					10246.79		
	For 1 nos. fall, Total Seigniorage charges					**10246.79**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.650 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	63.529	Cum	**195.20**	12400.89			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.89	Cum	**6381.70**	56744.03	2.88	4.00	8.00
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	43.39	Cum	**6914.20**	299994.24	17.90	18.66	37.31
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.66	Cum	**8151.40**	5388.32	0.37	0.26	0.52
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.02	MT	**73574.90**	75178.14			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	160.28	Sqm	**578.60**	92740.04			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.83	Sqm	**680.10**	3964.30			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.10	Cum	**694.61**	68.77			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.10	Cum	**1237.00**	122.46			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.10	Cum	**1377.70**	136.39			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.10	Cum	**516.50**	51.13			0.10
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.60	Sqm	**63.20**	669.71			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	19.43	Cum	**149.30**	2901.46			
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	22.916	Cum	**1075.00**	24634.65			
	Coarse Aggregates (100 Km lead)	45.938	Cum	**1398.00**	64220.65			
	Cement (30 km lead)	21.153	MT	**742.00**	15695.76			
	Boulder (60 Km lead)	0.10	Cum	**1159.00**	114.74			
	Brick (15 km lead)	349.00	No.	**3.18**	1109.82			
	Steel (30 Km lead)	1.02	MT	**742.00**	758.17			
	TOTAL (In Rs.)				**668071.08**			
	TOTAL (In Rs.)				**668071.08**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	22.92	Cum	**584.64**	13397.58	1339.76		
	Coarse Aggregate	45.94	Cum	**944.26**	43376.96	4337.70		
	Boulders	0.10	Cum	**694.61**	68.77	6.88		
	Total					5684.33		
	For 1 nos. fall, Total Seigniorage charges					**5684.33**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 5.025 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	73.135	Cum	**195.20**	14275.97			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	8.74	Cum	**6381.70**	55788.35	2.83	3.93	7.87
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	42.00	Cum	**6914.20**	290370.52	17.32	18.06	36.12
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.65	Cum	**8151.40**	5295.15	0.37	0.25	0.51
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.99	MT	**73574.90**	72766.45			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	157.81	Sqm	**578.60**	91309.08			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.83	Sqm	**680.10**	3964.30			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.10	Cum	**694.61**	68.77			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.10	Cum	**1237.00**	122.46			
10	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	0.10	Cum	**1377.70**	136.39			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	0.10	Cum	**516.50**	51.13			0.10
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.37	Sqm	**63.20**	655.26			
13	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
14	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	22.87	Cum	**149.30**	3414.68			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
15	**Carriage of materials**							
	Coarse Sand (60 Km lead)	22.246	Cum	**1075.00**	23914.02			
	Coarse Aggregates (100 Km lead)	44.597	Cum	**1398.00**	62346.18			
	Cement (30 km lead)	20.524	MT	**742.00**	15228.93			
	Boulder (60 Km lead)	0.10	Cum	**1159.00**	114.74			
	Brick (15 km lead)	349.00	No.	**3.18**	1109.82			
	Steel (30 Km lead)	0.99	MT	**742.00**	733.85			
	TOTAL (In Rs.)				**652843.45**			
	TOTAL (In Rs.)				**652843.45**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	22.25	Cum	**584.64**	13005.67	1300.57		
	Coarse Aggregate	44.60	Cum	**944.26**	42110.88	4211.09		
	Boulders	0.10	Cum	**694.61**	68.77	6.88		
	Total					5518.53		
	For 1 nos. fall, Total Seigniorage charges					**5518.53**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 5.928 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	35.765	Cum	**195.20**	6981.25			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.49	Cum	**6381.70**	35016.53	1.78	2.47	4.94
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	20.75	Cum	**6914.20**	143496.72	8.56	8.92	17.85
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.45	Cum	**8151.40**	3657.61	0.25	0.17	0.35
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.49	MT	**73574.90**	35960.08			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	98.58	Sqm	**578.60**	57038.32			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.13	Sqm	**680.10**	3488.91			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.85	Sqm	**63.20**	495.88			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.85	Cum	**149.30**	1768.57			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.568	Cum	**1075.00**	12435.97			
	Coarse Aggregates (100 Km lead)	23.141	Cum	**1398.00**	32351.35			
	Cement (30 km lead)	10.593	MT	**742.00**	7860.16			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	307.00	No.	**3.18**	976.26			
	Steel (30 Km lead)	0.49	MT	**742.00**	362.66			
	TOTAL (In Rs.)				**353067.67**			
	TOTAL (In Rs.)				**353067.67**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.57	Cum	**584.64**	6763.31	676.33		
	Coarse Aggregate	23.14	Cum	**944.26**	21851.28	2185.13		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2861.46		
	For 1 nos. fall, Total Seigniorage charges					**2861.46**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 6.185 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	44.023	Cum	**195.20**	8593.22			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.64	Cum	**6381.70**	35966.85	1.83	2.54	5.07
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	23.44	Cum	**6914.20**	162068.30	9.67	10.08	20.16
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.43	Cum	**8151.40**	3544.51	0.25	0.17	0.34
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.55	MT	**73574.90**	40614.09			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	106.48	Sqm	**578.60**	61607.23			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.13	Sqm	**680.10**	3488.91			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.85	Sqm	**63.20**	496.16			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	14.68	Cum	**149.30**	2191.03			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	12.785	Cum	**1075.00**	13743.79			
	Coarse Aggregates (100 Km lead)	25.574	Cum	**1398.00**	35752.72			
	Cement (30 km lead)	11.742	MT	**742.00**	8712.24			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	307.00	No.	**3.18**	976.26			
	Steel (30 Km lead)	0.55	MT	**742.00**	409.59			
	TOTAL (In Rs.)				**389342.32**			
	TOTAL (In Rs.)				**389342.32**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	12.78	Cum	**584.64**	7474.58	747.46		
	Coarse Aggregate	25.57	Cum	**944.26**	24148.69	2414.87		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					3162.33		
	For 1 nos. fall, Total Seigniorage charges					**3162.33**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.436 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	35.927	Cum	**195.20**	7013.02			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.53	Cum	**6381.70**	35316.81	1.79	2.49	4.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	21.03	Cum	**6914.20**	145409.79	8.68	9.04	18.09
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.44	Cum	**8151.40**	3599.17	0.25	0.17	0.35
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.50	MT	**73574.90**	36439.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	99.60	Sqm	**578.60**	57628.12			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.13	Sqm	**680.10**	3488.91			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.98	Sqm	**63.20**	504.64			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	11.28	Cum	**149.30**	1683.61			

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.706	Cum	**1075.00**	12583.62			
	Coarse Aggregates (100 Km lead)	23.416	Cum	**1398.00**	32735.29			
	Cement (30 km lead)	10.719	MT	**742.00**	7953.14			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	307.00	No.	**3.18**	976.26			
	Steel (30 Km lead)	0.50	MT	**742.00**	367.49			
	TOTAL (In Rs.)				**356876.77**			
	TOTAL (In Rs.)				**356876.77**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.71	Cum	**584.64**	6843.62	684.36		
	Coarse Aggregate	23.42	Cum	**944.26**	22110.61	2211.06		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2895.42		
	For 1 nos. fall, Total Seigniorage charges					**2895.42**		

