

TENDER DOCUMENT

FOR

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

Estimated Cost (Rs. 64.12 Crores)

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

PRICE SCHEDULE

Issued to M/s



(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 brought 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/AMBA/2025					
Name of Work:	Distribution Network for Amba 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	₹ 64,11,67,320/-					
• Total Amount						
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- Amba Division
(Total Cost – Rs. 64.12 Crores)

Summary of Cost

Sr. No.	Name of Canal	Cost (Rs. in Cr.)
1	Mahuary Sub Dy.	16.96
2	Basdiha Dy.	25.76
3	Amba Mr.	1.10
4	Karma Dy.	16.55
5	Karma Basantpur Mr.	2.24
6	Ratanpur Mr.	1.50
Total		64.12

**Amba Division – Mahuary Sub Dy.
(Total Cost – Rs. 16.96 Crores)**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND
ABSTRACT OF COST (MAHUARY SUB DISTRIBUTARY & ITS DISTRIBUTARIES)

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) Including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	MAHUARY SUB DISTRIBUTARY	1	Job	50172332.86	0.00	₹ 5,01,72,332.86	AOC Earthwork Mahuary Sub Distributary	23
	<i>BARIAWA MINOR</i>	1	Job	12263083.25	0.00	₹ 1,22,63,083.25	AOC Earthwork Bariawa	25
	<i>ITMA MINOR</i>	1	Job	8942204.36	0.00	₹ 89,42,204.36	AOC Earthwork Itma Minor	27
	<i>MALI MINOR</i>	1	Job	7654382.27	0.00	₹ 76,54,382.27	AOC Earthwork Mali Minor	29
	<i>THUMBHI MINOR</i>	1	Job	9522660.85	0.00	₹ 95,22,660.85	AOC Earthwork Thumbhi	31
	<i>SOTHIDIH MINOR</i>	1	Job	4685192.34	0.00	₹ 46,85,192.34	AOC Earthwork Sothidih	33
2	Head Regulator							
	<i>BARIAWA MINOR</i>	1	No.	3124871.39	23889.44	₹ 31,48,760.82	HR (AOC) Bariawa Minor	52
	<i>ITMA MINOR</i>	1	No.	2211754.48	16204.70	₹ 22,27,959.18	HR (AOC) Itma Minor	54
	<i>MALI MINOR</i>	1	No.	2342994.52	18336.02	₹ 23,61,330.54	HR (AOC) Mali Minor	56
	<i>THUMBHI MINOR</i>	1	No.	1873822.79	13326.06	₹ 18,87,148.84	HR (AOC) Thumbhi Minor	58
	<i>SOTHIDIH MINOR</i>	1	No.	363751.14	2979.09	₹ 3,66,730.22	Pipe HR AOC Sothidih	58
3	Falls							
	MAHUARY SUB DISTRIBUTARY							
	<i>0.610 m Fall at Ch. 0.075 Km</i>	1	No.	2010078.15	18092.27	₹ 20,28,170.42	Fall (AOC) Mahuary Sub Dy	80
	<i>1.524 m Fall at Ch. 0.955 Km</i>	1	No.	3380083.03	30645.02	₹ 34,10,728.04		81
	<i>0.457 m Fall at Ch. 2.200 Km</i>	1	No.	1631911.62	14568.97	₹ 16,46,480.59		82
	<i>1.830m Fall at Ch. 4.520 Km</i>	1	No.	3979777.22	36487.97	₹ 40,16,265.19		83
	<i>1.372 m Fall at Ch. 7.214 Km</i>	1	No.	2880386.39	26143.71	₹ 29,06,530.10		84
	<i>1.524 m Fall at Ch. 9.150 Km</i>	1	No.	2581260.31	23194.96	₹ 26,04,455.27		85
	<i>0.914 m Fall at Ch. 11.900 Km</i>	1	No.	1408277.11	12482.08	₹ 14,20,759.19		86
	<i>0.914 m Fall at Ch. 15.550 Km</i>	1	No.	1869078.27	16306.25	₹ 18,85,384.52		87
	<i>0.610 m Fall at Ch. 17.875 Km</i>	1	No.	721725.76	6302.68	₹ 7,28,028.44		88
	<i>0.610 m Fall at Ch. 18.28 Km</i>	1	No.	689678.15	5946.65	₹ 6,95,624.79		89
	BARIAWA MINOR							
	<i>0.457 m Fall at Ch. 2.050 Km</i>	1	No.	728097.46	6253.72	₹ 7,34,351.18	Fall (AOC) Bariwa Minor	90
	<i>0.610 m Fall at Ch. 6.100 Km</i>	1	No.	474162.19	3982.95	₹ 4,78,145.14		92
	ITMA MINOR							
	<i>1.676 m Fall at Ch. 0.900 Km</i>	1	No.	1644746.42	14198.46	₹ 16,58,944.88	Fall (AOC) Itma Minor	94
	<i>0.305 m Fall at Ch. 3.950 Km</i>	1	No.	375680.72	3110.37	₹ 3,78,791.09		95
	<i>0.457 m Fall at Ch. 4.600 Km</i>	1	No.	273259.09	2176.37	₹ 2,75,435.46		96
	MALI MINOR							
	<i>0.610 m Fall at Ch. 1.000 Km</i>	1	No.	449688.61	3748.45	₹ 4,53,437.06	Fall (AOC) Mali Minor	97
	<i>0.457 m Fall at Ch. 3.125 Km</i>	1	No.	305904.93	2472.70	₹ 3,08,377.63		99
	THUMBHI MINOR							
	<i>0.457 m Fall at Ch. 0.545 Km</i>	1	No.	1007693.02	8639.73	₹ 10,16,332.74	Fall (AOC) Thumbhi Minor	101
	<i>0.914 m Fall at Ch. 0.965 Km</i>	1	No.	696249.30	6002.11	₹ 7,02,251.41		102
	<i>1.220 m Fall at Ch. 3.300 Km</i>	1	No.	710473.34	6118.83	₹ 7,16,592.16		104
	<i>1.067 m Fall at Ch. 4.010 Km</i>	1	No.	540762.82	4563.94	₹ 5,45,326.76		106
	<i>1.067 m Fall at Ch. 5.010 Km</i>	1	No.	526359.31	4394.82	₹ 5,30,754.13		108
	SOTHIDIH MINOR							
	<i>1.067 m Fall at Ch. 2.450 Km</i>	1	No.	763414.77	6347.55	₹ 7,69,762.32	Fall (AOC) Sothidih Minor	107
4	Cross Drainage							
	MAHUARY SUB DISTRIBUTARY							
	<i>CD At Km 14.480</i>	1	No.	1359568.79	12031.08	₹ 13,71,599.87	C.D. Main canals-AOC Mahuary Sub Dy	179
	<i>CD At Km 15.400</i>	1	No.	1148831.08	10207.01	₹ 11,59,038.08		180
	<i>CD At Km 16.100</i>	1	No.	1314652.15	11657.24	₹ 13,26,309.39		181

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) Including Seigniorage Charges	Reference for Rate	Page No.
5	Pipe Culvert							
	BARIAWA MINOR							
	At Km 6.830	1	No.	390146.03	3259.43	₹ 3,93,405.46	Pipe Culvert AOC Bariawa	192
	THUMBHI MINOR							
	At Km 5.545	1	No.	389791.90	3259.43	₹ 3,93,051.33	Pipe Culvert AOC Thumbhi Minor	193
6	Inlet							
	MAHUARY SUB DISTRIBUTARY							
	Inlet At Km 1.700	1	No.	173346.72	1234.50	₹ 1,74,581.22	INLET AOC Mahuary Sub Dy	200
	Inlet At Km 12.200	1	No.	173346.72	1234.50	₹ 1,74,581.22		201
	THUMBHI MINOR							
	Inlet At Km 1.750	1	No.	173346.72	1234.50	₹ 1,74,581.22	INLET AOC Thumbhi Minor	202
7	Repair of Structures							
	MAHUARY SUB DISTRIBUTARY	25	No.	1397389.214	10818.50	₹ 14,08,207.71	Abstract (Repair St.)	228
	BARIAWA MINOR	13	No.	363759.8733	2750.24	₹ 3,66,510.11	Abstract (Repair St.)	233
	ITMA MINOR	8	No.	237801.7108	1750.73	₹ 2,39,552.44	Abstract (Repair St.) Itma	236
	MALI MINOR	7	No.	122219.7248	776.57	₹ 1,22,996.29	Abstract (Repair St.) Mali	240
	THUMBHI MINOR	8	No.	165560.1151	2266.05	₹ 1,67,826.17	Abstract (Repair St.)	245
	SOTHIDIH MINOR	12	No.	170021.3433	3070.51	₹ 1,73,091.86	Abstract (Repair St.)	249
	APPROACH ROAD	25	No.	521018.55	7578.59	₹ 1,32,14,928.62	Approach Road AOC	285
8	Outlets							
	MAHUARY SUB DISTRIBUTARY	64	No.	127744.47	1100.17	₹ 82,46,057.00	Outlet-AOC	289
	BARIAWA MINOR	27	No.	127744.47	1100.17	₹ 34,78,805.30		289
	ITMA MINOR	6	No.	127744.47	1100.17	₹ 7,73,067.84		289
	MALI MINOR	7	No.	127744.47	1100.17	₹ 9,01,912.48		289
	THUMBHI MINOR	12	No.	127744.47	1100.17	₹ 15,46,135.69		289
	SOTHIDIH MINOR	4	No.	127744.47	1100.17	₹ 5,15,378.56		289
9	Kilometer Stone	48	No.	3853.40	0.00	₹ 1,84,963.20	Rates 'IF61	322
	TOTAL (In Rs.)					₹ 16,96,49,295.13		
	TOTAL (In Lacs)					1696.49		

Carriage of Materials -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 (Tipper 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 of Cost =[(18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled 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		
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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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
MAHUARY SUB DISTRIBUTARY.**

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	1.001	0.501	50.050	10.282	5.141	514.100
200	100	1.838	1.420	141.950	9.426	9.854	985.400
300	100	1.740	1.789	178.900	8.305	8.866	886.550
400	100	0.228	0.984	98.400	9.875	9.090	909.000
500	100	0.452	0.340	34.000	12.795	11.335	1133.500
600	100	1.316	0.884	88.400	13.083	12.939	1293.900
700	100	0.172	0.744	74.400	7.012	10.048	1004.750
800	100	0.618	0.395	39.500	8.548	7.780	778.000
900	100	1.586	1.102	110.200	9.712	9.130	913.000
1000	100	0.622	1.104	110.400	7.785	8.749	874.850
1100	100	2.015	1.319	131.850	6.294	7.040	703.950
1200	100	1.562	1.789	178.850	5.847	6.071	607.050
1300	100	1.846	1.704	170.400	5.492	5.670	566.950
1400	100	1.148	1.497	149.700	5.481	5.487	548.650
1500	100	0.792	0.970	97.000	5.607	5.544	554.400
1600	100	0.000	0.396	39.600	29.711	17.659	1765.900
1700	100	2.571	1.286	128.550	7.859	18.785	1878.500
1800	100	2.168	2.370	236.950	6.083	6.971	697.100
1900	100	1.279	1.724	172.350	7.350	6.717	671.650
2000	100	1.042	1.161	116.050	8.738	8.044	804.400
2100	100	0.966	1.004	100.400	10.006	9.372	937.200
2200	100	0.392	0.679	67.900	9.556	9.781	978.100
2300	100	3.753	2.073	207.250	9.806	9.681	968.100
2400	100	2.812	3.283	328.250	9.812	9.809	980.900
2500	100	1.500	2.156	215.600	10.033	9.923	992.250
2600	100	0.491	0.996	99.550	10.861	10.447	1044.700
2700	100	1.822	1.157	115.650	6.790	8.826	882.550
2800	100	1.106	1.464	146.400	7.123	6.957	695.650
2900	100	0.669	0.888	88.750	7.979	7.551	755.100
3000	100	1.414	1.042	104.150	8.299	8.139	813.900
3100	100	1.721	1.568	156.750	9.027	8.663	866.300
3200	100	1.556	1.639	163.850	8.007	8.517	851.700
3300	100	1.642	1.599	159.900	8.184	8.096	809.550
3400	100	0.645	1.144	114.350	9.962	9.073	907.300
3500	100	0.551	0.598	59.800	9.260	9.611	961.100
3600	100	0.746	0.649	64.850	9.301	9.281	928.050
3700	100	1.096	0.921	92.100	9.515	9.408	940.800
3800	100	1.023	1.060	105.950	9.993	9.754	975.400
3900	100	0.732	0.878	87.750	8.572	9.283	928.250
4000	100	4.706	2.719	271.900	5.158	6.865	686.500
4100	100	1.884	3.295	329.500	5.449	5.304	530.350
4200	100	2.604	2.244	224.400	5.942	5.696	569.550
4300	100	2.030	2.317	231.700	5.334	5.638	563.800
4400	100	2.459	2.245	224.450	7.077	6.206	620.550

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4500	100	4.057	3.258	325.800	12.858	9.968	996.750
4600	100	0.501	2.279	227.900	10.782	11.820	1182.000
4700	100	0.392	0.447	44.650	9.234	10.008	1000.800
4800	100	1.292	0.842	84.200	9.320	9.277	927.700
4900	100	1.981	1.637	163.650	7.726	8.523	852.300
5000	100	1.687	1.834	183.400	9.667	8.697	869.650
5100	100	7.895	4.791	479.100	7.775	8.721	872.100
5200	100	3.991	5.943	594.300	5.917	6.846	684.600
5300	100	1.979	2.985	298.500	4.903	5.410	541.000
5400	100	7.223	4.601	460.100	4.931	4.917	491.700
5500	100	3.034	5.129	512.850	5.891	5.411	541.100
5600	100	1.824	2.429	242.900	3.576	4.734	473.350
5700	100	2.148	1.986	198.600	3.967	3.772	377.150
5800	100	5.296	3.722	372.200	7.364	5.666	566.550
5900	100	3.048	4.172	417.200	7.670	7.517	751.700
6000	100	3.402	3.225	322.500	4.548	6.109	610.900
6100	100	2.859	3.131	313.050	3.997	4.273	427.250
6200	100	2.695	2.777	277.700	7.338	5.668	566.750
6300	100	2.245	2.470	247.000	9.018	8.178	817.800
6400	100	1.815	2.030	203.000	11.076	10.047	1004.700
6500	100	2.383	2.099	209.900	7.650	9.363	936.300
6600	100	7.615	4.999	499.900	6.339	6.995	699.450
6700	100	3.369	5.492	549.200	4.425	5.382	538.200
6800	100	1.669	2.519	251.900	4.225	4.325	432.500
6900	100	1.651	1.660	166.000	4.842	4.534	453.350
7000	100	2.569	2.110	211.000	7.180	6.011	601.100
7100	100	2.398	2.484	248.350	4.927	6.054	605.350
7200	100	3.427	2.913	291.250	6.303	5.615	561.500
7300	100	2.473	2.950	295.000	4.642	5.473	547.250
7400	100	2.447	2.460	246.000	4.396	4.519	451.900
7500	100	2.265	2.356	235.600	6.445	5.421	542.050
7600	100	2.093	2.179	217.900	6.371	6.408	640.800
7700	100	2.020	2.057	205.650	5.699	6.035	603.500
7800	100	1.993	2.007	200.650	5.053	5.376	537.600
7900	100	1.933	1.963	196.300	5.245	5.149	514.900
8000	100	1.909	1.921	192.100	4.839	5.042	504.200
8100	100	2.225	2.067	206.700	5.265	5.052	505.200
8200	100	17.575	9.900	990.000	6.865	6.065	606.500
8300	100	4.968	11.272	1127.150	4.256	5.561	556.050
8400	100	2.155	3.562	356.150	5.291	4.774	477.350
8500	100	1.671	1.913	191.300	5.237	5.264	526.400
8600	100	1.769	1.720	172.000	5.351	5.294	529.400
8700	100	2.054	1.912	191.150	5.362	5.357	535.650
8800	100	1.704	1.879	187.900	4.141	4.752	475.150
8900	100	11.614	6.659	665.900	6.056	5.099	509.850
9000	100	12.376	11.995	1199.500	5.593	5.825	582.450
9100	100	1.057	6.717	671.650	6.191	5.892	589.200

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
9200	100	17.046	9.052	905.150	7.347	6.769	676.900
9300	100	14.359	15.703	1570.250	7.141	7.244	724.400
9400	100	8.618	11.489	1148.850	4.598	5.870	586.950
9500	100	4.111	6.365	636.450	4.585	4.592	459.150
9600	100	2.741	3.426	342.600	4.205	4.395	439.500
9700	100	3.452	3.097	309.650	4.942	4.574	457.350
9800	100	3.603	3.528	352.750	6.128	5.535	553.500
9900	100	2.914	3.259	325.850	5.392	5.760	576.000
10000	100	6.511	4.713	471.250	4.131	4.762	476.150
10100	100	3.851	5.181	518.100	3.420	3.776	377.550
10200	100	1.941	2.896	289.600	3.282	3.351	335.100
10300	100	1.191	1.566	156.600	4.703	3.993	399.250
10400	100	1.676	1.434	143.350	4.154	4.429	442.850
10500	100	2.665	2.171	217.050	4.492	4.323	432.300
10600	100	14.558	8.612	861.150	5.188	4.840	484.000
10700	100	3.245	8.902	890.150	3.930	4.559	455.900
10800	100	2.981	3.113	311.300	4.812	4.371	437.100
10900	100	3.275	3.128	312.800	3.661	4.237	423.650
11000	100	3.672	3.474	347.350	6.397	5.029	502.900
11100	100	3.767	3.720	371.950	5.667	6.032	603.200
11200	100	3.210	3.489	348.850	4.593	5.130	513.000
11300	100	3.621	3.416	341.550	5.593	5.093	509.300
11400	100	2.258	2.940	293.950	2.099	3.846	384.600
11500	100	2.060	2.159	215.900	1.273	1.686	168.600
11600	100	1.177	1.619	161.850	2.594	1.934	193.350
11700	100	1.243	1.210	121.000	1.360	1.977	197.700
11800	100	0.861	1.052	105.200	4.665	3.013	301.250
11900	100	6.497	3.679	367.900	3.821	4.243	424.300
12000	100	11.927	9.212	921.200	12.051	7.936	793.600
12100	100	3.226	7.577	757.650	7.105	9.578	957.800
12200	100	2.423	2.825	282.450	4.351	5.728	572.800
12300	100	2.147	2.285	228.500	4.602	4.477	447.650
12400	100	1.411	1.779	177.900	4.357	4.480	447.950
12500	100	1.225	1.318	131.800	3.998	4.178	417.750
12600	100	1.124	1.175	117.450	3.910	3.954	395.400
12700	100	0.806	0.965	96.500	3.154	3.532	353.200
12800	100	0.665	0.736	73.550	3.913	3.534	353.350
12900	100	0.568	0.617	61.650	3.889	3.901	390.100
13000	100	0.632	0.600	60.000	3.392	3.641	364.050
13100	100	0.777	0.705	70.450	3.385	3.389	338.850
13200	100	4.583	2.680	268.000	2.853	3.119	311.900
13300	100	2.450	3.517	351.650	5.075	3.964	396.400
13400	100	1.471	1.961	196.050	5.641	5.358	535.800
13500	100	6.399	3.935	393.500	6.662	6.152	615.150
13600	100	4.485	5.442	544.200	8.102	7.382	738.200
13700	100	5.678	5.082	508.150	5.347	6.725	672.450
13800	100	2.361	4.020	401.950	5.254	5.301	530.050

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
13900	100	1.756	2.059	205.850	4.789	5.022	502.150
14000	100	1.898	1.827	182.700	5.260	5.025	502.450
14100	100	1.183	1.541	154.050	6.140	5.700	570.000
14200	100	1.149	1.166	116.600	5.522	5.831	583.100
14300	100	1.094	1.122	112.150	7.174	6.348	634.800
14400	100	0.552	0.823	82.300	5.089	6.132	613.150
14500	100	0.145	0.349	34.850	5.813	5.451	545.100
14600	100	1.286	0.716	71.550	9.083	7.448	744.800
14700	100	0.725	1.006	100.550	9.339	9.211	921.100
14800	100	2.390	1.558	155.750	8.171	8.755	875.500
14900	100	0.587	1.489	148.850	7.381	7.776	777.600
15000	100	0.751	0.669	66.900	6.063	6.722	672.200
15100	100	0.724	0.738	73.750	5.147	5.605	560.500
15200	100	0.727	0.726	72.550	4.539	4.843	484.300
15300	100	1.015	0.871	87.100	4.213	4.376	437.600
15400	100	0.662	0.839	83.850	4.507	4.360	436.000
15500	100	0.657	0.660	65.950	6.948	5.728	572.750
15600	100	2.957	1.807	180.700	7.727	7.338	733.750
15700	100	3.755	3.356	335.600	4.599	6.163	616.300
15800	100	3.322	3.539	353.850	6.119	5.359	535.900
15900	100	2.990	3.156	315.600	9.771	7.945	794.500
16000	100	2.548	2.769	276.900	12.023	10.897	1089.700
16100	100	1.988	2.268	226.800	12.702	12.363	1236.250
16200	100	1.664	1.826	182.600	9.655	11.179	1117.850
16300	100	0.604	1.134	113.400	6.736	8.196	819.550
16400	100	1.367	0.986	98.550	5.521	6.129	612.850
16500	100	0.802	1.085	108.450	6.630	6.076	607.550
16600	100	0.439	0.621	62.050	7.653	7.142	714.150
16700	100	0.357	0.398	39.800	6.657	7.155	715.500
16800	100	0.486	0.422	42.150	3.870	5.264	526.350
16900	100	1.396	0.941	94.100	2.559	3.215	321.450
17000	100	7.730	4.563	456.300	7.270	4.915	491.450
17100	100	6.868	7.299	729.900	9.316	8.293	829.300
17200	100	5.707	6.288	628.750	5.506	7.411	741.100
17300	100	2.260	3.984	398.350	5.686	5.596	559.600
17400	100	1.461	1.861	186.050	4.158	4.922	492.200
17500	100	0.824	1.143	114.250	4.125	4.142	414.150
17600	100	0.425	0.625	62.450	5.217	4.671	467.100
17700	100	0.041	0.233	23.300	5.390	5.304	530.350
17800	100	0.000	0.021	2.050	6.405	5.898	589.750
17900	100	0.744	0.372	37.200	5.328	5.867	586.650
18000	100	0.690	0.717	71.700	4.413	4.871	487.050
18100	100	0.237	0.464	46.350	3.853	4.133	413.300
18200	100	0.509	0.373	37.300	5.288	4.571	457.050
18300	100	1.315	0.912	91.200	4.069	4.679	467.850
18400	100	1.295	1.305	130.500	4.440	4.255	425.450
18500	100	1.604	1.450	144.950	4.813	4.627	462.650

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
18600	100	0.633	1.119	111.850	3.999	4.406	440.600
18700	100	0.419	0.526	52.600	3.911	3.955	395.500
18800	100	0.543	0.481	48.100	4.553	4.232	423.200
18900	100	0.000	0.272	27.150	6.168	5.361	536.050
19000	100	0.560	0.280	28.000	3.567	4.868	486.750
19100	100	1.063	0.812	81.150	4.650	4.109	410.850
19200	100	0.490	0.777	77.650	4.086	4.368	436.800
19300	100	0.397	0.444	44.350	3.979	4.033	403.250
19400	100	0.375	0.386	38.600	6.698	5.339	533.850
19500	100	0.421	0.398	39.800	6.757	6.728	672.750
19600	100	0.711	0.566	56.600	4.944	5.851	585.050
19700	100	0.354	0.533	53.250	5.355	5.150	514.950
19800	100	0.073	0.214	21.350	5.781	5.568	556.800
19900	100	0.089	0.081	8.100	5.850	5.816	581.550
20000	100	0.106	0.098	9.750	6.604	6.227	622.700
20100	100	0.121	0.114	11.350	7.209	6.907	690.650
Total				48450.450			127647.550
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							48450.450
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							127647.550
NET QUANTITY OF EARTHWORK IN FILLING							79197.10

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK							
BARIAWA MINOR							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.654	0.327	32.700	6.311	3.156	315.550
200	100	0.430	0.542	54.200	7.650	6.981	698.050
300	100	0.423	0.427	42.650	2.317	4.984	498.350
400	100	0.359	0.391	39.100	7.199	4.758	475.800
500	100	0.407	0.383	38.300	1.818	4.509	450.850
600	100	0.198	0.303	30.250	3.626	2.722	272.200
700	100	0.431	0.315	31.450	4.163	3.895	389.450
800	100	1.850	1.141	114.050	5.445	4.804	480.400
900	100	1.120	1.485	148.500	2.661	4.053	405.300
1000	100	1.071	1.096	109.550	2.630	2.646	264.550
1100	100	0.365	0.718	71.800	3.839	3.235	323.450
1200	100	0.229	0.297	29.700	4.179	4.009	400.900
1300	100	0.251	0.240	24.000	5.846	5.013	501.250
1400	100	0.747	0.499	49.900	4.469	5.158	515.750
1500	100	0.280	0.514	51.350	2.960	3.715	371.450
1600	100	0.359	0.320	31.950	2.630	2.795	279.500
1700	100	6.780	3.570	356.950	3.443	3.037	303.650
1800	100	0.771	3.776	377.550	3.866	3.655	365.450
1900	100	1.126	0.949	94.850	3.942	3.904	390.400
2000	100	0.609	0.868	86.750	3.231	3.587	358.650
2100	100	1.102	0.856	85.550	3.627	3.429	342.900
2200	100	0.847	0.975	97.450	3.118	3.373	337.250
2300	100	0.512	0.680	67.950	6.012	4.565	456.500
2400	100	0.191	0.352	35.150	3.902	4.957	495.700
2500	100	0.007	0.099	9.900	3.314	3.608	360.800
2600	100	1.037	0.522	52.200	5.003	4.159	415.850
2700	100	1.101	1.069	106.900	2.587	3.795	379.500
2800	100	0.779	0.940	94.000	3.492	3.040	303.950
2900	100	0.044	0.412	41.150	3.351	3.422	342.150
3000	100	0.238	0.141	14.100	3.064	3.208	320.750
3100	100	0.618	0.428	42.800	4.142	3.603	360.300
3200	100	0.512	0.565	56.500	4.128	4.135	413.500
3300	100	0.487	0.500	49.950	2.813	3.471	347.050
3400	100	0.466	0.477	47.650	3.461	3.137	313.700
3500	100	6.973	3.720	371.950	7.389	5.425	542.500
3600	100	0.428	3.701	370.050	3.295	5.342	534.200
3700	100	0.605	0.517	51.650	4.502	3.899	389.850
3800	100	0.294	0.450	44.950	5.010	4.756	475.600
3900	100	0.522	0.408	40.800	1.786	3.398	339.800
4000	100	0.186	0.354	35.400	3.675	2.731	273.050
4100	100	0.071	0.129	12.850	4.290	3.983	398.250
4200	100	0.029	0.050	5.000	2.137	3.214	321.350
4300	100	0.017	0.023	2.300	3.142	2.640	263.950
4400	100	4.357	2.187	218.700	3.809	3.476	347.550

Chainage	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4500	100	0.735	2.546	254.600	3.219	3.514	351.400
4600	100	0.143	0.439	43.900	3.396	3.308	330.750
4700	100	0.128	0.136	13.550	1.431	2.414	241.350
4800	100	0.039	0.084	8.350	2.757	2.094	209.400
4900	100	0.124	0.082	8.150	4.275	3.516	351.600
5000	100	1.031	0.578	57.750	1.812	3.044	304.350
5100	100	0.285	0.658	65.800	3.335	2.574	257.350
5200	100	0.225	0.255	25.500	3.458	3.397	339.650
5300	100	0.391	0.308	30.800	3.719	3.589	358.850
5400	100	0.121	0.256	25.600	4.966	4.343	434.250
5500	100	0.093	0.107	10.700	5.688	5.327	532.700
5600	100	0.785	0.439	43.900	2.524	4.106	410.600
5700	100	0.349	0.567	56.700	2.220	2.372	237.200
5800	100	0.344	0.347	34.650	3.477	2.849	284.850
5900	100	0.172	0.258	25.800	4.267	3.872	387.200
6000	100	0.000	0.086	8.600	4.038	4.153	415.250
6100	100	0.630	0.315	31.500	2.491	3.265	326.450
6200	100	0.365	0.498	49.750	1.993	2.242	224.200
6300	100	0.189	0.277	27.700	2.328	2.161	216.050
6400	100	0.080	0.135	13.450	4.030	3.179	317.900
6500	100	0.000	0.040	4.000	4.263	4.147	414.650
6600	100	0.990	0.495	49.500	3.375	3.819	381.900
6700	100	0.657	0.824	82.350	2.653	3.014	301.400
6800	100	0.456	0.557	55.650	3.294	2.974	297.350
6900	100	0.344	0.400	40.000	2.014	2.654	265.400
7000	100	0.272	0.308	30.800	2.220	2.117	211.700
7100	100	0.231	0.252	25.150	1.715	1.968	196.750
Total				4894.650			25737.450
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							4894.650
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							25737.450
NET QUANTITY OF EARTHWORK IN FILLING							20842.80

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK							
ITMA MINOR							
0		0.000	0	0	0.000	0	0.000
100	100	0.324	0.162	16.200	3.980	1.990	199.000
200	100	0.073	0.199	19.850	4.081	4.031	403.050
300	100	1.275	0.674	67.400	4.396	4.239	423.850
400	100	0.178	0.727	72.650	4.039	4.218	421.750
500	100	0.077	0.128	12.750	2.957	3.498	349.800
600	100	0.034	0.056	5.550	4.002	3.480	347.950
700	100	0.029	0.032	3.150	4.839	4.421	442.050
800	100	0.000	0.015	1.450	6.337	5.588	558.800
900	100	4.620	2.310	231.000	5.302	5.820	581.950
1000	100	2.324	3.472	347.200	2.964	4.133	413.300
1100	100	1.705	2.015	201.450	3.255	3.110	310.950
1200	100	1.255	1.480	148.000	3.611	3.433	343.300
1300	100	1.185	1.220	122.000	2.342	2.977	297.650
1400	100	0.373	0.779	77.900	3.345	2.844	284.350
1500	100	0.065	0.219	21.900	3.777	3.561	356.100
1600	100	0.007	0.036	3.600	2.944	3.361	336.050
1700	100	0.000	0.004	0.350	4.296	3.620	362.000
1800	100	0.000	0.000	0.000	5.531	4.914	491.350
1900	100	0.657	0.329	32.850	5.557	5.544	554.400
2000	100	0.398	0.528	52.750	4.427	4.992	499.200
2100	100	0.227	0.313	31.250	2.840	3.634	363.350
2200	100	0.150	0.189	18.850	2.470	2.655	265.500
2300	100	0.077	0.114	11.350	2.400	2.435	243.500
2400	100	0.008	0.043	4.250	3.158	2.779	277.900
2500	100	0.000	0.004	0.400	5.398	4.278	427.800
2600	100	0.984	0.492	49.200	3.864	4.631	463.100
2700	100	0.895	0.940	93.950	1.908	2.886	288.600
2800	100	0.193	0.544	54.400	3.958	2.933	293.300
2900	100	0.095	0.144	14.400	3.788	3.873	387.300
3000	100	2.462	1.279	127.850	2.186	2.987	298.700
3100	100	0.870	1.666	166.600	3.028	2.607	260.700
3200	100	0.260	0.565	56.500	3.468	3.248	324.800
3300	100	0.357	0.309	30.850	3.289	3.379	337.850
3400	100	0.063	0.210	21.000	4.077	3.683	368.300
3500	100	0.000	0.032	3.150	5.201	4.639	463.900
3600	100	0.000	0.000	0.000	5.733	5.467	546.700
3700	100	0.000	0.000	0.000	5.608	5.671	567.050
3800	100	0.041	0.021	2.050	5.033	5.321	532.050
3900	100	0.224	0.133	13.250	5.213	5.123	512.300
4000	100	0.021	0.123	12.250	2.769	3.991	399.100
4100	100	0.012	0.017	1.650	3.139	2.954	295.400
4200	100	0.268	0.140	14.000	3.838	3.489	348.850
4300	100	0.108	0.188	18.800	3.694	3.766	376.600
4400	100	0.226	0.167	16.700	3.870	3.782	378.200

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4500	100	0.173	0.200	19.950	2.582	3.226	322.600
4600	100	0.494	0.334	33.350	4.117	3.350	334.950
4700	100	0.510	0.502	50.200	3.706	3.912	391.150
4800	100	0.138	0.324	32.400	2.858	3.282	328.200
Total				2336.600			18374.600
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							2336.600
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							18374.600
NET QUANTITY OF EARTHWORK IN FILLING							16038.00

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK							
MALI MINOR							
0		0.000	0	0	0.000	0	0.000
100	100	0.624	0.312	31.200	2.345	1.173	117.250
200	100	0.190	0.407	40.700	3.749	3.047	304.700
300	100	0.000	0.095	9.500	6.204	4.977	497.650
400	100	0.000	0.000	0.000	5.643	5.924	592.350
500	100	0.000	0.000	0.000	6.274	5.959	595.850
600	100	0.002	0.001	0.100	3.370	4.822	482.200
700	100	0.404	0.203	20.300	3.832	3.601	360.100
800	100	0.342	0.373	37.300	3.740	3.786	378.600
900	100	0.194	0.268	26.800	4.335	4.038	403.750
1000	100	0.838	0.516	51.600	3.589	3.962	396.200
1100	100	0.281	0.560	55.950	2.966	3.278	327.750
1200	100	0.121	0.201	20.100	3.895	3.431	343.050
1300	100	0.031	0.076	7.600	4.152	4.024	402.350
1400	100	0.556	0.294	29.350	3.898	4.025	402.500
1500	100	0.437	0.497	49.650	3.444	3.671	367.100
1600	100	0.326	0.382	38.150	3.231	3.338	333.750
1700	100	0.197	0.262	26.150	2.938	3.085	308.450
1800	100	0.209	0.203	20.300	1.971	2.455	245.450
1900	100	0.040	0.125	12.450	2.833	2.402	240.200
2000	100	3.213	1.627	162.650	3.211	3.022	302.200
2100	100	0.307	1.760	176.000	5.387	4.299	429.900
2200	100	0.514	0.411	41.050	3.363	4.375	437.500
2300	100	0.481	0.498	49.750	3.460	3.412	341.150
2400	100	0.446	0.464	46.350	3.535	3.498	349.750
2500	100	0.569	0.508	50.750	4.630	4.083	408.250
2600	100	0.389	0.479	47.900	3.434	4.032	403.200
2700	100	0.275	0.332	33.200	3.162	3.298	329.800
2800	100	1.183	0.729	72.900	3.148	3.155	315.500
2900	100	0.725	0.954	95.400	3.897	3.523	352.250
3000	100	0.621	0.673	67.300	2.545	3.221	322.100
3100	100	0.343	0.482	48.200	3.332	2.939	293.850
3200	100	0.579	0.461	46.100	3.143	3.238	323.750
3300	100	0.498	0.539	53.850	3.469	3.306	330.600
3400	100	0.503	0.501	50.050	3.402	3.436	343.550
3500	100	0.393	0.448	44.800	0.234	1.818	181.800
3600	100	0.234	0.314	31.350	4.146	2.190	219.000
3700	100	0.232	0.233	23.300	4.222	4.184	418.400
3800	100	0.587	0.410	40.950	2.803	3.513	351.250
3900	100	0.412	0.500	49.950	2.831	2.817	281.700
4000	100	0.237	0.325	32.450	3.286	3.059	305.850
Total				1741.450			14140.600
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							1741.450
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							14140.600
NET QUANTITY OF EARTHWORK IN FILLING							12399.15

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK							
THUMBHI MINOR							
0		0.000	0	0	0.000	0	0.000
100	100	0.341	0.171	17.050	4.993	2.497	249.650
200	100	0.462	0.402	40.150	2.671	3.832	383.200
300	100	0.321	0.392	39.150	1.969	2.320	232.000
400	100	0.372	0.347	34.650	2.086	2.028	202.750
500	100	0.276	0.324	32.400	3.988	3.037	303.700
600	100	1.048	0.662	66.200	3.465	3.727	372.650
700	100	0.474	0.761	76.100	2.073	2.769	276.900
800	100	0.353	0.414	41.350	1.681	1.877	187.700
900	100	0.208	0.281	28.050	3.152	2.417	241.650
1000	100	2.051	1.130	112.950	3.508	3.330	333.000
1100	100	0.992	1.522	152.150	0.986	2.247	224.700
1200	100	0.468	0.730	73.000	2.181	1.584	158.350
1300	100	0.329	0.399	39.850	6.758	4.470	446.950
1400	100	0.938	0.634	63.350	6.758	6.758	675.800
1500	100	0.510	0.724	72.400	1.938	4.348	434.800
1600	100	0.276	0.393	39.300	3.934	2.936	293.600
1700	100	0.000	0.138	13.800	5.260	4.597	459.700
1800	100	3.682	1.841	184.100	3.060	4.160	416.000
1900	100	4.261	3.972	397.150	2.888	2.974	297.400
2000	100	0.793	2.527	252.700	2.075	2.482	248.150
2100	100	0.179	0.486	48.600	3.370	2.723	272.250
2200	100	0.130	0.155	15.450	4.046	3.708	370.800
2300	100	1.049	0.590	58.950	2.476	3.261	326.100
2400	100	0.892	0.971	97.050	4.043	3.260	325.950
2500	100	0.694	0.793	79.300	3.190	3.617	361.650
2600	100	0.625	0.660	65.950	2.120	2.655	265.500
2700	100	1.311	0.968	96.800	3.348	2.734	273.400
2800	100	1.152	1.232	123.150	2.963	3.156	315.550
2900	100	0.098	0.625	62.500	3.983	3.473	347.300
3000	100	0.193	0.146	14.550	3.442	3.713	371.250
3100	100	0.044	0.119	11.850	3.881	3.662	366.150
3200	100	0.001	0.023	2.250	5.501	4.691	469.100
3300	100	2.429	1.215	121.500	4.515	5.008	500.800
3400	100	1.538	1.984	198.350	4.239	4.377	437.700
3500	100	0.755	1.147	114.650	2.010	3.125	312.450
3600	100	0.418	0.587	58.650	3.019	2.515	251.450
3700	100	0.206	0.312	31.200	2.279	2.649	264.900
3800	100	0.144	0.175	17.500	1.410	1.845	184.450
3900	100	0.000	0.072	7.200	4.582	2.996	299.600
4000	100	1.047	0.524	52.350	3.050	3.816	381.600
4100	100	1.748	1.398	139.750	3.926	3.488	348.800
4200	100	0.831	1.290	128.950	4.032	3.979	397.900
4300	100	0.127	0.479	47.900	3.586	3.809	380.900
4400	100	0.082	0.105	10.450	4.555	4.071	407.050

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4500	100	0.041	0.062	6.150	4.431	4.493	449.300
4600	100	0.004	0.023	2.250	3.525	3.978	397.800
4700	100	0.000	0.002	0.200	4.479	4.002	400.200
4800	100	0.032	0.016	1.600	4.499	4.489	448.900
4900	100	0.032	0.032	3.200	4.556	4.528	452.750
5000	100	0.245	0.139	13.850	4.905	4.731	473.050
5100	100	1.244	0.745	74.450	3.448	4.177	417.650
5200	100	0.699	0.972	97.150	3.893	3.671	367.050
5300	100	0.533	0.616	61.600	4.644	4.269	426.850
5400	100	0.349	0.441	44.100	5.684	5.164	516.400
5500	100	0.248	0.299	29.850	4.156	4.920	492.000
5600	100	0.161	0.205	20.450	4.485	4.321	432.050
5700	100	0.072	0.117	11.650	4.739	4.612	461.200
5800	100	0.319	0.196	19.550	4.245	4.492	449.200
Total				3766.750			20855.650
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							3766.750
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							20855.650
NET QUANTITY OF EARTHWORK IN FILLING							17088.90

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK SOTHIDIH MINOR							
0		0.000	0	0	0.000	0	0.000
100	100	0.000	0.000	0.000	5.042	2.521	252.100
200	100	0.000	0.000	0.000	4.426	4.734	473.400
300	100	0.000	0.000	0.000	5.222	4.824	482.400
400	100	0.096	0.048	4.800	4.173	4.698	469.750
500	100	0.356	0.226	22.600	2.361	3.267	326.700
600	100	0.709	0.533	53.250	2.346	2.354	235.350
700	100	0.532	0.621	62.050	2.402	2.374	237.400
800	100	0.243	0.388	38.750	3.047	2.725	272.450
900	100	0.000	0.122	12.150	4.239	3.643	364.300
1000	100	0.080	0.040	4.000	2.928	3.584	358.350
1100	100	1.586	0.833	83.300	2.965	2.947	294.650
1200	100	0.967	1.277	127.650	2.291	2.628	262.800
1300	100	0.063	0.515	51.500	2.657	2.474	247.400
1400	100	0.093	0.078	7.800	4.556	3.607	360.650
1500	100	0.000	0.047	4.650	5.442	4.999	499.900
1600	100	0.000	0.000	0.000	6.361	5.902	590.150
1700	100	0.017	0.009	0.850	4.611	5.486	548.600
1800	100	0.466	0.242	24.150	1.628	3.120	311.950
1900	100	0.613	0.540	53.950	2.055	1.842	184.150
2000	100	0.528	0.571	57.050	2.283	2.169	216.900
2100	100	0.673	0.601	60.050	2.583	2.433	243.300
2200	100	0.557	0.615	61.500	3.493	3.038	303.800
2300	100	0.385	0.471	47.100	4.392	3.943	394.250
2400	100	0.137	0.261	26.100	4.355	4.374	437.350
2500	100	0.740	0.439	43.850	3.758	4.057	405.650
2600	100	0.657	0.699	69.850	2.408	3.083	308.300
2700	100	0.347	0.502	50.200	2.515	2.462	246.150
2800	100	0.254	0.301	30.050	3.279	2.897	289.700
2900	100	0.188	0.221	22.100	4.183	3.731	373.100
Total				1019.300			9990.950
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							1019.300
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							9990.950
NET QUANTITY OF EARTHWORK IN FILLING							8971.65

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

MAHUARY SUB DISTRIBUTARY (0.000 TO 20.150 KM)

JUNGLE CLEARANCE QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 0.955	955	7.680	7334.40	Sqm
0.995 - 3.985	2990	6.960	20810.40	Sqm
3.985 - 5.790	1805	6.630	11967.15	Sqm
5.790-7.260	1470	6.320	9290.40	Sqm
7.260-9.550	2290	5.920	13556.80	Sqm
9.550-11.100	1550	5.640	8742.00	Sqm
11.100-12.000	900	5.340	4806.00	Sqm
12.000-14.020	2020	4.930	9958.60	Sqm
14.020-15.940	1920	4.500	8640.00	Sqm
15.940-17.220	1280	4.080	5222.40	Sqm
17.220-17.875	655	3.600	2358.00	Sqm
17.875-18.140	265	3.210	850.65	Sqm
18.140-18.400	260	2.790	725.40	Sqm
18.400-19.200	800	2.440	1952.00	Sqm
19.200-19.400	200	2.020	404.00	Sqm
19.400-20.150	750	1.300	975.00	Sqm
TOTAL			107593.20	Sqm

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.955	955	7.680	0.15	1100.16	Cum
0.995 - 3.985	2990	6.960	0.15	3121.56	Cum
3.985 - 5.790	1805	6.630	0.15	1795.07	Cum
5.790-7.260	1470	6.320	0.15	1393.56	Cum
7.260-9.550	2290	5.920	0.15	2033.52	Cum
9.550-11.100	1550	5.640	0.15	1311.30	Cum
11.100-12.000	900	5.340	0.15	720.90	Cum
12.000-14.020	2020	4.930	0.15	1493.79	Cum
14.020-15.940	1920	4.500	0.15	1296.00	Cum
15.940-17.220	1280	4.080	0.15	783.36	Cum
17.220-17.875	655	3.600	0.15	353.70	Cum
17.875-18.140	265	3.210	0.15	127.60	Cum
18.140-18.400	260	2.790	0.15	108.81	Cum
18.400-19.200	800	2.440	0.15	292.80	Cum
19.200-19.400	200	2.020	0.15	60.60	Cum
19.400-20.150	750	1.300	0.15	146.25	Cum
TOTAL				16138.98	Cum

BARIAWA MR. (0.000 TO 7.200 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 2.350	2350	3.85	9047.50	Sqm
2.350 - 3.600	1250	3.42	4275.00	Sqm
3.600 - 4.400	800	3.03	2424.00	Sqm
4.400 - 5.070	670	2.72	1822.40	Sqm
5.070 - 5.250	180	2.44	439.20	Sqm
5.250 - 5.790	540	2.22	1198.80	Sqm
5.790 - 6.100	310	2.04	632.40	Sqm
6.100 - 6.400	300	1.66	498.00	Sqm
6.400 - 6.650	250	1.39	347.50	Sqm
6.650 - 7.200	550	1.2	660.00	Sqm
TOTAL			21344.80	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 2.350	2350	3.85	0.15	1357.13	Cum
2.350 - 3.600	1250	3.42	0.15	641.25	Cum
3.600 - 4.400	800	3.03	0.15	363.60	Cum
4.400 - 5.070	670	2.72	0.15	273.36	Cum
5.070 - 5.250	180	2.44	0.15	65.88	Cum
5.250 - 5.790	540	2.22	0.15	179.82	Cum
5.790 - 6.100	310	2.04	0.15	94.86	Cum
6.100 - 6.400	300	1.66	0.15	74.70	Cum
6.400 - 6.650	250	1.39	1.15	399.63	Cum
6.650 - 7.200	550	1.2	2.15	1419.00	Cum
TOTAL				4869.22	Cum

ITMA MR. (0.000 TO 4.880 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 3.200	3200	2.05	6560.00	Sqm
3.200 - 3.650	450	1.75	787.50	Sqm
3.650 - 3.800	150	1.59	238.50	Sqm
3.800 - 4.400	600	1.38	828.00	Sqm
4.400 - 4.880	480	1.19	571.20	Sqm
TOTAL			8985.20	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 3.200	3200	2.05	0.15	984.00	Cum
3.200 - 3.650	450	1.75	0.15	118.13	Cum
3.650 - 3.800	150	1.59	0.15	35.78	Cum
3.800 - 4.400	600	1.38	1.15	952.20	Cum
4.400 - 4.880	480	1.19	2.15	1228.08	Cum
	TOTAL			3318.18	Cum

MALI MR. (0.000 TO 4.050 KM)					
JUNGLE CLEARANCE QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Quantity		
0.00 -0.060	60	2.04	122.40		Sqm
0.060-0.200	140	1.82	254.80		Sqm
0.200-1.220	1020	1.67	1703.40		Sqm
1.220-1.370	150	1.49	223.50		Sqm
1.370-2.000	630	1.32	831.60		Sqm
2.000-4.050	2050	1.18	2419.00		Sqm
	TOTAL			5554.70	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 -0.060	60	2.04	0.15	18.36	Cum
0.060-0.200	140	1.82	0.15	38.22	Cum
0.200-1.220	1020	1.67	0.15	255.51	Cum
1.220-1.370	150	1.49	0.15	33.53	Cum
1.370-2.000	630	1.32	1.15	956.34	Cum
2.000-4.050	2050	1.18	2.15	5200.85	Cum
	TOTAL			6502.81	Cum

THUMBHI MR (0.000 TO 5.900 KM)					
JUNGLE CLEARANCE QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Quantity		
0.00 - 2.050	2050	2.76	5658.00		Sqm
2.050 -2.550	500	2.45	1225.00		Sqm
2.550 - 3.300	750	2.22	1665.00		Sqm
3.300 - 3.900	600	1.92	1152.00		Sqm
3.900 -4.700	800	1.58	1264.00		Sqm
4.700 - 5.200	500	1.39	695.00		Sqm
5.200 -5.900	700	1.13	791.00		Sqm
	TOTAL			12450.00	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 2.050	2050	2.760	0.15	848.70	Cum
2.050 - 2.550	500	2.450	0.15	183.75	Cum
2.550 - 3.300	750	2.220	0.15	249.75	Cum
3.300 - 3.900	600	1.920	0.15	172.80	Cum
3.900 - 4.700	800	1.580	0.15	189.60	Cum
4.700 - 5.200	500	1.390	0.15	104.25	Cum
5.200 - 5.900	700	1.130	0.15	118.65	Cum
	TOTAL			1867.50	Cum

SOTHIDIH MR. (0.000 TO 2.950 KM)					
JUNGLE CLEARANCE QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Quantity		
0.00 - 0.030	30	1.95	58.50		Sqm
0.030 - 0.700	670	1.66	1112.20		Sqm
0.700 - 1.700	1000	1.48	1480.00		Sqm
1.700 - 2.950	1250	1.2	1500.00		Sqm
	TOTAL			4150.70	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.030	30	1.95	0.15	8.78	Cum
0.030 - 0.700	670	1.66	0.15	166.83	Cum
0.700 - 1.700	1000	1.48	0.15	222.00	Cum
1.700 - 2.950	1250	1.2	0.15	225.00	Cum
	TOTAL			622.61	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

ABSTRACT OF QUANTITY OF EARTHWORK FOR MAHUARY 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.	107593.20	Sqm	11.80	1270072.087
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.				
		<i>100% of Total Cutting for ordinary soil</i>	48450.45	Cum	156.50	7582495.425
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	19380.18	Cum	17.22	333678.5229
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.	79197.10	Cum	165.12	13076705.23
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 embankments, unloading, 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)	23759.13	Cum	174.89	4155234.25
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	19799.28	Cum	217.92	4314658.01
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	35638.70	Cum	319.14	11373733.12
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.				

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
			16138.98	Cum	196.10	3164853.98
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.	79197.10	Cum	61.88	4900902.24
TOTAL COST OF EARTHWORK (in Rs.)						50172332.86
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						501.723

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR BARIAWA 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.	21344.80	Sqm	11.80	251962.3422
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.				
		<i>100% of Total Cutting for ordinary soil</i>	4894.65	Cum	156.50	766012.725
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1957.86	Cum	17.22	33709.4822
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.	20842.80	Cum	165.12	3441478.94
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 embankments, unloading, 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 lifts 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)	6252.84	Cum	174.89	1093559.19
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	5210.70	Cum	217.92	1135515.74
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	9379.26	Cum	319.14	2993297.04
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 including 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.				
			4869.22	Cum	196.10	954854.04

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.	25737.45	Cum	61.88	1592693.75
TOTAL COST OF EARTHWORK (in Rs.)						12263083.25
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						122.631

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR ITMA 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.	8985.20	Sqm	11.80	106064.8044
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.				
		<i>100% of Total Cutting for ordinary soil</i>	2336.60	Cum	156.50	365677.9
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	934.64	Cum	17.22	16092.1774
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.	16038.00	Cum	165.12	2648129.77
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 embankments, unloading, 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 lifts 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)	4811.40	Cum	174.89	841465.75
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	4009.50	Cum	217.92	873750.24
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	7217.10	Cum	319.14	2303265.29
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 including 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.				
			3318.18	Cum	196.10	650695.10

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.	18374.60	Cum	61.88	1137063.33
TOTAL COST OF EARTHWORK (in Rs.)						8942204.36
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						89.422

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR MALI 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.	5554.70	Sqm	11.80	65569.84474
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.				
		<i>100% of Total Cutting for ordinary soil</i>	1741.45	Cum	156.50	272536.925
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	696.58	Cum	17.22	11993.37599
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.	12399.15	Cum	165.12	2047297.56
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 embankments, unloading, 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 lifts 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)	3719.75	Cum	174.89	650546.20
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	3099.79	Cum	217.92	675505.69
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5579.62	Cum	319.14	1780679.13
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 including 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.				
			6502.81	Cum	196.10	1275200.06

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.	14140.60	Cum	61.88	875053.48
TOTAL COST OF EARTHWORK (in Rs.)						7654382.27
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						76.544

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR THUMBHI 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.	12450.00	Sqm	11.80	146964.6546
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.				
		<i>100% of Total Cutting for ordinary soil</i>	3766.75	Cum	156.50	589496.375
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1506.70	Cum	17.22	25941.62853
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.	17088.90	Cum	165.12	2821650.14
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 embankments, unloading, 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 lifts 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)	5126.67	Cum	174.89	896603.32
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	4272.23	Cum	217.92	931003.27
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	7690.01	Cum	319.14	2454188.20
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 including 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.				
			1867.50	Cum	196.10	366216.75

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.	20855.65	Cum	61.88	1290596.52
TOTAL COST OF EARTHWORK (in Rs.)						9522660.85
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						95.227

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SOTIDIH 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.	4150.70	Sqm	11.80	48996.48128
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.				
		<i>100% of Total Cutting for ordinary soil</i>	1019.30	Cum	156.50	159520.45
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	407.72	Cum	17.22	7019.924859
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.	8971.65	Cum	165.12	1481362.61
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 embankments, unloading, 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 lifts 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)	2691.50	Cum	174.89	470715.56
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	2242.91	Cum	217.92	488775.49
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4037.24	Cum	319.14	1288445.57
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 including 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.				
			622.61	Cum	196.10	122092.84

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.	9990.95	Cum	61.88	618263.41
TOTAL COST OF EARTHWORK (in Rs.)						4685192.34
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						46.852

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR MAHUARY 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	107593.20	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	48450.450	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	19380.18	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	79197.100	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	23759.13	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	19799.28	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	35638.70	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	16138.98	Cum

S.No.	Items	No.	Quantity	Unit
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	79197.10	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR BARIAWA 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	21344.80	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	4894.650	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1957.86	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	20842.800	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	6252.84	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	5210.70	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	9379.26	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	4869.22	Cum

S.No.	Items	No.	Quantity	Unit
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	25737.45	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR ITMA 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	8985.20	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	2336.600	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	934.64	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	16038.000	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, unloading, 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	4811.40	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4009.50	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	7217.10	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	3318.18	Cum

S.No.	Items	No.	Quantity	Unit
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	18374.60	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR MALI 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.			
	<i>Separate sheet attached</i>	1	5554.70	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	1741.450	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	696.58	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	12399.150	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, unloading, 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	3719.75	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3099.79	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5579.62	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	6502.81	Cum

S.No.	Items	No.	Quantity	Unit
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	14140.60	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR THUMBHI 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	12450.00	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	3766.750	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1506.7	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	17088.900	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, unloading, 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	5126.67	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4272.23	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	7690.01	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	1867.50	Cum

S.No.	Items	No.	Quantity	Unit
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	20855.65	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR SOTHIDIH 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.			
	<i>Separate sheet attached</i>	1	4150.70	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	1019.300	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	407.72	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	8971.650	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, unloading, 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	2691.50	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2242.91	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4037.24	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	622.61	Cum

S.No.	Items	No.	Quantity	Unit
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	9990.95	Cum

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF BARIAWA 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.	2.285	0.500	2.79
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.350	0.200	1.55
	(h) is head of water above sill of gate in m	1.350	0.3	1.650
	Weight of lift gate including embedded parts	0.95		T
2	Capacity of screw hoist in tone including 25%reserve capacity (Hoist	2.50 xWt of gate		
		2.5	0.95	2.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2.4	715.48
	Weight of screw hoist with all accessories	0.72		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.650	400	660
	Columns with bracings/Anchors/Stiffeners	0.66		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.65	400	660
	Beams with cross beams/stiffeners	0.66		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.32	10%	0.132
	Railing/ Chequered plate/Ladder etc	0.132		T
Total Weight of One Gate		3.12		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF ITMA 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.	0.860	0.500	1.36
	(H) is height of gate in m = clear vent height in m+ 0.20m.	1.600	0.200	1.80
	(h) is head of water above sill of gate in m	1.600	0.3	1.900
	Weight of lift gate including embedded parts	0.45		T
2	Capacity of screw hoist in tone including 25%reserve capacity (Hoist	2.50 xWt of gate		
		2.5	0.45	1.1
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	336.89
	Weight of screw hoist with all accessories	0.34		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.900	400	760
	Columns with bracings/Anchors/Stiffeners	0.76		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.9	400	760
	Beams with cross beams/stiffeners	0.76		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.52	10%	0.152
	Railing/ Chequered plate/Ladder etc	0.152		T
Total Weight of One Gate		2.46		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF MALI 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.	0.880	0.500	1.38
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.020	0.200	1.22
	(h) is head of water above sill of gate in m	1.020	0.3	1.320
	Weight of lift gate including embedded parts	0.28		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	0.28	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		
		1.320	400	528
	Columns with bracings/Anchors/Stiffeners	0.528		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.32	400	528
	Beams with cross beams/stiffeners	0.528		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.056	10%	0.1056
	Railing/ Chequered plate/Ladder etc	0.1056		T
Total Weight of One Gate		1.74		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF THUMBHI 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.	1.400	0.500	1.90
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.260	0.200	1.46
	(h) is head of water above sill of gate in m	1.260	0.3	1.560
	Weight of lift gate including embedded parts	0.53		T
2	Capacity of screw hoist in tone including 25%reserve capacity (Hoist	2.50 xWt of gate		
		2.5	0.53	1.3
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.3	400.44
	Weight of screw hoist with all accessories	0.40		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.560	400	624
	Columns with bracings/Anchors/Stiffeners	0.624		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.56	400	624
	Beams with cross beams/stiffeners	0.624		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.248	10%	0.1248
	Railing/ Chequered plate/Ladder etc	0.1248		T
	Total Weight of One Gate	2.31		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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	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 BARIAWA MR OFFTAKING FROM RD-0+975 KM (L.T.) AT MAHUARY 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)
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.	269.928	Cum	156.50	42243.71			
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.	31.51	Cum	6381.70	201111.11	10.21	14.18	28.36
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.	163.85	Cum	6914.20	1132900.63	67.59	70.46	140.91
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.	25.66	Cum	8151.40	209136.29	14.55	10.01	20.27
5	Providing M.S. reinforcements 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.	4.06	MT	73574.90	298697.57			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.12	MT	160035.11	499540.96			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	427.83	Sqm	578.60	247542.77			
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.	14.40	Sqm	680.10	9793.44			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	4.55	Cum	694.61	3160.13			
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.	4.55	Cum	1237.00	5627.73			
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)	1.51	Cum	1377.70	2077.71			
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.	1.51	Cum	516.50	778.93			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.07	Sqm	63.20	194.20			
14	Providing Drainage Spouts complete as per drawings & technical 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	49.63	Sqm	149.30	7410.32			

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)
18	Carriage of materials							
	Coarse Sand (60 Km lead)	94.643	Cum	1075.00	101741.51			
	Coarse Aggregates (100 Km lead)	191.051	Cum	1398.00	267089.56			
	Cement (30 km lead)	92.346	MT	742.00	68520.98			
	Boulder (60 Km lead)	4.55	Cum	1159.00	5272.87			
	Steel (30 Km lead)	7.18	MT	742.00	5328.47			
	TOTAL (In Rs.)				3124871.39			
	TOTAL (In Rs.)				3124871.39			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	94.64	Cum	584.64	55332.24	5533.22		
	Coarse Aggregate	191.05	Cum	944.26	180401.99	18040.20		
	Boulders	4.55	Cum	694.61	3160.13	316.01		
	<i>Total</i>					23889.44		
	For 1 nos. HR, Total Seigniorage charges					23889.44		

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 ITMA MR OFFTAKING FROM RD-3+985 KM (LT.) AT MAHUARY 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.	196.261	Cum	156.50	30714.78			
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.	22.01	Cum	6381.70	140485.51	7.13	9.91	19.81
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.	112.36	Cum	6914.20	776911.14	46.35	48.32	96.63
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.	17.41	Cum	8151.40	141888.35	9.87	6.79	13.75
5	Providing M.S. reinforcements 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	197650.33			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.46	MT	160035.11	393379.97			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	332.71	Sqm	578.60	192506.18			
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.	12.56	Sqm	680.10	8540.70			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	0.81	Cum	694.61	562.63			
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.	0.81	Cum	1237.00	1001.97			
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)	0.57	Cum	1377.70	781.98			
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.	0.57	Cum	516.50	293.17			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.46	Sqm	63.20	282.12			
14	Providing Drainage Spouts complete as per drawings & technical 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	37.46	Sqm	149.30	5593.04			

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)	65.012	Cum	1075.00	69887.43			
	Coarse Aggregates (100 Km lead)	130.765	Cum	1398.00	182809.18			
	Cement (30 km lead)	63.352	MT	742.00	47007.49			
	Boulder (60 Km lead)	0.81	Cum	1159.00	938.79			
	Steel (30 Km lead)	5.14	MT	742.00	3817.20			
	TOTAL (In Rs.)				2211754.48			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	65.01	Cum	584.64	38008.36	3800.84		
	Coarse Aggregate	130.76	Cum	944.26	123475.96	12347.60		
	Boulders	0.81	Cum	694.61	562.63	56.26		
	<i>Total</i>					16204.70		
	For 1 nos. HR, Total Seigniorage charges					16204.70		

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)
ABSTRACT OF COST HR FOR MALI MR OFFTAKING FROM RD-4+520 KM (LT.) AT MAHUARY 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.	209.062	Cum	156.50	32718.21			
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.	22.29	Cum	6381.70	142271.00	7.22	10.03	20.06
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.	131.79	Cum	6914.20	911222.82	54.36	56.67	113.34
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.	17.75	Cum	8151.40	144659.84	10.06	6.92	14.02
5	Providing M.S. reinforcements 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	233480.03			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.74	MT	160035.11	278519.09			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	383.17	Sqm	578.60	221704.13			
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.	12.56	Sqm	680.10	8540.70			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	0.81	Cum	694.61	562.63			
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.	0.81	Cum	1237.00	1001.97			
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)	0.58	Cum	1377.70	800.17			
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.	0.58	Cum	516.50	299.98			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	2.84	Sqm	63.20	179.74			
14	Providing Drainage Spouts complete as per drawings & technical 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	43.73	Sqm	149.30	6528.71			

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)	73.623	Cum	1075.00	79144.75			
	Coarse Aggregates (100 Km lead)	148.004	Cum	1398.00	206910.03			
	Cement (30 km lead)	71.649	MT	742.00	53163.45			
	Boulder (60 Km lead)	0.81	Cum	1159.00	938.79			
	Steel (30 Km lead)	4.91	MT	742.00	3645.99			
	TOTAL (In Rs.)				2342994.52			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	73.62	Cum	584.64	43042.96	4304.30		
	Coarse Aggregate	148.00	Cum	944.26	139754.55	13975.46		
	Boulders	0.81	Cum	694.61	562.63	56.26		
	<i>Total</i>					18336.02		
	For 1 nos. HR, Total Seigniorage charges					18336.02		

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)
ABSTRACT OF COST HR FOR THUMBHI MR OFFTAKING FROM RD-7+214 KM (LT.) AT MAHUARY 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.	144.112	Cum	156.50	22553.47			
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.	19.69	Cum	6381.70	125663.19	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.	86.01	Cum	6914.20	594668.35	35.48	36.98	73.97
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.	17.98	Cum	8151.40	146530.25	10.19	7.01	14.20
5	Providing M.S. reinforcements 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.	2.23	MT	73574.90	164268.73			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.31	MT	160035.11	369227.61			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	285.73	Sqm	578.60	165322.88			
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.	11.59	Sqm	680.10	7879.64			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.16	Cum	694.61	1500.36			
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.	2.16	Cum	1237.00	2671.92			
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)	0.92	Cum	1377.70	1272.99			
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.	0.92	Cum	516.50	477.25			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.52	Sqm	63.20	222.17			
14	Providing Drainage Spouts complete as per drawings & technical 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	28.30	Sqm	149.30	4224.88			
18	Carriage of materials							

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)
	Coarse Sand (60 Km lead)	52.855	Cum	1075.00	56818.73			
	Coarse Aggregates (100 Km lead)	106.813	Cum	1398.00	149324.62			
	Cement (30 km lead)	52.050	MT	742.00	38621.24			
	Boulder (60 Km lead)	2.16	Cum	1159.00	2503.44			
	Steel (30 Km lead)	4.54	MT	742.00	3368.56			
TOTAL (In Rs.)					1873822.79			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	52.85	Cum	584.64	30900.93	3090.09		
	Coarse Aggregate	106.81	Cum	944.26	100859.27	10085.93		
	Boulders	2.16	Cum	694.61	1500.36	150.04		
	<i>Total</i>						13326.06	
	For 1 nos. HR, Total Seigniorage charges						13326.06	

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF HR FOR BARIAWA MR OFFTAKING FROM RD-0+975 KM (LT.) AT MAHUARY SUB 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	5.26	1.36	2.350	33.609	Cum
	<i>Section B-B</i>	2	5.25	2.07	3.912	84.904	Cum
	<i>Section C-C</i>	2	3.67	1.59	2.290	26.771	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.83	1.36	2.350	9.054	Cum
	<i>Left Bank Sec a to d</i>	1	3.66	2.94	2.200	23.681	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.56	1.10	2.940	3.648	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.78	2.10	2.940	34.295	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.4625	3.5175	0.850	4.373	Cum
	<i>Floor</i>	1	3.325	3.5175	0.650	7.602	Cum
		1	0.172	2.285	0.150	0.059	Cum
		1	4.76	2.285	0.800	8.701	Cum
		1	0.104	2.285	0.000	0.238	Cum
		1	5.079	2.285	1.150	13.346	Cum
		1	0.9	2.285	0.200	0.411	Cum
		1	0.135	2.285	0.200	0.062	Cum
		1	2.984	2.285	0.700	4.773	Cum
		1	1.0375	2.285	1.900	4.504	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	2.285	0.600	3.016	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.285	0.850	1.200	2.331	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	1.685	4.550	Cum
						269.93	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.						
	<i>PCC Below Floor</i>						
		1	0.629	4.020	0.150	0.38	Cum
		1	1.860	2.787	0.150	0.78	Cum
		1	0.934	2.285	0.150	0.32	Cum
		1	5.207	2.285	0.150	1.78	Cum
		1	5.306	2.285	0.150	1.82	Cum
		1	1.423	2.285	0.150	0.49	Cum
		1	0.829	2.285	0.150	0.28	Cum
		1	1.956	2.285	0.150	0.67	Cum
		1	0.692	2.285	0.150	0.24	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	5.258	1.360	0.300	4.29	Cum
	<i>Section B-B</i>	2	5.250	2.067	0.300	6.51	Cum
	<i>Section C-C</i>	2	3.667	1.594	0.300	3.51	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.833	1.360	0.300	1.16	Cum
	<i>Left Bank Sec a to d</i>	1	3.660	2.941	0.150	1.61	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.564	1.100	0.300	0.37	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.780	2.098	0.300	3.50	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.285	0.850	0.300	0.58	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	2.285	0.450	0.900	0.93	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	10	0.600	0.600	0.300	1.08	Cum
	TOTAL					31.51	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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Abutment						
	Section A-A	2	5.26	0.45	0.50	2.37	Cum
		2	5.26	0.71	0.85	6.30	Cum
		2	5.26	0.96	0.70	7.07	Cum
	Section B-B	2	5.25	1.24	1.41	18.44	Cum
		2	5.25	1.67	2.20	38.51	Cum
	Section C-C	2	3.67	0.45	0.50	1.65	Cum
		2	3.67	0.82	1.24	7.48	Cum
		2	3.67	1.19	0.75	6.57	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.83	0.45	0.50	0.64	Cum
		1	2.83	0.71	0.85	1.70	Cum
		1	2.83	0.96	0.70	1.90	Cum
	Left Bank						
	Section a-a	1		2.805	0.50	1.40	Sqm
		1		2.66	0.20	0.53	Sqm
		1		1.49	1.35	2.01	Sqm
						3.95	Sqm
	Section b-b	1		2.81	0.50	1.40	Sqm
		1		2.24	0.20	0.45	Sqm
		1		1.36	1.35	1.84	Sqm
						3.69	Sqm
	Section c-c	1		2.81	0.50	1.40	Sqm
		1		1.67	0.20	0.33	Sqm
		1		1.08	1.35	1.45	Sqm
						3.19	Sqm
	Section d-d	1		2.81	0.50	1.40	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.35	0.65	Sqm
						2.15	Sqm
	Bottom Key	1	3.66	1.46	0.70	3.75	Cum
	Top Stem Area	1	3.66		3.24	11.87	Cum
	D/S Transition wall						
	Sec 4-4	2	0.56	0.70	0.90	0.71	Cum
		2	0.56	0.53	1.24	0.73	Cum
		2	0.56	0.35	0.50	0.20	Cum
	Avg. of Sec 1-1 & 3-3	2	2.78	1.70	0.90	8.50	Cum
		2	2.78	1.28	1.24	8.84	Cum
		2	2.78	0.70	0.50	1.94	Cum
	TOTAL					129.15	Cum
	Floor						
	U/S key	1	1.46	3.52	0.70	3.60	Cum
	Floor	1	3.33	3.52	0.50	5.85	Cum
		1	0.17	2.29		0.39	Cum
		1	4.76	2.29	0.65	7.07	Cum
		1	0.10	2.29		0.24	Cum
		1	5.08	2.29	0.70	8.12	Cum
		1	0.90	2.29	0.20	0.41	Cum
		1	0.14	2.29		0.31	Cum
		1	0.79	2.29	0.45	0.81	Cum
		1	2.98	2.29	0.55	3.75	Cum
	D/S key	1	1.04	2.29	1.75	4.15	Cum
	TOTAL					163.85	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 Floor	1	3.78	3.52	0.20	2.66	Cum
		1	4.76	2.29	0.20	2.18	Cum
		1	5.08	2.29	0.20	2.32	Cum
		1	0.95	2.29	0.20	0.43	Cum
		1	2.98	2.29	0.20	1.36	Cum
	Top Slab	1	5.25	2.00	0.39	4.10	Cum
	75mm Th. Wearing coat on top slab	1	4.25	2.00	0.08	0.64	Cum
	Dirt wall	2	8.92	0.82	0.50	7.31	Cum
		2	8.92	0.40	0.43	3.03	Cum
	Parapet	2	2.84	0.45	0.18	0.44	Cum
		2	2.84	0.35	0.25	0.50	Cum
		2	2.84	0.22	0.55	0.68	Cum
	TOTAL					25.66	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing M.S. reinforcements 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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	3.545	29		1.578	162.241	Kg
a2	10	5.650	16		0.616	55.728	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	3.465	18		0.616	38.449	Kg
a5	10	5.550	11		0.616	37.635	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	50		0.888	111.007	Kg
x2	16	1.265	50		1.578	99.817	Kg
x3	10	2.985	24		0.616	44.163	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.386	9		0.888	59.009	Kg
	12	2.984	29		0.888	76.818	Kg
	<i>floor raft</i>						
	12	6.797	9		0.888	54.303	Kg
	12	15.326	18		0.888	244.889	Kg
	12	2.984	137		0.888	362.900	Kg
	0.25 % Skin Reinforcement for Transition walls	129.15	0.25%	0.32	7850	2534.55	Kg
	TOTAL Weight of steel (in kg)					4059.78	Kg
	TOTAL Weight of Steel (in Tonne)					4.06	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1		3.12		3.12	MT
	*Separate sheet attached						
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	5.26		0.50	10.52	Sqm
		4		0.45	0.50	0.90	Sqm
		4	5.26		0.85	17.88	Sqm
		4		0.71	0.85	2.40	Sqm
		4	5.26		0.70	14.72	Sqm
		4		0.96	0.70	2.69	Sqm
	<i>Section B-B</i>	4	5.25		1.41	29.65	Sqm
		4		1.24	1.41	7.02	Sqm
		4	5.25		2.20	46.20	Sqm
		4		1.67	2.20	14.67	Sqm
	<i>Section C-C</i>	4	3.67		1.24	18.19	Sqm
		4		0.82	1.24	4.08	Sqm
		4	3.67		0.75	11.00	Sqm
		4		1.19	0.75	3.58	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	2.83		0.50	2.83	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.83		0.85	4.82	Sqm
		2		0.71	0.85	1.20	Sqm
		2	2.83		0.70	3.97	Sqm
		2		0.96	0.70	1.34	Sqm
	Left Bank						
	<i>Bottom Key</i>	2	3.66		0.70	5.12	Sqm
		2		1.46	0.70	2.05	Sqm
	<i>Section a-a</i>	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		2.66	0.20	1.06	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.49	1.35	4.03	Sqm
	<i>Section b-b</i>	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		2.24	0.20	0.90	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.36	1.35	3.67	Sqm
	<i>Section c-c</i>	2	1.22		0.50	1.22	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		1.67	0.20	0.67	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.08	1.35	2.91	Sqm
	Section d-d	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.22		1.35	3.29	Sqm
		2		0.48	1.35	1.30	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.56		0.90	2.03	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.56		1.24	2.80	Sqm
		4		0.53	1.24	2.60	Sqm
		4	0.56		0.50	1.13	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.78		0.90	10.01	Sqm
		4		1.70	0.90	6.11	Sqm
		4	2.78		1.24	13.79	Sqm
		4		1.28	1.24	6.36	Sqm
		4	2.78		0.50	5.56	Sqm
		4		0.70	0.50	1.40	Sqm
	Floor						
	U/S key	2	1.46		0.70	2.05	Sqm
		2		3.52	0.70	4.92	Sqm
	Floor	2	3.33		0.50	3.33	Sqm
		2		3.52	0.50	3.52	Sqm
		2	0.17		0.00	0.00	Sqm
		2		2.29	0.00	0.00	Sqm
		2	4.76		0.65	6.19	Sqm
		2		2.29	0.65	2.97	Sqm
		2	0.10			0.21	Sqm
		2		2.29		4.57	Sqm
		2	5.08		0.70	7.11	Sqm
		2		2.29	0.70	3.20	Sqm
		2	0.90		0.20	0.36	Sqm
		2		2.29	0.20	0.91	Sqm
		2	0.14			0.27	Sqm
		2		2.29		4.57	Sqm
		2	2.98		0.55	3.28	Sqm
		2		2.29	0.55	2.51	Sqm
	D/S key	2	1.04		1.75	3.63	Sqm
		2		2.29	1.75	8.00	Sqm
	Toe Wall Base D/S Portion	2	2.29		0.30	1.37	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	2.29		0.90	4.11	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.00	0.39	1.56	Sqm
	Dirt wall	4	8.92		0.50	17.83	Sqm
		4		0.82	0.50	1.64	Sqm
		4	8.92		0.43	15.16	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	2.84		0.18	1.99	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.84		0.25	2.84	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.84		0.55	6.25	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					427.83	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	3.00	2.40		14.40	Sqm
	TOTAL					14.40	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	1.69	4.55	Cum
	TOTAL					4.55	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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)						
	<i>In D/S Portion below C.C. Blocks</i>	1	2.20	2.29	0.15	0.75	Cum
	<i>In D/S Portion below Stone Chips</i>	1	2.20	2.29	0.15	0.75	Cum
	TOTAL					1.51	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S transition</i>	2	1.65	0.48		1.59	Sqm
	<i>On Abutment Top</i>	2	5.06	0.45		1.49	Sqm
	TOTAL					3.07	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	5.26	0.89		9.351	Cum
	<i>Section B-B</i>	2	5.25	1.76		18.501	Cum
	<i>Section C-C</i>	2	3.67	1.33		9.754	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.83	0.88		2.498	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.56	0.92		1.034	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.78	1.53		8.496	Cum
	TOTAL					49.63	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR ITMA MR OFFTAKING FROM RD-3+985 KM (LT.) AT MAHUARY 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	2.90	2.13	3.520	43.384	Cum
	<i>Section B-B</i>	2	5.25	1.72	2.041	36.818	Cum
	<i>Section C-C</i>	2	0.50	1.54	2.041	3.139	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.73	1.76	3.520	23.055	Cum
	<i>Left Bank Sec a to d</i>	1	4.25	3.57	2.859	43.390	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	1.10	2.241	2.455	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.66	1.93	2.241	22.997	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.8	2.668	0.850	4.082	Cum
	<i>Floor</i>	1	4.334	2.668	0.650	7.516	Cum
		1	0.418	0.86	0.450	0.162	Cum
		1	0.718	0.86	0.350	0.216	Cum
		1	0.416	0.86	0.550	0.358	Cum
		1	3.829	0.86	1.200	3.952	Cum
		1	0.9	0.86	0.200	0.155	Cum
		1	0.135	0.86	0.200	0.023	Cum
		1	2.367	0.86	0.650	1.323	Cum
		1	0.7275	0.86	0.661	0.414	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	0.860	0.600	1.135	Cum
	<i>Toe Wall Base D/S Portion</i>	1	0.860	0.850	1.200	0.877	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.300	0.810	Cum
						196.26	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.						
	<i>PCC Below Floor</i>						
		1	0.629	4.476	0.150	0.42	Cum
		1	2.500	2.668	0.150	1.00	Cum
		1	1.246	0.860	0.150	0.16	Cum
		1	0.813	0.860	0.150	0.10	Cum
		1	4.129	0.860	0.150	0.53	Cum
		1	1.069	0.860	0.150	0.14	Cum
		1	1.279	0.860	0.150	0.16	Cum
		1	0.579	0.860	0.150	0.07	Cum
		1	0.692	0.860	0.150	0.09	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	2.900	2.125	0.300	3.70	Cum
	<i>Section B-B</i>	2	5.250	1.718	0.300	5.41	Cum
	<i>Section C-C</i>	2	0.500	1.538	0.300	0.46	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.732	1.755	0.300	1.96	Cum
	<i>Left Bank Sec a to d</i>	1	4.250	3.571	0.150	2.28	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.498	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.662	1.928	0.300	3.08	Cum
	<i>Toe Wall Base D/S Portion</i>	1	0.860	0.850	0.300	0.22	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	0.860	0.450	0.900	0.35	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	3	0.600	0.600	0.300	0.32	Cum
	TOTAL					22.01	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.						
	<i>Abutment</i>						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section A-A	2	2.90	0.45	0.50	1.31	Cum
		2	2.90	1.09	1.51	9.52	Cum
		2	2.90	1.73	1.21	12.12	Cum
	Section B-B	2	5.25	1.07	0.83	9.32	Cum
		2	5.25	1.32	0.91	12.61	Cum
	Section C-C	2	0.50	0.98	0.53	0.52	Cum
		2	0.50	1.14	1.21	1.38	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.73	0.45	0.50	0.84	Cum
		1	3.73	0.90	1.51	5.08	Cum
		1	3.73	1.36	1.21	6.12	Cum
	Left Bank						
	Section a-a	1		3.5	0.50	1.75	Sqm
		1		3.19	0.61	1.94	Sqm
		1		1.68	1.60	2.69	Sqm
						6.38	Sqm
	Section b-b	1		3.50	0.50	1.75	Sqm
		1		2.88	0.20	0.58	Sqm
		1		1.68	2.01	3.38	Sqm
						5.70	Sqm
	Section c-c	1		3.50	0.50	1.75	Sqm
		1		1.95	0.20	0.39	Sqm
		1		1.21	2.01	2.44	Sqm
						4.58	Sqm
	Section d-d	1		3.50	0.50	1.75	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	2.01	0.96	Sqm
						2.81	Sqm
	Bottom Key	1	4.25	1.80	0.70	5.36	Cum
	Top Stem Area	1	4.25	4.87		20.68	Cum
	D/S Transition wall						
	Sec 4-4	2	0.50	0.70	0.91	0.64	Cum
		2	0.50	0.53	0.53	0.28	Cum
		2	0.50	0.35	0.50	0.17	Cum
	Avg. of Sec 1-1 & 3-3	2	2.66	1.53	0.91	7.41	Cum
		2	2.66	1.17	0.53	3.29	Cum
		2	2.66	0.69	0.50	1.84	Cum
	TOTAL					98.46	Cum
	Floor						
	U/S key	1	1.80	2.67	0.70	3.36	Cum
	Floor	1	4.33	2.67	0.50	5.78	Cum
		1	0.42	0.86	0.30	0.11	Cum
		1	0.72	0.86	0.20	0.12	Cum
		1	0.42	0.86	0.55	0.20	Cum
		1	3.83	0.86	0.75	2.47	Cum
		1	0.90	0.86	0.20	0.15	Cum
		1	0.14	0.86		0.12	Cum
		1	0.53	0.86	0.55	0.25	Cum
		1	2.37	0.86	0.50	1.02	Cum
	D/S key	1	0.73	0.86	0.51	0.32	Cum
	TOTAL					112.36	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 Floor	1	4.45	2.67	0.20	2.38	Cum
		1	0.60	2.67	0.41	0.65	Cum
		1	0.67	0.86	0.20	0.12	Cum
		1	3.83	0.86	0.20	0.66	Cum
		1	0.95	0.86	0.20	0.16	Cum
		1	2.37	0.86	0.20	0.41	Cum
	Top Slab	1	5.25	2.00	0.39	4.10	Cum
	75mm Th. Wearing coat on top slab	1	4.25	2.00	0.08	0.64	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	2.84	0.45	0.18	0.44	Cum
		2	2.84	0.35	0.25	0.50	Cum
		2	2.84	0.22	0.55	0.68	Cum
	TOTAL					17.41	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing M.S. reinforcements 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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.120	29		1.578	97.024	Kg
a2	10	5.650	9		0.616	31.347	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	1.980	18		0.616	21.971	Kg
a5	10	5.450	6		0.616	20.158	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.321	28		0.888	57.690	Kg
x2	16	1.274	28		1.578	56.295	Kg
x3	10	1.560	24		0.616	23.080	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	8.700	4		0.888	30.892	Kg
	12	1.600	33		0.888	46.871	Kg
	<i>floor raft</i>						
	12	3.394	4		0.888	12.051	Kg
	12	9.319	8		0.888	66.180	Kg
	12	1.600	79		0.888	112.206	Kg
	0.25 % Skin Reinforcement for Transition walls	98.46	0.25%	0.25	7850	1932.35	Kg
	TOTAL Weight of steel (in kg)					2686.38	Kg
	TOTAL Weight of Steel (in Tonne)					2.69	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		2.46		2.46	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	2.90		0.50	5.80	Sqm
		4		0.45	0.50	0.90	Sqm
		4	2.90		1.51	17.50	Sqm
		4		1.09	1.51	6.56	Sqm
		4	2.90		1.21	14.05	Sqm
		4		1.73	1.21	8.36	Sqm
	<i>Section B-B</i>	4	5.25		0.83	17.43	Sqm
		4		1.07	0.83	3.55	Sqm
		4	5.25		0.91	19.13	Sqm
		4		1.32	0.91	4.80	Sqm
	<i>Section C-C</i>	4	0.50		0.53	1.06	Sqm
		4		0.98	0.53	2.08	Sqm
		4	0.50		1.21	2.42	Sqm
		4		1.14	1.21	5.51	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	3.73		0.50	3.73	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.73		1.51	11.26	Sqm
		2		0.90	1.51	2.72	Sqm
		2	3.73		1.21	9.04	Sqm
		2		1.36	1.21	3.28	Sqm
	Left Bank						
	<i>Bottom Key</i>	2	4.25		0.70	5.95	Sqm
		2		1.80	0.70	2.52	Sqm
	<i>Section a-a</i>	2	1.42		0.50	1.42	Sqm
		2		3.50	0.50	3.50	Sqm
		2	1.42		0.61	1.73	Sqm
		2		3.19	0.61	3.88	Sqm
		2	1.42		1.60	4.53	Sqm
		2		1.68	1.60	5.37	Sqm
	<i>Section b-b</i>	2	1.42		0.50	1.42	Sqm
		2		3.50	0.50	3.50	Sqm
		2	1.42		0.20	0.57	Sqm
		2		2.88	0.20	1.15	Sqm
		2	1.42		2.01	5.69	Sqm
		2		1.68	2.01	6.75	Sqm
	<i>Section c-c</i>	2	1.42		0.50	1.42	Sqm
		2		3.50	0.50	3.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.42		0.20	0.57	Sqm
		2		1.95	0.20	0.78	Sqm
		2	1.42		2.01	5.69	Sqm
		2		1.21	2.01	4.87	Sqm
	Section d-d	2	1.42		0.50	1.42	Sqm
		2		3.50	0.50	3.50	Sqm
		2	1.42		0.20	0.57	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.42		2.01	5.69	Sqm
		2		0.48	2.01	1.93	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.91	1.81	Sqm
		4		0.70	0.91	2.55	Sqm
		4	0.50		0.53	1.06	Sqm
		4		0.53	0.53	1.11	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	2.66		0.91	9.70	Sqm
		4		1.53	0.91	5.57	Sqm
		4	2.66		0.53	5.64	Sqm
		4		1.17	0.53	2.47	Sqm
		4	2.66		0.50	5.32	Sqm
		4		0.69	0.50	1.38	Sqm
	Floor						
	U/S key	2	1.80		0.70	2.52	Sqm
		2		2.67	0.70	3.74	Sqm
	Floor	2	4.33		0.50	4.33	Sqm
		2		2.67	0.50	2.67	Sqm
		2	0.42		0.30	0.25	Sqm
		2		0.86	0.30	0.52	Sqm
		2	0.72		0.20	0.29	Sqm
		2		0.86	0.20	0.34	Sqm
		2	0.42			0.83	Sqm
		2		0.86		1.72	Sqm
		2	3.83		0.75	5.74	Sqm
		2		0.86	0.75	1.29	Sqm
		2	0.90		0.20	0.36	Sqm
		2		0.86	0.20	0.34	Sqm
		2	0.14			0.27	Sqm
		2		0.86		1.72	Sqm
		2	2.37		0.50	2.37	Sqm
		2		0.86	0.50	0.86	Sqm
	D/S key	2	0.73		0.51	0.74	Sqm
		2		0.86	0.51	0.88	Sqm
	Toe Wall Base D/S Portion	2	0.86		0.30	0.52	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	0.86		0.90	1.55	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.00	0.39	1.56	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	2.84		0.18	1.99	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.84		0.25	2.84	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.84		0.55	6.25	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					332.71	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	3.00	2.09		12.56	Sqm
	TOTAL					12.56	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	0.30	0.81	Cum
	TOTAL					0.81	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)						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>In D/S Portion below C.C. Blocks</i>	1	2.20	0.86	0.15	0.28	Cum
	<i>In D/S Portion below Stone Chips</i>	1	2.20	0.86	0.15	0.28	Cum
	TOTAL					0.57	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S transition</i>	2	2.40	0.48		2.30	Sqm
	<i>On Abutment Top</i>	2	6.31	0.45		2.16	Sqm
	TOTAL					4.46	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	2.90	1.85		10.740	Cum
	<i>Section B-B</i>	2	5.25	1.20		12.621	Cum
	<i>Section C-C</i>	2	0.50	0.99		0.985	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.73	1.77		6.610	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	0.65		0.647	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.66	1.10		5.859	Cum
	TOTAL					37.46	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR MALI MR OFFTAKING FROM RD-4+520 KM (LT.) AT MAHUARY 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	7.07	1.53	4.344	94.102	Cum
	<i>Section B-B</i>	2	5.25	1.71	2.320	41.704	Cum
	<i>Section C-C</i>	2	0.50	1.71	2.320	3.972	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.16	1.16	4.344	10.918	Cum
	<i>Left Bank Sec a to d</i>	1	2.88	2.49	1.870	13.446	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	1.10	2.231	2.444	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.66	1.92	2.231	22.734	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.215	1.8465	0.850	1.907	Cum
	<i>Floor</i>	1	3.164	1.8465	0.650	3.798	Cum
		1	0.059	0.88	0.150	0.008	Cum
		1	3.96	0.88	0.720	2.509	Cum
		1	0.1133	0.88	0.000	0.100	Cum
		1	4.82	0.88	1.200	5.090	Cum
		1	0.9	0.88	0.200	0.158	Cum
		1	0.454	0.88	0.200	0.080	Cum
		1	2.486	0.88	0.650	1.422	Cum
		1	1.05	0.88	1.950	1.802	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	0.880	0.600	1.162	Cum
	<i>Toe Wall Base D/S Portion</i>	1	0.880	0.850	1.200	0.898	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.300	0.810	Cum
						209.06	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.						
	<i>PCC Below Floor</i>						
		1	0.629	2.169	0.150	0.20	Cum
		1	1.414	1.202	0.150	0.25	Cum
		1	1.272	0.880	0.150	0.17	Cum
		1	4.340	0.880	0.150	0.57	Cum
		1	4.812	0.880	0.150	0.64	Cum
		1	1.739	0.880	0.150	0.23	Cum
		1	0.155	0.880	0.150	0.02	Cum
		1	2.012	0.880	0.150	0.27	Cum
		1	0.692	0.880	0.150	0.09	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	7.070	1.532	0.300	6.50	Cum
	<i>Section B-B</i>	2	5.250	1.712	0.300	5.39	Cum
	<i>Section C-C</i>	2	0.500	1.712	0.300	0.51	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.163	1.162	0.300	0.75	Cum
	<i>Left Bank Sec a to d</i>	1	2.883	2.494	0.150	1.08	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.498	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.655	1.919	0.300	3.06	Cum
	<i>Toe Wall Base D/S Portion</i>	1	0.880	0.850	0.300	0.22	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	0.880	0.450	0.900	0.36	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	4	0.600	0.600	0.300	0.43	Cum
	TOTAL					22.29	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.						
	<i>Abutment</i>						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section A-A	2	7.07	0.82	0.50	5.80	Cum
		2	7.07	0.98	0.52	7.18	Cum
		2	7.07	1.13	3.02	48.40	Cum
	Section B-B	2	5.25	1.07	0.82	9.18	Cum
		2	5.25	1.31	1.20	16.53	Cum
	Section C-C	2	0.50	0.98	0.52	0.51	Cum
		2	0.50	1.13	1.50	1.70	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.16	0.45	0.50	0.49	Cum
		1	2.16	0.61	0.52	0.68	Cum
		1	2.16	0.76	3.02	4.98	Cum
	Left Bank						
	Section a-a	1		2.309	0.50	1.15	Sqm
		1		2.16	0.20	0.43	Sqm
		1		1.24	1.02	1.27	Sqm
						2.86	Sqm
	Section b-b	1		2.31	0.50	1.15	Sqm
		1		1.92	0.20	0.38	Sqm
		1		1.20	1.02	1.22	Sqm
						2.76	Sqm
	Section c-c	1		2.31	0.50	1.15	Sqm
		1		1.61	0.20	0.32	Sqm
		1		1.05	1.02	1.07	Sqm
						2.54	Sqm
	Section d-d	1		2.31	0.50	1.15	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.02	0.49	Sqm
						1.74	Sqm
	Bottom Key	1	2.88	1.21	0.70	2.45	Cum
	Top Stem Area	1	2.88	2.48		7.14	Cum
	D/S Transition wall						
	Sec 4-4	2	0.50	0.70	0.91	0.64	Cum
		2	0.50	0.53	0.52	0.27	Cum
		2	0.50	0.35	0.50	0.17	Cum
	Avg. of Sec 1-1 & 3-3	2	2.66	1.52	0.91	7.35	Cum
		2	2.66	1.18	0.52	3.25	Cum
		2	2.66	0.69	0.50	1.83	Cum
	TOTAL					118.55	Cum
	Floor						
	U/S key	1	1.22	1.85	0.70	1.57	Cum
	Floor	1	3.16	1.85	0.50	2.92	Cum
		1	0.06	0.88		0.05	Cum
		1	3.96	0.88	0.57	1.99	Cum
		1	0.11	0.88		0.10	Cum
		1	4.82	0.88	0.75	3.18	Cum
		1	0.90	0.88	0.20	0.16	Cum
		1	0.45	0.88		0.40	Cum
		1	0.14	0.88		0.12	Cum
		1	2.49	0.88	0.50	1.09	Cum
	D/S key	1	1.05	0.88	1.80	1.66	Cum
	TOTAL					131.79	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 Floor	1	3.28	1.85	0.20	1.21	Cum
		1	3.96	1.85	0.41	2.99	Cum
		1	4.82	0.88	0.20	0.85	Cum
		1	0.95	0.88	0.20	0.17	Cum
		1	2.49	0.88	0.20	0.44	Cum
	Top Slab	1	5.25	1.68	0.39	3.44	Cum
	75mm Th. Wearing coat on top slab	1	4.25	1.68	0.08	0.54	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	2.52	0.45	0.18	0.39	Cum
		2	2.52	0.35	0.25	0.44	Cum
		2	2.52	0.22	0.55	0.61	Cum
	TOTAL					17.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing M.S. reinforcements 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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.140	29		1.578	97.939	Kg
a2	10	5.650	9		0.616	31.347	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.000	18		0.616	22.193	Kg
a5	10	5.450	6		0.616	20.158	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.321	28		0.888	57.690	Kg
x2	16	1.274	28		1.578	56.295	Kg
x3	10	1.580	24		0.616	23.376	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	6.445	4		0.888	22.885	Kg
	12	1.620	25		0.888	35.952	Kg
	<i>floor raft</i>						
	12	6.797	4		0.888	24.135	Kg
	12	13.849	8		0.888	98.350	Kg
	12	1.620	124		0.888	178.322	Kg
	0.25 % Skin Reinforcement for Transition walls	118.55	0.25%	0.30	7850	2326.46	Kg
	TOTAL Weight of steel (in kg)					3173.37	Kg
	TOTAL Weight of Steel (in Tonne)					3.17	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		1.74		1.74	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	7.07		0.50	14.14	Sqm
		4		0.82	0.50	1.64	Sqm
		4	7.07		0.52	14.71	Sqm
		4		0.98	0.52	2.03	Sqm
		4	7.07		3.02	85.52	Sqm
		4		1.13	3.02	13.69	Sqm
	<i>Section B-B</i>	4	5.25		0.82	17.22	Sqm
		4		1.07	0.82	3.50	Sqm
		4	5.25		1.20	25.20	Sqm
		4		1.31	1.20	6.30	Sqm
	<i>Section C-C</i>	4	0.50		0.52	1.04	Sqm
		4		0.98	0.52	2.03	Sqm
		4	0.50		1.50	3.00	Sqm
		4		1.13	1.50	6.79	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	2.16		0.50	2.16	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.16		0.52	2.25	Sqm
		2		0.61	0.52	0.63	Sqm
		2	2.16		3.02	13.08	Sqm
		2		0.76	3.02	4.61	Sqm
	Left Bank						
	<i>Bottom Key</i>	2	2.88		0.70	4.04	Sqm
		2		1.21	0.70	1.70	Sqm
	<i>Section a-a</i>	2	0.96		0.50	0.96	Sqm
		2		2.31	0.50	2.31	Sqm
		2	0.96		0.20	0.38	Sqm
		2		2.16	0.20	0.86	Sqm
		2	0.96		1.02	1.96	Sqm
		2		1.24	1.02	2.54	Sqm
	<i>Section b-b</i>	2	0.96		0.50	0.96	Sqm
		2		2.31	0.50	2.31	Sqm
		2	0.96		0.20	0.38	Sqm
		2		1.92	0.20	0.77	Sqm
		2	0.96		1.02	1.96	Sqm
		2		1.20	1.02	2.45	Sqm
	<i>Section c-c</i>	2	0.96		0.50	0.96	Sqm
		2		2.31	0.50	2.31	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.96		0.20	0.38	Sqm
		2		1.61	0.20	0.64	Sqm
		2	0.96		1.02	1.96	Sqm
		2		1.05	1.02	2.13	Sqm
	Section d-d	2	0.96		0.50	0.96	Sqm
		2		2.31	0.50	2.31	Sqm
		2	0.96		0.20	0.38	Sqm
		2		0.48	0.20	0.19	Sqm
		2	0.96		1.02	1.96	Sqm
		2		0.48	1.02	0.98	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.91	1.81	Sqm
		4		0.70	0.91	2.55	Sqm
		4	0.50		0.52	1.04	Sqm
		4		0.53	0.52	1.09	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	2.66		0.91	9.67	Sqm
		4		1.52	0.91	5.54	Sqm
		4	2.66		0.52	5.52	Sqm
		4		1.18	0.52	2.45	Sqm
		4	2.66		0.50	5.31	Sqm
		4		0.69	0.50	1.38	Sqm
	Floor						
	U/S key	2	1.22		0.70	1.70	Sqm
		2		1.85	0.70	2.59	Sqm
	Floor	2	3.16		0.50	3.16	Sqm
		2		1.85	0.50	1.85	Sqm
		2	0.06			0.12	Sqm
		2		0.88		1.76	Sqm
		2	3.96		0.57	4.51	Sqm
		2		0.88	0.57	1.00	Sqm
		2	0.11			0.23	Sqm
		2		0.88		1.76	Sqm
		2	4.82		0.75	7.23	Sqm
		2		0.88	0.75	1.32	Sqm
		2	0.90		0.20	0.36	Sqm
		2		0.88	0.20	0.35	Sqm
		2	0.45			0.91	Sqm
		2		0.88		1.76	Sqm
		2	0.14			0.27	Sqm
		2		0.88		1.76	Sqm
		2	2.49		0.50	2.49	Sqm
		2		0.88	0.50	0.88	Sqm
	D/S key	2	1.05		1.80	3.78	Sqm
		2		0.88	1.80	3.17	Sqm
	Toe Wall Base D/S Portion	2	0.88		0.30	0.53	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	0.88		0.90	1.58	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		1.68	0.39	1.31	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	2.52		0.18	1.76	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.52		0.25	2.52	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.52		0.55	5.54	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					383.17	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	3.00	2.09		12.56	Sqm
	TOTAL					12.56	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	0.30	0.81	Cum
	TOTAL					0.81	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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)						
	<i>In D/S Portion below C.C. Blocks</i>	1	2.20	0.88	0.15	0.29	Cum
	<i>In D/S Portion below Stone Chips</i>	1	2.20	0.88	0.15	0.29	Cum
	TOTAL					0.58	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S transition</i>	2	1.53	0.48		1.47	Sqm
	<i>On Abutment Top</i>	2	10.47	0.45		1.38	Sqm
	TOTAL					2.84	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	7.07	1.48		20.913	Cum
	<i>Section B-B</i>	2	5.25	1.25		13.094	Cum
	<i>Section C-C</i>	2	0.50	1.09		1.090	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.16	1.05		2.260	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	0.65		0.642	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.66	1.08		5.729	Cum
	TOTAL					43.73	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR THUMBHI MR OFFTAKING FROM RD-7+214 KM (LT.) AT MAHUARY 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.76	1.68	2.760	16.283	Cum
	<i>Section B-B</i>	2	5.25	1.74	2.110	38.461	Cum
	<i>Section C-C</i>	2	0.50	1.59	2.110	3.346	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.93	1.31	2.760	10.576	Cum
	<i>Left Bank Sec a to d</i>	1	3.45	2.81	2.110	20.451	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	1.10	2.610	2.871	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.72	2.00	2.610	28.291	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.395	2.668	0.850	3.164	Cum
	<i>Floor</i>	1	3.524	2.668	0.650	6.111	Cum
		1	0.418	1.400	0.450	0.263	Cum
		1	0.718	1.400	0.350	0.352	Cum
		1	0.418	1.400	0.550	0.585	Cum
		1	3.079	1.400	1.200	5.173	Cum
		1	0.9	1.400	0.200	0.252	Cum
		1	0.135	1.400	0.200	0.038	Cum
		1	1.977	1.400	0.650	1.799	Cum
		1	0.725	1.400	0.650	0.660	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.400	0.600	1.848	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.400	0.850	1.200	1.428	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.800	2.160	Cum
						144.11	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.						
	<i>PCC Below Floor</i>						
		1	0.624	3.488	0.150	0.33	Cum
		1	1.737	3.341	0.150	0.87	Cum
		1	1.272	1.400	0.150	0.27	Cum
		1	0.778	1.400	0.150	0.16	Cum
		1	3.276	1.400	0.150	0.69	Cum
		1	1.739	1.400	0.150	0.37	Cum
		1	0.293	1.400	0.150	0.06	Cum
		1	0.559	1.400	0.150	0.12	Cum
		1	0.692	1.400	0.150	0.15	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.760	1.676	0.300	1.77	Cum
	<i>Section B-B</i>	2	5.250	1.736	0.300	5.47	Cum
	<i>Section C-C</i>	2	0.500	1.586	0.300	0.48	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.934	1.306	0.300	1.15	Cum
	<i>Left Bank Sec a to d</i>	1	3.448	2.811	0.150	1.45	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.500	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.716	1.996	0.300	3.25	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.400	0.850	0.300	0.36	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.400	0.450	0.900	0.57	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	6	0.600	0.600	0.300	0.65	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.						
	<i>Abutment</i>						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section A-A	2	1.76	0.82	0.50	1.44	Cum
		2	1.76	1.04	0.76	2.78	Cum
		2	1.76	1.26	1.20	5.32	Cum
	Section B-B	2	5.25	1.09	0.91	10.44	Cum
		2	5.25	1.37	0.90	12.91	Cum
	Section C-C	2	0.50	1.00	0.61	0.61	Cum
		2	0.50	1.19	1.20	1.42	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.93	0.45	0.50	0.66	Cum
		1	2.93	0.68	0.76	1.51	Cum
		1	2.93	0.91	1.20	3.19	Cum
	Left Bank						
	Section a-a	1		2.67	0.50	1.34	Sqm
		1		2.52	0.20	0.50	Sqm
		1		1.43	1.26	1.80	Sqm
						3.63	Sqm
	Section b-b	1		2.67	0.50	1.34	Sqm
		1		2.24	0.20	0.45	Sqm
		1		1.36	1.26	1.71	Sqm
						3.49	Sqm
	Section c-c	1		2.67	0.50	1.34	Sqm
		1		1.76	0.20	0.35	Sqm
		1		1.12	1.26	1.41	Sqm
						3.10	Sqm
	Section d-d	1		2.67	0.50	1.34	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.26	0.60	Sqm
						2.04	Sqm
	Bottom Key	1	3.45	1.40	0.70	3.37	Cum
	Top Stem Area	1	3.45	3.07		10.57	Cum
	D/S Transition wall						
	Sec 4-4	2	0.50	0.70	1.20	0.84	Cum
		2	0.50	0.53	0.61	0.32	Cum
		2	0.50	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.72	1.60	1.20	10.40	Cum
		2	2.72	1.20	0.61	3.98	Cum
		2	2.72	0.68	0.50	1.85	Cum
	TOTAL					71.80	Cum
	Floor						
	U/S key	1	1.40	2.67	0.70	2.61	Cum
	Floor	1	3.52	2.67	0.50	4.70	Cum
		1	0.42	1.40	0.30	0.18	Cum
		1	0.72	1.40	0.20	0.20	Cum
		1	0.42	1.40	0.55	0.32	Cum
		1	3.08	1.40	0.75	3.23	Cum
		1	0.90	1.40	0.20	0.25	Cum
		1	0.14	1.40		0.19	Cum
		1	0.45	1.40		0.64	Cum
		1	1.98	1.40	0.50	1.38	Cum
	D/S key	1	0.73	1.40	0.50	0.51	Cum
	TOTAL					86.01	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 Floor	1	3.64	2.67	0.20	1.94	Cum
		1	0.67	2.67	0.41	0.73	Cum
		1	3.08	1.40	0.20	0.86	Cum
		1	0.95	1.40	0.20	0.27	Cum
		1	1.98	1.40	0.20	0.55	Cum
	Top Slab	1	5.25	2.20	0.39	4.51	Cum
	75mm Th. Wearing coat on top slab	1	4.25	2.20	0.08	0.70	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	3.04	0.45	0.18	0.47	Cum
		2	3.04	0.35	0.25	0.53	Cum
		2	3.04	0.22	0.55	0.73	Cum
	TOTAL					17.98	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
5	Providing M.S. reinforcements 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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.660	29		1.578	121.738	Kg
a2	10	5.650	11		0.616	38.313	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.520	18		0.616	27.963	Kg
a5	10	5.450	8		0.616	26.878	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.321	36		0.888	74.173	Kg
x2	16	1.274	36		1.578	72.380	Kg
x3	10	2.100	24		0.616	31.070	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.127	6		0.888	37.960	Kg
	12	1.300	27		0.888	31.158	Kg
	<i>floor raft</i>						
	12	3.394	6		0.888	18.077	Kg
	12	8.179	12		0.888	87.126	Kg
	12	1.300	68		0.888	78.473	Kg
	0.25 % Skin Reinforcement for Transition walls	71.80	0.25%	0.18	7850	1409.10	Kg
	TOTAL Weight of steel (in kg)					2232.67	Kg
	TOTAL Weight of Steel (in Tonne)					2.23	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		2.31		2.31	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.76		0.50	3.52	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.76		0.76	5.35	Sqm
		4		1.04	0.76	3.16	Sqm
		4	1.76		1.20	8.45	Sqm
		4		1.26	1.20	6.05	Sqm
	<i>Section B-B</i>	4	5.25		0.91	19.11	Sqm
		4		1.09	0.91	3.98	Sqm
		4	5.25		0.90	18.90	Sqm
		4		1.37	0.90	4.92	Sqm
	<i>Section C-C</i>	4	0.50		0.61	1.22	Sqm
		4		1.00	0.61	2.45	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.19	1.20	5.69	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	2.93		0.50	2.93	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.93		0.76	4.46	Sqm
		2		0.68	0.76	1.03	Sqm
		2	2.93		1.20	7.04	Sqm
		2		0.91	1.20	2.17	Sqm
	Left Bank						
	<i>Bottom Key</i>	2	3.45		0.70	4.83	Sqm
		2		1.40	0.70	1.95	Sqm
	<i>Section a-a</i>	2	1.15		0.50	1.15	Sqm
		2		2.67	0.50	2.67	Sqm
		2	1.15		0.20	0.46	Sqm
		2		2.52	0.20	1.01	Sqm
		2	1.15		1.26	2.90	Sqm
		2		1.43	1.26	3.59	Sqm
	<i>Section b-b</i>	2	1.15		0.50	1.15	Sqm
		2		2.67	0.50	2.67	Sqm
		2	1.15		0.20	0.46	Sqm
		2		2.24	0.20	0.90	Sqm
		2	1.15		1.26	2.90	Sqm
		2		1.36	1.26	3.42	Sqm
	<i>Section c-c</i>	2	1.15		0.50	1.15	Sqm
		2		2.67	0.50	2.67	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.15		0.20	0.46	Sqm
		2		1.76	0.20	0.70	Sqm
		2	1.15		1.26	2.90	Sqm
		2		1.12	1.26	2.82	Sqm
	Section d-d	2	1.15		0.50	1.15	Sqm
		2		2.67	0.50	2.67	Sqm
		2	1.15		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.15		1.26	2.90	Sqm
		2		0.48	1.26	1.21	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		1.20	2.40	Sqm
		4		0.70	1.20	3.36	Sqm
		4	0.50		0.61	1.22	Sqm
		4		0.53	0.61	1.28	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	2.72		1.20	13.04	Sqm
		4		1.60	1.20	7.66	Sqm
		4	2.72		0.61	6.63	Sqm
		4		1.20	0.61	2.93	Sqm
		4	2.72		0.50	5.43	Sqm
		4		0.68	0.50	1.36	Sqm
	Floor						
	U/S key	2	1.40		0.70	1.95	Sqm
		2		2.67	0.70	3.74	Sqm
	Floor	2	3.52		0.50	3.52	Sqm
		2		2.67	0.50	2.67	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.40	0.30	0.84	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.40	0.20	0.56	Sqm
		2	0.42			0.84	Sqm
		2		1.40		2.80	Sqm
		2	3.08		0.75	4.62	Sqm
		2		1.40	0.75	2.10	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.40	0.20	0.56	Sqm
		2	0.14			0.27	Sqm
		2		1.40		2.80	Sqm
		2	0.45			0.91	Sqm
		2		1.40		2.80	Sqm
		2	1.98		0.50	1.98	Sqm
		2		1.40	0.50	1.40	Sqm
	D/S key	2	0.73		0.50	0.73	Sqm
		2		1.40	0.50	1.40	Sqm
	Toe Wall Base D/S Portion	2	1.40		0.30	0.84	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.40		0.90	2.52	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.20	0.39	1.72	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	3.04		0.18	2.13	Sqm
		4		0.45	0.18	0.31	Sqm
		4	3.04		0.25	3.04	Sqm
		4		0.35	0.25	0.35	Sqm
		4	3.04		0.55	6.69	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					285.73	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	3.00	1.93		11.59	Sqm
	TOTAL					11.59	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	0.80	2.16	Cum
	TOTAL					2.16	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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)						
	<i>In D/S Portion below C.C. Blocks</i>	1	2.20	1.40	0.15	0.46	Cum
	<i>In D/S Portion below Stone Chips</i>	1	2.20	1.40	0.15	0.46	Cum
	TOTAL					0.92	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S transition</i>	2	1.89	0.48		1.81	Sqm
	<i>On Abutment Top</i>	2	5.23	0.45		1.70	Sqm
	TOTAL					3.52	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.76	0.96		3.391	Cum
	<i>Section B-B</i>	2	5.25	1.30		13.650	Cum
	<i>Section C-C</i>	2	0.50	1.07		1.068	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.93	0.89		2.621	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	0.74		0.744	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.72	1.26		6.825	Cum
	TOTAL					28.30	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR MAHUARY 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. 0.075 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.	144.100	Cum	195.20	28128.34			
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.	27.48	Cum	6381.70	175361.30	8.90	12.37	24.73
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.	136.47	Cum	6914.20	943612.02	56.30	58.68	117.37
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.	1.58	Cum	8151.40	12875.14	0.90	0.62	1.25
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.	3.21	MT	73574.90	236467.86			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	351.14	Sqm	578.60	203171.34			
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.	44.91	Sqm	680.10	30544.65			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.28	Cum	694.61	3667.54			
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.	5.28	Cum	1237.00	6531.36			
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.	5.28	Cum	1377.70	7274.26			
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.	5.28	Cum	516.50	2727.12			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.09	Sqm	63.20	1143.29			
13	Providing Drainage Spouts complete as per drawings & technical 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	25.75	Cum	149.30	3844.07			

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)	71.665	Cum	1075.00	77040.40			
	Coarse Aggregates (100 Km lead)	143.347	Cum	1398.00	200398.79			
	Cement (30 km lead)	66.094	MT	742.00	49042.07			
	Boulder (60 Km lead)	5.28	Cum	1159.00	6119.52			
	Brick (15 km lead)	2694.00	No.	3.18	8566.92			
	Steel (30 Km lead)	3.21	MT	742.00	2384.77			
TOTAL (In Rs.)					2010078.15			
TOTAL (In Rs.)					2010078.15			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	71.67	Cum	584.64	41898.51	4189.85		
	Coarse Aggregate	143.35	Cum	944.26	135356.63	13535.66		
	Boulders	5.28	Cum	694.61	3667.54	366.75		
<i>Total</i>						18092.27		
For 1 nos. fall, Total Seigniorage charges						18092.27		

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)
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.955 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.	280.418	Cum	195.20	54737.51			
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.	31.94	Cum	6381.70	203813.48	10.35	14.37	28.74
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.	250.51	Cum	6914.20	1732092.49	103.34	107.72	215.44
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	13831.05	0.96	0.66	1.34
5	Providing M.S. reinforcements 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.	5.90	MT	73574.90	434059.97			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	520.35	Sqm	578.60	301072.14			
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.	37.32	Sqm	680.10	25384.05			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.10	Cum	694.61	2844.43			
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.	4.10	Cum	1237.00	5065.52			
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.	4.10	Cum	1377.70	5641.68			
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.	4.10	Cum	516.50	2115.07			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.44	Sqm	63.20	1291.52			
13	Providing Drainage Spouts complete as per drawings & technical 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	69.94	Cum	149.30	10442.14			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	122.754	Cum	1075.00	131960.31			
	Coarse Aggregates (100 Km lead)	245.525	Cum	1398.00	343243.29			
	Cement (30 km lead)	114.646	MT	742.00	85067.38			
	Boulder (60 Km lead)	4.10	Cum	1159.00	4746.11			
	Brick (15 km lead)	2239.00	No.	3.18	7120.02			
	Steel (30 Km lead)	5.90	MT	742.00	4377.48			
TOTAL (In Rs.)					3380083.03			
TOTAL (In Rs.)					3380083.03			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	122.75	Cum	584.64	71766.77	7176.68		
	Coarse Aggregate	245.52	Cum	944.26	231838.99	23183.90		
	Boulders	4.10	Cum	694.61	2844.43	284.44		
	<i>Total</i>					30645.02		
	For 1 nos. fall, Total Seigniorage charges					30645.02		

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 0.457 METER AT CH. 2.200 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.	137.721	Cum	195.20	26883.13			
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.	24.25	Cum	6381.70	154776.79	7.86	10.91	21.83
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.	107.71	Cum	6914.20	744743.97	44.43	46.32	92.63
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.	1.34	Cum	8151.40	10928.46	0.76	0.52	1.06
5	Providing M.S. reinforcements 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.	2.54	MT	73574.90	186631.80			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	300.54	Sqm	578.60	173892.62			
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.	37.33	Sqm	680.10	25388.81			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.10	Cum	694.61	2844.43			
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.	4.10	Cum	1237.00	5065.52			
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.	4.10	Cum	1377.70	5641.68			
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.	4.10	Cum	516.50	2115.07			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	16.69	Sqm	63.20	1054.73			
13	Providing Drainage Spouts complete as per drawings & technical 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	27.30	Cum	149.30	4075.26			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	57.753	Cum	1075.00	62084.56			
	Coarse Aggregates (100 Km lead)	115.520	Cum	1398.00	161496.36			
	Cement (30 km lead)	53.050	MT	742.00	39362.74			
	Boulder (60 Km lead)	4.10	Cum	1159.00	4746.11			
	Brick (15 km lead)	2239.00	No.	3.18	7120.02			
	Steel (30 Km lead)	2.54	MT	742.00	1882.17			
TOTAL (In Rs.)					1631911.62			
TOTAL (In Rs.)					1631911.62			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	57.75	Cum	584.64	33764.76	3376.48		
	Coarse Aggregate	115.52	Cum	944.26	109080.51	10908.05		
	Boulders	4.10	Cum	694.61	2844.43	284.44		
	<i>Total</i>					14568.97		
	For 1 nos. fall, Total Seigniorage charges					14568.97		

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)
SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 4.520 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.	452.129	Cum	195.20	88255.65			
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.	33.39	Cum	6381.70	213072.85	10.82	15.02	30.05
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.	295.42	Cum	6914.20	2042617.75	121.86	127.03	254.06
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.	1.52	Cum	8151.40	12393.57	0.86	0.59	1.20
5	Providing M.S. reinforcements 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.	6.96	MT	73574.90	511877.16			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	581.22	Sqm	578.60	336291.03			
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.	33.42	Sqm	680.10	22730.98			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	17.38	Cum	694.61	12069.71			
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.	17.38	Cum	1237.00	21494.40			
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.	3.59	Cum	1377.70	4943.19			
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.	3.59	Cum	516.50	1853.20			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.57	Sqm	63.20	1110.33			
13	Providing Drainage Spouts complete as per drawings & technical 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	113.24	Cum	149.30	16906.12			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	142.650	Cum	1075.00	153348.48			
	Coarse Aggregates (100 Km lead)	285.315	Cum	1398.00	398869.96			
	Cement (30 km lead)	133.542	MT	742.00	99088.20			
	Boulder (60 Km lead)	17.38	Cum	1159.00	20139.06			
	Brick (15 km lead)	2005.00	No.	3.18	6375.90			
	Steel (30 Km lead)	6.96	MT	742.00	5162.26			
TOTAL (In Rs.)					3979777.22			
TOTAL (In Rs.)					3979777.22			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	142.65	Cum	584.64	83398.75	8339.88		
	Coarse Aggregate	285.31	Cum	944.26	269411.27	26941.13		
	Boulders	17.38	Cum	694.61	12069.71	1206.97		
<i>Total</i>						36487.97		
For 1 nos. fall, Total Seigniorage charges						36487.97		

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)
SHARDA TYPE FALL OF HEIGHT 1.372METER AT CH. 7.214 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.	366.376	Cum	195.20	71516.68			
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.	29.16	Cum	6381.70	186113.97	9.45	13.12	26.25
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.	205.74	Cum	6914.20	1422523.51	84.87	88.47	176.94
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.	1.38	Cum	8151.40	11246.49	0.78	0.54	1.09
5	Providing M.S. reinforcements 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.	4.85	MT	73574.90	356482.41			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	455.74	Sqm	578.60	263689.81			
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.	29.72	Sqm	680.10	20211.21			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	12.73	Cum	694.61	8840.98			
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.	12.73	Cum	1237.00	15744.51			
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.	3.22	Cum	1377.70	4432.75			
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.	3.22	Cum	516.50	1661.84			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.06	Sqm	63.20	1078.44			
13	Providing Drainage Spouts complete as per drawings & technical 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	105.31	Cum	149.30	15722.91			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	102.130	Cum	1075.00	109789.43			
	Coarse Aggregates (100 Km lead)	204.273	Cum	1398.00	285573.92			
	Cement (30 km lead)	95.099	MT	742.00	70563.34			
	Boulder (60 Km lead)	12.73	Cum	1159.00	14751.73			
	Brick (15 km lead)	1783.00	No.	3.18	5669.94			
	Steel (30 Km lead)	4.85	MT	742.00	3595.11			
TOTAL (In Rs.)					2880386.39			
TOTAL (In Rs.)					2880386.39			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	102.13	Cum	584.64	59709.11	5970.91		
	Coarse Aggregate	204.27	Cum	944.26	192887.01	19288.70		
	Boulders	12.73	Cum	694.61	8840.98	884.10		
	<i>Total</i>					26143.71		
	For 1 nos. fall, Total Seigniorage charges					26143.71		

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 1.524 METER AT CH. 9.150 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.	330.515	Cum	195.20	64516.44			
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.	26.23	Cum	6381.70	167422.57	8.50	11.81	23.61
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.	187.34	Cum	6914.20	1295283.27	77.28	80.55	161.11
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.	1.50	Cum	8151.40	12256.32	0.85	0.59	1.19
5	Providing M.S. reinforcements 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.	4.41	MT	73574.90	324596.19			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	410.99	Sqm	578.60	237798.02			
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.	13.72	Sqm	680.10	9330.29			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.97	Cum	694.61	2062.99			
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.	2.97	Cum	1237.00	3673.89			
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.	2.97	Cum	1377.70	4091.77			
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.	2.97	Cum	516.50	1534.01			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.37	Sqm	63.20	1161.09			
13	Providing Drainage Spouts complete as per drawings & technical 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	86.58	Cum	149.30	12926.25			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	92.947	Cum	1075.00	99917.84			
	Coarse Aggregates (100 Km lead)	185.909	Cum	1398.00	259900.35			
	Cement (30 km lead)	86.629	MT	742.00	64278.71			
	Boulder (60 Km lead)	2.97	Cum	1159.00	3442.23			
	Brick (15 km lead)	823.00	No.	3.18	2617.14			
	Steel (30 Km lead)	4.41	MT	742.00	3273.54			
TOTAL (In Rs.)					2581260.31			
TOTAL (In Rs.)					2581260.31			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	92.95	Cum	584.64	54340.43	5434.04		
	Coarse Aggregate	185.91	Cum	944.26	175546.14	17554.61		
	Boulders	2.97	Cum	694.61	2062.99	206.30		
	<i>Total</i>					23194.96		
	For 1 nos. fall, Total Seigniorage charges					23194.96		

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. 11.90 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.	129.089	Cum	195.20	25198.19			
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.	19.78	Cum	6381.70	126220.74	6.41	8.90	17.80
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.	94.06	Cum	6914.20	650381.17	38.80	40.45	80.90
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.	1.14	Cum	8151.40	9316.56	0.65	0.45	0.90
5	Providing M.S. reinforcements 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.	2.22	MT	73574.90	162984.62			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	267.46	Sqm	578.60	154752.25			
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.	23.48	Sqm	680.10	15968.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.39	Cum	694.61	1661.85			
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.	2.39	Cum	1237.00	2959.52			
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.	2.39	Cum	1377.70	3296.15			
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.	2.39	Cum	516.50	1235.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.93	Sqm	63.20	880.62			
13	Providing Drainage Spouts complete as per drawings & technical 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	43.91	Cum	149.30	6555.32			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	49.794	Cum	1075.00	53528.39			
	Coarse Aggregates (100 Km lead)	99.599	Cum	1398.00	139239.59			
	Cement (30 km lead)	45.858	MT	742.00	34026.58			
	Boulder (60 Km lead)	2.39	Cum	1159.00	2772.91			
	Brick (15 km lead)	1408.00	No.	3.18	4477.44			
	Steel (30 Km lead)	2.22	MT	742.00	1643.69			
TOTAL (In Rs.)					1408277.11			
TOTAL (In Rs.)					1408277.11			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	49.79	Cum	584.64	29111.48	2911.15		
	Coarse Aggregate	99.60	Cum	944.26	94047.48	9404.75		
	Boulders	2.39	Cum	694.61	1661.85	166.19		
	<i>Total</i>					12482.08		
	For 1 nos. fall, Total Seigniorage charges					12482.08		

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)
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 15.550 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.	96.609	Cum	195.20	18858.17			
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.	18.96	Cum	6381.70	120965.42	6.14	8.53	17.06
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.	112.15	Cum	6914.20	775420.86	46.26	48.22	96.45
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.	22.13	Cum	8151.40	180377.03	12.55	8.63	17.48
5	Providing M.S. reinforcements 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	264437.70			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	290.80	Sqm	578.60	168254.64			
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.	16.30	Sqm	680.10	11084.95			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.65	Cum	694.61	1148.71			
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.	1.65	Cum	1237.00	2045.69			
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.	1.65	Cum	1377.70	2278.37			
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.	1.65	Cum	516.50	854.16			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.73	Sqm	63.20	425.46			
13	Providing Drainage Spouts complete as per drawings & technical 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	16.45	Cum	149.30	2456.15			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	65.384	Cum	1075.00	70287.71			
	Coarse Aggregates (100 Km lead)	130.989	Cum	1398.00	183122.77			
	Cement (30 km lead)	64.950	MT	742.00	48192.67			
	Boulder (60 Km lead)	1.65	Cum	1159.00	1916.70			
	Brick (15 km lead)	977.00	No.	3.18	3106.86			
	Steel (30 Km lead)	3.59	MT	742.00	2666.84			
TOTAL (In Rs.)					1869078.27			
TOTAL (In Rs.)					1869078.27			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	65.38	Cum	584.64	38226.05	3822.61		
	Coarse Aggregate	130.99	Cum	944.26	123687.78	12368.78		
	Boulders	1.65	Cum	694.61	1148.71	114.87		
	<i>Total</i>					16306.25		
	For 1 nos. fall, Total Seigniorage charges					16306.25		

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 0.610 METER AT CH. 17.875 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.	58.705	Cum	195.20	11459.28			
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.	12.03	Cum	6381.70	76755.44	3.90	5.41	10.82
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.	45.51	Cum	6914.20	314635.84	18.77	19.57	39.13
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.	0.77	Cum	8151.40	6256.61	0.44	0.30	0.61
5	Providing M.S. reinforcements 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.	1.07	MT	73574.90	78847.30			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	161.12	Sqm	578.60	93225.20			
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.	8.58	Sqm	680.10	5837.30			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.72	Cum	694.61	500.12			
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.	0.72	Cum	1237.00	890.64			
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.	0.72	Cum	1377.70	991.94			
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.	0.72	Cum	516.50	371.88			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.06	Sqm	63.20	699.06			
13	Providing Drainage Spouts complete as per drawings & technical 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	12.09	Cum	149.30	1804.64			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	25.279	Cum	1075.00	27175.10			
	Coarse Aggregates (100 Km lead)	50.566	Cum	1398.00	70691.26			
	Cement (30 km lead)	23.103	MT	742.00	17142.58			
	Boulder (60 Km lead)	0.72	Cum	1159.00	834.48			
	Brick (15 km lead)	514.00	No.	3.18	1634.52			
	Steel (30 Km lead)	1.07	MT	742.00	795.17			
TOTAL (In Rs.)					721725.76			
TOTAL (In Rs.)					721725.76			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	25.28	Cum	584.64	14779.21	1477.92		
	Coarse Aggregate	50.57	Cum	944.26	47747.44	4774.74		
	Boulders	0.72	Cum	694.61	500.12	50.01		
<i>Total</i>						6302.68		
For 1 nos. fall, Total Seigniorage charges						6302.68		

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. 18.280 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.	71.719	Cum	195.20	13999.63			
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.	11.28	Cum	6381.70	71998.09	3.66	5.08	10.15
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.	43.06	Cum	6914.20	297753.59	17.76	18.52	37.04
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.	0.76	Cum	8151.40	6181.17	0.43	0.30	0.60
5	Providing M.S. reinforcements 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.	1.01	MT	73574.90	74616.64			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	156.41	Sqm	578.60	90499.97			
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.	8.47	Sqm	680.10	5759.77			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.54	Cum	694.61	375.09			
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.	0.54	Cum	1237.00	667.98			
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.	0.54	Cum	1377.70	743.96			
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.	0.54	Cum	516.50	278.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.12	Sqm	63.20	702.52			
13	Providing Drainage Spouts complete as per drawings & technical 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	21.62	Cum	149.30	3228.05			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	23.890	Cum	1075.00	25681.93			
	Coarse Aggregates (100 Km lead)	47.788	Cum	1398.00	66807.51			
	Cement (30 km lead)	21.849	MT	742.00	16212.13			
	Boulder (60 Km lead)	0.54	Cum	1159.00	625.86			
	Brick (15 km lead)	508.00	No.	3.18	1615.44			
	Steel (30 Km lead)	1.01	MT	742.00	752.51			
TOTAL (In Rs.)					689678.15			
TOTAL (In Rs.)					689678.15			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	23.89	Cum	584.64	13967.15	1396.71		
	Coarse Aggregate	47.79	Cum	944.26	45124.22	4512.42		
	Boulders	0.54	Cum	694.61	375.09	37.51		
	<i>Total</i>					5946.65		
	For 1 nos. fall, Total Seigniorage charges					5946.65		

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 BARIAWA MINOR								
SHARDA TYPE FALL OF HEIGHT 0.457 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.	72.338	Cum	195.20	14120.35			
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.	11.61	Cum	6381.70	74112.27	3.76	5.23	10.45
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.	45.04	Cum	6914.20	311422.82	18.58	19.37	38.74
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.	0.86	Cum	8151.40	6992.07	0.49	0.33	0.68
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.	1.06	MT	73574.90	78042.12			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	167.99	Sqm	578.60	97198.37			
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.	12.07	Sqm	680.10	8205.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.26	Cum	694.61	877.81			
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.	1.26	Cum	1237.00	1563.26			
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.	1.26	Cum	1377.70	1741.07			
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.	1.26	Cum	516.50	652.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.36	Sqm	63.20	780.96			
13	Providing Drainage Spouts complete as per drawings & technical 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	21.52	Cum	149.30	3212.37			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	24.928	Cum	1075.00	26797.76			
	Coarse Aggregates (100 Km lead)	49.865	Cum	1398.00	69711.08			
	Cement (30 km lead)	22.828	MT	742.00	16938.73			
	Boulder (60 Km lead)	1.26	Cum	1159.00	1464.69			
	Brick (15 km lead)	723.00	No.	3.18	2299.14			
	Steel (30 Km lead)	1.06	MT	742.00	787.05			
TOTAL (In Rs.)					728097.46			
TOTAL (In Rs.)					728097.46			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	24.93	Cum	584.64	14573.99	1457.40		
	Coarse Aggregate	49.86	Cum	944.26	47085.40	4708.54		
	Boulders	1.26	Cum	694.61	877.81	87.78		
<i>Total</i>						6253.72		

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)
	For 1 nos. fall, Total Seigniorage charges					6253.72		

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. 6.100 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.	45.495	Cum	195.20	8880.57			
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.	7.54	Cum	6381.70	48144.27	2.44	3.39	6.79
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.	28.99	Cum	6914.20	200454.05	11.96	12.47	24.93
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.	0.53	Cum	8151.40	4306.14	0.30	0.21	0.42
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.	0.68	MT	73574.90	50233.51			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	120.25	Sqm	578.60	69576.06			
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.	5.34	Sqm	680.10	3633.77			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.13	Cum	694.61	87.52			
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	155.86			
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	173.59			
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.	0.13	Cum	516.50	65.08			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.72	Sqm	63.20	550.94			
13	Providing Drainage Spouts complete as per drawings & technical 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	12.99	Cum	149.30	1939.81			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	16.067	Cum	1075.00	17272.33			
	Coarse Aggregates (100 Km lead)	32.140	Cum	1398.00	44931.51			
	Cement (30 km lead)	14.703	MT	742.00	10909.53			
	Boulder (60 Km lead)	0.13	Cum	1159.00	146.03			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.68	MT	742.00	506.60			
TOTAL (In Rs.)					474162.19			
TOTAL (In Rs.)					474162.19			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	16.07	Cum	584.64	9393.58	939.36		
	Coarse Aggregate	32.14	Cum	944.26	30348.38	3034.84		
	Boulders	0.13	Cum	694.61	87.52	8.75		
<i>Total</i>						3982.95		
For 1 nos. fall, Total Seigniorage charges						3982.95		

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 ITMA MINOR								
SHARDA TYPE FALL OF HEIGHT 1.676 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.	146.043	Cum	195.20	28507.53			
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.	12.20	Cum	6381.70	77878.79	3.95	5.49	10.98
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.	113.29	Cum	6914.20	783316.64	46.73	48.72	97.43
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.	8.02	Cum	8151.40	65400.72	4.55	3.13	6.34
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.	3.03	MT	73574.90	222814.58			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	302.92	Sqm	578.60	175268.03			
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.	0.16	Cum	694.61	108.36			
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.	0.16	Cum	1237.00	192.97			
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.	0.16	Cum	1377.70	214.92			
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.	0.16	Cum	516.50	80.57			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.99	Sqm	63.20	378.82			
13	Providing Drainage Spouts complete as per drawings & technical 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	44.21	Cum	149.30	6600.44			

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)	57.336	Cum	1075.00	61635.93			
	Coarse Aggregates (100 Km lead)	114.752	Cum	1398.00	160422.93			
	Cement (30 km lead)	55.236	MT	742.00	40984.84			
	Boulder (60 Km lead)	0.16	Cum	1159.00	180.80			
	Brick (15 km lead)	505.00	No.	3.18	1605.90			
	Steel (30 Km lead)	3.03	MT	742.00	2247.08			
	TOTAL (In Rs.)				1644746.42			
	TOTAL (In Rs.)				1644746.42			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	57.34	Cum	584.64	33520.77	3352.08		
	Coarse Aggregate	114.75	Cum	944.26	108355.48	10835.55		
	Boulders	0.16	Cum	694.61	108.36	10.84		
	<i>Total</i>					14198.46		
	For 1 nos. fall, Total Seigniorage charges					14198.46		

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 0.305 METER AT CH. 3.950 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.	28.098	Cum	195.20	5484.79			
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.	6.64	Cum	6381.70	42386.84	2.15	2.99	5.98
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.	21.86	Cum	6914.20	151144.16	9.02	9.40	18.80
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.	0.48	Cum	8151.40	3888.22	0.27	0.19	0.38
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.	0.51	MT	73574.90	37876.52			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	103.63	Sqm	578.60	59959.17			
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.	5.34	Sqm	680.10	3633.77			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.00	Cum	694.61	0.00			
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.	0.00	Cum	1237.00	0.00			
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.	0.00	Cum	1377.70	0.00			
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.	0.00	Cum	516.50	0.00			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.46	Sqm	63.20	534.67			
13	Providing Drainage Spouts complete as per drawings & technical 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	6.86	Cum	149.30	1024.08			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	12.575	Cum	1075.00	13517.79			
	Coarse Aggregates (100 Km lead)	25.154	Cum	1398.00	35165.49			
	Cement (30 km lead)	11.440	MT	742.00	8488.24			
	Boulder (60 Km lead)	0.00	Cum	1159.00	0.00			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.51	MT	742.00	381.98			
TOTAL (In Rs.)					375680.72			
TOTAL (In Rs.)					375680.72			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	12.57	Cum	584.64	7351.66	735.17		
	Coarse Aggregate	25.15	Cum	944.26	23752.05	2375.20		
	Boulders	0.00	Cum	694.61	0.00	0.00		
<i>Total</i>						3110.37		
For 1 nos. fall, Total Seigniorage charges						3110.37		

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)
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 4.600 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.	22.073	Cum	195.20	4308.60			
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.	4.58	Cum	6381.70	29205.28	1.48	2.06	4.12
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.	15.24	Cum	6914.20	105367.28	6.29	6.55	13.11
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.	0.35	Cum	8151.40	2864.81	0.20	0.14	0.28
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	26404.89			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	83.22	Sqm	578.60	48153.52			
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.	3.89	Sqm	680.10	2642.19			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	694.61	121.90			
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	217.09			
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.	0.18	Cum	1377.70	241.79			
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.	0.18	Cum	516.50	90.65			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.97	Sqm	63.20	377.11			
13	Providing Drainage Spouts complete as per drawings & technical 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	7.30	Cum	149.30	1089.94			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	8.749	Cum	1075.00	9405.53			
	Coarse Aggregates (100 Km lead)	17.502	Cum	1398.00	24468.04			
	Cement (30 km lead)	7.968	MT	742.00	5912.42			
	Boulder (60 Km lead)	0.18	Cum	1159.00	203.40			
	Brick (15 km lead)	233.00	No.	3.18	740.94			
	Steel (30 Km lead)	0.36	MT	742.00	266.29			
TOTAL (In Rs.)					273259.09			
TOTAL (In Rs.)					273259.09			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	8.75	Cum	584.64	5115.21	511.52		
	Coarse Aggregate	17.50	Cum	944.26	16526.61	1652.66		
	Boulders	0.18	Cum	694.61	121.90	12.19		
<i>Total</i>						2176.37		
For 1 nos. fall, Total Seigniorage charges						2176.37		

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 MALI MINOR								
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.000 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.	51.901	Cum	195.20	10131.04			
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.	8.00	Cum	6381.70	51039.29	2.59	3.60	7.20
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.	26.35	Cum	6914.20	182182.32	10.87	11.33	22.66
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	4029.07	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.	0.62	MT	73574.90	45654.64			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	117.57	Sqm	578.60	68027.53			
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.	5.78	Sqm	680.10	3929.62			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.05	Cum	694.61	34.38			
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.	0.05	Cum	1237.00	61.23			
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.	0.05	Cum	1377.70	68.20			
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.	0.05	Cum	516.50	25.57			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.61	Sqm	63.20	544.00			
13	Providing Drainage Spouts complete as per drawings & technical 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	15.79	Cum	149.30	2358.07			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	15.122	Cum	1075.00	16255.97			
	Coarse Aggregates (100 Km lead)	30.298	Cum	1398.00	42356.76			
	Cement (30 km lead)	13.740	MT	742.00	10195.45			
	Boulder (60 Km lead)	0.05	Cum	1159.00	57.37			
	Brick (15 km lead)	346.00	No.	3.18	1100.28			
	Steel (30 Km lead)	0.62	MT	742.00	460.43			
TOTAL (In Rs.)					449688.61			
TOTAL (In Rs.)					449688.61			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	15.12	Cum	584.64	8840.83	884.08		
	Coarse Aggregate	30.30	Cum	944.26	28609.29	2860.93		
	Boulders	0.05	Cum	694.61	34.38	3.44		
<i>Total</i>						3748.45		

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)
	For 1 nos. fall, Total Seigniorage charges					3748.45		

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. 3.125 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.	40.895	Cum	195.20	7982.64			
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.	4.85	Cum	6381.70	30955.03	1.57	2.18	4.37
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.	17.59	Cum	6914.20	121626.19	7.26	7.56	15.13
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.	0.35	Cum	8151.40	2856.74	0.20	0.14	0.28
5	Providing M.S. reinforcements 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.	0.41	MT	73574.90	30479.36			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	90.65	Sqm	578.60	52451.07			
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.	0.00	Sqm	680.10	0.00			
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			
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.	5.97	Sqm	63.20	377.00			
13	Providing Drainage Spouts complete as per drawings & technical 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	10.98	Cum	149.30	1639.13			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	9.883	Cum	1075.00	10624.74			
	Coarse Aggregates (100 Km lead)	19.941	Cum	1398.00	27878.18			
	Cement (30 km lead)	9.027	MT	742.00	6697.66			
	Boulder (60 Km lead)	0.17	Cum	1159.00	198.19			
	Brick (15 km lead)	0.00	No.	3.18	0.00			
	Steel (30 Km lead)	0.41	MT	742.00	307.38			
TOTAL (In Rs.)					305904.93			
TOTAL (In Rs.)					305904.93			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	9.88	Cum	584.64	5778.28	577.83		
	Coarse Aggregate	19.94	Cum	944.26	18829.93	1882.99		
	Boulders	0.17	Cum	694.61	118.78	11.88		
<i>Total</i>						2472.70		
For 1 nos. fall, Total Seigniorage charges						2472.70		

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)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR THUMBHI MINOR								
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.545 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.	78.155	Cum	195.20	15255.77			
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.	11.44	Cum	6381.70	73020.36	3.71	5.15	10.30
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.	58.27	Cum	6914.20	402892.50	24.04	25.06	50.11
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.	11.20	Cum	8151.40	91294.29	6.35	4.37	8.85
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.	1.83	MT	73574.90	134327.64			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	181.90	Sqm	578.60	105248.87			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.48	Cum	694.61	333.41			
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.	0.48	Cum	1237.00	593.76			
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.	0.48	Cum	1377.70	661.30			
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.	0.48	Cum	516.50	247.92			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.83	Sqm	63.20	684.72			
13	Providing Drainage Spouts complete as per drawings & technical 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	15.06	Cum	149.30	2247.99			

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)	34.573	Cum	1075.00	37166.11			
	Coarse Aggregates (100 Km lead)	69.738	Cum	1398.00	97494.08			
	Cement (30 km lead)	34.094	MT	742.00	25297.79			
	Boulder (60 Km lead)	0.48	Cum	1159.00	556.32			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	1.83	MT	742.00	1354.69			
	TOTAL (In Rs.)				1007693.02			
	TOTAL (In Rs.)				1007693.02			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	34.57	Cum	584.64	20212.83	2021.28		
	Coarse Aggregate	69.74	Cum	944.26	65851.05	6585.10		
	Boulders	0.48	Cum	694.61	333.41	33.34		
	<i>Total</i>					8639.73		
	For 1 nos. fall, Total Seigniorage charges					8639.73		

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 0.914 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.	95.998	Cum	195.20	18738.90			
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.	10.21	Cum	6381.70	65155.03	3.31	4.59	9.19
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.	44.58	Cum	6914.20	308225.48	18.39	19.17	38.34
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.	0.48	Cum	8151.40	3886.26	0.27	0.19	0.38
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.	1.05	MT	73574.90	77240.88			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	162.53	Sqm	578.60	94041.71			
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.	0.00	Sqm	680.10	0.00			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.48	Cum	694.61	333.41			
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.	0.48	Cum	1237.00	593.76			
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.	0.48	Cum	1377.70	661.30			
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.	0.48	Cum	516.50	247.92			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	5.97	Sqm	63.20	377.00			
13	Providing Drainage Spouts complete as per drawings & technical 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	4550.87			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	23.949	Cum	1075.00	25745.27			
	Coarse Aggregates (100 Km lead)	48.383	Cum	1398.00	67639.37			
	Cement (30 km lead)	21.967	MT	742.00	16299.47			
	Boulder (60 Km lead)	0.48	Cum	1159.00	556.32			
	Brick (15 km lead)	0.00	No.	3.18	0.00			
	Steel (30 Km lead)	1.05	MT	742.00	778.97			
TOTAL (In Rs.)					696249.30			
TOTAL (In Rs.)					696249.30			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	23.95	Cum	584.64	14001.60	1400.16		
	Coarse Aggregate	48.38	Cum	944.26	45686.09	4568.61		
	Boulders	0.48	Cum	694.61	333.41	33.34		
	<i>Total</i>					6002.11		
	For 1 nos. fall, Total Seigniorage charges					6002.11		

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 FALL OF HEIGHT 1.220 METER AT CH. 3.300 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.	74.829	Cum	195.20	14606.57			
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.	9.42	Cum	6381.70	60099.97	3.05	4.24	8.48
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.	46.71	Cum	6914.20	322996.62	19.27	20.09	40.17
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	5310.23	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.	1.10	MT	73574.90	80942.50			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	168.68	Sqm	578.60	97599.82			
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.	0.00	Sqm	680.10	0.00			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.24	Cum	694.61	166.71			
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.	0.24	Cum	1237.00	296.88			
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.	0.24	Cum	1377.70	330.65			
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.	0.24	Cum	516.50	123.96			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.18	Sqm	63.20	643.31			
13	Providing Drainage Spouts complete as per drawings & technical 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	18.46	Cum	149.30	2756.37			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	24.579	Cum	1075.00	26422.85			
	Coarse Aggregates (100 Km lead)	49.405	Cum	1398.00	69068.62			
	Cement (30 km lead)	22.691	MT	742.00	16836.41			
	Boulder (60 Km lead)	0.24	Cum	1159.00	278.16			
	Brick (15 km lead)	0.00	No.	3.18	0.00			
	Steel (30 Km lead)	1.10	MT	742.00	816.30			
	TOTAL (In Rs.)				710473.34			
	TOTAL (In Rs.)				710473.34			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	24.58	Cum	584.64	14370.10	1437.01		
	Coarse Aggregate	49.41	Cum	944.26	46651.46	4665.15		
	Boulders	0.24	Cum	694.61	166.71	16.67		
	<i>Total</i>					6118.83		
	For 1 nos. fall, Total Seigniorage charges					6118.83		

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)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SOTHIDIH MINOR								
S. No.	Item of Works	Qty.	Unit	Rate (As per WRD SOR 2024 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.450 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.	104.290	Cum	195.20	20357.40			
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.	7.76	Cum	6381.70	49536.46	2.51	3.49	6.99
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.	42.66	Cum	6914.20	294986.01	17.60	18.35	36.69
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.	9.31	Cum	8151.40	75926.87	5.28	3.63	7.36
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.	1.28	MT	73574.90	94353.52			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	148.46	Sqm	578.60	85899.77			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.24	Cum	694.61	166.71			
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.	0.24	Cum	1237.00	296.88			
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.	0.24	Cum	1377.70	330.65			
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.	0.24	Cum	516.50	123.96			
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 & technical 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	18.07	Cum	149.30	2697.30			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	25.471	Cum	1075.00	27381.47			
	Coarse Aggregates (100 Km lead)	51.275	Cum	1398.00	71683.04			

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)
	Cement (30 km lead)	25.395	MT	742.00	18843.21			
	Boulder (60 Km lead)	0.24	Cum	1159.00	278.16			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	1.28	MT	742.00	951.55			
TOTAL (In Rs.)					763414.77			
TOTAL (In Rs.)					763414.77			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	25.47	Cum	584.64	14891.45	1489.14		
	Coarse Aggregate	51.28	Cum	944.26	48417.33	4841.73		
	Boulders	0.24	Cum	694.61	166.71	16.67		
<i>Total</i>						6347.55		
For 1 nos. fall, Total Seigniorage charges						6347.55		

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. 4.010 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.	44.759	Cum	195.20	8736.92			
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.	8.37	Cum	6381.70	53420.80	2.71	3.77	7.53
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.	33.51	Cum	6914.20	231668.73	13.82	14.41	28.82
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	4546.16	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.	0.79	MT	73574.90	58055.86			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	137.36	Sqm	578.60	79476.35			
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.	0.09	Cum	694.61	62.51			
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.	0.09	Cum	1237.00	111.33			
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.	0.09	Cum	1377.70	123.99			
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.	0.09	Cum	516.50	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.47	Sqm	63.20	598.78			
13	Providing Drainage Spouts complete as per drawings & technical 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	23.86	Cum	149.30	3562.32			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	18.392	Cum	1075.00	19771.51			
	Coarse Aggregates (100 Km lead)	36.880	Cum	1398.00	51557.95			
	Cement (30 km lead)	16.850	MT	742.00	12502.50			
	Boulder (60 Km lead)	0.09	Cum	1159.00	104.31			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.79	MT	742.00	585.49			
TOTAL (In Rs.)					540762.82			
TOTAL (In Rs.)					540762.82			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	18.39	Cum	584.64	10752.76	1075.28		
	Coarse Aggregate	36.88	Cum	944.26	34824.11	3482.41		
	Boulders	0.09	Cum	694.61	62.51	6.25		
<i>Total</i>						4563.94		
For 1 nos. fall, Total Seigniorage charges						4563.94		

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 1.067 METER AT CH. 5.010 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.	65.563	Cum	195.20	12797.89			
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.	8.14	Cum	6381.70	51939.47	2.64	3.66	7.32
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.	32.17	Cum	6914.20	222416.60	13.27	13.83	27.66
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	4464.11	0.31	0.21	0.43
5	Providing M.S. reinforcements 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	55737.29			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	133.99	Sqm	578.60	77524.42			
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.	0.09	Cum	694.61	62.51			
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.	0.09	Cum	1237.00	111.33			
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.	0.09	Cum	1377.70	123.99			
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.	0.09	Cum	516.50	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.38	Sqm	63.20	592.69			
13	Providing Drainage Spouts complete as per drawings & technical 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	22.30	Cum	149.30	3329.98			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	17.708	Cum	1075.00	19036.45			
	Coarse Aggregates (100 Km lead)	35.512	Cum	1398.00	49645.96			
	Cement (30 km lead)	16.217	MT	742.00	12032.89			
	Boulder (60 Km lead)	0.09	Cum	1159.00	104.31			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.76	MT	742.00	562.11			
TOTAL (In Rs.)					526359.31			
TOTAL (In Rs.)					526359.31			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	17.71	Cum	584.64	10353.00	1035.30		
	Coarse Aggregate	35.51	Cum	944.26	33532.69	3353.27		
	Boulders	0.09	Cum	694.61	62.51	6.25		
<i>Total</i>						4394.82		
For 1 nos. fall, Total Seigniorage charges						4394.82		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MAHUARY SUB DY

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 0.075 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.32	1.96	1.202	6.214	Cum
	<i>Section 2-2</i>	2	3.50	1.59	1.202	13.378	Cum
	<i>Section 3-3</i>	2	2.70	1.47	1.002	7.954	Cum
	<i>Section 5-5</i>	2	7.24	2.11	1.202	36.632	Cum
	<i>Section 6-6</i>	2	4.03	1.47	1.002	11.872	Cum
	<i>U/S Key Floor</i>	1	0.600	5.000	0.750	2.250	Cum
	<i>U/S Floor</i>	1	2.500	5.000	1.560	19.500	Cum
	<i>D/S Floor</i>	1	3.500	5.000	0.950	16.625	Cum
		1	3.000	5.000	0.750	11.250	Cum
	<i>D/S Key Floor</i>	1	0.700	5.000	1.150	4.025	Cum
	<i>Toe Wall D/S Portion</i>	1	16.000	0.750	0.900	10.800	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	4.000	0.600	0.750	3.600	Cum
						144.10	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.						
	<i>PCC Below Floor</i>	1	0.542	5.00	0.15	0.41	Cum
		1	0.671	5.00	0.15	0.50	Cum
		1	5.627	5.00	0.15	4.22	Cum
		1	0.424	5.00	0.15	0.32	Cum
		1	1.188	5.00	0.15	0.89	Cum
		1	1.000	5.00	0.15	0.75	Cum
		1	0.542	5.00	0.15	0.41	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.32	1.96	0.15	0.78	Cum
	<i>Section 2-2</i>	2	3.50	1.59	0.15	1.67	Cum
	<i>Section 3-3</i>	2	2.70	1.47	0.15	1.19	Cum
	<i>Section 5-5</i>	2	7.24	2.11	0.15	4.57	Cum
	<i>Section 6-6</i>	2	4.03	1.47	0.15	1.78	Cum
	<i>Toe Wall D/S Portion</i>	1	16.00	0.75	0.30	3.60	Cum
	<i>Toe Wall D/S Portion</i>	1	15.70	0.45	0.60	4.24	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.00	0.60	0.15	0.72	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.00	0.30	0.60	1.44	Cum
	TOTAL					27.48	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.10	0.45	0.45	0.44	Cum
		2	1.10	1.05	2.01	4.64	Cum
		2	1.10	1.81	0.60	2.38	Cum
	<i>Section 2-2</i>	2	3.50	0.45	0.45	1.42	Cum
		2	3.50	0.87	1.40	8.53	Cum
		2	3.50	1.44	0.60	6.05	Cum
	<i>Section 3-3</i>	2	2.19	0.45	0.45	0.89	Cum
		2	2.19	0.81	1.20	4.26	Cum
		2	2.19	1.32	0.50	2.89	Cum
	<i>Section 5-5</i>	2	7.19	0.45	0.45	2.91	Cum
		2	7.19	1.05	2.01	30.44	Cum
		2	7.19	1.81	0.60	15.59	Cum
	<i>Section 6-6</i>	2	4.69	0.45	0.45	1.90	Cum
		2	4.69	0.81	1.20	9.12	Cum
		2	4.69	1.32	0.50	6.19	Cum
	<i>Floor</i>	1	0.60	5.00	0.60	1.80	Cum
		1	6.00	5.00	0.60	18.00	Cum
		1	0.56	5.00	0.30	0.84	Cum
		1	0.20	5.00	0.40	0.40	Cum
		1	2.80	5.00	0.50	7.00	Cum
		1	0.70	5.00	1.00	3.50	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	1	1.11	5.00	1.31	7.30	Cum
	TOTAL					136.47	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	0.90	5.00	0.15	0.68	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	20.10	0.45	0.05	0.45	Cum
	On Abutment Top (Right Side)	1	20.10	0.45	0.05	0.45	Cum
	TOTAL					1.58	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	136.47	0.30%	0.41	7850	3213.97	Kg
	Total Weight in Metric Tonne					3.21	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.10		0.45	1.97	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.10		2.01	8.82	Sqm
		4		1.05	2.01	8.47	Sqm
		4	1.10		0.60	2.63	Sqm
		4		1.81	0.60	4.33	Sqm
	Section 2-2	4	3.50		0.45	6.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.50		1.40	19.60	Sqm
		4		0.87	1.40	4.87	Sqm
		4	3.50		0.60	8.40	Sqm
		4		1.44	0.60	3.46	Sqm
	Section 3-3	4	2.19		0.45	3.94	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.19		1.20	10.51	Sqm
		4		0.81	1.20	3.89	Sqm
		4	2.19		0.50	4.38	Sqm
		4		1.32	0.50	2.64	Sqm
	Section 5-5	4	7.19		0.45	12.95	Sqm
		4		0.45	0.45	0.81	Sqm
		4	7.19		2.01	57.82	Sqm
		4		1.05	2.01	8.47	Sqm
		4	7.19		0.60	17.26	Sqm
		4		1.81	0.60	4.33	Sqm
	Section 6-6	4	4.69		0.45	8.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.69		1.20	22.51	Sqm
		4		0.81	1.20	3.89	Sqm
		4	4.69		0.50	9.38	Sqm
		4		1.32	0.50	2.64	Sqm
	Floor	2	0.60		0.60	0.72	Sqm
		2		5.00	0.60	6.00	Sqm
		2	6.00		0.60	7.20	Sqm
		2		5.00	0.60	6.00	Sqm
		2	0.56		0.30	0.33	Sqm
		2		5.00	0.30	3.00	Sqm
		2	0.20		0.40	0.16	Sqm
		2		5.00	0.40	4.00	Sqm
		2	2.80		0.50	2.80	Sqm
		2		5.00	0.50	5.00	Sqm
		2	0.70		1.00	1.40	Sqm
		2		5.00	1.00	10.00	Sqm
	Crest	2	1.1105		1.314	2.92	Sqm
		2		5	1.314	13.14	Sqm
	Toe Wall D/S Portion	2	16.00		0.30	9.60	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	15.70		0.60	18.84	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	4.00		0.15	2.40	Sqm
		4		0.60	0.15	0.36	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	4.00		0.60	9.60	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.30	0.60	0.72	Sqm
	TOTAL					351.14	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.						
	<i>In D/S Portion On Slopes</i>	2	4.00	5.61		44.91	Sqm
	TOTAL					44.91	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	4.00	4.40	0.30	5.28	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	4.00	4.40	0.15	5.28	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	20.10	0.45		9.05	Sqm
	<i>On Abutment Top (Right Side)</i>	1	20.10	0.45		9.05	Sqm
	TOTAL					18.09	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		5.43		5.43	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.32	0.29		0.759	Cum
	<i>Section 2-2</i>	2	3.50	0.78		5.439	Cum
	<i>Section 3-3</i>	2	2.70	0.17		0.918	Cum
	<i>Section 5-5</i>	2	7.24	0.29		4.153	Cum
	<i>Section 6-6</i>	2	4.03	0.17		1.370	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	16.00	0.15	0.60	2.880	Cum
		2	4.00	0.15	0.60	4.800	Cum
	TOTAL					25.75	Cum
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 0.955 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.26	2.53	2.235	14.238	Cum
	<i>Section 2-2</i>	2	5.35	1.56	2.235	37.286	Cum
	<i>Section 3-3</i>	2	3.40	1.41	2.035	19.512	Cum
	<i>Section 5-5</i>	2	7.47	2.68	2.235	89.609	Cum
	<i>Section 6-6</i>	2	3.74	1.41	2.035	21.463	Cum
	<i>U/S Key Floor</i>	1	0.813	4.500	1.600	5.850	Cum
	<i>U/S Floor</i>	1	4.300	4.500	2.235	43.247	Cum
	<i>D/S Floor</i>	1	5.000	4.500	0.850	19.125	Cum
		1	3.700	4.500	0.650	10.823	Cum
	<i>D/S Key Floor</i>	1	0.825	4.500	1.650	6.126	Cum
	<i>Toe Wall D/S Portion</i>	1	14.800	0.750	0.900	9.990	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.500	0.600	0.750	3.150	Cum
						280.42	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.						
	<i>PCC Below Floor</i>	1	0.542	4.50	0.15	0.37	Cum
		1	1.621	4.50	0.15	1.09	Cum
		1	0.696	4.50	0.15	0.47	Cum
		1	0.777	4.50	0.15	0.52	Cum
		1	6.858	4.50	0.15	4.63	Cum
		1	0.777	4.50	0.15	0.52	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
		1	1.784	4.50	0.15	1.20	Cum
		1	1.677	4.50	0.15	1.13	Cum
		1	0.542	4.50	0.15	0.37	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.26	2.53	0.15	0.96	Cum
	<i>Section 2-2</i>	2	5.35	1.56	0.15	2.50	Cum
	<i>Section 3-3</i>	2	3.40	1.41	0.15	1.44	Cum
	<i>Section 5-5</i>	2	7.47	2.68	0.15	6.01	Cum
	<i>Section 6-6</i>	2	3.74	1.41	0.15	1.58	Cum
	<i>Toe Wall D/S Portion</i>	1	14.80	0.75	0.30	3.33	Cum
	<i>Toe Wall D/S Portion</i>	1	14.50	0.45	0.60	3.92	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.60	0.15	0.63	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.30	0.60	1.26	Cum
	TOTAL					31.94	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.11	0.45	0.45	0.45	Cum
		2	1.11	1.34	2.97	8.84	Cum
		2	1.11	2.38	1.05	5.54	Cum
	<i>Section 2-2</i>	2	5.35	0.45	0.45	2.17	Cum
		2	5.35	0.86	1.35	12.34	Cum
		2	5.35	1.41	1.05	15.83	Cum
	<i>Section 3-3</i>	2	2.92	0.45	0.45	1.18	Cum
		2	2.92	0.78	1.10	5.01	Cum
		2	2.92	1.26	0.75	5.52	Cum
	<i>Section 5-5</i>	2	7.47	0.45	0.45	3.02	Cum
		2	7.47	1.34	2.97	59.62	Cum
		2	7.47	2.38	1.05	37.39	Cum
	<i>Section 6-6</i>	2	4.37	0.45	0.45	1.77	Cum
		2	4.37	0.78	1.10	7.50	Cum
		2	4.37	1.26	0.75	8.26	Cum
	<i>Floor</i>	1	0.81	4.50	1.45	5.30	Cum
		1	2.03	4.50	0.50	4.56	Cum
		1	0.55	4.50	0.78	1.92	Cum
		1	6.72	4.50	1.05	31.77	Cum
		1	0.29	4.50	0.55	0.71	Cum
		1	0.25	4.50	0.63	0.70	Cum
		1	3.45	4.50	0.75	11.64	Cum
		1	0.83	4.50	1.50	5.57	Cum
	<i>Crest</i>	1	1.36	4.50	2.27	13.90	Cum
	TOTAL					250.51	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.						
	<i>Over Crest</i>	1	1.00	4.50	0.15	0.68	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	22.71	0.45	0.05	0.51	Cum
	<i>On Abutment Top (Right Side)</i>	1	22.71	0.45	0.05	0.51	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	250.51	0.30%	0.75	7850	5899.57	Kg
	Total Weight in Metric Tonne					5.90	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.11		0.45	1.99	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.11		2.97	13.17	Sqm
		4		1.34	2.97	15.96	Sqm
		4	1.11		1.05	4.65	Sqm
		4		2.38	1.05	10.01	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
	Section 2-2	4	5.35		0.45	9.62	Sqm
		4		0.45	0.45	0.81	Sqm
		4	5.35		1.35	28.87	Sqm
		4		0.86	1.35	4.62	Sqm
		4	5.35		1.05	22.46	Sqm
		4		1.41	1.05	5.92	Sqm
	Section 3-3	4	2.92		0.45	5.26	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.92		1.10	12.85	Sqm
		4		0.78	1.10	3.43	Sqm
		4	2.92		0.75	8.76	Sqm
		4		1.26	0.75	3.78	Sqm
	Section 5-5	4	7.47		0.45	13.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	7.47		2.97	88.85	Sqm
		4		1.34	2.97	15.96	Sqm
		4	7.47		1.05	31.37	Sqm
		4		2.38	1.05	10.01	Sqm
	Section 6-6	4	4.37		0.45	7.87	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.37		1.10	19.23	Sqm
		4		0.78	1.10	3.43	Sqm
		4	4.37		0.75	13.11	Sqm
		4		1.26	0.75	3.78	Sqm
	Floor	2	0.81		1.45	2.36	Sqm
		2		4.50	1.45	13.05	Sqm
		2	2.03		0.50	2.03	Sqm
		2		4.50	0.50	4.50	Sqm
		2	0.55		0.78	0.85	Sqm
		2		4.50	0.78	6.98	Sqm
		2	6.72		1.05	14.12	Sqm
		2		4.50	1.05	9.45	Sqm
		2	0.29		0.55	0.31	Sqm
		2		4.50	0.55	4.95	Sqm
		2	0.25		0.63	0.31	Sqm
		2		4.50	0.63	5.63	Sqm
		2	3.45		0.75	5.18	Sqm
		2		4.50	0.75	6.75	Sqm
		2	0.83		1.50	2.48	Sqm
		2		4.50	1.50	13.50	Sqm
	Crest	2	1.36		2.269	6.18	Sqm
		2		4.5	2.269	20.42	Sqm
	Toe Wall D/S Portion	2	14.80		0.30	8.88	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	14.50		0.60	17.40	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.15	2.10	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.60	8.40	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					520.35	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	3.50	5.33		37.32	Sqm
	TOTAL					37.32	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	3.50	3.90	0.30	4.10	Cum
	TOTAL					4.10	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	3.50	3.90	0.15	4.10	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	22.71	0.45		10.22	Sqm
	On Abutment Top (Right Side)	1	22.71	0.45		10.22	Sqm
	TOTAL					20.44	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						

	Items	No.	Length	Width	Height	Quantity	Unit
		1	2			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						
	<i>Under U/S floor</i>	1		34.72		34.72	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.26	0.74		1.865	Cum
	<i>Section 2-2</i>	2	5.35	0.79		8.438	Cum
	<i>Section 3-3</i>	2	3.40	0.53		3.618	Cum
	<i>Section 5-5</i>	2	7.47	0.71		10.557	Cum
	<i>Section 6-6</i>	2	3.74	0.52		3.882	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	14.80	0.15	0.60	2.664	Cum
		2	3.50	0.15	0.60	4.200	Cum
	TOTAL					69.94	Cum
		136.767	137.582	0.815			
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 2.200 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.80	1.482	6.098	Cum
	<i>Section 2-2</i>	2	3.50	1.53	1.482	15.872	Cum
	<i>Section 3-3</i>	2	2.20	1.41	1.282	7.954	Cum
	<i>Section 5-5</i>	2	6.77	1.95	1.482	39.224	Cum
	<i>Section 6-6</i>	2	3.74	1.41	1.282	13.521	Cum
	<i>U/S Key Floor</i>	1	0.613	4.500	0.800	2.205	Cum
	<i>U/S Floor</i>	1	2.500	4.500	1.357	15.266	Cum
	<i>D/S Floor</i>	1	3.500	4.500	0.900	14.175	Cum
		1	2.500	4.500	0.700	7.875	Cum
	<i>D/S Key Floor</i>	1	0.625	4.500	0.850	2.391	Cum
	<i>Toe Wall D/S Portion</i>	1	14.800	0.750	0.900	9.990	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.500	0.600	0.750	3.150	Cum
						137.72	Cum

	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.						
	<i>PCC Below Floor</i>	1	0.542	4.50	0.15	0.37	Cum
		1	0.727	4.50	0.15	0.49	Cum
		1	5.602	4.50	0.15	3.78	Cum
		1	0.353	4.50	0.15	0.24	Cum
		1	0.838	4.50	0.15	0.57	Cum
		1	0.895	4.50	0.15	0.60	Cum
		1	0.542	4.50	0.15	0.37	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.80	0.15	0.62	Cum
	<i>Section 2-2</i>	2	3.50	1.53	0.15	1.61	Cum
	<i>Section 3-3</i>	2	2.20	1.41	0.15	0.93	Cum
	<i>Section 5-5</i>	2	6.77	1.95	0.15	3.97	Cum
	<i>Section 6-6</i>	2	3.74	1.41	0.15	1.58	Cum
	<i>Toe Wall D/S Portion</i>	1	14.80	0.75	0.30	3.33	Cum
	<i>Toe Wall D/S Portion</i>	1	14.50	0.45	0.60	3.92	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.60	0.15	0.63	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.30	0.60	1.26	Cum
	TOTAL					24.25	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.91	0.45	0.45	0.37	Cum
		2	0.91	0.98	1.76	3.12	Cum
		2	0.91	1.65	0.55	1.65	Cum
	<i>Section 2-2</i>	2	3.50	0.45	0.45	1.42	Cum
		2	3.50	0.84	1.30	7.64	Cum
		2	3.50	1.38	0.55	5.31	Cum
	<i>Section 3-3</i>	2	1.72	0.45	0.45	0.70	Cum
		2	1.72	0.78	1.11	2.98	Cum
		2	1.72	1.26	0.50	2.17	Cum
	<i>Section 5-5</i>	2	6.73	0.45	0.45	2.73	Cum
		2	6.73	0.98	1.76	23.10	Cum
		2	6.73	1.65	0.55	12.24	Cum
	<i>Section 6-6</i>	2	4.37	0.45	0.45	1.77	Cum
		2	4.37	0.78	1.11	7.57	Cum
		2	4.37	1.26	0.50	5.51	Cum
	<i>Floor</i>	1	0.61	4.50	0.65	1.79	Cum
		1	6.00	4.50	0.55	14.85	Cum
		1	0.53	4.50	0.25	0.60	Cum
		1	0.20	4.50	0.40	0.36	Cum
		1	2.30	4.50	0.50	5.18	Cum
		1	0.63	4.50	0.70	1.97	Cum
	<i>Crest</i>	1	0.93	4.50	1.12	4.70	Cum
	TOTAL					107.71	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.						
	<i>Over Crest</i>	1	0.75	4.50	0.15	0.51	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	18.54	0.45	0.05	0.42	Cum
	<i>On Abutment Top (Right Side)</i>	1	18.54	0.45	0.05	0.42	Cum
	TOTAL					1.34	Cum
5	Providing M.S. reinforcements 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	107.71	0.30%	0.32	7850	2536.62	Kg
	Total Weight in Metric Tonne					2.54	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						

	Items	No.	Length	Width	Height	Quantity	Unit
	Abutment						
	<i>Section 1-1</i>	4	0.91		0.45	1.64	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.91		1.76	6.39	Sqm
		4		0.98	1.76	6.87	Sqm
		4	0.91		0.55	2.00	Sqm
		4		1.65	0.55	3.64	Sqm
	<i>Section 2-2</i>	4	3.50		0.45	6.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.50		1.30	18.20	Sqm
		4		0.84	1.30	4.37	Sqm
		4	3.50		0.55	7.70	Sqm
		4		1.38	0.55	3.04	Sqm
	<i>Section 3-3</i>	4	1.72		0.45	3.10	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.72		1.11	7.64	Sqm
		4		0.78	1.11	3.46	Sqm
		4	1.72		0.50	3.44	Sqm
		4		1.26	0.50	2.52	Sqm
	<i>Section 5-5</i>	4	6.73		0.45	12.11	Sqm
		4		0.45	0.45	0.81	Sqm
		4	6.73		1.76	47.29	Sqm
		4		0.98	1.76	6.87	Sqm
		4	6.73		0.55	14.80	Sqm
		4		1.65	0.55	3.64	Sqm
	<i>Section 6-6</i>	4	4.37		0.45	7.87	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.37		1.11	19.40	Sqm
		4		0.78	1.11	3.46	Sqm
		4	4.37		0.50	8.74	Sqm
		4		1.26	0.50	2.52	Sqm
	<i>Floor</i>	2	0.61		0.65	0.80	Sqm
		2		4.50	0.65	5.85	Sqm
		2	6.00		0.55	6.60	Sqm
		2		4.50	0.55	4.95	Sqm
		2	0.53		0.25	0.27	Sqm
		2		4.50	0.25	2.25	Sqm
		2	0.20		0.40	0.16	Sqm
		2		4.50	0.40	3.60	Sqm
		2	2.30		0.50	2.30	Sqm
		2		4.50	0.50	4.50	Sqm
		2	0.63		0.70	0.88	Sqm
		2		4.50	0.70	6.30	Sqm
	<i>Crest</i>	2	0.929		1.124	2.09	Sqm
		2		4.5	1.124	10.12	Sqm
	<i>Toe Wall D/S Portion</i>	2	14.80		0.30	8.88	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	14.50		0.60	17.40	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	3.50		0.15	2.10	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	3.50		0.60	8.40	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					300.54	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.						
	<i>In D/S Portion On Slopes</i>	2	3.50	5.33		37.33	Sqm
	TOTAL					37.33	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.50	3.90	0.30	4.10	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	3.50	3.90	0.15	4.10	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	18.54	0.45		8.34	Sqm
	<i>On Abutment Top (Right Side)</i>	1	18.54	0.45		8.34	Sqm
	TOTAL					16.69	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		4.81		4.81	Cum
	Abutment						
	Section 1-1	2	1.14	0.50		1.143	Cum
	Section 2-2	2	3.50	0.50		3.507	Cum
	Section 3-3	2	2.20	0.35		1.549	Cum
	Section 5-5	2	6.77	0.50		6.786	Cum
	Section 6-6	2	3.74	0.35		2.633	Cum
	D/S protection	2					
	Toe wall	2	14.80	0.15	0.60	2.664	Cum
		2	3.50	0.15	0.60	4.200	Cum
	TOTAL					27.30	Cum
SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 4.520 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	4.93	2.60	3.509	89.951	Cum
	Section 2-2	2	5.50	1.50	3.509	57.899	Cum
	Section 3-3	2	2.95	1.38	3.309	26.942	Cum
	Section 5-5	2	6.73	2.75	3.509	129.791	Cum
	Section 6-6	2	3.60	1.38	3.309	32.833	Cum
	U/S Key Floor	1	0.775	4.280	1.450	4.810	Cum
	U/S Floor	1	2.703	4.280	2.680	31.004	Cum
	D/S Floor	1	7.296	4.280	1.400	43.718	Cum
		1	3.250	4.280	1.000	13.910	Cum
	D/S Key Floor	1	0.950	4.280	2.150	8.742	Cum
	Toe Wall D/S Portion	1	14.230	0.750	0.900	9.605	Cum
	Boulder Pitching (D/S Portion)	2	3.250	0.600	0.750	2.925	Cum
						452.13	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	0.542	4.28	0.15	0.35	Cum
		1	1.453	4.28	0.15	0.93	Cum
		1	0.898	4.28	0.15	0.58	Cum
		1	0.777	4.28	0.15	0.50	Cum
		1	7.421	4.28	0.15	4.76	Cum
		1	0.636	4.28	0.15	0.41	Cum
		1	0.550	4.28	0.15	0.35	Cum
		1	0.070	4.28	0.15	0.04	Cum
		1	0.595	4.28	0.15	0.38	Cum
		1	2.236	4.28	0.15	1.44	Cum
		1	0.542	4.28	0.15	0.35	Cum
	PCC Below Abutment						
	Section 1-1	2	4.93	2.60	0.15	3.85	Cum
	Section 2-2	2	5.50	1.50	0.15	2.48	Cum
	Section 3-3	2	2.95	1.38	0.15	1.22	Cum
	Section 5-5	2	6.73	2.75	0.15	5.55	Cum
	Section 6-6	2	3.60	1.38	0.15	1.49	Cum
	Toe Wall D/S Portion	1	14.23	0.75	0.30	3.20	Cum
	Toe Wall D/S Portion	1	13.93	0.45	0.60	3.76	Cum
	Toe Wall for resting Brick Edging	2	3.25	0.60	0.15	0.59	Cum
	Toe Wall for resting Brick Edging	2	3.25	0.30	0.60	1.17	Cum
	TOTAL					33.39	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.						