S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.808 KM							
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	33.134	Cum	**195.20**	6467.80			
2	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	5.53	Cum	**6381.70**	35281.42	1.79	2.49	4.98
3	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	21.03	Cum	**6914.20**	145409.79	8.68	9.04	18.09
4	Providing & laying P.C.C. or **R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	0.44	Cum	**8151.40**	3599.17	0.25	0.17	0.35
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.50	MT	**73574.90**	36439.49			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	99.60	Sqm	**578.60**	57628.12			
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	5.13	Sqm	**680.10**	3488.91			
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.98	Sqm	**63.20**	504.64			
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	2.00	No.	**5588.70**	11177.40			
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	9.79	Cum	**149.30**	1461.11			
11	**Carriage of materials**							
	Coarse Sand (60 Km lead)	11.703	Cum	**1075.00**	12580.94			
	Coarse Aggregates (100 Km lead)	23.411	Cum	**1398.00**	32728.32			
	Cement (30 km lead)	10.717	MT	**742.00**	7951.81			
	Boulder (60 Km lead)	0.00	Cum	**1159.00**	0.00			
	Brick (15 km lead)	307.00	No.	**3.18**	976.26			
	Steel (30 Km lead)	0.50	MT	**742.00**	367.49			
	TOTAL (In Rs.)				**356062.67**			
	TOTAL (In Rs.)				**356062.67**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	Coarse Sand	11.70	Cum	**584.64**	6842.16	684.22		
	Coarse Aggregate	23.41	Cum	**944.26**	22105.89	2210.59		
	Boulders	0.00	Cum	**694.61**	0.00	0.00		
	Total					2894.81		
	For 1 nos. fall, Total Seigniorage charges					**2894.81**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MAHAUWAN SUB DY.							
S.No.	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.900 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.90*	*1.668*	*0.685*	*2.051*	*Cum*
	Section 2-2	*2*	*2.90*	*1.822*	*0.685*	*7.239*	*Cum*
	Section 3-3	*2*	*4.10*	*1.702*	*0.485*	*6.769*	*Cum*
	below bridge	*2*	*6.50*	*1.702*	*1.550*	*34.295*	*Cum*
	Section 5-5	*2*	*2.88*	*1.818*	*0.685*	*7.181*	*Cum*
	Section 6-6	*2*	*0.83*	*1.182*	*0.485*	*0.949*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.850*	*0.850*	*0.983*	*Cum*
	U/S Floor	*1*	*2.00*	*1.850*	*0.685*	*2.535*	*Cum*
	D/S Floor	*1*	*2.75*	*1.850*	*0.850*	*4.324*	*Cum*
		1	*4.40*	*1.850*	*0.650*	*5.291*	*Cum*
	D/S Key Floor	*1*	*0.64*	*1.850*	*0.900*	*1.061*	*Cum*
	Toe Wall D/S Portion	*1*	*6.61*	*0.750*	*0.900*	*4.462*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*2.25*	*0.900*	*0.750*	*1.519*	*Cum*
						78.66	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
		1	*0.78*	*1.850*	*0.150*	*0.22*	*Cum*
		1	*4.13*	*1.850*	*0.150*	*1.15*	*Cum*
		1	*0.28*	*1.850*	*0.150*	*0.08*	*Cum*
		1	*3.04*	*1.850*	*0.150*	*0.84*	*Cum*
		1	*0.78*	*1.850*	*0.150*	*0.22*	*Cum*
		1	*0.54*	*1.850*	*0.150*	*0.15*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.90*	*1.668*	*0.150*	*0.45*	*Cum*
	Section 2-2	*2*	*2.90*	*1.822*	*0.300*	*3.17*	*Cum*
	Section 3-3	*2*	*4.10*	*1.702*	*0.300*	*4.19*	*Cum*
	Section 5-5	*2*	*2.88*	*1.818*	*0.150*	*1.57*	*Cum*
	Section 6-6	*2*	*0.83*	*1.182*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*6.61*	*0.750*	*0.300*	*1.49*	*Cum*
	Toe Wall D/S Portion	*1*	*6.31*	*0.450*	*0.600*	*1.70*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*2.25*	*0.900*	*0.150*	*0.30*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.25*	*0.300*	*0.600*	*0.81*	*Cum*
	TOTAL					**16.78**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.82*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.82*	*0.909*	*1.530*	*2.28*	*Cum*
		2	*0.82*	*1.518*	*0.500*	*1.25*	*Cum*
	Section 2-2	*2*	*2.90*	*0.820*	*0.500*	*2.38*	*Cum*
		2	*2.90*	*1.096*	*0.920*	*5.85*	*Cum*
		2	*2.90*	*1.522*	*1.000*	*8.83*	*Cum*
	Section 3-3	*2*	*3.73*	*0.820*	*0.500*	*3.06*	*Cum*
		2	*3.73*	*1.036*	*0.720*	*5.57*	*Cum*
		2	*3.73*	*1.402*	*1.200*	*12.56*	*Cum*
	Section 5-5	*2*	*2.85*	*0.450*	*0.450*	*1.15*	*Cum*
		2	*2.85*	*0.909*	*1.530*	*7.92*	*Cum*
		2	*2.85*	*1.518*	*0.500*	*4.32*	*Cum*
	Section 6-6	*2*	*1.53*	*0.450*	*0.450*	*0.62*	*Cum*
		2	*1.53*	*0.666*	*0.720*	*1.47*	*Cum*
		2	*1.53*	*1.032*	*0.500*	*1.58*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*1.850*	*0.700*	*0.81*	*Cum*
		1	*4.75*	*1.850*	*0.500*	*4.39*	*Cum*
		1	*0.31*	*1.850*	*0.200*	*0.11*	*Cum*
		1	*0.20*	*1.850*	*0.400*	*0.15*	*Cum*
		1	*4.20*	*1.850*	*0.500*	*3.89*	*Cum*
		1	*0.64*	*1.850*	*0.750*	*0.88*	*Cum*
	Crest	*1*	*0.82*	*1.850*	*1.055*	*1.60*	*Cum*
	TOTAL					**68.30**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.850*	*0.150*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.38*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.38*	*0.450*	*0.050*	*0.17*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.65*	*5.500*	*0.328*	*4.78*	*Cum*
	Wearing coat	*1*	*2.65*	*4.500*	*0.070*	*0.83*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**11.03**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*3.11*		*1.578*	*152.1*	*Kg*
a2	*10*	*13*	*5.88*		*0.616*	*47.1*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*3.03*		*0.616*	*35.5*	*Kg*
a5	*10*	*9*	*5.80*		*0.616*	*32.2*	*Kg*
x1	*12*	*44*	*2.50*		*0.888*	*97.7*	*Kg*
x2	*16*	*44*	*1.32*		*1.578*	*91.3*	*Kg*
x3	*12*	*20*	*2.55*		*0.888*	*45.3*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**68.30**	**0.003**	**0.205**	**7850.0**	**1608.5**	**Kg**
	Total Reinforcement Steel (in kg)					*2116.4*	*Kg*
	Total Weight in Metric Tonne					**2.12**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.82*		*0.450*	*1.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.82*		*1.530*	*5.02*	*Sqm*
		4		*0.909*	*1.530*	*5.56*	*Sqm*
		4	*0.82*		*0.500*	*1.64*	*Sqm*
		4		*1.518*	*0.500*	*3.04*	*Sqm*
	Section 2-2	*4*	*2.90*		*0.500*	*5.80*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*2.90*		*0.920*	*10.67*	*Sqm*
		4		*1.096*	*0.920*	*4.03*	*Sqm*
		4	*2.90*		*1.000*	*11.60*	*Sqm*
		4		*1.522*	*1.000*	*6.09*	*Sqm*
	Section 3-3	*4*	*3.73*		*0.500*	*7.47*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.73*		*0.720*	*10.75*	*Sqm*
		4		*1.036*	*0.720*	*2.98*	*Sqm*
		4	*3.73*		*1.200*	*17.92*	*Sqm*
		4		*1.402*	*1.200*	*6.73*	*Sqm*
	Section 5-5	*4*	*2.85*		*0.450*	*5.13*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.85*		*1.530*	*17.44*	*Sqm*
		4		*0.909*	*1.530*	*5.56*	*Sqm*
		4	*2.85*		*0.500*	*5.70*	*Sqm*
		4		*1.518*	*0.500*	*3.04*	*Sqm*
	Section 6-6	*4*	*1.53*		*0.450*	*2.75*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.53*		*0.720*	*4.40*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*0.666*	*0.720*	*1.92*	*Sqm*
		4	*1.53*		*0.500*	*3.06*	*Sqm*
		4		*1.032*	*0.500*	*2.06*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.850*	*0.700*	*2.59*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*1.850*	*0.500*	*1.85*	*Sqm*
		2	*0.31*		*0.200*	*0.12*	*Sqm*
		2		*1.850*	*0.200*	*0.74*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.850*	*0.400*	*1.48*	*Sqm*
		2	*4.20*		*0.500*	*4.20*	*Sqm*
		2		*1.850*	*0.500*	*1.85*	*Sqm*
		2	*0.64*		*0.750*	*0.96*	*Sqm*
		2		*1.850*	*0.750*	*2.78*	*Sqm*
	Crest	*2*	*0.82*		*1.055*	*1.72*	*Sqm*
		2		*1.850*	*1.055*	*3.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.61*		*0.300*	*3.97*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*6.31*		*0.600*	*7.57*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.150*	*1.35*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.25*		*0.600*	*5.40*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**206.07**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*2.25*	*2.449*		*11.02*	*Sqm*
	TOTAL					**11.02**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.25*	*1.250*	*0.300*	**0.84**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.25*	*1.250*	*0.150*	**0.84**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.38*	*0.450*		*3.32*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.38*	*0.450*		*3.32*	*Sqm*
	TOTAL					**6.64**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.181		2.18	**Cum**
	Abutment						
	Section 1-1	2	*0.90*	*0.086*		*0.154*	*Cum*
	Section 2-2	2	*2.90*	*0.229*		*1.328*	*Cum*
	Section 3-3	2	*4.10*	*0.238*		*1.950*	*Cum*
	Section 5-5	2	*2.88*	*0.086*		*0.496*	*Cum*
	Section 6-6	2	*0.83*	*0.053*		*0.087*	*Cum*
	D/S protection	2					
	Toe wall	2	*6.61*	*0.150*	*0.600*	*1.983*	*Cum*
		2	*2.25*	0.150	*0.600*	*0.405*	*Cum*
	TOTAL					**8.58**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*1.809*	*1.645*	*6.841*	*Cum*
	Section 2-2	*2*	*3.00*	*1.230*	*1.645*	*12.140*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*1.445*	*7.057*	*Cum*
	Section 5-5	*2*	*3.16*	*1.959*	*1.595*	*19.729*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*1.445*	*3.497*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	U/S Floor	*1*	*2.50*	*1.450*	*1.645*	*5.963*	*Cum*
	D/S Floor	*1*	*3.00*	*1.450*	*0.850*	*3.698*	*Cum*
		1	*4.14*	*1.450*	*0.050*	*0.300*	*Cum*
		1	*2.50*	*1.450*	*0.650*	*2.356*	*Cum*
	D/S Key Floor	*1*	*0.66*	*1.450*	*1.000*	*0.961*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.900*	*3.949*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						69.06	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*0.38*	*1.450*	*0.150*	*0.08*	*Cum*
		1	*0.07*	*1.450*	*0.150*	*0.02*	*Cum*
		1	*4.40*	*1.450*	*0.150*	*0.96*	*Cum*
		1	*0.35*	*1.450*	*0.150*	*0.08*	*Cum*
		1	*1.06*	*1.450*	*0.150*	*0.23*	*Cum*
		1	*0.95*	*1.450*	*0.150*	*0.21*	*Cum*
		1	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.809*	*0.150*	*0.62*	*Cum*
	Section 2-2	*2*	*3.00*	*1.230*	*0.150*	*1.11*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*0.150*	*0.73*	*Cum*
	Section 5-5	*2*	*3.16*	*1.959*	*0.150*	*1.86*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*0.150*	*0.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.55*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.55**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.92*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.92*	*0.979*	*1.764*	*3.19*	*Cum*
		2	*0.92*	*1.659*	*0.550*	*1.69*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.690*	*0.800*	*3.31*	*Cum*
		2	*3.00*	*1.080*	*0.550*	*3.56*	*Cum*
	Section 3-3	*2*	*1.87*	*0.450*	*0.450*	*0.76*	*Cum*
		2	*1.87*	*0.630*	*0.600*	*1.41*	*Cum*
		2	*1.87*	*0.960*	*0.500*	*1.80*	*Cum*
	Section 5-5	*2*	*3.11*	*0.450*	*0.450*	*1.26*	*Cum*
		2	*3.11*	*0.979*	*1.764*	*10.75*	*Cum*
		2	*3.11*	*1.659*	*0.500*	*5.16*	*Cum*
	Section 6-6	*2*	*1.57*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.57*	*0.630*	*0.600*	*1.19*	*Cum*
		2	*1.57*	*0.960*	*0.500*	*1.51*	*Cum*
	Floor	*1*	*0.63*	*1.450*	*0.700*	*0.63*	*Cum*
		1	*5.50*	*1.450*	*0.500*	*3.99*	*Cum*
		1	*4.14*	*1.450*	*0.050*	*0.30*	*Cum*
		1	*0.28*	*1.450*	*0.250*	*0.10*	*Cum*
		1	*0.20*	*1.450*	*0.400*	*0.12*	*Cum*
		1	*2.30*	*1.450*	*0.500*	*1.67*	*Cum*
		1	*0.66*	*1.450*	*0.850*	*0.82*	*Cum*
	Crest	*1*	*0.91*	*1.450*	*1.304*	*1.72*	*Cum*
	TOTAL					**47.16**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.450*	*0.150*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.11*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.11*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.65**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**47.16**	**0.00**	**0.141**	**7850.0**	**1110.67**	**Kg**
	Total Weight in Metric Tonne					**1.11**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.92*		*0.450*	*1.66*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.92*		*1.764*	*6.52*	*Sqm*
		4		*0.979*	*1.764*	*6.91*	*Sqm*
		4	*0.92*		*0.550*	*2.03*	*Sqm*
		4		*1.659*	*0.550*	*3.65*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.800*	*9.60*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*3.00*		*0.550*	*6.60*	*Sqm*
		4		*1.080*	*0.550*	*2.38*	*Sqm*
	Section 3-3	*4*	*1.87*		*0.450*	*3.37*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.87*		*0.600*	*4.49*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.87*		*0.500*	*3.74*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Section 5-5	*4*	*3.11*		*0.450*	*5.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.11*		*1.764*	*21.97*	*Sqm*
		4		*0.979*	*1.764*	*6.91*	*Sqm*
		4	*3.11*		*0.500*	*6.23*	*Sqm*
		4		*1.659*	*0.500*	*3.32*	*Sqm*
	Section 6-6	*4*	*1.57*		*0.450*	*2.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.57*		*0.600*	*3.77*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.57*		*0.500*	*3.14*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.450*	*0.700*	*2.03*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*1.450*	*0.250*	*0.73*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.450*	*0.400*	*1.16*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.66*		*0.850*	*1.13*	*Sqm*
		2		*1.450*	*0.850*	*2.47*	*Sqm*
	Crest	*2*	*0.91*		*1.304*	*2.37*	*Sqm*
		2		*1.450*	*1.304*	*3.78*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.85*		*0.300*	*3.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.55*		*0.600*	*6.66*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**167.00**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*2.00*	*2.232*		*8.93*	*Sqm*
	TOTAL					**8.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.850*	*0.300*	**0.51**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.850*	*0.150*	**0.51**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.11*	*0.450*		*5.00*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.11*	*0.450*		*5.00*	*Sqm*
	TOTAL					**10.00**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.458		4.46	**Cum**
	Abutment						
	Section 1-1	2	*1.15*	*0.640*		*1.470*	*Cum*
	Section 2-2	2	*3.00*	*0.630*		*3.780*	*Cum*
	Section 3-3	2	*2.20*	*0.459*		*2.020*	*Cum*
	Section 5-5	2	*3.16*	*0.632*		*3.990*	*Cum*
	Section 6-6	2	*1.09*	*0.452*		*0.985*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.85*	*0.150*	*0.600*	*1.755*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**18.82**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 2.750 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.15*	*1.779*	*1.705*	*6.979*	*Cum*
	Section 2-2	*2*	*3.00*	*1.230*	*1.705*	*12.583*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*1.505*	*7.350*	*Cum*
	Section 5-5	*2*	*2.61*	*1.929*	*1.655*	*16.636*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*1.505*	*3.642*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.450*	*0.850*	*0.770*	*Cum*
	U/S Floor	*1*	*2.50*	*1.450*	*1.596*	*5.786*	*Cum*
	D/S Floor	*1*	*3.00*	*1.450*	*0.850*	*3.698*	*Cum*
		1	*4.14*	*1.450*	*0.050*	*0.300*	*Cum*
		1	*2.50*	*1.450*	*0.650*	*2.356*	*Cum*
	D/S Key Floor	*1*	*0.65*	*1.450*	*0.950*	*0.895*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.900*	*3.949*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						66.74	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
		1	*0.78*	*1.450*	*0.150*	*0.17*	*Cum*
		1	*0.38*	*1.450*	*0.150*	*0.08*	*Cum*
		1	*0.07*	*1.450*	*0.150*	*0.02*	*Cum*
		1	*4.40*	*1.450*	*0.150*	*0.96*	*Cum*
		1	*0.35*	*1.450*	*0.150*	*0.08*	*Cum*
		1	*1.09*	*1.450*	*0.150*	*0.24*	*Cum*
		1	*0.90*	*1.450*	*0.150*	*0.19*	*Cum*
		1	*0.54*	*1.450*	*0.150*	*0.12*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.15*	*1.779*	*0.150*	*0.61*	*Cum*
	Section 2-2	*2*	*3.00*	*1.230*	*0.150*	*1.11*	*Cum*
	Section 3-3	*2*	*2.20*	*1.110*	*0.150*	*0.73*	*Cum*
	Section 5-5	*2*	*2.61*	*1.929*	*0.150*	*1.51*	*Cum*
	Section 6-6	*2*	*1.09*	*1.110*	*0.150*	*0.36*	*Cum*
	Toe Wall D/S Portion	*1*	*5.85*	*0.750*	*0.300*	*1.32*	*Cum*
	Toe Wall D/S Portion	*1*	*5.55*	*0.450*	*0.600*	*1.50*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**10.19**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.93*	*0.450*	*0.450*	*0.37*	*Cum*
		2	*0.93*	*0.964*	*1.714*	*3.06*	*Cum*
		2	*0.93*	*1.629*	*0.550*	*1.66*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.690*	*0.800*	*3.31*	*Cum*
		2	*3.00*	*1.080*	*0.550*	*3.56*	*Cum*
	Section 3-3	*2*	*2.56*	*0.450*	*0.450*	*1.04*	*Cum*
		2	*2.56*	*0.630*	*0.600*	*1.94*	*Cum*
		2	*2.56*	*0.960*	*0.500*	*2.46*	*Cum*
	Section 5-5	*2*	*3.11*	*0.450*	*0.450*	*1.26*	*Cum*
		2	*3.11*	*0.964*	*1.714*	*10.29*	*Cum*
		2	*3.11*	*1.629*	*0.500*	*5.07*	*Cum*
	Section 6-6	*2*	*1.57*	*0.450*	*0.450*	*0.64*	*Cum*
		2	*1.57*	*0.630*	*0.600*	*1.19*	*Cum*
		2	*1.57*	*0.960*	*0.500*	*1.51*	*Cum*
	Floor	*1*	*0.63*	*1.450*	*0.700*	*0.63*	*Cum*
		1	*5.50*	*1.450*	*0.500*	*3.99*	*Cum*
		1	*4.14*	*1.450*	*0.050*	*0.30*	*Cum*
		1	*0.28*	*1.450*	*0.250*	*0.10*	*Cum*
		1	*0.20*	*1.450*	*0.400*	*0.12*	*Cum*
		1	*2.30*	*1.450*	*0.500*	*1.67*	*Cum*
		1	*0.65*	*1.450*	*0.800*	*0.75*	*Cum*
	Crest	*1*	*0.91*	*1.450*	*1.289*	*1.69*	*Cum*
	TOTAL					**47.82**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.70*	*1.450*	*0.150*	*0.15*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.92*	*0.450*	*0.050*	*0.25*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.92*	*0.450*	*0.050*	*0.25*	*Cum*
	TOTAL					**0.64**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**47.82**	**0.00**	**0.143**	**7850.0**	**1126.17**	**Kg**
	Total Weight in Metric Tonne					**1.13**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.93*		*0.450*	*1.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.93*		*1.714*	*6.35*	*Sqm*
		4		*0.964*	*1.714*	*6.61*	*Sqm*
		4	*0.93*		*0.550*	*2.04*	*Sqm*
		4		*1.629*	*0.550*	*3.58*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.800*	*9.60*	*Sqm*
		4		*0.690*	*0.800*	*2.21*	*Sqm*
		4	*3.00*		*0.550*	*6.60*	*Sqm*
		4		*1.080*	*0.550*	*2.38*	*Sqm*
	Section 3-3	*4*	*2.56*		*0.450*	*4.61*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.56*		*0.600*	*6.15*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*2.56*		*0.500*	*5.12*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Section 5-5	*4*	*3.11*		*0.450*	*5.60*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.11*		*1.714*	*21.34*	*Sqm*
		4		*0.964*	*1.714*	*6.61*	*Sqm*
		4	*3.11*		*0.500*	*6.23*	*Sqm*
		4		*1.629*	*0.500*	*3.26*	*Sqm*
	Section 6-6	*4*	*1.57*		*0.450*	*2.83*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.57*		*0.600*	*3.77*	*Sqm*
		4		*0.630*	*0.600*	*1.51*	*Sqm*
		4	*1.57*		*0.500*	*3.14*	*Sqm*
		4		*0.960*	*0.500*	*1.92*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.450*	*0.700*	*2.03*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.28*		*0.250*	*0.14*	*Sqm*
		2		*1.450*	*0.250*	*0.73*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.450*	*0.400*	*1.16*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*1.450*	*0.500*	*1.45*	*Sqm*
		2	*0.65*		*0.800*	*1.04*	*Sqm*
		2		*1.450*	*0.800*	*2.32*	*Sqm*
	Crest	*2*	*0.91*		*1.289*	*2.34*	*Sqm*
		2		*1.450*	*1.289*	*3.74*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.85*		*0.300*	*3.51*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.55*		*0.600*	*6.66*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**169.46**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*2.00*	*2.232*		*8.93*	*Sqm*
	TOTAL					**8.93**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.850*	*0.300*	**0.51**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.850*	*0.150*	**0.51**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.92*	*0.450*		*4.91*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.92*	*0.450*		*4.91*	*Sqm*
	TOTAL					**9.83**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		4.482		4.48	**Cum**
	Abutment						
	Section 1-1	2	*1.15*	*0.688*		*1.582*	*Cum*
	Section 2-2	2	*3.00*	*0.678*		*4.068*	*Cum*
	Section 3-3	2	*2.20*	*0.498*		*2.193*	*Cum*
	Section 5-5	2	*2.61*	*0.680*		*3.543*	*Cum*
	Section 6-6	2	*1.09*	*0.498*		*1.086*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.85*	*0.150*	*0.600*	*1.755*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**19.07**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 3.000 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.06*	*1.646*	*1.219*	*4.272*	*Cum*
	Section 2-2	*2*	*2.75*	*1.188*	*1.219*	*7.965*	*Cum*
	Section 3-3	*2*	*1.95*	*1.068*	*1.019*	*4.244*	*Cum*
	Section 5-5	*2*	*2.49*	*1.796*	*1.219*	*10.883*	*Cum*
	Section 6-6	*2*	*1.03*	*1.068*	*1.019*	*2.235*	*Cum*
	U/S Key Floor	*1*	*0.63*	*1.320*	*0.850*	*0.701*	*Cum*
	U/S Floor	*1*	*2.00*	*1.320*	*1.219*	*3.218*	*Cum*
	D/S Floor	*1*	*2.75*	*1.320*	*0.850*	*3.086*	*Cum*
		1	*2.25*	*1.320*	*0.650*	*1.931*	*Cum*
	D/S Key Floor	*1*	*0.63*	*1.320*	*0.850*	*0.701*	*Cum*
	Toe Wall D/S Portion	*1*	*5.51*	*0.750*	*0.900*	*3.719*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*2.00*	*0.600*	*0.750*	*1.800*	*Cum*
						44.76	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.320*	*0.150*	*0.11*	*Cum*
		1	*0.78*	*1.320*	*0.150*	*0.15*	*Cum*
		1	*4.13*	*1.320*	*0.150*	*0.82*	*Cum*
		1	*0.28*	*1.320*	*0.150*	*0.06*	*Cum*
		1	*0.89*	*1.320*	*0.150*	*0.18*	*Cum*
		1	*0.78*	*1.320*	*0.150*	*0.16*	*Cum*
		1	*0.54*	*1.320*	*0.150*	*0.11*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.06*	*1.646*	*0.150*	*0.53*	*Cum*
	Section 2-2	*2*	*2.75*	*1.188*	*0.150*	*0.98*	*Cum*
	Section 3-3	*2*	*1.95*	*1.068*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.49*	*1.796*	*0.150*	*1.34*	*Cum*
	Section 6-6	*2*	*1.03*	*1.068*	*0.150*	*0.33*	*Cum*
	Toe Wall D/S Portion	*1*	*5.51*	*0.750*	*0.300*	*1.24*	*Cum*
	Toe Wall D/S Portion	*1*	*5.21*	*0.450*	*0.600*	*1.41*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.600*	*0.150*	*0.36*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*2.00*	*0.300*	*0.600*	*0.72*	*Cum*
	TOTAL					**9.10**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.84*	*0.450*	*0.450*	*0.34*	*Cum*
		2	*0.84*	*0.898*	*1.492*	*2.25*	*Cum*
		2	*0.84*	*1.496*	*0.500*	*1.26*	*Cum*
	Section 2-2	*2*	*2.75*	*0.450*	*0.450*	*1.11*	*Cum*
		2	*2.75*	*0.669*	*0.730*	*2.69*	*Cum*
		2	*2.75*	*1.038*	*0.500*	*2.85*	*Cum*
	Section 3-3	*2*	*1.69*	*0.450*	*0.450*	*0.68*	*Cum*
		2	*1.69*	*0.609*	*0.530*	*1.09*	*Cum*
		2	*1.69*	*0.918*	*0.500*	*1.55*	*Cum*
	Section 5-5	*2*	*2.44*	*0.450*	*0.450*	*0.99*	*Cum*
		2	*2.44*	*0.898*	*1.492*	*6.54*	*Cum*
		2	*2.44*	*1.496*	*0.500*	*3.65*	*Cum*
	Section 6-6	*2*	*1.49*	*0.450*	*0.450*	*0.60*	*Cum*
		2	*1.49*	*0.609*	*0.530*	*0.96*	*Cum*
		2	*1.49*	*0.918*	*0.500*	*1.36*	*Cum*
	Floor	*1*	*0.63*	*1.320*	*0.700*	*0.58*	*Cum*
		1	*4.75*	*1.320*	*0.500*	*3.14*	*Cum*
		1	*0.31*	*1.320*	*0.250*	*0.10*	*Cum*
		1	*0.20*	*1.320*	*0.400*	*0.11*	*Cum*
		1	*2.05*	*1.320*	*0.500*	*1.35*	*Cum*
		1	*0.63*	*1.320*	*0.700*	*0.58*	*Cum*
	Crest	*1*	*0.82*	*1.320*	*1.097*	*1.19*	*Cum*
	TOTAL					**34.97**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.65*	*1.320*	*0.150*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*10.06*	*0.450*	*0.050*	*0.23*	*Cum*
	On Abutment Top (Right Side)	*1*	*10.06*	*0.450*	*0.050*	*0.23*	*Cum*
	TOTAL					**0.58**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**34.97**	**0.00**	**0.105**	**7850.0**	**823.64**	**Kg**
	Total Weight in Metric Tonne					**0.82**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.84*		*0.450*	*1.51*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.84*		*1.492*	*5.01*	*Sqm*
		4		*0.898*	*1.492*	*5.36*	*Sqm*
		4	*0.84*		*0.500*	*1.68*	*Sqm*
		4		*1.496*	*0.500*	*2.99*	*Sqm*
	Section 2-2	*4*	*2.75*		*0.450*	*4.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.75*		*0.730*	*8.03*	*Sqm*
		4		*0.669*	*0.730*	*1.95*	*Sqm*
		4	*2.75*		*0.500*	*5.50*	*Sqm*
		4		*1.038*	*0.500*	*2.08*	*Sqm*
	Section 3-3	*4*	*1.69*		*0.450*	*3.04*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.69*		*0.530*	*3.58*	*Sqm*
		4		*0.609*	*0.530*	*1.29*	*Sqm*
		4	*1.69*		*0.500*	*3.38*	*Sqm*
		4		*0.918*	*0.500*	*1.84*	*Sqm*
	Section 5-5	*4*	*2.44*		*0.450*	*4.39*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.44*		*1.492*	*14.57*	*Sqm*
		4		*0.898*	*1.492*	*5.36*	*Sqm*
		4	*2.44*		*0.500*	*4.88*	*Sqm*
		4		*1.496*	*0.500*	*2.99*	*Sqm*
	Section 6-6	*4*	*1.49*		*0.450*	*2.67*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.49*		*0.530*	*3.15*	*Sqm*
		4		*0.609*	*0.530*	*1.29*	*Sqm*
		4	*1.49*		*0.500*	*2.97*	*Sqm*
		4		*0.918*	*0.500*	*1.84*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.320*	*0.700*	*1.85*	*Sqm*
		2	*4.75*		*0.500*	*4.75*	*Sqm*
		2		*1.320*	*0.500*	*1.32*	*Sqm*
		2	*0.31*		*0.250*	*0.15*	*Sqm*
		2		*1.320*	*0.250*	*0.66*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*1.320*	*0.400*	*1.06*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*1.320*	*0.500*	*1.32*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.320*	*0.700*	*1.85*	*Sqm*
	Crest	*2*	*0.82*		*1.097*	*1.81*	*Sqm*
		2		*1.320*	*1.097*	*2.90*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.51*		*0.300*	*3.31*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.21*		*0.600*	*6.25*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.150*	*1.20*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*2.00*		*0.600*	*4.80*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**139.61**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*2.00*	*2.106*		*8.42*	*Sqm*
	TOTAL					**8.42**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*2.00*	*0.720*	*0.300*	**0.43**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*2.00*	*0.720*	*0.150*	**0.43**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*10.06*	*0.450*		*4.52*	*Sqm*
	On Abutment Top (Right Side)	*1*	*10.06*	*0.450*		*4.52*	*Sqm*
	TOTAL					**9.05**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.195		2.19	**Cum**
	Abutment						
	Section 1-1	2	*1.06*	*0.355*		*0.755*	*Cum*
	Section 2-2	2	*2.75*	*0.355*		*1.950*	*Cum*
	Section 3-3	2	*1.95*	*0.227*		*0.885*	*Cum*
	Section 5-5	2	*2.49*	*0.347*		*1.725*	*Cum*
	Section 6-6	2	*1.03*	*0.227*		*0.466*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.51*	*0.150*	*0.600*	*1.653*	*Cum*
		2	*2.00*	0.150	*0.600*	*0.360*	*Cum*
	TOTAL					**9.99**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.300 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.26*	*1.866*	*1.292*	*6.059*	*Cum*
	Section 2-2	*2*	*3.00*	*1.654*	*1.292*	*12.822*	*Cum*
	Section 3-3	*2*	*4.70*	*1.534*	*1.092*	*15.746*	*Cum*
	Section 5-5	*2*	*2.25*	*2.016*	*1.092*	*9.898*	*Cum*
	Section 6-6	*2*	*0.58*	*1.014*	*1.092*	*1.276*	*Cum*
	U/S Key Floor	*1*	*0.82*	*5.500*	*0.450*	*2.030*	*Cum*
	U/S Floor	*1*	*2.50*	*5.500*	*1.292*	*17.765*	*Cum*
	D/S Floor	*1*	*3.00*	*5.500*	*0.850*	*14.025*	*Cum*
		1	*4.34*	*5.500*	*0.200*	*4.771*	*Cum*
		1	*5.00*	*1.200*	*0.650*	*3.900*	*Cum*
	D/S Key Floor	*1*	*0.70*	*5.500*	*1.150*	*4.428*	*Cum*
	Toe Wall D/S Portion	*1*	*5.12*	*0.750*	*0.900*	*3.456*	*Cum*
	Boulder Pitching (D/S Portion)	*1*	*1.50*	*0.900*	*0.750*	*1.013*	*Cum*
						97.19	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
		1	*0.78*	*1.200*	*0.150*	*0.14*	*Cum*
		1	*0.11*	*1.200*	*0.150*	*0.02*	*Cum*
		1	*0.28*	*1.200*	*0.150*	*0.05*	*Cum*
		1	*4.41*	*1.200*	*0.150*	*0.79*	*Cum*
		1	*0.50*	*1.200*	*0.150*	*0.09*	*Cum*
		1	*3.50*	*1.200*	*0.150*	*0.63*	*Cum*
		1	*1.12*	*1.200*	*0.150*	*0.20*	*Cum*
		1	*0.54*	*1.200*	*0.150*	*0.10*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.26*	*1.866*	*0.150*	*0.70*	*Cum*
	Section 2-2	*2*	*3.00*	*1.654*	*0.300*	*2.98*	*Cum*
	Section 3-3	*2*	*4.70*	*1.534*	*0.300*	*4.33*	*Cum*
	Section 5-5	*2*	*2.25*	*2.016*	*0.150*	*1.36*	*Cum*
	Section 6-6	*2*	*0.58*	*1.014*	*0.150*	*0.18*	*Cum*
	Toe Wall D/S Portion	*1*	*5.12*	*0.750*	*0.300*	*1.15*	*Cum*
	Toe Wall D/S Portion	*1*	*4.82*	*0.450*	*0.600*	*1.30*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.900*	*0.150*	*0.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**14.86**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.03*	*0.450*	*0.450*	*0.42*	*Cum*
		2	*1.03*	*1.008*	*1.860*	*3.87*	*Cum*
		2	*1.03*	*1.716*	*0.700*	*2.48*	*Cum*
	Section 2-2	*2*	*3.00*	*0.820*	*0.500*	*2.46*	*Cum*
		2	*3.00*	*1.012*	*0.640*	*3.89*	*Cum*
		2	*3.00*	*1.354*	*1.350*	*10.97*	*Cum*
	Section 3-3	*2*	*4.42*	*0.820*	*0.500*	*3.62*	*Cum*
		2	*4.42*	*0.952*	*0.440*	*3.70*	*Cum*
		2	*4.42*	*1.234*	*1.550*	*16.90*	*Cum*
	Section 5-5	*2*	*2.20*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.20*	*1.008*	*1.860*	*8.27*	*Cum*
		2	*2.20*	*1.716*	*0.500*	*3.78*	*Cum*
	Section 6-6	*2*	*1.19*	*0.450*	*0.450*	*0.48*	*Cum*
		2	*1.19*	*0.582*	*0.440*	*0.61*	*Cum*
		2	*1.19*	*0.864*	*0.550*	*1.13*	*Cum*
	deduction for M 25 grade of concrete	*2*	*0.82*	*5.500*	*0.300*	*-2.71*	*Cum*
	Floor	*1*	*0.63*	*1.200*	*0.700*	*0.53*	*Cum*
		1	*5.50*	*1.200*	*0.500*	*3.30*	*Cum*
		1	*4.34*	*1.200*	*0.200*	*1.04*	*Cum*
		1	*0.22*	*1.200*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*1.200*	*0.450*	*0.11*	*Cum*
		1	*4.80*	*1.200*	*0.550*	*3.17*	*Cum*
		1	*0.70*	*1.200*	*1.000*	*0.84*	*Cum*
	Crest	*1*	*0.99*	*1.200*	*1.460*	*1.74*	*Cum*
	TOTAL					**71.54**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.75*	*1.200*	*0.200*	*0.18*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*7.47*	*0.450*	*0.050*	*0.17*	*Cum*
	On Abutment Top (Right Side)	*1*	*7.47*	*0.450*	*0.050*	*0.17*	*Cum*
	Slab Bridge						
	Slab	*1*	*2.00*	*5.500*	*0.328*	*3.61*	*Cum*
	Wearing coat	*1*	*2.00*	*4.500*	*0.070*	*0.63*	*Cum*
	Dirt wall	*2*	*0.40*	*5.500*	*0.500*	*2.20*	*Cum*
	300 mm thick pedastial	*2*	*0.82*	*5.500*	*0.300*	*2.71*	*Cum*
	TOTAL					**9.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	Dia of Bars	***No.***	***Length***		***Weight per m***	**Quantity**	**Unit**
a1	*16*	*31*	*2.46*		*1.578*	*120.3*	*Kg*
a2	*10*	*10*	*5.88*		*0.616*	*36.2*	*Kg*
a3	*10*	*2*	*5.40*		*0.616*	*6.7*	*Kg*
a4	*10*	*19*	*2.38*		*0.616*	*27.9*	*Kg*
a5	*10*	*7*	*5.80*		*0.616*	*25.0*	*Kg*
x1	*12*	*32*	*2.50*		*0.888*	*71.0*	*Kg*
x2	*16*	*32*	*1.32*		*1.578*	*66.4*	*Kg*
x3	*12*	*24*	*1.90*		*0.888*	*40.5*	*Kg*
	Taking Skin reinforcement @0.3% of M-20	**71.54**	**0.003**	**0.215**	**7850.0**	**1684.8**	**Kg**
	Total Reinforcement Steel (in kg)					*2078.9*	*Kg*
	Total Weight in Metric Tonne					**2.08**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.03*		*0.450*	*1.86*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.03*		*1.860*	*7.67*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*1.03*		*0.700*	*2.89*	*Sqm*
		4		*1.716*	*0.700*	*4.80*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.500*	*6.00*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*3.00*		*0.640*	*7.68*	*Sqm*
		4		*1.012*	*0.640*	*2.59*	*Sqm*
		4	*3.00*		*1.350*	*16.20*	*Sqm*
		4		*1.354*	*1.350*	*7.31*	*Sqm*
	Section 3-3	*4*	*4.42*		*0.500*	*8.84*	*Sqm*
		4		*0.820*	*0.500*	*1.64*	*Sqm*
		4	*4.42*		*0.440*	*7.78*	*Sqm*
		4		*0.952*	*0.440*	*1.68*	*Sqm*
		4	*4.42*		*1.550*	*27.39*	*Sqm*
		4		*1.234*	*1.550*	*7.65*	*Sqm*
	Section 5-5	*4*	*2.20*		*0.450*	*3.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.20*		*1.860*	*16.40*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*2.20*		*0.500*	*4.41*	*Sqm*
		4		*1.716*	*0.500*	*3.43*	*Sqm*
	Section 6-6	*4*	*1.19*		*0.450*	*2.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.19*		*0.440*	*2.10*	*Sqm*
		4		*0.582*	*0.440*	*1.02*	*Sqm*
		4	*1.19*		*0.550*	*2.62*	*Sqm*
		4		*0.864*	*0.550*	*1.90*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*1.200*	*0.700*	*1.68*	*Sqm*
		2	*5.50*		*0.500*	*5.50*	*Sqm*
		2		*1.200*	*0.500*	*1.20*	*Sqm*
		2	*0.22*		*0.200*	*0.09*	*Sqm*
		2		*1.200*	*0.200*	*0.48*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*1.200*	*0.450*	*1.08*	*Sqm*
		2	*4.80*		*0.550*	*5.28*	*Sqm*
		2		*1.200*	*0.550*	*1.32*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		*1.200*	*1.000*	*2.40*	*Sqm*
	Crest	*2*	*0.99*		*1.460*	*2.90*	*Sqm*
		2		*1.200*	*1.460*	*3.50*	*Sqm*
	Toe Wall D/S Portion	*2*	*5.12*		*0.300*	*3.07*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.82*		*0.600*	*5.78*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.900*	*0.150*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**212.55**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.944*		*5.83*	*Sqm*
	TOTAL					**5.83**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.600*	*0.300*	**0.27**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.600*	*0.150*	**0.27**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*7.47*	*0.450*		*3.36*	*Sqm*
	On Abutment Top (Right Side)	*1*	*7.47*	*0.450*		*3.36*	*Sqm*
	TOTAL					**6.72**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Floor	1		4.837		4.84	**Cum**
	Abutment						
	Section 1-1	2	1.26	*0.296*		*0.744*	*Cum*
	Section 2-2	2	3.00	*0.504*		*3.024*	*Cum*
	Section 3-3	2	4.70	*0.479*		*4.498*	*Cum*
	Section 5-5	2	2.25	*0.266*		*1.197*	*Cum*
	Section 6-6	2	0.58	*0.201*		*0.232*	*Cum*
	D/S protection	2					
	Toe wall	2	*5.12*	*0.150*	*0.600*	*1.536*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**16.34**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 4.650 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.29*	*1.866*	*1.745*	*8.411*	*Cum*
	Section 2-2	*2*	*3.00*	*1.134*	*1.745*	*11.873*	*Cum*
	Section 3-3	*2*	*3.20*	*1.014*	*1.545*	*10.026*	*Cum*
	Section 5-5	*2*	*2.52*	*2.016*	*1.595*	*16.184*	*Cum*
	Section 6-6	*2*	*0.95*	*1.014*	*1.545*	*2.964*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.820*	*0.850*	*0.436*	*Cum*
	U/S Floor	*1*	*2.75*	*0.820*	*1.745*	*3.935*	*Cum*
	D/S Floor	*1*	*3.00*	*0.820*	*0.850*	*2.091*	*Cum*
		1	*4.35*	*0.820*	*0.150*	*0.535*	*Cum*
		1	*3.50*	*0.820*	*0.650*	*1.866*	*Cum*
	D/S Key Floor	*1*	*0.70*	*0.820*	*1.150*	*0.660*	*Cum*
	Toe Wall D/S Portion	*1*	*4.74*	*0.750*	*0.900*	*3.200*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						63.53	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.820*	*0.150*	*0.10*	*Cum*
		1	*0.37*	*0.820*	*0.150*	*0.05*	*Cum*
		1	*0.21*	*0.820*	*0.150*	*0.03*	*Cum*
		1	*4.45*	*0.820*	*0.150*	*0.55*	*Cum*
		1	*0.42*	*0.820*	*0.150*	*0.05*	*Cum*
		1	*2.05*	*0.820*	*0.150*	*0.25*	*Cum*
		1	*1.12*	*0.820*	*0.150*	*0.14*	*Cum*
		1	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.29*	*1.866*	*0.150*	*0.72*	*Cum*
	Section 2-2	*2*	*3.00*	*1.134*	*0.150*	*1.02*	*Cum*
	Section 3-3	*2*	*3.20*	*1.014*	*0.150*	*0.97*	*Cum*
	Section 5-5	*2*	*2.52*	*2.016*	*0.150*	*1.52*	*Cum*
	Section 6-6	*2*	*0.95*	*1.014*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*4.74*	*0.750*	*0.300*	*1.07*	*Cum*
	Toe Wall D/S Portion	*1*	*4.44*	*0.450*	*0.600*	*1.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.89**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.07*	*0.450*	*0.450*	*0.43*	*Cum*
		2	*1.07*	*1.008*	*1.860*	*4.00*	*Cum*
		2	*1.07*	*1.716*	*0.650*	*2.38*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.642*	*0.640*	*2.47*	*Cum*
		2	*3.00*	*0.984*	*0.650*	*3.84*	*Cum*
	Section 3-3	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*0.582*	*0.440*	*1.49*	*Cum*
		2	*2.92*	*0.864*	*0.550*	*2.77*	*Cum*
	Section 5-5	*2*	*2.47*	*0.450*	*0.450*	*1.00*	*Cum*
		2	*2.47*	*1.008*	*1.860*	*9.27*	*Cum*
		2	*2.47*	*1.716*	*0.500*	*4.24*	*Cum*
	Section 6-6	*2*	*1.38*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.38*	*0.582*	*0.440*	*0.71*	*Cum*
		2	*1.38*	*0.864*	*0.500*	*1.19*	*Cum*
	Floor	*1*	*0.63*	*0.820*	*0.700*	*0.36*	*Cum*
		1	*5.75*	*0.820*	*0.500*	*2.36*	*Cum*
		1	*4.35*	*0.820*	*0.150*	*0.53*	*Cum*
		1	*0.20*	*0.820*	*0.300*	*0.05*	*Cum*
		1	*0.20*	*0.820*	*0.450*	*0.07*	*Cum*
		1	*3.30*	*0.820*	*0.550*	*1.49*	*Cum*
		1	*0.70*	*0.820*	*1.000*	*0.57*	*Cum*
	Crest	*1*	*1.04*	*0.820*	*1.415*	*1.20*	*Cum*
	TOTAL					**43.39**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.820*	*0.200*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.77*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.77*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.66**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**43.39**	**0.00**	**0.130**	**7850.0**	**1021.79**	**Kg**
	Total Weight in Metric Tonne					**1.02**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.07*		*0.450*	*1.92*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.07*		*1.860*	*7.93*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*1.07*		*0.650*	*2.77*	*Sqm*
		4		*1.716*	*0.650*	*4.46*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.640*	*7.68*	*Sqm*
		4		*0.642*	*0.640*	*1.64*	*Sqm*
		4	*3.00*		*0.650*	*7.80*	*Sqm*