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.86	0.45	0.45	1.97	Cum
		2	4.86	1.37	3.08	41.12	Cum
		2	4.86	2.45	1.05	24.98	Cum
	<i>Section 2-2</i>	2	5.50	0.45	0.45	2.23	Cum
		2	5.50	0.83	1.25	11.34	Cum
		2	5.50	1.35	1.05	15.59	Cum
	<i>Section 3-3</i>	2	2.49	0.45	0.45	1.01	Cum
		2	2.49	0.77	1.05	3.99	Cum
		2	2.49	1.23	0.80	4.89	Cum
	<i>Section 5-5</i>	2	6.73	0.45	0.45	2.73	Cum
		2	6.73	1.37	3.08	56.96	Cum
		2	6.73	2.45	1.05	34.60	Cum
	<i>Section 6-6</i>	2	4.21	0.45	0.45	1.71	Cum
		2	4.21	0.77	1.05	6.76	Cum
		2	4.21	1.23	0.80	8.29	Cum
	<i>Floor</i>	1	0.78	4.28	1.30	4.31	Cum
		1	2.15	4.28	0.50	4.61	Cum
		1	0.78	4.28	0.55	1.82	Cum
		1	7.30	4.28	1.05	32.79	Cum
		1	0.10	4.28		0.43	Cum
		1	0.70	4.28	0.20	0.60	Cum
		1	0.80	4.28	0.80	2.74	Cum
		1	0.78	4.28	0.05	0.17	Cum
		1	2.20	4.28	0.75	7.06	Cum
		1	0.95	4.28	2.00	8.13	Cum
	<i>Crest</i>	1	1.40	4.28	2.44	14.60	Cum
	TOTAL					295.42	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.						
	<i>Over Crest</i>	1	1.00	4.28	0.15	0.64	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	19.52	0.45	0.05	0.44	Cum
	<i>On Abutment Top (Right Side)</i>	1	19.52	0.45	0.05	0.44	Cum
	TOTAL					1.52	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	295.42	0.30%	0.89	7850	6957.23	Kg
	Total Weight in Metric Tonne					6.96	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	4.86		0.45	8.75	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.86		3.08	59.86	Sqm
		4		1.37	3.08	16.93	Sqm
		4	4.86		1.05	20.41	Sqm
		4		2.45	1.05	10.28	Sqm
	<i>Section 2-2</i>	4	5.50		0.45	9.90	Sqm
		4		0.45	0.45	0.81	Sqm
		4	5.50		1.25	27.50	Sqm
		4		0.83	1.25	4.13	Sqm
		4	5.50		1.05	23.10	Sqm
		4		1.35	1.05	5.67	Sqm
	<i>Section 3-3</i>	4	2.49		0.45	4.47	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.49		1.05	10.44	Sqm
		4		0.77	1.05	3.21	Sqm
		4	2.49		0.80	7.95	Sqm
		4		1.23	0.80	3.94	Sqm
	<i>Section 5-5</i>	4	6.73		0.45	12.11	Sqm
		4		0.45	0.45	0.81	Sqm
		4	6.73		3.08	82.91	Sqm
		4		1.37	3.08	16.93	Sqm
		4	6.73		1.05	28.27	Sqm
		4		2.45	1.05	10.28	Sqm
	<i>Section 6-6</i>	4	4.21		0.45	7.58	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.45	0.45	0.81	Sqm
		4	4.21		1.05	17.68	Sqm
		4		0.77	1.05	3.21	Sqm
		4	4.21		0.80	13.47	Sqm
		4		1.23	0.80	3.94	Sqm
	Floor	2	0.78		1.30	2.02	Sqm
		2		4.28	1.30	11.13	Sqm
		2	2.15		0.50	2.15	Sqm
		2		4.28	0.50	4.28	Sqm
		2	0.78		0.55	0.85	Sqm
		2		4.28	0.55	4.71	Sqm
		2	7.30		1.05	15.32	Sqm
		2		4.28	1.05	8.99	Sqm
		2	0.10			0.20	Sqm
		2		4.28		8.56	Sqm
		2	0.7		0.2	0.28	Sqm
		2		4.28	0.20	1.71	Sqm
		2	0.8		0.8	1.28	Sqm
		2		4.28	0.80	6.85	Sqm
		2	0.78		0.05	0.08	Sqm
		2		4.28	0.05	0.43	Sqm
		2	2.2		0.75	3.30	Sqm
		2		4.28	0.75	6.42	Sqm
		2	0.95		2.00	3.80	Sqm
		2		4.28	2.00	17.12	Sqm
	Crest	2	1.3985		2.44	6.82	Sqm
		2		4.28	2.44	20.89	Sqm
	Toe Wall D/S Portion	2	14.23		0.30	8.54	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	13.93		0.60	16.72	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	3.25		0.15	1.95	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	3.25		0.60	7.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					581.22	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	3.25	5.14		33.42	Sqm
	TOTAL					33.42	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In U/S Portion	1	3.25	3.68	0.30	3.59	Cum
	In D/S Portion	1	7.16	4.28	0.45	13.79	Cum
	TOTAL					17.38	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	3.68	0.15	3.59	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	19.52	0.45		8.78	Sqm
	On Abutment Top (Right Side)	1	19.52	0.45		8.78	Sqm
	TOTAL					17.57	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		26.32		26.32	Cum
	Abutment						
	Section 1-1	2	4.93	1.61		15.915	Cum
	Section 2-2	2	5.50	1.54		16.885	Cum
	Section 3-3	2	2.95	1.23		7.233	Cum
	Section 5-5	2	6.73	2.35		31.604	Cum
	Section 6-6	2	3.60	1.23		8.815	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	14.23	0.15	0.60	2.561	Cum
		2	3.25	0.15	0.60	3.900	Cum
	TOTAL					113.24	Cum
SHARDA TYPE FALL OF HEIGHT 1.372METER AT CH. 7.214 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.15	2.29	3.379	64.270	Cum
	<i>Section 2-2</i>	2	4.75	1.41	3.379	45.262	Cum
	<i>Section 3-3</i>	2	3.70	1.29	3.179	30.347	Cum
	<i>Section 5-5</i>	2	6.61	2.44	3.379	109.121	Cum
	<i>Section 6-6</i>	2	3.51	1.29	3.179	28.788	Cum
	<i>U/S Key Floor</i>	1	0.675	3.900	1.050	2.764	Cum
	<i>U/S Floor</i>	1	2.214	3.900	3.129	27.018	Cum
	<i>D/S Floor</i>	1	6.286	3.900	1.200	29.418	Cum
		1	4.011	3.900	0.800	12.514	Cum
	<i>D/S Key Floor</i>	1	0.800	3.900	1.550	4.836	Cum
	<i>Toe Wall D/S Portion</i>	1	13.500	0.750	0.900	9.113	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.250	0.600	0.750	2.925	Cum
						366.38	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.						
	<i>PCC Below Floor</i>	1	0.542	3.90	0.15	0.32	Cum
		1	1.006	3.90	0.15	0.59	Cum
		1	0.909	3.90	0.15	0.53	Cum
		1	0.353	3.90	0.15	0.21	Cum
		1	6.479	3.90	0.15	3.79	Cum
		1	0.565	3.90	0.15	0.33	Cum
		1	0.530	3.90	0.15	0.31	Cum
		1	0.070	3.90	0.15	0.04	Cum
		1	1.645	3.90	0.15	0.96	Cum
		1	1.565	3.90	0.15	0.92	Cum
		1	0.542	3.90	0.15	0.32	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	4.15	2.29	0.15	2.85	Cum
	<i>Section 2-2</i>	2	4.75	1.41	0.15	2.01	Cum
	<i>Section 3-3</i>	2	3.70	1.29	0.15	1.43	Cum
	<i>Section 5-5</i>	2	6.61	2.44	0.15	4.84	Cum
	<i>Section 6-6</i>	2	3.51	1.29	0.15	1.36	Cum
	<i>Toe Wall D/S Portion</i>	1	13.50	0.75	0.30	3.04	Cum
	<i>Toe Wall D/S Portion</i>	1	13.20	0.45	0.60	3.56	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.60	0.15	0.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.30	0.60	1.17	Cum
	TOTAL					29.16	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.07	0.45	0.45	1.65	Cum
		2	4.07	1.22	2.57	25.59	Cum
		2	4.07	2.14	0.85	14.84	Cum
	<i>Section 2-2</i>	2	4.75	0.45	0.45	1.92	Cum
		2	4.75	0.78	1.10	8.15	Cum
		2	4.75	1.26	0.85	10.17	Cum
	<i>Section 3-3</i>	2	3.28	0.45	0.45	1.33	Cum
		2	3.28	0.72	0.90	4.25	Cum
		2	3.28	1.14	0.60	4.49	Cum
	<i>Section 5-5</i>	2	6.61	0.45	0.45	2.68	Cum
		2	6.61	1.22	2.57	41.53	Cum
		2	6.61	2.14	0.85	24.08	Cum
	<i>Section 6-6</i>	2	4.08	0.45	0.45	1.65	Cum
		2	4.08	0.72	0.90	5.29	Cum
		2	4.08	1.14	0.60	5.58	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	Floor	1	0.68	3.90	0.90	2.37	Cum
		1	1.96	3.90	0.60	4.59	Cum
		1	0.73	3.90	0.25	0.71	Cum
		1	6.29	3.90	0.85	20.84	Cum
		1	0.27	3.90	0.40	0.42	Cum
		1	0.55	3.90	0.20	0.43	Cum
		1	0.80	3.90	0.80	2.50	Cum
		1	0.63	3.90	0.05	0.12	Cum
		1	2.95	3.90	0.60	6.90	Cum
		1	0.80	3.90	1.40	4.37	Cum
	Crest	1	1.22	3.90	1.96	9.30	Cum
	TOTAL					205.74	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	3.90	0.15	0.53	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	18.96	0.45	0.05	0.43	Cum
	On Abutment Top (Right Side)	1	18.96	0.45	0.05	0.43	Cum
	TOTAL					1.38	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	205.74	0.30%	0.62	7850	4845.16	Kg
	Total Weight in Metric Tonne					4.85	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	4.07		0.45	7.33	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.07		2.57	41.90	Sqm
		4		1.22	2.57	12.57	Sqm
		4	4.07		0.85	13.85	Sqm
		4		2.14	0.85	7.29	Sqm
	Section 2-2	4	4.75		0.45	8.55	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.75		1.10	20.90	Sqm
		4		0.78	1.10	3.43	Sqm
		4	4.75		0.85	16.15	Sqm
		4		1.26	0.85	4.28	Sqm
	Section 3-3	4	3.28		0.45	5.90	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.28		0.90	11.81	Sqm
		4		0.72	0.90	2.59	Sqm
		4	3.28		0.60	7.87	Sqm
		4		1.14	0.60	2.74	Sqm
	Section 5-5	4	6.61		0.45	11.90	Sqm
		4		0.45	0.45	0.81	Sqm
		4	6.61		2.57	68.00	Sqm
		4		1.22	2.57	12.57	Sqm
		4	6.61		0.85	22.47	Sqm
		4		2.14	0.85	7.29	Sqm
	Section 6-6	4	4.08		0.45	7.34	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.08		0.90	14.69	Sqm
		4		0.72	0.90	2.59	Sqm
		4	4.08		0.60	9.79	Sqm
		4		1.14	0.60	2.74	Sqm
	Floor	2	0.68		0.90	1.22	Sqm
		2		3.90	0.90	7.02	Sqm
		2	1.96		0.60	2.36	Sqm
		2		3.90	0.60	4.68	Sqm
		2	0.73		0.25	0.36	Sqm
		2		3.90	0.25	1.95	Sqm
		2	6.29		0.85	10.69	Sqm
		2		3.90	0.85	6.63	Sqm
		2	0.27		0.40	0.22	Sqm
		2		3.90	0.40	3.12	Sqm
		2	0.55		0.2	0.22	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		2		3.9	0.20	1.56	Sqm
		2	0.8		0.8	1.28	Sqm
		2		3.9	0.80	6.24	Sqm
		2	0.63		0.05	0.06	Sqm
		2		3.90	0.05	0.39	Sqm
		2	2.95		0.6	3.54	Sqm
		2		3.9	0.60	4.68	Sqm
		2	0.80		1.40	2.24	Sqm
		2		3.90	1.40	10.92	Sqm
	Crest	2	1.218		1.957	4.77	Sqm
		2		3.9	1.957	15.26	Sqm
	Toe Wall D/S Portion	2	13.50		0.30	8.10	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	13.20		0.60	15.84	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	3.25		0.15	1.95	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	3.25		0.60	7.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					455.74	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	4.57		29.72	Sqm
	TOTAL					29.72	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In U/S Portion	1	3.25	3.30	0.30	3.22	Cum
	In D/S Portion	1	5.18	4.08	0.45	9.51	Cum
	TOTAL					12.73	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	3.30	0.15	3.22	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	0.45		8.53	Sqm
	On Abutment Top (Right Side)	1	18.96	0.45		8.53	Sqm
	TOTAL					17.06	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		18.60		18.60	Cum
	Abutment						
	Section 1-1	2	4.15	2.54		21.053	Cum
	Section 2-2	2	4.75	1.30		12.350	Cum
	Section 3-3	2	3.70	1.02		7.570	Cum
	Section 5-5	2	6.61	2.44		32.228	Cum
	Section 6-6	2	3.51	1.02		7.181	Cum
	D/S protection	2					
	Toe wall	2	13.50	0.15	0.60	2.430	Cum
		2	3.25	0.15	0.60	3.900	Cum
	TOTAL					105.31	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 9.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.59	2.32	3.425	25.352	Cum
	<i>Section 2-2</i>	2	5.00	1.41	3.425	48.293	Cum
	<i>Section 3-3</i>	2	3.70	1.29	3.225	30.786	Cum
	<i>Section 5-5</i>	2	6.04	2.47	3.425	102.342	Cum
	<i>Section 6-6</i>	2	3.16	1.29	3.225	26.293	Cum
	<i>U/S Key Floor</i>	1	0.575	3.900	0.650	1.458	Cum
	<i>U/S Floor</i>	1	3.250	3.900	2.874	36.428	Cum
	<i>D/S Floor</i>	1	5.000	3.900	1.350	26.325	Cum
		1	4.000	3.900	1.150	17.940	Cum
	<i>D/S Key Floor</i>	1	0.825	3.900	1.650	5.309	Cum
	<i>Toe Wall D/S Portion</i>	1	12.800	0.750	0.900	8.640	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.600	0.750	1.350	Cum
						330.51	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.						
	<i>PCC Below Floor</i>	1	0.542	3.90	0.15	0.32	Cum
		1	0.559	3.90	0.15	0.33	Cum
		1	7.918	3.90	0.15	4.63	Cum
		1	0.636	3.90	0.15	0.37	Cum
		1	1.797	3.90	0.15	1.05	Cum
		1	1.677	3.90	0.15	0.98	Cum
		1	0.542	3.90	0.15	0.32	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.59	2.32	0.15	1.11	Cum
	<i>Section 2-2</i>	2	5.00	1.41	0.15	2.12	Cum
	<i>Section 3-3</i>	2	3.70	1.29	0.15	1.43	Cum
	<i>Section 5-5</i>	2	6.04	2.47	0.15	4.48	Cum
	<i>Section 6-6</i>	2	3.16	1.29	0.15	1.22	Cum
	<i>Toe Wall D/S Portion</i>	1	12.80	0.75	0.30	2.88	Cum
	<i>Toe Wall D/S Portion</i>	1	12.50	0.45	0.60	3.38	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.60	0.15	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.30	0.60	1.08	Cum
	TOTAL					26.23	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.37	0.45	0.45	0.55	Cum
		2	1.37	1.24	2.62	8.88	Cum
		2	1.37	2.17	1.00	5.95	Cum
	<i>Section 2-2</i>	2	5.00	0.45	0.45	2.03	Cum
		2	5.00	0.78	1.10	8.58	Cum
		2	5.00	1.26	1.00	12.60	Cum
	<i>Section 3-3</i>	2	3.28	0.45	0.45	1.33	Cum
		2	3.28	0.72	0.90	4.25	Cum
		2	3.28	1.14	0.75	5.61	Cum
	<i>Section 5-5</i>	2	5.63	0.45	0.45	2.28	Cum
		2	5.63	1.24	2.62	36.55	Cum
		2	5.63	2.17	1.00	24.48	Cum
	<i>Section 6-6</i>	2	3.73	0.45	0.45	1.51	Cum
		2	3.73	0.72	0.90	4.83	Cum
		2	3.73	1.14	0.75	6.38	Cum
	<i>Floor</i>	1	0.58	3.90	0.50	1.12	Cum
		1	8.25	3.90	1.00	32.18	Cum
		1	0.62	3.90	0.45	1.09	Cum
		1	0.20	3.90	0.65	0.51	Cum
		1	3.80	3.90	0.75	11.12	Cum
		1	0.83	3.90	1.50	4.83	Cum
	<i>Crest</i>	1	1.33	3.90	2.05	10.69	Cum
	TOTAL					187.34	Cum

	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	1.00	3.90	0.15	0.59	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	20.41	0.45	0.05	0.46	Cum
	On Abutment Top (Right Side)	1	20.41	0.45	0.05	0.46	Cum
	TOTAL					1.50	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	187.34	0.30%	0.56	7850	4411.78	Kg
	Total Weight in Metric Tonne					4.41	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	1.37		0.45	2.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.37		2.62	14.36	Sqm
		4		1.24	2.62	12.98	Sqm
		4	1.37		1.00	5.47	Sqm
		4		2.17	1.00	8.70	Sqm
	Section 2-2	4	5.00		0.45	9.00	Sqm
		4		0.45	0.45	0.81	Sqm
		4	5.00		1.10	22.00	Sqm
		4		0.78	1.10	3.43	Sqm
		4	5.00		1.00	20.00	Sqm
		4		1.26	1.00	5.04	Sqm
	Section 3-3	4	3.28		0.45	5.90	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.28		0.90	11.81	Sqm
		4		0.72	0.90	2.59	Sqm
		4	3.28		0.75	9.84	Sqm
		4		1.14	0.75	3.42	Sqm
	Section 5-5	4	5.63		0.45	10.13	Sqm
		4		0.45	0.45	0.81	Sqm
		4	5.63		2.62	59.10	Sqm
		4		1.24	2.62	12.98	Sqm
		4	5.63		1.00	22.52	Sqm
		4		2.17	1.00	8.70	Sqm
	Section 6-6	4	3.73		0.45	6.71	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.73		0.90	13.43	Sqm
		4		0.72	0.90	2.59	Sqm
		4	3.73		0.75	11.19	Sqm
		4		1.14	0.75	3.42	Sqm
	Floor	2	0.58		0.50	0.58	Sqm
		2		3.90	0.50	3.90	Sqm
		2	8.25		1.00	16.50	Sqm
		2		3.90	1.00	7.80	Sqm
		2	0.62		0.45	0.56	Sqm
		2		3.90	0.45	3.51	Sqm
		2	0.20		0.65	0.26	Sqm
		2		3.90	0.65	5.07	Sqm
		2	3.80		0.75	5.70	Sqm
		2		3.90	0.75	5.85	Sqm
		2	0.83		1.50	2.48	Sqm
		2		3.90	1.50	11.70	Sqm
	Crest	2	1.334		2.054	5.48	Sqm
		2		3.9	2.054	16.02	Sqm
	Toe Wall D/S Portion	2	12.80		0.30	7.68	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	12.50		0.60	15.00	Sqm
		2		0.45	0.60	0.54	Sqm
	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					410.99	Sqm

	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.						
	<i>In D/S Portion On Slopes</i>	1	3.00	4.57		13.72	Sqm
	TOTAL					13.72	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.00	3.30	0.30	2.97	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	3.00	3.30	0.15	2.97	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	20.41	0.45		9.19	Sqm
	<i>On Abutment Top (Right Side)</i>	1	20.41	0.45		9.19	Sqm
	TOTAL					18.37	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		16.69		16.69	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.59	2.39		7.596	Cum
	<i>Section 2-2</i>	2	5.00	1.32		13.200	Cum
	<i>Section 3-3</i>	2	3.70	1.05		7.755	Cum
	<i>Section 5-5</i>	2	6.04	2.39		28.806	Cum
	<i>Section 6-6</i>	2	3.16	1.05		6.623	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	12.80	0.15	0.60	2.304	Cum
		2	3.00	0.15	0.60	3.600	Cum
	TOTAL					86.58	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 11.90 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.01	1.91	1.665	12.794	Cum
	<i>Section 2-2</i>	2	1.50	1.36	1.665	6.803	Cum
	<i>Section 3-3</i>	2	3.25	1.24	1.465	11.827	Cum
	<i>Section 5-5</i>	2	5.36	2.06	1.665	36.779	Cum
	<i>Section 6-6</i>	2	2.93	1.24	1.465	10.655	Cum
	<i>U/S Key Floor</i>	1	0.625	3.500	0.850	1.859	Cum
	<i>U/S Floor</i>	1	2.750	3.500	1.764	16.979	Cum
	<i>D/S Floor</i>	1	4.000	3.500	0.850	11.900	Cum
		1	5.352	3.500	0.100	1.873	Cum
		1	1.750	3.500	0.650	3.981	Cum
	<i>D/S Key Floor</i>	1	0.725	3.500	1.250	3.172	Cum
	<i>Toe Wall D/S Portion</i>	1	11.840	0.750	0.900	7.992	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.750	0.600	0.750	2.475	Cum
						129.09	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.						
	<i>PCC Below Floor</i>	1	0.542	3.50	0.15	0.28	Cum
		1	1.318	3.50	0.15	0.69	Cum
		1	5.533	3.50	0.15	2.90	Cum
		1	0.424	3.50	0.15	0.22	Cum
		1	0.188	3.50	0.15	0.10	Cum
		1	1.230	3.50	0.15	0.65	Cum
		1	0.542	3.50	0.15	0.28	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.01	1.91	0.15	1.15	Cum
	<i>Section 2-2</i>	2	1.50	1.36	0.15	0.61	Cum
	<i>Section 3-3</i>	2	3.25	1.24	0.15	1.21	Cum
	<i>Section 5-5</i>	2	5.36	2.06	0.15	3.31	Cum
	<i>Section 6-6</i>	2	2.93	1.24	0.15	1.09	Cum
	<i>Toe Wall D/S Portion</i>	1	11.84	0.75	0.30	2.66	Cum
	<i>Toe Wall D/S Portion</i>	1	11.54	0.45	0.60	3.12	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.75	0.60	0.15	0.50	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.75	0.30	0.60	0.99	Cum
	TOTAL					19.78	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.79	0.45	0.45	0.72	Cum
		2	1.79	1.03	1.93	7.12	Cum
		2	1.79	1.76	0.60	3.77	Cum
	<i>Section 2-2</i>	2	1.50	0.45	0.45	0.61	Cum
		2	1.50	0.76	1.02	2.31	Cum
		2	1.50	1.21	0.60	2.18	Cum
	<i>Section 3-3</i>	2	2.85	0.45	0.45	1.16	Cum
		2	2.85	0.70	0.82	3.26	Cum
		2	2.85	1.09	0.60	3.74	Cum
	<i>Section 5-5</i>	2	5.32	0.45	0.45	2.15	Cum
		2	5.32	1.03	1.93	21.19	Cum
		2	5.32	1.76	0.50	9.36	Cum
	<i>Section 6-6</i>	2	3.47	0.45	0.45	1.41	Cum
		2	3.47	0.70	0.82	3.97	Cum
		2	3.47	1.09	0.60	4.55	Cum
	<i>Floor</i>	1	0.63	3.50	0.70	1.53	Cum
		1	6.75	3.50	0.50	11.81	Cum
		1	5.35	3.50	0.10	1.87	Cum
		1	0.26	3.50	0.30	0.27	Cum
		1	0.20	3.50	0.40	0.28	Cum
		1	1.55	3.50	0.50	2.71	Cum
		1	0.73	3.50	1.10	2.79	Cum
	<i>Crest</i>	1	1.08	3.50	1.41	5.30	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					94.06	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.						
	<i>Over Crest</i>	1	0.85	3.50	0.15	0.45	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	15.48	0.45	0.05	0.35	Cum
	<i>On Abutment Top (Right Side)</i>	1	15.48	0.45	0.05	0.35	Cum
	TOTAL					1.14	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	94.06	0.30%	0.28	7850	2215.22	Kg
	Total Weight in Metric Tonne					2.22	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.79		0.45	3.22	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.79		1.93	13.82	Sqm
		4		1.03	1.93	7.97	Sqm
		4	1.79		0.60	4.29	Sqm
		4		1.76	0.60	4.22	Sqm
	<i>Section 2-2</i>	4	1.50		0.45	2.70	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.50		1.02	6.12	Sqm
		4		0.76	1.02	3.08	Sqm
		4	1.50		0.60	3.60	Sqm
		4		1.21	0.60	2.91	Sqm
	<i>Section 3-3</i>	4	2.85		0.45	5.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.85		0.82	9.36	Sqm
		4		0.70	0.82	2.28	Sqm
		4	2.85		0.60	6.85	Sqm
		4		1.09	0.60	2.62	Sqm
	<i>Section 5-5</i>	4	5.32		0.45	9.57	Sqm
		4		0.45	0.45	0.81	Sqm
		4	5.32		1.93	41.14	Sqm
		4		1.03	1.93	7.97	Sqm
		4	5.32		0.50	10.64	Sqm
		4		1.76	0.50	3.52	Sqm
	<i>Section 6-6</i>	4	3.47		0.45	6.25	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.47		0.82	11.39	Sqm
		4		0.70	0.82	2.28	Sqm
		4	3.47		0.60	8.34	Sqm
		4		1.09	0.60	2.62	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		3.50	0.70	4.90	Sqm
		2	6.75		0.50	6.75	Sqm
		2		3.50	0.50	3.50	Sqm
		2	5.35		0.10	1.07	Sqm
		2		3.50	0.10	0.70	Sqm
		2	0.26		0.30	0.15	Sqm
		2		3.50	0.30	2.10	Sqm
		2	0.20		0.40	0.16	Sqm
		2		3.50	0.40	2.80	Sqm
		2	1.55		0.50	1.55	Sqm
		2		3.50	0.50	3.50	Sqm
		2	0.73		1.10	1.60	Sqm
		2		3.50	1.10	7.70	Sqm
	<i>Crest</i>	2	1.076		1.407	3.03	Sqm
		2		3.5	1.407	9.85	Sqm
	<i>Toe Wall D/S Portion</i>	2	11.84		0.30	7.10	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	11.54		0.60	13.85	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.75		0.15	1.65	Sqm
		4		0.60	0.15	0.36	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	4	2.75		0.60	6.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					267.46	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.						
	In D/S Portion On Slopes	2	2.75	4.27		23.48	Sqm
	TOTAL					23.48	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.75	2.90	0.30	2.39	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	2.75	2.90	0.15	2.39	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	15.48	0.45		6.97	Sqm
	On Abutment Top (Right Side)	1	15.48	0.45		6.97	Sqm
	TOTAL					13.93	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		8.17		8.17	Cum
	Abutment						
	Section 1-1	2	2.01	0.62		2.478	Cum
	Section 2-2	2	1.50	5.34		16.020	Cum
	Section 3-3	2	3.25	0.44		2.880	Cum
	Section 5-5	2	5.36	0.59		6.337	Cum
	Section 6-6	2	2.93	0.44		2.594	Cum
	D/S protection	2					
	Toe wall	2	11.84	0.15	0.60	2.13	Cum
		2	2.75	0.15	0.60	3.30	Cum
	TOTAL					43.91	Cum
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 15.550 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	1.34	1.81	0.938	4.557	Cum
	Section 2-2	2	3.46	1.78	0.938	11.554	Cum
	Section 3-3	2	4.95	1.66	0.738	12.128	Cum
	Section 5-5	2	4.54	1.96	0.938	16.691	Cum
	Section 6-6	2	2.07	1.14	0.738	3.475	Cum
	U/S Key Floor	1	0.613	3.050	0.800	1.495	Cum
	U/S Floor	1	2.750	3.050	1.814	15.215	Cum
	D/S Floor	1	3.250	3.050	0.900	8.921	Cum
		1	5.250	3.050	0.700	11.209	Cum
	D/S Key Floor	1	0.700	3.050	1.150	2.455	Cum
	Toe Wall D/S Portion	1	10.200	0.750	0.900	6.885	Cum
	Boulder Pitching (D/S Portion)	2	2.250	0.600	0.750	2.025	Cum
						96.61	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	0.542	3.05	0.15	0.25	Cum
		1	0.727	3.05	0.15	0.33	Cum
		1	5.893	3.05	0.15	2.70	Cum
		1	0.353	3.05	0.15	0.16	Cum
		1	0.345	3.05	0.15	0.16	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
		1	1.118	3.05	0.15	0.51	Cum
		1	0.542	3.05	0.15	0.25	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.34	1.81	0.15	0.73	Cum
	<i>Section 2-2</i>	2	3.46	1.78	0.15	1.85	Cum
	<i>Section 3-3</i>	2	4.95	1.66	0.15	2.47	Cum
	<i>Section 5-5</i>	2	4.54	1.96	0.15	2.67	Cum
	<i>Section 6-6</i>	2	2.07	1.14	0.15	0.71	Cum
	<i>Toe Wall D/S Portion</i>	1	10.20	0.75	0.30	2.30	Cum
	<i>Toe Wall D/S Portion</i>	1	9.90	0.45	0.60	2.67	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.25	0.60	0.15	0.41	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.25	0.30	0.60	0.81	Cum
	TOTAL					18.96	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.12	0.45	0.45	0.45	Cum
		2	1.12	0.98	1.76	3.86	Cum
		2	1.12	1.66	0.55	2.04	Cum
	<i>Section 2-2</i>	2	3.46	0.82	0.50	2.84	Cum
		2	3.46	1.08	0.85	6.32	Cum
		2	3.46	1.48	1.30	13.31	Cum
	<i>Section 3-3</i>	2	4.61	0.82	0.50	3.78	Cum
		2	4.61	1.02	0.65	6.08	Cum
		2	4.61	1.36	1.50	18.79	Cum
	<i>Section 5-5</i>	2	4.50	0.45	0.45	1.82	Cum
		2	4.50	0.98	1.76	15.54	Cum
		2	4.50	1.66	0.55	8.21	Cum
	<i>Section 6-6</i>	2	2.75	0.45	0.50	1.24	Cum
		2	2.75	0.65	0.65	2.30	Cum
		2	2.75	0.99	0.50	2.72	Cum
	<i>Deduction for M 25 grade of concrete</i>	2	0.82	6.50	0.30	-3.20	Cum
	<i>Floor</i>	1	0.61	3.05	0.65	1.21	Cum
		1	6.00	3.05	0.55	10.07	Cum
		1	0.57	3.05	0.25	0.44	Cum
		1	0.20	3.05	0.40	0.24	Cum
		1	5.05	3.05	0.50	7.70	Cum
		1	0.70	3.05	1.00	2.14	Cum
	<i>Crest</i>	1	1.06	3.05	1.32	4.26	Cum
	TOTAL					112.15	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.						
	<i>Over Crest</i>	1	0.75	3.05	0.15	0.34	Cum
	<i>Coping over Abutment Top</i>	2	7.48	0.45	0.05	0.34	Cum
	<i>Slab Bridge</i>						
	<i>Slab</i>	1	3.85	6.5	0.54	13.39	Cum
	<i>Wearing coat</i>	1	3.85	5.50	0.07	1.48	Cum
	<i>Dirt wall</i>	2	0.40	6.5	0.65	3.38	Cum
	<i>300 mm thick pedestal</i>	2	0.82	6.5	0.30	3.20	Cum
	TOTAL					22.13	Cum
5	Providing M.S. reinforcements 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	45	4.41		1.578	313.2	Kg
a2	10	19	7.00		0.616	82.0	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	4.33		0.616	69.4	Kg
a5	10	16	6.90		0.616	68.1	Kg
x1	12	64	2.55		0.888	144.9	Kg
x2	16	64	1.99		1.578	201.0	Kg
x3	12	20	3.75		0.888	66.6	Kg
	Taking Skin reinforcement @0.3% of M-20	112.15	0.30%	0.34	7850	2641.11	Kg

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Total Reinforcement Steel (in kg)</i>					3594.1	Kg
	TOTAL REINFORCEMENT STEEL (in MT)					3.59	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.12		0.45	2.01	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.12		1.76	7.89	Sqm
		4		0.98	1.76	6.91	Sqm
		4	1.12		0.55	2.46	Sqm
		4		1.66	0.55	3.65	Sqm
	<i>Section 2-2</i>	4	3.46		0.50	6.92	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.46		0.85	11.76	Sqm
		4		1.08	0.85	3.66	Sqm
		4	3.46		1.30	17.99	Sqm
		4		1.48	1.30	7.70	Sqm
	<i>Section 3-3</i>	4	4.61		0.50	9.21	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.61		0.65	11.97	Sqm
		4		1.02	0.65	2.64	Sqm
		4	4.61		1.50	27.63	Sqm
		4		1.36	1.50	8.16	Sqm
	<i>Section 5-5</i>	4	4.50		0.45	8.10	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.50		1.76	31.75	Sqm
		4		0.98	1.76	6.91	Sqm
		4	4.50		0.55	9.90	Sqm
		4		1.66	0.55	3.65	Sqm
	<i>Section 6-6</i>	4	2.75		0.50	5.49	Sqm
		4		0.45	0.50	0.90	Sqm
		4	2.75		0.65	7.14	Sqm
		4		0.65	0.65	1.68	Sqm
		4	2.75		0.50	5.49	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Floor</i>	2	0.61		0.65	0.80	Sqm
		2		3.05	0.65	3.97	Sqm
		2	6.00		0.55	6.60	Sqm
		2		3.05	0.55	3.36	Sqm
		2	0.57		0.25	0.29	Sqm
		2		3.05	0.25	1.53	Sqm
		2	0.20		0.40	0.16	Sqm
		2		3.05	0.40	2.44	Sqm
		2	5.05		0.50	5.05	Sqm
		2		3.05	0.50	3.05	Sqm
		2	0.70		1.00	1.40	Sqm
		2		3.05	1.00	6.10	Sqm
	<i>Crest</i>	2	1.061		1.315	2.79	Sqm
		2		3.05	1.315	8.02	Sqm
	<i>Toe Wall D/S Portion</i>	2	10.20		0.30	6.12	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	9.90		0.60	11.88	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.25		0.15	1.35	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.25		0.60	5.40	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					290.80	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.						
	<i>In D/S Portion On Slopes</i>	2	2.25	3.62		16.30	Sqm
	TOTAL					16.30	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.25	2.45	0.30	1.65	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	2.45	0.15	1.65	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
10	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.						
	On Abutment Top (Left Side)	1	7.48	0.45		3.37	Sqm
	On Abutment Top (Right Side)	1	7.48	0.45		3.37	Sqm
	TOTAL					6.73	Sqm
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
		1	2			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		7.61		7.61	Cum
	Abutment						
	Section 1-1	2	1.34	0.17		0.459	Cum
	Section 2-2	2	3.46	0.12		0.817	Cum
	Section 3-3	2	4.95	0.12		1.168	Cum
	Section 5-5	2	4.54	0.17		1.554	Cum
	Section 6-6	2	2.07	0.08		0.310	Cum
	D/S protection	2					
	Toe wall	2	10.20	0.15	0.60	1.836	Cum
		2	2.25	0.15	0.60	2.700	Cum
	TOTAL					16.45	Cum

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 17.875 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	2.23	1.53	1.269	8.648	Cum
	Section 2-2	2	1.50	1.14	1.269	4.340	Cum
	Section 3-3	2	2.00	1.02	1.069	4.362	Cum
	Section 5-5	2	4.02	1.68	1.269	17.147	Cum
	Section 6-6	2	1.86	1.02	1.069	4.045	Cum
	U/S Key Floor	1	0.625	2.200	0.850	1.169	Cum
	U/S Floor	1	2.000	2.200	0.650	2.860	Cum
	D/S Floor	1	2.500	2.200	0.850	4.675	Cum
		1	2.500	2.200	0.650	3.575	Cum
	D/S Key Floor	1	0.625	2.200	0.850	1.169	Cum
	Toe Wall D/S Portion	1	7.950	0.750	0.900	5.366	Cum
	Boulder Pitching (D/S Portion)	2	1.500	0.600	0.750	1.350	Cum
						58.71	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	0.542	2.20	0.15	0.18	Cum
		1	0.782	2.20	0.15	0.26	Cum
		1	3.876	2.20	0.15	1.28	Cum
		1	0.282	2.20	0.15	0.09	Cum
		1	1.138	2.20	0.15	0.38	Cum
		1	0.782	2.20	0.15	0.26	Cum
		1	0.542	2.20	0.15	0.18	Cum
	PCC Below Abutment						
	Section 1-1	2	2.23	1.53	0.15	1.02	Cum
	Section 2-2	2	1.50	1.14	0.15	0.51	Cum
	Section 3-3	2	2.00	1.02	0.15	0.61	Cum
	Section 5-5	2	4.02	1.68	0.15	2.03	Cum
	Section 6-6	2	1.86	1.02	0.15	0.57	Cum
	Toe Wall D/S Portion	1	7.95	0.75	0.30	1.79	Cum
	Toe Wall D/S Portion	1	7.65	0.45	0.60	2.07	Cum
	Toe Wall for resting Brick Edging	2	1.50	0.60	0.15	0.27	Cum
	Toe Wall for resting Brick Edging	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					12.03	Cum

	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.04	0.45	0.45	0.82	Cum
		2	2.04	0.84	1.30	4.45	Cum
		2	2.04	1.38	0.50	2.81	Cum
	<i>Section 2-2</i>	2	1.50	0.45	0.45	0.61	Cum
		2	1.50	0.65	0.65	1.26	Cum
		2	1.50	0.99	0.50	1.49	Cum
	<i>Section 3-3</i>	2	2.15	0.45	0.45	0.87	Cum
		2	2.15	0.59	0.45	1.13	Cum
		2	2.15	0.87	0.50	1.87	Cum
	<i>Section 5-5</i>	2	3.98	0.45	0.45	1.61	Cum
		2	3.98	0.84	1.30	8.69	Cum
		2	3.98	1.38	0.50	5.49	Cum
	<i>Section 6-6</i>	2	1.70	0.45	0.45	0.69	Cum
		2	1.70	0.59	0.45	0.90	Cum
		2	1.70	0.87	0.50	1.48	Cum
	<i>Floor</i>	1	0.63	2.20	0.70	0.96	Cum
		1	4.50	2.20	0.50	4.95	Cum
		1	0.31	2.20	0.25	0.17	Cum
		1	0.20	2.20	0.40	0.18	Cum
		1	2.30	2.20	0.50	2.53	Cum
		1	0.63	2.20	0.70	0.96	Cum
	<i>Crest</i>	1	0.79	2.20	0.92	1.60	Cum
	TOTAL					45.51	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.						
	<i>Over Crest</i>	1	0.65	2.20	0.15	0.21	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	12.29	0.45	0.05	0.28	Cum
	<i>On Abutment Top (Right Side)</i>	1	12.29	0.45	0.05	0.28	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	45.51	0.30%	0.14	7850	1071.66	Kg
	Total Weight in Metric Tonne					1.07	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	2.04		0.45	3.67	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.04		1.30	10.59	Sqm
		4		0.84	1.30	4.37	Sqm
		4	2.04		0.50	4.07	Sqm
		4		1.38	0.50	2.76	Sqm
	<i>Section 2-2</i>	4	1.50		0.45	2.70	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.50		0.65	3.90	Sqm
		4		0.65	0.65	1.68	Sqm
		4	1.50		0.50	3.00	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Section 3-3</i>	4	2.15		0.45	3.87	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.15		0.45	3.87	Sqm
		4		0.59	0.45	1.05	Sqm
		4	2.15		0.50	4.30	Sqm
		4		0.87	0.50	1.74	Sqm
	<i>Section 5-5</i>	4	3.98		0.45	7.16	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.98		1.30	20.68	Sqm
		4		0.84	1.30	4.37	Sqm
		4	3.98		0.50	7.96	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.38	0.50	2.76	Sqm
	Section 6-6	4	1.70		0.45	3.06	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.70		0.45	3.06	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.70		0.50	3.40	Sqm
		4		0.87	0.50	1.74	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		2.20	0.70	3.08	Sqm
		2	4.50		0.50	4.50	Sqm
		2		2.20	0.50	2.20	Sqm
		2	0.31		0.25	0.15	Sqm
		2		2.20	0.25	1.10	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.20	0.40	1.76	Sqm
		2	2.30		0.50	2.30	Sqm
		2		2.20	0.50	2.20	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.20	0.70	3.08	Sqm
	Crest	2	0.794		0.915	1.45	Sqm
		2		2.2	0.915	4.03	Sqm
	Toe Wall D/S Portion	2	7.95		0.30	4.77	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	7.65		0.60	9.18	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					161.12	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	1.50	2.86		8.58	Sqm
	TOTAL					8.58	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	1.60	0.30	0.72	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	1.60	0.15	0.72	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	12.29	0.45		5.53	Sqm
	On Abutment Top (Right Side)	1	12.29	0.45		5.53	Sqm
	TOTAL					11.06	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		2.60		2.60	Cum
	Abutment						
	Section 1-1	2	2.23	0.38		1.675	Cum
	Section 2-2	2	1.50	0.38		1.128	Cum
	Section 3-3	2	2.00	0.25		1.016	Cum
	Section 5-5	2	4.02	0.38		3.024	Cum
	Section 6-6	2	1.86	0.25		0.942	Cum
	D/S protection	2					
	Toe wall	2	7.95	0.09		1.431	Cum
		2	0.60	1.50	0.15	0.270	Cum
	TOTAL					12.09	Cum

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 18.280 KM

	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.31	1.50	1.781	12.321	Cum
	<i>Section 2-2</i>	2	1.50	1.13	1.781	6.059	Cum
	<i>Section 3-3</i>	2	2.00	1.01	1.581	6.413	Cum
	<i>Section 5-5</i>	2	4.03	1.65	1.781	23.671	Cum
	<i>Section 6-6</i>	2	1.83	1.01	1.581	5.855	Cum
	<i>U/S Key Floor</i>	1	0.625	1.800	0.850	0.956	Cum
	<i>U/S Floor</i>	1	2.000	1.800	0.650	2.340	Cum
	<i>D/S Floor</i>	1	2.500	1.800	0.850	3.825	Cum
		1	2.500	1.800	0.650	2.925	Cum
	<i>D/S Key Floor</i>	1	0.625	1.800	0.850	0.956	Cum
	<i>Toe Wall D/S Portion</i>	1	7.480	0.750	0.900	5.049	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						71.72	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.						
	<i>PCC Below Floor</i>	1	0.542	1.80	0.15	0.15	Cum
		1	0.782	1.80	0.15	0.21	Cum
		1	3.876	1.80	0.15	1.05	Cum
		1	0.282	1.80	0.15	0.08	Cum
		1	1.138	1.80	0.15	0.31	Cum
		1	0.782	1.80	0.15	0.21	Cum
		1	0.542	1.80	0.15	0.15	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.31	1.50	0.15	1.04	Cum
	<i>Section 2-2</i>	2	1.50	1.13	0.15	0.51	Cum
	<i>Section 3-3</i>	2	2.00	1.01	0.15	0.61	Cum
	<i>Section 5-5</i>	2	4.03	1.65	0.15	1.99	Cum
	<i>Section 6-6</i>	2	1.83	1.01	0.15	0.56	Cum
	<i>Toe Wall D/S Portion</i>	1	7.48	0.75	0.30	1.68	Cum
	<i>Toe Wall D/S Portion</i>	1	7.18	0.45	0.60	1.94	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					11.28	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.10	0.45	0.45	0.85	Cum
		2	2.10	0.83	1.25	4.34	Cum
		2	2.10	1.35	0.50	2.84	Cum
	<i>Section 2-2</i>	2	1.50	0.45	0.45	0.61	Cum
		2	1.50	0.64	0.64	1.23	Cum
		2	1.50	0.98	0.50	1.48	Cum
	<i>Section 3-3</i>	2	2.30	0.45	0.45	0.93	Cum
		2	2.30	0.58	0.44	1.18	Cum
		2	2.30	0.86	0.50	1.99	Cum
	<i>Section 5-5</i>	2	3.98	0.45	0.45	1.61	Cum
		2	3.98	0.83	1.25	8.22	Cum
		2	3.98	1.35	0.50	5.38	Cum
	<i>Section 6-6</i>	2	1.68	0.45	0.45	0.68	Cum
		2	1.68	0.58	0.44	0.86	Cum
		2	1.68	0.86	0.50	1.45	Cum
	<i>Floor</i>	1	0.63	1.80	0.70	0.79	Cum
		1	4.50	1.80	0.50	4.05	Cum
		1	0.31	1.80	0.25	0.14	Cum
		1	0.20	1.80	0.40	0.14	Cum
		1	2.30	1.80	0.50	2.07	Cum
		1	0.63	1.80	0.70	0.79	Cum
	<i>Crest</i>	1	0.89	1.80	0.90	1.45	Cum
	TOTAL					43.06	Cum

	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	1.80	0.15	0.20	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	12.35	0.45	0.05	0.28	Cum
	On Abutment Top (Right Side)	1	12.35	0.45	0.05	0.28	Cum
	TOTAL					0.76	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	43.06	0.30%	0.13	7850	1014.16	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	2.10		0.45	3.79	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.10		1.25	10.52	Sqm
		4		0.83	1.25	4.13	Sqm
		4	2.10		0.50	4.21	Sqm
		4		1.35	0.50	2.70	Sqm
	Section 2-2	4	1.50		0.45	2.70	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.50		0.64	3.84	Sqm
		4		0.64	0.64	1.64	Sqm
		4	1.50		0.50	3.00	Sqm
		4		0.98	0.50	1.97	Sqm
	Section 3-3	4	2.30		0.45	4.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.30		0.44	4.05	Sqm
		4		0.58	0.44	1.02	Sqm
		4	2.30		0.50	4.60	Sqm
		4		0.86	0.50	1.73	Sqm
	Section 5-5	4	3.98		0.45	7.17	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.98		1.25	19.92	Sqm
		4		0.83	1.25	4.13	Sqm
		4	3.98		0.50	7.97	Sqm
		4		1.35	0.50	2.70	Sqm
	Section 6-6	4	1.68		0.45	3.02	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.68		0.44	2.95	Sqm
		4		0.58	0.44	1.02	Sqm
		4	1.68		0.50	3.35	Sqm
		4		0.86	0.50	1.73	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.80	0.70	2.52	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.80	0.50	1.80	Sqm
		2	0.31		0.25	0.15	Sqm
		2		1.80	0.25	0.90	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.80	0.40	1.44	Sqm
		2	2.30		0.50	2.30	Sqm
		2		1.80	0.50	1.80	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.80	0.70	2.52	Sqm
	Crest	2	0.892		0.903	1.61	Sqm
		2		1.8	0.903	3.25	Sqm
	Toe Wall D/S Portion	2	7.48		0.30	4.49	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	7.18		0.60	8.62	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					156.41	Sqm

	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.82		8.47	Sqm
	TOTAL					8.47	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	1.20	0.30	0.54	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	1.50	1.20	0.15	0.54	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.35	0.45		5.56	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.35	0.45		5.56	Sqm
	TOTAL					11.12	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.99		1.99	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.31	0.85		3.911	Cum
	<i>Section 2-2</i>	2	1.50	0.73		2.190	Cum
	<i>Section 3-3</i>	2	2.00	0.55		2.188	Cum
	<i>Section 5-5</i>	2	4.03	0.85		6.831	Cum
	<i>Section 6-6</i>	2	1.83	0.55		1.998	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	7.48	0.15	0.60	2.244	Cum
		2	1.50	0.15	0.60	0.270	Cum
	TOTAL					21.62	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BARIAWA MINOR							
SHARDA TYPE FALL OF HEIGHT 0.457 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.25	1.56	1.781	6.980	Cum
	<i>Section 2-2</i>	2	3.00	1.29	1.781	13.785	Cum
	<i>Section 3-3</i>	2	1.51	1.17	1.581	5.572	Cum
	<i>Section 5-5</i>	2	2.86	1.71	1.781	17.473	Cum
	<i>Section 6-6</i>	2	1.18	1.17	1.581	4.365	Cum
	<i>U/S Key Floor</i>	1	0.625	2.285	0.850	1.214	Cum
	<i>U/S Floor</i>	1	2.000	2.285	1.307	5.973	Cum
	<i>D/S Floor</i>	1	3.000	2.285	0.850	5.827	Cum
		1	2.000	2.285	0.650	2.971	Cum
	<i>D/S Key Floor</i>	1	0.625	2.285	0.850	1.214	Cum
	<i>Toe Wall D/S Portion</i>	1	6.984	0.750	0.900	4.714	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.500	0.600	0.750	2.250	Cum
						72.34	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.						
	<i>PCC Below Floor</i>	1	0.542	2.29	0.15	0.19	Cum
		1	0.783	2.29	0.15	0.27	Cum
		1	4.568	2.29	0.15	1.57	Cum
		1	0.283	2.29	0.15	0.10	Cum
		1	0.446	2.29	0.15	0.15	Cum
		1	0.783	2.29	0.15	0.27	Cum
		1	0.542	2.29	0.15	0.19	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.25	1.56	0.15	0.59	Cum
	<i>Section 2-2</i>	2	3.00	1.29	0.15	1.16	Cum
	<i>Section 3-3</i>	2	1.51	1.17	0.15	0.53	Cum
	<i>Section 5-5</i>	2	2.86	1.71	0.15	1.47	Cum
	<i>Section 6-6</i>	2	1.18	1.17	0.15	0.41	Cum
	<i>Toe Wall D/S Portion</i>	1	6.98	0.75	0.30	1.57	Cum
	<i>Toe Wall D/S Portion</i>	1	6.68	0.45	0.60	1.80	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.60	0.15	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.30	0.60	0.90	Cum
	TOTAL					11.61	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.03	0.45	0.45	0.42	Cum
		2	1.03	0.86	1.36	2.39	Cum
		2	1.03	1.41	0.50	1.45	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.72	0.90	3.89	Cum
		2	3.00	1.14	0.50	3.42	Cum
	<i>Section 3-3</i>	2	1.15	0.45	0.45	0.46	Cum
		2	1.15	0.66	0.70	1.06	Cum
		2	1.15	1.02	0.50	1.17	Cum
	<i>Section 5-5</i>	2	2.82	0.45	0.45	1.14	Cum
		2	2.82	0.86	1.36	6.56	Cum
		2	2.82	1.41	0.50	3.99	Cum
	<i>Section 6-6</i>	2	1.69	0.45	0.45	0.68	Cum
		2	1.69	0.66	0.70	1.56	Cum
		2	1.69	1.02	0.50	1.72	Cum
	<i>Floor</i>	1	0.63	2.29	0.70	1.00	Cum
		1	5.00	2.29	0.50	5.71	Cum
		1	0.50	2.29	2.00	2.28	Cum
		1	0.20	2.29	0.40	0.18	Cum
		1	1.80	2.29	0.50	2.06	Cum
		1	0.63	2.29	0.70	1.00	Cum
	<i>Crest</i>	1	0.84	2.29	0.88	1.69	Cum
	TOTAL					45.04	Cum

	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.						
	<i>Over Crest</i>	1	0.70	2.29	0.15	0.24	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	13.73	0.45	0.05	0.31	Cum
	<i>On Abutment Top (Right Side)</i>	1	13.73	0.45	0.05	0.31	Cum
	TOTAL					0.86	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	45.04	0.30%	0.14	7850	1060.72	Kg
	Total Weight in Metric Tonne					1.06	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.03		0.45	1.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.03		1.36	5.58	Sqm
		4		0.86	1.36	4.65	Sqm
		4	1.03		0.50	2.06	Sqm
		4		1.41	0.50	2.83	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.90	10.80	Sqm
		4		0.72	0.90	2.59	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.14	0.50	2.28	Sqm
	<i>Section 3-3</i>	4	1.15		0.45	2.06	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.15		0.70	3.21	Sqm
		4		0.66	0.70	1.85	Sqm
		4	1.15		0.50	2.29	Sqm
		4		1.02	0.50	2.04	Sqm
	<i>Section 5-5</i>	4	2.82		0.45	5.07	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.82		1.36	15.30	Sqm
		4		0.86	1.36	4.65	Sqm
		4	2.82		0.50	5.64	Sqm
		4		1.41	0.50	2.83	Sqm
	<i>Section 6-6</i>	4	1.69		0.45	3.04	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.69		0.70	4.73	Sqm
		4		0.66	0.70	1.85	Sqm
		4	1.69		0.50	3.38	Sqm
		4		1.02	0.50	2.04	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		2.29	0.70	3.20	Sqm
		2	5.00		0.50	5.00	Sqm
		2		2.29	0.50	2.29	Sqm
		2	0.50		2.00	1.99	Sqm
		2		2.29	2.00	9.14	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.29	0.40	1.83	Sqm
		2	1.80		0.50	1.80	Sqm
		2		2.29	0.50	2.29	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.29	0.70	3.20	Sqm
	<i>Crest</i>	2	0.8385		0.881	1.48	Sqm
		2		2.285	0.881	4.03	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.98		0.30	4.19	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.68		0.60	8.02	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.50		0.15	1.50	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.50		0.60	6.00	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					167.99	Sqm

	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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	2.41		12.07	Sqm
	TOTAL					12.07	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	1.69	0.30	1.26	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	2.50	1.69	0.15	1.26	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	13.73	0.45		6.18	Sqm
	<i>On Abutment Top (Right Side)</i>	1	13.73	0.45		6.18	Sqm
	TOTAL					12.36	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.90		1.90	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.25	0.85		2.130	Cum
	<i>Section 2-2</i>	2	3.00	0.83		4.950	Cum
	<i>Section 3-3</i>	2	1.51	0.64		1.913	Cum
	<i>Section 5-5</i>	2	2.86	0.85		4.865	Cum
	<i>Section 6-6</i>	2	1.18	0.64		1.499	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	6.98	0.15	0.60	1.257	Cum
		2	2.50	0.15	0.60	3.000	Cum
	TOTAL					21.52	Cum

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 6.100 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.27	1.49	1.506	10.178	Cum
	<i>Section 2-2</i>	2	1.50	1.08	1.506	4.879	Cum
	<i>Section 3-3</i>	2	2.00	0.96	1.306	5.015	Cum
	<i>Section 5-5</i>	2	2.44	1.64	1.506	12.041	Cum
	<i>Section 6-6</i>	2	0.87	0.96	1.306	2.169	Cum
	<i>U/S Key Floor</i>	1	0.625	0.880	0.850	0.468	Cum
	<i>U/S Floor</i>	1	2.000	0.880	1.460	2.570	Cum
	<i>D/S Floor</i>	1	2.500	0.880	0.850	1.870	Cum
		1	2.500	0.880	0.650	1.430	Cum
	<i>D/S Key Floor</i>	1	0.625	0.880	0.850	0.468	Cum
	<i>Toe Wall D/S Portion</i>	1	4.530	0.750	0.900	3.058	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						45.49	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.						
	<i>PCC Below Floor</i>	1	0.542	0.88	0.15	0.07	Cum
		1	0.782	0.88	0.15	0.10	Cum
		1	3.876	0.88	0.15	0.51	Cum
		1	0.282	0.88	0.15	0.04	Cum
		1	1.138	0.88	0.15	0.15	Cum
		1	0.782	0.88	0.15	0.10	Cum
		1	0.542	0.88	0.15	0.07	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.27	1.49	0.15	1.01	Cum
	<i>Section 2-2</i>	2	1.50	1.08	0.15	0.49	Cum
	<i>Section 3-3</i>	2	2.00	0.96	0.15	0.58	Cum
	<i>Section 5-5</i>	2	2.44	1.64	0.15	1.20	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.15	0.25	Cum
	<i>Toe Wall D/S Portion</i>	1	4.53	0.75	0.30	1.02	Cum
	<i>Toe Wall D/S Portion</i>	1	4.23	0.45	0.60	1.14	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					7.54	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.05	0.45	0.45	0.83	Cum
		2	2.05	0.82	1.23	4.12	Cum
		2	2.05	1.34	0.50	2.74	Cum
	<i>Section 2-2</i>	2	1.50	0.45	0.45	0.61	Cum
		2	1.50	0.62	0.55	1.01	Cum
		2	1.50	0.93	0.50	1.40	Cum
	<i>Section 3-3</i>	2	1.75	0.45	0.45	0.71	Cum
		2	1.75	0.56	0.35	0.68	Cum
		2	1.75	0.81	0.50	1.41	Cum
	<i>Section 5-5</i>	2	2.40	0.45	0.45	0.97	Cum
		2	2.40	0.82	1.23	4.83	Cum
		2	2.40	1.34	0.50	3.21	Cum
	<i>Section 6-6</i>	2	1.27	0.45	0.45	0.51	Cum
		2	1.27	0.56	0.35	0.49	Cum
		2	1.27	0.81	0.50	1.03	Cum
	<i>Floor</i>	1	0.63	0.88	0.70	0.39	Cum
		1	4.50	0.88	0.50	1.98	Cum
		1	0.31	0.88	0.25	0.07	Cum
		1	0.20	0.88	0.40	0.07	Cum
		1	2.30	0.88	0.50	1.01	Cum
		1	0.63	0.88	0.70	0.39	Cum
	<i>Crest</i>	1	0.72	0.88	0.87	0.55	Cum
	TOTAL					28.99	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.						
	<i>Over Crest</i>	1	0.70	0.88	0.15	0.09	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.69	0.45	0.05	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.69	0.45	0.05	0.22	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	28.99	0.30%	0.09	7850	682.75	Kg
	Total Weight in Metric Tonne					0.68	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	4	2.05		0.45	3.68	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.05		1.23	10.07	Sqm
		4		0.82	1.23	4.03	Sqm
		4	2.05		0.50	4.09	Sqm
		4		1.34	0.50	2.68	Sqm
	<i>Section 2-2</i>	4	1.50		0.45	2.70	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.50		0.55	3.30	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.50		0.50	3.00	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.93	0.50	1.86	Sqm
	Section 3-3	4	1.75		0.45	3.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.75		0.35	2.44	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.75		0.50	3.49	Sqm
		4		0.81	0.50	1.62	Sqm
	Section 5-5	4	2.40		0.45	4.31	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.40		1.23	11.79	Sqm
		4		0.82	1.23	4.03	Sqm
		4	2.40		0.50	4.79	Sqm
		4		1.34	0.50	2.68	Sqm
	Section 6-6	4	1.27		0.45	2.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.27		0.35	1.78	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.27		0.50	2.54	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.88	0.70	1.23	Sqm
		2	4.50		0.50	4.50	Sqm
		2		0.88	0.50	0.88	Sqm
		2	0.31		0.25	0.15	Sqm
		2		0.88	0.25	0.44	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.88	0.40	0.70	Sqm
		2	2.30		0.50	2.30	Sqm
		2		0.88	0.50	0.88	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.88	0.70	1.23	Sqm
	Crest	2	0.715		0.868	1.24	Sqm
		2		0.88	0.868	1.53	Sqm
	Toe Wall D/S Portion	2	4.53		0.30	2.72	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.23		0.60	5.08	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					120.25	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	1.78		5.34	Sqm
	TOTAL					5.34	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.28	0.30	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	1.50	0.28	0.15	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	9.69	0.45		4.36	Sqm
	On Abutment Top (Right Side)	1	9.69	0.45		4.36	Sqm
	TOTAL					8.72	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		1.47		1.47	Cum
	Abutment						
	Section 1-1	2	2.27	0.55		2.507	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Section 2-2</i>	2	1.50		0.52	1.572	Cum
	<i>Section 3-3</i>	2	2.00		0.37	1.492	Cum
	<i>Section 5-5</i>	2	2.44		0.55	2.694	Cum
	<i>Section 6-6</i>	2	0.87		0.37	0.645	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.53	0.15	0.60	0.815	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					12.99	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR ITMA MINOR							
	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.676 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.76	1.26	1.016	4.512	Cum
	<i>Section 2-2</i>	2	1.35	1.08	1.016	2.963	Cum
	<i>Section 3-3</i>	2	2.50	0.96	0.816	3.917	Cum
	<i>Section 5-5</i>	2	2.41	1.41	1.016	6.920	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.816	1.355	Cum
	<i>U/S Key Floor</i>	1	0.625	0.600	0.850	0.319	Cum
	<i>U/S Floor</i>	1	2.000	0.600	1.155	1.386	Cum
	<i>D/S Floor</i>	1	2.000	0.600	0.850	1.020	Cum
		1	3.000	0.600	0.650	1.170	Cum
	<i>D/S Key Floor</i>	1	0.625	0.600	0.850	0.319	Cum
	<i>Toe Wall D/S Portion</i>	1	4.250	0.750	0.900	2.869	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						28.10	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.						
	<i>PCC Below Floor</i>	1	0.542	0.60	0.15	0.05	Cum
		1	0.782	0.60	0.15	0.07	Cum
		1	3.376	0.60	0.15	0.30	Cum
		1	0.282	0.60	0.15	0.03	Cum
		1	1.638	0.60	0.15	0.15	Cum
		1	0.782	0.60	0.15	0.07	Cum
		1	0.542	0.60	0.15	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.76	1.26	0.15	0.67	Cum
	<i>Section 2-2</i>	2	1.35	1.08	0.15	0.44	Cum
	<i>Section 3-3</i>	2	2.50	0.96	0.15	0.72	Cum
	<i>Section 5-5</i>	2	2.41	1.41	0.15	1.02	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.15	0.25	Cum
	<i>Toe Wall D/S Portion</i>	1	4.25	0.75	0.30	0.96	Cum
	<i>Toe Wall D/S Portion</i>	1	3.95	0.45	0.60	1.07	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					6.64	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.53	0.45	0.45	0.62	Cum
		2	1.53	0.71	0.86	1.85	Cum
		2	1.53	1.11	0.50	1.70	Cum
	<i>Section 2-2</i>	2	1.35	0.45	0.45	0.55	Cum
		2	1.35	0.62	0.55	0.91	Cum
		2	1.35	0.93	0.50	1.26	Cum
	<i>Section 3-3</i>	2	2.25	0.45	0.45	0.91	Cum
		2	2.25	0.56	0.35	0.87	Cum
		2	2.25	0.81	0.50	1.82	Cum
	<i>Section 5-5</i>	2	2.37	0.45	0.45	0.96	Cum
		2	2.37	0.71	0.86	2.86	Cum
		2	2.37	1.11	0.50	2.64	Cum
	<i>Section 6-6</i>	2	1.27	0.45	0.45	0.51	Cum
		2	1.27	0.56	0.35	0.49	Cum
		2	1.27	0.81	0.50	1.03	Cum
	<i>Floor</i>	1	0.63	0.60	0.70	0.26	Cum
		1	4.00	0.60	0.50	1.20	Cum
		1	0.31	0.60	0.25	0.05	Cum
		1	0.20	0.60	0.40	0.05	Cum
		1	2.80	0.60	0.50	0.84	Cum
		1	0.63	0.60	0.70	0.26	Cum
	<i>Crest</i>	1	0.68	0.60	0.54	0.22	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					21.86	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	0.60	0.15	0.05	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.40	0.45	0.05	0.21	Cum
	On Abutment Top (Right Side)	1	9.40	0.45	0.05	0.21	Cum
	TOTAL					0.48	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	21.86	0.30%	0.07	7850	514.80	Kg
	Total Weight in Metric Tonne					0.51	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.53		0.45	2.76	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.53		0.86	5.24	Sqm
		4		0.71	0.86	2.42	Sqm
		4	1.53		0.50	3.06	Sqm
		4		1.11	0.50	2.23	Sqm
	Section 2-2	4	1.35		0.45	2.43	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.35		0.55	2.97	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.35		0.50	2.70	Sqm
		4		0.93	0.50	1.86	Sqm
	Section 3-3	4	2.25		0.45	4.04	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.25		0.35	3.14	Sqm
		4		0.56	0.35	0.78	Sqm
		4	2.25		0.50	4.49	Sqm
		4		0.81	0.50	1.62	Sqm
	Section 5-5	4	2.37		0.45	4.26	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.37		0.86	8.10	Sqm
		4		0.71	0.86	2.42	Sqm
		4	2.37		0.50	4.74	Sqm
		4		1.11	0.50	2.23	Sqm
	Section 6-6	4	1.27		0.45	2.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.27		0.35	1.78	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.27		0.50	2.54	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.60	0.70	0.84	Sqm
		2	4.00		0.50	4.00	Sqm
		2		0.60	0.50	0.60	Sqm
		2	0.31		0.25	0.15	Sqm
		2		0.60	0.25	0.30	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.60	0.40	0.48	Sqm
		2	2.80		0.50	2.80	Sqm
		2		0.60	0.50	0.60	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.60	0.70	0.84	Sqm
	Crest	2	0.681		0.535	0.73	Sqm
		2		0.6	0.535	0.64	Sqm
	Toe Wall D/S Portion	2	4.25		0.30	2.55	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	3.95		0.60	4.74	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

	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					103.63	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.34	Sqm
	TOTAL					5.34	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.00	0.30	0.00	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	1.50	0.00	0.15	0.00	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.40	0.45		4.23	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.40	0.45		4.23	Sqm
	TOTAL					8.46	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		0.92		0.92	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.76	0.23		0.791	Cum
	<i>Section 2-2</i>	2	1.35	0.23		0.608	Cum
	<i>Section 3-3</i>	2	2.50	0.13		0.666	Cum
	<i>Section 5-5</i>	2	2.41	0.23		1.085	Cum
	<i>Section 6-6</i>	2	0.87	0.13		0.230	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.25	0.15	0.60	0.765	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					6.86	Cum
SHARDA TYPE FALL OF HEIGHT 1.676 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.54	1.98	2.729	16.644	Cum
	<i>Section 2-2</i>	2	4.00	1.71	2.729	37.289	Cum
	<i>Section 3-3</i>	2	4.70	1.59	2.529	37.751	Cum
	<i>Section 5-5</i>	2	2.42	2.13	2.729	28.016	Cum
	<i>Section 6-6</i>	2	0.67	1.07	2.529	3.630	Cum
	<i>U/S Key Floor</i>	1	0.575	0.860	0.650	0.321	Cum
	<i>U/S Floor</i>	1	3.000	0.860	2.926	7.549	Cum
	<i>D/S Floor</i>	1	4.000	0.860	1.250	4.300	Cum
		1	3.000	0.860	1.050	2.709	Cum
		1	2.000	0.860	0.750	1.290	Cum
	<i>D/S Key Floor</i>	1	0.863	0.860	1.800	1.335	Cum
	<i>Toe Wall D/S Portion</i>	1	5.050	0.750	0.900	3.409	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						146.04	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.						
	<i>PCC Below Floor</i>	1	0.542	0.86	0.15	0.07	Cum
		1	0.559	0.86	0.15	0.07	Cum
		1	6.668	0.86	0.15	0.86	Cum
		1	0.495	0.86	0.15	0.06	Cum
		1	2.252	0.86	0.15	0.29	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.212	0.86	0.15	0.03	Cum
		1	0.420	0.86	0.15	0.05	Cum
		1	1.845	0.86	0.15	0.24	Cum
		1	0.542	0.86	0.15	0.07	Cum
	PCC Below Abutment						
	Section 1-1	2	1.54	1.98	0.15	0.91	Cum
	Section 2-2	2	4.00	1.71	0.15	2.05	Cum
	Section 3-3	2	4.70	1.59	0.15	2.24	Cum
	Section 5-5	2	2.42	2.13	0.15	1.54	Cum
	Section 6-6	2	0.67	1.07	0.15	0.22	Cum
	Toe Wall D/S Portion	1	5.05	0.75	0.30	1.14	Cum
	Toe Wall D/S Portion	1	4.75	0.45	0.60	1.28	Cum
	Toe Wall for resting Brick Edging	2	2.00	0.60	0.15	0.36	Cum
	Toe Wall for resting Brick Edging	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					12.20	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	1.32	0.45	0.45	0.53	Cum
		2	1.32	1.06	2.41	6.74	Cum
		2	1.32	1.83	0.90	4.33	Cum
	Section 2-2	2	4.00	0.82	0.50	3.28	Cum
		2	4.00	1.04	0.73	6.07	Cum
		2	4.00	1.41	2.05	23.09	Cum
	Section 3-3	2	4.39	0.82	0.45	3.24	Cum
		2	4.39	0.98	0.53	4.56	Cum
		2	4.39	1.29	2.25	25.45	Cum
	Section 5-5	2	2.37	0.45	0.45	0.96	Cum
		2	2.37	1.06	2.41	12.13	Cum
		2	2.37	1.83	0.90	7.79	Cum
	Section 6-6	2	1.30	0.45	0.45	0.53	Cum
		2	1.30	0.68	0.53	0.94	Cum
		2	1.30	0.98	0.60	1.53	Cum
	Floor	1	0.58	0.86	0.50	0.25	Cum
		1	7.00	0.86	0.90	5.42	Cum
		1	0.57	0.86	0.35	0.17	Cum
		1	0.20	0.86	0.65	0.11	Cum
		1	2.80	0.86	0.75	1.81	Cum
		1	0.15	0.86	0.68	0.09	Cum
		1	1.85	0.86	0.60	0.95	Cum
		1	0.86	0.86	1.65	1.22	Cum
	Crest	1	1.22	0.86	1.99	2.09	Cum
	TOTAL					113.29	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	0.86	0.15	0.12	Cum
	Coping over Abutment Top	2	6.66	0.45	0.05	0.30	Cum
	Slab Bridge						
	Slab	1	1.66	5.5	0.34	3.06	Cum
	Wearing coat	1	1.66	4.50	0.07	0.52	Cum
	Dirt wall	2	0.40	5.5	0.30	1.32	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
	TOTAL					8.02	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	31	2.12		1.578	103.7	Kg
a2	10	8	5.90		0.616	29.1	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	2.04		0.616	23.9	Kg
a5	10	6	5.80		0.616	21.5	Kg
x1	12	28	2.50		0.888	62.2	Kg

	Items	No.	Length	Width	Height	Quantity	Unit
x2	16	28	1.94		1.578	85.7	Kg
x3	12	20	1.56		0.888	27.7	Kg
	Taking Skin reinforcement @0.3% of M-20	113.29	0.30%	0.34	7850	2668.00	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					3028.40	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					3.03	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.32		0.45	2.37	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.32		2.41	12.69	Sqm
		4		1.06	2.41	10.23	Sqm
		4	1.32		0.90	4.75	Sqm
		4		1.83	0.90	6.57	Sqm
	<i>Section 2-2</i>	4	4.00		0.50	8.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.00		0.73	11.68	Sqm
		4		1.04	0.73	3.03	Sqm
		4	4.00		2.05	32.80	Sqm
		4		1.41	2.05	11.55	Sqm
	<i>Section 3-3</i>	4	4.39		0.45	7.90	Sqm
		4		0.82	0.45	1.48	Sqm
		4	4.39		0.53	9.31	Sqm
		4		0.98	0.53	2.08	Sqm
		4	4.39		2.25	39.52	Sqm
		4		1.29	2.25	11.59	Sqm
	<i>Section 5-5</i>	4	2.37		0.45	4.27	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.37		2.41	22.83	Sqm
		4		1.06	2.41	10.23	Sqm
		4	2.37		0.90	8.54	Sqm
		4		1.83	0.90	6.57	Sqm
	<i>Section 6-6</i>	4	1.30		0.45	2.34	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.30		0.53	2.76	Sqm
		4		0.68	0.53	1.45	Sqm
		4	1.30		0.60	3.12	Sqm
		4		0.98	0.60	2.35	Sqm
	<i>Floor</i>	2	0.58		0.50	0.58	Sqm
		2		0.86	0.50	0.86	Sqm
		2	7.00		0.90	12.60	Sqm
		2		0.86	0.90	1.55	Sqm
		2	0.57		0.35	0.40	Sqm
		2		0.86	0.35	0.60	Sqm
		2	0.20		0.65	0.26	Sqm
		2		0.86	0.65	1.12	Sqm
		2	2.80		0.75	4.20	Sqm
		2		0.86	0.75	1.29	Sqm
		2	0.15		0.68	0.20	Sqm
		2		0.86	0.68	1.16	Sqm
		2	1.85		0.60	2.22	Sqm
		2		0.86	0.60	1.03	Sqm
		2	0.86		1.65	2.85	Sqm
		2		0.86	1.65	2.84	Sqm
	<i>Crest</i>	2	1.2235		1.99	4.87	Sqm
		2		0.86	1.99	3.42	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.05		0.30	3.03	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.75		0.60	5.70	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					302.92	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.11		8.42	Sqm
	TOTAL					8.42	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.26	0.30	0.16	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	0.26	0.15	0.16	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	6.66	0.45		3.00	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.66	0.45		3.00	Sqm
	TOTAL					5.99	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		7.25		7.25	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.54	1.36		4.200	Cum
	<i>Section 2-2</i>	2	4.00	1.38		11.072	Cum
	<i>Section 3-3</i>	2	4.70	1.17		10.951	Cum
	<i>Section 5-5</i>	2	2.42	1.36		6.570	Cum
	<i>Section 6-6</i>	2	0.67	0.64		0.862	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.05	0.15	0.60	0.909	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					44.21	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.76	1.26	1.016	4.512	Cum
	<i>Section 2-2</i>	2	1.35	1.08	1.016	2.963	Cum
	<i>Section 3-3</i>	2	2.50	0.96	0.816	3.917	Cum
	<i>Section 5-5</i>	2	2.41	1.41	1.016	6.920	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.816	1.355	Cum
	<i>U/S Key Floor</i>	1	0.625	0.600	0.850	0.319	Cum
	<i>U/S Floor</i>	1	2.000	0.600	1.155	1.386	Cum
	<i>D/S Floor</i>	1	2.000	0.600	0.850	1.020	Cum
		1	3.000	0.600	0.650	1.170	Cum
	<i>D/S Key Floor</i>	1	0.625	0.600	0.850	0.319	Cum
	<i>Toe Wall D/S Portion</i>	1	4.250	0.750	0.900	2.869	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						28.10	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.						
	<i>PCC Below Floor</i>	1	0.542	0.60	0.15	0.05	Cum
		1	0.782	0.60	0.15	0.07	Cum
		1	3.376	0.60	0.15	0.30	Cum
		1	0.282	0.60	0.15	0.03	Cum
		1	1.638	0.60	0.15	0.15	Cum
		1	0.782	0.60	0.15	0.07	Cum
		1	0.542	0.60	0.15	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.76	1.26	0.15	0.67	Cum
	<i>Section 2-2</i>	2	1.35	1.08	0.15	0.44	Cum
	<i>Section 3-3</i>	2	2.50	0.96	0.15	0.72	Cum
	<i>Section 5-5</i>	2	2.41	1.41	0.15	1.02	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.15	0.25	Cum
	<i>Toe Wall D/S Portion</i>	1	4.25	0.75	0.30	0.96	Cum
	<i>Toe Wall D/S Portion</i>	1	3.95	0.45	0.60	1.07	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	Toe Wall for resting Brick Edging	2	1.50	0.60	0.15	0.27	Cum
	Toe Wall for resting Brick Edging	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					6.64	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.53	0.45	0.45	0.62	Cum
		2	1.53	0.71	0.86	1.85	Cum
		2	1.53	1.11	0.50	1.70	Cum
	<i>Section 2-2</i>	2	1.35	0.45	0.45	0.55	Cum
		2	1.35	0.62	0.55	0.91	Cum
		2	1.35	0.93	0.50	1.26	Cum
	<i>Section 3-3</i>	2	2.25	0.45	0.45	0.91	Cum
		2	2.25	0.56	0.35	0.87	Cum
		2	2.25	0.81	0.50	1.82	Cum
	<i>Section 5-5</i>	2	2.37	0.45	0.45	0.96	Cum
		2	2.37	0.71	0.86	2.86	Cum
		2	2.37	1.11	0.50	2.64	Cum
	<i>Section 6-6</i>	2	1.27	0.45	0.45	0.51	Cum
		2	1.27	0.56	0.35	0.49	Cum
		2	1.27	0.81	0.50	1.03	Cum
	<i>Floor</i>	1	0.63	0.60	0.70	0.26	Cum
		1	4.00	0.60	0.50	1.20	Cum
		1	0.31	0.60	0.25	0.05	Cum
		1	0.20	0.60	0.40	0.05	Cum
		1	2.80	0.60	0.50	0.84	Cum
		1	0.63	0.60	0.70	0.26	Cum
	<i>Crest</i>	1	0.68	0.60	0.54	0.22	Cum
	TOTAL					21.86	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.						
	<i>Over Crest</i>	1	0.60	0.60	0.15	0.05	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.40	0.45	0.05	0.21	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.40	0.45	0.05	0.21	Cum
	TOTAL					0.48	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	21.86	0.30%	0.07	7850	514.80	Kg
	Total Weight in Metric Tonne					0.51	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	4	1.53		0.45	2.76	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.53		0.86	5.24	Sqm
		4		0.71	0.86	2.42	Sqm
		4	1.53		0.50	3.06	Sqm
		4		1.11	0.50	2.23	Sqm
	<i>Section 2-2</i>	4	1.35		0.45	2.43	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.35		0.55	2.97	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.35		0.50	2.70	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Section 3-3</i>	4	2.25		0.45	4.04	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.25		0.35	3.14	Sqm
		4		0.56	0.35	0.78	Sqm
		4	2.25		0.50	4.49	Sqm
		4		0.81	0.50	1.62	Sqm
	<i>Section 5-5</i>	4	2.37		0.45	4.26	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.45	0.45	0.81	Sqm
		4	2.37		0.86	8.10	Sqm
		4		0.71	0.86	2.42	Sqm
		4	2.37		0.50	4.74	Sqm
		4		1.11	0.50	2.23	Sqm
	Section 6-6	4	1.27		0.45	2.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.27		0.35	1.78	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.27		0.50	2.54	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.60	0.70	0.84	Sqm
		2	4.00		0.50	4.00	Sqm
		2		0.60	0.50	0.60	Sqm
		2	0.31		0.25	0.15	Sqm
		2		0.60	0.25	0.30	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.60	0.40	0.48	Sqm
		2	2.80		0.50	2.80	Sqm
		2		0.60	0.50	0.60	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.60	0.70	0.84	Sqm
	Crest	2	0.681		0.535	0.73	Sqm
		2		0.6	0.535	0.64	Sqm
	Toe Wall D/S Portion	2	4.25		0.30	2.55	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	3.95		0.60	4.74	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					103.63	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	1.78		5.34	Sqm
	TOTAL					5.34	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.00	0.30	0.00	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	1.50	0.00	0.15	0.00	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	9.40	0.45		4.23	Sqm
	On Abutment Top (Right Side)	1	9.40	0.45		4.23	Sqm
	TOTAL					8.46	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		0.92		0.92	Cum
	Abutment						
	Section 1-1	2	1.76	0.23		0.791	Cum
	Section 2-2	2	1.35	0.23		0.608	Cum
	Section 3-3	2	2.50	0.13		0.666	Cum
	Section 5-5	2	2.41	0.23		1.085	Cum
	Section 6-6	2	0.87	0.13		0.230	Cum
	D/S protection	2					
	Toe wall	2	4.25	0.15	0.60	0.765	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					6.86	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 4.600 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.32	1.145	2.877	Cum
	<i>Section 2-2</i>	2	2.00	1.05	1.145	4.809	Cum
	<i>Section 3-3</i>	2	1.77	0.93	0.945	3.111	Cum
	<i>Section 5-5</i>	2	0.65	1.47	1.145	2.192	Cum
	<i>Section 6-6</i>	2	1.08	0.93	0.945	1.898	Cum
	<i>U/S Key Floor</i>	1	0.625	0.590	0.850	0.313	Cum
	<i>U/S Floor</i>	1	2.000	0.590	1.307	1.542	Cum
	<i>D/S Floor</i>	1	2.000	0.590	0.850	1.003	Cum
		1	3.000	0.590	0.650	1.151	Cum
	<i>D/S Key Floor</i>	1	0.625	0.590	0.850	0.313	Cum
	<i>Toe Wall D/S Portion</i>	1	2.090	0.750	0.900	1.411	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.500	1.290	0.750	1.451	Cum
						22.07	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 as reinforcement, its cutting, bending, binding and placing complete job including royalty as per specifications and direction of E/I.						
	<i>PCC Below Floor</i>	1	0.542	0.59	0.15	0.05	Cum
		1	0.783	0.59	0.15	0.07	Cum
		1	3.618	0.59	0.15	0.32	Cum
		1	0.283	0.59	0.15	0.03	Cum
		1	1.396	0.59	0.15	0.12	Cum
		1	0.783	0.59	0.15	0.07	Cum
		1	0.542	0.59	0.15	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.32	0.15	0.38	Cum
	<i>Section 2-2</i>	2	2.00	1.05	0.15	0.63	Cum
	<i>Section 3-3</i>	2	1.77	0.93	0.15	0.49	Cum
	<i>Section 5-5</i>	2	0.65	1.47	0.15	0.29	Cum
	<i>Section 6-6</i>	2	1.08	0.93	0.15	0.30	Cum
	<i>Toe Wall D/S Portion</i>	1	2.09	0.75	0.30	0.47	Cum
	<i>Toe Wall D/S Portion</i>	1	1.79	0.45	0.60	0.48	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.29	0.15	0.29	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					4.58	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.74	0.96	1.02	Cum
		2	0.72	1.17	0.50	0.85	Cum
	<i>Section 2-2</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.60	0.50	1.20	Cum
		2	2.00	0.90	0.50	1.80	Cum
	<i>Section 3-3</i>	2	2.46	0.45	0.45	1.00	Cum
		2	2.46	0.54	0.30	0.80	Cum
		2	2.46	0.78	0.50	1.92	Cum
	<i>Section 5-5</i>	2	0.61	0.45	0.45	0.25	Cum
		2	0.61	0.74	0.96	0.85	Cum
		2	0.61	1.17	0.50	0.71	Cum
	<i>Section 6-6</i>	2	0.54	0.45	0.45	0.22	Cum
		2	0.54	0.54	0.30	0.17	Cum
		2	0.54	0.78	0.50	0.42	Cum
	<i>Floor</i>	1	0.63	0.59	0.70	0.26	Cum
		1	4.00	0.59	0.50	1.18	Cum
		1	0.55	0.59	0.20	0.06	Cum
		1	0.20	0.59	0.40	0.05	Cum
		1	2.80	0.59	0.50	0.83	Cum
		1	0.63	0.59	0.70	0.26	Cum
	<i>Crest</i>	1	0.71	0.59	0.70	0.29	Cum
	TOTAL					15.24	Cum

	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.						
	<i>Over Crest</i>	1	0.60	0.59	0.15	0.05	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	6.63	0.45	0.05	0.15	Cum
	<i>On Abutment Top (Right Side)</i>	1	6.63	0.45	0.05	0.15	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.						
	Taking Skin reinforcement @0.3% of M-20	15.24	0.30%	0.05	7850	358.88	Kg
	Total Weight in Metric Tonne					0.36	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.72		0.45	1.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		0.96	2.77	Sqm
		4		0.74	0.96	2.82	Sqm
		4	0.72		0.50	1.45	Sqm
		4		1.17	0.50	2.35	Sqm
	<i>Section 2-2</i>	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.00		0.50	4.00	Sqm
		4		0.60	0.50	1.20	Sqm
		4	2.00		0.50	4.00	Sqm
		4		0.90	0.50	1.80	Sqm
	<i>Section 3-3</i>	4	2.46		0.45	4.43	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.46		0.30	2.95	Sqm
		4		0.54	0.30	0.65	Sqm
		4	2.46		0.50	4.92	Sqm
		4		0.78	0.50	1.56	Sqm
	<i>Section 5-5</i>	4	0.61		0.45	1.09	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.61		0.96	2.32	Sqm
		4		0.74	0.96	2.82	Sqm
		4	0.61		0.50	1.21	Sqm
		4		1.17	0.50	2.35	Sqm
	<i>Section 6-6</i>	4	0.54		0.45	0.97	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.54		0.30	0.65	Sqm
		4		0.54	0.30	0.65	Sqm
		4	0.54		0.50	1.08	Sqm
		4		0.78	0.50	1.56	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.59	0.70	0.83	Sqm
		2	4.00		0.50	4.00	Sqm
		2		0.59	0.50	0.59	Sqm
		2	0.55		0.20	0.22	Sqm
		2		0.59	0.20	0.24	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.59	0.40	0.47	Sqm
		2	2.80		0.50	2.80	Sqm
		2		0.59	0.50	0.59	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.59	0.70	0.83	Sqm
	<i>Crest</i>	2	0.7085		0.702	0.99	Sqm
		2		0.59	0.702	0.83	Sqm
	<i>Toe Wall D/S Portion</i>	2	2.09		0.30	1.25	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	1.79		0.60	2.15	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		1.29	0.15	0.77	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					83.22	Sqm

	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.						
	<i>In D/S Portion On Slopes</i>	1	1.50	2.59		3.89	Sqm
	TOTAL					3.89	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.39	0.30	0.18	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	0.39	0.15	0.18	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	6.63	0.45		2.98	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.63	0.45		2.98	Sqm
	TOTAL					5.97	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		0.54		0.54	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.30		0.564	Cum
	<i>Section 2-2</i>	2	2.00	0.30		1.188	Cum
	<i>Section 3-3</i>	2	1.77	0.43		1.522	Cum
	<i>Section 5-5</i>	2	0.65	0.30		0.386	Cum
	<i>Section 6-6</i>	2	1.08	0.43		0.929	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.09	0.15	0.60	0.376	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					7.30	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR MALI MINOR							
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.000 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.96	1.49	1.549	4.457	Cum
	<i>Section 2-2</i>	2	2.50	1.13	1.549	8.736	Cum
	<i>Section 3-3</i>	2	2.20	1.01	1.349	5.983	Cum
	<i>Section 5-5</i>	2	2.26	1.64	1.549	11.508	Cum
	<i>Section 6-6</i>	2	3.74	1.01	1.349	10.171	Cum
	<i>U/S Key Floor</i>	1	0.625	0.710	0.850	0.377	Cum
	<i>U/S Floor</i>	1	2.000	0.710	1.460	2.073	Cum
	<i>D/S Floor</i>	1	2.500	0.710	0.900	1.598	Cum
		1	2.500	0.710	0.700	1.243	Cum
	<i>D/S Key Floor</i>	1	0.625	0.710	0.850	0.377	Cum
	<i>Toe Wall D/S Portion</i>	1	4.600	0.750	0.900	3.105	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	1.010	0.750	2.273	Cum
						51.90	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.						
	<i>PCC Below Floor</i>	1	0.542	0.71	0.15	0.06	Cum
		1	0.782	0.71	0.15	0.08	Cum
		1	3.876	0.71	0.15	0.41	Cum
		1	0.283	0.71	0.15	0.03	Cum
		1	1.138	0.71	0.15	0.12	Cum
		1	0.783	0.71	0.15	0.08	Cum
		1	0.542	0.71	0.15	0.06	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.96	1.49	0.15	0.43	Cum
	<i>Section 2-2</i>	2	2.50	1.13	0.15	0.85	Cum
	<i>Section 3-3</i>	2	2.20	1.01	0.15	0.67	Cum
	<i>Section 5-5</i>	2	2.26	1.64	0.15	1.11	Cum
	<i>Section 6-6</i>	2	3.74	1.01	0.15	1.13	Cum
	<i>Toe Wall D/S Portion</i>	1	4.60	0.75	0.30	1.04	Cum
	<i>Toe Wall D/S Portion</i>	1	4.30	0.45	0.60	1.16	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.01	0.15	0.23	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.00	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.74	0.45	0.45	0.30	Cum
		2	0.74	0.82	1.24	1.50	Cum
		2	0.74	1.34	0.50	0.99	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.64	0.63	2.01	Cum
		2	2.50	0.98	0.50	2.45	Cum
	<i>Section 3-3</i>	2	1.92	0.45	0.45	0.78	Cum
		2	1.92	0.58	0.43	0.96	Cum
		2	1.92	0.86	0.50	1.65	Cum
	<i>Section 5-5</i>	2	2.26	0.45	0.45	0.92	Cum
		2	2.26	0.82	1.24	4.61	Cum
		2	2.26	1.34	0.50	3.04	Cum
	<i>Section 6-6</i>	2	1.37	0.45	0.45	0.55	Cum
		2	1.37	0.58	0.43	0.68	Cum
		2	1.37	0.86	0.50	1.17	Cum
	<i>Floor</i>	1	0.63	0.71	0.70	0.31	Cum
		1	4.50	0.71	0.55	1.76	Cum
		1	0.31	0.71	0.20	0.04	Cum
		1	0.20	0.71	0.40	0.06	Cum
		1	2.30	0.71	0.50	0.82	Cum
		1	0.63	0.71	0.70	0.31	Cum
	<i>Crest</i>	1	0.73	0.71	0.85	0.44	Cum
	TOTAL					26.35	Cum

	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.						
	<i>Over Crest</i>	1	0.60	0.71	0.15	0.06	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.56	0.45	0.05	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.56	0.45	0.05	0.22	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.						
	Taking Skin reinforcement @0.3% of M-20	26.35	0.30%	0.08	7850	620.52	Kg
	Total Weight in Metric Tonne					0.62	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.74		0.45	1.33	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.74		1.24	3.66	Sqm
		4		0.82	1.24	4.08	Sqm
		4	0.74		0.50	1.48	Sqm
		4		1.34	0.50	2.69	Sqm
	<i>Section 2-2</i>	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.63	6.30	Sqm
		4		0.64	0.63	1.61	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.98	0.50	1.96	Sqm
	<i>Section 3-3</i>	4	1.92		0.45	3.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.92		0.43	3.30	Sqm
		4		0.58	0.43	1.00	Sqm
		4	1.92		0.50	3.84	Sqm
		4		0.86	0.50	1.72	Sqm
	<i>Section 5-5</i>	4	2.26		0.45	4.07	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.26		1.24	11.21	Sqm
		4		0.82	1.24	4.08	Sqm
		4	2.26		0.50	4.52	Sqm
		4		1.34	0.50	2.69	Sqm
	<i>Section 6-6</i>	4	1.37		0.45	2.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.37		0.43	2.35	Sqm
		4		0.58	0.43	1.00	Sqm
		4	1.37		0.50	2.73	Sqm
		4		0.86	0.50	1.72	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.71	0.70	0.99	Sqm
		2	4.50		0.55	4.95	Sqm
		2		0.71	0.55	0.78	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.71	0.20	0.28	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.71	0.40	0.57	Sqm
		2	2.30		0.50	2.30	Sqm
		2		0.71	0.50	0.71	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.71	0.70	0.99	Sqm
	<i>Crest</i>	2	0.733		0.849	1.24	Sqm
		2		0.71	0.849	1.21	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.60		0.30	2.76	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.30		0.60	5.16	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		1.01	0.15	0.61	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					117.57	Sqm

	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 soiling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.93		5.78	Sqm
	TOTAL					5.78	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.11	0.30	0.05	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	0.11	0.15	0.05	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.56	0.45		4.30	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.56	0.45		4.30	Sqm
	TOTAL					8.61	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1	1.58			1.58	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.96	0.59		1.131	Cum
	<i>Section 2-2</i>	2	2.50	0.59		2.935	Cum
	<i>Section 3-3</i>	2	2.20	0.41		1.804	Cum
	<i>Section 5-5</i>	2	2.26	0.59		2.653	Cum
	<i>Section 6-6</i>	2	3.74	0.41		3.067	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.60	0.15	0.60	0.828	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					15.79	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 3.125 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.32	2.107	5.286	Cum
	<i>Section 2-2</i>	2	2.50	1.13	2.107	11.883	Cum
	<i>Section 3-3</i>	2	2.20	0.93	1.907	7.803	Cum
	<i>Section 5-5</i>	2	0.65	1.47	2.107	4.031	Cum
	<i>Section 6-6</i>	2	0.93	0.93	1.907	3.299	Cum
	<i>U/S Key Floor</i>	1	0.625	0.580	0.850	0.308	Cum
	<i>U/S Floor</i>	1	2.000	0.580	1.307	1.516	Cum
	<i>D/S Floor</i>	1	2.500	0.580	0.850	1.233	Cum
		1	2.500	0.580	0.650	0.943	Cum
	<i>D/S Key Floor</i>	1	0.625	0.580	0.850	0.308	Cum
	<i>Toe Wall D/S Portion</i>	1	2.080	0.750	0.900	1.404	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	1.280	0.750	2.880	Cum
						40.89	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.						
	<i>PCC Below Floor</i>	1	0.542	0.58	0.15	0.05	Cum
		1	0.782	0.58	0.15	0.07	Cum
		1	4.118	0.58	0.15	0.36	Cum
		1	0.283	0.58	0.15	0.02	Cum
		1	0.897	0.58	0.15	0.08	Cum
		1	0.783	0.58	0.15	0.07	Cum
		1	0.542	0.58	0.15	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.32	0.15	0.38	Cum
	<i>Section 2-2</i>	2	2.50	1.13	0.15	0.85	Cum
	<i>Section 3-3</i>	2	2.20	0.93	0.15	0.61	Cum
	<i>Section 5-5</i>	2	0.65	1.47	0.15	0.29	Cum
	<i>Section 6-6</i>	2	0.93	0.93	0.15	0.26	Cum
	<i>Toe Wall D/S Portion</i>	1	2.08	0.75	0.30	0.47	Cum
	<i>Toe Wall D/S Portion</i>	1	1.78	0.45	0.60	0.48	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.28	0.15	0.29	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					4.85	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.80	0.45	0.45	0.32	Cum
		2	0.80	0.74	0.96	1.12	Cum
		2	0.80	1.17	0.70	1.31	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.60	0.50	1.50	Cum
		2	2.50	0.98	0.70	3.42	Cum
	<i>Section 3-3</i>	2	1.96	0.45	0.45	0.79	Cum
		2	1.96	0.54	0.30	0.64	Cum
		2	1.96	0.78	0.55	1.68	Cum
	<i>Section 5-5</i>	2	0.61	0.45	0.45	0.25	Cum
		2	0.61	0.74	0.96	0.85	Cum
		2	0.61	1.17	0.70	0.99	Cum
	<i>Section 6-6</i>	2	0.54	0.45	0.45	0.22	Cum
		2	0.54	0.54	0.30	0.17	Cum
		2	0.54	0.78	0.55	0.46	Cum
	<i>Floor</i>	1	0.63	0.58	0.70	0.25	Cum
		1	4.50	0.58	0.50	1.31	Cum
		1	0.31	0.58	0.20	0.04	Cum
		1	0.20	0.58	0.40	0.05	Cum
		1	2.30	0.58	0.50	0.67	Cum
		1	0.63	0.58	0.70	0.25	Cum
	<i>Crest</i>	1	0.71	0.58	0.67	0.27	Cum
	TOTAL					17.59	Cum

	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	0.58	0.15	0.05	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	6.63	0.45	0.05	0.15	Cum
	On Abutment Top (Right Side)	1	6.63	0.45	0.05	0.15	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	17.59	0.30%	0.05	7850	414.26	Kg
	Total Weight in Metric Tonne					0.41	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	0.80		0.45	1.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.80		0.96	3.05	Sqm
		4		0.74	0.96	2.82	Sqm
		4	0.80		0.70	2.23	Sqm
		4		1.17	0.70	3.29	Sqm
	Section 2-2	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.60	0.50	1.20	Sqm
		4	2.50		0.70	7.00	Sqm
		4		0.98	0.70	2.74	Sqm
	Section 3-3	4	1.96		0.45	3.53	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.96		0.30	2.35	Sqm
		4		0.54	0.30	0.65	Sqm
		4	1.96		0.55	4.31	Sqm
		4		0.78	0.55	1.72	Sqm
	Section 5-5	4	0.61		0.45	1.09	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.61		0.96	2.32	Sqm
		4		0.74	0.96	2.82	Sqm
		4	0.61		0.70	1.69	Sqm
		4		1.17	0.70	3.29	Sqm
	Section 6-6	4	0.54		0.45	0.97	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.54		0.30	0.65	Sqm
		4		0.54	0.30	0.65	Sqm
		4	0.54		0.55	1.19	Sqm
		4		0.78	0.55	1.72	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.58	0.70	0.81	Sqm
		2	4.50		0.50	4.50	Sqm
		2		0.58	0.50	0.58	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.58	0.20	0.23	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.58	0.40	0.46	Sqm
		2	2.30		0.50	2.30	Sqm
		2		0.58	0.50	0.58	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.58	0.70	0.81	Sqm
	Crest	2	0.708		0.669	0.95	Sqm
		2		0.58	0.669	0.78	Sqm
	Toe Wall D/S Portion	2	2.08		0.30	1.25	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	1.78		0.60	2.14	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.15	0.90	Sqm
		4		1.28	0.15	0.77	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					90.65	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.38	0.30	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	0.38	0.15	0.17	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	6.63	0.45		2.98	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.63	0.45		2.98	Sqm
	TOTAL					5.97	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		0.53		0.53	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.76		1.431	Cum
	<i>Section 2-2</i>	2	2.50	0.63		3.160	Cum
	<i>Section 3-3</i>	2	2.20	0.43		1.901	Cum
	<i>Section 5-5</i>	2	0.65	0.76		0.980	Cum
	<i>Section 6-6</i>	2	0.93	0.43		0.804	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.08	0.15	0.60	0.374	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					10.98	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR THUMBHI MINOR							
	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.545 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.26	1.51	1.707	6.475	Cum
	<i>Section 2-2</i>	2	2.30	1.76	1.707	13.788	Cum
	<i>Section 3-3</i>	2	4.20	1.64	1.507	20.710	Cum
	<i>Section 5-5</i>	2	2.61	1.66	1.707	14.817	Cum
	<i>Section 6-6</i>	2	0.73	1.12	1.507	2.452	Cum
	<i>U/S Key Floor</i>	1	0.625	1.400	0.850	0.744	Cum
	<i>U/S Floor</i>	1	2.000	1.400	2.007	5.620	Cum
	<i>D/S Floor</i>	1	2.500	1.400	0.850	2.975	Cum
		1	4.500	1.400	0.650	4.095	Cum
	<i>D/S Key Floor</i>	1	0.625	1.400	0.850	0.744	Cum
	<i>Toe Wall D/S Portion</i>	1	5.830	0.750	0.900	3.935	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						78.15	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.						
	<i>PCC Below Floor</i>	1	0.542	1.40	0.15	0.11	Cum
		1	0.782	1.40	0.15	0.16	Cum
		1	3.826	1.40	0.15	0.80	Cum
		1	0.282	1.40	0.15	0.06	Cum
		1	3.188	1.40	0.15	0.67	Cum
		1	0.782	1.40	0.15	0.16	Cum
		1	0.542	1.40	0.15	0.11	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.26	1.51	0.15	0.57	Cum
	<i>Section 2-2</i>	2	2.30	1.76	0.15	1.21	Cum
	<i>Section 3-3</i>	2	4.20	1.64	0.15	2.06	Cum
	<i>Section 5-5</i>	2	2.61	1.66	0.15	1.30	Cum
	<i>Section 6-6</i>	2	0.73	1.12	0.15	0.24	Cum
	<i>Toe Wall D/S Portion</i>	1	5.83	0.75	0.30	1.31	Cum
	<i>Toe Wall D/S Portion</i>	1	5.83	0.45	0.60	1.57	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					11.44	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.18	0.45	0.45	0.48	Cum
		2	1.18	0.83	1.27	2.48	Cum
		2	1.18	1.36	0.50	1.60	Cum
	<i>Section 2-2</i>	2	2.30	0.82	0.50	1.89	Cum
		2	2.30	1.06	0.81	3.96	Cum
		2	2.30	1.46	1.00	6.70	Cum
	<i>Section 3-3</i>	2	3.87	0.82	0.50	3.17	Cum
		2	3.87	0.97	0.61	4.57	Cum
		2	3.87	1.27	1.20	11.77	Cum
	<i>Section 5-5</i>	2	2.57	0.45	0.45	1.04	Cum
		2	2.57	0.83	1.27	5.41	Cum
		2	2.57	1.36	0.50	3.50	Cum
	<i>Section 6-6</i>	2	1.40	0.45	0.45	0.57	Cum
		2	1.40	0.63	0.61	1.08	Cum
		2	1.40	0.97	0.60	1.62	Cum
	<i>Floor</i>	1	0.63	1.40	0.70	0.61	Cum
		1	4.50	1.40	0.50	3.15	Cum
		1	0.25	1.40	0.20	0.07	Cum
		1	0.20	1.40	0.40	0.11	Cum
		1	4.30	1.40	0.50	3.01	Cum
		1	0.63	1.40	0.70	0.61	Cum
	<i>Crest</i>	1	0.78	1.40	0.80	0.87	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					58.27	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	1.40	0.20	0.18	Cum
	Coping over Abutment Top	2	12.04	0.45	0.05	0.54	Cum
	Slab Bridge						
	Slab	1	3.04	5.5	0.33	5.49	Cum
	Wearing coat	1	3.04	4.50	0.07	0.96	Cum
	Dirt wall	2	0.40	5.5	0.30	1.32	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
	TOTAL					11.20	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	2.66		1.578	130.1	Kg
a2	10	11	5.90		0.616	40.0	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	2.58		0.616	30.2	Kg
a5	10	8	5.80		0.616	28.6	Kg
x1	12	36	2.50		0.888	79.9	Kg
x2	16	36	1.94		1.578	110.2	Kg
x3	12	20	1.56		0.888	27.7	Kg
	Taking Skin reinforcement @0.3% of M-20	58.27	0.30%	0.17	7850	1372.27	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					1825.73	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					1.83	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.18		0.45	2.12	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.18		1.27	5.97	Sqm
		4		0.83	1.27	4.21	Sqm
		4	1.18		0.50	2.36	Sqm
		4		1.36	0.50	2.72	Sqm
	Section 2-2	4	2.30		0.50	4.60	Sqm
		4		0.82	0.50	1.64	Sqm
		4	2.30		0.81	7.45	Sqm
		4		1.06	0.81	3.44	Sqm
		4	2.30		1.00	9.20	Sqm
		4		1.46	1.00	5.82	Sqm
	Section 3-3	4	3.87		0.50	7.73	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.87		0.61	9.44	Sqm
		4		0.97	0.61	2.37	Sqm
		4	3.87		1.20	18.56	Sqm
		4		1.27	1.20	6.09	Sqm
	Section 5-5	4	2.57		0.45	4.63	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.57		1.27	13.03	Sqm
		4		0.83	1.27	4.21	Sqm
		4	2.57		0.50	5.14	Sqm
		4		1.36	0.50	2.72	Sqm
	Section 6-6	4	1.40		0.45	2.51	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.40		0.61	3.41	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.40		0.60	3.35	Sqm
		4		0.97	0.60	2.33	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.40	0.70	1.96	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.40	0.50	1.40	Sqm
		2	0.25		0.20	0.10	Sqm
		2		1.40	0.20	0.56	Sqm
		2	0.20		0.40	0.16	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.40	0.40	1.12	Sqm
		2	4.30		0.50	4.30	Sqm
		2		1.40	0.50	1.40	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.40	0.70	1.96	Sqm
	Crest	2	0.7825		0.795	1.24	Sqm
		2		1.4	0.795	2.23	Sqm
	Toe Wall D/S Portion	2	5.83		0.30	3.50	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.83		0.60	7.00	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					181.90	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	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.00	0.80	0.30	0.48	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	0.80	0.15	0.48	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	12.04	0.45		5.42	Sqm
	On Abutment Top (Right Side)	1	12.04	0.45		5.42	Sqm
	TOTAL					10.83	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		1.54		1.54	Cum
	Abutment						
	Section 1-1	2	1.26		0.72	1.809	Cum
	Section 2-2	2	2.30		0.31	1.426	Cum
	Section 3-3	2	4.20		0.25	2.100	Cum
	Section 5-5	2	2.61		0.72	3.765	Cum
	Section 6-6	2	0.73		0.66	0.967	Cum
	D/S protection	2					
	Toe wall	2	5.83	0.15	0.60	1.049	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					15.06	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.914 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.30	1.78	2.699	12.509	Cum
	<i>Section 2-2</i>	2	3.25	1.24	2.699	21.684	Cum
	<i>Section 3-3</i>	2	1.45	1.12	2.499	8.088	Cum
	<i>Section 5-5</i>	2	2.63	1.93	2.699	27.410	Cum
	<i>Section 6-6</i>	2	1.12	1.12	2.499	6.225	Cum
	<i>U/S Key Floor</i>	1	0.625	1.400	0.850	0.744	Cum
	<i>U/S Floor</i>	1	2.500	1.400	2.464	8.624	Cum
	<i>D/S Floor</i>	1	1.963	1.400	0.850	2.336	Cum
		1	1.800	1.400	0.650	1.638	Cum
	<i>D/S Key Floor</i>	1	0.625	1.400	1.150	1.006	Cum
	<i>Toe Wall D/S Portion</i>	1	5.830	0.750	0.900	3.935	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	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.						
	<i>PCC Below Floor</i>	1	0.542	1.40	0.15	0.11	Cum
		1	0.782	1.40	0.15	0.16	Cum
		1	0.282	1.40	1.15	0.45	Cum
		1	0.007	1.40	2.15	0.02	Cum
		1	4.744	1.40	0.15	1.00	Cum
		1	0.353	1.40	0.15	0.07	Cum
		1	0.238	1.40	0.15	0.05	Cum
		1	1.118	1.40	0.15	0.23	Cum
		1	0.542	1.40	0.15	0.11	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.30	1.78	0.15	0.70	Cum
	<i>Section 2-2</i>	2	3.25	1.24	0.15	1.21	Cum
	<i>Section 3-3</i>	2	1.45	1.12	0.15	0.49	Cum
	<i>Section 5-5</i>	2	2.63	1.93	0.15	1.52	Cum
	<i>Section 6-6</i>	2	1.12	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	5.83	0.75	0.30	1.31	Cum
	<i>Toe Wall D/S Portion</i>	1	5.53	0.45	0.60	1.49	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	2.00	0.60	0.15	0.18	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					10.21	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.15	0.45	0.45	0.47	Cum
		2	1.15	0.97	1.72	3.83	Cum
		2	1.15	1.63	0.60	2.25	Cum
	<i>Section 2-2</i>	2	3.25	0.45	0.45	1.32	Cum
		2	3.25	0.69	0.61	2.75	Cum
		2	3.25	1.09	0.60	4.24	Cum
	<i>Section 3-3</i>	2	1.12	0.45	0.45	0.45	Cum
		2	1.12	0.63	0.61	0.86	Cum
		2	1.12	0.97	0.50	1.08	Cum
	<i>Section 5-5</i>	2	2.58	0.45	0.45	1.04	Cum
		2	2.58	0.97	1.72	8.59	Cum
		2	2.58	1.63	0.60	5.05	Cum
	<i>Section 6-6</i>	2	1.73	0.45	0.45	0.70	Cum
		2	1.73	0.63	0.61	1.34	Cum
		2	1.73	0.97	0.50	1.67	Cum
	<i>Floor</i>	1	0.63	1.40	0.70	0.61	Cum
		1	1.24	1.40	0.50	0.87	Cum
		1	4.46	1.40	0.55	3.44	Cum
		1	0.28	1.40	0.25	0.10	Cum
		1	0.25	1.40	0.40	0.14	Cum
		1	1.55	1.40	0.50	1.09	Cum
		1	0.63	1.40	1.00	0.88	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	1	1.06	1.40	1.24	1.83	Cum
	TOTAL					44.58	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	1.40	0.15	0.18	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	6.63	0.45	0.05	0.15	Cum
	On Abutment Top (Right Side)	1	6.63	0.45	0.05	0.15	Cum
	TOTAL					0.48	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	44.58	0.30%	0.13	7850	1049.83	Kg
	Total Weight in Metric Tonne					1.05	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.15		0.45	2.07	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.15		1.72	7.92	Sqm
		4		0.97	1.72	6.67	Sqm
		4	1.15		0.60	2.76	Sqm
		4		1.63	0.60	3.92	Sqm
	Section 2-2	4	3.25		0.45	5.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.25		0.61	7.93	Sqm
		4		0.69	0.61	1.69	Sqm
		4	3.25		0.60	7.80	Sqm
		4		1.09	0.60	2.61	Sqm
	Section 3-3	4	1.12		0.45	2.01	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.12		0.61	2.73	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.12		0.50	2.23	Sqm
		4		0.97	0.50	1.93	Sqm
	Section 5-5	4	2.58		0.45	4.64	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.58		1.72	17.76	Sqm
		4		0.97	1.72	6.67	Sqm
		4	2.58		0.60	6.18	Sqm
		4		1.63	0.60	3.92	Sqm
	Section 6-6	4	1.73		0.45	3.12	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.73		0.61	4.23	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.73		0.50	3.46	Sqm
		4		0.97	0.50	1.93	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.40	0.70	1.96	Sqm
		2	1.24		0.50	1.24	Sqm
		2		1.40	0.50	1.40	Sqm
		2	4.46		0.55	4.91	Sqm
		2		1.40	0.55	1.54	Sqm
		2	0.28		0.25	0.14	Sqm
		2		1.40	0.25	0.70	Sqm
		2	0.25		0.40	0.20	Sqm
		2		1.40	0.40	1.12	Sqm
		2	1.55		0.50	1.55	Sqm
		2		1.40	0.50	1.40	Sqm
		2	0.63		1.00	1.25	Sqm
		2		1.40	1.00	2.80	Sqm
	Crest	2	1.0565		1.239	2.62	Sqm
		2		1.4	1.239	3.47	Sqm
	Toe Wall D/S Portion	2	5.83		0.30	3.50	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.53		0.60	6.64	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	2.00		0.15	1.20	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		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					162.53	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.00	0.80	0.30	0.48	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	0.80	0.15	0.48	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	6.63	0.45		2.98	Sqm
	On Abutment Top (Right Side)	1	6.63	0.45		2.98	Sqm
	TOTAL					5.97	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		3.72		3.72	Cum
	Abutment						
	Section 1-1	2	1.30	1.81		4.702	Cum
	Section 2-2	2	3.25	0.88		5.720	Cum
	Section 3-3	2	1.45	0.66		1.914	Cum
	Section 5-5	2	2.63	1.81		9.504	Cum
	Section 6-6	2	1.12	0.66		1.473	Cum
	D/S protection	2					
	Toe wall	2	5.83	0.15	0.60	1.049	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					30.48	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 3.300 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.45	1.89	2.017	11.025	Cum
	<i>Section 2-2</i>	2	3.50	1.12	2.017	15.757	Cum
	<i>Section 3-3</i>	2	2.20	1.00	1.817	7.963	Cum
	<i>Section 5-5</i>	2	2.43	2.04	2.017	20.026	Cum
	<i>Section 6-6</i>	2	1.00	1.00	1.817	3.605	Cum
	<i>U/S Key Floor</i>	1	0.625	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.500	1.000	2.770	6.925	Cum
	<i>D/S Floor</i>	1	1.963	1.000	0.850	1.669	Cum
		1	2.550	1.000	0.650	1.658	Cum
	<i>D/S Key Floor</i>	1	0.763	1.000	1.400	1.068	Cum
	<i>Toe Wall D/S Portion</i>	1	4.820	0.750	0.900	3.254	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						74.83	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.						
	<i>PCC Below Floor</i>	1	0.542	1.00	0.15	0.08	Cum
		1	0.782	1.00	0.15	0.12	Cum
		1	0.113	1.00	1.15	0.13	Cum
		1	0.202	1.00	2.15	0.43	Cum
		1	4.963	1.00	0.15	0.74	Cum
		1	0.494	1.00	0.15	0.07	Cum
		1	0.863	1.00	0.15	0.13	Cum
		1	1.397	1.00	0.15	0.21	Cum
		1	0.542	1.00	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.45	1.89	0.15	0.82	Cum
	<i>Section 2-2</i>	2	3.50	1.12	0.15	1.17	Cum
	<i>Section 3-3</i>	2	2.20	1.00	0.15	0.66	Cum
	<i>Section 5-5</i>	2	2.43	2.04	0.15	1.49	Cum
	<i>Section 6-6</i>	2	1.00	1.00	0.15	0.30	Cum
	<i>Toe Wall D/S Portion</i>	1	4.82	0.75	0.30	1.08	Cum
	<i>Toe Wall D/S Portion</i>	1	4.52	0.45	0.60	1.22	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.60	0.15	0.14	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					9.42	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.30	0.45	0.45	0.53	Cum
		2	1.30	1.02	1.90	5.03	Cum
		2	1.30	1.74	0.65	2.93	Cum
	<i>Section 2-2</i>	2	3.50	0.45	0.45	1.42	Cum
		2	3.50	0.63	0.61	2.70	Cum
		2	3.50	0.97	0.65	4.40	Cum
	<i>Section 3-3</i>	2	1.93	0.45	0.45	0.78	Cum
		2	1.93	0.57	0.41	0.91	Cum
		2	1.93	0.85	0.65	2.12	Cum
	<i>Section 5-5</i>	2	2.39	0.45	0.45	0.97	Cum
		2	2.39	1.02	1.90	9.26	Cum
		2	2.39	1.74	0.65	5.41	Cum
	<i>Section 6-6</i>	2	1.34	0.45	0.45	0.54	Cum
		2	1.34	0.57	0.41	0.63	Cum
		2	1.34	0.85	0.65	1.48	Cum
	<i>Floor</i>	1	0.63	1.00	0.70	0.44	Cum
		1	0.27	1.00	0.50	0.13	Cum
		1	4.46	1.00	0.65	2.90	Cum
		1	0.49	1.00	0.35	0.17	Cum
		1	0.25	1.00	0.40	0.10	Cum
		1	2.30	1.00	0.50	1.15	Cum
		1	0.76	1.00	1.25	0.95	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	1	1.19	1.00	1.50	1.78	Cum
	TOTAL					46.71	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	0.95	1.00	0.15	0.14	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	11.31	0.45	0.05	0.25	Cum
	On Abutment Top (Right Side)	1	11.31	0.45	0.05	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	46.71	0.30%	0.14	7850	1100.14	Kg
	Total Weight in Metric Tonne					1.10	MT
6	Providing shuttering including strutting, propping 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	2.33	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.30		1.90	9.85	Sqm
		4		1.02	1.90	7.75	Sqm
		4	1.30		0.65	3.37	Sqm
		4		1.74	0.65	4.52	Sqm
	Section 2-2	4	3.50		0.45	6.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.50		0.61	8.54	Sqm
		4		0.63	0.61	1.54	Sqm
		4	3.50		0.65	9.10	Sqm
		4		0.97	0.65	2.51	Sqm
	Section 3-3	4	1.93		0.45	3.47	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.93		0.41	3.16	Sqm
		4		0.57	0.41	0.94	Sqm
		4	1.93		0.65	5.01	Sqm
		4		0.85	0.65	2.20	Sqm
	Section 5-5	4	2.39		0.45	4.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.39		1.90	18.16	Sqm
		4		1.02	1.90	7.75	Sqm
		4	2.39		0.65	6.21	Sqm
		4		1.74	0.65	4.52	Sqm
	Section 6-6	4	1.34		0.45	2.42	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.34		0.41	2.20	Sqm
		4		0.57	0.41	0.94	Sqm
		4	1.34		0.65	3.49	Sqm
		4		0.85	0.65	2.20	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.00	0.70	1.40	Sqm
		2	0.27		0.50	0.27	Sqm
		2		1.00	0.50	1.00	Sqm
		2	4.46		0.65	5.80	Sqm
		2		1.00	0.65	1.30	Sqm
		2	0.49		0.35	0.34	Sqm
		2		1.00	0.35	0.70	Sqm
		2	0.25		0.40	0.20	Sqm
		2		1.00	0.40	0.80	Sqm
		2	2.30		0.50	2.30	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.76		1.25	1.91	Sqm
		2		1.00	1.25	2.50	Sqm
	Crest	2	1.191		1.495	3.56	Sqm
		2		1	1.495	2.99	Sqm
	Toe Wall D/S Portion	2	4.82		0.30	2.89	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.52		0.60	5.42	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.15	0.90	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					168.68	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.40	0.30	0.24	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	0.40	0.15	0.24	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	11.31	0.45		5.09	Sqm
	<i>On Abutment Top (Right Side)</i>	1	11.31	0.45		5.09	Sqm
	TOTAL					10.18	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		3.45		3.45	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.45	0.91		2.620	Cum
	<i>Section 2-2</i>	2	3.50	0.43		3.010	Cum
	<i>Section 3-3</i>	2	2.20	0.36		1.584	Cum
	<i>Section 5-5</i>	2	2.43	0.91		4.410	Cum
	<i>Section 6-6</i>	2	1.00	0.36		0.717	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.82	0.15	0.60	0.868	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					18.46	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 4.010 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.72	1.288	5.177	Cum
	<i>Section 2-2</i>	2	2.95	1.08	1.288	8.207	Cum
	<i>Section 3-3</i>	2	2.75	0.96	1.088	5.745	Cum
	<i>Section 5-5</i>	2	2.09	1.87	1.288	10.058	Cum
	<i>Section 6-6</i>	2	0.83	0.96	1.088	1.732	Cum
	<i>U/S Key Floor</i>	1	0.625	0.800	0.850	0.425	Cum
	<i>U/S Floor</i>	1	2.800	0.800	2.238	5.013	Cum
	<i>D/S Floor</i>	1	2.750	0.800	0.850	1.870	Cum
		1	2.950	0.800	0.650	1.534	Cum
	<i>D/S Key Floor</i>	1	0.700	0.800	1.150	0.644	Cum
	<i>Toe Wall D/S Portion</i>	1	4.450	0.750	0.900	3.004	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	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.						
	<i>PCC Below Floor</i>	1	0.542	0.80	0.15	0.07	Cum
		1	0.782	0.80	0.15	0.09	Cum
		1	0.676	0.80	1.15	0.62	Cum
		1	0.070	0.80	2.15	0.12	Cum
		1	4.150	0.80	0.15	0.50	Cum
		1	0.353	0.80	0.15	0.04	Cum
		1	1.438	0.80	0.15	0.17	Cum
		1	1.118	0.80	0.15	0.13	Cum
		1	0.542	0.80	0.15	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.72	0.15	0.60	Cum
	<i>Section 2-2</i>	2	2.95	1.08	0.15	0.96	Cum
	<i>Section 3-3</i>	2	2.75	0.96	0.15	0.79	Cum
	<i>Section 5-5</i>	2	2.09	1.87	0.15	1.17	Cum
	<i>Section 6-6</i>	2	0.83	0.96	0.15	0.24	Cum
	<i>Toe Wall D/S Portion</i>	1	4.45	0.75	0.30	1.00	Cum
	<i>Toe Wall D/S Portion</i>	1	4.15	0.45	0.60	1.12	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.60	0.15	0.14	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.37	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.02	0.45	0.45	0.41	Cum
		2	1.02	0.94	1.62	3.08	Cum
		2	1.02	1.57	0.55	1.76	Cum
	<i>Section 2-2</i>	2	2.95	0.45	0.45	1.19	Cum
		2	2.95	0.62	0.55	2.00	Cum
		2	2.95	0.93	0.55	3.02	Cum
	<i>Section 3-3</i>	2	2.48	0.45	0.45	1.00	Cum
		2	2.48	0.56	0.35	0.96	Cum
		2	2.48	0.81	0.50	2.01	Cum
	<i>Section 5-5</i>	2	2.04	0.45	0.45	0.83	Cum
		2	2.04	0.94	1.62	6.18	Cum
		2	2.04	1.57	0.55	3.53	Cum
	<i>Section 6-6</i>	2	1.30	0.45	0.45	0.53	Cum
		2	1.30	0.56	0.35	0.50	Cum
		2	1.30	0.81	0.50	1.05	Cum
	<i>Floor</i>	1	0.63	0.80	0.70	0.35	Cum
		1	1.63	0.80	0.50	0.65	Cum
		1	0.05	0.80	0.53	0.02	Cum
		1	3.87	0.80	0.55	1.70	Cum
		1	0.28	0.80	0.25	0.06	Cum
		1	0.20	0.80	0.40	0.06	Cum
		1	2.75	0.80	0.50	1.10	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.70	0.80	1.00	0.56	Cum
	Crest	1	0.91	0.80	1.31	0.95	Cum
	TOTAL					33.51	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	0.80	0.15	0.08	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	10.53	0.45	0.05	0.24	Cum
	On Abutment Top (Right Side)	1	10.53	0.45	0.05	0.24	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	33.51	0.30%	0.10	7850	789.07	Kg
	Total Weight in Metric Tonne					0.79	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.02		0.45	1.83	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.02		1.62	6.59	Sqm
		4		0.94	1.62	6.05	Sqm
		4	1.02		0.55	2.24	Sqm
		4		1.57	0.55	3.45	Sqm
	Section 2-2	4	2.95		0.45	5.31	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.95		0.55	6.49	Sqm
		4		0.62	0.55	1.35	Sqm
		4	2.95		0.55	6.49	Sqm
		4		0.93	0.55	2.05	Sqm
	Section 3-3	4	2.48		0.45	4.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.48		0.35	3.47	Sqm
		4		0.56	0.35	0.78	Sqm
		4	2.48		0.50	4.95	Sqm
		4		0.81	0.50	1.62	Sqm
	Section 5-5	4	2.04		0.45	3.68	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.04		1.62	13.22	Sqm
		4		0.94	1.62	6.05	Sqm
		4	2.04		0.55	4.50	Sqm
		4		1.57	0.55	3.45	Sqm
	Section 6-6	4	1.30		0.45	2.33	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.30		0.35	1.82	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.30		0.50	2.59	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.80	0.70	1.12	Sqm
		2	1.63		0.50	1.63	Sqm
		2		0.80	0.50	0.80	Sqm
		2	3.87		0.55	4.26	Sqm
		2		0.80	0.55	0.88	Sqm
		2	0.28		0.25	0.14	Sqm
		2		0.80	0.25	0.40	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.80	0.40	0.64	Sqm
		2	2.75		0.50	2.75	Sqm
		2		0.80	0.50	0.80	Sqm
		2	0.70		1.00	1.40	Sqm
		2		0.80	1.00	1.60	Sqm
	Crest	2	0.9095		1.307	2.38	Sqm
		2		0.8	1.307	2.09	Sqm
	Toe Wall D/S Portion	2	4.45		0.30	2.67	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.15		0.60	4.98	Sqm
		2		0.45	0.60	0.54	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					137.36	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.35	Sqm
	TOTAL					5.35	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.20	0.30	0.09	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	0.20	0.15	0.09	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.53	0.45		4.74	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.53	0.45		4.74	Sqm
	TOTAL					9.47	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		5.49		5.49	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.32		3.083	Cum
	<i>Section 2-2</i>	2	2.95	0.65		3.853	Cum
	<i>Section 3-3</i>	2	2.75	0.47		2.591	Cum
	<i>Section 5-5</i>	2	2.09	1.31		5.458	Cum
	<i>Section 6-6</i>	2	0.83	0.47		0.781	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.45	0.15	0.60	0.801	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					23.86	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 5.010 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.72	2.172	8.775	Cum
	<i>Section 2-2</i>	2	2.95	1.06	2.172	13.609	Cum
	<i>Section 3-3</i>	2	2.75	0.94	1.972	10.217	Cum
	<i>Section 5-5</i>	2	2.06	1.87	2.172	16.695	Cum
	<i>Section 6-6</i>	2	0.84	0.94	1.972	3.113	Cum
	<i>U/S Key Floor</i>	1	0.625	0.750	0.850	0.398	Cum
	<i>U/S Floor</i>	1	2.800	0.750	2.238	4.700	Cum
	<i>D/S Floor</i>	1	2.750	0.750	0.850	1.753	Cum
		1	2.950	0.750	0.650	1.438	Cum
	<i>D/S Key Floor</i>	1	0.700	0.750	1.150	0.604	Cum
	<i>Toe Wall D/S Portion</i>	1	4.310	0.750	0.900	2.909	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						65.56	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.						
	<i>PCC Below Floor</i>	1	0.542	0.75	0.15	0.06	Cum
		1	0.782	0.75	0.15	0.09	Cum
		1	0.674	0.75	1.15	0.58	Cum
		1	0.070	0.75	2.15	0.11	Cum
		1	4.152	0.75	0.15	0.47	Cum
		1	0.353	0.75	0.15	0.04	Cum
		1	1.438	0.75	0.15	0.16	Cum
		1	1.118	0.75	0.15	0.13	Cum
		1	0.542	0.75	0.15	0.06	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.72	0.15	0.61	Cum
	<i>Section 2-2</i>	2	2.95	1.06	0.15	0.94	Cum
	<i>Section 3-3</i>	2	2.75	0.94	0.15	0.78	Cum
	<i>Section 5-5</i>	2	2.06	1.87	0.15	1.15	Cum
	<i>Section 6-6</i>	2	0.84	0.94	0.15	0.24	Cum
	<i>Toe Wall D/S Portion</i>	1	4.31	0.75	0.30	0.97	Cum
	<i>Toe Wall D/S Portion</i>	1	4.01	0.45	0.60	1.08	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.60	0.15	0.14	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.14	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.02	0.45	0.45	0.41	Cum
		2	1.02	0.93	1.59	3.01	Cum
		2	1.02	1.57	0.55	1.77	Cum
	<i>Section 2-2</i>	2	2.95	0.45	0.45	1.19	Cum
		2	2.95	0.61	0.52	1.86	Cum
		2	2.95	0.91	0.55	2.96	Cum
	<i>Section 3-3</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.55	0.32	0.87	Cum
		2	2.50	0.79	0.50	1.98	Cum
	<i>Section 5-5</i>	2	1.98	0.45	0.45	0.80	Cum
		2	1.98	0.93	1.59	5.83	Cum
		2	1.98	1.57	0.55	3.43	Cum
	<i>Section 6-6</i>	2	1.23	0.45	0.45	0.50	Cum
		2	1.23	0.55	0.32	0.43	Cum
		2	1.23	0.79	0.50	0.98	Cum
	<i>Floor</i>	1	0.63	0.75	0.70	0.33	Cum
		1	1.63	0.75	0.50	0.61	Cum
		1	0.05	0.75	0.53	0.02	Cum
		1	3.87	0.75	0.55	1.60	Cum
		1	0.28	0.75	0.25	0.05	Cum
		1	0.20	0.75	0.40	0.06	Cum
		1	2.75	0.75	0.50	1.03	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.70	0.75	1.00	0.53	Cum
	Crest	1	0.91	0.75	1.31	0.90	Cum
	TOTAL					32.17	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	0.75	0.15	0.08	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	10.42	0.45	0.05	0.23	Cum
	On Abutment Top (Right Side)	1	10.42	0.45	0.05	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	32.17	0.30%	0.10	7850	757.56	Kg
	Total Weight in Metric Tonne					0.76	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.02		0.45	1.84	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.02		1.59	6.50	Sqm
		4		0.93	1.59	5.88	Sqm
		4	1.02		0.55	2.25	Sqm
		4		1.57	0.55	3.45	Sqm
	Section 2-2	4	2.95		0.45	5.31	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.95		0.52	6.14	Sqm
		4		0.61	0.52	1.26	Sqm
		4	2.95		0.55	6.49	Sqm
		4		0.91	0.55	2.01	Sqm
	Section 3-3	4	2.50		0.45	4.51	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.32	3.21	Sqm
		4		0.55	0.32	0.70	Sqm
		4	2.50		0.50	5.01	Sqm
		4		0.79	0.50	1.58	Sqm
	Section 5-5	4	1.98		0.45	3.57	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.98		1.59	12.59	Sqm
		4		0.93	1.59	5.88	Sqm
		4	1.98		0.55	4.36	Sqm
		4		1.57	0.55	3.45	Sqm
	Section 6-6	4	1.23		0.45	2.22	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.23		0.32	1.58	Sqm
		4		0.55	0.32	0.70	Sqm
		4	1.23		0.50	2.47	Sqm
		4		0.79	0.50	1.58	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.75	0.70	1.05	Sqm
		2	1.63		0.50	1.63	Sqm
		2		0.75	0.50	0.75	Sqm
		2	3.87		0.55	4.26	Sqm
		2		0.75	0.55	0.83	Sqm
		2	0.28		0.25	0.14	Sqm
		2		0.75	0.25	0.38	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.75	0.40	0.60	Sqm
		2	2.75		0.50	2.75	Sqm
		2		0.75	0.50	0.75	Sqm
		2	0.70		1.00	1.40	Sqm
		2		0.75	1.00	1.50	Sqm
	Crest	2	0.9105		1.312	2.39	Sqm
		2		0.75	1.312	1.97	Sqm
	Toe Wall D/S Portion	2	4.31		0.30	2.59	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.01		0.60	4.81	Sqm
		2		0.45	0.60	0.54	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					133.99	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.35	Sqm
	TOTAL					5.35	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.20	0.30	0.09	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	0.20	0.15	0.09	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.42	0.45		4.69	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.42	0.45		4.69	Sqm
	TOTAL					9.38	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		5.28		5.28	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.17	1.17		2.755	Cum
	<i>Section 2-2</i>	2	2.95	0.63		3.691	Cum
	<i>Section 3-3</i>	2	2.75	0.45		2.459	Cum
	<i>Section 5-5</i>	2	2.06	1.17		4.793	Cum
	<i>Section 6-6</i>	2	0.84	0.45		0.749	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.31	0.15	0.60	0.776	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					22.30	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SOTHIDIH MINOR							
	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.450 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.27	1.69	3.127	13.471	Cum
	<i>Section 2-2</i>	2	3.00	1.57	3.127	29.456	Cum
	<i>Section 3-3</i>	2	4.75	1.45	2.927	40.319	Cum
	<i>Section 5-5</i>	2	0.57	1.84	3.127	6.594	Cum
	<i>Section 6-6</i>	2	0.60	0.93	2.927	3.267	Cum
	<i>U/S Key Floor</i>	1	0.600	0.600	0.750	0.270	Cum
	<i>U/S Floor</i>	1	2.000	0.600	2.617	3.140	Cum
	<i>D/S Floor</i>	1	3.000	0.600	0.950	1.710	Cum
		1	5.500	0.600	0.750	2.475	Cum
	<i>D/S Key Floor</i>	1	0.650	0.600	0.950	0.371	Cum
	<i>Toe Wall D/S Portion</i>	1	2.100	0.750	0.900	1.418	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						104.29	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.						
	<i>PCC Below Floor</i>	1	0.542	0.60	0.15	0.05	Cum
		1	0.670	0.60	0.15	0.06	Cum
		1	4.567	0.60	0.15	0.41	Cum
		1	0.424	0.60	0.15	0.04	Cum
		1	3.846	0.60	0.15	0.35	Cum
		1	0.894	0.60	0.15	0.08	Cum
		1	0.542	0.60	0.15	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.27	1.69	0.15	0.65	Cum
	<i>Section 2-2</i>	2	3.00	1.57	0.15	1.41	Cum
	<i>Section 3-3</i>	2	4.75	1.45	0.15	2.07	Cum
	<i>Section 5-5</i>	2	0.57	1.84	0.15	0.32	Cum
	<i>Section 6-6</i>	2	0.60	0.93	0.15	0.17	Cum
	<i>Toe Wall D/S Portion</i>	1	2.10	0.75	0.30	0.47	Cum
	<i>Toe Wall D/S Portion</i>	1	2.10	0.45	0.60	0.57	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					7.76	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.12	0.45	0.45	0.46	Cum
		2	1.12	0.92	1.57	3.24	Cum
		2	1.12	1.54	0.60	2.08	Cum
	<i>Section 2-2</i>	2	3.00	0.82	0.50	2.46	Cum
		2	3.00	0.97	0.50	2.91	Cum
		2	3.00	1.27	1.00	7.62	Cum
	<i>Section 3-3</i>	2	3.70	0.82	0.50	3.03	Cum
		2	3.70	0.91	0.30	2.02	Cum
		2	3.70	1.15	1.20	10.21	Cum
	<i>Section 5-5</i>	2	0.53	0.45	0.45	0.21	Cum
		2	0.53	0.92	1.57	1.53	Cum
		2	0.53	1.54	0.60	0.98	Cum
	<i>Section 6-6</i>	2	0.60	0.45	0.45	0.24	Cum
		2	0.60	0.63	0.30	0.23	Cum
		2	0.60	0.91	0.60	0.66	Cum
	<i>Floor</i>	1	0.60	0.60	0.60	0.22	Cum
		1	5.00	0.60	0.60	1.80	Cum
		1	0.25	0.60	0.20	0.03	Cum
		1	0.20	0.60	0.40	0.05	Cum
		1	5.30	0.60	0.50	1.59	Cum
		1	0.65	0.60	0.80	0.31	Cum
	<i>Crest</i>	1	1.01	0.60	1.31	0.79	Cum

	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					42.66	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	0.60	0.15	0.07	Cum
	Coping over Abutment Top	2	10.31	0.45	0.05	0.46	Cum
	Slab Bridge						
	Slab	1	2.24	5.5	0.33	4.05	Cum
	Wearing coat	1	2.24	4.50	0.07	0.71	Cum
	Dirt wall	2	0.40	5.5	0.30	1.32	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
	TOTAL					9.31	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	5.90		0.616	25.5	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	1.27		1.578	43.9	Kg
x3	12	20	1.30		0.888	23.1	Kg
	Taking Skin reinforcement @0.3% of M-20	42.66	0.30%	0.13	7850	1004.73	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					1282.41	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					1.28	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.12		0.45	2.02	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.12		1.57	7.05	Sqm
		4		0.92	1.57	5.77	Sqm
		4	1.12		0.60	2.70	Sqm
		4		1.54	0.60	3.70	Sqm
	Section 2-2	4	3.00		0.50	6.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.00		0.50	6.00	Sqm
		4		0.97	0.50	1.94	Sqm
		4	3.00		1.00	12.00	Sqm
		4		1.27	1.00	5.08	Sqm
	Section 3-3	4	3.70		0.50	7.40	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.70		0.30	4.44	Sqm
		4		0.91	0.30	1.09	Sqm
		4	3.70		1.20	17.76	Sqm
		4		1.15	1.20	5.52	Sqm
	Section 5-5	4	0.53		0.45	0.95	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.53		1.57	3.32	Sqm
		4		0.92	1.57	5.77	Sqm
		4	0.53		0.60	1.27	Sqm
		4		1.54	0.60	3.70	Sqm
	Section 6-6	4	0.60		0.45	1.08	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.60		0.30	0.72	Sqm
		4		0.63	0.30	0.76	Sqm
		4	0.60		0.60	1.44	Sqm
		4		0.91	0.60	2.18	Sqm
	Floor	2	0.60		0.60	0.72	Sqm
		2		0.60	0.60	0.72	Sqm
		2	5.00		0.60	6.00	Sqm
		2		0.60	0.60	0.72	Sqm
		2	0.25		0.20	0.10	Sqm
		2		0.60	0.20	0.24	Sqm
		2	0.20		0.40	0.16	Sqm

	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.60	0.40	0.48	Sqm
		2	5.30		0.50	5.30	Sqm
		2		0.60	0.50	0.60	Sqm
		2	0.65		0.80	1.04	Sqm
		2		0.60	0.80	0.96	Sqm
	Crest	2	1.0095		1.308	2.64	Sqm
		2		0.6	1.308	1.57	Sqm
	Toe Wall D/S Portion	2	2.10		0.30	1.26	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	2.10		0.60	2.52	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					148.46	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.						
	In D/S Portion On Slopes	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.00	0.40	0.30	0.24	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	0.40	0.15	0.24	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	0.45		4.64	Sqm
	On Abutment Top (Right Side)	1	10.31	0.45		4.64	Sqm
	TOTAL					9.28	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		0.86		0.86	Cum
	Abutment						
	Section 1-1	2	1.27	1.86		4.741	Cum
	Section 2-2	2	3.00	0.58		3.451	Cum
	Section 3-3	2	4.75	0.38		3.610	Cum
	Section 5-5	2	0.57	1.86		2.132	Cum
	Section 6-6	2	0.60	0.41		0.490	Cum
	D/S protection	2					
	Toe wall	2	2.10	0.15	0.60	0.378	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					18.07	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS AT KM 14.480 OF MAHUARY SUB DY									
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	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	206.14	Cum	149.30	30776.36			
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.	50.28	Cum	6381.70	320848.22	16.29	22.62	45.25
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.	60.52	Cum	6914.20	418425.90	24.96	26.02	52.04
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.	316.75	Sqm	578.60	183273.33			
5	RCD M-151	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	20.00	RM	2532.61	50652.20			
6	WRD 5.6.2.2	Labour for laying fitting and fixing 600 mm dia NP3 pipe with collars in line level and grade as well as providing approved jointing materials and joint properly filled to make proof all complete as per specification and direction of E/I.	20.00	RM	711.27	14225.31			
7	WRD 5.3.22	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.	1.19	MT	73574.90	87380.79			
8	WRD 5.1.27	Earthwork in excavation of foundation trenches in ordinary soil (wide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	80.97	Cum	195.20	15804.95			
9		Carriage of materials							
		Coarse Sand 30 Km lead)	48.65	Cum	1075.00	52295.09			
		Coarse Aggregates (100 Km lead)	97.29	Cum	1398.00	136015.88			
		Cement (30 km lead)	41.25	MT	742.00	30609.53			
		Steel (30 Km lead)	1.19	MT	742.00	881.23			
		Hume Pipe (60 Km)	20.00	RM	919.00	18380.00			
TOTAL (In Rs.)						₹ 13,59,568.79			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	48.65	Cum	584.64	28440.75	2844.07		
		Coarse Aggregate	97.29	Cum	944.26	91870.07	9187.01		
<i>Total</i>							12031.08		

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)	
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS AT KM 15.400 OF MAHUARY SUB DY										
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	156.48	Cum	149.30	23362.58				
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.	45.72	Cum	6381.70	291798.34	14.81	20.58	41.15	
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.	48.13	Cum	6914.20	332769.22	19.85	20.70	41.39	
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.	280.14	Sqm	578.60	162088.40				
5	RCD M-151	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	17.50	RM	2532.61	44320.68				
6	WRD 5.6.2.2	Labour for laying fitting and fixing 600 mm dia NP3 pipe with collars in line level and grade as well as providing approved jointing materials and joint properly filled to make proof all complete as per specification and direction of E/I.	17.50	RM	711.27	12447.15				
7	WRD 5.3.22	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.	0.94	MT	73574.90	69492.92				
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.	52.69	Cum	195.20	10284.65				
9	Carriage of materials									
		Coarse Sand 30 Km lead)	41.27	Cum	1075.00	44366.44				
		Coarse Aggregates (100 Km lead)	82.54	Cum	1398.00	115394.01				
		Cement (30 km lead)	34.67	MT	742.00	25723.36				
		Steel (30 Km lead)	0.94	MT	742.00	700.83				
		Hume Pipe (60 Km)	17.50	RM	919.00	16082.50				
TOTAL (In Rs.)						₹ 11,48,831.08				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	41.27	Cum	584.64	24128.74	2412.87			
		Coarse Aggregate	82.54	Cum	944.26	77941.31	7794.13			
		<i>Total</i>						10207.01		

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)
ABSTRACT OF COST FOR CROSS DRAINAGE WORKS AT KM 16.100 OF MAHUARY SUB DY									
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	169.60	Cum	149.30	25321.63			
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.	46.48	Cum	6381.70	296593.02	15.06	20.91	41.83
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.	60.98	Cum	6914.20	421621.75	25.15	26.22	52.44
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.	317.44	Sqm	578.60	183671.94			
5	RCD M-151	Providing RCC Pipe NP 4 heavy duty non pressure pipe 600 mm dia with spigot	17.50	RM	2532.61	44320.68			
6	WRD 5.6.2.2	Labour for laying fitting and fixing 600 mm dia NP3 pipe with collars in line level and grade as well as providing approved jointing materials and joint properly filled to make proof all complete as per specification and direction of E/I.	17.50	RM	711.27	12447.15			
7	WRD 5.3.22	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.	1.20	MT	73574.90	88048.19			
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.	68.44	Cum	195.20	13360.42			
9	Carriage of materials								
		Coarse Sand (30 Km lead)	47.14	Cum	1075.00	50670.14			
		Coarse Aggregates (100 Km lead)	94.27	Cum	1398.00	131789.50			
		Cement (30 km lead)	40.21	MT	742.00	29837.27			
		Steel (30 Km lead)	1.20	MT	742.00	887.96			
		Hume Pipe (60 Km)	17.50	RM	919.00	16082.50			
TOTAL (In Rs.)						₹ 13,14,652.15			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	47.14	Cum	584.64	27557.01	2755.70		
		Coarse Aggregate	94.27	Cum	944.26	89015.42	8901.54		
<i>Total</i>							11657.24		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS AT KM 14.480 OF MAHUARY SUB DY

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						
	<i>Left Portion</i>	1	8.90		1.64	14.60	Cum
		1	5.40		9.81	53.00	Cum
	<i>Middle Portion</i>	1	1.37		45.91	62.90	Cum
	<i>Right Portion</i>	1	8.91		1.71	15.20	Cum
		1	5.40		11.19	60.44	Cum
TOTAL						206.14	Cum
2	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.						
	<i>300 mm Thick Left Abutment</i>	1	8.90	0.92	0.30	2.46	Cum
		1	5.16	3.74	0.30	5.78	Cum
	<i>300 mm Thick Right Abutment</i>	1	8.91	0.77	0.30	2.06	Cum
		1	5.06	3.74	0.30	5.68	Cum
	<i>Below Pipe Section</i>	1	20.00	1.37	0.30	8.22	Cum
		2	20.00	0.51	0.24	20.30	Cum
	<i>200 mm Thick Left and Right Portion Well</i>	2	3.72	2.50	0.20	3.72	Cum
	<i>Pipe Section</i>	7	0.30	1.27	1.14	3.04	Cum
	<i>Deduct Area of Pipe</i>	7	0.30		0.47	-0.98	Cum
	TOTAL						50.28
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.						
	<i>U/S Portion Retaining Wall (Section C-C)</i>	2	8.60	0.30	0.30	1.55	Cum
		2	8.60	0.46	1.07	8.48	Cum
	<i>U/S Portion Retaining Wall (Section D-D)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.77	3.12	8.75	Cum
	<i>U/S Portion Retaining Wall (Avg. section)</i>	2	4.05	0.30	0.40	0.97	Cum
		2	4.05	0.61	2.10	10.43	Cum
	<i>D/S Portion Retaining Wall (Section F-F)</i>	2	8.61	0.30	0.30	1.55	Cum
		2	8.61	0.46	1.07	8.48	Cum
	<i>D/S Portion Retaining Wall (Section E-E)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.77	3.12	8.75	Cum
	<i>D/S Portion Retaining Wall (Avg. section)</i>	2	4.05	0.61	2.10	10.44	Cum
		2	4.05	0.30	0.40	0.97	Cum
	<i>Deduct Area of Pipe (Section D-D & Section E-E)</i>	2	1.03		0.465	-0.96	Cum
TOTAL						60.52	Cum

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
4	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	8.90		0.30	5.34	Sqm
		2		0.92	0.30	0.55	Sqm
		2	5.16		0.30	3.09	Sqm
		2		3.74	0.30	2.24	Sqm
	300 mm Thick Right Abutment	2	8.91		0.30	5.34	Sqm
		2		0.77	0.30	0.46	Sqm
		2	5.06		0.30	3.04	Sqm
		2		3.74	0.30	2.24	Sqm
	200 mm Thick Left and Right Portion Well	4	3.72		0.20	2.97	Sqm
		4		2.50	0.20	2.00	Sqm
	Pipe Section	14	0.30		1.14	4.79	Sqm
		14		1.27	1.14	20.27	Sqm
	U/S Portion Retaining Wall (Section C-C)	4	8.60		0.30	10.32	Sqm
		4		0.30	0.30	0.36	Sqm
		4	8.60		1.07	36.83	Sqm
		4		0.46	1.07	1.97	Sqm
	U/S Portion Retaining Wall (Section D-D)	4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
		4	1.82		3.12	22.78	Sqm
		4		0.77	3.12	9.60	Sqm
	U/S Portion Retaining Wall (Avg. section)	4	4.05		0.40	6.48	Sqm
		4		0.30	0.40	0.48	Sqm
		4	4.05		2.10	33.96	Sqm
		4		0.61	2.10	5.15	Sqm
	D/S Portion Retaining Wall (Section E-E)	4	1.82		3.12	22.78	Sqm
		4		0.77	3.12	9.60	Sqm
		4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
	D/S Portion Retaining Wall (Section F-F)	4	8.61		1.07	36.84	Sqm
		4		0.46	1.07	1.97	Sqm
		4	8.61		0.30	10.33	Sqm
		4		0.30	0.30	0.36	Sqm
	D/S Portion Retaining Wall (Avg. section)	4	4.05		2.10	33.98	Sqm
		4		0.61	2.10	5.15	Sqm
		4	4.05		0.40	6.48	Sqm
		4		0.30	0.40	0.48	Sqm
	TOTAL					316.75	Sqm
5	RCC Pipe NP4 heavy duty non pressure pipe 600 mm dia with spigot						
	0.6 m dia pipe	8	2.50			20.00	RM
	TOTAL					20.00	RM
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.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	60.52	0.0025	0.151	7850.00	1187.644	Kg
	TOTAL					1187.644	Kg
	TOTAL					1.19	M.T.

S. No.	Item of Works	No.	Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
	<i>Left Portion</i>	1	8.90	0.49	4.38	Cum
		1	5.16	2.48	12.77	Cum
	<i>Middle Portion</i>	1	1.37	31.44	43.07	Cum
	<i>Right Portion</i>	1	8.91	0.92	8.21	Cum
		1	5.06	2.48	12.53	Cum
	TOTAL				80.97	Cum

S. No.	Item of Works	No.	Width	Height	Qty.	Unit	
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS AT KM 15.400 OF MAHUARY SUB DY							
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						
	<i>Left Portion</i>	1	8.90	0.64	5.67	Cum	
		1	5.40	5.51	29.77	Cum	
	<i>Middle Portion</i>	1	1.37	33.58	46.00	Cum	
	<i>Right Portion</i>	1	8.91	2.00	17.82	Cum	
		1	5.40	10.59	57.22	Cum	
	TOTAL				156.48	Cum	
2	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.						
	<i>300 mm Thick Left Abutment</i>	1	8.90	0.77	0.30	2.06	Cum
		1	5.16	3.50	0.30	5.41	Cum
	<i>300 mm Thick Right Abutment</i>	1	8.91	0.77	0.30	2.06	Cum
		1	5.06	3.50	0.30	5.31	Cum
	<i>Below Pipe Section</i>	1	17.50	1.37	0.30	7.19	Cum
		2	17.50	0.51	0.24	17.76	Cum
	<i>200 mm Thick Left and Right Portion Well</i>	2	3.87	2.50	0.20	3.87	Cum
	<i>Pipe Section</i>	7	0.30	1.27	1.14	3.04	Cum
	<i>Deduct Area of Pipe</i>	7	0.30	0.47		-0.98	Cum
	TOTAL				45.72	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.						
	<i>U/S Portion Retaining Wall (Section C-C)</i>	2	8.60	0.30	0.30	1.55	Cum
		2	8.60	0.46	1.07	8.48	Cum
	<i>U/S Portion Retaining Wall (Section D-D)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.65	2.32	5.48	Cum
	<i>U/S Portion Retaining Wall (Avg. section)</i>	2	3.95	0.30	0.40	0.95	Cum
		2	3.95	0.55	1.70	7.42	Cum
	<i>D/S Portion Retaining Wall (Section F-F)</i>	2	8.61	0.30	0.30	1.55	Cum
		2	8.61	0.46	1.07	8.48	Cum
	<i>D/S Portion Retaining Wall (Section E-E)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.65	2.32	5.48	Cum
	<i>D/S Portion Retaining Wall (Avg. section)</i>	2	3.95	0.55	1.70	7.43	Cum
		2	3.95	0.30	0.40	0.95	Cum
	<i>Deduct Area of Pipe (Section D-D & Section E-E)</i>	2	0.79	0.465		-0.74	Cum
	TOTAL				48.13	Cum	

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
4	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	8.90		0.30	5.34	Sqm
		2		0.77	0.30	0.46	Sqm
		2	5.16		0.30	3.09	Sqm
		2		3.50	0.30	2.10	Sqm
	300 mm Thick Right Abutment	2	8.91		0.30	5.34	Sqm
		2		0.77	0.30	0.46	Sqm
		2	5.06		0.30	3.04	Sqm
		2		3.50	0.30	2.10	Sqm
	200 mm Thick Left and Right Portion Well	4	3.87		0.20	3.09	Sqm
		4		2.50	0.20	2.00	Sqm
	Pipe Section	14	0.30		1.14	4.79	Sqm
		14		1.27	1.14	20.27	Sqm
	U/S Portion Retaining Wall (Section C-C)	4	8.60		0.30	10.32	Sqm
		4		0.30	0.30	0.36	Sqm
		4	8.60		1.07	36.83	Sqm
		4		0.46	1.07	1.97	Sqm
	U/S Portion Retaining Wall (Section D-D)	4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
		4	1.82		2.32	16.92	Sqm
		4		0.65	2.32	6.01	Sqm
	U/S Portion Retaining Wall (Avg. section)	4	3.95		0.40	6.32	Sqm
		4		0.30	0.40	0.48	Sqm
		4	3.95		1.70	26.79	Sqm
		4		0.55	1.70	3.76	Sqm
	D/S Portion Retaining Wall (Section E-E)	4	1.82		2.32	16.92	Sqm
		4		0.65	2.32	6.01	Sqm
		4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
	D/S Portion Retaining Wall (Section F-F)	4	8.61		1.07	36.84	Sqm
		4		0.46	1.07	1.97	Sqm
		4	8.61		0.30	10.33	Sqm
		4		0.30	0.30	0.36	Sqm
	D/S Portion Retaining Wall (Avg. section)	4	3.95		1.70	26.80	Sqm
		4		0.55	1.70	3.76	Sqm
		4	3.95		0.40	6.32	Sqm
		4		0.30	0.40	0.48	Sqm
	TOTAL					280.14	Sqm
5	RCC Pipe NP3 heavy duty non pressure pipe 600 mm dia with spigot						
	0.6 m dia pipe	7	2.50			17.50	RM
	TOTAL					17.50	RM
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.						
	RCC M-20 (Providing Skin Reinforcement @0.25%)	48.13	0.0025	0.120	7850.00	944.519	Kg
	TOTAL					944.519	Kg
	TOTAL					0.94	M.T.

S. No.	Item of Works	No.	Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
	<i>Left Portion</i>	1	8.90	0.43	3.79	Cum
		1	5.16	1.59	8.19	Cum
	<i>Middle Portion</i>	1	1.37	21.11	28.92	Cum
	<i>Right Portion</i>	1	8.91	0.43	3.79	Cum
		1	5.06	1.58	7.99	Cum
	TOTAL				52.69	Cum

S. No.	Item of Works	No.	Width	Height	Qty.	Unit	
DETAILED ESTIMATE FOR CROSS DRAINAGE WORKS AT KM 16.100 OF MAHUARY SUB DY							
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						
	<i>Left Portion</i>	1	8.90	1.16	10.36	Cum	
		1	5.40	7.59	41.01	Cum	
	<i>Middle Portion</i>	1	1.37	39.16	53.65	Cum	
	<i>Right Portion</i>	1	8.91	1.10	9.78	Cum	
		1	5.40	10.14	54.81	Cum	
	TOTAL				169.60	Cum	
2	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.						
	<i>300 mm Thick Left Abutment</i>	1	8.90	0.77	0.30	2.06	Cum
		1	5.16	3.74	0.30	5.79	Cum
	<i>300 mm Thick Right Abutment</i>	1	8.91	0.77	0.30	2.06	Cum
		1	5.06	3.74	0.30	5.68	Cum
	<i>Below Pipe Section</i>	1	17.50	1.37	0.30	7.19	Cum
		2	17.50	0.51	0.24	17.76	Cum
	<i>200 mm Thick Left and Right Portion Well</i>	2	3.87	2.50	0.20	3.87	Cum
	<i>Pipe Section</i>	7	0.30	1.27	1.14	3.04	Cum
	<i>Deduct Area of Pipe</i>	7	0.30	0.47		-0.98	Cum
	TOTAL				46.48	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.						
	<i>U/S Portion Retaining Wall (Section C-C)</i>	2	8.60	0.30	0.30	1.55	Cum
		2	8.60	0.46	1.07	8.48	Cum
	<i>U/S Portion Retaining Wall (Section D-D)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.77	3.14	8.82	Cum
	<i>U/S Portion Retaining Wall (Avg. section)</i>	2	4.05	0.30	0.40	0.97	Cum
		2	4.05	0.62	2.10	10.49	Cum
	<i>D/S Portion Retaining Wall (Section F-F)</i>	2	8.61	0.30	0.30	1.55	Cum
		2	8.61	0.46	1.07	8.48	Cum
	<i>D/S Portion Retaining Wall (Section E-E)</i>	2	1.82	0.30	0.50	0.55	Cum
		2	1.82	0.77	3.14	8.82	Cum
	<i>D/S Portion Retaining Wall (Avg. section)</i>	2	4.05	0.62	2.10	10.49	Cum
		2	4.05	0.30	0.40	0.97	Cum
	<i>Deduct Area of Pipe (Section D-D & Section E-E)</i>	2	0.79	0.465		-0.74	Cum
	TOTAL				60.98	Cum	

S. No.	Item of Works	No.		Width	Height	Qty.	Unit
4	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.						
	<i>300 mm Thick Left Abutment</i>	2	8.90		0.30	5.34	Sqm
		2		0.77	0.30	0.46	Sqm
		2	5.16		0.30	3.09	Sqm
		2		3.74	0.30	2.24	Sqm
	<i>300 mm Thick Right Abutment</i>	2	8.91		0.30	5.34	Sqm
		2		0.77	0.30	0.46	Sqm
		2	5.06		0.30	3.04	Sqm
		2		3.74	0.30	2.24	Sqm
	<i>200 mm Thick Left and Right Portion Well</i>	4	3.87		0.20	3.09	Sqm
		4		2.50	0.20	2.00	Sqm
	<i>Pipe Section</i>	14	0.30		1.14	4.79	Sqm
		14		1.27	1.14	20.27	Sqm
	<i>U/S Portion Retaining Wall (Section C-C)</i>	4	8.60		0.30	10.32	Sqm
		4		0.30	0.30	0.36	Sqm
		4	8.60		1.07	36.83	Sqm
		4		0.46	1.07	1.97	Sqm
	<i>U/S Portion Retaining Wall (Section D-D)</i>	4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
		4	1.82		3.14	22.88	Sqm
		4		0.77	3.14	9.67	Sqm
	<i>U/S Portion Retaining Wall (Avg. section)</i>	4	4.05		0.40	6.48	Sqm
		4		0.30	0.40	0.48	Sqm
		4	4.05		2.10	34.09	Sqm
		4		0.62	2.10	5.18	Sqm
	<i>D/S Portion Retaining Wall (Section E-E)</i>	4	1.82		3.14	22.88	Sqm
		4		0.77	3.14	9.67	Sqm
		4	1.82		0.50	3.65	Sqm
		4		0.30	0.50	0.60	Sqm
	<i>D/S Portion Retaining Wall (Section F-F)</i>	4	8.61		1.07	36.84	Sqm
		4		0.46	1.07	1.97	Sqm
		4	8.61		0.30	10.33	Sqm
		4		0.30	0.30	0.36	Sqm
	<i>D/S Portion Retaining Wall (Avg. section)</i>	4	4.05		2.10	34.10	Sqm
		4		0.62	2.10	5.18	Sqm
		4	4.05		0.40	6.48	Sqm
		4		0.30	0.40	0.48	Sqm
	TOTAL					317.44	Sqm
5	RCC Pipe NP3 heavy duty non pressure pipe 600 mm dia with spigot						
	<i>0.6 m dia pipe</i>	7	2.50			17.50	RM
	TOTAL					17.50	RM
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.						
	<i>RCC M-20 (Providing Skin Reinforcement @0.25%)</i>	60.98	0.0025	0.152	7850.00	1196.715	Kg
	TOTAL					1196.715	Kg
	TOTAL					1.20	M.T.

S. No.	Item of Works	No.	Width	Height	Qty.	Unit
7	Earthwork in excavation of foundation trenches in ordinary soil (vide classification of soil item A) and disposal of excavated earth so obtained to a distance upto 50 mtr and average lift of 1.5 m including levelling, ramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.					
	<i>Left Portion</i>	1	8.90	0.43	3.79	Cum
		1	5.16	2.49	12.86	Cum
	<i>Middle Portion</i>	1	1.37	25.82	35.37	Cum
	<i>Right Portion</i>	1	8.91	0.43	3.79	Cum
		1	5.06	2.49	12.62	Cum
	TOTAL				68.44	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST OF PIPE CULVERT OF BARIAWA 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)
AOC FOR PIPE CULVERT AT KM 6.83									
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	5.1.27	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.	56.953	Cum	195.20	11117.30			
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.	16.01	Cum	6381.70	102167.83	5.19	7.20	14.41
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.	12.277	Cum	6914.20	84885.98	5.06	5.28	10.56
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	109.796	Sqm	578.60	63527.83			
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.	0.24	MT	73574.90	17726.92			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.91	Cum	694.61	1325.32			
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.	1.91	Cum	1237.00	2360.20			
9	M-151	Providing 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	2532.61	18994.58			
10	5.6.2.2	Labour for laying 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	No.	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	8.96	Cum	149.30	1337.99			

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 royalty as per specification and direction of E/I.	1.68	Cum	5021.30	8435.78	0.19	0.54	
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.	9.520	Sqm	340.20	3238.70	0.494	0.139	
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.	3.920	Sqm	63.20	247.74	0.006		
16		Carriage of materials							
		Coarse Sand (60 Km lead)	13.160	Cum	1075.00	14147.00			
		Coarse Aggregates (100 Km lead)	24.967	Cum	1398.00	34903.60			
		Cement (30 km lead)	10.944	MT	742.00	8120.67			
		Steel (30 km lead)	0.241	MT	742.00	178.78			
		Boulder (60 km lead)	1.908	Cum	1159.00	2211.37			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						390146.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	13.16	Cum	584.64	7693.86	769.39		
		Coarse Aggregate	24.97	Cum	944.26	23575.16	2357.52		
		Boulder (60 km lead)	1.91	Cum	694.61	1325.32	132.53		
Total							3259.43		
ABSTRACT OF COST OF PIPE CULVERT OF THUMBHI MR.									
AOC FOR PIPE CULVERT AT KM 5.545									
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	5.1.27	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.	56.953	Cum	195.20	11117.30			
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.	16.01	Cum	6381.70	102167.83	5.19	7.20	14.41
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.	12.277	Cum	6914.20	84885.98	5.06	5.28	10.56
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	109.796	Sqm	578.60	63527.83			

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)
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.	0.24	MT	73574.90	17726.92			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.91	Cum	694.61	1325.32			
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.	1.91	Cum	1237.00	2360.20			
9	M-151	Providing 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	2532.61	18994.58			
10	5.6.2.2	Labour for laying 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	8.96	Cum	149.30	1337.99			
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 royalty as per specification and direction of E/I.	1.68	Cum	5021.30	8435.78	0.19	0.54	
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.	9.520	Sqm	340.20	3238.70	0.494	0.139	
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.	3.920	Sqm	63.20	247.74	0.006		
16		Carriage of materials							
		Coarse Sand (60 Km lead)	13.160	Cum	1075.00	14147.00			
		Coarse Aggregates (100 Km lead)	24.967	Cum	1398.00	34903.60			
		Cement (30 km lead)	10.944	MT	742.00	8120.67			
		Steel (30 km lead)	0.241	MT	742.00	178.78			
		Boulder (60 km lead)	1.908	Cum	1159.00	2211.37			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						389791.90			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	13.16	Cum	584.64	7693.86	769.39		
		Coarse Aggregate	24.97	Cum	944.26	23575.16	2357.52		
		Boulder (60 km lead)	1.91	Cum	694.61	1325.32	132.53		
Total							3259.43		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 6.830 OF BARIWAN 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	150.00			150.00	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.						
	<i>U/S Toe Wall</i>	1	0.54	0.85	1.20	0.55	Cum
	<i>D/S Toe Wall</i>	1	0.54	0.85	1.20	0.55	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	3.35	1.00	1.20	8.03	Cum
	<i>Extra for Slope (.5:1)</i>	2	3.35	1.05	2.10	14.76	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	4.35	1.00	1.20	10.43	Cum
	<i>Extra for Slope (.5:1)</i>	2	4.35	1.05	2.10	19.17	Cum
	<i>C.C Floor Apron in (U/S Portion)</i>	1	2.55	0.57	0.45	0.65	Cum
	<i>C.C Floor Apron in (D/S Portion)</i>	1	3.55	0.57	0.45	0.91	Cum
	<i>Launching Apron in U/S Portion</i>	1	2.50	0.53	0.60	0.80	Cum
	<i>Launching Apron in D/S Portion</i>	1	3.50	0.53	0.60	1.11	Cum
	TOTAL					56.95	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.						
	<i>PCC Below U/S Curtain Wall</i>	1	0.54	0.85	0.30	0.14	Cum
	<i>U/S Curtain Wall Stem</i>	1	0.54	0.45	0.90	0.22	Cum
	<i>PCC Below D/S Curtain Wall</i>	1	0.54	0.85	0.30	0.14	Cum
	<i>D/S Curtain Wall Stem</i>	1	0.54	0.45	0.90	0.22	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	3.00	0.45	0.30	0.81	Cum
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	3.00	0.30	0.60	1.08	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	3.00	0.45	0.30	0.81	Cum
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	3.00	0.30	0.60	1.08	Cum
	<i>Floor Apron (U/S Portion)</i>	1	2.55	0.57	0.45	0.65	Cum
	<i>Floor Apron (D/S Portion)</i>	1	3.55	0.57	0.45	0.91	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	3.35	1.00	0.30	2.01	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	4.35	1.00	0.30	2.61	Cum
	<i>PCC Below Hume Pipe</i>	1	7.50	1.29	0.41	3.92	Cum
	<i>PCC Below Hume Pipe in (Curve Portion)</i>	2	7.50	0.49	0.20	1.42	Cum
	TOTAL					16.01	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)						
	<i>Section A-A</i>	2	3.35	0.60	0.90	3.61	Cum
		2	3.35	0.45	0.30	0.90	Cum
		2	3.35	0.30	0.50	1.00	Cum
	D/S Transition Walls (Left & Right)						

	Section B-B	2	4.35	0.60	0.90	4.69	Cum
		2	4.35	0.45	0.30	1.17	Cum
		2	4.35	0.30	0.50	1.30	Cum
	Collar Joint	2	1.19	0.30	1.00	0.71	Cum
	Deduct Hume Pipe Area	1	1.13			-1.13	Cum
	TOTAL					12.28	Cum
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	2	0.54		0.90	0.96	Sqm
		2		0.45	0.90	0.81	Sqm
	D/S Curtain Wall Stem	2	0.54		0.90	0.96	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		0.57	0.45	0.51	Sqm
	Floor Apron (D/S Portion)	2	3.55		0.45	3.20	Sqm
		2		0.57	0.45	0.51	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	12.05	Sqm
		4		0.60	0.90	2.16	Sqm
		4	3.35		0.30	4.02	Sqm
		4		0.45	0.30	0.54	Sqm
		4	3.35		0.50	6.69	Sqm
		4		0.30	0.50	0.60	Sqm
	D/S Transition Walls (Left & Right)						
	Section B-B	4	4.35		0.90	15.65	Sqm
		4		0.60	0.90	2.16	Sqm
		4	4.35		0.30	5.22	Sqm
		4		0.45	0.30	0.54	Sqm
		4	4.35		0.50	8.69	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					109.80	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	12.28	0.25%	0.03	7850	240.94	Kg
	TOTAL Weight of steel (in kg)					240.94	Kg
	TOTAL Weight of Steel (in Tonne)					0.24	MT
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	Launching Apron in U/S Portion	1	2.50	0.53	0.60	0.80	Cum

	<i>Launching Apron in D/S Portion</i>	1	3.50	0.53	0.60	1.11	Cum
	TOTAL					1.91	Cum
8	Providing 600 mm RCC NP2 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	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	<i>U/S Transitions Walls</i>	2	3.35		0.16	1.07	Cum
	<i>D/S Transitions Walls</i>	2	4.35		0.16	1.39	Cum
	<i>Above Hume Pipe</i>	1		6.50		6.50	Cum
	TOTAL					8.96	Cum
11	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.						
	<i>Parapet</i>	2	2.8	0.5	0.6	1.68	Cum
	TOTAL					1.68	Cum
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand 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.						
	<i>Parapet</i>	2		2.8	1.7	9.52	Sqm
	TOTAL					9.52	Sqm
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	<i>Parapet top</i>	2		2.8	0.7	3.92	Sqm
	TOTAL					3.92	Sqm

DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 5.545 OF THUMBHI 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.						
	<i>U/S Toe Wall</i>	1	0.54	0.85	1.20	0.55	Cum
	<i>D/S Toe Wall</i>	1	0.54	0.85	1.20	0.55	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	3.35	1.00	1.20	8.03	Cum
	<i>Extra for Slope (.5:1)</i>	2	3.35	1.05	2.10	14.76	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	4.35	1.00	1.20	10.43	Cum
	<i>Extra for Slope (.5:1)</i>	2	4.35	1.05	2.10	19.17	Cum
	<i>C.C Floor Apron in (U/S Portion)</i>	1	2.55	0.57	0.45	0.65	Cum
	<i>C.C Floor Apron in (D/S Portion)</i>	1	3.55	0.57	0.45	0.91	Cum
	<i>Launching Apron in U/S Portion</i>	1	2.50	0.53	0.60	0.80	Cum
	<i>Launching Apron in D/S Portion</i>	1	3.50	0.53	0.60	1.11	Cum
	TOTAL					56.95	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.						
	<i>PCC Below U/S Curtain Wall</i>	1	0.54	0.85	0.30	0.14	Cum
	<i>U/S Curtain Wall Stem</i>	1	0.54	0.45	0.90	0.22	Cum
	<i>PCC Below D/S Curtain Wall</i>	1	0.54	0.85	0.30	0.14	Cum
	<i>D/S Curtain Wall Stem</i>	1	0.54	0.45	0.90	0.22	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	3.00	0.45	0.30	0.81	Cum
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	3.00	0.30	0.60	1.08	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	3.00	0.45	0.30	0.81	Cum
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	3.00	0.30	0.60	1.08	Cum
	<i>Floor Apron (U/S Portion)</i>	1	2.55	0.57	0.45	0.65	Cum
	<i>Floor Apron (D/S Portion)</i>	1	3.55	0.57	0.45	0.91	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	3.35	1.00	0.30	2.01	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	4.35	1.00	0.30	2.61	Cum
	<i>PCC Below Hume Pipe</i>	1	7.50	1.29	0.41	3.92	Cum
	<i>PCC Below Hume Pipe in (Curve Portion)</i>	2	7.50	0.49	0.20	1.42	Cum
	TOTAL					16.01	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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	U/S Transition Walls (Left & Right)						
	Section A-A	2	3.35	0.60	0.90	3.61	Cum
		2	3.35	0.45	0.30	0.90	Cum
		2	3.35	0.30	0.50	1.00	Cum
	D/S Transition Walls (Left & Right)						
	Section B-B	2	4.35	0.60	0.90	4.69	Cum
		2	4.35	0.45	0.30	1.17	Cum
		2	4.35	0.30	0.50	1.30	Cum
	Collar Joint	2	1.19	0.30	1.00	0.71	Cum
	Deduct Hume Pipe Area	1	1.13			-1.13	Cum
	TOTAL					12.28	Cum
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	U/S Curtain Wall Stem	2	0.54		0.90	0.96	Sqm
		2		0.45	0.90	0.81	Sqm
	D/S Curtain Wall Stem	2	0.54		0.90	0.96	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		0.57	0.45	0.51	Sqm
	Floor Apron (D/S Portion)	2	3.55		0.45	3.20	Sqm
		2		0.57	0.45	0.51	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	12.05	Sqm
		4		0.60	0.90	2.16	Sqm
		4	3.35		0.30	4.02	Sqm
		4		0.45	0.30	0.54	Sqm
		4	3.35		0.50	6.69	Sqm
		4		0.30	0.50	0.60	Sqm
	D/S Transition Walls (Left & Right)						
	Section B-B	4	4.35		0.90	15.65	Sqm
		4		0.60	0.90	2.16	Sqm
		4	4.35		0.30	5.22	Sqm
		4		0.45	0.30	0.54	Sqm
		4	4.35		0.50	8.69	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					109.80	Sqm

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.						
		Quantity	Percent		Density		
	0.25 % Skin Reinforcement for Transition walls	12.28	0.25%	0.03	7850	240.94	Kg
	TOTAL Weight of steel (in kg)					240.94	Kg
	TOTAL Weight of Steel (in Tonne)					0.24	MT
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>Launching Apron in U/S Portion</i>	1	2.50	0.53	0.60	0.80	Cum
	<i>Launching Apron in D/S Portion</i>	1	3.50	0.53	0.60	1.11	Cum
	TOTAL					1.91	Cum
8	Providing 600 mm RCC NP2 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	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	<i>U/S Transitions Walls</i>	2	3.35	0.16		1.07	Cum
	<i>D/S Transitions Walls</i>	2	4.35	0.16		1.39	Cum
	<i>Above Hume Pipe</i>	1	6.50			6.50	Cum
	TOTAL					8.96	Cum
11	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.						
	<i>Parapet</i>	2	2.8	0.5	0.6	1.68	Cum
	TOTAL					1.68	Cum
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand 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.						
	<i>Parapet</i>	2	2.8		1.7	9.52	Sqm
	TOTAL					9.52	Sqm
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	<i>Parapet top</i>	2	2.8		0.7	3.92	Sqm
	TOTAL					3.92	Sqm

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST MAHUARY SUB-DY INLET AT RD 1.700 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	5.1.27	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.	23.418	Cum	195.20	4571.27			
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.	6.69	Cum	6381.70	42684.44	2.17	3.01	6.02
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.	4.609	Cum	6914.20	31865.21	1.90	1.98	3.96
4	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	48.530	Sqm	578.60	28079.69			
5	5.3.22	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.	0.09	MT	73574.90	6654.48			
6	M-151	Providing 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	2532.61	18994.58			
7	5.6.2.2	Labour for laying 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			
8	5.2.1	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.68	Cum	339.90	230.50			
9	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.45	Cum	694.61	312.57			
10	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.	0.45	Cum	1237.00	556.65			
11	WRD 5.5.10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	1.35	Sqm	340.20	459.27			
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	28.82	Cum	149.30	4302.96			
13		Carriage of materials							
		Coarse Sand (60 Km lead)	4.992	Cum	1075.00	5365.95			
		Coarse Aggregates (100 Km lead)	9.983	Cum	1398.00	13956.46			
		Cement (30 km lead)	4.068	MT	742.00	3018.58			
		Steel (30 km lead)	0.090	MT	742.00	67.11			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						173346.72			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.99	Cum	584.64	2918.28	291.83		
		Coarse Aggregate	9.98	Cum	944.26	9426.70	942.67		
Total							1234.50		

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)
ABSTRACT OF COST MAHUARY SUB-DY INLET AT RD 12.200 KM.									
1	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.	23.418	Cum	195.20	4571.27			
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.	6.69	Cum	6381.70	42684.44	2.17	3.01	6.02
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.	4.609	Cum	6914.20	31865.21	1.90	1.98	3.96
4	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	48.530	Sqm	578.60	28079.69			
5	5.3.22	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.	0.09	MT	73574.90	6654.48			
6	M-151	Providing 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	2532.61	18994.58			
7	5.6.2.2	Labour for laying 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			
8	5.2.1	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.68	Cum	339.90	230.50			
9	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.45	Cum	694.61	312.57			
10	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.	0.45	Cum	1237.00	556.65			
11	WRD 5.5.10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	1.35	Sqm	340.20	459.27			
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	28.82	Cum	149.30	4302.96			
13		Carriage of materials							
		Coarse Sand (60 Km lead)	4.992	Cum	1075.00	5365.95			
		Coarse Aggregates (100 Km lead)	9.983	Cum	1398.00	13956.46			
		Cement (30 km lead)	4.068	MT	742.00	3018.58			
		Steel (30 km lead)	0.090	MT	742.00	67.11			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						173346.72			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.99	Cum	584.64	2918.28	291.83		
		Coarse Aggregate	9.98	Cum	944.26	9426.70	942.67		
Total							1234.50		

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)
ABSTRACT OF COST INLET AT RD 1.750 KM OF THUMBHI MR.									
1	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.	23.418	Cum	195.20	4571.27			
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.	6.69	Cum	6381.70	42684.44	2.17	3.01	6.02
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.	4.609	Cum	6914.20	31865.21	1.90	1.98	3.96
4	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	48.530	Sqm	578.60	28079.69			
5	5.3.22	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.	0.09	MT	73574.90	6654.48			
6	M-151	Providing 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	2532.61	18994.58			
7	5.6.2.2	Labour for laying 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			
8	5.2.1	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .	0.68	Cum	339.90	230.50			
9	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.45	Cum	694.61	312.57			
10	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.	0.45	Cum	1237.00	556.65			
11	WRD 5.5.10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	1.35	Sqm	340.20	459.27			
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	28.82	Cum	149.30	4302.96			
13		Carriage of materials							
		Coarse Sand (60 Km lead)	4.992	Cum	1075.00	5365.95			
		Coarse Aggregates (100 Km lead)	9.983	Cum	1398.00	13956.46			
		Cement (30 km lead)	4.068	MT	742.00	3018.58			
		Steel (30 km lead)	0.090	MT	742.00	67.11			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						173346.72			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.99	Cum	584.64	2918.28	291.83		
		Coarse Aggregate	9.98	Cum	944.26	9426.70	942.67		
Total							1234.50		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS QUANTITIES OF MAHUARY SUB-DY INLET AT RD 1.700 KM.

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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.7	0.60	0.29	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.60	2.80	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	1.75	15.78	Cum
	<i>Launching Apron</i>	1	2.00	0.75	0.30	0.45	Cum
	TOTAL					23.42	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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>U/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>D/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.70	0.15	0.07	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.15	0.70	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	0.30	2.71	Cum
	<i>Collar Joint</i>	2	1.14	0.30	1.14	0.78	Cum
	<i>Deduct Pipe Area</i>	2	0.28		0.30	-0.17	Cum
	TOTAL					6.69	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.						
	U/S Transitions Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.25	0.30	0.05	Cum
		2	0.35	0.38	0.60	0.16	Cum
		2	0.35	0.50	0.45	0.16	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.98	0.30	1.16	Cum
		2	1.98	0.76	0.60	1.81	Cum
		2	1.98	0.72	0.45	1.27	Cum
	TOTAL					4.61	Cum
4	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Toe Wall Base</i>	2	1.50		0.15	0.45	Sqm
		2		0.75	0.15	0.23	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>U/S Toe Wall Stem</i>	2	1.50		1.67	5.01	Sqm
		2		0.45	1.67	1.50	Sqm
	<i>D/S Toe Wall Base</i>	2	1.50	0.75	0.15	0.45	Sqm
		2			0.15	0.23	Sqm
	<i>D/S Toe Wall Stem</i>	2	1.50		1.67	5.01	Sqm
		2		0.45	1.67	1.50	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	4	0.35		0.45	0.63	Sqm
		4		0.25	0.45	0.45	Sqm
		4	0.35		0.60	0.84	Sqm
		4		0.38	0.60	0.90	Sqm
		4	0.35		0.45	0.63	Sqm
		4		0.50	0.45	0.90	Sqm
	<i>Average of Section A-A & Section C-C</i>	4	1.98		0.45	3.56	Sqm
		4		0.98	0.45	1.77	Sqm
		4	1.98		0.60	4.74	Sqm
		4		0.76	0.60	1.83	Sqm
		4	1.98		0.45	3.56	Sqm
		4		0.72	0.45	1.29	Sqm
	<i>PCC Below Hume Pipe</i>	2	6.60		0.30	3.96	Sqm
		2		1.37	0.30	0.82	Sqm
	<i>Collar Joint</i>	4	1.14		1.44	6.57	Sqm
		4		0.30	1.44	1.73	Sqm
	TOTAL					48.53	Sqm
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		
	0.25 % Skin Reinforcement for Transition walls	4.61	0.25%	0.01	7850	90.44	Kg
	TOTAL Weight of steel (in kg)					90.44	Kg
	TOTAL Weight of Steel (in Tonne)					0.09	MT
7	Providing 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 .	3		2.50		7.5	Rm
	TOTAL					7.50	Rm
8	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
		1	6.6	1.37	0.075	0.68	Cum
	TOTAL					0.68	Cum
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>Launching Apron</i>	1	2	0.75	0.3	0.45	Cum
	TOTAL					0.45	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	<i>D/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	TOTAL					1.35	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 Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.28		0.198	
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.44		1.739	Cum
	<i>Above Hume Pipe</i>	1	6.60	4.07		26.884	Cum
	TOTAL					28.82	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS QUANTITIES OF MAHUARY SUB-DY INLET AT RD 12.200 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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.7	0.60	0.29	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.60	2.80	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	1.75	15.78	Cum
	<i>Launching Apron</i>	1	2.00	0.75	0.30	0.45	Cum
	TOTAL					23.42	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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>U/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>D/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.70	0.15	0.07	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.15	0.70	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	0.30	2.71	Cum
	<i>Collar Joint</i>	2	1.14	0.30	1.14	0.78	Cum
	<i>Deduct Pipe Area</i>	2	0.28		0.30	-0.17	Cum
	TOTAL					6.69	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.						
	U/S Transitions Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.25	0.30	0.05	Cum
		2	0.35	0.38	0.60	0.16	Cum
		2	0.35	0.50	0.45	0.16	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.98	0.30	1.16	Cum
		2	1.98	0.76	0.60	1.81	Cum
		2	1.98	0.72	0.45	1.27	Cum
	TOTAL					4.61	Cum
4	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Toe Wall Base</i>	2	1.50		0.15	0.45	Sqm
		2		0.75	0.15	0.23	Sqm
	<i>U/S Toe Wall Stem</i>	2	1.50		1.67	5.01	Sqm
		2		0.45	1.67	1.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>D/S Toe Wall Base</i>	2	1.50	0.75	0.15	0.45	Sqm
		2			0.15	0.23	Sqm
	<i>D/S Toe Wall Stem</i>	2	1.50	0.45	1.67	5.01	Sqm
		2			1.67	1.50	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	4	0.35		0.45	0.63	Sqm
		4		0.25	0.45	0.45	Sqm
		4	0.35		0.60	0.84	Sqm
		4		0.38	0.60	0.90	Sqm
		4	0.35		0.45	0.63	Sqm
		4		0.50	0.45	0.90	Sqm
	<i>Average of Section A-A & Section C-C</i>	4	1.98		0.45	3.56	Sqm
		4		0.98	0.45	1.77	Sqm
		4	1.98		0.60	4.74	Sqm
		4		0.76	0.60	1.83	Sqm
		4	1.98		0.45	3.56	Sqm
		4		0.72	0.45	1.29	Sqm
	<i>PCC Below Hume Pipe</i>	2	6.60		0.30	3.96	Sqm
		2		1.37	0.30	0.82	Sqm
	<i>Collar Joint</i>	4	1.14		1.44	6.57	Sqm
		4		0.30	1.44	1.73	Sqm
	TOTAL					48.53	Sqm
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		
	0.25 % Skin Reinforcement for Transition walls	4.61	0.25%	0.01	7850	90.44	Kg
	TOTAL Weight of steel (in kg)					90.44	Kg
	TOTAL Weight of Steel (in Tonne)					0.09	MT
7	Providing 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 .	3		2.50		7.5	Rm
	TOTAL					7.50	Rm
8	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
		1	6.6	1.37	0.075	0.68	Cum
	TOTAL					0.68	Cum
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>Launching Apron</i>	1	2	0.75	0.3	0.45	Cum
	TOTAL					0.45	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	<i>D/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	TOTAL					1.35	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 Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.28		0.198	
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.44		1.739	Cum
	<i>Above Hume Pipe</i>	1	6.60	4.07		26.884	Cum
	TOTAL					28.82	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS QUANTITIES OF INLET AT RD 1.750 KM OF THUMBHI MR.							
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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	1.82	2.05	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.7	0.60	0.29	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.60	2.80	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	1.75	15.78	Cum
	<i>Launching Apron</i>	1	2.00	0.75	0.30	0.45	Cum
	TOTAL					23.42	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.						
	<i>U/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>U/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>D/S Toe Wall Base</i>	1	1.50	0.75	0.15	0.17	Cum
	<i>D/S Toe Wall Stem</i>	1	1.50	0.45	1.67	1.13	Cum
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	2	0.35	0.70	0.15	0.07	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	1.18	0.15	0.70	Cum
	<i>PCC Below Hume Pipe</i>	1	6.60	1.37	0.30	2.71	Cum
	<i>Collar Joint</i>	2	1.14	0.30	1.14	0.78	Cum
	<i>Deduct Pipe Area</i>	2	0.28		0.30	-0.17	Cum
	TOTAL					6.69	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.						
	U/S Transitions Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.25	0.30	0.05	Cum
		2	0.35	0.38	0.60	0.16	Cum
		2	0.35	0.50	0.45	0.16	Cum
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.98	0.30	1.16	Cum
		2	1.98	0.76	0.60	1.81	Cum
		2	1.98	0.72	0.45	1.27	Cum
	TOTAL					4.61	Cum
4	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Toe Wall Base</i>	2	1.50		0.15	0.45	Sqm
		2		0.75	0.15	0.23	Sqm
	<i>U/S Toe Wall Stem</i>	2	1.50		1.67	5.01	Sqm
		2		0.45	1.67	1.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>D/S Toe Wall Base</i>	2	1.50	0.75	0.15	0.45	Sqm
		2			0.15	0.23	Sqm
	<i>D/S Toe Wall Stem</i>	2	1.50	0.45	1.67	5.01	Sqm
		2			1.67	1.50	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>						
	<i>Section D-D</i>	4	0.35		0.45	0.63	Sqm
		4		0.25	0.45	0.45	Sqm
		4	0.35		0.60	0.84	Sqm
		4		0.38	0.60	0.90	Sqm
		4	0.35		0.45	0.63	Sqm
		4		0.50	0.45	0.90	Sqm
	<i>Average of Section A-A & Section C-C</i>	4	1.98		0.45	3.56	Sqm
		4		0.98	0.45	1.77	Sqm
		4	1.98		0.60	4.74	Sqm
		4		0.76	0.60	1.83	Sqm
		4	1.98		0.45	3.56	Sqm
		4		0.72	0.45	1.29	Sqm
	<i>PCC Below Hume Pipe</i>	2	6.60		0.30	3.96	Sqm
		2		1.37	0.30	0.82	Sqm
	<i>Collar Joint</i>	4	1.14		1.44	6.57	Sqm
		4		0.30	1.44	1.73	Sqm
	TOTAL					48.53	Sqm
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		
	0.25 % Skin Reinforcement for Transition walls	4.61	0.25%	0.01	7850	90.44	Kg
	TOTAL Weight of steel (in kg)					90.44	Kg
	TOTAL Weight of Steel (in Tonne)					0.09	MT
7	Providing 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 .	3		2.50		7.5	Rm
	TOTAL					7.50	Rm
8	Providing coarse clean sand in filling in foudation of trenches including ramming, watering, royalty all complete job as per specification and direction .						
		1	6.6	1.37	0.075	0.68	Cum
	TOTAL					0.68	Cum
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>Launching Apron</i>	1	2	0.75	0.3	0.45	Cum
	TOTAL					0.45	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>U/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	<i>D/S Toe Wall Top</i>	1	1.50	0.45		0.68	Sqm
	TOTAL					1.35	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 Floor (Left & Right)						
	<i>Section D-D</i>	2	0.35	0.28		0.198	
	<i>Average of Section A-A & Section C-C</i>	2	1.98	0.44		1.739	Cum
	<i>Above Hume Pipe</i>	1	6.60	4.07		26.884	Cum
	TOTAL					28.82	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MAHUARY SUB DISTRIBUTARY

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	NEW FALL (0.610 M)	0.075	₹ 0.00
2	FALL (1.524 M) (RECONSTRUCT)	0.955	₹ 8,072.65
3	BRIDGE / HR FOR BARIAWA MR.	0.975	₹ 27,498.49
4	FALL (1.372 M)	1.575	₹ 1,99,171.37
5	NEW INLET	1.700	₹ 0.00
6	NEW FALL (0.457 M)	2.200	₹ 0.00
7	FALL (1.524 M)	2.600	₹ 16,627.37
8	BRIDGE /FALL	2.630	₹ 53,112.11
9	CROSS DRAINAGE	2.645	₹ 65,001.96
10	HR FOR ITMA MR.	3.985	₹ 19,712.52
11	BRIDGE	4.000	₹ 24,019.89
12	FALL (1.830 M) / BRIDGE / HR FOR MALI MR.	4.520	₹ 21,872.39
13	CULVERT / FALL (1.829 M)	5.030	₹ 15,062.68
14	BRIDGE	5.380	₹ 44,435.43
15	FALL (1.372 M) / BRIDGE	5.710	₹ 1,43,135.13
16	FALL (1.067 M)	6.560	₹ 31,229.61
17	BRIDGE / HR FOR THUMBHI MR./FALL	7.214	₹ 43,476.99
18	BRIDGE / FALL (1.067 M)	8.200	₹ 10,136.13
19	FALL /BRIDGE (1.067 M)	8.900	₹ 1,07,918.41
20	BRIDGE	9.000	₹ 25,653.61
21	NEW FALL (1.524 M)	9.150	₹ 0.00
22	BRIDGE	9.245	₹ 16,710.31
23	FALL (0.610 M) / BRIDGE	10.600	₹ 1,24,530.63
24	FALL (1.067 M)	11.300	₹ 30,159.40
25	BRIDGE	11.480	₹ 16,710.31
26	NEW FALL (0.914 M)	11.900	₹ 0.00
27	FALL (1.220 M) BRIDGE / HR FOR SOTHIDIH MR.	12.000	₹ 1,03,473.69
28	NEW INLET	12.200	₹ 0.00
29	FALL (0.914 M)/BRIDGE	13.200	₹ 12,582.54
30	FALL (0.914 M)	13.500	₹ 24,217.95
31	NEW CD	14.480	₹ 0.00
32	BRIDGE	14.535	₹ 8,342.51
33	FALL (0.610M)	14.780	₹ 28,764.66
34	NEW CD	15.400	₹ 0.00
35	BRIDGE / FALL (0.914 M)	15.550	₹ 25,931.78
36	NEW CD	16.100	₹ 0.00
37	FALL (0.914 M)	16.970	₹ 30,159.40
38	BRIDGE	17.220	₹ 25,662.34
39	CROSS DRAINAGE	17.780	₹ 11,765.47

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
40	NEW FALL (0.610 M)	17.875	₹ 0.00
41	FALL (0.610 M)	18.280	₹ 27,734.77
42	CROSS DRAINAGE	18.290	₹ 12,251.49
43	BRIDGE	18.600	₹ 30,542.23
44	BRIDGE / FALL (0.610 M)	19.025	₹ 11,713.01
Total In Rs.			₹ 13,97,389.21
Total In Lakhs.			₹ 13.97

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BARIAWA MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	NEW FALL (1.829 M) COMBINED WITH HR	0.000	₹ 0.00
2	CULVERT	0.040	₹ 17,264.46
3	FALL (0.762 M)	0.305	₹ 65,834.59
4	FALL (0.914 M)	0.760	₹ 44,085.52
5	AQUEDUCT	0.940	₹ 46,289.49
6	CULVERT	1.375	₹ 19,406.47
7	FALL (1.220 M) / CULVERT	1.650	₹ 12,778.82
8	NEW FALL (0.457 M)	2.050	₹ 0.00
9	FALL (1.372 M) / BRIDGE	2.570	₹ 20,197.72
10	FALL (1.220 M) / BRIDGE	3.500	₹ 38,745.90
11	FALL (0.914 M) / BRIDGE	4.400	₹ 15,764.15
12	FALL (0.610 M) / BRIDGE	4.990	₹ 38,373.24
13	CULVERT / FALL (1.067 M)	5.510	₹ 14,916.15
14	CULVERT	5.800	₹ 11,953.21
15	NEW FALL (0.610 M)	6.100	₹ 0.00
16	FALL (0.914 M) / CULVERT	6.560	₹ 18,150.17
17	PIPE CULVERT	6.830	₹ 0.00
Total In Rs.			₹ 3,63,759.87
Total In Lakhs.			₹ 3.64

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF ITMA MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL (0.610 M)	0.300	₹ 5,962.75
2	NEW FALL (1.676 M) / BRIDGE	0.900	₹ 26,738.07
3	BRIDGE	1.650	₹ 11,539.30
4	FALL (1.220 M)	1.895	₹ 42,546.34
5	BRIDGE	2.265	₹ 9,251.44
6	FALL (1.220 M)	2.580	₹ 24,780.09
7	FALL (1.067 M)	3.000	₹ 35,132.81
8	BRIDGE	3.445	₹ 33,423.02
9	NEW FALL (0.305 M)	3.950	₹ 0.00
10	FALL (0.457M) / BRIDGE	4.225	₹ 48,427.89
11	NEW FALL (0.457 M)	4.600	₹ 0.00
Total In Rs.			₹ 2,37,801.71
Total In Lakhs.			₹ 2.38

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF MALI MR			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	NEW FALL (1.524 M) COMBINED WITH HR	0.000	₹ 0.00
2	SYPHON / FALL (0.915 M)	0.060	₹ 31,401.25
3	FALL (0.914 M) / BRIDGE	0.610	₹ 37,198.81
4	NEW FALL (0.610 M)	1.000	₹ 0.00
5	FALL (0.610 M)	1.370	₹ 2,444.74
6	PIPE CULVERT	1.580	₹ 6,423.61
7	FALL (0.762 M) / BRIDGE	2.000	₹ 12,294.43
8	FALL (1.067 M) / BRIDGE	2.800	₹ 24,775.86
9	NEW FALL (0.457 M)	3.125	₹ 0.00
10	FALL (0.305 M)	3.755	₹ 7,681.01
Total In Rs.			₹ 1,22,219.72
Total In Lakhs.			₹ 1.22

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF THUMBHI MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL (0.457 M)	0.055	₹ 34,218.25
2	BRIDGE /NEW FALL(0.457 m)	0.545	₹ 0.00
3	FALL (0.914 M)	0.965	₹ 42,521.79
4	NEW INLET	1.750	₹ 0.00
5	BRIDGE	1.950	₹ 18,836.74
6	BRIDGE / FALL (0.457 M)	2.215	₹ 43,160.03
7	BRIDGE / FALL (0.762 M)	2.715	₹ 26,823.30
8	FALL (1.22 M)	3.300	₹ 33,895.79
9	FALL (1.067 M)	4.010	₹ 3,692.33
10	BRIDGE	4.450	₹ 31,502.96
11	FALL (1.067 M)	5.010	₹ 44,767.41
12	BRIDGE	5.240	₹ 11,648.86
13	PIPE CULVERT	5.545	₹ 35,112.45
14	FALL (0.610 M)	5.755	₹ 63,186.24
Total In Rs.			₹ 1,65,560.12
Total In Lakhs.			₹ 1.66

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SOTHIDIH MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	CROSS DRAINAGE	0.180	₹ 6,782.37
2	CROSS DRAINAGE	0.310	₹ 7,018.46
3	PIPE CULVERT	0.330	₹ 8,481.45
4	PIPE LINE	0.535	₹ 24,680.05
5	CROSS DRAINAGE	0.585	₹ 10,703.36
6	PIPE CULVERT	0.640	₹ 12,431.44
7	CROSS DRAINAGE	0.810	₹ 12,195.35
8	BRIDGE	0.830	₹ 11,237.50
9	FALL (0.762 M) / BRIDGE	1.015	₹ 9,423.80
10	PIPE CULVERT	1.560	₹ 15,597.49
11	FALL (0.457 M) / BRIDGE	1.805	₹ 31,088.24
12	FALL (1.067 M) / BRIDGE	2.450	₹ 20,381.84
Total In Rs.			₹ 1,70,021.34
Total In Lakhs.			₹ 1.70

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		25.000	₹ 1,30,25,463.75
Total In Rs.			₹ 1,30,25,463.75
Total In Lakhs.			₹ 130.25

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF MAHURY SUB 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.-0.955 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.	17.600	Sqm	340.20	5987.52	0.912	0.257	
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.	17.600	Sqm	63.20	1112.32	0.03		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.257	Cum	1075.00	276.23			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.939	MT	742.00	696.58			
		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.)						8072.65			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.26	Cum	584.64	150.23	15.02		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							15.02		
QUANTITIES OF REPAIRING WORK FOR BRIDGE/HR FOR BARIAWA MR (Ch.-0.975 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.	11.032	Cum	2492.58	27498.49			
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.)						27498.49			
		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		
<i>Total</i>							0.00		
<i>New HR Cum Bridge is proposed here</i>									
AOC FOR FALL (Ch.1.575 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.	1.74	Cum	5021.30	8744.59	0.20	0.56	
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.	75.103	Sqm	340.20	25549.95	3.893	1.096	
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.	13.411	Sqm	63.20	847.59	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.	17.607	Cum	6914.20	121736.32	7.26	7.57	15.14
5		Carriage of materials							
		Coarse Sand (60 Km lead)	9.225	Cum	1075.00	9916.52			
		Coarse Aggregates (100 Km lead)	15.142	Cum	1398.00	21168.20			
		Cement (30 km lead)	11.377	MT	742.00	8441.61			
		Brick (15 km lead)	870.00	No.	3.18	2766.60			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						199171.37			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	9.22	Cum	584.64	5393.11	539.31		
		Coarse Aggregate	15.14	Cum	944.26	14297.77	1429.78		
<i>Total</i>							1969.09		

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.2.600 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.	1.16	Cum	5021.30	5808.22	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.	21.022	Sqm	340.20	7151.70	1.090	0.307	
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.	3.018	Sqm	63.20	190.71	0.005		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.677	Cum	1075.00	727.85			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.228	MT	742.00	910.85			
		Brick (15 km lead)	578.00	No.	3.18	1838.04			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						16627.37			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.68	Cum	584.64	395.84	39.58		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>								39.58	
AOC FOR BRIDGE/FALL (Ch.2.630 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 royalty as per specification and direction of E/I.	0.74	Cum	5021.30	3719.10	0.09	0.24	
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.	120.975	Sqm	340.20	41155.74	6.271	1.766	
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.	2.963	Sqm	63.20	187.24	0.004		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	2.003	Cum	1075.00	2153.49			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	6.361	MT	742.00	4719.95			
		Brick (15 km lead)	370.00	No.	3.18	1176.60			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						53112.11			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.00	Cum	584.64	1171.18	117.12		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>								117.12	
AOC FOR CROSS DRAINAGE (Ch.-2.645 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	5.3.4	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
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.	10.680	Sqm	578.60	6179.45			
4	WRD 5.3.22	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.	0.04	Mt	73574.90	3118.84			

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	5.5.5	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.	78.900	Sqm	340.20	26841.78	4.090	1.152	
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.	78.900	Sqm	63.20	4986.48	0.12		
7		Carriage of materials							
		Coarse Sand (60 Km lead)	2.124	Cum	1075.00	2283.24			
		Coarse Aggregates (100 Km lead)	1.944	Cum	1398.00	2717.71			
		Cement (30 km lead)	4.908	MT	742.00	3642.01			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.04	MT	742.00	31.45			
TOTAL (In Rs.)						65001.96			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.12	Cum	584.64	1241.74	124.17		
		Coarse Aggregate	1.94	Cum	944.26	1835.64	183.56		
		<i>Total</i>					307.74		
AOC FOR HR FOR ITMA MR. (Ch.-3.985 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.	7.908	Cum	2492.58	19712.52			
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.)						19712.52			
		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		
		<i>Total</i>					0.00		
<i>New HR Cum Bridge is proposed here</i>									
AOC FOR BRIDGE (Ch.4.000 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.	2.24	Cum	5021.30	11264.42	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.	20.385	Sqm	340.20	6934.99	1.057	0.298	
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.	2.926	Sqm	63.20	184.93	0.004		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.015	Cum	1075.00	1091.65			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.320	MT	742.00	979.13			
		Brick (15 km lead)	1121.00	No.	3.18	3564.78			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						24019.89			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.02	Cum	584.64	593.69	59.37		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					59.37		
AOC FOR FALL/ BRIDGE / HR FOR MALI MR. (Ch.4.520 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.	8.775	Cum	2492.58	21872.39			
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			
		Steel (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.)						21872.39			
		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		
		<i>Total</i>					0.00		
AOC FOR FALL/ CULVERT (Ch.5.030 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.	0.49	Cum	6381.70	3111.08	0.16	0.22	0.44
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 royalty as per specification and direction of E/I.	0.94	Cum	5021.30	4744.53	0.11	0.30	
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.	9.449	Sqm	340.20	3214.48	0.490	0.138	
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.	9.449	Sqm	63.20	597.16	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.660	Cum	1075.00	709.17			
		Coarse Aggregates (100 Km lead)	0.439	Cum	1398.00	613.37			
		Cement (30 km lead)	0.771	MT	742.00	571.93			
		Brick (15 km lead)	472.00	No.	3.18	1500.96			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						15062.68			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.66	Cum	584.64	385.68	38.57		
		Coarse Aggregate	0.44	Cum	944.26	414.29	41.43		
		<i>Total</i>					80.00		
AOC FOR BRIDGE (Ch.5.380 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.	5.31	Cum	6381.70	33903.83	1.72	2.39	4.78
2		Carriage of materials							
		Coarse Sand (60 Km lead)	2.391	Cum	1075.00	2570.00			
		Coarse Aggregates (100 Km lead)	4.781	Cum	1398.00	6684.39			
		Cement (30 km lead)	1.721	MT	742.00	1277.21			
		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.)						44435.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.39	Cum	584.64	1397.70	139.77		
		Coarse Aggregate	4.78	Cum	944.26	4514.88	451.49		
		<i>Total</i>					591.26		
AOC FOR FALL/BRIDGE (Ch.5.710 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.	3.52	Cum	6381.70	22466.39	1.14	1.58	3.17

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.	12.796	Cum	6914.20	88474.10	5.28	5.50	11.00
3		Carriage of materials							
		Coarse Sand (60 Km lead)	7.086	Cum	1075.00	7617.96			
		Coarse Aggregates (100 Km lead)	14.173	Cum	1398.00	19813.79			
		Cement (30 km lead)	6.419	MT	742.00	4762.88			
		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.)						143135.13			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	7.09	Cum	584.64	4143.04	414.30		
		Coarse Aggregate	14.17	Cum	944.26	13382.96	1338.30		
Total							1752.60		
AOC FOR FALL (Ch.6.560 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.	3.515	Cum	6914.20	24303.04	1.45	1.51	3.02
2		Carriage of materials							
		Coarse Sand (60 Km lead)	1.511	Cum	1075.00	1624.78			
		Coarse Aggregates (100 Km lead)	3.023	Cum	1398.00	4225.95			
		Cement (30 km lead)	1.450	MT	742.00	1075.84			
		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.)						31229.61			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.51	Cum	584.64	883.64	88.36		
		Coarse Aggregate	3.02	Cum	944.26	2854.36	285.44		
Total							373.80		
AOC FOR BRIDGE / HR FOR THUMBHI MR./FALL (Ch.7.260 Km)									
1	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.	17.319	Sqm	91.7	1588.19			
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.	3.978	Cum	6914.20	27506.26	1.64	1.71	3.42
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.	2.625	Cum	2492.58	6543.02			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.711	Cum	1075.00	1838.94			
		Coarse Aggregates (100 Km lead)	3.421	Cum	1398.00	4782.94			
		Cement (30 km lead)	1.641	MT	742.00	1217.64			
		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.)						43476.99			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.71	Cum	584.64	1000.11	100.01		
		Coarse Aggregate	3.42	Cum	944.26	3230.57	323.06		
Total							423.07		
AOC FOR FALL /BRIDGE (Ch.8.200Km)									

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.	4.067	Cum	2492.58	10136.13			
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.)						10136.13			
		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/BRIDGE (Ch.8.900Km)									
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.	12.146	Cum	6914.20	83982.65	5.01	5.22	10.45
2		Carriage of materials							
		Coarse Sand (60 Km lead)	5.223	Cum	1075.00	5614.67			
		Coarse Aggregates (100 Km lead)	10.446	Cum	1398.00	14603.38			
		Cement (30 km lead)	5.010	MT	742.00	3717.71			
TOTAL (In Rs.)						107918.41			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	5.22	Cum	584.64	3053.55	305.35		
		Coarse Aggregate	10.45	Cum	944.26	9863.65	986.37		
Total						1291.72			
AOC FOR BRIDGE (Ch.9.000Km)									
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.	2.94	Cum	5021.30	14784.56	0.34	0.94	
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.	20.940	Sqm	340.20	7123.71	1.086	0.306	
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.	20.940	Sqm	63.20	1323.39	0.031		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.248	Cum	1075.00	1341.51			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.456	MT	742.00	1080.44			
		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.)						25653.61			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.25	Cum	584.64	729.58	72.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total						72.96			
AOC FOR BRIDGE (Ch.9.245Km)									
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.	1.85	Cum	5021.30	9297.74	0.21	0.59	
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.	9.053	Sqm	340.20	3079.68	0.469	0.132	

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.	1.646	Sqm	63.20	104.02	0.002		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.725	Cum	1075.00	779.05			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.685	MT	742.00	508.32			
		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.)						16710.31			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.72	Cum	584.64	423.69	42.37		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					42.37		
AOC FOR BRIDGE/FALL (Ch.10.600Km)									
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.	1.014	Cum	8151.40	8267.25	0.58	0.40	0.80
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.	12.864	Cum	6914.20	88942.11	5.31	5.53	11.06
2		Carriage of materials							
		Coarse Sand (60 Km lead)	5.927	Cum	1075.00	6371.45			
		Coarse Aggregates (100 Km lead)	11.864	Cum	1398.00	16585.87			
		Cement (30 km lead)	5.881	MT	742.00	4363.95			
		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.)						124530.63			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	5.93	Cum	584.64	3465.12	346.51		
		Coarse Aggregate	11.86	Cum	944.26	11202.70	1120.27		
		<i>Total</i>					1466.78		
AOC FOR FALL (Ch.11.300Km)									
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.	0.21	Cum	5021.30	1033.08	0.02	0.07	
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.	3.232	Cum	6914.20	22345.06	1.33	1.39	2.78
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.455	Cum	1075.00	1564.66			
		Coarse Aggregates (100 Km lead)	2.779	Cum	1398.00	3885.49			
		Cement (30 km lead)	1.357	MT	742.00	1006.75			
		Brick (15 km lead)	102.00	No.	3.18	324.36			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						30159.40			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.46	Cum	584.64	850.94	85.09		
		Coarse Aggregate	2.78	Cum	944.26	2624.40	262.44		
		<i>Total</i>					347.53		

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. 11.480 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.	1.85	Cum	5021.30	9297.74	0.21	0.59		
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.	9.053	Sqm	340.20	3079.68	0.469	0.132		
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.	1.646	Sqm	63.20	104.02	0.002			
4		Carriage of materials								
		Coarse Sand (60 Km lead)	0.725	Cum	1075.00	779.05				
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00				
		Cement (30 km lead)	0.685	MT	742.00	508.32				
		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.)						16710.31				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	0.72	Cum	584.64	423.69	42.37			
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00			
		<i>Total</i>						42.37		
AOC FOR BRIDGE/FALL/HR FOR SOTHIDIH MR. (Ch. 12.000 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.	7.00	Cum	6381.70	44671.90	2.27	3.15	6.30	
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.	60.000	Sqm	578.60	34716.00				
3	WRD 5.3.22	Providing M.S. reinforcements 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.	0.14	Mt	73574.90	10107.35				
4		Carriage of materials								
		Coarse Sand (60 Km lead)	3.150	Cum	1075.00	3386.25				
		Coarse Aggregates (100 Km lead)	6.300	Cum	1398.00	8807.40				
		Cement (30 km lead)	2.268	MT	742.00	1682.86				
		Brick (15 km lead)	0.00	No.	3.18	0.00				
		Steel (30 Km lead)	0.14	MT	742.00	101.93				
TOTAL (In Rs.)						103473.69				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	3.15	Cum	584.64	1841.62	184.16			
		Coarse Aggregate	6.30	Cum	944.26	5948.84	594.88			
		<i>Total</i>						779.05		

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)
AOC FOR FALL/BRIDGE (Ch.13.200 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.	180.000	Sqm	11.80	2124.79			
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.	22.800	Sqm	340.20	7756.56	1.182	0.333	
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.	22.800	Sqm	63.20	1440.96	0.03		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.333	Cum	1075.00	357.85			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.216	MT	742.00	902.38			
		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.)						12582.54			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.33	Cum	584.64	194.61	19.46		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					19.46		
AOC FOR FALL(Ch.13.500 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.	52.800	Sqm	340.20	17962.56	2.737	0.771	
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.	52.800	Sqm	63.20	3336.96	0.08		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.771	Cum	1075.00	828.70			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.816	MT	742.00	2089.73			
		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.)						24217.95			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.77	Cum	584.64	450.69	45.07		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					45.07		
AOC FOR BRIDGE. (Ch.14.535) 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.	1.00	Cum	6381.70	6365.26	0.32	0.45	0.90
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.449	Cum	1075.00	482.50			
		Coarse Aggregates (100 Km lead)	0.898	Cum	1398.00	1254.96			
		Cement (30 km lead)	0.323	MT	742.00	239.79			
		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.)						8342.51			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.45	Cum	584.64	262.41	26.24		
		Coarse Aggregate	0.90	Cum	944.26	847.64	84.76		
		<i>Total</i>					111.01		
AOC FOR FALL (Ch.14.780 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.	11.540	Cum	2492.58	28764.66			
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			

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)
		Cement (30 km lead)	0.000	MT	742.00	0.00			
TOTAL (In Rs.)						28764.66			
		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.15.550 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.	10.404	Cum	2492.58	25931.78			
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.)						25931.78			
		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.16.970 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.	0.21	Cum	5021.30	1033.08	0.02	0.07	
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.	3.232	Cum	6914.20	22345.06	1.33	1.39	2.78
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.455	Cum	1075.00	1564.66			
		Coarse Aggregates (100 Km lead)	2.779	Cum	1398.00	3885.49			
		Cement (30 km lead)	1.357	MT	742.00	1006.75			
		Brick (15 km lead)	102.00	No.	3.18	324.36			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						30159.40			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.46	Cum	584.64	850.94	85.09		
		Coarse Aggregate	2.78	Cum	944.26	2624.40	262.44		
Total							347.53		
AOC FOR PIPE CULVERT(Ch.17.220 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	5.3.4	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
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.	10.680	Sqm	578.60	6179.45			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.972	Cum	1075.00	1044.90			
		Coarse Aggregates (100 Km lead)	1.944	Cum	1398.00	2717.71			
		Cement (30 km lead)	0.700	MT	742.00	519.28			
		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.)						25662.34			
		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	0.97	Cum	584.64	568.27	56.83		
		Coarse Aggregate	1.94	Cum	944.26	1835.64	183.56		
		Total					240.39		
AOC FOR CD WORK (Ch.17.780 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.	150.000	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.	0.76	Cum	6381.70	4824.57	0.24	0.34	0.68
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.	4.440	Sqm	578.60	2568.98			
4	WRD 5.3.22	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.	0.01	Mt	73574.90	1091.59			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.340	Cum	1075.00	365.72			
		Coarse Aggregates (100 Km lead)	0.680	Cum	1398.00	951.20			
		Cement (30 km lead)	0.245	MT	742.00	181.75			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.01	MT	742.00	11.01			
		TOTAL (In Rs.)				11765.47			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.34	Cum	584.64	198.89	19.89		
		Coarse Aggregate	0.68	Cum	944.26	642.47	64.25		
		Total					84.14		
AOC FOR FALL (Ch.18.280 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.	11.127	Cum	2492.58	27734.77			
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.)				27734.77			
		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.18.290 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	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.	0.90	Cum	6381.70	5743.53	0.29	0.41	0.81
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.	4.900	Sqm	578.60	2835.14			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.405	Cum	1075.00	435.38			
		Coarse Aggregates (100 Km lead)	0.810	Cum	1398.00	1132.38			
		Cement (30 km lead)	0.292	MT	742.00	216.37			
		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.)				12251.49			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.41	Cum	584.64	236.78	23.68		

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	0.81	Cum	944.26	764.85	76.49		
		<i>Total</i>					100.16		
AOC FOR CULVERT (Ch.18.600 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.	2.25	Cum	5021.30	11297.93	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.	32.050	Sqm	340.20	10903.41	1.661	0.468	
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.	32.050	Sqm	63.20	2025.56	0.048		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.188	Cum	1075.00	1277.02			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.969	MT	742.00	1460.81			
		Brick (15 km lead)	1125.00	No.	3.18	3577.50			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						30542.23			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.19	Cum	584.64	694.51	69.45		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					69.45		
AOC FOR BRIDGE/FALL (Ch.19.025 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.	1.36	Cum	5021.30	6819.07	0.16	0.43	
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.	5.225	Sqm	340.20	1777.54	0.271	0.076	
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.	1.414	Sqm	63.20	89.38	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.511	Cum	1075.00	549.17			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.429	MT	742.00	318.64			
		Brick (15 km lead)	679.00	No.	3.18	2159.22			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						11713.01			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.51	Cum	584.64	298.67	29.87		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					29.87		

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 BARIAWA MR.									
AOC FOR CULVERT (Ch.-0.040 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.	37.640	Sqm	340.20	12805.13	1.951	0.550	
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.	37.640	Sqm	63.20	2378.85	0.06		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.550	Cum	1075.00	590.76			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.008	MT	742.00	1489.73			
		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.)						17264.46			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.55	Cum	584.64	321.29	32.13		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							32.13		
AOC FOR FALL (Ch.-0.305 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.	0.58	Cum	5021.30	2928.75	0.07	0.19	
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.	6.948	Cum	6914.20	48038.56	2.87	2.99	5.98
3		Carriage of materials							
		Coarse Sand (60 Km lead)	3.174	Cum	1075.00	3412.27			
		Coarse Aggregates (100 Km lead)	5.975	Cum	1398.00	8353.22			
		Cement (30 km lead)	2.933	MT	742.00	2176.41			
		Brick (15 km lead)	291.00	No.	3.18	925.38			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						65834.59			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.17	Cum	584.64	1855.77	185.58		
		Coarse Aggregate	5.98	Cum	944.26	5642.07	564.21		
<i>Total</i>							749.78		
AOC FOR FALL (Ch.-0.760 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.	4.962	Cum	6914.20	34307.57	2.05	2.13	4.27
2		Carriage of materials							
		Coarse Sand (60 Km lead)	2.134	Cum	1075.00	2293.64			
		Coarse Aggregates (100 Km lead)	4.267	Cum	1398.00	5965.59			
		Cement (30 km lead)	2.047	MT	742.00	1518.71			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						44085.52			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.13	Cum	584.64	1247.40	124.74		
		Coarse Aggregate	4.27	Cum	944.26	4029.38	402.94		
<i>Total</i>							527.68		
AOC FOR AQUEDUCT (Ch.-0.940 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.	150.000	Sqm	11.80	1770.66			

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.	97.060	Sqm	340.20	33019.81	5.032	1.417	
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.	97.060	Sqm	63.20	6134.19	0.15		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.417	Cum	1075.00	1523.36			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	5.177	MT	742.00	3841.47			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						46289.49			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.42	Cum	584.64	828.48	82.85		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					82.85		
AOC FOR CULVERT (Ch.-1.375 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.	42.310	Sqm	340.20	14393.86	2.193	0.618	
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.	42.310	Sqm	63.20	2673.99	0.06		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.618	Cum	1075.00	664.06			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.257	MT	742.00	1674.56			
		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.)						19406.47			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.62	Cum	584.64	361.15	36.11		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					36.11		
AOC FOR FALL/CULVERT (Ch.-1.650 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.	150.000	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.	24.000	Sqm	340.20	8164.80	1.244	0.350	
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.	24.000	Sqm	63.20	1516.80	0.04		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.350	Cum	1075.00	376.68			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.280	MT	742.00	949.88			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						12778.82			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.35	Cum	584.64	204.86	20.49		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					20.49		
AOC FOR FALL/CULVERT (Ch.-2.570 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	5.3.5	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.	2.140	Cum	6914.20	14799.34	0.88	0.92	1.84

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)	0.920	Cum	1075.00	989.41			
		Coarse Aggregates (100 Km lead)	1.841	Cum	1398.00	2573.39			
		Cement (30 km lead)	0.883	MT	742.00	655.13			
		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.)						20197.72			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.92	Cum	584.64	538.09	53.81		
		Coarse Aggregate	1.84	Cum	944.26	1738.16	173.82		
<i>Total</i>							227.63		
AOC FOR FALL/CULVERT (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.	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.	4.201	Cum	6914.20	29049.91	1.73	1.81	3.61
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.807	Cum	1075.00	1942.14			
		Coarse Aggregates (100 Km lead)	3.613	Cum	1398.00	5051.36			
		Cement (30 km lead)	1.733	MT	742.00	1285.97			
		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.)						38745.90			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.81	Cum	584.64	1056.23	105.62		
		Coarse Aggregate	3.61	Cum	944.26	3411.87	341.19		
<i>Total</i>							446.81		
AOC FOR FALL/CULVERT (Ch.-4.400 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.	1.47	Cum	5021.30	7392.28	0.17	0.47	
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.	13.378	Sqm	340.20	4551.08	0.693	0.195	
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.	1.920	Sqm	63.20	121.36	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.666	Cum	1075.00	716.39			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.866	MT	742.00	642.55			
		Brick (15 km lead)	736.00	No.	3.18	2340.48			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						15764.15			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.67	Cum	584.64	389.61	38.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							38.96		
AOC FOR FALL/CULVERT (Ch.-4.990 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.	1.28	Cum	5021.30	6413.68	0.15	0.41	

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.	11.607	Sqm	340.20	3948.61	0.602	0.169	
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.	1.666	Sqm	63.20	105.29	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.	2.780	Cum	6914.20	19219.93	1.15	1.20	2.39
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.773	Cum	1075.00	1906.51			
		Coarse Aggregates (100 Km lead)	2.391	Cum	1398.00	3342.07			
		Cement (30 km lead)	1.898	MT	742.00	1408.31			
		Brick (15 km lead)	638.00	No.	3.18	2028.84			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						38373.24			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.77	Cum	584.64	1036.86	103.69		
		Coarse Aggregate	2.39	Cum	944.26	2257.35	225.74		
		<i>Total</i>					329.42		
AOC FOR FALL/CULVERT (Ch.-5.510 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.	1.679	Cum	6914.20	11607.82	0.69	0.72	1.44
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.722	Cum	1075.00	776.04			
		Coarse Aggregates (100 Km lead)	1.444	Cum	1398.00	2018.43			
		Cement (30 km lead)	0.693	MT	742.00	513.85			
		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.)						14916.15			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.72	Cum	584.64	422.05	42.21		
		Coarse Aggregate	1.44	Cum	944.26	1363.32	136.33		
		<i>Total</i>					178.54		
AOC FOR PIPE CULVERT (Ch.-5.800 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.	26.060	Sqm	340.20	8865.75	1.351	0.380	
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.	26.060	Sqm	63.20	1647.02	0.04		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.380	Cum	1075.00	409.02			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.390	MT	742.00	1031.43			
		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.)						11953.21			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.38	Cum	584.64	222.44	22.24		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					22.24		
AOC FOR FALL/CULVERT (Ch.-6.560 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 royalty as per specification and direction of E/I.	1.25	Cum	5021.30	6290.32	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.	11.851	Sqm	340.20	4031.58	0.614	0.173	
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.	2.195	Sqm	63.20	138.70	0.00		
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.	0.54	Cum	6381.70	3446.12	0.17	0.24	0.49
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.817	Cum	1075.00	878.16			
		Coarse Aggregates (100 Km lead)	0.486	Cum	1398.00	679.43			
		Cement (30 km lead)	0.937	MT	742.00	695.18			
		Brick (15 km lead)	626.00	No.	3.18	1990.68			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						18150.17			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.82	Cum	584.64	477.59	47.76		
		Coarse Aggregate	0.49	Cum	944.26	458.91	45.89		
		<i>Total</i>					93.65		
AOC FOR PIPE CULVERT (Ch.-6.830 Km)									
		New Structure 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 ITMA MR									
AOC FOR FALL (Ch.-0.300 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.	13.000	Sqm	340.20	4422.60	0.674	0.190	
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.	13.000	Sqm	63.20	821.60	0.02		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.190	Cum	1075.00	204.04			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.693	MT	742.00	514.52			
		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.)						5962.75			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.19	Cum	584.64	110.96	11.10		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							11.10		
AOC FOR FALL/BRIDGE (Ch.-0.900 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.	10.727	Cum	2492.58	26738.07			
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.)						26738.07			
		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		
<i>Total</i>							0.00		
AOC FOR BRIDGE (Ch.-1.650 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.	29.261	Sqm	340.20	9954.52	1.517	0.427	
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.427	Cum	1075.00	459.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.517	MT	742.00	1125.52			
		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.)						11539.30			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.43	Cum	584.64	249.76	24.98		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							24.98		
AOC FOR FALL (Ch.-1.895 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.	48.880	Sqm	340.20	16628.98	2.534	0.714	
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.	48.880	Sqm	63.20	3089.22	0.07		
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.	1.946	Cum	6914.20	13453.95	0.80	0.84	1.67

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)
4	WRD 5.3.22	Providing M.S. reinforcements 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.	0.04	Mt	73574.90	2809.62			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.550	Cum	1075.00	1666.64			
		Coarse Aggregates (100 Km lead)	1.673	Cum	1398.00	2339.45			
		Cement (30 km lead)	3.410	MT	742.00	2530.16			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.04	MT	742.00	28.33			
TOTAL (In Rs.)						42546.34			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.55	Cum	584.64	906.40	90.64		
		Coarse Aggregate	1.67	Cum	944.26	1580.15	158.01		
Total							248.66		
AOC FOR BRIDGE (Ch.-2.265 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.	0.82	Cum	5021.30	4132.33	0.09	0.26	
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.	8.412	Sqm	340.20	2861.93	0.436	0.123	
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.	2.195	Sqm	63.20	138.70	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.386	Cum	1075.00	415.13			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.534	MT	742.00	396.38			
		Brick (15 km lead)	411.00	No.	3.18	1306.98			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						9251.44			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.39	Cum	584.64	225.77	22.58		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							22.58		
AOC FOR FALL(Ch.-2.580 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.	2.789	Cum	6914.20	19283.99	1.15	1.20	2.40
2		Carriage of materials							
		Coarse Sand (60 Km lead)	1.199	Cum	1075.00	1289.23			
		Coarse Aggregates (100 Km lead)	2.399	Cum	1398.00	3353.21			
		Cement (30 km lead)	1.150	MT	742.00	853.66			
		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.)						24780.09			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.20	Cum	584.64	701.15	70.12		
		Coarse Aggregate	2.40	Cum	944.26	2264.88	226.49		
Total							296.60		
AOC FOR FALL(Ch.-3.000 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.	1.88	Cum	6381.70	11986.56	0.61	0.85	1.69

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)
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.	11.760	Sqm	578.60	6804.34			
3	WRD 5.3.22	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.	0.04	Mt	73574.90	2712.05			
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.	1.112	Cum	6914.20	7687.97	0.46	0.48	0.96
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.323	Cum	1075.00	1422.59			
		Coarse Aggregates (100 Km lead)	2.647	Cum	1398.00	3700.07			
		Cement (30 km lead)	1.067	MT	742.00	791.88			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.04	MT	742.00	27.35			
TOTAL (In Rs.)						35132.81			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.32	Cum	584.64	773.68	77.37		
		Coarse Aggregate	2.65	Cum	944.26	2499.16	249.92		
		<i>Total</i>					327.28		

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.-3.445 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.	1.12	Cum	5021.30	5632.21	0.13	0.36	
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.	10.193	Sqm	340.20	3467.49	0.528	0.149	
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.	1.463	Sqm	63.20	92.46	0.00		
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.	2.56	Cum	6381.70	16339.19	0.83	1.15	2.30
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.660	Cum	1075.00	1784.38			
		Coarse Aggregates (100 Km lead)	2.304	Cum	1398.00	3221.39			
		Cement (30 km lead)	1.489	MT	742.00	1105.09			
		Brick (15 km lead)	560.00	No.	3.18	1780.80			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						33423.02			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.66	Cum	584.64	970.44	97.04		
		Coarse Aggregate	2.30	Cum	944.26	2175.85	217.58		
<i>Total</i>							314.63		
AOC FOR BRIDGE (Ch.-4.225 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.	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.	8.918	Sqm	340.20	3034.06	0.462	0.130	
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.	1.280	Sqm	63.20	80.91	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.	2.159	Cum	6914.20	14928.11	0.89	0.93	1.86
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.	2.24	Cum	6381.70	14296.79	0.73	1.01	2.02
6		Carriage of materials							
		Coarse Sand (60 Km lead)	2.381	Cum	1075.00	2559.35			
		Coarse Aggregates (100 Km lead)	3.873	Cum	1398.00	5414.50			
		Cement (30 km lead)	2.194	MT	742.00	1627.78			
		Brick (15 km lead)	490.00	No.	3.18	1558.20			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						48427.89			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.38	Cum	584.64	1391.91	139.19		
		Coarse Aggregate	3.87	Cum	944.26	3657.15	365.72		
<i>Total</i>							504.91		

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 MALI MR									
AOC FOR FALL (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.	150.000	Sqm	11.80	1770.66			
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.	460.725	Sqm	63.20	29117.80	0.69		
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)	0.691	MT	742.00	512.79			
		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.)						31401.25			
		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		
<i>Total</i>							0.00		
AOC FOR FALL/BRIDGE (Ch.-0.610 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.	0.49	Cum	5021.30	2464.09	0.06	0.16	
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.	4.459	Sqm	340.20	1517.03	0.231	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.	1.280	Sqm	63.20	80.91	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.	3.591	Cum	6914.20	24827.85	1.48	1.54	3.09
6		Carriage of materials							
		Coarse Sand (60 Km lead)	1.766	Cum	1075.00	1898.67			
		Coarse Aggregates (100 Km lead)	3.088	Cum	1398.00	4317.21			
		Cement (30 km lead)	1.771	MT	742.00	1313.97			
		Brick (15 km lead)	245.00	No.	3.18	779.10			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						37198.81			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.77	Cum	584.64	1032.59	103.26		
		Coarse Aggregate	3.09	Cum	944.26	2916.00	291.60		
<i>Total</i>							394.86		
AOC FOR FALL (Ch.-1.370 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.	15.174	Sqm	11.80	179.12			
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.	0.255	Cum	6914.20	1763.12	0.11	0.11	0.22
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.110	Cum	1075.00	117.87			
		Coarse Aggregates (100 Km lead)	0.219	Cum	1398.00	306.58			
		Cement (30 km lead)	0.105	MT	742.00	78.05			
		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.)						2444.74			

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)
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.11	Cum	584.64	64.11	6.41		
		Coarse Aggregate	0.22	Cum	944.26	207.08	20.71		
		<i>Total</i>					27.12		
AOC FOR PIPE CULVERT (Ch.-1.580 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.	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 royalty as per specification and direction of E/I.	0.26	Cum	5021.30	1280.43	0.03	0.08	
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.	8.751	Sqm	340.20	2977.02	0.454	0.128	
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.	1.811	Sqm	63.20	114.42	0.00		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.209	Cum	1075.00	225.06			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.486	MT	742.00	360.41			
		Brick (15 km lead)	127.00	No.	3.18	403.86			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
		TOTAL (In Rs.)				6423.61			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.21	Cum	584.64	122.40	12.24		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					12.24		
AOC FOR FALL/BRIDGE (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.	100.000	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.	1.251	Cum	6914.20	8648.97	0.52	0.54	1.08
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.538	Cum	1075.00	578.23			
		Coarse Aggregates (100 Km lead)	1.076	Cum	1398.00	1503.93			
		Cement (30 km lead)	0.516	MT	742.00	382.87			
		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.)				12294.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.54	Cum	584.64	314.47	31.45		
		Coarse Aggregate	1.08	Cum	944.26	1015.81	101.58		
		<i>Total</i>					133.03		
AOC FOR FALL/CULVERT (Ch.-2.800 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.	1.30	Cum	5021.30	6547.45	0.15	0.42	
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.	12.613	Sqm	340.20	4291.02	0.654	0.184	
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.	1.811	Sqm	63.20	114.42	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)
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.	0.773	Cum	6914.20	5346.02	0.32	0.33	0.66
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	4.358	Sqm	578.60	2521.52			
6	WRD 5.3.22	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.	0.02	Mt	73574.90	1116.42			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	0.934	Cum	1075.00	1003.93			
		Coarse Aggregates (100 Km lead)	0.665	Cum	1398.00	929.60			
		Cement (30 km lead)	1.126	MT	742.00	835.30			
		Brick (15 km lead)	651.00	No.	3.18	2070.18			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						24775.86			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.93	Cum	584.64	545.99	54.60		
		Coarse Aggregate	0.66	Cum	944.26	627.88	62.79		
		<i>Total</i>					117.39		
AOC 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 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.	0.865	Cum	6914.20	5977.40	0.36	0.37	0.74
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.372	Cum	1075.00	399.62			
		Coarse Aggregates (100 Km lead)	0.743	Cum	1398.00	1039.38			
		Cement (30 km lead)	0.357	MT	742.00	264.61			
		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.)						7681.01			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.37	Cum	584.64	217.33	21.73		
		Coarse Aggregate	0.74	Cum	944.26	702.04	70.20		
		<i>Total</i>					91.94		

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)
ABSTRACT OF COST OF REPAIRED STRUCTURES OF THUMBHI MR.									
AOC FOR FALL (Ch.-0.055 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.	3.692	Cum	6914.20	25526.47	1.52	1.59	3.18
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.588	Cum	1075.00	1706.58			
		Coarse Aggregates (100 Km lead)	3.175	Cum	1398.00	4438.69			
		Cement (30 km lead)	1.523	MT	742.00	1130.00			
		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.)						34218.25			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.59	Cum	584.64	928.12	92.81		
		Coarse Aggregate	3.18	Cum	944.26	2998.05	299.80		
<i>Total</i>							392.62		
AOC FOR BRIDGE/FALL (Ch.-0.545 Km)									
1		Structure is in good condition and does not require any repair works.							
AOC FOR FALL (Ch.-0.965 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.	17.059	Cum	2492.58	42521.79			
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.)						42521.79			
		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		
<i>Total</i>							0.00		
AOC FOR ROAD CROSSING (Ch.-1.750 Km)									
1		Structure is in good condition and does not require any repair works.							
AOC FOR BRIDGE (Ch.-1.950 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.	100.000	Sqm	11.80	1180.44			
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.	38.494	Sqm	340.20	13095.76	1.996	0.562	
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.	38.494	Sqm	63.20	2432.84	0.06		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.562	Cum	1075.00	604.17			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.053	MT	742.00	1523.54			
		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.)						18836.74			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.56	Cum	584.64	328.58	32.86		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							32.86		
AOC FOR BRIDGE/FALL (Ch.-2.215 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 royalty as per specification and direction of E/I.	1.07	Cum	5021.30	5397.28	0.12	0.34	
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.	9.879	Sqm	340.20	3360.90	0.512	0.144	
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.	2.158	Sqm	63.20	136.38	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.	3.552	Cum	6914.20	24559.15	1.47	1.53	3.05
5		Carriage of materials							
		Coarse Sand (60 Km lead)	2.016	Cum	1075.00	2166.72			
		Coarse Aggregates (100 Km lead)	3.055	Cum	1398.00	4270.48			
		Cement (30 km lead)	2.104	MT	742.00	1561.46			
		Brick (15 km lead)	537.00	No.	3.18	1707.66			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						43160.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.02	Cum	584.64	1178.37	117.84		
		Coarse Aggregate	3.05	Cum	944.26	2884.44	288.44		
<i>Total</i>							406.28		
AOC FOR BRIDGE/FALL (Ch.-2.715Km)									
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	5.4.6	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.	1.17	Cum	5021.30	5877.09	0.13	0.37	
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.	10.826	Sqm	340.20	3683.17	0.561	0.158	
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.	1.756	Sqm	63.20	110.96	0.00		
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.	1.399	Cum	6914.20	9673.19	0.58	0.60	1.20
6		Carriage of materials							
		Coarse Sand (60 Km lead)	1.134	Cum	1075.00	1219.25			
		Coarse Aggregates (100 Km lead)	1.203	Cum	1398.00	1682.03			
		Cement (30 km lead)	1.276	MT	742.00	946.65			
		Brick (15 km lead)	585.00	No.	3.18	1860.30			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						26823.30			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.13	Cum	584.64	663.09	66.31		
		Coarse Aggregate	1.20	Cum	944.26	1136.10	113.61		
<i>Total</i>							179.92		
AOC FOR FALL (Ch.-3.300 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.	13.599	Cum	2492.58	33895.79			
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.)						33895.79			
		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.-4.010 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.	1.481	Cum	2492.58	3692.33			
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.)						3692.33			
		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.-4.450 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	5.5.5	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.	38.494	Sqm	340.20	13095.76	1.996	0.562	
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.	38.494	Sqm	63.20	2432.84	0.06		
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.	1.399	Cum	6914.20	9673.19	0.58	0.60	1.20
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.164	Cum	1075.00	1250.87			
		Coarse Aggregates (100 Km lead)	1.203	Cum	1398.00	1682.03			
		Cement (30 km lead)	2.630	MT	742.00	1951.75			
		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.)						31502.96			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.16	Cum	584.64	680.29	68.03		
		Coarse Aggregate	1.20	Cum	944.26	1136.10	113.61		
Total							181.64		
AOC FOR FALL (Ch.-5.010 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.	17.960	Cum	2492.58	44767.41			
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.)						44767.41			

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	0.00	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.-5.240 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.	1.08	Cum	5021.30	5408.76	0.12	0.34	
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.	10.035	Sqm	340.20	3413.78	0.520	0.147	
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.	1.701	Sqm	63.20	107.49	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.491	Cum	1075.00	528.04			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.647	MT	742.00	479.95			
		Brick (15 km lead)	538.00	No.	3.18	1710.84			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
		TOTAL (In Rs.)				11648.86			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.49	Cum	584.64	287.17	28.72		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					28.72		
AOC FOR PIPE CULVERT (Ch.-5.545 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.	120.000	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.	2.46	Cum	6381.70	15667.07	0.80	1.10	2.21
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.	16.560	Sqm	578.60	9581.62			
4	WRD 5.3.22	Providing M.S. reinforcements 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.	0.05	Mt	73574.90	3544.79			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.105	Cum	1075.00	1187.61			
		Coarse Aggregates (100 Km lead)	2.210	Cum	1398.00	3088.88			
		Cement (30 km lead)	0.795	MT	742.00	590.20			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.05	MT	742.00	35.75			
		TOTAL (In Rs.)				35112.45			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.10	Cum	584.64	645.88	64.59		
		Coarse Aggregate	2.21	Cum	944.26	2086.34	208.63		
		Total					273.22		
AOC FOR FALL (Ch.-5.755 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	5.3.4	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.	0.47	Cum	6381.70	3015.35	0.15	0.21	0.43

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	5.3.5	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.	6.507	Cum	6914.20	44994.02	2.68	2.80	5.60
6		Carriage of materials							
		Coarse Sand (60 Km lead)	3.011	Cum	1075.00	3236.65			
		Coarse Aggregates (100 Km lead)	6.022	Cum	1398.00	8418.31			
		Cement (30 km lead)	2.837	MT	742.00	2105.37			
		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.)						63186.24			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.01	Cum	584.64	1760.26	176.03		
		Coarse Aggregate	6.02	Cum	944.26	5686.03	568.60		
<i>Total</i>							744.63		

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 SOTHIDIH MR									
AOC FOR CD WORK (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.	180.000	Sqm	11.80	2124.79			
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.	72.420	Sqm	63.20	4576.97	0.109		
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)	0.109	MT	742.00	80.60			
		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.)						6782.37			
		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		
<i>Total</i>							0.00		
AOC FOR CD WORK (Ch.-0.310 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.	200.000	Sqm	11.80	2360.88			
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.	72.420	Sqm	63.20	4576.97	0.109		
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)	0.109	MT	742.00	80.60			
		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.)						7018.46			
		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		
<i>Total</i>							0.00		
AOC FOR PIPE CULVERT (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.	180.000	Sqm	11.80	2124.79			
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.	13.859	Sqm	340.20	4714.76	0.718	0.202	
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.	13.859	Sqm	63.20	875.88	0.021		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.202	Cum	1075.00	217.51			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.739	MT	742.00	548.51			
		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.)						8481.45			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.20	Cum	584.64	118.30	11.83		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							11.83		
AOC FOR PIPE LINE (Ch.-0.535 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.	180.000	Sqm	11.80	2124.79			
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.	49.175	Sqm	340.20	16729.34	2.549	0.718	

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.	49.175	Sqm	63.20	3107.86	0.074		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.718	Cum	1075.00	771.80			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.623	MT	742.00	1946.26			
		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.)						24680.05			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.72	Cum	584.64	419.75	41.97		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					41.97		
AOC FOR CD WORK (Ch.-0.585 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.	23.335	Sqm	340.20	7938.73	1.210	0.341	
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.	23.335	Sqm	63.20	1474.80	0.04		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.341	Cum	1075.00	366.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.245	MT	742.00	923.58			
		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.)						10703.36			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.34	Cum	584.64	199.19	19.92		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					19.92		
AOC FOR PPIPE CULVERT (Ch.-0.640 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.	140.000	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.	23.500	Sqm	340.20	7994.70	1.218	0.343	
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.	23.500	Sqm	63.20	1485.20	0.035		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.343	Cum	1075.00	368.83			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.253	MT	742.00	930.09			
		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.)						12431.44			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.34	Cum	584.64	200.59	20.06		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					20.06		
AOC FOR CD WORK (Ch.-0.810 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.	120.000	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.	23.500	Sqm	340.20	7994.70	1.218	0.343	
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.	23.500	Sqm	63.20	1485.20	0.035		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.343	Cum	1075.00	368.83			

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)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.253	MT	742.00	930.09			
		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.)						12195.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.34	Cum	584.64	200.59	20.06		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					20.06		
AOC FOR BRIDGE (Ch.-0.830 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.	24.500	Sqm	340.20	8334.90	1.270	0.358	
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.	24.500	Sqm	63.20	1548.40	0.037		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.358	Cum	1075.00	384.53			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.307	MT	742.00	969.67			
		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.)						11237.50			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.36	Cum	584.64	209.13	20.91		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					20.91		
AOC FOR FALL/BRIDGE (Ch.-1.015 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.	1.061	Cum	6914.20	7333.65	0.44	0.46	0.91
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.456	Cum	1075.00	490.29			
		Coarse Aggregates (100 Km lead)	0.912	Cum	1398.00	1275.22			
		Cement (30 km lead)	0.438	MT	742.00	324.64			
		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.)						9423.80			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.46	Cum	584.64	266.65	26.66		
		Coarse Aggregate	0.91	Cum	944.26	861.33	86.13		
		<i>Total</i>					112.80		
AOC FOR PIPE CULVERT (Ch.-1.560 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	5.5.5	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.	30.660	Sqm	340.20	10430.53	1.589	0.448	
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.	30.660	Sqm	63.20	1937.71	0.046		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.448	Cum	1075.00	481.21			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.635	MT	742.00	1213.47			
		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.)						15597.49			
		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	0.45	Cum	584.64	261.71	26.17		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					26.17		
AOC FOR FALL (Ch.-1.805 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 royalty as per specification and direction of E/I.	0.21	Cum	5021.30	1056.04	0.02	0.07	
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.	2.201	Sqm	340.20	748.66	0.114	0.032	
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.	1.463	Sqm	63.20	92.46	0.002		
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.	3.065	Cum	6914.20	21190.14	1.26	1.32	2.64
6		Carriage of materials							
		Coarse Sand (60 Km lead)	1.417	Cum	1075.00	1523.56			
		Coarse Aggregates (100 Km lead)	2.636	Cum	1398.00	3684.66			
		Cement (30 km lead)	1.405	MT	742.00	1042.29			
		Brick (15 km lead)	105.00	No.	3.18	333.90			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						31088.24			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.42	Cum	584.64	828.59	82.86		
		Coarse Aggregate	2.64	Cum	944.26	2488.75	248.88		
		<i>Total</i>					331.73		
AOC FOR PIPE CULVERT (Ch.-2.450 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.	100.000	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 royalty 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.	13.350	Sqm	340.20	4541.75	0.692	0.195	
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.	1.829	Sqm	63.20	115.58	0.003		
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.823	Cum	1075.00	884.77			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.921	MT	742.00	683.34			
		Brick (15 km lead)	981.00	No.	3.18	3119.58			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						20381.84			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.82	Cum	584.64	481.19	48.12		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		<i>Total</i>					48.12		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF MAHUARY SUB DISTRIBUTARY								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.955 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.						
		<i>Parapet Railing</i>	8	0.80		2	12.80	<i>Sqm</i>
		<i>Parapet Post</i>	4	1.20		1	4.80	<i>Sqm</i>
		TOTAL					17.60	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/HR FOR BARIAWA MR (Ch.-0.975 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.						
		<i>Gate abutment</i>	2	0.45	1.50	3.00	4.05	<i>Cum</i>
		<i>Gate Bottom</i>	1	0.45	1.50	0.50	0.34	<i>Cum</i>
		<i>Floor</i>	1	4.00	3.32	0.50	6.64	<i>Cum</i>
		TOTAL					11.03	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.1.575 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.						
		<i>Abutment Left Side</i>	1	0.35	0.3	2.7	0.28	<i>Cum</i>
			1	0.35	0.3	2.45	0.26	<i>Cum</i>
			1	0.35	0.3	2.2	0.23	<i>Cum</i>
			1	0.35	0.3	1.95	0.20	<i>Cum</i>
			1	1.5	0.3	1.7	0.77	<i>Cum</i>
		TOTAL					1.74	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.						
		<i>Abutment Left Side</i>	1	13.41		2.8	37.55	<i>Sqm</i>
		<i>Abutment Right Side</i>	1	13.41		2.8	37.55	<i>Sqm</i>
		TOTAL					75.10	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.						
		<i>Abutment Left Side</i>	1	13.41		0.5	6.71	<i>Sqm</i>
		<i>Abutment Right Side</i>	1	13.41		0.5	6.71	<i>Sqm</i>
		TOTAL					13.41	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.							
			Floor	1	8	4.81584	0.457	17.61	Cum
			TOTAL					17.61	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.2.600 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 D/S	1	5.0292	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 D/S	2	5.03		2.09	21.02	Sqm
			TOTAL					21.02	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	2	5.03		0.3	3.02	Sqm
			TOTAL					3.02	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.2.630 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 royalty as per specification and direction of E/I.							
			Parapet Wall D/S	1	4.93776	0.25	0.6	0.74	Cum
			TOTAL					0.74	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	4.94		12.25	120.98	Sqm
			TOTAL					120.98	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 D/S	2	4.94		0.3	2.96	Sqm
			TOTAL					2.96	Sqm
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.-2.645 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
			TOTAL					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.							
		<i>Wing Wall</i>	1	4.00	0.45	1.2	2.16	Cum	
		TOTAL						2.16	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.							
		<i>Wing Wall</i>	2	4.00		1.2	9.60	Sqm	
			2		0.45	1.2	1.08	Sqm	
		TOTAL						10.68	Sqm
4	WRD 5.3.22	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.							
		<i>0.25% skin Reinforcement for Transition Walls</i>	2.16	0.0025	0.005	7850	42.39	kg	
		TOTAL Weight of Steel (in Kg)						42.39	kg
		TOTAL Weight of Steel (in Tonne)						0.04	MT
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.							
		<i>Wing Wall</i>	4	9.00		1.65	59.40	Sqm	
		<i>Abutment</i>	2	5.00		1.95	19.50	Sqm	
		TOTAL						78.90	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.							
		<i>Wing Wall</i>	4	9.00		1.65	59.40	Sqm	
		<i>Abutment</i>	2	5.00		1.95	19.50	Sqm	
		TOTAL						78.90	Sqm
QUANTITIES OF REPAIRING WORK FOR HR FOR ITMA MR.(Ch.-3.985 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.							
		<i>Gate abutment</i>	2	0.45	1.50	2.00	2.70	Cum	
		<i>Gate Bottom</i>	1	0.45	1.00	0.50	0.23	Cum	
		<i>Floor</i>	1	3.00	3.32	0.50	4.98	Cum	
		TOTAL						7.91	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.4.000 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.							
		<i>Parapet Wall D/S</i>	2	4.8768	0.25	0.92	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.							

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		Parapet Wall D/S	2	4.88		2.09	20.39	Sqm	
		TOTAL						20.39	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	2	4.88		0.3	2.93	Sqm	
		TOTAL						2.93	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/ BRIDGE / HR FOR MALI MR. (Ch.4.520 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.							
		Gate abutment	2	0.45	1.50	2.00	2.70	Cum	
			2	0.45	1.50	1.00	1.35	Cum	
		Gate Bottom	1	0.45	1.00	0.50	0.23	Cum	
		D/S Wing Wall	2	5.00	0.45	1.00	4.50	Cum	
		TOTAL						8.78	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/ CULVERT (Ch.5.030 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.							
		Pitching in Side slope D/S (Right Side)	1	2.50	1.30	0.15	0.49	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 royalty as per specification and direction of E/I.							
		Parapet Wall D/S	2	3.77952	0.25	0.5	0.94	Cum	
		TOTAL						0.94	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		1.25	9.45	Sqm	
		TOTAL						9.45	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.							
		Parapet Wall D/S	2	3.78		0.3	2.27	Sqm	
		TOTAL						2.27	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.5.380 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.							

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Approach Slab	1	7.00	5.06	0.15	5.31	Cum
		TOTAL					5.31	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.5.710 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.						
		Approach Slab	1	7.00	3.35	0.15	3.52	Cum
		TOTAL					3.52	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.						
		Floor	1	3.5	8	0.457	12.80	Cum
		TOTAL					12.80	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.6.560 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	1	6.00	3.44	0.15	3.16	Cum
		Crest	1	3.44	0.34	0.31	0.35	Cum
		TOTAL					3.51	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE / HR FOR THUMBHI MR./FALL (Ch.7.260 Km)								
1	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.						
		CR Gate Face both side	2	3.38	2		13.53	Sqm
		Railing	2	3.38	0.02		0.14	Sqm
		Padestal	1	3.38	1.02		3.45	Sqm
		Stair	1	2.00	0.1		0.20	Sqm
		TOTAL					17.32	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	7.00	3.38	0.15	3.60	Cum
		Crest	1	3.38	0.61	0.18	0.38	Cum
		TOTAL					3.98	Cum
3	5.8.9	Dismantling RCC work including stacking serviceable materials in stacks within 15 meter load and disposal of unserviceable materials with all loads as per building specifications						
		Gate abutment	1	1.50	0.50	2.50	1.88	Cum
		Gate Bottom	1	1.50	1.00	0.50	0.75	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						2.63	Cum
QUANTITIES OF REPAIRING WORK FOR FALL /BRIDGE (Ch.8.200Km)									
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.							
			<i>Floor</i>	1	8.00	3.32	0.153	4.07	<i>Cum</i>
		TOTAL						4.07	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.8.900Km)									
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.							
			<i>Floor</i>	1	8.00	3.32	0.46	12.15	<i>Cum</i>
		TOTAL						12.15	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.9.000Km)									
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.							
		<i>Parapet Wall both Side</i>	2	4.572	0.35	0.92	2.94	<i>Cum</i>	
		TOTAL						2.94	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.							
		<i>Parapet Wall D/S</i>	2	4.57		2.29	20.94	<i>Sqm</i>	
		TOTAL						20.94	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.							
		<i>Parapet Wall D/S</i>	2	4.57		2.29	20.94	<i>Sqm</i>	
		TOTAL						20.94	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.9.245Km)									
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.							
		<i>Parapet Wall both Side</i>	2	4.1148	0.45	0.5	1.85	<i>Cum</i>	
		TOTAL						1.85	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.							
		<i>Parapet Wall D/S</i>	2	4.11		1.1	9.05	<i>Sqm</i>	
		TOTAL						9.05	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall D/S</i>	2	4.11		0.2	1.65	<i>Sqm</i>
		TOTAL					1.65	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.10.600Km)								
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.						
		<i>Wearing Coat</i>	1	3.36108	4.02336	0.075	1.01	<i>Cum</i>
		TOTAL					1.01	<i>Sqm</i>
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.						
		<i>Floor</i>	1	7.00	3.02	0.61	12.86	<i>Cum</i>
		TOTAL					12.86	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.11.300Km)								
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.						
		<i>Damaged Abutment D/S (Right Side)</i>	1	2.7432	0.25	0.3	0.21	<i>Cum</i>
		TOTAL					0.21	<i>Cum</i>
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.						
		<i>Floor</i>	1	7.00	3.02	0.15	3.23	<i>Cum</i>
		TOTAL					3.23	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.11.480 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.						
		<i>Parapet Wall both Side</i>	2	4.11	0.45	0.5	1.85	<i>Cum</i>
		TOTAL					1.85	<i>Cum</i>
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.						
		<i>Parapet Wall D/S</i>	2	4.11		1.1	9.05	<i>Sqm</i>
		TOTAL					9.05	<i>Sqm</i>

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	2	4.11		0.2	1.65	Sqm
		TOTAL					1.65	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL/HR FOR SOTHIDIH MR. (Ch.12.000 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.						
		Wing Wall	4	3.50	0.25	2	7.00	Cum
		TOTAL					7.00	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.						
		Wing Wall	8	3.50		2	56.00	Sqm
			8		0.25	2	4.00	Sqm
		TOTAL					60.00	Sqm
3	WRD 5.3.22	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.						
		0.25% skin Reinforcement for Transition Walls	7.00	0.0025	0.018	7850	137.38	kg
		TOTAL Weight of Steel (in Kg)					137.38	kg
		TOTAL Weight of Steel (in Tonne)					0.14	MT
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.13.200 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				180.00	Sqm
		TOTAL					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.						
		Parapet Wall	2	4.00		2.85	22.80	Sqm
		TOTAL					22.80	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		2.85	22.80	Sqm
		TOTAL					22.80	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.13.500 Km)								
1	5.5.5	Providing 25mm thick cement plaster (1:4) with approved quality of sand of requisite F.M.						
		Wing wall	4	2.00		1.65	13.20	Sqm
		Abutment	2	4.00		1.65	13.20	Sqm
		Side wall	2	8.00		1.65	26.40	Sqm
		TOTAL					52.80	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							
		<i>Wing wall</i>	4	2.00		1.65	13.20	<i>Sqm</i>	
		<i>Abutment</i>	2	4.00		1.65	13.20	<i>Sqm</i>	
		<i>Side wall</i>	2	8.00		1.65	26.40	<i>Sqm</i>	
		TOTAL						52.80	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR BRIDGE. (Ch.14.535 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.							
		<i>Parapet wall Top</i>	2	3.69	0.45	0.3	1.00	<i>Cum</i>	
		TOTAL						1.00	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.14.780 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.							
		<i>Wing Wall U/S</i>	2	2.50	0.45	1	2.25	<i>Cum</i>	
		<i>Wing Wall D/S</i>	2	2.00	0.45	1	1.80	<i>Cum</i>	
		<i>Abutment</i>	2	3.50	0.30	1	2.10	<i>Cum</i>	
		<i>Floor</i>	1	5.00	2.13	0.45	4.80	<i>Cum</i>	
		<i>Crest</i>	1	2.13	0.45	0.614	0.59	<i>Cum</i>	
		TOTAL						11.54	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.15.550 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.							
		<i>Wing Wall U/S</i>	2	1.00	0.45	1	0.90	<i>Cum</i>	
		<i>Wing Wall D/S</i>	2	1.00	0.45	1	0.90	<i>Cum</i>	
		<i>Abutment</i>	2	2.44	0.25	1	1.22	<i>Cum</i>	
		<i>Floor</i>	1	6.00	2.26	0.3	4.06	<i>Cum</i>	
		<i>Crest</i>	1	2.26	0.45	0.914	0.93	<i>Cum</i>	
		<i>Slab</i>	1	3.57	4.48	0.15	2.40	<i>Cum</i>	
		TOTAL						10.40	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.16.970 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.							
		<i>Damaged Abutment U/S (Left Side)</i>	1	2.7432	0.25	0.3	0.21	<i>Cum</i>	
		TOTAL						0.21	<i>Cum</i>

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.							
			Floor	1	7.00	3.02	0.15	3.23	Cum
			TOTAL					3.23	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT(Ch.17.220 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
			TOTAL					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	4.00	0.45	1.2	2.16	Cum
			TOTAL					2.16	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	4.00		1.2	9.60	Sqm
				2		0.45	1.2	1.08	Sqm
			TOTAL					10.68	Sqm
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.17.780 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				150.00	Sqm
			TOTAL					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.							
			Wing Wall	1	1.40	0.45	1.2	0.76	Cum
			TOTAL					0.76	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	1.40		1.2	3.36	Sqm
				2		0.45	1.2	1.08	Sqm
			TOTAL					4.44	Sqm
4	WRD 5.3.22	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.							
		0.25% skin Reinforcement for Transition Walls		0.76	0.0025	0.002	7850	14.84	kg

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL Weight of Steel (in Kg)					14.84	kg
		TOTAL Weight of Steel (in Tonne)					0.01	MT
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.18.280 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.						
		Wing Wall U/S	2	2.50	0.30	1.5	2.25	Cum
		Wing Wall D/S	2	2.50	0.30	1.5	2.25	Cum
		Abutment	2	3.51	0.30	1.5	3.15	Cum
		Slab	1	3.51	3.96	0.25	3.47	Cum
		TOTAL					11.13	Cum
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.18.290 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
		TOTAL					160.00	Sqm
2	5.3.4	Providing and laying FCC M1-150 with nominal mix of (1:2:4) in foundation of various components of canal or embankment structures with approved quality sand of requisite FM washed and screened including necessary tools and plants, vibrating, curing, excluding cost of form work as well reinforcement, its cutting, bending, binding and placing.						
		Wing Wall	1	2.00	0.45	1	0.90	Cum
		TOTAL					0.90	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	2.00		1	4.00	Sqm
			2		0.45	1	0.90	Sqm
		TOTAL					4.90	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.18.600 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 both Side	2	5.00	0.45	0.5	2.25	Cum
		TOTAL					2.25	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		1.45	14.50	Sqm
		Wing Wall	2	4.50		1.95	17.55	Sqm
		TOTAL					32.05	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	2	5.00		1.45	14.50	Sqm
		Wing Wall	2	4.50		1.95	17.55	Sqm
		TOTAL					32.05	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.19.025 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
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.							
		<i>Parapet Wall U/S</i>	1	3.54	0.45	0.5	0.80	Cum	
		<i>Parapet Wall D/S</i>	1	2.50	0.45	0.5	0.56	Cum	
		TOTAL						1.36	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.							
		<i>Parapet Wall U/S</i>	1	3.54		0.7	2.47	Sqm	
		<i>Parapet Wall D/S</i>	1	2.50		1.1	2.75	Sqm	
		TOTAL						5.22	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.							
		<i>Parapet Wall D/S</i>	2	3.54		0.2	1.41	Sqm	
		TOTAL						1.41	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF BARIWA MR									
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.040 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.							
		Parapet Wall U/S	1	3.00		2.19	6.57	Sqm	
		Parapet Wall D/S	1	3.00		2.19	6.57	Sqm	
		Wing wall	4	2.50		2.45	24.50	Sqm	
		TOTAL						37.64	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 U/S	1	3.00		2.19	6.57	Sqm	
		Parapet Wall D/S	1	3.00		2.19	6.57	Sqm	
		Wing wall	4	2.50		2.45	24.50	Sqm	
		TOTAL						37.64	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.305 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	3.17	0.10	0.92	0.58	Cum	
		TOTAL						0.58	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.							
		Floor	1	7.00	2.17	0.46	6.95	Cum	
		TOTAL						6.95	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.760 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.							
		Floor	1	7.00	2.32	0.31	4.96	Cum	
		TOTAL						4.96	Cum
QUANTITIES OF REPAIRING WORK FOR AQUEDUCT (Ch.-0.940 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				150.00	Sqm	
		TOTAL						150.00	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.							
		<i>SIDE Wall</i>	2	15.00		2.19	65.70	Sqm	
		<i>Wing wall</i>	4	3.20		2.45	31.36	Sqm	
		TOTAL						97.06	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.							
		<i>SIDE Wall</i>	2	15.00		2.19	65.70	Sqm	
		<i>Wing wall</i>	4	3.20		2.45	31.36	Sqm	
		TOTAL						97.06	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.375 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.							
		<i>Parapet Wall U/S</i>	1	2.50		2.19	5.48	Sqm	
		<i>Parapet Wall D/S</i>	1	2.50		2.19	5.48	Sqm	
		<i>Wing wall</i>	4	3.20		2.45	31.36	Sqm	
		TOTAL						42.31	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.							
		<i>Parapet Wall U/S</i>	1	2.50		2.19	5.48	Sqm	
		<i>Parapet Wall D/S</i>	1	2.50		2.19	5.48	Sqm	
		<i>Wing wall</i>	4	3.20		2.45	31.36	Sqm	
		TOTAL						42.31	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-1.650 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	
		TOTAL						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.							
		<i>Abutment</i>	2	8.00		1.5	24.00	Sqm	
		<i>Wing Wall U/S</i>	2	3.00		1.5	9.00	Sqm	
		TOTAL						24.00	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.							
		<i>Abutment</i>	2	8.00		1.5	24.00	Sqm	
		<i>Wing Wall U/S</i>	2	3.00		1.5	9.00	Sqm	
		TOTAL						24.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-2.570 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

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.							
			<i>Floor</i>	1	7.00	2.01	0.15	2.14	Cum
			TOTAL				2.14	Cum	
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (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				120.00	Sqm
			TOTAL				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.							
			<i>Floor</i>	1	7.00	1.92	0.30	4.09	Cum
			<i>Crest</i>	1	1.92	0.30	0.20	0.12	Cum
			TOTAL				4.20	Cum	
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-4.400 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.							
			<i>Parapet Wall U/S</i>	1	3.20	0.25	0.92	0.74	Cum
			<i>Parapet Wall D/S</i>	1	3.20	0.25	0.92	0.74	Cum
			TOTAL				1.47	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.							
			<i>Parapet Wall U/S</i>	1	3.20		2.09	6.69	Sqm
			<i>Parapet Wall D/S</i>	1	3.20		2.09	6.69	Sqm
			TOTAL				13.38	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.							
			<i>Parapet Wall D/S</i>	2	3.20		0.3	1.92	Sqm
			TOTAL				1.92	Sqm	
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-4.990 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.							
			<i>Parapet Wall U/S</i>	1	2.78	0.25	0.92	0.64	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		Parapet Wall D/S	1	2.78	0.25	0.92	0.64	Cum
		TOTAL					1.28	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 U/S	1	2.78		2.09	5.80	Sqm
		Parapet Wall D/S	1	2.78		2.09	5.80	Sqm
		TOTAL					11.61	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	2	2.78		0.3	1.67	Sqm
		TOTAL					1.67	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.						
		Floor	1	5.00	1.83	0.30	2.78	Cum
		TOTAL					2.78	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-5.510 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	1	6.00	1.83	0.15	1.68	Cum
		TOTAL					1.68	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-5.800 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 U/S	1	4.57		2.85	13.03	Sqm
		Abutment D/S	1	4.57		2.85	13.03	Sqm
		TOTAL					26.06	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 U/S	1	4.57		2.85	13.03	Sqm
		Abutment D/S	1	4.57		2.85	13.03	Sqm
		TOTAL					26.06	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-6.560 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall U/S</i>	1	3.66	0.25	0.45	0.41	<i>Cum</i>
		<i>Parapet Wall D/S</i>	1	3.66	0.25	0.92	0.84	<i>Cum</i>
		TOTAL					1.25	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.						
		<i>Parapet Wall U/S</i>	1	3.66		1.15	4.21	<i>Sqm</i>
		<i>Parapet Wall D/S</i>	1	3.66		2.09	7.64	<i>Sqm</i>
		TOTAL					11.85	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.						
		<i>Parapet Wall D/S</i>	2	3.66		0.3	2.19	<i>Sqm</i>
		TOTAL					2.19	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.						
		<i>Wing Wall D/S Top</i>	2	4.00	0.45	0.15	0.54	<i>Cum</i>
		TOTAL					0.54	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-6.830 Km)								
		New Structure has been proposed.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF ITMA MR									
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.300 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	2	8.00		0.5	8.00	Sqm	
		Abutment	2	5.00		0.5	5.00	Sqm	
		TOTAL						13.00	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	2	8.00		0.5	8.00	Sqm	
		Abutment	2	5.00		0.5	5.00	Sqm	
		TOTAL						13.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-0.900 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 U/S	2	2.50	0.30	1.5	2.25	Cum	
		Wing Wall D/S	2	2.50	0.30	1.5	2.25	Cum	
		Abutment	2	3.05	0.30	1.5	2.74	Cum	
		Slab	1	3.05	4.57	0.25	3.48	Cum	
		TOTAL						10.73	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.650 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	3.11		1.5	18.65	Sqm	
		Abutment	2	3.54		1.5	10.61	Sqm	
		TOTAL						29.26	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.895 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.							
		Wing wall	4	2.50		1.65	16.50	Sqm	
		Abutment	2	4.00		1.65	13.20	Sqm	
		Side wall	2	7.00		1.37	19.18	Sqm	
		TOTAL						48.88	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	2.50		1.65	16.50	Sqm	
		Abutment	2	4.00		1.65	13.20	Sqm	
		Side wall	2	7.00		1.37	19.18	Sqm	
		TOTAL						48.88	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Floor</i>	1	5.00	1.28	0.30	1.95	Cum
		TOTAL					1.95	Cum
4	WRD 5.3.22	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.						
		<i>0.25% skin Reinforcement for Transition Walls</i>	1.95	0.0025	0.005	7850	38.19	kg
		TOTAL Weight of Steel (in Kg)					38.19	kg
		TOTAL Weight of Steel (in Tonne)					0.04	MT
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.265 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.						
		<i>Parapet Wall U/S</i>	1	3.66	0.25	0.45	0.41	Cum
		<i>Parapet Wall D/S</i>	1	3.66	0.25	0.45	0.41	Cum
		TOTAL					0.82	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.						
		<i>Parapet Wall U/S</i>	1	3.66		1.15	4.21	Sqm
		<i>Parapet Wall D/S</i>	1	3.66		1.15	4.21	Sqm
		TOTAL					8.41	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.						
		<i>Parapet Wall D/S</i>	2	3.66		0.3	2.19	Sqm
		TOTAL					2.19	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-2.580 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.						
		<i>Floor</i>	1	7.00	1.31	0.30	2.79	Cum
		TOTAL					2.79	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-3.000 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.						
		Wing Wall Left Side	1	2.00	0.45	1.2	1.08	Cum
		Wing Wall & Abutment Top	1	11.83	0.45	0.15	0.80	Cum
		TOTAL					1.88	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.						
		Abutment U/S & D/S	4	2.00		1.2	9.60	Sqm
			4		0.45	1.2	2.16	Sqm
		TOTAL					11.76	Sqm
3	WRD 5.3.22	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						
		0.25% skin Reinforcement for Transition Walls	1.88	0.0025	0.005	7850	36.86	kg
		<i>Total Weight of Steel (in Kg)</i>					36.86	kg
		<i>Total Weight of Steel (in Tonne)</i>					0.04	MT
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.						
		Floor	1	6.00	1.22	0.15	1.11	Cum
		TOTAL					1.11	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.445 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 U/S	1	2.44	0.25	0.92	0.56	Cum
		Parapet Wall D/S	1	2.44	0.25	0.92	0.56	Cum
		TOTAL					1.12	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 U/S	1	2.44		2.09	5.10	Sqm
		Parapet Wall D/S	1	2.44		2.09	5.10	Sqm
		TOTAL					10.19	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 D/S	2	2.44		0.3	1.46	Sqm
		TOTAL					1.46	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.						
		<i>Approach Slab</i>	2	3.50	2.44	0.15	2.56	Cum
		TOTAL					2.56	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.225 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.						
		<i>Parapet Wall U/S</i>	1	2.13	0.25	0.92	0.49	Cum
		<i>Parapet Wall D/S</i>	1	2.13	0.25	0.92	0.49	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.						
		<i>Parapet Wall U/S</i>	1	2.13		2.09	4.46	Sqm
		<i>Parapet Wall D/S</i>	1	2.13		2.09	4.46	Sqm
		TOTAL					8.92	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.						
		<i>Parapet Wall D/S</i>	2	2.13		0.3	1.28	Sqm
		TOTAL					1.28	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.						
		<i>Floor</i>	1	5.00	0.94	0.46	2.16	Cum
		TOTAL					2.16	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.						
		<i>Approach Slab</i>	2	3.50	2.13	0.15	2.24	Cum
		TOTAL					2.24	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF MALI MR								
QUANTITIES OF REPAIRING WORK FOR FALL (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				150.00	Sqm
		TOTAL					150.00	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.						
		<i>Syphon Abutment</i>	8	3.66		4.2672	124.86	Sqm
			8	3.66		2.0117	58.86	Sqm
		<i>Syphon Pier</i>	2	3.66		4.2672	31.22	Sqm
			2	3.66		2.0726	15.16	Sqm
		<i>Syphon barrel outer wall</i>	2	31.70		2.4994	158.46	Sqm
		<i>Syphon barrel Starting wall</i>	1	3.05		6.096	18.58	Sqm
			1	3.05		1.0973	3.34	Sqm
		<i>Syphon Floor</i>	1	31.70		1.585	50.24	Sqm
		TOTAL					460.72	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-0.610 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.						
		<i>Parapet Wall U/S</i>	1	2.13	0.25	0.92	0.49	Cum
		<i>Parapet Wall D/S</i>	1	2.13	0.25	0.92	0.49	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.						
		<i>Parapet Wall U/S</i>	1	2.13		2.09	4.46	Sqm
		<i>Parapet Wall D/S</i>	1	2.13		2.09	4.46	Sqm
		TOTAL					8.92	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.						
		<i>Parapet Wall D/S</i>	2	2.13		0.3	1.28	Sqm
		TOTAL					1.28	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.						
		<i>Floor</i>	1	7.00	1.68	0.31	3.59	Cum
		TOTAL					3.59	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.370 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
		TOTAL					180.00	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.							
			<i>Floor</i>	1	7.00	1.68	0.61	7.16	Cum
			TOTAL					7.16	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.580 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				90.00	Sqm
			TOTAL					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.							
			<i>Abutment U/S</i>	1	1.70	0.25	0.6	0.26	Cum
			TOTAL					0.26	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.							
			<i>Abutment U/S</i>	1	3.02		1.45	4.38	Sqm
			<i>Abutment D/S</i>	1	3.02		1.45	4.38	Sqm
			TOTAL					8.75	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.							
			<i>Abutment U/S & D/S</i>	2	3.02		0.3	1.81	Sqm
			TOTAL					1.81	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (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				100.00	Sqm
			TOTAL					100.00	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.							
			<i>Floor</i>	1	5.00	1.65	0.15	1.25	Cum
			TOTAL					1.25	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-2.800 Km)									

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Abutment U/S & D/S</i>	2	2.83	0.25	0.92	1.30	Cum
		TOTAL					1.30	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.						
		<i>Abutment U/S</i>	1	3.02		2.09	6.31	Sqm
		<i>Abutment D/S</i>	1	3.02		2.09	6.31	Sqm
		TOTAL					12.61	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.						
		<i>Abutment U/S & D/S</i>	2	3.02		0.3	1.81	Sqm
		TOTAL					1.81	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 of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		<i>Crest</i>	1	1.58	0.46	1.07	0.77	Cum
		TOTAL					0.77	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.						
		<i>Crest</i>	2	1.58		1.07	3.38	Sqm
			2		0.46	1.067	0.98	Sqm
		TOTAL					4.36	Sqm
6	WRD 5.3.22	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						
		<i>0.25% skin Reinforcement for Transition Walls</i>	0.77	0.0025	0.002	7850	15.17	kg
		<i>Total Weight of Steel (in Kg)</i>					15.17	kg
		<i>Total Weight of Steel (in Tonne)</i>					0.02	MT
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.						
		<i>Floor</i>	1	6.00	0.95	0.15	0.86	Cum
		TOTAL					0.86	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF THUMBHI MR								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.055 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
		TOTAL					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.						
		Floor	1	5.00	1.55	0.46	3.55	Cum
		Crest	1	1.55	0.45	0.20	0.14	Cum
		TOTAL					3.69	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.545 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.965 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	1.3	3.51	Cum
		Abutment	2	9.00	0.45	1.3	10.53	Cum
		Crest	1	1.58	0.45	0.9	0.64	Cum
		Floor	1	5.00	1.58	0.3	2.38	Cum
		TOTAL					17.06	Cum
QUANTITIES OF REPAIRING WORK FOR INLET (Ch.-1.750 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.950 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				100.00	Sqm
		TOTAL					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.						
		Parapet wall	2	2.35		2.1292	9.99	Sqm
		Wing wall	4	2.50		2.85	28.50	Sqm
		TOTAL					38.49	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	2.35		2.1292	9.99	Sqm
		Wing wall	4	2.50		2.85	28.50	Sqm
		TOTAL					38.49	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.215 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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 U/S	1	1.52	0.25	0.65	0.25	Cum
		Parapet Wall D/S	1	3.60	0.25	0.92	0.83	Cum
		TOTAL					1.07	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 U/S	1	1.52		1.55	2.36	Sqm
		Parapet Wall D/S	1	3.60		2.09	7.52	Sqm
		TOTAL					9.88	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	2	3.60		0.3	2.16	Sqm
		TOTAL					2.16	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.						
		Floor	1	5.00	1.55	0.46	3.55	Cum
		TOTAL					3.55	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.715Km)								
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	5.4.6	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 U/S	1	2.93	0.25	0.8	0.59	Cum
		Parapet Wall D/S	1	2.93	0.25	0.8	0.59	Cum
		TOTAL					1.17	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 U/S	1	2.93		1.85	5.41	Sqm
		Parapet Wall D/S	1	2.93		1.85	5.41	Sqm
		TOTAL					10.83	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	2.93		0.3	1.76	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						1.76	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	5.00	1.65	0.15	1.25	Cum	
		Crest	1	1.65	0.45	0.20	0.15	Cum	
		TOTAL						1.40	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.300 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.							
		Wing Wall	2	2.50	0.45	1.22	2.75	Cum	
		Abutment	2	6.00	0.45	1.22	6.59	Cum	
		Crest	1	1.52	0.45	1.22	0.84	Cum	
		Floor	1	5.00	1.52	0.45	3.43	Cum	
		TOTAL						13.60	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.010 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.							
		Floor	1	6.00	1.65	0.15	1.48	Cum	
		TOTAL						1.48	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.450 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	
		TOTAL						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.							
		Parapet wall	2	2.35		2.1292	9.99	Sqm	
		Wing wall	4	2.50		2.85	28.50	Sqm	
		TOTAL						38.49	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	2.35		2.1292	9.99	Sqm	
		Wing wall	4	2.50		2.85	28.50	Sqm	
		TOTAL						38.49	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							
		Floor	1	5.00	1.65	0.15	1.25	Cum	
		Crest	1	1.65	0.45	0.20	0.15	Cum	
		TOTAL						1.40	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.010 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.						
		Wing Wall	2	2.50	0.45	1.5	3.38	Cum
		Abutment	2	7.00	0.45	1.5	9.45	Cum
		Crest	1	1.58	0.45	1.2	0.86	Cum
		Floor	1	6.00	1.58	0.45	4.28	Cum
		TOTAL					17.96	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.240 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 U/S	1	2.83	0.25	0.6	0.43	Cum
		Parapet Wall D/S	1	2.83	0.25	0.92	0.65	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 U/S	1	2.83		1.45	4.11	Sqm
		Parapet Wall D/S	1	2.83		2.09	5.92	Sqm
		TOTAL					10.03	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	2	2.83		0.3	1.70	Sqm
		TOTAL					1.70	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-5.545 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				120.00	Sqm
		TOTAL					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.						
		Abutment U/S & D/S	2	3.00	0.45	1.2	3.24	Cum
		Deduct Hume Pipe	1	0.79			-0.79	Cum
		TOTAL					2.46	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 U/S & D/S	4	3.00		1.2	14.40	Sqm
			4		0.45	1.2	2.16	Sqm
		TOTAL					16.56	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
4	WRD 5.3.22	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.						
		0.25% skin Reinforcement for Transition Walls	2.46	0.0025	0.006	7850	48.18	kg
		Total Weight of Steel (in Kg)					48.18	kg
		Total Weight of Steel (in Tonne)					0.05	MT
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.755 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
		TOTAL					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.						
		Abutment Left & Right Top	2	3.50	0.45	0.15	0.47	Cum
		TOTAL					0.47	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.						
		Floor	1	7.00	1.52	0.61	6.51	Cum
		TOTAL					6.51	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF SOTHIDIH MR								
QUANTITIES OF REPAIRING WORK FOR CD WORK (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				180.00	Sqm
		TOTAL					180.00	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.						
		<i>Abutment U/S Both Face</i>	2	5.49		3.3	36.21	Sqm
		<i>Abutment D/S Both Face</i>	2	5.49		3.3	36.21	Sqm
		TOTAL					72.42	Sqm
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.310 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
		TOTAL					200.00	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.						
		<i>Abutment U/S Both Face</i>	2	5.49		3.3	36.21	Sqm
		<i>Abutment D/S Both Face</i>	2	5.49		3.3	36.21	Sqm
		TOTAL					72.42	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (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				180.00	Sqm
		TOTAL					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.						
		<i>Parapet wall</i>	2	4.57		1.45	13.26	Sqm
			2	0.25		1.2	0.60	Sqm
		TOTAL					13.86	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.						
		<i>Parapet wall</i>	2	4.57		1.45	13.26	Sqm
			2	0.25		1.2	0.60	Sqm
		TOTAL					13.86	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE LINE (Ch.-0.535 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
		TOTAL					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.						
		<i>U/S Wing wall</i>	2	2.50		1.45	7.25	Sqm
			2	0.25		1.2	0.60	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		Side walls	2	4.00		2.85	22.80	Sqm	
		Abutment wall U/S	1	2.50		2.85	7.13	Sqm	
		Abutment wall D/S	1	4.00		2.85	11.40	Sqm	
		TOTAL						49.18	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 Wing wall	2	2.50		1.45	7.25	Sqm	
			2	0.25		1.2	0.60	Sqm	
		Side walls	2	4.00		2.85	22.80	Sqm	
		Abutment wall U/S	1	2.50		2.85	7.13	Sqm	
		Abutment wall D/S	1	4.00		2.85	11.40	Sqm	
		TOTAL						49.18	Sqm
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.585 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	5.12		1.65	16.90	Sqm	
		Wingwall	4	0.98		1.65	6.44	Sqm	
		TOTAL						23.34	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	5.12		1.65	16.90	Sqm	
		Wingwall	4	0.98		1.65	6.44	Sqm	
		TOTAL						23.34	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-0.640 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				140.00	Sqm	
		TOTAL						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.							
		Parapet wall	2	5.00		2.25	22.50	Sqm	
			2	0.25		2	1.00	Sqm	
		TOTAL						23.50	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		2.25	22.50	Sqm	
			2	0.25		2	1.00	Sqm	
		TOTAL						23.50	Sqm
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-0.810 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				120.00	Sqm	

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						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.							
		<i>Parapet wall</i>	2	5.00		2.25	22.50	<i>Sqm</i>	
			2	0.25		2	1.00	<i>Sqm</i>	
		TOTAL						23.50	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.							
		<i>Parapet wall</i>	2	5.00		2.25	22.50	<i>Sqm</i>	
			2	0.25		2	1.00	<i>Sqm</i>	
		TOTAL						23.50	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.830 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.							
		<i>Parapet wall</i>	2	5.00		2.45	24.50	<i>Sqm</i>	
		TOTAL						24.50	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.							
		<i>Parapet wall</i>	2	5.00		2.45	24.50	<i>Sqm</i>	
		TOTAL						24.50	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-1.015 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.							
		<i>Floor</i>	1	4.00	1.34	0.15	0.82	<i>Cum</i>	
		<i>Crest</i>	1	1.34	0.20	0.91	0.25	<i>Cum</i>	
		TOTAL						1.06	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.560 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	5.5.5	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.							
		<i>Parapet wall</i>	2	5.00		2.85	28.50	<i>Sqm</i>	
			2	0.45		2.4	2.16	<i>Sqm</i>	
		TOTAL						30.66	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.							
		<i>Parapet wall</i>	2	5.00		2.85	28.50	<i>Sqm</i>	

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
			2	0.45		2.4	2.16	Sqm	
		TOTAL						30.66	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.805 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	
		TOTAL						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 royalty as per specification and direction of E/I.							
		Parapet Wall U/S	1	1.34	0.25	0.3	0.10	Cum	
		Parapet Wall D/S	1	0.73	0.25	0.6	0.11	Cum	
		TOTAL						0.21	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 U/S	1	1.34		0.85	1.14	Sqm	
		Parapet Wall D/S	1	0.73		1.45	1.06	Sqm	
		TOTAL						2.20	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	2.44		0.3	1.46	Sqm	
		TOTAL						1.46	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	4.00	1.34	0.46	2.45	Cum	
		Crest	1	1.34	0.50	0.91	0.61	Cum	
		TOTAL						3.06	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.450 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				100.00	Sqm	
		TOTAL						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 royalty as per specification and direction of E/I.							
		Parapet Wall U/S	1	3.05	0.35	0.92	0.98	Cum	
		Parapet Wall D/S	1	3.05	0.35	0.92	0.98	Cum	
		TOTAL						1.96	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
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.							
		<i>Parapet Wall U/S</i>	1	3.05		2.19	6.68	<i>Sqm</i>	
		<i>Parapet Wall D/S</i>	1	3.05		2.19	6.68	<i>Sqm</i>	
		TOTAL						13.35	<i>Sqm</i>
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.							
		<i>Parapet Wall D/S</i>	2	3.05		0.3	1.83	<i>Sqm</i>	
		TOTAL						1.83	<i>Sqm</i>

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 transporting 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 25 no., Total Seigniorage charges						189464.87		

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 transporting to the embankment location within all lifts and lead upto 1000m.							
		<i>For Making RAMP</i>							
			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 place method with front end loader at OMC, and compacting with 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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	Rs.	155373.89
8	Other incidental charge , 3 % = of C	Rs.	4661.22
	<i>Total C+8 = D</i>	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, scaffolding and its removal wherever 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. 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.								
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 foundation 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			
<i>Total</i>							1100.17			
For 120 nos. outlet, Total Seigniorage charges							132020.77			

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, scaffolding and its removal wherever 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. reinforcements 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-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.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 M³
5	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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.	References 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 M³
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 embankments, unloading, 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 lifts 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	

Sl. No.	References 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%				₹ 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.	References 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.	References 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)				1441.00	
	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.	References 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				₹ 420.40	
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 M³

Sl. No.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 12 mm					
	(A)	Providing MS reinforcement plain (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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.	References 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, propping 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.	References 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, propping 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.	References 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.	References 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 M³
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 M³

Sl. No.	References 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 M³
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 M³
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.	References 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 M³
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 SI. No. 257
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	

Sl. No.	References 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	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 2.5 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
	5.6.2.4	1000 mm dia NP3 H.P.					
		Unit: per m					
		Taking Output =	7.5	m			

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		(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
	5.6.2.5	Labour Charges for Laying of 1200 mm NP3 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 .					
		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	

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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, scaffolding and its removal wherever 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 M³
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					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³
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 M³
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 royalty as per specification and direction of E/I.					
		Unit :- Per Sqm					
		Taking Output :- 2.832 cum					
		Materials					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³

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, unloading, 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 lifts 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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	Providing M.S. reinforcements 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.		
			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 foundation 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, scaffolding and its removal wherever 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 transporting 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

**Amba Division – Basdiha Dy.
(Total Cost – Rs. 25.76 Crores)**

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

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) Including Seigniorage Charges	Reference for rate	Page no.
1	Earthwork							
	BASDIHA DISTRIBUTARY	1	Job	35760147.17	0.00	₹ 3,57,60,147.17	AOC Earthwork Basdiha Distributary	49
	SHANKARPUR MINOR	1	Job	4730879.23	0.00	₹ 47,30,879.23	AOC Earthwork Shankarpur mr	51
	KHAIRA MINOR	1	Job	15342835.56	0.00	₹ 1,53,42,835.56	AOC Earthwork Khaira mr	53
	GAMHARIYA MINOR	1	Job	7903976.42	0.00	₹ 79,03,976.42	AOC Earthwork Gamhariya mr	55
	PITAMPURA SUB DY.	1	Job	25179631.21	0.00	₹ 2,51,79,631.21	AOC Earthwork Pritampura Sub Dy.	57
	CHANDAULI MINOR	1	Job	4044545.06	0.00	₹ 40,44,545.06	AOC Earthwork Chandauli mr.	59
	SIMRA MINOR	1	Job	7523398.22	0.00	₹ 75,23,398.22	AOC Earthwork Simra mr.	61
	SALEMPUR MINOR	1	Job	7198034.21	0.00	₹ 71,98,034.21	AOC Earthwork Salempur mr.	63
2	Head Regulator							
	SHANKARPUR MINOR	1	No.	1733026.27	12543.79	₹ 17,45,570.06	HR (AOC) Basdiha Distributary	73
	KHAIRA MINOR	1	No.	2139477.78	14841.02	₹ 21,54,318.80	HR (AOC) Khaira mr.	75
	GAMHARIYA MINOR	1	No.	2639665.52	18356.52	₹ 26,58,022.04	HR (AOC) Gamhariya mr.	77
	PITAMPURA SUB DY.	1	No.	3154486.95	19432.75	₹ 31,73,919.70	HR (AOC) Pritampura Sub dy.	79
	CHANDAULI MINOR	1	No.	1316321.91	8465.13	₹ 13,24,787.04	HR (AOC) Chandauli mr.	81
	SIMRA MINOR	1	No.	2139024.37	15733.86	₹ 21,54,758.23	HR (AOC) Simra Mr.	83
	SALEMPUR MINOR	1	No.	2159238.87	16603.82	₹ 21,75,842.69	HR (AOC) Salempur mr.	85
3	Falls							
	BASDIHA DISTRIBUTARY :							
	0.457 m Fall at Ch. 0.355 Km	1	No.	2378574.33	22710.37	₹ 24,01,284.70	Fall (AOC) Basdiha Distributary	128
	1.981 m Fall at Ch. 1.150 Km	1	No.	7895758.48	75006.19	₹ 79,70,764.67		129
	0.305 m Fall at Ch. 3.050 Km	1	No.	2057780.10	19666.10	₹ 20,77,446.20		130
	1.828 m Fall at Ch. 6.100 Km	1	No.	6247630.84	59322.37	₹ 63,06,953.20		133
	0.610 m AT Ch. 10.060 KM	1	No.	2073391.88	20399.27	₹ 20,93,791.15		134
	1.067 m Fall at Ch. 11.150 Km	1	No.	1964435.72	18483.59	₹ 19,82,919.32		135
	0.762 m Fall at Ch. 11.950 Km	1	No.	1640483.19	14759.94	₹ 16,55,243.13		136
	0.610 m Fall at Ch. 13.800 Km	1	No.	1522852.55	20502.21	₹ 15,43,354.77		137
	0.305 M Fall at Ch. 13.900 Km	1	No.	2512151.04	10300.95	₹ 25,22,451.99		139
	0.457 m Fall at Ch. 14.465 Km	1	No.	2178780.85	17328.07	₹ 21,96,108.91		165
	0.914 m Fall at Ch. 15.515 Km	1	No.	2350368.38	20827.35	₹ 23,71,195.73		140
	1.067 m Fall at Ch. 16.000 Km	1	No.	1504931.76	13353.50	₹ 15,18,285.26		141
	0.762 m Fall at Ch. 18.040 Km	1	No.	1982442.07	17337.61	₹ 19,99,779.67		142
	0.610 m Fall at Ch. 19.700 Km	1	No.	984529.61	8549.21	₹ 9,93,078.82		143
	1.067 m Fall at Ch. 20.100 Km	1	No.	1893805.92	16649.08	₹ 19,10,455.00		145
	0.610 m Fall at Ch. 22.000 Km	1	No.	683564.93	5785.83	₹ 6,89,350.76		146
	SHANKARPUR MINOR							
	1.676 m Fall at Ch. 2.950 Km	1	No.	895092.78	7574.50	₹ 9,02,667.28	Fall (AOC) Shankarpur mr.	148
	1.070 m Fall at Ch. 4.350 Km	1	No.	354005.57	2790.60	₹ 3,56,796.17		149
	KHAIRA MINOR :							
	0.305m Fall at Ch. 3.075 Km	1	No.	564226.21	4823.00	₹ 5,69,049.22		150

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) Including Seigniorage Charges	Reference for rate	Page no.
	1.372 m Fall at Ch. 3.850 Km	1	No.	1100055.45	9576.65	₹ 11,09,632.10	Fall (AOC) Khaira mr.	151
	0.305m Fall at Ch. 6.635 Km	1	No.	846918.84	7255.15	₹ 8,54,173.99		152
	1.372 m Fall at Ch. 8.450 Km	1	No.	1340033.16	11640.55	₹ 13,51,673.70		153
	PITAMPURA SUB DY.							
	1.676 m Fall at Ch. 2.600 Km	1	No.	2575127.48	23526.09	₹ 25,98,653.57	Fall (AOC) Pritampura sub dy.	154
	0.457 m Fall at Ch. 10.600 Km	1	No.	913645.51	7889.69	₹ 9,21,535.20		155
	0.610m Fall at Ch. 12.150 Km	1	No.	832155.96	7208.47	₹ 8,39,364.43		156
	0.610m Fall at Ch. 13.700 Km	1	No.	520044.62	4351.37	₹ 5,24,395.98		157
	SIMRA MINOR :							
	0.610 m Fall at Ch.1.650 Km	1	No.	505193.14	4201.29	₹ 5,09,394.43	Fall (AOC) Simra mr.	158
	0.610 m Fall at Ch.2.475 Km	1	No.	501102.90	4196.74	₹ 5,05,299.64		159
	0.610 m Fall at Ch.3.46 Km	1	No.	454622.94	3752.81	₹ 4,58,375.76		160
	SALEMPUR MINOR :							
	0.457 m Fall at Ch. 0.950 Km	1	No.	536536.76	4563.66	₹ 5,41,100.42	Fall (AOC) Salempur mr.	162
	1.067 m Fall at Ch. 2.900 Km	1	No.	634736.06	5365.46	₹ 6,40,101.52		163
	0.305 m Fall at Ch. 4.370 Km	1	No.	396787.58	3296.31	₹ 4,00,083.88		164
4	Slab Bridge							
	Basdiha Dy.							
	At Km 9.625	1	No.	3050799.00	11517.95	₹ 30,62,316.95	Slab-AOC Basdiha Dy.	276
	Khaira Minor :							
	At Km 3.255	1	No.	1991001.41	5623.39	₹ 19,96,624.81	Slab-AOC Khaira mr.	270
	PITAMPURA SUB DY.							
	At Km 0.410	1	No.	2426888.84	8103.50	₹ 24,34,992.34	Slab-AOC Pritampura Sub dy.	272
	At Km 4.965	1	No.	2416227.86	8048.86	₹ 24,24,276.72		274
5	Brick Sec	1	No.	23390310.74	62151.82	₹ 2,34,52,462.55	Brick Sec AOC	289
6	Repair of Structures							
	<i>BASDIHA DISTRIBUTARY</i>	21	No.	1705963.324	10032.48	₹ 17,15,995.81	Abstract (Repair St.) Basdiha Distributary	291
	<i>SHANKARPUR MINOR</i>	7	No.	239565.3566	164.29	₹ 2,39,729.65	Abstract (Repair St.) Shankarpur mr.	292
	<i>KHAIRA MINOR</i>	15	No.	1069582.252	7052.16	₹ 10,76,634.42	Abstract (Repair St.) Khaira mr.	293
	<i>GAMHARIYA MINOR</i>	9	No.	139873.3823	542.79	₹ 1,40,416.17	Abstract (Repair St.) Gamhariya mr.	294
	<i>PITAMPURA SUB DY.</i>	28	No.	719473.0919	2638.92	₹ 7,22,112.02	Abstract (Repair St.) Pritampura Sub Dy.	295
	<i>CHANDAULI MINOR</i>	9	No.	200579.6032	640.45	₹ 2,01,220.05	Abstract (Repair St.) Chandauli mr.	296
	<i>SIMRA MINOR</i>	4	No.	289163.0259	1228.02	₹ 2,90,391.04	Abstract (Repair St.) Simra mr.	297
	<i>SALEMPUR MINOR</i>	9	No.	381036.0226	3691.03	₹ 3,84,727.05	Abstract (Repair St.) Salempur mr.	298
	<i>APPROACH ROAD</i>	36	No.	521018.55	7578.59	₹ 1,90,29,497.21	Approach Road AOC	405
7	Outlets							
	<i>BASDIHA DISTRIBUTARY</i>	78	No.	127744.47	1100.17	₹ 1,00,49,881.97	Outlet-AOC	403
	<i>SHANKARPUR MINOR</i>	5	No.	127744.47	1100.17	₹ 6,44,223.20		403
	<i>KHAIRA MINOR</i>	12	No.	127744.47	1100.17	₹ 15,46,135.69		403
	<i>GAMHARIYA MINOR</i>	16	No.	127744.47	1100.17	₹ 20,61,514.25		403
	<i>PITAMPURA SUB DY.</i>	53	No.	127744.47	1100.17	₹ 68,28,765.96		403
	<i>CHANDAULI MINOR</i>	5	No.	127744.47	1100.17	₹ 6,44,223.20		403
	<i>SIMRA MINOR</i>	7	No.	127744.47	1100.17	₹ 9,01,912.48		403
	<i>SALEMPUR MINOR</i>	8	No.	127744.47	1100.17	₹ 10,30,757.13		403
8	Kilometer Stone	76	No.	3853.40	0.00	₹ 2,92,858.40	Rates F61	436
	TOTAL (In Rs.)					₹ 25,75,57,095.28		
	TOTAL (In Lacs)					2575.57		

Carriage of Materials -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 (Tipper 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 of Cost =[(18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled 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		
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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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
BASDIHA SUB DY (0.000 TO 23.600 KM)**

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	14.185	7.093	709.250	3.197	1.599	159.850
200	100	10.771	12.478	1247.800	4.510	3.854	385.350
300	100	8.073	9.422	942.200	5.719	5.115	511.450
400	100	12.269	10.171	1017.100	3.071	4.395	439.500
500	100	9.646	10.958	1095.750	5.708	4.390	438.950
600	100	7.052	8.349	834.900	7.452	6.580	658.000
700	100	7.219	7.136	713.550	4.984	6.218	621.800
800	100	7.391	7.305	730.500	4.257	4.621	462.050
900	100	7.937	7.664	766.400	3.975	4.116	411.600
1000	100	8.567	8.252	825.200	4.255	4.115	411.500
1100	100	6.717	7.642	764.200	6.248	5.252	525.150
1200	100	24.014	15.366	1536.550	4.444	5.346	534.600
1300	100	6.345	15.180	1517.950	4.217	4.331	433.050
1400	100	6.348	6.347	634.650	1.610	2.914	291.350
1500	100	5.575	5.962	596.150	2.655	2.133	213.250
1600	100	3.255	4.415	441.500	5.515	4.085	408.500
1700	100	2.766	3.011	301.050	9.549	7.532	753.200
1800	100	2.706	2.736	273.600	11.349	10.449	1044.900
1900	100	2.365	2.536	253.550	7.288	9.319	931.850
2000	100	11.762	7.064	706.350	2.363	4.826	482.550
2100	100	6.359	9.061	906.050	7.141	4.752	475.200
2200	100	4.174	5.267	526.650	4.908	6.025	602.450
2300	100	2.838	3.506	350.600	2.419	3.664	366.350
2400	100	1.537	2.188	218.750	3.253	2.836	283.600
2500	100	1.371	1.454	145.400	3.729	3.491	349.100
2600	100	2.734	2.053	205.250	1.850	2.790	278.950
2700	100	2.513	2.624	262.350	2.629	2.240	223.950
2800	100	2.186	2.350	234.950	3.715	3.172	317.200
2900	100	7.574	4.880	488.000	0.746	2.231	223.050
3000	100	4.674	6.124	612.400	2.494	1.620	162.000
3100	100	4.739	4.707	470.650	2.258	2.376	237.600
3200	100	5.347	5.043	504.300	1.568	1.913	191.300
3300	100	7.043	6.195	619.500	1.623	1.596	159.550
3400	100	4.257	5.650	565.000	2.547	2.085	208.500
3500	100	1.903	3.080	308.000	3.325	2.936	293.600
3600	100	0.743	1.323	132.300	5.485	4.405	440.500
3700	100	0.543	0.643	64.300	8.893	7.189	718.900
3800	100	22.382	11.463	1146.250	3.945	6.419	641.900
3900	100	8.911	15.647	1564.650	1.757	2.851	285.100
4000	100	6.595	7.753	775.300	1.205	1.481	148.100
4100	100	5.949	6.272	627.200	1.507	1.356	135.600
4200	100	6.250	6.100	609.950	1.662	1.585	158.450
4300	100	5.690	5.970	597.000	3.198	2.430	243.000

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	5.426	5.558	555.800	3.791	3.495	349.450
4500	100	4.700	5.063	506.300	2.052	2.922	292.150
4600	100	12.629	8.665	866.450	6.190	4.121	412.100
4700	100	6.852	9.741	974.050	6.447	6.319	631.850
4800	100	8.850	7.851	785.100	5.235	5.841	584.100
4900	100	9.202	9.026	902.600	3.182	4.209	420.850
5000	100	8.196	8.699	869.900	3.002	3.092	309.200
5100	100	7.992	8.094	809.400	1.962	2.482	248.200
5200	100	6.732	7.362	736.200	1.806	1.884	188.400
5300	100	5.036	5.884	588.400	2.563	2.185	218.450
5400	100	3.907	4.472	447.150	3.824	3.194	319.350
5500	100	3.786	3.847	384.650	3.076	3.450	345.000
5600	100	2.764	3.275	327.500	4.645	3.861	386.050
5700	100	2.201	2.483	248.250	6.429	5.537	553.700
5800	100	3.206	2.704	270.350	6.759	6.594	659.400
5900	100	2.464	2.835	283.500	9.414	8.087	808.650
6000	100	2.133	2.299	229.850	11.855	10.635	1063.450
6100	100	31.876	17.005	1700.450	7.982	9.919	991.850
6200	100	8.639	20.258	2025.750	5.189	6.586	658.550
6300	100	7.366	8.003	800.250	3.542	4.366	436.550
6400	100	6.372	6.869	686.900	3.281	3.412	341.150
6500	100	6.685	6.529	652.850	2.327	2.804	280.400
6600	100	8.659	7.672	767.200	2.503	2.415	241.500
6700	100	6.749	7.704	770.400	2.392	2.448	244.750
6800	100	4.932	5.841	584.050	2.437	2.415	241.450
6900	100	6.126	5.529	552.900	2.429	2.433	243.300
7000	100	7.985	7.056	705.550	1.672	2.051	205.050
7100	100	10.270	9.128	912.750	0.683	1.178	117.750
7200	100	5.637	7.954	795.350	2.789	1.736	173.600
7300	100	7.093	6.365	636.500	1.465	2.127	212.700
7400	100	6.805	6.949	694.900	1.121	1.293	129.300
7500	100	6.385	6.595	659.500	4.020	2.571	257.050
7600	100	6.002	6.194	619.350	2.550	3.285	328.500
7700	100	4.708	5.355	535.500	1.715	2.133	213.250
7800	100	3.963	4.336	433.550	2.074	1.895	189.450
7900	100	5.136	4.550	454.950	0.679	1.377	137.650
8000	100	4.720	4.928	492.800	1.547	1.113	111.300
8100	100	5.869	5.295	529.450	1.786	1.667	166.650
8200	100	4.613	5.241	524.100	2.562	2.174	217.400
8300	100	3.938	4.276	427.550	3.773	3.168	316.750
8400	100	3.668	3.803	380.300	3.964	3.869	386.850
8500	100	3.458	3.563	356.300	4.162	4.063	406.300
8600	100	3.279	3.369	336.850	4.355	4.259	425.850
8700	100	3.099	3.189	318.900	4.551	4.453	445.300
8800	100	2.925	3.012	301.200	4.781	4.666	466.600
8900	100	3.176	3.051	305.050	5.168	4.975	497.450

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
9000	100	3.851	3.514	351.350	5.438	5.303	530.300
9100	100	3.912	3.882	388.150	5.156	5.297	529.700
9200	100	4.084	3.998	399.800	4.845	5.001	500.050
9300	100	4.302	4.193	419.300	4.589	4.717	471.700
9400	100	4.333	4.318	431.750	3.391	3.990	399.000
9500	100	4.446	4.390	438.950	3.382	3.387	338.650
9600	100	4.505	4.476	447.550	3.292	3.337	333.700
9700	100	3.659	4.082	408.200	2.271	2.782	278.150
9800	100	3.868	3.764	376.350	1.773	2.022	202.200
9900	100	4.289	4.079	407.850	1.498	1.636	163.550
10000	100	4.559	4.424	442.400	1.465	1.482	148.150
10100	100	6.560	5.560	555.950	2.135	1.800	180.000
10200	100	6.920	6.740	674.000	0.642	1.389	138.850
10300	100	6.597	6.759	675.850	3.357	2.000	199.950
10400	100	5.645	6.121	612.100	2.174	2.766	276.550
10500	100	4.784	5.215	521.450	1.876	2.025	202.500
10600	100	18.602	11.693	1169.300	2.181	2.029	202.850
10700	100	4.409	11.506	1150.550	2.193	2.187	218.700
10800	100	3.078	3.744	374.350	1.546	1.870	186.950
10900	100	3.285	3.182	318.150	1.705	1.626	162.550
11000	100	3.518	3.402	340.150	1.857	1.781	178.100
11100	100	3.912	3.715	371.500	1.787	1.822	182.200
11200	100	8.114	6.013	601.300	2.610	2.199	219.850
11300	100	6.297	7.206	720.550	1.938	2.274	227.400
11400	100	4.535	5.416	541.600	1.571	1.755	175.450
11500	100	3.753	4.144	414.400	1.041	1.306	130.600
11600	100	3.678	3.716	371.550	1.589	1.315	131.500
11700	100	2.907	3.293	329.250	3.856	2.723	272.250
11800	100	25.804	14.356	1435.550	4.751	4.304	430.350
11900	100	6.915	16.360	1635.950	1.639	3.195	319.500
12000	100	6.849	6.882	688.200	1.517	1.578	157.800
12100	100	7.063	6.956	695.600	1.387	1.452	145.200
12200	100	6.271	6.667	666.700	1.725	1.556	155.600
12300	100	5.590	5.931	593.050	2.123	1.924	192.400
12400	100	4.982	5.286	528.600	1.766	1.945	194.450
12500	100	2.759	3.871	387.050	1.083	1.425	142.450
12600	100	3.291	3.025	302.500	0.419	0.751	75.100
12700	100	9.089	6.190	619.000	2.643	1.531	153.100
12800	100	2.861	5.975	597.500	1.297	1.970	197.000
12900	100	1.942	2.402	240.150	2.309	1.803	180.300
13000	100	1.649	1.796	179.550	2.637	2.473	247.300
13100	100	1.417	1.533	153.300	3.564	3.101	310.050
13200	100	1.609	1.513	151.300	4.335	3.950	394.950
13300	100	2.868	2.239	223.850	2.598	3.467	346.650
13400	100	2.192	2.530	253.000	2.274	2.436	243.600
13500	100	1.884	2.038	203.800	2.298	2.286	228.600

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
13600	100	1.964	1.924	192.400	2.829	2.564	256.350
13700	100	2.392	2.178	217.800	3.532	3.181	318.050
13800	100	15.685	9.039	903.850	4.837	4.185	418.450
13900	100	2.143	8.914	891.400	2.105	3.471	347.100
14000	100	1.836	1.990	198.950	2.287	2.196	219.600
14100	100	1.714	1.775	177.500	2.668	2.478	247.750
14200	100	1.541	1.628	162.750	2.896	2.782	278.200
14300	100	1.594	1.568	156.750	3.515	3.206	320.550
14400	100	1.630	1.612	161.200	4.164	3.840	383.950
14500	100	8.488	5.059	505.900	3.143	3.654	365.350
14600	100	6.596	7.542	754.200	1.325	2.234	223.400
14700	100	5.963	6.280	627.950	1.620	1.473	147.250
14800	100	4.055	5.009	500.900	3.746	2.683	268.300
14900	100	3.208	3.632	363.150	6.856	5.301	530.100
15000	100	1.589	2.399	239.850	3.566	5.211	521.100
15100	100	0.827	1.208	120.800	7.358	5.462	546.200
15200	100	1.915	1.371	137.100	5.898	6.628	662.800
15300	100	3.458	2.687	268.650	5.561	5.730	572.950
15400	100	4.971	4.215	421.450	5.954	5.758	575.750
15500	100	6.596	5.784	578.350	6.722	6.338	633.800
15600	100	2.649	4.623	462.250	3.041	4.882	488.150
15700	100	1.985	2.317	231.700	1.714	2.378	237.750
15800	100	0.558	1.272	127.150	3.334	2.524	252.400
15900	100	0.067	0.313	31.250	6.238	4.786	478.600
16000	100	5.878	2.973	297.250	0.405	3.322	332.150
16100	100	2.038	3.958	395.800	2.032	1.219	121.850
16200	100	1.526	1.782	178.200	2.833	2.433	243.250
16300	100	1.937	1.732	173.150	1.097	1.965	196.500
16400	100	1.290	1.614	161.350	1.935	1.516	151.600
16500	100	0.963	1.127	112.650	3.152	2.544	254.350
16600	100	1.040	1.002	100.150	4.256	3.704	370.400
16700	100	1.664	1.352	135.200	3.092	3.674	367.400
16800	100	1.314	1.489	148.900	4.202	3.647	364.700
16900	100	1.014	1.164	116.400	5.447	4.825	482.450
17000	100	0.759	0.887	88.650	6.773	6.110	611.000
17100	100	1.037	0.898	89.800	4.871	5.822	582.200
17200	100	0.490	0.764	76.350	6.454	5.663	566.250
17300	100	3.953	2.222	222.150	1.008	3.731	373.100
17400	100	3.496	3.725	372.450	0.521	0.765	76.450
17500	100	2.805	3.151	315.050	0.804	0.663	66.250
17600	100	2.411	2.608	260.800	1.226	1.015	101.500
17700	100	4.656	3.534	353.350	2.731	1.979	197.850
17800	100	1.329	2.993	299.250	4.822	3.777	377.650
17900	100	1.844	1.587	158.650	4.186	4.504	450.400
18000	100	1.373	1.609	160.850	6.220	5.203	520.300
18100	100	1.757	1.565	156.500	2.807	4.514	451.350

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
18200	100	1.515	1.636	163.600	2.485	2.646	264.600
18300	100	1.228	1.372	137.150	3.390	2.938	293.750
18400	100	1.083	1.156	115.550	4.395	3.893	389.250
18500	100	1.029	1.056	105.600	4.984	4.690	468.950
18600	100	1.050	1.040	103.950	6.112	5.548	554.800
18700	100	1.244	1.147	114.700	7.212	6.662	666.200
18800	100	1.511	1.378	137.750	8.329	7.771	777.050
18900	100	11.192	6.352	635.150	1.580	4.955	495.450
19000	100	2.696	6.944	694.400	1.613	1.597	159.650
19100	100	1.913	2.305	230.450	2.599	2.106	210.600
19200	100	1.161	1.537	153.700	3.064	2.832	283.150
19300	100	0.850	1.006	100.550	2.247	2.656	265.550
19400	100	0.684	0.767	76.700	2.674	2.461	246.050
19500	100	0.829	0.757	75.650	3.373	3.024	302.350
19600	100	1.255	1.042	104.200	4.196	3.785	378.450
19700	100	4.859	3.057	305.700	4.496	4.346	434.600
19800	100	5.074	4.967	496.650	5.683	5.090	508.950
19900	100	5.611	5.343	534.250	7.114	6.399	639.850
20000	100	6.080	5.846	584.550	8.082	7.598	759.800
20100	100	13.075	9.578	957.750	9.625	8.854	885.350
20200	100	5.401	9.238	923.800	3.643	6.634	663.400
20300	100	1.131	3.266	326.600	1.430	2.537	253.650
20400	100	1.010	1.071	107.050	2.006	1.718	171.800
20500	100	0.997	1.004	100.350	2.419	2.213	221.250
20600	100	0.941	0.969	96.900	2.535	2.477	247.700
20700	100	1.965	1.453	145.300	1.626	2.081	208.050
20800	100	2.003	1.984	198.400	1.212	1.419	141.900
20900	100	2.128	2.066	206.550	0.957	1.085	108.450
21000	100	2.611	2.370	236.950	0.926	0.942	94.150
21100	100	9.657	6.134	613.400	0.489	0.708	70.750
21200	100	3.897	6.777	677.700	1.041	0.765	76.500
21300	100	5.083	4.490	449.000	1.363	1.202	120.200
21400	100	3.862	4.473	447.250	0.879	1.121	112.100
21500	100	2.096	2.979	297.900	1.007	0.943	94.300
21600	100	1.452	1.774	177.400	1.498	1.253	125.250
21700	100	0.813	1.133	113.250	2.594	2.046	204.600
21800	100	0.498	0.656	65.550	3.990	3.292	329.200
21900	100	0.534	0.516	51.600	4.788	4.389	438.900
22000	100	1.185	0.860	85.950	2.514	3.651	365.100
22100	100	1.048	1.117	111.650	1.981	2.248	224.750
22200	100	1.021	1.035	103.450	2.086	2.034	203.350
22300	100	0.712	0.867	86.650	2.378	2.232	223.200
22400	100	0.507	0.610	60.950	3.035	2.707	270.650
22500	100	0.930	0.719	71.850	2.548	2.792	279.150
22600	100	12.941	6.936	693.550	3.546	3.047	304.700
22700	100	5.338	9.140	913.950	1.849	2.698	269.750

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
22800	100	2.245	3.792	379.150	5.622	3.736	373.550
22900	100	0.951	1.598	159.800	8.737	7.180	717.950
23000	100	1.189	1.070	107.000	4.762	6.750	674.950
23100	100	0.858	1.024	102.350	4.552	4.657	465.700
23200	100	0.628	0.743	74.300	3.703	4.128	412.750
23300	100	0.708	0.668	66.800	4.506	4.105	410.450
23400	100	0.343	0.526	52.550	6.086	5.296	529.600
23500	100	0.384	0.364	36.350	8.392	7.239	723.900
23600	100	0.525	0.455	45.450	7.986	8.189	818.900
Total				107418.750			81920.600
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							107418.750
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							81920.600
NET QUANTITY OF EARTHWORK IN FILLING							25498.15

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK SHANKARPUR MR (0.000 TO 4.900 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.932	0.466	46.600	2.458	1.229	122.900
200	100	0.742	0.837	83.700	2.559	2.509	250.850
300	100	0.491	0.617	61.650	2.673	2.616	261.600
400	100	0.614	0.553	55.250	2.282	2.478	247.750
500	100	0.851	0.733	73.250	1.987	2.135	213.450
600	100	2.571	1.711	171.100	1.470	1.729	172.850
700	100	0.626	1.599	159.850	1.233	1.352	135.150
800	100	0.262	0.444	44.400	1.476	1.355	135.450
900	100	0.698	0.480	48.000	3.227	2.352	235.150
1000	100	0.633	0.666	66.550	2.640	2.934	293.350
1100	100	0.617	0.625	62.500	1.418	2.029	202.900
1200	100	0.000	0.309	30.850	3.018	2.218	221.800
1300	100	4.297	2.149	214.850	2.537	2.778	277.750
1400	100	0.609	2.453	245.300	1.129	1.833	183.300
1500	100	0.744	0.677	67.650	1.175	1.152	115.200
1600	100	0.871	0.808	80.750	0.858	1.017	101.650
1700	100	0.939	0.905	90.500	0.381	0.620	61.950
1800	100	0.000	0.470	46.950	4.115	2.248	224.800
1900	100	0.026	0.013	1.300	4.790	4.453	445.250
2000	100	0.375	0.201	20.050	2.097	3.444	344.350
2100	100	0.200	0.288	28.750	2.746	2.422	242.150
2200	100	0.088	0.144	14.400	3.821	3.284	328.350
2300	100	3.952	2.020	202.000	1.856	2.839	283.850
2400	100	1.485	2.719	271.850	1.565	1.711	171.050
2500	100	0.734	1.110	110.950	2.718	2.142	214.150
2600	100	0.199	0.467	46.650	2.435	2.577	257.650
2700	100	0.548	0.374	37.350	1.802	2.119	211.850
2800	100	0.000	0.274	27.400	4.305	3.054	305.350
2900	100	0.000	0.000	0.000	6.767	5.536	553.600
3000	100	4.339	2.170	216.950	1.706	4.237	423.650
3100	100	2.233	3.286	328.600	0.484	1.095	109.500
3200	100	0.931	1.582	158.200	0.532	0.508	50.800
3300	100	0.375	0.653	65.300	1.271	0.902	90.150
3400	100	0.519	0.447	44.700	1.251	1.261	126.100
3500	100	0.000	0.260	25.950	3.090	2.171	217.050
3600	100	0.000	0.000	0.000	4.766	3.928	392.800
3700	100	1.787	0.894	89.350	0.747	2.757	275.650
3800	100	0.732	1.260	125.950	0.957	0.852	85.200
3900	100	0.290	0.511	51.100	1.730	1.344	134.350
4000	100	0.412	0.351	35.100	1.064	1.397	139.700
4100	100	0.000	0.206	20.600	3.084	2.074	207.400
4200	100	0.000	0.000	0.000	3.360	3.222	322.200
4300	100	0.000	0.000	0.000	4.498	3.929	392.900

Change	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
4400	100	1.260	0.630	63.000	2.362	3.430	343.000
4500	100	1.180	1.220	122.000	1.648	2.005	200.500
4600	100	0.588	0.884	88.400	0.690	1.169	116.900
4700	100	0.439	0.514	51.350	1.553	1.122	112.150
4800	100	0.371	0.405	40.500	2.920	2.237	223.650
4900	100	0.098	0.235	23.450	5.697	4.309	430.850
Total				3960.900			11209.950
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							3960.900
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							11209.950
NET QUANTITY OF EARTHWORK IN FILLING							7249.05

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK KHAIRA MR (0.000 TO 9.373 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.097	0.049	4.850	6.796	3.398	339.800
200	100	0.188	0.143	14.250	6.831	6.814	681.350
300	100	0.282	0.235	23.500	6.913	6.872	687.200
400	100	0.397	0.340	33.950	3.943	5.428	542.800
500	100	0.837	0.617	61.700	2.188	3.066	306.550
600	100	1.421	1.129	112.900	2.010	2.099	209.900
700	100	1.434	1.428	142.750	1.903	1.957	195.650
800	100	1.573	1.504	150.350	2.551	2.227	222.700
900	100	1.462	1.518	151.750	2.172	2.362	236.150
1000	100	1.001	1.232	123.150	1.801	1.987	198.650
1100	100	0.531	0.766	76.600	4.524	3.163	316.250
1200	100	0.436	0.484	48.350	4.634	4.579	457.900
1300	100	0.396	0.416	41.600	3.546	4.090	409.000
1400	100	0.428	0.412	41.200	5.217	4.382	438.150
1500	100	0.043	0.236	23.550	6.672	5.945	594.450
1600	100	0.502	0.273	27.250	4.660	5.666	566.600
1700	100	0.055	0.279	27.850	4.433	4.547	454.650
1800	100	0.000	0.028	2.750	5.364	4.899	489.850
1900	100	0.000	0.000	0.000	5.433	5.399	539.850
2000	100	0.000	0.000	0.000	5.393	5.413	541.300
2100	100	3.344	1.672	167.200	0.944	3.169	316.850
2200	100	1.042	2.193	219.300	4.790	2.867	286.700
2300	100	0.425	0.734	73.350	3.633	4.212	421.150
2400	100	0.363	0.394	39.400	2.594	3.114	311.350
2500	100	0.268	0.316	31.550	1.771	2.183	218.250
2600	100	0.508	0.388	38.800	4.490	3.131	313.050
2700	100	0.264	0.386	38.600	2.727	3.609	360.850
2800	100	0.121	0.193	19.250	2.926	2.827	282.650
2900	100	0.195	0.158	15.800	4.277	3.602	360.150
3000	100	2.351	1.273	127.300	0.250	2.264	226.350
3100	100	2.004	2.178	217.750	2.533	1.392	139.150
3200	100	2.042	2.023	202.300	0.924	1.729	172.850
3300	100	1.079	1.561	156.050	2.598	1.761	176.100
3400	100	0.614	0.847	84.650	2.002	2.300	230.000
3500	100	0.199	0.407	40.650	2.040	2.021	202.100
3600	100	0.000	0.100	9.950	3.792	2.916	291.600
3700	100	0.000	0.000	0.000	5.733	4.763	476.250
3800	100	0.000	0.000	0.000	6.998	6.366	636.550
3900	100	0.305	0.153	15.250	3.026	5.012	501.200
4000	100	0.423	0.364	36.400	1.262	2.144	214.400
4100	100	0.090	0.257	25.650	2.985	2.124	212.350
4200	100	0.092	0.091	9.100	3.700	3.343	334.250
4300	100	0.109	0.101	10.050	4.199	3.950	394.950

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	1.253	0.681	68.100	0.760	2.480	247.950
4500	100	1.125	1.189	118.900	2.047	1.404	140.350
4600	100	1.115	1.120	112.000	1.468	1.758	175.750
4700	100	1.102	1.109	110.850	1.353	1.411	141.050
4800	100	0.410	0.756	75.600	3.643	2.498	249.800
4900	100	0.739	0.575	57.450	2.752	3.198	319.750
5000	100	0.750	0.745	74.450	2.108	2.430	243.000
5100	100	0.046	0.398	39.800	3.116	2.612	261.200
5200	100	0.000	0.023	2.300	4.904	4.010	401.000
5300	100	0.000	0.000	0.000	5.118	5.011	501.100
5400	100	0.000	0.000	0.000	5.180	5.149	514.900
5500	100	1.316	0.658	65.800	2.269	3.725	372.450
5600	100	0.298	0.807	80.700	2.774	2.522	252.150
5700	100	0.226	0.262	26.200	2.791	2.783	278.250
5800	100	0.114	0.170	17.000	2.715	2.753	275.300
5900	100	0.036	0.075	7.500	2.719	2.717	271.700
6000	100	0.069	0.053	5.250	3.495	3.107	310.700
6100	100	0.157	0.113	11.300	4.444	3.970	396.950
6200	100	0.250	0.204	20.350	5.207	4.826	482.550
6300	100	0.346	0.298	29.800	5.788	5.498	549.750
6400	100	0.209	0.278	27.750	5.817	5.803	580.250
6500	100	0.047	0.128	12.800	6.718	6.268	626.750
6600	100	0.000	0.024	2.350	7.267	6.993	699.250
6700	100	0.713	0.357	35.650	1.779	4.523	452.300
6800	100	0.419	0.566	56.600	1.106	1.443	144.250
6900	100	0.477	0.448	44.800	1.227	1.167	116.650
7000	100	0.901	0.689	68.900	1.782	1.505	150.450
7100	100	0.542	0.722	72.150	1.555	1.669	166.850
7200	100	0.150	0.346	34.600	2.470	2.013	201.250
7300	100	0.040	0.095	9.500	3.479	2.975	297.450
7400	100	0.026	0.033	3.300	4.619	4.049	404.900
7500	100	0.693	0.360	35.950	1.887	3.253	325.300
7600	100	0.572	0.633	63.250	3.059	2.473	247.300
7700	100	0.230	0.401	40.100	4.115	3.587	358.700
7800	100	0.055	0.143	14.250	5.388	4.752	475.150
7900	100	0.000	0.028	2.750	6.827	6.108	610.750
8000	100	0.649	0.325	32.450	4.596	5.712	571.150
8100	100	0.516	0.583	58.250	2.819	3.708	370.750
8200	100	0.714	0.615	61.500	2.705	2.762	276.200
8300	100	1.086	0.900	90.000	1.070	1.888	188.750
8400	100	0.174	0.630	63.000	1.919	1.495	149.450
8500	100	3.187	1.681	168.050	0.724	1.322	132.150
8600	100	0.641	1.914	191.400	1.594	1.159	115.900
8700	100	0.343	0.492	49.200	1.897	1.746	174.550
8800	100	0.105	0.224	22.400	2.765	2.331	233.100
8900	100	0.039	0.072	7.200	2.932	2.849	284.850

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
9000	100	0.300	0.170	16.950	1.710	2.321	232.100
9100	100	0.534	0.417	41.700	1.682	1.696	169.600
9200	100	0.273	0.404	40.350	2.014	1.848	184.800
9300	100	0.144	0.209	20.850	2.488	2.251	225.100
9373	73	0.000	0.072	5.256	3.053	2.771	202.247
Total				5003.256			31261.747
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							5003.256
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							31261.747
NET QUANTITY OF EARTHWORK IN FILLING							26258.49

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK GAMHARIA MR (0.000 TO 6.100 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.789	0.395	39.450	3.324	1.662	166.200
200	100	0.777	0.783	78.300	4.682	4.003	400.300
300	100	0.874	0.826	82.550	4.860	4.771	477.100
400	100	0.539	0.707	70.650	5.596	5.228	522.800
500	100	9.316	4.928	492.750	2.932	4.264	426.400
600	100	3.226	6.271	627.100	0.666	1.799	179.900
700	100	2.555	2.891	289.050	0.174	0.420	42.000
800	100	1.005	1.780	178.000	2.596	1.385	138.500
900	100	0.730	0.868	86.750	1.787	2.192	219.150
1000	100	0.091	0.411	41.050	4.159	2.973	297.300
1100	100	0.435	0.263	26.300	5.586	4.873	487.250
1200	100	0.386	0.411	41.050	6.710	6.148	614.800
1300	100	0.275	0.331	33.050	7.728	7.219	721.900
1400	100	0.124	0.200	19.950	8.903	8.316	831.550
1500	100	0.000	0.062	6.200	8.195	8.549	854.900
1600	100	6.321	3.161	316.050	0.242	4.219	421.850
1700	100	1.365	3.843	384.300	1.615	0.929	92.850
1800	100	1.248	1.307	130.650	1.769	1.692	169.200
1900	100	0.486	0.867	86.700	1.173	1.471	147.100
2000	100	1.342	0.914	91.400	0.516	0.845	84.450
2100	100	1.297	1.320	131.950	0.225	0.371	37.050
2200	100	1.472	1.385	138.450	0.305	0.265	26.500
2300	100	0.757	1.115	111.450	0.855	0.580	58.000
2400	100	0.291	0.524	52.400	0.817	0.836	83.600
2500	100	3.508	1.900	189.950	0.788	0.803	80.250
2600	100	2.922	3.215	321.500	1.240	1.014	101.400
2700	100	1.841	2.382	238.150	2.668	1.954	195.400
2800	100	0.494	1.168	116.750	1.010	1.839	183.900
2900	100	0.595	0.545	54.450	3.613	2.312	231.150
3000	100	0.350	0.473	47.250	4.375	3.994	399.400
3100	100	0.061	0.206	20.550	5.222	4.799	479.850
3200	100	0.000	0.031	3.050	6.070	5.646	564.600
3300	100	4.580	2.290	229.000	1.572	3.821	382.100
3400	100	3.118	3.849	384.900	0.554	1.063	106.300
3500	100	2.193	2.656	265.550	0.324	0.439	43.900
3600	100	0.920	1.557	155.650	1.757	1.041	104.050
3700	100	0.755	0.838	83.750	1.493	1.625	162.500
3800	100	1.454	1.105	110.450	0.712	1.103	110.250
3900	100	1.108	1.281	128.100	0.673	0.693	69.250
4000	100	0.319	0.714	71.350	2.353	1.513	151.300
4100	100	0.000	0.160	15.950	4.577	3.465	346.500
4200	100	0.000	0.000	0.000	7.349	5.963	596.300
4300	100	3.235	1.618	161.750	3.206	5.278	527.750

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	1.277	2.256	225.600	1.650	2.428	242.800
4500	100	0.669	0.973	97.300	1.046	1.348	134.800
4600	100	0.191	0.430	43.000	1.854	1.450	145.000
4700	100	0.350	0.271	27.050	0.816	1.335	133.500
4800	100	0.026	0.188	18.800	1.394	1.105	110.500
4900	100	0.000	0.013	1.300	3.566	2.480	248.000
5000	100	0.000	0.000	0.000	6.003	4.785	478.450
5100	100	0.000	0.000	0.000	7.246	6.625	662.450
5200	100	0.000	0.000	0.000	8.273	7.760	775.950
5300	100	0.801	0.401	40.050	0.716	4.495	449.450
5400	100	0.889	0.845	84.500	1.045	0.881	88.050
5500	100	0.514	0.702	70.150	2.105	1.575	157.500
5600	100	0.369	0.442	44.150	2.156	2.131	213.050
5700	100	0.277	0.323	32.300	2.223	2.190	218.950
5800	100	0.369	0.323	32.300	1.381	1.802	180.200
5900	100	0.440	0.405	40.450	1.230	1.306	130.550
6000	100	0.557	0.499	49.850	1.100	1.165	116.500
6100	100	0.876	0.717	71.650	1.373	1.237	123.650
Total				7032.100			16946.150
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							7032.100
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							16946.150
NET QUANTITY OF EARTHWORK IN FILLING							9914.05

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK PRITAMPURA SUB DY (0.000 TO 14.384 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	1.930	0.965	96.500	4.758	2.379	237.900
200	100	1.685	1.808	180.750	5.321	5.040	503.950
300	100	1.473	1.579	157.900	5.642	5.482	548.150
400	100	9.628	5.551	555.050	6.978	6.310	631.000
500	100	7.487	8.558	855.750	2.640	4.809	480.900
600	100	6.670	7.079	707.850	1.422	2.031	203.100
700	100	5.233	5.952	595.150	2.717	2.070	206.950
800	100	4.802	5.018	501.750	2.457	2.587	258.700
900	100	3.151	3.977	397.650	4.185	3.321	332.100
1000	100	2.469	2.810	281.000	4.716	4.451	445.050
1100	100	2.846	2.658	265.750	1.188	2.952	295.200
1200	100	2.495	2.671	267.050	2.241	1.715	171.450
1300	100	1.402	1.949	194.850	3.049	2.645	264.500
1400	100	2.176	1.789	178.900	3.240	3.145	314.450
1500	100	1.310	1.743	174.300	3.487	3.364	336.350
1600	100	1.115	1.213	121.250	3.564	3.526	352.550
1700	100	6.202	3.659	365.850	3.511	3.538	353.750
1800	100	3.226	4.714	471.400	4.003	3.757	375.700
1900	100	2.203	2.715	271.450	3.380	3.692	369.150
2000	100	4.371	3.287	328.700	2.055	2.718	271.750
2100	100	4.997	4.684	468.400	3.228	2.642	264.150
2200	100	5.514	5.256	525.550	3.567	3.398	339.750
2300	100	4.455	4.985	498.450	2.584	3.076	307.550
2400	100	3.928	4.192	419.150	5.109	3.847	384.650
2500	100	0.124	2.026	202.600	13.919	9.514	951.400
2600	100	12.277	6.201	620.050	7.003	10.461	1046.100
2700	100	1.283	6.780	678.000	4.680	5.842	584.150
2800	100	1.091	1.187	118.700	4.348	4.514	451.400
2900	100	0.371	0.731	73.100	7.938	6.143	614.300
3000	100	0.327	0.349	34.900	10.632	9.285	928.500
3100	100	0.874	0.601	60.050	8.394	9.513	951.300
3200	100	14.720	7.797	779.700	4.590	6.492	649.200
3300	100	6.518	10.619	1061.900	5.041	4.816	481.550
3400	100	2.594	4.556	455.600	3.723	4.382	438.200
3500	100	1.397	1.996	199.550	4.329	4.026	402.600
3600	100	1.583	1.490	149.000	4.000	4.165	416.450
3700	100	1.414	1.499	149.850	4.685	4.343	434.250
3800	100	0.108	0.761	76.100	6.935	5.810	581.000
3900	100	0.141	0.125	12.450	9.530	8.233	823.250
4000	100	0.383	0.262	26.200	9.964	9.747	974.700
4100	100	3.992	2.188	218.750	5.868	7.916	791.600
4200	100	11.939	7.966	796.550	0.323	3.096	309.550
4300	100	5.340	8.640	863.950	1.885	1.104	110.400

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	3.856	4.598	459.800	0.842	1.364	136.350
4500	100	0.655	2.256	225.550	3.918	2.380	238.000
4600	100	1.068	0.862	86.150	5.385	4.652	465.150
4700	100	4.543	2.806	280.550	1.694	3.540	353.950
4800	100	2.956	3.750	374.950	4.156	2.925	292.500
4900	100	2.713	2.835	283.450	3.533	3.845	384.450
5000	100	2.298	2.506	250.550	4.748	4.141	414.050
5100	100	0.885	1.592	159.150	4.449	4.599	459.850
5200	100	3.205	2.045	204.500	2.229	3.339	333.900
5300	100	2.889	3.047	304.700	3.477	2.853	285.300
5400	100	2.194	2.542	254.150	3.333	3.405	340.500
5500	100	1.218	1.706	170.600	4.603	3.968	396.800
5600	100	0.880	1.049	104.900	4.287	4.445	444.500
5700	100	0.865	0.873	87.250	4.607	4.447	444.700
5800	100	1.471	1.168	116.800	5.546	5.077	507.650
5900	100	3.071	2.271	227.100	2.375	3.961	396.050
6000	100	3.608	3.340	333.950	1.230	1.803	180.250
6100	100	4.203	3.906	390.550	2.525	1.878	187.750
6200	100	3.349	3.776	377.600	2.450	2.488	248.750
6300	100	2.976	3.163	316.250	3.687	3.069	306.850
6400	100	1.535	2.256	225.550	2.792	3.240	323.950
6500	100	0.678	1.107	110.650	4.390	3.591	359.100
6600	100	0.470	0.574	57.400	4.953	4.672	467.150
6700	100	2.546	1.508	150.800	0.609	2.781	278.100
6800	100	2.497	2.522	252.150	1.608	1.109	110.850
6900	100	3.615	3.056	305.600	1.546	1.577	157.700
7000	100	3.919	3.767	376.700	2.810	2.178	217.800
7100	100	1.795	2.857	285.700	4.597	3.704	370.350
7200	100	2.739	2.267	226.700	4.386	4.492	449.150
7300	100	2.855	2.797	279.700	3.041	3.714	371.350
7400	100	3.007	2.931	293.100	6.071	4.556	455.600
7500	100	6.099	4.553	455.300	5.168	5.620	561.950
7600	100	2.555	4.327	432.700	4.610	4.889	488.900
7700	100	2.358	2.457	245.650	5.418	5.014	501.400
7800	100	1.716	2.037	203.700	1.572	3.495	349.500
7900	100	1.959	1.838	183.750	4.227	2.900	289.950
8000	100	1.706	1.833	183.250	4.156	4.192	419.150
8100	100	1.607	1.657	165.650	4.072	4.114	411.400
8200	100	1.398	1.503	150.250	3.389	3.731	373.050
8300	100	0.564	0.981	98.100	5.834	4.612	461.150
8400	100	2.674	1.619	161.900	2.324	4.079	407.900
8500	100	3.544	3.109	310.900	0.798	1.561	156.100
8600	100	2.511	3.028	302.750	3.189	1.994	199.350
8700	100	1.742	2.127	212.650	3.111	3.150	315.000
8800	100	1.196	1.469	146.900	3.860	3.486	348.550
8900	100	0.063	0.630	62.950	6.109	4.985	498.450

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
9000	100	0.487	0.275	27.500	6.570	6.340	633.950
9100	100	0.155	0.321	32.100	7.689	7.130	712.950
9200	100	0.218	0.187	18.650	8.865	8.277	827.700
9300	100	1.600	0.909	90.900	2.591	5.728	572.800
9400	100	2.696	2.148	214.800	3.497	3.044	304.400
9500	100	1.602	2.149	214.900	2.455	2.976	297.600
9600	100	1.260	1.431	143.100	2.662	2.559	255.850
9700	100	1.545	1.403	140.250	5.193	3.928	392.750
9800	100	0.174	0.860	85.950	7.869	6.531	653.100
9900	100	0.283	0.229	22.850	5.891	6.880	688.000
10000	100	0.251	0.267	26.700	5.529	5.710	571.000
10100	100	4.141	2.196	219.600	7.933	6.731	673.100
10200	100	0.618	2.380	237.950	5.755	6.844	684.400
10300	100	1.226	0.922	92.200	4.346	5.051	505.050
10400	100	0.577	0.902	90.150	5.497	4.922	492.150
10500	100	0.000	0.289	28.850	7.500	6.499	649.850
10600	100	1.053	0.527	52.650	2.987	5.244	524.350
10700	100	0.226	0.640	63.950	4.164	3.576	357.550
10800	100	0.538	0.382	38.200	5.997	5.081	508.050
10900	100	0.558	0.548	54.800	4.018	5.008	500.750
11000	100	0.820	0.689	68.900	4.174	4.096	409.600
11100	100	0.884	0.852	85.200	4.838	4.506	450.600
11200	100	1.069	0.977	97.650	5.545	5.192	519.150
11300	100	4.549	2.809	280.900	1.082	3.314	331.350
11400	100	1.809	3.179	317.900	3.614	2.348	234.800
11500	100	2.049	1.929	192.900	2.309	2.962	296.150
11600	100	1.278	1.664	166.350	3.501	2.905	290.500
11700	100	0.722	1.000	100.000	5.173	4.337	433.700
11800	100	0.163	0.443	44.250	9.562	7.368	736.750
11900	100	0.072	0.118	11.750	9.407	9.485	948.450
12000	100	0.000	0.036	3.600	9.288	9.348	934.750
12100	100	0.000	0.000	0.000	9.160	9.224	922.400
12200	100	1.164	0.582	58.200	2.444	5.802	580.200
12300	100	0.935	1.050	104.950	3.015	2.730	272.950
12400	100	0.964	0.950	94.950	3.341	3.178	317.800
12500	100	0.884	0.924	92.400	3.245	3.293	329.300
12600	100	0.818	0.851	85.100	3.766	3.506	350.550
12700	100	0.438	0.628	62.800	2.275	3.021	302.050
12800	100	0.173	0.306	30.550	4.336	3.306	330.550
12900	100	0.598	0.386	38.550	5.798	5.067	506.700
13000	100	0.021	0.310	30.950	6.496	6.147	614.700
13100	100	0.000	0.011	1.050	8.824	7.660	766.000
13200	100	0.000	0.000	0.000	8.745	8.785	878.450
13300	100	0.000	0.000	0.000	8.644	8.695	869.450
13400	100	3.973	1.987	198.650	2.360	5.502	550.200
13500	100	0.322	2.148	214.750	2.132	2.246	224.600

Change	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
13600	100	0.179	0.251	25.050	2.886	2.509	250.900
13700	100	2.536	1.358	135.750	1.812	2.349	234.900
13800	100	1.453	1.995	199.450	2.836	2.324	232.400
13900	100	0.947	1.200	120.000	2.599	2.718	271.750
14000	100	0.646	0.797	79.650	2.198	2.399	239.850
14100	100	0.276	0.461	46.100	3.245	2.722	272.150
14200	100	0.138	0.207	20.700	2.117	2.681	268.100
14300	100	0.081	0.110	10.950	3.089	2.603	260.300
14384	84	0.153	0.117	9.828	3.299	3.194	268.296
Total				31272.178			62854.546
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							31272.178
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							62854.546
NET QUANTITY OF EARTHWORK IN FILLING							31582.37

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK CHANDAULI MR (0.000 TO 2.993 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	2.019	1.010	100.950	1.658	0.829	82.900
200	100	0.596	1.308	130.750	2.378	2.018	201.800
300	100	1.002	0.799	79.900	3.014	2.696	269.600
400	100	0.245	0.624	62.350	4.823	3.919	391.850
500	100	0.372	0.309	30.850	2.910	3.867	386.650
600	100	0.984	0.678	67.800	1.928	2.419	241.900
700	100	0.236	0.610	61.000	3.857	2.893	289.250
800	100	0.000	0.118	11.800	4.432	4.145	414.450
900	100	0.838	0.419	41.900	3.633	4.033	403.250
1000	100	0.815	0.827	82.650	3.042	3.338	333.750
1100	100	0.360	0.588	58.750	3.597	3.320	331.950
1200	100	0.329	0.345	34.450	3.784	3.691	369.050
1300	100	0.687	0.508	50.800	2.622	3.203	320.300
1400	100	0.258	0.473	47.250	2.138	2.380	238.000
1500	100	0.013	0.136	13.550	2.617	2.378	237.750
1600	100	0.283	0.148	14.800	3.944	3.281	328.050
1700	100	0.205	0.244	24.400	5.296	4.620	462.000
1800	100	0.507	0.356	35.600	2.672	3.984	398.400
1900	100	0.711	0.609	60.900	2.025	2.349	234.850
2000	100	0.652	0.682	68.150	1.665	1.845	184.500
2100	100	0.819	0.736	73.550	1.412	1.539	153.850
2200	100	0.375	0.597	59.700	3.166	2.289	228.900
2300	100	0.788	0.582	58.150	2.446	2.806	280.600
2400	100	0.912	0.850	85.000	2.226	2.336	233.600
2500	100	0.477	0.695	69.450	2.611	2.419	241.850
2600	100	0.491	0.484	48.400	1.463	2.037	203.700
2700	100	0.345	0.418	41.800	1.626	1.545	154.450
2800	100	0.061	0.203	20.300	4.397	3.012	301.150
2900	100	0.130	0.096	9.550	4.882	4.640	463.950
2993	93	0.195	0.163	15.113	6.002	5.442	506.106
Total				1559.613			8888.406
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							1559.613
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							8888.406
NET QUANTITY OF EARTHWORK IN FILLING							7328.79

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK SIMRA MR (0.000 TO 5.151 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.000	0.000	0.000	3.871	1.936	193.550
200	100	0.000	0.000	0.000	5.604	4.738	473.750
300	100	0.000	0.000	0.000	6.886	6.245	624.500
400	100	0.000	0.000	0.000	8.064	7.475	747.500
500	100	0.000	0.000	0.000	5.507	6.786	678.550
600	100	0.000	0.000	0.000	5.596	5.552	555.150
700	100	0.763	0.382	38.150	3.300	4.448	444.800
800	100	0.584	0.674	67.350	2.988	3.144	314.400
900	100	0.523	0.554	55.350	2.270	2.629	262.900
1000	100	0.329	0.426	42.600	2.513	2.392	239.150
1100	100	0.301	0.315	31.500	2.897	2.705	270.500
1200	100	0.221	0.261	26.100	3.445	3.171	317.100
1300	100	0.131	0.176	17.600	3.989	3.717	371.700
1400	100	0.049	0.090	9.000	4.524	4.257	425.650
1500	100	0.007	0.028	2.800	5.067	4.796	479.550
1600	100	0.920	0.464	46.350	1.745	3.406	340.600
1700	100	0.967	0.944	94.350	4.517	3.131	313.100
1800	100	0.639	0.803	80.300	5.209	4.863	486.300
1900	100	0.999	0.819	81.900	5.569	5.389	538.900
2000	100	1.789	1.394	139.400	4.034	4.802	480.150
2100	100	1.236	1.513	151.250	4.515	4.275	427.450
2200	100	1.553	1.395	139.450	1.369	2.942	294.200
2300	100	0.170	0.862	86.150	3.144	2.257	225.650
2400	100	0.000	0.085	8.500	5.213	4.179	417.850
2500	100	1.170	0.585	58.500	1.175	3.194	319.400
2600	100	1.063	1.117	111.650	0.687	0.931	93.100
2700	100	0.833	0.948	94.800	1.887	1.287	128.700
2800	100	1.113	0.973	97.300	2.225	2.056	205.600
2900	100	0.958	1.036	103.550	3.142	2.684	268.350
3000	100	0.000	0.479	47.900	3.680	3.411	341.100
3100	100	0.000	0.000	0.000	3.823	3.752	375.150
3200	100	0.000	0.000	0.000	4.078	3.951	395.050
3300	100	0.000	0.000	0.000	4.285	4.182	418.150
3400	100	0.048	0.024	2.400	4.788	4.537	453.650
3500	100	0.578	0.313	31.300	2.903	3.846	384.550
3600	100	0.678	0.628	62.800	1.887	2.395	239.500
3700	100	0.207	0.443	44.250	1.569	1.728	172.800
3800	100	0.955	0.581	58.100	0.632	1.101	110.050
3900	100	0.935	0.945	94.500	0.960	0.796	79.600
4000	100	0.452	0.694	69.350	1.204	1.082	108.200
4100	100	0.469	0.461	46.050	1.656	1.430	143.000
4200	100	0.460	0.465	46.450	1.782	1.719	171.900
4300	100	0.551	0.506	50.550	1.072	1.427	142.700

Change	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
4400	100	0.402	0.477	47.650	1.254	1.163	116.300
4500	100	0.378	0.390	39.000	1.541	1.398	139.750
4600	100	0.368	0.373	37.300	1.827	1.684	168.400
4700	100	0.278	0.323	32.300	1.867	1.847	184.700
4800	100	0.169	0.224	22.350	1.837	1.852	185.200
4900	100	0.060	0.115	11.450	1.992	1.915	191.450
5000	100	0.000	0.030	3.000	2.252	2.122	212.200
5100	100	0.000	0.000	0.000	3.169	2.711	271.050
5151	51	0.000	0.000	0.000	4.037	3.603	183.753
Total				2330.600			16126.303
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							2330.600
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							16126.303
NET QUANTITY OF EARTHWORK IN FILLING							13795.70

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK SALEMPUR MR (0.000 TO 5.980 KM)							
0	0	0.000	0	0	0.000	0	0.000
100	100	0.065	0.033	3.250	3.239	1.620	161.950
200	100	0.190	0.128	12.750	4.120	3.680	367.950
300	100	0.050	0.120	12.000	3.709	3.915	391.450
400	100	0.152	0.101	10.100	3.175	3.442	344.200
500	100	0.386	0.269	26.900	2.650	2.913	291.250
600	100	0.607	0.497	49.650	1.650	2.150	215.000
700	100	0.261	0.434	43.400	2.638	2.144	214.400
800	100	0.525	0.393	39.300	1.341	1.990	198.950
900	100	0.472	0.499	49.850	2.250	1.796	179.550
1000	100	1.307	0.890	88.950	0.267	1.259	125.850
1100	100	0.752	1.030	102.950	0.666	0.467	46.650
1200	100	0.750	0.751	75.100	1.052	0.859	85.900
1300	100	0.560	0.655	65.500	2.239	1.646	164.550
1400	100	0.282	0.421	42.100	3.074	2.657	265.650
1500	100	0.462	0.372	37.200	2.099	2.587	258.650
1600	100	1.764	1.113	111.300	0.843	1.471	147.100
1700	100	0.535	1.150	114.950	2.563	1.703	170.300
1800	100	0.867	0.701	70.100	2.081	2.322	232.200
1900	100	0.143	0.505	50.500	2.996	2.539	253.850
2000	100	0.118	0.131	13.050	3.540	3.268	326.800
2100	100	0.191	0.155	15.450	4.017	3.779	377.850
2200	100	0.314	0.253	25.250	4.560	4.289	428.850
2300	100	0.797	0.556	55.550	3.451	4.006	400.550
2400	100	0.442	0.620	61.950	3.345	3.398	339.800
2500	100	0.141	0.292	29.150	2.550	2.948	294.750
2600	100	0.574	0.358	35.750	1.359	1.955	195.450
2700	100	0.190	0.382	38.200	2.185	1.772	177.200
2800	100	0.000	0.095	9.500	3.093	2.639	263.900
2900	100	4.789	2.395	239.450	2.167	2.630	263.000
3000	100	1.246	3.018	301.750	2.417	2.292	229.200
3100	100	1.695	1.471	147.050	0.899	1.658	165.800
3200	100	0.344	1.020	101.950	3.121	2.010	201.000
3300	100	0.056	0.200	20.000	4.274	3.698	369.750
3400	100	0.160	0.108	10.800	3.207	3.741	374.050
3500	100	0.058	0.109	10.900	3.477	3.342	334.200
3600	100	3.410	1.734	173.400	0.264	1.871	187.050
3700	100	1.552	2.481	248.100	1.648	0.956	95.600
3800	100	0.986	1.269	126.900	2.125	1.887	188.650
3900	100	0.573	0.780	77.950	1.754	1.940	193.950
4000	100	0.254	0.414	41.350	2.056	1.905	190.500
4100	100	0.005	0.130	12.950	3.766	2.911	291.100
4200	100	0.131	0.068	6.800	3.780	3.773	377.300
4300	100	0.100	0.116	11.550	2.321	3.051	305.050

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
4400	100	0.000	0.050	5.000	5.218	3.770	376.950
4500	100	0.000	0.000	0.000	7.574	6.396	639.600
4600	100	0.454	0.227	22.700	1.437	4.506	450.550
4700	100	0.820	0.637	63.700	4.509	2.973	297.300
4800	100	0.976	0.898	89.800	1.303	2.906	290.600
4900	100	0.970	0.973	97.300	1.650	1.477	147.650
5000	100	0.748	0.859	85.900	0.860	1.255	125.500
5100	100	0.365	0.557	55.650	1.222	1.041	104.100
5200	100	0.414	0.390	38.950	2.203	1.713	171.250
5300	100	0.225	0.320	31.950	3.099	2.651	265.100
5400	100	0.431	0.328	32.800	3.484	3.292	329.150
5500	100	0.478	0.455	45.450	3.692	3.588	358.800
5600	100	0.431	0.455	45.450	3.385	3.539	353.850
5700	100	0.385	0.408	40.800	3.116	3.251	325.050
5800	100	0.450	0.418	41.750	2.544	2.830	283.000
5900	100	0.361	0.406	40.550	4.318	3.431	343.100
5980	80	0.251	0.306	24.480	6.276	5.297	423.760
Total				3582.830			15972.060
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							3582.830
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							15972.060
NET QUANTITY OF EARTHWORK IN FILLING							12389.23

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND**BASDIHA DISTRIBUTARY (0.000 TO 23.700 KM)****JUNGLE CLEARANCE QUANTITY**

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 0.520	520	10.15	5278.00	Sqm
0.520 - 4.580	4060	9.45	38367.00	Sqm
4.580 - 9.450	4870	8.46	41200.20	Sqm
9.450 - 10.060	610	8.1	4941.00	Sqm
10.060 - 12.530	2470	6.34	15659.80	Sqm
12.530 - 12.685	155	5.65	875.75	Sqm
12.685 - 14.200	1515	5.19	7862.85	Sqm
14.200 - 16.000	1800	4.92	8856.00	Sqm
16.000 - 18.100	2100	3.95	8295.00	Sqm
18.100 - 19.250	1150	3.48	4002.00	Sqm
19.250-20.100	850	3.18	2703.00	Sqm
20.100-21.580	1480	2.85	4218.00	Sqm
21.580-22.400	820	2.38	1951.60	Sqm
22.400-22.800	400	1.93	772.00	Sqm
22.800-23.700	900	1.52	1368.00	Sqm
	TOTAL		146350.20	Sqm

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.520	520	10.150	0.15	791.70	Cum
0.520 - 4.580	4060	9.450	0.15	5755.05	Cum
4.580 - 9.450	4870	8.460	0.15	6180.03	Cum
9.450 - 10.060	610	8.100	0.15	741.15	Cum
10.060 - 12.530	2470	6.340	0.15	2348.97	Cum
12.530 - 12.685	155	5.650	0.15	131.36	Cum
12.685 - 14.200	1515	5.190	0.15	1179.43	Cum
14.200 - 16.000	1800	4.920	0.15	1328.40	Cum
16.000 - 18.100	2100	3.950	0.15	1244.25	Cum
18.100 - 19.250	1150	3.480	0.15	600.30	Cum
19.250-20.100	850	3.180	0.15	405.45	Cum
20.100-21.580	1480	2.850	0.15	632.70	Cum
21.580-22.400	820	2.380	0.15	292.74	Cum
22.400-22.800	400	1.930	0.15	115.80	Cum
22.800-23.700	900	1.520	0.15	205.20	Cum
	TOTAL			21952.53	Cum

SHANKARPUR MINOR (0.000 TO 4.950 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 2.300	2300	2.18	5014.00	Sqm
2.300 -4.150	1850	1.69	3126.50	Sqm
4.150-4.950	800	1.25	1000.00	Sqm
	TOTAL		9140.50	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 2.300	2300	2.18	0.15	752.10	Cum
2.300 -4.150	1850	1.69	0.15	468.98	Cum
4.150-4.950	800	1.25	0.15	150.00	Cum
	TOTAL			1371.08	Cum

KHAIRA MINOR (0.000 TO 9.400 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 4.800	4800	3.09	14832.00	Sqm
4.800 - 6.400	1600	2.70	4320.00	Sqm
6.400 - 7.620	1220	2.32	2830.40	Sqm
7.620 - 9.144	1524	1.76	2682.24	Sqm
9.144 - 9.400	256	1.20	307.20	Sqm
	TOTAL		24971.84	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 4.800	4800	3.09	0.15	2224.80	Cum
4.800 - 6.400	1600	2.70	0.15	648.00	Cum
6.400 - 7.620	1220	2.32	0.15	424.56	Cum
7.620 - 9.144	1524	1.76	1.15	3084.58	Cum
9.144 - 9.400	256	1.20	2.15	660.48	Cum
	TOTAL			7042.42	Cum

GAMHARIA MINOR (0.000 TO 6.150 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 -1.700	1700	3.61	6137.00	Sqm
1.700-3.900	2200	3.14	6908.00	Sqm
3.900-4.300	400	2.32	928.00	Sqm
4.300-4.570	270	2.16	583.20	Sqm
4.570-5.330	760	2.01	1527.60	Sqm
5.330-5.550	220	1.58	347.60	Sqm
5.550-6.150	600	1.25	750.00	Sqm
	TOTAL		17181.40	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 -1.700	1700	3.61	0.15	920.55	Cum
1.700-3.900	2200	3.14	0.15	1036.20	Cum
3.900-4.300	400	2.32	0.15	139.20	Cum
4.300-4.570	270	2.16	0.15	87.48	Cum
4.570-5.330	760	2.01	1.15	1756.74	Cum
5.330-5.550	220	1.58	2.15	747.34	Cum
5.550-6.150	600	1.25	3.15	2362.50	Cum
	TOTAL			7050.01	Cum

SIMRA MR. (0.000 TO 5.200 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 -0.950	950	2.45	2327.50	Sqm
0.950-3.000	2050	2.12	4346.00	Sqm
3.000-3.850	850	1.79	1521.50	Sqm
3.850-5.200	1350	1.3	1755.00	Sqm
	TOTAL		9950.00	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 -0.950	950	2.45	0.15	349.13	Cum
0.950-3.000	2050	2.12	0.15	651.90	Cum
3.000-3.850	850	1.79	0.15	228.23	Cum
3.850-5.200	1350	1.3	0.15	263.25	Cum
	TOTAL			1492.50	Cum

SALEMPUR MR (0.000 TO 6.000 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 -1.250	1250	2.54	3175.00	Sqm
1.250-3.050	1800	2.12	3816.00	Sqm
3.050-4.600	1550	1.74	2697.00	Sqm
4.600-6.000	1400	1.3	1820.00	Sqm
	TOTAL		11508.00	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 -1.250	1250	2.54	0.15	476.25	Cum
1.250-3.050	1800	2.12	0.15	572.40	Cum
3.050-4.600	1550	1.74	0.15	404.55	Cum
4.600-6.000	1400	1.3	0.15	273.00	Cum
	TOTAL			1726.20	Cum

PRITAMPURA SUB-DY. (0.000 TO 14.400 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 2.700	2700	5.94	16038.00	Sqm
2.700 - 5.100	2400	5.47	13128.00	Sqm
5.100 - 7.450	2350	5.16	12126.00	Sqm
7.450- 9.950	2500	4.38	10950.00	Sqm
9.950 - 10.900	950	3.88	3686.00	Sqm
10.900 - 11.450	550	3.52	1936.00	Sqm
11.450 - 12.250	800	3.12	2496.00	Sqm
12.250- 12.550	300	2.83	849.00	Sqm
12.550 - 13.000	450	2.5	1125.00	Sqm
13.000-13.500	500	2.07	1035.00	Sqm
13.500-14.000	500	1.74	870.00	Sqm
14.000-14.400	400	1.35	540.00	Sqm
	TOTAL		64779.00	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 2.700	2700	5.940	0.15	2405.70	Cum
2.700 - 5.100	2400	5.470	0.15	1969.20	Cum
5.100 - 7.450	2350	5.160	0.15	1818.90	Cum
7.450- 9.950	2500	4.380	0.15	1642.50	Cum
9.950 - 10.900	950	3.880	0.15	552.90	Cum
10.900 - 11.450	550	3.520	0.15	290.40	Cum
11.450 - 12.250	800	3.120	0.15	374.40	Cum
12.250- 12.550	300	2.830	0.15	127.35	Cum
12.550 - 13.000	450	2.500	0.15	168.75	Cum
13.000-13.500	500	2.070	0.15	155.25	Cum
13.500-14.000	500	1.740	1.15	1000.50	Cum
14.000-14.400	400	1.350	2.15	1161.00	Cum
	TOTAL			11666.85	Cum

CHANDAULI MR (0.000 TO 3.000 KM)						
JUNGLE CLEARANCE QUANTITY						
Reaches (km)	Length (m)	Perimeter (m)	Quantity			
0.00 - 0.560	560	2.11	1181.60		Sqm	
0.560 - 1.600	1040	1.69	1757.60		Sqm	
1.600- 3.000	1400	1.25	1750.00		Sqm	
	TOTAL			4689.20		Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.560	560	2.11	0.15	177.24	Cum
0.560 - 1.600	1040	1.69	0.15	263.64	Cum
1.600- 3.000	1400	1.25	0.15	262.50	Cum
	TOTAL			703.38	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR BASDIHA 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	146350.20	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	107418.750	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	42967.5	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	25498.150	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	7649.45	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	6374.54	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	11474.17	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	21952.53	Cum

S.No.	Items	No.	Quantity	Unit
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	81920.60	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR SHANKARPUR 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	9140.50	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	3960.900	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1584.36	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	7249.050	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	2174.72	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1812.26	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3262.07	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	1371.08	Cum

S.No.	Items	No.	Quantity	Unit
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	11209.95	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR KHAIRA 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	24971.84	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	5003.256	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2001.3024	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	26258.491	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, unloading, 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	7877.55	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	6564.62	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	11816.32	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	7042.42	Cum

S.No.	Items	No.	Quantity	Unit
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	31261.75	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR GAMHARIA 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	17181.40	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	7032.100	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	2812.84	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	9914.050	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, unloading, 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	2974.22	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2478.51	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4461.32	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	7050.01	Cum

S.No.	Items	No.	Quantity	Unit
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	16946.15	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR PITAMPURA 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	64779.00	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	31272.178	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			

S.No.	Items	No.	Quantity	Unit
	(40% of Total Cutting)	1	12508.8712	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	31582.368	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, unloading, 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	9474.71	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	7895.59	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	14212.07	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	11666.85	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	62854.55	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR SIMRA 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	9950.00	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	2330.600	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	932.24	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	13795.703	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, unloading, 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	4138.71	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3448.93	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	6208.07	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	1492.50	Cum

S.No.	Items	No.	Quantity	Unit
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	16126.30	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR SALEMPUR 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.			
	<i>Separate sheet attached</i>	1	11508.00	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	3582.830	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1433.132	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	12389.230	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, unloading, 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	3716.77	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3097.31	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5575.15	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	1726.20	Cum

S.No.	Items	No.	Quantity	Unit
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	15972.06	Cum

S.No.	Items	No.	Quantity	Unit
DETAILS OF QUANTITIES FOR EARTH WORK FOR CHANDAULI 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	4689.20	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	1559.613	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	623.845	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	7328.794	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, unloading, 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	2198.64	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	1832.20	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	3297.96	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	703.38	Cum

S.No.	Items	No.	Quantity	Unit
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	8888.41	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR BASDIHA 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.	146350.20	Sqm	11.80	1727574.827
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.				
		<i>100% of Total Cutting for ordinary soil</i>	107418.75	Cum	156.50	16811034.38
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	42967.50	Cum	17.22	739793.5381
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.	25498.15	Cum	165.12	4210151.53
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 embankments, unloading, 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)	7649.45	Cum	174.89	1337811.44
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	6374.54	Cum	217.92	1389139.21
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	11474.17	Cum	319.14	3661865.82
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.				
			21952.53	Cum	196.10	4304891.13

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.	25498.15	Cum	61.88	1577885.31
TOTAL COST OF EARTHWORK (in Rs.)						35760147.17
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						357.601

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SHANKARPUR 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.	9140.50	Sqm	11.80	107898.0261
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.				
		<i>100% of Total Cutting for ordinary soil</i>	3960.90	Cum	156.50	619880.85
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1584.36	Cum	17.22	27278.74068
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.	7249.05	Cum	165.12	1196933.85
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 embankments, unloading, 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 lifts 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)	2174.72	Cum	174.89	380335.91
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	1812.26	Cum	217.92	394928.24
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3262.07	Cum	319.14	1041057.82
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 including 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.				
			1371.08	Cum	196.10	268867.81

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.	11209.95	Cum	61.88	693697.99
TOTAL COST OF EARTHWORK (in Rs.)						4730879.23
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						47.309

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR KHAIRA 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.	24971.84	Sqm	11.80	294777.3366
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.				
		<i>100% of Total Cutting for ordinary soil</i>	5003.26	Cum	156.50	783009.564
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	2001.30	Cum	17.22	34457.45234
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.	26258.49	Cum	165.12	4335695.88
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 embankments, unloading, 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 lifts 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)	7877.55	Cum	174.89	1377704.22
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	6564.62	Cum	217.92	1430562.56
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	11816.32	Cum	319.14	3771060.60
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 including 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.				
			7042.42	Cum	196.10	1381017.78

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.	31261.75	Cum	61.88	1934550.17
TOTAL COST OF EARTHWORK (in Rs.)						15342835.56
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						153.428

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR GAMHARIYA 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.	17181.40	Sqm	11.80	202815.9451
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.				
		<i>100% of Total Cutting for ordinary soil</i>	7032.10	Cum	156.50	1100523.65
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	2812.84	Cum	17.22	48430.11243
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.	9914.05	Cum	165.12	1636967.89
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 embankments, unloading, 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 lifts 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)	2974.22	Cum	174.89	520160.46
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	2478.51	Cum	217.92	540117.44
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4461.32	Cum	319.14	1423786.46
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 including 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.				
			7050.01	Cum	196.10	1382506.96

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.	16946.15	Cum	61.88	1048667.49
TOTAL COST OF EARTHWORK (in Rs.)						7903976.42
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						79.040

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR PITAMPURA 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.	64779.00	Sqm	11.80	764676.5752
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.				
		<i>100% of Total Cutting for ordinary soil</i>	31272.18	Cum	156.50	4894095.857
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	12508.87	Cum	17.22	215371.6666
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.	31582.37	Cum	165.12	5214753.03
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 embankments, unloading, 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 lifts 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)	9474.71	Cum	174.89	1657032.10
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	7895.59	Cum	217.92	1720607.41
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	14212.07	Cum	319.14	4535638.62
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 including 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.				
			11666.85	Cum	196.10	2287869.29

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.	62854.55	Cum	61.88	3889586.68
TOTAL COST OF EARTHWORK (in Rs.)						25179631.21
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						251.796

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SIMRA 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.	9950.00	Sqm	11.80	117453.6798
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.				
		<i>100% of Total Cutting for ordinary soil</i>	2330.60	Cum	156.50	364738.9
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	932.24	Cum	17.22	16050.85537
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.	13795.70	Cum	165.12	2277890.75
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 embankments, unloading, 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 lifts 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)	4138.71	Cum	174.89	723819.15
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	3448.93	Cum	217.92	751589.90
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	6208.07	Cum	319.14	1981242.29
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 including 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.				
			1492.50	Cum	196.10	292679.25

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.	16126.30	Cum	61.88	997933.44
TOTAL COST OF EARTHWORK (in Rs.)						7523398.22
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						75.234

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SALEMPUR 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.	11508.00	Sqm	11.80	135844.9193
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.				
		<i>100% of Total Cutting for ordinary soil</i>	3582.83	Cum	156.50	560712.895
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1433.13	Cum	17.22	24674.97045
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.	12389.23	Cum	165.12	2045659.61
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 embankments, unloading, 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 lifts 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)	3716.77	Cum	174.89	650025.73
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	3097.31	Cum	217.92	674965.25
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5575.15	Cum	319.14	1779254.49
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 including 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.				
			1726.20	Cum	196.10	338507.82

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.	15972.06	Cum	61.88	988388.52
TOTAL COST OF EARTHWORK (in Rs.)						7198034.21
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						71.980

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR CHANDAULI 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.	4689.20	Sqm	11.80	55353.14526
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.				
		<i>100% of Total Cutting for ordinary soil</i>	1559.61	Cum	156.50	244079.3563
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	623.85	Cum	17.22	10741.0601
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.	7328.79	Cum	165.12	1210100.78
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 embankments, unloading, 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 lifts 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)	2198.64	Cum	174.89	384519.81
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	1832.20	Cum	217.92	399272.67
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	3297.96	Cum	319.14	1052510.02
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 including 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.				
			703.38	Cum	196.10	137932.82

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.	8888.41	Cum	61.88	550035.40
TOTAL COST OF EARTHWORK (in Rs.)						4044545.06
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						40.445

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SHANKARPUR 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.	1.200	0.500	1.70
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.100	0.200	1.30
	(h) is head of water above sill of gate in m	1.100	0.3	1.400
	Weight of lift gate including embedded parts	0.40		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	0.40	1.0
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.0	298.32
	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		
		1.400	400	560
	Columns with bracings/Anchors/Stiffeners	0.56		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.4	400	560
	Beams with cross beams/stiffeners	0.56		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.12	10%	0.112
	Railing/ Chequered plate/Ladder etc	0.112		T
	Total Weight of One Gate	1.93		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF KHAIRA 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.	1.750	0.500	2.25
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.350	0.200	1.55
	(h) is head of water above sill of gate in m	1.350	0.3	1.650
	Weight of lift gate including 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	2	540.12
	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		
		1.650	400	660
	Columns with bracings/Anchors/Stiffeners	0.66		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.65	400	660
	Beams with cross beams/stiffeners	0.66		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.32	10%	0.132
	Railing/ Chequered plate/Ladder etc	0.132		T
Total Weight of One Gate		2.71		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF GAMHARIA 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.	2.250	0.500	2.75
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.620	0.200	1.82
	(h) is head of water above sill of gate in m	1.620	0.3	1.920
	Weight of lift gate including embedded parts	1.15		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	1.15	2.9
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2.9	864.35
	Weight of screw hoist with all accessories	0.86		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.920	400	768
	Columns with bracings/Anchors/Stiffeners	0.768		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.92	400	768
	Beams with cross beams/stiffeners	0.768		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.536	10%	0.1536
	Railing/ Chequered plate/Ladder etc	0.1536		T
	Total Weight of One Gate	3.71		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF PRITAMPURA MR.