		4		*0.984*	*0.650*	*2.56*	*Sqm*
	Section 3-3	*4*	*2.92*		*0.450*	*5.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.92*		*0.440*	*5.14*	*Sqm*
		4		*0.582*	*0.440*	*1.02*	*Sqm*
		4	*2.92*		*0.550*	*6.42*	*Sqm*
		4		*0.864*	*0.550*	*1.90*	*Sqm*
	Section 5-5	*4*	*2.47*		*0.450*	*4.45*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.47*		*1.860*	*18.40*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*2.47*		*0.500*	*4.95*	*Sqm*
		4		*1.716*	*0.500*	*3.43*	*Sqm*
	Section 6-6	*4*	*1.38*		*0.450*	*2.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.38*		*0.440*	*2.43*	*Sqm*
		4		*0.582*	*0.440*	*1.02*	*Sqm*
		4	*1.38*		*0.500*	*2.76*	*Sqm*
		4		*0.864*	*0.500*	*1.73*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.820*	*0.700*	*1.15*	*Sqm*
		2	*5.75*		*0.500*	*5.75*	*Sqm*
		2		*0.820*	*0.500*	*0.82*	*Sqm*
		2	*0.20*		*0.300*	*0.12*	*Sqm*
		2		*0.820*	*0.300*	*0.49*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*0.820*	*0.450*	*0.74*	*Sqm*
		2	*3.30*		*0.550*	*3.63*	*Sqm*
		2		*0.820*	*0.550*	*0.90*	*Sqm*
		2	*0.70*		*1.000*	*1.40*	*Sqm*
		2		*0.820*	*1.000*	*1.64*	*Sqm*
	Crest	*2*	*1.04*		*1.415*	*2.93*	*Sqm*
		2		*0.820*	*1.415*	*2.32*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.74*		*0.300*	*2.84*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.44*		*0.600*	*5.33*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**160.28**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.943*		*5.83*	*Sqm*
	TOTAL					**5.83**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.220*	*0.300*	**0.10**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.220*	*0.150*	**0.10**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.77*	*0.450*		*5.30*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.77*	*0.450*		*5.30*	*Sqm*
	TOTAL					**10.60**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		5.216		5.22	**Cum**
	Abutment						
	Section 1-1	2	*1.29*	*0.649*		*1.676*	*Cum*
	Section 2-2	2	*3.00*	*0.621*		*3.726*	*Cum*
	Section 3-3	2	*3.20*	*0.478*		*3.062*	*Cum*
	Section 5-5	2	*2.52*	*0.627*		*3.156*	*Cum*
	Section 6-6	2	*0.95*	*0.478*		*0.905*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.74*	*0.150*	*0.600*	*1.422*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**19.43**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 5.025 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.31*	*1.866*	*2.112*	*10.298*	*Cum*
	Section 2-2	*2*	*3.00*	*1.134*	*2.112*	*14.370*	*Cum*
	Section 3-3	*2*	*3.20*	*1.014*	*1.912*	*12.408*	*Cum*
	Section 5-5	*2*	*2.25*	*2.016*	*1.962*	*17.787*	*Cum*
	Section 6-6	*2*	*0.95*	*1.014*	*1.912*	*3.668*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.820*	*0.850*	*0.436*	*Cum*
	U/S Floor	*1*	*2.75*	*0.820*	*1.962*	*4.424*	*Cum*
	D/S Floor	*1*	*3.00*	*0.820*	*0.850*	*2.091*	*Cum*
		1	*4.36*	*0.820*	*0.150*	*0.537*	*Cum*
		1	*3.50*	*0.820*	*0.650*	*1.866*	*Cum*
	D/S Key Floor	*1*	*0.71*	*0.820*	*1.200*	*0.701*	*Cum*
	Toe Wall D/S Portion	*1*	*4.74*	*0.750*	*0.900*	*3.200*	*Cum*
	Boulder Pitching (D/S Portion)	*2*	*1.50*	*0.600*	*0.750*	*1.350*	*Cum*
						73.14	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
		1	*0.78*	*0.820*	*0.150*	*0.10*	*Cum*
		1	*0.36*	*0.820*	*0.150*	*0.04*	*Cum*
		1	*0.21*	*0.820*	*0.150*	*0.03*	*Cum*
		1	*4.46*	*0.820*	*0.150*	*0.55*	*Cum*
		1	*0.42*	*0.820*	*0.150*	*0.05*	*Cum*
		1	*2.02*	*0.820*	*0.150*	*0.25*	*Cum*
		1	*1.17*	*0.820*	*0.150*	*0.14*	*Cum*
		1	*0.54*	*0.820*	*0.150*	*0.07*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.31*	*1.866*	*0.150*	*0.73*	*Cum*
	Section 2-2	*2*	*3.00*	*1.134*	*0.150*	*1.02*	*Cum*
	Section 3-3	*2*	*3.20*	*1.014*	*0.150*	*0.97*	*Cum*
	Section 5-5	*2*	*2.25*	*2.016*	*0.150*	*1.36*	*Cum*
	Section 6-6	*2*	*0.95*	*1.014*	*0.150*	*0.29*	*Cum*
	Toe Wall D/S Portion	*1*	*4.74*	*0.750*	*0.300*	*1.07*	*Cum*
	Toe Wall D/S Portion	*1*	*4.44*	*0.450*	*0.600*	*1.20*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.600*	*0.150*	*0.27*	*Cum*
	Toe Wall for resting Brick Edging	*2*	*1.50*	*0.300*	*0.600*	*0.54*	*Cum*
	TOTAL					**8.74**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.08*	*0.450*	*0.450*	*0.44*	*Cum*
		2	*1.08*	*1.008*	*1.860*	*4.06*	*Cum*
		2	*1.08*	*1.716*	*0.650*	*2.41*	*Cum*
	Section 2-2	*2*	*3.00*	*0.450*	*0.450*	*1.22*	*Cum*
		2	*3.00*	*0.642*	*0.640*	*2.47*	*Cum*
		2	*3.00*	*0.984*	*0.650*	*3.84*	*Cum*
	Section 3-3	*2*	*2.92*	*0.450*	*0.450*	*1.18*	*Cum*
		2	*2.92*	*0.582*	*0.440*	*1.49*	*Cum*
		2	*2.92*	*0.864*	*0.550*	*2.77*	*Cum*
	Section 5-5	*2*	*2.20*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.20*	*1.008*	*1.860*	*8.27*	*Cum*
		2	*2.20*	*1.716*	*0.500*	*3.78*	*Cum*
	Section 6-6	*2*	*1.38*	*0.450*	*0.450*	*0.56*	*Cum*
		2	*1.38*	*0.582*	*0.440*	*0.71*	*Cum*
		2	*1.38*	*0.864*	*0.500*	*1.19*	*Cum*
	Floor	*1*	*0.63*	*0.820*	*0.700*	*0.36*	*Cum*
		1	*5.75*	*0.820*	*0.500*	*2.36*	*Cum*
		1	*4.36*	*0.820*	*0.150*	*0.54*	*Cum*
		1	*0.20*	*0.820*	*0.300*	*0.05*	*Cum*
		1	*0.20*	*0.820*	*0.450*	*0.07*	*Cum*
		1	*3.30*	*0.820*	*0.550*	*1.49*	*Cum*
		1	*0.71*	*0.820*	*1.050*	*0.61*	*Cum*
	Crest	*1*	*1.04*	*0.820*	*1.460*	*1.25*	*Cum*
	TOTAL					**42.00**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.80*	*0.820*	*0.200*	*0.13*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*11.52*	*0.450*	*0.050*	*0.26*	*Cum*
	On Abutment Top (Right Side)	*1*	*11.52*	*0.450*	*0.050*	*0.26*	*Cum*
	TOTAL					**0.65**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**42.00**	**0.00**	**0.126**	**7850.0**	**989.01**	**Kg**
	Total Weight in Metric Tonne					**0.99**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*1.08*		*0.450*	*1.95*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.08*		*1.860*	*8.05*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*1.08*		*0.650*	*2.81*	*Sqm*
		4		*1.716*	*0.650*	*4.46*	*Sqm*
	Section 2-2	*4*	*3.00*		*0.450*	*5.40*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*3.00*		*0.640*	*7.68*	*Sqm*
		4		*0.642*	*0.640*	*1.64*	*Sqm*
		4	*3.00*		*0.650*	*7.80*	*Sqm*
		4		*0.984*	*0.650*	*2.56*	*Sqm*
	Section 3-3	*4*	*2.92*		*0.450*	*5.25*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.92*		*0.440*	*5.14*	*Sqm*
		4		*0.582*	*0.440*	*1.02*	*Sqm*
		4	*2.92*		*0.550*	*6.42*	*Sqm*
		4		*0.864*	*0.550*	*1.90*	*Sqm*
	Section 5-5	*4*	*2.20*		*0.450*	*3.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.20*		*1.860*	*16.40*	*Sqm*
		4		*1.008*	*1.860*	*7.50*	*Sqm*
		4	*2.20*		*0.500*	*4.41*	*Sqm*
		4		*1.716*	*0.500*	*3.43*	*Sqm*
	Section 6-6	*4*	*1.38*		*0.450*	*2.48*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.38*		*0.440*	*2.43*	*Sqm*
		4		*0.582*	*0.440*	*1.02*	*Sqm*
		4	*1.38*		*0.500*	*2.76*	*Sqm*
		4		*0.864*	*0.500*	*1.73*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.820*	*0.700*	*1.15*	*Sqm*
		2	*5.75*		*0.500*	*5.75*	*Sqm*
		2		*0.820*	*0.500*	*0.82*	*Sqm*
		2	*0.20*		*0.300*	*0.12*	*Sqm*
		2		*0.820*	*0.300*	*0.49*	*Sqm*
		2	*0.20*		*0.450*	*0.18*	*Sqm*
		2		*0.820*	*0.450*	*0.74*	*Sqm*
		2	*3.30*		*0.550*	*3.63*	*Sqm*
		2		*0.820*	*0.550*	*0.90*	*Sqm*
		2	*0.71*		*1.050*	*1.50*	*Sqm*
		2		*0.820*	*1.050*	*1.72*	*Sqm*
	Crest	*2*	*1.04*		*1.460*	*3.05*	*Sqm*
		2		*0.820*	*1.460*	*2.39*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.74*		*0.300*	*2.84*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.44*		*0.600*	*5.33*	*Sqm*
		2		*0.450*	*0.600*	*0.54*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.600*	*0.150*	*0.36*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.600*	*3.60*	*Sqm*
		4		*0.300*	*0.600*	*0.72*	*Sqm*
	TOTAL					**157.81**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*1.50*	*1.943*		*5.83*	*Sqm*
	TOTAL					**5.83**	**Sqm**
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	*1*	*1.50*	*0.220*	*0.300*	**0.10**	**Cum**
9	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.						
		2	*1.50*	*0.220*	*0.150*	**0.10**	**Cum**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*11.52*	*0.450*		*5.18*	*Sqm*
	On Abutment Top (Right Side)	*1*	*11.52*	*0.450*		*5.18*	*Sqm*
	TOTAL					**10.37**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		5.130		5.13	**Cum**
	Abutment						
	Section 1-1	2	*1.31*	*1.008*		*2.633*	*Cum*
	Section 2-2	2	*3.00*	*0.755*		*4.530*	*Cum*
	Section 3-3	2	*3.20*	*0.555*		*3.552*	*Cum*
	Section 5-5	2	*2.25*	*0.985*		*4.430*	*Cum*
	Section 6-6	2	*0.95*	*0.478*		*0.905*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.74*	*0.150*	*0.600*	*1.422*	*Cum*
		2	*1.50*	0.150	*0.600*	*0.270*	*Cum*
	TOTAL					**22.87**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 5.928 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.96*	*1.422*	*1.578*	*4.320*	*Cum*
	Section 2-2	*2*	*1.75*	*1.056*	*1.578*	*5.832*	*Cum*
	Section 3-3	*2*	*2.45*	*0.936*	*1.378*	*6.320*	*Cum*
	Section 5-5	*2*	*2.17*	*1.572*	*1.578*	*10.776*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*1.378*	*2.141*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	U/S Floor	*1*	*2.25*	*0.470*	*1.460*	*1.544*	*Cum*
	D/S Floor	*1*	*2.00*	*0.470*	*0.850*	*0.799*	*Cum*
		1	*2.50*	*0.470*	*0.650*	*0.764*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.750*	*2.250*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.450*	*0.520*	*Cum*
						35.76	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*3.87*	*0.470*	*0.150*	*0.27*	*Cum*
		1	*0.28*	*0.470*	*0.150*	*0.02*	*Cum*
		1	*0.90*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.96*	*1.422*	*0.150*	*0.41*	*Cum*
	Section 2-2	*2*	*1.75*	*1.056*	*0.150*	*0.55*	*Cum*
	Section 3-3	*2*	*2.45*	*0.936*	*0.150*	*0.69*	*Cum*
	Section 5-5	*2*	*2.17*	*1.572*	*0.150*	*1.02*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.300*	*0.90*	*Cum*
	Toe Wall D/S Portion	*1*	*3.70*	*0.450*	*0.450*	*0.75*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.150*	*0.17*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.470*	*0.300*	*0.21*	*Cum*
	TOTAL					**5.49**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.73*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.73*	*0.786*	*1.120*	*1.28*	*Cum*
		2	*0.73*	*1.272*	*0.500*	*0.93*	*Cum*
	Section 2-2	*2*	*1.75*	*0.450*	*0.450*	*0.71*	*Cum*
		2	*1.75*	*0.603*	*0.510*	*1.08*	*Cum*
		2	*1.75*	*0.906*	*0.500*	*1.59*	*Cum*
	Section 3-3	*2*	*2.21*	*0.450*	*0.450*	*0.89*	*Cum*
		2	*2.21*	*0.543*	*0.310*	*0.74*	*Cum*
		2	*2.21*	*0.786*	*0.500*	*1.73*	*Cum*
	Section 5-5	*2*	*2.13*	*0.450*	*0.450*	*0.86*	*Cum*
		2	*2.13*	*0.786*	*1.120*	*3.76*	*Cum*
		2	*2.13*	*1.272*	*0.500*	*2.72*	*Cum*
	Section 6-6	*2*	*1.22*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.22*	*0.543*	*0.310*	*0.41*	*Cum*
		2	*1.22*	*0.786*	*0.500*	*0.96*	*Cum*
	Floor	*1*	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
		1	*4.25*	*0.470*	*0.500*	*1.00*	*Cum*
		1	*0.55*	*0.470*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*0.470*	*0.400*	*0.04*	*Cum*
		1	*2.30*	*0.470*	*0.500*	*0.54*	*Cum*
		1	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
	Crest	*1*	*0.72*	*0.470*	*0.775*	*0.26*	*Cum*
	TOTAL					**20.75**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.470*	*0.200*	*0.06*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.72*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.72*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.45**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**20.75**	**0.00**	**0.062**	**7850.0**	**488.75**	**Kg**
	Total Weight in Metric Tonne					**0.49**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.73*		*0.450*	*1.31*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.73*		*1.120*	*3.26*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*0.73*		*0.500*	*1.46*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 2-2	*4*	*1.75*		*0.450*	*3.15*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.75*		*0.510*	*3.57*	*Sqm*
		4		*0.603*	*0.510*	*1.23*	*Sqm*
		4	*1.75*		*0.500*	*3.50*	*Sqm*
		4		*0.906*	*0.500*	*1.81*	*Sqm*
	Section 3-3	*4*	*2.21*		*0.450*	*3.97*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.21*		*0.310*	*2.74*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*2.21*		*0.500*	*4.41*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Section 5-5	*4*	*2.13*		*0.450*	*3.84*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.13*		*1.120*	*9.56*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*2.13*		*0.500*	*4.27*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 6-6	*4*	*1.22*		*0.450*	*2.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.22*		*0.310*	*1.52*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.22*		*0.500*	*2.45*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.55*		*0.200*	*0.22*	*Sqm*
		2		*0.470*	*0.200*	*0.19*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.470*	*0.400*	*0.38*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
	Crest	*2*	*0.72*		*0.775*	*1.12*	*Sqm*
		2		*0.470*	*0.775*	*0.73*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.00*		*0.300*	*2.40*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.70*		*0.450*	*3.33*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.770*	*0.150*	*0.46*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.470*	*0.300*	*0.56*	*Sqm*
	TOTAL					**98.58**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*1.50*	*1.710*		*5.13*	*Sqm*
	TOTAL					**5.13**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.72*	*0.450*		*3.92*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.72*	*0.450*		*3.92*	*Sqm*
	TOTAL					**7.85**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.024		2.02	**Cum**
	Abutment						
	Section 1-1	2	*0.96*	*0.612*		*1.178*	*Cum*
	Section 2-2	2	*1.75*	*0.560*		*1.960*	*Cum*
	Section 3-3	2	*2.45*	*0.400*		*1.960*	*Cum*
	Section 5-5	2	*2.17*	*0.612*		*2.658*	*Cum*
	Section 6-6	2	*0.83*	*0.400*		*0.664*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.00*	*0.150*	*0.450*	*1.200*	*Cum*
		2	*1.50*	0.150	*0.450*	*0.203*	*Cum*
	TOTAL					**11.85**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 6.185 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*1.04*	*1.605*	*1.880*	*6.246*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*1.880*	*8.934*	*Cum*
	Section 3-3	*2*	*1.95*	*0.936*	*1.680*	*6.133*	*Cum*
	Section 5-5	*2*	*2.03*	*1.755*	*1.880*	*13.379*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*1.680*	*2.610*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	U/S Floor	*1*	*2.25*	*0.470*	*1.764*	*1.865*	*Cum*
	D/S Floor	*1*	*2.25*	*0.470*	*0.850*	*0.899*	*Cum*
		1	*2.25*	*0.470*	*0.650*	*0.687*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.750*	*2.250*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.450*	*0.520*	*Cum*
						44.02	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*4.12*	*0.470*	*0.150*	*0.29*	*Cum*
		1	*0.28*	*0.470*	*0.150*	*0.02*	*Cum*
		1	*0.65*	*0.470*	*0.150*	*0.05*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*1.04*	*1.605*	*0.150*	*0.50*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*1.95*	*0.936*	*0.150*	*0.55*	*Cum*
	Section 5-5	*2*	*2.03*	*1.755*	*0.150*	*1.07*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.300*	*0.90*	*Cum*
	Toe Wall D/S Portion	*1*	*3.70*	*0.450*	*0.450*	*0.75*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.150*	*0.17*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.470*	*0.300*	*0.21*	*Cum*
	TOTAL					**5.64**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.81*	*0.450*	*0.450*	*0.33*	*Cum*
		2	*0.81*	*0.877*	*1.424*	*2.02*	*Cum*
		2	*0.81*	*1.455*	*0.500*	*1.18*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.603*	*0.510*	*1.38*	*Cum*
		2	*2.25*	*0.906*	*0.500*	*2.04*	*Cum*
	Section 3-3	*2*	*1.71*	*0.450*	*0.450*	*0.69*	*Cum*
		2	*1.71*	*0.543*	*0.310*	*0.57*	*Cum*
		2	*1.71*	*0.786*	*0.500*	*1.34*	*Cum*
	Section 5-5	*2*	*1.98*	*0.450*	*0.450*	*0.80*	*Cum*
		2	*1.98*	*0.877*	*1.424*	*4.96*	*Cum*
		2	*1.98*	*1.455*	*0.500*	*2.89*	*Cum*
	Section 6-6	*2*	*1.22*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.22*	*0.543*	*0.310*	*0.41*	*Cum*
		2	*1.22*	*0.786*	*0.500*	*0.96*	*Cum*
	Floor	*1*	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
		1	*4.50*	*0.470*	*0.500*	*1.06*	*Cum*
		1	*0.55*	*0.470*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*0.470*	*0.400*	*0.04*	*Cum*
		1	*2.05*	*0.470*	*0.500*	*0.48*	*Cum*
		1	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
	Crest	*1*	*0.78*	*0.470*	*1.134*	*0.42*	*Cum*
	TOTAL					**23.44**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.470*	*0.150*	*0.04*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.72*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.72*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.43**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**23.44**	**0.00**	**0.070**	**7850.0**	**552.01**	**Kg**
	Total Weight in Metric Tonne					**0.55**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.81*		*0.450*	*1.46*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.81*		*1.424*	*4.61*	*Sqm*
		4		*0.877*	*1.424*	*5.00*	*Sqm*
		4	*0.81*		*0.500*	*1.62*	*Sqm*
		4		*1.455*	*0.500*	*2.91*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.510*	*4.59*	*Sqm*
		4		*0.603*	*0.510*	*1.23*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.906*	*0.500*	*1.81*	*Sqm*
	Section 3-3	*4*	*1.71*		*0.450*	*3.07*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.71*		*0.310*	*2.12*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.71*		*0.500*	*3.41*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Section 5-5	*4*	*1.98*		*0.450*	*3.57*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.98*		*1.424*	*11.30*	*Sqm*
		4		*0.877*	*1.424*	*5.00*	*Sqm*
		4	*1.98*		*0.500*	*3.97*	*Sqm*
		4		*1.455*	*0.500*	*2.91*	*Sqm*
	Section 6-6	*4*	*1.22*		*0.450*	*2.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.22*		*0.310*	*1.52*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.22*		*0.500*	*2.45*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
		2	*4.50*		*0.500*	*4.50*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.55*		*0.200*	*0.22*	*Sqm*
		2		*0.470*	*0.200*	*0.19*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.470*	*0.400*	*0.38*	*Sqm*
		2	*2.05*		*0.500*	*2.05*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
	Crest	*2*	*0.78*		*1.134*	*1.77*	*Sqm*
		2		*0.470*	*1.134*	*1.07*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.00*		*0.300*	*2.40*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.70*		*0.450*	*3.33*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.770*	*0.150*	*0.46*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.470*	*0.300*	*0.56*	*Sqm*
	TOTAL					**106.48**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*1.50*	*1.710*		*5.13*	*Sqm*
	TOTAL					**5.13**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.72*	*0.450*		*3.93*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.72*	*0.450*		*3.93*	*Sqm*
	TOTAL					**7.85**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		2.581		2.58	**Cum**
	Abutment						
	Section 1-1	2	*1.04*	*0.898*		*1.859*	*Cum*
	Section 2-2	2	*2.25*	*0.610*		*2.745*	*Cum*
	Section 3-3	2	*1.95*	*0.440*		*1.716*	*Cum*
	Section 5-5	2	*2.03*	*0.898*		*3.641*	*Cum*
	Section 6-6	2	*0.83*	*0.440*		*0.730*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.00*	*0.150*	*0.450*	*1.200*	*Cum*
		2	*1.50*	0.150	*0.450*	*0.203*	*Cum*
	TOTAL					**14.68**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.436 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.98*	*1.422*	*1.560*	*4.368*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*1.560*	*7.413*	*Cum*
	Section 3-3	*2*	*2.20*	*0.936*	*1.360*	*5.601*	*Cum*
	Section 5-5	*2*	*2.07*	*1.572*	*1.560*	*10.128*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*1.360*	*2.113*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	U/S Floor	*1*	*2.00*	*0.470*	*1.460*	*1.372*	*Cum*
	D/S Floor	*1*	*2.25*	*0.470*	*0.850*	*0.899*	*Cum*
		1	*2.50*	*0.470*	*0.650*	*0.764*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.750*	*2.250*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.450*	*0.520*	*Cum*
						35.93	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*3.87*	*0.470*	*0.150*	*0.27*	*Cum*
		1	*0.28*	*0.470*	*0.150*	*0.02*	*Cum*
		1	*0.90*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.98*	*1.422*	*0.150*	*0.42*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*2.20*	*0.936*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.07*	*1.572*	*0.150*	*0.97*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.300*	*0.90*	*Cum*
	Toe Wall D/S Portion	*1*	*3.70*	*0.450*	*0.450*	*0.75*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.150*	*0.17*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.470*	*0.300*	*0.21*	*Cum*
	TOTAL					**5.53**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.786*	*1.120*	*1.31*	*Cum*
		2	*0.75*	*1.272*	*0.500*	*0.95*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.603*	*0.510*	*1.38*	*Cum*
		2	*2.25*	*0.906*	*0.500*	*2.04*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.543*	*0.310*	*0.66*	*Cum*
		2	*1.96*	*0.786*	*0.500*	*1.54*	*Cum*
	Section 5-5	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.786*	*1.120*	*3.56*	*Cum*
		2	*2.02*	*1.272*	*0.500*	*2.57*	*Cum*
	Section 6-6	*2*	*1.22*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.22*	*0.543*	*0.310*	*0.41*	*Cum*
		2	*1.22*	*0.786*	*0.500*	*0.96*	*Cum*
	Floor	*1*	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
		1	*4.25*	*0.470*	*0.500*	*1.00*	*Cum*
		1	*0.55*	*0.470*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*0.470*	*0.400*	*0.04*	*Cum*
		1	*2.30*	*0.470*	*0.500*	*0.54*	*Cum*
		1	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
	Crest	*1*	*0.73*	*0.470*	*0.830*	*0.28*	*Cum*
	TOTAL					**21.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.470*	*0.150*	*0.04*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.87*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.87*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.44**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**21.03**	**0.00**	**0.063**	**7850.0**	**495.27**	**Kg**
	Total Weight in Metric Tonne					**0.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.120*	*3.34*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*0.75*		*0.500*	*1.49*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.510*	*4.59*	*Sqm*
		4		*0.603*	*0.510*	*1.23*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.906*	*0.500*	*1.81*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.310*	*2.43*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.96*		*0.500*	*3.91*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Section 5-5	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*1.120*	*9.06*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*2.02*		*0.500*	*4.04*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 6-6	*4*	*1.22*		*0.450*	*2.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.22*		*0.310*	*1.52*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.22*		*0.500*	*2.45*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.55*		*0.200*	*0.22*	*Sqm*
		2		*0.470*	*0.200*	*0.19*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.470*	*0.400*	*0.38*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
	Crest	*2*	*0.73*		*0.830*	*1.21*	*Sqm*
		2		*0.470*	*0.830*	*0.78*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.00*		*0.300*	*2.40*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.70*		*0.450*	*3.33*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.770*	*0.150*	*0.46*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.470*	*0.300*	*0.56*	*Sqm*
	TOTAL					**99.60**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	In D/S Portion On Slopes	*2*	*1.50*	*1.710*		*5.13*	*Sqm*
	TOTAL					**5.13**	**Sqm**
8	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.87*	*0.450*		*3.99*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.87*	*0.450*		*3.99*	*Sqm*
	TOTAL					**7.98**	**Sqm**
9	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
10	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.387		1.39	**Cum**
	Abutment						
	Section 1-1	2	*0.98*	*0.597*		*1.175*	*Cum*
	Section 2-2	2	*2.25*	*0.549*		*2.471*	*Cum*
	Section 3-3	2	*2.20*	*0.392*		*1.725*	*Cum*
	Section 5-5	2	*2.07*	*0.597*		*2.466*	*Cum*
	Section 6-6	2	*0.83*	*0.392*		*0.651*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.00*	*0.150*	*0.450*	*1.200*	*Cum*
		2	*1.50*	0.150	*0.450*	*0.203*	*Cum*
	TOTAL					**11.28**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.808 KM						
1	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.97*	*1.422*	*1.421*	*3.926*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*1.421*	*6.753*	*Cum*
	Section 3-3	*2*	*2.20*	*0.936*	*1.221*	*5.029*	*Cum*
	Section 5-5	*2*	*2.07*	*1.572*	*1.421*	*9.226*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*1.221*	*1.897*	*Cum*
	U/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	U/S Floor	*1*	*2.00*	*0.470*	*1.460*	*1.372*	*Cum*
	D/S Floor	*1*	*2.25*	*0.470*	*0.850*	*0.899*	*Cum*
		1	*2.50*	*0.470*	*0.650*	*0.764*	*Cum*
	D/S Key Floor	*1*	*0.63*	*0.470*	*0.850*	*0.250*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.750*	*2.250*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.450*	*0.520*	*Cum*
						33.13	**Cum**
2	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below Floor	*1*	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*3.87*	*0.470*	*0.150*	*0.27*	*Cum*
		1	*0.28*	*0.470*	*0.150*	*0.02*	*Cum*
		1	*0.90*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.78*	*0.470*	*0.150*	*0.06*	*Cum*
		1	*0.54*	*0.470*	*0.150*	*0.04*	*Cum*
	PCC Below Abutment						
	Section 1-1	*2*	*0.97*	*1.422*	*0.150*	*0.41*	*Cum*
	Section 2-2	*2*	*2.25*	*1.056*	*0.150*	*0.71*	*Cum*
	Section 3-3	*2*	*2.20*	*0.936*	*0.150*	*0.62*	*Cum*
	Section 5-5	*2*	*2.07*	*1.572*	*0.150*	*0.97*	*Cum*
	Section 6-6	*2*	*0.83*	*0.936*	*0.150*	*0.23*	*Cum*
	Toe Wall D/S Portion	*1*	*4.00*	*0.750*	*0.300*	*0.90*	*Cum*
	Toe Wall D/S Portion	*1*	*3.70*	*0.450*	*0.450*	*0.75*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.770*	*0.150*	*0.17*	*Cum*
	Toe Wall for resting Brick Edging	*1*	*1.50*	*0.470*	*0.300*	*0.21*	*Cum*
	TOTAL					**5.53**	**Cum**
3	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Abutment						
	Section 1-1	*2*	*0.75*	*0.450*	*0.450*	*0.30*	*Cum*
		2	*0.75*	*0.786*	*1.120*	*1.31*	*Cum*
		2	*0.75*	*1.272*	*0.500*	*0.95*	*Cum*
	Section 2-2	*2*	*2.25*	*0.450*	*0.450*	*0.91*	*Cum*
		2	*2.25*	*0.603*	*0.510*	*1.38*	*Cum*
		2	*2.25*	*0.906*	*0.500*	*2.04*	*Cum*
	Section 3-3	*2*	*1.96*	*0.450*	*0.450*	*0.79*	*Cum*
		2	*1.96*	*0.543*	*0.310*	*0.66*	*Cum*
		2	*1.96*	*0.786*	*0.500*	*1.54*	*Cum*
	Section 5-5	*2*	*2.02*	*0.450*	*0.450*	*0.82*	*Cum*
		2	*2.02*	*0.786*	*1.120*	*3.56*	*Cum*
		2	*2.02*	*1.272*	*0.500*	*2.57*	*Cum*
	Section 6-6	*2*	*1.22*	*0.450*	*0.450*	*0.50*	*Cum*
		2	*1.22*	*0.543*	*0.310*	*0.41*	*Cum*
		2	*1.22*	*0.786*	*0.500*	*0.96*	*Cum*
	Floor	*1*	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
		1	*4.25*	*0.470*	*0.500*	*1.00*	*Cum*
		1	*0.55*	*0.470*	*0.200*	*0.05*	*Cum*
		1	*0.20*	*0.470*	*0.400*	*0.04*	*Cum*
		1	*2.30*	*0.470*	*0.500*	*0.54*	*Cum*
		1	*0.63*	*0.470*	*0.700*	*0.21*	*Cum*
	Crest	*1*	*0.73*	*0.470*	*0.830*	*0.28*	*Cum*
	TOTAL					**21.03**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-250 with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	Over Crest	*1*	*0.60*	*0.470*	*0.150*	*0.04*	*Cum*
	Coping over Abutment Top						
	On Abutment Top (Left Side)	*1*	*8.87*	*0.450*	*0.050*	*0.20*	*Cum*
	On Abutment Top (Right Side)	*1*	*8.87*	*0.450*	*0.050*	*0.20*	*Cum*
	TOTAL					**0.44**	**Cum**
5	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	**21.03**	**0.00**	**0.063**	**7850.0**	**495.27**	**Kg**
	Total Weight in Metric Tonne					**0.50**	**MT**
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	*4*	*0.75*		*0.450*	*1.34*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*0.75*		*1.120*	*3.34*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*0.75*		*0.500*	*1.49*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 2-2	*4*	*2.25*		*0.450*	*4.05*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.25*		*0.510*	*4.59*	*Sqm*
		4		*0.603*	*0.510*	*1.23*	*Sqm*
		4	*2.25*		*0.500*	*4.50*	*Sqm*
		4		*0.906*	*0.500*	*1.81*	*Sqm*
	Section 3-3	*4*	*1.96*		*0.450*	*3.52*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.96*		*0.310*	*2.43*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.96*		*0.500*	*3.91*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Section 5-5	*4*	*2.02*		*0.450*	*3.64*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*2.02*		*1.120*	*9.06*	*Sqm*
		4		*0.786*	*1.120*	*3.52*	*Sqm*
		4	*2.02*		*0.500*	*4.04*	*Sqm*
		4		*1.272*	*0.500*	*2.54*	*Sqm*
	Section 6-6	*4*	*1.22*		*0.450*	*2.20*	*Sqm*
		4		*0.450*	*0.450*	*0.81*	*Sqm*
		4	*1.22*		*0.310*	*1.52*	*Sqm*
		4		*0.543*	*0.310*	*0.67*	*Sqm*
		4	*1.22*		*0.500*	*2.45*	*Sqm*
		4		*0.786*	*0.500*	*1.57*	*Sqm*
	Floor	*2*	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
		2	*4.25*		*0.500*	*4.25*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.55*		*0.200*	*0.22*	*Sqm*
		2		*0.470*	*0.200*	*0.19*	*Sqm*
		2	*0.20*		*0.400*	*0.16*	*Sqm*
		2		*0.470*	*0.400*	*0.38*	*Sqm*
		2	*2.30*		*0.500*	*2.30*	*Sqm*
		2		*0.470*	*0.500*	*0.47*	*Sqm*
		2	*0.63*		*0.700*	*0.88*	*Sqm*
		2		*0.470*	*0.700*	*0.66*	*Sqm*
	Crest	*2*	*0.73*		*0.830*	*1.21*	*Sqm*
		2		*0.470*	*0.830*	*0.78*	*Sqm*
	Toe Wall D/S Portion	*2*	*4.00*		*0.300*	*2.40*	*Sqm*
		2		*0.750*	*0.300*	*0.45*	*Sqm*
	Toe Wall D/S Portion	*2*	*3.70*		*0.450*	*3.33*	*Sqm*
		2		*0.450*	*0.450*	*0.41*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.150*	*0.90*	*Sqm*
		4		*0.770*	*0.150*	*0.46*	*Sqm*
	Toe Wall for resting Brick Edging	*4*	*1.50*		*0.300*	*1.80*	*Sqm*
		4		*0.470*	*0.300*	*0.56*	*Sqm*
	TOTAL					**99.60**	**Sqm**
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	In D/S Portion On Slopes	*2*	*1.50*	*1.710*		*5.13*	*Sqm*
	TOTAL					**5.13**	**Sqm**
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	On Abutment Top (Left Side)	*1*	*8.87*	*0.450*		*3.99*	*Sqm*
	On Abutment Top (Right Side)	*1*	*8.87*	*0.450*		*3.99*	*Sqm*
	TOTAL					**7.98**	**Sqm**
11	Providing Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.						
		1	2.00			**2.00**	**No.**
12	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Under U/S floor	1		1.387		1.39	**Cum**
	Abutment						
	Section 1-1	2	*0.97*	*0.485*		*0.942*	*Cum*
	Section 2-2	2	*2.25*	*0.464*		*2.088*	*Cum*
	Section 3-3	2	*2.20*	*0.324*		*1.426*	*Cum*
	Section 5-5	2	*2.07*	*0.485*		*2.003*	*Cum*
	Section 6-6	2	*0.83*	*0.324*		*0.538*	*Cum*
	D/S protection	2					
	Toe wall	2	*4.00*	*0.150*	*0.450*	*1.200*	*Cum*
		2	*1.50*	0.150	*0.450*	*0.203*	*Cum*
	TOTAL					**9.79**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS OF MAHAUWAN SUB-DY.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
Cross Drainage at Ch. 5.250 K.M									
1	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	161.30	Cum	**149.30**	24082.45			
2	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	66.77	Cum	**6381.70**	426099.72	21.63	30.05	60.09
3	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	85.30	Cum	**6914.20**	589800.05	35.19	36.68	73.36
4	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	463.15	Sqm	**578.60**	267980.80			
5	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	25.00	RM	**7015.86**	175396.50			
6	**5.6.2.6**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	25.00	RM	**2047.70**	51192.61			
7	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	1.67	MT	**73574.90**	123169.23			
8	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	72.28	Cum	**195.20**	14108.74			
9		**Carriage of materials**							
		Coarse Sand 30 Km lead)	66.73	Cum	**1159.00**	77335.69			
		Coarse Aggregates (100 Km lead)	133.45	Cum	**1075.00**	143461.37			
		Cement (30 km lead)	56.82	MT	**742.00**	42160.83			
		Steel (30 Km lead)	1.67	MT	**742.00**	1242.16			
		Hume Pipe (30 Km)	25.00	RM	**919.00**	22975.00			
TOTAL (In Rs.)						**₹ 19,59,005.15**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	66.73	Cum	**584.64**	39010.82	3901.08		
		Coarse Aggregate	133.45	Cum	**944.26**	126013.80	12601.38		
		Total					**16502.46**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS OF MAHAUWAN SUB-DY.							
Cross Drainage at Ch. 5.250 Km							
S. No.	**Item of Works**	**No.**		**Width**	**Height**	**Qty.**	**Unit**
1	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.72*	*0.97*	*1.23*	*13.95*	*Cum*
		1	*7.91*	*3.63*	*1.23*	*35.30*	*Cum*
	Middle Portion	*1*	*4.08*	*12.13*		*49.49*	*Cum*
	Right Portion	*1*	*11.70*	*0.96*	*2.52*	*28.21*	*Cum*
		1	*7.90*	*3.63*	*1.20*	*34.34*	*Cum*
	TOTAL					**161.30**	**Cum**
3	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.						
	300 mm Thick Left Abutment	*1*	*11.72*	*0.97*	*0.30*	*3.41*	*Cum*
		1	*7.91*	*3.63*	*0.30*	*8.61*	*Cum*
	300 mm Thick Right Abutment	*1*	*11.70*	*0.96*	*0.30*	*3.37*	*Cum*
		1	*7.90*	*3.63*	*0.30*	*8.61*	*Cum*
	Below Pipe Section	*1*	*12.50*	*4.08*	*0.30*	*15.30*	*Cum*
		1	*12.50*	*1.23*		*15.33*	*Cum*
	200 mm Thick Left and Right Portion Well	*2*	*6.58*	*2.50*	*0.20*	*6.58*	*Cum*
	Pipe Section	*4*	*0.30*	*3.98*	*1.94*	*9.27*	*Cum*
	Deduct Area of Pipe	*4*	*0.30*	*3.08*		*-3.69*	*Cum*
	TOTAL					**66.77**	**Cum**
4	Providing & laying P.C.C. or **R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Portion Retaining Wall (Section C-C)	*2*	*11.42*	*0.30*	*0.20*	*1.37*	*Cum*
		2	*11.42*	*0.48*	*1.23*	*13.60*	*Cum*
	U/S Portion Retaining Wall (Section D-D)	*2*	*4.66*	*0.30*	*0.50*	*1.40*	*Cum*
		2	*4.66*	*0.71*	*2.76*	*18.37*	*Cum*
	U/S Portion Retaining Wall (Avg. section)	*2*	*4.03*	*0.30*	*0.35*	*0.85*	*Cum*
		2	*4.03*	*0.60*	*1.99*	*9.62*	*Cum*
	D/S Portion Retaining Wall (Section F-F)	*2*	*11.70*	*0.30*	*0.20*	*1.40*	*Cum*
		2	*11.70*	*0.48*	*1.20*	*13.44*	*Cum*
	D/S Portion Retaining Wall (Section E-E)	*2*	*4.66*	*0.30*	*0.50*	*1.40*	*Cum*
		2	*4.66*	*0.72*	*2.77*	*18.51*	*Cum*
	D/S Portion Retaining Wall (Avg. section)	*2*	*4.03*	*0.60*	*1.99*	*9.56*	*Cum*
		2	*4.03*	*0.30*	*0.35*	*0.85*	*Cum*
	Deduct Area of Pipe (Section D-D & Section E-E)	*2*	*0.82*	*3.077*		*-5.06*	*Cum*
	TOTAL					**85.30**	**Cum**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
5	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
	300 mm Thick Left Abutment	2	*11.72*		*0.30*	7.03	*Sqm*
		2		*0.97*	*0.30*	0.58	*Sqm*
		2	7.91		0.30	4.75	*Sqm*
		2		3.63	0.30	2.18	*Sqm*
	300 mm Thick Right Abutment	2	*11.70*		*0.30*	7.02	*Sqm*
		2		*0.96*	*0.30*	0.58	*Sqm*
		2	7.90		0.30	4.74	*Sqm*
		2		3.63	0.30	2.18	*Sqm*
	200 mm Thick Left and Right Portion Well	4	6.58		0.20	5.26	*Sqm*
		4		2.50	0.20	2.00	*Sqm*
	Pipe Section	8	0.30		1.94	4.66	*Sqm*
		8		3.98	1.94	61.77	*Sqm*
	U/S Portion Retaining Wall (Section C-C)	4	*11.42*		*0.20*	9.13	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
		4	*11.42*		*1.23*	56.13	*Sqm*
		4		0.48	1.23	2.38	*Sqm*
	U/S Portion Retaining Wall (Section D-D)	4	4.66		0.50	9.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
		4	4.66		2.76	51.46	*Sqm*
		4		0.71	2.76	7.88	*Sqm*
	U/S Porion Retaining Wall (Avg. section)	4	4.03		0.35	5.64	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
		4	4.03		1.99	32.12	*Sqm*
		4		0.60	1.99	4.78	*Sqm*
	D/S Portion Retaining Wall (Section E-E)	4	4.66		2.77	51.70	*Sqm*
		4		0.72	2.77	7.94	*Sqm*
		4	4.66		0.50	9.32	*Sqm*
		4		0.30	0.50	0.60	*Sqm*
	D/S Portion Retaining Wall (Section F-F)	4	11.70		1.20	56.06	*Sqm*
		4		0.48	1.20	2.30	*Sqm*
		4	11.70		0.20	9.36	*Sqm*
		4		0.30	0.20	0.24	*Sqm*
	D/S Portion Retaining Wall (Avg. section)	4	4.03		1.99	31.99	*Sqm*
		4		0.60	1.99	4.75	*Sqm*
		4	4.03		0.35	5.64	*Sqm*
		4		0.30	0.35	0.42	*Sqm*
	TOTAL					**463.15**	***Sqm***
6	Providing 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I						
	1.2 m dia pipe	*10*	*2.50*			*25.00*	*RM*
	TOTAL					**25.00**	**RM**
7	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	*85.30*	*0.0025*	*0.213*	*7850.00*	*1674.066*	*Kg*
	TOTAL					*1674.066*	*Kg*
	TOTAL					**1.67**	**M.T.**