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.	1.900	0.500	2.40
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.470	0.200	1.67
	(h) is head of water above sill of gate in m	1.470	0.3	1.770
	Weight of lift gate including embedded parts	0.86		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	0.86	2.2
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	2	646.95
	Weight of screw hoist with all accessories	0.65		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.770	400	708
	Columns with bracings/Anchors/Stiffeners	0.708		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.77	400	708
	Beams with cross beams/stiffeners	0.708		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.416	10%	0.1416
	Railing/ Chequered plate/Ladder etc	0.1416		T
	Total Weight of Two Gate	6.13		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF CHANDAULI MR.

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.	1.170	0.500	1.67
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.100	0.200	1.30
	(h) is head of water above sill of gate in m	1.100	0.3	1.400
	Weight of lift gate including embedded parts	0.39		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	0.39	1.00
	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		
		1.400	400	560
	Columns with bracings/Anchors/Stiffeners	0.56		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.4	400	560
	Beams with cross beams/stiffeners	0.56		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.12	10%	0.112
	Railing/ Chequered plate/Ladder etc	0.112		T
	Total Weight of One Gate	1.92		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SIMRA MR.

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.	1.200	0.500	1.70
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.330	0.200	1.53
	(h) is head of water above sill of gate in m	1.330	0.3	1.630
	Weight of lift gate including embedded parts	0.49		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	0.49	1.2
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	367.15
	Weight of screw hoist with all accessories	0.37		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.630	400	652
	Columns with bracings/Anchors/Stiffeners	0.652		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.63	400	652
	Beams with cross beams/stiffeners	0.652		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.304	10%	0.1304
	Railing/ Chequered plate/Ladder etc	0.1304		T
	Total Weight of One Gate	2.29		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SALEMPUR MR.

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.	1.200	0.500	1.70
	(H) is height of gate in m = clear vent height in m + 0.20m.	0.960	0.200	1.16
	(h) is head of water above sill of gate in m	0.960	0.3	1.260
	Weight of lift gate including embedded parts	0.34		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	0.34	1.0
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1.0	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		
		1.260	400	504
	Columns with bracings/Anchors/Stiffeners	0.504		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.26	400	504
	Beams with cross beams/stiffeners	0.504		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.008	10%	0.1008
	Railing/ Chequered plate/Ladder etc	0.1008		T
	Total Weight of One Gate	1.75		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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	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 SHANKARPUR MR OFFTAKING FROM RD-0+345 KM (R.) AT BASDIHA 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.	138.153	Cum	156.50	21620.93			
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.	19.24	Cum	6381.70	122767.79	6.23	8.66	17.31
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.	80.41	Cum	6914.20	555999.11	33.17	34.58	69.16
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.	16.73	Cum	8151.40	136377.52	9.49	6.52	13.22
5	Providing M.S. reinforcements 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.	2.16	MT	73574.90	158683.81			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.93	MT	160035.11	308560.97			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	274.44	Sqm	578.60	158791.20			
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.	11.59	Sqm	680.10	7879.64			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.62	Cum	694.61	1125.27			
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.	1.62	Cum	1237.00	2003.94			
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)	1.16	Cum	1377.70	1591.24			
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.	1.16	Cum	516.50	596.56			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.07	Sqm	63.20	194.20			
14	Providing Drainage Spouts complete as per drawings & technical 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	29.99	Sqm	149.30	4477.75			

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)
18	Carriage of materials							
	Coarse Sand (60 Km lead)	49.760	Cum	1075.00	53491.83			
	Coarse Aggregates (100 Km lead)	100.842	Cum	1398.00	140977.10			
	Cement (30 km lead)	48.890	MT	742.00	36276.37			
	Boulder (60 Km lead)	1.62	Cum	1159.00	1877.58			
	Steel (30 Km lead)	4.08	MT	742.00	3030.96			
TOTAL (In Rs.)					1733026.27			
TOTAL (In Rs.)					1733026.27			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	49.76	Cum	584.64	29091.59	2909.16		
	Coarse Aggregate	100.84	Cum	944.26	95221.06	9522.11		
	Boulders	1.62	Cum	694.61	1125.27	112.53		
	<i>Total</i>						12543.79	
	For 1 nos. HR, Total Seigniorage charges						12543.79	

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)
ABSTRACT OF COST HR FOR KHAIRA MR OFFTAKING FROM RD-0+345 KM (R.) AT BASDIHA 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.	166.248	Cum	156.50	26017.87			
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.	20.67	Cum	6381.70	131936.40	6.70	9.30	18.61
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.	97.22	Cum	6914.20	672223.22	40.10	41.81	83.61
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.	19.26	Cum	8151.40	157012.89	10.92	7.51	15.22
5	Providing M.S. reinforcements 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.	2.96	MT	73574.90	217444.85			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.71	MT	160035.11	434061.09			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	312.93	Sqm	578.60	181058.59			
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.	14.40	Sqm	680.10	9793.44			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.11	Cum	694.61	2156.76			
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.	3.11	Cum	1237.00	3840.89			
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)	1.16	Cum	1377.70	1591.24			
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.	1.16	Cum	516.50	596.56			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.71	Sqm	63.20	234.28			
14	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	35.92	Sqm	149.30	5362.63			

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)
18	Carriage of materials							
	Coarse Sand (60 Km lead)	58.622	Cum	1075.00	63018.35			
	Coarse Aggregates (100 Km lead)	118.591	Cum	1398.00	165790.32			
	Cement (30 km lead)	57.725	MT	742.00	42831.77			
	Boulder (60 Km lead)	3.11	Cum	1159.00	3598.70			
	Steel (30 Km lead)	5.67	MT	742.00	4205.44			
TOTAL (In Rs.)					2139477.78			
TOTAL (In Rs.)					2139477.78			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	58.62	Cum	584.64	34272.61	3427.26		
	Coarse Aggregate	118.59	Cum	944.26	111980.80	11198.08		
	Boulders	3.11	Cum	694.61	2156.76	215.68		
<i>Total</i>						14841.02		
For 1 nos. HR, Total Seigniorage charges						14841.02		

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)
ABSTRACT OF COST HR FOR GAMHARIA MR OFFTAKING FROM RD-4+580 KM (L.) AT BASDIHA 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.	195.234	Cum	156.50	30554.16			
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.	22.54	Cum	6381.70	143870.76	7.30	10.14	20.29
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.	124.14	Cum	6914.20	858323.50	51.21	53.38	106.76
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.	22.55	Cum	8151.40	183800.79	12.78	8.79	17.81
5	Providing M.S. reinforcements 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.	3.13	MT	73574.90	230620.66			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.71	MT	160035.11	593155.98			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	367.08	Sqm	578.60	212390.46			
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.	11.67	Sqm	680.10	7936.77			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	4.46	Cum	694.61	3094.49			
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.	4.46	Cum	1237.00	5510.84			
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)	1.49	Cum	1377.70	2045.88			
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.	1.49	Cum	516.50	767.00			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.51	Sqm	63.20	284.95			
14	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	34.35	Sqm	149.30	5128.55			

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)	72.319	Cum	1075.00	77742.56			
	Coarse Aggregates (100 Km lead)	146.348	Cum	1398.00	204594.22			
	Cement (30 km lead)	71.297	MT	742.00	52902.15			
	Boulder (60 Km lead)	4.46	Cum	1159.00	5163.35			
	Steel (30 Km lead)	6.84	MT	742.00	5075.96			
TOTAL (In Rs.)					2639665.52			
TOTAL (In Rs.)					2639665.52			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	72.32	Cum	584.64	42280.38	4228.04		
	Coarse Aggregate	146.35	Cum	944.26	138190.37	13819.04		
	Boulders	4.46	Cum	694.61	3094.49	309.45		
<i>Total</i>						18356.52		
For 1 nos. HR, Total Seigniorage charges						18356.52		

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)
ABSTRACT OF COST HR FOR PRITAMPURA SUB DY OFFTAKING FROM RD-10+060 KM (R.) AT BASDIHA 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.	207.284	Cum	156.50	32439.95			
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.	27.44	Cum	6381.70	175145.73	8.89	12.35	24.70
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.	119.12	Cum	6914.20	823590.46	49.14	51.22	102.44
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.	29.46	Cum	8151.40	240104.11	16.70	11.49	23.27
5	Providing M.S. reinforcements 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.	3.64	MT	73574.90	267920.95			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	6.13	MT	160035.11	981700.84			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	364.08	Sqm	578.60	210658.98			
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.	17.10	Sqm	680.10	11629.71			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	8.69	Cum	694.61	6038.94			
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.	8.69	Cum	1237.00	10754.48			
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)	2.52	Cum	1377.70	3473.46			
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.	2.52	Cum	516.50	1302.20			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	4.04	Sqm	63.20	255.32			
14	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	36.88	Sqm	149.30	5505.80			

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)	75.058	Cum	1075.00	80687.04			
	Coarse Aggregates (100 Km lead)	152.931	Cum	1398.00	213797.79			
	Cement (30 km lead)	74.729	MT	742.00	55448.73			
	Boulder (60 Km lead)	8.69	Cum	1159.00	10076.35			
	Steel (30 Km lead)	9.78	MT	742.00	7253.61			
	TOTAL (In Rs.)				3154486.95			
	TOTAL (In Rs.)				3154486.95			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	75.06	Cum	584.64	43881.74	4388.17		
	Coarse Aggregate	152.93	Cum	944.26	144406.80	14440.68		
	Boulders	8.69	Cum	694.61	6038.94	603.89		
	<i>Total</i>					19432.75		
	For 1 nos. HR, Total Seigniorage charges					19432.75		

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)
ABSTRACT OF COST HR FOR CHANDAULI MR OFFTAKING FROM RD-7+435 KM (R.) AT PRITAMPURA SUB-DY								
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.	8.150	Cum	156.50	1275.54			
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.	0.41	Cum	6381.70	2616.50	0.13	0.18	0.37
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.	4.10	Cum	6914.20	28349.95	1.69	1.76	3.53
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.	11.59	Cum	8151.40	94442.12	6.57	4.52	9.15
5	Providing M.S. reinforcements 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.	6.75	MT	73574.90	496789.50			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.92	MT	160035.11	307353.23			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	0.19	Sqm	578.60	109.05			
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.	0.51	Sqm	680.10	345.63			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	97.22	Cum	694.61	67532.46			
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.	97.22	Cum	1237.00	120265.56			
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)	1.08	Cum	1377.70	1484.68			
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.	1.08	Cum	516.50	556.61			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	0.81	Sqm	63.20	51.37			
14	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	4.88	Cum	5588.70	27294.76			
15	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (3.18 PWD NH SOR CHHATISGARH 2025)	0.53	Sqm	66.00	34.89			
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications.	0.81	RM	499.80	407.23			
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	102.94	Sqm	149.30	15368.65			

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)	6.466	Cum	1075.00	6951.11			
	Coarse Aggregates (100 Km lead)	14.126	Cum	1398.00	19747.88			
	Cement (30 km lead)	8.393	MT	742.00	6227.94			
	Boulder (60 Km lead)	97.22	Cum	1159.00	112682.12			
	Steel (30 Km lead)	8.67	MT	742.00	6435.14			
TOTAL (In Rs.)					1316321.91			
TOTAL (In Rs.)					1316321.91			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	6.47	Cum	584.64	3780.37	378.04		
	Coarse Aggregate	14.13	Cum	944.26	13338.43	1333.84		
	Boulders	97.22	Cum	694.61	67532.46	6753.25		
	<i>Total</i>						8465.13	
	For 1 nos. HR, Total Seigniorage charges						8465.13	

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 SIMRA MR OFFTAKING FROM RD-12+685 KM (R.) AT BASDIHA 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.	175.920	Cum	156.50	27531.50			
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.	21.06	Cum	6381.70	134390.40	6.82	9.48	18.95
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.	108.64	Cum	6914.20	751186.56	44.82	46.72	93.43
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.	16.93	Cum	8151.40	138010.72	9.60	6.60	13.38
5	Providing M.S. reinforcements 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	198968.19			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.29	MT	160035.11	366652.80			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	332.19	Sqm	578.60	192207.99			
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.	12.88	Sqm	680.10	8761.05			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.62	Cum	694.61	1125.27			
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.	1.62	Cum	1237.00	2003.94			
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)	0.79	Cum	1377.70	1091.14			
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.	0.79	Cum	516.50	409.07			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.72	Sqm	63.20	235.10			
14	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	28.78	Sqm	149.30	4296.19			

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)
18	Carriage of materials							
	Coarse Sand (60 Km lead)	62.796	Cum	1075.00	67506.15			
	Coarse Aggregates (100 Km lead)	126.554	Cum	1398.00	176922.69			
	Cement (30 km lead)	61.239	MT	742.00	45438.98			
	Boulder (60 Km lead)	1.62	Cum	1159.00	1877.58			
	Steel (30 Km lead)	5.00	MT	742.00	3706.57			
	TOTAL (In Rs.)				2139024.37			
	TOTAL (In Rs.)				2139024.37			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	62.80	Cum	584.64	36713.30	3671.33		
	Coarse Aggregate	126.55	Cum	944.26	119500.01	11950.00		
	Boulders	1.62	Cum	694.61	1125.27	112.53		
	<i>Total</i>					15733.86		
	For 1 nos. HR, Total Seigniorage charges					15733.86		

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 SALEMPUR MR OFFTAKING FROM RD-15+950 KM (R.) AT BASDIHA 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.	185.179	Cum	156.50	28980.56			
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.	21.07	Cum	6381.70	134483.38	6.83	9.48	18.97
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.	116.93	Cum	6914.20	808482.38	48.23	50.28	100.56
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.	16.80	Cum	8151.40	136929.79	9.52	6.55	13.27
5	Providing M.S. reinforcements 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	215917.72			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	1.75	MT	160035.11	280547.51			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	356.30	Sqm	578.60	206156.02			
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.	13.31	Sqm	680.10	9054.85			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	1.62	Cum	694.61	1125.27			
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.	1.62	Cum	1237.00	2003.94			
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)	0.79	Cum	1377.70	1091.14			
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.	0.79	Cum	516.50	409.07			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	2.67	Sqm	63.20	169.04			
14	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	39.26	Sqm	149.30	5861.20			

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)
18	Carriage of materials							
	Coarse Sand (60 Km lead)	66.315	Cum	1075.00	71288.12			
	Coarse Aggregates (100 Km lead)	133.589	Cum	1398.00	186757.48			
	Cement (30 km lead)	64.586	MT	742.00	47923.04			
	Boulder (60 Km lead)	1.62	Cum	1159.00	1877.58			
	Steel (30 Km lead)	4.69	MT	742.00	3478.28			
	TOTAL (In Rs.)				2159238.87			
	TOTAL (In Rs.)				2159238.87			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	66.31	Cum	584.64	38770.13	3877.01		
	Coarse Aggregate	133.59	Cum	944.26	126142.79	12614.28		
	Boulders	1.62	Cum	694.61	1125.27	112.53		
	<i>Total</i>					16603.82		
	For 1 nos. HR, Total Seigniorage charges					16603.82		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF HR FOR SHANKARPUR MR OFFTAKING FROM RD-0+345 KM (R.) AT BASDIHA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.70	1.58	2.601	13.965	Cum
	<i>Section B-B</i>	2	5.25	1.87	2.280	44.720	Cum
	<i>Section C-C</i>	2	0.50	1.69	2.280	3.849	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.13	1.21	2.600	9.858	Cum
	<i>Left Bank Sec a to d</i>	1	3.08	2.60	1.950	15.602	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.49	1.10	2.608	2.806	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.61	1.85	2.608	25.164	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.2575	2.106	0.850	2.251	Cum
	<i>Floor</i>	1	3.286	2.106	0.650	4.498	Cum
		1	0.419	1.75	0.450	0.330	Cum
		1	0.718	1.75	0.350	0.440	Cum
		1	0.419	1.75	0.300	0.733	Cum
		1	2.579	1.75	0.950	4.288	Cum
		1	0.9	1.75	0.200	0.315	Cum
		1	0.135	1.75	0.200	0.047	Cum
		1	2.415	1.75	0.650	2.747	Cum
		1	0.725	1.75	0.650	0.825	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.750	0.600	2.310	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.750	0.850	1.200	1.785	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.600	1.620	Cum
						138.15	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.						
	<i>PCC Below Floor</i>						
		1	0.629	2.437	0.150	0.23	Cum
		1	1.522	1.531	0.150	0.35	Cum
		1	1.269	1.750	0.150	0.33	Cum
		1	0.670	1.750	0.150	0.18	Cum
		1	2.838	1.750	0.150	0.74	Cum
		1	0.973	1.750	0.150	0.26	Cum
		1	1.340	1.750	0.150	0.35	Cum
		1	0.567	1.750	0.150	0.15	Cum
		1	0.692	1.750	0.150	0.18	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.698	1.581	0.300	1.61	Cum
	<i>Section B-B</i>	2	5.250	1.868	0.300	5.88	Cum
	<i>Section C-C</i>	2	0.500	1.688	0.300	0.51	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.131	1.211	0.300	1.14	Cum
	<i>Left Bank Sec a to d</i>	1	3.075	2.602	0.150	1.20	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.489	1.100	0.300	0.32	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.605	1.852	0.300	2.89	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.750	0.850	0.300	0.45	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.750	0.450	0.900	0.71	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	5	0.600	0.600	0.300	0.54	Cum
	TOTAL					19.24	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	1.70	0.82	0.50	1.39	Cum
		2	1.70	1.00	0.60	2.04	Cum
		2	1.70	1.18	1.20	4.81	Cum
	Section B-B	2	5.25	1.14	1.08	12.97	Cum
		2	5.25	1.47	0.90	13.87	Cum
	Section C-C	2	0.50	1.05	0.78	0.82	Cum
		2	0.50	1.29	1.20	1.55	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.13	0.45	0.50	0.70	Cum
		1	3.13	0.63	0.60	1.18	Cum
		1	3.13	0.81	1.20	3.05	Cum
	Left Bank						
	Section a-a	1		2.479	0.50	1.24	Sqm
		1		2.31	0.20	0.46	Sqm
		1		1.31	1.10	1.44	Sqm
						3.14	Sqm
	Section b-b	1		2.48	0.50	1.24	Sqm
		1		2.04	0.20	0.41	Sqm
		1		1.26	1.10	1.38	Sqm
						3.03	Sqm
	Section c-c	1		2.48	0.50	1.24	Sqm
		1		1.67	0.20	0.33	Sqm
		1		1.08	1.10	1.18	Sqm
						2.76	Sqm
	Section d-d	1		2.48	0.50	1.24	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.10	0.53	Sqm
						1.86	Sqm
	Bottom Key	1	3.08	1.28	0.70	2.74	Cum
	Top Stem Area	1	3.08	2.70		8.29	Cum
	D/S Transition wall						
	Sec 4-4	2	0.49	0.70	0.90	0.62	Cum
		2	0.49	0.53	0.91	0.47	Cum
		2	0.49	0.35	0.50	0.17	Cum
	Avg. of Sec 1-1 & 3-3	2	2.61	1.45	0.90	6.81	Cum
		2	2.61	1.13	0.91	5.32	Cum
		2	2.61	0.67	0.50	1.75	Cum
	TOTAL					68.57	Cum
	Floor						
	U/S key	1	1.26	2.11	0.70	1.85	Cum
	Floor	1	3.29	2.11	0.50	3.46	Cum
		1	0.42	1.75	0.30	0.22	Cum
		1	0.72	1.75	0.20	0.25	Cum
		1	0.42	1.75	0.30	0.22	Cum
		1	2.58	1.75	0.50	2.26	Cum
		1	0.90	1.75	0.20	0.32	Cum
		1	0.14	1.75		0.24	Cum
		1	0.53	1.75	0.30	0.28	Cum
		1	2.42	1.75	0.50	2.11	Cum
	D/S key	1	0.73	1.75	0.50	0.63	Cum
	TOTAL					80.41	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.						
	<i>Over Floor</i>	1	3.29	2.11	0.20	1.38	Cum
		1	0.67	1.75	0.20	0.23	Cum
		1	2.58	1.75	0.20	0.90	Cum
		1	0.95	1.75	0.20	0.33	Cum
		1	2.42	1.75	0.20	0.85	Cum
	<i>Top Slab</i>	1	5.25	2.00	0.39	4.10	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	2.00	0.08	0.64	Cum
	<i>Dirt wall</i>	2	5.75	0.82	0.50	4.72	Cum
		2	5.75	0.40	0.43	1.96	Cum
	<i>Parapet</i>	2	2.84	0.45	0.18	0.44	Cum
		2	2.84	0.35	0.25	0.50	Cum
		2	2.84	0.22	0.55	0.68	Cum
	TOTAL					16.73	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.460	29		1.578	112.584	Kg
a2	10	5.650	10		0.616	34.830	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.380	18		0.616	26.409	Kg
a5	10	5.550	7		0.616	23.949	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	32		0.888	71.045	Kg
x2	16	1.265	32		1.578	63.883	Kg
x3	10	1.900	24		0.616	28.111	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	6.673	5		0.888	29.618	Kg
	12	1.900	25		0.888	42.166	Kg
	<i>floor raft</i>						
	12	3.394	5		0.888	15.064	Kg
	12	8.117	10		0.888	72.055	Kg
	12	1.900	67		0.888	113.005	Kg
	0.25 % Skin Reinforcement for Transition walls	68.57	0.25%	0.17	7850	1345.78	Kg
	TOTAL Weight of steel (in kg)					2156.77	Kg
	TOTAL Weight of Steel (in Tonne)					2.16	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		1.93		1.93	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.70		0.50	3.40	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.70		0.60	4.08	Sqm
		4		1.00	0.60	2.41	Sqm
		4	1.70		1.20	8.15	Sqm
		4		1.18	1.20	5.67	Sqm
	<i>Section B-B</i>	4	5.25		1.08	22.68	Sqm
		4		1.14	1.08	4.94	Sqm
		4	5.25		0.90	18.90	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.47	0.90	5.28	Sqm
	Section C-C	4	0.50		0.78	1.56	Sqm
		4		1.05	0.78	3.29	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.29	1.20	6.18	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.13		0.50	3.13	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.13		0.60	3.76	Sqm
		2		0.63	0.60	0.76	Sqm
		2	3.13		1.20	7.51	Sqm
		2		0.81	1.20	1.95	Sqm
	Left Bank						
	Bottom Key	2	3.08		0.70	4.31	Sqm
		2		1.28	0.70	1.79	Sqm
	Section a-a	2	1.03		0.50	1.03	Sqm
		2		2.48	0.50	2.48	Sqm
		2	1.03		0.20	0.41	Sqm
		2		2.31	0.20	0.92	Sqm
		2	1.03		1.10	2.26	Sqm
		2		1.31	1.10	2.87	Sqm
	Section b-b	2	1.03		0.50	1.03	Sqm
		2		2.48	0.50	2.48	Sqm
		2	1.03		0.20	0.41	Sqm
		2		2.04	0.20	0.81	Sqm
		2	1.03		1.10	2.26	Sqm
		2		1.26	1.10	2.77	Sqm
	Section c-c	2	1.03		0.50	1.03	Sqm
		2		2.48	0.50	2.48	Sqm
		2	1.03		0.20	0.41	Sqm
		2		1.67	0.20	0.67	Sqm
		2	1.03		1.10	2.26	Sqm
		2		1.08	1.10	2.37	Sqm
	Section d-d	2	1.03		0.50	1.03	Sqm
		2		2.48	0.50	2.48	Sqm
		2	1.03		0.20	0.41	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.03		1.10	2.26	Sqm
		2		0.48	1.10	1.06	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		0.90	1.76	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.49		0.91	1.78	Sqm
		4		0.53	0.91	1.91	Sqm
		4	0.49		0.50	0.98	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.61		0.90	9.38	Sqm
		4		1.45	0.90	5.23	Sqm
		4	2.61		0.91	9.46	Sqm
		4		1.13	0.91	4.09	Sqm
		4	2.61		0.50	5.21	Sqm
		4		0.67	0.50	1.35	Sqm
	Floor						
	U/S key	2	1.26		0.70	1.76	Sqm
		2		2.11	0.70	2.95	Sqm
	Floor	2	3.29		0.50	3.29	Sqm
		2		2.11	0.50	2.11	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.75	0.30	1.05	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.75	0.20	0.70	Sqm
		2	0.42		0.30	0.84	Sqm
		2		1.75	0.30	3.50	Sqm
		2	2.58		0.50	2.58	Sqm
		2		1.75	0.50	1.75	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.75	0.20	0.70	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.75		3.50	Sqm
		2	2.42		0.50	2.42	Sqm
		2		1.75	0.50	1.75	Sqm
	D/S key	2	0.73		0.50	0.73	Sqm
		2		1.75	0.50	1.75	Sqm
	Toe Wall Base D/S Portion	2	1.75		0.30	1.05	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.75		0.90	3.15	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.00	0.39	1.56	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	2.84		0.18	1.99	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.84		0.25	2.84	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.84		0.55	6.25	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					274.44	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	3.00	1.93		11.59	Sqm
	TOTAL					11.59	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	0.60	1.62	Cum
	TOTAL					1.62	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	1.75	0.15	0.58	Cum
	In D/S Portion below Stone Chips	1	2.20	1.75	0.15	0.58	Cum
	TOTAL					1.16	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.65	0.48		1.59	Sqm
	On Abutment Top	2	5.06	0.45		1.49	Sqm
	TOTAL					3.07	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.70	0.82		2.781	Cum
	<i>Section B-B</i>	2	5.25	1.53		16.086	Cum
	<i>Section C-C</i>	2	0.50	1.27		1.268	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.13	0.74		2.326	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.49	0.80		0.778	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.61	1.30		6.752	Cum
	TOTAL					29.99	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR KHAIRA MR OFFTAKING FROM RD-0+345 KM (R.) AT BASDIHA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.00	1.72	3.030	10.405	Cum
	<i>Section B-B</i>	2	5.25	2.00	2.507	52.752	Cum
	<i>Section C-C</i>	2	0.71	1.82	2.507	6.457	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.17	1.35	3.030	12.938	Cum
	<i>Left Bank Sec a to d</i>	1	3.61	2.91	2.180	22.923	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	1.10	2.835	3.150	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.71	1.99	2.835	30.520	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.4465	2.975	0.850	3.658	Cum
	<i>Floor</i>	1	3.628	2.975	0.650	7.016	Cum
		1	0.418	1.75	0.450	0.329	Cum
		1	0.718	1.75	0.350	0.440	Cum
		1	0.1077	1.75	0.000	0.188	Cum
		1	3.079	1.75	1.000	5.388	Cum
		1	0.968	1.75	0.200	0.339	Cum
		2	0.145	1.75	0.200	0.102	Cum
		1	1.423	1.75	0.650	1.619	Cum
		1	0.725	1.75	0.650	0.825	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.750	0.600	2.310	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.750	0.850	1.200	1.785	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	1.150	0.900	3.105	Cum
						166.25	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.						
	<i>PCC Below Floor</i>						
		1	0.629	3.469	0.150	0.33	Cum
		1	1.832	2.244	0.150	0.62	Cum
		1	1.269	1.750	0.150	0.33	Cum
		1	0.782	1.750	0.150	0.21	Cum
		1	3.088	1.750	0.150	0.81	Cum
		1	1.131	1.750	0.150	0.30	Cum
		1	0.348	1.750	0.150	0.09	Cum
		1	0.567	1.750	0.150	0.15	Cum
		1	0.692	1.750	0.150	0.18	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.000	1.717	0.300	1.03	Cum
	<i>Section B-B</i>	2	5.250	2.004	0.300	6.31	Cum
	<i>Section C-C</i>	2	0.706	1.824	0.300	0.77	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.170	1.347	0.300	1.28	Cum
	<i>Left Bank Sec a to d</i>	1	3.611	2.912	0.150	1.58	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.505	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.709	1.987	0.300	3.23	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.750	0.850	0.300	0.45	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.750	0.450	0.900	0.71	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	7	0.600	0.600	0.300	0.76	Cum
	TOTAL					20.67	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	1.07	0.83	1.77	Cum
		2	1.00	1.32	1.40	3.69	Cum
	Section B-B	2	5.25	1.21	1.31	16.63	Cum
		2	5.25	1.60	0.90	15.16	Cum
	Section C-C	2	0.71	1.12	1.01	1.60	Cum
		2	0.71	1.42	1.20	2.41	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.17	0.45	0.50	0.71	Cum
		1	3.17	0.70	0.83	1.84	Cum
		1	3.17	0.95	1.40	4.20	Cum
	Left Bank						
	Section a-a	1		2.773	0.50	1.39	Sqm
		1		2.62	0.20	0.52	Sqm
		1		1.48	1.33	1.96	Sqm
						3.87	Sqm
	Section b-b	1		2.77	0.50	1.39	Sqm
		1		2.20	0.20	0.44	Sqm
		1		1.34	1.33	1.78	Sqm
						3.61	Sqm
	Section c-c	1		2.77	0.50	1.39	Sqm
		1		1.80	0.20	0.36	Sqm
		1		1.14	1.33	1.52	Sqm
						3.26	Sqm
	Section d-d	1		2.77	0.50	1.39	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.33	0.64	Sqm
						2.12	Sqm
	Bottom Key	1	3.61	1.45	0.70	3.66	Cum
	Top Stem Area	1	3.61	3.22		11.62	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	0.70	0.90	0.64	Cum
		2	0.51	0.53	1.14	0.60	Cum
		2	0.51	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.71	1.59	0.90	7.74	Cum
		2	2.71	1.20	1.14	7.36	Cum
		2	2.71	0.68	0.50	1.84	Cum
	TOTAL					82.47	Cum
	Floor						
	U/S key	1	1.45	2.98	0.70	3.01	Cum
	Floor	1	3.63	2.98	0.50	5.40	Cum
		1	0.42	1.75	0.30	0.22	Cum
		1	0.72	1.75	0.20	0.25	Cum
		1	0.11	1.75		0.19	Cum
		1	3.08	1.75	0.55	2.96	Cum
		1	0.97	1.75	0.20	0.34	Cum
		2	0.15	1.75		0.51	Cum
		1	1.42	1.75	0.50	1.25	Cum
	D/S key	1	0.73	1.75	0.50	0.63	Cum
	TOTAL					97.22	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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Over Floor	1	3.75	2.98	0.20	2.23	Cum
		1	0.67	1.75	0.20	0.23	Cum
		1	3.08	1.75	0.20	1.08	Cum
		1	0.95	1.75	0.20	0.33	Cum
		1	1.43	1.75	0.20	0.50	Cum
	Top Slab	1	5.25	2.55	0.39	5.23	Cum
	75mm Th. Wearing coat on top slab	1	4.25	2.55	0.08	0.81	Cum
	Dirt wall	2	5.96	0.82	0.50	4.88	Cum
		2	5.96	0.40	0.43	2.03	Cum
	Parapet	2	3.39	0.45	0.18	0.53	Cum
		2	3.39	0.35	0.25	0.60	Cum
		2	3.39	0.22	0.55	0.81	Cum
	TOTAL					19.26	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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	3.010	29		1.578	137.756	Kg
a2	10	5.650	113		0.616	393.579	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.930	9		0.616	16.256	Kg
a5	10	5.550	10		0.616	34.214	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	42		0.888	93.246	Kg
x2	16	1.265	42		1.578	83.847	Kg
x3	10	2.450	24		0.616	36.248	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.325	7		0.888	45.517	Kg
	12	2.450	28		0.888	60.896	Kg
	<i>floor raft</i>						
	12	3.394	7		0.888	21.090	Kg
	12	7.625	14		0.888	94.762	Kg
	12	2.450	65		0.888	141.367	Kg
	0.25 % Skin Reinforcement for Transition walls	82.47	0.25%	0.21	7850	1618.38	Kg
	TOTAL Weight of steel (in kg)					2955.42	Kg
	TOTAL Weight of Steel (in Tonne)					2.96	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		2.71		2.71	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.00		0.50	2.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.00		0.83	3.32	Sqm
		4		1.07	0.83	3.55	Sqm
		4	1.00		1.40	5.60	Sqm
		4		1.32	1.40	7.38	Sqm
	<i>Section B-B</i>	4	5.25		1.31	27.45	Sqm
		4		1.21	1.31	6.34	Sqm
		4	5.25		0.90	18.90	Sqm
		4		1.60	0.90	5.77	Sqm
	<i>Section C-C</i>	4	0.71		1.01	2.84	Sqm
		4		1.12	1.01	4.52	Sqm
		4	0.71		1.20	3.39	Sqm
		4		1.42	1.20	6.84	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	3.17		0.50	3.17	Sqm
		2		0.45	0.50	0.45	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.17		0.83	5.26	Sqm
		2		0.70	0.83	1.16	Sqm
		2	3.17		1.40	8.88	Sqm
		2		0.95	1.40	2.65	Sqm
	Left Bank						
	Bottom Key	2	3.61		0.70	5.06	Sqm
		2		1.45	0.70	2.03	Sqm
	Section a-a	2	1.20		0.50	1.20	Sqm
		2		2.77	0.50	2.77	Sqm
		2	1.20		0.20	0.48	Sqm
		2		2.62	0.20	1.05	Sqm
		2	1.20		1.33	3.20	Sqm
		2		1.48	1.33	3.93	Sqm
	Section b-b	2	1.20		0.50	1.20	Sqm
		2		2.77	0.50	2.77	Sqm
		2	1.20		0.20	0.48	Sqm
		2		2.20	0.20	0.88	Sqm
		2	1.20		1.33	3.20	Sqm
		2		1.34	1.33	3.57	Sqm
	Section c-c	2	1.20		0.50	1.20	Sqm
		2		2.77	0.50	2.77	Sqm
		2	1.20		0.20	0.48	Sqm
		2		1.80	0.20	0.72	Sqm
		2	1.20		1.33	3.20	Sqm
		2		1.14	1.33	3.03	Sqm
	Section d-d	2	1.20		0.50	1.20	Sqm
		2		2.77	0.50	2.77	Sqm
		2	1.20		0.20	0.48	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.20		1.33	3.20	Sqm
		2		0.48	1.33	1.28	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.82	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		1.14	2.29	Sqm
		4		0.53	1.14	2.38	Sqm
		4	0.51		0.50	1.01	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.71		0.90	9.75	Sqm
		4		1.59	0.90	5.71	Sqm
		4	2.71		1.14	12.30	Sqm
		4		1.20	1.14	5.43	Sqm
		4	2.71		0.50	5.42	Sqm
		4		0.68	0.50	1.36	Sqm
	Floor						
	U/S key	2	1.45		0.70	2.03	Sqm
		2		2.98	0.70	4.17	Sqm
	Floor	2	3.63		0.50	3.63	Sqm
		2		2.98	0.50	2.98	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.75	0.30	1.05	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.75	0.20	0.70	Sqm
		2	0.11		0.00	0.22	Sqm
		2		1.75	0.00	3.50	Sqm
		2	3.08		0.55	3.39	Sqm
		2		1.75	0.55	1.93	Sqm
		2	0.97		0.20	0.39	Sqm
		2		1.75	0.20	0.70	Sqm
		4	0.15			0.58	Sqm
		4		1.75		7.00	Sqm
		2	1.42		0.50	1.42	Sqm
		2		1.75	0.50	1.75	Sqm
	D/S key	2	0.73		0.50	0.73	Sqm
		2		1.75	0.50	1.75	Sqm
	Toe Wall Base D/S Portion	2	1.75		0.30	1.05	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.75		0.90	3.15	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.55	0.39	1.99	Sqm
	Dirt wall	4	5.96		0.50	11.91	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.96		0.43	10.13	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	3.39		0.18	2.37	Sqm
		4		0.45	0.18	0.31	Sqm
		4	3.39		0.25	3.39	Sqm
		4		0.35	0.25	0.35	Sqm
		4	3.39		0.55	7.46	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					312.93	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	3.00	2.40		14.40	Sqm
	TOTAL					14.40	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	1.15	0.90	3.11	Cum
	TOTAL					3.11	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	1.75	0.15	0.58	Cum
	In D/S Portion below Stone Chips	1	2.20	1.75	0.15	0.58	Cum
	TOTAL					1.16	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.99	0.48		1.91	Sqm
	On Abutment Top	2	4.97	0.45		1.79	Sqm
	TOTAL					3.71	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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	1.13		2.260	Cum
	Section B-B	2	5.25	1.87		19.593	Cum
	Section C-C	2	0.71	1.55		2.194	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.17	0.99		3.149	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	0.87		0.879	Cum
	Avg. of Sec 1-1 & 3-3	2	2.71	1.45		7.843	Cum
	TOTAL					35.92	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR GAMHARIA MR OFFTAKING FROM RD-4+580 KM (L.) AT BASDIHA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.00	1.89	3.825	14.459	Cum
	<i>Section B-B</i>	2	5.25	1.77	2.819	52.273	Cum
	<i>Section C-C</i>	2	0.78	1.59	2.659	6.545	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.69	1.52	3.825	15.660	Cum
	<i>Left Bank Sec a to d</i>	1	4.29	3.41	2.066	30.202	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	1.10	2.819	3.138	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.72	2.00	2.819	30.557	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.662	3.979	1.050	6.944	Cum
	<i>Floor</i>	1	4.034	3.979	0.750	12.038	Cum
		1	0.441	2.25	0.450	0.447	Cum
		1	0.741	2.25	0.450	0.750	Cum
		1	0.11115	2.25	0.000	0.250	Cum
		1	2.68	2.25	1.110	6.693	Cum
		1	1.3	2.25	0.200	0.585	Cum
		1	0.135	2.25	0.200	0.061	Cum
		1	1.49	2.25	0.650	2.179	Cum
		1	0.9	2.25	1.350	2.734	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	2.250	0.600	2.970	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.250	0.850	1.200	2.295	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	1.650	0.900	4.455	Cum
						195.23	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.						
	<i>PCC Below Floor</i>						
		1	0.630	4.731	0.150	0.45	Cum
		1	2.310	2.998	0.150	1.04	Cum
		1	1.244	2.250	0.150	0.42	Cum
		1	0.804	2.250	0.150	0.27	Cum
		1	2.762	2.250	0.150	0.93	Cum
		1	1.478	2.250	0.150	0.50	Cum
		1	0.064	2.250	0.150	0.02	Cum
		1	1.360	2.250	0.150	0.46	Cum
		1	0.692	2.250	0.150	0.23	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.000	1.890	0.300	1.13	Cum
	<i>Section B-B</i>	2	5.250	1.766	0.300	5.56	Cum
	<i>Section C-C</i>	2	0.776	1.586	0.300	0.74	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.694	1.520	0.300	1.23	Cum
	<i>Left Bank Sec a to d</i>	1	4.287	3.410	0.150	2.19	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.506	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.716	1.996	0.300	3.25	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.250	0.850	0.300	0.57	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	2.250	0.450	0.900	0.91	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	10	0.600	0.600	0.300	1.08	Cum
	TOTAL					22.54	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	1.16	1.12	2.58	Cum
		2	1.00	1.49	1.91	5.69	Cum
	Section B-B	2	5.25	1.09	0.91	10.44	Cum
		2	5.25	1.37	1.61	23.08	Cum
	Section C-C	2	0.78	1.00	0.45	0.70	Cum
		2	0.78	1.19	1.91	3.51	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.69	0.45	0.50	0.61	Cum
		1	2.69	0.79	1.12	2.36	Cum
		1	2.69	1.12	1.91	5.76	Cum
	Left Bank						
	Section a-a	1		3.204	0.60	1.92	Sqm
		1		3.05	0.20	0.61	Sqm
		1		1.69	1.12	1.89	Sqm
						4.42	Sqm
	Section b-b	1		3.20	0.60	1.92	Sqm
		1		2.69	0.20	0.54	Sqm
		1		1.58	1.12	1.77	Sqm
						4.23	Sqm
	Section c-c	1		3.20	0.60	1.92	Sqm
		1		1.95	0.20	0.39	Sqm
		1		1.22	1.12	1.36	Sqm
						3.67	Sqm
	Section d-d	1		3.20	0.60	1.92	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.12	0.54	Sqm
						2.55	Sqm
	Bottom Key	1	4.29	1.66	0.90	6.41	Cum
	Top Stem Area	1	4.29	3.72		15.94	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	0.70	1.41	1.00	Cum
		2	0.51	0.53	0.61	0.32	Cum
		2	0.51	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.72	1.60	1.41	12.21	Cum
		2	2.72	1.26	0.61	4.19	Cum
		2	2.72	0.74	0.50	2.02	Cum
	TOTAL					97.82	Cum
	Floor						
	U/S key	1	1.66	3.98	0.90	5.95	Cum
	Floor	1	4.03	3.98	0.60	9.63	Cum
		1	0.44	2.25	0.30	0.30	Cum
		1	0.74	2.25	0.30	0.50	Cum
		1	0.11	2.25		0.25	Cum
		1	2.68	2.25	0.66	3.98	Cum
		1	1.30	2.25	0.20	0.59	Cum
		1	0.14	2.25		0.30	Cum
		1	0.32	2.25		0.71	Cum
		1	1.49	2.25	0.50	1.68	Cum
	D/S key	1	0.90	2.25	1.20	2.43	Cum
	TOTAL					124.14	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.						
	<i>Over Floor</i>	1	4.18	3.98	0.20	3.32	Cum
		1	0.67	2.25	0.20	0.30	Cum
		1	3.08	2.25	0.20	1.39	Cum
		1	0.95	2.25	0.20	0.43	Cum
		1	1.49	2.25	0.20	0.67	Cum
	<i>Top Slab</i>	1	5.25	3.05	0.39	6.25	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	3.05	0.08	0.97	Cum
	<i>Dirt wall</i>	2	6.03	0.82	0.50	4.94	Cum
		2	6.03	0.40	0.43	2.05	Cum
	<i>Parapet</i>	2	3.89	0.45	0.18	0.61	Cum
		2	3.89	0.35	0.25	0.68	Cum
		2	3.89	0.22	0.55	0.93	Cum
	TOTAL					22.55	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	3.510	29		1.578	160.639	Kg
a2	10	5.650	12		0.616	41.796	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	3.430	18		0.616	38.060	Kg
a5	10	5.550	11		0.616	37.635	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	48		0.888	106.567	Kg
x2	16	1.265	48		1.578	95.825	Kg
x3	10	2.850	24		0.616	42.166	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	8.743	9		0.888	69.851	Kg
	12	2.949	33		0.888	86.389	Kg
	<i>floor raft</i>						
	12	5.250	9		0.888	41.944	Kg
	12	7.795	18		0.888	124.554	Kg
	12	2.949	73		0.888	191.102	Kg
	0.25 % Skin Reinforcement for Transition walls	97.82	0.25%	0.24	7850	1919.71	Kg
	TOTAL Weight of steel (in kg)					3134.50	Kg
	TOTAL Weight of Steel (in Tonne)					3.13	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		3.71		3.71	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.00		0.50	2.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.00		1.12	4.46	Sqm
		4		1.16	1.12	5.16	Sqm
		4	1.00		1.91	7.64	Sqm
		4		1.49	1.91	11.38	Sqm
	<i>Section B-B</i>	4	5.25		0.91	19.11	Sqm
		4		1.09	0.91	3.98	Sqm
		4	5.25		1.61	33.79	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.37	1.61	8.79	Sqm
	Section C-C	4	0.78		0.45	1.40	Sqm
		4		1.00	0.45	1.81	Sqm
		4	0.78		1.91	5.93	Sqm
		4		1.19	1.91	9.06	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.69		0.50	2.69	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.69		1.12	6.01	Sqm
		2		0.79	1.12	1.75	Sqm
		2	2.69		1.91	10.28	Sqm
		2		1.12	1.91	4.28	Sqm
	Left Bank						
	Bottom Key	2	4.29		0.90	7.72	Sqm
		2		1.66	0.90	2.99	Sqm
	Section a-a	2	1.43		0.60	1.71	Sqm
		2		3.20	0.60	3.84	Sqm
		2	1.43		0.20	0.57	Sqm
		2		3.05	0.20	1.22	Sqm
		2	1.43		1.12	3.19	Sqm
		2		1.69	1.12	3.78	Sqm
	Section b-b	2	1.43		0.60	1.71	Sqm
		2		3.20	0.60	3.84	Sqm
		2	1.43		0.20	0.57	Sqm
		2		2.69	0.20	1.08	Sqm
		2	1.43		1.12	3.19	Sqm
		2		1.58	1.12	3.54	Sqm
	Section c-c	2	1.43		0.60	1.71	Sqm
		2		3.20	0.60	3.84	Sqm
		2	1.43		0.20	0.57	Sqm
		2		1.95	0.20	0.78	Sqm
		2	1.43		1.12	3.19	Sqm
		2		1.22	1.12	2.72	Sqm
	Section d-d	2	1.43		0.60	1.71	Sqm
		2		3.20	0.60	3.84	Sqm
		2	1.43		0.20	0.57	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.43		1.12	3.19	Sqm
		2		0.48	1.12	1.07	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		1.41	2.85	Sqm
		4		0.70	1.41	3.95	Sqm
		4	0.51		0.61	1.23	Sqm
		4		0.53	0.61	1.28	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		1.41	15.31	Sqm
		4		1.60	1.41	8.99	Sqm
		4	2.72		0.61	6.63	Sqm
		4		1.26	0.61	3.08	Sqm
		4	2.72		0.50	5.43	Sqm
		4		0.74	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.66		0.90	2.99	Sqm
		2		3.98	0.90	7.16	Sqm
	Floor	2	4.03		0.60	4.84	Sqm
		2		3.98	0.60	4.77	Sqm
		2	0.44		0.30	0.26	Sqm
		2		2.25	0.30	1.35	Sqm
		2	0.74		0.30	0.44	Sqm
		2		2.25	0.30	1.35	Sqm
		2	0.11		0.00	0.22	Sqm
		2		2.25	0.00	4.50	Sqm
		2	2.68		0.66	3.54	Sqm
		2		2.25	0.66	2.97	Sqm
		2	1.30		0.20	0.52	Sqm
		2		2.25	0.20	0.90	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		2.25		4.50	Sqm
		2	0.32			0.63	Sqm
		2		2.25		4.50	Sqm
		2	1.49		0.50	1.49	Sqm
		2		2.25	0.50	2.25	Sqm
	D/S key	2	0.90		1.20	2.16	Sqm
		2		2.25	1.20	5.40	Sqm
	Toe Wall Base D/S Portion	2	2.25		0.30	1.35	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	2.25		0.90	4.05	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		3.05	0.39	2.38	Sqm
	Dirt wall	4	6.03		0.50	12.05	Sqm
		4		0.82	0.50	1.64	Sqm
		4	6.03		0.43	10.24	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	3.89		0.18	2.72	Sqm
		4		0.45	0.18	0.31	Sqm
		4	3.89		0.25	3.89	Sqm
		4		0.35	0.25	0.35	Sqm
		4	3.89		0.55	8.56	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					367.08	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	3.00	1.95		11.67	Sqm
	TOTAL					11.67	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	1.65	0.90	4.46	Cum
	TOTAL					4.46	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	2.25	0.15	0.74	Cum
	In D/S Portion below Stone Chips	1	2.20	2.25	0.15	0.74	Cum
	TOTAL					1.49	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	2.42	0.48		2.33	Sqm
	On Abutment Top	2	5.04	0.45		2.18	Sqm
	TOTAL					4.51	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.00	1.61		3.211	Cum
	<i>Section B-B</i>	2	5.25	1.56		16.388	Cum
	<i>Section C-C</i>	2	0.78	1.35		2.098	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.69	1.37		3.698	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	0.79		0.795	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.72	1.50		8.160	Cum
	TOTAL					34.35	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR PRITAMPURA SUB DY OFFTAKING FROM RD-10+060 KM (R.) AT BASDIHA DY							
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.						
	<i>Abutment</i>						
	Section A-A	2	1.00	1.79	3.148	11.264	Cum
	Section B-B	2	5.25	1.97	2.648	54.774	Cum
	Section C-C	2	0.53	1.79	2.648	5.005	Cum
	<i>U/S Transition wall</i>						
	Right Bank (Section D-D)	1	3.35	1.42	3.148	14.964	Cum
	Left Bank Sec a to d	1	3.92	3.07	2.398	28.819	Cum
	<i>D/S Transition wall</i>						
	Sec 4-4	2	0.53	1.10	2.650	3.113	Cum
	Avg. of Sec 1-1 & 3-3	2	2.98	2.29	2.650	36.115	Cum
	<i>Floor</i>						
	U/S key	1	1.536	3.7375	0.750	4.306	Cum
	Floor	1	3.782	3.7375	0.750	10.601	Cum
		1	0.3725	3.82	0.450	0.640	Cum
		1	0.604	3.82	0.450	1.038	Cum
		1	0.0906	3.82	0.000	0.346	Cum
		1	2.997	3.82	1.050	12.021	Cum
		1	1.116	3.82	0.200	0.853	Cum
		1	0.240	3.82	0.200	0.183	Cum
		1	1.245	3.82	0.650	3.091	Cum
		1	0.775	3.82	0.850	2.516	Cum
	D/S Portion C.C. Blocks (600x600x300)mm	1	2.200	3.820	0.600	5.042	Cum
	Toe Wall Base D/S Portion	1	3.820	0.850	1.200	3.896	Cum
	Boulder Pitching (D/S Portion)	1	3.000	0.900	3.220	8.694	Cum
						207.28	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.						
	<i>PCC Below Floor</i>						
		1	0.624	5.659	0.150	0.53	Cum
		1	1.965	4.406	0.150	1.30	Cum
		1	1.525	3.820	0.150	0.87	Cum
		1	0.670	3.820	0.150	0.38	Cum
		1	3.062	3.820	0.150	1.75	Cum
		1	1.264	3.820	0.150	0.72	Cum
		1	0.097	3.820	0.150	0.06	Cum
		1	0.782	3.820	0.150	0.45	Cum
		1	0.692	3.820	0.150	0.40	Cum
	<i>PCC Below Abutment</i>						
	Section A-A	2	1.000	1.789	0.300	1.07	Cum
	Section B-B	2	5.250	1.970	0.300	6.21	Cum
	Section C-C	2	0.528	1.790	0.300	0.57	Cum
	<i>U/S Transition wall</i>						
	Right Bank (Section D-D)	1	3.350	1.419	0.300	1.43	Cum
	Left Bank Sec a to d	1	3.921	3.065	0.150	1.80	Cum
	<i>D/S Transition wall</i>						
	Sec 4-4	2	0.534	1.100	0.300	0.35	Cum
	Avg. of Sec 1-1 & 3-3	2	2.975	2.291	0.300	4.09	Cum
	Toe Wall Base D/S Portion	1	3.820	0.850	0.300	0.97	Cum
	Toe Wall Stem D/S Portion	1	3.820	0.450	0.900	1.55	Cum
	Toe Wall Base (For Brick Pitching)	1	3.000	0.450	0.300	0.41	Cum
	Toe Wall Stem (For Brick Pitching)	1	3.000	0.300	0.900	0.81	Cum
	D/S Portion C.C. Blocks (600x600x300)mm	16	0.600	0.600	0.300	1.73	Cum
	TOTAL					27.44	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	1.10	0.95	2.09	Cum
		2	1.00	1.39	1.40	3.89	Cum
	Section B-B	2	5.25	1.20	1.25	15.66	Cum
		2	5.25	1.57	1.10	18.13	Cum
	Section C-C	2	0.53	1.11	0.95	1.11	Cum
		2	0.53	1.40	1.40	2.07	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.35	0.45	0.50	0.75	Cum
		1	3.35	0.73	0.95	2.33	Cum
		1	3.35	1.02	1.40	4.78	Cum
	Left Bank						
	Section a-a	1		2.952	0.60	1.77	Sqm
		1		2.80	0.20	0.56	Sqm
		1		1.57	1.45	2.27	Sqm
						4.60	Sqm
	Section b-b	1		2.95	0.60	1.77	Sqm
		1		2.41	0.20	0.48	Sqm
		1		1.44	1.45	2.09	Sqm
						4.34	Sqm
	Section c-c	1		2.95	0.60	1.77	Sqm
		1		1.87	0.20	0.37	Sqm
		1		1.17	1.45	1.70	Sqm
						3.84	Sqm
	Section d-d	1		2.95	0.60	1.77	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.45	0.70	Sqm
						2.56	Sqm
	Bottom Key	1	3.92	1.54	0.60	3.61	Cum
	Top Stem Area	1	3.92		3.84	15.04	Cum
	D/S Transition wall						
	Sec 4-4	2	0.53	0.70	0.90	0.67	Cum
		2	0.53	0.53	0.95	0.53	Cum
		2	0.53	0.35	0.50	0.19	Cum
	Avg. of Sec 1-1 & 3-3	2	2.98	1.89	0.90	10.12	Cum
		2	2.98	1.42	0.95	8.03	Cum
		2	2.98	0.76	0.50	2.27	Cum
	TOTAL					92.12	Cum
	Floor						
	U/S key	1	1.54	3.74	0.60	3.44	Cum
	Floor	1	3.78	3.74	0.60	8.48	Cum
		1	0.37	3.82	0.30	0.43	Cum
		1	0.60	3.82	0.30	0.69	Cum
		1	0.09	3.82		0.35	Cum
		1	3.00	3.82	0.60	6.87	Cum
		1	1.12	3.82	0.20	0.85	Cum
		1	0.24	3.82		0.92	Cum
		1	0.13	3.82		0.51	Cum
		1	1.25	3.82	0.50	2.38	Cum
	D/S key	1	0.78	3.82	0.70	2.07	Cum
	TOTAL					119.12	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.						
	<i>Over Floor</i>	1	3.92	3.74	0.20	2.93	Cum
		1	0.67	3.82	0.20	0.51	Cum
		1	3.08	3.82	0.20	2.35	Cum
		1	0.95	3.82	0.20	0.72	Cum
		1	1.25	3.82	0.20	0.95	Cum
	<i>Top Slab</i>	1	5.25	4.62	0.44	10.68	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	4.62	0.08	1.47	Cum
	<i>Dirt wall</i>	2	5.78	0.82	0.50	4.74	Cum
		2	5.78	0.40	0.43	1.96	Cum
	<i>Parapet</i>	2	5.46	0.45	0.18	0.85	Cum
		2	5.46	0.35	0.25	0.96	Cum
		2	5.46	0.22	0.55	1.31	Cum
	TOTAL					29.46	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	5.280	32		1.578	266.642	Kg
a2	10	5.650	37		0.616	128.871	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	4.200	23		0.616	59.550	Kg
a5	10	5.550	21		0.616	71.848	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.602	72		0.888	166.306	Kg
x2	16	1.265	72		1.578	143.737	Kg
x3	10	4.300	24		0.616	63.619	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.837	15		0.888	104.354	Kg
	12	4.520	30		0.888	120.373	Kg
	<i>floor raft</i>						
	12	3.918	15		0.888	52.170	Kg
	12	7.547	30		0.888	200.985	Kg
	12	4.520	69		0.888	276.857	Kg
	0.25 % Skin Reinforcement for Transition walls	92.12	0.25%	0.23	7850	1807.90	Kg
	TOTAL Weight of steel (in kg)					3641.47	Kg
	TOTAL Weight of Steel (in Tonne)					3.64	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1	6.13			6.13	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.00		0.50	2.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.00		0.95	3.79	Sqm
		4		1.10	0.95	4.19	Sqm
		4	1.00		1.40	5.60	Sqm
		4		1.39	1.40	7.78	Sqm
	<i>Section B-B</i>	4	5.25		1.25	26.21	Sqm
		4		1.20	1.25	5.97	Sqm
		4	5.25		1.10	23.10	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.57	1.10	6.91	Sqm
	Section C-C	4	0.53		0.95	2.00	Sqm
		4		1.11	0.95	4.21	Sqm
		4	0.53		1.40	2.96	Sqm
		4		1.40	1.40	7.84	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.35		0.50	3.35	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.35		0.95	6.35	Sqm
		2		0.73	0.95	1.39	Sqm
		2	3.35		1.40	9.38	Sqm
		2		1.02	1.40	2.85	Sqm
	Left Bank						
	Bottom Key	2	3.92		0.60	4.71	Sqm
		2		1.54	0.60	1.84	Sqm
	Section a-a	2	1.31		0.60	1.57	Sqm
		2		2.95	0.60	3.54	Sqm
		2	1.31		0.20	0.52	Sqm
		2		2.80	0.20	1.12	Sqm
		2	1.31		1.45	3.79	Sqm
		2		1.57	1.45	4.54	Sqm
	Section b-b	2	1.31		0.60	1.57	Sqm
		2		2.95	0.60	3.54	Sqm
		2	1.31		0.20	0.52	Sqm
		2		2.41	0.20	0.96	Sqm
		2	1.31		1.45	3.79	Sqm
		2		1.44	1.45	4.18	Sqm
	Section c-c	2	1.31		0.60	1.57	Sqm
		2		2.95	0.60	3.54	Sqm
		2	1.31		0.20	0.52	Sqm
		2		1.87	0.20	0.75	Sqm
		2	1.31		1.45	3.79	Sqm
		2		1.17	1.45	3.40	Sqm
	Section d-d	2	1.31		0.60	1.57	Sqm
		2		2.95	0.60	3.54	Sqm
		2	1.31		0.20	0.52	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.31		1.45	3.79	Sqm
		2		0.48	1.45	1.39	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.53		0.90	1.92	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.53		0.95	2.03	Sqm
		4		0.53	0.95	2.00	Sqm
		4	0.53		0.50	1.07	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.98		0.90	10.71	Sqm
		4		1.89	0.90	6.81	Sqm
		4	2.98		0.95	11.31	Sqm
		4		1.42	0.95	5.40	Sqm
		4	2.98		0.50	5.95	Sqm
		4		0.76	0.50	1.53	Sqm
	Floor						
	U/S key	2	1.54		0.60	1.84	Sqm
		2		3.74	0.60	4.49	Sqm
	Floor	2	3.78		0.60	4.54	Sqm
		2		3.74	0.60	4.49	Sqm
		2	0.37		0.30	0.22	Sqm
		2		3.82	0.30	2.29	Sqm
		2	0.60		0.30	0.36	Sqm
		2		3.82	0.30	2.29	Sqm
		2	0.09		0.00	0.18	Sqm
		2		3.82	0.00	7.64	Sqm
		2	3.00		0.60	3.60	Sqm
		2		3.82	0.60	4.58	Sqm
		2	1.12		0.20	0.45	Sqm
		2		3.82	0.20	1.53	Sqm
		2	0.24			0.48	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		3.82		7.64	Sqm
		2	1.25		0.50	1.25	Sqm
		2		3.82	0.50	3.82	Sqm
	D/S key	2	0.78		0.70	1.09	Sqm
		2		3.82	0.70	5.35	Sqm
	Toe Wall Base D/S Portion	2	3.82		0.30	2.29	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	3.82		0.90	6.88	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.44	4.63	Sqm
		2		4.62	0.44	4.07	Sqm
	Dirt wall	4	5.78		0.50	11.56	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.78		0.43	9.82	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	5.46		0.18	3.82	Sqm
		4		0.45	0.18	0.31	Sqm
		4	5.46		0.25	5.46	Sqm
		4		0.35	0.25	0.35	Sqm
		4	5.46		0.55	12.01	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					364.08	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	3.00	2.85		17.10	Sqm
	TOTAL					17.10	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	3.22	8.69	Cum
	TOTAL					8.69	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	3.82	0.15	1.26	Cum
	In D/S Portion below Stone Chips	1	2.20	3.82	0.15	1.26	Cum
	TOTAL					2.52	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	2.17	0.48		2.09	Sqm
	On Abutment Top	2	5.10	0.45		1.95	Sqm
	TOTAL					4.04	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.00	1.21		2.426	Cum
	<i>Section B-B</i>	2	5.25	1.90		19.940	Cum
	<i>Section C-C</i>	2	0.53	1.60		1.687	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.35	1.12		3.752	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.53	0.81		0.866	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.98	1.38		8.206	Cum
	TOTAL					36.88	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR CHANDAULI MR OFFTAKING FROM RD-7+435 KM (R.) AT PRITAMPURA SUB DY							
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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.54	1.58	2.604	12.713	Cum
	<i>Section B-B</i>	2	5.25	1.67	1.950	34.193	Cum
	<i>Section C-C</i>	2	0.50	1.49	1.950	2.906	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.91	1.21	2.600	9.151	Cum
	<i>Left Bank Sec a to d</i>	1	2.22	2.60	1.950	11.276	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.49	1.10	2.150	2.318	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.61	1.86	2.150	20.869	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.278	2.418	0.850	2.627	Cum
	<i>Floor</i>	1	3.29	2.418	0.650	5.171	Cum
		1	0.418	1.1	0.450	0.207	Cum
		1	0.718	1.1	0.350	0.276	Cum
		1	0.418	1.1	0.300	0.460	Cum
		1	3.079	1.1	0.950	3.218	Cum
		1	0.9	1.1	0.200	0.198	Cum
		1	0.135	1.1	0.200	0.030	Cum
		1	1.761	1.1	0.650	1.259	Cum
		1	0.725	1.1	0.650	0.518	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.100	0.600	1.452	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.100	0.850	1.200	1.122	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.500	1.350	Cum
						111.31	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.						
	<i>PCC Below Floor</i>						
		1	0.629	2.878	0.150	0.27	Cum
		1	1.526	1.560	0.150	0.36	Cum
		1	1.269	1.100	0.150	0.21	Cum
		1	0.670	1.100	0.150	0.11	Cum
		1	3.338	1.100	0.150	0.55	Cum
		1	0.973	1.100	0.150	0.16	Cum
		1	0.686	1.100	0.150	0.11	Cum
		1	0.567	1.100	0.150	0.09	Cum
		1	0.692	1.100	0.150	0.11	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.544	1.581	0.300	1.46	Cum
	<i>Section B-B</i>	2	5.250	1.670	0.300	5.26	Cum
	<i>Section C-C</i>	2	0.500	1.490	0.300	0.45	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.907	1.211	0.300	1.06	Cum
	<i>Left Bank Sec a to d</i>	1	2.224	2.600	0.150	0.87	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.490	1.100	0.300	0.32	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.610	1.860	0.300	2.91	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.100	0.850	0.300	0.28	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.100	0.450	0.900	0.45	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	5	0.600	0.600	0.300	0.54	Cum
	TOTAL					16.79	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	1.54	0.82	0.50	1.27	Cum
		2	1.54	1.00	0.60	1.87	Cum
		2	1.54	1.18	1.20	4.38	Cum
	Section B-B	2	5.25	1.05	0.75	8.23	Cum
		2	5.25	1.27	0.90	12.00	Cum
	Section C-C	2	0.50	0.96	0.45	0.43	Cum
		2	0.50	1.09	1.20	1.31	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.91	0.45	0.50	0.65	Cum
		1	2.91	0.63	0.60	1.10	Cum
		1	2.91	0.81	1.20	2.83	Cum
	Left Bank						
	Section a-a	1		2.436	0.50	1.22	Sqm
		1		2.29	0.20	0.46	Sqm
		1		1.31	1.10	1.44	Sqm
						3.11	Sqm
	Section b-b	1		2.44	0.50	1.22	Sqm
		1		2.04	0.20	0.41	Sqm
		1		1.26	1.10	1.39	Sqm
						3.01	Sqm
	Section c-c	1		2.44	0.50	1.22	Sqm
		1		1.67	0.20	0.33	Sqm
		1		1.07	1.10	1.18	Sqm
						2.73	Sqm
	Section d-d	1		2.44	0.50	1.22	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.10	0.53	Sqm
						1.84	Sqm
	Bottom Key	1	2.22	1.28	0.70	1.99	Cum
	Top Stem Area	1	2.22	2.67		5.95	Cum
	D/S Transition wall						
	Sec 4-4	2	0.49	0.70	0.90	0.62	Cum
		2	0.49	0.53	0.45	0.23	Cum
		2	0.49	0.35	0.50	0.17	Cum
	Avg. of Sec 1-1 & 3-3	2	2.61	1.46	0.90	6.86	Cum
		2	2.61	1.13	0.45	2.65	Cum
		2	2.61	0.67	0.50	1.76	Cum
	TOTAL					54.28	Cum
	Floor						
	U/S key	1	1.28	2.42	0.70	2.16	Cum
	Floor	1	3.29	2.42	0.50	3.98	Cum
		1	0.42	1.10	0.30	0.14	Cum
		1	0.72	1.10	0.20	0.16	Cum
		1	0.42	1.10	0.30	0.14	Cum
		1	3.08	1.10	0.50	1.69	Cum
		1	0.90	1.10	0.20	0.20	Cum
		1	0.14	1.10		0.15	Cum
		1	0.53	1.10	0.30	0.18	Cum
		1	1.76	1.10	0.50	0.97	Cum
	D/S key	1	0.73	1.10	0.50	0.40	Cum
	TOTAL					64.44	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.						
	<i>Over Floor</i>	1	3.41	2.42	0.20	1.65	Cum
		1	0.67	1.10	0.20	0.15	Cum
		1	3.08	1.10	0.20	0.68	Cum
		1	0.95	1.10	0.20	0.21	Cum
		1	1.76	1.10	0.20	0.39	Cum
	<i>Top Slab</i>	1	5.25	1.90	0.39	3.90	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	1.90	0.08	0.61	Cum
	<i>Dirt wall</i>	2	5.75	0.82	0.50	4.72	Cum
		2	5.75	0.40	0.43	1.96	Cum
	<i>Parapet</i>	2	2.74	0.45	0.18	0.43	Cum
		2	2.74	0.35	0.25	0.48	Cum
		2	2.74	0.22	0.55	0.66	Cum
	TOTAL					15.81	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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.360	29		1.578	108.008	Kg
a2	10	5.650	10		0.616	34.830	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.280	18		0.616	25.300	Kg
a5	10	5.550	7		0.616	23.949	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	32		0.888	71.045	Kg
x2	16	1.265	32		1.578	63.883	Kg
x3	10	1.800	24		0.616	26.631	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	6.682	5		0.888	29.658	Kg
	12	1.800	26		0.888	41.545	Kg
	<i>floor raft</i>						
	12	3.460	5		0.888	15.357	Kg
	12	7.963	10		0.888	70.688	Kg
	12	1.800	67		0.888	107.057	Kg
	0.25 % Skin Reinforcement for Transition walls	54.28	0.25%	0.14	7850	1065.34	Kg
	TOTAL Weight of steel (in kg)					1861.55	Kg
	TOTAL Weight of Steel (in Tonne)					1.86	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		1.92		1.92	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.54		0.50	3.09	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.54		0.60	3.73	Sqm
		4		1.00	0.60	2.42	Sqm
		4	1.54		1.20	7.41	Sqm
		4		1.18	1.20	5.67	Sqm
	<i>Section B-B</i>	4	5.25		0.75	15.75	Sqm
		4		1.05	0.75	3.14	Sqm
		4	5.25		0.90	18.90	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.27	0.90	4.57	Sqm
	Section C-C	4	0.50		0.45	0.90	Sqm
		4		0.96	0.45	1.72	Sqm
		4	0.50		1.20	2.40	Sqm
		4		1.09	1.20	5.23	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.91		0.50	2.91	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.91		0.60	3.49	Sqm
		2		0.63	0.60	0.76	Sqm
		2	2.91		1.20	6.98	Sqm
		2		0.81	1.20	1.95	Sqm
	Left Bank						
	Bottom Key	2	2.22		0.70	3.11	Sqm
		2		1.28	0.70	1.79	Sqm
	Section a-a	2	0.74		0.50	0.74	Sqm
		2		2.44	0.50	2.44	Sqm
		2	0.74		0.20	0.30	Sqm
		2		2.29	0.20	0.91	Sqm
		2	0.74		1.10	1.63	Sqm
		2		1.31	1.10	2.88	Sqm
	Section b-b	2	0.74		0.50	0.74	Sqm
		2		2.44	0.50	2.44	Sqm
		2	0.74		0.20	0.30	Sqm
		2		2.04	0.20	0.82	Sqm
		2	0.74		1.10	1.63	Sqm
		2		1.26	1.10	2.77	Sqm
	Section c-c	2	0.74		0.50	0.74	Sqm
		2		2.44	0.50	2.44	Sqm
		2	0.74		0.20	0.30	Sqm
		2		1.67	0.20	0.67	Sqm
		2	0.74		1.10	1.63	Sqm
		2		1.07	1.10	2.36	Sqm
	Section d-d	2	0.74		0.50	0.74	Sqm
		2		2.44	0.50	2.44	Sqm
		2	0.74		0.20	0.30	Sqm
		2		0.48	0.20	0.19	Sqm
		2	0.74		1.10	1.63	Sqm
		2		0.48	1.10	1.06	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		0.90	1.76	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.49		0.45	0.88	Sqm
		4		0.53	0.45	0.95	Sqm
		4	0.49		0.50	0.98	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.61		0.90	9.40	Sqm
		4		1.46	0.90	5.25	Sqm
		4	2.61		0.45	4.70	Sqm
		4		1.13	0.45	2.03	Sqm
		4	2.61		0.50	5.22	Sqm
		4		0.67	0.50	1.35	Sqm
	Floor						
	U/S key	2	1.28		0.70	1.79	Sqm
		2		2.42	0.70	3.39	Sqm
	Floor	2	3.29		0.50	3.29	Sqm
		2		2.42	0.50	2.42	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.10	0.30	0.66	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.10	0.20	0.44	Sqm
		2	0.42		0.30	0.84	Sqm
		2		1.10	0.30	2.20	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.10	0.50	1.10	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.10	0.20	0.44	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.10		2.20	Sqm
		2	1.76		0.50	1.76	Sqm
		2		1.10	0.50	1.10	Sqm
	D/S key	2	0.73		0.50	0.73	Sqm
		2		1.10	0.50	1.10	Sqm
	Toe Wall Base D/S Portion	2	1.10		0.30	0.66	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.10		0.90	1.98	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		1.90	0.39	1.48	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	2.74		0.18	1.92	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.74		0.25	2.74	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.74		0.55	6.03	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					238.46	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	3.00	1.95		11.69	Sqm
	TOTAL					11.69	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	0.50	1.35	Cum
	TOTAL					1.35	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	1.10	0.15	0.36	Cum
	In D/S Portion below Stone Chips	1	2.20	1.10	0.15	0.36	Cum
	TOTAL					0.73	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.77	0.48		1.70	Sqm
	On Abutment Top	2	4.92	0.45		1.60	Sqm
	TOTAL					3.30	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.54	0.82		2.532	Cum
	<i>Section B-B</i>	2	5.25	1.10		11.550	Cum
	<i>Section C-C</i>	2	0.50	0.88		0.884	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.91	0.75		2.183	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.49	0.62		0.611	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.61	1.02		5.329	Cum
	TOTAL					23.09	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR SIMRA MR OFFTAKING FROM RD-12+685 KM (R.) AT BASDIHA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	3.30	1.72	3.590	40.754	Cum
	<i>Section B-B</i>	2	5.25	1.74	2.360	43.018	Cum
	<i>Section C-C</i>	2	0.50	1.56	2.250	3.466	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.68	1.35	3.590	17.833	Cum
	<i>Left Bank Sec a to d</i>	1	3.61	2.92	2.183	22.994	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	1.10	2.260	2.486	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.68	1.95	2.260	23.676	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.4495	2.5415	0.850	3.131	Cum
	<i>Floor</i>	1	3.636	2.5415	0.650	6.007	Cum
		1	0.618	1.2	0.650	0.482	Cum
		1	1.118	1.2	0.410	0.550	Cum
		1	0.30875	1.2	0.000	0.371	Cum
		1	3.047	1.2	1.150	4.205	Cum
		1	0.932	1.2	0.200	0.224	Cum
		1	0.304	1.2	0.200	0.073	Cum
		1	1.761	1.2	0.650	1.374	Cum
		1	0.7875	1.2	0.900	0.851	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.200	0.600	1.584	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.200	0.850	1.200	1.224	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.600	1.620	Cum
						175.92	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.						
	<i>PCC Below Floor</i>						
		1	0.624	3.105	0.150	0.29	Cum
		1	1.838	1.764	0.150	0.49	Cum
		1	1.270	1.200	0.150	0.23	Cum
		1	1.946	1.200	0.150	0.35	Cum
		1	3.047	1.200	0.150	0.55	Cum
		1	1.423	1.200	0.150	0.26	Cum
		1	1.094	1.200	0.150	0.20	Cum
		1	0.838	1.200	0.150	0.15	Cum
		1	0.692	1.200	0.150	0.12	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	3.300	1.720	0.300	3.41	Cum
	<i>Section B-B</i>	2	5.250	1.736	0.300	5.47	Cum
	<i>Section C-C</i>	2	0.495	1.556	0.300	0.46	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.680	1.350	0.300	1.49	Cum
	<i>Left Bank Sec a to d</i>	1	3.611	2.917	0.150	1.58	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.500	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.682	1.953	0.300	3.14	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.200	0.850	0.300	0.31	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.200	0.450	0.900	0.49	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	5	0.600	0.600	0.300	0.54	Cum
	TOTAL					21.06	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	3.30	0.82	0.50	2.71	Cum
		2	3.30	1.07	0.83	5.88	Cum
		2	3.30	1.32	1.96	17.05	Cum
	Section B-B	2	5.25	1.08	0.86	9.73	Cum
		2	5.25	1.34	1.20	16.83	Cum
	Section C-C	2	0.50	0.99	0.45	0.44	Cum
		2	0.50	1.16	1.50	1.72	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.68	0.45	0.50	0.83	Cum
		1	3.68	0.70	0.83	2.15	Cum
		1	3.68	0.95	1.96	6.84	Cum
	Left Bank						
	Section a-a	1		2.779	0.50	1.39	Sqm
		1		2.63	0.20	0.53	Sqm
		1		1.48	1.33	1.97	Sqm
						3.89	Sqm
	Section b-b	1		2.78	0.50	1.39	Sqm
		1		2.34	0.20	0.47	Sqm
		1		1.41	1.33	1.88	Sqm
						3.73	Sqm
	Section c-c	1		2.78	0.50	1.39	Sqm
		1		1.82	0.20	0.36	Sqm
		1		1.15	1.33	1.53	Sqm
						3.29	Sqm
	Section d-d	1		2.78	0.50	1.39	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.33	0.64	Sqm
						2.13	Sqm
	Bottom Key	1	3.61	1.45	0.70	3.66	Cum
	Top Stem Area	1	3.61	3.26		11.77	Cum
	D/S Transition wall						
	Sec 4-4	2	0.50	0.70	0.90	0.63	Cum
		2	0.50	0.53	0.56	0.29	Cum
		2	0.50	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.68	1.55	0.90	7.50	Cum
		2	2.68	1.18	0.56	3.54	Cum
		2	2.68	0.68	0.50	1.82	Cum
	TOTAL					93.56	Cum
	Floor						
	U/S key	1	1.45	2.54	0.70	2.58	Cum
	Floor	1	3.64	2.54	0.50	4.62	Cum
		1	0.62	1.20	0.50	0.37	Cum
		1	1.12	1.20	0.26	0.35	Cum
		1	0.31	1.20		0.37	Cum
		1	3.05	1.20	0.70	2.56	Cum
		1	0.93	1.20	0.20	0.22	Cum
		1	0.30	1.20		0.36	Cum
		1	0.14	1.20		0.16	Cum
		1	2.60	1.20	0.55	1.72	Cum
		1	1.76	1.20	0.50	1.06	Cum
	D/S key	1	0.79	1.20	0.75	0.71	Cum
	TOTAL					108.64	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.						
	<i>Over Floor</i>	1	3.75	2.54	0.20	1.91	Cum
		1	1.69	1.20	0.20	0.41	Cum
		1	3.08	1.20	0.20	0.74	Cum
		1	0.95	1.20	0.20	0.23	Cum
		1	2.60	1.20	0.20	0.62	Cum
	<i>Top Slab</i>	1	5.25	2.00	0.39	4.10	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	2.00	0.08	0.64	Cum
	<i>Dirt wall</i>	2	5.75	0.82	0.50	4.71	Cum
		2	5.75	0.40	0.43	1.95	Cum
	<i>Parapet</i>	2	2.84	0.45	0.18	0.44	Cum
		2	2.84	0.35	0.25	0.50	Cum
		2	2.84	0.22	0.55	0.68	Cum
	TOTAL					16.93	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.460	29		1.578	112.584	Kg
a2	10	5.650	10		0.616	34.830	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.380	18		0.616	26.409	Kg
a5	10	5.550	7		0.616	23.949	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	32		0.888	71.045	Kg
x2	16	1.265	32		1.578	63.883	Kg
x3	10	1.900	24		0.616	28.111	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.367	5		0.888	32.699	Kg
	12	1.900	28		0.888	47.226	Kg
	<i>floor raft</i>						
	12	4.179	5		0.888	18.549	Kg
	12	9.827	10		0.888	87.235	Kg
	12	1.900	85		0.888	143.364	Kg
	0.25 % Skin Reinforcement for Transition walls	93.56	0.25%	0.23	7850	1836.15	Kg
	TOTAL Weight of steel (in kg)					2704.29	Kg
	TOTAL Weight of Steel (in Tonne)					2.70	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		2.29		2.29	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	3.30		0.50	6.60	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.30		0.83	11.00	Sqm
		4		1.07	0.83	3.57	Sqm
		4	3.30		1.96	25.83	Sqm
		4		1.32	1.96	10.33	Sqm
	<i>Section B-B</i>	4	5.25		0.86	18.06	Sqm
		4		1.08	0.86	3.71	Sqm
		4	5.25		1.20	25.20	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.34	1.20	6.41	Sqm
	Section C-C	4	0.50		0.45	0.89	Sqm
		4		0.99	0.45	1.78	Sqm
		4	0.50		1.50	2.97	Sqm
		4		1.16	1.50	6.94	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	3.68		0.50	3.68	Sqm
		2		0.45	0.50	0.45	Sqm
		2	3.68		0.83	6.13	Sqm
		2		0.70	0.83	1.17	Sqm
		2	3.68		1.96	14.40	Sqm
		2		0.95	1.96	3.72	Sqm
	Left Bank						
	Bottom Key	2	3.61		0.70	5.06	Sqm
		2		1.45	0.70	2.03	Sqm
	Section a-a	2	1.20		0.50	1.20	Sqm
		2		2.78	0.50	2.78	Sqm
		2	1.20		0.20	0.48	Sqm
		2		2.63	0.20	1.05	Sqm
		2	1.20		1.33	3.21	Sqm
		2		1.48	1.33	3.94	Sqm
	Section b-b	2	1.20		0.50	1.20	Sqm
		2		2.78	0.50	2.78	Sqm
		2	1.20		0.20	0.48	Sqm
		2		2.34	0.20	0.93	Sqm
		2	1.20		1.33	3.21	Sqm
		2		1.41	1.33	3.76	Sqm
	Section c-c	2	1.20		0.50	1.20	Sqm
		2		2.78	0.50	2.78	Sqm
		2	1.20		0.20	0.48	Sqm
		2		1.82	0.20	0.73	Sqm
		2	1.20		1.33	3.21	Sqm
		2		1.15	1.33	3.07	Sqm
	Section d-d	2	1.20		0.50	1.20	Sqm
		2		2.78	0.50	2.78	Sqm
		2	1.20		0.20	0.48	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.20		1.33	3.21	Sqm
		2		0.48	1.33	1.28	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.90	1.80	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.50		0.56	1.12	Sqm
		4		0.53	0.56	1.18	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	2.68		0.90	9.66	Sqm
		4		1.55	0.90	5.59	Sqm
		4	2.68		0.56	6.01	Sqm
		4		1.18	0.56	2.64	Sqm
		4	2.68		0.50	5.36	Sqm
		4		0.68	0.50	1.36	Sqm
	Floor						
	U/S key	2	1.45		0.70	2.03	Sqm
		2		2.54	0.70	3.56	Sqm
	Floor	2	3.64		0.50	3.64	Sqm
		2		2.54	0.50	2.54	Sqm
		2	0.62		0.50	0.62	Sqm
		2		1.20	0.50	1.20	Sqm
		2	1.12		0.26	0.58	Sqm
		2		1.20	0.26	0.62	Sqm
		2	0.31		0.00	0.62	Sqm
		2		1.20	0.00	2.40	Sqm
		2	3.05		0.70	4.27	Sqm
		2		1.20	0.70	1.68	Sqm
		2	0.93		0.20	0.37	Sqm
		2		1.20	0.20	0.48	Sqm
		2	0.30			0.61	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.20		2.40	Sqm
		2	0.14			0.27	Sqm
		2		1.20		2.40	Sqm
		2	2.603		0.55	2.86	Sqm
		2		1.2	0.55	1.32	Sqm
		2	1.76		0.50	1.76	Sqm
		2		1.20	0.50	1.20	Sqm
	D/S key	2	0.79		0.75	1.18	Sqm
		2		1.20	0.75	1.80	Sqm
	Toe Wall Base D/S Portion	2	1.20		0.30	0.72	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.20		0.90	2.16	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.00	0.39	1.56	Sqm
	Dirt wall	4	5.75		0.50	11.49	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.75		0.43	9.77	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	2.84		0.18	1.99	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.84		0.25	2.84	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.84		0.55	6.25	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					332.19	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	3.00	2.15		12.88	Sqm
	TOTAL					12.88	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	0.60	1.62	Cum
	TOTAL					1.62	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	1.20	0.15	0.40	Cum
	In D/S Portion below Stone Chips	1	2.20	1.20	0.15	0.40	Cum
	TOTAL					0.79	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	2.00	0.48		1.92	Sqm
	On Abutment Top	2	6.73	0.45		1.80	Sqm
	TOTAL					3.72	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	3.30	1.34		8.818	Cum
	<i>Section B-B</i>	2	5.25	1.14		11.918	Cum
	<i>Section C-C</i>	2	0.50	1.13		1.119	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.68	1.12		4.106	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	0.66		0.658	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.68	0.40		2.157	Cum
	TOTAL					28.78	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR SALEMPUR MR OFFTAKING FROM RD-15+950 KM (R.) AT BASDIHA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	4.91	1.50	3.952	58.031	Cum
	<i>Section B-B</i>	2	5.25	1.74	2.679	48.833	Cum
	<i>Section C-C</i>	2	0.50	1.56	2.679	4.169	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.70	1.13	3.952	11.982	Cum
	<i>Left Bank Sec a to d</i>	1	2.74	2.42	1.809	11.970	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	1.10	2.579	2.865	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.71	1.99	2.579	27.764	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.169	2.125	0.850	2.112	Cum
	<i>Floor</i>	1	3.073	2.125	0.650	4.245	Cum
		1	0.618	1.2	0.650	0.482	Cum
		2	1.118	1.2	0.507	1.360	Cum
		1	0.44905	1.2	0.000	0.539	Cum
		1	3.579	1.2	1.150	4.939	Cum
		1	0.9	1.2	0.200	0.216	Cum
		1	0.135	1.2	0.200	0.032	Cum
		1	0.857	1.2	1.179	1.212	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.200	0.600	1.584	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.200	0.850	1.200	1.224	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	0.900	0.600	1.620	Cum
						185.18	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.						
	<i>PCC Below Floor</i>						
		1	0.624	2.415	0.150	0.23	Cum
		1	1.336	1.490	0.150	0.30	Cum
		1	1.270	1.200	0.150	0.23	Cum
		1	2.953	1.200	0.150	0.53	Cum
		1	3.759	1.200	0.150	0.68	Cum
		1	1.423	1.200	0.150	0.26	Cum
		1	0.954	1.200	0.150	0.17	Cum
		1	1.150	1.200	0.150	0.21	Cum
		1	0.692	1.200	0.150	0.12	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	4.911	1.495	0.300	4.41	Cum
	<i>Section B-B</i>	2	5.250	1.736	0.300	5.47	Cum
	<i>Section C-C</i>	2	0.500	1.556	0.300	0.47	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.695	1.125	0.300	0.91	Cum
	<i>Left Bank Sec a to d</i>	1	2.740	2.415	0.150	0.99	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.505	1.100	0.300	0.33	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.709	1.987	0.300	3.23	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.200	0.850	0.300	0.31	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.200	0.450	0.900	0.49	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	5	0.600	0.600	0.300	0.54	Cum
	TOTAL					21.07	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	4.91	0.82	0.50	4.03	Cum
		2	4.91	0.96	0.46	4.32	Cum
		2	4.91	1.10	2.69	28.96	Cum
	Section B-B	2	5.25	1.08	0.90	10.19	Cum
		2	5.25	1.34	1.48	20.75	Cum
	Section C-C	2	0.50	0.99	0.60	0.59	Cum
		2	0.50	1.16	1.78	2.06	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.70	0.45	0.50	0.61	Cum
		1	2.70	0.59	0.46	0.73	Cum
		1	2.70	0.73	2.69	5.26	Cum
	Left Bank						
	Section a-a	1		2.218	0.50	1.11	Sqm
		1		2.07	0.20	0.41	Sqm
		1		1.20	0.96	1.15	Sqm
						2.67	Sqm
	Section b-b	1		2.22	0.50	1.11	Sqm
		1		1.83	0.20	0.37	Sqm
		1		1.15	0.96	1.11	Sqm
						2.58	Sqm
	Section c-c	1		2.22	0.50	1.11	Sqm
		1		1.57	0.20	0.31	Sqm
		1		1.02	0.96	0.98	Sqm
						2.41	Sqm
	Section d-d	1		2.22	0.50	1.11	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	0.96	0.46	Sqm
						1.67	Sqm
	Bottom Key	1	2.74	1.17	0.70	2.24	Cum
	Top Stem Area	1	2.74	2.33		6.39	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	0.70	1.18	0.83	Cum
		2	0.51	0.53	0.60	0.32	Cum
		2	0.51	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.71	1.59	1.18	10.14	Cum
		2	2.71	1.20	0.60	3.89	Cum
		2	2.71	0.68	0.50	1.84	Cum
	TOTAL					103.32	Cum
	Floor						
	U/S key	1	1.17	2.13	0.70	1.74	Cum
	Floor	1	3.07	2.13	0.50	3.27	Cum
		1	0.62	1.20	0.50	0.37	Cum
		2	1.12	1.20	0.36	0.96	Cum
		1	0.45	1.20		0.54	Cum
		1	3.58	1.20	0.70	3.01	Cum
		1	0.90	1.20	0.20	0.22	Cum
		1	0.14	1.20		0.16	Cum
		1	0.84	1.20	0.45	0.45	Cum
		1	2.80	1.20	0.55	1.85	Cum
	D/S key	1	0.86	1.20	1.03	1.06	Cum
	TOTAL					116.93	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.						
	<i>Over Floor</i>	1	3.19	2.13	0.20	1.36	Cum
		1	2.71	1.20	0.20	0.65	Cum
		1	3.58	1.20	0.20	0.86	Cum
		1	0.95	1.20	0.20	0.23	Cum
		1	2.80	1.20	0.20	0.67	Cum
	<i>Top Slab</i>	1	5.25	2.00	0.39	4.10	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	2.00	0.08	0.64	Cum
	<i>Dirt wall</i>	2	5.75	0.82	0.50	4.72	Cum
		2	5.75	0.40	0.43	1.96	Cum
	<i>Parapet</i>	2	2.84	0.45	0.18	0.44	Cum
		2	2.84	0.35	0.25	0.50	Cum
		2	2.84	0.22	0.55	0.68	Cum
	TOTAL					16.80	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.460	29		1.578	112.584	Kg
a2	10	5.650	10		0.616	34.830	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	2.380	18		0.616	26.409	Kg
a5	10	5.550	7		0.616	23.949	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	32		0.888	71.045	Kg
x2	16	1.265	32		1.578	63.883	Kg
x3	10	1.900	24		0.616	28.111	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	6.274	5		0.888	27.847	Kg
	12	1.900	25		0.888	42.166	Kg
	<i>floor raft</i>						
	12	4.910	5		0.888	21.793	Kg
	12	11.546	10		0.888	102.494	Kg
	12	1.900	103		0.888	173.724	Kg
	0.25 % Skin Reinforcement for Transition walls	103.32	0.25%	0.26	7850	2027.57	Kg
	TOTAL Weight of steel (in kg)					2934.67	Kg
	TOTAL Weight of Steel (in Tonne)					2.93	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		1.75		1.75	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	4.91		0.50	9.82	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.91		0.46	9.02	Sqm
		4		0.96	0.46	1.76	Sqm
		4	4.91		2.69	52.90	Sqm
		4		1.10	2.69	11.80	Sqm
	<i>Section B-B</i>	4	5.25		0.90	18.90	Sqm
		4		1.08	0.90	3.88	Sqm
		4	5.25		1.48	31.06	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.34	1.48	7.90	Sqm
	Section C-C	4	0.50		0.60	1.20	Sqm
		4		0.99	0.60	2.37	Sqm
		4	0.50		1.78	3.56	Sqm
		4		1.16	1.78	8.23	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.70		0.50	2.70	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.70		0.46	2.47	Sqm
		2		0.59	0.46	0.54	Sqm
		2	2.70		2.69	14.52	Sqm
		2		0.73	2.69	3.90	Sqm
	Left Bank						
	Bottom Key	2	2.74		0.70	3.84	Sqm
		2		1.17	0.70	1.64	Sqm
	Section a-a	2	0.91		0.50	0.91	Sqm
		2		2.22	0.50	2.22	Sqm
		2	0.91		0.20	0.37	Sqm
		2		2.07	0.20	0.83	Sqm
		2	0.91		0.96	1.75	Sqm
		2		1.20	0.96	2.30	Sqm
	Section b-b	2	0.91		0.50	0.91	Sqm
		2		2.22	0.50	2.22	Sqm
		2	0.91		0.20	0.37	Sqm
		2		1.83	0.20	0.73	Sqm
		2	0.91		0.96	1.75	Sqm
		2		1.15	0.96	2.21	Sqm
	Section c-c	2	0.91		0.50	0.91	Sqm
		2		2.22	0.50	2.22	Sqm
		2	0.91		0.20	0.37	Sqm
		2		1.57	0.20	0.63	Sqm
		2	0.91		0.96	1.75	Sqm
		2		1.02	0.96	1.96	Sqm
	Section d-d	2	0.91		0.50	0.91	Sqm
		2		2.22	0.50	2.22	Sqm
		2	0.91		0.20	0.37	Sqm
		2		0.48	0.20	0.19	Sqm
		2	0.91		0.96	1.75	Sqm
		2		0.48	0.96	0.92	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		1.18	2.38	Sqm
		4		0.70	1.18	3.30	Sqm
		4	0.51		0.60	1.21	Sqm
		4		0.53	0.60	1.26	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	2.71		1.18	12.78	Sqm
		4		1.59	1.18	7.48	Sqm
		4	2.71		0.60	6.50	Sqm
		4		1.20	0.60	2.87	Sqm
		4	2.71		0.50	5.42	Sqm
		4		0.68	0.50	1.36	Sqm
	Floor						
	U/S key	2	1.17		0.70	1.64	Sqm
		2		2.13	0.70	2.98	Sqm
	Floor	2	3.07		0.50	3.07	Sqm
		2		2.13	0.50	2.13	Sqm
		2	0.62		0.50	0.62	Sqm
		2		1.20	0.50	1.20	Sqm
		2	1.12		0.36	0.80	Sqm
		2		1.20	0.36	0.86	Sqm
		2	0.45		0.00	0.90	Sqm
		2		1.20	0.00	2.40	Sqm
		2	3.58		0.70	5.01	Sqm
		2		1.20	0.70	1.68	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.20	0.20	0.48	Sqm
		2	0.14			0.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.20		2.40	Sqm
		2	0.84			1.68	Sqm
		2		1.20		2.40	Sqm
		2	2.8		0.55	3.08	Sqm
		2		1.2	0.55	1.32	Sqm
	D/S key	2	0.86		1.03	1.76	Sqm
		2		1.20	1.03	2.47	Sqm
	Toe Wall Base D/S Portion	2	1.20		0.30	0.72	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.20		0.90	2.16	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.00	0.39	1.56	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	2.84		0.18	1.99	Sqm
		4		0.45	0.18	0.31	Sqm
		4	2.84		0.25	2.84	Sqm
		4		0.35	0.25	0.35	Sqm
		4	2.84		0.55	6.25	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					356.30	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	3.00	2.22		13.31	Sqm
	TOTAL					13.31	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	0.60	1.62	Cum
	TOTAL					1.62	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	1.20	0.15	0.40	Cum
	In D/S Portion below Stone Chips	1	2.20	1.20	0.15	0.40	Cum
	TOTAL					0.79	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.44	0.48		1.38	Sqm
	On Abutment Top	2	8.27	0.45		1.29	Sqm
	TOTAL					2.67	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	4.91	1.30		12.759	Cum
	<i>Section B-B</i>	2	5.25	1.45		15.181	Cum
	<i>Section C-C</i>	2	0.50	1.25		1.250	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.70	0.93		2.509	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	0.74		0.743	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.71	1.26		6.816	Cum
	TOTAL					39.26	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR BASDIHA 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 0.457 METER AT CH. 0.355 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.	345.778	Cum	195.20	67495.92			
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.	32.75	Cum	6381.70	208968.84	10.61	14.74	29.47
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.	164.00	Cum	6914.20	1133920.47	67.65	70.52	141.04
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.	2.26	Cum	8151.40	18461.82	1.28	0.88	1.79
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.	2.57	MT	73574.90	189439.26			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	401.84	Sqm	578.60	232502.92			
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.	59.29	Sqm	680.10	40324.49			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	8.57	Cum	694.61	5954.54			
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.	8.57	Cum	1237.00	10604.18			
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.	8.57	Cum	1377.70	11810.33			8.57
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.	8.57	Cum	516.50	4427.70			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	19.23	Sqm	63.20	1215.64			
13	Providing Drainage Spouts complete as per drawings & technical 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	98.03	Cum	149.30	14636.24			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	86.138	Cum	1075.00	92598.39			
	Coarse Aggregates (100 Km lead)	180.871	Cum	1398.00	252857.96			
	Cement (30 km lead)	79.543	MT	742.00	59020.95			
	Boulder (60 Km lead)	8.57	Cum	1159.00	9935.53			
	Brick (15 km lead)	3557.00	No.	3.18	11311.26			
	Steel (30 Km lead)	2.57	MT	742.00	1910.49			
	TOTAL (in Rs.)				2378574.33			
	TOTAL (in Rs.)				2378574.33			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	86.14	Cum	584.64	50359.74	5035.97		
	Coarse Aggregate	180.87	Cum	944.26	170789.45	17078.95		
	Boulders	8.57	Cum	694.61	5954.54	595.45		
	<i>Total</i>					22710.37		
	For 1 nos. fall, Total Seigniorage charges					22710.37		

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)
SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.981 METER AT CH. 1.150 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.	836.958	Cum	195.20	163374.20			
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.	58.02	Cum	6381.70	370274.48	18.80	26.11	52.22
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.	599.05	Cum	6914.20	4141978.12	247.11	257.59	515.19
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.	35.45	Cum	8151.40	288990.85	20.10	13.83	28.01
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.	11.84	MT	73574.90	871087.65			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	917.21	Sqm	578.60	530698.16			
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.	65.88	Sqm	680.10	44804.99			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	8.48	Cum	694.61	5886.82			
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.	8.48	Cum	1237.00	10483.58			
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.	8.48	Cum	1377.70	11676.01			
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.	8.48	Cum	516.50	4377.34			8.48
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.36	Sqm	63.20	1286.80			
13	Providing Drainage Spouts complete as per drawings & technical 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	215.59	Cum	149.30	32187.72			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	297.529	Cum	1075.00	319844.07			
	Coarse Aggregates (100 Km lead)	603.888	Cum	1398.00	844235.80			
	Cement (30 km lead)	286.010	MT	742.00	212219.73			
	Boulder (60 Km lead)	8.48	Cum	1159.00	9822.53			
	Brick (15 km lead)	3952.00	No.	3.18	12567.36			
	Steel (30 Km lead)	11.84	MT	742.00	8784.89			
TOTAL (in Rs.)					7895758.48			
TOTAL (in Rs.)					7895758.48			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	297.53	Cum	584.64	173947.57	17394.76		
	Coarse Aggregate	603.89	Cum	944.26	570227.54	57022.75		
	Boulders	8.48	Cum	694.61	5886.82	588.68		
	<i>Total</i>					75006.19		
	For 1 nos. fall, Total Seigniorage charges					75006.19		

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 0.304 METER AT CH. 3.050								
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.	226.679	Cum	195.20	44247.82			
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.	30.41	Cum	6381.70	194062.61	9.85	13.68	27.37
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.	139.84	Cum	6914.20	966914.48	57.69	60.13	120.27
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.	1.64	Cum	8151.40	13376.20	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.	2.20	MT	73574.90	161538.28			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	371.99	Sqm	578.60	215232.45			
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.	59.29	Sqm	680.10	40324.49			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	7.63	Cum	694.61	5298.14			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	7.63	Cum	1237.00	9435.22			
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.	7.63	Cum	1377.70	10508.41			7.63
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.	7.63	Cum	516.50	3939.60			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.76	Sqm	63.20	1185.44			
13	Providing Drainage Spouts complete as per drawings & technical 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	60.58	Cum	149.30	9044.27			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	74.457	Cum	1075.00	80041.67			
	Coarse Aggregates (100 Km lead)	156.559	Cum	1398.00	218868.99			
	Cement (30 km lead)	68.469	MT	742.00	50803.98			
	Boulder (60 Km lead)	7.63	Cum	1159.00	8840.27			
	Brick (15 km lead)	3557.00	No.	3.18	11311.26			
	Steel (30 Km lead)	2.20	MT	742.00	1629.11			
TOTAL (in Rs.)					2057780.10			
TOTAL (in Rs.)					2057780.10			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	74.46	Cum	584.64	43530.76	4353.08		
	Coarse Aggregate	156.56	Cum	944.26	147832.07	14783.21		
	Boulders	7.63	Cum	694.61	5298.14	529.81		
	<i>Total</i>					19666.10		
	For 1 nos. fall, Total Seigniorage charges					19666.10		

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. 4.580								
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.	528.834	Cum	195.20	103228.46			
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.	42.34	Cum	6381.70	270179.65	13.72	19.05	38.10
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.	314.88	Cum	6914.20	2177156.66	129.89	135.40	270.80
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.	1.83	Cum	8151.40	14900.13	1.04	0.71	1.44
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.	4.94	MT	73574.90	363728.29			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	601.41	Sqm	578.60	347977.21			
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.	51.26	Sqm	680.10	34859.21			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	30.98	Cum	694.61	21519.07			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	30.98	Cum	1237.00	38322.35			
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.	5.72	Cum	1377.70	7885.95			5.72
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.	5.72	Cum	516.50	2956.45			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	20.45	Sqm	63.20	1292.34			
13	Providing Drainage Spouts complete as per drawings & technical 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	153.41	Cum	149.30	22903.72			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	155.164	Cum	1075.00	166800.87			
	Coarse Aggregates (100 Km lead)	316.069	Cum	1398.00	441865.14			
	Cement (30 km lead)	144.642	MT	742.00	107324.58			
	Boulder (60 Km lead)	30.98	Cum	1159.00	35905.90			
	Brick (15 km lead)	3075.00	No.	3.18	9778.50			
	Steel (30 Km lead)	4.94	MT	742.00	3668.19			
TOTAL (in Rs.)					4183430.07			
TOTAL (in Rs.)					4183430.07			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	155.16	Cum	584.64	90714.85	9071.48		
	Coarse Aggregate	316.07	Cum	944.26	298451.77	29845.18		
	Boulders	30.98	Cum	694.61	21519.07	2151.91		
	<i>Total</i>					41068.57		
	For 1 nos. fall, Total Seigniorage charges					41068.57		

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 1.828 METER AT CH. 6.100								
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.	491.797	Cum	195.20	95998.77			
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.	49.37	Cum	6381.70	315047.79	16.00	22.22	44.43
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.	468.98	Cum	6914.20	3242622.79	193.45	201.66	403.32
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.	29.76	Cum	8151.40	242598.38	16.87	11.61	23.51
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.	9.29	MT	73574.90	683621.71			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	792.58	Sqm	578.60	458586.31			
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.	57.58	Sqm	680.10	39161.52			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	6.44	Cum	694.61	4472.94			
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.	6.44	Cum	1237.00	7965.66			
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.	6.44	Cum	1377.70	8871.70			
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.	6.44	Cum	516.50	3326.00			6.44
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.58	Sqm	63.20	1174.17			
13	Providing Drainage Spouts complete as per drawings & technical 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	125.62	Cum	149.30	18755.46			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	235.484	Cum	1075.00	253145.09			
	Coarse Aggregates (100 Km lead)	477.705	Cum	1398.00	667831.21			
	Cement (30 km lead)	226.324	MT	742.00	167932.53			
	Boulder (60 Km lead)	6.44	Cum	1159.00	7463.38			
	Brick (15 km lead)	3454.00	No.	3.18	10983.72			
	Steel (30 Km lead)	9.29	Cum	742.00	6894.30			
	TOTAL (in Rs.)				6247630.84			
	TOTAL (in Rs.)				6247630.84			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	235.48	Cum	584.64	137673.25	13767.33		
	Coarse Aggregate	477.70	Cum	944.26	451077.47	45107.75		
	Boulders	6.44	Cum	694.61	4472.94	447.29		
	<i>Total</i>					59322.37		
	For 1 nos. fall, Total Seigniorage charges					59322.37		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 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.	242.599	Cum	195.20	47355.32			
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.	27.37	Cum	6381.70	174693.84	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.	145.67	Cum	6914.20	1007193.51	60.09	62.64	125.28
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.	1.42	Cum	8151.40	11554.36	0.80	0.55	1.12
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.	2.29	MT	73574.90	168267.53			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	355.99	Sqm	578.60	205975.92			
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.	29.26	Sqm	680.10	19897.01			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	3.20	Cum	694.61	2219.28			
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.	3.20	Cum	1237.00	3952.22			
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.	15.90	Cum	1377.70	21904.60			
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.	15.90	Cum	516.50	8212.04			15.90
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.90	Sqm	63.20	1004.84			
13	Providing Drainage Spouts complete as per drawings & technical 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	85.03	Cum	149.30	12695.64			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	75.509	Cum	1075.00	81172.63			
	Coarse Aggregates (100 Km lead)	166.932	Cum	1398.00	233371.52			
	Cement (30 km lead)	69.762	MT	742.00	51763.36			
	Boulder (60 Km lead)	3.20	Cum	1159.00	3703.01			
	Brick (15 km lead)	1755.00	No.	3.18	5580.90			
	Steel (30 Km lead)	2.29	Cum	742.00	1696.97			
TOTAL (in Rs.)					2073391.88			
TOTAL (in Rs.)					2073391.88			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	75.51	Cum	584.64	44145.83	4414.58		
	Coarse Aggregate	166.93	Cum	944.26	157627.60	15762.76		
	Boulders	3.20	Cum	694.61	2219.28	221.93		
	<i>Total</i>					20399.27		
	For 1 nos. fall, Total Seigniorage charges					20399.27		

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)
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 11.150								
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.	257.073	Cum	195.20	50180.62			
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.	25.03	Cum	6381.70	159712.91	8.11	11.26	22.52
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.	141.00	Cum	6914.20	974911.74	58.16	60.63	121.26
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.	1.40	Cum	8151.40	11394.43	0.79	0.55	1.10
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.	2.21	MT	73574.90	162874.35			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	346.92	Sqm	578.60	200728.32			
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.	31.70	Sqm	680.10	21559.51			
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			3.46
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	17.37	Sqm	63.20	1098.07			
13	Providing Drainage Spouts complete as per drawings & technical 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	72.52	Cum	149.30	10827.06			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	72.438	Cum	1075.00	77870.60			
	Coarse Aggregates (100 Km lead)	148.351	Cum	1398.00	207394.38			
	Cement (30 km lead)	67.064	MT	742.00	49761.71			
	Boulder (60 Km lead)	3.46	Cum	1159.00	4011.59			
	Brick (15 km lead)	1902.00	No.	3.18	6048.36			
	Steel (30 Km lead)	2.21	Cum	742.00	1642.58			
TOTAL (in Rs.)					1964435.72			
TOTAL (in Rs.)					1964435.72			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	72.44	Cum	584.64	42350.02	4235.00		
	Coarse Aggregate	148.35	Cum	944.26	140081.70	14008.17		
	Boulders	3.46	Cum	694.61	2404.22	240.42		
<i>Total</i>						18483.59		
For 1 nos. fall, Total Seigniorage charges						18483.59		

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)
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 11.950								
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.	207.069	Cum	195.20	40419.77			
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.	22.70	Cum	6381.70	144857.37	7.35	10.21	20.43
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.	108.52	Cum	6914.20	750325.15	44.76	46.66	93.33
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.	1.29	Cum	8151.40	10535.48	0.73	0.50	1.02
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.	2.56	MT	73574.90	188030.44			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	297.27	Sqm	578.60	172000.50			
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.	31.70	Sqm	680.10	21559.51			
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 (uncreted) 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			3.46
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.	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.	15.89	Sqm	63.20	1004.22			
13	Providing Drainage Spouts complete as per drawings & technical 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	61.47	Cum	149.30	9176.90			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	57.382	Cum	1075.00	61685.56			
	Coarse Aggregates (100 Km lead)	118.238	Cum	1398.00	165296.74			
	Cement (30 km lead)	52.852	MT	742.00	39215.84			
	Boulder (60 Km lead)	3.46	Cum	1159.00	4011.59			
	Brick (15 km lead)	1902.00	No.	3.18	6048.36			
	Steel (30 Km lead)	2.56	MT	742.00	1896.28			
TOTAL (in Rs.)					1640483.19			
TOTAL (in Rs.)					1640483.19			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	57.38	Cum	584.64	33547.76	3354.78		
	Coarse Aggregate	118.24	Cum	944.26	111647.42	11164.74		
	Boulders	3.46	Cum	694.61	2404.22	240.42		
	<i>Total</i>					14759.94		
	For 1 nos. fall, Total Seigniorage charges					14759.94		

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 0.610 METER AT CH. 13.800								
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.	130.568	Cum	195.20	25486.90			
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.	21.36	Cum	6381.70	136316.90	6.92	9.61	19.22
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.	110.26	Cum	6914.20	762354.77	45.48	47.41	94.82
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.	1.14	Cum	8151.40	9320.72	0.65	0.45	0.90
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	191045.04			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	305.18	Sqm	578.60	176576.08			
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.	31.69	Sqm	680.10	21555.09			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	14.73	Cum	694.61	10228.31			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	14.73	Cum	1237.00	18215.15			
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.	2.34	Cum	1377.70	3223.82			2.34
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.	2.34	Cum	516.50	1208.61			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	16.12	Sqm	63.20	1018.72			
13	Providing Drainage Spouts complete as per drawings & technical 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	24.87	Cum	149.30	3713.37			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	57.470	Cum	1075.00	61779.93			
	Coarse Aggregates (100 Km lead)	117.291	Cum	1398.00	163972.61			
	Cement (30 km lead)	53.051	MT	742.00	39363.93			
	Boulder (60 Km lead)	14.73	Cum	1159.00	17066.58			
	Brick (15 km lead)	1901.00	No.	3.18	6045.18			
	Steel (30 Km lead)	2.60	MT	742.00	1926.68			
TOTAL (in Rs.)					1522852.55			
TOTAL (in Rs.)					1522852.55			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	57.47	Cum	584.64	33599.09	3359.91		
	Coarse Aggregate	117.29	Cum	944.26	110753.06	11075.31		
	Boulders	14.73	Cum	694.61	10228.31	1022.83		
	<i>Total</i>					15458.05		
	For 1 nos. fall, Total Seigniorage charges					15458.05		

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. 13.900 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.	229.423	Cum	195.20	44783.30			
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.	27.94	Cum	6381.70	178292.69	9.05	12.57	25.14
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.	142.21	Cum	6914.20	983264.53	58.66	61.15	122.30
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.	19.36	Cum	8151.40	157846.32	10.98	7.55	15.30
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.	3.09	MT	73574.90	227356.14			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	357.72	Sqm	578.60	206979.11			
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.	31.69	Sqm	680.10	21555.09			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.34	Cum	694.61	1625.39			
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.	2.34	Cum	1237.00	2894.58			
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.	2.34	Cum	1377.70	3223.82			2.34
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.	2.34	Cum	516.50	1208.61			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.86	Sqm	63.20	560.04			
13	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	2.00	No.	5588.70	287288.35			
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	51.41	Cum	149.30	7674.80			

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)	81.274	Cum	1075.00	87369.87			
	Coarse Aggregates (100 Km lead)	165.082	Cum	1398.00	230784.97			
	Cement (30 km lead)	78.693	MT	742.00	58390.14			
	Boulder (60 Km lead)	2.34	Cum	1159.00	2712.06			
	Brick (15 km lead)	1902.00	No.	3.18	6048.36			
	Steel (30 Km lead)	3.09	MT	742.00	2292.88			
	TOTAL (In Rs.)				2512151.04			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	81.27	Cum	584.64	47516.21	4751.62		
	Coarse Aggregate	165.08	Cum	944.26	155880.56	15588.06		
	Boulders	2.34	Cum	694.61	1625.39	162.54		
	<i>Total</i>					20502.21		
	For 1 nos. fall, Total Seigniorage charges					20502.21		

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 CULVERT/FALL OF HEIGHT 0.914 METER AT CH. 15.515								
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.	220.506	Cum	195.20	43042.75			
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.	27.55	Cum	6381.70	175842.22	8.93	12.40	24.80
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.	148.98	Cum	6914.20	1030090.96	61.46	64.06	128.12
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.	16.35	Cum	8151.40	133294.63	9.27	6.38	12.92
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.	4.31	MT	73574.90	317290.07			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	361.50	Sqm	578.60	209161.92			
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.	28.49	Sqm	680.10	19374.69			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.98	Cum	694.61	1375.33			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.98	Cum	1237.00	2449.26			
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.	1.98	Cum	1377.70	2727.85			
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.	1.98	Cum	516.50	1022.67			1.98
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.07	Sqm	63.20	762.65			
13	Providing Drainage Spouts complete as per drawings & technical 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	60.66	Cum	149.30	9056.66			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	82.839	Cum	1075.00	89051.94			
	Coarse Aggregates (100 Km lead)	167.822	Cum	1398.00	234614.54			
	Cement (30 km lead)	79.654	MT	742.00	59103.55			
	Boulder (60 Km lead)	1.98	Cum	1159.00	2294.82			
	Brick (15 km lead)	1709.00	No.	3.18	5434.62			
	Steel (30 Km lead)	4.31	MT	742.00	3199.86			
TOTAL (In Rs.)					2350368.38			
TOTAL (In Rs.)					2350368.38			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	82.84	Cum	584.64	48431.00	4843.10		
	Coarse Aggregate	167.82	Cum	944.26	158467.18	15846.72		
	Boulders	1.98	Cum	694.61	1375.33	137.53		
	<i>Total</i>					20827.35		
	For 1 nos. fall, Total Seigniorage charges					20827.35		

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. 16.000 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.	96.201	Cum	195.20	18778.37			
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.	18.93	Cum	6381.70	120836.65	6.13	8.52	17.04
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.	103.92	Cum	6914.20	718531.01	42.87	44.69	89.37
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.	1.10	Cum	8151.40	8963.44	0.62	0.43	0.87
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.	2.45	MT	73574.90	180062.87			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	288.29	Sqm	578.60	166805.30			
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.	27.44	Sqm	680.10	18664.66			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.26	Cum	694.61	875.21			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.26	Cum	1237.00	1558.62			
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.	1.26	Cum	1377.70	1735.90			
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.	1.26	Cum	516.50	650.79			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	16.59	Sqm	63.20	1048.64			
13	Providing Drainage Spouts complete as per drawings & technical 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	15.21	Cum	149.30	2271.22			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	53.636	Cum	1075.00	57658.27			
	Coarse Aggregates (100 Km lead)	107.282	Cum	1398.00	149980.51			
	Cement (30 km lead)	49.626	MT	742.00	36822.36			
	Boulder (60 Km lead)	1.26	Cum	1159.00	1460.34			
	Brick (15 km lead)	1646.00	No.	3.18	5234.28			
	Steel (30 Km lead)	2.45	MT	742.00	1815.93			
TOTAL (In Rs.)					1504931.76			
TOTAL (In Rs.)					1504931.76			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	53.64	Cum	584.64	31357.52	3135.75		
	Coarse Aggregate	107.28	Cum	944.26	101302.28	10130.23		
	Boulders	1.26	Cum	694.61	875.21	87.52		
	<i>Total</i>					13353.50		
	For 1 nos. fall, Total Seigniorage charges					13353.50		

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 BRIDGE/FALL OF HEIGHT 0.762 METER AT CH. 18.040 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.	193.136	Cum	195.20	37700.13			
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.	24.48	Cum	6381.70	156225.69	7.93	11.02	22.03
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.	124.92	Cum	6914.20	863704.08	51.53	53.71	107.43
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.	12.74	Cum	8151.40	103875.98	7.23	4.97	10.07
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.	3.54	MT	73574.90	260190.47			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	325.15	Sqm	578.60	188131.31			
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.	27.44	Sqm	680.10	18664.66			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.26	Cum	694.61	875.21			
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.	1.26	Cum	1237.00	1558.62			
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.	1.26	Cum	1377.70	1735.90			
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.	1.26	Cum	516.50	650.79			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.41	Sqm	63.20	720.90			
13	Providing Drainage Spouts complete as per drawings & technical 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	56.55	Cum	149.30	8442.81			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	69.701	Cum	1075.00	74928.05			
	Coarse Aggregates (100 Km lead)	139.528	Cum	1398.00	195060.78			
	Cement (30 km lead)	66.686	MT	742.00	49480.65			
	Boulder (60 Km lead)	1.26	Cum	1159.00	1460.34			
	Brick (15 km lead)	1646.00	No.	3.18	5234.28			
	Steel (30 Km lead)	3.54	MT	742.00	2624.01			
TOTAL (In Rs.)					1982442.07			
TOTAL (In Rs.)					1982442.07			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	69.70	Cum	584.64	40749.71	4074.97		
	Coarse Aggregate	139.53	Cum	944.26	131751.14	13175.11		
	Boulders	1.26	Cum	694.61	875.21	87.52		
	<i>Total</i>					17337.61		
	For 1 nos. fall, Total Seigniorage charges					17337.61		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 19.700 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.	105.530	Cum	195.20	20599.36			
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.	14.60	Cum	6381.70	93190.12	4.73	6.57	13.14
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.	63.35	Cum	6914.20	438019.28	26.13	27.24	54.48
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.	0.78	Cum	8151.40	6388.42	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.	1.49	MT	73574.90	109767.02			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	210.60	Sqm	578.60	121852.50			
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.	20.02	Sqm	680.10	13612.20			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.68	Cum	694.61	468.86			
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.	0.68	Cum	1237.00	834.98			
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.	0.68	Cum	1377.70	929.95			
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.	0.68	Cum	516.50	348.64			0.68
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.97	Sqm	63.20	819.98			
13	Providing Drainage Spouts complete as per drawings & technical 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	30.55	Cum	149.30	4561.12			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	34.118	Cum	1075.00	36676.49			
	Coarse Aggregates (100 Km lead)	68.918	Cum	1398.00	96347.59			
	Cement (30 km lead)	31.308	MT	742.00	23230.39			
	Boulder (60 Km lead)	0.68	Cum	1159.00	782.33			
	Brick (15 km lead)	1200.00	No.	3.18	3816.00			
	Steel (30 Km lead)	1.49	MT	742.00	1107.00			
TOTAL (In Rs.)					984529.61			
TOTAL (In Rs.)					984529.61			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	34.12	Cum	584.64	19946.55	1994.66		
	Coarse Aggregate	68.92	Cum	944.26	65076.67	6507.67		
	Boulders	0.68	Cum	694.61	468.86	46.89		
	<i>Total</i>					8549.21		
	For 1 nos. fall, Total Seigniorage charges					8549.21		

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 1.067 METER AT CH. 20.100 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.	194.113	Cum	195.20	37890.91			
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.	21.85	Cum	6381.70	139446.05	7.08	9.83	19.67
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.	122.70	Cum	6914.20	848399.71	50.62	52.76	105.53
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.	11.09	Cum	8151.40	90360.76	6.29	4.32	8.76
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.	3.37	MT	73574.90	248184.31			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	315.31	Sqm	578.60	182439.95			
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.	16.30	Sqm	680.10	11088.01			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.54	Cum	694.61	375.09			
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.	0.54	Cum	1237.00	667.98			
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.	0.54	Cum	1377.70	743.96			
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.	0.54	Cum	516.50	278.91			0.54
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.65	Sqm	63.20	672.83			
13	Providing Drainage Spouts complete as per drawings & technical 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	56.36	Cum	149.30	8414.82			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	66.919	Cum	1075.00	71937.80			
	Coarse Aggregates (100 Km lead)	134.489	Cum	1398.00	188015.10			
	Cement (30 km lead)	63.980	MT	742.00	47473.49			
	Boulder (60 Km lead)	0.54	Cum	1159.00	625.86			
	Brick (15 km lead)	978.00	No.	3.18	3110.04			
	Steel (30 Km lead)	3.37	MT	742.00	2502.93			
TOTAL (In Rs.)					1893805.92			
TOTAL (In Rs.)					1893805.92			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	66.92	Cum	584.64	39123.46	3912.35		
	Coarse Aggregate	134.49	Cum	944.26	126992.23	12699.22		
	Boulders	0.54	Cum	694.61	375.09	37.51		
<i>Total</i>						16649.08		
For 1 no. fall, Total Seigniorage charges						16649.08		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 22.000 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.	87.056	Cum	195.20	16993.34			
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.	11.30	Cum	6381.70	72105.27	3.66	5.08	10.17
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.	41.33	Cum	6914.20	285761.65	17.05	17.77	35.54
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.	0.67	Cum	8151.40	5483.85	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.	0.97	MT	73574.90	71611.47			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	160.69	Sqm	578.60	92976.01			
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.	16.21	Sqm	680.10	11024.42			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.41	Cum	694.61	286.53			
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.	0.41	Cum	1237.00	510.26			
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.	0.41	Cum	1377.70	568.30			
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.	0.41	Cum	516.50	213.06			0.41
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.39	Sqm	63.20	719.53			
13	Providing Drainage Spouts complete as per drawings & technical 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	27.54	Cum	149.30	4112.00			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	23.119	Cum	1075.00	24852.47			
	Coarse Aggregates (100 Km lead)	46.656	Cum	1398.00	65225.61			
	Cement (30 km lead)	21.091	MT	742.00	15649.33			
	Boulder (60 Km lead)	0.41	Cum	1159.00	478.09			
	Brick (15 km lead)	973.00	No.	3.18	3094.14			
	Steel (30 Km lead)	0.97	MT	742.00	722.20			
TOTAL (In Rs.)					683564.93			
TOTAL (In Rs.)					683564.93			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	23.12	Cum	584.64	13516.04	1351.60		
	Coarse Aggregate	46.66	Cum	944.26	44055.75	4405.57		
	Boulders	0.41	Cum	694.61	286.53	28.65		
<i>Total</i>						5785.83		
For 1 no. fall, Total Seigniorage charges						5785.83		

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)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR SHANKARPUR MR.								
SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 2.950 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.	115.007	Cum	195.20	22449.27			
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.	9.41	Cum	6381.70	60047.63	3.05	4.23	8.47
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.	60.61	Cum	6914.20	419090.41	25.00	26.06	52.13
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.	0.68	Cum	8151.40	5575.31	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.	1.43	MT	73574.90	105023.47			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	207.98	Sqm	578.60	120338.75			
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.	5.62	Sqm	680.10	3819.44			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.09	Cum	694.61	62.51			
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.	0.09	Cum	1237.00	111.33			
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.	0.09	Cum	1377.70	123.99			0.09
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.	0.09	Cum	516.50	46.49			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.40	Sqm	63.20	720.44			
13	Providing Drainage Spouts complete as per drawings & technical 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	31.63	Cum	149.30	4721.68			

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)	30.565	Cum	1075.00	32856.89			
	Coarse Aggregates (100 Km lead)	61.226	Cum	1398.00	85593.85			
	Cement (30 km lead)	28.439	MT	742.00	21101.96			
	Boulder (60 Km lead)	0.09	Cum	1159.00	104.31			
	Brick (15 km lead)	336.00	No.	3.18	1068.48			
	Steel (30 Km lead)	1.43	MT	742.00	1059.16			
	TOTAL (In Rs.)				895092.78			
	TOTAL (In Rs.)				895092.78			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	30.56	Cum	584.64	17869.26	1786.93		
	Coarse Aggregate	61.23	Cum	944.26	57813.20	5781.32		
	Boulders	0.09	Cum	694.61	62.51	6.25		
	<i>Total</i>					7574.50		
	For 1 nos. fall, Total Seigniorage charges					7574.50		

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 1.070 METER AT CH. 4.350 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.	43.521	Cum	195.20	8495.39			
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.	4.77	Cum	6381.70	30410.66	1.54	2.14	4.29
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.	20.77	Cum	6914.20	143584.56	8.57	8.93	17.86
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.	0.39	Cum	8151.40	3159.36	0.22	0.15	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.	0.49	MT	73574.90	35982.09			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	103.13	Sqm	578.60	59670.29			
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.	7.95	Sqm	680.10	5406.80			
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.	6.29	Sqm	63.20	397.48			
13	Providing Drainage Spouts complete as per drawings & technical 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	11.45	Cum	149.30	1709.45			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	11.225	Cum	1075.00	12067.07			
	Coarse Aggregates (100 Km lead)	22.454	Cum	1398.00	31391.04			
	Cement (30 km lead)	10.330	MT	742.00	7664.82			
	Boulder (60 Km lead)	0.20	Cum	1159.00	234.70			
	Brick (15 km lead)	477.00	No.	3.18	1516.86			
	Steel (30 Km lead)	0.49	MT	742.00	362.88			
TOTAL (In Rs.)					354005.57			
TOTAL (In Rs.)					354005.57			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	11.23	Cum	584.64	6562.69	656.27		
	Coarse Aggregate	22.45	Cum	944.26	21202.65	2120.26		
	Boulders	0.20	Cum	694.61	140.66	14.07		
	<i>Total</i>					2790.60		
	For 1 nos. fall, Total Seigniorage charges					2790.60		

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)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KHAIRA MR.								
SHARDA TYPE FALL OF HEIGHT .304 METER AT CH. 3.075 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.	76.670	Cum	195.20	14966.08			
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.	9.78	Cum	6381.70	62402.64	3.17	4.40	8.80
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.	33.49	Cum	6914.20	231584.96	13.82	14.40	28.80
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	4996.73	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.	0.79	MT	73574.90	58034.87			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	134.63	Sqm	578.60	77898.12			
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.	8.93	Sqm	680.10	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.69	Cum	694.61	479.28			
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.	0.69	Cum	1237.00	853.53			
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.	0.69	Cum	1377.70	950.61			0.69
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.	0.69	Cum	516.50	356.39			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.11	Sqm	63.20	575.74			
13	Providing Drainage Spouts complete as per drawings & technical 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	21.75	Cum	149.30	3247.25			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	19.042	Cum	1075.00	20469.94			
	Coarse Aggregates (100 Km lead)	38.780	Cum	1398.00	54214.06			
	Cement (30 km lead)	17.332	MT	742.00	12860.40			
	Boulder (60 Km lead)	0.69	Cum	1159.00	799.71			
	Brick (15 km lead)	535.00	No.	3.18	1701.30			
	Steel (30 Km lead)	0.79	MT	742.00	585.28			
TOTAL (In Rs.)					564226.21			
TOTAL (In Rs.)					564226.21			
Seigniorage @10%				Rate	Amount in Rs.	10%		
	Coarse Sand	19.04	Cum	584.64	11132.60	1113.26		
	Coarse Aggregate	38.78	Cum	944.26	36618.15	3661.81		
	Boulders	0.69	Cum	694.61	479.28	47.93		
<i>Total</i>						4823.00		
For 1 nos. fall, Total Seigniorage charges						4823.00		

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)
SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH. 3.850 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.	139.475	Cum	195.20	27225.44			
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.	12.75	Cum	6381.70	81378.60	4.13	5.74	11.48
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.	74.87	Cum	6914.20	517691.48	30.89	32.20	64.39
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	6852.56	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.	1.76	MT	73574.90	129732.76			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	227.89	Sqm	578.60	131859.30			
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.	8.93	Sqm	680.10	6071.93			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.69	Cum	694.61	479.28			
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.	0.69	Cum	1237.00	853.53			
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.	0.69	Cum	1377.70	950.61			0.69
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.	0.69	Cum	516.50	356.39			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.35	Sqm	63.20	780.56			
13	Providing Drainage Spouts complete as per drawings & technical 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	36.25	Cum	149.30	5411.88			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	38.262	Cum	1075.00	41131.51			
	Coarse Aggregates (100 Km lead)	77.222	Cum	1398.00	107956.57			
	Cement (30 km lead)	35.494	MT	742.00	26336.29			
	Boulder (60 Km lead)	0.69	Cum	1159.00	799.71			
	Brick (15 km lead)	535.00	No.	3.18	1701.30			
	Steel (30 Km lead)	1.76	MT	742.00	1308.35			
TOTAL (In Rs.)					1100055.45			
TOTAL (In Rs.)					1100055.45			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	38.26	Cum	584.64	22369.42	2236.94		
	Coarse Aggregate	77.22	Cum	944.26	72917.79	7291.78		
	Boulders	0.69	Cum	694.61	479.28	47.93		
	<i>Total</i>					9576.65		
	For 1 nos. fall, Total Seigniorage charges					9576.65		

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 0.305 METER AT CH. 6.635 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.	74.585	Cum	195.20	14559.05			
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.	12.98	Cum	6381.70	82840.94	4.21	5.84	11.68
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.	46.52	Cum	6914.20	321618.32	19.19	20.00	40.00
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.	8.43	Cum	8151.40	68685.94	4.78	3.29	6.66
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.	1.48	MT	73574.90	108989.45			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	160.39	Sqm	578.60	92801.32			
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.	7.18	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 (uncreted) 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.	5.50	Sqm	63.20	347.82			
13	Providing Drainage Spouts complete as per drawings & technical 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	20.70	Cum	149.30	3091.23			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	29.129	Cum	1075.00	31314.13			
	Coarse Aggregates (100 Km lead)	58.606	Cum	1398.00	81930.64			
	Cement (30 km lead)	28.171	MT	742.00	20903.06			
	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)	1.48	MT	742.00	1099.15			
TOTAL (In Rs.)					846918.84			
TOTAL (In Rs.)					846918.84			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	29.13	Cum	584.64	17030.23	1703.02		
	Coarse Aggregate	58.61	Cum	944.26	55338.93	5533.89		
	Boulders	0.26	Cum	694.61	182.34	18.23		
	<i>Total</i>					7255.15		
	For 1 nos. fall, Total Seigniorage charges					7255.15		

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 BRIDGE/FALL OF HEIGHT 1.372 METER AT CH. 8.450 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.	139.151	Cum	195.20	27162.36			
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.	15.15	Cum	6381.70	96663.57	4.91	6.82	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.	86.40	Cum	6914.20	597418.40	35.64	37.15	74.31
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.	7.75	Cum	8151.40	63185.17	4.40	3.02	6.12
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.	2.38	MT	73574.90	175198.06			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	241.75	Sqm	578.60	139876.99			
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.	6.16	Sqm	680.10	4186.70			
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			0.07
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			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.02	Sqm	63.20	443.66			
13	Providing Drainage Spouts complete as per drawings & technical 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	40.07	Cum	149.30	5981.90			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	46.993	Cum	1075.00	50517.66			
	Coarse Aggregates (100 Km lead)	94.131	Cum	1398.00	131595.64			
	Cement (30 km lead)	44.945	MT	742.00	33348.88			
	Boulder (60 Km lead)	0.07	Cum	1159.00	78.23			
	Brick (15 km lead)	369.00	No.	3.18	1173.42			
	Steel (30 Km lead)	2.38	MT	742.00	1766.87			
TOTAL (In Rs.)					1340033.16			
TOTAL (In Rs.)					1340033.16			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	46.99	Cum	584.64	27474.09	2747.41		
	Coarse Aggregate	94.13	Cum	944.26	88884.48	8888.45		
	Boulders	0.07	Cum	694.61	46.89	4.69		
<i>Total</i>						11640.55		
For 1 nos. fall, Total Seigniorage charges						11640.55		

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 PRITAMPURA SUB DY.								
SHARDA TYPE FALL OF HEIGHT 1.676 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.	202.623	Cum	195.20	39552.08			
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.	25.96	Cum	6381.70	165660.65	8.41	11.68	23.36
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.	188.25	Cum	6914.20	1301622.55	77.65	80.95	161.90
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.	1.46	Cum	8151.40	11897.46	0.83	0.57	1.15
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.	4.43	MT	73574.90	326184.80			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	416.38	Sqm	578.60	240917.56			
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.	28.58	Sqm	680.10	19435.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.90	Cum	694.61	2012.98			
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.	2.90	Cum	1237.00	3584.83			
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.	2.90	Cum	1377.70	3992.57			2.90
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.	2.90	Cum	516.50	1496.82			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.30	Sqm	63.20	1156.83			
13	Providing Drainage Spouts complete as per drawings & technical 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	33.58	Cum	149.30	5014.08			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	93.200	Cum	1075.00	100189.64			
	Coarse Aggregates (100 Km lead)	189.312	Cum	1398.00	264658.06			
	Cement (30 km lead)	86.893	MT	742.00	64474.44			
	Boulder (60 Km lead)	2.90	Cum	1159.00	3358.78			
	Brick (15 km lead)	1714.00	No.	3.18	5450.52			
	Steel (30 Km lead)	4.43	MT	742.00	3289.56			
TOTAL (In Rs.)					2575127.48			
TOTAL (In Rs.)					2575127.48			
Seigniorage @10%				Rate	Amount in Rs.	10%		
	Coarse Sand	93.20	Cum	584.64	54488.25	5448.82		
	Coarse Aggregate	189.31	Cum	944.26	178759.67	17875.97		
	Boulders	2.90	Cum	694.61	2012.98	201.30		
<i>Total</i>						23526.09		
For 1 nos. fall, Total Seigniorage charges						23526.09		

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. 10.600 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.	99.856	Cum	195.20	19491.80			
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.	14.86	Cum	6381.70	94854.47	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.	57.05	Cum	6914.20	394451.69	23.53	24.53	49.06
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.	0.87	Cum	8151.40	7127.79	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.	1.34	MT	73574.90	98849.05			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	198.08	Sqm	578.60	114607.44			
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.	20.02	Sqm	680.10	13612.20			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.20	Cum	694.61	833.53			
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.	1.20	Cum	1237.00	1484.40			
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.	1.20	Cum	1377.70	1653.24			
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.	1.20	Cum	516.50	619.80			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.20	Sqm	63.20	834.15			
13	Providing Drainage Spouts complete as per drawings & technical 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	28.50	Cum	149.30	4254.62			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	31.561	Cum	1075.00	33927.96			
	Coarse Aggregates (100 Km lead)	63.131	Cum	1398.00	88256.48			
	Cement (30 km lead)	28.844	MT	742.00	21402.62			
	Boulder (60 Km lead)	1.20	Cum	1159.00	1390.80			
	Brick (15 km lead)	1201.00	No.	3.18	3819.18			
	Steel (30 Km lead)	1.34	MT	742.00	996.89			
TOTAL (In Rs.)					913645.51			
TOTAL (In Rs.)					913645.51			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	31.56	Cum	584.64	18451.76	1845.18		
	Coarse Aggregate	63.13	Cum	944.26	59611.64	5961.16		
	Boulders	1.20	Cum	694.61	833.53	83.35		
<i>Total</i>						7889.69		
For 1 no. fall, Total Seigniorage charges						7889.69		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 12.150 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.	81.631	Cum	195.20	15934.32			
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.	13.29	Cum	6381.70	84806.91	4.31	5.98	11.96
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.	52.01	Cum	6914.20	359580.56	21.45	22.36	44.73
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.	0.78	Cum	8151.40	6356.75	0.44	0.30	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.	1.22	MT	73574.90	90110.39			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	185.99	Sqm	578.60	107614.68			
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.	18.68	Sqm	680.10	12704.27			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.75	Cum	694.61	520.96			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.75	Cum	1237.00	927.75			
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.	0.75	Cum	1377.70	1033.28			
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.	0.75	Cum	516.50	387.38			0.75
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	12.48	Sqm	63.20	788.53			
13	Providing Drainage Spouts complete as per drawings & technical 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	23.30	Cum	149.30	3478.02			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	28.647	Cum	1075.00	30795.36			
	Coarse Aggregates (100 Km lead)	58.051	Cum	1398.00	81155.98			
	Cement (30 km lead)	26.200	MT	742.00	19440.65			
	Boulder (60 Km lead)	0.75	Cum	1159.00	869.25			
	Brick (15 km lead)	1121.00	No.	3.18	3564.78			
	Steel (30 Km lead)	1.22	MT	742.00	908.76			
TOTAL (In Rs.)					832155.96			
TOTAL (In Rs.)					832155.96			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	28.65	Cum	584.64	16748.09	1674.81		
	Coarse Aggregate	58.05	Cum	944.26	54815.69	5481.57		
	Boulders	0.75	Cum	694.61	520.96	52.10		
<i>Total</i>						7208.47		
For 1 no. fall, Total Seigniorage charges						7208.47		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 13.700 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.	64.247	Cum	195.20	12541.11			
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.	8.78	Cum	6381.70	56008.88	2.84	3.95	7.90
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.	31.03	Cum	6914.20	214541.23	12.80	13.34	26.69
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.	0.58	Cum	8151.40	4716.85	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.	0.73	MT	73574.90	53763.73			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	131.06	Sqm	578.60	75833.39			
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.	8.02	Sqm	680.10	5451.68			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.11	Cum	694.61	78.14			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.11	Cum	1237.00	139.16			
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.	0.11	Cum	1377.70	154.99			
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.	0.11	Cum	516.50	58.11			0.11
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.04	Sqm	63.20	634.72			
13	Providing Drainage Spouts complete as per drawings & technical 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	19.53	Cum	149.30	2916.47			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	17.518	Cum	1075.00	18831.41			
	Coarse Aggregates (100 Km lead)	35.153	Cum	1398.00	49144.56			
	Cement (30 km lead)	15.971	MT	742.00	11850.61			
	Boulder (60 Km lead)	0.11	Cum	1159.00	130.39			
	Brick (15 km lead)	481.00	No.	3.18	1529.58			
	Steel (30 Km lead)	0.73	MT	742.00	542.21			
TOTAL (In Rs.)					520044.62			
TOTAL (In Rs.)					520044.62			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	17.52	Cum	584.64	10241.49	1024.15		
	Coarse Aggregate	35.15	Cum	944.26	33194.02	3319.40		
	Boulders	0.11	Cum	694.61	78.14	7.81		
<i>Total</i>						4351.37		
For 1 no. fall, Total Seigniorage charges						4351.37		

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)
AOC 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.	62.525	Cum	195.20	12204.98			
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.	8.15	Cum	6381.70	52036.22	2.64	3.67	7.34
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.	30.35	Cum	6914.20	209827.69	12.52	13.05	26.10
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	4344.53	0.30	0.21	0.42
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.	0.71	MT	73574.90	52582.53			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	127.99	Sqm	578.60	74057.50			
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.	0.21	Cum	694.61	145.87			
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.	0.21	Cum	1237.00	259.77			
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.	0.21	Cum	1377.70	289.32			
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.	0.21	Cum	516.50	108.47			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.86	Sqm	63.20	559.93			
13	Providing Drainage Spouts complete as per drawings & technical 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	23.93	Cum	149.30	3572.72			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	16.927	Cum	1075.00	18196.00			
	Coarse Aggregates (100 Km lead)	33.858	Cum	1398.00	47333.98			
	Cement (30 km lead)	15.462	MT	742.00	11473.08			
	Boulder (60 Km lead)	0.21	Cum	1159.00	243.39			
	Brick (15 km lead)	430.00	No.	3.18	1367.40			
	Steel (30 Km lead)	0.71	MT	742.00	530.29			
TOTAL (In Rs.)					505193.14			
TOTAL (In Rs.)					505193.14			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	16.93	Cum	584.64	9895.92	989.59		
	Coarse Aggregate	33.86	Cum	944.26	31971.09	3197.11		
	Boulders	0.21	Cum	694.61	145.87	14.59		
	<i>Total</i>					4201.29		
	For 1 nos. fall, Total Seigniorage charges					4201.29		

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)
AOC SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.475 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.	50.489	Cum	195.20	9855.50			
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.	8.13	Cum	6381.70	51894.19	2.63	3.66	7.32
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.	30.33	Cum	6914.20	209692.86	12.51	13.04	26.08
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.	0.53	Cum	8151.40	4344.53	0.30	0.21	0.42
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.	0.71	MT	73574.90	52548.74			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	127.96	Sqm	578.60	74034.93			
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.	0.21	Cum	694.61	145.87			
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.	0.21	Cum	1237.00	259.77			
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.	0.21	Cum	1377.70	289.32			
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.	0.21	Cum	516.50	108.47			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.86	Sqm	63.20	559.93			
13	Providing Drainage Spouts complete as per drawings & technical 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	15.06	Cum	149.30	2248.04			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	16.908	Cum	1075.00	18176.22			
	Coarse Aggregates (100 Km lead)	33.822	Cum	1398.00	47282.54			
	Cement (30 km lead)	15.447	MT	742.00	11461.76			
	Boulder (60 Km lead)	0.21	Cum	1159.00	243.39			
	Brick (15 km lead)	430.00	No.	3.18	1367.40			
	Steel (30 Km lead)	0.71	MT	742.00	529.95			
TOTAL (In Rs.)					501102.90			
TOTAL (In Rs.)					501102.90			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	16.91	Cum	584.64	9885.16	988.52		
	Coarse Aggregate	33.82	Cum	944.26	31936.34	3193.63		
	Boulders	0.21	Cum	694.61	145.87	14.59		
	<i>Total</i>					4196.74		
	For 1 nos. fall, Total Seigniorage charges					4196.74		

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)
AOC SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 3.460 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.	60.767	Cum	195.20	11861.77			
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.	7.41	Cum	6381.70	47311.58	2.40	3.34	6.67
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.	26.99	Cum	6914.20	186638.98	11.13	11.61	23.21
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.	0.51	Cum	8151.40	4122.98	0.29	0.20	0.40
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.	0.64	MT	73574.90	46771.47			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	118.43	Sqm	578.60	68523.94			
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.	6.15	Sqm	680.10	4184.66			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.11	Cum	694.61	78.14			
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.	0.11	Cum	1237.00	139.16			
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.	0.11	Cum	1377.70	154.99			
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.	0.11	Cum	516.50	58.11			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.59	Sqm	63.20	542.64			
13	Providing Drainage Spouts complete as per drawings & technical 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	16.13	Cum	149.30	2408.01			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	15.141	Cum	1075.00	16276.18			
	Coarse Aggregates (100 Km lead)	30.286	Cum	1398.00	42340.29			
	Cement (30 km lead)	13.824	MT	742.00	10257.15			
	Boulder (60 Km lead)	0.11	Cum	1159.00	130.39			
	Brick (15 km lead)	369.00	No.	3.18	1173.42			
	Steel (30 Km lead)	0.64	MT	742.00	471.69			
TOTAL (In Rs.)					454622.94			
TOTAL (In Rs.)					454622.94			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	15.14	Cum	584.64	8851.82	885.18		
	Coarse Aggregate	30.29	Cum	944.26	28598.17	2859.82		
	Boulders	0.11	Cum	694.61	78.14	7.81		
	<i>Total</i>					3752.81		
	For 1 nos. fall, Total Seigniorage charges					3752.81		

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 SALEMPUR MR.								
SHARDA TYPE FALL OF HEIGHT 0.914 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.	31.595	Cum	195.20	6167.28			
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.	9.56	Cum	6381.70	61010.42	3.10	4.30	8.60
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.	40.18	Cum	6914.20	277783.25	16.57	17.28	34.55
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.	0.62	Cum	8151.40	5033.41	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.	0.95	MT	73574.90	69612.10			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	154.44	Sqm	578.60	89357.41			
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.	0.36	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			0.36
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.65	Sqm	63.20	609.87			
13	Providing Drainage Spouts complete as per drawings & technical 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	5.94	Cum	149.30	887.42			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	21.818	Cum	1075.00	23454.88			
	Coarse Aggregates (100 Km lead)	44.003	Cum	1398.00	61516.42			
	Cement (30 km lead)	20.020	MT	742.00	14854.93			
	Boulder (60 Km lead)	0.36	Cum	1159.00	417.24			
	Brick (15 km lead)	535.00	No.	3.18	1701.30			
	Steel (30 Km lead)	0.95	MT	742.00	702.04			
TOTAL (In Rs.)					631734.58			
TOTAL (In Rs.)					631734.58			
Seigniorage @10%				Rate	Amount in Rs.	10%		
	Coarse Sand	21.82	Cum	584.64	12755.96	1275.60		
	Coarse Aggregate	44.00	Cum	944.26	41550.43	4155.04		
	Boulders	0.36	Cum	694.61	250.06	25.01		
<i>Total</i>						5455.65		
For 1 nos. fall, Total Seigniorage charges						5455.65		

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. 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.	49.564	Cum	195.20	9674.86			
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.	8.97	Cum	6381.70	57264.73	2.91	4.04	8.08
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.	32.45	Cum	6914.20	224364.31	13.39	13.95	27.91
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.	0.57	Cum	8151.40	4611.57	0.32	0.22	0.45
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	56225.38			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	133.80	Sqm	578.60	77414.32			
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.	8.93	Sqm	680.10	6071.93			
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			0.36
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.15	Sqm	63.20	578.58			
13	Providing Drainage Spouts complete as per drawings & technical 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	11.75	Cum	149.30	1753.56			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	18.212	Cum	1075.00	19577.92			
	Coarse Aggregates (100 Km lead)	36.790	Cum	1398.00	51431.99			
	Cement (30 km lead)	16.614	MT	742.00	12327.33			
	Boulder (60 Km lead)	0.36	Cum	1159.00	417.24			
	Brick (15 km lead)	535.00	No.	3.18	1701.30			
	Steel (30 Km lead)	0.76	MT	742.00	567.03			
TOTAL (In Rs.)					536536.76			
TOTAL (In Rs.)					536536.76			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	18.21	Cum	584.64	10647.47	1064.75		
	Coarse Aggregate	36.79	Cum	944.26	34739.04	3473.90		
	Boulders	0.36	Cum	694.61	250.06	25.01		
	<i>Total</i>					4563.66		
	For 1 nos. fall, Total Seigniorage charges					4563.66		

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)
AOB SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.900								
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.	74.720	Cum	195.20	14585.36			
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.	8.90	Cum	6381.70	56782.38	2.88	4.00	8.01
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.	40.46	Cum	6914.20	279766.43	16.69	17.40	34.80
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.	0.59	Cum	8151.40	4821.02	0.34	0.23	0.47
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.	0.95	MT	73574.90	70109.08			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	151.50	Sqm	578.60	87658.51			
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.	0.21	Cum	694.61	145.87			
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.	0.21	Cum	1237.00	259.77			
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.	0.21	Cum	1377.70	289.32			
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.	0.21	Cum	516.50	108.47			
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 & technical 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	22.84	Cum	149.30	3410.04			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	21.634	Cum	1075.00	23256.05			
	Coarse Aggregates (100 Km lead)	43.273	Cum	1398.00	60495.62			
	Cement (30 km lead)	19.909	MT	742.00	14772.49			
	Boulder (60 Km lead)	0.21	Cum	1159.00	243.39			
	Brick (15 km lead)	430.00	No.	3.18	1367.40			
	Steel (30 Km lead)	0.95	MT	742.00	707.05			
TOTAL (In Rs.)					634736.06			
TOTAL (In Rs.)					634736.06			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	21.63	Cum	584.64	12647.83	1264.78		
	Coarse Aggregate	43.27	Cum	944.26	40860.94	4086.09		
	Boulders	0.21	Cum	694.61	145.87	14.59		
	<i>Total</i>					5365.46		
	For 1 nos. fall, Total Seigniorage charges					5365.46		

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 0.305 METER AT CH. 4.370								
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.	36.586	Cum	195.20	7141.55			
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.	7.06	Cum	6381.70	45057.88	2.29	3.18	6.35
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.	23.08	Cum	6914.20	159564.55	9.52	9.92	19.85
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.	0.50	Cum	8151.40	4058.05	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.	0.54	MT	73574.90	39986.65			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	107.05	Sqm	578.60	61938.62			
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.	5.61	Sqm	680.10	3817.40			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.11	Cum	694.61	78.14			
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.	0.11	Cum	1237.00	139.16			
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.	0.11	Cum	1377.70	154.99			
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.	0.11	Cum	516.50	58.11			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.43	Sqm	63.20	532.57			
13	Providing Drainage Spouts complete as per drawings & technical 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	9.66	Cum	149.30	1442.02			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	13.295	Cum	1075.00	14291.94			
	Coarse Aggregates (100 Km lead)	26.595	Cum	1398.00	37179.30			
	Cement (30 km lead)	12.089	MT	742.00	8970.38			
	Boulder (60 Km lead)	0.11	Cum	1159.00	130.39			
	Brick (15 km lead)	336.00	No.	3.18	1068.48			
	Steel (30 Km lead)	0.54	MT	742.00	403.26			
TOTAL (In Rs.)					396787.58			
TOTAL (In Rs.)					396787.58			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	13.29	Cum	584.64	7772.69	777.27		
	Coarse Aggregate	26.59	Cum	944.26	25112.25	2511.22		
	Boulders	0.11	Cum	694.61	78.14	7.81		
	<i>Total</i>					3296.31		
	For 1 nos. fall, Total Seigniorage charges					3296.31		

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 0.457 METER AT CH. 14.465								
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.	228.273	0.00	195.20	44558.97			
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.	25.64	Cum	6381.70	163605.38	8.31	11.54	23.07
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.	116.06	Cum	6914.20	802462.68	47.87	49.91	99.81
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.	18.56	Cum	8151.40	151306.74	10.52	7.24	14.66
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.	2.66	MT	73574.90	195916.13			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	309.86	MT	578.60	179284.36			
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.	28.48	Sqm	680.10	19370.61			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.98	Sqm	694.61	1375.33			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncreted) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.98	Cum	1237.00	2449.26			
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.	1.98	Cum	1377.70	2727.85			1.98
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.	1.98	Cum	516.50	1022.67			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.99	Sqm	63.20	505.04			
13	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	2.00	Sqm	5588.70	278656.99			
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	49.86	No.	149.30	7444.22			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	68.682	0.00	1075.00	73832.65			
	Coarse Aggregates (100 Km lead)	139.529	Cum	1398.00	195061.10			
	Cement (30 km lead)	66.706	Cum	742.00	49495.66			
	Boulder (60 Km lead)	1.98	MT	1159.00	2294.82			
	Brick (15 km lead)	1709.00	Cum	3.18	5434.62			
	Steel (30 Km lead)	2.66	MT	742.00	1975.81			
TOTAL (In Rs.)					2178780.85			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	68.68	Cum	584.64	40153.97	4015.40		
	Coarse Aggregate	139.53	Cum	944.26	131751.35	13175.14		
	Boulders	1.98	Cum	694.61	1375.33	137.53		
	<i>Total</i>					17328.07		
	For 1 nos. fall, Total Seigniorage charges					17328.07		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR BASDIHA DISTRIBUTARY.							
S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 0.355 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.64	2.002	3.596	23.621	Cum
	<i>Section 2-2</i>	2	3.00	1.728	3.596	37.283	Cum
	<i>Section 3-3</i>	2	2.20	1.608	3.396	24.027	Cum
	<i>Section 5-5</i>	2	8.36	2.152	3.596	129.459	Cum
	<i>Section 6-6</i>	2	4.70	1.608	3.396	51.298	Cum
	<i>U/S Key Floor</i>	1	0.61	6.950	0.800	3.406	Cum
	<i>U/S Floor</i>	1	2.50	6.950	1.357	23.578	Cum
	<i>D/S Floor</i>	1	3.00	6.950	0.900	18.765	Cum
		1	2.50	6.950	0.700	12.163	Cum
	<i>D/S Key Floor</i>	1	0.68	6.950	1.050	4.926	Cum
	<i>Toe Wall D/S Portion</i>	1	19.56	0.750	0.900	13.203	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	4.50	0.600	0.750	4.050	Cum
						345.78	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.						
	<i>PCC Below Floor</i>	1	0.54	6.950	0.150	0.57	Cum
		1	0.73	6.950	0.150	0.76	Cum
		1	5.10	6.950	0.150	5.32	Cum
		1	0.35	6.950	0.150	0.37	Cum
		1	0.79	6.950	0.150	0.82	Cum
		1	1.01	6.950	0.150	1.05	Cum
		1	0.54	6.950	0.150	0.57	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.64	2.002	0.150	0.99	Cum
	<i>Section 2-2</i>	2	3.00	1.728	0.150	1.56	Cum
	<i>Section 3-3</i>	2	2.20	1.608	0.150	1.06	Cum
	<i>Section 5-5</i>	2	8.36	2.152	0.150	5.40	Cum
	<i>Section 6-6</i>	2	4.70	1.608	0.150	2.27	Cum
	<i>Toe Wall D/S Portion</i>	1	19.56	0.750	0.300	4.40	Cum
	<i>Toe Wall D/S Portion</i>	1	19.26	0.450	0.600	5.20	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.600	0.150	0.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.300	0.600	1.62	Cum
	TOTAL					32.75	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.42	0.450	0.450	0.57	Cum
		2	1.42	1.076	2.087	6.36	Cum
		2	1.42	1.852	0.550	2.88	Cum
	<i>Section 2-2</i>	2	3.00	0.450	0.450	1.22	Cum
		2	3.00	0.939	1.630	9.18	Cum
		2	3.00	1.578	0.550	5.21	Cum
	<i>Section 3-3</i>	2	1.62	0.450	0.450	0.66	Cum
		2	1.62	0.879	1.430	4.08	Cum
		2	1.62	1.458	0.500	2.36	Cum
	<i>Section 5-5</i>	2	8.32	0.450	0.450	3.37	Cum
		2	8.32	1.076	2.087	37.37	Cum
		2	8.32	1.852	0.550	16.95	Cum
	<i>Section 6-6</i>	2	5.43	0.450	0.450	2.20	Cum
		2	5.43	0.879	1.430	13.64	Cum
		2	5.43	1.458	0.500	7.91	Cum
	<i>Floor</i>	1	0.61	6.950	0.650	2.77	Cum
		1	5.50	6.950	0.550	21.02	Cum
		1	0.53	6.950	0.250	0.92	Cum
		1	0.20	6.950	0.400	0.56	Cum
		1	2.30	6.950	0.500	7.99	Cum
		1	0.68	6.950	0.900	4.22	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Crest</i>	1	1.45	6.950	1.246	12.55	Cum
	TOTAL					164.00	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.						
	<i>Over Crest</i>	1	1.25	6.950	0.150	1.30	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	21.37	0.450	0.050	0.48	Cum
	<i>On Abutment Top (Right Side)</i>	1	21.37	0.450	0.050	0.48	Cum
	TOTAL					2.26	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 @0.2% of M-20	164.00	0.002	0.328	7850.000	2574.78	Kg
	Total Weight in Metric Tonne					2.57	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.42		0.450	2.55	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.42		2.087	11.82	Sqm
		4		1.076	2.087	8.98	Sqm
		4	1.42		0.550	3.11	Sqm
		4		1.852	0.550	4.07	Sqm
	<i>Section 2-2</i>	4	3.00		0.450	5.40	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.00		1.630	19.56	Sqm
		4		0.939	1.630	6.12	Sqm
		4	3.00		0.550	6.60	Sqm
		4		1.578	0.550	3.47	Sqm
	<i>Section 3-3</i>	4	1.62		0.450	2.92	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.62		1.430	9.27	Sqm
		4		0.879	1.430	5.03	Sqm
		4	1.62		0.500	3.24	Sqm
		4		1.458	0.500	2.92	Sqm
	<i>Section 5-5</i>	4	8.32		0.450	14.98	Sqm
		4		0.450	0.450	0.81	Sqm
		4	8.32		2.087	69.47	Sqm
		4		1.076	2.087	8.98	Sqm
		4	8.32		0.550	18.31	Sqm
		4		1.852	0.550	4.07	Sqm
	<i>Section 6-6</i>	4	5.43		0.450	9.77	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.43		1.430	31.04	Sqm
		4		0.879	1.430	5.03	Sqm
		4	5.43		0.500	10.85	Sqm
		4		1.458	0.500	2.92	Sqm
	Floor	2	0.61		0.650	0.80	Sqm
		2		6.950	0.650	9.04	Sqm
		2	5.50		0.550	6.05	Sqm
		2		6.950	0.550	7.65	Sqm
		2	0.53		0.250	0.27	Sqm
		2		6.950	0.250	3.48	Sqm
		2	0.20		0.400	0.16	Sqm
		2		6.950	0.400	5.56	Sqm
		2	2.30		0.500	2.30	Sqm
		2		6.950	0.500	6.95	Sqm
		2	0.68		0.900	1.22	Sqm
		2		6.950	0.900	12.51	Sqm
	Crest	2	1.45		1.246	3.61	Sqm
		2		6.950	1.246	17.32	Sqm
	Toe Wall D/S Portion	2	19.56		0.300	11.74	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	19.26		0.600	23.11	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		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					401.84	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.						
	<i>In D/S Portion On Slopes</i>	2	4.50	6.588		59.29	Sqm
	TOTAL					59.29	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	4.50	6.350	0.300	8.57	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	4.50	6.350	0.150	8.57	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	21.37	0.450		9.62	Sqm
	<i>On Abutment Top (Right Side)</i>	1	21.37	0.450		9.62	Sqm
	TOTAL					19.23	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		3.612		3.61	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.64		2.613	8.573	Cum
	<i>Section 2-2</i>	2	3.00		2.008	12.048	Cum
	<i>Section 3-3</i>	2	2.20		1.697	7.467	Cum
	<i>Section 5-5</i>	2	8.36		2.613	43.713	Cum
	<i>Section 6-6</i>	2	4.70		1.697	15.942	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	19.56	0.150	0.600	5.868	Cum
		2	4.50	0.150	0.600	0.810	Cum
	TOTAL					98.03	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.981 METER AT CH. 1.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.20	2.917	4.181	53.699	Cum
	<i>Section 2-2</i>	2	7.00	2.342	4.181	137.087	Cum
	<i>Section 3-3</i>	2	5.20	2.222	3.981	91.996	Cum
	<i>below bridge</i>	2	6.50	2.222	1.550	44.773	Cum
	<i>Section 5-5</i>	2	8.18	3.067	4.181	209.684	Cum
	<i>Section 6-6</i>	2	4.33	1.608	3.981	55.398	Cum
	<i>U/S Key Floor</i>	1	0.58	6.250	0.650	2.336	Cum
	<i>U/S Floor</i>	1	4.50	6.250	3.731	104.934	Cum
	<i>D/S Floor</i>	1	7.00	6.250	1.750	76.563	Cum
		1	3.00	6.250	1.550	29.063	Cum
	<i>D/S Key Floor</i>	1	0.99	6.250	2.300	14.195	Cum
	<i>Toe Wall D/S Portion</i>	1	18.86	0.750	0.900	12.731	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	5.00	0.600	0.750	4.500	Cum
						836.96	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.						
	<i>PCC Below Floor</i>	1	0.54	6.250	0.150	0.51	Cum
		1	0.56	6.250	0.150	0.52	Cum
		1	11.18	6.250	0.150	10.48	Cum
		1	0.85	6.250	0.150	0.80	Cum
		1	2.88	6.250	0.150	2.70	Cum
		1	2.40	6.250	0.150	2.25	Cum
		1	0.54	6.250	0.150	0.51	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.20	2.917	0.150	1.93	Cum
	<i>Section 2-2</i>	2	7.00	2.342	0.300	9.84	Cum
	<i>Section 3-3</i>	2	5.20	2.222	0.300	6.93	Cum
	<i>Section 5-5</i>	2	8.18	3.067	0.150	7.52	Cum
	<i>Section 6-6</i>	2	4.33	1.608	0.150	2.09	Cum
	<i>Toe Wall D/S Portion</i>	1	18.86	0.750	0.300	4.24	Cum
	<i>Toe Wall D/S Portion</i>	1	18.56	0.450	0.600	5.01	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	5.00	0.600	0.150	0.90	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	5.00	0.300	0.600	1.80	Cum
	TOTAL					58.02	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.98	0.450	0.450	0.80	Cum
		2	1.98	1.534	3.611	21.89	Cum
		2	1.98	2.767	1.400	15.31	Cum
	<i>Section 2-2</i>	2	7.00	0.820	0.500	5.74	Cum
		2	7.00	1.356	1.786	33.91	Cum
		2	7.00	2.042	2.800	80.05	Cum
	<i>Section 3-3</i>	2	4.62	0.820	0.500	3.79	Cum
		2	4.62	1.296	1.586	19.00	Cum
		2	4.62	1.922	3.000	53.29	Cum
	<i>Section 5-5</i>	2	8.13	0.450	0.450	3.29	Cum
		2	8.13	1.534	3.611	90.06	Cum
		2	8.13	2.767	1.400	63.00	Cum
	<i>Section 6-6</i>	2	5.24	0.450	0.450	2.12	Cum
		2	5.24	0.879	1.430	13.18	Cum
		2	5.24	1.458	0.850	12.99	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	6.500	0.300	-3.20	Cum
	<i>Floor</i>	1	0.58	6.250	0.500	1.80	Cum
		1	11.50	6.250	1.400	100.63	Cum
		1	0.71	6.250	0.600	2.65	Cum
		1	0.20	6.250	0.900	1.13	Cum
		1	2.80	6.250	1.000	17.50	Cum
		1	0.15	6.250	0.925	0.87	Cum
		1	2.35	6.250	0.850	12.48	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.99	6.250	2.150	13.27	Cum
	Crest	1	1.95	6.250	2.750	33.52	Cum
	TOTAL					599.05	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	1.50	6.250	0.150	1.41	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	22.62	0.450	0.050	0.51	Cum
	On Abutment Top (Right Side)	1	22.62	0.450	0.050	0.51	Cum
	Slab Bridge						
	Slab	1	7.05	6.500	0.535	24.52	Cum
	Wearing coat	1	7.05	5.500	0.070	2.71	Cum
	Dirt wall	2	0.40	6.500	0.500	2.60	Cum
	300 mm thick pedestal	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					35.45	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	20	59	7.91		2.466	1150.8	Kg
a2	12	47	7.28		0.888	303.7	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	31	7.83		0.616	149.6	Kg
a5	10	35	7.20		0.616	155.3	Kg
x1	12	116	2.70		0.888	278.1	Kg
x2	16	116	1.32		1.578	240.7	Kg
x3	12	24	6.95		0.888	148.1	Kg
	Taking Skin reinforcement @0.2% of M-20	599.05	0.002	1.198	7850.000	9405.1	Kg
	Total Reinforcement Steel (in kg)					11839.5	Kg
	Total Weight in Metric Tonne					11.84	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.98		0.450	3.56	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.98		3.611	28.55	Sqm
		4		1.534	3.611	22.15	Sqm
		4	1.98		1.400	11.07	Sqm
		4		2.767	1.400	15.50	Sqm
	Section 2-2	4	7.00		0.500	14.00	Sqm
		4		0.820	0.500	1.64	Sqm
		4	7.00		1.786	50.01	Sqm
		4		1.356	1.786	9.69	Sqm
		4	7.00		2.800	78.40	Sqm
		4		2.042	2.800	22.87	Sqm
	Section 3-3	4	4.62		0.500	9.24	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.62		1.586	29.32	Sqm
		4		1.296	1.586	8.22	Sqm
		4	4.62		3.000	55.45	Sqm
		4		1.922	3.000	23.06	Sqm
	Section 5-5	4	8.13		0.450	14.64	Sqm
		4		0.450	0.450	0.81	Sqm
		4	8.13		3.611	117.46	Sqm
		4		1.534	3.611	22.15	Sqm
		4	8.13		1.400	45.54	Sqm
		4		2.767	1.400	15.50	Sqm
	Section 6-6	4	5.24		0.450	9.43	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.24		1.430	29.98	Sqm
		4		0.879	1.430	5.03	Sqm
		4	5.24		0.850	17.82	Sqm
		4		1.458	0.850	4.96	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		6.250	0.500	6.25	Sqm
		2	11.50		1.400	32.20	Sqm
		2		6.250	1.400	17.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.71		0.600	0.85	Sqm
		2		6.250	0.600	7.50	Sqm
		2	0.20		0.900	0.36	Sqm
		2		6.250	0.900	11.25	Sqm
		2	2.80		1.000	5.60	Sqm
		2		6.250	1.000	12.50	Sqm
		2	0.15		0.925	0.28	Sqm
		2		6.250	0.925	11.56	Sqm
		2	2.35		0.850	4.00	Sqm
		2		6.250	0.850	10.63	Sqm
		2	0.99		2.150	4.25	Sqm
		2		6.250	2.150	26.88	Sqm
	Crest	2	1.95		2.750	10.73	Sqm
		2		6.250	2.750	34.38	Sqm
	Toe Wall D/S Portion	2	18.86		0.300	11.32	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	18.56		0.600	22.27	Sqm
		2		0.450	0.600	0.54	Sqm
	Toe Wall for resting Brick Edging	4	5.00		0.150	3.00	Sqm
		4		0.600	0.150	0.36	Sqm
	Toe Wall for resting Brick Edging	4	5.00		0.600	12.00	Sqm
		4		0.300	0.600	0.72	Sqm
	TOTAL					917.21	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.						
	<i>In D/S Portion On Slopes</i>	2	5.00	6.588		65.88	Sqm
	TOTAL					65.88	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	5.00	5.650	0.300	8.48	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	5.00	5.650	0.150	8.48	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	22.62	0.450		10.18	Sqm
	<i>On Abutment Top (Right Side)</i>	1	22.62	0.450		10.18	Sqm
	TOTAL					20.36	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		43.362		43.36	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.20	3.077		13.548	Cum
	<i>Section 2-2</i>	2	7.00	3.672		51.401	Cum
	<i>Section 3-3</i>	2	5.20	3.392		35.272	Cum
	<i>Section 5-5</i>	2	8.18	3.077		50.315	Cum
	<i>Section 6-6</i>	2	4.33	1.749		15.136	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	18.86	0.150	0.600	5.658	Cum
		2	5.00	0.150	0.600	0.900	Cum
	TOTAL					215.59	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.304 METER AT CH. 3.050							
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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.11	1.911	2.330	9.880	Cum
	<i>Section 2-2</i>	2	3.00	1.728	2.330	24.157	Cum
	<i>Section 3-3</i>	2	2.20	1.608	2.130	15.070	Cum
	<i>Section 5-5</i>	2	8.36	2.061	2.330	80.335	Cum
	<i>Section 6-6</i>	2	4.70	1.608	2.130	32.175	Cum
	<i>U/S Key Floor</i>	1	0.63	6.250	0.850	3.320	Cum
	<i>U/S Floor</i>	1	2.00	6.250	1.155	14.438	Cum
	<i>D/S Floor</i>	1	3.00	6.250	0.850	15.938	Cum
	<i>D/S Key Floor</i>	1	2.50	6.250	0.650	10.156	Cum
	<i>D/S Key Floor</i>	1	0.68	6.250	1.050	4.430	Cum
	<i>Toe Wall D/S Portion</i>	1	18.86	0.750	0.900	12.731	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	4.50	0.600	0.750	4.050	Cum
						226.68	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.						
	<i>PCC Below Floor</i>	1	0.54	6.250	0.150	0.51	Cum
		1	0.78	6.250	0.150	0.73	Cum
		1	4.58	6.250	0.150	4.29	Cum
		1	0.28	6.250	0.150	0.27	Cum
		1	0.84	6.250	0.150	0.79	Cum
		1	1.01	6.250	0.150	0.94	Cum
		1	0.54	6.250	0.150	0.51	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.11	1.911	0.150	0.64	Cum
	<i>Section 2-2</i>	2	3.00	1.728	0.150	1.56	Cum
	<i>Section 3-3</i>	2	2.20	1.608	0.150	1.06	Cum
	<i>Section 5-5</i>	2	8.36	2.061	0.150	5.17	Cum
	<i>Section 6-6</i>	2	4.70	1.608	0.150	2.27	Cum
	<i>Toe Wall D/S Portion</i>	1	18.86	0.750	0.300	4.24	Cum
	<i>Toe Wall D/S Portion</i>	1	18.56	0.450	0.600	5.01	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.600	0.150	0.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.300	0.600	1.62	Cum
	TOTAL					30.41	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.88	0.450	0.450	0.36	Cum
		2	0.88	1.031	1.935	3.53	Cum
		2	0.88	1.761	0.500	1.56	Cum
	<i>Section 2-2</i>	2	3.00	0.450	0.450	1.22	Cum
		2	3.00	0.939	1.630	9.18	Cum
		2	3.00	1.578	0.500	4.73	Cum
	<i>Section 3-3</i>	2	1.62	0.450	0.450	0.66	Cum
		2	1.62	0.879	1.430	4.08	Cum
		2	1.62	1.458	0.500	2.36	Cum
	<i>Section 5-5</i>	2	8.32	0.450	0.450	3.37	Cum
		2	8.32	1.031	1.935	33.19	Cum
		2	8.32	1.761	0.500	14.65	Cum
	<i>Section 6-6</i>	2	5.43	0.450	0.450	2.20	Cum
		2	5.43	0.879	1.430	13.64	Cum
		2	5.43	1.458	0.500	7.91	Cum
	<i>Floor</i>	1	0.63	6.250	0.700	2.73	Cum
		1	5.00	6.250	0.500	15.63	Cum
		1	0.51	6.250	0.200	0.63	Cum
		1	0.20	6.250	0.400	0.50	Cum
		1	2.30	6.250	0.500	7.19	Cum
		1	0.68	6.250	0.900	3.80	Cum
	<i>Crest</i>	1	0.93	6.250	1.154	6.74	Cum
	TOTAL					139.84	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.						
	<i>Over Crest</i>	1	0.75	6.250	0.150	0.70	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	20.84	0.450	0.050	0.47	Cum
	<i>On Abutment Top (Right Side)</i>	1	20.84	0.450	0.050	0.47	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	139.84	0.002	0.280	7850.000	2195.56	Kg
	Total Weight in Metric Tonne					2.20	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.88		0.450	1.59	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.88		1.935	6.85	Sqm
		4		1.031	1.935	7.98	Sqm
		4	0.88		0.500	1.77	Sqm
		4		1.761	0.500	3.52	Sqm
	<i>Section 2-2</i>	4	3.00		0.450	5.40	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.00		1.630	19.56	Sqm
		4		0.939	1.630	6.12	Sqm
		4	3.00		0.500	6.00	Sqm
		4		1.578	0.500	3.16	Sqm
	<i>Section 3-3</i>	4	1.62		0.450	2.92	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.62		1.430	9.27	Sqm
		4		0.879	1.430	5.03	Sqm
		4	1.62		0.500	3.24	Sqm
		4		1.458	0.500	2.92	Sqm
	<i>Section 5-5</i>	4	8.32		0.450	14.98	Sqm
		4		0.450	0.450	0.81	Sqm
		4	8.32		1.935	64.41	Sqm
		4		1.031	1.935	7.98	Sqm
		4	8.32		0.500	16.64	Sqm
		4		1.761	0.500	3.52	Sqm
	<i>Section 6-6</i>	4	5.43		0.450	9.77	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.43		1.430	31.04	Sqm
		4		0.879	1.430	5.03	Sqm
		4	5.43		0.500	10.85	Sqm
		4		1.458	0.500	2.92	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		6.250	0.700	8.75	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	5.00		0.500	5.00	Sqm
		2		6.250	0.500	6.25	Sqm
		2	0.51		0.200	0.20	Sqm
		2		6.250	0.200	2.50	Sqm
		2	0.20		0.400	0.16	Sqm
		2		6.250	0.400	5.00	Sqm
		2	2.30		0.500	2.30	Sqm
		2		6.250	0.500	6.25	Sqm
		2	0.68		0.900	1.22	Sqm
		2		6.250	0.900	11.25	Sqm
	Crest	2	0.93		1.154	2.16	Sqm
		2		6.250	1.154	14.43	Sqm
	Toe Wall D/S Portion	2	18.86		0.300	11.32	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	18.56		0.600	22.27	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					371.99	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.						
	<i>In D/S Portion On Slopes</i>	2	4.50	6.588		59.29	Sqm
	TOTAL					59.29	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	4.50	5.650	0.300	7.63	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	4.50	5.650	0.150	7.63	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	20.84	0.450		9.38	Sqm
	<i>On Abutment Top (Right Side)</i>	1	20.84	0.450		9.38	Sqm
	TOTAL					18.76	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		2.282		2.28	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.11	1.426		3.164	Cum
	<i>Section 2-2</i>	2	3.00	1.431		8.586	Cum
	<i>Section 3-3</i>	2	2.20	1.176		5.174	Cum
	<i>Section 5-5</i>	2	8.36	1.426		23.856	Cum
	<i>Section 6-6</i>	2	4.70	1.176		11.047	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	18.86	0.150	0.600	5.658	Cum
		2	4.50	0.150	0.600	0.810	Cum
	TOTAL					60.58	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.524 METER AT CH. 4.580							
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, rammimg the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.75	2.702	3.275	84.066	Cum
	<i>Section 2-2</i>	2	5.50	1.578	3.275	56.847	Cum
	<i>Section 3-3</i>	2	3.70	1.758	3.075	40.003	Cum
	<i>Section 5-5</i>	2	9.33	2.852	3.275	174.215	Cum
	<i>Section 6-6</i>	2	4.55	1.578	3.075	44.176	Cum
	<i>U/S Key Floor</i>	1	0.74	5.370	1.300	5.148	Cum
	<i>U/S Floor</i>	1	2.76	5.370	3.125	46.283	Cum
	<i>D/S Floor</i>	1	7.34	5.370	0.950	37.450	Cum
		1	3.90	5.370	0.750	15.707	Cum
	<i>D/S Key Floor</i>	1	0.93	5.370	1.900	9.438	Cum
	<i>Toe Wall D/S Portion</i>	1	17.63	0.750	0.900	11.900	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	4.00	0.600	0.750	3.600	Cum
						528.83	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.						
	<i>PCC Below Floor</i>	1	0.54	5.370	0.150	0.44	Cum
		1	1.29	5.370	0.150	1.04	Cum
		1	1.43	5.370	0.150	1.15	Cum
		1	0.21	5.370	0.150	0.17	Cum
		1	7.76	5.370	0.150	6.25	Cum
		1	0.64	5.370	0.150	0.51	Cum
		1	1.60	5.370	0.150	1.29	Cum
		1	2.12	5.370	0.150	1.71	Cum
		1	0.54	5.370	0.150	0.44	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	4.75	2.702	0.150	3.85	Cum
	<i>Section 2-2</i>	2	5.50	1.578	0.150	2.60	Cum
	<i>Section 3-3</i>	2	3.70	1.758	0.150	1.95	Cum
	<i>Section 5-5</i>	2	9.33	2.852	0.150	7.98	Cum
	<i>Section 6-6</i>	2	4.55	1.578	0.150	2.15	Cum
	<i>Toe Wall D/S Portion</i>	1	17.63	0.750	0.300	3.97	Cum
	<i>Toe Wall D/S Portion</i>	1	17.33	0.450	0.600	4.68	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.00	0.600	0.150	0.72	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.00	0.300	0.600	1.44	Cum
	TOTAL					42.34	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.68	0.450	0.450	1.89	Cum
		2	4.68	1.426	3.254	43.39	Cum
		2	4.68	2.552	0.750	17.90	Cum
	<i>Section 2-2</i>	2	5.50	0.450	0.450	2.23	Cum
		2	5.50	0.864	1.380	13.12	Cum
		2	5.50	1.428	0.600	9.42	Cum
	<i>Section 3-3</i>	2	3.21	0.450	0.450	1.30	Cum
		2	3.21	0.954	1.680	10.29	Cum
		2	3.21	1.608	0.750	7.74	Cum
	<i>Section 5-5</i>	2	9.23	0.450	0.450	3.74	Cum
		2	9.23	1.426	3.254	85.69	Cum
		2	9.23	2.552	0.600	28.28	Cum
	<i>Section 6-6</i>	2	5.25	0.450	0.450	2.13	Cum
		2	5.25	0.864	1.380	12.52	Cum
		2	5.25	1.428	0.600	9.00	Cum
	<i>Floor</i>	1	0.74	5.370	1.150	4.55	Cum
		1	2.61	5.370	0.600	8.40	Cum
		1	0.68	5.370	0.150	0.54	Cum
		1	7.24	5.370	0.750	29.16	Cum
		1	0.62	5.370	0.450	1.51	Cum
		1	0.30	5.370	0.450	0.72	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	3.70	5.370	0.600	11.92	Cum
	Crest	1	0.93	5.370	1.900	9.44	Cum
	TOTAL					314.88	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	1.00	5.370	0.150	0.81	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	22.72	0.450	0.050	0.51	Cum
	On Abutment Top (Right Side)	1	22.72	0.450	0.050	0.51	Cum
	TOTAL					1.83	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	314.88	0.002	0.630	7850.000	4943.65	Kg
	Total Weight in Metric Tonne					4.94	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	4.68		0.450	8.42	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.68		3.254	60.85	Sqm
		4		1.426	3.254	18.56	Sqm
		4	4.68		0.750	14.03	Sqm
		4		2.552	0.750	7.66	Sqm
	Section 2-2	4	5.50		0.450	9.90	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.50		1.380	30.36	Sqm
		4		0.864	1.380	4.77	Sqm
		4	5.50		0.600	13.20	Sqm
		4		1.428	0.600	3.43	Sqm
	Section 3-3	4	3.21		0.450	5.78	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.21		1.680	21.58	Sqm
		4		0.954	1.680	6.41	Sqm
		4	3.21		0.750	9.63	Sqm
		4		1.608	0.750	4.82	Sqm
	Section 5-5	4	9.23		0.450	16.62	Sqm
		4		0.450	0.450	0.81	Sqm
		4	9.23		3.254	120.18	Sqm
		4		1.426	3.254	18.56	Sqm
		4	9.23		0.600	22.16	Sqm
		4		2.552	0.600	6.12	Sqm
	Section 6-6	4	5.25		0.450	9.45	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.25		1.380	28.99	Sqm
		4		0.864	1.380	4.77	Sqm
		4	5.25		0.600	12.60	Sqm
		4		1.428	0.600	3.43	Sqm
	Floor	2	0.74		1.150	1.70	Sqm
		2		5.370	1.150	12.35	Sqm
		2	2.61		0.600	3.13	Sqm
		2		5.370	0.600	6.44	Sqm
		2	0.68		0.150	0.20	Sqm
		2		5.370	0.150	1.61	Sqm
		2	7.24		0.750	10.86	Sqm
		2		5.370	0.750	8.06	Sqm
		2	0.62		0.450	0.56	Sqm
		2		5.370	0.450	4.83	Sqm
		2	0.30		0.450	0.27	Sqm
		2		5.370	0.450	4.83	Sqm
		2	3.70		0.600	4.44	Sqm
		2		5.370	0.600	6.44	Sqm
	Crest	2	0.93		1.900	3.52	Sqm
		2		5.370	1.900	20.41	Sqm
	Toe Wall D/S Portion	2	17.63		0.300	10.58	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	17.33		0.600	20.80	Sqm
		2		0.450	0.600	0.54	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	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					601.41	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.						
	<i>In D/S Portion On Slopes</i>	2	4.00	6.407		51.26	Sqm
	TOTAL					51.26	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In U/S Portion</i>	1	9.66	5.810	0.450	25.26	Cum
	<i>In D/S Portion</i>	1	4.00	4.770	0.300	5.72	Cum
	TOTAL					30.98	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	4.770	0.150	5.72	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	22.72	0.450		10.22	Sqm
	<i>On Abutment Top (Right Side)</i>	1	22.72	0.450		10.22	Sqm
	TOTAL					20.45	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		27.488		27.49	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	4.75	2.264		21.508	Cum
	<i>Section 2-2</i>	2	5.50	1.639		18.029	Cum
	<i>Section 3-3</i>	2	3.70	2.051		15.177	Cum
	<i>Section 5-5</i>	2	9.33	2.494		46.524	Cum
	<i>Section 6-6</i>	2	4.55	2.051		18.672	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	17.63	0.150	0.600	5.289	Cum
		2	4.00	0.150	0.600	0.720	Cum
	TOTAL					153.41	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.828 METER AT CH. 6.100							
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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.17	2.795	2.408	29.196	Cum
	<i>Section 2-2</i>	2	6.00	2.218	2.408	64.091	Cum
	<i>Section 3-3</i>	2	4.70	2.098	2.208	43.544	Cum
	<i>below bridge</i>	2	6.50	2.098	1.800	49.093	Cum
	<i>Section 5-5</i>	2	7.95	2.945	2.408	112.798	Cum
	<i>Section 6-6</i>	2	4.18	1.578	2.208	29.142	Cum
	<i>U/S Key Floor</i>	1	0.58	5.370	0.650	2.007	Cum
	<i>U/S Floor</i>	1	4.00	5.370	3.328	71.485	Cum
	<i>D/S Floor</i>	1	6.00	5.370	1.500	48.330	Cum
		1	2.00	5.370	1.300	13.962	Cum
	<i>D/S Key Floor</i>	1	0.99	5.370	2.300	12.197	Cum
	<i>Toe Wall D/S Portion</i>	1	17.63	0.750	0.900	11.900	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	4.50	0.600	0.750	4.050	Cum
						491.80	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.						
	<i>PCC Below Floor</i>	1	0.54	5.370	0.150	0.44	Cum
		1	0.56	5.370	0.150	0.45	Cum
		1	9.68	5.370	0.150	7.79	Cum
		1	0.64	5.370	0.150	0.51	Cum
		1	2.48	5.370	0.150	2.00	Cum
		1	2.40	5.370	0.150	1.94	Cum
		1	0.54	5.370	0.150	0.44	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.17	2.795	0.150	1.82	Cum
	<i>Section 2-2</i>	2	6.00	2.218	0.300	7.98	Cum
	<i>Section 3-3</i>	2	4.70	2.098	0.300	5.92	Cum
	<i>Section 5-5</i>	2	7.95	2.945	0.150	7.03	Cum
	<i>Section 6-6</i>	2	4.18	1.578	0.150	1.98	Cum
	<i>Toe Wall D/S Portion</i>	1	17.63	0.750	0.300	3.97	Cum
	<i>Toe Wall D/S Portion</i>	1	17.33	0.450	0.600	4.68	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.600	0.150	0.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	4.50	0.300	0.600	1.62	Cum
	TOTAL					49.37	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.94	0.450	0.450	0.79	Cum
		2	1.94	1.473	3.408	19.51	Cum
		2	1.94	2.645	1.150	11.82	Cum
	<i>Section 2-2</i>	2	6.00	0.820	0.500	4.92	Cum
		2	6.00	1.294	1.580	24.53	Cum
		2	6.00	1.918	2.800	64.44	Cum
	<i>Section 3-3</i>	2	4.19	0.820	0.500	3.44	Cum
		2	4.19	1.234	1.380	14.27	Cum
		2	4.19	1.798	3.000	45.20	Cum
	<i>Section 5-5</i>	2	7.91	0.450	0.450	3.20	Cum
		2	7.91	1.473	3.408	79.38	Cum
		2	7.91	2.645	1.150	48.11	Cum
	<i>Section 6-6</i>	2	5.08	0.450	0.450	2.06	Cum
		2	5.08	0.864	1.380	12.12	Cum
		2	5.08	1.428	0.850	12.33	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	6.500	0.300	-3.20	Cum
	<i>Floor</i>	1	0.58	5.370	0.500	1.54	Cum
		1	10.00	5.370	1.150	61.76	Cum
		1	0.63	5.370	0.450	1.53	Cum
		1	0.20	5.370	0.800	0.86	Cum
		1	1.80	5.370	0.900	8.70	Cum
		1	0.05	5.370	0.875	0.23	Cum
		1	2.95	5.370	0.850	13.47	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.99	5.370	2.150	11.40	Cum
	Crest	1	1.92	5.370	2.575	26.56	Cum
	TOTAL					468.98	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	1.50	5.370	0.150	1.21	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	20.64	0.450	0.050	0.46	Cum
	On Abutment Top (Right Side)	1	20.64	0.450	0.050	0.46	Cum
	Slab Bridge						
	Slab	1	6.17	6.500	0.485	19.45	Cum
	Wearing coat	1	6.17	5.500	0.070	2.38	Cum
	Dirt wall	2	0.40	6.500	0.500	2.60	Cum
	300 mm thick pedestal	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					29.76	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	20	51	6.93		2.466	871.5	Kg
a2	12	35	7.18		0.888	223.1	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	29	6.85		0.616	122.5	Kg
a5	10	28	7.10		0.616	122.6	Kg
x1	12	102	2.65		0.888	240.0	Kg
x2	16	102	1.32		1.578	211.7	Kg
x3	12	24	6.07		0.888	129.3	Kg
	Taking Skin reinforcement @0.2% of M-20	468.98	0.002	0.938	7850.000	7363.0	Kg
	Total Reinforcement Steel (in kg)					9291.5	Kg
	Total Weight in Metric Tonne					9.29	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.94		0.450	3.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.94		3.408	26.49	Sqm
		4		1.473	3.408	20.07	Sqm
		4	1.94		1.150	8.94	Sqm
		4		2.645	1.150	12.17	Sqm
	Section 2-2	4	6.00		0.500	12.00	Sqm
		4		0.820	0.500	1.64	Sqm
		4	6.00		1.580	37.92	Sqm
		4		1.294	1.580	8.18	Sqm
		4	6.00		2.800	67.20	Sqm
		4		1.918	2.800	21.48	Sqm
	Section 3-3	4	4.19		0.500	8.38	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.19		1.380	23.13	Sqm
		4		1.234	1.380	6.81	Sqm
		4	4.19		3.000	50.28	Sqm
		4		1.798	3.000	21.58	Sqm
	Section 5-5	4	7.91		0.450	14.24	Sqm
		4		0.450	0.450	0.81	Sqm
		4	7.91		3.408	107.82	Sqm
		4		1.473	3.408	20.07	Sqm
		4	7.91		1.150	36.38	Sqm
		4		2.645	1.150	12.17	Sqm
	Section 6-6	4	5.08		0.450	9.15	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.08		1.380	28.05	Sqm
		4		0.864	1.380	4.77	Sqm
		4	5.08		0.850	17.28	Sqm
		4		1.428	0.850	4.86	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		5.370	0.500	5.37	Sqm
		2	10.00		1.150	23.00	Sqm
		2		5.370	1.150	12.35	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.63		0.450	0.57	Sqm
		2		5.370	0.450	4.83	Sqm
		2	0.20		0.800	0.32	Sqm
		2		5.370	0.800	8.59	Sqm
		2	1.80		0.900	3.24	Sqm
		2		5.370	0.900	9.67	Sqm
		2	0.05		0.875	0.09	Sqm
		2		5.370	0.875	9.40	Sqm
		2	2.95		0.850	5.02	Sqm
		2		5.370	0.850	9.13	Sqm
		2	0.99		2.150	4.25	Sqm
		2		5.370	2.150	23.09	Sqm
	Crest	2	1.92		2.575	9.89	Sqm
		2		5.370	2.575	27.66	Sqm
	Toe Wall D/S Portion	2	17.63		0.300	10.58	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	17.33		0.600	20.80	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					792.58	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.						
	<i>In D/S Portion On Slopes</i>	2	4.50	6.398		57.58	Sqm
	TOTAL					57.58	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	4.50	4.770	0.300	6.44	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	4.50	4.770	0.150	6.44	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	20.64	0.450		9.29	Sqm
	<i>On Abutment Top (Right Side)</i>	1	20.64	0.450		9.29	Sqm
	TOTAL					18.58	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		27.198		27.20	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.17	0.874		3.791	Cum
	<i>Section 2-2</i>	2	6.00	3.295		39.540	Cum
	<i>Section 3-3</i>	2	4.70	3.158		29.681	Cum
	<i>Section 5-5</i>	2	7.95	0.874		13.902	Cum
	<i>Section 6-6</i>	2	4.18	0.647		5.412	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	17.63	0.150	0.600	5.289	Cum
		2	4.50	0.150	0.600	0.810	Cum
	TOTAL					125.62	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 11.150							
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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.09	2.098	2.967	13.564	Cum
	<i>Section 2-2</i>	2	4.27	1.458	2.967	36.917	Cum
	<i>Section 3-3</i>	2	3.20	1.338	2.767	23.694	Cum
	<i>Section 5-5</i>	2	6.12	2.248	2.967	81.605	Cum
	<i>Section 6-6</i>	2	3.39	1.338	2.767	25.116	Cum
	<i>U/S Key Floor</i>	1	0.58	4.150	0.650	1.551	Cum
	<i>U/S Floor</i>	1	3.00	4.150	2.167	26.979	Cum
	<i>D/S Floor</i>	1	4.00	4.150	1.100	18.260	Cum
		1	3.50	4.150	0.900	13.073	Cum
	<i>D/S Key Floor</i>	1	0.75	4.150	1.350	4.202	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.900	9.187	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.25	0.600	0.750	2.925	Cum
						257.07	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.						
	<i>PCC Below Floor</i>	1	0.54	4.150	0.150	0.34	Cum
		1	0.56	4.150	0.150	0.35	Cum
		1	6.68	4.150	0.150	4.16	Cum
		1	0.57	4.150	0.150	0.35	Cum
		1	1.49	4.150	0.150	0.93	Cum
		1	1.34	4.150	0.150	0.83	Cum
		1	0.54	4.150	0.150	0.34	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.09	2.098	0.150	0.69	Cum
	<i>Section 2-2</i>	2	4.27	1.458	0.150	1.87	Cum
	<i>Section 3-3</i>	2	3.20	1.338	0.150	1.28	Cum
	<i>Section 5-5</i>	2	6.12	2.248	0.150	4.13	Cum
	<i>Section 6-6</i>	2	3.39	1.338	0.150	1.36	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.300	3.06	Cum
	<i>Toe Wall D/S Portion</i>	1	13.31	0.450	0.600	3.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.600	0.150	0.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.300	0.600	1.17	Cum
	TOTAL					25.03	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.86	0.450	0.450	0.35	Cum
		2	0.86	1.124	2.247	4.37	Cum
		2	0.86	1.948	0.750	2.53	Cum
	<i>Section 2-2</i>	2	4.27	0.450	0.450	1.73	Cum
		2	4.27	0.804	1.180	8.10	Cum
		2	4.27	1.308	0.750	8.37	Cum
	<i>Section 3-3</i>	2	2.76	0.450	0.450	1.12	Cum
		2	2.76	0.744	0.980	4.02	Cum
		2	2.76	1.188	0.550	3.60	Cum
	<i>Section 5-5</i>	2	6.07	0.450	0.450	2.46	Cum
		2	6.07	1.124	2.247	30.68	Cum
		2	6.07	1.948	0.750	17.75	Cum
	<i>Section 6-6</i>	2	3.99	0.450	0.450	1.61	Cum
		2	3.99	0.744	0.980	5.81	Cum
		2	3.99	1.188	0.550	5.21	Cum
	<i>Floor</i>	1	0.58	4.150	0.500	1.19	Cum
		1	7.00	4.150	0.750	21.79	Cum
		1	0.61	4.150	0.400	1.01	Cum
		1	0.20	4.150	0.450	0.37	Cum
		1	3.30	4.150	0.550	7.53	Cum
		1	0.75	4.150	1.200	3.74	Cum
	<i>Crest</i>	1	1.12	4.150	1.655	7.68	Cum
	TOTAL					141.00	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.						
	<i>Over Crest</i>	1	0.85	4.150	0.150	0.53	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	19.31	0.450	0.050	0.43	Cum
	<i>On Abutment Top (Right Side)</i>	1	19.31	0.450	0.050	0.43	Cum
	TOTAL					1.40	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 @0.2% of M-20	141.00	0.002	0.282	7850.000	2213.72	Kg
	Total Weight in Metric Tonne					2.21	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.86		0.450	1.56	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.86		2.247	7.77	Sqm
		4		1.124	2.247	10.10	Sqm
		4	0.86		0.750	2.59	Sqm
		4		1.948	0.750	5.84	Sqm
	<i>Section 2-2</i>	4	4.27		0.450	7.68	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.27		1.180	20.14	Sqm
		4		0.804	1.180	3.79	Sqm
		4	4.27		0.750	12.80	Sqm
		4		1.308	0.750	3.92	Sqm
	<i>Section 3-3</i>	4	2.76		0.450	4.96	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.76		0.980	10.80	Sqm
		4		0.744	0.980	2.92	Sqm
		4	2.76		0.550	6.06	Sqm
		4		1.188	0.550	2.61	Sqm
	<i>Section 5-5</i>	4	6.07		0.450	10.93	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.07		2.247	54.59	Sqm
		4		1.124	2.247	10.10	Sqm
		4	6.07		0.750	18.22	Sqm
		4		1.948	0.750	5.84	Sqm
	<i>Section 6-6</i>	4	3.99		0.450	7.17	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.99		0.980	15.63	Sqm
		4		0.744	0.980	2.92	Sqm
		4	3.99		0.550	8.77	Sqm
		4		1.188	0.550	2.61	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		4.150	0.500	4.15	Sqm
		2	7.00		0.750	10.50	Sqm
		2		4.150	0.750	6.23	Sqm
		2	0.61		0.400	0.49	Sqm
		2		4.150	0.400	3.32	Sqm
		2	0.20		0.450	0.18	Sqm
		2		4.150	0.450	3.74	Sqm
		2	3.30		0.550	3.63	Sqm
		2		4.150	0.550	4.57	Sqm
		2	0.75		1.200	1.80	Sqm
		2		4.150	1.200	9.96	Sqm
	Crest	2	1.12		1.655	3.70	Sqm
		2		4.150	1.655	13.74	Sqm
	Toe Wall D/S Portion	2	13.61		0.300	8.17	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	13.31		0.600	15.97	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					346.92	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	3.25	4.877		31.70	Sqm
	TOTAL					31.70	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.25	3.550	0.300	3.46	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	3.25	3.550	0.150	3.46	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	19.31	0.450		8.69	Sqm
	<i>On Abutment Top (Right Side)</i>	1	19.31	0.450		8.69	Sqm
	TOTAL					17.37	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		12.329		12.33	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.09	2.014		4.389	Cum
	<i>Section 2-2</i>	2	4.27	1.391		11.871	Cum
	<i>Section 3-3</i>	2	3.20	1.109		7.098	Cum
	<i>Section 5-5</i>	2	6.12	2.014		24.641	Cum
	<i>Section 6-6</i>	2	3.39	1.109		7.523	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	13.61	0.150	0.600	4.083	Cum
		2	3.25	0.150	0.600	0.585	Cum
	TOTAL					72.52	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 11.950							
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, rammimg the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.915	2.771	13.208	Cum
	<i>Section 2-2</i>	2	3.50	1.458	2.771	28.281	Cum
	<i>Section 3-3</i>	2	2.20	1.338	2.571	15.136	Cum
	<i>Section 5-5</i>	2	6.16	2.065	2.771	70.445	Cum
	<i>Section 6-6</i>	2	3.39	1.338	2.571	23.337	Cum
	<i>U/S Key Floor</i>	1	0.60	4.150	0.750	1.868	Cum
	<i>U/S Floor</i>	1	2.50	4.150	1.712	17.762	Cum
	<i>D/S Floor</i>	1	3.50	4.150	0.950	13.799	Cum
		1	2.50	4.150	0.750	7.781	Cum
	<i>D/S Key Floor</i>	1	0.70	4.150	1.150	3.341	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.900	9.187	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.25	0.600	0.750	2.925	Cum
						207.07	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.						
	<i>PCC Below Floor</i>	1	0.54	4.150	0.150	0.34	Cum
		1	0.67	4.150	0.150	0.42	Cum
		1	5.63	4.150	0.150	3.50	Cum
		1	0.43	4.150	0.150	0.26	Cum
		1	0.69	4.150	0.150	0.43	Cum
		1	1.12	4.150	0.150	0.70	Cum
		1	0.54	4.150	0.150	0.34	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.915	0.150	0.71	Cum
	<i>Section 2-2</i>	2	3.50	1.458	0.150	1.53	Cum
	<i>Section 3-3</i>	2	2.20	1.338	0.150	0.88	Cum
	<i>Section 5-5</i>	2	6.16	2.065	0.150	3.81	Cum
	<i>Section 6-6</i>	2	3.39	1.338	0.150	1.36	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.300	3.06	Cum
	<i>Toe Wall D/S Portion</i>	1	13.31	0.450	0.600	3.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.600	0.150	0.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.300	0.600	1.17	Cum
	TOTAL					22.70	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.02	0.450	0.450	0.41	Cum
		2	1.02	1.033	1.942	4.09	Cum
		2	1.02	1.765	0.600	2.16	Cum
	<i>Section 2-2</i>	2	3.50	0.450	0.450	1.42	Cum
		2	3.50	0.804	1.180	6.64	Cum
		2	3.50	1.308	0.600	5.49	Cum
	<i>Section 3-3</i>	2	1.76	0.450	0.450	0.71	Cum
		2	1.76	0.744	0.980	2.56	Cum
		2	1.76	1.188	0.500	2.09	Cum
	<i>Section 5-5</i>	2	6.11	0.450	0.450	2.48	Cum
		2	6.11	1.033	1.942	24.51	Cum
		2	6.11	1.765	0.600	12.94	Cum
	<i>Section 6-6</i>	2	3.99	0.450	0.450	1.61	Cum
		2	3.99	0.744	0.980	5.81	Cum
		2	3.99	1.188	0.500	4.74	Cum
	<i>Floor</i>	1	0.60	4.150	0.600	1.49	Cum
		1	6.00	4.150	0.600	14.94	Cum
		1	0.56	4.150	0.300	0.69	Cum
		1	0.20	4.150	0.400	0.33	Cum
		1	2.30	4.150	0.500	4.77	Cum
		1	0.70	4.150	1.000	2.91	Cum
	<i>Crest</i>	1	1.02	4.150	1.355	5.72	Cum
	TOTAL					108.52	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.						
	<i>Over Crest</i>	1	0.80	4.150	0.150	0.50	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	17.66	0.450	0.050	0.40	Cum
	<i>On Abutment Top (Right Side)</i>	1	17.66	0.450	0.050	0.40	Cum
	TOTAL					1.29	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	108.52	0.00	0.326	7850.000	2555.63	Kg
	Total Weight in Metric Tonne					2.56	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.02		0.450	1.84	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.02		1.942	7.92	Sqm
		4		1.033	1.942	8.02	Sqm
		4	1.02		0.600	2.45	Sqm
		4		1.765	0.600	4.24	Sqm
	<i>Section 2-2</i>	4	3.50		0.450	6.30	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.50		1.180	16.52	Sqm
		4		0.804	1.180	3.79	Sqm
		4	3.50		0.600	8.40	Sqm
		4		1.308	0.600	3.14	Sqm
	<i>Section 3-3</i>	4	1.76		0.450	3.16	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.76		0.980	6.88	Sqm
		4		0.744	0.980	2.92	Sqm
		4	1.76		0.500	3.51	Sqm
		4		1.188	0.500	2.38	Sqm
	<i>Section 5-5</i>	4	6.11		0.450	11.00	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.11		1.942	47.47	Sqm
		4		1.033	1.942	8.02	Sqm
		4	6.11		0.600	14.67	Sqm
		4		1.765	0.600	4.24	Sqm
	<i>Section 6-6</i>	4	3.99		0.450	7.17	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.99		0.980	15.63	Sqm
		4		0.744	0.980	2.92	Sqm
		4	3.99		0.500	7.97	Sqm
		4		1.188	0.500	2.38	Sqm
	Floor	2	0.60		0.600	0.72	Sqm
		2		4.150	0.600	4.98	Sqm
		2	6.00		0.600	7.20	Sqm
		2		4.150	0.600	4.98	Sqm
		2	0.56		0.300	0.33	Sqm
		2		4.150	0.300	2.49	Sqm
		2	0.20		0.400	0.16	Sqm
		2		4.150	0.400	3.32	Sqm
		2	2.30		0.500	2.30	Sqm
		2		4.150	0.500	4.15	Sqm
		2	0.70		1.000	1.40	Sqm
		2		4.150	1.000	8.30	Sqm
	Crest	2	1.02		1.355	2.76	Sqm
		2		4.150	1.355	11.25	Sqm
	Toe Wall D/S Portion	2	13.61		0.300	8.17	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	13.31		0.600	15.97	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					297.27	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
6	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soiling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.						
	<i>In D/S Portion On Slopes</i>	2	3.25	4.877		31.70	Sqm
	TOTAL					31.70	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.25	3.550	0.300	3.46	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	3.25	3.550	0.150	3.46	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	17.66	0.450		7.94	Sqm
	<i>On Abutment Top (Right Side)</i>	1	17.66	0.450		7.94	Sqm
	TOTAL					15.89	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		6.493		6.49	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.920		4.779	Cum
	<i>Section 2-2</i>	2	3.50	1.368		9.576	Cum
	<i>Section 3-3</i>	2	2.20	1.101		4.844	Cum
	<i>Section 5-5</i>	2	6.16	1.920		23.637	Cum
	<i>Section 6-6</i>	2	3.39	1.101		7.469	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	13.61	0.150	0.600	4.083	Cum
		2	3.25	0.150	0.600	0.585	Cum
	TOTAL					61.47	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 13.800							
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, rammimg the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.55	1.915	1.486	14.513	Cum
	<i>Section 2-2</i>	2	3.55	1.458	1.486	15.396	Cum
	<i>Section 3-3</i>	2	1.65	1.338	1.286	5.668	Cum
	<i>Section 5-5</i>	2	7.20	2.065	1.486	44.166	Cum
	<i>Section 6-6</i>	2	3.39	1.338	1.286	11.673	Cum
	<i>U/S Key Floor</i>	1	0.64	3.000	0.900	1.721	Cum
	<i>U/S Floor</i>	1	2.25	3.000	1.486	10.031	Cum
	<i>D/S Floor</i>	1	3.50	3.000	0.900	9.450	Cum
		1	2.00	3.000	0.700	4.200	Cum
	<i>D/S Key Floor</i>	1	0.70	3.000	1.150	2.415	Cum
	<i>Toe Wall D/S Portion</i>	1	12.46	0.750	0.900	8.411	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.25	0.600	0.750	2.925	Cum
						130.57	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.						
	<i>PCC Below Floor</i>	1	0.54	3.000	0.150	0.24	Cum
		1	0.84	3.000	0.150	0.38	Cum
		1	5.30	3.000	0.150	2.39	Cum
		1	0.35	3.000	0.150	0.16	Cum
		1	0.24	3.000	0.150	0.11	Cum
		1	1.12	3.000	0.150	0.50	Cum
		1	0.54	3.000	0.150	0.24	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.55	1.915	0.150	1.46	Cum
	<i>Section 2-2</i>	2	3.55	1.458	0.150	1.55	Cum
	<i>Section 3-3</i>	2	1.65	1.338	0.150	0.66	Cum
	<i>Section 5-5</i>	2	7.20	2.065	0.150	4.46	Cum
	<i>Section 6-6</i>	2	3.39	1.338	0.150	1.36	Cum
	<i>Toe Wall D/S Portion</i>	1	12.46	0.750	0.300	2.80	Cum
	<i>Toe Wall D/S Portion</i>	1	12.16	0.450	0.600	3.28	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.600	0.150	0.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.25	0.300	0.600	1.17	Cum
	TOTAL					21.36	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.40	0.450	0.450	0.97	Cum
		2	2.40	1.033	1.942	9.62	Cum
		2	2.40	1.765	0.550	4.66	Cum
	<i>Section 2-2</i>	2	3.55	0.450	0.450	1.44	Cum
		2	3.55	0.804	1.180	6.74	Cum
		2	3.55	1.308	0.550	5.11	Cum
	<i>Section 3-3</i>	2	1.20	0.450	0.450	0.49	Cum
		2	1.20	0.744	0.980	1.75	Cum
		2	1.20	1.188	0.500	1.43	Cum
	<i>Section 5-5</i>	2	7.20	0.450	0.450	2.91	Cum
		2	7.20	1.033	1.942	28.86	Cum
		2	7.20	1.765	0.550	13.97	Cum
	<i>Section 6-6</i>	2	3.99	0.450	0.450	1.61	Cum
		2	3.99	0.744	0.980	5.81	Cum
		2	3.99	1.188	0.500	4.74	Cum
	<i>Floor</i>	1	0.64	3.000	0.750	1.43	Cum
		1	5.75	3.000	0.550	9.49	Cum
		1	0.53	3.000	0.250	0.40	Cum
		1	0.20	3.000	0.400	0.24	Cum
		1	1.80	3.000	0.500	2.70	Cum
		1	0.70	3.000	1.000	2.10	Cum
	<i>Crest</i>	1	0.93	3.000	1.347	3.77	Cum
	TOTAL					110.26	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.						
	<i>Over Crest</i>	1	0.75	3.000	0.150	0.34	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	17.91	0.450	0.050	0.40	Cum
	<i>On Abutment Top (Right Side)</i>	1	17.91	0.450	0.050	0.40	Cum
	TOTAL					1.14	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	110.26	0.00	0.331	7850.000	2596.61	Kg
	Total Weight in Metric Tonne					2.60	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	2.40		0.450	4.32	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.40		1.942	18.64	Sqm
		4		1.033	1.942	8.02	Sqm
		4	2.40		0.550	5.28	Sqm
		4		1.765	0.550	3.88	Sqm
	<i>Section 2-2</i>	4	3.55		0.450	6.40	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.55		1.180	16.77	Sqm
		4		0.804	1.180	3.79	Sqm
		4	3.55		0.550	7.82	Sqm
		4		1.308	0.550	2.88	Sqm
	<i>Section 3-3</i>	4	1.20		0.450	2.17	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.20		0.980	4.72	Sqm
		4		0.744	0.980	2.92	Sqm
		4	1.20		0.500	2.41	Sqm
		4		1.188	0.500	2.38	Sqm
	<i>Section 5-5</i>	4	7.20		0.450	12.95	Sqm
		4		0.450	0.450	0.81	Sqm
		4	7.20		1.942	55.90	Sqm
		4		1.033	1.942	8.02	Sqm
		4	7.20		0.550	15.83	Sqm
		4		1.765	0.550	3.88	Sqm
	<i>Section 6-6</i>	4	3.99		0.450	7.17	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.99		0.980	15.63	Sqm
		4		0.744	0.980	2.92	Sqm
		4	3.99		0.500	7.97	Sqm
		4		1.188	0.500	2.38	Sqm
	Floor	2	0.64		0.750	0.96	Sqm
		2		3.000	0.750	4.50	Sqm
		2	5.75		0.550	6.33	Sqm
		2		3.000	0.550	3.30	Sqm
		2	0.53		0.250	0.26	Sqm
		2		3.000	0.250	1.50	Sqm
		2	0.20		0.400	0.16	Sqm
		2		3.000	0.400	2.40	Sqm
		2	1.80		0.500	1.80	Sqm
		2		3.000	0.500	3.00	Sqm
		2	0.70		1.000	1.40	Sqm
		2		3.000	1.000	6.00	Sqm
	Crest	2	0.93		1.347	2.52	Sqm
		2		3.000	1.347	8.08	Sqm
	Toe Wall D/S Portion	2	12.46		0.300	7.48	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	12.16		0.600	14.59	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					305.18	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	3.25	4.876		31.69	Sqm
	TOTAL					31.69	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In U/S Portion</i>	1	6.63	4.150	0.450	12.39	Cum
	<i>In D/S Portion</i>	1	3.25	2.400	0.300	2.34	Cum
	TOTAL					14.73	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	3.25	2.400	0.150	2.34	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	17.91	0.450		8.06	Sqm
	<i>On Abutment Top (Right Side)</i>	1	17.91	0.450		8.06	Sqm
	TOTAL					16.12	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		2.081		2.08	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.55	0.504		2.568	Cum
	<i>Section 2-2</i>	2	3.55	0.504		3.578	Cum
	<i>Section 3-3</i>	2	1.65	0.504		1.659	Cum
	<i>Section 5-5</i>	2	7.20	0.504		7.247	Cum
	<i>Section 6-6</i>	2	3.39	0.504		3.416	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	12.46	0.150	0.600	3.738	Cum
		2	3.25	0.150	0.600	0.585	Cum
	TOTAL					24.87	Cum
SHARDA TYPE FALL OF HEIGHT 0.304 METER AT CH. 13.900 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.27	2.006	2.113	10.779	Cum
	<i>Section 2-2</i>	2	4.00	1.978	2.113	33.436	Cum
	<i>Section 3-3</i>	2	3.70	1.858	1.913	26.302	Cum
	<i>below bridge</i>	2	6.50	1.858	1.800	43.477	Cum
	<i>Section 5-5</i>	2	6.14	2.156	2.113	55.911	Cum
	<i>Section 6-6</i>	2	3.02	1.338	1.913	15.470	Cum
	<i>U/S Key Floor</i>	1	0.63	3.000	0.850	1.594	Cum
	<i>U/S Floor</i>	1	1.22	3.000	2.113	7.727	Cum
	<i>D/S Floor</i>	1	5.28	3.000	0.850	13.464	Cum
		1	4.00	3.000	0.650	7.800	Cum
	<i>D/S Key Floor</i>	1	0.68	3.000	1.050	2.126	Cum
	<i>Toe Wall D/S Portion</i>	1	12.46	0.750	0.900	8.411	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.25	0.600	0.750	2.925	Cum
						229.42	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.						
	<i>PCC Below Floor</i>	1	0.54	3.000	0.150	0.24	Cum
		1	0.78	3.000	0.150	0.35	Cum
		1	0.11	3.000	0.150	0.05	Cum
		1	0.28	3.000	0.150	0.13	Cum
		1	5.71	3.000	0.150	2.57	Cum
		1	0.57	3.000	0.150	0.25	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	2.19	3.000	0.150	0.98	Cum
		1	1.00	3.000	0.150	0.45	Cum
		1	0.54	3.000	0.150	0.24	Cum
	<i>PCC Below Abutment</i>						
	Section 1-1	2	1.27	2.006	0.150	0.77	Cum
	Section 2-2	2	4.00	1.978	0.300	4.75	Cum
	Section 3-3	2	3.70	1.858	0.300	4.12	Cum
	Section 5-5	2	6.14	2.156	0.150	3.97	Cum
	Section 6-6	2	3.02	1.338	0.150	1.21	Cum
	Toe Wall D/S Portion	1	12.46	0.750	0.300	2.80	Cum
	Toe Wall D/S Portion	1	12.16	0.450	0.600	3.28	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					27.94	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.						
	<i>Abutment</i>						
	Section 1-1	2	1.12	0.450	0.450	0.45	Cum
		2	1.12	1.078	2.094	5.06	Cum
		2	1.12	1.856	0.500	2.08	Cum
	Section 2-2	2	4.00	0.820	0.500	3.28	Cum
		2	4.00	1.174	1.180	11.08	Cum
		2	4.00	1.678	1.200	16.11	Cum
	Section 3-3	2	3.26	0.820	0.500	2.67	Cum
		2	3.26	1.114	0.980	7.11	Cum
		2	3.26	1.558	1.400	14.20	Cum
	Section 5-5	2	6.09	0.450	0.450	2.47	Cum
		2	6.09	1.078	2.094	27.51	Cum
		2	6.09	1.856	0.500	11.31	Cum
	Section 6-6	2	3.79	0.450	0.450	1.54	Cum
		2	3.79	0.744	0.980	5.53	Cum
		2	3.79	1.188	0.850	7.66	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	6.500	0.300	-3.20	Cum
	<i>Floor</i>	1	0.63	3.000	0.700	1.31	Cum
		1	1.07	3.000	0.500	1.60	Cum
		1	0.60	3.000	0.200	0.36	Cum
		1	5.23	3.000	0.700	10.98	Cum
		1	0.56	3.000	0.400	0.67	Cum
		1	0.20	3.000	0.400	0.24	Cum
		1	3.80	3.000	0.500	5.70	Cum
		1	0.68	3.000	0.900	1.82	Cum
	<i>Crest</i>	1	1.04	3.000	1.494	4.66	Cum
	TOTAL					142.21	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.						
	<i>Over Crest</i>	1	0.80	3.000	0.150	0.36	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.85	0.450	0.050	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.85	0.450	0.050	0.22	Cum
	<i>Slab Bridge</i>						
	<i>Slab</i>	1	3.80	6.500	0.458	11.30	Cum
	<i>Wearing coat</i>	1	3.80	5.500	0.070	1.46	Cum
	<i>Dirt wall</i>	2	0.40	6.500	0.500	2.60	Cum
	<i>300 mm thick pedestal</i>	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					19.36	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	45	4.36		1.578	309.6	Kg
a2	10	19	6.98		0.616	81.8	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	16	4.28		0.616	42.2	Kg

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
a5	10	16	6.90		0.616	68.1	Kg
x1	12	62	2.55		0.888	140.4	Kg
x2	16	62	1.32		1.578	128.7	Kg
x3	12	24	3.70		0.888	78.8	Kg
	Taking Skin reinforcement @0.2% of M-20	142.21	0.002	0.284	7850.000	2232.7	Kg
	Total Reinforcement Steel (in kg)					3090.1	Kg
	Total Weight in Metric Tonne					3.09	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.12		0.450	2.02	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.12		2.094	9.39	Sqm
		4		1.078	2.094	9.03	Sqm
		4	1.12		0.500	2.24	Sqm
		4		1.856	0.500	3.71	Sqm
	Section 2-2	4	4.00		0.500	8.00	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.00		1.180	18.88	Sqm
		4		1.174	1.180	5.54	Sqm
		4	4.00		1.200	19.20	Sqm
		4		1.678	1.200	8.05	Sqm
	Section 3-3	4	3.26		0.500	6.51	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.26		0.980	12.76	Sqm
		4		1.114	0.980	4.37	Sqm
		4	3.26		1.400	18.23	Sqm
		4		1.558	1.400	8.72	Sqm
	Section 5-5	4	6.09		0.450	10.97	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.09		2.094	51.03	Sqm
		4		1.078	2.094	9.03	Sqm
		4	6.09		0.500	12.19	Sqm
		4		1.856	0.500	3.71	Sqm
	Section 6-6	4	3.79		0.450	6.82	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.79		0.980	14.86	Sqm
		4		0.744	0.980	2.92	Sqm
		4	3.79		0.850	12.89	Sqm
		4		1.188	0.850	4.04	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		3.000	0.700	4.20	Sqm
		2	1.07		0.500	1.07	Sqm
		2		3.000	0.500	3.00	Sqm
		2	0.60		0.200	0.24	Sqm
		2		3.000	0.200	1.20	Sqm
		2	5.23		0.700	7.32	Sqm
		2		3.000	0.700	4.20	Sqm
		2	0.56		0.400	0.45	Sqm
		2		3.000	0.400	2.40	Sqm
		2	0.20		0.400	0.16	Sqm
		2		3.000	0.400	2.40	Sqm
		2	3.80		0.500	3.80	Sqm
		2		3.000	0.500	3.00	Sqm
		2	0.68		0.900	1.22	Sqm
		2		3.000	0.900	5.40	Sqm
	Crest	2	1.04		1.494	3.11	Sqm
		2		3.000	1.494	8.96	Sqm
	Toe Wall D/S Portion	2	12.46		0.300	7.48	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	12.16		0.600	14.59	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					357.72	Sqm
6	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soiling 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	4.876		31.69	Sqm
	TOTAL					31.69	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.25	2.400	0.300	2.34	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	3.25	2.400	0.150	2.34	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.85	0.450		4.43	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.85	0.450		4.43	Sqm
	TOTAL					8.86	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		5.721		5.72	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.27	1.155		2.937	Cum
	<i>Section 2-2</i>	2	4.00	1.236		9.888	Cum
	<i>Section 3-3</i>	2	3.70	1.043		7.718	Cum
	<i>Section 5-5</i>	2	6.14	1.155		14.175	Cum
	<i>Section 6-6</i>	2	3.02	1.099		6.642	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	12.46	0.150	0.600	3.738	Cum
		2	3.25	0.150	0.600	0.585	Cum
	TOTAL					51.41	Cum

SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 14.465

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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.73	1.712	2.445	6.069	Cum
	<i>Section 2-2</i>	2	3.67	1.958	2.445	35.120	Cum
	<i>Section 3-3</i>	2	4.20	1.838	2.245	34.661	Cum
	<i>below bridge</i>	2	6.50	1.838	1.800	43.009	Cum
	<i>Section 5-5</i>	2	5.96	1.862	2.445	54.271	Cum
	<i>Section 6-6</i>	2	2.92	1.318	2.245	17.293	Cum
	<i>U/S Key Floor</i>	1	0.63	2.800	0.850	1.488	Cum
	<i>U/S Floor</i>	1	1.02	2.800	2.245	6.399	Cum
	<i>D/S Floor</i>	1	3.98	2.800	0.850	9.472	Cum
		1	4.50	2.800	0.650	8.190	Cum
	<i>D/S Key Floor</i>	1	0.63	2.800	0.850	1.488	Cum
	<i>Toe Wall D/S Portion</i>	1	12.02	0.750	0.900	8.114	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						228.27	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.						
	<i>PCC Below Floor</i>	1	0.54	2.800	0.150	0.23	Cum
		1	0.78	2.800	0.150	0.33	Cum
		1	4.73	2.800	0.150	1.98	Cum
		1	0.28	2.800	0.150	0.12	Cum
		1	2.70	2.800	0.150	1.13	Cum
		1	0.78	2.800	0.150	0.33	Cum
		1	0.54	2.800	0.150	0.23	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.73	1.712	0.150	0.37	Cum
	<i>Section 2-2</i>	2	3.67	1.958	0.300	4.31	Cum
	<i>Section 3-3</i>	2	4.20	1.838	0.300	4.63	Cum
	<i>Section 5-5</i>	2	5.96	1.862	0.150	3.33	Cum
	<i>Section 6-6</i>	2	2.92	1.318	0.150	1.16	Cum
	<i>Toe Wall D/S Portion</i>	1	12.02	0.750	0.300	2.70	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall D/S Portion</i>	1	11.72	0.450	0.600	3.16	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					25.64	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.66	0.450	0.450	0.27	Cum
		2	0.66	0.931	1.603	1.96	Cum
		2	0.66	1.562	0.700	1.44	Cum
	<i>Section 2-2</i>	2	3.67	0.820	0.500	3.01	Cum
		2	3.67	1.164	1.146	9.79	Cum
		2	3.67	1.658	1.000	12.16	Cum
	<i>Section 3-3</i>	2	3.77	0.820	0.500	3.09	Cum
		2	3.77	1.104	0.946	7.87	Cum
		2	3.77	1.538	1.200	13.90	Cum
	<i>Section 5-5</i>	2	5.98	0.450	0.450	2.42	Cum
		2	5.98	0.931	1.603	17.86	Cum
		2	5.98	1.562	0.700	13.09	Cum
	<i>Section 6-6</i>	2	3.69	0.450	0.450	1.50	Cum
		2	3.69	0.734	0.946	5.13	Cum
		2	3.69	1.168	0.850	7.33	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	6.500	0.300	-3.20	Cum
	<i>Floor</i>	1	0.63	2.800	0.700	1.23	Cum
		1	5.00	2.800	0.500	7.00	Cum
		1	0.66	2.800	0.200	0.37	Cum
		1	0.20	2.800	0.400	0.22	Cum
		1	4.30	2.800	0.500	6.02	Cum
		1	0.63	2.800	0.700	1.23	Cum
	<i>Crest</i>	1	0.82	2.800	1.047	2.39	Cum
	TOTAL					116.06	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.						
	<i>Over Crest</i>	1	0.65	2.800	0.150	0.27	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	8.88	0.450	0.050	0.20	Cum
	<i>On Abutment Top (Right Side)</i>	1	8.88	0.450	0.050	0.20	Cum
	<i>Slab Bridge</i>						
	<i>Slab</i>	1	3.60	6.500	0.458	10.71	Cum
	<i>Wearing coat</i>	1	3.60	5.500	0.070	1.39	Cum
	<i>Dirt wall</i>	2	0.40	6.500	0.500	2.60	Cum
	<i>300 mm thick pedestal</i>	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					18.56	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	45	4.16		1.578	295.4	Kg
a2	10	18	6.98		0.616	77.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	26	4.08		0.616	65.4	Kg
a5	10	14	6.90		0.616	59.6	Kg
x1	12	60	2.55		0.888	135.9	Kg
x2	16	60	1.32		1.578	124.5	Kg
x3	12	24	3.50		0.888	74.6	Kg
	Taking Skin reinforcement @0.2% of M-20	116.06	0.002	0.232	7850.000	1822.1	Kg
	<i>Total Reinforcement Steel (in kg)</i>					2662.8	Kg
	Total Weight in Metric Tonne					2.66	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	4	0.66		0.450	1.18	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.450	0.450	0.81	Sqm
		4	0.66		1.603	4.22	Sqm
		4		0.931	1.603	5.97	Sqm
		4	0.66		0.700	1.84	Sqm
		4		1.562	0.700	4.37	Sqm
	Section 2-2	4	3.67		0.500	7.34	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.67		1.146	16.81	Sqm
		4		1.164	1.146	5.34	Sqm
		4	3.67		1.000	14.67	Sqm
		4		1.658	1.000	6.63	Sqm
	Section 3-3	4	3.77		0.500	7.53	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.77		0.946	14.25	Sqm
		4		1.104	0.946	4.18	Sqm
		4	3.77		1.200	18.08	Sqm
		4		1.538	1.200	7.38	Sqm
	Section 5-5	4	5.98		0.450	10.77	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.98		1.603	38.37	Sqm
		4		0.931	1.603	5.97	Sqm
		4	5.98		0.700	16.76	Sqm
		4		1.562	0.700	4.37	Sqm
	Section 6-6	4	3.69		0.450	6.65	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.69		0.946	13.97	Sqm
		4		0.734	0.946	2.78	Sqm
		4	3.69		0.850	12.55	Sqm
		4		1.168	0.850	3.97	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		2.800	0.700	3.92	Sqm
		2	5.00		0.500	5.00	Sqm
		2		2.800	0.500	2.80	Sqm
		2	0.66		0.200	0.26	Sqm
		2		2.800	0.200	1.12	Sqm
		2	0.20		0.400	0.16	Sqm
		2		2.800	0.400	2.24	Sqm
		2	4.30		0.500	4.30	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	0.82		1.047	1.71	Sqm
		2		2.800	1.047	5.86	Sqm
	Toe Wall D/S Portion	2	12.02		0.300	7.21	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	11.72		0.600	14.06	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					309.86	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. <i>In D/S Portion On Slopes</i>	2	3.00	4.747		28.48	Sqm
	TOTAL					28.48	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. <i>In D/S Portion</i>	1	3.00	2.200	0.300	1.98	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	3.00	2.200	0.150	1.98	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I. <i>On Abutment Top (Left Side)</i>	1	8.88	0.450		4.00	Sqm
	<i>On Abutment Top (Right Side)</i>	1	8.88	0.450		4.00	Sqm
	TOTAL					7.99	Sqm
10	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	2.00			2.00	No.
	0.449						
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						
	<i>Under U/S floor</i>	1		2.120		2.12	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.73		1.346	1.952	Cum
	<i>Section 2-2</i>	2	3.67		1.359	9.970	Cum
	<i>Section 3-3</i>	2	4.20		1.122	9.426	Cum
	<i>Section 5-5</i>	2	5.96		1.346	16.046	Cum
	<i>Section 6-6</i>	2	2.92		1.061	6.203	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	12.02	0.150	0.600	3.606	Cum
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					49.86	Cum

SHARDA TYPE CULVERT/FALL OF HEIGHT 0.914 METER AT CH. 15.515

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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.38	1.986	2.219	12.168	Cum
	<i>Section 2-2</i>	2	3.80	1.958	2.219	33.020	Cum
	<i>Section 3-3</i>	2	4.20	1.838	2.019	31.172	Cum
	<i>below bridge</i>	2	6.50	1.838	0.850	20.310	Cum
	<i>Section 5-5</i>	2	6.10	2.136	2.219	57.811	Cum
	<i>Section 6-6</i>	2	2.92	1.318	2.019	15.552	Cum
	<i>U/S Key Floor</i>	1	0.58	2.800	0.650	1.047	Cum
	<i>U/S Floor</i>	1	2.50	2.800	1.964	13.748	Cum
	<i>D/S Floor</i>	1	4.00	2.800	1.050	11.760	Cum
		1	4.50	2.800	0.850	10.710	Cum
	<i>D/S Key Floor</i>	1	0.71	2.800	1.200	2.394	Cum
	<i>Toe Wall D/S Portion</i>	1	12.02	0.750	0.900	8.115	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						220.51	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.						
	<i>PCC Below Floor</i>	1	0.54	2.800	0.150	0.23	Cum
		1	0.56	2.800	0.150	0.23	Cum
		1	6.18	2.800	0.150	2.59	Cum
		1	0.50	2.800	0.150	0.21	Cum
		1	2.61	2.800	0.150	1.10	Cum
		1	1.17	2.800	0.150	0.49	Cum
		1	0.54	2.800	0.150	0.23	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.38	1.986	0.150	0.82	Cum
	<i>Section 2-2</i>	2	3.80	1.958	0.300	4.46	Cum
	<i>Section 3-3</i>	2	4.20	1.838	0.300	4.63	Cum
	<i>Section 5-5</i>	2	6.10	2.136	0.150	3.91	Cum
	<i>Section 6-6</i>	2	2.92	1.318	0.150	1.16	Cum
	<i>Toe Wall D/S Portion</i>	1	12.02	0.750	0.300	2.70	Cum
	<i>Toe Wall D/S Portion</i>	1	11.72	0.450	0.600	3.16	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					27.55	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.31	0.450	0.450	0.53	Cum
		2	1.31	1.068	2.060	5.74	Cum
		2	1.31	1.836	0.700	3.36	Cum
	<i>Section 2-2</i>	2	3.65	0.820	0.500	2.99	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.65	1.164	1.146	9.74	Cum
		2	3.65	1.658	1.400	16.94	Cum
	Section 3-3	2	3.77	0.820	0.500	3.09	Cum
		2	3.77	1.104	0.946	7.87	Cum
		2	3.77	1.538	1.600	18.53	Cum
	Section 5-5	2	6.05	0.450	0.450	2.45	Cum
		2	6.05	1.068	2.060	26.64	Cum
		2	6.05	1.836	0.700	15.56	Cum
	Section 6-6	2	3.69	0.450	0.450	1.50	Cum
		2	3.69	0.734	0.946	5.13	Cum
		2	3.69	1.168	0.550	4.74	Cum
	deduction for M 25 grade of concrete	2	0.82	6.500	0.300	-3.20	Cum
	Floor	1	0.58	2.800	0.500	0.81	Cum
		1	6.50	2.800	0.700	12.74	Cum
		1	0.58	2.800	0.350	0.57	Cum
		1	0.20	2.800	0.450	0.25	Cum
		1	4.30	2.800	0.550	6.62	Cum
		1	0.71	2.800	1.050	2.09	Cum
	Crest	1	1.04	2.800	1.476	4.29	Cum
	TOTAL					148.98	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	2.800	0.150	0.34	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	13.41	0.450	0.050	0.30	Cum
	On Abutment Top (Right Side)	1	13.41	0.450	0.050	0.30	Cum
	Slab Bridge						
	Slab	1	3.60	6.500	0.385	9.01	Cum
	Wearing coat	1	3.60	5.500	0.070	1.39	Cum
	Dirt wall	2	0.40	6.500	0.350	1.82	Cum
	300 mm thick pedestal	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					16.35	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	45	4.16		1.578	295.4	Kg
a2	10	18	6.98		0.616	77.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	16	4.08		0.616	40.2	Kg
a5	10	14	7.00		0.616	60.4	Kg
x1	12	60	2.55		0.888	135.9	Kg
x2	16	60	1.32		1.578	124.5	Kg
x3	12	20	3.50		0.888	62.1	Kg
	Taking Skin reinforcement @0.3% of M-20	148.98	0.00	0.447	7850.000	3508.5	Kg
	Total Reinforcement Steel (in kg)					4312.5	Kg
	Total Weight in Metric Tonne					4.31	MT
5	Providing shuttering including strutting, propping 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		2.060	10.76	Sqm
		4		1.068	2.060	8.80	Sqm
		4	1.31		0.700	3.66	Sqm
		4		1.836	0.700	5.14	Sqm
	Section 2-2	4	3.65		0.500	7.30	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.65		1.146	16.73	Sqm
		4		1.164	1.146	5.34	Sqm
		4	3.65		1.400	20.44	Sqm
		4		1.658	1.400	9.28	Sqm
	Section 3-3	4	3.77		0.500	7.53	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.77		0.946	14.25	Sqm
		4		1.104	0.946	4.18	Sqm
		4	3.77		1.600	24.10	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.538	1.600	9.84	Sqm
	Section 5-5	4	6.05		0.450	10.90	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.05		2.060	49.88	Sqm
		4		1.068	2.060	8.80	Sqm
		4	6.05		0.700	16.95	Sqm
		4		1.836	0.700	5.14	Sqm
	Section 6-6	4	3.69		0.450	6.65	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.69		0.946	13.97	Sqm
		4		0.734	0.946	2.78	Sqm
		4	3.69		0.550	8.12	Sqm
		4		1.168	0.550	2.57	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		2.800	0.500	2.80	Sqm
		2	6.50		0.700	9.10	Sqm
		2		2.800	0.700	3.92	Sqm
		2	0.58		0.350	0.41	Sqm
		2		2.800	0.350	1.96	Sqm
		2	0.20		0.450	0.18	Sqm
		2		2.800	0.450	2.52	Sqm
		2	4.30		0.550	4.73	Sqm
		2		2.800	0.550	3.08	Sqm
		2	0.71		1.050	1.50	Sqm
		2		2.800	1.050	5.88	Sqm
	Crest	2	1.04		1.476	3.06	Sqm
		2		2.800	1.476	8.27	Sqm
	Toe Wall D/S Portion	2	12.02		0.300	7.21	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	11.72		0.600	14.07	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					361.50	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	3.00	4.748		28.49	Sqm
	TOTAL					28.49	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	3.00	2.200	0.300	1.98	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	3.00	2.200	0.150	1.98	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	13.41	0.450		6.03	Sqm
	On Abutment Top (Right Side)	1	13.41	0.450		6.03	Sqm
	TOTAL					12.07	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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		5.627		5.63	Cum
	Abutment						
	Section 1-1	2	1.38		1.056	2.916	Cum
	Section 2-2	2	3.80		2.014	15.303	Cum
	Section 3-3	2	4.20		1.791	15.044	Cum
	Section 5-5	2	6.10		1.056	12.880	Cum
	Section 6-6	2	2.92		0.812	4.745	Cum
	D/S protection	2					
	Toe wall	2	12.02	0.150	0.600	3.607	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					60.66	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 16.000 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, rammimg the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.36	2.078	1.091	6.187	Cum
	<i>Section 2-2</i>	2	4.00	1.394	1.091	12.167	Cum
	<i>Section 3-3</i>	2	2.20	1.274	0.891	4.995	Cum
	<i>Section 5-5</i>	2	6.52	2.228	1.091	31.692	Cum
	<i>Section 6-6</i>	2	3.19	1.274	0.891	7.233	Cum
	<i>U/S Key Floor</i>	1	0.60	2.000	0.750	0.900	Cum
	<i>U/S Floor</i>	1	2.50	2.000	2.017	10.085	Cum
	<i>D/S Floor</i>	1	4.00	2.000	0.950	7.600	Cum
		1	2.50	2.000	0.750	3.750	Cum
	<i>D/S Key Floor</i>	1	0.73	2.000	1.050	1.523	Cum
	<i>Toe Wall D/S Portion</i>	1	10.92	0.750	0.900	7.370	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						96.20	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.						
	<i>PCC Below Floor</i>	1	0.54	2.000	0.150	0.16	Cum
		1	0.67	2.000	0.150	0.20	Cum
		1	6.13	2.000	0.150	1.84	Cum
		1	0.42	2.000	0.150	0.13	Cum
		1	0.64	2.000	0.150	0.19	Cum
		1	1.23	2.000	0.150	0.37	Cum
		1	0.54	2.000	0.150	0.16	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.36	2.078	0.150	0.85	Cum
	<i>Section 2-2</i>	2	4.00	1.394	0.150	1.67	Cum
	<i>Section 3-3</i>	2	2.20	1.274	0.150	0.84	Cum
	<i>Section 5-5</i>	2	6.52	2.228	0.150	4.36	Cum
	<i>Section 6-6</i>	2	3.19	1.274	0.150	1.22	Cum
	<i>Toe Wall D/S Portion</i>	1	10.92	0.750	0.300	2.46	Cum
	<i>Toe Wall D/S Portion</i>	1	10.62	0.450	0.600	2.87	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					18.93	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	0.450	0.450	0.46	Cum
		2	1.14	1.114	2.213	5.62	Cum
		2	1.14	1.928	0.600	2.64	Cum
	<i>Section 2-2</i>	2	4.00	0.450	0.450	1.62	Cum
		2	4.00	0.772	1.074	6.63	Cum
		2	4.00	1.244	0.600	5.97	Cum
	<i>Section 3-3</i>	2	1.79	0.450	0.450	0.72	Cum
		2	1.79	0.712	0.874	2.23	Cum
		2	1.79	1.124	0.500	2.01	Cum
	<i>Section 5-5</i>	2	6.48	0.450	0.450	2.62	Cum
		2	6.48	1.114	2.213	31.93	Cum
		2	6.48	1.928	0.600	14.98	Cum
	<i>Section 6-6</i>	2	3.75	0.450	0.450	1.52	Cum
		2	3.75	0.712	0.874	4.66	Cum
		2	3.75	1.124	0.500	4.21	Cum
	<i>Floor</i>	1	0.60	2.000	0.600	0.72	Cum
		1	6.50	2.000	0.600	7.80	Cum
		1	0.56	2.000	0.300	0.33	Cum
		1	0.20	2.000	0.400	0.16	Cum
		1	2.30	2.000	0.500	2.30	Cum
		1	0.73	2.000	0.900	1.31	Cum
	<i>Crest</i>	1	1.14	2.000	1.518	3.47	Cum
	TOTAL					103.92	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.						
	<i>Over Crest</i>	1	0.90	2.000	0.150	0.27	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	18.44	0.450	0.050	0.41	Cum
	<i>On Abutment Top (Right Side)</i>	1	18.44	0.450	0.050	0.41	Cum
	TOTAL					1.10	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	103.92	0.00	0.312	7850.000	2447.34	Kg
	Total Weight in Metric Tonne					2.45	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.14		0.450	2.05	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.14		2.213	10.09	Sqm
		4		1.114	2.213	9.86	Sqm
		4	1.14		0.600	2.73	Sqm
		4		1.928	0.600	4.63	Sqm
	<i>Section 2-2</i>	4	4.00		0.450	7.20	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.00		1.074	17.18	Sqm
		4		0.772	1.074	3.32	Sqm
		4	4.00		0.600	9.60	Sqm
		4		1.244	0.600	2.99	Sqm
	<i>Section 3-3</i>	4	1.79		0.450	3.22	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.79		0.874	6.25	Sqm
		4		0.712	0.874	2.49	Sqm
		4	1.79		0.500	3.58	Sqm
		4		1.124	0.500	2.25	Sqm
	<i>Section 5-5</i>	4	6.48		0.450	11.66	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.48		2.213	57.32	Sqm
		4		1.114	2.213	9.86	Sqm
		4	6.48		0.600	15.54	Sqm
		4		1.928	0.600	4.63	Sqm
	<i>Section 6-6</i>	4	3.75		0.450	6.74	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.75		0.874	13.10	Sqm
		4		0.712	0.874	2.49	Sqm
		4	3.75		0.500	7.49	Sqm
		4		1.124	0.500	2.25	Sqm
	Floor	2	0.60		0.600	0.72	Sqm
		2		2.000	0.600	2.40	Sqm
		2	6.50		0.600	7.80	Sqm
		2		2.000	0.600	2.40	Sqm
		2	0.56		0.300	0.33	Sqm
		2		2.000	0.300	1.20	Sqm
		2	0.20		0.400	0.16	Sqm
		2		2.000	0.400	1.60	Sqm
		2	2.30		0.500	2.30	Sqm
		2		2.000	0.500	2.00	Sqm
		2	0.73		0.900	1.31	Sqm
		2		2.000	0.900	3.60	Sqm
	<i>Crest</i>	2	1.14		1.518	3.47	Sqm
		2		2.000	1.518	6.07	Sqm
	Toe Wall D/S Portion	2	10.92		0.300	6.55	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	10.62		0.600	12.74	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					288.29	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.						
	<i>In D/S Portion On Slopes</i>	2	3.00	4.574		27.44	Sqm
	TOTAL					27.44	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.00	1.400	0.300	1.26	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	3.00	1.400	0.150	1.26	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	18.44	0.450		8.30	Sqm
	<i>On Abutment Top (Right Side)</i>	1	18.44	0.450		8.30	Sqm
	TOTAL					16.59	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		4.667		4.67	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.36	0.227		0.619	Cum
	<i>Section 2-2</i>	2	4.00	0.227		1.816	Cum
	<i>Section 3-3</i>	2	2.20	0.124		0.546	Cum
	<i>Section 5-5</i>	2	6.52	0.227		2.960	Cum
	<i>Section 6-6</i>	2	3.19	0.124		0.790	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	10.92	0.150	0.600	3.275	Cum
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					15.21	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 0.762 METER AT CH. 18.040 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.48	1.852	2.202	12.100	Cum
	<i>Section 2-2</i>	2	3.80	1.914	2.202	32.031	Cum
	<i>Section 3-3</i>	2	3.90	1.794	2.002	28.014	Cum
	<i>below bridge</i>	2	6.50	1.794	0.850	19.824	Cum
	<i>Section 5-5</i>	2	5.85	2.002	2.202	51.561	Cum
	<i>Section 6-6</i>	2	2.82	1.274	2.002	14.364	Cum
	<i>U/S Key Floor</i>	1	0.60	2.000	0.750	0.900	Cum
	<i>U/S Floor</i>	1	2.50	2.000	1.712	8.560	Cum
	<i>D/S Floor</i>	1	4.00	2.000	0.950	7.600	Cum
		1	4.20	2.000	0.750	6.300	Cum
	<i>D/S Key Floor</i>	1	0.73	2.000	1.250	1.813	Cum
	<i>Toe Wall D/S Portion</i>	1	10.92	0.750	0.900	7.370	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						193.14	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.						
	<i>PCC Below Floor</i>	1	0.54	2.000	0.150	0.16	Cum
		1	0.67	2.000	0.150	0.20	Cum
		1	6.13	2.000	0.150	1.84	Cum
		1	0.42	2.000	0.150	0.13	Cum
		1	2.34	2.000	0.150	0.70	Cum
		1	1.23	2.000	0.150	0.37	Cum
		1	0.54	2.000	0.150	0.16	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.48	1.852	0.150	0.82	Cum
	<i>Section 2-2</i>	2	3.80	1.914	0.300	4.36	Cum
	<i>Section 3-3</i>	2	3.90	1.794	0.300	4.20	Cum
	<i>Section 5-5</i>	2	5.85	2.002	0.150	3.51	Cum
	<i>Section 6-6</i>	2	2.82	1.274	0.150	1.08	Cum
	<i>Toe Wall D/S Portion</i>	1	10.92	0.750	0.300	2.46	Cum
	<i>Toe Wall D/S Portion</i>	1	10.62	0.450	0.600	2.87	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					24.48	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.41	0.450	0.450	0.57	Cum
		2	1.41	1.001	1.836	5.18	Cum
		2	1.41	1.702	0.600	2.88	Cum
	<i>Section 2-2</i>	2	3.65	0.820	0.500	2.99	Cum
		2	3.65	1.142	1.074	8.95	Cum
		2	3.65	1.614	1.400	16.50	Cum
	<i>Section 3-3</i>	2	3.77	0.820	0.500	3.09	Cum
		2	3.77	1.082	0.874	7.12	Cum
		2	3.77	1.494	1.600	18.00	Cum
	<i>Section 5-5</i>	2	5.80	0.450	0.450	2.35	Cum
		2	5.80	1.001	1.836	21.33	Cum
		2	5.80	1.702	0.600	11.85	Cum
	<i>Section 6-6</i>	2	3.56	0.450	0.450	1.44	Cum
		2	3.56	0.712	0.874	4.43	Cum
		2	3.56	1.124	0.500	4.01	Cum
	<i>deduction for M 25 grade of concrete Floor</i>	2	0.82	6.500	0.300	-3.20	Cum
		1	0.60	2.000	0.600	0.72	Cum
		1	6.50	2.000	0.600	7.80	Cum
		1	0.56	2.000	0.300	0.33	Cum
		1	0.20	2.000	0.450	0.18	Cum
		1	4.00	2.000	0.500	4.00	Cum
		1	0.73	2.000	1.100	1.60	Cum
	<i>Crest</i>	1	1.09	2.000	1.274	2.79	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					124.92	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	0.80	2.000	0.150	0.24	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	12.67	0.450	0.050	0.29	Cum
	On Abutment Top (Right Side)	1	12.67	0.450	0.050	0.29	Cum
	Slab Bridge						
	Slab	1	2.80	6.500	0.335	6.10	Cum
	Wearing coat	1	2.80	5.500	0.070	1.08	Cum
	Dirt wall	2	0.40	6.500	0.300	1.56	Cum
	300 mm thick pedestal	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					12.74	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	36	3.26		1.578	185.2	Kg
a2	10	14	6.88		0.616	59.4	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	3.18		0.616	45.1	Kg
a5	10	10	6.80		0.616	41.9	Kg
x1	12	46	2.50		0.888	102.1	Kg
x2	16	46	1.32		1.578	95.5	Kg
x3	12	24	2.70		0.888	57.5	Kg
	Taking Skin reinforcement @0.3% of M-20	124.92	0.00	0.375	7850.000	2941.8	Kg
	<i>Total Reinforcement Steel (in kg)</i>					3536.4	Kg
	Total Weight in Metric Tonne					3.54	MT
5	Providing shuttering including strutting, propping 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		1.836	10.34	Sqm
		4		1.001	1.836	7.35	Sqm
		4	1.41		0.600	3.38	Sqm
		4		1.702	0.600	4.08	Sqm
	Section 2-2	4	3.65		0.500	7.30	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.65		1.074	15.68	Sqm
		4		1.142	1.074	4.91	Sqm
		4	3.65		1.400	20.44	Sqm
		4		1.614	1.400	9.04	Sqm
	Section 3-3	4	3.77		0.500	7.53	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.77		0.874	13.17	Sqm
		4		1.082	0.874	3.78	Sqm
		4	3.77		1.600	24.10	Sqm
		4		1.494	1.600	9.56	Sqm
	Section 5-5	4	5.80		0.450	10.45	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.80		1.836	42.62	Sqm
		4		1.001	1.836	7.35	Sqm
		4	5.80		0.600	13.93	Sqm
		4		1.702	0.600	4.08	Sqm
	Section 6-6	4	3.56		0.450	6.41	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.56		0.874	12.45	Sqm
		4		0.712	0.874	2.49	Sqm
		4	3.56		0.500	7.12	Sqm
		4		1.124	0.500	2.25	Sqm
	Floor	2	0.60		0.600	0.72	Sqm
		2		2.000	0.600	2.40	Sqm
		2	6.50		0.600	7.80	Sqm
		2		2.000	0.600	2.40	Sqm
		2	0.56		0.300	0.33	Sqm
		2		2.000	0.300	1.20	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.20		0.450	0.18	Sqm
		2		2.000	0.450	1.80	Sqm
		2	4.00		0.500	4.00	Sqm
		2		2.000	0.500	2.00	Sqm
		2	0.73		1.100	1.60	Sqm
		2		2.000	1.100	4.40	Sqm
	Crest	2	1.09		1.274	2.79	Sqm
		2		2.000	1.274	5.10	Sqm
	Toe Wall D/S Portion	2	10.92		0.300	6.55	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	10.62		0.600	12.74	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					325.15	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.						
	<i>In D/S Portion On Slopes</i>	2	3.00	4.574		27.44	Sqm
	TOTAL					27.44	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.00	1.400	0.300	1.26	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	3.00	1.400	0.150	1.26	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.67	0.450		5.70	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.67	0.450		5.70	Sqm
	TOTAL					11.41	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		3.727		3.73	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.48	1.158		3.436	Cum
	<i>Section 2-2</i>	2	3.80	1.869		14.201	Cum
	<i>Section 3-3</i>	2	3.90	1.653		12.890	Cum
	<i>Section 5-5</i>	2	5.85	1.158		13.544	Cum
	<i>Section 6-6</i>	2	2.82	0.877		4.938	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	10.92	0.150	0.600	3.275	Cum
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					56.55	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 19.700 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.38	1.686	1.894	8.801	Cum
	<i>Section 2-2</i>	2	2.62	1.320	1.894	13.090	Cum
	<i>Section 3-3</i>	2	1.70	1.200	1.694	6.912	Cum
	<i>Section 5-5</i>	2	6.52	1.836	1.894	45.338	Cum
	<i>Section 6-6</i>	2	2.73	1.200	1.694	11.079	Cum
	<i>U/S Key Floor</i>	1	0.63	1.500	0.850	0.797	Cum
	<i>U/S Floor</i>	1	2.00	1.500	1.460	4.380	Cum
	<i>D/S Floor</i>	1	3.00	1.500	0.850	3.825	Cum
		1	2.00	1.500	0.650	1.950	Cum
	<i>D/S Key Floor</i>	1	0.63	1.500	0.850	0.797	Cum
	<i>Toe Wall D/S Portion</i>	1	9.35	0.750	0.900	6.311	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.50	0.600	0.750	2.250	Cum
						105.53	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.						
	<i>PCC Below Floor</i>	1	0.54	1.500	0.150	0.12	Cum
		1	0.78	1.500	0.150	0.18	Cum
		1	4.58	1.500	0.150	1.03	Cum
		1	0.28	1.500	0.150	0.06	Cum
		1	0.44	1.500	0.150	0.10	Cum
		1	0.78	1.500	0.150	0.18	Cum
		1	0.54	1.500	0.150	0.12	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.38	1.686	0.150	0.70	Cum
	<i>Section 2-2</i>	2	2.62	1.320	0.150	1.04	Cum
	<i>Section 3-3</i>	2	1.70	1.200	0.150	0.61	Cum
	<i>Section 5-5</i>	2	6.52	1.836	0.150	3.59	Cum
	<i>Section 6-6</i>	2	2.73	1.200	0.150	0.98	Cum
	<i>Toe Wall D/S Portion</i>	1	9.35	0.750	0.300	2.10	Cum
	<i>Toe Wall D/S Portion</i>	1	9.05	0.450	0.600	2.44	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.600	0.150	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.300	0.600	0.90	Cum
	TOTAL					14.60	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.16	0.450	0.450	0.47	Cum
		2	1.16	0.918	1.560	3.33	Cum
		2	1.16	1.536	0.500	1.78	Cum
	<i>Section 2-2</i>	2	2.62	0.450	0.450	1.06	Cum
		2	2.62	0.735	0.950	3.66	Cum
		2	2.62	1.170	0.500	3.06	Cum
	<i>Section 3-3</i>	2	1.19	0.450	0.450	0.48	Cum
		2	1.19	0.675	0.750	1.20	Cum
		2	1.19	1.050	0.500	1.25	Cum
	<i>Section 5-5</i>	2	6.48	0.450	0.450	2.62	Cum
		2	6.48	0.918	1.560	18.55	Cum
		2	6.48	1.536	0.500	9.95	Cum
	<i>Section 6-6</i>	2	3.25	0.450	0.450	1.32	Cum
		2	3.25	0.675	0.750	3.29	Cum
		2	3.25	1.050	0.500	3.41	Cum
	<i>Floor</i>	1	0.63	1.500	0.700	0.66	Cum
		1	5.00	1.500	0.500	3.75	Cum
		1	0.51	1.500	0.200	0.15	Cum
		1	0.20	1.500	0.400	0.12	Cum
		1	1.80	1.500	0.500	1.35	Cum
		1	0.63	1.500	0.700	0.66	Cum
	<i>Crest</i>	1	0.77	1.500	1.067	1.23	Cum
	TOTAL					63.35	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.						
	<i>Over Crest</i>	1	0.60	1.500	0.150	0.14	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	14.42	0.450	0.050	0.32	Cum
	<i>On Abutment Top (Right Side)</i>	1	14.42	0.450	0.050	0.32	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	63.35	0.00	0.190	7850.000	1491.91	Kg
	Total Weight in Metric Tonne					1.49	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.16		0.450	2.09	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.16		1.560	7.25	Sqm
		4		0.918	1.560	5.73	Sqm
		4	1.16		0.500	2.32	Sqm
		4		1.536	0.500	3.07	Sqm
	<i>Section 2-2</i>	4	2.62		0.450	4.71	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.62		0.950	9.95	Sqm
		4		0.735	0.950	2.79	Sqm
		4	2.62		0.500	5.24	Sqm
		4		1.170	0.500	2.34	Sqm
	<i>Section 3-3</i>	4	1.19		0.450	2.14	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.19		0.750	3.57	Sqm
		4		0.675	0.750	2.03	Sqm
		4	1.19		0.500	2.38	Sqm
		4		1.050	0.500	2.10	Sqm
	<i>Section 5-5</i>	4	6.48		0.450	11.66	Sqm
		4		0.450	0.450	0.81	Sqm
		4	6.48		1.560	40.41	Sqm
		4		0.918	1.560	5.73	Sqm
		4	6.48		0.500	12.95	Sqm
		4		1.536	0.500	3.07	Sqm
	<i>Section 6-6</i>	4	3.25		0.450	5.85	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.25		0.750	9.75	Sqm
		4		0.675	0.750	2.03	Sqm
		4	3.25		0.500	6.50	Sqm
		4		1.050	0.500	2.10	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		1.500	0.700	2.10	Sqm
		2	5.00		0.500	5.00	Sqm
		2		1.500	0.500	1.50	Sqm
		2	0.51		0.200	0.20	Sqm
		2		1.500	0.200	0.60	Sqm
		2	0.20		0.400	0.16	Sqm
		2		1.500	0.400	1.20	Sqm
		2	1.80		0.500	1.80	Sqm
		2		1.500	0.500	1.50	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.500	0.700	2.10	Sqm
	Crest	2	0.77		1.067	1.64	Sqm
		2		1.500	1.067	3.20	Sqm
	Toe Wall D/S Portion	2	9.35		0.300	5.61	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	9.05		0.600	10.86	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					210.60	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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	4.003		20.02	Sqm
	TOTAL					20.02	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	0.900	0.300	0.68	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	0.900	0.150	0.68	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	14.42	0.450		6.49	Sqm
	<i>On Abutment Top (Right Side)</i>	1	14.42	0.450		6.49	Sqm
	TOTAL					12.97	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		2.044		2.04	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.38	0.913		2.515	Cum
	<i>Section 2-2</i>	2	2.62	0.887		4.644	Cum
	<i>Section 3-3</i>	2	1.70	0.700		2.380	Cum
	<i>Section 5-5</i>	2	6.52	0.913		11.897	Cum
	<i>Section 6-6</i>	2	2.73	0.700		3.815	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	9.35	0.150	0.600	2.805	Cum
		2	2.50	0.150	0.600	0.450	Cum
	TOTAL					30.55	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.067 METER AT CH. 20.100 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.31	1.960	2.434	12.518	Cum
	<i>Section 2-2</i>	2	3.12	1.863	2.434	28.296	Cum
	<i>Section 3-3</i>	2	5.40	1.743	2.234	42.054	Cum
	<i>below bridge</i>	2	6.50	1.743	0.850	19.260	Cum
	<i>Section 5-5</i>	2	5.08	2.110	2.434	52.159	Cum
	<i>Section 6-6</i>	2	2.07	1.140	2.234	10.518	Cum
	<i>U/S Key Floor</i>	1	0.59	1.400	0.700	0.576	Cum
	<i>U/S Floor</i>	1	2.50	1.400	2.067	7.235	Cum
	<i>D/S Floor</i>	1	4.00	1.400	1.000	5.600	Cum
		1	5.90	1.400	0.800	6.608	Cum
	<i>D/S Key Floor</i>	1	0.76	1.400	1.400	1.495	Cum
	<i>Toe Wall D/S Portion</i>	1	8.55	0.750	0.900	5.771	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.25	0.600	0.750	2.025	Cum
						194.11	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.						
	<i>PCC Below Floor</i>	1	0.54	1.400	0.150	0.11	Cum
		1	0.62	1.400	0.150	0.13	Cum
		1	5.15	1.400	0.150	1.08	Cum
		1	0.50	1.400	0.150	0.10	Cum
		1	3.92	1.400	0.150	0.82	Cum
		1	1.40	1.400	0.150	0.29	Cum
		1	0.54	1.400	0.150	0.11	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.31	1.960	0.150	0.77	Cum
	<i>Section 2-2</i>	2	3.12	1.863	0.300	3.49	Cum
	<i>Section 3-3</i>	2	5.40	1.743	0.300	5.65	Cum
	<i>Section 5-5</i>	2	5.08	2.110	0.150	3.21	Cum
	<i>Section 6-6</i>	2	2.07	1.140	0.150	0.71	Cum
	<i>Toe Wall D/S Portion</i>	1	8.55	0.750	0.300	1.92	Cum
	<i>Toe Wall D/S Portion</i>	1	8.25	0.450	0.600	2.23	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.25	0.600	0.150	0.41	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.25	0.300	0.600	0.81	Cum
	TOTAL					21.85	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.09	0.450	0.450	0.44	Cum
		2	1.09	1.055	2.017	4.63	Cum
		2	1.09	1.810	0.650	2.56	Cum
	<i>Section 2-2</i>	2	3.12	0.820	0.500	2.56	Cum
		2	3.12	1.117	0.989	6.89	Cum
		2	3.12	1.563	1.550	15.12	Cum
	<i>Section 3-3</i>	2	5.06	0.820	0.500	4.15	Cum
		2	5.06	1.057	0.789	8.43	Cum
		2	5.06	1.443	1.750	25.53	Cum
	<i>Section 5-5</i>	2	5.03	0.450	0.450	2.04	Cum
		2	5.03	1.055	2.017	21.43	Cum
		2	5.03	1.810	0.650	11.85	Cum
	<i>Section 6-6</i>	2	2.75	0.450	0.450	1.11	Cum
		2	2.75	0.645	0.650	2.30	Cum
		2	2.75	0.990	0.500	2.72	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	6.500	0.300	-3.20	Cum
	<i>Floor</i>	1	0.59	1.400	0.550	0.45	Cum
		1	6.50	1.400	0.650	5.92	Cum
		1	0.58	1.400	0.350	0.28	Cum
		1	0.20	1.400	0.425	0.12	Cum
		1	5.70	1.400	0.500	3.99	Cum
		1	0.76	1.400	1.250	1.33	Cum
	<i>Crest</i>	1	0.99	1.400	1.494	2.07	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					122.70	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	1.400	0.150	0.16	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	11.83	0.450	0.050	0.27	Cum
	On Abutment Top (Right Side)	1	11.83	0.450	0.050	0.27	Cum
	Slab Bridge						
	Slab	1	2.20	6.500	0.335	4.79	Cum
	Wearing coat	1	2.20	5.500	0.070	0.85	Cum
	Dirt wall	2	0.40	6.500	0.300	1.56	Cum
	300 mm thick pedestal	2	0.82	6.500	0.300	3.20	Cum
	TOTAL					11.09	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	36	2.66		1.578	151.1	Kg
a2	10	11	6.88		0.616	46.7	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	2.58		0.616	36.6	Kg
a5	10	10	6.80		0.616	41.9	Kg
x1	12	36	2.50		0.888	79.9	Kg
x2	16	36	1.32		1.578	74.7	Kg
x3	12	24	2.10		0.888	44.7	Kg
	Taking Skin reinforcement @0.3% of M-20	122.70	0.00	0.368	7850.000	2889.7	Kg
	Total Reinforcement Steel (in kg)					3373.2	Kg
	Total Weight in Metric Tonne					3.37	MT
5	Providing shuttering including strutting, propping 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	1.96	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.09		2.017	8.77	Sqm
		4		1.055	2.017	8.51	Sqm
		4	1.09		0.650	2.83	Sqm
		4		1.810	0.650	4.71	Sqm
	Section 2-2	4	3.12		0.500	6.24	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.12		0.989	12.34	Sqm
		4		1.117	0.989	4.42	Sqm
		4	3.12		1.550	19.34	Sqm
		4		1.563	1.550	9.69	Sqm
	Section 3-3	4	5.06		0.500	10.11	Sqm
		4		0.820	0.500	1.64	Sqm
		4	5.06		0.789	15.95	Sqm
		4		1.057	0.789	3.33	Sqm
		4	5.06		1.750	35.39	Sqm
		4		1.443	1.750	10.10	Sqm
	Section 5-5	4	5.03		0.450	9.06	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.03		2.017	40.62	Sqm
		4		1.055	2.017	8.51	Sqm
		4	5.03		0.650	13.09	Sqm
		4		1.810	0.650	4.71	Sqm
	Section 6-6	4	2.75		0.450	4.94	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.75		0.650	7.14	Sqm
		4		0.645	0.650	1.68	Sqm
		4	2.75		0.500	5.49	Sqm
		4		0.990	0.500	1.98	Sqm
	Floor	2	0.59		0.550	0.65	Sqm
		2		1.400	0.550	1.54	Sqm
		2	6.50		0.650	8.45	Sqm
		2		1.400	0.650	1.82	Sqm
		2	0.58		0.350	0.41	Sqm
		2		1.400	0.350	0.98	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.20		0.425	0.17	Sqm
		2		1.400	0.425	1.19	Sqm
		2	5.70		0.500	5.70	Sqm
		2		1.400	0.500	1.40	Sqm
		2	0.76		1.250	1.91	Sqm
		2		1.400	1.250	3.50	Sqm
	Crest	2	0.99		1.494	2.96	Sqm
		2		1.400	1.494	4.18	Sqm
	Toe Wall D/S Portion	2	8.55		0.300	5.13	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	8.25		0.600	9.90	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					315.31	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.						
	<i>In D/S Portion On Slopes</i>	2	2.25	3.623		16.30	Sqm
	TOTAL					16.30	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.25	0.800	0.300	0.54	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	2.25	0.800	0.150	0.54	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	11.83	0.450		5.32	Sqm
	<i>On Abutment Top (Right Side)</i>	1	11.83	0.450		5.32	Sqm
	TOTAL					10.65	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		4.540		4.54	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.31		1.388	3.642	Cum
	<i>Section 2-2</i>	2	3.12		1.779	11.098	Cum
	<i>Section 3-3</i>	2	5.40		1.581	17.075	Cum
	<i>Section 5-5</i>	2	5.08		1.388	14.097	Cum
	<i>Section 6-6</i>	2	2.07		0.712	2.941	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	8.55	0.150	0.600	2.565	Cum
		2	2.25	0.150	0.600	0.405	Cum
	TOTAL					56.36	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 22.000 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.566	2.218	6.843	Cum
	<i>Section 2-2</i>	2	2.95	1.200	2.218	15.703	Cum
	<i>Section 3-3</i>	2	1.75	1.080	2.018	7.628	Cum
	<i>Section 5-5</i>	2	4.10	1.716	2.218	31.202	Cum
	<i>Section 6-6</i>	2	2.15	1.080	2.018	9.350	Cum
	<i>U/S Key Floor</i>	1	0.63	1.150	0.850	0.611	Cum
	<i>U/S Floor</i>	1	2.00	1.150	1.460	3.358	Cum
	<i>D/S Floor</i>	1	2.75	1.150	0.850	2.688	Cum
		1	2.25	1.150	0.650	1.682	Cum
	<i>D/S Key Floor</i>	1	0.63	1.150	0.850	0.611	Cum
	<i>Toe Wall D/S Portion</i>	1	7.60	0.750	0.900	5.130	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.50	0.600	0.750	2.250	Cum
						87.06	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.						
	<i>PCC Below Floor</i>	1	0.54	1.150	0.150	0.09	Cum
		1	0.78	1.150	0.150	0.14	Cum
		1	4.13	1.150	0.150	0.71	Cum
		1	0.28	1.150	0.150	0.05	Cum
		1	0.89	1.150	0.150	0.15	Cum
		1	0.78	1.150	0.150	0.13	Cum
		1	0.54	1.150	0.150	0.09	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.566	0.150	0.46	Cum
	<i>Section 2-2</i>	2	2.95	1.200	0.150	1.06	Cum
	<i>Section 3-3</i>	2	1.75	1.080	0.150	0.57	Cum
	<i>Section 5-5</i>	2	4.10	1.716	0.150	2.11	Cum
	<i>Section 6-6</i>	2	2.15	1.080	0.150	0.69	Cum
	<i>Toe Wall D/S Portion</i>	1	7.60	0.750	0.300	1.71	Cum
	<i>Toe Wall D/S Portion</i>	1	7.30	0.450	0.600	1.97	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.600	0.150	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.300	0.600	0.90	Cum
	TOTAL					11.30	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.76	0.450	0.450	0.31	Cum
		2	0.76	0.858	1.360	1.77	Cum
		2	0.76	1.416	0.500	1.08	Cum
	<i>Section 2-2</i>	2	2.95	0.450	0.450	1.19	Cum
		2	2.95	0.675	0.750	2.99	Cum
		2	2.95	1.050	0.500	3.10	Cum
	<i>Section 3-3</i>	2	1.44	0.450	0.450	0.58	Cum
		2	1.44	0.615	0.550	0.97	Cum
		2	1.44	0.930	0.500	1.33	Cum
	<i>Section 5-5</i>	2	4.06	0.450	0.450	1.64	Cum
		2	4.06	0.858	1.360	9.46	Cum
		2	4.06	1.416	0.500	5.74	Cum
	<i>Section 6-6</i>	2	2.61	0.450	0.450	1.06	Cum
		2	2.61	0.615	0.550	1.77	Cum
		2	2.61	0.930	0.500	2.43	Cum
	<i>Floor</i>	1	0.63	1.150	0.700	0.50	Cum
		1	4.75	1.150	0.500	2.73	Cum
		1	0.31	1.150	0.200	0.07	Cum
		1	0.20	1.150	0.400	0.09	Cum
		1	2.05	1.150	0.500	1.18	Cum
		1	0.63	1.150	0.700	0.50	Cum
	<i>Crest</i>	1	0.75	1.150	0.958	0.83	Cum
	TOTAL					41.33	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.						
	<i>Over Crest</i>	1	0.60	1.150	0.150	0.10	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	12.65	0.450	0.050	0.28	Cum
	<i>On Abutment Top (Right Side)</i>	1	12.65	0.450	0.050	0.28	Cum
	TOTAL					0.67	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	41.33	0.00	0.124	7850.000	973.31	Kg
	Total Weight in Metric Tonne					0.97	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.76		0.450	1.37	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.76		1.360	4.14	Sqm
		4		0.858	1.360	4.67	Sqm
		4	0.76		0.500	1.52	Sqm
		4		1.416	0.500	2.83	Sqm
	<i>Section 2-2</i>	4	2.95		0.450	5.31	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.95		0.750	8.85	Sqm
		4		0.675	0.750	2.03	Sqm
		4	2.95		0.500	5.90	Sqm
		4		1.050	0.500	2.10	Sqm
	<i>Section 3-3</i>	4	1.44		0.450	2.58	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.44		0.550	3.16	Sqm
		4		0.615	0.550	1.35	Sqm
		4	1.44		0.500	2.87	Sqm
		4		0.930	0.500	1.86	Sqm
	<i>Section 5-5</i>	4	4.06		0.450	7.30	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.06		1.360	22.06	Sqm
		4		0.858	1.360	4.67	Sqm
		4	4.06		0.500	8.11	Sqm
		4		1.416	0.500	2.83	Sqm
	<i>Section 6-6</i>	4	2.61		0.450	4.70	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.61		0.550	5.74	Sqm
		4		0.615	0.550	1.35	Sqm
		4	2.61		0.500	5.22	Sqm
		4		0.930	0.500	1.86	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		1.150	0.700	1.61	Sqm
		2	4.75		0.500	4.75	Sqm
		2		1.150	0.500	1.15	Sqm
		2	0.31		0.200	0.12	Sqm
		2		1.150	0.200	0.46	Sqm
		2	0.20		0.400	0.16	Sqm
		2		1.150	0.400	0.92	Sqm
		2	2.05		0.500	2.05	Sqm
		2		1.150	0.500	1.15	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.150	0.700	1.61	Sqm
	Crest	2	0.75		0.958	1.44	Sqm
		2		1.150	0.958	2.20	Sqm
	Toe Wall D/S Portion	2	7.60		0.300	4.56	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	7.30		0.600	8.76	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					160.69	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	3.242		16.21	Sqm
	TOTAL					16.21	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	0.550	0.300	0.41	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	2.50	0.550	0.150	0.41	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.65	0.450		5.69	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.65	0.450		5.69	Sqm
	TOTAL					11.39	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.887		1.89	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.270		2.502	Cum
	<i>Section 2-2</i>	2	2.95	0.844		4.980	Cum
	<i>Section 3-3</i>	2	1.75	0.646		2.261	Cum
	<i>Section 5-5</i>	2	4.10	1.270		10.411	Cum
	<i>Section 6-6</i>	2	2.15	0.646		2.771	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	7.60	0.150	0.600	2.280	Cum
		2	2.50	0.150	0.600	0.450	Cum
	TOTAL					27.54	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SHANKARPUR MR.							
SHARDA TYPE FALL OF HEIGHT 1.676 METER AT CH. 2.950 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.23	2.116	2.920	15.255	Cum
	<i>Section 2-2</i>	2	4.41	1.110	2.920	28.561	Cum
	<i>Section 3-3</i>	2	3.20	0.990	2.720	17.234	Cum
	<i>Section 5-5</i>	2	2.21	2.266	2.920	29.200	Cum
	<i>Section 6-6</i>	2	0.91	0.990	2.720	4.901	Cum
	<i>U/S Key Floor</i>	1	0.58	0.800	0.650	0.299	Cum
	<i>U/S Floor</i>	1	3.00	0.800	2.926	7.022	Cum
	<i>D/S Floor</i>	1	4.00	0.800	1.250	4.000	Cum
		1	3.50	0.800	1.050	2.940	Cum
	<i>D/S Key Floor</i>	1	0.84	0.800	1.700	1.139	Cum
	<i>Toe Wall D/S Portion</i>	1	4.60	0.750	0.900	3.105	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.50	0.600	0.750	1.350	Cum
						115.01	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.						
	<i>PCC Below Floor</i>	1	0.54	0.800	0.150	0.07	Cum
		1	0.56	0.800	0.150	0.07	Cum
		1	6.48	0.800	0.150	0.78	Cum
		1	0.57	0.800	0.150	0.07	Cum
		1	1.51	0.800	0.150	0.18	Cum
		1	1.73	0.800	0.150	0.21	Cum
		1	0.54	0.800	0.150	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.23	2.116	0.150	0.78	Cum
	<i>Section 2-2</i>	2	4.41	1.110	0.150	1.47	Cum
	<i>Section 3-3</i>	2	3.20	0.990	0.150	0.95	Cum
	<i>Section 5-5</i>	2	2.21	2.266	0.150	1.50	Cum
	<i>Section 6-6</i>	2	0.91	0.990	0.150	0.27	Cum
	<i>Toe Wall D/S Portion</i>	1	4.60	0.750	0.300	1.04	Cum
	<i>Toe Wall D/S Portion</i>	1	4.30	0.450	0.600	1.16	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.600	0.150	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.300	0.600	0.54	Cum
	TOTAL					9.41	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.01	0.450	0.450	0.41	Cum
		2	1.01	1.133	2.276	5.21	Cum
		2	1.01	1.966	0.900	3.57	Cum
	<i>Section 2-2</i>	2	4.41	0.450	0.450	1.78	Cum
		2	4.41	0.630	0.600	3.33	Cum
		2	4.41	0.960	0.900	7.61	Cum
	<i>Section 3-3</i>	2	2.93	0.450	0.450	1.19	Cum
		2	2.93	0.570	0.400	1.34	Cum
		2	2.93	0.840	0.700	3.45	Cum
	<i>Section 5-5</i>	2	2.16	0.450	0.450	0.88	Cum
		2	2.16	1.133	2.276	11.15	Cum
		2	2.16	1.966	0.900	7.65	Cum
	<i>Section 6-6</i>	2	1.33	0.450	0.450	0.54	Cum
		2	1.33	0.570	0.400	0.61	Cum
		2	1.33	0.840	0.700	1.56	Cum
	<i>Floor</i>	1	0.58	0.800	0.500	0.23	Cum
		1	7.00	0.800	0.900	5.04	Cum
		1	0.41	0.800	0.400	0.13	Cum
		1	0.20	0.800	0.600	0.10	Cum
		1	3.30	0.800	0.700	1.85	Cum
		1	0.84	0.800	1.550	1.04	Cum
	<i>Crest</i>	1	1.26	0.800	1.933	1.95	Cum
	TOTAL					60.61	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.						
	<i>Over Crest</i>	1	0.95	0.800	0.150	0.11	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	12.67	0.450	0.050	0.28	Cum
	<i>On Abutment Top (Right Side)</i>	1	12.67	0.450	0.050	0.28	Cum
	TOTAL					0.68	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	60.61	0.00	0.182	7850.000	1427.44	Kg
	Total Weight in Metric Tonne					1.43	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.01		0.450	1.82	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.01		2.276	9.19	Sqm
		4		1.133	2.276	10.31	Sqm
		4	1.01		0.900	3.63	Sqm
		4		1.966	0.900	7.08	Sqm
	<i>Section 2-2</i>	4	4.41		0.450	7.93	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.41		0.600	10.57	Sqm
		4		0.630	0.600	1.51	Sqm
		4	4.41		0.900	15.86	Sqm
		4		0.960	0.900	3.46	Sqm
	<i>Section 3-3</i>	4	2.93		0.450	5.27	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.93		0.400	4.69	Sqm
		4		0.570	0.400	0.91	Sqm
		4	2.93		0.700	8.20	Sqm
		4		0.840	0.700	2.35	Sqm
	<i>Section 5-5</i>	4	2.16		0.450	3.89	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.16		2.276	19.69	Sqm
		4		1.133	2.276	10.31	Sqm
		4	2.16		0.900	7.79	Sqm
		4		1.966	0.900	7.08	Sqm
	<i>Section 6-6</i>	4	1.33		0.450	2.39	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.33		0.400	2.13	Sqm
		4		0.570	0.400	0.91	Sqm
		4	1.33		0.700	3.72	Sqm
		4		0.840	0.700	2.35	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		0.800	0.500	0.80	Sqm
		2	7.00		0.900	12.60	Sqm
		2		0.800	0.900	1.44	Sqm
		2	0.41		0.400	0.33	Sqm
		2		0.800	0.400	0.64	Sqm
		2	0.20		0.600	0.24	Sqm
		2		0.800	0.600	0.96	Sqm
		2	3.30		0.700	4.62	Sqm
		2		0.800	0.700	1.12	Sqm
		2	0.84		1.550	2.60	Sqm
		2		0.800	1.550	2.48	Sqm
	Crest	2	1.26		1.933	4.89	Sqm
		2		0.800	1.933	3.09	Sqm
	Toe Wall D/S Portion	2	4.60		0.300	2.76	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.30		0.600	5.16	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					207.98	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.872		5.62	Sqm
	TOTAL					5.62	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.200	0.300	0.09	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	0.200	0.150	0.09	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.67	0.450		5.70	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.67	0.450		5.70	Sqm
	TOTAL					11.40	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		6.833		6.83	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.23	1.750		4.321	Cum
	<i>Section 2-2</i>	2	4.41	0.753		6.635	Cum
	<i>Section 3-3</i>	2	3.20	0.543		3.475	Cum
	<i>Section 5-5</i>	2	2.21	1.750		7.723	Cum
	<i>Section 6-6</i>	2	0.91	0.543		0.988	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.60	0.150	0.600	1.380	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					31.63	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.070 METER AT CH. 4.350 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.23	1.692	2.191	9.134	Cum
	<i>Section 2-2</i>	2	3.00	1.050	2.191	13.803	Cum
	<i>Section 3-3</i>	2	0.77	0.930	1.991	2.852	Cum
	<i>Section 5-5</i>	2	0.57	1.842	2.191	4.629	Cum
	<i>Section 6-6</i>	2	1.08	0.930	1.991	4.000	Cum
	<i>U/S Key Floor</i>	1	0.61	0.650	0.800	0.319	Cum
	<i>U/S Floor</i>	1	2.00	0.650	1.970	2.561	Cum
	<i>D/S Floor</i>	1	3.00	0.650	0.900	1.755	Cum
		1	2.00	0.650	0.700	0.910	Cum
	<i>D/S Key Floor</i>	1	0.73	0.650	1.250	0.589	Cum
	<i>Toe Wall D/S Portion</i>	1	2.15	0.750	0.900	1.451	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.50	1.350	0.750	1.519	Cum
						43.52	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.						
	<i>PCC Below Floor</i>	1	0.54	0.650	0.150	0.05	Cum
		1	0.73	0.650	0.150	0.07	Cum
		1	4.44	0.650	0.150	0.43	Cum
		1	0.35	0.650	0.150	0.03	Cum
		1	0.35	0.650	0.150	0.03	Cum
		1	1.30	0.650	0.150	0.13	Cum
		1	0.54	0.650	0.150	0.05	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.23	1.692	0.150	0.63	Cum
	<i>Section 2-2</i>	2	3.00	1.050	0.150	0.95	Cum
	<i>Section 3-3</i>	2	0.77	0.930	0.150	0.21	Cum
	<i>Section 5-5</i>	2	0.57	1.842	0.150	0.32	Cum
	<i>Section 6-6</i>	2	1.08	0.930	0.150	0.30	Cum
	<i>Toe Wall D/S Portion</i>	1	2.15	0.750	0.300	0.48	Cum
	<i>Toe Wall D/S Portion</i>	1	1.85	0.450	0.600	0.50	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.350	0.150	0.30	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.300	0.600	0.27	Cum
	TOTAL					4.77	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.01	0.450	0.450	0.41	Cum
		2	1.01	0.921	1.570	2.91	Cum
		2	1.01	1.542	0.550	1.71	Cum
	<i>Section 2-2</i>	2	3.00	0.450	0.450	1.22	Cum
		2	3.00	0.600	0.500	1.80	Cum
		2	3.00	0.900	0.550	2.97	Cum
	<i>Section 3-3</i>	2	1.46	0.450	0.450	0.59	Cum
		2	1.46	0.540	0.300	0.47	Cum
		2	1.46	0.780	0.500	1.14	Cum
	<i>Section 5-5</i>	2	0.53	0.450	0.450	0.21	Cum
		2	0.53	0.921	1.570	1.53	Cum
		2	0.53	1.542	0.550	0.90	Cum
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.61	0.650	0.650	0.26	Cum
		1	5.00	0.650	0.550	1.79	Cum
		1	0.37	0.650	0.250	0.06	Cum
		1	0.20	0.650	0.400	0.05	Cum
		1	1.80	0.650	0.500	0.59	Cum
		1	0.73	0.650	1.100	0.52	Cum
	<i>Crest</i>	1	0.96	0.650	1.329	0.83	Cum
	TOTAL					20.77	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.						
	<i>Over Crest</i>	1	0.75	0.650	0.150	0.07	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	6.99	0.450	0.050	0.16	Cum
	<i>On Abutment Top (Right Side)</i>	1	6.99	0.450	0.050	0.16	Cum
	TOTAL					0.39	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.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	20.77	0.00	0.062	7850.000	489.05	Kg
	Total Weight in Metric Tonne					0.49	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.01		0.450	1.81	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.01		1.570	6.32	Sqm
		4		0.921	1.570	5.78	Sqm
		4	1.01		0.550	2.21	Sqm
		4		1.542	0.550	3.39	Sqm
	<i>Section 2-2</i>	4	3.00		0.450	5.40	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.00		0.500	6.00	Sqm
		4		0.600	0.500	1.20	Sqm
		4	3.00		0.550	6.60	Sqm
		4		0.900	0.550	1.98	Sqm
	<i>Section 3-3</i>	4	1.46		0.450	2.63	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.46		0.300	1.75	Sqm
		4		0.540	0.300	0.65	Sqm
		4	1.46		0.500	2.92	Sqm
		4		0.780	0.500	1.56	Sqm
	<i>Section 5-5</i>	4	0.53		0.450	0.95	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.53		1.570	3.33	Sqm
		4		0.921	1.570	5.78	Sqm
		4	0.53		0.550	1.16	Sqm
		4		1.542	0.550	3.39	Sqm
	<i>Section 6-6</i>	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	0.61		0.650	0.80	Sqm
		2		0.650	0.650	0.85	Sqm
		2	5.00		0.550	5.50	Sqm
		2		0.650	0.550	0.72	Sqm
		2	0.37		0.250	0.19	Sqm
		2		0.650	0.250	0.33	Sqm
		2	0.20		0.400	0.16	Sqm
		2		0.650	0.400	0.52	Sqm
		2	1.80		0.500	1.80	Sqm
		2		0.650	0.500	0.65	Sqm
		2	0.73		1.100	1.60	Sqm
		2		0.650	1.100	1.43	Sqm
	Crest	2	0.96		1.329	2.56	Sqm
		2		0.650	1.329	1.73	Sqm
	Toe Wall D/S Portion	2	2.15		0.300	1.29	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	1.85		0.600	2.22	Sqm
		2		0.450	0.600	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.150	0.90	Sqm
		4		1.350	0.150	0.81	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.600	3.60	Sqm
		4		0.300	0.600	0.72	Sqm
	TOTAL					103.13	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.650		7.95	Sqm
	TOTAL					7.95	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	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.						
	<i>On Abutment Top (Left Side)</i>	1	6.99	0.450		3.14	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.99	0.450		3.14	Sqm
	TOTAL					6.29	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		0.969		0.97	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.23	1.197		2.949	Cum
	<i>Section 2-2</i>	2	3.00	0.608		3.645	Cum
	<i>Section 3-3</i>	2	0.77	0.432		0.665	Cum
	<i>Section 5-5</i>	2	0.57	1.197		1.373	Cum
	<i>Section 6-6</i>	2	1.08	0.432		0.933	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.15	0.150	0.600	0.645	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					11.45	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KHAIRA MR.							
SHARDA TYPE FALL OF HEIGHT .304 METER AT CH. 3.075 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.93	1.412	2.471	6.469	Cum
	<i>Section 2-2</i>	2	2.00	1.230	2.471	12.157	Cum
	<i>Section 3-3</i>	2	2.70	1.110	2.271	13.612	Cum
	<i>Section 5-5</i>	2	2.68	1.562	2.471	20.700	Cum
	<i>Section 6-6</i>	2	1.09	1.110	2.271	5.495	Cum
	<i>U/S Key Floor</i>	1	0.63	1.750	0.850	0.930	Cum
	<i>U/S Floor</i>	1	2.00	1.750	1.154	4.039	Cum
	<i>D/S Floor</i>	1	2.00	1.750	0.850	2.975	Cum
		1	3.00	1.750	0.650	3.413	Cum
	<i>D/S Key Floor</i>	1	0.63	1.750	0.850	0.930	Cum
	<i>Toe Wall D/S Portion</i>	1	6.15	0.750	0.900	4.151	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.00	0.600	0.750	1.800	Cum
						76.67	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.						
	<i>PCC Below Floor</i>	1	0.54	1.750	0.150	0.14	Cum
		1	0.78	1.750	0.150	0.21	Cum
		1	3.57	1.750	0.150	0.94	Cum
		1	0.28	1.750	0.150	0.07	Cum
		1	1.45	1.750	0.150	0.38	Cum
		1	0.78	1.750	0.150	0.21	Cum
		1	0.54	1.750	0.150	0.14	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.93	1.412	0.150	0.39	Cum
	<i>Section 2-2</i>	2	2.00	1.230	0.150	0.74	Cum
	<i>Section 3-3</i>	2	2.70	1.110	0.150	0.90	Cum
	<i>Section 5-5</i>	2	2.68	1.562	0.150	1.26	Cum
	<i>Section 6-6</i>	2	1.09	1.110	0.150	0.36	Cum
	<i>Toe Wall D/S Portion</i>	1	6.15	0.750	0.300	1.38	Cum
	<i>Toe Wall D/S Portion</i>	1	5.85	0.450	0.600	1.58	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.600	0.150	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.300	0.600	0.72	Cum
	TOTAL					9.78	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.70	0.450	0.450	0.28	Cum
		2	0.70	0.781	1.104	1.21	Cum
		2	0.70	1.262	0.500	0.89	Cum
	<i>Section 2-2</i>	2	2.00	0.450	0.450	0.81	Cum
		2	2.00	0.690	0.800	2.21	Cum
		2	2.00	1.080	0.500	2.16	Cum
	<i>Section 3-3</i>	2	2.37	0.450	0.450	0.96	Cum
		2	2.37	0.630	0.600	1.79	Cum
		2	2.37	0.960	0.500	2.28	Cum
	<i>Section 5-5</i>	2	2.63	0.450	0.450	1.07	Cum
		2	2.63	0.781	1.104	4.54	Cum
		2	2.63	1.262	0.500	3.32	Cum
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.63	1.750	0.700	0.77	Cum
		1	4.00	1.750	0.500	3.50	Cum
		1	0.50	1.750	0.200	0.17	Cum
		1	0.20	1.750	0.400	0.14	Cum
		1	2.80	1.750	0.500	2.45	Cum
		1	0.63	1.750	0.700	0.77	Cum
	<i>Crest</i>	1	0.71	1.750	0.688	0.85	Cum
	TOTAL					33.49	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.						
	<i>Over Crest</i>	1	0.60	1.750	0.150	0.16	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.12	0.450	0.050	0.23	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.12	0.450	0.050	0.23	Cum
	TOTAL					0.61	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	33.49	0.00	0.100	7850.000	788.79	Kg
	Total Weight in Metric Tonne					0.79	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.70		0.450	1.26	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.70		1.104	3.10	Sqm
		4		0.781	1.104	3.45	Sqm
		4	0.70		0.500	1.41	Sqm
		4		1.262	0.500	2.52	Sqm
	<i>Section 2-2</i>	4	2.00		0.450	3.60	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.00		0.800	6.40	Sqm
		4		0.690	0.800	2.21	Sqm
		4	2.00		0.500	4.00	Sqm
		4		1.080	0.500	2.16	Sqm
	<i>Section 3-3</i>	4	2.37		0.450	4.27	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.37		0.600	5.69	Sqm
		4		0.630	0.600	1.51	Sqm
		4	2.37		0.500	4.74	Sqm
		4		0.960	0.500	1.92	Sqm
	<i>Section 5-5</i>	4	2.63		0.450	4.74	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.63		1.104	11.63	Sqm
		4		0.781	1.104	3.45	Sqm
		4	2.63		0.500	5.27	Sqm
		4		1.262	0.500	2.52	Sqm
	<i>Section 6-6</i>	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		1.750	0.700	2.45	Sqm
		2	4.00		0.500	4.00	Sqm
		2		1.750	0.500	1.75	Sqm
		2	0.50		0.200	0.20	Sqm
		2		1.750	0.200	0.70	Sqm
		2	0.20		0.400	0.16	Sqm
		2		1.750	0.400	1.40	Sqm
		2	2.80		0.500	2.80	Sqm
		2		1.750	0.500	1.75	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.750	0.700	2.45	Sqm
	Crest	2	0.71		0.688	0.97	Sqm
		2		1.750	0.688	2.41	Sqm
	Toe Wall D/S Portion	2	6.15		0.300	3.69	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	5.85		0.600	7.02	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					134.63	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.232		8.93	Sqm
	TOTAL					8.93	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.150	0.300	0.69	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	2.00	1.150	0.150	0.69	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.12	0.450		4.55	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.12	0.450		4.55	Sqm
	TOTAL					9.11	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.387		1.39	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.93	1.291		2.394	Cum
	<i>Section 2-2</i>	2	2.00	0.897		3.588	Cum
	<i>Section 3-3</i>	2	2.70	0.693		3.742	Cum
	<i>Section 5-5</i>	2	2.68	1.291		6.924	Cum
	<i>Section 6-6</i>	2	1.09	0.693		1.511	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	6.15	0.150	0.600	1.845	Cum
		2	2.00	0.150	0.600	0.360	Cum
	TOTAL					21.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.372 METER AT CH. 3.850 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.39	2.053	2.864	16.393	Cum
	<i>Section 2-2</i>	2	4.00	1.230	2.864	28.182	Cum
	<i>Section 3-3</i>	2	3.70	1.110	2.664	21.882	Cum
	<i>Section 5-5</i>	2	2.55	2.203	2.864	32.165	Cum
	<i>Section 6-6</i>	2	1.09	1.110	2.664	6.446	Cum
	<i>U/S Key Floor</i>	1	0.58	1.750	0.650	0.654	Cum
	<i>U/S Floor</i>	1	2.50	1.750	2.522	11.034	Cum
	<i>D/S Floor</i>	1	4.00	1.750	1.150	8.050	Cum
		1	4.00	1.750	0.950	6.650	Cum
	<i>D/S Key Floor</i>	1	0.79	1.750	1.500	2.067	Cum
	<i>Toe Wall D/S Portion</i>	1	6.15	0.750	0.900	4.151	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.00	0.600	0.750	1.800	Cum
						139.47	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.						
	<i>PCC Below Floor</i>	1	0.54	1.750	0.150	0.14	Cum
		1	0.56	1.750	0.150	0.15	Cum
		1	6.17	1.750	0.150	1.62	Cum
		1	0.50	1.750	0.150	0.13	Cum
		1	1.97	1.750	0.150	0.52	Cum
		1	1.51	1.750	0.150	0.40	Cum
		1	0.54	1.750	0.150	0.14	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.39	2.053	0.150	0.86	Cum
	<i>Section 2-2</i>	2	4.00	1.230	0.150	1.48	Cum
	<i>Section 3-3</i>	2	3.70	1.110	0.150	1.23	Cum
	<i>Section 5-5</i>	2	2.55	2.203	0.150	1.68	Cum
	<i>Section 6-6</i>	2	1.09	1.110	0.150	0.36	Cum
	<i>Toe Wall D/S Portion</i>	1	6.15	0.750	0.300	1.38	Cum
	<i>Toe Wall D/S Portion</i>	1	5.85	0.450	0.600	1.58	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.600	0.150	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.300	0.600	0.72	Cum
	TOTAL					12.75	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.17	0.450	0.450	0.47	Cum
		2	1.17	1.102	2.172	5.59	Cum
		2	1.17	1.903	0.800	3.56	Cum
	<i>Section 2-2</i>	2	4.00	0.450	0.450	1.62	Cum
		2	4.00	0.690	0.800	4.42	Cum
		2	4.00	1.080	0.800	6.91	Cum
	<i>Section 3-3</i>	2	3.37	0.450	0.450	1.36	Cum
		2	3.37	0.630	0.600	2.55	Cum
		2	3.37	0.960	0.650	4.21	Cum
	<i>Section 5-5</i>	2	2.50	0.450	0.450	1.01	Cum
		2	2.50	1.102	2.172	11.98	Cum
		2	2.50	1.903	0.800	7.63	Cum
	<i>Section 6-6</i>	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	0.650	1.96	Cum
	<i>Floor</i>	1	0.58	1.750	0.500	0.50	Cum
		1	6.50	1.750	0.800	9.10	Cum
		1	0.57	1.750	0.350	0.35	Cum
		1	0.20	1.750	0.550	0.19	Cum
		1	3.80	1.750	0.650	4.32	Cum
		1	0.79	1.750	1.350	1.86	Cum
	<i>Crest</i>	1	1.13	1.750	1.740	3.45	Cum
	TOTAL					74.87	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.						
	<i>Over Crest</i>	1	0.85	1.750	0.150	0.22	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	13.72	0.450	0.050	0.31	Cum
	<i>On Abutment Top (Right Side)</i>	1	13.72	0.450	0.050	0.31	Cum
	TOTAL					0.84	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	74.87	0.00	0.225	7850.000	1763.27	Kg
	Total Weight in Metric Tonne					1.76	MT
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.17		0.450	2.10	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.17		2.172	10.16	Sqm
		4		1.102	2.172	9.57	Sqm
		4	1.17		0.800	3.74	Sqm
		4		1.903	0.800	6.09	Sqm
	<i>Section 2-2</i>	4	4.00		0.450	7.20	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.00		0.800	12.80	Sqm
		4		0.690	0.800	2.21	Sqm
		4	4.00		0.800	12.80	Sqm
		4		1.080	0.800	3.46	Sqm
	<i>Section 3-3</i>	4	3.37		0.450	6.07	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.37		0.600	8.09	Sqm
		4		0.630	0.600	1.51	Sqm
		4	3.37		0.650	8.76	Sqm
		4		0.960	0.650	2.50	Sqm
	<i>Section 5-5</i>	4	2.50		0.450	4.51	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.50		2.172	21.76	Sqm
		4		1.102	2.172	9.57	Sqm
		4	2.50		0.800	8.01	Sqm
		4		1.903	0.800	6.09	Sqm
	<i>Section 6-6</i>	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		0.650	4.08	Sqm
		4		0.960	0.650	2.50	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		1.750	0.500	1.75	Sqm
		2	6.50		0.800	10.40	Sqm
		2		1.750	0.800	2.80	Sqm
		2	0.57		0.350	0.40	Sqm
		2		1.750	0.350	1.23	Sqm
		2	0.20		0.550	0.22	Sqm
		2		1.750	0.550	1.93	Sqm
		2	3.80		0.650	4.94	Sqm
		2		1.750	0.650	2.28	Sqm
		2	0.79		1.350	2.13	Sqm
		2		1.750	1.350	4.73	Sqm
	Crest	2	1.13		1.740	3.94	Sqm
		2		1.750	1.740	6.09	Sqm
	Toe Wall D/S Portion	2	6.15		0.300	3.69	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	5.85		0.600	7.02	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					227.89	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.232		8.93	Sqm
	TOTAL					8.93	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.150	0.300	0.69	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	2.00	1.150	0.150	0.69	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	13.72	0.450		6.18	Sqm
	<i>On Abutment Top (Right Side)</i>	1	13.72	0.450		6.18	Sqm
	TOTAL					12.35	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		5.513		5.51	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.39	1.793		4.999	Cum
	<i>Section 2-2</i>	2	4.00	0.942		7.536	Cum
	<i>Section 3-3</i>	2	3.70	0.716		5.295	Cum
	<i>Section 5-5</i>	2	2.55	1.793		9.141	Cum
	<i>Section 6-6</i>	2	1.09	0.716		1.560	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	6.15	0.150	0.600	1.845	Cum
		2	2.00	0.150	0.600	0.360	Cum
	TOTAL					36.25	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 0.305 METER AT CH. 6.635 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.353	1.379	4.534	Cum
	<i>Section 2-2</i>	2	2.30	1.690	1.379	10.720	Cum
	<i>Section 3-3</i>	2	4.00	1.570	1.179	14.808	Cum
	<i>below bridge</i>	2	6.50	1.570	0.850	17.349	Cum
	<i>Section 5-5</i>	2	2.42	1.503	1.379	10.023	Cum
	<i>Section 6-6</i>	2	0.63	1.050	1.179	1.560	Cum
	<i>U/S Key Floor</i>	1	0.63	1.100	0.850	0.584	Cum
	<i>U/S Floor</i>	1	2.00	1.100	1.155	2.541	Cum
	<i>D/S Floor</i>	1	2.50	1.100	1.000	2.750	Cum
		1	4.30	1.100	0.800	3.784	Cum
	<i>D/S Key Floor</i>	1	0.63	1.100	0.850	0.584	Cum
	<i>Toe Wall D/S Portion</i>	1	5.20	0.750	0.900	3.510	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.75	1.400	0.750	1.838	Cum
						74.59	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.						
	<i>PCC Below Floor</i>	1	0.54	1.100	0.150	0.09	Cum
		1	0.78	1.100	0.150	0.13	Cum
		1	4.07	1.100	0.150	0.67	Cum
		1	0.28	1.100	0.150	0.05	Cum
		1	2.75	1.100	0.150	0.45	Cum
		1	0.78	1.100	0.150	0.13	Cum
		1	0.54	1.100	0.150	0.09	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.353	0.150	0.49	Cum
	<i>Section 2-2</i>	2	2.30	1.690	0.300	2.33	Cum
	<i>Section 3-3</i>	2	4.00	1.570	0.300	3.77	Cum
	<i>Section 5-5</i>	2	2.42	1.503	0.150	1.09	Cum
	<i>Section 6-6</i>	2	0.63	1.050	0.150	0.20	Cum
	<i>Toe Wall D/S Portion</i>	1	5.20	0.750	0.300	1.17	Cum
	<i>Toe Wall D/S Portion</i>	1	4.90	0.450	0.600	1.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.75	1.400	0.150	0.37	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.300	0.600	0.63	Cum
	TOTAL					12.98	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	0.450	0.450	0.46	Cum
		2	1.14	0.752	1.005	1.72	Cum
		2	1.14	1.203	0.500	1.37	Cum
	<i>Section 2-2</i>	2	2.15	0.820	0.500	1.76	Cum
		2	2.15	1.030	0.700	3.10	Cum
		2	2.15	1.390	1.000	5.98	Cum
	<i>Section 3-3</i>	2	3.70	0.820	0.500	3.03	Cum
		2	3.70	0.970	0.500	3.59	Cum
		2	3.70	1.270	1.200	11.28	Cum
	<i>Section 5-5</i>	2	2.37	0.450	0.450	0.96	Cum
		2	2.37	0.752	1.005	3.59	Cum
		2	2.37	1.203	0.500	2.86	Cum
	<i>Section 6-6</i>	2	1.27	0.450	0.450	0.51	Cum
		2	1.27	0.600	0.500	0.76	Cum
		2	1.27	0.900	0.500	1.14	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	5.500	0.300	-2.71	Cum
	<i>Floor</i>	1	0.63	1.100	0.700	0.48	Cum
		1	4.50	1.100	0.650	3.22	Cum
		1	0.50	1.100	0.200	0.11	Cum
		1	0.20	1.100	0.400	0.09	Cum
		1	4.10	1.100	0.500	2.26	Cum
		1	0.63	1.100	0.700	0.48	Cum
	<i>Crest</i>	1	0.70	1.100	0.632	0.48	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					46.52	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	0.60	1.100	0.150	0.10	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	6.12	0.450	0.050	0.14	Cum
	On Abutment Top (Right Side)	1	6.12	0.450	0.050	0.14	Cum
	Slab Bridge						
	Slab	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
	300 mm thick pedestal	2	0.82	5.500	0.300	2.71	Cum
	TOTAL					8.43	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	31	2.36		1.578	115.5	Kg
a2	10	10	5.88		0.616	36.2	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	2.28		0.616	26.7	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	1.80		0.888	38.3	Kg
	Taking Skin reinforcement @0.3% of M-20	46.52	0.00	0.140	7850.000	1095.4	Kg
	Total Reinforcement Steel (in kg)					1481.3	Kg
	Total Weight in Metric Tonne					1.48	MT
5	Providing shuttering including strutting, propping 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	2.05	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.14		1.005	4.58	Sqm
		4		0.752	1.005	3.02	Sqm
		4	1.14		0.500	2.28	Sqm
		4		1.203	0.500	2.41	Sqm
	Section 2-2	4	2.15		0.500	4.30	Sqm
		4		0.820	0.500	1.64	Sqm
		4	2.15		0.700	6.02	Sqm
		4		1.030	0.700	2.88	Sqm
		4	2.15		1.000	8.60	Sqm
		4		1.390	1.000	5.56	Sqm
	Section 3-3	4	3.70		0.500	7.40	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.70		0.500	7.40	Sqm
		4		0.970	0.500	1.94	Sqm
		4	3.70		1.200	17.76	Sqm
		4		1.270	1.200	6.10	Sqm
	Section 5-5	4	2.37		0.450	4.27	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.37		1.005	9.54	Sqm
		4		0.752	1.005	3.02	Sqm
		4	2.37		0.500	4.75	Sqm
		4		1.203	0.500	2.41	Sqm
	Section 6-6	4	1.27		0.450	2.28	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.27		0.500	2.53	Sqm
		4		0.600	0.500	1.20	Sqm
		4	1.27		0.500	2.53	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	4.50		0.650	5.85	Sqm
		2		1.100	0.650	1.43	Sqm
		2	0.50		0.200	0.20	Sqm
		2		1.100	0.200	0.44	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.20		0.400	0.16	Sqm
		2		1.100	0.400	0.88	Sqm
		2	4.10		0.500	4.10	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		0.632	0.88	Sqm
		2		1.100	0.632	1.39	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		1.400	0.150	0.84	Sqm
	Toe Wall for resting Brick Edging	4	1.75		0.600	4.20	Sqm
		4		0.300	0.600	0.72	Sqm
	TOTAL					160.39	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.						
	<i>In D/S Portion On Slopes</i>	2	1.75	2.052		7.18	Sqm
	TOTAL					7.18	Sqm
7	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.75	0.500	0.300	0.26	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	0.500	0.150	0.26	Cum
9	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	6.12	0.450		2.75	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.12	0.450		2.75	Sqm
	TOTAL					5.50	Sqm
10	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.112		1.11	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	0.453		1.101	Cum
	<i>Section 2-2</i>	2	2.30	1.230		5.656	Cum
	<i>Section 3-3</i>	2	4.00	1.046		8.369	Cum
	<i>Section 5-5</i>	2	2.42	0.453		2.192	Cum
	<i>Section 6-6</i>	2	0.63	0.317		0.400	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.20	0.150	0.600	1.560	Cum
		2	1.75	0.150	0.600	0.315	Cum
	TOTAL					20.70	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE BRIDGE/FALL OF HEIGHT 1.372 METER AT CH. 8.450 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.33	1.963	2.464	12.880	Cum
	<i>Section 2-2</i>	2	3.50	1.830	2.464	31.564	Cum
	<i>Section 3-3</i>	2	4.40	1.710	2.264	34.069	Cum
	<i>below bridge</i>	2	6.50	1.710	0.850	18.896	Cum
	<i>Section 5-5</i>	2	2.25	2.113	2.464	23.424	Cum
	<i>Section 6-6</i>	2	0.42	1.020	2.264	1.917	Cum
	<i>U/S Key Floor</i>	1	0.58	0.750	0.650	0.280	Cum
	<i>U/S Floor</i>	1	2.50	0.750	2.472	4.635	Cum
	<i>D/S Floor</i>	1	3.50	0.750	1.100	2.888	Cum
		1	4.70	0.750	0.900	3.173	Cum
	<i>D/S Key Floor</i>	1	0.73	0.750	1.250	0.680	Cum
	<i>Toe Wall D/S Portion</i>	1	4.70	0.750	0.900	3.173	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.50	1.400	0.750	1.575	Cum
						139.15	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.						
	<i>PCC Below Floor</i>	1	0.54	0.750	0.150	0.06	Cum
		1	0.56	0.750	0.150	0.06	Cum
		1	5.62	0.750	0.150	0.63	Cum
		1	0.50	0.750	0.150	0.06	Cum
		1	2.70	0.750	0.150	0.30	Cum
		1	1.57	0.750	0.150	0.18	Cum
		1	0.54	0.750	0.150	0.06	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.33	1.963	0.150	0.78	Cum
	<i>Section 2-2</i>	2	3.50	1.830	0.300	3.84	Cum
	<i>Section 3-3</i>	2	4.40	1.710	0.300	4.51	Cum
	<i>Section 5-5</i>	2	2.25	2.113	0.150	1.43	Cum
	<i>Section 6-6</i>	2	0.42	1.020	0.150	0.13	Cum
	<i>Toe Wall D/S Portion</i>	1	4.70	0.750	0.300	1.06	Cum
	<i>Toe Wall D/S Portion</i>	1	4.40	0.450	0.600	1.19	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.400	0.150	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.300	0.600	0.54	Cum
	TOTAL					15.15	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.11	0.450	0.450	0.45	Cum
		2	1.11	1.057	2.022	4.73	Cum
		2	1.11	1.813	0.750	3.01	Cum
	<i>Section 2-2</i>	2	3.50	0.820	0.500	2.87	Cum
		2	3.50	1.100	0.933	7.18	Cum
		2	3.50	1.530	1.500	16.07	Cum
	<i>Section 3-3</i>	2	4.12	0.820	0.500	3.37	Cum
		2	4.12	1.040	0.733	6.27	Cum
		2	4.12	1.410	1.700	19.73	Cum
	<i>Section 5-5</i>	2	2.21	0.450	0.450	0.89	Cum
		2	2.21	1.057	2.022	9.42	Cum
		2	2.21	1.813	0.750	6.00	Cum
	<i>Section 6-6</i>	2	1.20	0.450	0.450	0.48	Cum
		2	1.20	0.585	0.450	0.63	Cum
		2	1.20	0.870	0.600	1.25	Cum
	<i>deduction for M 25 grade of concrete</i>	2	0.82	5.500	0.300	-2.71	Cum
	<i>Floor</i>	1	0.58	0.750	0.500	0.22	Cum
		1	6.00	0.750	0.750	3.38	Cum
		1	0.52	0.750	0.350	0.14	Cum
		1	0.20	0.750	0.500	0.08	Cum
		1	4.50	0.750	0.600	2.03	Cum
		1	0.73	0.750	1.100	0.60	Cum
	<i>Crest</i>	1	0.70	0.750	0.632	0.33	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					86.40	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.						
	<i>Over Crest</i>	1	0.80	0.750	0.150	0.09	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	7.80	0.450	0.050	0.18	Cum
	<i>On Abutment Top (Right Side)</i>	1	7.80	0.450	0.050	0.18	Cum
	<i>Slab Bridge</i>						
	<i>Slab</i>	1	1.55	5.500	0.328	2.80	Cum
	<i>Wearing coat</i>	1	1.55	4.500	0.070	0.49	Cum
	<i>Dirt wall</i>	2	0.40	5.500	0.300	1.32	Cum
	<i>300 mm thick pedestal</i>	2	0.82	5.500	0.300	2.71	Cum
	TOTAL					7.75	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	31	2.01		1.578	98.3	Kg
a2	10	8	5.88		0.616	29.0	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	1.93		0.616	22.6	Kg
a5	10	6	5.80		0.616	21.5	Kg
x1	12	32	2.50		0.888	71.0	Kg
x2	16	32	1.32		1.578	66.4	Kg
x3	12	24	1.45		0.888	30.9	Kg
	Taking Skin reinforcement @0.3% of M-20	86.40	0.00	0.259	7850.000	2034.8	Kg
	<i>Total Reinforcement Steel (in kg)</i>					2381.2	Kg
	Total Weight in Metric Tonne					2.38	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.11		0.450	1.99	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.11		2.022	8.95	Sqm
		4		1.057	2.022	8.54	Sqm
		4	1.11		0.750	3.32	Sqm
		4		1.813	0.750	5.44	Sqm
	<i>Section 2-2</i>	4	3.50		0.500	7.00	Sqm
		4		0.820	0.500	1.64	Sqm
		4	3.50		0.933	13.06	Sqm
		4		1.100	0.933	4.11	Sqm
		4	3.50		1.500	21.00	Sqm
		4		1.530	1.500	9.18	Sqm
	<i>Section 3-3</i>	4	4.12		0.500	8.23	Sqm
		4		0.820	0.500	1.64	Sqm
		4	4.12		0.733	12.07	Sqm
		4		1.040	0.733	3.05	Sqm
		4	4.12		1.700	27.98	Sqm
		4		1.410	1.700	9.59	Sqm
	<i>Section 5-5</i>	4	2.21		0.450	3.97	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.21		2.022	17.84	Sqm
		4		1.057	2.022	8.54	Sqm
		4	2.21		0.750	6.62	Sqm
		4		1.813	0.750	5.44	Sqm
	<i>Section 6-6</i>	4	1.20		0.450	2.15	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.20		0.450	2.15	Sqm
		4		0.585	0.450	1.05	Sqm
		4	1.20		0.600	2.87	Sqm
		4		0.870	0.600	2.09	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		0.750	0.500	0.75	Sqm
		2	6.00		0.750	9.00	Sqm
		2		0.750	0.750	1.13	Sqm
		2	0.52		0.350	0.37	Sqm
		2		0.750	0.350	0.53	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.20		0.500	0.20	Sqm
		2		0.750	0.500	0.75	Sqm
		2	4.50		0.600	5.40	Sqm
		2		0.750	0.600	0.90	Sqm
		2	0.73		1.100	1.60	Sqm
		2		0.750	1.100	1.65	Sqm
	Crest	2	0.70		0.632	0.88	Sqm
		2		0.750	0.632	0.95	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		1.400	0.150	0.84	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.600	3.60	Sqm
		4		0.300	0.600	0.72	Sqm
	TOTAL					241.75	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.052		6.16	Sqm
	TOTAL					6.16	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	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.						
	<i>On Abutment Top (Left Side)</i>	1	7.80	0.450		3.51	Sqm
	<i>On Abutment Top (Right Side)</i>	1	7.80	0.450		3.51	Sqm
	TOTAL					7.02	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		3.973		3.97	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.33	1.316		3.505	Cum
	<i>Section 2-2</i>	2	3.50	1.657		11.599	Cum
	<i>Section 3-3</i>	2	4.40	1.468		12.914	Cum
	<i>Section 5-5</i>	2	2.25	1.316		5.921	Cum
	<i>Section 6-6</i>	2	0.42	0.572		0.475	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.70	0.150	0.600	1.410	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					40.07	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR PRITAMPURA SUB DY.							
SHARDA TYPE FALL OF HEIGHT 1.676 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.57	2.446	1.649	12.669	Cum
	<i>Section 2-2</i>	2	5.00	1.440	1.649	23.746	Cum
	<i>Section 3-3</i>	2	3.20	1.320	1.449	12.241	Cum
	<i>Section 5-5</i>	2	5.90	2.596	1.649	50.488	Cum
	<i>Section 6-6</i>	2	3.31	1.320	1.449	12.643	Cum
	<i>U/S Key Floor</i>	1	0.58	3.820	0.650	1.428	Cum
	<i>U/S Floor</i>	1	3.00	3.820	2.926	33.532	Cum
	<i>D/S Floor</i>	1	5.00	3.820	1.250	23.875	Cum
		1	3.50	3.820	1.050	14.039	Cum
	<i>D/S Key Floor</i>	1	0.89	3.820	1.900	6.441	Cum
	<i>Toe Wall D/S Portion</i>	1	13.07	0.750	0.900	8.822	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						202.62	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.						
	<i>PCC Below Floor</i>	1	0.54	3.820	0.150	0.31	Cum
		1	0.56	3.820	0.150	0.32	Cum
		1	7.67	3.820	0.150	4.39	Cum
		1	0.50	3.820	0.150	0.28	Cum
		1	1.27	3.820	0.150	0.73	Cum
		1	1.96	3.820	0.150	1.12	Cum
		1	0.54	3.820	0.150	0.31	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.57	2.446	0.150	1.15	Cum
	<i>Section 2-2</i>	2	5.00	1.440	0.150	2.16	Cum
	<i>Section 3-3</i>	2	3.20	1.320	0.150	1.27	Cum
	<i>Section 5-5</i>	2	5.90	2.596	0.150	4.59	Cum
	<i>Section 6-6</i>	2	3.31	1.320	0.150	1.31	Cum
	<i>Toe Wall D/S Portion</i>	1	13.07	0.750	0.300	2.94	Cum
	<i>Toe Wall D/S Portion</i>	1	12.77	0.450	0.600	3.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					25.96	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.35	0.450	0.450	0.54	Cum
		2	1.35	1.298	2.826	9.87	Cum
		2	1.35	2.296	0.900	5.56	Cum
	<i>Section 2-2</i>	2	5.00	0.450	0.450	2.03	Cum
		2	5.00	0.795	1.150	9.14	Cum
		2	5.00	1.290	0.900	11.61	Cum
	<i>Section 3-3</i>	2	2.77	0.450	0.450	1.12	Cum
		2	2.77	0.735	0.950	3.86	Cum
		2	2.77	1.170	0.750	4.85	Cum
	<i>Section 5-5</i>	2	5.85	0.450	0.450	2.37	Cum
		2	5.85	1.298	2.826	42.94	Cum
		2	5.85	2.296	0.900	24.19	Cum
	<i>Section 6-6</i>	2	3.89	0.450	0.450	1.58	Cum
		2	3.89	0.735	0.950	5.43	Cum
		2	3.89	1.170	0.750	6.83	Cum
	<i>Floor</i>	1	0.58	3.820	0.500	1.10	Cum
		1	8.00	3.820	0.900	27.50	Cum
		1	0.57	3.820	0.350	0.77	Cum
		1	0.20	3.820	0.650	0.50	Cum
		1	3.30	3.820	0.750	9.45	Cum
		1	0.89	3.820	1.750	5.93	Cum
	<i>Crest</i>	1	1.31	3.820	2.212	11.07	Cum
	TOTAL					188.25	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.						
	<i>Over Crest</i>	1	0.95	3.820	0.150	0.54	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	20.34	0.450	0.050	0.46	Cum
	<i>On Abutment Top (Right Side)</i>	1	20.34	0.450	0.050	0.46	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	188.25	0.00	0.565	7850.000	4433.37	Kg
	Total Weight in Metric Tonne					4.43	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.35		0.450	2.42	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.35		2.826	15.21	Sqm
		4		1.298	2.826	14.67	Sqm
		4	1.35		0.900	4.84	Sqm
		4		2.296	0.900	8.27	Sqm
	<i>Section 2-2</i>	4	5.00		0.450	9.00	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.00		1.150	23.00	Sqm
		4		0.795	1.150	3.66	Sqm
		4	5.00		0.900	18.00	Sqm
		4		1.290	0.900	4.64	Sqm
	<i>Section 3-3</i>	4	2.77		0.450	4.98	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.77		0.950	10.51	Sqm
		4		0.735	0.950	2.79	Sqm
		4	2.77		0.750	8.30	Sqm
		4		1.170	0.750	3.51	Sqm
	<i>Section 5-5</i>	4	5.85		0.450	10.54	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.85		2.826	66.17	Sqm
		4		1.298	2.826	14.67	Sqm
		4	5.85		0.900	21.07	Sqm
		4		2.296	0.900	8.27	Sqm
	<i>Section 6-6</i>	4	3.89		0.450	7.00	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.89		0.950	14.78	Sqm
		4		0.735	0.950	2.79	Sqm
		4	3.89		0.750	11.67	Sqm
		4		1.170	0.750	3.51	Sqm
	Floor	2	0.58		0.500	0.58	Sqm
		2		3.820	0.500	3.82	Sqm
		2	8.00		0.900	14.40	Sqm
		2		3.820	0.900	6.88	Sqm
		2	0.57		0.350	0.40	Sqm
		2		3.820	0.350	2.67	Sqm
		2	0.20		0.650	0.26	Sqm
		2		3.820	0.650	4.97	Sqm
		2	3.30		0.750	4.95	Sqm
		2		3.820	0.750	5.73	Sqm
		2	0.89		1.750	3.11	Sqm
		2		3.820	1.750	13.37	Sqm
	Crest	2	1.31		2.212	5.80	Sqm
		2		3.820	2.212	16.90	Sqm
	Toe Wall D/S Portion	2	13.07		0.300	7.84	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	12.77		0.600	15.32	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					416.38	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.						
	<i>In D/S Portion On Slopes</i>	2	3.00	4.763		28.58	Sqm
	TOTAL					28.58	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.00	3.220	0.300	2.90	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	3.220	0.150	2.90	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	20.34	0.450		9.15	Sqm
	<i>On Abutment Top (Right Side)</i>	1	20.34	0.450		9.15	Sqm
	TOTAL					18.30	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		14.933		14.93	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.57	0.423		1.329	Cum
	<i>Section 2-2</i>	2	5.00	0.423		4.230	Cum
	<i>Section 3-3</i>	2	3.20	0.280		1.792	Cum
	<i>Section 5-5</i>	2	5.90	0.423		4.989	Cum
	<i>Section 6-6</i>	2	3.31	0.280		1.851	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	13.07	0.150	0.600	3.921	Cum
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					33.58	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 10.600 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.01	1.594	1.934	6.252	Cum
	<i>Section 2-2</i>	2	2.50	1.320	1.934	12.764	Cum
	<i>Section 3-3</i>	2	2.45	1.200	1.734	10.196	Cum
	<i>Section 5-5</i>	2	5.08	1.744	1.934	34.292	Cum
	<i>Section 6-6</i>	2	2.73	1.200	1.734	11.340	Cum
	<i>U/S Key Floor</i>	1	0.63	2.200	0.850	1.169	Cum
	<i>U/S Floor</i>	1	1.75	2.200	1.307	5.032	Cum
	<i>D/S Floor</i>	1	2.50	2.200	0.850	4.675	Cum
		1	2.75	2.200	0.650	3.933	Cum
	<i>D/S Key Floor</i>	1	0.63	2.200	0.850	1.169	Cum
	<i>Toe Wall D/S Portion</i>	1	10.05	0.750	0.900	6.784	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.50	0.600	0.750	2.250	Cum
						99.86	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.						
	<i>PCC Below Floor</i>	1	0.54	2.200	0.150	0.18	Cum
		1	0.78	2.200	0.150	0.26	Cum
		1	3.83	2.200	0.150	1.26	Cum
		1	0.28	2.200	0.150	0.09	Cum
		1	1.19	2.200	0.150	0.39	Cum
		1	0.78	2.200	0.150	0.26	Cum
		1	0.54	2.200	0.150	0.18	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.01	1.594	0.150	0.48	Cum
	<i>Section 2-2</i>	2	2.50	1.320	0.150	0.99	Cum
	<i>Section 3-3</i>	2	2.45	1.200	0.150	0.88	Cum
	<i>Section 5-5</i>	2	5.08	1.744	0.150	2.66	Cum
	<i>Section 6-6</i>	2	2.73	1.200	0.150	0.98	Cum
	<i>Toe Wall D/S Portion</i>	1	10.05	0.750	0.300	2.26	Cum
	<i>Toe Wall D/S Portion</i>	1	9.75	0.450	0.600	2.63	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.600	0.150	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.300	0.600	0.90	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.79	0.450	0.450	0.32	Cum
		2	0.79	0.872	1.407	1.94	Cum
		2	0.79	1.444	0.500	1.14	Cum
	<i>Section 2-2</i>	2	2.50	0.450	0.450	1.01	Cum
		2	2.50	0.735	0.950	3.49	Cum
		2	2.50	1.170	0.500	2.93	Cum
	<i>Section 3-3</i>	2	2.08	0.450	0.450	0.84	Cum
		2	2.08	0.675	0.750	2.10	Cum
		2	2.08	1.050	0.500	2.18	Cum
	<i>Section 5-5</i>	2	5.04	0.450	0.450	2.04	Cum
		2	5.04	0.872	1.407	12.37	Cum
		2	5.04	1.444	0.500	7.28	Cum
	<i>Section 6-6</i>	2	3.25	0.450	0.450	1.32	Cum
		2	3.25	0.675	0.750	3.29	Cum
		2	3.25	1.050	0.500	3.41	Cum
	<i>Floor</i>	1	0.63	2.200	0.700	0.96	Cum
		1	4.25	2.200	0.500	4.68	Cum
		1	0.51	2.200	0.200	0.22	Cum
		1	0.20	2.200	0.400	0.18	Cum
		1	2.55	2.200	0.500	2.81	Cum
		1	0.63	2.200	0.700	0.96	Cum
	<i>Crest</i>	1	0.79	2.200	0.915	1.60	Cum
	TOTAL					57.05	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.						
	<i>Over Crest</i>	1	0.65	2.200	0.150	0.21	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	14.67	0.450	0.050	0.33	Cum
	<i>On Abutment Top (Right Side)</i>	1	14.67	0.450	0.050	0.33	Cum
	TOTAL					0.87	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	57.05	0.00	0.171	7850.000	1343.52	Kg
	Total Weight in Metric Tonne					1.34	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.79		0.450	1.42	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.79		1.407	4.44	Sqm
		4		0.872	1.407	4.91	Sqm
		4	0.79		0.500	1.58	Sqm
		4		1.444	0.500	2.89	Sqm
	<i>Section 2-2</i>	4	2.50		0.450	4.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.50		0.950	9.50	Sqm
		4		0.735	0.950	2.79	Sqm
		4	2.50		0.500	5.00	Sqm
		4		1.170	0.500	2.34	Sqm
	<i>Section 3-3</i>	4	2.08		0.450	3.74	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.08		0.750	6.23	Sqm
		4		0.675	0.750	2.03	Sqm
		4	2.08		0.500	4.15	Sqm
		4		1.050	0.500	2.10	Sqm
	<i>Section 5-5</i>	4	5.04		0.450	9.07	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.04		1.407	28.36	Sqm
		4		0.872	1.407	4.91	Sqm
		4	5.04		0.500	10.08	Sqm
		4		1.444	0.500	2.89	Sqm
	<i>Section 6-6</i>	4	3.25		0.450	5.85	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.25		0.750	9.75	Sqm
		4		0.675	0.750	2.03	Sqm
		4	3.25		0.500	6.50	Sqm
		4		1.050	0.500	2.10	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		2.200	0.700	3.08	Sqm
		2	4.25		0.500	4.25	Sqm
		2		2.200	0.500	2.20	Sqm
		2	0.51		0.200	0.20	Sqm
		2		2.200	0.200	0.88	Sqm
		2	0.20		0.400	0.16	Sqm
		2		2.200	0.400	1.76	Sqm
		2	2.55		0.500	2.55	Sqm
		2		2.200	0.500	2.20	Sqm
		2	0.63		0.700	0.88	Sqm
		2		2.200	0.700	3.08	Sqm
	Crest	2	0.79		0.915	1.45	Sqm
		2		2.200	0.915	4.03	Sqm
	Toe Wall D/S Portion	2	10.05		0.300	6.03	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	9.75		0.600	11.70	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					198.08	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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	4.003		20.02	Sqm
	TOTAL					20.02	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	1.600	0.300	1.20	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	2.50	1.600	0.150	1.20	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	14.67	0.450		6.60	Sqm
	<i>On Abutment Top (Right Side)</i>	1	14.67	0.450		6.60	Sqm
	TOTAL					13.20	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.319		1.32	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.01	0.955		1.937	Cum
	<i>Section 2-2</i>	2	2.50	0.925		4.625	Cum
	<i>Section 3-3</i>	2	2.45	0.719		3.523	Cum
	<i>Section 5-5</i>	2	5.08	0.955		9.709	Cum
	<i>Section 6-6</i>	2	2.73	0.719		3.919	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	10.05	0.150	0.600	3.015	Cum
		2	2.50	0.150	0.600	0.450	Cum
	TOTAL					28.50	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 12.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.05	1.644	1.658	5.713	Cum
	<i>Section 2-2</i>	2	3.00	1.278	1.658	12.714	Cum
	<i>Section 3-3</i>	2	1.70	1.158	1.458	5.740	Cum
	<i>Section 5-5</i>	2	4.73	1.794	1.658	28.117	Cum
	<i>Section 6-6</i>	2	2.52	1.158	1.458	8.516	Cum
	<i>U/S Key Floor</i>	1	0.63	1.600	0.850	0.850	Cum
	<i>U/S Floor</i>	1	2.00	1.600	1.460	4.672	Cum
	<i>D/S Floor</i>	1	3.00	1.600	0.850	4.080	Cum
		1	2.00	1.600	0.650	2.080	Cum
	<i>D/S Key Floor</i>	1	0.63	1.600	0.850	0.850	Cum
	<i>Toe Wall D/S Portion</i>	1	8.96	0.750	0.900	6.048	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.50	0.600	0.750	2.250	Cum
						81.63	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.						
	<i>PCC Below Floor</i>	1	0.54	1.600	0.150	0.13	Cum
		1	0.78	1.600	0.150	0.19	Cum
		1	4.42	1.600	0.150	1.06	Cum
		1	0.28	1.600	0.150	0.07	Cum
		1	0.60	1.600	0.150	0.14	Cum
		1	0.78	1.600	0.150	0.19	Cum
		1	0.54	1.600	0.150	0.13	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.05	1.644	0.150	0.52	Cum
	<i>Section 2-2</i>	2	3.00	1.278	0.150	1.15	Cum
	<i>Section 3-3</i>	2	1.70	1.158	0.150	0.59	Cum
	<i>Section 5-5</i>	2	4.73	1.794	0.150	2.54	Cum
	<i>Section 6-6</i>	2	2.52	1.158	0.150	0.88	Cum
	<i>Toe Wall D/S Portion</i>	1	8.96	0.750	0.300	2.02	Cum
	<i>Toe Wall D/S Portion</i>	1	8.66	0.450	0.600	2.34	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.600	0.150	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.300	0.600	0.90	Cum
	TOTAL					13.29	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.82	0.450	0.450	0.33	Cum
		2	0.82	0.897	1.490	2.19	Cum
		2	0.82	1.494	0.500	1.22	Cum
	<i>Section 2-2</i>	2	3.00	0.450	0.450	1.22	Cum
		2	3.00	0.714	0.880	3.77	Cum
		2	3.00	1.128	0.500	3.38	Cum
	<i>Section 3-3</i>	2	1.35	0.450	0.450	0.55	Cum
		2	1.35	0.654	0.680	1.20	Cum
		2	1.35	1.008	0.500	1.36	Cum
	<i>Section 5-5</i>	2	4.68	0.450	0.450	1.90	Cum
		2	4.68	0.897	1.490	12.52	Cum
		2	4.68	1.494	0.500	7.00	Cum
	<i>Section 6-6</i>	2	3.03	0.450	0.450	1.23	Cum
		2	3.03	0.654	0.680	2.69	Cum
		2	3.03	1.008	0.500	3.05	Cum
	<i>Floor</i>	1	0.63	1.600	0.700	0.70	Cum
		1	5.00	1.600	0.500	4.00	Cum
		1	0.35	1.600	0.200	0.11	Cum
		1	0.20	1.600	0.400	0.13	Cum
		1	1.80	1.600	0.500	1.44	Cum
		1	0.63	1.600	0.700	0.70	Cum
	<i>Crest</i>	1	0.81	1.600	1.030	1.34	Cum
	TOTAL					52.01	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.						
	<i>Over Crest</i>	1	0.65	1.600	0.150	0.16	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	13.86	0.450	0.050	0.31	Cum
	<i>On Abutment Top (Right Side)</i>	1	13.86	0.450	0.050	0.31	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	52.01	0.00	0.156	7850.000	1224.74	Kg
	Total Weight in Metric Tonne					1.22	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.82		0.450	1.47	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.82		1.490	4.88	Sqm
		4		0.897	1.490	5.35	Sqm
		4	0.82		0.500	1.64	Sqm
		4		1.494	0.500	2.99	Sqm
	<i>Section 2-2</i>	4	3.00		0.450	5.40	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.00		0.880	10.56	Sqm
		4		0.714	0.880	2.51	Sqm
		4	3.00		0.500	6.00	Sqm
		4		1.128	0.500	2.26	Sqm
	<i>Section 3-3</i>	4	1.35		0.450	2.42	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.35		0.680	3.66	Sqm
		4		0.654	0.680	1.78	Sqm
		4	1.35		0.500	2.69	Sqm
		4		1.008	0.500	2.02	Sqm
	<i>Section 5-5</i>	4	4.68		0.450	8.43	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.68		1.490	27.91	Sqm
		4		0.897	1.490	5.35	Sqm
		4	4.68		0.500	9.37	Sqm
		4		1.494	0.500	2.99	Sqm
	<i>Section 6-6</i>	4	3.03		0.450	5.45	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.03		0.680	8.23	Sqm
		4		0.654	0.680	1.78	Sqm
		4	3.03		0.500	6.05	Sqm
		4		1.008	0.500	2.02	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		1.600	0.700	2.24	Sqm
		2	5.00		0.500	5.00	Sqm
		2		1.600	0.500	1.60	Sqm
		2	0.35		0.200	0.14	Sqm
		2		1.600	0.200	0.64	Sqm
		2	0.20		0.400	0.16	Sqm
		2		1.600	0.400	1.28	Sqm
		2	1.80		0.500	1.80	Sqm
		2		1.600	0.500	1.60	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.600	0.700	2.24	Sqm
	Crest	2	0.81		1.030	1.68	Sqm
		2		1.600	1.030	3.30	Sqm
	Toe Wall D/S Portion	2	8.96		0.300	5.38	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	8.66		0.600	10.39	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					185.99	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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	3.736		18.68	Sqm
	TOTAL					18.68	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	1.000	0.300	0.75	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	1.000	0.150	0.75	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	13.86	0.450		6.24	Sqm
	<i>On Abutment Top (Right Side)</i>	1	13.86	0.450		6.24	Sqm
	TOTAL					12.48	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		2.011		2.01	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.05	0.682		1.430	Cum
	<i>Section 2-2</i>	2	3.00	0.985		5.910	Cum
	<i>Section 3-3</i>	2	1.70	0.516		1.754	Cum
	<i>Section 5-5</i>	2	4.73	0.682		6.449	Cum
	<i>Section 6-6</i>	2	2.52	0.516		2.603	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	8.96	0.150	0.600	2.688	Cum
		2	2.50	0.150	0.600	0.450	Cum
	TOTAL					23.30	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 13.700 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.476	2.023	5.909	Cum
	<i>Section 2-2</i>	2	2.50	1.110	2.023	11.228	Cum
	<i>Section 3-3</i>	2	1.95	0.990	1.823	7.039	Cum
	<i>Section 5-5</i>	2	3.38	1.626	2.023	22.207	Cum
	<i>Section 6-6</i>	2	1.71	0.990	1.823	6.172	Cum
	<i>U/S Key Floor</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>U/S Floor</i>	1	1.75	0.850	1.460	2.172	Cum
	<i>D/S Floor</i>	1	2.50	0.850	0.850	1.806	Cum
	<i>D/S Key Floor</i>	1	2.25	0.850	0.650	1.243	Cum
	<i>D/S Key Floor</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>Toe Wall D/S Portion</i>	1	6.25	0.750	0.900	4.219	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.50	0.600	0.750	1.350	Cum
						64.25	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.						
	<i>PCC Below Floor</i>	1	0.54	0.850	0.150	0.07	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	3.48	0.850	0.150	0.44	Cum
		1	0.28	0.850	0.150	0.04	Cum
		1	1.04	0.850	0.150	0.13	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	0.54	0.850	0.150	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.476	0.150	0.44	Cum
	<i>Section 2-2</i>	2	2.50	1.110	0.150	0.83	Cum
	<i>Section 3-3</i>	2	1.95	0.990	0.150	0.58	Cum
	<i>Section 5-5</i>	2	3.38	1.626	0.150	1.65	Cum
	<i>Section 6-6</i>	2	1.71	0.990	0.150	0.51	Cum
	<i>Toe Wall D/S Portion</i>	1	6.25	0.750	0.300	1.41	Cum
	<i>Toe Wall D/S Portion</i>	1	5.95	0.450	0.600	1.61	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.600	0.150	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.300	0.600	0.54	Cum
	TOTAL					8.78	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.76	0.450	0.450	0.31	Cum
		2	0.76	0.813	1.210	1.50	Cum
		2	0.76	1.326	0.500	1.01	Cum
	<i>Section 2-2</i>	2	2.50	0.450	0.450	1.01	Cum
		2	2.50	0.630	0.600	1.89	Cum
		2	2.50	0.960	0.500	2.40	Cum
	<i>Section 3-3</i>	2	1.68	0.450	0.450	0.68	Cum
		2	1.68	0.570	0.400	0.77	Cum
		2	1.68	0.840	0.500	1.41	Cum
	<i>Section 5-5</i>	2	3.33	0.450	0.450	1.35	Cum
		2	3.33	0.813	1.210	6.55	Cum
		2	3.33	1.326	0.500	4.42	Cum
	<i>Section 6-6</i>	2	2.13	0.450	0.450	0.86	Cum
		2	2.13	0.570	0.400	0.97	Cum
		2	2.13	0.840	0.500	1.79	Cum
	<i>Floor</i>	1	0.63	0.850	0.700	0.37	Cum
		1	4.25	0.850	0.500	1.81	Cum
		1	0.16	0.850	0.200	0.03	Cum
		1	0.20	0.850	0.400	0.07	Cum
		1	2.05	0.850	0.500	0.87	Cum
		1	0.63	0.850	0.700	0.37	Cum
	<i>Crest</i>	1	0.74	0.850	0.918	0.58	Cum
	TOTAL					31.03	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.						
	<i>Over Crest</i>	1	0.60	0.850	0.150	0.08	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	11.16	0.450	0.050	0.25	Cum
	<i>On Abutment Top (Right Side)</i>	1	11.16	0.450	0.050	0.25	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	31.03	0.00	0.093	7850.000	730.73	Kg
	Total Weight in Metric Tonne					0.73	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.76		0.450	1.38	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.76		1.210	3.70	Sqm
		4		0.813	1.210	3.93	Sqm
		4	0.76		0.500	1.53	Sqm
		4		1.326	0.500	2.65	Sqm
	<i>Section 2-2</i>	4	2.50		0.450	4.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.50		0.600	6.00	Sqm
		4		0.630	0.600	1.51	Sqm
		4	2.50		0.500	5.00	Sqm
		4		0.960	0.500	1.92	Sqm
	<i>Section 3-3</i>	4	1.68		0.450	3.02	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.68		0.400	2.69	Sqm
		4		0.570	0.400	0.91	Sqm
		4	1.68		0.500	3.36	Sqm
		4		0.840	0.500	1.68	Sqm
	<i>Section 5-5</i>	4	3.33		0.450	6.00	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.33		1.210	16.12	Sqm
		4		0.813	1.210	3.93	Sqm
		4	3.33		0.500	6.66	Sqm
		4		1.326	0.500	2.65	Sqm
	<i>Section 6-6</i>	4	2.13		0.450	3.83	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.13		0.400	3.41	Sqm
		4		0.570	0.400	0.91	Sqm
		4	2.13		0.500	4.26	Sqm
		4		0.840	0.500	1.68	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		0.850	0.700	1.19	Sqm
		2	4.25		0.500	4.25	Sqm
		2		0.850	0.500	0.85	Sqm
		2	0.16		0.200	0.06	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	2.05		0.500	2.05	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	0.74		0.918	1.37	Sqm
		2		0.850	0.918	1.56	Sqm
	Toe Wall D/S Portion	2	6.25		0.300	3.75	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	5.95		0.600	7.14	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					131.06	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.672		8.02	Sqm
	TOTAL					8.02	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.250	0.300	0.11	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	0.250	0.150	0.11	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	11.16	0.450		5.02	Sqm
	<i>On Abutment Top (Right Side)</i>	1	11.16	0.450		5.02	Sqm
	TOTAL					10.04	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.081		1.08	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	1.045		2.068	Cum
	<i>Section 2-2</i>	2	2.50	0.675		3.375	Cum
	<i>Section 3-3</i>	2	1.95	0.521		2.030	Cum
	<i>Section 5-5</i>	2	3.38	1.045		7.055	Cum
	<i>Section 6-6</i>	2	1.71	0.521		1.780	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	6.25	0.150	0.600	1.875	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					19.53	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
<i>DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SIMRA MR.</i>							

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.650 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.536	2.146	6.480	Cum
	<i>Section 2-2</i>	2	2.50	1.170	2.146	12.554	Cum
	<i>Section 3-3</i>	2	1.68	1.050	1.946	6.845	Cum
	<i>Section 5-5</i>	2	2.44	1.686	2.146	17.664	Cum
	<i>Section 6-6</i>	2	1.53	1.050	1.946	6.232	Cum
	<i>U/S Key Floor</i>	1	0.63	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.00	1.000	1.460	2.920	Cum
	<i>D/S Floor</i>	1	2.50	1.000	0.850	2.125	Cum
		1	2.50	1.000	0.650	1.625	Cum
	<i>D/S Key Floor</i>	1	0.63	1.000	0.850	0.531	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.900	3.443	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.75	0.600	0.750	1.575	Cum
						62.53	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.						
	<i>PCC Below Floor</i>	1	0.54	1.000	0.150	0.08	Cum
		1	0.78	1.000	0.150	0.12	Cum
		1	4.07	1.000	0.150	0.61	Cum
		1	0.28	1.000	0.150	0.04	Cum
		1	0.95	1.000	0.150	0.14	Cum
		1	0.78	1.000	0.150	0.12	Cum
		1	0.54	1.000	0.150	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.536	0.150	0.45	Cum
	<i>Section 2-2</i>	2	2.50	1.170	0.150	0.88	Cum
	<i>Section 3-3</i>	2	1.68	1.050	0.150	0.53	Cum
	<i>Section 5-5</i>	2	2.44	1.686	0.150	1.23	Cum
	<i>Section 6-6</i>	2	1.53	1.050	0.150	0.48	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.300	1.15	Cum
	<i>Toe Wall D/S Portion</i>	1	4.80	0.450	0.600	1.30	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.600	0.150	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.300	0.600	0.63	Cum
	TOTAL					8.154	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.83	0.450	0.450	0.34	Cum
		2	0.83	0.843	1.310	1.84	Cum
		2	0.83	1.386	0.500	1.15	Cum
	<i>Section 2-2</i>	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
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.63	1.000	0.700	0.44	Cum
		1	4.50	1.000	0.500	2.25	Cum
		1	0.50	1.000	0.200	0.10	Cum
		1	0.20	1.000	0.498	0.10	Cum
		1	2.30	1.000	0.500	1.15	Cum
		1	0.63	1.000	0.700	0.44	Cum
	<i>Crest</i>	1	0.75	1.000	0.932	0.70	Cum
	TOTAL					30.35	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.						
	<i>Over Crest</i>	1	0.60	1.000	0.150	0.09	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.84	0.450	0.050	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.84	0.450	0.050	0.22	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	30.35	0.00	0.091	7850.000	714.68	Kg
	Total Weight in Metric Tonne					0.71	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.83		0.450	1.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.83		1.310	4.36	Sqm
		4		0.843	1.310	4.42	Sqm
		4	0.83		0.500	1.66	Sqm
		4		1.386	0.500	2.77	Sqm
	<i>Section 2-2</i>	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
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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
	<i>Section 6-6</i>	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		1.000	0.700	1.40	Sqm
		2	4.50		0.500	4.50	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.50		0.200	0.20	Sqm
		2		1.000	0.200	0.40	Sqm
		2	0.20		0.498	0.20	Sqm
		2		1.000	0.498	1.00	Sqm
		2	2.30		0.500	2.30	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.000	0.700	1.40	Sqm
	Crest	2	0.75		0.932	1.39	Sqm
		2		1.000	0.932	1.86	Sqm
	Toe Wall D/S Portion	2	5.10		0.300	3.06	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.80		0.600	5.76	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					127.99	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.						
	<i>In D/S Portion On Slopes</i>	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.						
	<i>In D/S Portion</i>	1	1.75	0.400	0.300	0.21	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	0.400	0.150	0.21	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.84	0.450		4.43	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.84	0.450		4.43	Sqm
	TOTAL					8.86	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.755		1.76	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.884		3.704	Cum
	<i>Section 2-2</i>	2	2.50	0.756		3.780	Cum
	<i>Section 3-3</i>	2	1.68	0.570		1.910	Cum
	<i>Section 5-5</i>	2	2.44	1.884		9.198	Cum
	<i>Section 6-6</i>	2	1.53	0.570		1.739	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.10	0.150	0.600	1.530	Cum
		2	1.75	0.150	0.600	0.315	Cum
	TOTAL					23.93	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.475 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.536	1.651	4.986	Cum
	<i>Section 2-2</i>	2	2.50	1.170	1.651	9.658	Cum
	<i>Section 3-3</i>	2	1.68	1.050	1.451	5.104	Cum
	<i>Section 5-5</i>	2	2.40	1.686	1.651	13.345	Cum
	<i>Section 6-6</i>	2	1.53	1.050	1.451	4.647	Cum
	<i>U/S Key Floor</i>	1	0.63	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.00	1.000	1.460	2.920	Cum
	<i>D/S Floor</i>	1	2.50	1.000	0.850	2.125	Cum
		1	2.50	1.000	0.650	1.625	Cum
	<i>D/S Key Floor</i>	1	0.63	1.000	0.850	0.531	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.900	3.443	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.75	0.600	0.750	1.575	Cum
						50.49	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.						
	<i>PCC Below Floor</i>	1	0.54	1.000	0.150	0.08	Cum
		1	0.78	1.000	0.150	0.12	Cum
		1	4.07	1.000	0.150	0.61	Cum
		1	0.28	1.000	0.150	0.04	Cum
		1	0.95	1.000	0.150	0.14	Cum
		1	0.78	1.000	0.150	0.12	Cum
		1	0.54	1.000	0.150	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.536	0.150	0.45	Cum
	<i>Section 2-2</i>	2	2.50	1.170	0.150	0.88	Cum
	<i>Section 3-3</i>	2	1.68	1.050	0.150	0.53	Cum
	<i>Section 5-5</i>	2	2.40	1.686	0.150	1.21	Cum
	<i>Section 6-6</i>	2	1.53	1.050	0.150	0.48	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.300	1.15	Cum
	<i>Toe Wall D/S Portion</i>	1	4.80	0.450	0.600	1.30	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.600	0.150	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.300	0.600	0.63	Cum
	TOTAL					8.13	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.83	0.450	0.450	0.34	Cum
		2	0.83	0.843	1.310	1.84	Cum
		2	0.83	1.386	0.500	1.15	Cum
	<i>Section 2-2</i>	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
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.63	1.000	0.700	0.44	Cum
		1	4.50	1.000	0.500	2.25	Cum
		1	0.40	1.000	0.200	0.08	Cum
		1	0.20	1.000	0.498	0.10	Cum
		1	2.30	1.000	0.500	1.15	Cum
		1	0.63	1.000	0.700	0.44	Cum
	<i>Crest</i>	1	0.75	1.000	0.932	0.70	Cum
	TOTAL					30.33	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.						
	<i>Over Crest</i>	1	0.60	1.000	0.150	0.09	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.84	0.450	0.050	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.84	0.450	0.050	0.22	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	30.33	0.00	0.091	7850.000	714.22	Kg
	Total Weight in Metric Tonne					0.71	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.83		0.450	1.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.83		1.310	4.36	Sqm
		4		0.843	1.310	4.42	Sqm
		4	0.83		0.500	1.66	Sqm
		4		1.386	0.500	2.77	Sqm
	<i>Section 2-2</i>	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
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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
	<i>Section 6-6</i>	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		1.000	0.700	1.40	Sqm
		2	4.50		0.500	4.50	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.40		0.200	0.16	Sqm
		2		1.000	0.200	0.40	Sqm
		2	0.20		0.498	0.20	Sqm
		2		1.000	0.498	1.00	Sqm
		2	2.30		0.500	2.30	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.000	0.700	1.40	Sqm
	Crest	2	0.75		0.932	1.39	Sqm
		2		1.000	0.932	1.86	Sqm
	Toe Wall D/S Portion	2	5.10		0.300	3.06	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.80		0.600	5.76	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					127.96	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.						
	<i>In D/S Portion On Slopes</i>	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.						
	<i>In D/S Portion</i>	1	1.75	0.400	0.300	0.21	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	0.400	0.150	0.21	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.84	0.450		4.43	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.84	0.450		4.43	Sqm
	TOTAL					8.86	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.755		1.76	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	0.676		1.329	Cum
	<i>Section 2-2</i>	2	2.50	0.648		3.240	Cum
	<i>Section 3-3</i>	2	1.68	0.570		1.910	Cum
	<i>Section 5-5</i>	2	2.40	0.676		3.240	Cum
	<i>Section 6-6</i>	2	1.53	0.570		1.739	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.10	0.150	0.600	1.530	Cum
		2	1.75	0.150	0.600	0.315	Cum
	TOTAL					15.06	Cum

SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 3.460

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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.488	2.287	6.663	Cum
	<i>Section 2-2</i>	2	2.50	1.122	2.287	12.830	Cum
	<i>Section 3-3</i>	2	1.70	1.002	2.087	7.106	Cum
	<i>Section 5-5</i>	2	2.28	1.638	2.287	17.090	Cum
	<i>Section 6-6</i>	2	1.43	1.002	2.087	5.977	Cum
	<i>U/S Key Floor</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>U/S Floor</i>	1	2.00	0.850	1.460	2.482	Cum
	<i>D/S Floor</i>	1	2.50	0.850	0.850	1.806	Cum
		1	2.50	0.850	0.650	1.381	Cum
	<i>D/S Key Floor</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>Toe Wall D/S Portion</i>	1	4.71	0.750	0.900	3.179	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.50	0.600	0.750	1.350	Cum
						60.77	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.						
	<i>PCC Below Floor</i>	1	0.54	0.850	0.150	0.07	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	4.07	0.850	0.150	0.52	Cum
		1	0.28	0.850	0.150	0.04	Cum
		1	0.95	0.850	0.150	0.12	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	0.54	0.850	0.150	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.488	0.150	0.44	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section 2-2	2	2.50	1.122	0.150	0.84	Cum
	Section 3-3	2	1.70	1.002	0.150	0.51	Cum
	Section 5-5	2	2.28	1.638	0.150	1.12	Cum
	Section 6-6	2	1.43	1.002	0.150	0.43	Cum
	Toe Wall D/S Portion	1	4.71	0.750	0.300	1.06	Cum
	Toe Wall D/S Portion	1	4.41	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					7.41	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	0.83	0.450	0.450	0.34	Cum
		2	0.83	0.819	1.230	1.67	Cum
		2	0.83	1.338	0.500	1.11	Cum
	Section 2-2	2	2.50	0.450	0.450	1.01	Cum
		2	2.50	0.636	0.620	1.97	Cum
		2	2.50	0.972	0.500	2.43	Cum
	Section 3-3	2	1.92	0.450	0.450	0.78	Cum
		2	1.92	0.576	0.420	0.93	Cum
		2	1.92	0.852	0.500	1.64	Cum
	Section 5-5	2	2.24	0.450	0.450	0.91	Cum
		2	2.24	0.819	1.230	4.51	Cum
		2	2.24	1.338	0.500	3.00	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	0.850	0.700	0.37	Cum
		1	4.50	0.850	0.500	1.91	Cum
		1	0.40	0.850	0.200	0.07	Cum
		1	0.20	0.850	0.498	0.08	Cum
		1	2.30	0.850	0.500	0.98	Cum
		1	0.63	0.850	0.700	0.37	Cum
	Crest	1	0.74	0.850	0.890	0.56	Cum
	TOTAL					26.99	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	0.60	0.850	0.150	0.08	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.54	0.450	0.050	0.21	Cum
	On Abutment Top (Right Side)	1	9.54	0.450	0.050	0.21	Cum
	TOTAL					0.51	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.	Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	26.99	0.00	0.081	7850.000	635.70	Kg
	Total Weight in Metric Tonne					0.64	MT
6	Providing shuttering including strutting, propping 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	1.49	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.83		1.230	4.07	Sqm
		4		0.819	1.230	4.03	Sqm
		4	0.83		0.500	1.66	Sqm
		4		1.338	0.500	2.68	Sqm
	Section 2-2	4	2.50		0.450	4.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.50		0.620	6.20	Sqm
		4		0.636	0.620	1.58	Sqm
		4	2.50		0.500	5.00	Sqm
		4		0.972	0.500	1.94	Sqm
	Section 3-3	4	1.92		0.450	3.46	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.450	0.450	0.81	Sqm
		4	1.92		0.420	3.23	Sqm
		4		0.576	0.420	0.97	Sqm
		4	1.92		0.500	3.85	Sqm
		4		0.852	0.500	1.70	Sqm
	Section 5-5	4	2.24		0.450	4.03	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.24		1.230	11.02	Sqm
		4		0.819	1.230	4.03	Sqm
		4	2.24		0.500	4.48	Sqm
		4		1.338	0.500	2.68	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		0.850	0.700	1.19	Sqm
		2	4.50		0.500	4.50	Sqm
		2		0.850	0.500	0.85	Sqm
		2	0.40		0.200	0.16	Sqm
		2		0.850	0.200	0.34	Sqm
		2	0.20		0.498	0.20	Sqm
		2		0.850	0.498	0.85	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	0.74		0.890	1.32	Sqm
		2		0.850	0.890	1.51	Sqm
	Toe Wall D/S Portion	2	4.71		0.300	2.83	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.41		0.600	5.29	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					118.43	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.051		6.15	Sqm
	TOTAL					6.15	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.250	0.300	0.11	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	0.250	0.150	0.11	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.54	0.450		4.29	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.54	0.450		4.29	Sqm
	TOTAL					8.59	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.662		1.66	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	0.943		1.845	Cum
	<i>Section 2-2</i>	2	2.50	0.679		3.394	Cum
	<i>Section 3-3</i>	2	1.70	0.519		1.763	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Section 5-5	2	2.28		0.943	4.300	Cum
	Section 6-6	2	1.43		0.519	1.482	Cum
	D/S protection	2					
	Toe wall	2	4.71	0.150	0.600	1.413	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					16.13	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
<i>DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SALEMPUR MR.</i>							

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 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, rammimg the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.96	1.504	1.453	4.187	Cum
	<i>Section 2-2</i>	2	2.50	1.230	1.453	8.936	Cum
	<i>Section 3-3</i>	2	2.20	1.110	1.253	6.120	Cum
	<i>Section 5-5</i>	2	2.66	1.654	1.453	12.797	Cum
	<i>Section 6-6</i>	2	1.09	1.110	1.253	3.032	Cum
	<i>U/S Key Floor</i>	1	0.63	1.200	0.850	0.638	Cum
	<i>U/S Floor</i>	1	2.00	1.200	1.307	3.137	Cum
	<i>D/S Floor</i>	1	2.50	1.200	0.850	2.550	Cum
		1	2.50	1.200	0.650	1.950	Cum
	<i>D/S Key Floor</i>	1	0.63	1.200	0.850	0.638	Cum
	<i>Toe Wall D/S Portion</i>	1	5.60	0.750	0.900	3.780	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.00	0.600	0.750	1.800	Cum
						49.56	Cum
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	<i>PCC Below Floor</i>	1	0.54	1.200	0.150	0.10	Cum
		1	0.78	1.200	0.150	0.14	Cum
		1	4.07	1.200	0.150	0.73	Cum
		1	0.28	1.200	0.150	0.05	Cum
		1	0.95	1.200	0.150	0.17	Cum
		1	0.78	1.200	0.150	0.14	Cum
		1	0.54	1.200	0.150	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.96	1.504	0.150	0.43	Cum
	<i>Section 2-2</i>	2	2.50	1.230	0.150	0.92	Cum
	<i>Section 3-3</i>	2	2.20	1.110	0.150	0.73	Cum
	<i>Section 5-5</i>	2	2.66	1.654	0.150	1.32	Cum
	<i>Section 6-6</i>	2	1.09	1.110	0.150	0.36	Cum
	<i>Toe Wall D/S Portion</i>	1	5.60	0.750	0.300	1.26	Cum
	<i>Toe Wall D/S Portion</i>	1	5.30	0.450	0.600	1.43	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.600	0.150	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.300	0.600	0.72	Cum
	TOTAL					8.97	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.73	0.450	0.450	0.30	Cum
		2	0.73	0.827	1.257	1.53	Cum
		2	0.73	1.354	0.500	0.99	Cum
	<i>Section 2-2</i>	2	2.50	0.450	0.450	1.01	Cum
		2	2.50	0.690	0.800	2.76	Cum
		2	2.50	1.080	0.500	2.70	Cum
	<i>Section 3-3</i>	2	1.74	0.450	0.450	0.71	Cum
		2	1.74	0.630	0.600	1.32	Cum
		2	1.74	0.960	0.500	1.67	Cum
	<i>Section 5-5</i>	2	2.62	0.450	0.450	1.06	Cum
		2	2.62	0.827	1.257	5.44	Cum
		2	2.62	1.354	0.500	3.55	Cum
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.63	1.200	0.700	0.53	Cum
		1	4.50	1.200	0.500	2.70	Cum
		1	0.50	1.200	0.200	0.12	Cum
		1	0.20	1.200	0.400	0.10	Cum
		1	2.30	1.200	0.500	1.38	Cum
		1	0.63	1.200	0.700	0.53	Cum
	<i>Crest</i>	1	0.73	1.200	0.839	0.74	Cum
	TOTAL					32.45	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.						
	<i>Over Crest</i>	1	0.60	1.200	0.150	0.11	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.17	0.450	0.050	0.23	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.17	0.450	0.050	0.23	Cum
	TOTAL					0.57	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	32.45	0.00	0.097	7850.000	764.19	Kg
	Total Weight in Metric Tonne					0.76	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.73		0.450	1.32	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.73		1.257	3.69	Sqm
		4		0.827	1.257	4.16	Sqm
		4	0.73		0.500	1.47	Sqm
		4		1.354	0.500	2.71	Sqm
	<i>Section 2-2</i>	4	2.50		0.450	4.50	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.50		0.800	8.00	Sqm
		4		0.690	0.800	2.21	Sqm
		4	2.50		0.500	5.00	Sqm
		4		1.080	0.500	2.16	Sqm
	<i>Section 3-3</i>	4	1.74		0.450	3.14	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.74		0.600	4.19	Sqm
		4		0.630	0.600	1.51	Sqm
		4	1.74		0.500	3.49	Sqm
		4		0.960	0.500	1.92	Sqm
	<i>Section 5-5</i>	4	2.62		0.450	4.71	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.62		1.257	13.17	Sqm
		4		0.827	1.257	4.16	Sqm
		4	2.62		0.500	5.24	Sqm
		4		1.354	0.500	2.71	Sqm
	<i>Section 6-6</i>	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		1.200	0.700	1.68	Sqm
		2	4.50		0.500	4.50	Sqm
		2		1.200	0.500	1.20	Sqm
		2	0.50		0.200	0.20	Sqm
		2		1.200	0.200	0.48	Sqm
		2	0.20		0.400	0.16	Sqm
		2		1.200	0.400	0.96	Sqm
		2	2.30		0.500	2.30	Sqm
		2		1.200	0.500	1.20	Sqm
		2	0.63		0.700	0.88	Sqm
		2		1.200	0.700	1.68	Sqm
	Crest	2	0.73		0.839	1.23	Sqm
		2		1.200	0.839	2.01	Sqm
	Toe Wall D/S Portion	2	5.60		0.300	3.36	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	5.30		0.600	6.36	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					133.80	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.						
	<i>In D/S Portion On Slopes</i>	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.						
	<i>In D/S Portion</i>	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.						
	<i>On Abutment Top (Left Side)</i>	1	10.17	0.450		4.58	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.17	0.450		4.58	Sqm
	TOTAL					9.15	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		1.517		1.52	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.96	0.484		0.927	Cum
	<i>Section 2-2</i>	2	2.50	0.484		2.420	Cum
	<i>Section 3-3</i>	2	2.20	0.344		1.514	Cum
	<i>Section 5-5</i>	2	2.66	0.484		2.577	Cum
	<i>Section 6-6</i>	2	1.09	0.344		0.750	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.60	0.150	0.600	1.680	Cum
		2	2.00	0.150	0.600	0.360	Cum
	TOTAL					11.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 2.900 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.810	2.239	9.921	Cum
	<i>Section 2-2</i>	2	3.00	1.170	2.239	15.718	Cum
	<i>Section 3-3</i>	2	1.68	1.050	2.039	7.172	Cum
	<i>Section 5-5</i>	2	2.39	1.960	2.239	20.950	Cum
	<i>Section 6-6</i>	2	1.53	1.050	2.039	6.530	Cum
	<i>U/S Key Floor</i>	1	0.63	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.50	1.000	2.017	5.043	Cum
	<i>D/S Floor</i>	1	1.69	1.000	0.850	1.439	Cum
		1	2.60	1.000	0.650	1.690	Cum
	<i>D/S Key Floor</i>	1	0.68	1.000	1.050	0.709	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.900	3.443	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.75	0.600	0.750	1.575	Cum
						74.72	Cum
2	Earthwork in filling foundation trenches and back filling of structures in layer not exceeding 150 mm thick well watered rammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I						
	<i>PCC Below Floor</i>	1	0.54	1.000	0.150	0.08	Cum
		1	0.84	1.000	0.150	0.13	Cum
		1	0.28	1.000	0.150	0.04	Cum
		1	0.21	1.000	0.150	0.03	Cum
		1	4.32	1.000	0.150	0.65	Cum
		1	0.42	1.000	0.150	0.06	Cum
		1	1.04	1.000	0.150	0.16	Cum
		1	1.01	1.000	0.150	0.15	Cum
		1	0.54	1.000	0.150	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.810	0.150	0.66	Cum
	<i>Section 2-2</i>	2	3.00	1.170	0.150	1.05	Cum
	<i>Section 3-3</i>	2	1.68	1.050	0.150	0.53	Cum
	<i>Section 5-5</i>	2	2.39	1.960	0.150	1.40	Cum
	<i>Section 6-6</i>	2	1.53	1.050	0.150	0.48	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.750	0.300	1.15	Cum
	<i>Toe Wall D/S Portion</i>	1	4.80	0.450	0.600	1.30	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.600	0.150	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.300	0.600	0.63	Cum
	TOTAL					8.90	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.07	0.450	0.450	0.43	Cum
		2	1.07	0.980	1.767	3.72	Cum
		2	1.07	1.660	0.600	2.14	Cum
	<i>Section 2-2</i>	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	0.600	3.67	Cum
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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	0.600	4.67	Cum
	<i>Section 6-6</i>	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
	<i>Floor</i>	1	0.63	1.000	0.700	0.44	Cum
		1	1.31	1.000	0.500	0.65	Cum
		1	4.19	1.000	0.500	2.10	Cum
		1	0.40	1.000	0.200	0.08	Cum
		1	0.30	1.000	0.257	0.08	Cum
		1	2.30	1.000	0.500	1.15	Cum
		1	0.68	1.000	0.900	0.61	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Crest</i>	1	0.97	1.000	1.330	1.29	Cum
	TOTAL					40.46	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.						
	<i>Over Crest</i>	1	0.75	1.000	0.150	0.11	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.64	0.450	0.050	0.24	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.64	0.450	0.050	0.24	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	40.46	0.00	0.121	7850.000	952.89	Kg
	Total Weight in Metric Tonne					0.95	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.07		0.450	1.93	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.07		1.767	7.59	Sqm
		4		0.980	1.767	6.93	Sqm
		4	1.07		0.600	2.58	Sqm
		4		1.660	0.600	3.98	Sqm
	<i>Section 2-2</i>	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		0.600	7.20	Sqm
		4		1.020	0.600	2.45	Sqm
	<i>Section 3-3</i>	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
	<i>Section 5-5</i>	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		0.600	5.62	Sqm
		4		1.660	0.600	3.98	Sqm
	<i>Section 6-6</i>	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		1.000	0.700	1.40	Sqm
		2	4.19		0.500	4.19	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.40		0.200	0.16	Sqm
		2		1.000	0.200	0.40	Sqm
		2	0.30		0.257	0.15	Sqm
		2		1.000	0.257	0.51	Sqm
		2	2.30		0.500	2.30	Sqm
		2		1.000	0.500	1.00	Sqm
		2	0.68		0.900	1.22	Sqm
		2		1.000	0.900	1.80	Sqm
	Crest	2	0.97		1.330	2.58	Sqm
		2		1.000	1.330	2.66	Sqm
	Toe Wall D/S Portion	2	5.10		0.300	3.06	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.80		0.600	5.76	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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.300	0.600	0.72	Sqm
	TOTAL					151.50	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.						
	<i>In D/S Portion On Slopes</i>	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.						
	<i>In D/S Portion</i>	1	1.75	0.400	0.300	0.21	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	0.400	0.150	0.21	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.64	0.450		4.79	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.64	0.450		4.79	Sqm
	TOTAL					9.58	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		4.055		4.05	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.200		2.938	Cum
	<i>Section 2-2</i>	2	3.00	0.771		4.626	Cum
	<i>Section 3-3</i>	2	1.68	0.570		1.910	Cum
	<i>Section 5-5</i>	2	2.39	1.200		5.729	Cum
	<i>Section 6-6</i>	2	1.53	0.570		1.739	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.10	0.150	0.600	1.530	Cum
		2	1.75	0.150	0.600	0.315	Cum
	TOTAL					22.84	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 4.370 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.91	1.293	1.366	3.225	Cum
	<i>Section 2-2</i>	2	2.00	1.110	1.366	6.065	Cum
	<i>Section 3-3</i>	2	2.21	0.990	1.166	5.091	Cum
	<i>Section 5-5</i>	2	2.28	1.443	1.366	8.994	Cum
	<i>Section 6-6</i>	2	1.41	0.990	1.166	3.244	Cum
	<i>U/S Key Floor</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>U/S Floor</i>	1	1.50	0.850	1.155	1.473	Cum
	<i>D/S Floor</i>	1	2.00	0.850	0.850	1.445	Cum
	<i>D/S Key Floor</i>	1	3.00	0.850	0.650	1.658	Cum
	<i>Toe Wall D/S Portion</i>	1	0.63	0.850	0.850	0.452	Cum
	<i>Toe Wall D/S Portion</i>	1	4.65	0.750	0.900	3.139	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.50	0.600	0.750	1.350	Cum
						36.59	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.						
	<i>PCC Below Floor</i>	1	0.54	0.850	0.150	0.07	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	2.88	0.850	0.150	0.37	Cum
		1	0.28	0.850	0.150	0.04	Cum
		1	1.64	0.850	0.150	0.21	Cum
		1	0.78	0.850	0.150	0.10	Cum
		1	0.54	0.850	0.150	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.91	1.293	0.150	0.35	Cum
	<i>Section 2-2</i>	2	2.00	1.110	0.150	0.67	Cum
	<i>Section 3-3</i>	2	2.21	0.990	0.150	0.65	Cum
	<i>Section 5-5</i>	2	2.28	1.443	0.150	0.99	Cum
	<i>Section 6-6</i>	2	1.41	0.990	0.150	0.42	Cum
	<i>Toe Wall D/S Portion</i>	1	4.65	0.750	0.300	1.05	Cum
	<i>Toe Wall D/S Portion</i>	1	4.35	0.450	0.600	1.17	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.600	0.150	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.300	0.600	0.54	Cum
	TOTAL					7.06	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.76	0.450	0.450	0.31	Cum
		2	0.76	0.722	0.905	1.00	Cum
		2	0.76	1.143	0.500	0.87	Cum
	<i>Section 2-2</i>	2	2.00	0.450	0.450	0.81	Cum
		2	2.00	0.630	0.600	1.51	Cum
		2	2.00	0.960	0.500	1.92	Cum
	<i>Section 3-3</i>	2	2.43	0.450	0.450	0.98	Cum
		2	2.43	0.570	0.400	1.11	Cum
		2	2.43	0.840	0.500	2.04	Cum
	<i>Section 5-5</i>	2	2.24	0.450	0.450	0.91	Cum
		2	2.24	0.722	0.905	2.92	Cum
		2	2.24	1.143	0.500	2.56	Cum
	<i>Section 6-6</i>	2	1.33	0.450	0.450	0.54	Cum
		2	1.33	0.570	0.400	0.61	Cum
		2	1.33	0.840	0.500	1.12	Cum
	<i>Floor</i>	1	0.63	0.850	0.700	0.37	Cum
		1	3.50	0.850	0.500	1.49	Cum
		1	0.40	0.850	0.200	0.07	Cum
		1	0.20	0.850	0.307	0.05	Cum
		1	2.80	0.850	0.500	1.19	Cum
		1	0.63	0.850	0.700	0.37	Cum
	<i>Crest</i>	1	0.69	0.850	0.574	0.34	Cum
	TOTAL					23.08	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.						
	<i>Over Crest</i>	1	0.60	0.850	0.150	0.08	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.36	0.450	0.050	0.21	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.36	0.450	0.050	0.21	Cum
	TOTAL					0.50	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	23.08	0.00	0.069	7850.000	543.48	Kg
	Total Weight in Metric Tonne					0.54	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.76		0.450	1.37	Sqm
		4		0.450	0.450	0.81	Sqm
		4	0.76		0.905	2.76	Sqm
		4		0.722	0.905	2.61	Sqm
		4	0.76		0.500	1.53	Sqm
		4		1.143	0.500	2.29	Sqm
	<i>Section 2-2</i>	4	2.00		0.450	3.60	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.00		0.600	4.80	Sqm
		4		0.630	0.600	1.51	Sqm
		4	2.00		0.500	4.00	Sqm
		4		0.960	0.500	1.92	Sqm
	<i>Section 3-3</i>	4	2.43		0.450	4.37	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.43		0.400	3.89	Sqm
		4		0.570	0.400	0.91	Sqm
		4	2.43		0.500	4.86	Sqm
		4		0.840	0.500	1.68	Sqm
	<i>Section 5-5</i>	4	2.24		0.450	4.03	Sqm
		4		0.450	0.450	0.81	Sqm
		4	2.24		0.905	8.10	Sqm
		4		0.722	0.905	2.61	Sqm
		4	2.24		0.500	4.48	Sqm
		4		1.143	0.500	2.29	Sqm
	<i>Section 6-6</i>	4	1.33		0.450	2.39	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.33		0.400	2.13	Sqm
		4		0.570	0.400	0.91	Sqm
		4	1.33		0.500	2.66	Sqm
		4		0.840	0.500	1.68	Sqm
	Floor	2	0.63		0.700	0.88	Sqm
		2		0.850	0.700	1.19	Sqm
		2	3.50		0.500	3.50	Sqm
		2		0.850	0.500	0.85	Sqm
		2	0.40		0.200	0.16	Sqm
		2		0.850	0.200	0.34	Sqm
		2	0.20		0.307	0.12	Sqm
		2		0.850	0.307	0.52	Sqm
		2	2.80		0.500	2.80	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	0.69		0.574	0.79	Sqm
		2		0.850	0.574	0.98	Sqm
	Toe Wall D/S Portion	2	4.65		0.300	2.79	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	4.35		0.600	5.22	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					107.05	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.871		5.61	Sqm
	TOTAL					5.61	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.250	0.300	0.11	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	0.250	0.150	0.11	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.36	0.450		4.21	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.36	0.450		4.21	Sqm
	TOTAL					8.43	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		0.416		0.42	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.91	0.444		0.810	Cum
	<i>Section 2-2</i>	2	2.00	0.440		1.758	Cum
	<i>Section 3-3</i>	2	2.21	0.414		1.824	Cum
	<i>Section 5-5</i>	2	2.28	0.444		2.024	Cum
	<i>Section 6-6</i>	2	1.41	0.414		1.162	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	4.65	0.150	0.600	1.395	Cum
		2	1.50	0.150	0.600	0.270	Cum
	TOTAL					9.66	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	3.30	2.055	2.310	31.331	Cum
	<i>Section 2-2</i>	2	5.00	1.488	2.310	34.373	Cum
	<i>Section 3-3</i>	2	1.70	1.338	2.110	9.599	Cum
	<i>Section 5-5</i>	2	8.66	2.205	2.310	88.251	Cum
	<i>Section 6-6</i>	2	3.39	1.338	2.110	19.152	Cum
	<i>U/S Key Floor</i>	1	0.70	4.150	0.650	1.888	Cum
	<i>U/S Floor</i>	1	1.59	4.150	2.310	15.243	Cum
	<i>D/S Floor</i>	1	6.40	4.150	0.850	22.576	Cum
		1	2.00	4.150	0.650	5.395	Cum
	<i>D/S Key Floor</i>	1	0.70	4.150	1.000	2.905	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.900	9.187	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.00	0.600	0.750	2.700	Cum
						242.60	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.						
	<i>PCC Below Floor</i>	1	0.54	4.150	0.150	0.34	Cum
		1	1.12	4.150	0.150	0.70	Cum
		1	7.43	4.150	0.150	4.62	Cum
		1	0.35	4.150	0.150	0.22	Cum
		1	0.24	4.150	0.150	0.15	Cum
		1	1.12	4.150	0.150	0.70	Cum
		1	0.54	4.150	0.150	0.34	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	3.30	2.055	0.150	2.03	Cum
	<i>Section 2-2</i>	2	5.00	1.488	0.150	2.23	Cum
	<i>Section 3-3</i>	2	1.70	1.338	0.150	0.68	Cum
	<i>Section 5-5</i>	2	8.66	2.205	0.150	5.73	Cum
	<i>Section 6-6</i>	2	3.39	1.338	0.150	1.36	Cum
	<i>Toe Wall D/S Portion</i>	1	13.61	0.750	0.300	3.06	Cum
	<i>Toe Wall D/S Portion</i>	1	13.31	0.450	0.600	3.59	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.600	0.150	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.300	0.600	1.08	Cum
	TOTAL					27.37	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	3.23	0.450	0.450	1.31	Cum
		2	3.23	1.103	2.175	15.47	Cum
		2	3.23	1.905	0.500	6.14	Cum
	<i>Section 2-2</i>	2	5.00	0.450	0.450	2.03	Cum
		2	5.00	0.819	1.230	10.07	Cum
		2	5.00	1.338	0.500	6.69	Cum
	<i>Section 3-3</i>	2	1.26	0.450	0.450	0.51	Cum
		2	1.26	0.744	0.980	1.83	Cum
		2	1.26	1.188	0.500	1.49	Cum
	<i>Section 5-5</i>	2	8.75	0.450	0.450	3.55	Cum
		2	8.75	1.103	2.175	41.99	Cum
		2	8.75	1.905	0.500	16.68	Cum
	<i>Section 6-6</i>	2	4.06	0.450	0.450	1.64	Cum
		2	4.06	0.744	0.980	5.92	Cum
		2	4.06	1.188	0.500	4.82	Cum
	<i>Floor</i>	1	0.70	4.150	0.500	1.45	Cum
		1	8.00	4.150	0.500	16.60	Cum
		1	0.53	4.150	0.250	0.55	Cum
		1	0.25	4.150	0.375	0.39	Cum
		1	1.75	4.150	0.500	3.63	Cum
	<i>Crest</i>	1	0.70	4.150	1.000	2.91	Cum
	TOTAL					145.67	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.						
	<i>Over Crest</i>	1	1.00	4.150	0.150	0.62	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	17.67	0.450	0.050	0.40	Cum
	<i>On Abutment Top (Right Side)</i>	1	17.67	0.450	0.050	0.40	Cum
	TOTAL					1.42	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	145.67	0.002	0.291	7850.000	2287.02	Kg
	Total Weight in Metric Tonne					2.29	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	3.23		0.450	5.81	Sqm
		4		0.450	0.450	0.81	Sqm
		4	3.23		2.175	28.06	Sqm
		4		1.103	2.175	9.59	Sqm
		4	3.23		0.500	6.45	Sqm
		4		1.905	0.500	3.81	Sqm
	<i>Section 2-2</i>	4	5.00		0.450	9.00	Sqm
		4		0.450	0.450	0.81	Sqm
		4	5.00		1.230	24.60	Sqm
		4		0.819	1.230	4.03	Sqm
		4	5.00		0.500	10.00	Sqm
		4		1.338	0.500	2.68	Sqm
	<i>Section 3-3</i>	4	1.26		0.450	2.26	Sqm
		4		0.450	0.450	0.81	Sqm
		4	1.26		0.980	4.92	Sqm
		4		0.744	0.980	2.92	Sqm
		4	1.26		0.500	2.51	Sqm
		4		1.188	0.500	2.38	Sqm
	<i>Section 5-5</i>	4	8.75		0.450	15.76	Sqm
		4		0.450	0.450	0.81	Sqm
		4	8.75		2.175	76.16	Sqm
		4		1.103	2.175	9.59	Sqm
		4	8.75		0.500	17.51	Sqm
		4		1.905	0.500	3.81	Sqm
	<i>Section 6-6</i>	4	4.06		0.450	7.31	Sqm
		4		0.450	0.450	0.81	Sqm
		4	4.06		0.980	15.92	Sqm
		4		0.744	0.980	2.92	Sqm
		4	4.06		0.500	8.12	Sqm
		4		1.188	0.500	2.38	Sqm
	Floor	2	0.70		0.500	0.70	Sqm
		2		4.150	0.500	4.15	Sqm
		2	8.00		0.500	8.00	Sqm
		2		4.150	0.500	4.15	Sqm
		2	0.53		0.250	0.27	Sqm
		2		4.150	0.250	2.08	Sqm
		2	0.25		0.375	0.19	Sqm
		2		4.150	0.375	3.11	Sqm
		2	1.75		0.500	1.75	Sqm
		2		4.150	0.500	4.15	Sqm
	Crest	2	0.70		1.000	1.40	Sqm
		2		4.150	1.000	8.30	Sqm
	Toe Wall D/S Portion	2	13.61		0.300	8.17	Sqm
		2		0.750	0.300	0.45	Sqm
	Toe Wall D/S Portion	2	13.31		0.600	15.97	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					355.99	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.						
	<i>In D/S Portion On Slopes</i>	2	3.00	4.876		29.26	Sqm
	TOTAL					29.26	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In U/S Portion</i>	1	9.50	4.655	0.300	13.27	Cum
	<i>In D/S Portion</i>	1	3.00	3.550	0.300	3.20	Cum
	TOTAL					16.46	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	3.00	3.550	0.150	3.20	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	17.67	0.450		7.95	Sqm
	<i>On Abutment Top (Right Side)</i>	1	17.67	0.450		7.95	Sqm
	TOTAL					15.90	Sqm
11	Providing Drainage Spouts complete as per drawings & technical 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						
	<i>Under U/S floor</i>	1		3.307		3.31	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	3.30	1.399		9.233	Cum
	<i>Section 2-2</i>	2	5.00	1.344		13.442	Cum
	<i>Section 3-3</i>	2	1.70	1.101		3.743	Cum
	<i>Section 5-5</i>	2	8.66	2.494		43.216	Cum
	<i>Section 6-6</i>	2	3.39	1.101		7.469	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	13.61	0.150	0.600	4.083	Cum
		2	3.00	0.150	0.600	0.540	Cum
	TOTAL					85.03	Cum

**ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KHAIRA MR.
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 3.255**

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.	97.031	Cum	195.20	18940.49			
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.	7.25	Cum	6381.70	46278.05	2.35	3.26	6.53
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.	22.62	Cum	6914.20	156409.19	9.33	9.73	19.45
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.	22.47	Cum	8151.40	183148.81	12.74	8.76	17.75
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.	2.62	MT	73574.90	193051.16			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	166.61	Sqm	578.60	96398.96			
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	1220.80			
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)	3.20	Sqm	66.00	211.20			
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)	8.00	RM	36993.21	295945.68			
11	Providing Drainage Spouts complete as per drawings & technical 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	61.32	Cum	149.30	9154.96			

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)	21.753	Cum	1159.00	25211.90			
	Coarse Aggregates (100 Km lead)	43.731	Cum	1075.00	47010.80			
	Cement (30 km lead)	24.420	MT	742.00	18119.99			
	Boulder (60 Km lead)	3.20	Cum	1159.00	3708.80			
	Brick (15 km lead)	480.00	No.	1838.00	882240.00			
	Steel (30 Km lead)	2.62	MT	742.00	1946.91			
	TOTAL (In Rs.)				1991001.41			
	TOTAL (In Rs.)				1991001.41			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	21.75	Cum	584.64	12717.76	1271.78		
	Coarse Aggregate	43.73	Cum	944.26	41293.42	4129.34		
	Boulders	3.20	Cum	694.61	2222.75	222.28		
	<i>Total</i>					5623.39		
	For 1 nos. fall, Total Seigniorage charges					5623.39		

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 PRITAMPURA SUB-DY								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 0.410								
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.	90.000	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.	84.200	Cum	195.20	16435.82			
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.	8.29	Cum	6381.70	52880.55	2.68	3.73	7.46
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.	30.64	Cum	6914.20	211861.16	12.64	13.18	26.35
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.	37.14	Cum	8151.40	302721.10	21.06	14.48	29.34
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.	3.51	MT	73574.90	258117.30			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	231.22	Sqm	578.60	133781.25			
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	1220.80			
9	Providing & Fixing in position Tar Paper Bearing for slab as per approved drawings & specifications. (PWD NH SOR Chattisgarh, Ch- 14, SI.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 & technical 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	61.72	Cum	149.30	9214.99			

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)
13	Carriage of materials							
	Coarse Sand (60 Km lead)	31.388	Cum	1159.00	36378.93			
	Coarse Aggregates (100 Km lead)	63.148	Cum	1075.00	67883.87			
	Cement (30 km lead)	36.381	MT	742.00	26994.86			
	Boulder (60 Km lead)	4.40	Cum	1159.00	5099.60			
	Brick (15 km lead)	480.00	No.	1838.00	882240.00			
	Steel (30 Km lead)	3.51	MT	742.00	2603.10			
	TOTAL (In Rs.)				2426888.84			
	TOTAL (In Rs.)				2426888.84			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	31.39	Cum	584.64	18350.80	1835.08		
	Coarse Aggregate	63.15	Cum	944.26	59627.93	5962.79		
	Boulders	4.40	Cum	694.61	3056.28	305.63		
	<i>Total</i>					8103.50		
	For 1 nos. fall, Total Seigniorage charges					8103.50		

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)
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 4.965								
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.	140.000	Sqm	11.80	1652.61			
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.	117.768	Cum	195.20	22988.24			
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.	9.14	Cum	6381.70	58318.53	2.96	4.11	8.22
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.	31.92	Cum	6914.20	220728.48	13.17	13.73	27.45
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.	34.20	Cum	8151.40	278796.40	19.39	13.34	27.02
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.	3.43	MT	73574.90	252141.15			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	224.90	Sqm	578.60	130129.16			
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	1220.80			
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 & technical 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	80.93	Cum	149.30	12082.31			

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)
13	Carriage of materials							
	Coarse Sand (60 Km lead)	31.178	Cum	1159.00	36135.83			
	Coarse Aggregates (100 Km lead)	62.699	Cum	1075.00	67401.36			
	Cement (30 km lead)	35.522	MT	742.00	26357.44			
	Boulder (60 Km lead)	4.40	Cum	1159.00	5099.60			
	Brick (15 km lead)	480.00	No.	1838.00	882240.00			
	Steel (30 Km lead)	3.43	MT	742.00	2542.83			
TOTAL (In Rs.)					2416227.86			
TOTAL (In Rs.)					2416227.86			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	31.18	Cum	584.64	18228.17	1822.82		
	Coarse Aggregate	62.70	Cum	944.26	59204.10	5920.41		
	Boulders	4.40	Cum	694.61	3056.28	305.63		
<i>Total</i>						8048.86		
For 1 nos. fall, Total Seigniorage charges						8048.86		

ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR BASDIHA DY.

AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 9.625

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.	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.	196.400	Cum	195.20	38337.34			
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.	11.24	Cum	6381.70	71740.52	3.64	5.06	10.12
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.	42.69	Cum	6914.20	295152.22	17.61	18.36	36.71
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.	54.65	Cum	8151.40	445485.52	30.99	21.31	43.17
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.	5.10	MT	73574.90	375343.35			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	299.79	Sqm	578.60	173460.61			
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	1220.80			
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)	5.82	Sqm	66.00	384.12			
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)	14.55	RM	36993.21	538251.21			
11	Providing Drainage Spouts complete as per drawings & technical 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	126.86	Cum	149.30	18939.66			

13	Carriage of materials						
	Coarse Sand (60 Km lead)	44.729	Cum	1159.00	51840.38		
	Coarse Aggregates (100 Km lead)	90.004	Cum	1075.00	96753.86		
	Cement (30 km lead)	52.238	MT	742.00	38760.86		
	Boulder (60 Km lead)	5.82	Cum	1159.00	6745.38		
	Brick (15 km lead)	480.00	No.	1838.00	882240.00		
	Steel (30 Km lead)	5.10	MT	742.00	3785.32		
TOTAL (In Rs.)					3050799.00		
TOTAL (In Rs.)					3050799.00		
	Seigniorage @10%			Rate	Amount in Rs.	10%	
	Coarse Sand	44.73	Cum	584.64	26150.09	2615.01	
	Coarse Aggregate	90.00	Cum	944.26	84986.79	8498.68	
	Boulders	5.82	Cum	694.61	4042.63	404.26	
<i>Total</i>						11517.95	
For 1 nos. fall, Total Seigniorage charges						11517.95	

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SLAB BRIDGE FOR KHAIRA MR.							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT KM 3.255							
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.						
	<i>Right abutment</i>	2	1.92	1.49	2.15	12.30	Cum
		1	3.71	1.84	2.15	14.64	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.63	1.08	2.15	26.01	Cum
	<i>Left abutment</i>	2	1.92	1.49	2.15	12.30	Cum
		1	3.71	1.84	2.15	14.64	Cum
	<i>Extra for Slope (0.5:1)</i>	2	3.71	1.08	2.15	17.14	Cum
	TOTAL					97.03	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.						
	<i>Right abutment</i>	2	1.92	1.49	0.20	1.14	Cum
		1	3.71	1.84	0.20	1.36	Cum
	<i>Left abutment</i>	2	1.92	1.49	0.20	1.14	Cum
		1	3.71	1.84	0.20	1.36	Cum
	<i>Levelling course</i>	2	4.00	3.50	0.08	2.24	Cum
	TOTAL					7.25	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.						
	<i>Right abutment</i>	1	3.71	1.64	0.20	1.21	Cum
		1	3.71	1.44	0.80	4.26	Cum
		1	3.71	0.93	0.75	2.58	Cum
		1	3.71	0.82	0.45	1.37	Cum
	<i>Return wall</i>	2	1.92	1.29	0.20	0.99	Cum
		2	1.92	1.09	0.80	3.35	Cum
		2	1.92	0.55	0.97	2.03	Cum
		2	1.92	0.40	0.15	0.23	Cum
	<i>Left abutment</i>	1	3.71	1.64	0.20	1.21	Cum
		1	3.71	1.44	0.80	4.26	Cum
		1	3.71	0.93	0.75	2.58	Cum
		1	3.71	0.82	0.45	1.37	Cum
	<i>Return wall</i>	2	1.92	1.29	0.20	0.99	Cum
		2	1.92	1.09	0.80	3.35	Cum
		2	1.92	0.55	0.97	2.03	Cum
		2	1.92	0.40	0.15	0.23	Cum
	TOTAL					22.62	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.						
	<i>Slab</i>	1	3.74	4.00	0.37	5.51	Cum
	<i>Approch Slab</i>	2	3.50	4.00	0.30	8.40	Cum
	<i>Wearing coat</i>	1	10.74	3.00	0.08	2.42	Cum
	<i>Parapet</i>	2	10.74	0.44	0.18	1.67	Cum
		2	10.74	0.35	0.25	1.88	Cum
		2	10.74	0.22	0.55	2.59	Cum
	TOTAL					22.47	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	28	4.31		1.578	190.4	Kg	
a2	10	19	4.50		0.616	52.7	Kg	
a3	10	2	3.90		0.616	4.8	Kg	
a4	10	16	4.23		0.616	41.7	Kg	
a5	10	15	4.40		0.616	40.7	Kg	
	APPROACH SLAB							
c1	12	54	3.70		0.888	177.4	Kg	
c2	12	46	4.20		0.888	171.5	Kg	
c3	12	54	3.70		0.888	177.4	Kg	
c4	12	46	3.70		0.888	151.1	Kg	
	CRASH BARRIER FOR MAIN SLAB							
x1	12	116	2.37		0.888	244.2	Kg	
x2	16	116	1.32		1.578	242.4	Kg	
x3	12	24	3.65		0.888	77.8	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%)	22.62	0.0025	0.057	7850.00	443.946	Kg	
	Total Reinforcement Steel (in kg)						2623.9	Kg
	Total Weight in Metric Tonne						2.62	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.							
	Right abutment	2	3.71		0.20	1.48	Sqm	
		2		1.64	0.20	0.65	Sqm	
		2	3.71		0.80	5.93	Sqm	
		2		1.44	0.80	2.30	Sqm	
		2	3.71		0.75	5.56	Sqm	
		2		0.93	0.75	1.39	Sqm	
		2	3.71		0.45	3.34	Sqm	
		2		0.82	0.45	0.74	Sqm	
	Return wall	2	1.92		0.20	0.77	Sqm	
		2		1.29	0.20	0.52	Sqm	
		2	1.92		0.80	3.07	Sqm	
		2		1.09	0.80	1.75	Sqm	
		2	1.92		0.97	3.72	Sqm	
		2		0.55	0.97	1.06	Sqm	
		2	1.92		0.15	0.58	Sqm	
		2		0.40	0.15	0.12	Sqm	
	Left abutment	2	3.71		0.20	1.48	Sqm	
		2		1.64	0.20	0.65	Sqm	
		2	3.71		0.80	5.93	Sqm	
		2		1.44	0.80	2.30	Sqm	
		2	3.71		0.75	5.56	Sqm	
		2		0.93	0.75	1.39	Sqm	
		2	3.71		0.45	3.34	Sqm	
		2		0.82	0.45	0.74	Sqm	
	Return wall	2	1.92		0.20	0.77	Sqm	
		2		1.29	0.20	0.52	Sqm	
		2	1.92		0.80	3.07	Sqm	
		2		1.09	0.80	1.75	Sqm	
		2	1.92		0.97	3.72	Sqm	
		2		0.55	0.97	1.06	Sqm	
		2	1.92		0.15	0.58	Sqm	
		2		0.40	0.15	0.12	Sqm	
	Slab	2	3.74		0.37	2.76	Sqm	
		1	3.74	4.00		14.94	Sqm	
		2		4.00	0.37	2.95	Sqm	
	Approch Slab	4	3.50		0.30	4.20	Sqm	
		2	3.50	4.00		28.00	Sqm	
		4		4.00	0.30	4.80	Sqm	
	Parapet	4	10.74		0.18	7.51	Sqm	
		4		0.44	0.18	0.31	Sqm	
		4	10.74		0.25	10.74	Sqm	
		4		0.35	0.25	0.35	Sqm	
		4	10.74		0.55	23.62	Sqm	

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.22	0.55	0.48	Sqm
TOTAL						166.61	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	4.00	0.40		3.20	Sqm
TOTAL						3.20	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	4.00			8.00	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	3.71	1.18		8.73	Cum
	Right and left Return wall	4	1.92	1.23		9.43	Cum
	Extra slope	2	5.627	1.075	2.15	26.01	Cum
		2	3.709	1.075	2.15	17.14	Cum
TOTAL						61.32	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SLAB BRIDGE FOR PRITAMPURA MINOR							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT KM 0.410							
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	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.						
	<i>Right abutment</i>	2	1.97	1.60	1.59	10.00	Cum
		1	5.10	1.74	1.59	14.10	Cum
	<i>Extra for Slope (0.5:1)</i>	2	7.07	0.80	1.59	17.92	Cum
	<i>Left abutment</i>	2	1.97	1.49	1.59	9.34	Cum
		1	5.10	1.84	1.59	14.92	Cum
	<i>Extra for Slope (0.5:1)</i>	2	7.07	0.80	1.59	17.92	Cum
	TOTAL					84.20	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.						
	<i>Right abutment</i>	2	1.97	1.60	0.20	1.26	Cum
		1	5.10	1.74	0.20	1.77	Cum
	<i>Left abutment</i>	2	1.97	1.60	0.20	1.26	Cum
		1	5.10	1.74	0.20	1.77	Cum
	<i>Levelling course</i>	2	3.10	4.50	0.08	2.23	Cum
	TOTAL					8.29	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.						
	<i>Right abutment</i>	1	5.10	1.64	0.20	1.67	Cum
		1	5.10	1.49	0.80	6.06	Cum
		1	5.10	0.98	1.05	5.24	Cum
		1	5.10	0.82	0.50	2.09	Cum
	<i>Return wall</i>	2	1.87	1.40	0.20	1.04	Cum
		2	1.87	1.20	0.80	3.57	Cum
		2	1.87	0.60	1.32	2.95	Cum
		2	1.87	0.40	0.15	0.22	Cum
	<i>Left abutment</i>	1	5.10	1.64	0.20	1.67	Cum
		1	5.10	1.49	0.80	6.06	Cum
		1	5.10	0.98	1.05	5.24	Cum
		1	5.10	0.82	0.50	2.09	Cum
	<i>Return wall</i>	2	1.87	1.40	0.20	1.04	Cum
		2	1.87	1.20	0.80	3.57	Cum
		2	1.87	0.60	1.32	2.95	Cum
		2	1.87	0.40	0.15	0.22	Cum
	TOTAL					30.64	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.						
	<i>Slab</i>	1	5.57	5.50	0.43	13.10	Cum
	<i>Approach Slab</i>	2	3.50	5.50	0.33	12.61	Cum
	<i>Wearing coat</i>	1	12.57	4.50	0.08	4.24	Cum
	<i>Parapet</i>	2	12.57	0.44	0.18	1.96	Cum
		2	12.57	0.35	0.25	2.21	Cum
		2	12.57	0.22	0.55	3.03	Cum
	TOTAL					37.14	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	6.23		2.466	568.4	Kg
a2	12	28	6.10		0.888	151.6	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	22	6.15		0.616	83.4	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	5.47		0.616	80.9	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%)	30.64	0.0025	0.077	7850.00	601.339	Kg
	Total Reinforcement Steel (in kg)					3508.2	Kg
	Total Weight in Metric Tonne					3.51	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	5.10		0.20	2.04	Sqm
		2		1.64	0.20	0.65	Sqm
		2	5.10		0.80	8.17	Sqm
		2		1.49	0.80	2.38	Sqm
		2	5.10		1.05	10.72	Sqm
		2		0.98	1.05	2.05	Sqm
		2	5.10		0.50	5.10	Sqm
		2		0.82	0.50	0.82	Sqm
	Return wall	2	1.87		0.20	0.75	Sqm
		2		1.40	0.20	0.56	Sqm
		2	1.87		0.80	2.99	Sqm
		2		1.20	0.80	1.91	Sqm
		2	1.87		1.32	4.93	Sqm
		2		0.60	1.32	1.58	Sqm
		2	1.87		0.15	0.56	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	5.10		0.20	2.04	Sqm
		2		1.64	0.20	0.65	Sqm
		2	5.10		0.80	8.17	Sqm
		2		1.49	0.80	2.38	Sqm
		2	5.10		1.05	10.72	Sqm
		2		0.98	1.05	2.05	Sqm
		2	5.10		0.50	5.10	Sqm
		2		0.82	0.50	0.82	Sqm
	Return wall	2	1.87		0.20	0.75	Sqm
		2		1.40	0.20	0.56	Sqm
		2	1.87		0.80	2.99	Sqm
		2		1.20	0.80	1.91	Sqm
		2	1.87		1.32	4.93	Sqm
		2		0.60	1.32	1.58	Sqm
		2	1.87		0.15	0.56	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	5.57		0.43	4.76	Sqm
		1	5.57	5.50		30.64	Sqm
		2		5.50	0.43	4.70	Sqm
	Approch Slab	4	3.50		0.33	4.59	Sqm
		2	3.50	5.50		38.50	Sqm
		4		5.50	0.33	7.21	Sqm
	Parapet	4	12.57		0.18	8.80	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.57		0.25	12.57	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.57		0.55	27.65	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.22	0.55	0.48	Sqm
TOTAL						231.22	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 & technical 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	5.10	1.10		11.27	Cum
	Right and left Return wall	4	1.97	1.86		14.61	Cum
	Extra slope	2	7.0715	0.796	1.592	17.92	Cum
		2	7.0715	0.796	1.592	17.92	Cum
TOTAL						61.72	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT KM 4.965							
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	140.00			140.00	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.						
	<i>Right abutment</i>	2	1.96	1.58	1.98	12.30	Cum
		1	5.12	1.92	1.98	19.50	Cum
	<i>Extra for Slope (0.5:1)</i>	2	7.08	0.99	1.98	27.86	Cum
	<i>Left abutment</i>	2	1.96	1.49	1.98	11.60	Cum
		1	5.12	1.84	1.98	18.65	Cum
	<i>Extra for Slope (0.5:1)</i>	2	7.08	0.99	1.98	27.86	Cum
	TOTAL					117.77	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.						
	<i>Right abutment</i>	2	1.96	1.58	0.20	1.24	Cum
		1	5.12	1.92	0.20	1.97	Cum
	<i>Left abutment</i>	2	1.96	1.58	0.20	1.24	Cum
		1	5.12	1.92	0.20	1.97	Cum
	<i>Levelling course</i>	2	3.10	5.50	0.08	2.73	Cum
	TOTAL					9.14	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.						
	<i>Right abutment</i>	1	5.12	1.82	0.20	1.86	Cum
		1	5.12	1.57	0.80	6.43	Cum
		1	5.12	1.07	1.00	5.48	Cum
		1	5.12	0.82	0.50	2.10	Cum
	<i>Return wall</i>	2	1.86	1.38	0.20	1.03	Cum
		2	1.86	1.18	0.80	3.51	Cum
		2	1.86	0.69	1.27	3.26	Cum
		2	1.86	0.40	0.15	0.22	Cum
	<i>Left abutment</i>	1	5.12	1.82	0.20	1.86	Cum
		1	5.12	1.57	0.80	6.43	Cum
		1	5.12	1.07	1.00	5.48	Cum
		1	5.12	0.82	0.50	2.10	Cum
	<i>Return wall</i>	2	1.86	1.38	0.20	1.03	Cum
		2	1.86	1.18	0.80	3.51	Cum
		2	1.86	0.69	1.27	3.26	Cum
		2	1.86	0.40	0.15	0.22	Cum
	TOTAL					31.92	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.						
	<i>Slab</i>	1	5.10	5.50	0.38	10.59	Cum
	<i>Approch Slab</i>	2	3.50	5.50	0.33	12.61	Cum
	<i>Wearing coat</i>	1	12.10	4.50	0.08	4.08	Cum
	<i>Parapet</i>	2	12.10	0.44	0.18	1.88	Cum
		2	12.10	0.35	0.25	2.12	Cum
		2	12.10	0.22	0.55	2.91	Cum
	TOTAL					34.20	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	5.76		2.466	525.5	Kg
a2	12	26	6.10		0.888	140.8	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	22	5.68		0.616	77.0	Kg
a5	10	21	6.00		0.616	77.7	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	84	2.45		0.888	182.8	Kg
x2	16	84	1.45		1.578	191.6	Kg
x3	10	24	5.00		0.616	74.0	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	10	48	3.40		0.616	100.6	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	31.92	0.0025	0.080	7850.00	626.507	Kg
	Total Reinforcement Steel (in kg)					3427.0	Kg
	Total Weight in Metric Tonne					3.43	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Right abutment</i>	2	5.12		0.20	2.05	Sqm
		2		1.82	0.20	0.73	Sqm
		2	5.12		0.80	8.19	Sqm
		2		1.57	0.80	2.51	Sqm
		2	5.12		1.00	10.24	Sqm
		2		1.07	1.00	2.14	Sqm
		2	5.12		0.50	5.12	Sqm
		2		0.82	0.50	0.82	Sqm
	<i>Return wall</i>	2	1.86		0.20	0.74	Sqm
		2		1.38	0.20	0.55	Sqm
		2	1.86		0.80	2.98	Sqm
		2		1.18	0.80	1.89	Sqm
		2	1.86		1.27	4.72	Sqm
		2		0.69	1.27	1.75	Sqm
		2	1.86		0.15	0.56	Sqm
		2		0.40	0.15	0.12	Sqm
	<i>Left abutment</i>	2	5.12		0.20	2.05	Sqm
		2		1.82	0.20	0.73	Sqm
		2	5.12		0.80	8.19	Sqm
		2		1.57	0.80	2.51	Sqm
		2	5.12		1.00	10.24	Sqm
		2		1.07	1.00	2.14	Sqm
		2	5.12		0.50	5.12	Sqm
		2		0.82	0.50	0.82	Sqm
	<i>Return wall</i>	2	1.86		0.20	0.74	Sqm
		2		1.38	0.20	0.55	Sqm
		2	1.86		0.80	2.98	Sqm
		2		1.18	0.80	1.89	Sqm
		2	1.86		1.27	4.72	Sqm
		2		0.69	1.27	1.75	Sqm
		2	1.86		0.15	0.56	Sqm
		2		0.40	0.15	0.12	Sqm
	<i>Slab</i>	2	5.10		0.38	3.85	Sqm
		1	5.10	5.50		28.05	Sqm
		2		5.50	0.38	4.15	Sqm
	<i>Approch Slab</i>	4	3.50		0.33	4.59	Sqm
		2	3.50	5.50		38.50	Sqm
		4		5.50	0.33	7.21	Sqm
	<i>Parapet</i>	4	12.10		0.18	8.47	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.10		0.25	12.10	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.10		0.55	26.62	Sqm
		4		0.22	0.55	0.48	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
TOTAL						224.90	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 & technical 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	5.12		1.07	10.98	Cum
Right and left Return wall		4	1.96		1.81	14.22	Cum
<i>Extra slope</i>		2	7.079	0.992	1.984	27.86	Cum
		2	7.079	0.992	1.984	27.86	Cum
TOTAL						80.93	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SLAB BRIDGE FOR BASDIHA DY. AT 9.625 KM							
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.						
	<i>Right abutment</i>	2	2.04	1.74	2.58	18.24	Cum
		1	5.97	2.18	2.58	33.47	Cum
	<i>Extra for Slope (0.5:1)</i>	2	8.00	1.29	2.58	53.27	Cum
	<i>Left abutment</i>	2	2.04	1.74	2.58	18.24	Cum
		1	5.97	2.18	2.58	33.47	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.97	1.29	2.58	39.71	Cum
	TOTAL					196.40	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.						
	<i>Right abutment</i>	2	2.04	1.74	0.20	1.41	Cum
		1	5.97	2.18	0.20	2.59	Cum
	<i>Left abutment</i>	2	2.04	1.74	0.20	1.41	Cum
		1	5.97	2.18	0.20	2.59	Cum
	<i>Levelling course</i>	2	3.10	6.50	0.08	3.22	Cum
	TOTAL					11.24	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.						
	<i>Right abutment</i>	1	5.97	1.98	0.20	2.36	Cum
		1	5.97	1.63	0.80	7.75	Cum
		1	5.97	1.05	1.52	9.47	Cum
		1	5.97	0.82	0.50	2.45	Cum
	<i>Return wall</i>	2	1.94	1.74	0.20	1.34	Cum
		2	1.94	1.34	0.80	4.14	Cum
		2	1.94	0.67	1.79	4.62	Cum
		2	1.94	0.40	0.15	0.23	Cum
	<i>Left abutment</i>	1	5.97	1.98	0.20	2.36	Cum
		1	5.97	1.63	0.80	7.75	Cum
		1	5.97	1.05	1.52	9.47	Cum
		1	5.97	0.82	0.50	2.45	Cum
	<i>Return wall</i>	2	1.94	1.74	0.20	1.34	Cum
		2	1.94	1.34	0.80	4.14	Cum
		2	1.94	0.67	1.79	4.62	Cum
		2	1.94	0.40	0.15	0.23	Cum
	TOTAL					42.69	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.						
	<i>Slab</i>	1	6.50	7.28	0.54	25.30	Cum
	<i>Approch Slab</i>	2	3.50	7.28	0.30	15.28	Cum
	<i>Wearing coat</i>	1	13.50	6.28	0.08	6.35	Cum
	<i>Parapet</i>	2	13.50	0.44	0.18	2.10	Cum
		2	13.50	0.35	0.25	2.37	Cum
		2	13.50	0.22	0.55	3.25	Cum
	TOTAL					54.65	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	8.14		2.466	1183.5	Kg
a2	12	49	7.30		0.888	317.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	31	8.06		0.616	153.9	Kg
a5	10	37	7.20		0.616	164.2	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	122	2.55		0.888	276.4	Kg
x2	16	122	1.45		1.578	278.2	Kg
x3	12	24	7.18		0.888	152.9	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%)	42.69	0.0025	0.107	7850.00	837.749	Kg
	Total Reinforcement Steel (in kg)					5101.5	Kg
	Total Weight in Metric Tonne					5.10	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Right abutment</i>	2	5.97		0.20	2.39	Sqm
		2		1.98	0.20	0.79	Sqm
		2	5.97		0.80	9.54	Sqm
		2		1.63	0.80	2.60	Sqm
		2	5.97		1.52	18.07	Sqm
		2		1.05	1.52	3.17	Sqm
		2	5.97		0.50	5.97	Sqm
		2		0.82	0.50	0.82	Sqm
	<i>Return wall</i>	2	1.94		0.20	0.78	Sqm
		2		1.74	0.20	0.69	Sqm
		2	1.94		0.80	3.10	Sqm
		2		1.34	0.80	2.14	Sqm
		2	1.94		1.79	6.92	Sqm
		2		0.67	1.79	2.38	Sqm
		2	1.94		0.15	0.58	Sqm
		2		0.40	0.15	0.12	Sqm
	<i>Left abutment</i>	2	5.97		0.20	2.39	Sqm
		2		1.98	0.20	0.79	Sqm
		2	5.97		0.80	9.54	Sqm
		2		1.63	0.80	2.60	Sqm
		2	5.97		1.52	18.07	Sqm
		2		1.05	1.52	3.17	Sqm
		2	5.97		0.50	5.97	Sqm
		2		0.82	0.50	0.82	Sqm
	<i>Return wall</i>	2	1.94		0.20	0.78	Sqm
		2		1.74	0.20	0.69	Sqm
		2	1.94		0.80	3.10	Sqm
		2		1.34	0.80	2.14	Sqm
		2	1.94		1.79	6.92	Sqm
		2		0.67	1.79	2.38	Sqm
		2	1.94		0.15	0.58	Sqm
		2		0.40	0.15	0.12	Sqm
	<i>Slab</i>	2	6.50		0.54	6.96	Sqm
		1	6.50	7.28		47.29	Sqm
		2		7.28	0.54	7.78	Sqm
	<i>Approch Slab</i>	4	3.50		0.30	4.20	Sqm
		2	3.50	7.28		50.93	Sqm
		4		7.28	0.30	8.73	Sqm
	<i>Parapet</i>	4	13.50		0.18	9.45	Sqm
		4		0.44	0.18	0.31	Sqm
		4	13.50		0.25	13.50	Sqm
		4		0.35	0.25	0.35	Sqm
		4	13.50		0.55	29.70	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.22	0.55	0.48	Sqm
TOTAL						299.79	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	7.28	0.40		5.82	Sqm
TOTAL						5.82	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	7.28			14.55	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	5.97	1.15		13.71	Cum
	Right and left Return wall	4	2.04	2.47		20.17	Cum
	Extra slope	2	8.0025	1.29	2.58	53.27	Cum
		2	5.965	1.29	2.58	39.71	Cum
TOTAL						126.86	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	Basdiha Minor	9144-9400	256.000	0.520	133.120	Cum	5021.30	₹ 6,68,435.46	15.34	42.60
2	Shankarpur Minor	4150-4950	800.000	0.530	424.000	Cum	5021.30	₹ 21,29,031.20	48.84	135.68
3	Gamharia Minor	5550-6150	600.000	0.530	318.000	Cum	5021.30	₹ 15,96,773.40	36.63	101.76
4	Simra Minor	3850-5200	1350.000	0.540	729.000	Cum	5021.30	₹ 36,60,527.70	83.98	233.28
5	Salempur Minor	4600-6000	1400.000	0.540	756.000	Cum	5021.30	₹ 37,96,102.80	87.09	241.92
6	Pritampur Sub DY	14000-14400	400.000	0.550	220.000	Cum	5021.30	₹ 11,04,686.00	25.34	70.40
7	Chandauli Minor	1600-3000	1400.000	0.530	742.000	Cum	5021.30	₹ 37,25,804.60	85.48	237.44
Total					3322.12			₹ 1,66,81,361.16	382.71	1063.08
8	Carriage of materials									
	Coarse Sand (60 Km lead)				1063.078	Cum	1075.00	₹ 11,42,809.28		
	Cement (30 km lead)				382.708	MT	742.00	₹ 2,83,969.50		
	Brick (15 km lead)				1661060.00	No.	3.18	₹ 52,82,170.80		
Carriage of materials Total (In Rs.)								₹ 67,08,949.58		
SUB TOTAL (In Rs.)								₹ 2,33,90,310.74		
	Seigniorage @10%				Rate	Amount in Rs.	10%			
	Coarse Sand		1063.08	Cum	584.64	621518.16	62151.82			
Total								₹ 62,151.82		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF BASDIHA DISTRIBUTARY

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	HR FOR SHAKARPUR & KHAIRA MR.	0.345	₹ 40,127.43
2	CR + FALL	0.355	₹ 10,800.90
3	BRIDGE / FALL (1.981 M)	1.150	₹ 84,597.60
4	BRIDGE / FALL (1.524 M)	1.950	₹ 3,32,707.52
5	FALL (1.220 M)	2.900	₹ 60,689.73
6	NEW FALL (0.3048 M)	3.050	₹ 0.00
7	BRIDGE	3.305	₹ 26,885.49
8	FALL (1.524 M)	3.800	₹ 63,496.15
9	CR + HR FOR GAMHARIA MR. + FALL 1.524 M	4.580	₹ 52,445.70
10	BRIDGE	5.445	₹ 26,767.44
11	BRIDGE / FALL (1.828 M)	6.100	₹ 31,757.06
12	BRIDGE / FALL (1.220 M)	7.080	₹ 25,587.01
13	BRIDGE	8.070	₹ 8,118.14
14	CROSS DRAINAGE	8.575	₹ 68,251.97
15	BRIDGE	8.985	₹ 27,121.58
16	BRIDGE	9.625	₹ 55,994.74
17	BRIDGE / FALL (0.610 M) / CR + HR FOR PRITAMPURA SUB-DY.	10.060	₹ 51,887.05
18	FALL (0.914 M)	10.600	₹ 6,182.12
19	BRIDGE	10.760	₹ 19,424.62
20	FALL (1.067 M)	11.150	₹ 74,777.40
21	BRIDGE / FALL (1.067 M)	11.800	₹ 23,312.31
22	NEW FALL (0.762 M)	11.950	₹ 0.00
23	FALL (0.762 M) / HR FOR SIMRA MR.	12.685	₹ 11,376.60
24	BRIDGE / FALL (0.610 M)	13.800	₹ 81,355.11
25	NEW FALL (0.305 M)	13.900	₹ 0.00
26	BRIDGE / FALL (0.457 M)	14.465	₹ 57,274.39
27	FALL (0.914 M)	14.950	₹ 72,094.16
28	CULVERT + FALL (0.914 M)	15.515	₹ 0.00
29	HR FOR SALEMPUR MR.	15.950	₹ 10,856.11
30	FALL (1.067 M)	16.000	₹ 0.00
31	FALL (0.610M)	16.640	₹ 76,017.62
32	BRIDGE	17.125	₹ 20,128.62

33	FALL (0.914 M)	17.300	₹ 51,542.17
34	BRIDGE/ FALL (0.762 M)	18.040	₹ 59,003.86
35	FALL (1.372 M)	18.900	₹ 1,534.57
36	BRIDGE	19.170	₹ 45,819.88
37	NEW FALL (0.610 M)	19.700	₹ 0.00
38	BRIDGE / FALL (1.067 M)	20.100	₹ 49,912.64
39	BRIDGE	20.670	₹ 25,354.46
40	BRIDGE / FALL (0.915 M)	21.100	₹ 30,521.37
41	BRIDGE	21.280	₹ 0.00
42	FALL (0.610 M)	22.000	₹ 0.00
43	FALL (1.524 M)	22.600	₹ 22,239.81
44	BRIDGE	22.765	₹ 0.00
45	BRIDGE	23.080	₹ 0.00
Total In Rs.			₹ 17,05,963.32
Total In Lakhs.			₹ 17.06

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SHANKARPUR MR.

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	CULVERT COMBINED WITH HR	0.005	₹ 0.00
2	BRIDGE	0.550	₹ 4,101.97
3	BRIDGE	1.055	₹ 12,416.20
4	BRIDGE / FALL (1.524 M)	1.300	₹ 43,376.72
5	BRIDGE	1.700	₹ 1,703.65
6	BRIDGE	2.250	₹ 8,535.20
7	BRIDGE / FALL (1.524 M)	2.300	₹ 11,078.02
9	FALL (1.676 M)	2.950	₹ 90,276.34
10	FALL (1.220 M)	3.700	₹ 3,719.68
11	FALL (1.070 M)	4.350	₹ 64,357.56
Total In Rs.			₹ 2,39,565.36
Total In Lakhs.			₹ 2.40

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KHAIRA MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	CULVERT COMBINED WITH HR	0.005	₹ 0.00
2	BRIDGE	0.735	₹ 10,449.01
3	BRIDGE	1.125	₹ 92,429.36
4	BRIDGE	1.740	₹ 8,641.72
5	BRIDGE / FALL (1.372 M)	2.050	₹ 98,033.30
6	BRIDGE	2.375	₹ 8,768.95
7	PIPE CULVERT	2.460	₹ 2,48,435.19
8	BRIDGE	2.630	₹ 21,217.10
9	BRIDGE / FALL (1.524 M)	3.025	₹ 4,606.46
10	NEW FALL (0.305 M)	3.075	₹ 0.00
11	BRIDGE	3.255	₹ 9,183.04
12	FALL (1.372 M)	3.850	₹ 58,396.05
13	FALL (1.22 M)	4.350	₹ 97,491.19
14	BRIDGE	4.885	₹ 37,023.96
15	BRIDGE + FALL (0.457 M)	5.450	₹ 1,21,360.28
16	BRIDGE / FALL (0.305 M)	6.635	₹ 47,369.60
17	BRIDGE	7.005	₹ 1,129.15
18	FALL (0.61 M)	7.450	₹ 1,02,472.99
19	FALL (1.067 M)	7.950	₹ 63,172.67
20	CULVERT	8.250	₹ 0.00
21	BRIDGE / FALL (1.372 M)	8.450	₹ 37,277.43
22	PIPE CULVERT	9.220	₹ 2,124.79
Total In Rs.			₹ 10,69,582.25
Total In Lakhs.			₹ 10.70

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF GAMHARIA MR.

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL (1.676 M)	0.500	₹ 4,619.21
2	BRIDGE	0.650	₹ 16,633.42
3	BRIDGE	1.050	₹ 21,211.29
4	FALL (1.524 M)	1.600	₹ 19,332.39
5	BRIDGE	1.770	₹ 17,424.34
6	FALL (1.220 M)	2.450	₹ 8,245.52
7	BRIDGE	2.810	₹ 17,129.50
8	FALL (1.220 M)	3.300	₹ 20,523.90
9	FALL (1.524 M)	4.300	₹ 14,753.82
10	FALL (1.220 M)	5.275	₹ 0.00
Total In Rs.			₹ 1,39,873.38
Total In Lakhs.			₹ 1.40

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF PRITAMPURA SUB DY

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	BRIDGE COMBINED WITH HR	0.005	₹ 0.00
2	CULVERT + FALL (0.914 M)	0.350	₹ 25,180.00
3	CULVERT	0.410	₹ 0.00
4	CULVERT	0.555	₹ 1,888.70
5	CULVERT / FALL (0.915 M)	1.050	₹ 15,414.14
6	CULVERT / FALL (0.915 M)	1.650	₹ 9,546.95
7	AQUEDUCT	2.280	₹ 19,332.22
8	FALL (1.676 M)	2.600	₹ 54,804.58
9	CULVERT / FALL (1.220 M)	3.200	₹ 79,052.63
10	CULVERT	3.650	₹ 20,369.63
11	CULVERT	4.110	₹ 37,088.46
12	CULVERT / FALL (0.762 M)	4.150	₹ 11,246.10
13	CULVERT	4.260	₹ 7,102.35
14	CULVERT	4.280	₹ 4,803.31
15	CULVERT	4.695	₹ 23,456.70
16	CULVERT	5.255	₹ 0.00
17	FALL (0.762 M)	5.850	₹ 20,568.43
18	BRIDGE	6.285	₹ 18,857.84
19	BRIDGE / FALL (0.762 M)	6.650	₹ 28,602.65
20	BRIDGE	6.735	₹ 8,876.65
21	BRIDGE	7.015	₹ 46,503.93
22	HR FOR CHANDAULI MR.	7.435	₹ 4,178.35
23	BRIDGE / FALL (0.610 M)	7.450	₹ 18,899.35
24	BRIDGE	8.410	₹ 41,200.86
25	CULVERT	8.850	₹ 21,077.83
26	BRIDGE / FALL (1.22 M)	9.250	₹ 4,838.44
27	CULVERT	9.670	₹ 17,052.96
28	PIPE CULVERT	10.075	₹ 7,707.69
29	CULVERT / FALL (0.610 M)	10.110	₹ 15,439.48
30	NEW FALL (0.457 M)	10.600	₹ 0.00
31	CULVERT	10.785	₹ 37,178.98
32	FALL (0.457 M)	11.770	₹ 8,448.28
33	FALL (0.610 M)	12.150	₹ 77,299.01
34	PIPE CULVERT	12.915	₹ 1,975.63
35	FALL (1.220 M)	13.350	₹ 11,029.52
36	BRIDGE / FALL (0.610 M)	13.680	₹ 20,451.43
37	NEW FALL (0.610M)	13.700	₹ 0.00
Total In Rs.			₹ 7,19,473.09
Total In Lakhs.			₹ 7.19

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF CHANDAULI MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL 0.914 M	0.100	₹ 13,936.19
2	CULVERT	0.660	₹ 24,865.75
3	CROSS DRAINAGE	0.695	₹ 20,624.33
4	FALL (0.305 M)	0.900	₹ 22,251.45
5	CULVERT + FALL (0.610 M)	1.335	₹ 26,764.50
6	FALL (0.914M)	1.800	₹ 24,091.98
7	CULVERT	2.168	₹ 21,123.00
8	CROSS DRAINAGE	2.470	₹ 22,454.17
9	FALL (0.305 M)	2.795	₹ 24,468.23
Total In Rs.			₹ 2,00,579.60
Total In Lakhs.			₹ 2.01

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SIMRA MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL (0.457 M) COMBINED WITH HR	0.000	₹ 0.00
2	FALL (0.610 M)	0.610	₹ 57,409.44
3	BRIDGE	1.600	₹ 25,930.77
4	FALL (0.610 M)	1.650	₹ 0.00
5	FALL (0.610 M)	2.000	₹ 22,096.03
6	FALL (0.610 M)	2.475	₹ 0.00
7	BRIDGE	3.380	₹ 1,14,676.02
8	FALL (0.610 M)	3.460	₹ 69,050.77
Total In Rs.			₹ 2,89,163.03
Total In Lakhs.			₹ 2.89

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SALEMPUR MR.

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL (0.914 M) COMBINED WITH HR	0.000	₹ 0.00
2	CROSS DRAINAGE	0.020	₹ 7,142.27
3	CULVERT	0.575	₹ 19,793.88
4	FALL (0.457 M)	0.950	₹ 35,405.01
5	FALL (0.610 M)	1.600	₹ 1,18,780.78
6	CULVERT	1.820	₹ 1,185.68
7	CULVERT / FALL (0.610 M)	2.240	₹ 5,773.66
8	FALL (0.762 M)	2.900	₹ 45,572.34
9	FALL (1.524 M)	3.095	₹ 37,613.81
10	CULVERT	3.470	₹ 11,954.02
11	FALL (0.457 M)	3.550	₹ 42,644.81
12	FALL (0.305 M)	4.370	₹ 38,801.69
13	FALL (1.524 M)	4.600	₹ 0.00
14	CULVERT	4.715	₹ 16,368.06
15	ROAD CROSSING	5.200	₹ 1,770.66
Total In Rs.			₹ 3,81,036.02
Total In Lakhs.			₹ 3.81

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND**DETAILED ESTIMATE FOR C/O OF APPROACH ROAD**

Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		36.000	₹ 1,87,56,667.80
Total In Rs.			₹ 1,87,56,667.80
Total In Lakhs.			₹ 187.57

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF BASDIHA 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 HR OF Shankarpur & Khaira Mr.(Ch.-0.345 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	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.	7.707	Cum	2492.58	19210.94			
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.	14.000	Sqm	340.20	4762.80	0.726	0.204	
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.	21.600	Sqm	91.70	1980.72	0.03		
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.	0.657	Cum	8151.40	5351.39	0.37	0.26	0.52
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.	8.832	Sqm	578.60	5110.20			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	0.460	Cum	1075.00	494.97			
		Coarse Aggregates (100 Km lead)	0.519	Cum	1398.00	725.05			
		Cement (30 km lead)	1.130	MT	742.00	838.75			
TOTAL (In Rs.)						40127.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.46	Cum	584.64	269.19	26.92		
		Coarse Aggregate	0.52	Cum	944.26	489.73	48.97		
Total							75.89		
AOC FOR CR + BRIDGE/NEW FALL AT 0.355 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	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.	9.754	Sqm	91.70	894.41	0.01		
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.	0.635	Cum	8151.40	5174.10	0.36	0.25	0.50
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.	3.579	Sqm	578.60	2070.81			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.248	Cum	1075.00	266.12			
		Coarse Aggregates (100 Km lead)	0.501	Cum	1398.00	701.03			
		Cement (30 km lead)	0.375	MT	742.00	277.90			
TOTAL (In Rs.)						10800.90			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.25	Cum	584.64	144.73	14.47		
		Coarse Aggregate	0.50	Cum	944.26	473.50	47.35		
Total							61.82		
AOC FOR BRIDGE + FALL (Ch.-1.150 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.	33.940	Cum	2492.58	84597.60			
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.000	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)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.000	MT	742.00	0.00			
TOTAL (In Rs.)						84597.60			
		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.-1.950 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.	37.447	Cum	6914.20	258914.66	15.45	16.10	32.20
2		Carriage of materials							
		Coarse Sand (60 Km lead)	16.102	Cum	1075.00	17309.78			
		Coarse Aggregates (100 Km lead)	32.204	Cum	1398.00	45021.54			
		Cement (30 km lead)	15.447	MT	742.00	11461.53			
TOTAL (In Rs.)						332707.52			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	16.10	Cum	584.64	9413.95	941.39		
		Coarse Aggregate	32.20	Cum	944.26	30409.18	3040.92		
Total						3982.31			
AOC FOR FALL (Ch.-2.900 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.	77.400	Sqm	340.20	26331.48	4.012	1.130	
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.	77.400	Sqm	63.20	4891.68	0.12		
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.	2.835	Cum	6914.20	19601.76	1.17	1.22	2.44
4		Carriage of materials							
		Coarse Sand (60 Km lead)	2.349	Cum	1075.00	2525.27			
		Coarse Aggregates (100 Km lead)	2.438	Cum	1398.00	3408.46			
		Cement (30 km lead)	5.298	MT	742.00	3931.08			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						60689.73			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.35	Cum	584.64	1373.37	137.34		
		Coarse Aggregate	2.44	Cum	944.26	2302.20	230.22		
Total						367.56			
AOC FOR FOR BRIDGE (Ch.-3.305 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			
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.	2.80	Cum	5021.30	14080.53	0.32	0.90	
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.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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.	12.741	Sqm	63.20	805.21	0.02		
7		Carriage of materials							
		Coarse Sand (60 Km lead)	1.083	Cum	1075.00	1164.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	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)
		Cement (30 km lead)	1.003	MT	742.00	743.95			
		Brick (15 km lead)	1402.00	No.	3.18	4458.36			
TOTAL (In Rs.)						26885.49			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.08	Cum	584.64	633.37	63.34		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.34		
AOC FOR FALL (Ch.-3.800 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.	200.000	Sqm	11.80	2360.88			
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, propping etc. and its removal after use in foundation as per specification and direction of E/I.	27.600	Sqm	578.60	15969.36			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	2.430	Cum	1075.00	2612.25			
		Coarse Aggregates (100 Km lead)	4.860	Cum	1398.00	6794.28			
		Cement (30 km lead)	1.750	MT	742.00	1298.20			
TOTAL (In Rs.)						63496.15			
		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 HR OF CR + HR OF GAMHARIA MR+ FALL AT 4.580 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.	120.000	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.	13.005	Sqm	91.70	1192.60			
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.	5.351	Cum	6914.20	36998.36	2.21	2.30	4.60
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.	5.000	Sqm	340.20	1701.00	0.259	0.073	
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.	5.000	Sqm	63.20	316.00	0.01		
6		Carriage of materials							
		Coarse Sand (60 Km lead)	2.374	Cum	1075.00	2552.01			
		Coarse Aggregates (100 Km lead)	4.602	Cum	1398.00	6433.48			
		Cement (30 km lead)	2.474	MT	742.00	1835.72			
TOTAL (In Rs.)						52445.70			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.37	Cum	584.64	1387.91	138.79		
		Coarse Aggregate	4.60	Cum	944.26	4345.41	434.54		
Total							573.33		

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 BRIDGE (Ch.-5.445 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			
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.	2.80	Cum	5021.30	14080.53	0.32	0.90	
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.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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.	12.741	Sqm	63.20	805.21	0.02		
7		Carriage of materials							
		Coarse Sand (60 Km lead)	1.083	Cum	1075.00	1164.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.003	MT	742.00	743.95			
		Brick (15 km lead)	1402.00	No.	3.18	4458.36			
TOTAL (In Rs.)						26767.44			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.08	Cum	584.64	633.37	63.34		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.34		
AOC FOR FOR BRIDGE + FALL (Ch.-6.100 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.	12.741	Cum	2492.58	31757.06			
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.)						31757.06			
		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.-7.080 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.	2.80	Cum	5021.30	14080.53	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.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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.	12.741	Sqm	63.20	805.21	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.083	Cum	1075.00	1164.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.003	MT	742.00	743.95			
		Brick (15 km lead)	1402.00	No.	3.18	4458.36			
TOTAL (In Rs.)						25587.01			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.08	Cum	584.64	633.37	63.34		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.34		
AOC FOR BRIDGE (Ch.-8.070 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			

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.	0.408	Cum	6914.20	2823.76	0.17	0.18	0.35
3	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	5.311	Sqm	578.60	3073.06			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.176	Cum	1075.00	188.78			
		Coarse Aggregates (100 Km lead)	0.351	Cum	1398.00	491.01			
		Cement (30 km lead)	0.168	MT	742.00	125.00			
TOTAL (In Rs.)						8118.14			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.18	Cum	584.64	102.67	10.27		
		Coarse Aggregate	0.35	Cum	944.26	331.65	33.16		
Total							43.43		
AOC FOR CD WORK (Ch.-8.575 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	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.	145.200	Sqm	340.20	49397.04	7.527	2.120	
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.	145.200	Sqm	63.20	9176.64	0.22		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	2.120	Cum	1075.00	2278.91			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	7.745	MT	742.00	5746.77			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						68251.97			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.12	Cum	584.64	1239.39	123.94		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							123.94		
AOC FOR FOR BRIDGE (Ch.-8.985 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 royalty as per specification and direction of E/I.	2.80	Cum	5021.30	14080.53	0.32	0.90	
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.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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.	12.741	Sqm	63.20	805.21	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.083	Cum	1075.00	1164.60			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.003	MT	742.00	743.95			
		Brick (15 km lead)	1402.00	No.	3.18	4458.36			
TOTAL (In Rs.)						27121.58			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.08	Cum	584.64	633.37	63.34		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.34		
AOC FOR FOR BRIDGE (Ch.-9.625 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.	110.000	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.	21.944	Cum	2492.58	54696.26			
6		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.)						55994.74			
		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 CR + HR OF PRITAMPURA SUB DY , FALL /BRIDGE (Ch.-10.060 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.	135.000	Sqm	11.80	1593.59			
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.	9.792	Sqm	91.70	897.92			
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.	5.560	Cum	6914.20	38439.85	2.29	2.39	4.78
4		Carriage of materials							
		Coarse Sand (60 Km lead)	2.391	Cum	1075.00	2569.90			
		Coarse Aggregates (100 Km lead)	4.781	Cum	1398.00	6684.14			
		Cement (30 km lead)	2.293	MT	742.00	1701.64			
TOTAL (In Rs.)						51887.05			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.39	Cum	584.64	1397.64	139.76		
		Coarse Aggregate	4.78	Cum	944.26	4514.71	451.47		
Total							591.24		
AOC FOR FALL (Ch.-10.600 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.	120.000	Sqm	11.80	1416.53			
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.	74.100	Sqm	63.20	4683.12	0.11		
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)	0.111	MT	742.00	82.47			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						6182.12			
		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 BRIDGE(Ch.-10.760 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.	85.000	Sqm	11.80	1003.37			
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.	2.02	Cum	5021.30	10137.98	0.23	0.65	

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	5.5.5	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.	9.173	Sqm	340.20	3120.74	0.476	0.134	
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.	9.173	Sqm	63.20	579.75	0.01		
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.780	Cum	1075.00	838.51			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.722	MT	742.00	535.64			
		Brick (15 km lead)	1009.00	No.	3.18	3208.62			
TOTAL (In Rs.)						19424.62			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.78	Cum	584.64	456.02	45.60		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							45.60		
AOC FOR FALL (Ch.-11.150 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.	30.000	Cum	2492.58	74777.40			
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.)						74777.40			
		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.									
AOC FOR BRIDGE+ FALL (Ch.-11.800 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.	120.000	Sqm	11.80	1416.53			
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.	1.37	Cum	5021.30	6887.22	0.16	0.44	
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.	6.629	Sqm	340.20	2255.32	0.344	0.097	
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.	6.629	Sqm	63.20	418.98	0.01		
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.	1.10	Cum	6381.70	7019.87	0.36	0.50	0.99
7		Carriage of materials							
		Coarse Sand (60 Km lead)	1.031	Cum	1075.00	1108.00			
		Coarse Aggregates (100 Km lead)	0.990	Cum	1398.00	1384.02			
		Cement (30 km lead)	0.868	MT	742.00	644.07			
		Brick (15 km lead)	685.00	No.	3.18	2178.30			
TOTAL (In Rs.)						23312.31			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.03	Cum	584.64	602.59	60.26		
		Coarse Aggregate	0.99	Cum	944.26	934.82	93.48		
Total							153.74		
AOC FOR HR OF SIMRA MINOR(Ch.-12.685 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.	75.000	Sqm	11.80	885.33			

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	5.8.9	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.	4.209	Cum	2492.58	10491.27			
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.)						11376.60			
		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 + FALL (Ch.-13.800 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.	170.000	Sqm	11.80	2006.75			
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.	31.834	Cum	2492.58	79348.37			
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			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						81355.11			
		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		
AOC FOR FOR BRIDGE/FALL(Ch.-14.465 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.	22.410	Cum	2492.58	55857.86			
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			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						57274.39			
		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		
AOC FOR FALL (Ch.-14.950 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.	200.000	Sqm	11.80	2360.88			
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.	7.849	Cum	6914.20	54266.79	3.24	3.37	6.75
3		Carriage of materials							
		Coarse Sand (60 Km lead)	3.375	Cum	1075.00	3628.02			
		Coarse Aggregates (100 Km lead)	6.750	Cum	1398.00	9436.21			
		Cement (30 km lead)	3.238	MT	742.00	2402.26			
TOTAL (In Rs.)						72094.16			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.37	Cum	584.64	1973.10	197.31		
		Coarse Aggregate	6.75	Cum	944.26	6373.56	637.36		
Total							834.67		

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)
AOC FOR CULVERT (Ch.-15.515 Km)									
1		Structure is in good condition and does not require any repair works.							
No repair required as per Site									
AOC FOR HR FOR SALEMPUR MR.(Ch.-15.950 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.	150.000	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.	3.645	Cum	2492.58	9085.45			
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.)						10856.11			
		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		
AOC FOR FALL (Ch.-16.640Km)									
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.	170.000	Sqm	11.80	2006.75			
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.	67.500	Sqm	340.20	22963.50	3.499	0.986	
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.	5.334	Cum	6914.20	36880.34	2.20	2.29	4.59
4		Carriage of materials							
		Coarse Sand (60 Km lead)	3.279	Cum	1075.00	3525.05			
		Coarse Aggregates (100 Km lead)	4.587	Cum	1398.00	6412.96			
		Cement (30 km lead)	5.699	MT	742.00	4229.01			
TOTAL (In Rs.)						76017.62			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.28	Cum	584.64	1917.10	191.71		
		Coarse Aggregate	4.59	Cum	944.26	4331.55	433.15		
Total							624.87		
AOC FOR FOR BRIDGE (Ch.-17.125 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.	80.000	Sqm	11.80	944.35			
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.	1.31	Cum	5021.30	6588.77	0.15	0.42	
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.	21.684	Sqm	340.20	7376.90	1.124	0.317	
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.	21.684	Sqm	63.20	1370.43	0.03		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.736	Cum	1075.00	791.71			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.308	MT	742.00	970.38			
		Brick (15 km lead)	656.00	No.	3.18	2086.08			
TOTAL (In Rs.)						20128.62			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.74	Cum	584.64	430.57	43.06		

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							43.06		
AOC FOR FALL (Ch.-17.300 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.	80.000	Sqm	11.80	944.35			
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.	5.421	Cum	6914.20	37484.35	2.24	2.33	4.66
3	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	4.200	Sqm	578.60	2430.12			
4	Carriage of materials								
		Coarse Sand (60 Km lead)	2.331	Cum	1075.00	2506.02			
		Coarse Aggregates (100 Km lead)	4.662	Cum	1398.00	6517.99			
		Cement (30 km lead)	2.236	MT	742.00	1659.34			
TOTAL (In Rs.)						51542.17			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.33	Cum	584.64	1362.90	136.29		
		Coarse Aggregate	4.66	Cum	944.26	4402.49	440.25		
Total							576.54		
AOC FOR FOR BRIDGE+ FALL (Ch.-18.040 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.	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 royalty 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.	5.733	Sqm	340.20	1950.46	0.297	0.084	
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.	5.733	Sqm	63.20	362.34	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.	5.226	Cum	6914.20	36132.20	2.16	2.25	4.49
6	Carriage of materials								
		Coarse Sand (60 Km lead)	2.735	Cum	1075.00	2939.69			
		Coarse Aggregates (100 Km lead)	4.494	Cum	1398.00	6282.87			
		Cement (30 km lead)	2.607	MT	742.00	1934.26			
		Brick (15 km lead)	630.00	No.	3.18	2003.40			
TOTAL (In Rs.)						59003.86			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.73	Cum	584.64	1598.75	159.88		
		Coarse Aggregate	4.49	Cum	944.26	4243.68	424.37		
Total							584.24		
AOC FOR FALL (Ch.-18.900 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.	130.000	Sqm	11.80	1534.57			
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.)						1534.57			
		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	0.00	Cum	584.64	0.00	0.00		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							0.00		
AOC FOR FOR BRIDGE (Ch.-19.170 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 royalty as per specification and direction of E/I.	1.47	Cum	5021.30	7392.28	0.17	0.47	
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.	6.689	Sqm	340.20	2275.54	0.347	0.098	
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.	6.689	Sqm	63.20	422.73	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.	2.70	Cum	6381.70	17230.59	0.87	1.22	2.43
6	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	14.700	Sqm	578.60	8505.42			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	1.784	Cum	1075.00	1917.54			
		Coarse Aggregates (100 Km lead)	2.430	Cum	1398.00	3397.14			
		Cement (30 km lead)	1.401	MT	742.00	1039.67			
		Brick (15 km lead)	736.00	No.	3.18	2340.48			
TOTAL (In Rs.)						45819.88			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.78	Cum	584.64	1042.86	104.29		
		Coarse Aggregate	2.43	Cum	944.26	2294.55	229.46		
Total							333.74		
AOC FOR BRIDGE/FALL (Ch.-20.100 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.	20.024	Cum	2492.58	49912.64			
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.)						49912.64			
		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		
New fall has been proposed.									
AOC FOR FOR BRIDGE (Ch.-20.670 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	5.5.5	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.	61.000	Sqm	340.20	20752.20	3.162	0.891	
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.891	Cum	1075.00	957.40			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	3.162	MT	742.00	2346.38			
TOTAL (In Rs.)						25354.46			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.89	Cum	584.64	520.68	52.07		
		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							52.07		
AOC FOR FOR BRIDGE + FALL (Ch.-21.100 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.	80.000	Sqm	11.80	944.35			
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.	75.000	Sqm	340.20	25515.00	3.888	1.095	
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.095	Cum	1075.00	1177.13			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	3.888	MT	742.00	2884.90			
TOTAL (In Rs.)						30521.37			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.10	Cum	584.64	640.18	64.02		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							64.02		
AOC FOR BRIDGE (Ch.21.280 Km)									
1		Structure is in good condition and does not require any repair works.							
AOC FOR FALL (Ch.22.600 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.	80.000	Sqm	11.80	944.35			
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.	54.000	Sqm	340.20	18370.80	2.799	0.788	
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.788	Cum	1075.00	847.53			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.799	MT	742.00	2077.13			
TOTAL (In Rs.)						22239.81			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.79	Cum	584.64	460.93	46.09		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							46.09		
AOC FOR BRIDGE (Ch.-22.765 Km)									
1		Structure is in good condition and does not require any repair works.							
		No required as per site condition							
AOC FOR BRIDGE(Ch.-23.080 Km)									
1		Structure is in good condition and does not require any repair works.							
		No required as per site condition							

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 (SHANKARPUR MINOR)									
AOC FOR CULVERT (Ch.-0.550 Km)									
1		New HR cum Bridge is Proposed Here and Dismantling Cost is taken in Basdiha Distributary							
AOC FOR BRIDGE (Ch.-0.550 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.	100.000	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 royalty as per specification and direction of E/I.	0.25	Cum	5021.30	1262.66	0.03	0.08	
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.	2.515	Sqm	340.20	855.47	0.130	0.037	
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.	2.515	Sqm	63.20	158.92	0.00		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.117	Cum	1075.00	125.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.163	MT	742.00	121.02			
		Brick (15 km lead)	125.00	No.	3.18	397.50			
TOTAL (In Rs.)						4101.97			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.12	Cum	584.64	68.51	6.85		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							6.85		
AOC FOR HR OF BRIDGE (Ch.-1.055 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 royalty as per specification and direction of E/I.	1.21	Cum	5021.30	6054.63	0.14	0.39	
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.	5.478	Sqm	340.20	1863.78	0.284	0.080	
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.	5.478	Sqm	63.20	346.24	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.466	Cum	1075.00	500.78			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.431	MT	742.00	319.90			
		Brick (15 km lead)	602.00	No.	3.18	1914.36			
TOTAL (In Rs.)						12416.20			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.47	Cum	584.64	272.35	27.23		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							27.23		
AOC FOR HR OF BRIDGE+ FALL (Ch.-1.300 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	5.5.5	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.	106.700	Sqm	340.20	36299.34	5.531	1.558	
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.558	Cum	1075.00	1674.66			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	5.531	MT	742.00	4104.25			
TOTAL (In Rs.)						43376.72			
		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	1.56	Cum	584.64	910.76	91.08		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							91.08		
AOC FOR BRIDGE (Ch.-1.700 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.	6.300	Sqm	63.20	398.16	0.01		
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)	0.009	MT	742.00	7.01			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						1703.65			
		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 HR OF BRIDGE (Ch.-2.250 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.	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 royalty as per specification and direction of E/I.	0.70	Cum	5021.30	3520.13	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.	4.505	Sqm	340.20	1532.67	0.234	0.066	
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.	4.505	Sqm	63.20	284.73	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.290	Cum	1075.00	311.87			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.321	MT	742.00	238.23			
		Brick (15 km lead)	350.00	No.	3.18	1113.00			
TOTAL (In Rs.)						8535.20			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.29	Cum	584.64	169.61	16.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							16.96		
AOC FOR HR OF BRIDGE+ FALL (Ch.-2.300 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.	180.000	Sqm	11.80	2124.79			
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.	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.	4.459	Sqm	340.20	1517.03	0.231	0.065	
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.	4.459	Sqm	63.20	281.82	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.379	Cum	1075.00	407.61			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.351	MT	742.00	260.38			
		Brick (15 km lead)	490.00	No.	3.18	1558.20			
TOTAL (In Rs.)						11078.02			
		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	0.38	Cum	584.64	221.68	22.17		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							22.17		
AOC FOR FALL (Ch.-2.950 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.	36.218	Cum	2492.58	90276.34			
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.)						90276.34			
		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		
New fall has been proposed.									
AOC FOR FALL (Ch.-3.700 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.	1.492	Cum	2492.58	3719.68			
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.)						3719.68			
		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.-4.350 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.	25.820	Cum	2492.58	64357.56			
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.)						64357.56			
		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		
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 (KHAIRA MINOR)									
AOC FOR BRIDGE (Ch.-0.735 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 royalty as per specification and direction of E/I.	1.11	Cum	5021.30	5570.99	0.13	0.36	
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.	2.667	Sqm	340.20	907.31	0.138	0.039	
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.	2.667	Sqm	63.20	168.55	0.00		
5	Carriage of materials								
		Coarse Sand (60 Km lead)	0.394	Cum	1075.00	423.52			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.270	MT	742.00	200.39			
		Brick (15 km lead)	554.00	No.	3.18	1761.72			
TOTAL (In Rs.)						10449.01			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.39	Cum	584.64	230.33	23.03		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							23.03		
AOC FOR BRIDGE (Ch.-1.125 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	5.1.31	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	7.350	Cum	149.30	1097.36			
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.	0.55	Cum	6381.70	3517.91	0.18	0.25	0.50
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.	9.601	Cum	6914.20	66384.62	3.96	4.13	8.26
5	Carriage of materials								
		Coarse Sand (60 Km lead)	4.377	Cum	1075.00	4704.82			
		Coarse Aggregates (100 Km lead)	8.753	Cum	1398.00	12236.91			
		Cement (30 km lead)	4.139	MT	742.00	3071.21			
TOTAL (In Rs.)						92429.36			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.38	Cum	584.64	2558.72	255.87		
		Coarse Aggregate	8.75	Cum	944.26	8265.26	826.53		
Total							1082.40		
AOC FOR HR OF BRIDGE (Ch.-1.740 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.	0.77	Cum	5021.30	3872.15	0.09	0.25	
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.	7.007	Sqm	340.20	2383.90	0.363	0.102	

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.	7.007	Sqm	63.20	442.86	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.349	Cum	1075.00	375.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.463	MT	742.00	343.26			
		Brick (15 km lead)	385.00	No.	3.18	1224.30			
TOTAL (In Rs.)						8641.72			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.35	Cum	584.64	204.08	20.41		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							20.41		
AOC FOR HR OF BRIDGE/FALL (Ch.-2.050 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 royalty as per specification and direction of E/I.	0.73	Cum	5021.30	3660.94	0.08	0.23	
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.	16.563	Sqm	340.20	5634.68	0.859	0.242	
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.	16.563	Sqm	63.20	1046.77	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.	9.601	Cum	6914.20	66384.62	3.96	4.13	8.26
5		Carriage of materials							
		Coarse Sand (60 Km lead)	4.604	Cum	1075.00	4948.91			
		Coarse Aggregates (100 Km lead)	8.257	Cum	1398.00	11543.33			
		Cement (30 km lead)	4.928	MT	742.00	3656.54			
		Brick (15 km lead)	364.00	No.	3.18	1157.52			
TOTAL (In Rs.)						98033.30			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.60	Cum	584.64	2691.47	269.15		
		Coarse Aggregate	8.26	Cum	944.26	7796.79	779.68		
Total							1048.83		
AOC FOR HR OF BRIDGE (Ch.-2.375 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.	0.28	Cum	5021.30	1420.30	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.	14.779	Sqm	340.20	5027.86	0.766	0.216	
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.	14.779	Sqm	63.20	934.04	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.306	Cum	1075.00	329.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.821	MT	742.00	609.11			
		Brick (15 km lead)	141.00	No.	3.18	448.38			
TOTAL (In Rs.)						8768.95			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.31	Cum	584.64	179.07	17.91		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							17.91		

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 PIPE CULVERT(Ch.-2.460Km)									
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	5.5.5	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.	17.800	Sqm	340.20	6055.67	0.923	0.260	
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.	17.800	Sqm	63.20	1124.98	0.03		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.260	Cum	1075.00	279.38			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.949	MT	742.00	704.51			
		Brick (15 km lead)	75000.00	No.	3.18	238500.00			
TOTAL (In Rs.)						248435.19			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.26	Cum	584.64	151.94	15.19		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							15.19		
AOC FOR HR OF BRIDGE (Ch.-2.630 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 royalty as per specification and direction of E/I.	1.77	Cum	5021.30	8870.73	0.20	0.57	
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.	16.053	Sqm	340.20	5461.30	0.832	0.234	
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.	16.053	Sqm	63.20	1014.56	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.800	Cum	1075.00	859.67			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.060	MT	742.00	786.37			
		Brick (15 km lead)	883.00	No.	3.18	2807.94			
TOTAL (In Rs.)						21217.10			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.80	Cum	584.64	467.53	46.75		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							46.75		
AOC FOR HR OF BRIDGE/FALL (Ch.-3.025 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.	0.518	Cum	6914.20	3584.77	0.21	0.22	0.45
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.223	Cum	1075.00	239.66			
		Coarse Aggregates (100 Km lead)	0.446	Cum	1398.00	623.34			
		Cement (30 km lead)	0.214	MT	742.00	158.69			
TOTAL (In Rs.)						4606.46			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.22	Cum	584.64	130.34	13.03		
		Coarse Aggregate	0.45	Cum	944.26	421.03	42.10		
Total							55.14		

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)
AOC FOR BRIDGE (Ch.-3.255 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.	0.55	Cum	5021.30	2759.78	0.06	0.18	
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.	11.590	Sqm	340.20	3942.82	0.601	0.169	
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.	11.590	Sqm	63.20	732.47	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.345	Cum	1075.00	370.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.682	MT	742.00	505.68			
		Brick (15 km lead)	274.00	No.	3.18	871.32			
TOTAL (In Rs.)						9183.04			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.35	Cum	584.64	201.75	20.18		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							20.18		
AOC FOR BRIDGE/FALL (Ch.-3.850 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.	23.428	Cum	2492.58	58396.05			
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.)						58396.05			
		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 FALL (Ch.-4.350 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.	10.973	Cum	6914.20	75868.13	4.53	4.72	9.44
2		Carriage of materials							
		Coarse Sand (60 Km lead)	4.718	Cum	1075.00	5072.18			
		Coarse Aggregates (100 Km lead)	9.437	Cum	1398.00	13192.38			
		Cement (30 km lead)	4.526	MT	742.00	3358.50			
TOTAL (In Rs.)						97491.19			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.72	Cum	584.64	2758.51	275.85		
		Coarse Aggregate	9.44	Cum	944.26	8910.61	891.06		
Total							1166.91		
AOC FOR BRIDGE (Ch.-4.885 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.	1.23	Cum	5021.30	6160.23	0.14	0.39	
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.	11.567	Sqm	340.20	3935.15	0.600	0.169	
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.	11.567	Sqm	63.20	731.04	0.02		

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)
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.	2.03	Cum	6381.70	12922.94	0.66	0.91	1.82
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	10.620	Sqm	578.60	6144.73			
6		Carriage of materials							
		Coarse Sand (60 Km lead)	1.473	Cum	1075.00	1583.17			
		Coarse Aggregates (100 Km lead)	1.823	Cum	1398.00	2547.86			
		Cement (30 km lead)	1.414	MT	742.00	1049.50			
		Brick (15 km lead)	613.00	No.	3.18	1949.34			
TOTAL (In Rs.)						37023.96			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.47	Cum	584.64	861.01	86.10		
		Coarse Aggregate	1.82	Cum	944.26	1720.91	172.09		
Total							258.19		
AOB FOR FALL/BRIDGE (Ch.-5.450 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.	13.659	Cum	6914.20	94443.18	5.63	5.87	11.75
2		Carriage of materials							
		Coarse Sand (60 Km lead)	5.874	Cum	1075.00	6314.01			
		Coarse Aggregates (100 Km lead)	11.747	Cum	1398.00	16422.31			
		Cement (30 km lead)	5.634	MT	742.00	4180.77			
TOTAL (In Rs.)						121360.28			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	5.87	Cum	584.64	3433.88	343.39		
		Coarse Aggregate	11.75	Cum	944.26	11092.23	1109.22		
Total							1452.61		
AOB FOR BRIDGE/FALL (Ch.-6.635 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.	19.004	Cum	2492.58	47369.60			
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.)						47369.60			
		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.									
AOB FOR BRIDGE (Ch.-7.005 Km)									
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.	0.14	Cum	6381.70	861.53	0.04	0.06	0.12
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.061	Cum	1075.00	65.31			
		Coarse Aggregates (100 Km lead)	0.122	Cum	1398.00	169.86			
		Cement (30 km lead)	0.044	MT	742.00	32.46			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						1129.15			
		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		

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							15.02		
AOC FOR FALL (Ch.-7.450 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.	11.534	Cum	6914.20	79745.00	4.76	4.96	9.92
2		Carriage of materials							
		Coarse Sand (60 Km lead)	4.959	Cum	1075.00	5331.37			
		Coarse Aggregates (100 Km lead)	9.919	Cum	1398.00	13866.51			
		Cement (30 km lead)	4.758	MT	742.00	3530.12			
TOTAL (In Rs.)						102472.99			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.96	Cum	584.64	2899.47	289.95		
		Coarse Aggregate	9.92	Cum	944.26	9365.94	936.59		
Total							1226.54		
AOC FOR FALL (Ch.-7.950Km)									
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.	2.430	Sqm	340.20	826.69	0.126	0.035	
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.	0.585	Sqm	63.20	36.97	0.00		
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.	5.40	Cum	6381.70	34461.18	1.75	2.43	4.86
4	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	29.400	Sqm	578.60	17010.84			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	2.465	Cum	1075.00	2650.39			
		Coarse Aggregates (100 Km lead)	4.860	Cum	1398.00	6794.28			
		Cement (30 km lead)	1.876	MT	742.00	1392.32			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						63172.67			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.47	Cum	584.64	1441.42	144.14		
		Coarse Aggregate	4.86	Cum	944.26	4589.10	458.91		
Total							603.05		
AOC FOR PIPE CULVERT (Ch.-8.250Km)									
1	Structure is in good condition and does not require any repair works.								
AOC FOR BRIDGE/FALL (Ch.-8.450 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.	14.955	Cum	2492.58	37277.43			
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.)						37277.43			
		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)
AOC FOR HR OF PIPE CULVERT (Ch.-9.220 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.	180.000	Sqm	11.80	2124.79			
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.)						2124.79			
		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 (GAMHARIA MINOR)									
AOC FOR FALL (Ch.-0.500 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.	1.853	Cum	2492.58	4619.21			
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.)						4619.21			
		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.-0.650Km)									
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.	42.178	Sqm	340.20	14349.03	2.187	0.616	
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.616	Cum	1075.00	661.99			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.187	MT	742.00	1622.40			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						16633.42			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.62	Cum	584.64	360.02	36.00		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							36.00		
AOC FOR BRIDGE (Ch.-1.050 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 royalty as per specification and direction of E/I.	1.53	Cum	5021.30	7673.89	0.18	0.49	
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.	13.887	Sqm	340.20	4724.46	0.720	0.203	
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.	13.887	Sqm	63.20	877.68	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.	0.459	Cum	6914.20	3176.47	0.19	0.20	0.40
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.889	Cum	1075.00	956.05			
		Coarse Aggregates (100 Km lead)	0.395	Cum	1398.00	552.34			
		Cement (30 km lead)	1.106	MT	742.00	820.88			
		Brick (15 km lead)	764.00	No.	3.18	2429.52			
TOTAL (In Rs.)						21211.29			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.89	Cum	584.64	519.95	51.99		
		Coarse Aggregate	0.40	Cum	944.26	373.07	37.31		
Total							89.30		
AOC FOR FALL (Ch.-1.600 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.	3.719	Cum	2492.58	9268.81			

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.	1.133	Cum	6914.20	7831.53	0.47	0.49	0.97
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.487	Cum	1075.00	523.58			
		Coarse Aggregates (100 Km lead)	0.974	Cum	1398.00	1361.79			
		Cement (30 km lead)	0.467	MT	742.00	346.68			
TOTAL (In Rs.)						19332.39			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.49	Cum	584.64	284.75	28.47		
		Coarse Aggregate	0.97	Cum	944.26	919.80	91.98		
Total							120.46		
AOC FOR BRIDGE (Ch.-1.770Km)									
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.	44.184	Sqm	340.20	15031.33	2.290	0.645	
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.645	Cum	1075.00	693.46			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.290	MT	742.00	1699.54			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						17424.34			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.65	Cum	584.64	377.14	37.71		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							37.71		
AOC FOR FALL (Ch.-2.450 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.	200.000	Sqm	11.80	2360.88			
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.	91.500	Sqm	63.20	5782.80	0.14		
		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)	0.137	MT	742.00	101.84			
TOTAL (In Rs.)						8245.52			
		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.-2.810 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.	1.53	Cum	5021.30	7673.89	0.18	0.49	
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.	13.887	Sqm	340.20	4724.46	0.720	0.203	
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.	13.887	Sqm	63.20	877.68	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.692	Cum	1075.00	743.69			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.917	MT	742.00	680.27			
		Brick (15 km lead)	764.00	No.	3.18	2429.52			
TOTAL (In Rs.)						17129.50			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.69	Cum	584.64	404.45	40.45		
		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							40.45		
AOC FOR FALL (Ch.-3.300 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.	2.310	Cum	6914.20	15971.80	0.95	0.99	1.99
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.993	Cum	1075.00	1067.80			
		Coarse Aggregates (100 Km lead)	1.987	Cum	1398.00	2777.27			
		Cement (30 km lead)	0.953	MT	742.00	707.03			
TOTAL (In Rs.)						20523.90			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.99	Cum	584.64	580.72	58.07		
		Coarse Aggregate	1.99	Cum	944.26	1875.87	187.59		
Total							245.66		
AOC 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.	2.975	Cum	2492.58	7415.05			
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.	16.000	Sqm	340.20	5443.20	0.829	0.234	
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.	16.000	Sqm	63.20	1011.20	0.02		
		Coarse Sand (60 Km lead)	0.234	Cum	1075.00	251.12			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.853	MT	742.00	633.25			
TOTAL (In Rs.)						14753.82			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.23	Cum	584.64	136.57	13.66		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							13.66		
AOC FOR FALL (Ch.-5.275 Km)									
1		Structure is in good condition and does not require 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 (PRITAMPURA SUB DY)									
AOC FOR BRIDGE (Ch.-0.005 Km)									
1 New HR cum Bridge is proposed here and dismantling Quantity is taken in Basdiha Distributary									
AOC FOR CULVERT/FALL (Ch.-0.350 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.	2.50	Cum	5021.30	12541.72	0.29	0.80	
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.	16.563	Sqm	340.20	5634.68	0.859	0.242	
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.	16.563	Sqm	63.20	1046.77	0.02		
4	Carriage of materials								
		Coarse Sand (60 Km lead)	1.041	Cum	1075.00	1119.16			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.171	MT	742.00	869.03			
		Brick (15 km lead)	1248.00	No.	3.18	3968.64			
TOTAL (In Rs.)						25180.00			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.04	Cum	584.64	608.66	60.87		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							60.87		
AOC FOR HR OF CULVERT (Ch.-0.555 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.	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 CULVERT/FALL (Ch.-1.050 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 royalty as per specification and direction of E/I.	1.00	Cum	5021.30	5033.79	0.12	0.32	
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.	18.219	Sqm	340.20	6198.14	0.944	0.266	
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.	18.219	Sqm	63.20	1151.45	0.03		
4	Carriage of materials								
		Coarse Sand (60 Km lead)	0.587	Cum	1075.00	630.80			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.087	MT	742.00	806.77			
		Brick (15 km lead)	501.00	No.	3.18	1593.18			
TOTAL (In Rs.)						15414.14			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.59	Cum	584.64	343.06	34.31		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							34.31		
AOC FOR CULVERT/FALL (Ch.-1.650 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 royalty as per specification and direction of E/I.	0.84	Cum	5021.30	4217.89	0.10	0.27	
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.	7.920	Sqm	340.20	2694.38	0.411	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.	7.920	Sqm	63.20	500.54	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.384	Cum	1075.00	413.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.519	MT	742.00	385.26			
		Brick (15 km lead)	420.00	No.	3.18	1335.60			
TOTAL (In Rs.)						9546.95			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.38	Cum	584.64	224.75	22.48		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							22.48		
AOC FOR AQUEDUCT (Ch.-2.280 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.	0.25	Cum	5021.30	1255.33	0.03	0.08	
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.	2.500	Sqm	340.20	850.50	0.130	0.037	
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.	2.500	Sqm	63.20	158.00	0.00		
4	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.	1.69	Cum	8151.40	13740.27	0.31	0.29	0.58
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.	0.150	Cum	6914.20	1037.13	0.06	0.06	0.13
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.470	Cum	1075.00	505.24			
		Coarse Aggregates (100 Km lead)	0.707	Cum	1398.00	988.36			
		Cement (30 km lead)	0.539	MT	742.00	399.90			
		Brick (15 km lead)	125.00	No.	3.18	397.50			
TOTAL (In Rs.)						19332.22			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.47	Cum	584.64	274.77	27.48		
		Coarse Aggregate	0.71	Cum	944.26	667.57	66.76		
Total							94.23		
AOC FOR HR OF 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.	21.987	Cum	2492.58	54804.58			
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.000	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)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.000	MT	742.00	0.00			
TOTAL (In Rs.)						54804.58			
		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			
AOC FOR CULVERT/FALL (Ch.-3.200 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.	1.81	Cum	5021.30	9081.94	0.21	0.58	
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.	16.435	Sqm	340.20	5591.33	0.852	0.240	
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.	16.435	Sqm	63.20	1038.72	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.	6.616	Cum	6914.20	45743.43	2.73	2.84	5.69
5		Carriage of materials							
		Coarse Sand (60 Km lead)	3.664	Cum	1075.00	3938.33			
		Coarse Aggregates (100 Km lead)	5.690	Cum	1398.00	7954.12			
		Cement (30 km lead)	3.814	MT	742.00	2830.04			
		Brick (15 km lead)	904.00	No.	3.18	2874.72			
TOTAL (In Rs.)						79052.63			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.66	Cum	584.64	2141.86	214.19		
		Coarse Aggregate	5.69	Cum	944.26	5372.50	537.25		
Total						751.44			
AOC FOR CULVERT (Ch.-3.650 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	5.5.5	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.	41.579	Sqm	340.20	14145.16	2.155	0.607	
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.	41.579	Sqm	63.20	2627.79	0.06		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.607	Cum	1075.00	652.58			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.218	MT	742.00	1645.62			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						20369.63			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.61	Cum	584.64	354.91	35.49		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total						35.49			
AOC FOR FOR CULVERT (Ch.-4.110 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.	2.19	Cum	5021.30	10982.81	0.25	0.70	
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.	19.875	Sqm	340.20	6761.61	1.030	0.290	

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.	19.875	Sqm	63.20	1256.13	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.	1.08	Cum	6381.70	6892.24	0.35	0.49	0.97
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	6.120	Sqm	578.60	3541.03			
6		Carriage of materials							
		Coarse Sand (60 Km lead)	1.476	Cum	1075.00	1586.81			
		Coarse Aggregates (100 Km lead)	0.972	Cum	1398.00	1358.86			
		Cement (30 km lead)	1.662	MT	742.00	1233.24			
		Brick (15 km lead)	1093.00	No.	3.18	3475.74			
TOTAL (In Rs.)						37088.46			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.48	Cum	584.64	862.99	86.30		
		Coarse Aggregate	0.97	Cum	944.26	917.82	91.78		
Total							178.08		
AOC FOR FOR CULVERT/FALL (Ch.-4.150 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.	0.67	Cum	5021.30	3379.33	0.08	0.22	
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.	14.191	Sqm	340.20	4827.94	0.736	0.207	
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.	14.191	Sqm	63.20	896.90	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.423	Cum	1075.00	454.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.835	MT	742.00	619.20			
		Brick (15 km lead)	336.00	No.	3.18	1068.48			
TOTAL (In Rs.)						11246.10			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.42	Cum	584.64	247.04	24.70		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							24.70		
AOC FOR FOR CULVERT (Ch.-4.260 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.	0.30	Cum	5021.30	1530.49	0.04	0.10	
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.	6.706	Sqm	340.20	2281.25	0.348	0.098	
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.	6.706	Sqm	63.20	423.79	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.	0.23	Cum	6381.70	1435.88	0.07	0.10	0.20
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.297	Cum	1075.00	318.94			
		Coarse Aggregates (100 Km lead)	0.203	Cum	1398.00	283.10			
		Cement (30 km lead)	0.466	MT	742.00	345.54			
		Brick (15 km lead)	152.00	No.	3.18	483.36			

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)
TOTAL (In Rs.)						7102.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.30	Cum	584.64	173.46	17.35		
		Coarse Aggregate	0.20	Cum	944.26	191.21	19.12		
Total							36.47		
AOC FOR FOR CULVERT (Ch.-4.280 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.	0.28	Cum	5021.30	1408.05	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.	6.169	Sqm	340.20	2098.75	0.320	0.090	
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.	6.169	Sqm	63.20	389.89	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.180	Cum	1075.00	193.29			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.361	MT	742.00	268.13			
		Brick (15 km lead)	140.00	No.	3.18	445.20			
TOTAL (In Rs.)						4803.31			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.18	Cum	584.64	105.12	10.51		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							10.51		
AOC FOR FOR CULVERT (Ch.-4.695 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	5.4.6	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.	1.93	Cum	5021.30	9715.56	0.22	0.62	
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.	17.582	Sqm	340.20	5981.42	0.911	0.257	
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.	17.582	Sqm	63.20	1111.19	0.03		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.876	Cum	1075.00	941.55			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.161	MT	742.00	861.26			
		Brick (15 km lead)	967.00	No.	3.18	3075.06			
TOTAL (In Rs.)						23456.70			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.88	Cum	584.64	512.06	51.21		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							51.21		
AOC FOR FOR CULVERT (Ch.-5.255 Km)									
		New structure at site.							
AOC FOR FALL (Ch.-5.850 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.	120.000	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.	41.755	Sqm	340.20	14205.05	2.165	0.610	
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.	41.755	Sqm	63.20	2638.92	0.06		
5		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)	0.610	Cum	1075.00	655.34			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.227	MT	742.00	1652.59			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						20568.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.61	Cum	584.64	356.41	35.64		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							35.64		
AOC FOR FOR BRIDGE (Ch.-6.285 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.	1.68	Cum	5021.30	8448.32	0.19	0.54	
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.	15.289	Sqm	340.20	5201.24	0.793	0.223	
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.	15.289	Sqm	63.20	966.25	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.762	Cum	1075.00	818.74			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.009	MT	742.00	748.92			
		Brick (15 km lead)	841.00	No.	3.18	2674.38			
TOTAL (In Rs.)						18857.84			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.76	Cum	584.64	445.27	44.53		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							44.53		
AOC FOR FOR BRIDGE/FALL (Ch.-6.650 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.	160.000	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 royalty as per specification and direction of E/I.	2.38	Cum	5021.30	11968.45	0.27	0.76	
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.	21.659	Sqm	340.20	7368.42	1.123	0.316	
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.	21.659	Sqm	63.20	1368.85	0.03		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.079	Cum	1075.00	1159.88			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.430	MT	742.00	1060.97			
		Brick (15 km lead)	1191.00	No.	3.18	3787.38			
TOTAL (In Rs.)						28602.65			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.08	Cum	584.64	630.80	63.08		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.08		
AOC FOR BRIDGE (Ch.-6.735 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.	0.52	Cum	5021.30	2601.84	0.06	0.17	
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.	11.400	Sqm	340.20	3878.12	0.591	0.166	

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.	11.400	Sqm	63.20	720.45	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.332	Cum	1075.00	357.16			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.668	MT	742.00	495.46			
		Brick (15 km lead)	259.00	No.	3.18	823.62			
TOTAL (In Rs.)						8876.65			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.33	Cum	584.64	194.24	19.42		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							19.42		
AOC FOR CULVERT (Ch.-7.015 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	5.4.6	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.	1.82	Cum	5021.30	9152.34	0.21	0.58	
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.	16.563	Sqm	340.20	5634.68	0.859	0.242	
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.	16.563	Sqm	63.20	1046.77	0.02		
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.	2.25	Cum	6381.70	14358.83	0.73	1.01	2.03
6	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	10.500	Sqm	578.60	6075.30			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	1.838	Cum	1075.00	1975.40			
		Coarse Aggregates (100 Km lead)	2.025	Cum	1398.00	2830.95			
		Cement (30 km lead)	1.822	MT	742.00	1352.25			
		Brick (15 km lead)	911.00	No.	3.18	2896.98			
TOTAL (In Rs.)						46503.93			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.84	Cum	584.64	1074.32	107.43		
		Coarse Aggregate	2.03	Cum	944.26	1912.13	191.21		
Total							298.65		
AOC FOR HR OF CHANDAULI MINOR (Ch.-7.435 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	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.	2.742	Sqm	91.70	251.49			
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.	4.800	Sqm	340.20	1632.96	0.249	0.070	
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.	9.600	Sqm	63.20	606.72	0.01		
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.070	Cum	1075.00	75.34			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.263	MT	742.00	195.32			
TOTAL (In Rs.)						4178.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.07	Cum	584.64	40.97	4.10		
		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							4.10		
AOC FOR FOR BRIDGE/FALL (Ch.-7.450 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.	110.000	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 royalty as per specification and direction of E/I.	1.57	Cum	5021.30	7885.10	0.18	0.50	
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.	14.270	Sqm	340.20	4854.49	0.740	0.208	
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.	14.270	Sqm	63.20	901.83	0.02		
5	Carriage of materials								
		Coarse Sand (60 Km lead)	0.711	Cum	1075.00	764.15			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.942	MT	742.00	698.99			
		Brick (15 km lead)	785.00	No.	3.18	2496.30			
TOTAL (In Rs.)						18899.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.71	Cum	584.64	415.59	41.56		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							41.56		
AOC FOR FOR BRIDGE (Ch.-8.410 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 royalty as per specification and direction of E/I.	1.36	Cum	5021.30	6829.06	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.	12.358	Sqm	340.20	4204.33	0.641	0.180	
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.	12.358	Sqm	63.20	781.05	0.02		
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.	2.25	Cum	6381.70	14358.83	0.73	1.01	2.03
6	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	10.500	Sqm	578.60	6075.30			
7	Carriage of materials								
		Coarse Sand (60 Km lead)	1.628	Cum	1075.00	1750.25			
		Coarse Aggregates (100 Km lead)	2.025	Cum	1398.00	2830.95			
		Cement (30 km lead)	1.545	MT	742.00	1146.30			
		Brick (15 km lead)	680.00	No.	3.18	2162.40			
TOTAL (In Rs.)						41200.86			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.63	Cum	584.64	951.87	95.19		
		Coarse Aggregate	2.03	Cum	944.26	1912.13	191.21		
Total							286.40		
AOC FOR FOR CULVERT (Ch.-8.850 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.	110.000	Sqm	11.80	1298.48			

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 royalty as per specification and direction of E/I.	1.68	Cum	5021.30	8448.32	0.19	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.	15.289	Sqm	340.20	5201.24	0.793	0.223	
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.	15.289	Sqm	63.20	966.25	0.02		
5	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	6.17	Cum	149.30	921.51			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	0.762	Cum	1075.00	818.74			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.009	MT	742.00	748.92			
		Brick (15 km lead)	841.00	No.	3.18	2674.38			
TOTAL (In Rs.)						21077.83			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.76	Cum	584.64	445.27	44.53		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							44.53		
AOC FOR FALL (Ch.-9.250 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.	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.	0.372	Cum	6914.20	2571.09	0.15	0.16	0.32
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.160	Cum	1075.00	171.89			
		Coarse Aggregates (100 Km lead)	0.320	Cum	1398.00	447.08			
		Cement (30 km lead)	0.153	MT	742.00	113.82			
TOTAL (In Rs.)						4838.44			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.16	Cum	584.64	93.48	9.35		
		Coarse Aggregate	0.32	Cum	944.26	301.97	30.20		
Total							39.55		
AOC FOR FOR CULVERT (Ch.-9.670 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	5.4.6	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.	1.42	Cum	5021.30	7110.67	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.	12.868	Sqm	340.20	4377.71	0.667	0.188	
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.	12.868	Sqm	63.20	813.26	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.641	Cum	1075.00	689.10			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.850	MT	742.00	630.34			
		Brick (15 km lead)	708.00	No.	3.18	2251.44			
TOTAL (In Rs.)						17052.96			

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	0.64	Cum	584.64	374.77	37.48		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					37.48		
AOC FOR PIPE CULVERT (Ch.-10.075 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	5.5.5	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.	13.716	Sqm	340.20	4666.18	0.711	0.200	
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.	13.716	Sqm	63.20	866.85	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.200	Cum	1075.00	215.27			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.732	MT	742.00	542.86			
		TOTAL (In Rs.)				7707.69			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.20	Cum	584.64	117.08	11.71		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					11.71		
AOC FOR CULVERT/FALL (Ch.-10.110 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 royalty 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	0.594	0.167	
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 (15 km lead)	630.00	No.	3.18	2003.40			
		TOTAL (In Rs.)				15439.48			
		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		
AOC FOR CULVERT (Ch.-10.785 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.	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 royalty as per specification and direction of E/I.	1.54	Cum	5021.30	7744.29	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.	54.553	Sqm	340.20	18558.97	2.828	0.796	
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.	54.553	Sqm	63.20	3447.76	0.08		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.290	Cum	1075.00	1386.76			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	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)
		Cement (30 km lead)	3.088	MT	742.00	2290.95			
		Brick (15 km lead)	771.00	No.	3.18	2451.78			
TOTAL (In Rs.)						37178.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.29	Cum	584.64	754.19	75.42		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							75.42		
AOC FOR FALL (Ch.-11.770 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.	1.01	Cum	6381.70	6445.96	0.33	0.45	0.91
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.455	Cum	1075.00	488.62			
		Coarse Aggregates (100 Km lead)	0.909	Cum	1398.00	1270.87			
		Cement (30 km lead)	0.327	MT	742.00	242.83			
TOTAL (In Rs.)						8448.28			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.45	Cum	584.64	265.74	26.57		
		Coarse Aggregate	0.91	Cum	944.26	858.39	85.84		
Total							112.41		
AOC FOR FALL (Ch.-12.150 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.	31.012	Cum	2492.58	77299.01			
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.)						77299.01			
		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 has been Proposed.									
AOC FOR PIPE CULVERT (Ch.-12.915 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			
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.	6.858	Sqm	63.20	433.43	0.01		
5		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)	0.010	MT	742.00	7.63			
TOTAL (In Rs.)						1975.63			
		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.-13.350 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.	150.000	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.	1.32	Cum	6381.70	8415.42	0.43	0.59	1.19
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.593	Cum	1075.00	637.91			
		Coarse Aggregates (100 Km lead)	1.187	Cum	1398.00	1659.16			

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)
		Cement (30 km lead)	0.427	MT	742.00	317.02			
TOTAL (In Rs.)						11029.52			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.59	Cum	584.64	346.93	34.69		
		Coarse Aggregate	1.19	Cum	944.26	1120.66	112.07		
Total							146.76		
AOC FOR BRIDGE (Ch.-13.680 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.	135.000	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 royalty as per specification and direction of E/I.	1.68	Cum	5021.30	8448.32	0.19	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.	15.289	Sqm	340.20	5201.24	0.793	0.223	
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.	15.289	Sqm	63.20	966.25	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.762	Cum	1075.00	818.74			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.009	MT	742.00	748.92			
		Brick (15 km lead)	841.00	No.	3.18	2674.38			
TOTAL (In Rs.)						20451.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.76	Cum	584.64	445.27	44.53		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							44.53		

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 (CHANDAULI MR.)									
AOC FOR FALL (Ch.-0.100 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.	120.000	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.	27.295	Sqm	340.20	9285.89	1.415	0.399	
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.	27.295	Sqm	63.20	1725.07	0.04		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.399	Cum	1075.00	428.40			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.456	MT	742.00	1080.30			
TOTAL (In Rs.)						13936.19			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.40	Cum	584.64	232.99	23.30		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							23.30		
AOC FOR BRIDGE (Ch.-0.660 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.	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 royalty as per specification and direction of E/I.	1.33	Cum	5021.30	6688.25	0.15	0.43	
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.	12.104	Sqm	340.20	4117.65	0.627	0.177	
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.	12.104	Sqm	63.20	764.95	0.02		
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.	0.75	Cum	6381.70	4786.28	0.24	0.34	0.68
6	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	4.500	Sqm	578.60	2603.70			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	0.940	Cum	1075.00	1010.98			
		Coarse Aggregates (100 Km lead)	0.675	Cum	1398.00	943.65			
		Cement (30 km lead)	1.042	MT	742.00	773.20			
		Brick (15 km lead)	665.00	No.	3.18	2114.70			
TOTAL (In Rs.)						24865.75			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.94	Cum	584.64	549.82	54.98		
		Coarse Aggregate	0.68	Cum	944.26	637.38	63.74		
Total							118.72		
AOC FOR CROSS DRAINAGE (Ch.-0.695 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	5.5.5	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.	42.392	Sqm	340.20	14421.62	2.198	0.619	
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.	42.392	Sqm	63.20	2679.15	0.06		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.619	Cum	1075.00	665.34			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.261	MT	742.00	1677.79			

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.)						20624.33			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.62	Cum	584.64	361.84	36.18		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							36.18		
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.	130.000	Sqm	11.80	1534.57			
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.	2.332	Cum	6914.20	16121.98	0.96	1.00	2.01
2		Carriage of materials							
		Coarse Sand (60 Km lead)	1.003	Cum	1075.00	1077.84			
		Coarse Aggregates (100 Km lead)	2.005	Cum	1398.00	2803.38			
		Cement (30 km lead)	0.962	MT	742.00	713.68			
TOTAL (In Rs.)						22251.45			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.00	Cum	584.64	586.18	58.62		
		Coarse Aggregate	2.01	Cum	944.26	1893.50	189.35		
Total							247.97		
AOC FOR FALL/CULVERT (Ch.-1.335 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.	100.000	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.	55.778	Sqm	340.20	18975.81	2.892	0.814	
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.	55.778	Sqm	63.20	3525.19	0.08		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.814	Cum	1075.00	875.44			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.975	MT	742.00	2207.61			
TOTAL (In Rs.)						26764.50			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.81	Cum	584.64	476.11	47.61		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							47.61		
AOC FOR FALL (Ch.-1.800 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.	130.000	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.	57.200	Sqm	340.20	19459.44	2.965	0.835	
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.	0.000	Sqm	63.20	0.00	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.835	Cum	1075.00	897.75			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.965	MT	742.00	2200.21			
TOTAL (In Rs.)						24091.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.84	Cum	584.64	488.24	48.82		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							48.82		
AOC FOR CULVERT (Ch.-2.168 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	5.5.5	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.	42.192	Sqm	340.20	14353.72	2.187	0.616	
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.	42.192	Sqm	63.20	2666.53	0.06		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.616	Cum	1075.00	662.20			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.251	MT	742.00	1669.89			
TOTAL (In Rs.)						21123.00			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.62	Cum	584.64	360.14	36.01		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							36.01		
AOC FOR CROSS DRAINAGE (Ch.-2.470 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	5.5.5	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.	45.866	Sqm	340.20	15603.72	2.378	0.670	
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.	45.866	Sqm	63.20	2898.75	0.07		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.670	Cum	1075.00	719.87			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.447	MT	742.00	1815.31			
TOTAL (In Rs.)						22454.17			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.67	Cum	584.64	391.50	39.15		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							39.15		
AOC FOR FALL (Ch.-2.795 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.	130.000	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.	50.000	Sqm	340.20	17010.00	2.592	0.730	
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.	50.000	Sqm	63.20	3160.00	0.08		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.730	Cum	1075.00	784.75			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.667	MT	742.00	1978.91			
TOTAL (In Rs.)						24468.23			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.73	Cum	584.64	426.79	42.68		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							42.68		

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 (SIMRA MR.)									
AOC FOR FALL (Ch.-0.610 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.	3.731	Cum	6914.20	25795.17	1.54	1.60	3.21
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.	2.03	Cum	6381.70	12922.94	0.66	0.91	1.82
4	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	9.600	Sqm	578.60	5554.56			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	2.515	Cum	1075.00	2704.13			
		Coarse Aggregates (100 Km lead)	5.031	Cum	1398.00	7033.26			
		Cement (30 km lead)	2.195	MT	742.00	1628.72			
TOTAL (In Rs.)						57409.44			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.52	Cum	584.64	1470.65	147.06		
		Coarse Aggregate	5.03	Cum	944.26	4750.52	475.05		
Total							622.12		
AOC FOR BRIDGE (Ch.-1.600 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.	120.000	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 royalty as per specification and direction of E/I.	2.19	Cum	5021.30	10982.81	0.25	0.70	
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.	19.875	Sqm	340.20	6761.61	1.030	0.290	
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.	19.875	Sqm	63.20	1256.13	0.03		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.990	Cum	1075.00	1064.36			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.312	MT	742.00	973.60			
		Brick (15 km lead)	1093.00	No.	3.18	3475.74			
TOTAL (In Rs.)						25930.77			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.99	Cum	584.64	578.85	57.89		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							57.89		
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.	110.000	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.	2.341	Cum	6914.20	16184.76	0.97	1.01	2.01
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)	1.007	Cum	1075.00	1082.03			
		Coarse Aggregates (100 Km lead)	2.013	Cum	1398.00	2814.30			
		Cement (30 km lead)	0.966	MT	742.00	716.46			
TOTAL (In Rs.)						22096.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.01	Cum	584.64	588.47	58.85		
		Coarse Aggregate	2.01	Cum	944.26	1900.88	190.09		
Total						248.93			
AOC FOR BRIDGE (Ch.-3.380 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.	1.682	Sqm	11.80	19.86			
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.	15.29	Cum	5021.30	76769.49	1.76	4.89	
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.	15.289	Sqm	340.20	5201.24	0.793	0.223	
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.	15.289	Sqm	63.20	966.25	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	5.116	Cum	1075.00	5499.29			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	2.577	MT	742.00	1911.96			
		Brick (15 km lead)	7644.00	No.	3.18	24307.92			
TOTAL (In Rs.)						114676.02			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	5.12	Cum	584.64	2990.80	299.08		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total						299.08			
AOC FOR FALL (Ch.-3.460 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.	27.703	Cum	2492.58	69050.77			
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.)						69050.77			
		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 (SALEMPUR MR.)									
AOC FOR CROSS DRAINAGE (Ch.-0.020 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	5.5.5	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.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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.	12.741	Sqm	63.20	805.21	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.186	Cum	1075.00	199.96			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.680	MT	742.00	504.25			
TOTAL (In Rs.)						7142.27			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.19	Cum	584.64	108.75	10.88		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							10.88		
AOC FOR BRIDGE (Ch.-0.575 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.	0.46	Cum	5021.30	2295.74	0.05	0.15	
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.	36.141	Sqm	340.20	12295.05	1.874	0.528	
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.	36.141	Sqm	63.20	2284.09	0.05		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.674	Cum	1075.00	724.50			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.980	MT	742.00	1469.47			
		Brick (15 km lead)	228.00	No.	3.18	725.04			
TOTAL (In Rs.)						19793.88			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.67	Cum	584.64	394.02	39.40		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							39.40		
AOC FOR FALL (Ch.-0.950 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.	14.204	Cum	2492.58	35405.01			
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.)						35405.01			
		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 has been Proposed.									
AOC FOR FALL (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 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.	4.670	Cum	6914.20	32289.48	1.93	2.01	4.02

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)
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.	6.30	Cum	6381.70	40204.71	2.04	2.84	5.67
3	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	26.100	Sqm	578.60	15101.46			
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 per specification & direction of E/I.	0.124	Mt	75929.60	9387.75			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	4.843	Cum	1075.00	5206.34			
		Coarse Aggregates (100 Km lead)	9.686	Cum	1398.00	13541.34			
		Cement (30 km lead)	3.968	MT	742.00	2943.95			
		Steel (30 Km lead)	0.12	MT	855.39	105.76			
TOTAL (In Rs.)						118780.78			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.84	Cum	584.64	2831.48	283.15		
		Coarse Aggregate	9.69	Cum	944.26	9146.31	914.63		
Total							1197.78		
AOC FOR CULVERT (Ch.-1.820 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.	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.	1.050	Sqm	340.20	357.21	0.054	0.015	
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.	1.050	Sqm	63.20	66.36	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.047	Cum	1075.00	50.88			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.068	MT	742.00	50.11			
		Brick (15 km lead)	50.00	No.	3.18	159.00			
TOTAL (In Rs.)						1185.68			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.05	Cum	584.64	27.67	2.77		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							2.77		
AOC FOR CULVERT/FALL (Ch.-2.240 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.	0.17	Cum	5021.30	828.51	0.02	0.05	
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.	10.058	Sqm	340.20	3421.87	0.521	0.147	
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.	10.058	Sqm	63.20	635.69	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.200	Cum	1075.00	214.63			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.556	MT	742.00	412.20			
		Brick (15 km lead)	82.00	No.	3.18	260.76			
TOTAL (In Rs.)						5773.66			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.20	Cum	584.64	116.72	11.67		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							11.67		

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)
AOC FOR FALL (Ch.-2.900 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.	18.283	Cum	2492.58	45572.34			
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.)						45572.34			
		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		
New fall has been Proposed.									
AOC FOR FALL (Ch.-3.095 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	5.5.5	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.	78.660	Sqm	340.20	26760.13	4.078	1.148	
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.	78.660	Sqm	63.20	4971.31	0.12		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.148	Cum	1075.00	1234.57			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	4.196	MT	742.00	3113.23			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						37613.81			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.15	Cum	584.64	671.42	67.14		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							67.14		

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)
AOC FOR CULVERT (Ch.-3.470 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.	0.60	Cum	5021.30	2999.76	0.07	0.19	
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.	10.058	Sqm	340.20	3421.87	0.521	0.147	
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.	10.058	Sqm	63.20	635.69	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.	0.38	Cum	6381.70	2393.14	0.12	0.17	0.34
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.507	Cum	1075.00	544.78			
		Coarse Aggregates (100 Km lead)	0.338	Cum	1398.00	471.83			
		Cement (30 km lead)	0.727	MT	742.00	539.31			
		Brick (15 km lead)	298.00	No.	3.18	947.64			
TOTAL (In Rs.)						11954.02			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.51	Cum	584.64	296.28	29.63		
		Coarse Aggregate	0.34	Cum	944.26	318.69	31.87		
Total							61.50		
AOC FOR FALL (Ch.-3.550 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.	4.800	Cum	6914.20	33186.41	1.98	2.06	4.13
2		Carriage of materials							
		Coarse Sand (60 Km lead)	2.064	Cum	1075.00	2218.68			
		Coarse Aggregates (100 Km lead)	4.128	Cum	1398.00	5770.64			
		Cement (30 km lead)	1.980	MT	742.00	1469.08			
TOTAL (In Rs.)						42644.81			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.06	Cum	584.64	1206.63	120.66		
		Coarse Aggregate	4.13	Cum	944.26	3897.70	389.77		
Total							510.43		
AOC FOR FALL (Ch.-4.370 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.	15.567	Cum	2492.58	38801.69			
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.)						38801.69			
		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.-4.600 Km)									
1	Structure is in good condition and does not require 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 CULVERT (Ch.-4.715 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.	130.000	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.	32.340	Sqm	340.20	11002.07	1.677	0.472	
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.	32.340	Sqm	63.20	2043.89	0.05		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.472	Cum	1075.00	507.58			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.725	MT	742.00	1279.96			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
TOTAL (In Rs.)						16368.06			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.47	Cum	584.64	276.05	27.60		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							27.60		
AOC FOR CULVERT (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.	150.000	Sqm	11.80	1770.66			
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.)						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		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF BASDIHA DISTRIBUTARY

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR HR OF Shankarpur & Khaira Mr.(Ch.-0.345 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	5.8.9	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.							
		For Shankarpur Mr							
		<i>Hand Rail</i>	2	2.00	0.18	0.20	0.14	Cum	
		<i>Post</i>	2	0.28	0.25	0.86	0.12	Cum	
		<i>Slab</i>	1	3.05	2.00	0.15	0.92	Cum	
		<i>Abutment</i>	2	3.05	0.45	1.20	3.29	Cum	
		For Khaira Mr							
		<i>Abutment</i>	1	1.80	0.60	1.20	1.30	Cum	
		<i>Side wall</i>	2	1.80	0.45	1.20	1.94	Cum	
		TOTAL						7.71	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.							
		<i>CR GATE Abutment</i>	1	2		7.00	14.00	Sqm	
		TOTAL						14.00	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)							
		<i>CR GATE-1</i>	2	3.00		1.80	10.80	Sqm	
		<i>CR GATE-2</i>	2	3.00		1.80	10.80	Sqm	
		TOTAL						21.60	Sqm
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.							
		<i>Quantity for 6m Railing</i>							
		<i>Hand Rail (2Nos)</i>	6	2.00	0.18	0.20	0.42	Cum	
		<i>Post</i>	4	0.28	0.25	0.86	0.24	Cum	
		<i>Total Quantity for 6m Railing with 4 nos. through post</i>						0.66	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.							
		<i>Hand Rail (2Nos)</i>	12	2.00		0.20	4.80	Sqm	
			12		0.18	0.20	0.42	Sqm	
		<i>Post</i>	8	0.28		0.86	1.89	Sqm	
			8		0.25	0.86	1.72	Sqm	
		TOTAL						8.83	Sqm
QUANTITIES OF REPAIRING WORK FOR CR + BRIDGE AT 0.355 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	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	2.44		2.00	9.75	Sqm
		TOTAL					9.75	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.						
		Quantity for 6m Railing						
		Hand Rail (2Nos)	2	2.00	0.18	0.20	0.14	Cum
		Post	3	0.28	0.25	0.86	0.18	Cum
		Total Quantity for 6m Railing with 4 nos. through post					0.32	Cum
		Total Quantity for 12m Railing with 4 nos. through post					0.63	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)	2	2.00		0.20	0.80	Sqm
			2		0.18	0.20	0.07	Sqm
		Post	6	0.28		0.86	1.42	Sqm
			6		0.25	0.86	1.29	Sqm
		TOTAL					3.58	Sqm
5		New Fall proposed here.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-1.150 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.						
		Hand Rail	2	2.00	0.18	0.20	0.14	Cum
		Post	3	0.28	0.25	0.86	0.18	Cum
		Slab	1	6.61	4.27	0.34	9.46	Cum
		Abutment	2	6.00	0.45	1.80	9.72	Cum
		Wing wall	4	3.00	0.45	1.80	9.72	Cum
		Crest	1	3.87	1.00	1.22	4.72	Cum
		TOTAL					33.94	Cum
2		New Fall Proposed Here						

QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-1.950 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.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		D/S Floor	1	6.40	6.40	0.914	37.45	Cum	
		TOTAL						37.45	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.900 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.							
		U/S Wing wall	2	6.00		2.7	32.40	Sqm	
		Abutment	2	8.00		2.33	37.20	Sqm	
		D/S Wing wall	2	2.00		1.95	7.80	Sqm	
		TOTAL						77.40	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.							
		U/S Wing wall	2	6.00		2.7	32.40	Sqm	
		Abutment	2	8.00		2.33	37.20	Sqm	
		D/S Wing wall	2	2.00		1.95	7.80	Sqm	
		TOTAL						77.40	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.							
		U/S Wing wall	2	6.00	0.45	0.15	0.81	Cum	
		Abutment	2	8.00	0.45	0.15	1.08	Cum	
		D/S Wing wall	2	2.00	0.45	0.15	0.27	Cum	
		D/S Slope Pitching Top	2	5.00	0.45	0.15	0.68	Cum	
		TOTAL						2.84	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-3.305 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 royalty as per specification and direction of E/I.							
		Parapet Wall	2	6.096	0.25	0.92	2.80	Cum	
		TOTAL						2.80	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	6.10		2.09	12.74	Sqm	
		TOTAL						12.74	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.800 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				200.00	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.						
		<i>Wing walls</i>	2	3.00	0.45	2	5.40	Cum
		TOTAL					5.40	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.						
		<i>Wing walls</i>	4	3.00		2	24.00	Sqm
			4		0.45	2	3.60	Sqm
		TOTAL					27.60	Sqm
QUANTITIES OF REPAIRING WORK FOR CR + HR OF GAMHARIA MR+ FALL AT 4.580 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				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).						
		<i>CR GATE-1</i>	2	2.68		1.83	9.81	Sqm
		<i>HR GATE</i>	1	1.68		1.52	2.55	Sqm
		<i>Padestal</i>	1	6.40		0.10	0.64	Sqm
		TOTAL					13.01	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.						
		<i>D/S Floor</i>	1	5.50	6.40	0.152	5.35	Cum
		TOTAL					5.35	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.						
		<i>Abutment wall For Gamharia Mr</i>	1	4.00		1.25	5.00	Sqm
		TOTAL					5.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Abutment wall For Gamharia Mr</i>	1	4.00		1.25	5.00	Sqm
		TOTAL					5.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.445 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	6.096	0.25	0.92	2.80	Cum
		TOTAL					2.80	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-6.100 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						
		<i>Hand Rail</i>	8	2.00	0.18	0.20	0.56	Cum
		<i>Post</i>	4	0.28	0.25	0.86	0.24	Cum
		<i>Slab</i>	1	6.61	4.27	0.34	9.46	Cum
		<i>Abutment</i>	2	6.00	0.45	1.80	9.72	Cum
		<i>Wing wall</i>	4	3.00	0.45	1.80	9.72	Cum
		<i>Crest</i>	1	3.87	1.00	1.22	4.72	Cum
		TOTAL					34.42	Cum
2		<i>New Fall Proposed Here</i>						
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-7.080 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.						
		<i>Parapet Wall</i>	2	6.096	0.25	0.92	2.80	Cum
		TOTAL					2.80	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-8.070 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.						
		<i>Parapet Post</i>	2	0.25	0.28	0.86	0.12	Cum
		<i>Parapet hand Rail</i>	4	2.00	0.18	0.20	0.29	Cum
		TOTAL					0.41	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.						
		<i>Parapet</i>	4	0.25		0.86	0.86	Sqm
			4		0.28	0.86	0.96	Sqm
			8	2.00		0.20	3.20	Sqm
			8		0.18	0.20	0.29	Sqm
		TOTAL					5.31	Sqm
QUANTITIES OF REPAIRING WORK FOR CD WORK (Ch.-8.575 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.						
		<i>U/S & D/S Wing wall</i>	4	10.00		2.25	90.00	Sqm
		<i>Abutment</i>	2	8.00		3.45	55.20	Sqm
		TOTAL					145.20	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.						
		<i>U/S & D/S Wing wall</i>	4	10.00		2.25	90.00	Sqm
		<i>Abutment</i>	2	8.00		3.45	55.20	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					145.20	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-8.985 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	6.096	0.25	0.92	2.80	Cum
		TOTAL					2.80	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	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.						
		<i>Parapet Wall</i>	1	6.10		2.09	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-9.625 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.						
		<i>Parapet Post</i>	8	0.25	0.28	0.86	0.48	Cum
		<i>Hand Raail</i>	7	2.00	0.18	0.20	0.50	Cum
		<i>Slab</i>	1	5.18	3.66	0.15	2.84	Cum
		<i>Abutment</i>	2	3.66	0.50	2.00	7.32	Cum
		<i>Wing wall</i>	4	3.00	0.45	2.00	10.80	Cum
		TOTAL					21.94	Cum
QUANTITIES OF REPAIRING WORK FOR CR + HR OF PRITAMPURA SUB DY , FALL /BRIDGE (Ch.-10.060 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				135.00	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).						
		<i>CR GATE</i>	1	3.66		1.40	5.13	Sqm
		<i>HR GATE</i>	1	3.51		1.22	4.27	Sqm
		<i>PADESTAL</i>	1	3.90		0.10	0.39	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					9.79	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.						
		<i>D/S Floor</i>	1	5.00	3.66	0.30	5.56	Cum
		TOTAL					5.56	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-10.600 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				120.00	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.						
		<i>U/S Wing wall</i>	2	2.00		2.25	9.00	Sqm
		<i>Abutment</i>	2	13.00		2.25	58.50	Sqm
		<i>D/S wing Wall</i>	2	2.00		1.65	6.60	Sqm
		TOTAL					74.10	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-10.760 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				85.00	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.						
		<i>Parapet Wall</i>	2	4.38912	0.25	0.92	2.02	Cum
		TOTAL					2.02	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.						
		<i>Parapet Wall</i>	1	4.39		2.09	9.17	Sqm
		TOTAL					9.17	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.						
		<i>Parapet Wall</i>	1	4.39		2.09	9.17	Sqm
		TOTAL					9.17	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.150 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.						
		<i>Wings</i>	2	3.00	0.50	3.00	9.00	Cum
		<i>Abutment</i>	2	7.00	0.50	3.00	21.00	Cum
		TOTAL					30.00	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE+ FALL (Ch.-11.800 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				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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	4.572	0.25	0.6	1.37	Cum
		TOTAL					1.37	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.						
		<i>Parapet Wall</i>	1	4.57		1.45	6.63	Sqm
		TOTAL					6.63	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.						
		<i>Parapet Wall</i>	1	4.57		1.45	6.63	Sqm
		TOTAL					6.63	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.						
		<i>D/S Side Slope</i>	1	2.50	2.20	0.2	1.10	Cum
		TOTAL					1.10	Cum
QUANTITIES OF REPAIRING WORK FOR HR OF SIMRA MR (Ch.-12.685 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				75.00	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.						
		For Simra Mr						
		<i>Slab</i>	1	3.05	2.00	0.15	0.92	Cum
		<i>Abutment</i>	2	3.05	0.45	1.20	3.29	Cum
		TOTAL					4.21	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-13.800 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				170.00	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.						
		Parapet	2	4.27	0.25	0.30	0.66	Cum
		Slab	1	5.18	3.66	0.15	2.84	Cum
		Abutment	2	3.66	0.45	2.00	6.58	Cum
		Wing wall	4	5.00	0.30	2.00	12.00	Cum
		Crest	1	2.90	0.60	0.61	1.06	Cum
		Floor D/S	1	6.00	2.90	0.50	8.69	Cum
		TOTAL					31.83	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-14.465 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						
		Slab	1	4.27	3.66	0.15	2.34	Cum
		Abutment	2	3.66	0.45	2.00	6.58	Cum
		Wing wall	2	5.00	0.30	2.00	6.00	Cum
		Crest	1	2.74	0.50	0.46	0.63	Cum
		Floor D/S	1	5.00	2.74	0.50	6.86	Cum
		TOTAL					22.41	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.950 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				200.00	Sqm
		TOTAL					200.00	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	5.00	3.14	0.50	7.85	Cum
		TOTAL					7.85	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-15.515 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR HR OF SALEMPUR MR (Ch.-15.950 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				150.00	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.							
		Slab	1	2.70	1.80	0.15	0.73	Cum	
		Abutment	2	2.70	0.45	1.20	2.92	Cum	
		TOTAL						3.65	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-16.640Km)									
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				170.00	Sqm	
		TOTAL						170.00	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	8.5		2.00	34.00	Sqm	
		Abutment top	2	8.5		0.50	8.50	Sqm	
		Wings	4	2.5		2.00	20.00	Sqm	
			4	2.5		0.50	5.00	Sqm	
		TOTAL						67.50	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 Floor	1	5.00	2.13	0.50	5.33	Cum	
		TOTAL						5.33	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-17.125 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				80.00	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.							
		Parapet Wall	2	3.74904	0.25	0.7	1.31	Cum	
		TOTAL						1.31	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	3.75		1.65	6.19	Sqm	
		Abutment	2	3.75		1	7.50	Sqm	
		Wing wall	4	2.00		1	8.00	Sqm	
		TOTAL						21.68	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							
		Parapet Wall	1	3.75		1.65	6.19	Sqm	
		Abutment	2	3.75		1	7.50	Sqm	
		Wing wall	4	2.00		1	8.00	Sqm	
		TOTAL						21.68	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT + FALL (Ch.-17.300 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				80.00	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.							
		Slab	1	4.00	3.00	0.30	3.60	Cum	
		D/S Floor	1	3.00	1.86	0.33	1.82	Cum	
		TOTAL						5.42	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.							
		Slab	2	4.00		0.30	2.40	Sqm	
			2		3.00	0.30	1.80	Sqm	
		TOTAL						4.20	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-18.040 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				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.							
		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	1	2.74		2.09	5.73	Sqm	
		TOTAL						5.73	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	2.74		2.09	5.73	Sqm	
		TOTAL						5.73	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>D/S Floor</i>	1	3.00	2.29	0.76	5.23	Cum
		TOTAL					5.23	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.900 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				130.00	Sqm
		TOTAL					130.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-19.170 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and						
			1				110.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.2004	0.25	0.92	1.47	Cum
		TOTAL					1.47	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.						
		<i>Parapet Wall</i>	1	3.20		2.09	6.69	Sqm
		TOTAL					6.69	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.						
		<i>Parapet Wall</i>	1	3.20		2.09	6.69	Sqm
		TOTAL					6.69	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.						
		<i>Wing wall</i>	2	2.00	0.45	1.5	2.70	Cum
		TOTAL					2.70	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.						
		<i>Wing wall</i>	4	2.00		1.50	12.00	Sqm
			4		0.45	1.50	2.70	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						14.70	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-20.100 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.							
		<i>Slab</i>	1	3.11	4.36	0.30	4.13	<i>Cum</i>	
		<i>Wings</i>	2	3.00	0.50	2.50	7.50	<i>Cum</i>	
		<i>Floor</i>	1	6.00	3.11	0.45	8.39	<i>Cum</i>	
		TOTAL						20.02	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-20.670 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	
		TOTAL						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.							
		<i>Parapet</i>	4	4.00		0.50	8.00	<i>Sqm</i>	
			4	4.00	0.50		8.00	<i>Sqm</i>	
		<i>Abutment</i>	2	4.0		2.0	16.00	<i>Sqm</i>	
		<i>Abutment top</i>	2	4.0		0.5	4.00	<i>Sqm</i>	
		<i>Wings</i>	4	2.5		2.0	20.00	<i>Sqm</i>	
			4	2.5		0.5	5.00	<i>Sqm</i>	
		TOTAL						61.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-21.100 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				80.00	Sqm	
		TOTAL						80.00	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.							
		<i>Abutment</i>	2	10.0		2.0	40.00	<i>Sqm</i>	
		<i>Abutment top</i>	2	10.0		0.5	10.00	<i>Sqm</i>	
		<i>Wings</i>	4	2.5		2.0	20.00	<i>Sqm</i>	
			4	2.5		0.5	5.00	<i>Sqm</i>	
		TOTAL						75.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.21.280 Km)									
1		Structure requires no repair work.							
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.22.600 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.							

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
			1				80.00	Sqm
		TOTAL					80.00	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.						
		<i>Abutment</i>	2	8.0		1.8	28.80	Sqm
		<i>Abutment top</i>	2	8.0		0.5	7.20	Sqm
		<i>Wings</i>	4	2.0		1.8	14.40	Sqm
			4	2.0		0.5	3.60	Sqm
		TOTAL					54.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-22.765 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-23.080 Km)								
1		Structure requires no repair work.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (SHANKARPUR MINOR OFFTAKING BASDIHA DY.)									
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.005 Km)									
1		New HR cum Bridge is Proposed Here and Dismantling Cost is taken in Basdiha Distributary							
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.550 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and							
			1				100.00	Sqm	
		TOTAL						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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	1	2.01168	0.25	0.5	0.25	Cum	
		TOTAL						0.25	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.							
		<i>Parapet Wall</i>	1	2.01		1.25	2.51	Sqm	
		TOTAL						2.51	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.							
		<i>Parapet Wall</i>	1	2.01		1.25	2.51	Sqm	
		TOTAL						2.51	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE(Ch.-1.055 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and							
			1				120.00	Sqm	
		TOTAL						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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	2	2.62128	0.25	0.92	1.21	Cum	
		TOTAL						1.21	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.							
		<i>Parapet Wall</i>	1	2.62		2.09	5.48	Sqm	
		TOTAL						5.48	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.							
		<i>Parapet Wall</i>	1	2.62		2.09	5.48	Sqm	

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
TOTAL							5.48	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE + FALL (Ch.-1.300 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
TOTAL							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	4	3.5		0.8	11.20	Sqm
			2	3.5	0.5		3.50	Sqm
		Abutment	2	15.0		1.5	45.00	Sqm
			2	15.0		0.5	15.00	Sqm
		Wings	4	4.0		1.5	24.00	Sqm
			4	4.0	0.5		8.00	Sqm
TOTAL							106.70	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.700 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
TOTAL							110.00	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.						
		Parapet Wall	1	2.00		0.65	1.30	Sqm
		Wing wall Top	4	2.50		0.5	5.00	Sqm
TOTAL							6.30	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.250 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				130.00	Sqm
TOTAL							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 royalty as per specification and direction of E/I.						
		Parapet Wall	2	2.80416	0.25	0.5	0.70	Cum
TOTAL							0.70	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	1	2.80		1.25	3.51	Sqm
		Wing wall Top	1	2.00		0.5	1.00	Sqm
TOTAL							4.51	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	2.80		1.25	3.51	Sqm	
		Wing wall Top	1	2.00		0.5	1.00	Sqm	
		TOTAL						4.51	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE+ FALL (Ch.-2.300 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	
		TOTAL						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 royalty 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	1	2.13		2.09	4.46	Sqm	
		TOTAL						4.46	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	2.13		2.09	4.46	Sqm	
		TOTAL						4.46	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.950 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	2.20	13.20	Cum	
		Abutment	2	10.00	0.50	2.20	22.00	Cum	
		Crest	1	1.22	0.50	1.67	1.02	Cum	
		TOTAL						36.22	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.700 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.							
		Floor D/S	1	8.00	1.22	0.15	1.49	Cum	
		TOTAL						1.49	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.350 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.						
		<i>Wings U/S & D/S</i>	4	3.00	0.50	1.80	10.80	<i>Cum</i>
		<i>Abutment</i>	2	8.00	0.50	1.80	14.40	<i>Cum</i>
		<i>Crest</i>	1	1.16	0.50	1.07	0.62	<i>Cum</i>
TOTAL							25.82	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (KHAIRA MINOR)									
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.735 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	
		TOTAL						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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	2	2.1336	0.5	0.52	1.11	Cum	
		TOTAL						1.11	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.							
		<i>Parapet Wall</i>	1	2.13		1.25	2.67	Sqm	
		TOTAL						2.67	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.							
		<i>Parapet Wall</i>	1	2.13		1.25	2.67	Sqm	
		TOTAL						2.67	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.125 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	
		TOTAL						120.00	Sqm
2	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							
		<i>Side Slope</i>	1	3.00	1.23	2	7.35	Cum	
		TOTAL						7.35	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.							
		<i>Side Slope</i>	1	3.00	1.23	0.15	0.55	Cum	
		TOTAL						0.55	Cum

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.						
		<i>D/S Floor</i>	1	7.00	2.74	0.50	9.60	Cum
		TOTAL					9.60	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.740 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.						
		<i>Parapet Wall</i>	1	3.3528	0.25	0.92	0.77	Cum
		TOTAL					0.77	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.						
		<i>Parapet Wall</i>	1	3.35		2.09	7.01	Sqm
		TOTAL					7.01	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.						
		<i>Parapet Wall</i>	1	3.35		2.09	7.01	Sqm
		TOTAL					7.01	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.050 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.9624	0.1	0.92	0.73	Cum
		TOTAL					0.73	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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	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.						
		<i>D/S Floor</i>	1	7.00	2.74	0.50	9.60	Cum
		TOTAL					9.60	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.375 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.						
		<i>Parapet Wall</i>	2	3.53568	0.1	0.4	0.28	Cum
		TOTAL					0.28	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.						
		<i>Parapet Wall</i>	2	3.54		2.09	14.78	Sqm
		TOTAL					14.78	Sqm
3	5.5.10	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads						
		<i>Parapet Wall</i>	2	3.54		2.09	14.78	Sqm
		TOTAL					14.78	Sqm

QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT(Ch.-2.460Km)

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	5.5.5	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.						
		<i>Abutment U/S & D/S</i>	2	4.45		2	17.80	Sqm
		TOTAL					17.80	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.						
		<i>Abutment U/S & D/S</i>	2	4.45		2	17.80	Sqm
		TOTAL					17.80	Sqm

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.630 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.84048	0.25	0.92	1.77	<i>Cum</i>
		TOTAL					1.77	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.						
		<i>Parapet Wall</i>	2	3.84		2.09	16.05	<i>Sqm</i>
		TOTAL					16.05	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.						
		<i>Parapet Wall</i>	2	3.84		2.09	16.05	<i>Sqm</i>
		TOTAL					16.05	Sqm

QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-3.025 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.						
		<i>Crest</i>	1	2.47	0.50	0.42	0.52	<i>Cum</i>
		TOTAL					0.52	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.255 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.						
		<i>Parapet Wall</i>	2	2.98704	0.1	0.92	0.55	<i>Cum</i>
		TOTAL					0.55	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.						
		<i>Parapet Wall</i>	2	2.99		1.94	11.59	<i>Sqm</i>
		TOTAL					11.59	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.						
		<i>Parapet Wall</i>	2	2.99		1.94	11.59	<i>Sqm</i>
		TOTAL					11.59	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-3.850 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.						
		<i>Wings U/S & D/S</i>	4	3.00	0.50	1.50	9.00	Cum
		<i>Abutment</i>	2	6.00	0.50	1.50	9.00	Cum
		<i>Crest</i>	1	1.16	0.50	0.76	0.44	Cum
		<i>Slab</i>	1	4.33	3.84	0.30	4.99	Cum
		TOTAL					23.43	Cum

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.350 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						
		<i>Floor D/S</i>	1	8.00	2.74	0.50	10.97	Cum
		TOTAL					10.97	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.885 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.						
		<i>Parapet Wall</i>	2	3.5052	0.25	0.7	1.23	Cum
		TOTAL					1.23	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.						
		<i>Parapet Wall</i>	2	3.51		1.65	11.57	Sqm
		TOTAL					11.57	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.						
		<i>Parapet Wall</i>	2	3.51		1.65	11.57	Sqm
		TOTAL					11.57	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.						
		<i>Wing wall</i>	1	2.50	0.45	1.8	2.03	Cum
		TOTAL					2.03	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.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		<i>Wing wall</i>	2	2.50		1.80	9.00	Sqm
			2		0.45	1.80	1.62	Sqm
TOTAL							10.62	Sqm

QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-5.450 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.						
		<i>Floor D/S</i>	1	6.00	2.13	1.07	13.66	Cum
TOTAL							13.66	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-6.635 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.						
		<i>Wings U/S & D/S</i>	2	4.15	0.52	1.50	6.44	Cum
		<i>Abutment</i>	2	4.27	0.52	1.50	6.63	Cum
		<i>Crest</i>	1	1.22	0.50	0.76	0.46	Cum
		<i>Slab</i>	1	4.27	4.27	0.30	5.46	Cum
TOTAL							19.00	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-7.005 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.						
		<i>Wing wall Cracks</i>	1	0.30	0.45	1	0.14	Cum
TOTAL							0.14	Cum

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.450 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.						
		<i>Floor D/S</i>	1	6.00	2.10	0.91	11.53	Cum
TOTAL							11.53	Cum

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-7.950Km)

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.						
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S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		<i>Abutmet</i>	2	0.45		2.7	2.43	<i>Sqm</i>	
		TOTAL						2.43	<i>Sqm</i>
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.							
		<i>Abutmet</i>	2	0.45		0.65	0.59	<i>Sqm</i>	
		TOTAL						0.59	<i>Sqm</i>
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.							
		<i>Wing wall</i>	4	2.00	0.45	1.5	5.40	<i>Cum</i>	
		TOTAL						5.40	<i>Cum</i>
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.							
		<i>Wing wall</i>	8	2.00		1.50	24.00	<i>Sqm</i>	
			8		0.45	1.50	5.40	<i>Sqm</i>	
		TOTAL						29.40	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-8.250Km)									
1		Structure requires no repair work.							

QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-8.450 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.							
		<i>Wings U/S & D/S</i>	2	2.00	0.43	1.20	2.05	<i>Cum</i>	
		<i>Abutment</i>	2	10.00	0.43	1.20	10.24	<i>Cum</i>	
		<i>Crest</i>	1	0.90	0.50	0.61	0.27	<i>Cum</i>	
		<i>Slab</i>	1	4.36	1.83	0.30	2.39	<i>Cum</i>	
		TOTAL						14.96	<i>Cum</i>

QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-9.220 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	<i>Sqm</i>	
		TOTAL						180.00	<i>Sqm</i>

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (GAMHARIA MINOR)								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.500 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.						
		<i>D/S Floor</i>	1	8.00	1.52	0.15	1.85	Cum
		TOTAL					1.85	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.650Km)								
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.						
		<i>Parapet Wall</i>	2	3.35		2.09	14.01	Sqm
		<i>Abutment</i>	2	3.35		1.2	8.05	Sqm
		<i>Wing wall</i>	4	3.05		1.65	20.12	Sqm
		TOTAL					42.18	Sqm

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.050 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.32232	0.25	0.92	1.53	Cum
		TOTAL					1.53	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.						
		<i>Parapet Wall</i>	2	3.32		2.09	13.89	Sqm
		TOTAL					13.89	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.						
		<i>Parapet Wall</i>	2	3.32		2.09	13.89	Sqm
		TOTAL					13.89	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.						
		<i>Crest</i>	1	1.19	0.49	0.79	0.46	Cum
		TOTAL					0.46	Cum

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.600 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.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		<i>D/S Floor</i>	1	8.00	1.52	0.31	3.72	Cum	
		TOTAL						3.72	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.							
		<i>Crest</i>	1	1.52	0.49	1.52	1.13	Cum	
		TOTAL						1.13	Cum

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.770Km)

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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm	
		<i>Abutment</i>	2	3.66		1.2	8.78	Sqm	
		<i>Wing wall</i>	4	3.05		1.65	20.12	Sqm	
		TOTAL						44.18	Sqm

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.450 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				200.00	Sqm	
		TOTAL						200.00	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.							
		<i>Abutment</i>	2	4.00		3.45	27.60	Sqm	
		<i>U/S Wing wall</i>	2	3.00		3.45	20.70	Sqm	
		<i>D/S Wing wall</i>	2	2.00		3.45	13.80	Sqm	
		<i>D/S Side wall</i>	2	6.00		2.45	29.40	Sqm	
		TOTAL						91.50	Sqm

QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.810 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.							
		<i>Parapet Wall</i>	2	3.32232	0.25	0.92	1.53	Cum	
		TOTAL						1.53	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.							
		<i>Parapet Wall</i>	2	3.32		2.09	13.89	Sqm	
		TOTAL						13.89	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
		<i>Parapet Wall</i>	2	3.32		2.09	13.89	<i>Sqm</i>
TOTAL							13.89	<i>Sqm</i>

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.300 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.						
		<i>Crest</i>	1	3.50	0.55	1.20	2.31	<i>Cum</i>
TOTAL							2.31	<i>Cum</i>

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.						
		<i>D/S Floor</i>	1	8.00	1.22	0.31	2.97	<i>Cum</i>
TOTAL							2.97	<i>Cum</i>
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.						
		<i>Abutment</i>	2	8.00		1	16.00	<i>Sqm</i>
TOTAL							16.00	<i>Sqm</i>
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.						
		<i>Parapet Wall</i>	2	8.00		1	16.00	<i>Sqm</i>
TOTAL							16.00	<i>Sqm</i>

QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.275 Km)

1		Structure requires no repair work.						
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S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (PRITAMPURA SUB DY.)								
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-0.305Km)								
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.						
		<i>Parapet Wall</i>	2	3.9624	0.25	0.92	1.82	Cum
		<i>Wing wall Extended Portion</i>	2	1	0.45	0.75	0.68	Cum
		TOTAL					2.50	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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	Sqm

QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.555 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.						
			1				160.00	Sqm
		TOTAL					160.00	Sqm

QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-1.050 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	1	4.35864	0.25	0.92	1.00	Cum
		TOTAL					1.00	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.						
		<i>Parapet Wall</i>	2	4.36		2.09	18.22	Sqm
		TOTAL					18.22	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.						
		<i>Parapet Wall</i>	2	4.36		2.09	18.22	Sqm
		TOTAL					18.22	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-1.650 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.						
		<i>Parapet Wall</i>	2	2.4	0.25	0.7	0.84	Cum
		TOTAL					0.84	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.						
		<i>Parapet Wall</i>	2	2.40		1.65	7.92	Sqm
		TOTAL					7.92	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.						
		<i>Parapet Wall</i>	2	2.40		1.65	7.92	Sqm
		TOTAL					7.92	Sqm
QUANTITIES OF REPAIRING WORK FOR AQUEDUCT (Ch.-2.280 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.						
		<i>Parapet Wall</i>	2	1	0.25	0.5	0.25	Cum
		TOTAL					0.25	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.						
		<i>Parapet Wall</i>	2	1.00		1.25	2.50	Sqm
		TOTAL					2.50	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.						
		<i>Parapet Wall</i>	2	1.00		1.25	2.50	Sqm
		TOTAL					2.50	Sqm
4	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.						
		<i>Wearing Coat on Slab</i>	1	5.12064	4.3891	0.075	1.69	Cum
		TOTAL					1.69	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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 path Hole Filling	1	0.50	1.00	0.30	0.15	Cum
		TOTAL					0.15	Cum
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						
		Abutment	2	10.00	0.50	1.20	12.00	Cum
		Wing wall	4	3.00	0.50	1.20	7.20	Cum
		Crest	1	3.05	0.50	1.83	2.79	Cum
		TOTAL					21.99	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-3.200 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	3.93192	0.25	0.92	1.81	Cum
		TOTAL					1.81	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	3.93		2.09	16.44	Sqm
		TOTAL					16.44	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	2	3.93		2.09	16.44	Sqm
		TOTAL					16.44	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	7.00	3.11	0.30	6.62	Cum
		TOTAL					6.62	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.650 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
		TOTAL					110.00	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	2	3.35		2.09	14.01	Sqm	
		Wing wall	4	2.50		1.65	16.50	Sqm	
		Abutment	2	3.35		1.65	11.06	Sqm	
		TOTAL						41.58	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	3.35		2.09	14.0	Sqm	
		Wing wall	4	2.50		1.65	16.5	Sqm	
		Abutment	2	3.35		1.65	11.1	Sqm	
		TOTAL						41.58	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.110 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	4.75488	0.25	0.92	2.19	Cum	
		TOTAL						2.19	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	4.75		2.09	19.88	Sqm	
		TOTAL						19.88	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	4.75		2.09	19.88	Sqm	
		TOTAL						19.88	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.							
		Wing wall	1	1.20	0.50	1.8	1.08	Cum	
		TOTAL						1.08	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	2	1.20		1.80	4.32	Sqm	
			2		0.50	1.80	1.80	Sqm	
		TOTAL						6.12	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-4.150 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.							
		<i>Parapet Wall</i>	2	3.6576	0.1	0.92	0.67	Cum	
		TOTAL					0.67	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.							
		<i>Parapet Wall</i>	2	3.66		1.94	14.19	Sqm	
		TOTAL					14.19	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.							
		<i>Parapet Wall</i>	2	3.66		1.94	14.19	Sqm	
		TOTAL					14.19	Sqm	
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.260 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.							
		<i>Parapet Wall</i>	2	3.048	0.1	0.5	0.30	Cum	
		TOTAL					0.30	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.							
		<i>Parapet Wall</i>	2	3.05		1.1	6.71	Sqm	
		TOTAL					6.71	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.							
		<i>Parapet Wall</i>	2	3.05		1.1	6.71	Sqm	
		TOTAL					6.71	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.							
		<i>Wing wall top</i>	4	1.50	0.25	0.15	0.23	Cum	
		TOTAL					0.23	Cum	
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.280 Km)									

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	2.80416	0.1	0.5	0.28	Cum
		TOTAL					0.28	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	2.80		1.1	6.17	Sqm
		TOTAL					6.17	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	2.80		1.1	6.17	Sqm
		TOTAL					6.17	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.695 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	5.4.6	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	4.20624	0.25	0.92	1.93	Cum
		TOTAL					1.93	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	4.21		2.09	17.58	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						17.58	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.							
		<i>Parapet Wall</i>	2	4.21		2.09	17.58	Sqm	
		TOTAL						17.58	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.255 Km)									
New Structure at site.									
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.850 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				120.00	Sqm	
		TOTAL						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.							
		<i>U/S Wing wall</i>	2	2.50		1.65	8.25	Sqm	
		<i>Abutment</i>	2	3.50		1.655	11.59	Sqm	
		<i>Side wall</i>	2	6.00		1.37	16.44	Sqm	
		<i>U/S Wing wall</i>	2	2.00		1.37	5.48	Sqm	
		TOTAL						41.76	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.							
		<i>U/S Wing wall</i>	2	2.50		1.65	8.25	Sqm	
		<i>Abutment</i>	2	3.50		1.655	11.59	Sqm	
		<i>Side wall</i>	2	6.00		1.37	16.44	Sqm	
		<i>U/S Wing wall</i>	2	2.00		1.37	5.48	Sqm	
		TOTAL						41.76	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-6.285 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.							
		<i>Parapet Wall</i>	2	3.6576	0.25	0.92	1.68	Cum	
		TOTAL						1.68	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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm	
		TOTAL						15.29	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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm	
		TOTAL						15.29	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-6.650 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.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
			1				160.00	Sqm	
		TOTAL						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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	2	5.1816	0.25	0.92	2.38	Cum	
		TOTAL						2.38	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.							
		<i>Parapet Wall</i>	2	5.18		2.09	21.66	Sqm	
		TOTAL						21.66	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.							
		<i>Parapet Wall</i>	2	5.18		2.09	21.66	Sqm	
		TOTAL						21.66	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-6.735 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.							
		<i>Parapet Wall</i>	2	5.1816	0.1	0.5	0.52	Cum	
		TOTAL						0.52	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.							
		<i>Parapet Wall</i>	2	5.18		1.1	11.40	Sqm	
		TOTAL						11.40	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.							
		<i>Parapet Wall</i>	2	5.18		1.1	11.40	Sqm	
		TOTAL						11.40	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-7.015 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	5.4.6	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.							
		<i>Parapet Wall</i>	2	3.9624	0.25	0.92	1.82	Cum	
		TOTAL						1.82	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	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.						
		<i>Parapet Wall</i>	2	3.96		2.09	16.56	Sqm
		TOTAL					16.56	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.						
		<i>Wing wall</i>	1	3.00	0.50	1.5	2.25	Cum
		TOTAL					2.25	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.						
		<i>Wing wall</i>	2	3.00		1.50	9.00	Sqm
			2		0.50	1.50	1.50	Sqm
		TOTAL					10.50	Sqm
QUANTITIES OF REPAIRING WORK FOR HR OF CHANDALI MINOR (Ch.-7.435 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).						
		<i>HR GATE-1</i>	2	0.91		1.50	2.74	Sqm
		TOTAL					2.74	Sqm
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.						
		<i>Gate Abutment Surface</i>	1	4.00		1.2	4.80	Sqm
		TOTAL					4.80	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.						
		<i>Gate Abutment Surface</i>	2	4.00		1.2	9.60	Sqm
		TOTAL					9.60	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-7.450 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.41376	0.25	0.92	1.57	Cum
		TOTAL					1.57	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.						
		<i>Parapet Wall</i>	2	3.41		2.09	14.27	Sqm
		TOTAL					14.27	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.						
		<i>Parapet Wall</i>	2	3.41		2.09	14.27	Sqm
		TOTAL					14.27	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-8.410 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
		TOTAL					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.						
		<i>Parapet Wall</i>	2	2.95656	0.25	0.92	1.36	Cum
		TOTAL					1.36	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.						
		<i>Parapet Wall</i>	2	2.96		2.09	12.36	Sqm
		TOTAL					12.36	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.						
		<i>Parapet Wall</i>	2	2.96		2.09	12.36	Sqm
		TOTAL					12.36	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.						
		<i>Wing wall</i>	1	3.00	0.50	1.5	2.25	Cum
		TOTAL					2.25	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.						
		<i>Wing wall</i>	2	3.00		1.50	9.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
			2		0.50	1.50	1.50	Sqm	
		TOTAL						10.50	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-8.850 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				110.00	Sqm	
		TOTAL						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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	2	3.6576	0.25	0.92	1.68	Cum	
		TOTAL						1.68	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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm	
		TOTAL						15.29	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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm	
		TOTAL						15.29	Sqm
5	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							
		<i>Ramp U/S & D/S</i>	2	3	4.1148	0.25	6.17	Cum	
		TOTAL						6.17	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-9.250 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				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.							
		<i>Crest</i>	1	0.61	0.50	1.22	0.37	Cum	
		TOTAL						0.37	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-9.670 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				100.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.07848	0.25	0.92	1.42	Cum
		TOTAL					1.42	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.						
		<i>Parapet Wall</i>	2	3.08		2.09	12.87	Sqm
		TOTAL					12.87	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.						
		<i>Parapet Wall</i>	2	3.08		2.09	12.87	Sqm
		TOTAL					12.87	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-10.075 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
		TOTAL					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.						
		<i>Parapet Wall</i>	2	4.57		1.5	13.72	Sqm
		TOTAL					13.72	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.						
		<i>Parapet Wall</i>	2	4.57		1.5	13.72	Sqm
		TOTAL					13.72	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-10.110 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	2.7432	0.25	0.92	1.26	Cum
		TOTAL					1.26	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall</i>	2	2.74		2.09	11.47	<i>Sqm</i>
		TOTAL					11.47	<i>Sqm</i>
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.						
		<i>Parapet Wall</i>	2	2.74		2.09	11.47	<i>Sqm</i>
		TOTAL					11.47	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-10.785 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				110.00	<i>Sqm</i>
		TOTAL					110.00	<i>Sqm</i>
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.						
		<i>Parapet Wall</i>	2	3.3528	0.25	0.92	1.54	<i>Cum</i>
		TOTAL					1.54	<i>Cum</i>
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.						
		<i>Parapet Wall</i>	2	3.35		2.09	14.01	<i>Sqm</i>
		<i>Abutment</i>	2	3.35		1.5	10.06	<i>Sqm</i>
		<i>Wing wall</i>	4	3.05		2.5	30.48	<i>Sqm</i>
		TOTAL					54.55	<i>Sqm</i>
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.						
		<i>Parapet Wall</i>	2	3.35		2.09	14.01	<i>Sqm</i>
		<i>Abutment</i>	2	3.35		1.5	10.06	<i>Sqm</i>
		<i>Wing wall</i>	4	3.05		2.5	30.48	<i>Sqm</i>
		TOTAL					54.55	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.770 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.						
		<i>Wing wall U/S Top</i>	1	3.00	0.50	0.15	0.23	<i>Cum</i>
		<i>Wing wall D/S Top</i>	1	3.00	0.50	0.15	0.23	<i>Cum</i>
		<i>Abutment Top</i>	1	7.47	0.50	0.15	0.56	<i>Cum</i>
		TOTAL					1.01	<i>Cum</i>
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-12.150 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.						
		<i>Abutment</i>	2	10.06	0.50	1.80	18.11	Cum
		<i>Wing wall</i>	4	3.00	0.50	1.50	9.00	Cum
		<i>Crest</i>	1	2.32	0.50	0.61	0.71	Cum
		<i>Slab</i>	1	4.00	3.20	0.25	3.20	Cum
		TOTAL					31.01	Cum
2		New fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-12.915 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.						
		<i>Parapet Wall</i>	2	2.29		1.5	6.86	Sqm
		TOTAL					6.86	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.350 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
		TOTAL					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.						
		<i>Wing wall U/S Top</i>	1	3.00	0.50	0.15	0.23	Cum
		<i>Wing wall D/S Top</i>	1	3.00	0.50	0.15	0.23	Cum
		<i>Abutment Top</i>	1	11.58	0.50	0.15	0.87	Cum
		TOTAL					1.32	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-13.680 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	3.6576	0.25	0.92	1.68	Cum
		TOTAL					1.68	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	<i>Sqm</i>	
		TOTAL						15.29	<i>Sqm</i>
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.							
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	<i>Sqm</i>	
		TOTAL						15.29	<i>Sqm</i>

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (CHANDALI MR.)									
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.100 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				120.00	Sqm	
		TOTAL						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.							
		<i>Parapet Wall U/S</i>	1	3.05		1.9	5.79	Sqm	
		<i>Abutment</i>	2	8.23		1.2	19.75	Sqm	
		<i>Well</i>	1	1.46		1.2	1.75	Sqm	
		TOTAL						27.30	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.							
		<i>Parapet Wall U/S</i>	1	3.05		1.9	5.79	Sqm	
		<i>Abutment</i>	2	8.23		1.2	19.75	Sqm	
		<i>Well</i>	1	1.46		1.2	1.75	Sqm	
		TOTAL						27.30	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.660 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				90.00	Sqm	
		TOTAL						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.							
		<i>Parapet Wall</i>	2	2.8956	0.25	0.92	1.33	Cum	
		TOTAL						1.33	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.							
		<i>Parapet Wall</i>	2	2.90		2.09	12.10	Sqm	
		TOTAL						12.10	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.							
		<i>Parapet Wall</i>	2	2.90		2.09	12.10	Sqm	
		TOTAL						12.10	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.							
		<i>Wing wall</i>	1	1.00	0.50	1.5	0.75	Cum	
		TOTAL						0.75	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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	2	1.00		1.50	3.00	Sqm
			2		0.50	1.50	1.50	Sqm
		TOTAL					4.50	Sqm
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.-0.695 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	5.5.5	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	2	2.44		1.9	9.27	Sqm
		Abutment	2	3.05		1.9	11.58	Sqm
		Wing Wall	4	2.83		1.9	21.54	Sqm
		TOTAL					42.39	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 U/S	2	2.44		1.9	9.27	Sqm
		Abutment	2	3.05		1.9	11.58	Sqm
		Wing Wall	4	2.83		1.9	21.54	Sqm
		TOTAL					42.39	Sqm
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				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.						
		D/S Floor	1	5.00	1.55	0.30	2.33	Cum
		TOTAL					2.33	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/CULVERT (Ch.-1.335 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				100.00	Sqm
		TOTAL					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.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		Parapet Wall U/S	2	2.44		2.5	12.19	Sqm	
		Abutment	2	3.05		2.5	15.24	Sqm	
		Wing Wall	4	2.83		2.5	28.35	Sqm	
		TOTAL						55.78	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 U/S	2	2.44		2.5	12.19	Sqm	
		Abutment	2	3.05		2.5	15.24	Sqm	
		Wing Wall	4	2.83		2.5	28.35	Sqm	
		TOTAL						55.78	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.800 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	
		TOTAL						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.							
		Abutment	2	7.00		2.2	30.80	Sqm	
		Wing Wall	4	3.00		2.2	26.40	Sqm	
		TOTAL						57.20	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.							
		Abutment	2	7.00		2.2	30.80	Sqm	
		Wing Wall	4	3.00		2.2	26.40	Sqm	
		TOTAL						57.20	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.168 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	5.5.5	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	2	2.44		2.5	12.19	Sqm	
		Wing Wall	4	3.00		2.5	30.00	Sqm	
		TOTAL						42.19	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 U/S	2	2.44		2.5	12.19	Sqm	
		Wing Wall	4	3.00		2.5	30.00	Sqm	
		TOTAL						42.19	Sqm
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.-2.470 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	
		TOTAL						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.							
		<i>Parapet Wall U/S</i>	2	3.35		1.9	12.74	Sqm	
		<i>Abutment</i>	2	3.05		1.9	11.58	Sqm	
		<i>Wing Wall</i>	4	2.83		1.9	21.54	Sqm	
		TOTAL						45.87	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.							
		<i>Parapet Wall U/S</i>	2	3.35		1.9	12.74	Sqm	
		<i>Abutment</i>	2	3.05		1.9	11.58	Sqm	
		<i>Wing Wall</i>	4	2.83		1.9	21.54	Sqm	
		TOTAL						45.87	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.795 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				130.00	Sqm	
		TOTAL						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.							
		<i>Abutment</i>	2	6.50		2	26.00	Sqm	
		<i>Wing Wall</i>	4	3.00		2	24.00	Sqm	
		TOTAL						50.00	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.							
		<i>Abutment</i>	2	6.50		2	26.00	Sqm	
		<i>Wing Wall</i>	4	3.00		2	24.00	Sqm	
		TOTAL						50.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (SIMRA MR.)								
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.610 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.						
		<i>D/S Floor</i>	1	8.00	1.55	0.30	3.73	Cum
		TOTAL					3.73	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.						
		<i>Abutment</i>	1	2.70	0.50	1.5	2.03	Cum
		TOTAL					2.03	Cum
4	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.						
		<i>Wing wall</i>	2	2.70		1.50	8.10	Sqm
			2		0.50	1.50	1.50	Sqm
		TOTAL					9.60	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.600 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				120.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	4.75488	0.25	0.92	2.19	Cum
		TOTAL					2.19	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.						
		<i>Parapet Wall</i>	2	4.75		2.09	19.88	Sqm
		TOTAL					19.88	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.						
		<i>Parapet Wall</i>	2	4.75		2.09	19.88	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					19.88	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
		TOTAL					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.						
		<i>D/S Floor</i>	1	7.00	1.10	0.30	2.34	Cum
		TOTAL					2.34	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.380 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.						
		<i>Parapet Wall</i>	2	3.6576	0.25	0.92	1.68	Cum
		TOTAL					1.68	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.						
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm
		TOTAL					15.29	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.						
		<i>Parapet Wall</i>	2	3.66		2.09	15.29	Sqm
		TOTAL					15.29	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.460 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.						
		<i>Abutment</i>	2	10.06	0.50	1.80	18.11	Cum
		<i>Wing wall</i>	4	3.00	0.50	1.50	9.00	Cum
		<i>Crest</i>	1	2.00	0.70	0.43	0.60	Cum
		TOTAL					27.70	Cum
2		New fall has been Proposed.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES (SALEMPUR MR.)								
QUANTITIES OF REPAIRING WORK FOR CROSS DRAINAGE (Ch.-0.020 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
		TOTAL					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 U/S	2	3.35		1.9	12.74	Sqm
		TOTAL					12.74	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 U/S	2	3.35		1.9	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.575 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						
		Parapet Wall	2	3.048	0.25	0.3	0.46	Cum
		TOTAL					0.46	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	3.05		2.09	12.74	Sqm
		Wing wall	4	3.00		1.95	23.40	Sqm
		TOTAL					36.14	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		2.09	12.74	Sqm
		Wing wall	4	3.00		1.95	23.40	Sqm
		TOTAL					36.14	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.950 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	5.79	0.50	1.80	10.42	Cum
		Wing wall	2	2.10	0.50	1.50	3.15	Cum
		Crest	1	1.80	0.70	0.50	0.63	Cum
		TOTAL					14.20	Cum
2		New fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.600 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Abutment</i>	2	7.00	0.25	1.8	6.30	Cum
		TOTAL					6.30	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.						
		<i>Abutment</i>	2	7.00		1.8	25.20	Sqm
			2		0.25	1.8	0.90	Sqm
		TOTAL					26.10	Sqm
3	WRD 5.3.22	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.						
		<i>0.25% skin Reinforcement for Abutment Walls</i>	6.30	0.0025	0.016	7850	123.64	kg
		TOTAL Weight of Steel (in Kg)					123.64	kg
		TOTAL Weight of Steel (in Tonne)					0.12	MT
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.						
		<i>D/S Floor</i>	1	7.00	2.19	0.30	4.67	Cum
		TOTAL					4.67	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.820 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.						
		<i>Parapet Wall</i>	1	1	0.25	0.4	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.						
		<i>Parapet Wall</i>	1	1.00		1.05	1.05	Sqm
		TOTAL					1.05	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.						
		<i>Parapet Wall</i>	1	1.00		1.05	1.05	Sqm
		TOTAL					1.05	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-2.240 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall</i>	1	2.2	0.25	0.3	0.17	Cum
		TOTAL					0.17	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.						
		<i>Parapet Wall</i>	2	3.05		1.65	10.06	Sqm
		TOTAL					10.06	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.						
		<i>Parapet Wall</i>	2	3.05		1.65	10.06	Sqm
		TOTAL					10.06	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.900 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.						
		<i>Abutment</i>	2	5.18	0.50	2.00	10.36	Cum
		<i>Wing wall U/S</i>	2	3.00	0.50	1.80	5.40	Cum
		<i>Wing wall D/S</i>	2	2.10	0.50	1.20	2.52	Cum
		TOTAL					18.28	Cum
2		New fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.095 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	5.5.5	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.						
		<i>U/S Wing wall</i>	2	2.50		3.15	15.75	Sqm
		<i>Abutment</i>	2	4.50		3.15	28.35	Sqm
		<i>Side wall</i>	2	6.00		2.25	27.00	Sqm
		<i>D/S wing wall</i>	2	2.00		1.89	7.56	Sqm
		TOTAL					78.66	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.						
		<i>U/S Wing wall</i>	2	2.50		3.15	15.75	Sqm
		<i>Abutment</i>	2	4.50		3.15	28.35	Sqm
		<i>Side wall</i>	2	6.00		2.25	27.00	Sqm
		<i>D/S wing wall</i>	2	2.00		1.89	7.56	Sqm
		TOTAL					78.66	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-3.470 Km)								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		<i>Parapet Wall</i>	1	3.41376	0.25	0.7	0.60	Cum
		TOTAL					0.60	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.						
		<i>Parapet Wall</i>	2	3.05		1.65	10.06	Sqm
		TOTAL					10.06	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.						
		<i>Parapet Wall</i>	2	3.05		1.65	10.06	Sqm
		TOTAL					10.06	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.						
		<i>Wing wall Top</i>	4	2.50	0.25	0.15	0.38	Cum
		TOTAL					0.38	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.550 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.						
		<i>D/S Floor</i>	1	7.00	2.26	0.30	4.80	Cum
		TOTAL					4.80	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.370 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.						
		<i>Abutment</i>	2	5.18	0.50	1.80	9.33	Cum
		<i>Wing wall U/S</i>	2	3.00	0.50	1.80	5.40	Cum
		<i>Wing wall D/S</i>	2	1.20	0.50	0.70	0.84	Cum
		TOTAL					15.57	Cum
2		New fall has been Proposed.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.600 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.715 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				130.00	Sqm	
		TOTAL						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.							
		<i>Parapet wall</i>	2	3.00		2.14	12.84	Sqm	
		<i>Wing wall</i>	4	2.50		1.95	19.50	Sqm	
		TOTAL						32.34	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.							
		<i>Parapet wall</i>	2	3.00		2.14	12.84	Sqm	
		<i>Wing wall</i>	4	2.50		1.95	19.50	Sqm	
		TOTAL						32.34	Sqm