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
8	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	Left Portion	*1*	*11.72*	*0.41*		*4.79*	*Cum*
		1	*5.72*	*1.33*		*7.60*	*Cum*
	Middle Portion	*1*	*3.66*	*13.01*		*47.62*	*Cum*
	Right Portion	*1*	*11.70*	*0.40*		*4.62*	*Cum*
		1	*5.72*	*1.34*		*7.64*	*Cum*
	TOTAL					**72.28**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF PIPE CULVERT OF MAHAUWAN SUB-DY.									
	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR PIPE CULVERT AT KM 6.000									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	70.000	Sqm	**11.80**	826.31			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	53.344	Cum	**156.50**	8348.36			
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.73	Cum	**6381.70**	119509.28	6.07	8.43	16.85
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	21.818	Cum	**6914.20**	150853.38	9.00	9.38	18.76
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	118.304	Sqm	**578.60**	68450.55			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.43	MT	**73574.90**	31503.04			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.80	Cum	**694.61**	1250.30			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.80	Cum	**1237.00**	2226.60			
9	M-150 RCD	Supplying 900 mm NP3 Pipe	7.50	Rm	**4849.67**	36372.53			
10	5.6.2.5	Labour Charges for Laying of 900 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.03	Sqm	**680.10**	4781.10			

	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.45	Cum	**149.30**	4098.76			
14	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.02	Cum	**5021.30**	5121.73	0.12	0.33	
15	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.780	Sqm	**340.20**	1966.36	0.30	0.08	
16	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.380	Sqm	**63.20**	150.42	0.004		
17		Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	10.88	Cum	**149.30**	1624.38			
		Coarse Sand (60 Km lead)	18.220	Cum	**1075.00**	19586.05			
		Coarse Aggregates (100 Km lead)	35.618	Cum	**1398.00**	49793.38			
		Cement (30 km lead)	15.488	MT	**742.00**	11492.17			
		Steel (30 km lead)	0.428	MT	**742.00**	317.71			
		Boulder (60 km lead)	1.800	Cum	**1159.00**	2086.20			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
		TOTAL (In Rs.)				**545454.37**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	18.22	Cum	**584.64**	10651.90	1065.19		
		Coarse Aggregate	35.62	Cum	**944.26**	33632.26	3363.23		
		Boulder	1.80	Cum	**694.61**	1250.30	125.03		
		Total					**4553.45**		

	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR PIPE CULVERT AT KM 6.740									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	50.000	Sqm	**11.80**	590.22			
2	5.1.8	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	53.344	Cum	**156.50**	8348.36	6.07	8.43	16.85
3	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	18.73	Cum	**6381.70**	119509.28	9.00	9.38	18.76
4	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	21.818	Cum	**6914.20**	150853.38			
5	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	118.304	Sqm	**578.60**	68450.55			
6	5.3.22	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.	0.43	MT	**73574.90**	31503.04			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.80	Cum	**694.61**	1250.30			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.80	Cum	**1237.00**	2226.60			
9	M-150 RCD	Supplying 900 mm NP3 Pipe	7.50	Rm	**4849.67**	36372.53			
10	5.6.1	Labour Charges for Laying of 900 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	Rm	**1713.33**	12849.98			
11	13.08 RCD	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8.00	Rm	**152.60**	1220.80			
12	5.7.16	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	7.03	Sqm	**680.10**	4781.10			

	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
13	5.1.31	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	27.45	Cum	**149.30**	4098.76	0.12	0.33	
14	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.02	Cum	**5021.30**	5121.73	0.087	0.116	
15	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	5.780	Sqm	**340.20**	1966.36	0.00		
16	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	2.380	Sqm	**63.20**	150.42			
17		**Carriage of materials**							
		Coarse Sand (60 Km lead)	18.251	Cum	**1075.00**	19619.60			
		Coarse Aggregates (100 Km lead)	35.618	Cum	**1398.00**	49793.38			
		Cement (30 km lead)	15.275	MT	**742.00**	11334.17			
		Steel (30 km lead)	0.428	MT	**742.00**	317.71			
		Boulder (60 km lead)	1.800	MT	**1159.00**	2086.20			
		Hume Pipe (30 Km Lead)	7.500	Rm	**1470.00**	11025.00			
TOTAL (In Rs.)						**543469.46**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	18.25	Cum	**584.64**	10670.14	1067.01		
		Coarse Aggregate	35.62	Cum	**944.26**	33632.26	3363.23		
		Boulder (60 km lead)	1.80	Cum	**694.61**	1250.30	125.03		
		Total					**4555.27**		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 6.000 OF MAHAUWAN SUB-DY.

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*	*70.00*			**70.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.51*	*0.85*	*1.20*	*0.52*	*Cum*
	D/S Toe Wall	*1*	*0.51*	*0.85*	*1.20*	*0.52*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*1.20*	*1.31*	*Cum*
		2	*2.37*	*1.71*	*1.20*	*9.70*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.37*	*1.01*	*2.01*	*9.58*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*1.20*	*1.28*	*Cum*
		2	*2.85*	*1.70*	*1.20*	*11.60*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.85*	*1.01*	*2.01*	*11.50*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*0.72*	*0.45*	*0.66*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*0.72*	*0.45*	*0.82*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**53.34**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.51*	*0.85*	*0.30*	*0.13*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.51*	*0.45*	*0.90*	*0.21*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.51*	*0.85*	*0.30*	*0.13*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.51*	*0.45*	*0.90*	*0.21*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*0.72*	*0.45*	*0.66*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*0.72*	*0.45*	*0.82*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*2.37*	*1.71*	*0.30*	*2.43*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*0.30*	*0.32*	*Cum*
		2	*2.85*	*1.70*	*0.30*	*2.90*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.70*	*0.35*	*4.46*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.60*	*0.33*	*2.98*	*Cum*
	TOTAL					**18.73**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.55*	*0.60*	*0.90*	*0.59*	*Cum*
		2	*0.55*	*0.45*	*0.31*	*0.15*	*Cum*
		2	*0.55*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.37*	*1.31*	*0.90*	*5.57*	*Cum*
		2	*2.37*	*1.11*	*0.31*	*1.63*	*Cum*
		2	*2.37*	*0.72*	*0.50*	*1.72*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.53*	*0.60*	*0.90*	*0.58*	*Cum*
		2	*0.53*	*0.45*	*0.31*	*0.15*	*Cum*
		2	*0.53*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section E-E & Section G-G	*2*	*2.85*	*1.30*	*0.90*	*6.65*	*Cum*
		2	*2.85*	*1.10*	*0.31*	*1.95*	*Cum*
		2	*2.85*	*0.72*	*0.50*	*2.05*	*Cum*
	Collar Joint	*2*	*1.60*	*0.30*	*1.47*	*1.41*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.95*		*-0.95*	*Cum*
	TOTAL					**21.82**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.51*		*0.90*	*0.92*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.51*		*0.90*	*0.92*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*0.72*	*0.45*	*0.65*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.72*	*0.45*	*0.65*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.55*		*0.30*	*0.66*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.37*		*0.30*	*2.84*	*Sqm*
		4		*1.71*	*0.30*	*2.05*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	D/S Transitions Floor (Left & Right)	*4*	*0.53*		*0.30*	*0.64*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.85*		*0.30*	*3.42*	*Sqm*
		4		*1.70*	*0.30*	*2.04*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.55*		*0.90*	*1.97*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.55*		*0.31*	*0.68*	*Sqm*
		4		*0.45*	*0.31*	*0.56*	*Sqm*
		4	*0.55*		*0.50*	*1.09*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.37*		*0.90*	*8.53*	*Sqm*
		4		*1.31*	*0.90*	*4.70*	*Sqm*
		4	*2.37*		*0.31*	*2.94*	*Sqm*
		4		*1.11*	*0.31*	*1.37*	*Sqm*
		4	*2.37*		*0.50*	*4.74*	*Sqm*
		4		*0.72*	*0.50*	*1.45*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.53*		*0.90*	*1.92*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.53*		*0.31*	*0.66*	*Sqm*
		4		*0.45*	*0.31*	*0.56*	*Sqm*
		4	*0.53*		*0.50*	*1.07*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*2.85*		*0.90*	*10.25*	*Sqm*
		4		*1.30*	*0.90*	*4.67*	*Sqm*
		4	*2.85*		*0.31*	*3.53*	*Sqm*
		4		*1.10*	*0.31*	*1.37*	*Sqm*
		4	*2.85*		*0.50*	*5.69*	*Sqm*
		4		*0.72*	*0.50*	*1.44*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.70*	*0.35*	*1.19*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.33*	*9.99*	*Sqm*
		4		*0.60*	*0.33*	*0.80*	*Sqm*
	TOTAL					**118.30**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*21.82*	*0.25%*	*0.05*	*7850*	*428.18*	*Kg*
	TOTAL Weight of steel (in kg)					428.18	Kg
	TOTAL Weight of Steel (in Tonne)					**0.43**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**1.80**	**Cum**
8	Providing 900 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.41*	*2.00*		*2.81*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.41*	*3.00*		*4.22*	*Sqm*
	TOTAL					**7.03**	**Sqm**
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.37*	*1.01*	*2.01*	*9.58*	*Cum*
	D/S Transitions Walls	*2*	*2.85*	*1.01*	*2.01*	*11.50*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**27.45**	**Cum**
12	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	1.7	0.5	0.6	*1.02*	*Cum*
	TOTAL					**1.02**	**Cum**
13	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**	**1.7**		**1.7**	**5.78**	*Sqm*
	TOTAL					**5.78**	***Sqm***
14	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**	**1.7**		**0.7**	**2.38**	*Sqm*
	TOTAL					**2.38**	***Sqm***
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
		1	1.70	*6.40*		*10.880*	*Cum*
	TOTAL					**10.88**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 6.740 OF MAHAUWAN SUB DY.						
1	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	*1*		*50.00*		**50.00**	**Sqm**
2	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	U/S Toe Wall	*1*	*0.51*	*0.85*	*1.20*	*0.52*	*Cum*
	D/S Toe Wall	*1*	*0.51*	*0.85*	*1.20*	*0.52*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.90*	*1.62*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.90*	*2.43*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*1.20*	*1.31*	*Cum*
		2	*2.37*	*1.71*	*1.20*	*9.70*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.37*	*1.01*	*2.01*	*9.58*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*1.20*	*1.28*	*Cum*
		2	*2.85*	*1.70*	*1.20*	*11.60*	*Cum*
	Extra for Slope (.5:1)	*2*	*2.85*	*1.01*	*2.01*	*11.50*	*Cum*
	C.C Floor Apron in (U/S Portion)	*1*	*2.05*	*0.72*	*0.45*	*0.66*	*Cum*
	C.C Floor Apron in (D/S Portion)	*1*	*2.55*	*0.72*	*0.45*	*0.82*	*Cum*
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**53.34**	**Cum**
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	PCC Below U/S Curtain Wall	*1*	*0.51*	*0.85*	*0.30*	*0.13*	*Cum*
	U/S Curtain Wall Stem	*1*	*0.51*	*0.45*	*0.90*	*0.21*	*Cum*
	PCC Below D/S Curtain Wall	*1*	*0.51*	*0.85*	*0.30*	*0.13*	*Cum*
	D/S Curtain Wall Stem	*1*	*0.51*	*0.45*	*0.90*	*0.21*	*Cum*
	U/S Toe Wall Base (For Resting Brick Pitching)	*2*	*2.00*	*0.45*	*0.30*	*0.54*	*Cum*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*2.00*	*0.30*	*0.60*	*0.72*	*Cum*
	D/S Toe Wall Base (For Resting Brick Pitching)	*2*	*3.00*	*0.45*	*0.30*	*0.81*	*Cum*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*2*	*3.00*	*0.30*	*0.60*	*1.08*	*Cum*
	Floor Apron (U/S Portion)	*1*	*2.05*	*0.72*	*0.45*	*0.66*	*Cum*
	Floor Apron (D/S Portion)	*1*	*2.55*	*0.72*	*0.45*	*0.82*	*Cum*
	U/S Transitions Floor (Left & Right)	*2*	*0.55*	*1.00*	*0.30*	*0.33*	*Cum*
		2	*2.37*	*1.71*	*0.30*	*2.43*	*Cum*
	D/S Transitions Floor (Left & Right)	*2*	*0.53*	*1.00*	*0.30*	*0.32*	*Cum*
		2	*2.85*	*1.70*	*0.30*	*2.90*	*Cum*
	PCC Below Hume Pipe	*1*	*7.50*	*1.70*	*0.35*	*4.46*	*Cum*
	PCC Below Hume Pipe in (Curve Portion)	*2*	*7.50*	*0.60*	*0.33*	*2.98*	*Cum*
	TOTAL					**18.73**	**Cum**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
4	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
	U/S Transition Walls (Left & Right)						
	Section D-D	*2*	*0.55*	*0.60*	*0.90*	*0.59*	*Cum*
		2	*0.55*	*0.45*	*0.31*	*0.15*	*Cum*
		2	*0.55*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section A-A & Section C-C	*2*	*2.37*	*1.31*	*0.90*	*5.57*	*Cum*
		2	*2.37*	*1.11*	*0.31*	*1.63*	*Cum*
		2	*2.37*	*0.72*	*0.50*	*1.72*	*Cum*
	D/S Transition Walls (Left & Right)						
	Section H-H	*2*	*0.53*	*0.60*	*0.90*	*0.58*	*Cum*
		2	*0.53*	*0.45*	*0.31*	*0.15*	*Cum*
		2	*0.53*	*0.30*	*0.50*	*0.16*	*Cum*
	Average of Section E-E & Section G-G	*2*	*2.85*	*1.30*	*0.90*	*6.65*	*Cum*
		2	*2.85*	*1.10*	*0.31*	*1.95*	*Cum*
		2	*2.85*	*0.72*	*0.50*	*2.05*	*Cum*
	Collar Joint	*2*	*1.60*	*0.30*	*1.47*	*1.41*	*Cum*
	Deduct Hume Pipe Area	*1*		*0.95*		*-0.95*	*Cum*
	TOTAL					**21.82**	**Cum**
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	*2*	*0.51*		*0.90*	*0.92*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	D/S Curtain Wall Stem	*2*	*0.51*		*0.90*	*0.92*	*Sqm*
		2		*0.45*	*0.90*	*0.81*	*Sqm*
	U/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*2.00*		*0.60*	*4.80*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	D/S Toe Wall Stem (For Resting Brick Pitching)	*4*	*3.00*		*0.60*	*7.20*	*Sqm*
		4		*0.30*	*0.60*	*0.72*	*Sqm*
	Floor Apron (U/S Portion)	*2*	*2.05*		*0.45*	*1.85*	*Sqm*
		2		*0.72*	*0.45*	*0.65*	*Sqm*
	Floor Apron (D/S Portion)	*2*	*2.55*		*0.45*	*2.30*	*Sqm*
		2		*0.72*	*0.45*	*0.65*	*Sqm*
	U/S Transitions Floor (Left & Right)	*4*	*0.55*		*0.30*	*0.66*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.37*		*0.30*	*2.84*	*Sqm*
		4		*1.71*	*0.30*	*2.05*	*Sqm*
	D/S Transitions Floor (Left & Right)	*4*	*0.53*		*0.30*	*0.64*	*Sqm*
		4		*1.00*	*0.30*	*1.20*	*Sqm*
		4	*2.85*		*0.30*	*3.42*	*Sqm*
		4		*1.70*	*0.30*	*2.04*	*Sqm*
	U/S Transition Walls (Left & Right)						
	Section D-D	*4*	*0.55*		*0.90*	*1.97*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.55*		*0.31*	*0.68*	*Sqm*
		4		*0.45*	*0.31*	*0.56*	*Sqm*
		4	*0.55*		*0.50*	*1.09*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section A-A & Section C-C	*4*	*2.37*		*0.90*	*8.53*	*Sqm*