QUANTITIES OF REPAIRING WORK FOR CULVERT (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	
		TOTAL						150.00	Sqm

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, scaffolding and its removal wherever 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. 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.								
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 foundation 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(As per Bihar SOR 2025)								
		Coarse Sand (30 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			
					<i>Total</i>		1100.17			
					For 184 nos. outlet, Total Seigniorage charges		202431.85			

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, scaffolding and its removal wherever 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. reinforcements 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-15 (Providing Reinforcement @ 0.24%)	1.63	0.0024	0.004	7850.00	30.648	Kg
	TOTAL					30.65	Kg

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 transporting 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	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 36 no., Total Seigniorage charges					272829.41		

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 transporting to the embankment location within all lifts and lead upto 1000m.						
		<i>For Making RAMP</i>						
		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 place method with front end loader at OMC, and compacting with 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						
		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 RATES

Sl. No.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 including 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 M³
5	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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.	References 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 M³
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 embankments, unloading, 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 lifts 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	

Sl. No.	References 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.	References 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.	References 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.	References 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 M³

Sl. No.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References 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.	References 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.	References 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, propping 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.	References 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, propping 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.	References 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 M³

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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 M³
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 M³
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	

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³
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 M³
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.					
		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	

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 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 2.5 m length and two collars)					
		Materials					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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
	5.6.2.4	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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.5	Labour Charges for Laying of 1200 mm NP3 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 .					
		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, scaffolding and its removal wherever 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.	References 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 M³
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 M³
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.					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 royalty 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	
						12365.52	
		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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 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, unloading, 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 2023 & PL JUNE 2024	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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	Providing M.S. reinforcements 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.		
			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 foundation 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, scaffolding and its removal wherever 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 transporting 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

**Amba Division – Amba Minor
(Total Cost – Rs. 1.10 Crores)**

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

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	<i>AMBA MINOR</i>	1	Job	6567379.08	0.00	₹ 65,67,379.08	AOC Earthwork Amba Minor	7
2	Falls							
	AMBA MINOR :							
	<i>0.610 m Fall at Ch. 1.925 Km</i>	1	No.	487499.05	4070.69	₹ 4,91,569.74	Fall (AOC) Amba Minor	11
	<i>1.220 m Fall at Ch. 2.250 Km</i>	1	No.	1063904.90	9164.85	₹ 10,73,069.74		13
	<i>0.762 m Fall at Ch. 2.970 Km</i>	1	No.	898839.25	7701.43	₹ 9,06,540.68		15
3	Pipe Culvert							
	<i>2.495 Km</i>	1	No.	471282.07	4071.56	₹ 4,75,353.63	Pipe Culvert AOC	26
	<i>2.710 Km</i>	1	No.	471045.98	4071.56	₹ 4,75,117.54		28
4	<i>Repair of Structures</i>							
	<i>Amba Minor</i>	3	No.	69108.6672	15275.94	₹ 84,384.60	Abstract (Repair St.) Amba Minor	37
5	Outlets							
	<i>Amba Minor</i>	7	No.	127744.47	1100.17	₹ 9,01,912.48	Outlet-AOC	46
6	Kilometer Stone	4	No.	3853.40	0.00	₹ 15,413.60	'Rates 'IF61	79
	TOTAL (In Rs.)					10990741.10		
	TOTAL (In Lacs)					109.91		

Carriage of Materials 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 (Tipper 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 of Cost = (18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
							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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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							
AMBA MINOR - KM 0.000 TO KM 3.400							
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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	0.318	0.159	15.900	5.322	2.661	266.100
200	100	0.316	0.317	31.700	1.095	3.209	320.850
300	100	0.492	0.404	40.400	2.993	2.044	204.400
400	100	0.159	0.326	32.550	2.868	2.931	293.050
500	100	0.431	0.295	29.500	2.182	2.525	252.500
600	100	1.006	0.719	71.850	3.610	2.896	289.600
700	100	0.328	0.667	66.700	2.840	3.225	322.500
800	100	0.243	0.286	28.550	2.105	2.473	247.250
900	100	0.000	0.122	12.150	4.632	3.369	336.850
1000	100	2.380	1.190	119.000	3.275	3.954	395.350
1100	100	0.812	1.596	159.600	1.780	2.528	252.750
1200	100	0.000	0.406	40.600	3.852	2.816	281.600
1300	100	0.099	0.050	4.950	3.629	3.741	374.050
1400	100	0.251	0.175	17.500	2.033	2.831	283.100
1500	100	0.013	0.132	13.200	3.592	2.813	281.250
1600	100	0.000	0.007	0.650	5.274	4.433	443.300
1700	100	0.000	0.000	0.000	7.195	6.235	623.450
1800	100	1.380	0.690	69.000	2.211	4.703	470.300
1900	100	0.404	0.892	89.200	1.710	1.961	196.050
2000	100	0.559	0.482	48.150	1.596	1.653	165.300
2100	100	0.000	0.280	27.950	5.223	3.410	340.950
2200	100	0.000	0.000	0.000	5.846	5.535	553.450
2300	100	1.855	0.928	92.750	6.878	6.362	636.200
2400	100	1.118	1.487	148.650	7.087	6.983	698.250
2500	100	2.056	1.587	158.700	7.251	7.169	716.900
2600	100	2.030	2.043	204.300	5.872	6.562	656.150
2700	100	1.884	1.957	195.700	4.818	5.345	534.500
2800	100	0.116	1.000	100.000	14.638	9.728	972.800
2900	100	0.614	0.365	36.500	6.352	10.495	1049.500
3000	100	1.849	1.232	123.150	4.701	5.527	552.650
3100	100	1.021	1.435	143.500	4.126	4.414	441.350
3200	100	0.393	0.707	70.700	3.438	3.782	378.200
3300	100	0.262	0.328	32.750	2.953	3.196	319.550
3400	100	0.000	0.131	13.100	5.047	4.000	400.000
Total				2238.900			14550.050
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							2238.900
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							14550.050
NET QUANTITY OF EARTHWORK IN FILLING							12311.15

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND**AMBA MINOR****JUNGLE CLEARANCE QUANTITY**

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 1.000	1000	2.67	2670.00	Sqm
1.000 - 1.925	925	2.39	2210.75	Sqm
1.925 - 2.830	905	2.02	1828.10	Sqm
2.830 - 3.450	620	1.79	1109.80	Sqm
	TOTAL		7818.65	Sqm

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 1.000	1000	2.670	0.15	400.50	Cum
1.000 - 1.925	925	2.390	0.15	331.61	Cum
1.925 - 2.830	905	2.020	0.15	274.22	Cum
2.830 - 3.450	620	1.790	0.15	166.47	Cum
	TOTAL			1172.80	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR AMBA 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.	7818.65	Sqm	11.80	92294.39332
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.				
		<i>100% of Total Cutting for ordinary soil</i>	2238.90	Cum	156.50	350387.85
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	895.56	Cum	17.22	15419.31695
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.	12311.15	Cum	165.12	2032767.36
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, unloading, 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)	3693.35	Cum	174.89	645929.11
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	3077.79	Cum	217.92	670711.45
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	5540.02	Cum	319.14	1768041.18
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.				
			1172.80	Cum	196.10	229985.59
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.	12311.15	Cum	61.88	761842.83
TOTAL COST OF EARTHWORK (in Rs.)						6567379.08
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						65.674

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES FOR EARTH WORK FOR AMBA 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	7818.65	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	2238.900	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	895.56	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.			
		1	12311.150	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, unloading, 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	3693.35	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	3077.79	Cum
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	5540.02	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	1172.80	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	14550.05	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR AMBA MINOR								
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. 1.925 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, rramming the foundation trenches, removing the roots of shrubs etc. all complete as per specifications and direction of E/I.	68.648	Cum	195.20	13400.03			
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.	8.10	Cum	6381.70	51677.51	2.62	3.64	7.29
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.	29.10	Cum	6914.20	201181.89	12.00	12.51	25.02
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.	0.57	Cum	8151.40	4613.90	0.32	0.22	0.45
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	50415.90			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	121.66	Sqm	578.60	70393.27			
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.	5.35	Sqm	680.10	3635.81			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.29	Cum	694.61	200.05			
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.	0.29	Cum	1237.00	356.26			
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.	0.29	Cum	1377.70	396.78			
11	Labour charges for laying coarse dry graded filter of stone chips in slope and apron including light rramming etc. all complete as per specification and direction of E/I.	0.29	Cum	516.50	148.75			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.72	Sqm	63.20	550.88			
13	Providing Drainage Spouts complete as per drawings & technical 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 rrammed and fully compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in a suitable profile within a lead of 30m and lift of 1.5 m complete job, as per specification and direction of E/I	20.09	Cum	149.30	2999.02			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	16.376	Cum	1075.00	17604.65			
	Coarse Aggregates (100 Km lead)	32.758	Cum	1398.00	45796.38			
	Cement (30 km lead)	14.947	MT	742.00	11090.74			
	Boulder (60 Km lead)	0.29	Cum	1159.00	333.79			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.69	MT	742.00	508.44			
	TOTAL (In Rs.)				487499.05			
	TOTAL (In Rs.)				487499.05			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	16.38	Cum	584.64	9574.31	957.43		
	Coarse Aggregate	32.76	Cum	944.26	30932.54	3093.25		
	Boulders	0.29	Cum	694.61	200.05	20.00		
	<i>Total</i>					4070.69		
	For 1 nos. fall, Total Seigniorage charges					4070.69		

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)
AOC OF SHARDA TYPE FALL OF HEIGHT 1.220 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.	98.348	Cum	195.20	19197.55			
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.	10.79	Cum	6381.70	68836.24	3.49	4.85	9.71
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.	65.87	Cum	6914.20	455417.52	27.17	28.32	56.65
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.	9.65	Cum	8151.40	78645.85	5.47	3.76	7.62
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.	1.95	MT	73574.90	143141.00			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	183.66	Sqm	578.60	106264.36			
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.	5.34	Sqm	680.10	3633.77			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.29	Cum	694.61	200.05			
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.	0.29	Cum	1237.00	356.26			
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.	0.29	Cum	1377.70	396.78			
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.	0.29	Cum	516.50	148.75			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.27	Sqm	63.20	712.48			
13	Providing Drainage Spouts complete as per drawings & technical 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	20.37	Cum	149.30	3041.71			

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)	36.940	Cum	1075.00	39709.97			
	Coarse Aggregates (100 Km lead)	73.975	Cum	1398.00	103417.74			
	Cement (30 km lead)	36.135	MT	742.00	26812.51			
	Boulder (60 Km lead)	0.29	Cum	1159.00	333.79			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	1.95	MT	742.00	1443.57			
TOTAL (In Rs.)					1063904.90			
TOTAL (In Rs.)					1063904.90			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	36.94	Cum	584.64	21596.31	2159.63		
	Coarse Aggregate	73.98	Cum	944.26	69852.10	6985.21		
	Boulders	0.29	Cum	694.61	200.05	20.00		
	<i>Total</i>					9164.85		
	For 1 nos. fall, Total Seigniorage charges					9164.85		

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)
AOC OF SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 2.970 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.	65.363	Cum	195.20	12758.77			
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.	9.53	Cum	6381.70	60831.99	3.09	4.29	8.58
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.	53.74	Cum	6914.20	371546.54	22.17	23.11	46.21
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.	9.30	Cum	8151.40	75814.66	5.27	3.63	7.35
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.	1.64	MT	73574.90	120462.56			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	163.07	Sqm	578.60	94352.16			
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.	5.13	Sqm	680.10	3486.87			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.29	Cum	694.61	200.05			
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.	0.29	Cum	1237.00	356.26			
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.	0.29	Cum	1377.70	396.78			
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.	0.29	Cum	516.50	148.75			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	10.64	Sqm	63.20	672.44			
13	Providing Drainage Spouts complete as per drawings & technical 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	8.27	Cum	149.30	1234.54			

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)	31.024	Cum	1075.00	33350.40			
	Coarse Aggregates (100 Km lead)	62.140	Cum	1398.00	86872.09			
	Cement (30 km lead)	30.528	MT	742.00	22652.08			
	Boulder (60 Km lead)	0.29	Cum	1159.00	333.79			
	Brick (15 km lead)	307.00	No.	3.18	976.26			
	Steel (30 Km lead)	1.64	MT	742.00	1214.86			
	TOTAL (In Rs.)				898839.25			
	TOTAL (In Rs.)				898839.25			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	31.02	Cum	584.64	18137.65	1813.77		
	Coarse Aggregate	62.14	Cum	944.26	58676.57	5867.66		
	Boulders	0.29	Cum	694.61	200.05	20.00		
	<i>Total</i>					7701.43		
	For 1 nos. fall, Total Seigniorage charges					7701.43		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR AMBA MINOR

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.925 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.07	1.49	2.065	6.611	Cum
	<i>Section 2-2</i>	2	3.00	1.08	2.065	13.381	Cum
	<i>Section 3-3</i>	2	1.70	0.96	1.865	6.087	Cum
	<i>Section 5-5</i>	2	2.44	1.64	2.065	16.553	Cum
	<i>Section 6-6</i>	2	0.87	0.96	1.865	3.097	Cum
	<i>U/S Key Floor</i>	1	0.625	1.240	0.850	0.659	Cum
	<i>U/S Floor</i>	1	2.000	1.240	1.309	3.246	Cum
	<i>D/S Floor</i>	1	3.000	1.240	1.696	6.309	Cum
		1	2.000	1.240	1.496	3.710	Cum
	<i>D/S Key Floor</i>	1	0.625	1.240	0.850	0.659	Cum
	<i>Toe Wall D/S Portion</i>	1	4.890	0.750	0.900	6.602	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.500	1.540	0.750	1.733	Cum
						68.65	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.						
	<i>PCC Below Floor</i>	1	0.542	1.24	0.15	0.10	Cum
		1	0.783	1.24	0.15	0.15	Cum
		1	4.568	1.24	0.15	0.85	Cum
		1	0.283	1.24	0.15	0.05	Cum
		1	0.447	1.24	0.15	0.08	Cum
		1	0.783	1.24	0.15	0.15	Cum
		1	0.542	1.24	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.07	1.49	0.15	0.48	Cum
	<i>Section 2-2</i>	2	3.00	1.08	0.15	0.97	Cum
	<i>Section 3-3</i>	2	1.70	0.96	0.15	0.49	Cum
	<i>Section 5-5</i>	2	2.44	1.64	0.15	1.20	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.15	0.25	Cum
	<i>Toe Wall D/S Portion</i>	1	4.89	0.75	0.30	1.10	Cum
	<i>Toe Wall D/S Portion</i>	1	4.59	0.45	0.60	1.24	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.54	0.15	0.35	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.10	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.85	0.45	0.45	0.34	Cum
		2	0.85	0.82	1.24	1.73	Cum
		2	0.85	1.34	0.50	1.14	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.62	0.55	2.03	Cum
		2	3.00	0.93	0.50	2.79	Cum
	<i>Section 3-3</i>	2	1.45	0.45	0.45	0.59	Cum
		2	1.45	0.56	0.35	0.56	Cum
		2	1.45	0.81	0.50	1.17	Cum
	<i>Section 5-5</i>	2	2.39	0.45	0.45	0.97	Cum
		2	2.39	0.82	1.24	4.88	Cum
		2	2.39	1.34	0.50	3.22	Cum
	<i>Section 6-6</i>	2	1.27	0.45	0.45	0.51	Cum
		2	1.27	0.56	0.35	0.49	Cum
		2	1.27	0.81	0.50	1.03	Cum
	<i>Floor</i>	1	0.63	1.24	0.70	0.54	Cum
		1	5.00	1.24	0.50	3.10	Cum
		1	0.50	1.24	0.20	0.12	Cum
		1	0.20	1.24	0.40	0.10	Cum
		1	1.80	1.24	0.50	1.12	Cum
		1	0.63	1.24	0.70	0.54	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Crest	1	0.84	1.24	0.88	0.91	Cum
	TOTAL					29.10	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	1.24	0.15	0.13	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.69	0.45	0.05	0.22	Cum
	On Abutment Top (Right Side)	1	9.69	0.45	0.05	0.22	Cum
	TOTAL					0.57	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	29.10	0.30%	0.09	7850	685.23	Kg
	Total Weight in Metric Tonne					0.69	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	0.85		0.45	1.52	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.85		1.24	4.20	Sqm
		4		0.82	1.24	4.08	Sqm
		4	0.85		0.50	1.69	Sqm
		4		1.34	0.50	2.69	Sqm
	Section 2-2	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.55	6.60	Sqm
		4		0.62	0.55	1.35	Sqm
		4	3.00		0.50	6.00	Sqm
		4		0.93	0.50	1.86	Sqm
	Section 3-3	4	1.45		0.45	2.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.45		0.35	2.02	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.45		0.50	2.89	Sqm
		4		0.81	0.50	1.62	Sqm
	Section 5-5	4	2.39		0.45	4.31	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.39		1.24	11.88	Sqm
		4		0.82	1.24	4.08	Sqm
		4	2.39		0.50	4.79	Sqm
		4		1.34	0.50	2.69	Sqm
	Section 6-6	4	1.27		0.45	2.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.27		0.35	1.78	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.27		0.50	2.54	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.24	0.70	1.74	Sqm
		2	5.00		0.50	5.00	Sqm
		2		1.24	0.50	1.24	Sqm
		2	0.50		0.20	0.20	Sqm
		2		1.24	0.20	0.50	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.24	0.40	0.99	Sqm
		2	1.80		0.50	1.80	Sqm
		2		1.24	0.50	1.24	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.24	0.70	1.74	Sqm
	Crest	2	0.8375		0.876	1.47	Sqm
		2		1.24	0.876	2.17	Sqm
	Toe Wall D/S Portion	2	4.89		0.30	2.93	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.59		0.60	5.51	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.15	0.90	Sqm
		4		1.54	0.15	0.92	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					121.66	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.35	Sqm
	TOTAL					5.35	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.64	0.30	0.29	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	0.64	0.15	0.29	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.69	0.45		4.36	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.69	0.45		4.36	Sqm
	TOTAL					8.72	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		4.26		4.26	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.07	1.43		3.065	Cum
	<i>Section 2-2</i>	2	3.00	0.65		3.876	Cum
	<i>Section 3-3</i>	2	1.70	0.47		1.605	Cum
	<i>Section 5-5</i>	2	2.44	1.09		5.315	Cum
	<i>Section 6-6</i>	2	0.87	0.45		0.784	Cum
	<i>D/S protection</i>	2	0.11				
	<i>Toe wall</i>	2	1.24	0.09		0.223	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					20.09	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.220 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.35	1.81	1.632	7.967	Cum
	<i>Section 2-2</i>	2	3.20	1.78	1.632	18.592	Cum
	<i>Section 3-3</i>	2	4.00	1.81	1.432	20.735	Cum
	<i>Section 5-5</i>	2	2.37	1.96	1.632	15.187	Cum
	<i>Section 6-6</i>	2	0.32	0.96	1.432	0.866	Cum
	<i>U/S Key Floor</i>	1	0.625	1.240	0.850	0.659	Cum
	<i>U/S Floor</i>	1	1.183	1.240	1.980	2.905	Cum
		1	4.516	1.240	2.330	13.048	Cum
	<i>D/S Floor</i>	1	4.300	1.240	1.980	10.557	Cum
	<i>D/S Key Floor</i>	1	4.300	1.240	0.700	3.732	Cum
	<i>Toe Wall D/S Portion</i>	1	4.890	0.750	0.750	2.751	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						98.35	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.						
	<i>PCC Below Floor</i>	1	0.542	1.24	0.15	0.10	Cum
		1	0.782	1.24	0.15	0.15	Cum
		1	0.028	1.24	0.15	0.01	Cum
		1	0.282	1.24	0.15	0.05	Cum
		1	4.690	1.24	0.15	0.87	Cum
		1	0.494	1.24	0.15	0.09	Cum
		1	2.970	1.24	0.15	0.55	Cum
		1	0.726	1.24	0.15	0.14	Cum
		1	0.542	1.24	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.35	1.81	0.15	0.73	Cum
	<i>Section 2-2</i>	2	3.20	1.78	0.15	1.71	Cum
	<i>Section 3-3</i>	2	4.00	1.81	0.15	2.17	Cum
	<i>Section 5-5</i>	2	2.37	1.96	0.15	1.40	Cum
	<i>Section 6-6</i>	2	0.32	0.96	0.15	0.09	Cum
	<i>Toe Wall D/S Portion</i>	1	4.89	0.75	0.30	1.10	Cum
	<i>Toe Wall D/S Portion</i>	1	4.89	0.45	0.45	0.99	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.30	0.60	0.27	Cum
	TOTAL					10.79	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.20	0.45	0.45	0.48	Cum
		2	1.20	0.96	1.27	2.93	Cum
		2	1.20	1.62	0.50	1.94	Cum
	<i>Section 2-2</i>	2	3.20	0.82	0.50	2.62	Cum
		2	3.20	1.06	0.51	3.46	Cum
		2	3.20	1.63	1.00	10.43	Cum
	<i>Section 3-3</i>	2	3.93	0.82	0.50	3.22	Cum
		2	3.93	0.97	0.31	2.36	Cum
		2	3.93	1.66	1.20	15.64	Cum
	<i>Section 5-5</i>	2	2.33	0.45	0.45	0.94	Cum
		2	2.33	0.96	1.27	5.69	Cum
		2	2.33	1.62	0.50	3.77	Cum
	<i>Section 6-6</i>	2	1.00	0.45	0.45	0.40	Cum
		2	1.00	0.54	0.31	0.33	Cum
		2	1.00	0.81	0.55	0.89	Cum
	<i>Floor</i>	1	0.63	1.24	0.70	0.54	Cum
		1	0.98	1.24	0.50	0.61	Cum
		1	0.20	1.24	0.60	0.15	Cum
		1	4.32	1.24	0.70	3.75	Cum
		1	0.20	1.24	0.45	0.11	Cum
		1	0.50	1.24	0.35	0.22	Cum
		1	4.30	1.24	0.55	2.93	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.61	1.24	0.65	0.49	Cum
	Crest	1	1.08	1.24	1.45	1.95	Cum
TOTAL						65.87	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	0.85	1.24	0.15	0.16	Cum
	Coping over Abutment Top	2	12.53	0.45	0.05	0.56	Cum
	Slab Bridge						
	Slab	1	2.04	5.5	0.33	3.69	Cum
	Wearing coat	1	2.04	4.50	0.07	0.64	Cum
	Dirt wall	2	0.40	5.5	0.43	1.89	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
TOTAL						9.65	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		
	Dia of Bars	No.	Length		Weight per m	Quantity	Unit
a1	16	31	2.50		1.578	122.3	Kg
a2	10	10	5.90		0.616	36.4	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	2.42		0.616	28.3	Kg
a5	10	8	5.80		0.616	28.6	Kg
x1	12	34	2.50		0.888	75.5	Kg
x2	16	34	1.27		1.578	67.9	Kg
x3	10	24	1.94		0.616	28.7	Kg
	Taking Skin reinforcement @0.3% of M-20	65.87	0.30%	0.20	7850	1551.17	Kg
TOTAL REINFORCEMENT STEEL (in kg)						1945.51	Kg'
TOTAL REINFORCEMENT STEEL (in MT)						1.95	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.20		0.45	2.16	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.20		1.27	6.09	Sqm
		4		0.96	1.27	4.89	Sqm
		4	1.20		0.50	2.40	Sqm
		4		1.62	0.50	3.24	Sqm
	Section 2-2	4	3.20		0.50	6.40	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.20		0.51	6.53	Sqm
		4		1.06	0.51	2.16	Sqm
		4	3.20		1.00	12.80	Sqm
		4		1.63	1.00	6.52	Sqm
	Section 3-3	4	3.93		0.50	7.85	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.93		0.31	4.87	Sqm
		4		0.97	0.31	1.20	Sqm
		4	3.93		1.20	18.84	Sqm
		4		1.66	1.20	7.97	Sqm
	Section 5-5	4	2.33		0.45	4.19	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.33		1.27	11.84	Sqm
		4		0.96	1.27	4.89	Sqm
		4	2.33		0.50	4.65	Sqm
		4		1.62	0.50	3.24	Sqm
	Section 6-6	4	1.00		0.45	1.79	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.00		0.31	1.23	Sqm
		4		0.54	0.31	0.67	Sqm
		4	1.00		0.55	2.19	Sqm
		4		0.81	0.55	1.78	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.24	0.70	1.74	Sqm
		2	0.98		0.50	0.98	Sqm
		2		1.24	0.50	1.24	Sqm
		2	0.20		0.60	0.24	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.24	0.60	1.49	Sqm
		2	4.32		0.70	6.04	Sqm
		2		1.24	0.70	1.74	Sqm
		2	0.20		0.45	0.18	Sqm
		2		1.24	0.45	1.12	Sqm
		2	0.50		0.35	0.35	Sqm
		2		1.24	0.35	0.87	Sqm
		2	4.32		0.70	6.04	Sqm
		2		1.24	0.70	1.74	Sqm
		2	0.61		0.65	0.80	Sqm
		2		1.24	0.65	1.61	Sqm
	<i>Crest</i>	2	1.0835		1.45	3.14	Sqm
		2		1.24	1.45	3.60	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.89		0.30	2.93	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.89		0.45	4.40	Sqm
		2		0.45	0.45	0.41	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					183.66	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.34	Sqm
	TOTAL					5.34	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.64	0.30	0.29	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	0.64	0.15	0.29	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.53	0.45		5.64	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.53	0.45		5.64	Sqm
	TOTAL					11.27	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		4.26		4.26	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.35	0.98		2.643	Cum
	<i>Section 2-2</i>	2	3.20	0.63		4.022	Cum
	<i>Section 3-3</i>	2	4.00	0.56		4.510	Cum
	<i>Section 5-5</i>	2	2.37	0.98		4.653	Cum
	<i>Section 6-6</i>	2	0.32	0.45		0.286	Cum
	<i>D/S protection</i>						
	<i>Toe wall</i>	2	4.89	0.09		0.000	Cum
	TOTAL					20.37	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 2.970 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.15	1.51	1.312	4.570	Cum
	<i>Section 2-2</i>	2	2.50	1.58	1.312	10.339	Cum
	<i>Section 3-3</i>	2	4.70	1.46	1.112	15.219	Cum
	<i>Section 5-5</i>	2	2.05	1.66	1.312	8.926	Cum
	<i>Section 6-6</i>	2	0.83	0.94	1.112	1.726	Cum
	<i>U/S Key Floor</i>	1	0.625	1.240	0.850	0.659	Cum
	<i>U/S Floor</i>	1	4.500	1.240	1.312	7.321	Cum
	<i>D/S Floor</i>	1	4.800	1.240	1.462	8.702	Cum
	<i>D/S Key Floor</i>	1	4.800	1.240	0.650	3.869	Cum
	<i>Toe Wall D/S Portion</i>	1	4.770	0.750	0.750	2.683	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						65.36	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.						
	<i>PCC Below Floor</i>	1	0.542	1.24	0.15	0.10	Cum
		1	0.782	1.24	0.15	0.15	Cum
		1	4.117	1.24	0.15	0.77	Cum
		1	0.282	1.24	0.15	0.05	Cum
		1	3.396	1.24	0.15	0.63	Cum
		1	0.782	1.24	0.15	0.15	Cum
		1	0.542	1.24	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.15	1.51	0.15	0.52	Cum
	<i>Section 2-2</i>	2	2.50	1.58	0.15	1.18	Cum
	<i>Section 3-3</i>	2	4.70	1.46	0.15	2.05	Cum
	<i>Section 5-5</i>	2	2.05	1.66	0.15	1.02	Cum
	<i>Section 6-6</i>	2	0.83	0.94	0.15	0.23	Cum
	<i>Toe Wall D/S Portion</i>	1	4.77	0.75	0.30	1.07	Cum
	<i>Toe Wall D/S Portion</i>	1	4.77	0.45	0.45	0.97	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	0.30	0.60	0.27	Cum
	TOTAL					9.53	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.00	0.45	0.45	0.41	Cum
		2	1.00	0.83	1.27	2.12	Cum
		2	1.00	1.51	0.50	1.52	Cum
	<i>Section 2-2</i>	2	2.50	0.82	0.50	2.05	Cum
		2	2.50	1.12	0.51	2.86	Cum
		2	2.50	1.58	1.00	7.88	Cum
	<i>Section 3-3</i>	2	4.46	0.82	0.50	3.65	Cum
		2	4.46	0.99	0.31	2.73	Cum
		2	4.46	1.16	1.20	12.37	Cum
	<i>Section 5-5</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.83	1.27	4.23	Cum
		2	2.00	1.51	0.50	3.03	Cum
	<i>Section 6-6</i>	2	1.24	0.45	0.45	0.50	Cum
		2	1.24	0.54	0.31	0.42	Cum
		2	1.24	0.79	0.50	0.97	Cum
	<i>Floor</i>	1	0.63	1.24	0.70	0.54	Cum
		1	4.50	1.24	0.50	2.79	Cum
		1	0.20	1.24	0.40	0.10	Cum
		1	0.55	1.24	0.20	0.14	Cum
		1	4.80	1.24	0.50	2.98	Cum
		1	0.63	1.24	0.70	0.54	Cum
	<i>Crest</i>	1	0.91	1.24	0.98	1.10	Cum
	TOTAL					53.74	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 Crest	1	0.75	1.24	0.15	0.14	Cum
	Coping over Abutment Top	2	11.82	0.45	0.05	0.53	Cum
	Slab Bridge						
	Slab	1	1.90	5.5	0.33	3.43	Cum
	Wearing coat	1	1.90	4.50	0.07	0.60	Cum
	Dirt wall	2	0.40	5.5	0.43	1.89	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
	TOTAL					9.30	Cum
5	Providing M.S. reinforcements 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		
	<i>Dia of Bars</i>	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	5.80		0.616	25.0	Kg
x1	12	32	2.50		0.888	71.0	Kg
x2	16	32	1.27		1.578	63.9	Kg
x3	10	24	1.80		0.616	26.6	Kg
	Taking Skin reinforcement @0.3% of M-20	53.74	0.30%	0.16	7850	1265.50	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					1637.28	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					1.64	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	1.00		0.45	1.80	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.00		1.27	5.10	Sqm
		4		0.83	1.27	4.23	Sqm
		4	1.00		0.50	2.00	Sqm
		4		1.51	0.50	3.03	Sqm
	Section 2-2	4	2.50		0.50	5.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	2.50		0.51	5.10	Sqm
		4		1.12	0.51	2.29	Sqm
		4	2.50		1.00	10.00	Sqm
		4		1.58	1.00	6.30	Sqm
	Section 3-3	4	4.46		0.50	8.91	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.46		0.31	5.53	Sqm
		4		0.99	0.31	1.23	Sqm
		4	4.46		1.20	21.39	Sqm
		4		1.16	1.20	5.55	Sqm
	Section 5-5	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.00		1.27	10.19	Sqm
		4		0.83	1.27	4.23	Sqm
		4	2.00		0.50	4.00	Sqm
		4		1.51	0.50	3.03	Sqm
	Section 6-6	4	1.24		0.45	2.23	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.24		0.31	1.54	Sqm
		4		0.54	0.31	0.67	Sqm
		4	1.24		0.50	2.48	Sqm
		4		0.79	0.50	1.57	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.24	0.70	1.74	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.24	0.50	1.24	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.24	0.40	0.99	Sqm
		2	0.55		0.20	0.22	Sqm
		2		1.24	0.20	0.50	Sqm
		2	4.50		0.50	4.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.24	0.50	1.24	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.24	0.70	1.74	Sqm
	Crest	2	0.905		0.977	1.77	Sqm
		2		1.24	0.977	2.42	Sqm
	Toe Wall D/S Portion	2	4.77		0.30	2.86	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.77		0.45	4.29	Sqm
		2		0.45	0.45	0.41	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					163.07	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	1.50	1.71		5.13	Sqm
	TOTAL					5.13	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.64	0.30	0.29	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	0.64	0.15	0.29	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	11.82	0.45		5.32	Sqm
	On Abutment Top (Right Side)	1	11.82	0.45		5.32	Sqm
	TOTAL					10.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		1.84		1.84	Cum
	Abutment						
	Section 1-1	2	1.15	0.41		0.933	Cum
	Section 2-2	2	2.50	0.21		1.031	Cum
	Section 3-3	2	4.70	0.23		2.202	Cum
	Section 5-5	2	2.05	0.41		1.658	Cum
	Section 6-6	2	0.83	0.37		0.608	Cum
	D/S protection						
	Toe wall	2	4.77	0.07		0.000	Cum
	TOTAL					8.27	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST OF PIPE CULVERT OF 2.495 OF AMBA 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.	130.000	Sqm	11.80	1534.57			
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.	49.607	Cum	156.50	7763.54			
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	102109.65	5.18	7.20	14.40
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.	19.489	Cum	6914.20	134750.75	8.04	8.38	16.76
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	115.463	Sqm	578.60	66806.63			
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.	0.38	MT	73574.90	28140.29			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.88	Cum	788.59	2271.14			
8	WRD 5.7.18.1	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncraterd) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	2.88	Cum	1237.00	3562.56			
9	M-151	Providing 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	2532.61	18994.58			
10	5.6.2.2	Labour for laying 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			

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)
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.	7.08	Sqm	680.10	4812.39			
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 royalty as per specification and direction of E/I.	0.77	Cum	5021.30	3886.49	0.09	0.25	
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.	4.386	Sqm	340.20	1492.12	4.547	0.064	
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.	1.806	Sqm	63.20	114.14	0.003		
16	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	27.28	Cum	149.30	4072.70			
17		Carriage of materials							
		Coarse Sand (60 Km lead)	15.892	Cum	1075.00	17084.06			
		Coarse Aggregates (100 Km lead)	31.161	Cum	1398.00	43562.90			
		Cement (30 km lead)	17.863	MT	742.00	13254.06			
		Steel (30 km lead)	0.382	MT	742.00	283.79			
		Boulder (60 km lead)	2.880	Cum	1159.00	3337.92			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						471282.07			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	15.89	Cum	584.64	9291.19	929.12		
		Coarse Aggregate	31.16	Cum	944.26	29423.97	2942.40		
		Boulder (60 km lead)	2.88	Cum	694.61	2000.48	200.05		
Total							4071.56		

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 PIPE CULVERT OF 2.710 OF AMBA MR.									
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	5.1.8	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.	49.607	Cum	156.50	7763.54			
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	102109.65	5.18	7.20	14.40
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.	19.489	Cum	6914.20	134750.75	8.04	8.38	16.76
5	5.3.18	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	115.463	Sqm	578.60	66806.63			
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.	0.38	MT	73574.90	28140.29			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.88	Cum	788.59	2271.14			
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.	2.88	Cum	1237.00	3562.56			
9	M-151	Providing 600 mm NP3 RCC Hume Pipe with collar as per I.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	2532.61	18994.58			

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)
10	5.6.2.2	Labour for laying 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	5.7.16	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.	7.08	Sqm	680.10	4812.39			
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 royalty as per specification and direction of E/I.	0.77	Cum	5021.30	3886.49	0.09	0.25	
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.	4.386	Sqm	340.20	1492.12	4.547	0.064	
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.	1.806	Sqm	63.20	114.14	0.003		
16	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	27.28	Cum	149.30	4072.70			
17		Carriage of materials							
		Coarse Sand (60 Km lead)	15.892	Cum	1075.00	17084.06			
		Coarse Aggregates (100 Km lead)	31.161	Cum	1398.00	43562.90			
		Cement (30 km lead)	17.863	MT	742.00	13254.06			
		Steel (30 km lead)	0.382	MT	742.00	283.79			
		Boulder (60 km lead)	2.880	Cum	1159.00	3337.92			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						471045.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	15.89	Cum	584.64	9291.19	929.12		
		Coarse Aggregate	31.16	Cum	944.26	29423.97	2942.40		
		Boulder (60 km lead)	2.88	Cum	694.61	2000.48	200.05		
Total							4071.56		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.495 OF AMBA 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	130.00			130.00	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.						
	<i>U/S Toe Wall</i>	1	1.17	0.85	1.20	1.19	Cum
	<i>D/S Toe Wall</i>	1	1.17	0.85	1.20	1.19	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.45	Cum
		2	2.17	1.80	1.20	9.37	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.17	1.03	2.05	9.14	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.45	Cum
		2	2.17	1.80	1.20	9.37	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.17	1.03	2.05	9.14	Cum
	<i>C.C Floor Apron in (U/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>C.C Floor Apron in (D/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>Launching Apron in U/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	<i>Launching Apron in D/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					49.61	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.						
	<i>PCC Below U/S Curtain Wall</i>	1	1.17	0.85	0.30	0.30	Cum
	<i>U/S Curtain Wall Stem</i>	1	1.17	0.45	0.90	0.47	Cum
	<i>PCC Below D/S Curtain Wall</i>	1	1.17	0.85	0.30	0.30	Cum
	<i>D/S Curtain Wall Stem</i>	1	1.17	0.45	0.90	0.47	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>Floor Apron (U/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>Floor Apron (D/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.36	Cum
		2	2.17	1.80	0.30	2.34	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.36	Cum
		2	2.17	1.80	0.30	2.34	Cum
	<i>PCC Below Hume Pipe</i>	1	7.50	1.29	0.41	3.92	Cum
	<i>PCC Below Hume Pipe in (Curve Portion)</i>	2	7.50	0.49	0.20	1.43	Cum
	TOTAL					16.00	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)						
	<i>Section D-D</i>	2	0.61	0.60	0.90	0.65	Cum
		2	0.61	0.45	0.35	0.19	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section A-A & Section C-C</i>	2	2.17	1.40	0.90	5.46	Cum
		2	2.17	1.17	0.35	1.78	Cum
		2	2.17	0.75	0.50	1.64	Cum
	D/S Transition Walls (Left & Right)						
	<i>Section H-H</i>	2	0.61	0.60	0.90	0.65	Cum
		2	0.61	0.45	0.35	0.19	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section E-E & Section G-G</i>	2	2.17	1.40	0.90	5.46	Cum
		2	2.17	1.17	0.35	1.78	Cum
		2	2.17	0.75	0.50	1.64	Cum
	<i>Collar Joint</i>	2	1.19	0.30	1.20	0.86	Cum
	<i>Deduct Hume Pipe Area</i>	1		1.19		-1.19	Cum
	TOTAL					19.49	Cum
5	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Curtain Wall Stem</i>	2	1.17		0.90	2.10	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>D/S Curtain Wall Stem</i>	2	1.17		0.90	2.10	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>Floor Apron (U/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.85	0.45	0.76	Sqm
	<i>Floor Apron (D/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.85	0.45	0.76	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.17		0.30	2.61	Sqm
		4		1.80	0.30	2.16	Sqm
	<i>D/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.17		0.30	2.61	Sqm
		4		1.80	0.30	2.16	Sqm
	U/S Transition Walls (Left & Right)						
	<i>Section D-D</i>	4	0.61		0.90	2.18	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.35	0.85	Sqm
		4		0.45	0.35	0.63	Sqm
		4	0.61		0.50	1.21	Sqm
		4		0.30	0.50	0.60	Sqm

	<i>Average of Section A-A & Section C-C</i>	4	2.17		0.90	7.83	Sqm
		4		1.40	0.90	5.03	Sqm
		4	2.17		0.35	3.04	Sqm
		4		1.17	0.35	1.64	Sqm
		4	2.17		0.50	4.35	Sqm
		4		0.75	0.50	1.51	Sqm
	D/S Transition Walls (Left & Right)						
	<i>Section H-H</i>	4	0.61		0.90	2.18	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.35	0.85	Sqm
		4		0.45	0.35	0.63	Sqm
		4	0.61		0.50	1.21	Sqm
		4		0.30	0.50	0.60	Sqm
	<i>Average of Section E-E & Section G-G</i>	4	2.17		0.90	7.83	Sqm
		4		1.40	0.90	5.03	Sqm
		4	2.17		0.35	3.04	Sqm
		4		1.17	0.35	1.64	Sqm
		4	2.17		0.50	4.35	Sqm
		4		0.75	0.50	1.51	Sqm
	<i>PCC Below Hume Pipe</i>	2	7.50		0.41	6.08	Sqm
		2		1.29	0.41	1.04	Sqm
	<i>Deduct Hume Pipe Area</i>	4	7.50		0.20	5.85	Sqm
		4		0.49	0.20	0.38	Sqm
	TOTAL					115.46	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	19.49	0.25%	0.05	7850	382.47	Kg
	TOTAL Weight of steel (in kg)					382.47	Kg
	TOTAL Weight of Steel (in Tonne)					0.38	MT
7	Launching Apron i/c cost of all material, labour and T&P etc. Complete.						
	<i>Launching Apron in U/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	<i>Launching Apron in D/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					2.88	Cum
8	Providing 600 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.						
	<i>On Slopes in U/S Portion</i>	1	1.77	2.00		3.54	Sqm
	<i>On Slopes in D/S Portion</i>	1	1.77	2.00		3.54	Sqm
	TOTAL					7.08	Sqm

11	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.						
	<i>Parapet</i>	2	1.29	0.5	0.6	0.77	<i>Cum</i>
	TOTAL					0.77	Cum
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand 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.						
	<i>Parapet</i>	2	1.29		1.7	4.39	<i>Sqm</i>
	TOTAL					4.39	Sqm
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	<i>Parapet top</i>	2	1.29		0.7	1.81	<i>Sqm</i>
	TOTAL					1.81	Sqm
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						
	<i>U/S Transitions Walls</i>	2	2.17	1.03	2.05	9.14	<i>Cum</i>
	<i>D/S Transitions Walls</i>	2	2.17	1.03	2.05	9.14	<i>Cum</i>
	<i>U/S Toe Wall</i>	1	1.17		0.15	0.18	<i>Cum</i>
	<i>D/S Toe Wall</i>	1	1.17		0.15	0.18	<i>Cum</i>
	<i>Above Hume Pipe</i>	1	1.29		6.71	8.656	<i>Cum</i>
	TOTAL					27.28	Cum

DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 2.710 OF AMBA 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		110.00		110.00	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.						
	<i>U/S Toe Wall</i>	1	1.17	0.85	1.20	1.19	Cum
	<i>D/S Toe Wall</i>	1	1.17	0.85	1.20	1.19	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.45	Cum
		2	2.17	1.80	1.20	9.37	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.17	1.03	2.05	9.14	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.45	Cum
		2	2.17	1.80	1.20	9.37	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.17	1.03	2.05	9.14	Cum
	<i>C.C Floor Apron in (U/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>C.C Floor Apron in (D/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>Launching Apron in U/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	<i>Launching Apron in D/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					49.61	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.						
	<i>PCC Below U/S Curtain Wall</i>	1	1.17	0.85	0.30	0.30	Cum
	<i>U/S Curtain Wall Stem</i>	1	1.17	0.45	0.90	0.47	Cum
	<i>PCC Below D/S Curtain Wall</i>	1	1.17	0.85	0.30	0.30	Cum
	<i>D/S Curtain Wall Stem</i>	1	1.17	0.45	0.90	0.47	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>Floor Apron (U/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>Floor Apron (D/S Portion)</i>	1	1.55	0.85	0.45	0.59	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.36	Cum
		2	2.17	1.80	0.30	2.34	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.36	Cum
		2	2.17	1.80	0.30	2.34	Cum
	<i>PCC Below Hume Pipe</i>	1	7.50	1.29	0.41	3.92	Cum
	<i>PCC Below Hume Pipe in (Curve Portion)</i>	2	7.50	0.49	0.20	1.43	Cum
	TOTAL					16.00	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)						
	<i>Section D-D</i>	2	0.61	0.60	0.90	0.65	Cum
		2	0.61	0.45	0.35	0.19	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section A-A & Section C-C</i>	2	2.17	1.40	0.90	5.46	Cum
		2	2.17	1.17	0.35	1.78	Cum
		2	2.17	0.75	0.50	1.64	Cum
	D/S Transition Walls (Left & Right)						
	<i>Section H-H</i>	2	0.61	0.60	0.90	0.65	Cum
		2	0.61	0.45	0.35	0.19	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section E-E & Section G-G</i>	2	2.17	1.40	0.90	5.46	Cum
		2	2.17	1.17	0.35	1.78	Cum
		2	2.17	0.75	0.50	1.64	Cum
	<i>Collar Joint</i>	2	1.19	0.30	1.20	0.86	Cum
	<i>Deduct Hume Pipe Area</i>	1		1.19		-1.19	Cum
	TOTAL					19.49	Cum
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Curtain Wall Stem</i>	2	1.17		0.90	2.10	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>D/S Curtain Wall Stem</i>	2	1.17		0.90	2.10	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>Floor Apron (U/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.85	0.45	0.76	Sqm
	<i>Floor Apron (D/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.85	0.45	0.76	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.17		0.30	2.61	Sqm
		4		1.80	0.30	2.16	Sqm
	<i>D/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.17		0.30	2.61	Sqm
		4		1.80	0.30	2.16	Sqm
	U/S Transition Walls (Left & Right)						
	<i>Section D-D</i>	4	0.61		0.90	2.18	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.35	0.85	Sqm
		4		0.45	0.35	0.63	Sqm
		4	0.61		0.50	1.21	Sqm
		4		0.30	0.50	0.60	Sqm
	<i>Average of Section A-A & Section C-C</i>	4	2.17		0.90	7.83	Sqm

		4		1.40	0.90	5.03	Sqm
		4	2.17		0.35	3.04	Sqm
		4		1.17	0.35	1.64	Sqm
		4	2.17		0.50	4.35	Sqm
		4		0.75	0.50	1.51	Sqm
	D/S Transition Walls (Left & Right)						
	Section H-H	4	0.61		0.90	2.18	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.35	0.85	Sqm
		4		0.45	0.35	0.63	Sqm
		4	0.61		0.50	1.21	Sqm
		4		0.30	0.50	0.60	Sqm
	Average of Section E-E & Section G-G	4	2.17		0.90	7.83	Sqm
		4		1.40	0.90	5.03	Sqm
		4	2.17		0.35	3.04	Sqm
		4		1.17	0.35	1.64	Sqm
		4	2.17		0.50	4.35	Sqm
		4		0.75	0.50	1.51	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					115.46	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	19.49	0.25%	0.05	7850	382.47	Kg
	TOTAL Weight of steel (in kg)					382.47	Kg
	TOTAL Weight of Steel (in Tonne)					0.38	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	1.20	0.60	1.44	Cum
	Launching Apron in D/S Portion	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					2.88	Cum
8	Providing 600 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	1.77	2.00		3.54	Sqm
	On Slopes in D/S Portion	1	1.77	2.00		3.54	Sqm
	TOTAL					7.08	Sqm

11	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.						
	<i>Parapet</i>	2	1.29	0.5	0.6	0.77	<i>Cum</i>
	TOTAL					0.77	Cum
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand 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.						
	<i>Parapet</i>	2	1.29		1.7	4.39	<i>Sqm</i>
	TOTAL					4.39	Sqm
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	<i>Parapet top</i>	2	1.29		0.7	1.81	<i>Sqm</i>
	TOTAL					1.81	Sqm
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						
	<i>U/S Transitions Walls</i>	2	2.17	1.03	2.05	9.14	<i>Cum</i>
	<i>D/S Transitions Walls</i>	2	2.17	1.03	2.05	9.14	<i>Cum</i>
	<i>U/S Toe Wall</i>	1	1.17		0.15	0.18	<i>Cum</i>
	<i>D/S Toe Wall</i>	1	1.17		0.15	0.18	<i>Cum</i>
	<i>Above Hume Pipe</i>	1	1.29		6.71	8.656	<i>Cum</i>
	TOTAL					27.28	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND**DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF AMBA MINOR**

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	ROAD CROSSING / FALL (1.220 M)	1.000	₹ 10,353.04
2	FALL (0.915 M) / BRIDGE	1.730	₹ 22,543.23
3	NEW FALL (0.610 M) / BRIDGE	1.925	₹ 0.00
4	PIPE CULVERT	2.180	₹ 27,255.31
5	FALL (1.220 M) / BRIDGE	2.250	₹ 0.00
6	PIPE CULVERT	2.495	₹ 2,826.99
7	PIPE CULVERT	2.550	₹ 0.00
8	PIPE CULVERT	2.710	₹ 2,544.29
9	PIPE CULVERT / FALL (0.762 M)	2.970	₹ 3,585.81
Total In Rs.			₹ 69,108.67
Total In Lakhs.			₹ 0.69

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF AMBA 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 ROAD CROSSING / FALL AT (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.	120.000	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 royalty as per specification and direction of E/I.	0.30	Cum	5021.30	1530.49	0.04	0.10	
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.	7.620	Sqm	340.20	2592.32	7.900	0.111	
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.	1.829	Sqm	63.20	115.58	0.003		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.209	Cum	1075.00	224.45			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	7.938	MT	742.00	5890.20			
TOTAL (In Rs.)						10353.04			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.21	Cum	584.64	122.07	12.21		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							12.21		
AOC FOR FALL (0.915 M) / BRIDGE AT (CH. 1.730 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.	150.000	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 royalty 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.	12.741	Sqm	340.20	4334.37	13.209	0.186	
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.	1.829	Sqm	63.20	115.58	0.003		
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.	0.05	Cum	6381.70	341.37	0.02	0.02	0.05
6		Carriage of materials							
		Coarse Sand (60 Km lead)	0.659	Cum	1075.00	708.16			
		Coarse Aggregates (100 Km lead)	0.048	Cum	1398.00	67.30			
		Cement (30 km lead)	13.391	MT	742.00	9936.19			
TOTAL (In Rs.)						22543.23			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.66	Cum	584.64	385.13	38.51		
		Coarse Aggregate	0.05	Cum	944.26	45.46	4.55		
Total							43.06		
AOC FOR PIPE CULVERT AT CH. 2.180 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.	0.13	Cum	5021.30	635.15	0.01	0.04	

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.	5.060	Sqm	340.20	1721.30	5.246	0.074	
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.	3.036	Sqm	63.20	191.86	0.00		
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.	3.04	Cum	6381.70	19373.62	0.35	0.97	
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.086	Cum	1075.00	1167.24			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	5.615	MT	742.00	4166.13			
TOTAL (In Rs.)						27255.31			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.09	Cum	584.64	634.81	63.48		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							63.48		
AOC FOR FALL / BRIDGE AT (CH. 2.250 KM)									
1		Structure is in good condition and does not require any repair works.							
AOC FOR PIPE CULVERT AT CH. 2.495 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.	1.13	Cum	2492.58	2826.99			
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.)						2826.99			
		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		
AOC FOR PIPE CULVERT AT CH. 2.550 KM									
1		Structure is in good condition and does not require any repair works.							
AOC FOR PIPE CULVERT AT CH. 2.710 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.	1.02	Cum	2492.58	2544.29			
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.)						2544.29			
		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 PIPE CULVERT AT CH. 2.970 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.	1.44	Cum	2492.58	3585.81			
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.)						3585.81			

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	0.00	Cum	584.64	0.00	0.00		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							0.00		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF AMBA MINOR

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR ROAD CROSSING / FALL AT (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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall D/S</i>	1	3.048	0.25	0.4	0.30	Cum
		TOTAL					0.30	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.						
		<i>Parapet Wall U/S</i>	1	3.05		1.25	3.81	Sqm
		<i>Parapet Wall D/S</i>	1	3.05		1.25	3.81	Sqm
		TOTAL					7.62	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.						
		<i>Parapet Wall U/S</i>	1	3.05		0.3	0.91	Sqm
		<i>Parapet Wall D/S</i>	1	3.05		0.3	0.91	Sqm
		TOTAL					1.83	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (0.915 M) / BRIDGE AT (CH. 1.730 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				150.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall U/S & D/S</i>	2	3.05	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.						
		<i>Parapet Wall U/S</i>	1	3.05		2.09	6.37	Sqm
		<i>Parapet Wall D/S</i>	1	3.05		2.09	6.37	Sqm
		TOTAL					12.74	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 U/S	1	3.05		0.3	0.91	Sqm	
		Parapet Wall D/S	1	3.05		0.3	0.91	Sqm	
		TOTAL						1.83	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.							
		Crest	1	0.79	0.45	0.15	0.05	Cum	
		TOTAL						0.05	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT AT CH. 2.180 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 U/S & D/S	1	5.06	0.25	0.1	0.13	Cum	
		TOTAL						0.13	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 U/S	1	5.06		0.5	2.53	Sqm	
		Parapet Wall D/S	1	5.06		0.5	2.53	Sqm	
		TOTAL						5.06	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 U/S	1	5.06		0.3	1.52	Sqm	
		Parapet Wall D/S	1	5.06		0.3	1.52	Sqm	
		TOTAL						3.04	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.							
		Floor D/S	1	0.91	0.50	0.25	0.11	Cum	
		TOTAL						0.11	Cum
QUANTITIES OF REPAIRING WORK FOR FALL / BRIDGE AT (CH. 2.250 KM)									
	New Fall is proposed at this location.								

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT AT CH. 2.495 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.						
		<i>Abutment</i>	2	3.05	0.305	0.61	1.13	<i>Cum</i>
		TOTAL					1.13	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT AT CH. 2.550 KM								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT AT CH. 2.710 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.						
		<i>Abutment</i>	2	2.74	0.305	0.61	1.02	<i>Cum</i>
		TOTAL					1.02	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT AT CH. 2.970 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.						
		<i>Abutment</i>	2	2.74	0.305	0.61	1.02	<i>Cum</i>
		<i>Parapet</i>	1	2.74	0.305	0.5	0.42	<i>Cum</i>
		TOTAL					1.44	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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	Rs.	155373.89
8	Other incidental charge , 3 % = of C	Rs.	4661.22
	<i>Total C+8 = D</i>	Rs.	160035.1095

**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)	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, scaffolding and its removal wherever 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)	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. reinforcements 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.								
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 foundation 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				

Sl. No.	Reference	Name of Item	Qty.	Unit	Rate (As per WRD SOR 2025)	Amount in Rs.	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)	Boulders (cum)	
		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				
		<i>Total</i>						1100.17			
		For 7 nos. outlet, Total Seigniorage charges						7701.21			

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						
	<i>Toe Wall Base in Canal Portion</i>	1	1.5	0.75	0.15	0.17	Cum
	<i>Coping on Stem of Toe Wall</i>	1	1.50	0.45	0.075	0.05	Cum
	<i>Gate Structure (Section A-B)</i>	1	1.80	0.75	0.15	0.20	Cum
	<i>Coping (Section A-B)</i>	1	1.5	0.45	0.075	0.05	Cum
	<i>Water Course (Section C-D)</i>	1	15.00	1.50	0.15	3.38	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.075	0.45	Cum
	<i>Coping above Walls(Section C-D)</i>	2	15	0.40	0.075	0.90	Cum
	<i>Below transition walls</i>	1	1.5	1.2	0.15	0.27	Cum
		1	1.5	0.75	0.15	0.17	Cum
	<i>Gate Structure (Section A-B)</i>	2	1.50	0.45	1.21	1.63	Cum
	<i>Toe Wall stem</i>	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, scaffolding and its removal wherever required including royalty etc. all complete job as per specification and direction of E/I.						
	<i>Transition Walls in U/S</i>	2	1.50	0.45	1.04	1.40	Cum
	<i>Water Course (Section C-D)</i>	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 .						
	<i>150 mm Dia R.C.C. Pipe</i>	1			7.5	7.5	RM
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	<i>Spindle 25 mm dia</i>	1	0.000491	7850.00	1.29	4.97	Kg
		1	0.000491	7850.00	0.24	0.92	Kg
	<i>300 X300 MM MS GATE</i>	1		60.00		60.00	Kg
	<i>I.M.C. Grove (100 x 50) 9.56 kg/m</i>	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 .						
	<i>Toe Wall Base in Canal Portion</i>	1	1.50	0.75	0.10	0.11	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.10	0.60	Cum
	<i>Below transition walls</i>	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.						
	<i>RCC M-15 (Providing Reinforcement @ 0.24%)</i>	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.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 M³

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³
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, unloading, 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	

Sl. No.	References 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.	References 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.	References 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.	References 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 initial 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 M³

Sl. No.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			Say, Rs	₹ 8,151.40	Per M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 12 mm					
	(A)	Providing MS reinforcement plain (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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.	References 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, propping 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.	References 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, propping 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.	References 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 M³
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.	References 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 M³
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 M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						3503.19	
					Say, Rs	₹ 1,237.00	Per M³
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 M³

Sl. No.	References 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 M³
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 SI. No. 257
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	

Sl. No.	References 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	
	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 .			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
	5.6.1.7	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

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		Sand	0.045	cum	584.64	26.31	M-004
		Jute	7.5	Kg	20.89	156.68	M SI. 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
	5.6.2.5	1200 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	0.057	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 SI. 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.	References 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, scaffolding and its removal wherever 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 M³
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.	References 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 M³
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 M³
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 royalty 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	

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	WRD SOR 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 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, unloading, 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 2023 & PL JUNE 2024	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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	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.		
			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 foundation 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, scaffolding and its removal wherever 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 CHHATISGAR H 2025	3.18 PWD NH SOR CHHATISGA RH 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 transporting 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

**Amba Division – Karma Dy.
(Total Cost – Rs. 16.55 Crores)**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (KARMA DISTRIBUTARY)								
S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
1	Earthwork							
	KARMA DISTRIBUTARY	1	Job	54691181.46	0.00	₹ 5,46,91,181.46	AOC Earthwork Karma Distributary	21
	CHAURAHA MINOR	1	Job	13643449.59	0.00	₹ 1,36,43,449.59	AOC Earthwork Chauraha Minor	23
	NEURA SURAJMALMINOR	1	Job	9394449.24	0.00	₹ 93,94,449.24	AOC Earthwork Neura Surajmal Minor	25
	SHUSHNAR MR.	1	Job	12655530.55	0.00	₹ 1,26,55,530.55	AOC Earthwork Shushnar Minor	27
2	Head Regulator							
	CHAURAHA MINOR	1	No.	2617289.57	18671.94	₹ 26,35,961.51	HR (AOC) Chauraha Minor	34
	NEURA SURAJMALMINOR	1	No.	1728836.34	11986.72	₹ 17,40,823.06	HR (AOC) Neura Surajmal Minor	37
	SHUSHNAR MR.	1	No.	1911827.70	13173.91	₹ 19,25,001.61	HR (AOC) Shushnar Minor	40
3	Falls							
	KARMA DISTRIBUTARY :							
	0.610 m Fall at Ch. 8.150 Km	1	No.	2840462.59	24689.63	₹ 28,65,152.22	Fall (AOC) Karma Distributary	58
	0.610 m Fall at Ch. 9.150 Km	1	No.	2705245.12	23676.78	₹ 27,28,921.90		59
	0.914 m Fall at Ch. 16.860 Km	1	No.	1563077.43	14125.08	₹ 15,77,202.51		61
	1.067 m Fall at Ch. 21.350 Km	1	No.	2959904.84	13481.18	₹ 29,73,386.02		62
	0.457 m Fall at Ch. 22.150 Km	1	No.	2173230.66	9363.19	₹ 21,82,593.85		63
	0.914 m Fall at Ch. 23.050 Km	1	No.	1859795.55	8889.91	₹ 18,68,685.46		64
	1.220 m Fall at Ch. 23.300 Km	1	No.	2050024.53	10595.79	₹ 20,60,620.33		65
	CHAURAHA MINOR							
	0.914 m Fall at Ch. 3.190 Km	1	No.	843915.37	7343.28	₹ 8,51,258.65	Fall (AOC) Chauraha Minor	67
	0.457 m Fall at Ch. 4.175 Km	1	No.	1299189.62	11090.38	₹ 13,10,279.99		79
	0.305 m Fall at Ch. 6.000 Km	1	No.	527642.34	4593.79	₹ 5,32,236.13		68
	0.457 m Fall at Ch. 6.750 Km	1	No.	465582.73	3960.99	₹ 4,69,543.73		69
	0.457 m Fall at Ch. 7.050 Km	1	No.	432241.66	3613.07	₹ 4,35,854.73		70
	0.457 m Fall at Ch. 7.200 Km	1	No.	431936.96	3613.07	₹ 4,35,550.03		71
	0.457 m Fall at Ch. 7.500 Km	1	No.	375920.73	3087.98	₹ 3,79,008.71		72
	NEURA SURAJMAL MINOR							
	0.457 m Fall at Ch. 1.950 Km	1	No.	504899.45	4338.29	₹ 5,09,237.74	Fall (AOC) Neura Surajmal Minor	74
	0.457 m Fall at Ch. 2.300 Km	1	No.	505474.74	4338.29	₹ 5,09,813.02		75
	SHUSHNAR MR.							
	0.457 m Fall at Ch. 1.500 Km	1	No.	600428.65	5150.99	₹ 6,05,579.64	Fall (AOC) Shushnar Minor	77
	0.305 m Fall at Ch. 4.075 Km	1	No.	447729.06	3793.53	₹ 4,51,522.59		78
4	Slab Bridge							
	KARMA DISTRIBUTARY :							
	5.280 Km	1	No.	2542445.63	15198.98	₹ 25,57,644.61	Slab-AOC Karma Dy.	136
	7.420 Km	1	No.	2547621.59	15198.98	₹ 25,62,820.58		138
	19.740 Km	1	No.	1535034.86	9436.20	₹ 15,44,471.06		140
	CHAURAHA MINOR							
	5.910 KM	1	No.	1241985.82	7659.44	₹ 12,49,645.26	Slab-AOC Chauraha Mr.	146
	NEURA SURAJMAL MINOR							
	0.240 KM	1	No.	1164759.09	6839.14	₹ 11,71,598.23	Slab-AOC Neura Surajmal Mr.	142
	SHUSHNAR MR.							
	4.300 KM	1	No.	1049444.75	6315.89	₹ 10,55,760.64	Slab-AOC Shushnar Mr.	144
5	Brick Sec	1	No.	2661414.24	7071.81	₹ 26,68,486.04	'Brick Sec '1112	165
6	Repair of Structures							
	KARMA DISTRIBUTARY	22	No.	2106630.839	13963.14	₹ 21,20,593.98	Abstract (Repair St.) Karma Dy.	167
	CHAURAHA MINOR	12	No.	389582.1952	3440.56	₹ 3,93,022.75	Abstract (Repair St.) Chauraha Minor	168
	NEURA SURAJMALMINOR	11	No.	255816.9052	2139.63	₹ 2,57,956.53	Abstract (Repair St.) Neura Surajmal Minor	169

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page No.
	SHUSHNAR MR.	6	No.	231189.1823	283.06	₹ 2,31,472.24	Abstract (Repair St.) Shusnar Minor	170
	Approach Road	20	No.	521018.55	7578.59	₹ 1,05,71,942.89	Approach Road AOC	221
7	Outlets							
	KARMA DISTRIBUTARY	82	No.	127744.47	1100.17	₹ 1,05,65,260.53	Outlet-AOC	225
	CHAURAHA MINOR	20	No.	127744.47	1100.17	₹ 25,76,892.81		225
	NEURA SURAJMALMINOR	7	No.	127744.47	1100.17	₹ 9,01,912.48		225
	SHUSHNAR MR.	10	No.	127744.47	1100.17	₹ 12,88,446.41		225
7	Kilometer Stone	46	No.	3853.40	0.00	₹ 1,77,256.40	'Rates '!F61	259
TOTAL (In Rs.)						₹ 16,55,33,005.00		
TOTAL (In Lacs)						₹ 1,655.33		

As Per Latest Approved Rates Feb.			
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 (Tipper 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 of Cost =[(18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled 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		
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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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				
KARMA DISTRIBUTARY				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 0.150	150	11.186	1677.90	Sqm
0.150 - 3.200	3050	10.59	32311.70	Sqm
3.200 - 7.735	4535	9.744	44189.04	Sqm
7.735 - 8.700	965	9.203	8880.90	Sqm
8.700 - 9.565	865	8.553	7398.35	Sqm
9.565-11.360	1795	7.91	14200.25	Sqm
11.360-12.850	1490	7.298	10874.02	Sqm
12.850-14.460	1610	6.799	10946.39	Sqm
14.460-15.750	1290	6.515	8404.35	Sqm
15.750-16.860	1110	6.087	6756.57	Sqm
16.860-18.342	1482	5.746	8515.57	Sqm
18.342-20.058	1716	4.613	7915.91	Sqm
20.058-21.350	1292	3.697	4776.52	Sqm
21.350-21.750	400	3.056	1222.40	Sqm
21.750-22.150	400	2.714	1085.60	Sqm
22.150-22.990	840	2.373	1993.32	Sqm
22.990-23.750	760	1.889	1435.64	Sqm
	TOTAL		172584.42	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.150	150	11.186	0.15	251.69	Cum
0.150 - 3.200	3050	10.594	0.15	4846.76	Cum
3.200 - 7.735	4535	9.744	0.15	6628.36	Cum
7.735 - 8.700	965	9.203	0.15	1332.13	Cum
8.700 - 9.565	865	8.553	0.15	1109.75	Cum
9.565-11.360	1795	7.911	0.15	2130.04	Cum
11.360-12.850	1490	7.298	0.15	1631.10	Cum
12.850-14.460	1610	6.799	0.15	1641.96	Cum
14.460-15.750	1290	6.515	0.15	1260.65	Cum
15.750-16.860	1110	6.087	0.15	1013.49	Cum
16.860-18.342	1482	5.746	0.15	1277.34	Cum
18.342-20.058	1716	4.613	0.15	1187.39	Cum
20.058-21.350	1292	3.697	0.15	716.48	Cum
21.350-21.750	400	3.056	0.15	183.36	Cum
21.750-22.150	400	2.714	0.15	162.84	Cum
22.150-22.990	840	2.373	0.15	299.00	Cum
22.990-23.750	760	1.889	0.15	215.35	Cum
	TOTAL			25887.66	Cum

CHAURAH MR. (0.000 TO 7.700 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 3.190	3190	6.743	21510.17	Sqm
3.190-4.800	1610	6.25	10064.11	Sqm
4.800-5.380	580	5.847	3391.26	Sqm
5.380-6.520	1140	5.427	6186.78	Sqm
6.520-6.900	380	4.736	1799.68	Sqm
6.900-7.500	600	4.34	2602.80	Sqm
7.500-7.700	200	3.20	640.00	Sqm
TOTAL			46194.80	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 3.190	3190	6.743	0.15	3226.53	Cum
3.190-4.800	1610	6.251	0.15	1509.62	Cum
4.800-5.380	580	5.847	0.15	508.69	Cum
5.380-6.520	1140	5.427	0.15	928.02	Cum
6.520-6.900	380	4.736	0.15	269.95	Cum
6.900-7.500	600	4.338	0.15	390.42	Cum
7.500-7.700	200	3.2	0.15	96.00	Cum
TOTAL				6929.22	Cum

NEURA SURAJMAL MR. (0.000 TO 4.700 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 -1.500	1500	5.186	7779.00	Sqm
1.500-2.400	900	4.74	4262.40	Sqm
2.400-4.225	1825	4.338	7916.85	Sqm
4.225-4.700	475	3.2	1520.00	Sqm
TOTAL			21478.25	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 -1.500	1500	5.86	0.15	1318.50	Cum
1.500-2.400	900	5.416	0.15	731.16	Cum
2.400-4.225	1825	5.077	0.15	1389.83	Cum
4.225-4.700	475	4.736	0.15	337.44	Cum
TOTAL				3776.93	Cum

SHUSHNAR MR. (0.000 TO 4.500 KM)				
JUNGLE CLEARANCE QUANTITY				
Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.000 -1.050	1050	5.538	5814.90	Sqm
1.050-2.550	1500	4.89	7333.50	Sqm
2.550-3.700	1150	4.507	5183.05	Sqm
3.700-4.500	800	3	2400.00	Sqm
	TOTAL		20731.45	Sqm

LIP CUTTING QUANTITY					
Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.000 -1.050	1050	5.538	0.15	872.24	Cum
1.050-2.550	1500	4.889	0.15	1100.03	Cum
2.550-3.700	1150	4.507	0.15	777.46	Cum
3.700-4.500	800	3	0.15	360.00	Cum
	TOTAL			3109.72	Cum

DETAIL QUANTITIES OF EARTHWORK KARMA DISTRIBUTARY (0.000 TO 23.400 KM)							
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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
0		0.000	0	0	0.000	0	0.000
100	100	13.452	6.726	672.600	1.745	0.873	87.250
200	100	11.402	12.427	1242.700	1.118	1.432	143.150
300	100	12.088	11.745	1174.500	2.375	1.747	174.650
400	100	15.447	13.768	1376.750	4.743	3.559	355.900
500	100	3.300	9.374	937.350	27.610	16.177	1617.650
600	100	2.792	3.046	304.600	2.119	14.865	1486.450
700	100	2.133	2.463	246.250	7.071	4.595	459.500
800	100	1.307	1.720	172.000	6.329	6.700	670.000
900	100	2.817	2.062	206.200	5.399	5.864	586.400
1000	100	2.236	2.527	252.650	5.474	5.437	543.650
1100	100	1.688	1.962	196.200	6.435	5.955	595.450
1200	100	1.453	1.571	157.050	7.619	7.027	702.700
1300	100	1.164	1.309	130.850	5.189	6.404	640.400
1400	100	0.988	1.076	107.600	7.555	6.372	637.200
1500	100	1.430	1.209	120.900	7.270	7.413	741.250
1600	100	1.596	1.513	151.300	5.665	6.468	646.750
1700	100	1.718	1.657	165.700	3.958	4.812	481.150
1800	100	1.763	1.741	174.050	2.371	3.165	316.450
1900	100	2.022	1.893	189.250	2.129	2.250	225.000
2000	100	2.313	2.168	216.750	2.725	2.427	242.700
2100	100	2.620	2.467	246.650	4.460	3.593	359.250
2200	100	4.442	3.531	353.100	6.097	5.279	527.850
2300	100	3.586	4.014	401.400	1.790	3.944	394.350
2400	100	3.491	3.539	353.850	2.032	1.911	191.100
2500	100	2.731	3.111	311.100	1.840	1.936	193.600
2600	100	2.618	2.675	267.450	3.085	2.463	246.250
2700	100	2.884	2.751	275.100	3.876	3.481	348.050
2800	100	3.005	2.945	294.450	3.695	3.786	378.550
2900	100	3.139	3.072	307.200	1.001	2.348	234.800
3000	100	3.290	3.215	321.450	3.299	2.150	215.000
3100	100	3.462	3.376	337.600	4.549	3.924	392.400
3200	100	20.930	12.196	1219.600	5.159	4.854	485.400
3300	100	1.225	11.078	1107.750	5.502	5.331	533.050
3400	100	0.670	0.948	94.750	6.590	6.046	604.600
3500	100	0.223	0.447	44.650	7.442	7.016	701.600
3600	100	0.024	0.124	12.350	8.380	7.911	791.100
3700	100	0.857	0.441	44.050	7.530	7.955	795.500
3800	100	0.623	0.740	74.000	7.530	7.530	753.000
3900	100	0.579	0.601	60.100	7.133	7.332	733.150
4000	100	0.552	0.566	56.550	6.901	7.017	701.700
4100	100	0.534	0.543	54.300	9.410	8.156	815.550

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4200	100	4.964	2.749	274.900	3.686	6.548	654.800
4300	100	2.331	3.648	364.750	5.261	4.474	447.350
4400	100	1.894	2.113	211.250	5.278	5.270	526.950
4500	100	1.455	1.675	167.450	5.302	5.290	529.000
4600	100	1.038	1.247	124.650	5.550	5.426	542.600
4700	100	0.635	0.837	83.650	5.771	5.661	566.050
4800	100	0.256	0.446	44.550	5.648	5.710	570.950
4900	100	5.564	2.910	291.000	3.460	4.554	455.400
5000	100	0.080	2.822	282.200	9.489	6.475	647.450
5100	100	2.012	1.046	104.600	6.449	7.969	796.900
5200	100	0.996	1.504	150.400	9.176	7.813	781.250
5300	100	2.557	1.777	177.650	4.861	7.019	701.850
5400	100	1.493	2.025	202.500	6.539	5.700	570.000
5500	100	0.506	1.000	99.950	5.620	6.080	607.950
5600	100	0.031	0.269	26.850	6.027	5.824	582.350
5700	100	12.068	6.050	604.950	4.186	5.107	510.650
5800	100	0.000	6.034	603.400	13.844	9.015	901.500
5900	100	0.137	0.069	6.850	9.712	11.778	1177.800
6000	100	0.499	0.318	31.800	7.712	8.712	871.200
6100	100	0.814	0.657	65.650	7.055	7.384	738.350
6200	100	0.807	0.811	81.050	7.985	7.520	752.000
6300	100	0.568	0.688	68.750	8.184	8.085	808.450
6400	100	0.497	0.533	53.250	16.464	12.324	1232.400
6500	100	0.426	0.462	46.150	10.231	13.348	1334.750
6600	100	13.547	6.987	698.650	5.603	7.917	791.700
6700	100	1.193	7.370	737.000	8.991	7.297	729.700
6800	100	1.325	1.259	125.900	7.937	8.464	846.400
6900	100	1.447	1.386	138.600	7.276	7.607	760.650
7000	100	1.545	1.496	149.600	6.861	7.069	706.850
7100	100	1.618	1.582	158.150	6.099	6.480	648.000
7200	100	1.669	1.644	164.350	5.587	5.843	584.300
7300	100	1.409	1.539	153.900	5.402	5.495	549.450
7400	100	0.832	1.121	112.050	5.611	5.507	550.650
7500	100	2.260	1.546	154.600	3.919	4.765	476.500
7600	100	2.056	2.158	215.800	3.846	3.883	388.250
7700	100	1.831	1.944	194.350	3.752	3.799	379.900
7800	100	1.319	1.575	157.500	4.563	4.158	415.750
7900	100	1.095	1.207	120.700	4.715	4.639	463.900
8000	100	0.870	0.983	98.250	5.013	4.864	486.400
8100	100	0.638	0.754	75.400	5.420	5.217	521.650
8200	100	1.108	0.873	87.300	8.487	6.954	695.350
8300	100	1.669	1.389	138.850	8.474	8.481	848.050
8400	100	1.255	1.462	146.200	8.096	8.285	828.500
8500	100	0.840	1.048	104.750	8.175	8.136	813.550
8600	100	0.470	0.655	65.500	7.984	8.080	807.950

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
8700	100	0.317	0.394	39.350	6.216	7.100	710.000
8800	100	0.175	0.246	24.600	7.690	6.953	695.300
8900	100	0.064	0.120	11.950	8.910	8.300	830.000
9000	100	0.009	0.037	3.650	10.063	9.487	948.650
9100	100	0.000	0.005	0.450	11.182	10.623	1062.250
9200	100	0.039	0.020	1.950	8.908	10.045	1004.500
9300	100	0.043	0.041	4.100	7.608	8.258	825.800
9400	100	0.233	0.138	13.800	6.735	7.172	717.150
9500	100	0.304	0.269	26.850	6.058	6.397	639.650
9600	100	3.794	2.049	204.900	5.267	5.663	566.250
9700	100	2.539	3.167	316.650	5.115	5.191	519.100
9800	100	1.344	1.942	194.150	5.102	5.109	510.850
9900	100	0.430	0.887	88.700	5.176	5.139	513.900
10000	100	0.275	0.353	35.250	5.344	5.260	526.000
10100	100	0.282	0.279	27.850	5.417	5.381	538.050
10200	100	0.365	0.324	32.350	5.489	5.453	545.300
10300	100	0.508	0.437	43.650	5.571	5.530	553.000
10400	100	0.725	0.617	61.650	5.717	5.644	564.400
10500	100	0.954	0.840	83.950	5.999	5.858	585.800
10600	100	1.182	1.068	106.800	6.494	6.247	624.650
10700	100	1.198	1.190	119.000	6.826	6.660	666.000
10800	100	1.354	1.276	127.600	7.289	7.058	705.750
10900	100	1.538	1.446	144.600	7.781	7.535	753.500
11000	100	1.731	1.635	163.450	8.287	8.034	803.400
11100	100	1.920	1.826	182.550	8.805	8.546	854.600
11200	100	2.106	2.013	201.300	9.418	9.112	911.150
11300	100	2.253	2.180	217.950	9.964	9.691	969.100
11400	100	2.408	2.331	233.050	3.272	6.618	661.800
11500	100	0.416	1.412	141.200	4.942	4.107	410.700
11600	100	0.395	0.406	40.550	5.485	5.214	521.350
11700	100	0.461	0.428	42.800	5.959	5.722	572.200
11800	100	0.611	0.536	53.600	7.002	6.481	648.050
11900	100	1.239	0.925	92.500	6.259	6.631	663.050
12000	100	1.066	1.153	115.250	6.101	6.180	618.000
12100	100	0.938	1.002	100.200	6.090	6.096	609.550
12200	100	0.931	0.935	93.450	6.268	6.179	617.900
12300	100	1.085	1.008	100.800	6.582	6.425	642.500
12400	100	0.000	0.543	54.250	9.901	8.242	824.150
12500	100	0.008	0.004	0.400	7.352	8.627	862.650
12600	100	0.080	0.044	4.400	5.670	6.511	651.100
12700	100	0.242	0.161	16.100	4.405	5.038	503.750
12800	100	0.499	0.371	37.050	4.418	4.412	441.150
12900	100	15.408	7.954	795.350	4.819	4.619	461.850
13000	100	3.007	9.208	920.750	3.197	4.008	400.800
13100	100	3.609	3.308	330.800	2.450	2.824	282.350

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
13200	100	4.285	3.947	394.700	3.414	2.932	293.200
13300	100	3.559	3.922	392.200	3.044	3.229	322.900
13400	100	2.277	2.918	291.800	2.974	3.009	300.900
13500	100	1.239	1.758	175.800	3.319	3.147	314.650
13600	100	10.307	5.773	577.300	3.728	3.524	352.350
13700	100	0.801	5.554	555.400	6.059	4.894	489.350
13800	100	0.769	0.785	78.500	5.827	5.943	594.300
13900	100	0.836	0.803	80.250	5.420	5.624	562.350
14000	100	0.912	0.874	87.400	4.915	5.168	516.750
14100	100	11.022	5.967	596.700	4.311	4.613	461.300
14200	100	3.349	7.186	718.550	3.354	3.833	383.250
14300	100	3.358	3.354	335.350	3.215	3.285	328.450
14400	100	3.349	3.354	335.350	3.412	3.314	331.350
14500	100	1.013	2.181	218.100	4.317	3.865	386.450
14600	100	0.972	0.993	99.250	3.407	3.862	386.200
14700	100	10.454	5.713	571.300	2.112	2.760	275.950
14800	100	0.145	5.300	529.950	8.621	5.367	536.650
14900	100	0.070	0.108	10.750	7.254	7.938	793.750
15000	100	0.135	0.103	10.250	6.623	6.939	693.850
15100	100	3.174	1.655	165.450	2.986	4.805	480.450
15200	100	0.998	2.086	208.600	4.753	3.870	386.950
15300	100	0.931	0.965	96.450	4.352	4.553	455.250
15400	100	0.887	0.909	90.900	4.039	4.196	419.550
15500	100	0.838	0.863	86.250	3.123	3.581	358.100
15600	100	0.774	0.806	80.600	3.580	3.352	335.150
15700	100	0.764	0.769	76.900	4.169	3.875	387.450
15800	100	0.645	0.705	70.450	4.882	4.526	452.550
15900	100	0.650	0.648	64.750	4.165	4.524	452.350
16000	100	0.697	0.674	67.350	3.759	3.962	396.200
16100	100	0.507	0.602	60.200	4.252	4.006	400.550
16200	100	0.817	0.662	66.200	4.316	4.284	428.400
16300	100	0.940	0.879	87.850	6.237	5.277	527.650
16400	100	0.711	0.826	82.550	6.285	6.261	626.100
16500	100	0.730	0.721	72.050	4.305	5.295	529.500
16600	100	0.624	0.677	67.700	4.404	4.355	435.450
16700	100	0.730	0.677	67.700	4.553	4.479	447.850
16800	100	0.991	0.861	86.050	5.066	4.810	480.950
16900	100	0.750	0.871	87.050	7.288	6.177	617.700
17000	100	0.456	0.603	60.300	6.012	6.650	665.000
17100	100	0.869	0.663	66.250	3.396	4.704	470.400
17200	100	1.439	1.154	115.400	3.511	3.454	345.350
17300	100	0.935	1.187	118.700	4.005	3.758	375.800
17400	100	1.068	1.002	100.150	3.569	3.787	378.700
17500	100	1.377	1.223	122.250	3.220	3.395	339.450
17600	100	1.685	1.531	153.100	2.941	3.081	308.050

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
17700	100	1.994	1.840	183.950	2.705	2.823	282.300
17800	100	2.305	2.150	214.950	2.490	2.598	259.750
17900	100	2.619	2.462	246.200	2.096	2.293	229.300
18000	100	1.152	1.886	188.550	5.503	3.800	379.950
18100	100	2.546	1.849	184.900	3.504	4.504	450.350
18200	100	2.452	2.499	249.900	4.272	3.888	388.800
18300	100	2.413	2.433	243.250	5.003	4.638	463.750
18400	100	0.763	1.588	158.800	4.970	4.987	498.650
18500	100	0.656	0.710	70.950	7.207	6.089	608.850
18600	100	11.391	6.024	602.350	3.626	5.417	541.650
18700	100	4.363	7.877	787.700	2.682	3.154	315.400
18800	100	0.545	2.454	245.400	5.724	4.203	420.300
18900	100	0.428	0.487	48.650	6.081	5.903	590.250
19000	100	0.316	0.372	37.200	5.962	6.022	602.150
19100	100	0.210	0.263	26.300	7.472	6.717	671.700
19200	100	0.363	0.287	28.650	5.449	6.461	646.050
19300	100	0.204	0.284	28.350	6.845	6.147	614.700
19400	100	1.276	0.740	74.000	7.089	6.967	696.700
19500	100	0.452	0.864	86.400	6.107	6.598	659.800
19600	100	1.293	0.873	87.250	2.740	4.424	442.350
19700	100	0.136	0.715	71.450	5.302	4.021	402.100
19800	100	0.142	0.139	13.900	6.078	5.690	569.000
19900	100	1.149	0.646	64.550	2.893	4.486	448.550
20000	100	0.179	0.664	66.400	5.653	4.273	427.300
20100	100	0.232	0.206	20.550	6.417	6.035	603.500
20200	100	0.213	0.223	22.250	7.460	6.939	693.850
20300	100	0.369	0.291	29.100	6.777	7.119	711.850
20400	100	1.688	1.029	102.850	4.298	5.538	553.750
20500	100	1.456	1.572	157.200	4.861	4.580	457.950
20600	100	1.304	1.380	138.000	5.538	5.200	519.950
20700	100	2.449	1.877	187.650	2.964	4.251	425.100
20800	100	2.257	2.353	235.300	3.863	3.414	341.350
20900	100	0.851	1.554	155.400	3.911	3.887	388.700
21000	100	0.450	0.651	65.050	4.161	4.036	403.600
21100	100	0.230	0.340	34.000	4.407	4.284	428.400
21200	100	0.043	0.137	13.650	4.745	4.576	457.600
21300	100	0.000	0.022	2.150	5.289	5.017	501.700
21400	100	1.752	0.876	87.600	3.158	4.224	422.350
21500	100	1.367	1.560	155.950	3.510	3.334	333.400
21600	100	1.028	1.198	119.750	3.492	3.501	350.100
21700	100	0.736	0.882	88.200	3.866	3.679	367.900
21800	100	0.444	0.590	59.000	2.625	3.246	324.550
21900	100	1.024	0.734	73.400	1.785	2.205	220.500
22000	100	0.579	0.802	80.150	2.612	2.199	219.850
22100	100	0.266	0.423	42.250	3.599	3.106	310.550

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
22200	100	0.467	0.367	36.650	4.544	4.072	407.150
22300	100	0.278	0.373	37.250	4.831	4.688	468.750
22400	100	0.183	0.231	23.050	4.512	4.672	467.150
22500	100	0.294	0.239	23.850	3.421	3.967	396.650
22600	100	0.094	0.194	19.400	4.409	3.915	391.500
22700	100	0.008	0.051	5.100	5.538	4.974	497.350
22800	100	0.000	0.004	0.400	6.726	6.132	613.200
22900	100	0.000	0.000	0.000	5.472	6.099	609.900
23000	100	0.000	0.000	0.000	5.026	5.249	524.900
23100	100	0.738	0.369	36.900	2.714	3.870	387.000
23200	100	0.228	0.483	48.300	3.393	3.054	305.350
23300	100	9.277	4.753	475.250	7.294	5.344	534.350
23400	100	0.306	4.792	479.150	2.212	4.753	475.300
Total				43794.700			128437.500
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							43794.700
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							128437.500
NET QUANTITY OF EARTHWORK IN FILLING							84642.80

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK CHAURAHA MR (0.000 TO 7.600 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	11.723	5.862	586.150	4.482	2.241	224.100
200	100	10.939	11.331	1133.100	2.603	3.543	354.250
300	100	24.369	17.654	1765.400	0.000	1.302	130.150
400	100	12.116	18.243	1824.250	7.286	3.643	364.300
500	100	12.253	12.185	1218.450	7.136	7.211	721.100
600	100	11.264	11.759	1175.850	7.805	7.471	747.050
700	100	10.299	10.782	1078.150	9.340	8.573	857.250
800	100	9.363	9.831	983.100	8.134	8.737	873.700
900	100	8.785	9.074	907.400	7.006	7.570	757.000
1000	100	8.301	8.543	854.300	7.182	7.094	709.400
1100	100	7.792	8.047	804.650	7.405	7.294	729.350
1200	100	7.276	7.534	753.400	7.645	7.525	752.500
1300	100	7.890	7.583	758.300	5.872	6.759	675.850
1400	100	6.861	7.376	737.550	5.055	5.464	546.350
1500	100	5.876	6.369	636.850	6.187	5.621	562.100
1600	100	5.027	5.452	545.150	5.364	5.776	577.550
1700	100	4.729	4.878	487.800	5.213	5.289	528.850
1800	100	4.852	4.791	479.050	4.827	5.020	502.000
1900	100	5.910	5.381	538.100	5.835	5.331	533.100
2000	100	5.052	5.481	548.100	4.718	5.277	527.650
2100	100	3.636	4.344	434.400	4.962	4.840	484.000
2200	100	2.758	3.197	319.700	4.873	4.918	491.750
2300	100	2.529	2.644	264.350	5.075	4.974	497.400
2400	100	3.711	3.120	312.000	4.090	4.583	458.250
2500	100	1.366	2.539	253.850	2.674	3.382	338.200
2600	100	0.490	0.928	92.800	2.746	2.710	271.000
2700	100	0.543	0.517	51.650	2.284	2.515	251.500
2800	100	0.308	0.426	42.550	2.451	2.368	236.750
2900	100	0.046	0.177	17.700	6.207	4.329	432.900
3000	100	0.000	0.023	2.300	8.252	7.230	722.950
3100	100	0.489	0.245	24.450	8.714	8.483	848.300
3200	100	1.406	0.948	94.750	3.564	6.139	613.900
3300	100	1.989	1.698	169.750	2.803	3.184	318.350
3400	100	1.114	1.552	155.150	2.341	2.572	257.200
3500	100	0.560	0.837	83.700	2.985	2.663	266.300
3600	100	0.449	0.505	50.450	2.611	2.798	279.800
3700	100	0.325	0.387	38.700	4.191	3.401	340.100
3800	100	0.408	0.367	36.650	4.156	4.174	417.350
3900	100	0.133	0.271	27.050	5.084	4.620	462.000
4000	100	0.055	0.094	9.400	4.740	4.912	491.200
4100	100	0.034	0.045	4.450	2.241	3.491	349.050

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4200	100	0.678	0.356	35.600	3.098	2.670	266.950
4300	100	1.831	1.255	125.450	4.689	3.894	389.350
4400	100	0.702	1.267	126.650	3.226	3.958	395.750
4500	100	0.049	0.376	37.550	3.154	3.190	319.000
4600	100	0.017	0.033	3.300	4.283	3.719	371.850
4700	100	0.022	0.020	1.950	4.628	4.456	445.550
4800	100	0.594	0.308	30.800	6.417	5.523	552.250
4900	100	0.381	0.488	48.750	5.919	6.168	616.800
5000	100	0.218	0.300	29.950	3.998	4.959	495.850
5100	100	0.126	0.172	17.200	3.603	3.801	380.050
5200	100	0.229	0.178	17.750	3.967	3.785	378.500
5300	100	0.010	0.120	11.950	3.530	3.749	374.850
5400	100	0.659	0.335	33.450	5.305	4.418	441.750
5500	100	0.235	0.447	44.700	4.049	4.677	467.700
5600	100	0.177	0.206	20.600	3.655	3.852	385.200
5700	100	0.198	0.188	18.750	1.618	2.637	263.650
5800	100	0.089	0.144	14.350	2.356	1.987	198.700
5900	100	0.028	0.059	5.850	3.242	2.799	279.900
6000	100	0.282	0.155	15.500	3.855	3.549	354.850
6100	100	0.098	0.190	19.000	5.172	4.514	451.350
6200	100	0.038	0.068	6.800	4.780	4.976	497.600
6300	100	0.084	0.061	6.100	7.828	6.304	630.400
6400	100	3.057	1.571	157.050	5.021	6.425	642.450
6500	100	0.197	1.627	162.700	6.328	5.675	567.450
6600	100	0.612	0.405	40.450	3.839	5.084	508.350
6700	100	0.029	0.321	32.050	6.271	5.055	505.500
6800	100	0.529	0.279	27.900	5.825	6.048	604.800
6900	100	0.468	0.499	49.850	2.872	4.349	434.850
7000	100	0.102	0.285	28.500	4.820	3.846	384.600
7100	100	0.374	0.238	23.800	3.011	3.916	391.550
7200	100	0.742	0.558	55.800	2.680	2.846	284.550
7300	100	0.224	0.483	48.300	5.304	3.992	399.200
7400	100	0.000	0.112	11.200	8.195	6.750	674.950
7500	100	0.456	0.228	22.800	4.317	6.256	625.600
7600	100	0.219	0.338	33.750	6.581	5.449	544.900
Total				21667.050			36028.450
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							21667.050
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							36028.450
NET QUANTITY OF EARTHWORK IN FILLING							14361.40

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK NEURA SURAJMAL MR (0.000 TO 4.600 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.025	0.013	1.250	7.312	3.656	365.600
200	100	0.520	0.273	27.250	3.299	5.306	530.550
300	100	0.082	0.301	30.100	5.750	4.525	452.450
400	100	0.567	0.325	32.450	4.439	5.095	509.450
500	100	0.162	0.365	36.450	3.781	4.110	411.000
600	100	0.280	0.221	22.100	3.561	3.671	367.100
700	100	0.000	0.140	14.000	6.141	4.851	485.100
800	100	0.704	0.352	35.200	0.702	3.422	342.150
900	100	0.812	0.758	75.800	1.846	1.274	127.400
1000	100	0.994	0.903	90.300	2.983	2.415	241.450
1100	100	0.626	0.810	81.000	3.148	3.066	306.550
1200	100	0.458	0.542	54.200	3.574	3.361	336.100
1300	100	0.008	0.233	23.300	4.670	4.122	412.200
1400	100	0.000	0.004	0.400	7.824	6.247	624.700
1500	100	1.736	0.868	86.800	5.566	6.695	669.500
1600	100	1.267	1.502	150.150	1.727	3.647	364.650
1700	100	0.157	0.712	71.200	3.851	2.789	278.900
1800	100	0.000	0.079	7.850	6.643	5.247	524.700
1900	100	0.101	0.051	5.050	6.054	6.349	634.850
2000	100	0.294	0.198	19.750	3.626	4.840	484.000
2100	100	0.548	0.421	42.100	3.215	3.421	342.050
2200	100	0.434	0.491	49.100	2.902	3.059	305.850
2300	100	0.656	0.545	54.500	3.664	3.283	328.300
2400	100	0.124	0.390	39.000	4.348	4.006	400.600
2500	100	0.000	0.062	6.200	6.212	5.280	528.000
2600	100	0.000	0.000	0.000	5.875	6.044	604.350
2700	100	0.000	0.000	0.000	6.377	6.126	612.600
2800	100	0.000	0.000	0.000	4.174	5.276	527.550
2900	100	0.649	0.325	32.450	3.718	3.946	394.600
3000	100	0.000	0.325	32.450	3.560	3.639	363.900
3100	100	0.123	0.062	6.150	3.550	3.555	355.500
3200	100	0.000	0.062	6.150	5.447	4.499	449.850
3300	100	0.000	0.000	0.000	3.932	4.690	468.950
3400	100	0.261	0.131	13.050	3.655	3.794	379.350
3500	100	0.160	0.211	21.050	3.131	3.393	339.300
3600	100	0.000	0.080	8.000	6.070	4.601	460.050
3700	100	0.100	0.050	5.000	4.449	5.260	525.950
3800	100	0.710	0.405	40.500	2.348	3.399	339.850
3900	100	0.859	0.785	78.450	3.364	2.856	285.600
4000	100	0.805	0.832	83.200	2.766	3.065	306.500
4100	100	0.567	0.686	68.600	1.683	2.225	222.450
4200	100	0.472	0.520	51.950	2.780	2.232	223.150

Change	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
4300	100	1.364	0.918	91.800	0.917	1.849	184.850
4400	100	0.350	0.857	85.700	4.608	2.763	276.250
4500	100	0.065	0.208	20.750	2.996	3.802	380.200
4600	100	0.077	0.071	7.100	5.369	4.183	418.250
Total				1707.850			18492.250
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							1707.850
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							18492.250
NET QUANTITY OF EARTHWORK IN FILLING							16784.40

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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
DETAIL QUANTITIES OF EARTHWORK SHUSHNAR MR (0.000 TO 4.500 KM)							
0		0.000	0	0	0.000	0	0.000
100	100	0.510	0.255	25.500	6.016	3.008	300.800
200	100	0.240	0.375	37.500	7.277	6.647	664.650
300	100	0.177	0.209	20.850	6.680	6.979	697.850
400	100	0.126	0.152	15.150	6.022	6.351	635.100
500	100	0.078	0.102	10.200	5.871	5.947	594.650
600	100	0.007	0.043	4.250	5.642	5.757	575.650
700	100	0.000	0.004	0.350	8.440	7.041	704.100
800	100	2.396	1.198	119.800	6.397	7.419	741.850
900	100	1.054	1.725	172.500	7.110	6.754	675.350
1000	100	0.789	0.922	92.150	6.814	6.962	696.200
1100	100	0.457	0.623	62.300	6.746	6.780	678.000
1200	100	0.250	0.354	35.350	6.375	6.561	656.050
1300	100	0.057	0.154	15.350	6.298	6.337	633.650
1400	100	0.000	0.029	2.850	5.648	5.973	597.300
1500	100	0.459	0.230	22.950	4.739	5.194	519.350
1600	100	0.251	0.355	35.500	4.086	4.413	441.250
1700	100	0.059	0.155	15.500	4.304	4.195	419.500
1800	100	0.685	0.372	37.200	3.944	4.124	412.400
1900	100	0.000	0.343	34.250	6.076	5.010	501.000
2000	100	0.978	0.489	48.900	7.285	6.681	668.050
2100	100	0.805	0.892	89.150	5.756	6.521	652.050
2200	100	0.497	0.651	65.100	5.598	5.677	567.700
2300	100	0.213	0.355	35.500	4.039	4.819	481.850
2400	100	0.000	0.107	10.650	4.303	4.171	417.100
2500	100	0.008	0.004	0.400	4.998	4.651	465.050
2600	100	0.000	0.004	0.400	7.379	6.189	618.850
2700	100	0.000	0.000	0.000	4.555	5.967	596.700
2800	100	0.007	0.004	0.350	6.328	5.442	544.150
2900	100	0.049	0.028	2.800	6.160	6.244	624.400
3000	100	0.090	0.070	6.950	6.280	6.220	622.000
3100	100	0.418	0.254	25.400	4.266	5.273	527.300
3200	100	0.181	0.300	29.950	6.533	5.400	539.950
3300	100	0.099	0.140	14.000	6.728	6.631	663.050
3400	100	0.018	0.059	5.850	6.836	6.782	678.200
3500	100	0.000	0.009	0.900	7.230	7.033	703.300
3600	100	0.000	0.000	0.000	7.332	7.281	728.100
3700	100	2.226	1.113	111.300	1.276	4.304	430.400
3800	100	0.482	1.354	135.400	3.636	2.456	245.600
3900	100	0.246	0.364	36.400	4.617	4.127	412.650
4000	100	0.037	0.142	14.150	4.356	4.487	448.650
4100	100	0.224	0.131	13.050	5.235	4.796	479.550
4200	100	0.089	0.157	15.650	4.332	4.784	478.350

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
4300	100	0.000	0.045	4.450	3.986	4.159	415.900
4400	100	0.000	0.000	0.000	6.427	5.207	520.650
4500	100	0.000	0.000	0.000	9.379	7.903	790.300
Total				1426.200			25464.550
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							1426.200
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							25464.550
NET QUANTITY OF EARTHWORK IN FILLING							24038.35

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

ABSTRACT OF QUANTITY OF EARTHWORK FOR KARMA 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.	172584.42	Sqm	11.80	2037253.778
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.				
		<i>100% of Total Cutting for ordinary soil</i>	43794.70	Cum	156.50	6853870.55
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	17517.88	Cum	17.22	301614.3463
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.	84642.80	Cum	165.12	13975877.22
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, unloading, 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 lifts 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)	25392.84	Cum	174.89	4440953.79
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	21160.70	Cum	217.92	4611339.74
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	38089.26	Cum	319.14	12155806.44
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.				
			25887.66	Cum	196.10	5076570.68

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.	84642.80	Cum	61.88	5237894.92
TOTAL COST OF EARTHWORK (in Rs.)						54691181.46
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						546.912

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR CHAURAHA 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.	46194.80	Sqm	11.80	545301.4319
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.				
		<i>100% of Total Cutting for ordinary soil</i>	21667.05	Cum	156.50	3390893.325
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	8666.82	Cum	17.22	149221.0958
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.	14361.40	Cum	165.12	2371296.35
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 embankments, unloading, 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 lifts 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)	4308.42	Cum	174.89	753499.57
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	3590.35	Cum	217.92	782409.07
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	6462.63	Cum	319.14	2062483.74
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 including 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.				
			6929.22	Cum	196.10	1358820.04

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.	36028.45	Cum	61.88	2229524.96
TOTAL COST OF EARTHWORK (in Rs.)						13643449.59
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						136.434

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR NEURA SURAJMAL 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.	21478.25	Sqm	11.80	253537.638
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.				
		<i>100% of Total Cutting for ordinary soil</i>	1707.85	Cum	156.50	267278.525
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	683.14	Cum	17.22	11761.9726
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.	16784.40	Cum	165.12	2771372.33
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 embankments, unloading, 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 lifts 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)	5035.32	Cum	174.89	880627.11
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	4196.10	Cum	217.92	914414.11
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	7552.98	Cum	319.14	2410458.04
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 including 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.				
			3776.93	Cum	196.10	740655.73

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.	18492.25	Cum	61.88	1144343.79
TOTAL COST OF EARTHWORK (in Rs.)						9394449.24
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						93.944

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
ABSTRACT OF QUANTITY OF EARTHWORK FOR SHUSHNAR 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.	20731.45	Sqm	11.80	244722.1196
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.				
		<i>100% of Total Cutting for ordinary soil</i>	1426.20	Cum	156.50	223200.3
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	570.48	Cum	17.22	9822.247458
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.	24038.35	Cum	165.12	3969115.25
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 embankments, unloading, 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 lifts 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)	7211.51	Cum	174.89	1261220.11
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	6009.59	Cum	217.92	1309609.31
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	10817.26	Cum	319.14	3452219.56
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 including 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.				
			3109.72	Cum	196.10	609815.60

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.	25464.55	Cum	61.88	1575806.06
TOTAL COST OF EARTHWORK (in Rs.)						1265530.55
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						126.555

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF CHAUHARA 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.	2.500	0.500	3.00
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.350	0.200	1.55
	(h) is head of water above sill of gate in m	1.350	0.3	1.650
	Weight of lift gate including embedded parts	1.05		T
2	Capacity of screw hoist in tonne including 25%reserve capacity (Hoist capacity shall be rounded off to next 1 tonne)	2.50 xWt of gate		
		2.5	1.05	2.6
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	3	789.15
	Weight of screw hoist with all accessories	0.79		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.650	400	660
	Columns with bracings/Anchors/Stiffeners	0.66		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.65	400	660
	Beams with cross beams/stiffeners	0.66		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.32	10%	0.132
	Railing/ Chequered plate/Ladder etc	0.132		T
	Total Weight of One Gate	3.29		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF NEURA SURAJMAL 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.	1.650	0.500	2.15
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.115	0.200	1.32
	(h) is head of water above sill of gate in m	1.115	0.3	1.415
	Weight of lift gate including embedded parts	0.55		T
2	Capacity of screw hoist in tone including 25%reserve capacity (Hoist	2.50 xWt of gate		
		2.5	0.55	1.4
	Weight of screw hoist with all accessories	300 kg per tonne capacity of hoist		
		300	1	412.52
	Weight of screw hoist with all accessories	0.41		T
3	Weight of hoist bridge:			
(i)	Columns with bracings/Anchors/Stiffeners	400 kg per meter height		
		1.415	400	566
	Columns with bracings/Anchors/Stiffeners	0.566		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.415	400	566
	Beams with cross beams/stiffeners	0.566		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.132	10%	0.1132
	Railing/ Chequered plate/Ladder etc	0.1132		T
	Total Weight of One Gate	2.21		T

DETAIL QUANTITIES OF HEAD REGULATOR GATE OF SHUSHNAR MR.

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.	1.900	0.500	2.40
	(H) is height of gate in m = clear vent height in m + 0.20m.	1.250	0.200	1.45
	(h) is head of water above sill of gate in m	1.250	0.3	1.550
	Weight of lift gate including embedded parts	0.72		T
2	Capacity of screw hoist in tone including 25%reserve capacity (Hoist	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	2	540.07
	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		
		1.550	400	620
	Columns with bracings/Anchors/Stiffeners	0.62		T
(ii)	Beams with cross beams/stiffeners	400 kg per meter span		
		1.55	400	620
	Beams with cross beams/stiffeners	0.62		T
(iii)	Railing/ Chequered plate/Ladder etc	10% of wt. of columns/beams		
		1.24	10%	0.124
	Railing/ Chequered plate/Ladder etc	0.124		T
	Total Weight of One Gate	2.62		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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	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 CHAUHARA MR OFFTAKING FROM RD-0+150 KM (L.) AT KARMA 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.	211.194	Cum	156.50	33051.86			
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.	23.92	Cum	6381.70	152660.51	7.75	10.76	21.53
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.	124.80	Cum	6914.20	862862.56	51.48	53.66	107.32
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.	22.85	Cum	8151.40	186299.17	12.96	8.91	18.06

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)
5	Providing M.S. reinforcements 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.	3.32	MT	73574.90	244216.16			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	3.29	MT	160035.11	527053.15			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	368.56	Sqm	578.60	213249.08			
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.	14.40	Sqm	680.10	9793.44			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	5.13	Cum	694.61	3563.35			
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.	5.13	Cum	1237.00	6345.81			
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)	1.65	Cum	1377.70	2273.21			
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.	1.65	Cum	516.50	852.23			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.77	Sqm	63.20	238.04			
14	Providing Drainage Spouts complete as per drawings & technical 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			

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)
16	Providing and fixing 20 mm thick compressible fibre board in expansion joint complete as per drawing & technical specifications. (RCD 15.22 - (ii))	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	48.14	Sqm	149.30	7186.66			
18	Carriage of materials							
	Coarse Sand (60 Km lead)	73.340	Cum	1075.00	78840.80			
	Coarse Aggregates (100 Km lead)	148.559	Cum	1398.00	207685.63			
	Cement (30 km lead)	72.188	MT	742.00	53563.16			
	Boulder (60 Km lead)	5.13	Cum	1159.00	5945.67			
	Steel (30 Km lead)	6.61	MT	742.00	4906.58			
TOTAL (In Rs.)					2617289.57			
TOTAL (In Rs.)					2617289.57			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	73.34	Cum	584.64	42877.66	4287.77		
	Coarse Aggregate	148.56	Cum	944.26	140278.42	14027.84		
	Boulders	5.13	Cum	694.61	3563.35	356.33		
<i>Total</i>						18671.94		
For 1 nos. HR, Total Seigniorage charges						18671.94		

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 COST HR FOR NEURA SURAJMAL MR OFFTAKING FROM RD-3+150 KM (L.) AT KARMA 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.	127.460	Cum	156.50	19947.53			
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.	19.00	Cum	6381.70	121239.42	6.16	8.55	17.10
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.	73.20	Cum	6914.20	506109.05	30.19	31.48	62.95
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.	18.36	Cum	8151.40	149665.09	10.41	7.16	14.50

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)
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.	2.24	MT	73574.90	164558.13			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.21	MT	160035.11	353315.18			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	263.08	Sqm	578.60	152217.88			
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.	11.67	Sqm	680.10	7936.77			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	2.84	Cum	694.61	1969.22			
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.	2.84	Cum	1237.00	3506.90			
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)	1.09	Cum	1377.70	1500.32			
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.	1.09	Cum	516.50	562.47			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.33	Sqm	63.20	210.18			
14	Providing Drainage Spouts complete as per drawings & technical 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. (RCD 15.22 - (ii))	10.50	RM	499.80	5247.90			

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)
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	24.67	Sqm	149.30	3683.52			
18	Carriage of materials							
	Coarse Sand (60 Km lead)	47.185	Cum	1075.00	50723.99			
	Coarse Aggregates (100 Km lead)	95.643	Cum	1398.00	133708.65			
	Cement (30 km lead)	46.760	MT	742.00	34696.08			
	Boulder (60 Km lead)	2.84	Cum	1159.00	3285.77			
	Steel (30 Km lead)	4.44	MT	742.00	3297.70			
TOTAL (In Rs.)					1728836.34			
TOTAL (In Rs.)					1728836.34			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	47.19	Cum	584.64	27586.30	2758.63		
	Coarse Aggregate	95.64	Cum	944.26	90311.68	9031.17		
	Boulders	2.84	Cum	694.61	1969.22	196.92		
	<i>Total</i>					11986.72		
	For 1 nos. HR, Total Seigniorage charges					11986.72		

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 SHUSHNAR OFFTAKING FROM RD-18+342 KM (L.) AT KARMA DISTRIBUTARY CANAL								
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.	137.113	Cum	156.50	21458.22			
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.	19.58	Cum	6381.70	124977.47	6.35	8.81	17.63
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.	81.51	Cum	6914.20	563570.37	33.62	35.05	70.10
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.	20.16	Cum	8151.40	164372.44	11.43	7.86	15.93

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)
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.	2.30	MT	73574.90	169211.82			
6	Structural Steel (Average rate of Angle, Joint and Channel) etc.	2.62	MT	160035.11	419960.10			
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	279.09	Sqm	578.60	161482.75			
8	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soiling joints filled with local sand free from clay contents including royalty etc. all complete as per approved design, specifications and direction of E/I.	12.77	Sqm	680.10	8687.60			
9	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry. (WRD M-002)	3.51	Cum	694.61	2438.08			
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.	3.51	Cum	1237.00	4341.87			
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)	1.25	Cum	1377.70	1727.64			
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.	1.25	Cum	516.50	647.69			
13	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	3.71	Sqm	63.20	234.28			
14	Providing Drainage Spouts complete as per drawings & technical 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. (RCD 15.22 - (ii))	10.50	RM	499.80	5247.90			

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)
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	26.00	Sqm	149.30	3882.44			
18	Carriage of materials							
	Coarse Sand (60 Km lead)	51.726	Cum	1075.00	55605.37			
	Coarse Aggregates (100 Km lead)	104.907	Cum	1398.00	146660.68			
	Cement (30 km lead)	51.401	MT	742.00	38139.66			
	Boulder (60 Km lead)	3.51	Cum	1159.00	4068.09			
	Steel (30 Km lead)	4.92	MT	742.00	3653.63			
TOTAL (In Rs.)					1911822.70			
TOTAL (In Rs.)					₹ 19,11,827.70			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	51.73	Cum	584.64	30241.04	3024.10		
	Coarse Aggregate	104.91	Cum	944.26	99059.95	9906.00		
	Boulders	3.51	Cum	694.61	2438.08	243.81		
	<i>Total</i>					13173.91		
	For 1 nos. HR, Total Seigniorage charges					13173.91		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF HR FOR CHAUHARA MR OFFTAKING FROM RD-0+150 KM (L.) AT KARMA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.17	1.73	3.050	12.294	Cum
	<i>Section B-B</i>	2	5.25	2.28	3.174	76.119	Cum
	<i>Section C-C</i>	2	0.51	2.10	3.174	6.812	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.39	1.36	3.050	14.076	Cum
	<i>Left Bank Sec a to d</i>	1	3.66	2.71	2.200	21.821	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.51	1.10	3.300	3.732	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.78	2.07	3.300	38.035	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.4625	3.915	0.850	4.867	Cum
	<i>Floor</i>	1	3.75	3.915	0.650	9.543	Cum
		1	0.318	2.5	0.450	0.358	Cum
		1	0.618	2.5	0.350	0.541	Cum
		1	0.0927	2.5	0.000	0.232	Cum
		1	3.07	2.5	0.950	7.291	Cum
		1	0.9	2.5	0.200	0.450	Cum
		2	0.135	2.5	0.200	0.135	Cum
		1	1.392	2.5	0.650	2.262	Cum
		1	0.775	2.5	0.850	1.647	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	2.500	0.600	3.300	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.500	0.850	1.200	2.550	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	1.900	0.900	5.130	Cum
						211.19	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.						
	<i>PCC Below Floor</i>						
		1	0.624	4.490	0.150	0.42	Cum
		1	1.861	3.077	0.150	0.86	Cum
		1	1.374	2.500	0.150	0.52	Cum
		1	0.670	2.500	0.150	0.25	Cum
		1	3.238	2.500	0.150	1.21	Cum
		1	0.948	2.500	0.150	0.36	Cum
		1	0.244	2.500	0.150	0.09	Cum
		1	0.782	2.500	0.150	0.29	Cum
		1	0.692	2.500	0.150	0.26	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.165	1.730	0.300	1.21	Cum
	<i>Section B-B</i>	2	5.250	2.284	0.300	7.19	Cum
	<i>Section C-C</i>	2	0.510	2.104	0.300	0.64	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.394	1.360	0.300	1.38	Cum
	<i>Left Bank Sec a to d</i>	1	3.660	2.710	0.150	1.49	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.514	1.100	0.300	0.34	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.780	2.073	0.300	3.46	Cum
	<i>Toe Wall Base D/S Portion</i>	1	2.500	0.850	0.300	0.64	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	2.500	0.450	0.900	1.01	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	10	0.600	0.600	0.300	1.08	Cum
	TOTAL					23.92	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	1.17	0.82	0.50	0.96	Cum
		2	1.17	1.08	0.85	2.13	Cum
		2	1.17	1.33	1.40	4.34	Cum
	Section B-B	2	5.25	1.35	1.77	25.18	Cum
		2	5.25	1.88	1.10	21.76	Cum
	Section C-C	2	0.51	1.26	1.47	1.90	Cum
		2	0.51	1.70	1.40	2.43	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.39	0.45	0.50	0.76	Cum
		1	3.39	0.71	0.85	2.03	Cum
		1	3.39	0.96	1.40	4.56	Cum
	Left Bank						
	Section a-a	1		2.805	0.50	1.40	Sqm
		1		2.66	0.20	0.53	Sqm
		1		1.49	1.35	2.01	Sqm
						3.95	Sqm
	Section b-b	1		2.81	0.50	1.40	Sqm
		1		2.29	0.20	0.46	Sqm
		1		1.38	1.35	1.87	Sqm
						3.73	Sqm
	Section c-c	1		2.81	0.50	1.40	Sqm
		1		1.81	0.20	0.36	Sqm
		1		1.15	1.35	1.55	Sqm
						3.31	Sqm
	Section d-d	1		2.81	0.50	1.40	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.35	0.65	Sqm
						2.15	Sqm
	Bottom Key	1	3.66	1.46	0.70	3.75	Cum
	Top Stem Area	1	3.66		3.28	12.02	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	0.70	0.90	0.65	Cum
		2	0.51	0.53	1.60	0.86	Cum
		2	0.51	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.78	1.67	0.90	8.37	Cum
		2	2.78	1.22	1.60	10.87	Cum
		2	2.78	0.67	0.50	1.85	Cum
	TOTAL					104.61	Cum
	Floor						
	U/S key	1	1.46	3.92	0.70	4.01	Cum
	Floor	1	3.75	3.92	0.50	7.34	Cum
		1	0.32	2.50	0.30	0.24	Cum
		1	0.62	2.50	0.20	0.31	Cum
		1	0.09		2.50	0.23	Cum
		1	3.07	2.50	0.50	3.84	Cum
		1	0.90	2.50	0.20	0.45	Cum
		2	0.14	2.50		0.68	Cum
		1	1.39	2.50	0.50	1.74	Cum
	D/S key	1	0.78	2.50	0.70	1.36	Cum
	TOTAL					124.80	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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Over Floor	1	3.76	3.92	0.20	2.94	Cum
		1	0.67	2.50	0.20	0.34	Cum
		1	3.08	2.50	0.20	1.54	Cum
		1	0.95	2.50	0.20	0.47	Cum
		1	1.39	2.50	0.20	0.70	Cum
	Top Slab	1	5.25	3.30	0.39	6.77	Cum
	75mm Th. Wearing coat on top slab	1	4.25	3.30	0.08	1.05	Cum
	Dirt wall	2	5.76	0.82	0.50	4.72	Cum
		2	5.76	0.40	0.43	1.96	Cum
	Parapet	2	4.14	0.45	0.18	0.65	Cum
		2	4.14	0.35	0.25	0.73	Cum
		2	4.14	0.22	0.55	1.00	Cum
	TOTAL					22.85	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	3.760	29		1.578	172.080	Kg
a2	10	5.650	17		0.616	59.211	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	3.680	18		0.616	40.834	Kg
a5	10	5.550	12		0.616	41.056	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
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
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.386	10		0.888	65.566	Kg
	12	3.200	28		0.888	79.538	Kg
	<i>floor raft</i>						
	12	3.918	10		0.888	34.780	Kg
	12	7.594	20		0.888	134.824	Kg
	12	3.200	67		0.888	190.324	Kg
	0.25 % Skin Reinforcement for Transition walls	104.61	0.25%	0.26	7850	2052.95	Kg
	TOTAL Weight of steel (in kg)					3319.29	Kg
	TOTAL Weight of Steel (in Tonne)					3.32	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		3.29		3.29	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.17		0.50	2.33	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.17		0.85	3.96	Sqm
		4		1.08	0.85	3.66	Sqm
		4	1.17		1.40	6.52	Sqm
		4		1.33	1.40	7.45	Sqm
	<i>Section B-B</i>	4	5.25		1.77	37.25	Sqm
		4		1.35	1.77	9.59	Sqm
		4	5.25		1.10	23.10	Sqm
		4		1.88	1.10	8.29	Sqm
	<i>Section C-C</i>	4	0.51		1.47	3.01	Sqm
		4		1.26	1.47	7.44	Sqm
		4	0.51		1.40	2.86	Sqm
		4		1.70	1.40	9.54	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	3.39		0.50	3.39	Sqm
		2		0.45	0.50	0.45	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.39		0.85	5.77	Sqm
		2		0.71	0.85	1.20	Sqm
		2	3.39		1.40	9.50	Sqm
		2		0.96	1.40	2.69	Sqm
	Left Bank						
	Bottom Key	2	3.66		0.70	5.12	Sqm
		2		1.46	0.70	2.05	Sqm
	Section a-a	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		2.66	0.20	1.06	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.49	1.35	4.03	Sqm
	Section b-b	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		2.29	0.20	0.91	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.38	1.35	3.74	Sqm
	Section c-c	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		1.81	0.20	0.72	Sqm
		2	1.22		1.35	3.29	Sqm
		2		1.15	1.35	3.09	Sqm
	Section d-d	2	1.22		0.50	1.22	Sqm
		2		2.81	0.50	2.81	Sqm
		2	1.22		0.20	0.49	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.22		1.35	3.29	Sqm
		2		0.48	1.35	1.30	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.51		0.90	1.85	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.51		1.60	3.29	Sqm
		4		0.53	1.60	3.36	Sqm
		4	0.51		0.50	1.03	Sqm
		4		0.35	0.50	0.70	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.78		0.90	10.01	Sqm
		4		1.67	0.90	6.02	Sqm
		4	2.78		1.60	17.79	Sqm
		4		1.22	1.60	7.82	Sqm
		4	2.78		0.50	5.56	Sqm
		4		0.67	0.50	1.33	Sqm
	Floor						
	U/S key	2	1.46		0.70	2.05	Sqm
		2		3.92	0.70	5.48	Sqm
	Floor	2	3.75		0.50	3.75	Sqm
		2		3.92	0.50	3.92	Sqm
		2	0.32		0.30	0.19	Sqm
		2		2.50	0.30	1.50	Sqm
		2	0.62		0.20	0.25	Sqm
		2		2.50	0.20	1.00	Sqm
		2	0.09		0.00	0.19	Sqm
		2		2.50	0.00	5.00	Sqm
		2	3.07		0.50	3.07	Sqm
		2		2.50	0.50	2.50	Sqm
		2	0.90		0.20	0.36	Sqm
		2		2.50	0.20	1.00	Sqm
		4	0.14			0.54	Sqm
		4		2.50		10.00	Sqm
		2	1.39		0.50	1.39	Sqm
		2		2.50	0.50	2.50	Sqm
	D/S key	2	0.78		0.70	1.09	Sqm
		2		2.50	0.70	3.50	Sqm
	Toe Wall Base D/S Portion	2	2.50		0.30	1.50	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	2.50		0.90	4.50	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		3.30	0.39	2.58	Sqm
	Dirt wall	4	5.76		0.50	11.52	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.76		0.43	9.79	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	4.14		0.18	2.90	Sqm
		4		0.45	0.18	0.31	Sqm
		4	4.14		0.25	4.14	Sqm
		4		0.35	0.25	0.35	Sqm
		4	4.14		0.55	9.11	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					368.56	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	3.00	2.40		14.40	Sqm
	TOTAL					14.40	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	1.90	0.90	5.13	Cum
	TOTAL					5.13	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	2.50	0.15	0.83	Cum
	In D/S Portion below Stone Chips	1	2.20	2.50	0.15	0.83	Cum
	TOTAL					1.65	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	2.03	0.48		1.94	Sqm
	On Abutment Top	2	4.36	0.45		1.82	Sqm
	TOTAL					3.77	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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	1.17	1.13		2.633	Cum
	Section B-B	2	5.25	2.74		28.770	Cum
	Section C-C	2	0.51	2.34		2.387	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.39	1.02		3.465	Cum
	D/S Transition wall						
	Sec 4-4	2	0.51	1.06		1.085	Cum
	Avg. of Sec 1-1 & 3-3	2	2.78	1.76		9.797	Cum
	TOTAL					48.14	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR NEURA SURAJMAL MR OFFTAKING FROM RD-3+150 KM (L.) AT KARMA 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.						
	<i>Abutment</i>						
	<i>Section A-A</i>	2	1.63	1.59	2.653	13.743	Cum
	<i>Section B-B</i>	2	5.25	1.67	1.990	34.895	Cum
	<i>Section C-C</i>	2	0.50	2.11	1.990	4.197	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.36	1.22	2.653	10.856	Cum
	<i>Left Bank Sec a to d</i>	1	3.10	2.62	1.963	15.936	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.49	1.10	2.191	2.362	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.61	1.86	2.191	21.267	Cum
	<i>Floor</i>						
	<i>U/S key</i>	1	1.2845	2.6865	0.850	2.933	Cum
	<i>Floor</i>	1	3.304	2.6865	0.650	5.770	Cum
		1	0.418	1.65	0.450	0.310	Cum
		1	0.598	1.65	0.350	0.345	Cum
		1	0.0897	1.65	0.000	0.148	Cum
		1	3.079	1.65	0.950	4.826	Cum
		1	0.9	1.65	0.200	0.297	Cum
		2	0.135	1.65	0.200	0.089	Cum
		1	1.822	1.65	0.650	1.954	Cum
		1	0.735	1.65	0.690	0.837	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	1	2.200	1.650	0.600	2.178	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.650	0.850	1.200	1.683	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	3.000	1.050	0.900	2.835	Cum
						127.46	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.						
	<i>PCC Below Floor</i>						
		1	0.629	3.055	0.150	0.29	Cum
		1	1.538	2.019	0.150	0.47	Cum
		1	1.269	1.650	0.150	0.31	Cum
		1	0.670	1.650	0.150	0.17	Cum
		1	3.338	1.650	0.150	0.83	Cum
		1	0.973	1.650	0.150	0.24	Cum
		1	0.753	1.650	0.150	0.19	Cum
		1	0.613	1.650	0.150	0.15	Cum
		1	0.692	1.650	0.150	0.17	Cum
	<i>PCC Below Abutment</i>						
	<i>Section A-A</i>	2	1.631	1.588	0.300	1.55	Cum
	<i>Section B-B</i>	2	5.250	1.670	0.300	5.26	Cum
	<i>Section C-C</i>	2	0.500	2.109	0.300	0.63	Cum
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	3.360	1.218	0.300	1.23	Cum
	<i>Left Bank Sec a to d</i>	1	3.102	2.617	0.150	1.22	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.490	1.100	0.300	0.32	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.610	1.860	0.300	2.91	Cum
	<i>Toe Wall Base D/S Portion</i>	1	1.650	0.850	0.300	0.42	Cum
	<i>Toe Wall Stem D/S Portion</i>	1	1.650	0.450	0.900	0.67	Cum
	<i>Toe Wall Base (For Brick Pitching)</i>	1	3.000	0.450	0.300	0.41	Cum
	<i>Toe Wall Stem (For Brick Pitching)</i>	1	3.000	0.300	0.900	0.81	Cum
	<i>D/S Portion C.C. Blocks (600x600x300)mm</i>	7	0.600	0.600	0.300	0.76	Cum
	TOTAL					19.00	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	1.63	0.82	0.50	1.34	Cum
		2	1.63	1.00	0.61	2.01	Cum
		2	1.63	1.19	1.24	4.81	Cum
	Section B-B	2	5.25	1.05	0.75	8.23	Cum
		2	5.25	1.27	0.94	12.53	Cum
	Section C-C	2	0.50	0.96	0.45	0.43	Cum
		2	0.50	1.09	1.24	1.35	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.36	0.45	0.50	0.76	Cum
		1	3.36	0.63	0.61	1.31	Cum
		1	3.36	0.82	1.24	3.41	Cum
	Left Bank						
	Section a-a	1		2.45	0.50	1.23	Sqm
		1		2.30	0.20	0.46	Sqm
		1		1.31	1.11	1.46	Sqm
						3.15	Sqm
	Section b-b	1		2.45	0.50	1.23	Sqm
		1		2.09	0.20	0.42	Sqm
		1		1.28	1.11	1.43	Sqm
						3.07	Sqm
	Section c-c	1		2.45	0.50	1.23	Sqm
		1		1.67	0.20	0.33	Sqm
		1		1.15	1.11	1.28	Sqm
						2.83	Sqm
	Section d-d	1		2.45	0.50	1.23	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.11	0.53	Sqm
						1.86	Sqm
	Bottom Key	1	3.10	1.29	0.70	2.79	Cum
	Top Stem Area	1	3.10	2.73		8.46	Cum
	D/S Transition wall						
	Sec 4-4	2	0.49	0.70	0.94	0.65	Cum
		2	0.49	0.53	0.45	0.23	Cum
		2	0.49	0.35	0.50	0.17	Cum
	Avg. of Sec 1-1 & 3-3	2	2.61	1.46	0.94	7.17	Cum
		2	2.61	1.19	0.45	2.80	Cum
		2	2.61	0.74	0.50	1.92	Cum
	TOTAL					60.35	Cum
	Floor						
	U/S key	1	1.28	2.69	0.70	2.42	Cum
	Floor	1	3.30	2.69	0.50	4.44	Cum
		1	0.42	1.65	0.30	0.21	Cum
		1	0.60	1.65	0.20	0.20	Cum
		1	0.09	1.65		0.15	Cum
		1	3.08	1.65	0.50	2.54	Cum
		1	0.90	1.65	0.20	0.30	Cum
		2	0.14	1.65		0.45	Cum
		1	1.82	1.65	0.50	1.50	Cum
	D/S key	1	0.74	1.65	0.54	0.65	Cum
	TOTAL					73.20	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 Floor	1	3.45	2.69	0.20	1.85	Cum
		1	0.67	1.65	0.20	0.22	Cum
		1	3.08	1.65	0.20	1.02	Cum
		1	0.95	1.65	0.20	0.31	Cum
		1	1.82	1.65	0.20	0.60	Cum
	Top Slab	1	5.25	2.45	0.39	5.02	Cum
	75mm Th. Wearing coat on top slab	1	4.25	2.45	0.08	0.78	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	3.29	0.45	0.18	0.51	Cum
		2	3.29	0.35	0.25	0.58	Cum
		2	3.29	0.22	0.55	0.79	Cum
	TOTAL					18.36	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.						
	Dia of Bars	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	2.910	29		1.578	133.179	Kg
a2	10	5.650	12		0.616	41.796	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	3.680	18		0.616	40.834	Kg
a5	10	5.550	9		0.616	30.792	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.472	54		0.888	118.498	Kg
x2	16	1.294	54		1.578	110.274	Kg
x3	10	2.350	24		0.616	34.768	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	6.707	7		0.888	41.677	Kg
	12	2.350	25		0.888	52.153	Kg
	<i>floor raft</i>						
	12	3.510	7		0.888	21.811	Kg
	12	8.050	14		0.888	100.044	Kg
	12	2.350	71		0.888	148.113	Kg
	0.25 % Skin Reinforcement for Transition walls	60.35	0.25%	0.15	7850	1184.41	Kg
	TOTAL Weight of steel (in kg)					2236.61	Kg
	TOTAL Weight of Steel (in Tonne)					2.24	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1		2.21		2.21	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.63		0.50	3.26	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.63		0.61	4.00	Sqm
		4		1.00	0.61	2.46	Sqm
		4	1.63		1.24	8.09	Sqm
		4		1.19	1.24	5.89	Sqm
	<i>Section B-B</i>	4	5.25		0.75	15.75	Sqm
		4		1.05	0.75	3.14	Sqm
		4	5.25		0.94	19.74	Sqm
		4		1.27	0.94	4.78	Sqm
	<i>Section C-C</i>	4	0.50		0.45	0.90	Sqm
		4		0.96	0.45	1.72	Sqm
		4	0.50		1.24	2.48	Sqm
		4		1.09	1.24	5.41	Sqm
	U/S Transition wall						
	<i>Right Bank (Section D-D)</i>	2	3.36		0.50	3.36	Sqm
		2		0.45	0.50	0.45	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	3.36		0.61	4.12	Sqm
		2		0.63	0.61	0.78	Sqm
		2	3.36		1.24	8.33	Sqm
		2		0.82	1.24	2.03	Sqm
	Left Bank						
	Bottom Key	2	3.10		0.70	4.34	Sqm
		2		1.29	0.70	1.80	Sqm
	Section a-a	2	1.03		0.50	1.03	Sqm
		2		2.45	0.50	2.45	Sqm
		2	1.03		0.20	0.41	Sqm
		2		2.30	0.20	0.92	Sqm
		2	1.03		1.11	2.30	Sqm
		2		1.31	1.11	2.92	Sqm
	Section b-b	2	1.03		0.50	1.03	Sqm
		2		2.45	0.50	2.45	Sqm
		2	1.03		0.20	0.41	Sqm
		2		2.09	0.20	0.84	Sqm
		2	1.03		1.11	2.30	Sqm
		2		1.28	1.11	2.86	Sqm
	Section c-c	2	1.03		0.50	1.03	Sqm
		2		2.45	0.50	2.45	Sqm
		2	1.03		0.20	0.41	Sqm
		2		1.67	0.20	0.67	Sqm
		2	1.03		1.11	2.30	Sqm
		2		1.15	1.11	2.55	Sqm
	Section d-d	2	1.03		0.50	1.03	Sqm
		2		2.45	0.50	2.45	Sqm
		2	1.03		0.20	0.41	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.03		1.11	2.30	Sqm
		2		0.48	1.11	1.07	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.49		0.94	1.84	Sqm
		4		0.70	0.94	2.63	Sqm
		4	0.49		0.45	0.88	Sqm
		4		0.53	0.45	0.95	Sqm
		4	0.49		0.50	0.98	Sqm
	Avg. of Sec 1-1 & 3-3	4	2.61		0.94	9.82	Sqm
		4		1.46	0.94	5.49	Sqm
		4	2.61		0.45	4.70	Sqm
		4		1.19	0.45	2.14	Sqm
		4	2.61		0.50	5.22	Sqm
		4		0.74	0.50	1.47	Sqm
	Floor						
	U/S key	2	1.28		0.70	1.80	Sqm
		2		2.69	0.70	3.76	Sqm
	Floor	2	3.30		0.50	3.30	Sqm
		2		2.69	0.50	2.69	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.65	0.30	0.99	Sqm
		2	0.60		0.20	0.24	Sqm
		2		1.65	0.20	0.66	Sqm
		2	0.09		0.00	0.18	Sqm
		2		1.65	0.00	3.30	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.65	0.50	1.65	Sqm
		2	0.90		0.20	0.36	Sqm
		2		1.65	0.20	0.66	Sqm
		4	0.14			0.54	Sqm
		4		1.65		6.60	Sqm
		2	1.82		0.50	1.82	Sqm
		2		1.65	0.50	1.65	Sqm
	D/S key	2	0.74		0.54	0.79	Sqm
		2		1.65	0.54	1.78	Sqm
	Toe Wall Base D/S Portion	2	1.65		0.30	0.99	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.65		0.90	2.97	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.45	0.39	1.91	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	3.29		0.18	2.30	Sqm
		4		0.45	0.18	0.31	Sqm
		4	3.29		0.25	3.29	Sqm
		4		0.35	0.25	0.35	Sqm
		4	3.29		0.55	7.24	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					263.08	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	3.00	1.95		11.67	Sqm
	TOTAL					11.67	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	1.05	0.90	2.84	Cum
	TOTAL					2.84	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	1.65	0.15	0.54	Cum
	In D/S Portion below Stone Chips	1	2.20	1.65	0.15	0.54	Cum
	TOTAL					1.09	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.79	0.48		1.72	Sqm
	On Abutment Top	2	4.62	0.45		1.61	Sqm
	TOTAL					3.33	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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	1.63	0.85		2.758	Cum
	Section B-B	2	5.25	1.16		12.180	Cum
	Section C-C	2	0.50	0.91		0.912	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	3.36	0.76		2.552	Cum
	D/S Transition wall						
	Sec 4-4	2	0.49	0.63		0.619	Cum
	Avg. of Sec 1-1 & 3-3	2	2.61	1.08		5.651	Cum
	TOTAL					24.67	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF HR FOR SHUSHNAR OFFTAKING FROM RD-18+342 KM (L.) AT KARMA DISTRIBUTARY CANAL							
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.						
	<i>Abutment</i>						
	Section A-A	2	1.00	1.67	2.750	9.185	Cum
	Section B-B	2	5.25	1.76	2.100	38.808	Cum
	Section C-C	2	0.58	1.58	2.100	3.816	Cum
	<i>U/S Transition wall</i>						
	Right Bank (Section D-D)	1	2.92	1.30	2.750	10.455	Cum
	Left Bank Sec a to d	1	3.43	2.31	2.100	16.607	Cum
	<i>D/S Transition wall</i>						
	Sec 4-4	2	0.50	1.10	2.300	2.530	Cum
	Avg. of Sec 1-1 & 3-3	2	2.71	1.99	2.300	24.761	Cum
	<i>Floor</i>						
	U/S key	1	1.3875	3.7375	0.850	4.408	Cum
	Floor	1	3.5	3.7375	0.650	8.503	Cum
		1	0.418	1.9	0.450	0.357	Cum
		1	0.718	1.9	0.350	0.477	Cum
		1	0.402	1.9	0.300	0.764	Cum
		1	3.079	1.9	0.950	5.558	Cum
		1	0.885	1.9	0.200	0.336	Cum
		2	0.133	1.9	0.200	0.101	Cum
		1	1.292	1.9	0.650	1.596	Cum
		1	0.725	1.9	0.650	0.895	Cum
	D/S Portion C.C. Blocks (600x600x300)mm	1	2.200	1.900	0.600	2.508	Cum
	Toe Wall Base D/S Portion	1	1.900	0.850	1.200	1.938	Cum
	Boulder Pitching (D/S Portion)	1	3.000	0.900	1.300	3.510	Cum
						137.11	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.						
	<i>PCC Below Floor</i>						
		1	0.624	4.390	0.150	0.41	Cum
		1	1.723	2.555	0.150	0.66	Cum
		1	1.269	1.900	0.150	0.36	Cum
		1	0.670	1.900	0.150	0.19	Cum
		1	3.338	1.900	0.150	0.95	Cum
		1	0.973	1.900	0.150	0.28	Cum
		1	0.217	1.900	0.150	0.06	Cum
		1	0.567	1.900	0.150	0.16	Cum
		1	0.692	1.900	0.150	0.20	Cum
	<i>PCC Below Abutment</i>						
	Section A-A	2	1.000	1.670	0.300	1.00	Cum
	Section B-B	2	5.250	1.760	0.300	5.54	Cum
	Section C-C	2	0.575	1.580	0.300	0.55	Cum
	<i>U/S Transition wall</i>						
	Right Bank (Section D-D)	1	2.925	1.300	0.300	1.14	Cum
	Left Bank Sec a to d	1	3.425	2.309	0.150	1.19	Cum
	<i>D/S Transition wall</i>						
	Sec 4-4	2	0.500	1.100	0.300	0.33	Cum
	Avg. of Sec 1-1 & 3-3	2	2.709	1.987	0.300	3.23	Cum
	Toe Wall Base D/S Portion	1	1.900	0.850	0.300	0.48	Cum
	Toe Wall Stem D/S Portion	1	1.900	0.450	0.900	0.77	Cum
	Toe Wall Base (For Brick Pitching)	1	3.000	0.450	0.300	0.41	Cum
	Toe Wall Stem (For Brick Pitching)	1	3.000	0.300	0.900	0.81	Cum
	D/S Portion C.C. Blocks (600x600x300)mm	8	0.600	0.600	0.300	0.86	Cum
	TOTAL					19.58	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	0.75	1.57	Cum
		2	1.00	1.27	1.20	3.05	Cum
	Section B-B	2	5.25	1.09	0.90	10.30	Cum
		2	5.25	1.36	0.90	12.85	Cum
	Section C-C	2	0.58	0.97	0.60	0.67	Cum
		2	0.58	1.18	1.20	1.63	Cum
	U/S Transition wall						
	Right Bank (Section D-D)	1	2.92	0.45	0.50	0.66	Cum
		1	2.92	0.68	0.75	1.48	Cum
		1	2.92	0.90	1.20	3.16	Cum
	Left Bank						
	Section a-a	1		2.655	0.50	1.33	Sqm
		1		2.51	0.20	0.50	Sqm
		1		1.42	1.25	1.77	Sqm
						3.60	Sqm
	Section b-b	1		2.66	0.50	1.33	Sqm
		1		2.27	0.20	0.45	Sqm
		1		1.37	1.25	1.72	Sqm
						3.50	Sqm
	Section c-c	1		2.66	0.50	1.33	Sqm
		1		1.76	0.20	0.35	Sqm
		1		1.12	1.25	1.40	Sqm
						3.08	Sqm
	Section d-d	1		2.66	0.50	1.33	Sqm
		1		0.48	0.20	0.10	Sqm
		1		0.48	1.25	0.60	Sqm
						2.02	Sqm
	Bottom Key	1	3.43	1.39	0.70	3.33	Cum
	Top Stem Area	1	3.43		3.05	10.44	Cum
	D/S Transition wall						
	Sec 4-4	2	0.50	0.70	0.90	0.63	Cum
		2	0.50	0.53	0.60	0.32	Cum
		2	0.50	0.35	0.50	0.18	Cum
	Avg. of Sec 1-1 & 3-3	2	2.71	1.59	0.90	7.74	Cum
		2	2.71	1.26	0.60	4.09	Cum
		2	2.71	0.74	0.50	2.01	Cum
	TOTAL					64.92	Cum
	Floor						
	U/S key	1	1.39	3.74	0.70	3.63	Cum
	Floor	1	3.50	3.74	0.50	6.54	Cum
		1	0.42	1.90	0.30	0.24	Cum
		1	0.72	1.90	0.20	0.27	Cum
		1	0.40	1.90	0.30	0.23	Cum
		1	3.08	1.90	0.50	2.93	Cum
		1	0.89	1.90	0.20	0.34	Cum
		2	0.13	1.90		0.50	Cum
		1	1.29	1.90	0.50	1.23	Cum
	D/S key	1	0.73	1.90	0.50	0.69	Cum
	TOTAL					81.51	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.						
	<i>Over Floor</i>	1	3.63	3.74	0.20	2.71	Cum
		1	0.67	1.90	0.20	0.25	Cum
		1	3.08	1.90	0.20	1.17	Cum
		1	0.95	1.90	0.20	0.36	Cum
		1	1.29	1.90	0.20	0.49	Cum
	<i>Top Slab</i>	1	5.25	2.70	0.39	5.54	Cum
	<i>75mm Th. Wearing coat on top slab</i>	1	4.25	2.70	0.08	0.86	Cum
	<i>Dirt wall</i>	2	5.83	0.82	0.50	4.78	Cum
		2	5.83	0.40	0.43	1.98	Cum
	<i>Parapet</i>	2	3.54	0.45	0.18	0.55	Cum
		2	3.54	0.35	0.25	0.62	Cum
		2	3.54	0.22	0.55	0.85	Cum
	TOTAL					20.16	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	Length	Nos.		Weight per m	Quantity	Unit
	<i>Slab Per Span</i>						
a1	16	3.160	29		1.578	144.621	Kg
a2	10	5.650	14		0.616	48.762	Kg
a3	10	5.150	2		0.616	6.350	Kg
a4	10	3.080	9		0.616	17.088	Kg
a5	10	5.550	10		0.616	34.214	Kg
	<i>Dirt Wall</i>						
d1	12	4.460	26		0.888	102.938	Kg
d2	12	5.550	14		0.888	68.975	Kg
	<i>Crash Barrier</i>						
x1	12	2.501	42		0.888	93.246	Kg
x2	16	1.265	42		1.578	83.847	Kg
x3	10	2.200	24		0.616	32.549	Kg
	<i>Floor R/F</i>						
	<i>U/S Key</i>						
	12	7.098	8		0.888	50.407	Kg
	12	2.600	27		0.888	62.317	Kg
	<i>floor raft</i>						
	12	3.394	8		0.888	24.103	Kg
	12	7.494	16		0.888	106.439	Kg
	12	2.600	65		0.888	150.022	Kg
	0.25 % Skin Reinforcement for Transition walls	64.92	0.25%	0.16	7850	1273.98	Kg
	TOTAL Weight of steel (in kg)					2299.86	Kg
	TOTAL Weight of Steel (in Tonne)					2.30	MT
6	Structural Steel (Average rate of Angle, Joint and Channel) etc. *Separate sheet attached	1	2.62			2.62	MT
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section A-A</i>	4	1.00		0.50	2.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	1.00		0.75	3.00	Sqm
		4		1.05	0.75	3.14	Sqm
		4	1.00		1.20	4.80	Sqm
		4		1.27	1.20	6.10	Sqm
	<i>Section B-B</i>	4	5.25		0.90	18.90	Sqm
		4		1.09	0.90	3.92	Sqm
		4	5.25		0.90	18.90	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.36	0.90	4.90	Sqm
	Section C-C	4	0.58		0.60	1.38	Sqm
		4		0.97	0.60	2.33	Sqm
		4	0.58		1.20	2.76	Sqm
		4		1.18	1.20	5.66	Sqm
	U/S Transition wall						
	Right Bank (Section D-D)	2	2.92		0.50	2.92	Sqm
		2		0.45	0.50	0.45	Sqm
		2	2.92		0.75	4.39	Sqm
		2		0.68	0.75	1.01	Sqm
		2	2.92		1.20	7.02	Sqm
		2		0.90	1.20	2.16	Sqm
	Left Bank						
	Bottom Key	2	3.43		0.70	4.80	Sqm
		2		1.39	0.70	1.94	Sqm
	Section a-a	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.51	0.20	1.00	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.42	1.25	3.54	Sqm
	Section b-b	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		2.27	0.20	0.91	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.37	1.25	3.43	Sqm
	Section c-c	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		1.76	0.20	0.70	Sqm
		2	1.14		1.25	2.85	Sqm
		2		1.12	1.25	2.79	Sqm
	Section d-d	2	1.14		0.50	1.14	Sqm
		2		2.66	0.50	2.66	Sqm
		2	1.14		0.20	0.46	Sqm
		2		0.48	0.20	0.19	Sqm
		2	1.14		1.25	2.85	Sqm
		2		0.48	1.25	1.20	Sqm
	D/S Transition wall						
	Sec 4-4	4	0.50		0.90	1.80	Sqm
		4		0.70	0.90	2.52	Sqm
		4	0.50		0.60	1.20	Sqm
		4		0.53	0.60	1.26	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	2.71		0.90	9.75	Sqm
		4		1.59	0.90	5.71	Sqm
		4	2.71		0.60	6.50	Sqm
		4		1.26	0.60	3.02	Sqm
		4	2.71		0.50	5.42	Sqm
		4		0.74	0.50	1.49	Sqm
	Floor						
	U/S key	2	1.39		0.70	1.94	Sqm
		2		3.74	0.70	5.23	Sqm
	Floor	2	3.50		0.50	3.50	Sqm
		2		3.74	0.50	3.74	Sqm
		2	0.42		0.30	0.25	Sqm
		2		1.90	0.30	1.14	Sqm
		2	0.72		0.20	0.29	Sqm
		2		1.90	0.20	0.76	Sqm
		2	0.40		0.30	0.80	Sqm
		2		1.90	0.30	3.80	Sqm
		2	3.08		0.50	3.08	Sqm
		2		1.90	0.50	1.90	Sqm
		2	0.89		0.20	0.35	Sqm
		2		1.90	0.20	0.76	Sqm
		4	0.13			0.53	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		1.90		7.60	Sqm
		2	1.29		0.50	1.29	Sqm
		2		1.90	0.50	1.90	Sqm
	D/S key	2	0.73		0.50	0.73	Sqm
		2		1.90	0.50	1.90	Sqm
	Toe Wall Base D/S Portion	2	1.90		0.30	1.14	Sqm
		2		0.85	0.30	0.51	Sqm
	Toe Wall Stem D/S Portion	2	1.90		0.90	3.42	Sqm
		2		0.45	0.90	0.81	Sqm
	Top Slab	2	5.25		0.39	4.10	Sqm
		2		2.70	0.39	2.11	Sqm
	Dirt wall	4	5.83		0.50	11.65	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.83		0.43	9.90	Sqm
		4		0.40	0.43	0.68	Sqm
	Parapet	4	3.54		0.18	2.48	Sqm
		4		0.45	0.18	0.31	Sqm
		4	3.54		0.25	3.54	Sqm
		4		0.35	0.25	0.35	Sqm
		4	3.54		0.55	7.79	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					279.09	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	3.00	2.13		12.77	Sqm
	TOTAL					12.77	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	1.30	3.51	Cum
	TOTAL					3.51	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	1.90	0.15	0.63	Cum
	In D/S Portion below Stone Chips	1	2.20	1.90	0.15	0.63	Cum
	TOTAL					1.25	Cum
11	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	U/S transition	2	1.99	0.48		1.91	Sqm
	On Abutment Top	2	4.94	0.45		1.79	Sqm
	TOTAL					3.71	Sqm
12	Providing Drainage Spouts complete as per drawings & technical 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 compacted and finely dressed with suitable earth obtained from excavation of foundation trenches and placed in 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		0.95	1.906	Cum
	Section B-B	2	5.25		1.29	13.514	Cum
	Section C-C	2	0.58		1.06	1.216	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>U/S Transition wall</i>						
	<i>Right Bank (Section D-D)</i>	1	2.92	0.88		2.582	Cum
	<i>D/S Transition wall</i>						
	<i>Sec 4-4</i>	2	0.50	0.68		0.680	Cum
	<i>Avg. of Sec 1-1 & 3-3</i>	2	2.71	1.13		6.106	Cum
	TOTAL					26.00	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KARMA DISTRIBUTARY								
S. No.	Item of Works	Qty.	Unit	Rate (As per W/RD SOR 2025 & PL 2025)	Amount (Rs)	Cement (MT)	Coarse Sand (Cum)	Coarse Aggregate (Cum)
SHARDA TYPE FALL OF HEIGHT 0.61 METER AT CH. 8.150 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.	309.079	Cum	195.20	60332.26			
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.	31.21	Cum	6381.70	199159.04	10.11	14.04	28.09
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.	160.59	Cum	6914.20	1110361.49	66.24	69.05	138.11
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.	33.04	Cum	8151.40	269284.66	18.73	12.88	26.10
5	Providing M.S. reinforcements per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	6.11	MT	73574.90	449487.27			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	373.58	Sqm	578.60	216150.71			
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.	38.66	Sqm	680.10	26293.35			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	5.62	Cum	694.61	3901.97			
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.	5.62	Cum	1237.00	6948.85			
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.	5.62	Cum	1377.70	7739.23			5.62
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.	5.62	Cum	516.50	2901.44			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.80	Sqm	63.20	1187.94			
13	Providing Drainage Spouts complete as per drawings & technical 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	44.91	Cum	149.30	6704.63			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	95.982	Cum	1075.00	103180.28			
	Coarse Aggregates (100 Km lead)	197.911	Cum	1398.00	276679.81			
	Cement (30 km lead)	95.086	MT	742.00	70554.10			
	Boulder (60 Km lead)	5.62	Cum	1159.00	6510.68			
	Brick (15 km lead)	2319.00	No.	3.18	7374.42			
	Steel (30 Km lead)	6.11	MT	742.00	4533.06			
	TOTAL (In Rs.)				2840462.59			
	TOTAL (In Rs.)				2840462.59			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	95.98	Cum	584.64	56114.72	5611.47		
	Coarse Aggregate	197.91	Cum	944.26	186879.60	18687.96		
	Boulders	5.62	Cum	694.61	3901.97	390.20		
	<i>Total</i>					24689.63		
	For 1 nos. fall, Total Seigniorage charges					24689.63		

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)
SHARDA TYPE FALL OF HEIGHT 0.61 METER AT CH. 9.150 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.	273.094	Cum	195.20	53307.89			
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.	29.79	Cum	6381.70	190115.14	9.65	13.41	26.81
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.	155.67	Cum	6914.20	1076355.00	64.22	66.94	133.88
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.	30.77	Cum	8151.40	250852.81	17.45	12.00	24.31
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.	5.56	MT	73574.90	409359.02			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	366.00	Sqm	578.60	211769.27			
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.	38.66	Sqm	680.10	26293.35			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	4.94	Cum	694.61	3427.90			
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.	4.94	Cum	1237.00	6104.60			
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.	4.94	Cum	1377.70	6798.95			4.94
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.	4.94	Cum	516.50	2548.93			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	18.80	Sqm	63.20	1187.94			
13	Providing Drainage Spouts complete as per drawings & technical 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	41.28	Cum	149.30	6162.50			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	92.347	Cum	1075.00	99273.22			
	Coarse Aggregates (100 Km lead)	189.937	Cum	1398.00	265532.06			
	Cement (30 km lead)	91.316	MT	742.00	67756.70			
	Boulder (60 Km lead)	4.94	Cum	1159.00	5719.67			
	Brick (15 km lead)	2319.00	No.	3.18	7374.42			
	Steel (30 Km lead)	5.56	MT	742.00	4128.37			
TOTAL (In Rs.)					2705245.12			
TOTAL (In Rs.)					2705245.12			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	92.35	Cum	584.64	53989.85	5398.99		
	Coarse Aggregate	189.94	Cum	944.26	179350.00	17935.00		
	Boulders	4.94	Cum	694.61	3427.90	342.79		
<i>Total</i>						23676.78		
For 1 nos. fall, Total Seigniorage charges						23676.78		

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)
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 16.860 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.	163.984	Cum	195.20	32009.70			
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.	20.90	Cum	6381.70	133386.94	6.77	9.41	18.81
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.	106.27	Cum	6914.20	734796.36	43.84	45.70	91.40
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.	1.17	Cum	8151.40	9512.68	0.66	0.46	0.92
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.	2.50	MT	73574.90	184138.94			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	293.10	Sqm	578.60	169587.24			
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.	13.50	Sqm	680.10	9181.35			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.34	Cum	694.61	1625.39			
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.	2.34	Cum	1237.00	2894.58			
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.	2.34	Cum	1377.70	3223.82			2.34
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.	2.34	Cum	516.50	1208.61			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	15.66	Sqm	63.20	989.71			
13	Providing Drainage Spouts complete as per drawings & technical 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	38.86	Cum	149.30	5802.06			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	55.558	Cum	1075.00	59725.29			
	Coarse Aggregates (100 Km lead)	113.468	Cum	1398.00	158628.94			

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)
	Cement (30 km lead)	51.272	MT	742.00	38043.52			
	Boulder (60 Km lead)	2.34	Cum	1159.00	2712.06			
	Brick (15 km lead)	810.00	No.	3.18	2575.80			
	Steel (30 Km lead)	2.50	MT	742.00	1857.03			
TOTAL (In Rs.)					1563077.43			
TOTAL (In Rs.)					1563077.43			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	55.56	Cum	584.64	32481.67	3248.17		
	Coarse Aggregate	113.47	Cum	944.26	107143.75	10714.37		
	Boulders	2.34	Cum	694.61	1625.39	162.54		
<i>Total</i>						14125.08		
For 1 nos. fall, Total Seigniorage charges						14125.08		

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)
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 21.350 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.	180.949	Cum	195.20	35321.26			
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.	15.72	Cum	6381.70	100328.20	5.09	7.07	14.15
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.	99.16	Cum	6914.20	685605.68	40.90	42.64	85.28
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.	11.27	Cum	8151.40	91882.83	6.39	4.40	8.90
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.	2.87	MT	73574.90	211163.23			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	265.98	Sqm	578.60	153894.17			
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.	12.97	Sqm	680.10	8819.54			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.54	Cum	694.61	375.09			
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.	0.54	Cum	1237.00	667.98			
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.	0.54	Cum	1377.70	743.96			0.54
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.	0.54	Cum	516.50	278.91			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.58	Sqm	63.20	542.29			
13	Providing Drainage Spouts complete as per drawings & technical 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	52.01	Cum	149.30	7764.42			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	54.109	Cum	1159.00	62712.39			
	Coarse Aggregates (100 Km lead)	108.871	Cum	1075.00	117036.13			
	Cement (30 km lead)	52.388	MT	742.00	38871.93			
	Boulder (60 Km lead)	0.54	Cum	1159.00	625.86			
	Brick (15 km lead)	778.00	No.	1838.00	1429964.00			
	Steel (30 Km lead)	2.87	MT	742.00	2129.57			
TOTAL (In Rs.)					2959904.84			
TOTAL (In Rs.)					2959904.84			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	54.11	Cum	584.64	31634.31	3163.43		
	Coarse Aggregate	108.87	Cum	944.26	102802.36	10280.24		
	Boulders	0.54	Cum	694.61	375.09	37.51		
<i>Total</i>						13481.18		
For 1 nos. fall, Total Seigniorage charges						13481.18		

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. 22.150 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.	88.575	Cum	195.20	17289.86			
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.	12.87	Cum	6381.70	82121.51	4.17	5.79	11.58
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.	64.93	Cum	6914.20	448961.49	26.78	27.92	55.84
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.	10.09	Cum	8151.40	82239.76	5.72	3.93	7.97
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	145878.30			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	197.60	Sqm	578.60	114330.63			
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.	10.02	Sqm	680.10	6812.56			
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.	6.77	Sqm	63.20	427.91			
13	Providing Drainage Spouts complete as per drawings & technical 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	29.45	Cum	149.30	4397.14			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	37.647	Cum	1159.00	43632.58			
	Coarse Aggregates (100 Km lead)	75.657	Cum	1075.00	81331.15			
	Cement (30 km lead)	36.675	MT	742.00	27212.68			
	Boulder (60 Km lead)	0.26	Cum	1159.00	304.24			
	Brick (15 km lead)	601.00	No.	1838.00	1104638.00			
	Steel (30 Km lead)	1.98	MT	742.00	1471.18			
TOTAL (In Rs.)					2173230.66			
TOTAL (In Rs.)					2173230.66			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	37.65	Cum	584.64	22009.79	2200.98		
	Coarse Aggregate	75.66	Cum	944.26	71439.77	7143.98		
	Boulders	0.26	Cum	694.61	182.34	18.23		
<i>Total</i>						9363.19		
For 1 nos. fall, Total Seigniorage charges						9363.19		

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 0.915 METER AT CH. 23.050 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.	92.349	Cum	195.20	18026.56			
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.	11.54	Cum	6381.70	73622.05	3.74	5.19	10.38
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.	62.60	Cum	6914.20	432846.55	25.82	26.92	53.84
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.	9.51	Cum	8151.40	77528.09	5.39	3.71	7.51
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.	2.16	MT	73574.90	158951.32			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	191.89	Sqm	578.60	111024.80			
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.	7.45	Sqm	680.10	5064.02			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.14	Cum	694.61	93.77			
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.	0.14	Cum	1237.00	167.00			
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.	0.14	Cum	1377.70	185.99			0.14
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.	0.14	Cum	516.50	69.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.32	Sqm	63.20	399.13			
13	Providing Drainage Spouts complete as per drawings & technical 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	29.61	Cum	149.30	4420.68			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	35.820	Cum	1159.00	41515.13			
	Coarse Aggregates (100 Km lead)	71.870	Cum	1075.00	77259.91			
	Cement (30 km lead)	34.954	MT	742.00	25935.94			
	Boulder (60 Km lead)	0.14	Cum	1159.00	156.47			
	Brick (15 km lead)	446.00	No.	1838.00	819748.00			
	Steel (30 Km lead)	2.16	MT	742.00	1603.02			
TOTAL (In Rs.)					1859795.55			
TOTAL (In Rs.)					1859795.55			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	35.82	Cum	584.64	20941.68	2094.17		
	Coarse Aggregate	71.87	Cum	944.26	67863.67	6786.37		
	Boulders	0.14	Cum	694.61	93.77	9.38		
<i>Total</i>						8889.91		
For 1 nos. fall, Total Seigniorage charges						8889.91		

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. 23.300 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.	124.294	Cum	195.20	24262.24			
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.	11.96	Cum	6381.70	76356.39	3.88	5.38	10.77
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.	78.18	Cum	6914.20	540527.94	32.25	33.62	67.23
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.	9.53	Cum	8151.40	77693.15	5.40	3.72	7.53
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.	2.50	MT	73574.90	183682.84			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	226.29	Sqm	578.60	130931.98			
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.	7.45	Sqm	680.10	5064.02			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.14	Cum	694.61	93.77			
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.	0.14	Cum	1237.00	167.00			
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.	0.14	Cum	1377.70	185.99			0.14
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.	0.14	Cum	516.50	69.73			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.72	Sqm	63.20	424.72			
13	Providing Drainage Spouts complete as per drawings & technical 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	34.94	Cum	149.30	5217.09			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	42.717	Cum	1159.00	49509.34			
	Coarse Aggregates (100 Km lead)	85.665	Cum	1075.00	92089.76			
	Cement (30 km lead)	41.529	MT	742.00	30814.27			
	Boulder (60 Km lead)	0.14	Cum	1159.00	156.47			
	Brick (15 km lead)	446.00	No.	1838.00	819748.00			
	Steel (30 Km lead)	2.50	MT	742.00	1852.43			
TOTAL (In Rs.)					2050024.53			
TOTAL (In Rs.)					2050024.53			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	42.72	Cum	584.64	24974.24	2497.42		
	Coarse Aggregate	85.66	Cum	944.26	80889.93	8088.99		
	Boulders	0.14	Cum	694.61	93.77	9.38		
<i>Total</i>						10595.79		
For 1 nos. fall, Total Seigniorage charges						10595.79		

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)
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR CHAURAHA MR.								
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 3.190 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.	116.542	Cum	195.20	22748.95			
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.	12.09	Cum	6381.70	77185.70	3.92	5.44	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.	53.90	Cum	6914.20	372660.60	22.23	23.18	46.35
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	6266.88	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.	1.27	MT	73574.90	93388.23			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	181.12	Sqm	578.60	104796.64			
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.	11.61	Sqm	680.10	7895.96			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.16	Cum	694.61	807.48			
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.	1.16	Cum	1237.00	1438.01			
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.	1.16	Cum	1377.70	1601.58			1.16
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.	1.16	Cum	516.50	600.43			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.89	Sqm	63.20	625.28			
13	Providing Drainage Spouts complete as per drawings & technical 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	32.90	Cum	149.30	4912.05			

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)	28.919	Cum	1075.00	31087.49			
	Coarse Aggregates (100 Km lead)	59.007	Cum	1398.00	82492.33			
	Cement (30 km lead)	26.588	MT	742.00	19727.94			
	Boulder (60 Km lead)	1.16	Cum	1159.00	1347.34			
	Brick (15 km lead)	696.00	No.	3.18	2213.28			
	Steel (30 Km lead)	1.27	MT	742.00	941.82			
	TOTAL (In Rs.)				843915.37			
	TOTAL (In Rs.)				843915.37			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	28.92	Cum	584.64	16906.97	1690.70		
	Coarse Aggregate	59.01	Cum	944.26	55718.31	5571.83		
	Boulders	1.16	Cum	694.61	807.48	80.75		
	<i>Total</i>					7343.28		
	For 1 nos. fall, Total Seigniorage charges					7343.28		

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. 6.000 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.	35.909	Cum	195.20	7009.48			
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.	9.36	Cum	6381.70	59715.82	3.03	4.21	8.42
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.	31.93	Cum	6914.20	220755.34	13.17	13.73	27.46
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.	0.60	Cum	8151.40	4858.44	0.34	0.23	0.47
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.	0.75	MT	73574.90	55320.98			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	128.36	Sqm	578.60	74267.38			
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.	0.60	Cum	694.61	419.37			
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.	0.60	Cum	1237.00	746.84			
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.	0.60	Cum	1377.70	831.79			0.60
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.	0.60	Cum	516.50	311.84			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.77	Sqm	63.20	554.30			
13	Providing Drainage Spouts complete as per drawings & technical 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	4.67	Cum	149.30	696.52			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	18.172	Cum	1075.00	19535.14			
	Coarse Aggregates (100 Km lead)	36.954	Cum	1398.00	51661.91			
	Cement (30 km lead)	16.540	MT	742.00	12272.65			
	Boulder (60 Km lead)	0.60	Cum	1159.00	699.75			
	Brick (15 km lead)	430.00	No.	3.18	1367.40			
	Steel (30 Km lead)	0.75	MT	742.00	557.91			
TOTAL (In Rs.)					527642.34			
TOTAL (In Rs.)					527642.34			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	18.17	Cum	584.64	10624.21	1062.42		
	Coarse Aggregate	36.95	Cum	944.26	34894.33	3489.43		
	Boulders	0.60	Cum	694.61	419.37	41.94		
<i>Total</i>						4593.79		
For 1 nos. fall, Total Seigniorage charges						4593.79		

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)
AOC OF SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 6.750 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.	39.879	Cum	195.20	7784.32			
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.	8.17	Cum	6381.70	52141.61	2.65	3.68	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.	27.78	Cum	6914.20	192110.82	11.46	11.95	23.90
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.	0.54	Cum	8151.40	4403.59	0.31	0.21	0.43
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	48142.70			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	118.83	Sqm	578.60	68752.67			
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.	5.88	Sqm	680.10	4001.03			
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			0.27
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.	0.27	Cum	516.50	139.46			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.64	Sqm	63.20	546.33			
13	Providing Drainage Spouts complete as per drawings & technical 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	7.99	Cum	149.30	1193.60			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	15.835	Cum	1075.00	17022.56			
	Coarse Aggregates (100 Km lead)	31.945	Cum	1398.00	44659.51			
	Cement (30 km lead)	14.415	MT	742.00	10695.81			
	Boulder (60 Km lead)	0.27	Cum	1159.00	312.93			
	Brick (15 km lead)	352.00	No.	3.18	1119.36			
	Steel (30 Km lead)	0.65	MT	742.00	485.52			
TOTAL (In Rs.)					465582.73			
TOTAL (In Rs.)					465582.73			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	15.83	Cum	584.64	9257.74	925.77		
	Coarse Aggregate	31.95	Cum	944.26	30164.66	3016.47		
	Boulders	0.27	Cum	694.61	187.54	18.75		
<i>Total</i>						3960.99		
For 1 nos. fall, Total Seigniorage charges						3960.99		

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)
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 7.050 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.	47.223	Cum	195.20	9217.95			
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	48425.84	2.46	3.41	6.83
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.	25.28	Cum	6914.20	174779.21	10.43	10.87	21.74
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.	0.52	Cum	8151.40	4253.20	0.30	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.	0.60	MT	73574.90	43799.43			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	113.02	Sqm	578.60	65395.38			
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.	5.89	Sqm	680.10	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	694.61	125.03			
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	222.66			
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	247.99			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	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.64	Sqm	63.20	545.76			
13	Providing Drainage Spouts complete as per drawings & technical 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	13.80	Cum	149.30	2060.58			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	14.488	Cum	1075.00	15574.46			
	Coarse Aggregates (100 Km lead)	29.161	Cum	1398.00	40767.01			
	Cement (30 km lead)	13.182	MT	742.00	9780.85			
	Boulder (60 Km lead)	0.18	Cum	1159.00	208.62			
	Brick (15 km lead)	353.00	No.	3.18	1122.54			
	Steel (30 Km lead)	0.60	MT	742.00	441.72			
TOTAL (In Rs.)					432241.66			
TOTAL (In Rs.)					432241.66			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	14.49	Cum	584.64	8470.19	847.02		
	Coarse Aggregate	29.16	Cum	944.26	27535.52	2753.55		
	Boulders	0.18	Cum	694.61	125.03	12.50		
<i>Total</i>						3613.07		
For 1 nos. fall, Total Seigniorage charges						3613.07		

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. 7.200 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.	46.022	Cum	195.20	8983.52			
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	48425.84	2.46	3.41	6.83
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.	25.28	Cum	6914.20	174779.21	10.43	10.87	21.74
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.	0.52	Cum	8151.40	4253.20	0.30	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.	0.60	MT	73574.90	43799.43			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	113.02	Sqm	578.60	65395.38			
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.	5.89	Sqm	680.10	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.18	Cum	694.61	125.03			
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	222.66			
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	247.99			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	92.97			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.64	Sqm	63.20	545.76			
13	Providing Drainage Spouts complete as per drawings & technical 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	13.33	Cum	149.30	1990.32			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	14.488	Cum	1075.00	15574.46			
	Coarse Aggregates (100 Km lead)	29.161	Cum	1398.00	40767.01			
	Cement (30 km lead)	13.182	MT	742.00	9780.85			
	Boulder (60 Km lead)	0.18	Cum	1159.00	208.62			
	Brick (15 km lead)	353.00	No.	3.18	1122.54			
	Steel (30 Km lead)	0.60	MT	742.00	441.72			
TOTAL (In Rs.)					431936.96			
TOTAL (In Rs.)					431936.96			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	14.49	Cum	584.64	8470.19	847.02		
	Coarse Aggregate	29.16	Cum	944.26	27535.52	2753.55		
	Boulders	0.18	Cum	694.61	125.03	12.50		
<i>Total</i>						3613.07		
For 1 nos. fall, Total Seigniorage charges						3613.07		

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. 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.	35.273	Cum	195.20	6885.31			
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.	5.80	Cum	6381.70	37008.78	1.88	2.61	5.22
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.	22.21	Cum	6914.20	153571.85	9.16	9.55	19.10
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	3652.36	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.	0.52	MT	73574.90	38484.89			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	100.48	Sqm	578.60	58138.88			
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.	8.40	Sqm	680.10	5712.84			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.23	Cum	694.61	156.29			
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.	0.23	Cum	1237.00	278.33			
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.	0.23	Cum	1377.70	309.98			0.23
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.	0.23	Cum	516.50	116.21			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	7.52	Sqm	63.20	475.35			
13	Providing Drainage Spouts complete as per drawings & technical 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	8.37	Cum	149.30	1249.53			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	12.335	Cum	1075.00	13260.29			
	Coarse Aggregates (100 Km lead)	24.900	Cum	1398.00	34809.90			
	Cement (30 km lead)	11.295	MT	742.00	8380.94			
	Boulder (60 Km lead)	0.23	Cum	1159.00	260.78			
	Brick (15 km lead)	504.00	No.	3.18	1602.72			
	Steel (30 Km lead)	0.52	MT	742.00	388.12			
TOTAL (In Rs.)					375920.73			
TOTAL (In Rs.)					375920.73			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	12.34	Cum	584.64	7211.62	721.16		
	Coarse Aggregate	24.90	Cum	944.26	23511.87	2351.19		
	Boulders	0.23	Cum	694.61	156.29	15.63		
<i>Total</i>						3087.98		
For 1 nos. fall, Total Seigniorage charges						3087.98		

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 NEURA SURAJMAL MR.								
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.950 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.	49.635	Cum	195.20	9688.77			
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.	8.82	Cum	6381.70	56261.65	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.	30.31	Cum	6914.20	209556.55	12.50	13.03	26.07
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.	0.58	Cum	8151.40	4732.25	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.	0.71	MT	73574.90	52514.58			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	123.82	Sqm	578.60	71639.71			
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.	5.89	Sqm	680.10	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.47	Cum	694.61	328.20			
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.	0.47	Cum	1237.00	584.48			
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.	0.47	Cum	1377.70	650.96			0.47
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.	0.47	Cum	516.50	244.05			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.64	Sqm	63.20	546.10			
13	Providing Drainage Spouts complete as per drawings & technical 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	11.93	Cum	149.30	1780.51			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	17.226	Cum	1075.00	18518.12			
	Coarse Aggregates (100 Km lead)	34.931	Cum	1398.00	48833.00			
	Cement (30 km lead)	15.688	MT	742.00	11640.27			
	Boulder (60 Km lead)	0.47	Cum	1159.00	547.63			
	Brick (15 km lead)	353.00	No.	3.18	1122.54			
	Steel (30 Km lead)	0.71	MT	742.00	529.61			
	TOTAL (In Rs.)				504899.45			
	TOTAL (In Rs.)				504899.45			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	17.23	Cum	584.64	10071.10	1007.11		
	Coarse Aggregate	34.93	Cum	944.26	32983.58	3298.36		
	Boulders	0.47	Cum	694.61	328.20	32.82		
	<i>Total</i>					4338.29		
	For 1 nos. fall, Total Seigniorage charges					4338.29		

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)
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 2.300 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.	51.689	Cum	195.20	10089.62			
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.	8.82	Cum	6381.70	56261.65	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.	30.31	Cum	6914.20	209556.55	12.50	13.03	26.07
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.	0.58	Cum	8151.40	4732.25	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.	0.71	MT	73574.90	52514.58			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	123.82	Sqm	578.60	71639.71			
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.	5.89	Sqm	680.10	4003.07			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.47	Cum	694.61	328.20			
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.	0.47	Cum	1237.00	584.48			
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.	0.47	Cum	1377.70	650.96			0.47
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.	0.47	Cum	516.50	244.05			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.64	Sqm	63.20	546.10			
13	Providing Drainage Spouts complete as per drawings & technical 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	13.09	Cum	149.30	1954.94			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	17.226	Cum	1075.00	18518.12			
	Coarse Aggregates (100 Km lead)	34.931	Cum	1398.00	48833.00			
	Cement (30 km lead)	15.688	MT	742.00	11640.27			
	Boulder (60 Km lead)	0.47	Cum	1159.00	547.63			
	Brick (15 km lead)	353.00	No.	3.18	1122.54			
	Steel (30 Km lead)	0.71	MT	742.00	529.61			
TOTAL (In Rs.)					505474.74			
TOTAL (In Rs.)					505474.74			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	17.23	Cum	584.64	10071.10	1007.11		
	Coarse Aggregate	34.93	Cum	944.26	32983.58	3298.36		
	Boulders	0.47	Cum	694.61	328.20	32.82		
<i>Total</i>						4338.29		
For 1 nos. fall, Total Seigniorage charges						4338.29		

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 QUANTITIES OF SHARDA TYPE FALL FOR SHUSHNAR MR.								
SHARDA TYPE FALL OF HEIGHT 0.457 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.	66.178	Cum	195.20	12918.02			
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.	9.52	Cum	6381.70	60773.72	3.09	4.29	8.57
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.	36.96	Cum	6914.20	255540.21	15.25	15.89	31.78
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	5222.56	0.36	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.	0.87	MT	73574.90	64038.02			
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	142.46	Sqm	578.60	82426.36			
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.	8.57	Sqm	680.10	5827.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.60	Cum	694.61	416.77			
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.	0.60	Cum	1237.00	742.20			
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.	0.60	Cum	1377.70	826.62			0.60
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.	0.60	Cum	516.50	309.90			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.97	Sqm	63.20	567.15			
13	Providing Drainage Spouts complete as per drawings & technical 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	19.24	Cum	149.30	2872.98			

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)	20.428	Cum	1075.00	21959.61			
	Coarse Aggregates (100 Km lead)	41.461	Cum	1398.00	57963.16			
	Cement (30 km lead)	18.694	MT	742.00	13871.14			
	Boulder (60 Km lead)	0.60	Cum	1159.00	695.40			
	Brick (15 km lead)	514.00	No.	3.18	1634.52			
	Steel (30 Km lead)	0.87	MT	742.00	645.82			
	TOTAL (In Rs.)				600428.65			
	TOTAL (In Rs.)				600428.65			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	20.43	Cum	584.64	11942.76	1194.28		
	Coarse Aggregate	41.46	Cum	944.26	39150.43	3915.04		
	Boulders	0.60	Cum	694.61	416.77	41.68		
	<i>Total</i>					5150.99		
	For 1 nos. fall, Total Seigniorage charges					5150.99		

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)
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 4.075 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.	41.239	Cum	195.20	8049.91			
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.	7.95	Cum	6381.70	50708.48	2.57	3.58	7.15
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.	26.41	Cum	6914.20	182634.19	10.90	11.36	22.72
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.	0.57	Cum	8151.40	4678.33	0.33	0.22	0.45
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.	0.62	MT	73574.90	45767.87			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	115.05	Sqm	578.60	66565.34			
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.	0.27	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			0.27
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.	0.27	Cum	516.50	139.46			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.60	Sqm	63.20	543.43			
13	Providing Drainage Spouts complete as per drawings & technical 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	9.24	Cum	149.30	1378.91			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	15.158	Cum	1075.00	16294.50			
	Coarse Aggregates (100 Km lead)	30.591	Cum	1398.00	42766.34			
	Cement (30 km lead)	13.796	MT	742.00	10236.50			
	Boulder (60 Km lead)	0.27	Cum	1159.00	312.93			
	Brick (15 km lead)	352.00	No.	3.18	1119.36			
	Steel (30 Km lead)	0.62	MT	742.00	461.57			
TOTAL (In Rs.)					447729.06			
TOTAL (In Rs.)					447729.06			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	15.16	Cum	584.64	8861.78	886.18		
	Coarse Aggregate	30.59	Cum	944.26	28885.94	2888.59		
	Boulders	0.27	Cum	694.61	187.54	18.75		
<i>Total</i>						3793.53		
For 1 nos. fall, Total Seigniorage charges						3793.53		

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 0.457 METER AT CH. 4.175 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.	85.880	Cum	195.20	16763.80			
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.	20.10	Cum	6381.70	128274.59	6.51	9.05	18.09
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.	70.75	Cum	6914.20	489168.93	29.18	30.42	60.84
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.	12.09	Cum	8151.40	98517.37	6.85	4.71	9.55
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.	2.28	MT	73574.90	167774.34			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	206.23	Sqm	578.60	119326.97			
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.	9.29	Sqm	680.10	6316.77			
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.	6.67	Sqm	63.20	421.82			
13	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	15.18	No.	5588.70	84833.45			
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	5.35	Cum	149.30	798.07			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	44.181	Cum	1159.00	51205.23			
	Coarse Aggregates (100 Km lead)	89.412	Cum	1075.00	96117.80			
	Cement (30 km lead)	42.549	MT	742.00	31571.35			
	Boulder (60 Km lead)	0.93	Cum	1159.00	1077.87			
	Brick (15 km lead)	557.00	No.	3.18	1771.26			
	Steel (30 Km lead)	2.28	MT	742.00	1692.00			
TOTAL (In Rs.)					1299189.62			
TOTAL (In Rs.)					1299189.62			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	44.18	Cum	584.64	25829.70	2582.97		
	Coarse Aggregate	89.41	Cum	944.26	84428.08	8442.81		
	Boulders	0.93	Cum	694.61	645.99	64.60		
<i>Total</i>						11090.38		
For 1 nos. fall, Total Seigniorage charges						11090.38		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KARMA DISTRIBUTARY