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		*1.31*	*0.90*	*4.70*	*Sqm*
		4	*2.37*		*0.31*	*2.94*	*Sqm*
		4		*1.11*	*0.31*	*1.37*	*Sqm*
		4	*2.37*		*0.50*	*4.74*	*Sqm*
		4		*0.72*	*0.50*	*1.45*	*Sqm*
	D/S Transition Walls (Left & Right)						
	Section H-H	*4*	*0.53*		*0.90*	*1.92*	*Sqm*
		4		*0.60*	*0.90*	*2.16*	*Sqm*
		4	*0.53*		*0.31*	*0.66*	*Sqm*
		4		*0.45*	*0.31*	*0.56*	*Sqm*
		4	*0.53*		*0.50*	*1.07*	*Sqm*
		4		*0.30*	*0.50*	*0.60*	*Sqm*
	Average of Section E-E & Section G-G	*4*	*2.85*		*0.90*	*10.25*	*Sqm*
		4		*1.30*	*0.90*	*4.67*	*Sqm*
		4	*2.85*		*0.31*	*3.53*	*Sqm*
		4		*1.10*	*0.31*	*1.37*	*Sqm*
		4	*2.85*		*0.50*	*5.69*	*Sqm*
		4		*0.72*	*0.50*	*1.44*	*Sqm*
	PCC Below Hume Pipe	*2*	*7.50*		*0.35*	*5.25*	*Sqm*
		2		*1.70*	*0.35*	*1.19*	*Sqm*
	Deduct Hume Pipe Area	*4*	*7.50*		*0.33*	*9.99*	*Sqm*
		4		*0.60*	*0.33*	*0.80*	*Sqm*
	TOTAL					**118.30**	**Sqm**
6	Providing M.S. reinforcement as per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	*21.82*	*0.25%*	*0.05*	*7850*	*428.18*	*Kg*
	TOTAL Weight of steel (in kg)					428.18	Kg
	TOTAL Weight of Steel (in Tonne)					**0.43**	**MT**
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	Launching Apron in U/S Portion	*1*	*2.00*	*0.60*	*0.60*	*0.72*	*Cum*
	Launching Apron in D/S Portion	*1*	*3.00*	*0.60*	*0.60*	*1.08*	*Cum*
	TOTAL					**1.80**	**Cum**
8	Providing 900 mm RCC NP3 pipe	3		2.50		7.5	Rm
	TOTAL					**7.50**	**Rm**
9	Providing weepholes in brick masonry/stone masonry, plain/reinforced concrete abutment, wing wall, return wall with 90 mm dia PVC pipe extending through the full width of the structures with slope of 1(V):20(H) towards drawing face complete as per drawing	8				**8.00**	**No.**
10	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	On Slopes in U/S Portion	*1*	*1.41*	*2.00*		*2.81*	*Sqm*
	On Slopes in D/S Portion	*1*	*1.41*	*3.00*		*4.22*	*Sqm*
	TOTAL					**7.03**	**Sqm**

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	U/S Transitions Walls	*2*	*2.37*	*1.01*	*2.01*	*9.58*	*Cum*
	D/S Transitions Walls	*2*	*2.85*	*1.01*	*2.01*	*11.50*	*Cum*
	Above Hume Pipe	*1*		*6.38*		*6.38*	*Cum*
	TOTAL					**27.45**	**Cum**
12	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.						
	Parapet	2	1.7	0.5	0.6	*1.02*	*Cum*
	TOTAL					**1.02**	**Cum**
13	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.						
	Parapet	**2**		**1.7**	**1.7**	**5.78**	*Sqm*
	TOTAL					**5.78**	***Sqm***
14	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	Parapet top	**2**		**1.7**	**0.7**	**2.38**	*Sqm*
	TOTAL					**2.38**	***Sqm***
15	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
		1	1.70	*6.40*		*10.880*	*Cum*
	TOTAL					**10.88**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MAHAUWAN SUB DY.			
Sl. No.	**Structure Type**	**Chainage In Km**	**Amount (In Rs.)**
1	FALL (1.220 M)	0.200	₹ 1,652.61
2	FALL (1.220 M)	0.450	₹ 1,12,366.02
3	FALL (1.220 M)	0.750	₹ 1,14,433.10
4	CULVERT + FALL (0.610 M)	0.900	₹ 3,672.00
5	FALL (0.610 M)	1.050	₹ 1,05,298.80
6	FALL (1.067 M)	1.150	₹ 27,590.29
7	FALL (0.610 M)	1.420	₹ 1,05,652.93
8	FALL (1.070 M)	1.700	₹ 1,12,707.22
9	FALL (0.900 M)	1.925	₹ 0.00
10	CULVERT	1.955	₹ 21,200.44
11	NEW FALL (0.914 M)	2.000	₹ 0.00
12	FALL (1.220 M)	2.500	₹ 67,012.14
13	FALL (0.914 M)	2.750	₹ 49,399.53
14	NEW FALL (0.762 M)	3.000	₹ 0.00
15	FALL (0.914 M)/ CULVERT	3.450	₹ 79,704.19
16	FALL (1.220 M)	3.900	₹ 0.00
17	BRIDGE	4.065	₹ 0.00
18	FALL (0.900 M)	4.150	₹ 0.00
19	FALL (1.220 M) + NEW CULVERT	4.300	₹ 68,966.95
20	FALL (1.220 M)	4.650	₹ 59,549.05
21	CULVERT	4.890	₹ 0.00
22	FALL (1.00 M)	5.025	₹ 29,104.61
25	PROP. SYPHON AQUEDUCT	5.250	₹ 0.00
26	NEW FALL (0.610 M)	5.928	₹ 0.00
27	PRO. PIPE CULVERT	6.000	₹ 0.00
28	NEW FALL (0.914 M)	6.185	₹ 0.00
29	NEW FALL (0.610 M)	6.436	₹ 0.00
30	PRO. PIPE CULVERT	6.740	₹ 0.00
31	NEW FALL (0.610 M)	6.808	₹ 0.00
Total In Rs.			**₹ 9,58,309.88**
Total In Lakhs.			**₹ 9.58**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	**APPROACH ROAD**	**NOS.**	**Amount (In Rs.)**
1		2.000	₹ 10,42,037.10
Total In Rs.			**₹ 10,42,037.10**
Total In Lakhs.			**₹ 10.42**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF MAHAUWAN SUB DY.									
S. No.	**Ref**	**Item of Works**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
AOC FOR FALL (Ch.-0.200 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	140.000	Sqm	**11.80**	1652.61			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
TOTAL (In Rs.)						**1652.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
AOC FOR FALL (Ch.-0.450 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	11.713	Cum	**6914.20**	80989.23	4.83	5.04	10.07
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	11.887	Sqm	**578.60**	6877.65			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	5.037	Cum	**1075.00**	5414.55			
		Coarse Aggregates (100 Km lead)	10.074	Cum	**1398.00**	14082.86			
		Cement (30 km lead)	4.832	MT	**742.00**	3585.20			
TOTAL (In Rs.)						**112366.02**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	5.04	Cum	**584.64**	2944.71	294.47		
		Coarse Aggregate	10.07	Cum	**944.26**	9512.08	951.21		
		Total					**1245.68**		
AOC FOR FALL (Ch.-0.750 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	1.525	Sqm	**11.80**	18.00			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.050	Cum	**6914.20**	69487.71	4.15	4.32	8.64
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	43.420	Sqm	**578.60**	25122.81			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.322	Cum	**1075.00**	4645.61			
		Coarse Aggregates (100 Km lead)	8.643	Cum	**1398.00**	12082.91			
		Cement (30 km lead)	4.146	MT	**742.00**	3076.05			
TOTAL (In Rs.)						**114433.10**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.32	Cum	**584.64**	2526.52	252.65		
		Coarse Aggregate	8.64	Cum	**944.26**	8161.24	816.12		
		Total					**1068.78**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
		AOC FOR FOR CULVERT(Ch.-0.900 Km)							
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	8.400	Sqm	**340.20**	2857.68	0.126	0.168	
2	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	8.400	Sqm	**63.20**	530.88	0.01		
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.168	Cum	**1075.00**	180.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.139	MT	**742.00**	102.84			
		Brick (15 km lead)	0.00	No.	3.17	0.00			
		TOTAL (In Rs.)				**3672.00**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.17	Cum	**584.64**	98.22	9.82		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**9.82**		
		AOC FOR FALL (Ch.-1.050 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	120.000	Sqm	**11.80**	1416.53			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.933	Cum	**6914.20**	75589.95	4.51	4.70	9.40
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	11.664	Sqm	**578.60**	6748.55			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.701	Cum	**1075.00**	5053.58			
		Coarse Aggregates (100 Km lead)	9.402	Cum	**1398.00**	13144.01			
		Cement (30 km lead)	4.510	MT	**742.00**	3346.19			
		TOTAL (In Rs.)				**105298.80**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.70	Cum	**584.64**	2748.39	274.84		
		Coarse Aggregate	9.40	Cum	**944.26**	8877.94	887.79		
		Total					**1162.63**		
		AOC FOR FALL (Ch.-1.150 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	130.000	Sqm	**11.80**	1534.57			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	2.742	Cum	**6914.20**	18959.45	1.13	1.18	2.36
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	2.925	Sqm	**578.60**	1692.67			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	1.179	Cum	**1075.00**	1267.54			
		Coarse Aggregates (100 Km lead)	2.358	Cum	**1398.00**	3296.78			
		Cement (30 km lead)	1.131	MT	**742.00**	839.29			
		TOTAL (In Rs.)				**27590.29**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	1.18	Cum	**584.64**	689.35	68.94		
		Coarse Aggregate	2.36	Cum	**944.26**	2226.76	222.68		
		Total					**291.61**		

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
AOC FOR FALL (Ch.-1.420 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	10.933	Cum	**6914.20**	75589.95	4.51	4.70	9.40
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	11.664	Sqm	**578.60**	6748.55			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.701	Cum	**1075.00**	5053.58			
		Coarse Aggregates (100 Km lead)	9.402	Cum	**1398.00**	13144.01			
		Cement (30 km lead)	4.510	MT	**742.00**	3346.19			
TOTAL (In Rs.)						**105652.93**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.70	Cum	**584.64**	2748.39	274.84		
		Coarse Aggregate	9.40	Cum	**944.26**	8877.94	887.79		
		Total					**1162.63**		
AOC FOR FALL (Ch.-1.700 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	9.898	Cum	**6914.20**	68433.29	4.08	4.26	8.51
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	42.810	Sqm	**578.60**	24769.87			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	4.256	Cum	**1075.00**	4575.12			
		Coarse Aggregates (100 Km lead)	8.512	Cum	**1398.00**	11899.57			
		Cement (30 km lead)	4.083	MT	**742.00**	3029.38			
TOTAL (In Rs.)						**112707.22**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	4.26	Cum	**584.64**	2488.18	248.82		
		Coarse Aggregate	8.51	Cum	**944.26**	8037.40	803.74		
		Total					**1052.56**		
AOC FOR CULVERT (Ch.-1.955 Km)									
1	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	1.830	Cum	**6914.20**	12652.99	0.75	0.79	1.57
2	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	8.540	Sqm	**578.60**	4941.24			
3		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.787	Cum	**1075.00**	845.92			
		Coarse Aggregates (100 Km lead)	1.574	Cum	**1398.00**	2200.17			
		Cement (30 km lead)	0.755	MT	**742.00**	560.12			
TOTAL (In Rs.)						**21200.44**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.79	Cum	**584.64**	460.05	46.01		
		Coarse Aggregate	1.57	Cum	**944.26**	1486.08	148.61		
		Total					**194.61**		
AOC FOR FALL (Ch.-2.500 Km)									

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	150.000	Sqm	**11.80**	1770.66			
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.838	Cum	**6914.20**	47281.02	2.82	2.94	5.88
3	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.751	Sqm	**578.60**	4484.97			
4		**Carriage of materials**							
		Coarse Sand (60 Km lead)	2.940	Cum	**1075.00**	3160.98			
		Coarse Aggregates (100 Km lead)	5.881	Cum	**1398.00**	8221.49			
		Cement (30 km lead)	2.821	MT	**742.00**	2093.02			
		TOTAL (In Rs.)				**67012.14**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	2.94	Cum	**584.64**	1719.10	171.91		
		Coarse Aggregate	5.88	Cum	**944.26**	5553.09	555.31		
		Total					**727.22**		
		AOC FOR FALL (Ch.-2.750 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	19.819	Cum	**2492.58**	49399.53			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**49399.53**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR FALL / CULVERT (Ch.-3.450 Km)							
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	90.000	Sqm	**11.80**	1062.40			
2	5.4.6	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.	1.05	Cum	**680.10**	714.11	0.12	0.34	
3	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	4.950	Sqm	**340.20**	1683.99	0.074	0.099	
4	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.	4.950	Sqm	**63.20**	312.84	0.01		
5	5.3.4	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	1.23	Cum	**6381.70**	7877.83	0.14	0.40	
6	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	6.838	Cum	**6914.20**	47281.02	2.82	2.94	5.88

S. No.	Ref	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
7	5.3.18	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	7.751	Sqm	**578.60**	4484.97			
8		**Carriage of materials**							
		Coarse Sand (60 Km lead)	3.770	Cum	**1075.00**	4053.25			
		Coarse Aggregates (100 Km lead)	5.881	Cum	**1398.00**	8221.49			
		Cement (30 km lead)	3.166	MT	**742.00**	2348.89			
		Brick (15 km lead)	525.00	No.	3.17	1663.41			
		TOTAL (In Rs.)				**79704.19**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	3.77	Cum	**584.64**	2204.37	220.44		
		Coarse Aggregate	5.88	Cum	**944.26**	5553.09	555.31		
		Total					**775.75**		
		AOC FOR FALL(Ch.-3.900 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR BRIDGE (Ch.-4.065 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL / CULVERT (Ch.-4.300 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	27.669	Cum	**2492.58**	68966.95			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**68966.95**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR FALL / CULVERT (Ch.-4.650 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	23.891	Cum	**2492.58**	59549.05			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**59549.05**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							
		AOC FOR CULVERT (Ch.-4.890 Km)							
1	**Structure is in good condition and does not requir any repair works.**								
		AOC FOR FALL / CULVERT (Ch.-5.025 Km)							
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	11.676	Cum	**2492.58**	29104.61			
2		**Carriage of materials**							
		Coarse Sand (60 Km lead)	0.000	Cum	**1075.00**	0.00			
		Coarse Aggregates (100 Km lead)	0.000	Cum	**1398.00**	0.00			
		Cement (30 km lead)	0.000	MT	**742.00**	0.00			
		TOTAL (In Rs.)				**29104.61**			
		Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
		Coarse Sand	0.00	Cum	**584.64**	0.00	0.00		
		Coarse Aggregate	0.00	Cum	**944.26**	0.00	0.00		
		Total					**0.00**		
		New Fall has been Proposed							

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.200 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				140.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.450 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.						
			1				120.00	Sqm
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		D/S Floor	1	7.00	2.74	0.61	*11.71*	*Cum*
		TOTAL					***11.71***	***Cum***
3	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		D/S Floor	2	7.00		0.61	*8.54*	Sqm
			2		2.74	0.61	*3.35*	Sqm
		TOTAL					**11.89**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.750 Km)								
1	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		U/S Wing wall	1	5.00	0.50	0.61	*1.53*	*Cum*
		TOTAL					***1.53***	***Cum***
2	5.3.5	Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		U/S Wing wall	2	5.00	0.50	0.61	*3.05*	*Cum*
		Abutment left	2	7.00	0.50	1.00	*7.00*	*Cum*
		TOTAL					***10.05***	***Cum***
3	5.3.19	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.						
		U/S Wing wall	4	5.00		0.61	*12.20*	Sqm
			4		0.50	0.61	*1.22*	Sqm
		Abutment left	4	7.00		1.00	*28.00*	Sqm
			4		0.50	1.00	*2.00*	Sqm
		TOTAL					**43.42**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		QUANTITIES OF REPAIRING WORK FOR CULVERT(Ch.-0.900 Km)						
1	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	4.00		2.1	*8.40*	*Sqm*
		TOTAL					**8.40**	***Sqm***
2	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	4.00		2.1	*8.40*	*Sqm*
		TOTAL					**8.40**	***Sqm***
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.050 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**120.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	2.56	0.61	*10.93*	*Cum*
		TOTAL					***10.93***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.61	*8.54*	Sqm
			2		2.56	0.61	*3.12*	Sqm
		TOTAL					**11.66**	**Sqm**
		QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.150 Km)						
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**130.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	2.56	0.153	*2.74*	*Cum*
		TOTAL					***2.74***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.15	*2.14*	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			2		2.56	0.15	*0.78*	Sqm
		TOTAL					**2.93**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.420 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	7.00	2.56	0.61	*10.93*	*Cum*
		TOTAL					***10.93***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	7.00		0.61	*8.54*	Sqm
			2		2.56	0.61	*3.12*	Sqm
		TOTAL					**11.66**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.700 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall left Side	2	4.75	0.50	0.61	*2.90*	*Cum*
		Abutment left	2	7.00	0.50	1.00	*7.00*	*Cum*
		TOTAL					***9.90***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall left Side	4	4.75		0.61	*11.59*	Sqm
			4		0.50	0.61	*1.22*	Sqm
		Abutment left	4	7.00		1.00	*28.00*	Sqm
			4		0.50	1.00	*2.00*	Sqm
		TOTAL					**42.81**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.955 Km)								
1	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		Wing wall Right Side U/S	1	3.00	0.50	0.61	*0.92*	*Cum*

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Wing wall Right Side D/S	1	3.00	0.50	0.61	*0.92*	*Cum*
		TOTAL					***1.83***	***Cum***
2	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		Wing wall Right Side U/S	2	3.00		0.61	*3.66*	Sqm
			2		0.50	0.61	*0.61*	Sqm
		Wing wall Right Side D/S	2	3.00		0.61	*3.66*	Sqm
			2		0.50	0.61	*0.61*	Sqm
		TOTAL					**8.54**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.500 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**150.00**	**Sqm**
2	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.00	2.50	0.456	*6.84*	*Cum*
		TOTAL					***6.84***	***Cum***
3	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	6.00		0.46	*5.47*	Sqm
			2		2.50	0.46	*2.28*	Sqm
		TOTAL					**7.75**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.750 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*5.50*	*0.45*	*1.70*	*8.42*	*Cum*
		Wing wall	*4*	*2.50*	*0.45*	*1.80*	*8.10*	*Cum*
		Crest	*1*	*3.87*	*0.70*	*1.22*	*3.30*	*Cum*
		TOTAL					***19.82***	***Cum***
2		***New Fall has been Proposed***						
QUANTITIES OF REPAIRING WORK FOR FALL / CULVERT (Ch.-3.450 Km)								
1	**5.1.3**	**Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.**						
			1				**90.00**	**Sqm**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2	**5.4.6**	**Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.**						
		Parapet Wall	2	3	0.25	0.7	*1.05*	*Cum*
		TOTAL					**1.05**	**Cum**
3	**5.5.5**	**Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.**						
		Parapet Wall	1	3.00		1.65	*4.95*	*Sqm*
		TOTAL					**4.95**	***Sqm***
4	**5.5.10**	**Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.**						
		Parapet Wall	1	3.00		1.65	*4.95*	*Sqm*
		TOTAL					**4.95**	***Sqm***
5	**5.3.4**	**Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.**						
		Wing walls Top	2	9.14	0.45	0.15	*1.23*	*Cum*
		TOTAL					***1.23***	***Cum***
6	**5.3.5**	**Providing & laying P.C.C. or R.C.C. M-200 with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.**						
		D/S Floor	1	6.00	2.50	0.456	*6.84*	*Cum*
		TOTAL					***6.84***	***Cum***
7	**5.3.19**	**Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.**						
		D/S Floor	2	6.00		0.46	*5.47*	Sqm
			2		2.50	0.46	*2.28*	Sqm
		TOTAL					**7.75**	**Sqm**
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-3.900 Km)								
1		**Structure requires no repair work.**						

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.065 Km)		
1		**Structure requires no repair work.**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL / CULVERT (Ch.-4.300 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*9.00*	*0.45*	*2.00*	*16.20*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*2.00*	*10.80*	*Cum*
		Crest	*1*	*0.91*	*0.60*	*1.22*	*0.67*	*Cum*
		TOTAL					***27.67***	***Cum***
2		***New Fall has been Proposed***						
QUANTITIES OF REPAIRING WORK FOR FALL / CULVERT (Ch.-4.650 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*7.00*	*0.45*	*2.00*	*12.60*	*Cum*
		Wing wall	*4*	*3.00*	*0.45*	*2.00*	*10.80*	*Cum*
		Crest	*1*	*0.67*	*0.60*	*1.22*	*0.49*	*Cum*
		TOTAL					***23.89***	***Cum***
2		***New Fall has been Proposed***						

QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.890 Km)		
1		**Structure requires no repair work.**

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL / CULVERT (Ch.-5.025 Km)								
1	**5.8.9**	**Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.**						
		Abutment	*2*	*5.00*	*0.45*	*1.80*	*8.10*	*Cum*
		Wing wall	*4*	*1.00*	*0.45*	*1.80*	*3.24*	*Cum*
		Crest	*1*	*0.61*	*0.60*	*0.92*	*0.34*	*Cum*
		TOTAL					***11.68***	***Cum***
2		***New Fall has been Proposed***						

ABSTRACT OF QUANTITIES FOR CONSTRUCTION OF APPROACH ROAD								
S. No.	**Item of Works**	**Qty.**	**Unit**	**Rate (As per RCD 2025)**	**Amount (Rs)**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**
1	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m. (RCD SSR Item no. 301)	60.00	Cum	**78.40**	4704.00			
2	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	60.00	Cum	**1044.90**	62694.00			
3	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	15.00	Cum	**6381.70**	95725.50	4.86	6.75	13.50
4	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	30.00	Cum	**6217.20**	186516.00	20.94	10.80	21.90
5	**Carriage of materials**							
	Grading Material (26.5 mm & below)(40 Km lead)	60.000	Cum	**1398.00**	83880.00			
	Coarse Sand (60 Km lead)	17.550	Cum	**1075.00**	18866.25			
	Coarse Aggregates (100 Km lead)	35.400	Cum	**1398.00**	49489.20			
	Cement (30 km lead)	25.800	MT	**742.00**	19143.60			
	TOTAL (In Rs.)				**521018.55**			
	TOTAL (In Rs.)				**₹ 5,21,018.55**			
	Seigniorage @10%			**Rate**	**Amount in Rs.**	**10%**		
	26.50 mm to 9.50 mm	21.00	Cum	**913.48**	19183.08	1918.31		
	9.50 mm TO 4.75 mm	7.50	Cum	**602.28**	4517.10	451.71		
	4.75 mm below	31.50	Cum	**266.62**	8398.53	839.85		
	Coarse Sand	17.55	Cum	**584.64**	10260.43	1026.04		
	Coarse Aggregate	35.40	Cum	**944.26**	33426.80	3342.68		
	Total					**7578.59**		
	For 2 no., Total Seigniorage charges					**15157.19**		

QUANTITIES OF CONSTRUCTION OF GSB ROAD FOR APPROACH ROAD								
S.No.	**Reference Clause**	**Items**	**No.**	**Length**	**Width**	**Height**	**Quantity**	**Unit**
1	RCD SSR Item no. 301	Excavation for road work in soil with hydraulic excavator including cutting and loading in tipper, trimming bottom and side slopes in accordance with requirements of lines grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000m.						
		For Making RAMP						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
2	RCD 4.01 B-II	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.						
		U/S	1	20.00	5.00	0.30	30.00	Cum
		D/S	1	20.00	5.00	0.30	30.00	Cum
		Total					**60.00**	**Cum**
3	5.3.4	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
		U/S	1	20.00	5.00	0.08	7.50	Cum
		D/S	1	20.00	5.00	0.08	7.50	Cum
		Total					**15.00**	**Cum**
4	RCD 14.01 C	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump						
		U/S	1	20.00	5.00	0.15	15.00	Cum
		D/S	1	20.00	5.00	0.15	15.00	Cum
		Total					**30.00**	**Cum**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ANALYSIS OF RATE OF OUTLET GATE			
1	Cost of material **(A)** (Structural Steel WRD M-181)	Rs.	55116.67
2	Wastage **5%** =	Rs.	2755.83
3	Cost of miscellaneous material like electrodes,oxygen, acetylene nut bolt, rope as per site conditions, etc **65 % of (A)**	Rs.	35825.84
	Total 1+2+3= ***(B)*** =	Rs.	93698.34
4	Labour charge 30%(B) =	Rs.	28109.50
5	Overhead charge + Contractor profit **@15% A**	Rs.	8267.50
6	Workshop and energy charge ,**12 % of (B)**	Rs.	11243.80
7	Transportation and erection charge ,**15 % of B**	Rs.	14054.75
	Total = B+4+5+6+7 = ***C***	Rs.	155373.89
8	Other incidental charge , **3 % = of C**	Rs.	4661.22
	Total C+8 = D	Rs.	**160035.11**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND ABSTRACT OF COST FOR CONSTRUCTION OF OUTLET										
Sl. No.	**Reference**	**Name of Item**	**Qty.**	**Unit**	**Rate (As per WRD SOR 2025 & PL 2025)**	**Amount in Rs.**	**Cement (MT)**	**Coarse Sand (Cum)**	**Coarse Aggregate (Cum)**	**Boulders (cum)**
1	**WRD 5.3.9**	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	7.61	Cum	**6381.70**	48564.42	2.47	3.42	6.85	
2	**WRD 5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	8.60	Cum	**3391.40**	29172.74	1.24	3.44		8.60
3	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**220.00**	1650.00				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
4	**WRD 5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	7.50	RM	**238.00**	1785.03				
5	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.								
a.		TMT Grade Fe-500 - 16 mm	0.03	M.T.	**73574.90**	2254.92				
6	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.08	MT	**160035.11**	12687.05				
7	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.89	Cum	**339.90**	302.80				
8		**Carriage of materials**								
		Coarse Sand (60 Km lead)	7.76	Cum	**1075.00**	**8337.83**				
		Coarse Aggregates (100 Km lead)	6.85	Cum	**1398.00**	**9574.84**				
		Cement (30 km lead)	3.70	MT	**742.00**	**2748.60**				
		Boulders (60 km lead)	8.60	Cum	**1159.00**	**9969.69**				
		Steel (30 Km lead)	0.11	M.T.	**742.00**	**81.56**				
		Hume Pipe (30 Km)	7.50	RM	**82.00**	**615.00**				
TOTAL (In Rs.)						**127744.47**				
		Seigniorage @10%			Rate	Amount in Rs.	10%			

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025 & PL 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)
		Coarse Sand	7.76	Cum	**584.64**	4534.54	453.45			
		Coarse Aggregate	6.85	Cum	**944.26**	6467.19	646.72			
		Total					1100.17			
		For 22 nos. outlet, Total Seigniorage charges					**24203.81**			

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
BILL OF QUANTITIES FOR CONSTRUCTION OF OUTLET							
Sl. No.	**Name of Item**	**No.**	**Length (m)**	**Width (m)**	**Height (m)**	**Qty.**	**Unit**
1	Providing & laying **P.C.C. or R.C.C. M-150** with nominal mix of (1:2:4) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification &						
	Toe Wall Base in Canal Portion	*1*	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Coping on Stem of Toe Wall	*1*	*1.50*	*0.45*	*0.075*	*0.05*	*Cum*
	Gate Structure (Section A-B)	*1*	*1.80*	*0.75*	*0.15*	*0.20*	*Cum*
	Coping (Section A-B)	*1*	*1.5*	*0.45*	*0.075*	*0.05*	*Cum*
	Water Course (Section C-D)	*1*	*15.00*	*1.50*	*0.15*	*3.38*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.075*	*0.45*	*Cum*
	Coping above Walls(Section C-D)	*2*	*15*	*0.40*	*0.075*	*0.90*	*Cum*
	Below transition walls	*1*	*1.5*	*1.2*	*0.15*	*0.27*	*Cum*
		1	*1.5*	*0.75*	*0.15*	*0.17*	*Cum*
	Gate Structure (Section A-B)	*2*	*1.50*	*0.45*	*1.21*	*1.63*	*Cum*
	Toe Wall stem	*1*	*1.50*	*0.45*	*0.51*	*0.35*	*Cum*
	TOTAL					***7.61***	*Cum*
2	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.						
	Transition Walls in U/S	*2*	*1.50*	*0.45*	*1.04*	*1.40*	*Cum*
	Water Course (Section C-D)	*2*	*15.00*	*0.40*	*0.60*	*7.20*	*Cum*
	2					**8.60**	Cum
3	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .						
	150 mm Dia R.C.C. Pipe	1			7.5	**7.5**	**RM**
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	Spindle 25 mm dia	*1*	*0.000491*	*7850.00*	*1.29*	*4.97*	*Kg*
		1	*0.000491*	*7850.00*	*0.24*	*0.92*	*Kg*
	300 X300 MM MS GATE	*1*		*60.00*		*60.00*	*Kg*
	I.M.C. Grove (100 x 50) 9.56 kg/m	*2*		*9.56*	*0.70*	*13.38*	*Kg*
	TOTAL (In Kg)					**79.28**	**Kg**
	TOTAL					**0.08**	**MT**
5	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
	Toe Wall Base in Canal Portion	*1*	*1.50*	*0.75*	*0.10*	*0.11*	*Cum*
	Water Course Floor (Section C-D)	*1*	*15.00*	*0.40*	*0.10*	*0.60*	*Cum*
	Below transition walls	*1*	*1.50*	*1.19*	*0.10*	*0.18*	*Cum*
	TOTAL					**0.89**	**Cum**
6	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.						
	RCC M-15 (Providing Reinforcement @ 0.24%)	*1.63*	*0.0024*	*0.004*	*7850.00*	*30.648*	*Kg*
	TOTAL					**30.65**	**Kg**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
ANALYSIS OF RATES							
Sl. No.	**Refrences SOR No.**	**Description**	**Quantity**	**Unit**	**Rate**	**Amount**	**Ref**
1	**5.1.3**	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 92.94 Sqm					
		Unskilled mazdoor for cutting shrubs, weed	1.50	nos	424.00	₹ 636.00	
		Unskilled mazdoor for removing grass roots and leveling	0.75	nos	424.00	₹ 318.00	
						₹ 954.00	
		Add Overhead charge &c.P @ 15 %				₹ 143.10	
					Total	₹ 1,097.10	
		Rate per Sqm			**Say, Rs**	**₹ 11.80**	**Per M^2**
2	**5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting ,carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			**Say, Rs**	**₹ 156.50**	**Per M^3**
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
3	**5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.50	nos	424.00	₹ 1,908.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	
		Head Mason	0.13	nos	569.00	₹ 71.13	
					Total	₹ 3,675.13	
		Add Overhead charge & C.P @ 15 %				₹ 551.27	
						₹ 4,226.39	
		Rate per Cum			**Say, Rs**	**₹ 149.30**	**Per M^3**
4	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for carrying	4.00	nos	424.00	₹ 1,696.00	SI-1
		Unskilled mazdoor for controlling Slope and fine dressing	2.00	nos	424.00	₹ 848.00	SI-2
		Skilled Mazdoor	0.25	nos	536.00	₹ 134.00	SII-70
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					Total	₹ 4,829.00	
		Add Overhead charge &c.P @ 15 %				₹ 724.35	
						₹ 5,553.35	
		Rate per Cum			**Say, Rs**	**₹ 196.10**	**Per M^3**
5	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	1.00	nos	424.00	₹ 424.00	Sl-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			**Say, Rs**	**₹ 17.22**	**Per M^3**
6	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.					
		Unit: per Cum					
		Taking Output :- 28.32 cum					
		Labour					
		Unskilled mazdoor for cutting, carrying	9.09	nos	424.00	₹ 3,854.16	Sl-1
		Add extra wages of 1/2 no. unskilled labour per 28.32 m3	0.50	nos	424.00	₹ 212.00	Sl-1
						₹ 4,066.16	
		Add Overhead charge &C.P @ 15 %				₹ 609.92	
						₹ 4,676.08	
					Say, Rs	**₹ 165.12**	**Per M^3**
7	**5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.					
		As per Labour rate (19.06.2024)					
		Unit: per Cum					
		Taking Output :- 28.32 cum					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Cost of water	LS			15.00	
		Bhisti for carriage of water and sprinkling	3.00	nos	417.00	₹ 1,251.00	S II-13
		Hire charges of sheep foot roller assuming 1450 cum to be rolled in 8 hr vide item no. 3.16	0.16	hr	1612.00	₹ 257.92	PM8001
						₹ 1,523.92	
		Add Overhead charge &C.P @ 15 %				₹ 228.59	
						₹ 1,752.51	
					Say, Rs	**₹ 61.88**	**Per M^3**
8	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)					
	5.1.46.1	Beyond 150m but upto 1/2 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				0.65	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				3.9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes CoI =T				12.7	
	9	Number of trip per hour taken as 50 minutes N=50/T				3.937	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				17.323	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				83.18	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 16.29	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 152.08	
	16	Add overhead charges and CP 15% I like the coffee				₹ 22.81	
	17	**Rate per cubic metre**				**₹ 174.89**	
	5.1.46.2	Beyond 1/2 km but upto 1 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				1.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				9	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				17.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.809	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				12.36	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				116.59	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 20.30	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 189.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 28.42	
	17	**Rate per cubic metre**				**₹ 217.92**	
	5.1.46.3	Beyond 1.00 km but upto 1.50 km					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				2.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				15	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				23.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				2.101	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				9.244	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				155.88	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 25.02	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 233.50	
	16	Add overhead charges and CP 15% I like the coffee				₹ 35.03	
	17	**Rate per cubic metre**				**₹ 268.53**	
	5.1.46.4	Beyond 1.50 km but upto 2.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				3.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				21	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				29.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.678	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				7.383	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				195.18	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 29.73	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 277.52	
	16	Add overhead charges and CP 15% I like the coffee				₹ 41.63	
	17	**Rate per cubic metre**				**₹ 319.14**	
	5.1.46.5	Beyond 2.00 km but upto 2.50 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				4.5	
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				27	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				35.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.397	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				6.15	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				234.50	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.47	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 34.45	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 321.56	
	16	Add overhead charges and CP 15% I like the coffee				₹ 48.24	
	17	**Rate per cubic metre**				**₹ 369.80**	
	5.1.46.6	Beyond 2.50 km but upto 3.00 km					
	2	Cost of cutting & loading by Excavator one M3 capacity = Use rate of Excavator/Capacity of Excavator (60 m^3) PM 3005/60				38.13	
	3	Average Speed on Kucha truck Km/hr =(V)				10	
	4	Average haulage path (distance) in one cycle (D) in km				5.5	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5	Haulage Time in Min (time taken in one cycle of run) =60d/V				33	
	6	Loading Time one minute per M^3 for 5.5 M^3				5.5	
	7	Unloading and Turning time in minute				3.3	
	8	Total Time Per trip in minutes Col =T				41.8	
	9	Number of trip per hour taken as 50 minutes N=50/T				1.196	
	10	Output per hour with 80% efficiency Q =0.8 x N x 5.5				5.263	
	11	Use Rate per hour of Tippers 5.5 M^3 Capacity =(Tr)				1441	
	12	Carriage cost per metre M^3 = Tr/Q				273.80	
	13	Add for spreading cost = (Use rate of Dozer 175HP per hour /capacity of dozer 175HP, Per hour. 300 cum) =4342/300				14.473	
	14	Add 5% of Haul road maintenance, 5% for processing and 2% for extra labour for finishing =12% of column (2+12+13)				₹ 39.17	
	15	Total cost per Cubic metre Col(2+12+13+14)				₹ 365.57	
	16	Add overhead charges and CP 15%				₹ 54.84	
	17	**Rate per cubic metre**				**₹ 420.40**	
9	**5.1.24**	Earthwork in filling in flood embankment, canals banks (Canal Discharge Above 28 Cumecs) as well as special repair of embankments and canal banks in ordinary soil in proper profile obtain from borrow area or any other source free from logs, roots or any other ingredients etc. with intial lead of 30m and initial lift of 1.5m including breaking the clods to maximum 60 mm cube, placing the earth in layers not exceeding 225 mm thicka ll complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting	9.00	nos	424.00	₹ 3,816.00	SI-1
		Skilled Mazdoor	1.00	nos	536.00	₹ 536.00	SI-3
		Mate	0.25	nos	455.00	₹ 113.75	SII-2
					Total	₹ 4,465.75	
		Add Overhead charge & C.P @ 15 %				₹ 669.86	
						₹ 5,135.61	
		Rate per Cum			**Say, Rs**	**₹ 181.30**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
10	**5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 28.32 cum					
		Unskilled mazdoor for cutting and carrying	11.00	nos	424.00	₹ 4,664.00	SI-1
		Head Mason	0.25	nos	569.00	₹ 142.25	SII -3
					Total	₹ 4,806.25	
		Add Overhead charge & C.P @ 15 %				₹ 720.94	
						₹ 5,527.19	
		Rate per Cum			**Say, Rs**	**₹ 195.20**	**Per M^3**
11	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A.	**MATERIALS**					
		Coarse aggregates Gr IV **(Rate of approved quality of aggregate as per Design)**	2.66	M^3	1115.24	₹ 2,966.54	M047
		Sand	1.330	M^3	584.64	₹ 777.57	M-004
		Cement	0.443	M^3	8264.70	₹ 3,661.26	M-1P
		Total				₹ 7,405.37	
	B.	**LABOUR**					
		Head mason	0.5	nos	569.00	₹ 284.50	S II -3
		Mason Gr II	1	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	**HIRE CHARGES OF MACHINE**					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists	**1.43**	hr	351	₹ 501.93	
		on the basic of mixer production capacity 1.98 m3					
		per hour. Used rate per hourx2.832/1.98					
		(ii) Vibrator 1no. To vibrate 2.832 cum on the	**1.43**	hr	405	₹ 579.15	
		basic of vibrator capacity 1.98 cum per hour.					
		Used rate per hourx2.832/1.98					
		Total				₹ 14,783.95	
		Add Overhead charge & C.P	15	%		₹ 2,217.59	
						₹ 17,001.55	**Per M^3**
					Say, Rs	**₹ 6,003.37**	**Per M^3**
12	**5.3.4**	Providing and laying PCC M-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.55	m^3	913.48	₹ 2,327.55	M044
		Sand	1.27	m^3	584.64	₹ 744.83	M-004
		Cement	0.64	m^3	8264.70	₹ 5,264.62	M-1P
		Total				₹ 8,337.00	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 15,715.58	
		Add Overhead charge &c.P @ 15 %				₹ 2,357.34	
						₹ 18,072.92	
		Rate per Cum			**Say, Rs**	**₹ 6,381.70**	**Per M^3**
13	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.44	m^3	913.48	₹ 2,225.24	M044
		Sand	1.22	m^3	584.64	₹ 712.09	M-004
		Cement	0.81	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
14	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		Course Aggregate (20mm & 10mm) **(Taking Rate of approved quality as per design)**	2.436	m^3	913.48	₹ 2,225.24	M044
		Sand	1.218	m^3	584.64	₹ 712.09	M-004
		Cement	0.812	m^3	8264.70	₹ 6,710.94	M-1P
		Total				₹ 9,648.27	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					Total	₹ 17,026.85	
		Add Overhead charge &c.P @ 15 %				₹ 2,554.03	
						₹ 19,580.88	
		Rate per Cum			**Say, Rs**	**₹ 6,914.20**	**Per M^3**
15	**5.3.11**	Providing & laying P.C.C. or R.C.C. **M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
	A	**Material**					
		coarse Aggregate (20mm & 10mm) (Cost of coarse aggregates as per design)	2.38	m^3	913.48	₹ 2,173.17	M044
		Sand	1.19	m^4	584.64	₹ 695.14	M-004
		Cement	1.19	m^5	8264.70	₹ 9,826.73	M-1P
		Total				₹ 12,695.04	
	B	**Labour**					
		Head mason	0.50	nos	569.00	₹ 284.50	S II -3
		Mason Gr-II	1.00	nos	508.00	₹ 508.00	S II-4
		Unskilled mazdoor for controlling Slope and fine dressing	12.00	nos	424.00	₹ 5,088.00	S II-1
		Bhisti	1.00	nos	417.00	₹ 417.00	S II -13
		Total				₹ 6,297.50	
	C	**Hire charge of Machine**					
		Concrete Mixer (taking 2cum per hr.)	1.43	hr	351.00	₹ 501.93	PM21001
		on the basic of mixer production capacity 1.98 m^3 per hour. Used rate per hour 2.832/1.98					
		(ii) Vibrator 1 no. To vibrate 2.832 cum on the Basic of VibratorCapacity 1.98 m3 per hour.	1.43	hr	405.00	₹ 579.15	PM44001
					total	₹ 20,073.62	
		Add Overhead charge &c.P @ 15 %				₹ 3,011.04	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			**Say, Rs**	**₹ 8,151.40**	**Per M^3**
16	**5.3.22**	Providing M.S Reinforcement (TOR Steel) as per design, drawing removal of rust cutting, bending, binding including supplying annealed wire placing M.S. roads in position complete job as as per specification & direction of E/I.					
		Unit :- **Per M.T**					
		Taking Output :- 1 M.T					
	(a)	TMT grade Fe-500 ***8 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	52450	₹ 55,072.50	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 66,025.70	
		Add Overhead charge &c.P @ 15 %				₹ 9,903.86	
						₹ 75,929.56	
		Rate per M.T			**Say, Rs**	**₹ 75,929.60**	**Per M.T**
	(B)	TMT grade Fe-500 ***10 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	51094	₹ 53,648.70	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 64,601.90	
		Add Overhead charge &c.P @ 15 %				₹ 9,690.29	
						₹ 74,292.19	
		Rate per M.T			**Say, Rs**	**₹ 74,292.20**	**Per M.T**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 ***12 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***16 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***20 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
	(C)	TMT grade Fe-500 ***25 mm***					
	(A)	Providing MS reinforcement plain	1.050	MT	50500	₹ 53,025.00	
		(Including 5% wastage)					
	B	i. Annealed wire	14.00	Kg	48.3	₹ 676.20	M072
		ii. Black Smith Gr.II	9.00	nos	508.00	₹ 4,572.00	SII-10
		iii. Head Black Smith	1.00	nos	569.00	₹ 569.00	SII-9
		Iv.Skilled mazdoor	8.00	nos	536.00	₹ 4,288.00	SI-71
		v. Unskilled Mazdoor	2.00	nos	424.00	₹ 848.00	SI-1
					total	₹ 63,978.20	
		Add Overhead charge &c.P @ 15 %				₹ 9,596.73	
						₹ 73,574.93	
		Rate per M.T			**Say, Rs**	**₹ 73,574.90**	**Per M.T**
17	**5.3.18**	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
	A	**Material**					
		Local wood planks. 38 mm thick =9.3x38x1000	0.35	m^3			
		Add 5% wastage	0.02	m^3			
		Cost of 0.37 cum local wood planks.	0.37	m^3	26000.00	₹ 9,620.00	code no 1198 (RCD)
		Add cost for shattering and propping @ 10% of above				₹ 962.00	
					Total	₹ 10,582.00	
		Assuming 4 uses to calculate	4.00	use			
		Cost of shattering for 2.832 cum total cost /4				₹ 2,645.50	
		Add 1% for cost of nails and spikes on total cost of wood				₹ 105.82	
					Total	₹ 2,751.32	A
	B	**Labour**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Carpenter Gr-II	1.50	nos	508.00	₹ 762.00	S II-17
		Unskilled mazdoor	2.50	nos	424.00	₹ 1,060.00	S I-1
					Total	₹ 1,822.00	B
	C	**Carriage of materials**					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 105.82	C
		Total cost for 9.3 sqm=A+B+C				₹ 4,679.14	
		Add Overhead charge &c.P @ 15 %				₹ 701.87	
						₹ 5,381.01	
		Rate per Sqm			**Say, Rs**	**₹ 578.60**	**Per M2**
18	**5.3.20**	Providing centering including strutting, proping etc. and its removal after use indeck slab as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 22.326 Sqm					
		(Assuming size in slab 7.32 x 3.05 =22.326 sqm)					
	A	**MATERIALS**					
		a. 40 mm thick local wood planks (22.326x 40)/1000 = 0.893					
		Add 5% wastages = 0.045					
		0.938	0.94	m^3	26000.00	**₹ 24,440.00**	**Code no. 1197 (BCD)**
		Assuming 4 uses to calculate	4.00	use			
		Cost of planks per use = 0.89 x rate of local wood/4				**₹ 6,110.00**	
		b. Assuming avg. height of slab from GL = 3.66 m					
		150 mm sal bullah required = 78 nos.					
		Length of sal bullah = 78X3.66 =285.48	285.48	M	75.00	**₹ 21,411.00**	**M SL No. 223**
		(Assuming sal bullah to be used 10 times for centering					
		= 285.48 x Rate per mtr/10				**₹ 2,141.10**	
		c. Salwood scanting required (75 mm * 63 mmsize) = 0.311 cum	0.31	m^3	60000.00	**₹ 18,660.00**	**Code no. 1199 (BCD)**
		(Assuming 10 uses)					
		Cost per use = 0.311 x Rate per mtr/10				**₹ 1,866.00**	
		Total				**₹ 10,117.10**	
		Add 1% for cost of nails and spikes				**₹ 101.17**	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 10,218.27	**(A)**
	B	**LABOUR**					
		Carpenter Gr-II	4.00	nos	508.00	₹ 2,032.00	S I-17
		Unskilled Majdoor	7.00	nos	424.00	₹ 2,968.00	S I-1
					Total	₹ 5,000.00	**(B)**
	C	Carriage of Materials					
		Cost of carriage of material from godown and back to godown after use, including loading, unloading and stacking @ 1% of total cost of food materials				₹ 101.17	
		Total cost for 22.326 sqm=A+B+C				₹ 15,319.44	
		Add Overhead charge & C.P @ 15 %				₹ 2,297.92	
		Total				₹ 17,617.36	
		Rate per Sqm			**Say, Rs**	**₹ 789.10**	**Per M2**
17	**5.5.10**	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 Sqm					
		Material					
		Cement	0.01	m^4	8264.70	₹ 115.71	M-1P
					Total	₹ 115.71	
	B	**Labour**					
		Head mason	0.06	nos	569.00	₹ 35.56	S II-3
		Mason Gr-II	0.50	nos	508.00	₹ 254.00	S II-4
		Unskilled mazdoor	0.25	nos	424.00	₹ 106.00	S II-1
					Total	₹ 395.56	
		Total				₹ 511.27	
		Add Overhead charge &c.P @ 15 %				₹ 76.69	
						₹ 587.96	
		Rate per Cum			**Say, Rs**	**₹ 63.20**	**Per M^3**
18	**5.2.2**	Providing filter of stone chips 20 mm and down well graded as per design for lined canal, drains including hand packing etc all complete as per specification and direction of E/I.					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Material					
		Sone chips (M-040 +M -045)/2	2.83	nos	673.97	₹ 1,908.68	M-004
		Labour					
		Unskilled mazdoor for Screening and grading Filter	2.00	nos	424.00	₹ 848.00	Sl-1
		Unskilled mazdoor for laying and hand packing	1.50	nos	424.00	₹ 636.00	Sl-1
					Total	₹ 3,392.68	
		Add Overhead charge &c.P @ 15 %				₹ 508.90	
						₹ 3,901.59	
		Rate per Cum			**Say, Rs**	**₹ 1,377.70**	**Per M^3**
19	**5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	3	nos.	424.00	1272.00	
						1272.00	
		Add Overhead charge & C.P. @15%				190.80	
						1462.80	
					Say, Rs	**₹ 516.50**	**Per M^3**
20	**5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor	6	nos.	424.00	2544.00	
		Mason Gr II	0.5	nos.	508.00	254.00	
		Mate	0.25	nos.	455.00	113.75	
		Stone Dresser	0.25	nos.	538.00	134.50	
						3046.25	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Add Overhead charge & C.P. @15%				456.94	
						3503.19	
					Say, Rs	**₹ 1,237.00**	**Per M^3**
21	**5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .					
		Unit :- **Per cum**					
		Taking Output :- 2.832 cum					
		Unskilled Mazdoor for cutting	1	nos.	424.00	424.00	
		Local Sand	2.832	nos.	145.87	413.10	
						837.10	
		Add Overhead charge & C.P. @15%				125.57	
						962.67	
					Say, Rs	**₹ 339.90**	**Per M^3**
20	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.				**Page -261**	
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Cement	0.07	m^3	8264.70	₹ 562.00	M-1 P
		Sand	0.27	m^3	584.64	₹ 159.02	M044
		Total				₹ 721.02	
		Labour					
		Mason Gr II	1.50	nos	508.00	₹ 762.00	SII-4
		Unskilled Mazdoor	2.50	nos	424.00	₹ 1,060.00	SII-1
		Bhisti	0.50	nos	417.00	₹ 208.50	SI-13
					total	₹ 2,030.50	
		Add Overhead charge &c.P @ 15 %				₹ 412.73	
						₹ 3,164.25	
		Rate per Cum			**Say, Rs**	**₹ 340.20**	**Per M^3**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
21	**5.6.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .					
	5.6.1.1	**150 mm dia NP2 H.P.**					
		Unit: per m					
		Taking Output =	**8**	**m**			
		(Assuming 4 pipes of 2m length and three collars)					
		Materials					
		Cement	0.011	cum	8264.70	90.91	**M-1 P**
		Sand	0.011	cum	584.64	6.43	**M-004**
		Jute	1.5	Kg	20.89	31.34	**M Sl. No. 257**
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
		Fitter Gr I	0.50	nos	577.00	288.50	
		Total				1527.00	
						1655.68	
		Add Overhead charge & C.P @ 15 %				₹ 248.35	
						₹ 1,904.03	
					Say, Rs	**₹ 238.00**	**Per M**
	5.6.2.2	**600 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.034	cum	8264.70	281.00	**M-1 P**
		Sand	0.034	cum	584.64	19.88	**M-004**
		Jute	4	Kg	20.89	83.56	**M Sl. No. 257**

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Total				384.44	
		Labour					
		Head Mason	1.5	nos	569.00	853.50	
		Unskilled Mazdoor	7	nos	424.00	2968.00	
		Fitter Gr I	0.75	nos	577.00	432.75	
		Total				4254.25	
						4638.69	
		Add Overhead charge & C.P @ 15 %				₹ 695.80	
						₹ 5,334.49	
					Say, Rs	**₹ 711.27**	**Per M**
	5.6.2.5	**1000 mm dia NP3 H.P.**					
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.045	cum	8264.70	371.91	**M-1 P**
		Sand	0.045	cum	584.64	26.31	**M-004**
		Jute	7.5	Kg	20.89	156.68	**M Sl. No. 257**
		Total				554.90	
		Labour					
		Head Mason	2	nos	569.00	1138.00	
		Unskilled Mazdoor	21	nos	424.00	8904.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				10619.00	
						11173.90	
		Add Overhead charge & C.P @ 15 %				₹ 1,676.08	
						₹ 12,849.98	
					Say, Rs	**₹ 1,713.33**	**Per M**
	5.6.2.6	**Labour Charges for Laying of 1200 mm NP3 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP3 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .**					

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Unit: per m					
		Taking Output =	**7.5**	**m**			
		(Assuming 3 pipes of 2.5 m length and two collars)					
		Materials					
		Cement	0.057	cum	8264.70	471.09	**M-1 P**
		Sand	0.057	cum	584.64	33.32	**M-004**
		Jute	12	Kg	20.89	250.68	**M Sl. No. 257**
		Total				755.09	
		Labour					
		Head Mason	2.5	nos	569.00	1422.50	
		Unskilled Mazdoor	25	nos	424.00	10600.00	
		Fitter Gr I	1	nos	577.00	577.00	
		Total				12599.50	
						13354.59	
		Add Overhead charge & C.P @ 15 %				₹ 2,003.19	
						₹ 15,357.78	
					Say, Rs	**₹ 2,047.70**	**Per M**
22	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Stone Boulder	2.832	cum	694.61	1967.14	
		Sand	1.12	cum	584.64	654.80	
		Cement	0.28	cum	8264.70	2314.12	
		Labour				4936.05	
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2	nos	508.00	1016.00	
		Unskilled Mazdoor	5	nos	424.00	2120.00	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Bhisti	0.5	nos	417.00	208.50	
						3415.63	
						8351.67	
		Add Overhead charge & C.P @ 15 %				₹ 1,252.75	
						₹ 9,604.43	
					Say, Rs	**₹ 3,391.40**	**Per M^3**
23	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 9.3 cum					
		Materials					
		Bricks	800	per 1000 nos	4891.00	3912.80	
		Local Sand	0.425	cum	145.87	61.99	
		Total				3974.79	
		Labour					
		Mason Gr II	1.125	nos	508.00	571.50	
		Unskilled Mazdoor	2.25	nos	424.00	954.00	
						1525.50	
						5500.29	
		Add Overhead charge & C.P @ 15 %				₹ 825.04	
						₹ 6,325.34	
					Say, Rs	**₹ 680.10**	**Per M^3**
24	**5.8.9**	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Hammer man	2.25	nos	445.00	₹ 1,001.25	SII-17
		Skilled Mazdoor	2.25	nos	536.00	₹ 1,206.00	SII-18
		Unskilled mazdoor	7.00	nos	424.00	₹ 2,968.00	SI-1

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Blacksmith GR II	1.00	nos	508.00	₹ 508.00	SII-10
		Mate	1.00	nos	455.00	₹ 455.00	SII-2
					total	₹ 6,138.25	
		Add Overhead charge & C.P @ 15 %				₹ 920.74	
						₹ 7,058.99	
		Rate per Cum			**Say, Rs**	**₹ 2,492.58**	**Per M^3**
25	**5.4.6**	Brick work in designation 100A Brick with cement mortar (1:4) in superstructure with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints to 12 mm depth, curing, scaffolding and its removal wherever required including royalty etc. complete job including royality as per specification and direction of E/I.					
		Unit :- **Per Sqm**					
		Taking Output :- 2.832 cum					
		Materials					
		Bricks	1150	per 1000 nos	4891.00	5624.65	
		Sand	0.92	cum	584.64	537.87	
		Cement	0.23	cum	8264.70	1900.88	
		Total				8063.40	
		Labour					
		Head Mason	0.125	nos	569.00	71.13	
		Mason Gr II	2.5	nos	508.00	1270.00	
		Unskilled Mazdoor	6	nos	424.00	2544.00	
		Bhisti	1	nos	417.00	417.00	
						4302.13	
						12365.53	
		Add Overhead charge & C.P @ 15 %				₹ 1,854.83	
						₹ 14,220.35	
					Say, Rs	**₹ 5,021.30**	**Per M^3**

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	**WRD SOR 2025 & PL 2025**	**WRD 5.1.3**	Jungle clearance and weeding out shrubs including small tree upto 0.50 m girth and removal as per specifications and direction of E/I.	**Sqm**	**11.80**
2	**WRD SOR 2025 & PL 2025**	**WRD 5.1.8**	Earthwork in Excavation of canals carrying minimum full supply discharge between 8.5 cumecs (300 cusecs) and 0.14 cumecs (5 cusecs) in ordinary soil (vide classification of soil item -A) and making the banks with excavated earth in proper profile and clod breaking and laying earth in 225 mm layer & rough dressing of soil with initial lead of 30 m and lift of 1.5 m.all complete as per specifications and direction of E/I.	**Cum**	**156.50**
3	**WRD SOR 2025 & PL 2025**	**WRD 5.1.31**	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	**Cum**	**149.30**
4	**WRD SOR 2025 & PL 2025**	**5.1.21**	Earthwork in lip cutting in side slopes and bed of canal in ordinary soil with initial lead of 30M and lift of 1.5M includind the cost of formation of subgrade of canal lining profiling, levelling, controlling of slopes and fine dressing, disposal of excavated earth and nominal dewatering if any all complete as per approved design, specification and direction of engineer in charge.	**Cum**	**196.10**
5	**WRD SOR 2025 & PL 2025**	**5.1.22**	Extra for wet earth all complete as per specifications and direction of E/I.	**Cum**	**17.22**
6	**WRD SOR 2025 & PL 2025**	**5.1.25**	Earthwork in filling of canal banks (discharge upto 28 cumecs) as well as special repair of canal banks in ordinary soil in proper profile obtained from borrow area or any other sources free from logs, roots or any other ingredients etc. with initial lead of 30m and lift of 1.5 m including breaking the clods to maximum 60 mm cube placing the earth in layers not exceeding 225mm thick all complete and as per specification and direction of E/I.	**Cum**	**165.12**
7	**WRD SOR 2025 & PL 2025**	**WRD 5.1.39**	Labour for rolling and compacting the earth in layers of 225mm thick at O.M.C. by sheep foot roller driven by tractor to achieve minimum 95% of maximum dry density, including sprinkling the required quantity of water with all leads and lifts, finishing the surface as per plan and drawing, including hire charge of compaction machine and other tools and plants etc. for lined canal all complete as per specification and direction of E/I.	**Cum**	**61.88**

8	**WRD SOR 2025 & PL 2025**	**5.1.46**	Earthwork by mechanical means with help of Excavator, Tipper and Spreader in canal or flood embankment or dhar all types of work like filling and making of canal banks or embankment of earth free from logs, roots or any other gradients desilting of canal bed and dhar in proper profile with dressing and finishing including new construction, repair or restoration in ordinary soil including cutting, loading, carriage from pit to banks or emabankments, unloaidng, spreading, clod-breaking and laying in layers properly with lead of ..... meter (Lead will be considered as track path i.e. half of distance travelled in one cycle i.e. half of the haulage path from pit to bank or embankment. Pit will be beyond 150 m from centre of bank ie perpendicular distance from centre of bank to nearest boundary of pit will be more than 150 m) and with all liftss all complete job as per specifications and direction of E/I. (Mode of measurement - sectional measurement of compacted earth)		
		5.1.46.1	Beyond 150m but upto 1/2 km	**174.89**	**Cum**
		5.1.46.2	Beyond 1/2 km but upto 1 km	**217.92**	**Cum**
		5.1.46.3	Beyond 1 km but upto 1.50 km	**268.53**	**Cum**
		5.1.46.4	Beyond 1.50 km but upto 2.00 km	**319.14**	**Cum**
		5.1.46.5	Beyond 2.00 km but upto 2.50 km	**369.80**	**Cum**
		5.1.46.6	Beyond 2.50 km but upto 3.00 km	**420.40**	**Cum**
9	**WRD SOR 2025 & PL 2025**	**WRD 5.1.27**	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	**195.20**	**Cum**
10	**WRD SOR 2025 & PL 2025**	**WRD 5.5.10**	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	**Sqm**	**63.20**
11	**WRD SOR 2023 & PL JUNE 2025**	**5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of D/I.	**Cum**	**340.20**
12	**WRD SOR 2025 & PL 2025**	**5.3.8**	Providing & laying **P.C.C. M-100** with nominal mix of (1:3:6) in superstructure of various components of canal or embankment structures with approved quality of graded coarse aggregate of required grade and approved quality sand of requisite F.M. washed and screened including necessary tools and plants, vibrating, curing,royalty etc. excluding cost of form work as well reinforcement its cutting, bending. binding, and placing complete job as per specification & direction of E/I.	**Cum**	**6003.37**
13	**WRD SOR 2025 & PL 2025**	**5.3.4**	Providing and laying **PCC M-150** with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.	**Cum**	**6381.70**

14	**WRD SOR 2025 & PL 2025**	**5.3.5**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in foundation of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
15	**WRD SOR 2025 & PL 2025**	**5.3.10**	Providing & laying **P.C.C. or R.C.C. M-200** with nominal mix of (1:1.5:3) in superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**6914.20**
16	**WRD SOR 2025 & PL 2025**	**5.3.11**	Providing & laying **P.C.C. or R.C.C. M-250** with nominal mix (1:1:2) in superstructure of various components of canal or embankment structures with approved quality of 20 mm graded coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.	**Cum**	**8151.40**
17	**RCD 2025**	**RCD 14.09**	Drainage Spouts complete as per drawings & techincal specifications & as per clause 2705 of specifications.	**NO.**	5588.70
18	**WRD SOR 2025 & PL 2025**	**WRD 5.3.22**	Providing M.S. reinforcementas per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.		
			TMT Grade FE-500 - 8 mm	**MT**	**75929.60**
			TMT Grade FE-500 - 10 mm	**MT**	**74292.20**
			TMT Grade FE-500 - 12 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 16 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 20 mm	**MT**	**73574.90**
			TMT Grade FE-500 - 25mm	**MT**	**73574.90**
19	**WRD SOR 2025 & PL 2025**	**WRD 5.3.19**	Providing shuttering including strutting, propping etc. and its removal after use in various components of canal structure or embankment structure as per specifications and direction of E/I.	**Cum**	**578.60**
20	**WRD SOR 2025 & PL 2025**	**WRD 5.3.20**	Providing centering including strutting, propping etc. and its removal after use in deck slab as per specifications and direction of E/I.	**Cum**	**789.10**
21	**WRD SOR 2025 & PL 2025**	**WRD 5.2.2**	Providing filter of stone chips 20mm & down well graded as per design for lined canal, drains including hand packing etc. as per specification and direction of E/I.	**Cum**	**1377.70**
22	**WRD SOR 2025 & PL 2025**	**WRD 5.7.13**	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light ramming etc. all complete as per specification and direction of E/I.	**Cum**	**516.50**
23	**WRD SOR 2025 & PL 2025**	**WRD M-002**	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	**Cum**	694.61

24	**WRD SOR 2025 & PL 2025**	**WRD 5.7.18.1**	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncrated) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	**Cum**	**1237.00**
25	**WRD SOR 2025 & PL 2025**	**WRD 5.1.37**	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	**Cum**	**339.90**
26	**WRD SOR 2025 & PL 2025**	**WRD 5.5.5**	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M. washed and screened including curing, scaffolding wherever required and its removal , royalty etc, complete as per specification and direction of E/I.	**Cum**	**340.20**
27	**WRD SOR 2025 & PL 2025**	**M-1701**	Providing 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	220.00
28	**WRD SOR 2025 & PL 2025**	**WRD 5.6.1.1**	Labour Charges for Laying of 150mm NP2 RCC Hume Pipe with collar as per I.S.S. 458-1971 including fixing and fitting NP2 hume pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**238.00**
29	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1000 mm dia with spigot	**R.M.**	6002.82
30	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.4**	Labour for laying 1000mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**1713.33**
31	**RCD 2025**	**RCD M-149**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 1200 mm dia with spigot	**R.M.**	7015.86
32	**WRD SOR 2025 & PL 2025**	**WRD 5.6.2.5**	Labour for laying 1200mm NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**R.M.**	**2047.70**
33	**WRD SOR 2025 & PL 2025**	**5.4.10**	Providing rough dressed random rubble Stone Masonary in cement Mortar (1:4) in foundation with approved quality of coarse sand of requisite F.M. washed and screened with raking out joints, curing, scaffholding and its removal whereever required including royalty etc. all complete job as per specification and direction of E/I.	**Cum**	**3391.40**
34	**WRD SOR 2025 & PL 2025**	**M-181**	Structural Steel (Average rate of Angle, Joint and Channel) etc.	**MT**	**160035.11**
35	**WRD SOR 2025 & PL 2025**	**5.7.16**	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	**Sqm**	**680.10**
36	**RCD 2025**	**RCD 15.22**	Providing and fixing in position 20 mm thick compressible fibre board in expansion joint complete as per drawing & Technical specification.	**RM**	499.80
37	**RCD 2025**	**RCD M-151**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	**RM**	2532.61

38	**WRD SOR 2025 & PL 2025**	**5.6.2.2**	Labour Charges for Laying, fitting and fixing NP3 RCC Hume Pipe with collars in line, level and grade, as well as providing approved jointing materials and joints properly filled to make them water proof, all complete, as per specification & direction of E/I .	**RM**	**711.27**
39	**WRD SOR 2025**	**M-126**	Modular Strip/box seal expansion joint	**RM**	36993.21
40	**PWD NH SOR CHHATISGARH 2025**	**3.18 PWD NH SOR CHHATISGARH 2025**	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	**RM**	66.00
41	**RCD 2025**	**RCD M-148**	Providing RCC Pipe NP 4 heavy duty non pressure pipe 900 mm dia with spigot	**R.M.**	4849.67
42	**RCD 2025**	**13.08**	Weepholes	**No.**	152.60
43	**RCD 2025**	**3.06 - 301**	Excavation for road work in soil with hydraulic excavator including cutting and loading in tippers, trimming bottom and side slopes, in accordance with requirements of lines, grades and cross sections, and tranporting to the embankment location within all lifts and lead upto 1000 m	**Cum**	78.40
44	**RCD 2025**	**4.01 B - 401**	Construction of granular sub-base by providing closegraded material, spreading in uniform layers with motorgrader on prepared surface, mixing by mix in placemethod with front end loader at OMC, and compactingwith vibratory roller to achieve the desired density,complete as per clause 401.	**Cum**	1044.90
45	**RCD 2025**	**14.01 C**	RCC Grade M-30 using Batching plant, Transit Mixer and Concrete Pump	**Cum**	6217.20
46	**RCD 2025**	**8.14**	Kilometer Stone M-15	**Nos.**	3853.40

	MATERIAL RATE:				
1	**WRD SOR 2025**	**M-004**	Coarse Sand	**Cum**	584.64
2	**WRD SOR 2025**	**M-012**	Coarse Aggregate	**Cum**	944.26
3	**WRD SOR 2025**	**M-001**	Boulder	**Cum**	694.61
4	**WRD SOR 2025**	**M-11 9(ii)**	Brick	**Cum**	4891
5	**WRD SOR 2025**	**M-006**	Fine Sand	**Cum**	145.87
6	**WRD SOR 2025**	**M1**	Cement (Gaya)	**per bag of 50 Kg**	281.00
7	**WRD SOR 2025**	**M-025**	Aggregate 26.5 mm to 4.75 mm	**Cum**	913.48
8	**WRD SOR 2025**	**M-015**	Aggregate 9.5 mm to 4.75 mm	**Cum**	602.28
9	**WRD SOR 2025**	**M-017**	Aggregate 4.75 mm and below	**Cum**	266.62
10	**WRD SOR 2025**	**M-181**	Structural Steel	**MT**	55116.67