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.61 METER AT CH. 8.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.62	1.93	2.199	5.209	Cum
	<i>Section 2-2</i>	2	4.10	2.08	2.199	37.506	Cum
	<i>Section 3-3</i>	2	3.95	1.96	2.199	34.049	Cum
	<i>Section 5-5</i>	2	7.06	2.08	2.199	64.501	Cum
	<i>Section 6-6</i>	2	3.52	1.44	2.199	22.261	Cum
	<i>U/S Key Floor</i>	1	0.625	5.950	0.850	3.161	Cum
	<i>U/S Floor</i>	1	1.290	5.950	2.000	15.351	Cum
	<i>D/S Floor</i>	1	4.707	5.950	2.150	60.214	Cum
		1	4.250	5.950	1.950	49.311	Cum
	<i>D/S Key Floor</i>	1	0.625	5.950	0.850	3.161	Cum
	<i>Toe Wall D/S Portion</i>	1	16.600	0.750	0.900	11.205	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.500	0.600	0.750	3.150	Cum
						309.08	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.						
	<i>PCC Below Floor</i>	1	0.542	5.95	0.15	0.48	Cum
		1	0.782	5.95	0.15	0.70	Cum
		1	0.287	5.95	0.15	0.26	Cum
		1	0.070	5.95	0.15	0.06	Cum
		1	4.989	5.95	0.15	4.45	Cum
		1	0.353	5.95	0.15	0.32	Cum
		1	2.888	5.95	0.15	2.58	Cum
		1	0.782	5.95	0.15	0.70	Cum
		1	0.542	5.95	0.15	0.48	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.62	1.93	0.15	0.36	Cum
	<i>Section 2-2</i>	2	4.10	2.08	0.15	2.56	Cum
	<i>Section 3-3</i>	2	3.95	1.96	0.15	2.32	Cum
	<i>Section 5-5</i>	2	7.06	2.08	0.15	4.40	Cum
	<i>Section 6-6</i>	2	3.52	1.44	0.15	1.52	Cum
	<i>Toe Wall D/S Portion</i>	1	16.60	0.75	0.30	3.74	Cum
	<i>Toe Wall D/S Portion</i>	1	16.30	0.45	0.60	4.40	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.60	0.15	0.63	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.30	0.60	1.26	Cum
	TOTAL					31.21	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.62	0.45	0.45	0.25	Cum
		2	0.62	1.04	1.96	2.50	Cum
		2	0.62	1.78	0.55	1.20	Cum
	<i>Section 2-2</i>	2	4.10	1.23	1.35	13.56	Cum
		2	4.10	1.78	1.00	14.60	Cum
	<i>Section 3-3</i>	2	3.46	1.17	1.15	9.26	Cum
		2	3.46	1.66	1.20	13.76	Cum
	<i>Section 5-5</i>	2	7.02	0.45	0.45	2.84	Cum
		2	7.02	1.04	1.96	28.57	Cum
		2	7.02	1.78	0.55	13.72	Cum
	<i>Section 6-6</i>	2	4.35	0.45	0.45	1.76	Cum
		2	4.35	0.80	1.15	7.94	Cum
		2	4.35	1.29	0.50	5.61	Cum
	<i>Floor</i>	1	0.63	5.95	0.70	2.60	Cum
		1	1.24	5.95	0.50	3.69	Cum
		1	0.53	5.95	0.05	0.16	Cum
		1	4.71	5.95	0.55	15.40	Cum
		1	0.28	5.95	0.25	0.42	Cum
		1	0.20	5.95	0.40	0.48	Cum
		1	4.05	5.95	0.50	12.05	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.63	5.95	0.70	2.60	Cum
	Crest	1	1.00	5.95	1.28	7.62	Cum
	TOTAL					160.59	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	5.95	0.15	0.71	Cum
	Coping over Abutment Top	2	20.89	0.45	0.05	0.94	Cum
	Slab Bridge						
	Slab	1	6.75	6.5	0.46	20.07	Cum
	Wearing coat	1	6.75	5.50	0.07	2.60	Cum
	Dirt wall	2	0.40	6.5	0.65	3.38	Cum
	pedastial	2	0.82	6.5	0.50	5.33	Cum
	TOTAL					33.04	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	20	59	7.61		2.466	1107.1	Kg
a2	12	45	7.30		0.888	291.6	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	31	7.53		0.616	143.9	Kg
a5	10	34	7.20		0.616	150.9	Kg
x1	12	112	2.70		0.888	268.5	Kg
x2	16	112	1.47		1.578	258.9	Kg
x3	10	24	6.65		0.616	98.4	Kg
	Taking Skin reinforcement @0.3% of M-20	160.59	0.30%	0.48	7850	3781.93	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					6109.25	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					6.11	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	0.62		0.45	1.11	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.62		1.96	4.82	Sqm
		4		1.04	1.96	8.14	Sqm
		4	0.62		0.55	1.35	Sqm
		4		1.78	0.55	3.91	Sqm
	Section 2-2	4	4.10		1.35	22.14	Sqm
		4		1.23	1.35	6.62	Sqm
		4	4.10		1.00	16.40	Sqm
		4		1.78	1.00	7.12	Sqm
	Section 3-3	4	3.46		1.15	15.89	Sqm
		4		1.17	1.15	5.36	Sqm
		4	3.46		1.20	16.58	Sqm
		4		1.66	1.20	7.97	Sqm
	Section 5-5	4	7.02		0.45	12.64	Sqm
		4		0.45	0.45	0.81	Sqm
		4	7.02		1.96	55.04	Sqm
		4		1.04	1.96	8.14	Sqm
		4	7.02		0.55	15.45	Sqm
		4		1.78	0.55	3.91	Sqm
	Section 6-6	4	4.35		0.45	7.82	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.35		1.15	19.99	Sqm
		4		0.80	1.15	3.66	Sqm
		4	4.35		0.50	8.69	Sqm
		4		1.29	0.50	2.58	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		5.95	0.70	8.33	Sqm
		2	1.24		0.50	1.24	Sqm
		2		5.95	0.50	5.95	Sqm
		2	0.53		0.05	0.05	Sqm
		2		5.95	0.05	0.60	Sqm
		2	4.71		0.55	5.18	Sqm
		2		5.95	0.55	6.55	Sqm
		2	0.28		0.25	0.14	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		5.95	0.25	2.98	Sqm
		2	0.20		0.40	0.16	Sqm
		2		5.95	0.40	4.76	Sqm
		2	4.05		0.50	4.05	Sqm
		2		5.95	0.50	5.95	Sqm
		2	0.63		0.70	0.88	Sqm
		2		5.95	0.70	8.33	Sqm
	Crest	2	1.004		1.275	2.56	Sqm
		2		5.95	1.275	15.17	Sqm
	Toe Wall D/S Portion	2	16.60		0.30	9.96	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	16.30		0.60	19.56	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.15	2.10	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.60	8.40	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					373.58	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.						
	In D/S Portion On Slopes	2	3.50	5.52		38.66	Sqm
	TOTAL					38.66	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	3.50	5.35	0.30	5.62	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	3.50	5.35	0.15	5.62	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	20.89	0.45		9.40	Sqm
	On Abutment Top (Right Side)	1	20.89	0.45		9.40	Sqm
	TOTAL					18.80	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		7.03		7.03	Cum
	Abutment						
	Section 1-1	2	0.62	1.15		1.411	Cum
	Section 2-2	2	4.10	0.67		5.460	Cum
	Section 3-3	2	3.95	0.58		4.602	Cum
	Section 5-5	2	7.06	1.15		16.206	Cum
	Section 6-6	2	3.52	1.16		8.169	Cum
	D/S protection	2					
	Toe wall	1	16.60	0.09		1.494	Cum
		2	3.50	0.08		0.537	Cum
	TOTAL					44.91	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.61 METER AT CH. 9.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.62	1.93	2.016	4.776	Cum
	<i>Section 2-2</i>	2	4.10	2.08	2.016	34.385	Cum
	<i>Section 3-3</i>	2	3.95	1.96	2.016	31.216	Cum
	<i>Section 5-5</i>	2	7.06	2.08	2.016	59.133	Cum
	<i>Section 6-6</i>	2	3.52	1.44	2.016	20.408	Cum
	<i>U/S Key Floor</i>	1	0.625	5.300	0.850	2.816	Cum
	<i>U/S Floor</i>	1	1.290	5.300	1.818	12.430	Cum
	<i>D/S Floor</i>	1	4.707	5.300	2.016	50.293	Cum
		1	4.250	5.300	1.816	40.905	Cum
	<i>D/S Key Floor</i>	1	0.625	5.300	0.850	2.816	Cum
	<i>Toe Wall D/S Portion</i>	1	15.950	0.750	0.900	10.766	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.500	0.600	0.750	3.150	Cum
						273.09	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.						
	<i>PCC Below Floor</i>	1	0.542	5.30	0.15	0.43	Cum
		1	0.782	5.30	0.15	0.62	Cum
		1	0.287	5.30	0.15	0.23	Cum
		1	0.070	5.30	0.15	0.06	Cum
		1	4.989	5.30	0.15	3.97	Cum
		1	0.353	5.30	0.15	0.28	Cum
		1	2.888	5.30	0.15	2.30	Cum
		1	0.782	5.30	0.15	0.62	Cum
		1	0.542	5.30	0.15	0.43	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.62	1.93	0.15	0.36	Cum
	<i>Section 2-2</i>	2	4.10	2.08	0.15	2.56	Cum
	<i>Section 3-3</i>	2	3.95	1.96	0.15	2.32	Cum
	<i>Section 5-5</i>	2	7.06	2.08	0.15	4.40	Cum
	<i>Section 6-6</i>	2	3.52	1.44	0.15	1.52	Cum
	<i>Toe Wall D/S Portion</i>	1	15.95	0.75	0.30	3.59	Cum
	<i>Toe Wall D/S Portion</i>	1	15.65	0.45	0.60	4.23	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.60	0.15	0.63	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.50	0.30	0.60	1.26	Cum
	TOTAL					29.79	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.62	0.45	0.45	0.25	Cum
		2	0.62	1.04	1.96	2.50	Cum
		2	0.62	1.78	0.55	1.20	Cum
	<i>Section 2-2</i>	2	4.10	1.23	1.35	13.56	Cum
		2	4.10	1.78	1.00	14.60	Cum
	<i>Section 3-3</i>	2	3.46	1.17	1.15	9.26	Cum
		2	3.46	1.66	1.20	13.76	Cum
	<i>Section 5-5</i>	2	7.02	0.45	0.45	2.84	Cum
		2	7.02	1.04	1.96	28.57	Cum
		2	7.02	1.78	0.55	13.72	Cum
	<i>Section 6-6</i>	2	4.35	0.45	0.45	1.76	Cum
		2	4.35	0.80	1.15	7.94	Cum
		2	4.35	1.29	0.50	5.61	Cum
	<i>Floor</i>	1	0.63	5.30	0.70	2.32	Cum
		1	1.24	5.30	0.50	3.29	Cum
		1	0.53	5.30	0.05	0.14	Cum
		1	4.71	5.30	0.55	13.72	Cum
		1	0.28	5.30	0.25	0.37	Cum
		1	0.20	5.30	0.40	0.42	Cum
		1	4.05	5.30	0.50	10.73	Cum
		1	0.63	5.30	0.70	2.32	Cum
	<i>Crest</i>	1	1.00	5.30	1.28	6.78	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					155.67	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.						
	<i>Over Crest</i>	1	0.80	5.30	0.15	0.64	Cum
	<i>Coping over Abutment Top</i>	2	20.89	0.45	0.05	0.94	Cum
	<i>Slab Bridge</i>						
	<i>Slab</i>	1	6.10	6.5	0.46	18.14	Cum
	<i>Wearing coat</i>	1	6.10	5.50	0.07	2.35	Cum
	<i>Dirt wall</i>	2	0.40	6.5	0.65	3.38	Cum
	<i>pedastial</i>	2	0.82	6.5	0.50	5.33	Cum
	TOTAL					30.77	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	20	51	6.86		2.466	862.7	Kg
a2	12	35	7.30		0.888	226.8	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	29	6.78		0.616	121.2	Kg
a5	10	28	7.10		0.616	122.6	Kg
x1	12	102	2.65		0.888	240.0	Kg
x2	16	102	1.42		1.578	227.8	Kg
x3	10	24	6.00		0.616	88.8	Kg
	Taking Skin reinforcement @0.3% of M-20	155.67	0.30%	0.47	7850	3666.10	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					5563.84	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					5.56	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.62		0.45	1.11	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.62		1.96	4.82	Sqm
		4		1.04	1.96	8.14	Sqm
		4	0.62		0.55	1.35	Sqm
		4		1.78	0.55	3.91	Sqm
	<i>Section 2-2</i>	4	4.10		1.35	22.14	Sqm
		4		1.23	1.35	6.62	Sqm
		4	4.10		1.00	16.40	Sqm
		4		1.78	1.00	7.12	Sqm
	<i>Section 3-3</i>	4	3.46		1.15	15.89	Sqm
		4		1.17	1.15	5.36	Sqm
		4	3.46		1.20	16.58	Sqm
		4		1.66	1.20	7.97	Sqm
	<i>Section 5-5</i>	4	7.02		0.45	12.64	Sqm
		4		0.45	0.45	0.81	Sqm
		4	7.02		1.96	55.04	Sqm
		4		1.04	1.96	8.14	Sqm
		4	7.02		0.55	15.45	Sqm
		4		1.78	0.55	3.91	Sqm
	<i>Section 6-6</i>	4	4.35		0.45	7.82	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.35		1.15	19.99	Sqm
		4		0.80	1.15	3.66	Sqm
		4	4.35		0.50	8.69	Sqm
		4		1.29	0.50	2.58	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		5.30	0.70	7.42	Sqm
		2	1.24		0.50	1.24	Sqm
		2		5.30	0.50	5.30	Sqm
		2	0.53		0.05	0.05	Sqm
		2		5.30	0.05	0.53	Sqm
		2	4.71		0.55	5.18	Sqm
		2		5.30	0.55	5.83	Sqm
		2	0.28		0.25	0.14	Sqm
		2		5.30	0.25	2.65	Sqm
		2	0.20		0.40	0.16	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		5.30	0.40	4.24	Sqm
		2	4.05		0.50	4.05	Sqm
		2		5.30	0.50	5.30	Sqm
		2	0.63		0.70	0.88	Sqm
		2		5.30	0.70	7.42	Sqm
	Crest	2	1.004		1.275	2.56	Sqm
		2		5.3	1.275	13.52	Sqm
	Toe Wall D/S Portion	2	15.95		0.30	9.57	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	15.65		0.60	18.78	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.15	2.10	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	3.50		0.60	8.40	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					366.00	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.						
	In D/S Portion On Slopes	2	3.50	5.52		38.66	Sqm
	TOTAL					38.66	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	3.50	4.70	0.30	4.94	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	3.50	4.70	0.15	4.94	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	20.89	0.45		9.40	Sqm
	On Abutment Top (Right Side)	1	20.89	0.45		9.40	Sqm
	TOTAL					18.80	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		6.71		6.71	Cum
	Abutment						
	Section 1-1	2	0.62	1.02		1.260	Cum
	Section 2-2	2	4.10	0.53		4.321	Cum
	Section 3-3	2	3.95	0.47		3.685	Cum
	Section 5-5	2	7.06	1.02		14.471	Cum
	Section 6-6	2	3.52	1.26		8.858	Cum
	D/S protection	2					
	Toe wall	1	15.95	0.09		1.436	Cum
		2	3.50	0.08		0.537	Cum
	TOTAL					41.28	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 16.860 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.26	1.99	2.140	10.760	Cum
	<i>Section 2-2</i>	2	3.50	1.41	2.140	21.122	Cum
	<i>Section 3-3</i>	2	2.20	1.29	1.940	11.011	Cum
	<i>Section 5-5</i>	2	6.13	2.14	2.140	56.147	Cum
	<i>Section 6-6</i>	2	3.16	1.29	1.940	15.816	Cum
	<i>U/S Key Floor</i>	1	0.588	3.200	0.700	1.316	Cum
	<i>U/S Floor</i>	1	2.500	3.200	1.915	15.320	Cum
	<i>D/S Floor</i>	1	3.500	3.200	1.000	11.200	Cum
		1	2.500	3.200	0.800	6.400	Cum
	<i>D/S Key Floor</i>	1	0.763	3.200	1.400	3.416	Cum
	<i>Toe Wall D/S Portion</i>	1	13.000	0.750	0.900	8.775	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	3.000	0.600	0.750	2.700	Cum
						163.98	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.						
	<i>PCC Below Floor</i>	1	0.542	3.20	0.15	0.26	Cum
		1	0.615	3.20	0.15	0.30	Cum
		1	5.643	3.20	0.15	2.71	Cum
		1	0.495	3.20	0.15	0.24	Cum
		1	0.521	3.20	0.15	0.25	Cum
		1	1.398	3.20	0.15	0.67	Cum
		1	0.542	3.20	0.15	0.26	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.26	1.99	0.15	0.75	Cum
	<i>Section 2-2</i>	2	3.50	1.41	0.15	1.48	Cum
	<i>Section 3-3</i>	2	2.20	1.29	0.15	0.85	Cum
	<i>Section 5-5</i>	2	6.13	2.14	0.15	3.94	Cum
	<i>Section 6-6</i>	2	3.16	1.29	0.15	1.22	Cum
	<i>Toe Wall D/S Portion</i>	1	13.00	0.75	0.30	2.93	Cum
	<i>Toe Wall D/S Portion</i>	1	12.70	0.45	0.60	3.43	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.60	0.15	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	3.00	0.30	0.60	1.08	Cum
	TOTAL					20.90	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.04	0.45	0.45	0.42	Cum
		2	1.04	1.07	2.07	4.59	Cum
		2	1.04	1.84	0.65	2.49	Cum
	<i>Section 2-2</i>	2	3.50	0.45	0.45	1.42	Cum
		2	3.50	0.78	1.10	6.01	Cum
		2	3.50	1.26	0.65	5.73	Cum
	<i>Section 3-3</i>	2	1.78	0.45	0.45	0.72	Cum
		2	1.78	0.72	0.90	2.31	Cum
		2	1.78	1.14	0.50	2.03	Cum
	<i>Section 5-5</i>	2	6.09	0.45	0.45	2.47	Cum
		2	6.09	1.07	2.07	26.90	Cum
		2	6.09	1.84	0.65	14.56	Cum
	<i>Section 6-6</i>	2	3.73	0.45	0.45	1.51	Cum
		2	3.73	0.72	0.90	4.83	Cum
		2	3.73	1.14	0.50	4.25	Cum
	<i>Floor</i>	1	0.59	3.20	0.55	1.03	Cum
		1	6.00	3.20	0.65	12.48	Cum
		1	0.57	3.20	0.35	0.64	Cum
		1	0.20	3.20	0.40	0.26	Cum
		1	2.30	3.20	0.50	3.68	Cum
		1	0.76	3.20	1.25	3.05	Cum
	<i>Crest</i>	1	1.04	3.20	1.48	4.90	Cum
	TOTAL					106.27	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	3.20	0.15	0.38	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	17.40	0.45	0.05	0.39	Cum
	On Abutment Top (Right Side)	1	17.40	0.45	0.05	0.39	Cum
	TOTAL					1.17	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	106.27	0.30%	0.32	7850	2502.74	Kg
	Total Weight in Metric Tonne					2.50	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.04		0.45	1.87	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.04		2.07	8.59	Sqm
		4		1.07	2.07	8.83	Sqm
		4	1.04		0.65	2.70	Sqm
		4		1.84	0.65	4.78	Sqm
	Section 2-2	4	3.50		0.45	6.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.50		1.10	15.40	Sqm
		4		0.78	1.10	3.43	Sqm
		4	3.50		0.65	9.10	Sqm
		4		1.26	0.65	3.28	Sqm
	Section 3-3	4	1.78		0.45	3.20	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.78		0.90	6.41	Sqm
		4		0.72	0.90	2.59	Sqm
		4	1.78		0.50	3.56	Sqm
		4		1.14	0.50	2.28	Sqm
	Section 5-5	4	6.09		0.45	10.96	Sqm
		4		0.45	0.45	0.81	Sqm
		4	6.09		2.07	50.30	Sqm
		4		1.07	2.07	8.83	Sqm
		4	6.09		0.65	15.83	Sqm
		4		1.84	0.65	4.78	Sqm
	Section 6-6	4	3.73		0.45	6.71	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.73		0.90	13.43	Sqm
		4		0.72	0.90	2.59	Sqm
		4	3.73		0.50	7.46	Sqm
		4		1.14	0.50	2.28	Sqm
	Floor	2	0.59		0.55	0.65	Sqm
		2		3.20	0.55	3.52	Sqm
		2	6.00		0.65	7.80	Sqm
		2		3.20	0.65	4.16	Sqm
		2	0.57		0.35	0.40	Sqm
		2		3.20	0.35	2.24	Sqm
		2	0.20		0.40	0.16	Sqm
		2		3.20	0.40	2.56	Sqm
		2	2.30		0.50	2.30	Sqm
		2		3.20	0.50	3.20	Sqm
		2	0.76		1.25	1.91	Sqm
		2		3.20	1.25	8.00	Sqm
	Crest	2	1.035		1.48	3.06	Sqm
		2		3.2	1.48	9.47	Sqm
	Toe Wall D/S Portion	2	13.00		0.30	7.80	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	12.70		0.60	15.24	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	3.00		0.15	1.80	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	3.00		0.60	7.20	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					293.10	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.						
	<i>In D/S Portion On Slopes</i>	2	3.00	2.25		13.50	Sqm
	TOTAL					13.50	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	3.00	2.60	0.30	2.34	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	3.00	2.60	0.15	2.34	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	17.40	0.45		7.83	Sqm
	<i>On Abutment Top (Right Side)</i>	1	17.40	0.45		7.83	Sqm
	TOTAL					15.66	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		6.25		6.25	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.26	1.04		2.629	Cum
	<i>Section 2-2</i>	2	3.50	1.03		7.182	Cum
	<i>Section 3-3</i>	2	2.20	0.79		3.494	Cum
	<i>Section 5-5</i>	2	6.13	1.04		12.757	Cum
	<i>Section 6-6</i>	2	3.16	0.79		5.018	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	3.20	0.09		0.576	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					38.86	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.067 METER AT CH. 21.350 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.31	1.87	2.842	13.972	Cum
	<i>Section 2-2</i>	2	3.20	1.72	2.842	31.285	Cum
	<i>Section 3-3</i>	2	5.00	1.60	2.842	45.472	Cum
	<i>Section 5-5</i>	2	4.64	2.02	2.842	53.246	Cum
	<i>Section 6-6</i>	2	1.78	1.08	2.842	10.896	Cum
	<i>U/S Key Floor</i>	1	0.588	1.500	0.700	0.617	Cum
	<i>U/S Floor</i>	1	2.000	1.500	2.067	6.201	Cum
	<i>D/S Floor</i>	1	3.000	1.500	1.000	4.500	Cum
		1	5.500	1.500	0.800	6.600	Cum
	<i>D/S Key Floor</i>	1	0.663	1.500	1.000	0.994	Cum
	<i>Toe Wall D/S Portion</i>	1	7.950	0.750	0.900	5.366	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						180.95	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.						
	<i>PCC Below Floor</i>	1	0.542	1.50	0.15	0.12	Cum
		1	0.615	1.50	0.15	0.14	Cum
		1	4.452	1.50	0.15	1.00	Cum
		1	0.425	1.50	0.15	0.10	Cum
		1	3.863	1.50	0.15	0.87	Cum
		1	1.174	1.50	0.15	0.26	Cum
		1	0.542	1.50	0.15	0.12	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.31	1.87	0.15	0.74	Cum
	<i>Section 2-2</i>	2	3.20	1.72	0.15	1.65	Cum
	<i>Section 3-3</i>	2	5.00	1.60	0.15	2.40	Cum
	<i>Section 5-5</i>	2	4.64	2.02	0.15	2.81	Cum
	<i>Section 6-6</i>	2	1.78	1.08	0.15	0.58	Cum
	<i>Toe Wall D/S Portion</i>	1	7.95	0.75	0.30	1.79	Cum
	<i>Toe Wall D/S Portion</i>	1	7.65	0.45	0.60	2.07	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					15.72	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.09	0.45	0.45	0.44	Cum
		2	1.09	1.01	1.87	4.11	Cum
		2	1.09	1.72	0.65	2.44	Cum
	<i>Section 2-2</i>	2	3.20	0.82	0.50	2.62	Cum
		2	3.20	1.05	0.75	5.02	Cum
		2	3.20	1.42	1.20	10.91	Cum
	<i>Section 3-3</i>	2	4.69	0.82	0.50	3.84	Cum
		2	4.69	0.99	0.55	5.08	Cum
		2	4.69	1.30	1.40	17.05	Cum
	<i>Section 5-5</i>	2	4.59	0.45	0.45	1.86	Cum
		2	4.59	1.01	1.87	17.32	Cum
		2	4.59	1.72	0.65	10.27	Cum
	<i>Section 6-6</i>	2	2.43	0.45	0.45	0.98	Cum
		2	2.43	0.62	0.55	1.64	Cum
		2	2.43	0.93	0.55	2.48	Cum
	<i>Floor</i>	1	0.59	1.50	0.55	0.48	Cum
		1	5.00	1.50	0.65	4.88	Cum
		1	0.36	1.50	0.30	0.16	Cum
		1	0.20	1.50	0.45	0.14	Cum
		1	5.30	1.50	0.55	4.37	Cum
		1	0.66	1.50	0.85	0.84	Cum
	<i>Crest</i>	1	1.07	1.50	1.39	2.23	Cum
	TOTAL					99.16	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	0.85	1.50	0.15	0.19	Cum
	Coping over Abutment Top	2	9.53	0.45	0.05	0.43	Cum
	Slab Bridge						
	Slab	1	2.30	6.5	0.34	5.01	Cum
	Wearing coat	1	2.30	5.50	0.07	0.89	Cum
	Dirt wall	2	0.40	6.5	0.30	1.56	Cum
	300 mm thick pedestal	2	0.82	6.5	0.30	3.20	Cum
	TOTAL					11.27	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	36	2.76		1.578	156.8	Kg
a2	10	12	6.90		0.616	51.0	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	2.68		0.616	38.0	Kg
a5	10	8	6.80		0.616	33.5	Kg
x1	12	38	2.50		0.888	84.4	Kg
x2	16	38	1.94		1.578	116.3	Kg
x3	12	24	2.20		0.888	46.9	Kg
	Taking Skin reinforcement @0.3% of M-20	99.16	0.30%	0.30	7850	2335.20	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					2870.04	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					2.87	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	1.09		0.45	1.96	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.09		1.87	8.13	Sqm
		4		1.01	1.87	7.54	Sqm
		4	1.09		0.65	2.83	Sqm
		4		1.72	0.65	4.47	Sqm
	Section 2-2	4	3.20		0.50	6.40	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.20		0.75	9.60	Sqm
		4		1.05	0.75	3.14	Sqm
		4	3.20		1.20	15.36	Sqm
		4		1.42	1.20	6.82	Sqm
	Section 3-3	4	4.69		0.50	9.37	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.69		0.55	10.31	Sqm
		4		0.99	0.55	2.17	Sqm
		4	4.69		1.40	26.24	Sqm
		4		1.30	1.40	7.28	Sqm
	Section 5-5	4	4.59		0.45	8.27	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.59		1.87	34.30	Sqm
		4		1.01	1.87	7.54	Sqm
		4	4.59		0.65	11.94	Sqm
		4		1.72	0.65	4.47	Sqm
	Section 6-6	4	2.43		0.45	4.37	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.43		0.55	5.34	Sqm
		4		0.62	0.55	1.35	Sqm
		4	2.43		0.55	5.34	Sqm
		4		0.93	0.55	2.05	Sqm
	Floor	2	0.59		0.55	0.65	Sqm
		2		1.50	0.55	1.65	Sqm
		2	5.00		0.65	6.50	Sqm
		2		1.50	0.65	1.95	Sqm
		2	0.36		0.30	0.21	Sqm
		2		1.50	0.30	0.90	Sqm
		2	0.20		0.45	0.18	Sqm
		2		1.50	0.45	1.35	Sqm
		2	5.30		0.55	5.83	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.50	0.55	1.65	Sqm
		2	0.66		0.85	1.13	Sqm
		2		1.50	0.85	2.55	Sqm
	Crest	2	1.0725		1.385	2.97	Sqm
		2		1.5	1.385	4.16	Sqm
	Toe Wall D/S Portion	2	7.95		0.30	4.77	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	7.65		0.60	9.18	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					265.98	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	3.24		12.97	Sqm
	TOTAL					12.97	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.00	0.90	0.30	0.54	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	2.00	0.90	0.15	0.54	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	9.53	0.45		4.29	Sqm
	On Abutment Top (Right Side)	1	9.53	0.45		4.29	Sqm
	TOTAL					8.58	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		2.17		2.17	Cum
	Abutment						
	Section 1-1	2	1.31	1.95		5.127	Cum
	Section 2-2	2	3.20	1.37		8.799	Cum
	Section 3-3	2	5.00	1.17		11.670	Cum
	Section 5-5	2	4.64	1.95		18.086	Cum
	Section 6-6	2	1.78	0.65		2.319	Cum
	D/S protection	2					
	Toe wall	2	7.95	0.15	0.60	1.431	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					52.01	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 22.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.33	1.44	1.597	6.111	Cum
	<i>Section 2-2</i>	2	2.80	1.66	1.597	14.846	Cum
	<i>Section 3-3</i>	2	5.20	1.54	1.597	25.578	Cum
	<i>Section 5-5</i>	2	3.97	1.59	1.597	20.222	Cum
	<i>Section 6-6</i>	2	1.49	1.02	1.597	4.838	Cum
	<i>U/S Key Floor</i>	1	0.625	1.100	0.850	0.584	Cum
	<i>U/S Floor</i>	1	2.000	1.100	1.307	2.875	Cum
	<i>D/S Floor</i>	1	3.000	1.100	0.850	2.805	Cum
		1	5.500	1.100	0.650	3.933	Cum
	<i>D/S Key Floor</i>	1	0.625	1.100	0.850	0.584	Cum
	<i>Toe Wall D/S Portion</i>	1	6.850	0.750	0.900	4.624	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.750	0.600	0.750	1.575	Cum
						88.58	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.						
	<i>PCC Below Floor</i>	1	0.542	1.10	0.15	0.09	Cum
		1	0.783	1.10	0.15	0.13	Cum
		1	4.239	1.10	0.15	0.70	Cum
		1	0.283	1.10	0.15	0.05	Cum
		1	4.276	1.10	0.15	0.71	Cum
		1	0.783	1.10	0.15	0.13	Cum
		1	0.542	1.10	0.15	0.09	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.33	1.44	0.15	0.57	Cum
	<i>Section 2-2</i>	2	2.80	1.66	0.15	1.39	Cum
	<i>Section 3-3</i>	2	5.20	1.54	0.15	2.40	Cum
	<i>Section 5-5</i>	2	3.97	1.59	0.15	1.90	Cum
	<i>Section 6-6</i>	2	1.49	1.02	0.15	0.45	Cum
	<i>Toe Wall D/S Portion</i>	1	6.85	0.75	0.30	1.54	Cum
	<i>Toe Wall D/S Portion</i>	1	6.55	0.45	0.60	1.77	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.60	0.15	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.30	0.60	0.63	Cum
	TOTAL					12.87	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.25	0.45	0.45	0.51	Cum
		2	1.25	0.80	1.16	2.30	Cum
		2	1.25	1.29	0.50	1.61	Cum
	<i>Section 2-2</i>	2	2.65	0.82	0.50	2.17	Cum
		2	2.65	1.02	0.65	3.50	Cum
		2	2.65	1.36	1.00	7.21	Cum
	<i>Section 3-3</i>	2	4.83	0.82	0.50	3.96	Cum
		2	4.83	0.96	0.45	4.15	Cum
		2	4.83	1.24	1.20	14.36	Cum
	<i>Section 5-5</i>	2	3.93	0.45	0.45	1.59	Cum
		2	3.93	0.80	1.16	7.24	Cum
		2	3.93	1.29	0.50	5.08	Cum
	<i>Section 6-6</i>	2	2.11	0.45	0.45	0.85	Cum
		2	2.11	0.59	0.45	1.11	Cum
		2	2.11	0.87	0.50	1.83	Cum
	<i>Floor</i>	1	0.63	1.10	0.70	0.48	Cum
		1	5.00	1.10	0.50	2.75	Cum
		1	0.17	1.10	0.20	0.04	Cum
		1	0.20	1.10	0.40	0.09	Cum
		1	5.30	1.10	0.50	2.92	Cum
		1	0.63	1.10	0.70	0.48	Cum
	<i>Crest</i>	1	0.87	1.10	0.75	0.71	Cum
	TOTAL					64.93	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	1.10	0.15	0.12	Cum
	Coping over Abutment Top	2	7.52	0.45	0.05	0.34	Cum
	Slab Bridge						
	Slab	1	1.90	6.5	0.34	4.14	Cum
	Wearing coat	1	1.90	5.50	0.07	0.73	Cum
	Dirt wall	2	0.40	6.5	0.30	1.56	Cum
	300 mm thick pedestal	2	0.82	6.5	0.30	3.20	Cum
	TOTAL					10.09	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	36	2.36		1.578	134.1	Kg
a2	10	10	6.90		0.616	42.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	2.28		0.616	32.3	Kg
a5	10	7	6.80		0.616	29.3	Kg
x1	12	32	2.50		0.888	71.0	Kg
x2	16	32	1.94		1.578	98.0	Kg
x3	12	24	1.80		0.888	38.3	Kg
	Taking Skin reinforcement @0.3% of M-20	64.93	0.30%	0.19	7850	1529.18	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					1982.72	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					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	1.25		0.45	2.24	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.25		1.16	5.77	Sqm
		4		0.80	1.16	3.69	Sqm
		4	1.25		0.50	2.49	Sqm
		4		1.29	0.50	2.59	Sqm
	Section 2-2	4	2.65		0.50	5.30	Sqm
		4		0.82	0.50	1.64	Sqm
		4	2.65		0.65	6.89	Sqm
		4		1.02	0.65	2.64	Sqm
		4	2.65		1.00	10.60	Sqm
		4		1.36	1.00	5.44	Sqm
	Section 3-3	4	4.83		0.50	9.65	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.83		0.45	8.69	Sqm
		4		0.96	0.45	1.72	Sqm
		4	4.83		1.20	23.16	Sqm
		4		1.24	1.20	5.95	Sqm
	Section 5-5	4	3.93		0.45	7.07	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.93		1.16	18.18	Sqm
		4		0.80	1.16	3.69	Sqm
		4	3.93		0.50	7.86	Sqm
		4		1.29	0.50	2.59	Sqm
	Section 6-6	4	2.11		0.45	3.79	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.11		0.45	3.79	Sqm
		4		0.59	0.45	1.05	Sqm
		4	2.11		0.50	4.21	Sqm
		4		0.87	0.50	1.74	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.10	0.70	1.54	Sqm
		2	5.00		0.50	5.00	Sqm
		2		1.10	0.50	1.10	Sqm
		2	0.17		0.20	0.07	Sqm
		2		1.10	0.20	0.44	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.10	0.40	0.88	Sqm
		2	5.30		0.50	5.30	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.10	0.50	1.10	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.10	0.70	1.54	Sqm
	Crest	2	0.866		0.747	1.29	Sqm
		2		1.1	0.747	1.64	Sqm
	Toe Wall D/S Portion	2	6.85		0.30	4.11	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	6.55		0.60	7.86	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.75		0.15	1.05	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	1.75		0.60	4.20	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					197.60	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	1.75	2.86		10.02	Sqm
	TOTAL					10.02	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.75	0.50	0.30	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	0.50	0.15	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	7.52	0.45		3.39	Sqm
	On Abutment Top (Right Side)	1	7.52	0.45		3.39	Sqm
	TOTAL					6.77	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		1.20		1.20	Cum
	Abutment						
	Section 1-1	2	1.33	0.63		1.664	Cum
	Section 2-2	2	2.80	1.18		6.588	Cum
	Section 3-3	2	5.20	1.00		10.368	Cum
	Section 5-5	2	3.97	0.63		4.989	Cum
	Section 6-6	2	1.49	0.44		1.307	Cum
	D/S protection	2					
	Toe wall	2	6.85	0.15	0.60	1.233	Cum
		2	1.75	0.15	0.60	2.100	Cum
	TOTAL					29.45	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.915 METER AT CH. 23.050 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.02	1.63	1.839	6.117	Cum
	<i>Section 2-2</i>	2	2.00	1.60	1.839	11.770	Cum
	<i>Section 3-3</i>	2	6.45	1.48	1.839	35.110	Cum
	<i>Section 5-5</i>	2	3.09	1.78	1.839	20.248	Cum
	<i>Section 6-6</i>	2	1.20	0.96	1.839	4.219	Cum
	<i>U/S Key Floor</i>	1	0.613	0.900	0.800	0.441	Cum
	<i>U/S Floor</i>	1	2.000	0.900	1.815	3.267	Cum
	<i>D/S Floor</i>	1	2.000	0.900	0.850	1.530	Cum
		1	6.500	0.900	0.650	3.803	Cum
	<i>D/S Key Floor</i>	1	0.625	0.900	0.850	0.478	Cum
	<i>Toe Wall D/S Portion</i>	1	5.950	0.750	0.900	4.016	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						92.35	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.						
	<i>PCC Below Floor</i>	1	0.542	0.90	0.15	0.07	Cum
		1	0.726	0.90	0.15	0.10	Cum
		1	3.401	0.90	0.15	0.46	Cum
		1	0.353	0.90	0.15	0.05	Cum
		1	5.088	0.90	0.15	0.69	Cum
		1	0.783	0.90	0.15	0.11	Cum
		1	0.542	0.90	0.15	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.02	1.63	0.15	0.50	Cum
	<i>Section 2-2</i>	2	2.00	1.60	0.15	0.96	Cum
	<i>Section 3-3</i>	2	6.45	1.48	0.15	2.86	Cum
	<i>Section 5-5</i>	2	3.09	1.78	0.15	1.65	Cum
	<i>Section 6-6</i>	2	1.20	0.96	0.15	0.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.95	0.75	0.30	1.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.65	0.45	0.60	1.53	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					11.54	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.79	0.45	0.45	0.32	Cum
		2	0.79	0.89	1.47	2.07	Cum
		2	0.79	1.48	0.55	1.29	Cum
	<i>Section 2-2</i>	2	2.00	0.82	0.50	1.64	Cum
		2	2.00	0.99	0.55	2.17	Cum
		2	2.00	1.30	1.00	5.20	Cum
	<i>Section 3-3</i>	2	6.20	0.82	0.50	5.08	Cum
		2	6.20	0.93	0.35	4.01	Cum
		2	6.20	1.18	1.20	17.54	Cum
	<i>Section 5-5</i>	2	3.05	0.45	0.45	1.24	Cum
		2	3.05	0.89	1.47	7.96	Cum
		2	3.05	1.48	0.55	4.97	Cum
	<i>Section 6-6</i>	2	1.79	0.45	0.45	0.72	Cum
		2	1.79	0.56	0.35	0.69	Cum
		2	1.79	0.81	0.50	1.45	Cum
	<i>Floor</i>	1	0.61	0.90	0.65	0.36	Cum
		1	4.00	0.90	0.50	1.80	Cum
		1	0.33	0.90	0.25	0.07	Cum
		1	0.20	0.90	0.40	0.07	Cum
		1	6.30	0.90	0.50	2.84	Cum
		1	0.63	0.90	0.70	0.39	Cum
	<i>Crest</i>	1	0.77	0.90	1.05	0.73	Cum
	TOTAL					62.60	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	0.90	0.15	0.08	Cum
	Coping over Abutment Top	2	7.02	0.45	0.05	0.32	Cum
	Slab Bridge						
	Slab	1	1.70	6.5	0.34	3.70	Cum
	Wearing coat	1	1.70	5.50	0.07	0.65	Cum
	Dirt wall	2	0.40	6.5	0.30	1.56	Cum
	300 mm thick pedestal	2	0.82	6.5	0.30	3.20	Cum
	TOTAL					9.51	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.	Quantity	Percent		Density		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	36	7.06		1.578	401.1	Kg
a2	10	9	7.30		0.616	40.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	2.08		0.616	29.5	Kg
a5	10	6	6.80		0.616	25.2	Kg
x1	12	28	2.50		0.888	62.2	Kg
x2	16	28	1.94		1.578	85.7	Kg
x3	12	24	1.60		0.888	34.1	Kg
	Taking Skin reinforcement @0.3% of M-20	62.60	0.30%	0.19	7850	1474.29	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					2160.40	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					2.16	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	0.79		0.45	1.43	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.79		1.47	4.64	Sqm
		4		0.89	1.47	5.21	Sqm
		4	0.79		0.55	1.74	Sqm
		4		1.48	0.55	3.25	Sqm
	Section 2-2	4	2.00		0.50	4.00	Sqm
		4		0.82	0.50	1.64	Sqm
		4	2.00		0.55	4.40	Sqm
		4		0.99	0.55	2.17	Sqm
		4	2.00		1.00	8.00	Sqm
		4		1.30	1.00	5.20	Sqm
	Section 3-3	4	6.20		0.50	12.39	Sqm
		4		0.82	0.50	1.64	Sqm
		4	6.20		0.35	8.67	Sqm
		4		0.93	0.35	1.30	Sqm
		4	6.20		1.20	29.74	Sqm
		4		1.18	1.20	5.66	Sqm
	Section 5-5	4	3.05		0.45	5.49	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.05		1.47	17.89	Sqm
		4		0.89	1.47	5.21	Sqm
		4	3.05		0.55	6.72	Sqm
		4		1.48	0.55	3.25	Sqm
	Section 6-6	4	1.79		0.45	3.21	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.79		0.35	2.50	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.79		0.50	3.57	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.61		0.65	0.80	Sqm
		2		0.90	0.65	1.17	Sqm
		2	4.00		0.50	4.00	Sqm
		2		0.90	0.50	0.90	Sqm
		2	0.33		0.25	0.17	Sqm
		2		0.90	0.25	0.45	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.90	0.40	0.72	Sqm
		2	6.30		0.50	6.30	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.90	0.50	0.90	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.90	0.70	1.26	Sqm
	Crest	2	0.7745		1.048	1.62	Sqm
		2		0.9	1.048	1.89	Sqm
	Toe Wall D/S Portion	2	5.95		0.30	3.57	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.65		0.60	6.78	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					191.89	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	2.48		7.45	Sqm
	TOTAL					7.45	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.30	0.30	0.14	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	0.30	0.15	0.14	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	7.02	0.45		3.16	Sqm
	On Abutment Top (Right Side)	1	7.02	0.45		3.16	Sqm
	TOTAL					6.32	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		2.36		2.36	Cum
	Abutment						
	Section 1-1	2	1.02	0.80		1.623	Cum
	Section 2-2	2	2.00	0.89		3.545	Cum
	Section 3-3	2	6.45	1.05		13.577	Cum
	Section 5-5	2	3.09	0.80		4.920	Cum
	Section 6-6	2	1.20	0.30		0.715	Cum
	D/S protection	2					
	Toe wall	2	5.95	0.15	0.60	1.071	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					29.61	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.220 METER AT CH. 23.300 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.81	2.393	8.525	Cum
	<i>Section 2-2</i>	2	3.10	1.60	2.393	23.746	Cum
	<i>Section 3-3</i>	2	5.70	1.48	2.393	40.375	Cum
	<i>Section 5-5</i>	2	3.01	1.96	2.393	28.307	Cum
	<i>Section 6-6</i>	2	1.20	0.96	2.393	5.490	Cum
	<i>U/S Key Floor</i>	1	0.575	0.900	0.650	0.336	Cum
	<i>U/S Floor</i>	1	2.000	0.900	2.270	4.086	Cum
	<i>D/S Floor</i>	1	3.000	0.900	1.050	2.835	Cum
		1	6.000	0.900	0.850	4.590	Cum
	<i>D/S Key Floor</i>	1	0.675	0.900	1.050	0.638	Cum
	<i>Toe Wall D/S Portion</i>	1	5.950	0.750	0.900	4.016	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						124.29	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.						
	<i>PCC Below Floor</i>	1	0.542	0.90	0.15	0.07	Cum
		1	0.559	0.90	0.15	0.08	Cum
		1	4.477	0.90	0.15	0.60	Cum
		1	0.425	0.90	0.15	0.06	Cum
		1	4.438	0.90	0.15	0.60	Cum
		1	1.006	0.90	0.15	0.14	Cum
		1	0.542	0.90	0.15	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.98	1.81	0.15	0.53	Cum
	<i>Section 2-2</i>	2	3.10	1.60	0.15	1.49	Cum
	<i>Section 3-3</i>	2	5.70	1.48	0.15	2.53	Cum
	<i>Section 5-5</i>	2	3.01	1.96	0.15	1.77	Cum
	<i>Section 6-6</i>	2	1.20	0.96	0.15	0.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.95	0.75	0.30	1.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.65	0.45	0.60	1.53	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					11.96	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.76	0.45	0.45	0.31	Cum
		2	0.76	0.98	1.77	2.62	Cum
		2	0.76	1.66	0.70	1.76	Cum
	<i>Section 2-2</i>	2	3.10	0.82	0.50	2.54	Cum
		2	3.10	0.99	0.55	3.36	Cum
		2	3.10	1.30	1.30	10.48	Cum
	<i>Section 3-3</i>	2	5.45	0.82	0.50	4.46	Cum
		2	5.45	0.93	0.35	3.53	Cum
		2	5.45	1.18	1.50	19.28	Cum
	<i>Section 5-5</i>	2	3.01	0.45	0.45	1.22	Cum
		2	3.01	0.98	1.77	10.47	Cum
		2	3.01	1.66	0.70	7.01	Cum
	<i>Section 6-6</i>	2	1.79	0.45	0.45	0.72	Cum
		2	1.79	0.56	0.35	0.69	Cum
		2	1.79	0.81	0.50	1.45	Cum
	<i>Floor</i>	1	0.58	0.90	0.50	0.26	Cum
		1	5.00	0.90	0.70	3.15	Cum
		1	0.36	0.90	0.30	0.10	Cum
		1	0.20	0.90	0.50	0.09	Cum
		1	5.80	0.90	0.60	3.13	Cum
		1	0.68	0.90	0.90	0.55	Cum
	<i>Crest</i>	1	0.83	0.90	1.35	1.00	Cum
	TOTAL					78.18	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	0.90	0.15	0.08	Cum
	Coping over Abutment Top	2	7.47	0.45	0.05	0.34	Cum
	Slab Bridge						
	Slab	1	1.70	6.5	0.34	3.70	Cum
	Wearing coat	1	1.70	5.50	0.07	0.65	Cum
	Dirt wall	2	0.40	6.5	0.30	1.56	Cum
	300 mm thick pedestal	2	0.82	6.5	0.30	3.20	Cum
	TOTAL					9.53	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	36	6.56		1.578	372.7	Kg
a2	10	9	6.90		0.616	38.3	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	2.08		0.616	29.5	Kg
a5	10	6	6.80		0.616	25.2	Kg
x1	12	28	2.50		0.888	62.2	Kg
x2	16	28	1.94		1.578	85.7	Kg
x3	12	24	1.60		0.888	34.1	Kg
	Taking Skin reinforcement @0.3% of M-20	78.18	0.30%	0.23	7850	1841.06	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					2496.54	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					2.50	MT

6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	0.76		0.45	1.36	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.76		1.77	5.35	Sqm
		4		0.98	1.77	6.95	Sqm
		4	0.76		0.70	2.11	Sqm
		4		1.66	0.70	4.65	Sqm
	Section 2-2	4	3.10		0.50	6.20	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.10		0.55	6.82	Sqm
		4		0.99	0.55	2.17	Sqm
		4	3.10		1.30	16.13	Sqm
		4		1.30	1.30	6.76	Sqm
	Section 3-3	4	5.45		0.50	10.89	Sqm
		4		0.82	0.50	1.64	Sqm
		4	5.45		0.35	7.62	Sqm
		4		0.93	0.35	1.30	Sqm
		4	5.45		1.50	32.67	Sqm
		4		1.18	1.50	7.08	Sqm
	Section 5-5	4	3.01		0.45	5.43	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.01		1.77	21.34	Sqm
		4		0.98	1.77	6.95	Sqm
		4	3.01		0.70	8.44	Sqm
		4		1.66	0.70	4.65	Sqm
	Section 6-6	4	1.79		0.45	3.21	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.79		0.35	2.50	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.79		0.50	3.57	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.58		0.50	0.58	Sqm
		2		0.90	0.50	0.90	Sqm
		2	5.00		0.70	7.00	Sqm
		2		0.90	0.70	1.26	Sqm
		2	0.36		0.30	0.21	Sqm
		2		0.90	0.30	0.54	Sqm
		2	0.20		0.50	0.20	Sqm
		2		0.90	0.50	0.90	Sqm
		2	5.80		0.60	6.96	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.90	0.60	1.08	Sqm
		2	0.68		0.90	1.22	Sqm
		2		0.90	0.90	1.62	Sqm
	Crest	2	0.825		1.35	2.23	Sqm
		2		0.9	1.35	2.43	Sqm
	Toe Wall D/S Portion	2	5.95		0.30	3.57	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.65		0.60	6.78	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					226.29	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	2.48		7.45	Sqm
	TOTAL					7.45	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.30	0.30	0.14	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	0.30	0.15	0.14	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	0.45		3.36	Sqm
	On Abutment Top (Right Side)	1	7.47	0.45		3.36	Sqm
	TOTAL					6.72	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		2.81		2.81	Cum
	Abutment						
	Section 1-1	2	0.98	1.28		2.520	Cum
	Section 2-2	2	3.10	1.11		6.906	Cum
	Section 3-3	2	5.70	0.96		10.961	Cum
	Section 5-5	2	3.01	1.28		7.729	Cum
	Section 6-6	2	1.20	0.48		1.145	Cum
	D/S protection	2					
	Toe wall	2	5.95	0.15	0.60	1.071	Cum
		2	1.50	0.15	0.60	1.800	Cum
	TOTAL					34.94	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR CHAURAHA MR.							
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 3.190 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.20	1.99	2.854	13.572	Cum
	<i>Section 2-2</i>	2	3.10	1.26	2.854	22.288	Cum
	<i>Section 3-3</i>	2	1.13	1.14	2.654	6.838	Cum
	<i>Section 5-5</i>	2	2.93	2.14	2.854	35.745	Cum
	<i>Section 6-6</i>	2	1.71	1.14	2.654	10.317	Cum
	<i>U/S Key Floor</i>	1	0.600	2.150	0.750	0.968	Cum
	<i>U/S Floor</i>	1	2.000	2.150	1.846	7.938	Cum
	<i>D/S Floor</i>	1	3.500	2.150	0.950	7.149	Cum
		1	2.000	2.150	0.750	3.225	Cum
	<i>D/S Key Floor</i>	1	0.700	2.150	1.150	1.731	Cum
	<i>Toe Wall D/S Portion</i>	1	6.700	0.750	0.900	4.523	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.500	0.600	0.750	2.250	Cum
						116.54	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.						
	<i>PCC Below Floor</i>	1	0.542	2.15	0.15	0.17	Cum
		1	0.670	2.15	0.15	0.22	Cum
		1	5.167	2.15	0.15	1.67	Cum
		1	0.424	2.15	0.15	0.14	Cum
		1	0.146	2.15	0.15	0.05	Cum
		1	1.118	2.15	0.15	0.36	Cum
		1	0.542	2.15	0.15	0.17	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.20	1.99	0.15	0.71	Cum
	<i>Section 2-2</i>	2	3.10	1.26	0.15	1.17	Cum
	<i>Section 3-3</i>	2	1.13	1.14	0.15	0.39	Cum
	<i>Section 5-5</i>	2	2.93	2.14	0.15	1.88	Cum
	<i>Section 6-6</i>	2	1.71	1.14	0.15	0.58	Cum
	<i>Toe Wall D/S Portion</i>	1	6.70	0.75	0.30	1.51	Cum
	<i>Toe Wall D/S Portion</i>	1	6.40	0.45	0.60	1.73	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.60	0.15	0.45	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.50	0.30	0.60	0.90	Cum
	TOTAL					12.09	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.97	0.45	0.45	0.39	Cum
		2	0.97	0.99	1.81	3.50	Cum
		2	0.97	1.69	0.60	1.97	Cum
	<i>Section 2-2</i>	2	3.10	0.45	0.45	1.26	Cum
		2	3.10	0.71	0.85	3.71	Cum
		2	3.10	1.11	0.60	4.13	Cum
	<i>Section 3-3</i>	2	1.36	0.45	0.45	0.55	Cum
		2	1.36	0.65	0.65	1.14	Cum
		2	1.36	0.99	0.50	1.34	Cum
	<i>Section 5-5</i>	2	2.89	0.45	0.45	1.17	Cum
		2	2.89	0.99	1.81	10.40	Cum
		2	2.89	1.69	0.60	5.84	Cum
	<i>Section 6-6</i>	2	1.63	0.45	0.45	0.66	Cum
		2	1.63	0.65	0.65	1.37	Cum
		2	1.63	0.99	0.50	1.61	Cum
	<i>Floor</i>	1	0.60	2.15	0.60	0.77	Cum
		1	5.50	2.15	0.60	7.10	Cum
		1	0.61	2.15	0.30	0.39	Cum
		1	0.20	2.15	0.40	0.17	Cum
		1	1.80	2.15	0.50	1.94	Cum
		1	0.70	2.15	1.00	1.51	Cum
	<i>Crest</i>	1	1.06	2.15	1.31	2.98	Cum
	TOTAL					53.90	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.						
	<i>Over Crest</i>	1	0.85	2.15	0.15	0.27	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.99	0.45	0.05	0.25	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.99	0.45	0.05	0.25	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	53.90	0.30%	0.16	7850	1269.29	Kg
	Total Weight in Metric Tonne					1.27	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.97		0.45	1.75	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.97		1.81	7.05	Sqm
		4		0.99	1.81	7.21	Sqm
		4	0.97		0.60	2.33	Sqm
		4		1.69	0.60	4.05	Sqm
	<i>Section 2-2</i>	4	3.10		0.45	5.58	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.10		0.85	10.54	Sqm
		4		0.71	0.85	2.40	Sqm
		4	3.10		0.60	7.44	Sqm
		4		1.11	0.60	2.66	Sqm
	<i>Section 3-3</i>	4	1.36		0.45	2.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.36		0.65	3.52	Sqm
		4		0.65	0.65	1.68	Sqm
		4	1.36		0.50	2.71	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Section 5-5</i>	4	2.89		0.45	5.19	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.89		1.81	20.93	Sqm
		4		0.99	1.81	7.21	Sqm
		4	2.89		0.60	6.92	Sqm
		4		1.69	0.60	4.05	Sqm
	<i>Section 6-6</i>	4	1.63		0.45	2.93	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.63		0.65	4.24	Sqm
		4		0.65	0.65	1.68	Sqm
		4	1.63		0.50	3.26	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Floor</i>	2	0.60		0.60	0.72	Sqm
		2		2.15	0.60	2.58	Sqm
		2	5.50		0.60	6.60	Sqm
		2		2.15	0.60	2.58	Sqm
		2	0.61		0.30	0.36	Sqm
		2		2.15	0.30	1.29	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.15	0.40	1.72	Sqm
		2	1.80		0.50	1.80	Sqm
		2		2.15	0.50	2.15	Sqm
		2	0.70		1.00	1.40	Sqm
		2		2.15	1.00	4.30	Sqm
	<i>Crest</i>	2	1.06		1.309	2.78	Sqm
		2		2.15	1.309	5.63	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.70		0.30	4.02	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.40		0.60	7.68	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.50		0.15	1.50	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.50		0.60	6.00	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					181.12	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.						
	<i>In D/S Portion On Slopes</i>	2	2.50	2.32		11.61	Sqm
	TOTAL					11.61	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.50	1.55	0.30	1.16	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	1.55	0.15	1.16	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.99	0.45		4.95	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.99	0.45		4.95	Sqm
	TOTAL					9.89	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		4.74		4.74	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.20	2.00		4.786	Cum
	<i>Section 2-2</i>	2	3.10	0.97		5.993	Cum
	<i>Section 3-3</i>	2	1.13	0.74		1.675	Cum
	<i>Section 5-5</i>	2	2.93	2.00		11.722	Cum
	<i>Section 6-6</i>	2	1.71	0.74		2.527	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	6.70	0.08		1.072	Cum
		2	2.50	0.08		0.383	Cum
	TOTAL					32.90	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 4.175 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.13	1.53	1.261	4.387	Cum
	<i>Section 2-2</i>	2	4.10	1.78	1.261	18.406	Cum
	<i>Section 3-3</i>	2	3.70	1.66	1.261	15.490	Cum
	<i>Section 5-5</i>	2	2.75	1.68	1.261	11.690	Cum
	<i>Section 6-6</i>	2	0.77	0.96	1.261	1.852	Cum
	<i>U/S Key Floor</i>	1	0.625	2.150	0.850	1.142	Cum
	<i>U/S Floor</i>	1	2.000	2.150	1.815	7.805	Cum
	<i>D/S Floor</i>	1	3.750	2.150	0.850	6.853	Cum
		1	3.750	2.150	0.650	5.241	Cum
	<i>D/S Key Floor</i>	1	0.625	2.150	0.850	1.142	Cum
	<i>Toe Wall D/S Portion</i>	1	6.700	0.750	0.900	4.523	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	2.450	0.750	7.350	Cum
						85.88	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.						
	<i>PCC Below Floor</i>	1	0.542	2.15	0.15	0.17	Cum
		1	0.726	2.15	0.15	0.23	Cum
		1	5.367	2.15	0.15	1.73	Cum
		1	0.282	2.15	0.15	0.09	Cum
		1	2.147	2.15	0.15	0.69	Cum
		1	0.782	2.15	0.15	0.25	Cum
		1	0.542	2.15	0.15	0.17	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.13	1.53	0.15	0.52	Cum
	<i>Section 2-2</i>	2	4.10	1.78	0.15	2.19	Cum
	<i>Section 3-3</i>	2	3.70	1.66	0.15	1.84	Cum
	<i>Section 5-5</i>	2	2.75	1.68	0.15	1.39	Cum
	<i>Section 6-6</i>	2	0.77	0.96	0.15	0.22	Cum
	<i>Toe Wall D/S Portion</i>	1	6.70	0.75	0.30	1.51	Cum
	<i>Toe Wall D/S Portion</i>	1	6.40	0.45	0.60	1.73	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	2.45	0.15	1.47	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	2.45	0.60	5.88	Cum
	TOTAL					20.10	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.56	0.45	0.45	0.23	Cum
		2	0.56	0.84	1.31	1.23	Cum
		2	0.56	1.38	0.50	0.78	Cum
	<i>Section 2-2</i>	2	4.10	0.82	0.50	3.36	Cum
		2	4.10	1.08	0.85	7.49	Cum
		2	4.10	1.48	1.00	12.14	Cum
	<i>Section 3-3</i>	2	3.36	0.82	0.50	2.75	Cum
		2	3.36	1.02	0.65	4.43	Cum
		2	3.36	1.36	1.20	10.95	Cum
	<i>Section 5-5</i>	2	2.72	0.45	0.45	1.10	Cum
		2	2.72	0.84	1.31	5.98	Cum
		2	2.72	1.38	0.50	3.76	Cum
	<i>Section 6-6</i>	2	1.45	0.45	0.45	0.59	Cum
		2	1.45	0.56	0.65	1.04	Cum
		2	1.45	0.81	0.50	1.17	Cum
	<i>Floor</i>	1	0.63	2.15	0.70	0.94	Cum
		1	5.75	2.15	0.50	6.18	Cum
		1	0.55	2.15	0.20	0.24	Cum
		1	0.20	2.15	0.40	0.17	Cum
		1	3.55	2.15	0.50	3.82	Cum
		1	0.63	2.15	0.70	0.94	Cum
	<i>Crest</i>	1	0.79	2.15	0.87	1.47	Cum
	TOTAL					70.75	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	0.65	2.15	0.15	0.21	Cum
	Coping over Abutment Top	2	7.42	0.45	0.05	0.33	Cum
	Slab Bridge						
	Slab	1	2.95	5.5	0.41	6.59	Cum
	Wearing coat	1	2.95	4.50	0.07	0.93	Cum
	Dirt wall	2	0.40	5.5	0.30	1.32	Cum
	300 mm thick pedestal	2	0.82	5.5	0.30	2.71	Cum
	TOTAL					12.09	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		
	<i>Dia of Bars</i>	No.	Length		Weight per m	Quantity	Unit
a1	16	31	3.41		1.578	166.8	Kg
a2	10	15	6.30		0.616	58.3	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	3.33		0.616	39.0	Kg
a5	10	11	5.80		0.616	39.3	Kg
x1	12	48	2.50		0.888	106.6	Kg
x2	16	48	1.94		1.578	147.0	Kg
x3	12	20	2.85		0.888	50.6	Kg
	Taking Skin reinforcement @0.3% of M-20	70.75	0.30%	0.21	7850	1666.13	Kg
	TOTAL REINFORCEMENT STEEL (in kg)					2280.32	Kg'
	TOTAL REINFORCEMENT STEEL (in MT)					2.28	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	0.56		0.45	1.01	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.56		1.31	2.93	Sqm
		4		0.84	1.31	4.40	Sqm
		4	0.56		0.50	1.12	Sqm
		4		1.38	0.50	2.77	Sqm
	Section 2-2	4	4.10		0.50	8.20	Sqm
		4		0.82	0.50	1.64	Sqm
		4	4.10		0.85	13.94	Sqm
		4		1.08	0.85	3.66	Sqm
		4	4.10		1.00	16.40	Sqm
		4		1.48	1.00	5.92	Sqm
	Section 3-3	4	3.36		0.50	6.71	Sqm
		4		0.82	0.50	1.64	Sqm
		4	3.36		0.65	8.72	Sqm
		4		1.02	0.65	2.64	Sqm
		4	3.36		1.20	16.10	Sqm
		4		1.36	1.20	6.53	Sqm
	Section 5-5	4	2.72		0.45	4.89	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.72		1.31	14.21	Sqm
		4		0.84	1.31	4.40	Sqm
		4	2.72		0.50	5.44	Sqm
		4		1.38	0.50	2.77	Sqm
	Section 6-6	4	1.45		0.45	2.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.45		0.65	3.76	Sqm
		4		0.56	0.65	1.44	Sqm
		4	1.45		0.50	2.89	Sqm
		4		0.81	0.50	1.62	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		2.15	0.70	3.01	Sqm
		2	5.75		0.50	5.75	Sqm
		2		2.15	0.50	2.15	Sqm
		2	0.55		0.20	0.22	Sqm
		2		2.15	0.20	0.86	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.15	0.40	1.72	Sqm
		2	3.55		0.50	3.55	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		2.15	0.50	2.15	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.15	0.70	3.01	Sqm
	Crest	2	0.786		0.867	1.36	Sqm
		2		2.15	0.867	3.73	Sqm
	Toe Wall D/S Portion	2	6.70		0.30	4.02	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	6.40		0.60	7.68	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	2.00		0.15	1.20	Sqm
		4		2.45	0.15	1.47	Sqm
	Toe Wall for resting Brick Edging	4	2.00		0.60	4.80	Sqm
		4		2.45	0.60	5.88	Sqm
	TOTAL					206.23	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	2.32		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	1.55	0.30	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	2.00	1.55	0.15	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	7.42	0.45		3.34	Sqm
	On Abutment Top (Right Side)	1	7.42	0.45		3.34	Sqm
	TOTAL					6.67	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		1.97		1.97	Cum
	Abutment						
	Section 1-1	2	1.13	0.37		0.840	Cum
	Section 2-2	2	4.10	0.45		3.649	Cum
	Section 3-3	2	3.70	0.35		2.619	Cum
	Section 5-5	2	2.75	0.37		2.038	Cum
	Section 6-6	2	0.77	0.30		0.457	Cum
	D/S protection	2					
	Toe wall	2	6.70	0.15	0.60	1.206	Cum
		2	2.00	0.15	0.60	2.400	Cum
	TOTAL					15.18	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 6.000 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.92	1.50	0.850	2.356	Cum
	<i>Section 2-2</i>	2	2.00	1.17	0.850	3.978	Cum
	<i>Section 3-3</i>	2	2.18	1.05	0.650	2.969	Cum
	<i>Section 5-5</i>	2	2.48	1.65	0.850	6.966	Cum
	<i>Section 6-6</i>	2	1.53	1.05	0.650	2.082	Cum
	<i>U/S Key Floor</i>	1	0.625	1.750	0.850	0.930	Cum
	<i>U/S Floor</i>	1	2.000	1.750	1.155	4.043	Cum
	<i>D/S Floor</i>	1	1.976	1.750	0.850	2.939	Cum
	<i>D/S Key Floor</i>	1	3.000	1.750	0.650	3.413	Cum
	<i>Toe Wall D/S Portion</i>	1	0.625	1.750	0.650	0.711	Cum
	<i>Toe Wall D/S Portion</i>	1	5.850	0.750	0.900	3.949	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.750	0.600	0.750	1.575	Cum
						35.91	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.						
	<i>PCC Below Floor</i>	1	0.542	1.75	0.15	0.14	Cum
		1	0.782	1.75	0.15	0.21	Cum
		1	3.567	1.75	0.15	0.94	Cum
		1	0.282	1.75	0.15	0.07	Cum
		1	1.446	1.75	0.15	0.38	Cum
		1	0.782	1.75	0.15	0.21	Cum
		1	0.542	1.75	0.15	0.14	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.92	1.50	0.15	0.42	Cum
	<i>Section 2-2</i>	2	2.00	1.17	0.15	0.70	Cum
	<i>Section 3-3</i>	2	2.18	1.05	0.15	0.69	Cum
	<i>Section 5-5</i>	2	2.48	1.65	0.15	1.23	Cum
	<i>Section 6-6</i>	2	1.53	1.05	0.15	0.48	Cum
	<i>Toe Wall D/S Portion</i>	1	5.85	0.75	0.30	1.32	Cum
	<i>Toe Wall D/S Portion</i>	1	5.55	0.45	0.60	1.50	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.60	0.15	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.75	0.30	0.60	0.63	Cum
	TOTAL					9.36	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.77	0.45	0.45	0.31	Cum
		2	0.77	0.75	1.01	1.16	Cum
		2	0.77	1.20	0.50	0.93	Cum
	<i>Section 2-2</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.66	0.70	1.85	Cum
		2	2.00	1.02	0.50	2.04	Cum
	<i>Section 3-3</i>	2	2.40	0.45	0.45	0.97	Cum
		2	2.40	0.60	0.50	1.44	Cum
		2	2.40	0.90	0.50	2.16	Cum
	<i>Section 5-5</i>	2	2.94	0.45	0.45	1.19	Cum
		2	2.94	0.75	1.01	4.44	Cum
		2	2.94	1.20	0.50	3.53	Cum
	<i>Section 6-6</i>	2	1.45	0.45	0.45	0.59	Cum
		2	1.45	0.60	0.50	0.87	Cum
		2	1.45	0.90	0.50	1.31	Cum
	<i>Floor</i>	1	0.63	1.75	0.70	0.77	Cum
		1	3.98	1.75	0.50	3.48	Cum
		1	0.50	1.75	0.20	0.17	Cum
		1	0.20	1.75	0.40	0.14	Cum
		1	2.80	1.75	0.50	2.45	Cum
		1	0.63	1.75	0.50	0.55	Cum
	<i>Crest</i>	1	0.70	1.75	0.64	0.78	Cum
	TOTAL					31.93	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	1.75	0.15	0.16	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.75	0.45	0.05	0.22	Cum
	On Abutment Top (Right Side)	1	9.75	0.45	0.05	0.22	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	31.93	0.30%	0.10	7850	751.90	Kg
	Total Weight in Metric Tonne					0.75	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		0.45	1.39	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.77		1.01	3.10	Sqm
		4		0.75	1.01	3.02	Sqm
		4	0.77		0.50	1.54	Sqm
		4		1.20	0.50	2.41	Sqm
	Section 2-2	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.00		0.70	5.60	Sqm
		4		0.66	0.70	1.85	Sqm
		4	2.00		0.50	4.00	Sqm
		4		1.02	0.50	2.04	Sqm
	Section 3-3	4	2.40		0.45	4.32	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.40		0.50	4.80	Sqm
		4		0.60	0.50	1.20	Sqm
		4	2.40		0.50	4.80	Sqm
		4		0.90	0.50	1.80	Sqm
	Section 5-5	4	2.94		0.45	5.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.94		1.01	11.81	Sqm
		4		0.75	1.01	3.02	Sqm
		4	2.94		0.50	5.88	Sqm
		4		1.20	0.50	2.41	Sqm
	Section 6-6	4	1.45		0.45	2.61	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.45		0.50	2.90	Sqm
		4		0.60	0.50	1.20	Sqm
		4	1.45		0.50	2.90	Sqm
		4		0.90	0.50	1.80	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.75	0.70	2.45	Sqm
		2	3.98		0.50	3.98	Sqm
		2		1.75	0.50	1.75	Sqm
		2	0.50		0.20	0.20	Sqm
		2		1.75	0.20	0.70	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.75	0.40	1.40	Sqm
		2	2.80		0.50	2.80	Sqm
		2		1.75	0.50	1.75	Sqm
		2	0.63		0.50	0.63	Sqm
		2		1.75	0.50	1.75	Sqm
	Crest	2	0.6975		0.636	0.89	Sqm
		2		1.75	0.636	2.23	Sqm
	Toe Wall D/S Portion	2	5.85		0.30	3.51	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.55		0.60	6.66	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.75		0.15	1.05	Sqm
		4		0.60	0.15	0.36	Sqm
	Toe Wall for resting Brick Edging	4	1.75		0.60	4.20	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					128.36	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.						
	<i>In D/S Portion On Slopes</i>	2	1.75	2.05		7.18	Sqm
	TOTAL					7.18	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.75	1.15	0.30	0.60	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	1.15	0.15	0.60	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.75	0.45		4.39	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.75	0.45		4.39	Sqm
	TOTAL					8.77	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.39		1.39	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.92	0.13		0.246	Cum
	<i>Section 2-2</i>	2	2.00	0.13		0.534	Cum
	<i>Section 3-3</i>	2	2.18	0.07		0.305	Cum
	<i>Section 5-5</i>	2	2.48	0.13		0.662	Cum
	<i>Section 6-6</i>	2	1.53	0.07		0.214	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.85	0.09		1.053	Cum
		2	1.75	0.08		0.265	Cum
	TOTAL					4.67	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 6.750 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.56	1.218	3.616	Cum
	<i>Section 2-2</i>	2	2.00	1.14	1.218	5.554	Cum
	<i>Section 3-3</i>	2	2.19	1.02	1.018	4.548	Cum
	<i>Section 5-5</i>	2	2.36	1.71	1.218	9.864	Cum
	<i>Section 6-6</i>	2	1.47	1.02	1.018	3.042	Cum
	<i>U/S Key Floor</i>	1	0.625	1.200	0.850	0.638	Cum
	<i>U/S Floor</i>	1	2.000	1.200	1.218	2.923	Cum
	<i>D/S Floor</i>	1	2.000	1.200	0.850	2.040	Cum
		1	3.000	1.200	0.650	2.340	Cum
	<i>D/S Key Floor</i>	1	0.625	1.200	0.650	0.488	Cum
	<i>Toe Wall D/S Portion</i>	1	5.150	0.750	0.900	3.476	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						39.88	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.						
	<i>PCC Below Floor</i>	1	0.542	1.20	0.15	0.10	Cum
		1	0.782	1.20	0.15	0.14	Cum
		1	3.617	1.20	0.15	0.65	Cum
		1	0.282	1.20	0.15	0.05	Cum
		1	1.396	1.20	0.15	0.25	Cum
		1	0.782	1.20	0.15	0.14	Cum
		1	0.542	1.20	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.56	0.15	0.45	Cum
	<i>Section 2-2</i>	2	2.00	1.14	0.15	0.68	Cum
	<i>Section 3-3</i>	2	2.19	1.02	0.15	0.67	Cum
	<i>Section 5-5</i>	2	2.36	1.71	0.15	1.21	Cum
	<i>Section 6-6</i>	2	1.47	1.02	0.15	0.45	Cum
	<i>Toe Wall D/S Portion</i>	1	5.15	0.75	0.30	1.16	Cum
	<i>Toe Wall D/S Portion</i>	1	4.85	0.45	0.60	1.31	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.17	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.80	0.45	0.45	0.32	Cum
		2	0.80	0.78	1.11	1.38	Cum
		2	0.80	1.26	0.50	1.01	Cum
	<i>Section 2-2</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.65	0.65	1.68	Cum
		2	2.00	0.99	0.50	1.98	Cum
	<i>Section 3-3</i>	2	2.42	0.45	0.45	0.98	Cum
		2	2.42	0.59	0.45	1.27	Cum
		2	2.42	0.87	0.50	2.10	Cum
	<i>Section 5-5</i>	2	2.32	0.45	0.45	0.94	Cum
		2	2.32	0.78	1.11	4.01	Cum
		2	2.32	1.26	0.50	2.93	Cum
	<i>Section 6-6</i>	2	1.39	0.45	0.45	0.56	Cum
		2	1.39	0.59	0.45	0.73	Cum
		2	1.39	0.87	0.50	1.21	Cum
	<i>Floor</i>	1	0.63	1.20	0.70	0.53	Cum
		1	4.00	1.20	0.50	2.40	Cum
		1	0.55	1.20	0.20	0.13	Cum
		1	0.20	1.20	0.40	0.10	Cum
		1	2.80	1.20	0.50	1.68	Cum
		1	0.63	1.20	0.50	0.38	Cum
	<i>Crest</i>	1	0.72	1.20	0.76	0.65	Cum
	TOTAL					27.78	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	1.20	0.15	0.11	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.61	0.45	0.05	0.22	Cum
	On Abutment Top (Right Side)	1	9.61	0.45	0.05	0.22	Cum
	TOTAL					0.54	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	27.78	0.30%	0.08	7850	654.34	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	0.80		0.45	1.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.80		1.11	3.54	Sqm
		4		0.78	1.11	3.46	Sqm
		4	0.80		0.50	1.60	Sqm
		4		1.26	0.50	2.53	Sqm
	Section 2-2	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.00		0.65	5.20	Sqm
		4		0.65	0.65	1.68	Sqm
		4	2.00		0.50	4.00	Sqm
		4		0.99	0.50	1.98	Sqm
	Section 3-3	4	2.42		0.45	4.35	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.42		0.45	4.35	Sqm
		4		0.59	0.45	1.05	Sqm
		4	2.42		0.50	4.83	Sqm
		4		0.87	0.50	1.74	Sqm
	Section 5-5	4	2.32		0.45	4.17	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.32		1.11	10.27	Sqm
		4		0.78	1.11	3.46	Sqm
		4	2.32		0.50	4.64	Sqm
		4		1.26	0.50	2.53	Sqm
	Section 6-6	4	1.39		0.45	2.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.39		0.45	2.50	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.39		0.50	2.78	Sqm
		4		0.87	0.50	1.74	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.20	0.70	1.68	Sqm
		2	4.00		0.50	4.00	Sqm
		2		1.20	0.50	1.20	Sqm
		2	0.55		0.20	0.22	Sqm
		2		1.20	0.20	0.48	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.20	0.40	0.96	Sqm
		2	2.80		0.50	2.80	Sqm
		2		1.20	0.50	1.20	Sqm
		2	0.63		0.50	0.63	Sqm
		2		1.20	0.50	1.20	Sqm
	Crest	2	0.718		0.759	1.09	Sqm
		2		1.2	0.759	1.82	Sqm
	Toe Wall D/S Portion	2	5.15		0.30	3.09	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.85		0.60	5.82	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					118.83	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.96		5.88	Sqm
	TOTAL					5.88	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.60	0.30	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	0.60	0.15	0.27	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.61	0.45		4.32	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.61	0.45		4.32	Sqm
	TOTAL					8.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.58		1.58	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.34		0.649	Cum
	<i>Section 2-2</i>	2	2.00	0.34		1.368	Cum
	<i>Section 3-3</i>	2	2.19	0.23		0.990	Cum
	<i>Section 5-5</i>	2	2.36	0.34		1.616	Cum
	<i>Section 6-6</i>	2	1.47	0.23		0.662	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	5.15	0.09		0.901	Cum
		2	1.50	0.08		0.233	Cum
	TOTAL					7.99	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 7.050 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.37	1.709	4.450	Cum
	<i>Section 2-2</i>	2	2.00	1.10	1.709	7.506	Cum
	<i>Section 3-3</i>	2	2.70	0.98	1.509	7.969	Cum
	<i>Section 5-5</i>	2	2.37	1.52	1.709	12.337	Cum
	<i>Section 6-6</i>	2	1.00	0.98	1.509	2.943	Cum
	<i>U/S Key Floor</i>	1	0.625	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.000	1.000	1.307	2.614	Cum
	<i>D/S Floor</i>	1	2.000	1.000	0.850	1.700	Cum
		1	3.000	1.000	0.650	1.950	Cum
	<i>D/S Key Floor</i>	1	0.625	1.000	0.850	0.531	Cum
	<i>Toe Wall D/S Portion</i>	1	4.950	0.750	0.900	3.341	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						47.22	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.						
	<i>PCC Below Floor</i>	1	0.542	1.00	0.15	0.08	Cum
		1	0.783	1.00	0.15	0.12	Cum
		1	3.618	1.00	0.15	0.54	Cum
		1	0.283	1.00	0.15	0.04	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	1.397	1.00	0.15	0.21	Cum
		1	0.782	1.00	0.15	0.12	Cum
		1	0.542	1.00	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.37	0.15	0.39	Cum
	<i>Section 2-2</i>	2	2.00	1.10	0.15	0.66	Cum
	<i>Section 3-3</i>	2	2.70	0.98	0.15	0.79	Cum
	<i>Section 5-5</i>	2	2.37	1.52	0.15	1.08	Cum
	<i>Section 6-6</i>	2	1.00	0.98	0.15	0.29	Cum
	<i>Toe Wall D/S Portion</i>	1	4.95	0.75	0.30	1.11	Cum
	<i>Toe Wall D/S Portion</i>	1	4.65	0.45	0.60	1.26	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.76	1.04	1.14	Cum
		2	0.72	1.22	0.50	0.88	Cum
	<i>Section 2-2</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.62	0.58	1.45	Cum
		2	2.00	0.95	0.50	1.90	Cum
	<i>Section 3-3</i>	2	2.42	0.45	0.45	0.98	Cum
		2	2.42	0.56	0.38	1.04	Cum
		2	2.42	0.83	0.50	2.00	Cum
	<i>Section 5-5</i>	2	2.33	0.45	0.45	0.94	Cum
		2	2.33	0.76	1.04	3.67	Cum
		2	2.33	1.22	0.50	2.84	Cum
	<i>Section 6-6</i>	2	1.41	0.45	0.45	0.57	Cum
		2	1.41	0.56	0.38	0.60	Cum
		2	1.41	0.83	0.50	1.17	Cum
	<i>Floor</i>	1	0.63	1.00	0.70	0.44	Cum
		1	4.00	1.00	0.50	2.00	Cum
		1	0.55	1.00	0.20	0.11	Cum
		1	0.20	1.00	0.40	0.08	Cum
		1	2.80	1.00	0.50	1.40	Cum
		1	0.63	1.00	0.70	0.44	Cum
	<i>Crest</i>	1	0.71	1.00	0.73	0.52	Cum
	TOTAL					25.28	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.						
	<i>Over Crest</i>	1	0.60	1.00	0.15	0.09	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.60	0.45	0.05	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.60	0.45	0.05	0.22	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	25.28	0.30%	0.08	7850	595.30	Kg
	Total Weight in Metric Tonne					0.60	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	4	0.72		0.45	1.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		1.04	3.00	Sqm
		4		0.76	1.04	3.16	Sqm
		4	0.72		0.50	1.45	Sqm
		4		1.22	0.50	2.44	Sqm
	<i>Section 2-2</i>	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4	2.00		0.58	4.64	Sqm
		4		0.62	0.58	1.45	Sqm
		4	2.00		0.50	4.00	Sqm
		4		0.95	0.50	1.90	Sqm
	Section 3-3	4	2.42		0.45	4.35	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.42		0.38	3.67	Sqm
		4		0.56	0.38	0.86	Sqm
		4	2.42		0.50	4.83	Sqm
		4		0.83	0.50	1.66	Sqm
	Section 5-5	4	2.33		0.45	4.19	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.33		1.04	9.65	Sqm
		4		0.76	1.04	3.16	Sqm
		4	2.33		0.50	4.66	Sqm
		4		1.22	0.50	2.44	Sqm
	Section 6-6	4	1.41		0.45	2.54	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.41		0.38	2.14	Sqm
		4		0.56	0.38	0.86	Sqm
		4	1.41		0.50	2.82	Sqm
		4		0.83	0.50	1.66	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.00	0.70	1.40	Sqm
		2	4.00		0.50	4.00	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.55		0.20	0.22	Sqm
		2		1.00	0.20	0.40	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.00	0.40	0.80	Sqm
		2	2.80		0.50	2.80	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.00	0.70	1.40	Sqm
	Crest	2	0.7135		0.731	1.04	Sqm
		2		1	0.731	1.46	Sqm
	Toe Wall D/S Portion	2	4.95		0.30	2.97	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.65		0.60	5.58	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					113.02	Sqm
7	Providing pitching work with designation 100A bricks in panel and in herring bond pattern one brick on edge over a brick flat soiling 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	1.96		5.89	Sqm
	TOTAL					5.89	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	1.50	0.40	0.30	0.18	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	0.40	0.15	0.18	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	9.60	0.45		4.32	Sqm
	On Abutment Top (Right Side)	1	9.60	0.45		4.32	Sqm
	TOTAL					8.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Under U/S floor</i>	1		1.46		1.46	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.73		1.384	Cum
	<i>Section 2-2</i>	2	2.00	0.67		2.696	Cum
	<i>Section 3-3</i>	2	2.70	0.50		2.678	Cum
	<i>Section 5-5</i>	2	2.37	0.73		3.458	Cum
	<i>Section 6-6</i>	2	1.00	0.50		0.989	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.00	0.09		0.180	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					13.80	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 7.200 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.37	1.653	4.305	Cum
	<i>Section 2-2</i>	2	2.00	1.10	1.653	7.260	Cum
	<i>Section 3-3</i>	2	2.70	0.98	1.453	7.674	Cum
	<i>Section 5-5</i>	2	2.37	1.52	1.653	11.933	Cum
	<i>Section 6-6</i>	2	1.00	0.98	1.453	2.834	Cum
	<i>U/S Key Floor</i>	1	0.625	1.000	0.850	0.531	Cum
	<i>U/S Floor</i>	1	2.000	1.000	1.307	2.614	Cum
	<i>D/S Floor</i>	1	2.000	1.000	0.850	1.700	Cum
		1	3.000	1.000	0.650	1.950	Cum
	<i>D/S Key Floor</i>	1	0.625	1.000	0.850	0.531	Cum
	<i>Toe Wall D/S Portion</i>	1	4.950	0.750	0.900	3.341	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						46.02	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.						
	<i>PCC Below Floor</i>	1	0.542	1.00	0.15	0.08	Cum
		1	0.783	1.00	0.15	0.12	Cum
		1	3.618	1.00	0.15	0.54	Cum
		1	0.283	1.00	0.15	0.04	Cum
		1	1.397	1.00	0.15	0.21	Cum
		1	0.782	1.00	0.15	0.12	Cum
		1	0.542	1.00	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.37	0.15	0.39	Cum
	<i>Section 2-2</i>	2	2.00	1.10	0.15	0.66	Cum
	<i>Section 3-3</i>	2	2.70	0.98	0.15	0.79	Cum
	<i>Section 5-5</i>	2	2.37	1.52	0.15	1.08	Cum
	<i>Section 6-6</i>	2	1.00	0.98	0.15	0.29	Cum
	<i>Toe Wall D/S Portion</i>	1	4.95	0.75	0.30	1.11	Cum
	<i>Toe Wall D/S Portion</i>	1	4.65	0.45	0.60	1.26	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.76	1.04	1.14	Cum
		2	0.72	1.22	0.50	0.88	Cum
	<i>Section 2-2</i>	2	2.00	0.45	0.45	0.81	Cum
		2	2.00	0.62	0.58	1.45	Cum
		2	2.00	0.95	0.50	1.90	Cum
	<i>Section 3-3</i>	2	2.42	0.45	0.45	0.98	Cum
		2	2.42	0.56	0.38	1.04	Cum
		2	2.42	0.83	0.50	2.00	Cum
	<i>Section 5-5</i>	2	2.33	0.45	0.45	0.94	Cum
		2	2.33	0.76	1.04	3.67	Cum
		2	2.33	1.22	0.50	2.84	Cum
	<i>Section 6-6</i>	2	1.41	0.45	0.45	0.57	Cum
		2	1.41	0.56	0.38	0.60	Cum
		2	1.41	0.83	0.50	1.17	Cum
	<i>Floor</i>	1	0.63	1.00	0.70	0.44	Cum
		1	4.00	1.00	0.50	2.00	Cum
		1	0.55	1.00	0.20	0.11	Cum
		1	0.20	1.00	0.40	0.08	Cum
		1	2.80	1.00	0.50	1.40	Cum
		1	0.63	1.00	0.70	0.44	Cum
	<i>Crest</i>	1	0.71	1.00	0.73	0.52	Cum
	TOTAL					25.28	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	1.00	0.15	0.09	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.60	0.45	0.05	0.22	Cum
	On Abutment Top (Right Side)	1	9.60	0.45	0.05	0.22	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	25.28	0.30%	0.08	7850	595.30	Kg
	Total Weight in Metric Tonne					0.60	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	0.72		0.45	1.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		1.04	3.00	Sqm
		4		0.76	1.04	3.16	Sqm
		4	0.72		0.50	1.45	Sqm
		4		1.22	0.50	2.44	Sqm
	Section 2-2	4	2.00		0.45	3.60	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.00		0.58	4.64	Sqm
		4		0.62	0.58	1.45	Sqm
		4	2.00		0.50	4.00	Sqm
		4		0.95	0.50	1.90	Sqm
	Section 3-3	4	2.42		0.45	4.35	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.42		0.38	3.67	Sqm
		4		0.56	0.38	0.86	Sqm
		4	2.42		0.50	4.83	Sqm
		4		0.83	0.50	1.66	Sqm
	Section 5-5	4	2.33		0.45	4.19	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.33		1.04	9.65	Sqm
		4		0.76	1.04	3.16	Sqm
		4	2.33		0.50	4.66	Sqm
		4		1.22	0.50	2.44	Sqm
	Section 6-6	4	1.41		0.45	2.54	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.41		0.38	2.14	Sqm
		4		0.56	0.38	0.86	Sqm
		4	1.41		0.50	2.82	Sqm
		4		0.83	0.50	1.66	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.00	0.70	1.40	Sqm
		2	4.00		0.50	4.00	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.55		0.20	0.22	Sqm
		2		1.00	0.20	0.40	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.00	0.40	0.80	Sqm
		2	2.80		0.50	2.80	Sqm
		2		1.00	0.50	1.00	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.00	0.70	1.40	Sqm
	Crest	2	0.7135		0.731	1.04	Sqm
		2		1	0.731	1.46	Sqm
	Toe Wall D/S Portion	2	4.95		0.30	2.97	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	4.65		0.60	5.58	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					113.02	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.96		5.89	Sqm
	TOTAL					5.89	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.40	0.30	0.18	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	0.40	0.15	0.18	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.60	0.45		4.32	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.60	0.45		4.32	Sqm
	TOTAL					8.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.46		1.46	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.68		1.286	Cum
	<i>Section 2-2</i>	2	2.00	0.66		2.640	Cum
	<i>Section 3-3</i>	2	2.70	0.49		2.624	Cum
	<i>Section 5-5</i>	2	2.37	0.68		3.214	Cum
	<i>Section 6-6</i>	2	1.00	0.49		0.969	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.00	0.09		0.180	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					13.33	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.94	1.37	1.307	3.375	Cum
	<i>Section 2-2</i>	2	2.50	1.05	1.307	6.862	Cum
	<i>Section 3-3</i>	2	2.20	0.93	1.107	4.530	Cum
	<i>Section 5-5</i>	2	2.37	1.52	1.307	9.409	Cum
	<i>Section 6-6</i>	2	0.15	0.93	1.107	0.309	Cum
	<i>U/S Key Floor</i>	1	0.625	0.800	0.850	0.425	Cum
	<i>U/S Floor</i>	1	2.000	0.800	1.307	2.091	Cum
	<i>D/S Floor</i>	1	2.000	0.800	0.850	1.360	Cum
		1	3.000	0.800	0.650	1.560	Cum
	<i>D/S Key Floor</i>	1	0.625	0.800	0.850	0.425	Cum
	<i>Toe Wall D/S Portion</i>	1	2.300	0.750	0.900	1.553	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	1.500	0.750	3.375	Cum
						35.27	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.						
	<i>PCC Below Floor</i>	1	0.542	0.80	0.15	0.07	Cum
		1	0.783	0.80	0.15	0.09	Cum
		1	3.420	0.80	0.15	0.41	Cum
		1	0.283	0.80	0.15	0.03	Cum
		1	1.597	0.80	0.15	0.19	Cum
		1	0.782	0.80	0.15	0.09	Cum
		1	0.542	0.80	0.15	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.94	1.37	0.15	0.39	Cum
	<i>Section 2-2</i>	2	2.50	1.05	0.15	0.79	Cum
	<i>Section 3-3</i>	2	2.20	0.93	0.15	0.61	Cum
	<i>Section 5-5</i>	2	2.37	1.52	0.15	1.08	Cum
	<i>Section 6-6</i>	2	0.15	0.93	0.15	0.04	Cum
	<i>Toe Wall D/S Portion</i>	1	2.30	0.75	0.30	0.52	Cum
	<i>Toe Wall D/S Portion</i>	1	2.00	0.45	0.60	0.54	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.50	0.15	0.34	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					5.80	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.76	1.04	1.13	Cum
		2	0.72	1.22	0.50	0.87	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.60	0.50	1.50	Cum
		2	2.50	0.90	0.50	2.25	Cum
	<i>Section 3-3</i>	2	1.96	0.45	0.45	0.79	Cum
		2	1.96	0.54	0.30	0.64	Cum
		2	1.96	0.78	0.50	1.53	Cum
	<i>Section 5-5</i>	2	2.32	0.45	0.45	0.94	Cum
		2	2.32	0.76	1.04	3.66	Cum
		2	2.32	1.22	0.50	2.84	Cum
	<i>Section 6-6</i>	2	0.54	0.45	0.45	0.22	Cum
		2	0.54	0.54	0.30	0.17	Cum
		2	0.54	0.78	0.50	0.42	Cum
	<i>Floor</i>	1	0.63	0.80	0.70	0.35	Cum
		1	4.00	0.80	0.50	1.60	Cum
		1	0.35	0.80	0.20	0.06	Cum
		1	0.20	0.80	0.40	0.06	Cum
		1	2.80	0.80	0.50	1.12	Cum
		1	0.63	0.80	0.70	0.35	Cum
	<i>Crest</i>	1	0.71	0.80	0.71	0.40	Cum
	TOTAL					22.21	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	0.80	0.15	0.07	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	8.36	0.45	0.05	0.19	Cum
	On Abutment Top (Right Side)	1	8.36	0.45	0.05	0.19	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	22.21	0.30%	0.07	7850	523.07	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	0.72		0.45	1.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		1.04	2.97	Sqm
		4		0.76	1.04	3.16	Sqm
		4	0.72		0.50	1.43	Sqm
		4		1.22	0.50	2.44	Sqm
	Section 2-2	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.60	0.50	1.20	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.90	0.50	1.80	Sqm
	Section 3-3	4	1.96		0.45	3.53	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.96		0.30	2.35	Sqm
		4		0.54	0.30	0.65	Sqm
		4	1.96		0.50	3.92	Sqm
		4		0.78	0.50	1.56	Sqm
	Section 5-5	4	2.32		0.45	4.18	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.32		1.04	9.63	Sqm
		4		0.76	1.04	3.16	Sqm
		4	2.32		0.50	4.64	Sqm
		4		1.22	0.50	2.44	Sqm
	Section 6-6	4	0.54		0.45	0.97	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.54		0.30	0.65	Sqm
		4		0.54	0.30	0.65	Sqm
		4	0.54		0.50	1.08	Sqm
		4		0.78	0.50	1.56	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		0.80	0.70	1.12	Sqm
		2	4.00		0.50	4.00	Sqm
		2		0.80	0.50	0.80	Sqm
		2	0.35		0.20	0.14	Sqm
		2		0.80	0.20	0.32	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.80	0.40	0.64	Sqm
		2	2.80		0.50	2.80	Sqm
		2		0.80	0.50	0.80	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.80	0.70	1.12	Sqm
	Crest	2	0.7095		0.708	1.00	Sqm
		2		0.8	0.708	1.13	Sqm
	Toe Wall D/S Portion	2	2.30		0.30	1.38	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	2.00		0.60	2.40	Sqm
		2		0.45	0.60	0.54	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.15	0.90	Sqm
		4		1.50	0.15	0.90	Sqm
	Toe Wall for resting Brick Edging	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					100.48	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	2.80		8.40	Sqm
	TOTAL					8.40	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.50	0.30	0.23	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	0.50	0.15	0.23	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	8.36	0.45		3.76	Sqm
	<i>On Abutment Top (Right Side)</i>	1	8.36	0.45		3.76	Sqm
	TOTAL					7.52	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.34		1.34	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.94	0.40		0.757	Cum
	<i>Section 2-2</i>	2	2.50	0.40		1.985	Cum
	<i>Section 3-3</i>	2	2.20	0.27		1.201	Cum
	<i>Section 5-5</i>	2	2.37	0.40		1.901	Cum
	<i>Section 6-6</i>	2	0.15	0.27		0.082	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.80	0.09		0.144	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					8.37	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEURA SURAJMAL MR.							
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 1.950 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.41	1.486	3.975	Cum
	<i>Section 2-2</i>	2	3.00	1.14	1.486	10.164	Cum
	<i>Section 3-3</i>	2	1.70	1.02	1.286	4.460	Cum
	<i>Section 5-5</i>	2	2.36	1.56	1.486	10.981	Cum
	<i>Section 6-6</i>	2	0.96	1.02	1.286	2.505	Cum
	<i>U/S Key Floor</i>	1	0.625	1.650	0.850	0.877	Cum
	<i>U/S Floor</i>	1	2.000	1.650	1.307	4.313	Cum
	<i>D/S Floor</i>	1	3.000	1.650	0.850	4.208	Cum
		1	2.000	1.650	0.650	2.145	Cum
	<i>D/S Key Floor</i>	1	0.625	1.650	0.850	0.877	Cum
	<i>Toe Wall D/S Portion</i>	1	5.600	0.750	0.900	3.780	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						49.64	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.						
	<i>PCC Below Floor</i>	1	0.542	1.65	0.15	0.13	Cum
		1	0.783	1.65	0.15	0.19	Cum
		1	4.518	1.65	0.15	1.12	Cum
		1	0.283	1.65	0.15	0.07	Cum
		1	0.497	1.65	0.15	0.12	Cum
		1	0.782	1.65	0.15	0.19	Cum
		1	0.542	1.65	0.15	0.13	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.41	0.15	0.40	Cum
	<i>Section 2-2</i>	2	3.00	1.14	0.15	1.03	Cum
	<i>Section 3-3</i>	2	1.70	1.02	0.15	0.52	Cum
	<i>Section 5-5</i>	2	2.36	1.56	0.15	1.11	Cum
	<i>Section 6-6</i>	2	0.96	1.02	0.15	0.29	Cum
	<i>Toe Wall D/S Portion</i>	1	5.60	0.75	0.30	1.26	Cum
	<i>Toe Wall D/S Portion</i>	1	5.30	0.45	0.60	1.43	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.82	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.78	1.11	1.25	Cum
		2	0.72	1.26	0.50	0.91	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.65	0.65	2.52	Cum
		2	3.00	0.99	0.50	2.97	Cum
	<i>Section 3-3</i>	2	1.42	0.45	0.45	0.57	Cum
		2	1.42	0.59	0.45	0.74	Cum
		2	1.42	0.87	0.50	1.23	Cum
	<i>Section 5-5</i>	2	2.32	0.45	0.45	0.94	Cum
		2	2.32	0.78	1.11	4.01	Cum
		2	2.32	1.26	0.50	2.93	Cum
	<i>Section 6-6</i>	2	1.39	0.45	0.45	0.56	Cum
		2	1.39	0.59	0.45	0.73	Cum
		2	1.39	0.87	0.50	1.21	Cum
	<i>Floor</i>	1	0.63	1.65	0.70	0.72	Cum
		1	5.00	1.65	0.50	4.13	Cum
		1	0.45	1.65	0.20	0.15	Cum
		1	0.20	1.65	0.40	0.13	Cum
		1	1.80	1.65	0.50	1.49	Cum
		1	0.63	1.65	0.70	0.72	Cum
	<i>Crest</i>	1	0.72	1.65	0.75	0.89	Cum
	TOTAL					30.31	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.						
	<i>Over Crest</i>	1	0.60	1.65	0.15	0.15	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.60	0.45	0.05	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.60	0.45	0.05	0.22	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.						
	Taking Skin reinforcement @0.3% of M-20	30.31	0.30%	0.09	7850	713.76	Kg
	Total Weight in Metric Tonne					0.71	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.72		0.45	1.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		1.11	3.19	Sqm
		4		0.78	1.11	3.46	Sqm
		4	0.72		0.50	1.44	Sqm
		4		1.26	0.50	2.53	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.65	7.80	Sqm
		4		0.65	0.65	1.68	Sqm
		4	3.00		0.50	6.00	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Section 3-3</i>	4	1.42		0.45	2.55	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.42		0.45	2.55	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.42		0.50	2.83	Sqm
		4		0.87	0.50	1.74	Sqm
	<i>Section 5-5</i>	4	2.32		0.45	4.17	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.32		1.11	10.27	Sqm
		4		0.78	1.11	3.46	Sqm
		4	2.32		0.50	4.64	Sqm
		4		1.26	0.50	2.53	Sqm
	<i>Section 6-6</i>	4	1.39		0.45	2.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.39		0.45	2.50	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.39		0.50	2.78	Sqm
		4		0.87	0.50	1.74	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		1.65	0.70	2.31	Sqm
		2	5.00		0.50	5.00	Sqm
		2		1.65	0.50	1.65	Sqm
		2	0.45		0.20	0.18	Sqm
		2		1.65	0.20	0.66	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.65	0.40	1.32	Sqm
		2	1.80		0.50	1.80	Sqm
		2		1.65	0.50	1.65	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.65	0.70	2.31	Sqm
	<i>Crest</i>	2	0.7165		0.749	1.07	Sqm
		2		1.65	0.749	2.47	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.60		0.30	3.36	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.30		0.60	6.36	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					123.82	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.96		5.89	Sqm
	TOTAL					5.89	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	1.05	0.30	0.47	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	1.05	0.15	0.47	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.60	0.45		4.32	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.60	0.45		4.32	Sqm
	TOTAL					8.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.97		1.97	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.54		1.014	Cum
	<i>Section 2-2</i>	2	3.00	0.53		3.150	Cum
	<i>Section 3-3</i>	2	1.70	0.38		1.282	Cum
	<i>Section 5-5</i>	2	2.36	0.54		2.533	Cum
	<i>Section 6-6</i>	2	0.96	0.38		0.720	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.65	0.09		0.297	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					11.93	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 2.300 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.41	1.578	4.222	Cum
	<i>Section 2-2</i>	2	3.00	1.14	1.578	10.794	Cum
	<i>Section 3-3</i>	2	1.70	1.02	1.378	4.779	Cum
	<i>Section 5-5</i>	2	2.36	1.56	1.578	11.661	Cum
	<i>Section 6-6</i>	2	0.96	1.02	1.378	2.685	Cum
	<i>U/S Key Floor</i>	1	0.625	1.650	0.850	0.877	Cum
	<i>U/S Floor</i>	1	2.000	1.650	1.307	4.313	Cum
	<i>D/S Floor</i>	1	3.000	1.650	0.850	4.208	Cum
		1	2.000	1.650	0.650	2.145	Cum
	<i>D/S Key Floor</i>	1	0.625	1.650	0.850	0.877	Cum
	<i>Toe Wall D/S Portion</i>	1	5.600	0.750	0.900	3.780	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						51.69	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.						
	<i>PCC Below Floor</i>	1	0.542	1.65	0.15	0.13	Cum
		1	0.783	1.65	0.15	0.19	Cum
		1	4.518	1.65	0.15	1.12	Cum
		1	0.283	1.65	0.15	0.07	Cum
		1	0.497	1.65	0.15	0.12	Cum
		1	0.782	1.65	0.15	0.19	Cum
		1	0.542	1.65	0.15	0.13	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.95	1.41	0.15	0.40	Cum
	<i>Section 2-2</i>	2	3.00	1.14	0.15	1.03	Cum
	<i>Section 3-3</i>	2	1.70	1.02	0.15	0.52	Cum
	<i>Section 5-5</i>	2	2.36	1.56	0.15	1.11	Cum
	<i>Section 6-6</i>	2	0.96	1.02	0.15	0.29	Cum
	<i>Toe Wall D/S Portion</i>	1	5.60	0.75	0.30	1.26	Cum
	<i>Toe Wall D/S Portion</i>	1	5.30	0.45	0.60	1.43	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					8.82	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.72	0.45	0.45	0.29	Cum
		2	0.72	0.78	1.11	1.25	Cum
		2	0.72	1.26	0.50	0.91	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.65	0.65	2.52	Cum
		2	3.00	0.99	0.50	2.97	Cum
	<i>Section 3-3</i>	2	1.42	0.45	0.45	0.57	Cum
		2	1.42	0.59	0.45	0.74	Cum
		2	1.42	0.87	0.50	1.23	Cum
	<i>Section 5-5</i>	2	2.32	0.45	0.45	0.94	Cum
		2	2.32	0.78	1.11	4.01	Cum
		2	2.32	1.26	0.50	2.93	Cum
	<i>Section 6-6</i>	2	1.39	0.45	0.45	0.56	Cum
		2	1.39	0.59	0.45	0.73	Cum
		2	1.39	0.87	0.50	1.21	Cum
	<i>Floor</i>	1	0.63	1.65	0.70	0.72	Cum
		1	5.00	1.65	0.50	4.13	Cum
		1	0.45	1.65	0.20	0.15	Cum
		1	0.20	1.65	0.40	0.13	Cum
		1	1.80	1.65	0.50	1.49	Cum
		1	0.63	1.65	0.70	0.72	Cum
	<i>Crest</i>	1	0.72	1.65	0.75	0.89	Cum
	TOTAL					30.31	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 Crest	1	0.60	1.65	0.15	0.15	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	9.60	0.45	0.05	0.22	Cum
	On Abutment Top (Right Side)	1	9.60	0.45	0.05	0.22	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	30.31	0.30%	0.09	7850	713.76	Kg
	Total Weight in Metric Tonne					0.71	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	0.72		0.45	1.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.72		1.11	3.19	Sqm
		4		0.78	1.11	3.46	Sqm
		4	0.72		0.50	1.44	Sqm
		4		1.26	0.50	2.53	Sqm
	Section 2-2	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.65	7.80	Sqm
		4		0.65	0.65	1.68	Sqm
		4	3.00		0.50	6.00	Sqm
		4		0.99	0.50	1.98	Sqm
	Section 3-3	4	1.42		0.45	2.55	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.42		0.45	2.55	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.42		0.50	2.83	Sqm
		4		0.87	0.50	1.74	Sqm
	Section 5-5	4	2.32		0.45	4.17	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.32		1.11	10.27	Sqm
		4		0.78	1.11	3.46	Sqm
		4	2.32		0.50	4.64	Sqm
		4		1.26	0.50	2.53	Sqm
	Section 6-6	4	1.39		0.45	2.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.39		0.45	2.50	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.39		0.50	2.78	Sqm
		4		0.87	0.50	1.74	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.65	0.70	2.31	Sqm
		2	5.00		0.50	5.00	Sqm
		2		1.65	0.50	1.65	Sqm
		2	0.45		0.20	0.18	Sqm
		2		1.65	0.20	0.66	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.65	0.40	1.32	Sqm
		2	1.80		0.50	1.80	Sqm
		2		1.65	0.50	1.65	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.65	0.70	2.31	Sqm
	Crest	2	0.7165		0.749	1.07	Sqm
		2		1.65	0.749	2.47	Sqm
	Toe Wall D/S Portion	2	5.60		0.30	3.36	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.30		0.60	6.36	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					123.82	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.96		5.89	Sqm
	TOTAL					5.89	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	1.05	0.30	0.47	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	1.05	0.15	0.47	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.60	0.45		4.32	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.60	0.45		4.32	Sqm
	TOTAL					8.64	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.97		1.97	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.95	0.61		1.158	Cum
	<i>Section 2-2</i>	2	3.00	0.59		3.534	Cum
	<i>Section 3-3</i>	2	1.70	0.43		1.462	Cum
	<i>Section 5-5</i>	2	2.36	0.61		2.892	Cum
	<i>Section 6-6</i>	2	0.96	0.43		0.821	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.65	0.09		0.297	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					13.09	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SHUSHNAR MR.							
SHARDA TYPE FALL OF HEIGHT 0.457 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.14	1.47	2.010	12.681	Cum
	<i>Section 2-2</i>	2	1.50	1.20	2.010	7.236	Cum
	<i>Section 3-3</i>	2	2.00	1.08	1.810	7.819	Cum
	<i>Section 5-5</i>	2	2.56	1.62	2.010	16.726	Cum
	<i>Section 6-6</i>	2	1.05	1.08	1.810	4.086	Cum
	<i>U/S Key Floor</i>	1	0.625	1.600	0.850	0.850	Cum
	<i>U/S Floor</i>	1	2.000	1.600	1.307	4.182	Cum
	<i>D/S Floor</i>	1	2.500	1.600	0.850	3.400	Cum
		1	2.500	1.600	0.650	2.600	Cum
	<i>D/S Key Floor</i>	1	0.625	1.600	0.850	0.850	Cum
	<i>Toe Wall D/S Portion</i>	1	5.850	0.750	0.900	3.949	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						66.18	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.						
	<i>PCC Below Floor</i>	1	0.542	1.60	0.15	0.13	Cum
		1	0.783	1.60	0.15	0.19	Cum
		1	4.068	1.60	0.15	0.98	Cum
		1	0.283	1.60	0.15	0.07	Cum
		1	0.947	1.60	0.15	0.23	Cum
		1	0.782	1.60	0.15	0.19	Cum
		1	0.542	1.60	0.15	0.13	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.14	1.47	0.15	0.95	Cum
	<i>Section 2-2</i>	2	1.50	1.20	0.15	0.54	Cum
	<i>Section 3-3</i>	2	2.00	1.08	0.15	0.65	Cum
	<i>Section 5-5</i>	2	2.56	1.62	0.15	1.25	Cum
	<i>Section 6-6</i>	2	1.05	1.08	0.15	0.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.85	0.75	0.30	1.32	Cum
	<i>Toe Wall D/S Portion</i>	1	5.55	0.45	0.60	1.50	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					9.52	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.92	0.45	0.45	0.78	Cum
		2	1.92	0.81	1.21	3.75	Cum
		2	1.92	1.32	0.50	2.54	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.68	0.75	2.53	Cum
		2	2.50	1.05	0.50	2.63	Cum
	<i>Section 3-3</i>	2	1.69	0.45	0.45	0.68	Cum
		2	1.69	0.62	0.55	1.14	Cum
		2	1.69	0.93	0.50	1.57	Cum
	<i>Section 5-5</i>	2	2.52	0.45	0.45	1.02	Cum
		2	2.52	0.81	1.21	4.94	Cum
		2	2.52	1.32	0.50	3.33	Cum
	<i>Section 6-6</i>	2	1.51	0.45	0.45	0.61	Cum
		2	1.51	0.62	0.55	1.02	Cum
		2	1.51	0.93	0.50	1.40	Cum
	<i>Floor</i>	1	0.63	1.60	0.70	0.70	Cum
		1	4.50	1.60	0.50	3.60	Cum
		1	0.50	1.60	0.20	0.16	Cum
		1	0.20	1.60	0.40	0.13	Cum
		1	2.30	1.60	0.50	1.84	Cum
		1	0.63	1.60	0.70	0.70	Cum
	<i>Crest</i>	1	0.72	1.60	0.77	0.88	Cum
	TOTAL					36.96	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.						
	<i>Over Crest</i>	1	0.60	1.60	0.20	0.19	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.97	0.45	0.05	0.22	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.97	0.45	0.05	0.22	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.						
	Taking Skin reinforcement @0.3% of M-20	36.96	0.30%	0.11	7850	870.38	Kg
	Total Weight in Metric Tonne					0.87	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.92		0.45	3.45	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.92		1.21	9.25	Sqm
		4		0.81	1.21	3.92	Sqm
		4	1.92		0.50	3.83	Sqm
		4		1.32	0.50	2.65	Sqm
	<i>Section 2-2</i>	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.75	7.50	Sqm
		4		0.68	0.75	2.03	Sqm
		4	2.50		0.50	5.00	Sqm
		4		1.05	0.50	2.10	Sqm
	<i>Section 3-3</i>	4	1.69		0.45	3.03	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.69		0.55	3.71	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.69		0.50	3.37	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Section 5-5</i>	4	2.52		0.45	4.53	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.52		1.21	12.16	Sqm
		4		0.81	1.21	3.92	Sqm
		4	2.52		0.50	5.04	Sqm
		4		1.32	0.50	2.65	Sqm
	<i>Section 6-6</i>	4	1.51		0.45	2.72	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.51		0.55	3.32	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.51		0.50	3.02	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		1.60	0.70	2.24	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.60	0.50	1.60	Sqm
		2	0.50		0.20	0.20	Sqm
		2		1.60	0.20	0.64	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.60	0.40	1.28	Sqm
		2	2.30		0.50	2.30	Sqm
		2		1.60	0.50	1.60	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.60	0.70	2.24	Sqm
	<i>Crest</i>	2	0.7195		0.766	1.10	Sqm
		2		1.6	0.766	2.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.85		0.30	3.51	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.55		0.60	6.66	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					142.46	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.14		8.57	Sqm
	TOTAL					8.57	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.00	0.30	0.60	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	1.00	0.15	0.60	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.97	0.45		4.49	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.97	0.45		4.49	Sqm
	TOTAL					8.97	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.83		1.83	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.14	1.03		4.413	Cum
	<i>Section 2-2</i>	2	1.50	0.84		2.532	Cum
	<i>Section 3-3</i>	2	2.00	0.65		2.584	Cum
	<i>Section 5-5</i>	2	2.56	1.03		5.283	Cum
	<i>Section 6-6</i>	2	1.05	0.65		1.350	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.60	0.09		0.288	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					19.24	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.305 METER AT CH. 4.075 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.92	1.32	1.351	3.282	Cum
	<i>Section 2-2</i>	2	2.50	1.14	1.351	7.701	Cum
	<i>Section 3-3</i>	2	2.20	1.02	1.151	5.166	Cum
	<i>Section 5-5</i>	2	2.38	1.47	1.351	9.480	Cum
	<i>Section 6-6</i>	2	0.96	1.02	1.151	2.242	Cum
	<i>U/S Key Floor</i>	1	0.625	1.200	0.850	0.638	Cum
	<i>U/S Floor</i>	1	2.000	1.200	1.153	2.767	Cum
	<i>D/S Floor</i>	1	2.500	1.200	0.850	2.550	Cum
		1	2.500	1.200	0.650	1.950	Cum
	<i>D/S Key Floor</i>	1	0.625	1.200	0.850	0.638	Cum
	<i>Toe Wall D/S Portion</i>	1	5.150	0.750	0.900	3.476	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						41.24	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.						
	<i>PCC Below Floor</i>	1	0.542	1.20	0.15	0.10	Cum
		1	0.783	1.20	0.15	0.14	Cum
		1	4.018	1.20	0.15	0.72	Cum
		1	0.283	1.20	0.15	0.05	Cum
		1	0.996	1.20	0.15	0.18	Cum
		1	0.782	1.20	0.15	0.14	Cum
		1	0.542	1.20	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.92	1.32	0.15	0.36	Cum
	<i>Section 2-2</i>	2	2.50	1.14	0.15	0.86	Cum
	<i>Section 3-3</i>	2	2.20	1.02	0.15	0.67	Cum
	<i>Section 5-5</i>	2	2.38	1.47	0.15	1.05	Cum
	<i>Section 6-6</i>	2	0.96	1.02	0.15	0.29	Cum
	<i>Toe Wall D/S Portion</i>	1	5.15	0.75	0.30	1.16	Cum
	<i>Toe Wall D/S Portion</i>	1	4.85	0.45	0.60	1.31	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					7.95	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.69	0.45	0.45	0.28	Cum
		2	0.69	0.74	0.96	0.97	Cum
		2	0.69	1.17	0.50	0.81	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.65	0.65	2.10	Cum
		2	2.50	0.99	0.50	2.48	Cum
	<i>Section 3-3</i>	2	1.92	0.45	0.45	0.78	Cum
		2	1.92	0.59	0.45	1.01	Cum
		2	1.92	0.87	0.50	1.67	Cum
	<i>Section 5-5</i>	2	2.34	0.45	0.45	0.95	Cum
		2	2.34	0.74	0.96	3.29	Cum
		2	2.34	1.17	0.50	2.74	Cum
	<i>Section 6-6</i>	2	1.39	0.45	0.45	0.56	Cum
		2	1.39	0.59	0.45	0.73	Cum
		2	1.39	0.87	0.50	1.21	Cum
	<i>Floor</i>	1	0.63	1.20	0.70	0.53	Cum
		1	4.50	1.20	0.50	2.70	Cum
		1	0.45	1.20	0.20	0.11	Cum
		1	0.20	1.20	0.40	0.10	Cum
		1	2.30	1.20	0.50	1.38	Cum
		1	0.63	1.20	0.70	0.53	Cum
	<i>Crest</i>	1	0.69	1.20	0.60	0.50	Cum
	TOTAL					26.41	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.						
	<i>Over Crest</i>	1	0.60	1.20	0.20	0.14	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.55	0.45	0.05	0.21	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.55	0.45	0.05	0.21	Cum
	TOTAL					0.57	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	26.41	0.30%	0.08	7850	622.06	Kg
	Total Weight in Metric Tonne					0.62	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.69		0.45	1.25	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.69		0.96	2.65	Sqm
		4		0.74	0.96	2.81	Sqm
		4	0.69		0.50	1.39	Sqm
		4		1.17	0.50	2.35	Sqm
	<i>Section 2-2</i>	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.65	6.50	Sqm
		4		0.65	0.65	1.68	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.99	0.50	1.98	Sqm
	<i>Section 3-3</i>	4	1.92		0.45	3.45	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.92		0.45	3.45	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.92		0.50	3.83	Sqm
		4		0.87	0.50	1.74	Sqm
	<i>Section 5-5</i>	4	2.34		0.45	4.21	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.34		0.96	8.93	Sqm
		4		0.74	0.96	2.81	Sqm
		4	2.34		0.50	4.68	Sqm
		4		1.17	0.50	2.35	Sqm
	<i>Section 6-6</i>	4	1.39		0.45	2.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.39		0.45	2.50	Sqm
		4		0.59	0.45	1.05	Sqm
		4	1.39		0.50	2.78	Sqm
		4		0.87	0.50	1.74	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		1.20	0.70	1.68	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.20	0.50	1.20	Sqm
		2	0.45		0.20	0.18	Sqm
		2		1.20	0.20	0.48	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.20	0.40	0.96	Sqm
		2	2.30		0.50	2.30	Sqm
		2		1.20	0.50	1.20	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.20	0.70	1.68	Sqm
	<i>Crest</i>	2	0.693		0.597	0.83	Sqm
		2		1.2	0.597	1.43	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.15		0.30	3.09	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.85		0.60	5.82	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					115.05	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.96		5.88	Sqm
	TOTAL					5.88	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.60	0.30	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	0.60	0.15	0.27	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.55	0.45		4.30	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.55	0.45		4.30	Sqm
	TOTAL					8.60	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.10		1.10	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.92	0.44		0.808	Cum
	<i>Section 2-2</i>	2	2.50	0.43		2.160	Cum
	<i>Section 3-3</i>	2	2.20	0.30		1.320	Cum
	<i>Section 5-5</i>	2	2.38	0.44		2.096	Cum
	<i>Section 6-6</i>	2	0.96	0.30		0.573	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.20	0.09		0.216	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					9.24	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST FOR CONSTRUCTION OF SLAB CULVERT FOR KARMA DY.								
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT KM 5.280								
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.	90.000	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.	134.444	Cum	156.50	21040.54			
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.	10.84	Cum	6381.70	69180.18	3.51	4.88	9.76
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.	65.21	Cum	6914.20	450879.81	26.90	28.04	56.08
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.	68.75	Cum	8151.40	560439.35	38.98	26.81	54.32
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.	6.23	MT	73574.90	458569.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	307.26	Sqm	578.60	177779.73			
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	1220.80			
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	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	93.67	Cum	149.30	13984.91			

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)	59.733	Cum	1075.00	64212.70			
	Coarse Aggregates (100 Km lead)	120.153	Cum	1398.00	167973.93			
	Cement (30 km lead)	69.395	MT	742.00	51491.15			
	Boulder (60 Km lead)	5.20	Cum	1159.00	6026.80			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	6.23	MT	742.00	4624.66			
	TOTAL (In Rs.)				2542445.63			
	TOTAL (In Rs.)				2542445.63			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	59.73	Cum	584.64	34922.15	3492.22		
	Coarse Aggregate	120.15	Cum	944.26	113455.70	11345.57		
	Boulders	5.20	Cum	694.61	3611.97	361.20		
	<i>Total</i>					15198.98		
	For 1 nos. fall, Total Seigniorage charges					15198.98		

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 FOR CONSTRUCTION OF SLAB BRIDGE AT KM 7.420								
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.	154.703	Cum	156.50	24210.95			
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.	10.84	Cum	6381.70	69180.18	3.51	4.88	9.76
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.	65.21	Cum	6914.20	450879.81	26.90	28.04	56.08
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.	68.75	Cum	8151.40	560439.35	38.98	26.81	54.32
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.	6.23	MT	73574.90	458569.95			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	307.26	Sqm	578.60	177779.73			
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	1220.80			
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	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	104.73	Cum	149.30	15636.33			

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)
13	Carriage of materials							
	Coarse Sand (60 Km lead)	59.733	Cum	1075.00	64212.70			
	Coarse Aggregates (100 Km lead)	120.153	Cum	1398.00	167973.93			
	Cement (30 km lead)	69.395	MT	742.00	51491.15			
	Boulder (60 Km lead)	5.20	Cum	1159.00	6026.80			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	6.23	MT	742.00	4624.66			
	TOTAL (In Rs.)				2547621.59			
	TOTAL (In Rs.)				2547621.59			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	59.73	Cum	584.64	34922.15	3492.22		
	Coarse Aggregate	120.15	Cum	944.26	113455.70	11345.57		
	Boulders	5.20	Cum	694.61	3611.97	361.20		
	<i>Total</i>					15198.98		
	For 1 nos. fall, Total Seigniorage charges					15198.98		

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 FOR CONSTRUCTION OF SLAB BRIDGE AT KM 19.740								
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.	90.000	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.	79.097	Cum	156.50	12378.70			
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.	10.08	Cum	6381.70	64351.79	3.27	4.54	9.08
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.	48.77	Cum	6914.20	337209.14	20.12	20.97	41.94
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.	29.86	Cum	8151.40	243369.52	16.93	11.64	23.59
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.	3.49	MT	73574.90	256698.27			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	216.76	Sqm	578.60	125417.46			
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	1220.80			
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)	3.16	Sqm	66.00	208.56			
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)	7.90	RM	36993.21	292246.36			
11	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	52.03	Cum	149.30	7767.85			

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)	37.153	Cum	1075.00	39939.41			
	Coarse Aggregates (100 Km lead)	74.604	Cum	1398.00	104297.00			
	Cement (30 km lead)	40.313	MT	742.00	29912.57			
	Boulder (60 Km lead)	3.16	Cum	1159.00	3662.44			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	3.49	MT	742.00	2588.79			
	TOTAL (In Rs.)				1535034.86			
	TOTAL (In Rs.)				1535034.86			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	37.15	Cum	584.64	21721.09	2172.11		
	Coarse Aggregate	74.60	Cum	944.26	70445.99	7044.60		
	Boulders	3.16	Cum	694.61	2194.97	219.50		
	<i>Total</i>					9436.20		
	For 1 nos. fall, Total Seigniorage charges					9436.20		

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)
AOC FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.240 OF NEURA SURAJMAL 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.	130.000	Sqm	11.80	1534.57			
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.	146.012	Cum	156.50	22850.85			
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.	8.01	Cum	6381.70	51132.86	2.60	3.61	7.21
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.	35.49	Cum	6914.20	245416.55	14.64	15.26	30.53
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.	20.65	Cum	8151.40	168352.44	11.71	8.05	16.32
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.	2.78	MT	73574.90	204682.34			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	169.47	Sqm	578.60	98055.44			
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	1220.80			
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)	2.32	Sqm	66.00	153.12			
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)	5.80	RM	36993.21	214560.62			
11	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	89.45	Cum	149.30	13355.59			

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)
13	Carriage of materials							
	Coarse Sand (60 Km lead)	26.923	Cum	1075.00	28942.22			
	Coarse Aggregates (100 Km lead)	54.053	Cum	1398.00	75565.44			
	Cement (30 km lead)	28.948	MT	742.00	21479.34			
	Boulder (60 Km lead)	2.32	Cum	1159.00	2688.88			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	2.78	MT	742.00	2064.21			
	TOTAL (In Rs.)				1164759.09			
	TOTAL (In Rs.)				1164759.09			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	26.92	Cum	584.64	15740.26	1574.03		
	Coarse Aggregate	54.05	Cum	944.26	51039.64	5103.96		
	Boulders	2.32	Cum	694.61	1611.50	161.15		
	<i>Total</i>					6839.14		
	For 1 nos. fall, Total Seigniorage charges					6839.14		

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 FOR CONSTRUCTION OF SLAB BRIDGE AT KM 4.300 OF SHUSHNAR 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.	90.000	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.	61.441	Cum	156.50	9615.46			
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.	7.77	Cum	6381.70	49577.51	2.52	3.50	6.99
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.	33.13	Cum	6914.20	229098.44	13.67	14.25	28.50
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.	18.39	Cum	8151.40	149929.26	10.43	7.17	14.53
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.	2.67	MT	73574.90	196149.94			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	159.52	Sqm	578.60	92296.65			
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	1220.80			
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)	1.96	Sqm	66.00	129.36			
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)	4.90	RM	36993.21	181266.73			
11	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	38.09	Cum	149.30	5686.10			

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)	24.917	Cum	1075.00	26785.82			
	Coarse Aggregates (100 Km lead)	50.018	Cum	1398.00	69925.18			
	Cement (30 km lead)	26.614	MT	742.00	19747.52			
	Boulder (60 Km lead)	1.96	Cum	1159.00	2271.64			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	2.67	MT	742.00	1978.16			
	TOTAL (In Rs.)				1049444.75			
	TOTAL (In Rs.)				1049444.75			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	24.92	Cum	584.64	14567.50	1456.75		
	Coarse Aggregate	50.02	Cum	944.26	47230.01	4723.00		
	Boulders	1.96	Cum	694.61	1361.44	136.14		
	<i>Total</i>					6315.89		
	For 1 nos. fall, Total Seigniorage charges					6315.89		

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 FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.910 OF CHAURAHA 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.	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.	55.907	Cum	156.50	8749.45			
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.	9.09	Cum	6381.70	58022.67	2.95	4.09	8.18
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.	41.71	Cum	6914.20	288386.93	17.21	17.94	35.87
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.	20.97	Cum	8151.40	170937.91	11.89	8.18	16.57
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.	2.96	MT	73574.90	217505.77			
7	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.	182.48	Sqm	578.60	105581.81			
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	1220.80			
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)	2.44	Sqm	66.00	161.04			
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)	6.10	RM	36993.21	225658.58			
11	Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.	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	39.28	Cum	149.30	5864.30			

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)	30.205	Cum	1075.00	32470.26			
	Coarse Aggregates (100 Km lead)	60.619	Cum	1398.00	84746.05			
	Cement (30 km lead)	32.041	MT	742.00	23774.52			
	Boulder (60 Km lead)	2.44	Cum	1159.00	2827.96			
	Brick (15 km lead)	480.00	No.	3.18	1526.40			
	Steel (30 Km lead)	2.96	MT	742.00	2193.54			
	TOTAL (In Rs.)				1241985.82			
	TOTAL (In Rs.)				1241985.82			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	30.20	Cum	584.64	17658.99	1765.90		
	Coarse Aggregate	60.62	Cum	944.26	57240.56	5724.06		
	Boulders	2.44	Cum	694.61	1694.85	169.48		
	<i>Total</i>					7659.44		
	For 1 nos. fall, Total Seigniorage charges					7659.44		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND							
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KARMA DY							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.280							
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.						
	<i>Right abutment</i>	2	2.04	1.73	2.01	14.16	Cum
		1	5.97	2.07	2.01	24.84	Cum
	<i>Extra for Slope (0.5:1)</i>	2	8.00	1.01	2.01	32.34	Cum
	<i>Left abutment</i>	2	2.04	1.73	2.01	14.16	Cum
		1	5.97	2.07	2.01	24.84	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.97	1.01	2.01	24.12	Cum
	TOTAL					134.44	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.						
	<i>Right abutment</i>	2	2.04	1.73	0.20	1.41	Cum
		1	5.97	2.07	0.20	2.47	Cum
	<i>Left abutment</i>	2	2.04	1.73	0.20	1.41	Cum
		1	5.97	2.07	0.20	2.47	Cum
	<i>Levelling course</i>	2	5.50	3.50	0.08	3.08	Cum
	TOTAL					10.84	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.						
	<i>Right abutment</i>	1	5.97	1.87	0.20	2.23	Cum
		1	5.97	1.67	0.80	7.97	Cum
		1	5.97	1.15	1.50	10.25	Cum
		1	5.97	0.82	0.20	0.98	Cum
		1	5.97	0.40	0.37	0.88	Cum
	<i>Return wall</i>	2	1.94	1.53	0.20	1.18	Cum
		2	1.94	1.28	0.80	3.97	Cum
		2	1.94	0.72	1.77	4.90	Cum
		2	1.94	0.40	0.15	0.23	Cum
	<i>Left abutment</i>	1	5.97	1.87	0.20	2.23	Cum
		1	5.97	1.67	0.80	7.97	Cum
		1	5.97	1.15	1.50	10.25	Cum
		1	5.97	0.82	0.20	0.98	Cum
		1	5.97	0.40	0.37	0.88	Cum
	<i>Return wall</i>	2	1.94	1.53	0.20	1.18	Cum
		2	1.94	1.28	0.80	3.97	Cum
		2	1.94	0.72	1.77	4.90	Cum
		2	1.94	0.40	0.15	0.23	Cum
	TOTAL					65.21	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
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	8.35	6.50	0.71	38.40	Cum
	Approch Slab	2	3.50	6.50	0.34	15.24	Cum
	Wearing coat	1	15.35	5.50	0.08	6.33	Cum
	Parapet	2	15.35	0.44	0.18	2.39	Cum
		2	15.35	0.35	0.25	2.69	Cum
		2	15.35	0.22	0.55	3.70	Cum
	TOTAL					68.75	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	9.41		2.466	1485.0	Kg
a2	12	60	7.50		0.888	399.5	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	46	9.33		0.616	264.6	Kg
a5	10	60	7.40		0.616	273.7	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	140	2.65		0.888	329.5	Kg
x2	16	140	1.55		1.578	341.4	Kg
x3	10	24	8.25		0.616	122.1	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	12	48	3.40		0.888	144.9	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	65.2	0.0025	0.163	7850.00	1279.76	Kg
	Total Reinforcement Steel (in kg)					6232.7	Kg
	Total Weight in Metric Tonne					6.23	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	5.97		0.20	2.39	Sqm
		2		1.87	0.20	0.75	Sqm
		2	5.97		0.80	9.55	Sqm
		2		1.67	0.80	2.67	Sqm
		2	5.97		1.50	17.91	Sqm
		2		1.15	1.50	3.44	Sqm
		2	5.97		0.20	2.39	Sqm
		2		0.82	0.20	0.33	Sqm
	Return wall	2	1.94		0.20	0.77	Sqm
		2		1.53	0.20	0.61	Sqm
		2	1.94		0.80	3.10	Sqm
		2		1.28	0.80	2.05	Sqm
		2	1.94		1.77	6.85	Sqm
		2		0.72	1.77	2.53	Sqm
		2	1.94		0.15	0.58	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	5.97		0.20	2.39	Sqm
		2		1.87	0.20	0.75	Sqm
		2	5.97		0.80	9.55	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		1.67	0.80	2.67	Sqm
		2	5.97		1.50	17.91	Sqm
		2		1.15	1.50	3.44	Sqm
		2	5.97		0.20	2.39	Sqm
		2		0.82	0.20	0.33	Sqm
	Return wall	2	1.94		0.20	0.77	Sqm
		2		1.53	0.20	0.61	Sqm
		2	1.94		0.80	3.10	Sqm
		2		1.28	0.80	2.05	Sqm
		2	1.94		1.77	6.85	Sqm
		2		0.72	1.77	2.53	Sqm
		2	1.94		0.15	0.58	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	8.35		0.71	11.82	Sqm
		1	8.35	6.50		54.28	Sqm
		2		6.50	0.71	9.20	Sqm
	Approch Slab	4	3.50		0.34	4.69	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.34	8.71	Sqm
	Parapet	4	15.35		0.18	10.75	Sqm
		4		0.44	0.18	0.31	Sqm
		4	15.35		0.25	15.35	Sqm
		4		0.35	0.25	0.35	Sqm
		4	15.35		0.55	33.77	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					307.26	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 & technical 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	5.97		1.45	17.32	Cum
	Right and left Return wall	4	2.04		2.44	19.90	Cum
	Extra slope	2	8.004	1.005	2.01	32.34	Cum
		2	5.969	1.005	2.01	24.12	Cum
	TOTAL					93.67	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR NEURA SURAJMAL MINOR							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 0.240							
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	130.00			130.00	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.						
	<i>Right abutment</i>	2	1.84	1.45	2.48	13.21	Cum
		1	5.00	1.89	2.48	23.38	Cum
	<i>Extra for Slope (0.5:1)</i>	2	6.85	1.24	2.48	42.07	Cum
	<i>Left abutment</i>	2	1.84	1.45	2.48	13.21	Cum
		1	5.00	1.89	2.48	23.38	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.00	1.24	2.48	30.75	Cum
	TOTAL					146.01	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.						
	<i>Right abutment</i>	2	1.84	1.45	0.20	1.07	Cum
		1	5.00	1.89	0.20	1.89	Cum
	<i>Left abutment</i>	2	1.84	1.45	0.20	1.07	Cum
		1	5.00	1.89	0.20	1.89	Cum
	<i>Levelling course</i>	2	3.10	4.25	0.08	2.11	Cum
	TOTAL					8.01	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.						
	<i>Right abutment</i>	1	5.00	1.69	0.20	1.69	Cum
		1	5.00	1.44	0.80	5.74	Cum
		1	5.00	0.90	0.55	2.49	Cum
		1	5.00	0.82	0.50	2.05	Cum
	<i>Return wall</i>	2	1.74	1.25	0.20	0.87	Cum
		2	1.74	1.05	0.80	2.92	Cum
		2	1.74	0.62	0.82	1.78	Cum
	<i>Left abutment</i>	2	1.74	0.40	0.15	0.21	Cum
		1	5.00	1.69	0.20	1.69	Cum
		1	5.00	1.44	0.80	5.74	Cum
		1	5.00	0.90	0.55	2.49	Cum
		1	5.00	0.82	0.50	2.05	Cum
	<i>Return wall</i>	2	1.74	1.25	0.20	0.87	Cum
		2	1.74	1.05	0.80	2.92	Cum
		2	1.74	0.62	0.82	1.78	Cum
		2	1.74	0.40	0.15	0.21	Cum
	TOTAL					35.49	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.						
	<i>Slab</i>	1	5.25	2.90	0.34	5.10	Cum
	<i>Approch Slab</i>	2	3.50	2.90	0.34	6.80	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit	
	Wearing coat	1	12.25	1.90	0.08	1.75	Cum	
	Parapet	2	12.25	0.44	0.18	1.91	Cum	
		2	12.25	0.35	0.25	2.15	Cum	
		2	12.25	0.22	0.55	2.95	Cum	
TOTAL						20.65	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	29	3.96		1.578	181.2	Kg	
a2	10	15	6.25		0.616	57.8	Kg	
a3	10	2	5.15		0.616	6.3	Kg	
a4	10	18	3.88		0.616	43.1	Kg	
a5	10	10	6.15		0.616	37.9	Kg	
	APPROACH SLAB							
c1	12	70	3.70		0.888	229.9	Kg	
c2	12	46	5.45		0.888	222.5	Kg	
c3	12	70	3.70		0.888	229.9	Kg	
c4	12	46	5.45		0.888	222.5	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	10	24	2.80		0.616	41.4	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	12	48	3.40		0.888	144.9	Kg	
	RCC M-20 (Providing Skin Reinforcement @0.25%)	35.5	0.0025	0.089	7850.00	696.58	Kg	
	Total Reinforcement Steel (in kg)						2782.0	Kg
	Total Weight in Metric Tonne						2.78	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.							
	Right abutment	2	5.00		0.20	2.00	Sqm	
		2		1.69	0.20	0.67	Sqm	
		2	5.00		0.80	8.01	Sqm	
		2		1.44	0.80	2.30	Sqm	
		2	5.00		0.55	5.51	Sqm	
		2		0.90	0.55	0.99	Sqm	
		2	5.00		0.50	5.00	Sqm	
		2		0.82	0.50	0.82	Sqm	
	Return wall	2	1.74		0.20	0.70	Sqm	
		2		1.25	0.20	0.50	Sqm	
		2	1.74		0.80	2.79	Sqm	
		2		1.05	0.80	1.67	Sqm	
		2	1.74		0.82	2.86	Sqm	
		2		0.62	0.82	1.02	Sqm	
		2	1.74		0.15	0.52	Sqm	
		2		0.40	0.15	0.12	Sqm	
	Left abutment	2	5.00		0.20	2.00	Sqm	
		2		1.69	0.20	0.67	Sqm	
		2	5.00		0.80	8.01	Sqm	
		2		1.44	0.80	2.30	Sqm	
		2	5.00		0.55	5.51	Sqm	
		2		0.90	0.55	0.99	Sqm	
		2	5.00		0.50	5.00	Sqm	
		2		0.82	0.50	0.82	Sqm	
	Return wall	2	1.74		0.20	0.70	Sqm	
		2		1.25	0.20	0.50	Sqm	
		2	1.74		0.80	2.79	Sqm	
		2		1.05	0.80	1.67	Sqm	
		2	1.74		0.82	2.86	Sqm	
		2		0.62	0.82	1.02	Sqm	
		2	1.74		0.15	0.52	Sqm	

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.40	0.15	0.12	Sqm
	Slab	2	5.25		0.34	3.52	Sqm
		1	5.25	2.90		15.23	Sqm
		2		2.90	0.34	1.94	Sqm
	Approch Slab	4	3.50		0.34	4.69	Sqm
		2	3.50	2.90		20.30	Sqm
		4		2.90	0.34	3.89	Sqm
	Parapet	4	12.25		0.18	8.58	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.25		0.25	12.25	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.25		0.55	26.95	Sqm
		4		0.22	0.55	0.48	Sqm
TOTAL						169.47	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	2.90	0.40		2.32	Sqm
TOTAL						2.32	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	2.90			5.80	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	5.00		0.72	7.24	Cum
	Right and left Return wall	4	1.84		1.27	9.39	Cum
	Extra slope	2	6.8465	1.2395	2.479	42.07	Cum
		2	5.004	1.2395	2.479	30.75	Cum
TOTAL						89.45	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR SHUSHNAR MINOR							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 4.300							
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.						
	<i>Right abutment</i>	2	1.88	1.42	1.37	7.31	Cum
		1	5.03	1.76	1.37	12.14	Cum
	<i>Extra for Slope (0.5:1)</i>	2	6.91	0.69	1.37	13.05	Cum
	<i>Left abutment</i>	2	1.88	1.42	1.37	7.31	Cum
		1	5.03	1.76	1.37	12.14	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.03	0.69	1.37	9.50	Cum
	TOTAL					61.44	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.						
	<i>Right abutment</i>	2	1.88	1.42	0.20	1.06	Cum
		1	5.03	1.76	0.20	1.77	Cum
	<i>Left abutment</i>	2	1.88	1.42	0.20	1.06	Cum
		1	5.03	1.76	0.20	1.77	Cum
	<i>Levelling course</i>	2	3.10	4.25	0.08	2.11	Cum
	TOTAL					7.77	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.						
	<i>Right abutment</i>	1	5.03	1.66	0.20	1.67	Cum
		1	5.03	1.39	0.80	5.58	Cum
		1	5.03	0.88	0.45	2.00	Cum
		1	5.03	0.82	0.50	2.06	Cum
	<i>Return wall</i>	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
	<i>Left abutment</i>	1	5.03	1.66	0.20	1.67	Cum
		1	5.03	1.39	0.80	5.58	Cum
		1	5.03	0.88	0.45	2.00	Cum
		1	5.03	0.82	0.50	2.06	Cum
	<i>Return wall</i>	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					33.13	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.						
	<i>Slab</i>	1	5.25	2.45	0.34	4.31	Cum
	<i>Approch Slab</i>	2	3.50	2.45	0.34	5.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Wearing coat	1	12.25	1.45	0.08	1.33	Cum
	Parapet	2	12.25	0.44	0.18	1.91	Cum
		2	12.25	0.35	0.25	2.15	Cum
		2	12.25	0.22	0.55	2.95	Cum
TOTAL						18.39	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	29	3.51		1.578	160.6	Kg
a2	10	13	6.25		0.616	50.1	Kg
a3	10	2	5.15		0.616	6.3	Kg
a4	10	18	3.43		0.616	38.1	Kg
a5	10	9	6.15		0.616	34.1	Kg
	APPROACH SLAB						
c1	12	70	3.70		0.888	229.9	Kg
c2	12	46	5.45		0.888	222.5	Kg
c3	12	70	3.70		0.888	229.9	Kg
c4	12	46	5.45		0.888	222.5	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	10	24	2.80		0.616	41.4	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	12	48	3.40		0.888	144.9	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	33.1	0.0025	0.083	7850.00	650.26	Kg
	<i>Total Reinforcement Steel (in kg)</i>					2666.0	Kg
	Total Weight in Metric Tonne					2.67	MT
7	Providing shuttering including strutting, propping 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		1.66	0.20	0.66	Sqm
		2	5.03		0.80	8.05	Sqm
		2		1.39	0.80	2.22	Sqm
		2	5.03		0.45	4.53	Sqm
		2		0.88	0.45	0.79	Sqm
		2	5.03		0.50	5.03	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	5.03		0.20	2.01	Sqm
		2		1.66	0.20	0.66	Sqm
		2	5.03		0.80	8.05	Sqm
		2		1.39	0.80	2.22	Sqm
		2	5.03		0.45	4.53	Sqm
		2		0.88	0.45	0.79	Sqm
		2	5.03		0.50	5.03	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

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.40	0.15	0.12	Sqm
	Slab	2	5.25		0.34	3.52	Sqm
		1	5.25	2.45		12.86	Sqm
		2		2.45	0.34	1.64	Sqm
	Approch Slab	4	3.50		0.34	4.69	Sqm
		2	3.50	2.45		17.15	Sqm
		4		2.45	0.34	3.28	Sqm
	Parapet	4	12.25		0.18	8.58	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.25		0.25	12.25	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.25		0.55	26.95	Sqm
		4		0.22	0.55	0.48	Sqm
TOTAL						159.52	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	2.45	0.40		1.96	Sqm
TOTAL						1.96	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	2.45			4.90	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	0.67		6.78	Cum
	Right and left Return wall	4	1.88	1.17		8.76	Cum
	Extra slope	2	6.9115	0.687	1.374	13.05	Cum
		2	5.034	0.687	1.374	9.50	Cum
TOTAL						38.09	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 7.420							
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.						
	<i>Right abutment</i>	2	2.04	1.73	2.22	15.62	Cum
		1	5.97	2.07	2.22	27.39	Cum
	<i>Extra for Slope (0.5:1)</i>	2	8.00	1.11	2.22	39.34	Cum
	<i>Left abutment</i>	2	2.04	1.73	2.22	15.62	Cum
		1	5.97	2.07	2.22	27.39	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.97	1.11	2.22	29.34	Cum
	TOTAL					154.70	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.						
	<i>Right abutment</i>	2	2.04	1.73	0.20	1.41	Cum
		1	5.97	2.07	0.20	2.47	Cum
	<i>Left abutment</i>	2	2.04	1.73	0.20	1.41	Cum
		1	5.97	2.07	0.20	2.47	Cum
	<i>Levelling course</i>	2	5.50	3.50	0.08	3.08	Cum
	TOTAL					10.84	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.						
	<i>Right abutment</i>	1	5.97	1.87	0.20	2.23	Cum
		1	5.97	1.67	0.80	7.97	Cum
		1	5.97	1.15	1.50	10.25	Cum
		1	5.97	0.82	0.20	0.98	Cum
		1	5.97	0.40	0.37	0.88	Cum
	<i>Return wall</i>	2	1.94	1.53	0.20	1.18	Cum
		2	1.94	1.28	0.80	3.97	Cum
		2	1.94	0.72	1.77	4.90	Cum
		2	1.94	0.40	0.15	0.23	Cum
	<i>Left abutment</i>	1	5.97	1.87	0.20	2.23	Cum
		1	5.97	1.67	0.80	7.97	Cum
		1	5.97	1.15	1.50	10.25	Cum
		1	5.97	0.82	0.20	0.98	Cum
		1	5.97	0.40	0.37	0.88	Cum
	<i>Return wall</i>	2	1.94	1.53	0.20	1.18	Cum
		2	1.94	1.28	0.80	3.97	Cum
		2	1.94	0.72	1.77	4.90	Cum
		2	1.94	0.40	0.15	0.23	Cum
	TOTAL					65.21	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.						

S.No.	Items	No.	Length	Width	Height	Quantity	Unit	
	Slab	1	8.35	6.50	0.71	38.40	Cum	
	Approch Slab	2	3.50	6.50	0.34	15.24	Cum	
	Wearing coat	1	15.35	5.50	0.08	6.33	Cum	
	Parapet	2	15.35	0.44	0.18	2.39	Cum	
		2	15.35	0.35	0.25	2.69	Cum	
		2	15.35	0.22	0.55	3.70	Cum	
TOTAL						68.75	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	9.41		2.466	1485.0	Kg	
a2	12	60	7.50		0.888	399.5	Kg	
a3	10	2	6.40		0.616	7.9	Kg	
a4	10	46	9.33		0.616	264.6	Kg	
a5	10	60	7.40		0.616	273.7	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	140	2.65		0.888	329.5	Kg	
x2	16	140	1.55		1.578	341.4	Kg	
x3	10	24	8.25		0.616	122.1	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	12	48	3.40		0.888	144.9	Kg	
	RCC M-20 (Providing Skin Reinforcement @0.25%)	65.2	0.0025	0.163	7850.00	#####	Kg	
	<i>Total Reinforcement Steel (in kg)</i>						6232.7	Kg
	Total Weight in Metric Tonne						6.23	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.							
	<i>Right abutment</i>	2	5.97		0.20	2.39	Sqm	
		2		1.87	0.20	0.75	Sqm	
		2	5.97		0.80	9.55	Sqm	
		2		1.67	0.80	2.67	Sqm	
		2	5.97		1.50	17.91	Sqm	
		2		1.15	1.50	3.44	Sqm	
		2	5.97		0.20	2.39	Sqm	
		2		0.82	0.20	0.33	Sqm	
	<i>Return wall</i>	2	1.94		0.20	0.77	Sqm	
		2		1.53	0.20	0.61	Sqm	
		2	1.94		0.80	3.10	Sqm	
		2		1.28	0.80	2.05	Sqm	
		2	1.94		1.77	6.85	Sqm	
		2		0.72	1.77	2.53	Sqm	
		2	1.94		0.15	0.58	Sqm	
		2		0.40	0.15	0.12	Sqm	
	<i>Left abutment</i>	2	5.97		0.20	2.39	Sqm	
		2		1.87	0.20	0.75	Sqm	
		2	5.97		0.80	9.55	Sqm	
		2		1.67	0.80	2.67	Sqm	
		2	5.97		1.50	17.91	Sqm	
		2		1.15	1.50	3.44	Sqm	
		2	5.97		0.20	2.39	Sqm	
		2		0.82	0.20	0.33	Sqm	
	<i>Return wall</i>	2	1.94		0.20	0.77	Sqm	
		2		1.53	0.20	0.61	Sqm	
		2	1.94		0.80	3.10	Sqm	
		2		1.28	0.80	2.05	Sqm	

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.94		1.77	6.85	Sqm
		2		0.72	1.77	2.53	Sqm
		2	1.94		0.15	0.58	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	8.35		0.71	11.82	Sqm
		1	8.35	6.50		54.28	Sqm
		2		6.50	0.71	9.20	Sqm
	Approch Slab	4	3.50		0.34	4.69	Sqm
		2	3.50	6.50		45.50	Sqm
		4		6.50	0.34	8.71	Sqm
	Parapet	4	15.35		0.18	10.75	Sqm
		4		0.44	0.18	0.31	Sqm
		4	15.35		0.25	15.35	Sqm
		4		0.35	0.25	0.35	Sqm
		4	15.35		0.55	33.77	Sqm
		4		0.22	0.55	0.48	Sqm
	TOTAL					307.26	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 & technical 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	5.97	1.35		16.15	Cum
	Right and left Return wall	4	2.04	2.44		19.90	Cum
	Extra slope	2	8.00	1.1085	2.217	39.34	Cum
		2	5.97	1.1085	2.217	29.34	Cum
	TOTAL					104.73	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 19.740							
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.						
	<i>Right abutment</i>	2	1.94	1.54	1.43	8.50	Cum
		1	6.16	1.88	1.43	16.50	Cum
	<i>Extra for Slope (0.5:1)</i>	2	8.10	0.71	1.43	16.52	Cum
	<i>Left abutment</i>	2	1.94	1.54	1.43	8.50	Cum
		1	6.16	1.88	1.43	16.50	Cum
	<i>Extra for Slope (0.5:1)</i>	2	6.16	0.71	1.43	12.57	Cum
	TOTAL					79.10	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.						
	<i>Right abutment</i>	2	1.94	1.54	0.20	1.19	Cum
		1	6.16	1.88	0.20	2.31	Cum
	<i>Left abutment</i>	2	1.94	1.54	0.20	1.19	Cum
		1	6.16	1.88	0.20	2.31	Cum
	<i>Levelling course</i>	2	5.50	3.50	0.08	3.08	Cum
	TOTAL					10.08	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.						
	<i>Right abutment</i>	1	6.16	1.68	0.20	2.06	Cum
		1	6.16	1.48	0.80	7.27	Cum
		1	6.16	1.05	0.85	5.49	Cum
		1	6.16	0.82	0.42	2.12	Cum
		1	6.16	0.40	0.05	0.12	Cum
	<i>Return wall</i>	2	1.84	1.34	0.20	0.98	Cum
		2	1.84	1.14	0.80	3.34	Cum
		2	1.84	0.67	1.12	2.77	Cum
		2	1.84	0.40	0.15	0.22	Cum
	<i>Left abutment</i>	1	6.16	1.68	0.20	2.06	Cum
		1	6.16	1.48	0.80	7.27	Cum
		1	6.16	1.05	0.85	5.49	Cum
		1	6.16	0.82	0.42	2.12	Cum
		1	6.16	0.40	0.05	0.12	Cum
	<i>Return wall</i>	2	1.84	1.34	0.20	0.98	Cum
		2	1.84	1.14	0.80	3.34	Cum
		2	1.84	0.67	1.12	2.77	Cum
		2	1.84	0.40	0.15	0.22	Cum
	TOTAL					48.77	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	6.50	3.95	0.39	9.88	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Approch Slab	2	3.50	3.95	0.34	9.26	Cum
	Wearing coat	1	13.50	2.95	0.08	2.99	Cum
	Parapet	2	13.50	0.44	0.18	2.10	Cum
		2	13.50	0.35	0.25	2.37	Cum
		2	13.50	0.22	0.55	3.25	Cum
	TOTAL					29.86	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	36	4.41		1.578	250.5	Kg
a2	10	20	6.90		0.616	85.1	Kg
a3	10	2	6.40		0.616	7.9	Kg
a4	10	23	4.33		0.616	61.4	Kg
a5	10	14	7.40		0.616	63.9	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	66	2.38		0.888	139.2	Kg
x2	16	66	1.32		1.578	137.5	Kg
x3	10	24	3.85		0.616	57.0	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	12	48	3.40		0.888	144.9	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	48.8	0.0025	0.122	7850.00	957.121	Kg
	Total Reinforcement Steel (in kg)					3488.9	Kg
	Total Weight in Metric Tonne					3.49	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	6.16		0.20	2.47	Sqm
		2		1.68	0.20	0.67	Sqm
		2	6.16		0.80	9.86	Sqm
		2		1.48	0.80	2.36	Sqm
		2	6.16		0.85	10.48	Sqm
		2		1.05	0.85	1.78	Sqm
		2	6.16		0.42	5.18	Sqm
		2		0.82	0.42	0.69	Sqm
	Return wall	2	1.84		0.20	0.74	Sqm
		2		1.34	0.20	0.53	Sqm
		2	1.84		0.80	2.94	Sqm
		2		1.14	0.80	1.82	Sqm
		2	1.84		1.12	4.12	Sqm
		2		0.67	1.12	1.51	Sqm
		2	1.84		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	6.16		0.20	2.47	Sqm
		2		1.68	0.20	0.67	Sqm
		2	6.16		0.80	9.86	Sqm
		2		1.48	0.80	2.36	Sqm
		2	6.16		0.85	10.48	Sqm
		2		1.05	0.85	1.78	Sqm
		2	6.16		0.42	5.18	Sqm
		2		0.82	0.42	0.69	Sqm
	Return wall	2	1.84		0.20	0.74	Sqm
		2		1.34	0.20	0.53	Sqm
		2	1.84		0.80	2.94	Sqm
		2		1.14	0.80	1.82	Sqm
		2	1.84		1.12	4.12	Sqm
		2		0.67	1.12	1.51	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	1.84		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Slab	2	6.50		0.39	5.01	Sqm
		1	6.50	3.95		25.68	Sqm
		2		3.95	0.39	3.04	Sqm
	Approch Slab	4	3.50		0.34	4.69	Sqm
		2	3.50	3.95		27.65	Sqm
		4		3.95	0.34	5.29	Sqm
	Parapet	4	13.50		0.18	9.45	Sqm
		4		0.44	0.18	0.31	Sqm
		4	13.50		0.25	13.50	Sqm
		4		0.35	0.25	0.35	Sqm
		4	13.50		0.55	29.70	Sqm
		4		0.22	0.55	0.48	Sqm
TOTAL						216.76	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 (RCD 13.08)	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	3.95	0.40		3.16	Sqm
TOTAL						3.16	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	3.95			7.90	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	6.16		0.85	10.43	Cum
	Right and left Return wall	4	1.94		1.61	12.51	Cum
	Extra slope	2	8.10	0.714	1.428	16.52	Cum
		2	6.16	0.714	1.428	12.57	Cum
TOTAL						52.03	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES FOR CHAURAHA MINOR							
BILL OF QUANTITIES FOR CONSTRUCTION OF SLAB BRIDGE AT - KM 5.910							
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.						
	<i>Right abutment</i>	2	1.92	1.51	1.20	6.96	Cum
		1	5.19	1.95	1.20	12.13	Cum
	<i>Extra for Slope (0.5:1)</i>	2	7.12	0.60	1.20	10.25	Cum
	<i>Left abutment</i>	2	1.92	1.51	1.20	6.96	Cum
		1	5.19	1.95	1.20	12.13	Cum
	<i>Extra for Slope (0.5:1)</i>	2	5.19	0.60	1.20	7.48	Cum
	TOTAL					55.91	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.						
	<i>Right abutment</i>	2	1.92	1.51	0.20	1.16	Cum
		1	5.19	1.95	0.20	2.02	Cum
	<i>Left abutment</i>	2	1.92	1.51	0.20	1.16	Cum
		1	5.19	1.95	0.20	2.02	Cum
	<i>Levelling course</i>	2	3.10	5.50	0.08	2.73	Cum
	TOTAL					9.09	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.						
	<i>Right abutment</i>	1	5.19	1.75	0.20	1.81	Cum
		1	5.19	1.45	0.80	6.01	Cum
		1	5.19	1.03	0.76	4.05	Cum
		1	5.19	0.82	0.50	2.13	Cum
	<i>Return wall</i>	2	1.82	1.31	0.20	0.95	Cum
		2	1.82	1.11	0.80	3.23	Cum
		2	1.82	0.65	1.03	2.44	Cum
		2	1.82	0.40	0.15	0.22	Cum
	<i>Left abutment</i>	1	5.19	1.75	0.20	1.81	Cum
		1	5.19	1.45	0.80	6.01	Cum
		1	5.19	1.03	0.76	4.05	Cum
		1	5.19	0.82	0.50	2.13	Cum
	<i>Return wall</i>	2	1.82	1.31	0.20	0.95	Cum
		2	1.82	1.11	0.80	3.23	Cum
		2	1.82	0.65	1.03	2.44	Cum
		2	1.82	0.40	0.15	0.22	Cum
	TOTAL					41.71	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.						
	<i>Slab</i>	1	5.50	3.05	0.33	5.49	Cum
	<i>Approch Slab</i>	2	3.50	3.05	0.30	6.41	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	Wearing coat	1	12.50	2.05	0.08	1.92	Cum
	Parapet	2	12.50	0.44	0.18	1.94	Cum
		2	12.50	0.35	0.25	2.19	Cum
		2	12.50	0.22	0.55	3.01	Cum
TOTAL						20.97	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	32	3.51		1.578	177.3	Kg
a2	10	16	5.90		0.616	58.2	Kg
a3	10	2	5.40		0.616	6.7	Kg
a4	10	19	3.43		0.616	40.2	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	50	2.32		0.888	103.0	Kg
x2	16	50	1.27		1.578	100.5	Kg
x3	10	24	2.95		0.616	43.6	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	12	48	3.40		0.888	144.9	Kg
	RCC M-20 (Providing Skin Reinforcement @0.25%)	41.7	0.0025	0.104	7850.00	818.55	Kg
	Total Reinforcement Steel (in kg)					2956.2	Kg
	Total Weight in Metric Tonne					2.96	MT
7	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Right abutment	2	5.19		0.20	2.08	Sqm
		2		1.75	0.20	0.70	Sqm
		2	5.19		0.80	8.31	Sqm
		2		1.45	0.80	2.32	Sqm
		2	5.19		0.76	7.84	Sqm
		2		1.03	0.76	1.56	Sqm
		2	5.19		0.50	5.19	Sqm
		2		0.82	0.50	0.82	Sqm
	Return wall	2	1.82		0.20	0.73	Sqm
		2		1.31	0.20	0.52	Sqm
		2	1.82		0.80	2.92	Sqm
		2		1.11	0.80	1.77	Sqm
		2	1.82		1.03	3.74	Sqm
		2		0.65	1.03	1.34	Sqm
		2	1.82		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm
	Left abutment	2	5.19		0.20	2.08	Sqm
		2		1.75	0.20	0.70	Sqm
		2	5.19		0.80	8.31	Sqm
		2		1.45	0.80	2.32	Sqm
		2	5.19		0.76	7.84	Sqm
		2		1.03	0.76	1.56	Sqm
		2	5.19		0.50	5.19	Sqm
		2		0.82	0.50	0.82	Sqm
	Return wall	2	1.82		0.20	0.73	Sqm
		2		1.31	0.20	0.52	Sqm
		2	1.82		0.80	2.92	Sqm
		2		1.11	0.80	1.77	Sqm
		2	1.82		1.03	3.74	Sqm
		2		0.65	1.03	1.34	Sqm
		2	1.82		0.15	0.55	Sqm
		2		0.40	0.15	0.12	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2		0.40	0.15	0.12	Sqm
	Slab	2	5.50		0.33	3.60	Sqm
		1	5.50	3.05		16.78	Sqm
		2		3.05	0.33	2.00	Sqm
	Approch Slab	4	3.50		0.30	4.20	Sqm
		2	3.50	3.05		21.35	Sqm
		4		3.05	0.30	3.66	Sqm
	Parapet	4	12.50		0.18	8.75	Sqm
		4		0.44	0.18	0.31	Sqm
		4	12.50		0.25	12.50	Sqm
		4		0.35	0.25	0.35	Sqm
		4	12.50		0.55	27.50	Sqm
		4		0.22	0.55	0.48	Sqm
TOTAL						182.48	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	3.05	0.40		2.44	Sqm
TOTAL						2.44	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	3.05			6.10	RM
11	Providing Drainage Spouts complete as per drawings & technical 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	5.19	0.96		9.97	Cum
	Right and left Return wall	4	1.92	1.51		11.59	Cum
	Extra slope	2	7.1155	0.6	1.2	10.25	Cum
		2	5.192	0.6	1.2	7.48	Cum
TOTAL						39.28	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	Chauraha Minor	7500-7700	200.000	0.560	112.000	Cum	5021.30	₹ 5,62,385.60	12.90	35.84
2	Neura Srajmal Minor	4225-4700	475.000	0.560	266.000	Cum	5021.30	₹ 13,35,665.80	30.64	85.12
Total					378.00			₹ 18,98,051.40	43.55	120.96
3	Carriage of materials									
	Coarse Sand (60 Km lead)				120.960	Cum	1075.00	₹ 1,30,032.00		
	Cement (30 km lead)				43.546	MT	742.00	₹ 32,310.84		
	Brick (15 km lead)				189000.00	No.	3.18	₹ 6,01,020.00		
Carriage of materials Total (In Rs.)								₹ 7,63,362.84		
SUB TOTAL (In Rs.)								₹ 26,61,414.24		
	Seigniorage @10%				Rate	Amount in Rs.	10%			
	Coarse Sand		120.96	Cum	584.64	70718.05	7071.81			
Total								₹ 7,071.81		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KARMA DISTRIBUTARY			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	BRIDGE COMBINED WITH HR	0.005	₹ 0.00
2	HR FOR CHAUHARA MR.	0.150	₹ 51,303.43
3	BRIDGE	0.220	₹ 14,034.77
4	BRIDGE / FALL (0.305 M)	0.435	₹ 6,869.55
5	BRIDGE / FALL (1.220 M)	1.350	₹ 1,135.08
6	BRIDGE / FALL (1.220 M)	2.150	₹ 10,991.80
7	BRIDGE	2.415	₹ 10,860.26
8	HR FOR NEURA SURAJMAL MR.	3.150	₹ 11,777.44
9	BRIDGE / FALL (1.220 M)	3.200	₹ 4,432.39
10	FALL (1.220 M)	3.650	₹ 10,808.66
11	BRIDGE / FALL (1.520 M)	4.170	₹ 4,301.47
12	FALL (0.610 M)	4.900	₹ 3,63,047.50
13	BRIDGE	5.280	₹ 7,693.58
14	BRIDGE / FALL (1.220 M)	5.700	₹ 4,29,877.49
15	PROPOSED MR.-1 / H.R.	6.450	₹ 0.00
17	BRIDGE / FALL (1.220 M)	6.600	₹ 9,970.65
18	BRIDGE	7.420	₹ 10,464.78
19	PROPOSED MR.-2 / H.R.	7.735	₹ 0.00
20	BRIDGE / FALL (0.610 M)	8.150	₹ 6,774.89
21	PROPOSED MR.-3 / H.R.	8.700	₹ 0.00
22	BRIDGE / FALL (0.610 M)	9.150	₹ 1,35,782.98
23	PROPOSED MR. 4 & BRIDGE / H.R.	9.565	₹ 0.00
24	PROPOSED MR. 5 / H.R.	11.333	₹ 0.00
25	FALL (0.457 M)	11.360	₹ 1,83,421.00
26	BRIDGE / FALL (1.220 M)	12.350	₹ 4,250.08
27	BRIDGE / FALL (1.524 M)	12.850	₹ 20,299.35
28	BRIDGE	13.230	₹ 0.00
29	FALL (0.915 M)	13.600	₹ 28,347.70
30	FALL (1.680 M)	14.050	₹ 1,947.72
31	BRIDGE	14.490	₹ 1,534.57
32	BRIDGE / FALL (0.914 M)	14.700	₹ 33,651.62
33	BRIDGE / FALL (1.372 M)	15.050	₹ 10,841.17
34	FALL (0.762 M)	16.250	₹ 93,471.75
35	FALL (0.915 M)	16.860	₹ 9,031.28
36	CULVERT	17.275	₹ 6,774.46
37	FALL (0.457 M)	17.975	₹ 6,622.35
38	CULVERT / FALL (0.457 M)	18.035	₹ 1,534.57
39	HR FOR SHUSHNAR MR.	18.342	₹ 3,816.51
40	FALL (1.372 M)	18.600	₹ 9,154.31
41	CULVERT	19.400	₹ 0.00
42	FALL (0.915 M)	19.480	₹ 0.00
43	PIPE CULVERT	19.740	₹ 33,481.67
44	CULVERT / FALL (0.610 M)	19.850	₹ 0.00
45	PROPOSED MR.-7 / H.R.	20.058	₹ 0.00

46	CULVERT / FALL (1.067 M)	21.350	₹ 2,801.38
47	FALL (0.457 M)	22.150	₹ 9,913.64
48	CULVERT / FALL (0.915 M)	23.050	₹ 2,163.89
49	CULVERT / FALL (1.220 M)	23.300	₹ 11,348.46
Total In Rs.			₹ 21,06,630.84
Total In Lakhs.			₹ 21.07

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF CHAUHARA MR.			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	CULVERT	1.230	₹ 12,481.03
2	BRIDGE	1.920	₹ 6,990.18
3	BRIDGE / FALL (0.305 M)	2.340	₹ 12,357.62
4	BRIDGE	2.780	₹ 6,291.16
5	FALL (1.830 M)	3.130	₹ 38,365.77
6	NEW FALL (0.914 M)	3.190	₹ 0.00
7	BRIDGE	3.445	₹ 7,703.02
8	FALL (0.457 M)	4.175	₹ 7,817.48
9	FALL (0.762 M)	4.240	₹ 37,680.67
10	NEW FALL (0.305 M)	4.800	₹ 0.00
11	CULVERT	5.165	₹ 5,592.14
12	FALL (0.610 M)	5.380	₹ 32,674.97
13	NEW FALL (0.305 M)	6.000	₹ 0.00
14	FALL (0.915 M)	6.400	₹ 2,19,628.85
15	BRIDGE / FALL (1.670 M)	6.520	₹ 1,999.30
16	NEW FALL (0.457 M)	6.750	₹ 0.00
17	NEW FALL (0.457 M)	7.050	₹ 0.00
18	NEW FALL (0.457 M)	7.200	₹ 0.00
19	NEW FALL (0.457 M)	7.500	₹ 0.00
Total In Rs.			₹ 3,89,582.20
Total In Lakhs.			₹ 3.90

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF NEURA SURAJMAL MR.

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	CULVERT	0.065	₹ 71,315.43
2	FALL (0.505 M)	0.180	₹ 34,221.02
3	CULVERT	0.240	₹ 10,684.98
4	FALL (0.914 M)	0.780	₹ 1,416.53
5	FALL (0.970 M)	1.505	₹ 2,360.88
6	NEW FALL (0.457 M)	1.950	₹ 0.00
7	FALL (0.457 M)	2.095	₹ 40,902.85
8	NEW FALL (0.457 M)	2.300	₹ 0.00
9	CULVERT	2.480	₹ 10,684.98
10	FALL (0.305 M)	2.665	₹ 34,836.66
11	CULVERT	2.745	₹ 7,417.99
12	FALL (0.790 M)	3.245	₹ 38,552.32
13	FALL (0.914 M)	4.225	₹ 2,006.75
14	PIPE CULVERT	4.480	₹ 1,416.53
Total In Rs.			₹ 2,55,816.91
Total In Lakhs.			₹ 2.56

DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF SHUSHNAR MR.

Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	BRIDGE / FALL (0.610 M)	0.050	₹ 13,949.09
2	CULVERT / FALL (0.610 M)	0.700	₹ 6,827.73
3	CULVERT / FALL (1.220 M)	0.800	₹ 4,830.77
4	NEW FALL (0.457 M)	1.500	₹ 0.00
5	BRIDGE	1.995	₹ 23,993.22
6	CULVERT / FALL (0.457 M)	2.030	₹ 0.00
7	CULVERT	2.570	₹ 2,212.51
8	FALL (0.610 M)	2.750	₹ 75,888.52
9	BRIDGE	3.065	₹ 64,818.67
10	CULVERT / FALL (0.915 M)	3.700	₹ 22,236.04
11	NEW FALL (0.305 M)	4.075	₹ 0.00
12	CULVERT	4.300	₹ 16,432.63
13	HR FOR PROPOSED MR.-6	4.500	₹ 0.00
Total In Rs.			₹ 2,31,189.18
Total In Lakhs.			₹ 2.31

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND**DETAILED ESTIMATE FOR C/O OF APPROACH ROAD**

Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		20.000	₹ 1,04,20,371.00
Total In Rs.			₹ 1,04,20,371.00
Total In Lakhs.			₹ 104.20

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KARMA 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.-0.005Km)									
1		Structure is in good condition and does not require any repair works.							
AOC FOR HR OF CHAUHARA MR (Ch.-0.150 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.	2.250	Cum	2492.58	5608.31			
2	M-181	Structural Steel (Average rate of Angle, Joint and Channel) etc.	0.284	MT	160035.11	45484.24			
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			
		Steel (30 km lead)	0.284	MT	742.00	210.89			
TOTAL (In Rs.)						51303.43			
		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.-0.220 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.	1.51	Cum	5021.30	7603.49	0.17	0.48	
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.	8.376	Sqm	340.20	2849.48	0.434	0.122	
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.	1.097	Sqm	63.20	69.35	0.0016		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.607	Cum	1075.00	652.36			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.610	MT	742.00	452.84			
		Brick (30 km lead)	757.000	No.	3.18	2407.26			
TOTAL (In Rs.)						14034.77			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.61	Cum	584.64	354.79	35.48		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							35.48		
AOC FOR BRIDGE/FALL (Ch.-0.435 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.	0.71	Cum	5021.30	3581.35	0.08	0.23	
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.	4.542	Sqm	340.20	1545.03	0.235	0.066	
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.	0.914	Sqm	63.20	57.79	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.295	Cum	1075.00	316.63			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.319	MT	742.00	236.67			
		Brick (30 km lead)	356.000	No.	3.18	1132.08			
TOTAL (In Rs.)						6869.55			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.29	Cum	584.64	172.20	17.22		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							17.22		

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.-1.350 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.	2.800	Sqm	340.20	952.56	0.145	0.041	
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.	0.480	Sqm	63.20	30.34	0.00		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.041	Cum	1075.00	43.95			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.146	MT	742.00	108.24			
TOTAL (In Rs.)						1135.08			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.04	Cum	584.64	23.90	2.39		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							2.39		
AOC FOR BRIDGE/FALL (Ch.-2.150 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.	0.45	Cum	5021.30	2238.34	0.05	0.14	
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.	2.667	Sqm	340.20	907.31	0.138	0.039	
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.	0.457	Sqm	63.20	28.90	0.00		
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.	0.81	Cum	6381.70	5169.18	0.26	0.36	0.73
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.546	Cum	1075.00	587.04			
		Coarse Aggregates (100 Km lead)	0.729	Cum	1398.00	1019.14			
		Cement (30 km lead)	0.453	MT	742.00	335.93			
		Brick (30 km lead)	222.000	No.	3.18	705.96			
TOTAL (In Rs.)						10991.80			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.55	Cum	584.64	319.26	31.93		
		Coarse Aggregate	0.73	Cum	944.26	688.37	68.84		
Total							100.76		
AOC FOR BRIDGE (Ch.-2.415 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	5.5.5	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.	20.589	Sqm	340.20	7004.46	1.067	0.301	
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.	20.589	Sqm	63.20	1301.24	0.03		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.301	Cum	1075.00	323.15			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.098	MT	742.00	814.89			
TOTAL (In Rs.)						10860.26			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.30	Cum	584.64	175.74	17.57		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							17.57		

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 NEURA SURAJMAL MR (Ch.-3.150 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.	4.725	Cum	2492.58	11777.44			
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.)						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		
AOC FOR BRIDGE/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.	120.000	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.	6.401	Sqm	340.20	2177.55	0.332	0.093	
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.	4.572	Sqm	63.20	288.95	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.	0.02	Cum	6381.70	150.77	0.01	0.01	0.02
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.104	Cum	1075.00	111.89			
		Coarse Aggregates (100 Km lead)	0.021	Cum	1398.00	29.72			
		Cement (30 km lead)	0.346	MT	742.00	256.98			
TOTAL (In Rs.)						4432.39			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.10	Cum	584.64	60.85	6.09		
		Coarse Aggregate	0.02	Cum	944.26	20.08	2.01		
Total							8.09		
AOC FOR FALL (Ch.-3.650 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.	0.47	Cum	5021.30	2339.93	0.05	0.15	
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.	0.90	Cum	6381.70	5743.53	0.29	0.41	0.81
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.554	Cum	1075.00	595.68			
		Coarse Aggregates (100 Km lead)	0.810	Cum	1398.00	1132.38			

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)
		Cement (30 km lead)	0.345	MT	742.00	256.20			
		Brick (30 km lead)	233.000	No.	3.18	740.94			
TOTAL (In Rs.)						10808.66			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.55	Cum	584.64	323.96	32.40		
		Coarse Aggregate	0.81	Cum	944.26	764.85	76.49		
Total							108.88		
AOC FOR BRIDGE/FALL (Ch.-4.170 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.	0.40	Cum	5021.30	2003.88	0.05	0.13	
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.	3.256	Sqm	340.20	1107.65	0.169	0.048	
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.	3.256	Sqm	63.20	205.77	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.175	Cum	1075.00	188.38			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.220	MT	742.00	162.97			
		Brick (30 km lead)	199.000	No.	3.18	632.82			
TOTAL (In Rs.)						4301.47			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.18	Cum	584.64	102.45	10.25		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							10.25		
AOC FOR FALL (Ch.-4.900 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	18.56	Cum	695.2	12904.32			
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.	30.937	Cum	6914.20	213902.62	12.76	13.30	26.61
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.	9.00	Cum	6381.70	57435.30	2.92	4.05	8.10
3		Carriage of materials							
		Coarse Sand (60 Km lead)	17.353	Cum	1075.00	18654.25			
		Coarse Aggregates (100 Km lead)	34.706	Cum	1398.00	48518.39			
		Cement (30 km lead)	15.677	MT	742.00	11632.63			
TOTAL (In Rs.)						363047.50			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	17.35	Cum	584.64	10145.13	1014.51		
		Coarse Aggregate	34.71	Cum	944.26	32771.08	3277.11		
Total							4291.62		
AOC FOR BRIDGE (Ch.-5.280 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.	0.64	Cum	5021.30	3194.90	0.07	0.20	

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)
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.	7.113	Sqm	340.20	2419.74	0.369	0.104	
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.	6.363	Sqm	63.20	402.12	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.307	Cum	1075.00	330.51			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.452	MT	742.00	335.06			
		Brick (30 km lead)	318.000	No.	3.18	1011.24			
TOTAL (In Rs.)						7693.58			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.31	Cum	584.64	179.75	17.97		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							17.97		
AOC FOR BRIDGE/FALL (Ch.-5.700 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.	0.90	Cum	5021.30	4514.95	0.10	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.	8.992	Sqm	340.20	3058.94	0.466	0.131	
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.	8.992	Sqm	63.20	568.27	0.01		
4	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	22.71	Cum	695.2	15791.3243			
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.	45.430	Cum	6914.20	314109.25	18.74	19.53	39.07
6		Carriage of materials							
		Coarse Sand (60 Km lead)	19.954	Cum	1075.00	21450.26			
		Coarse Aggregates (100 Km lead)	39.069	Cum	1398.00	54619.08			
		Cement (30 km lead)	19.323	MT	742.00	14337.59			
		Brick (30 km lead)	449.000	No.	3.18	1427.82			
TOTAL (In Rs.)						429877.49			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	19.95	Cum	584.64	11665.75	1166.57		
		Coarse Aggregate	39.07	Cum	944.26	36891.71	3689.17		
Total							4855.75		
AOC FOR BRIDGE/FALL (Ch.-6.600 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.	0.83	Cum	5021.30	4170.59	0.10	0.27	
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.	8.306	Sqm	340.20	2825.63	0.431	0.121	
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.	8.306	Sqm	63.20	524.93	0.01		

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	5.1.31	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	2.103	Cum	149.30	314.00			
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.387	Cum	1075.00	416.08			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.539	MT	742.00	399.73			
		Brick (30 km lead)	415.000	No.	3.18	1319.70			
TOTAL (In Rs.)						9970.65			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.39	Cum	584.64	226.29	22.63		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							22.63		
AOC FOR BRIDGE (Ch.-7.420Km)									
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.	0.13	Cum	5021.30	627.66	0.01	0.04	
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.	20.900	Sqm	340.20	7110.18	1.083	0.305	
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.	20.900	Sqm	63.20	1320.88	0.03		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.345	Cum	1075.00	371.03			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.129	MT	742.00	837.87			
		Brick (30 km lead)	62.000	No.	3.18	197.16			
TOTAL (In Rs.)						10464.78			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.35	Cum	584.64	201.78	20.18		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							20.18		
AOC FOR BRIDGE/FALL (Ch.-8.150 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.	0.81	Cum	6381.70	5169.18	0.26	0.36	0.73
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.365	Cum	1075.00	391.84			
		Coarse Aggregates (100 Km lead)	0.729	Cum	1398.00	1019.14			
		Cement (30 km lead)	0.262	MT	742.00	194.73			
TOTAL (In Rs.)						6774.89			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.36	Cum	584.64	213.10	21.31		
		Coarse Aggregate	0.73	Cum	944.26	688.37	68.84		
Total							90.15		
AOC FOR BRIDGE/FALL (Ch.-9.150 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.	1.79	Cum	5021.30	8999.29	0.21	0.57	
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.	17.325	Sqm	340.20	5893.91	0.898	0.253	

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.	17.325	Sqm	63.20	1094.93	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.	4.97	Cum	6381.70	31704.29	1.61	2.24	4.47
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.	26.22	Sqm	578.60	15170.89			
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.	6.584	Cum	6914.20	45520.88	2.72	2.83	5.66
7		Carriage of materials							
		Coarse Sand (60 Km lead)	5.893	Cum	1075.00	6335.01			
		Coarse Aggregates (100 Km lead)	10.133	Cum	1398.00	14166.16			
		Cement (30 km lead)	5.456	MT	742.00	4048.33			
		Brick (30 km lead)	896.000	No.	3.18	2849.28			
TOTAL (In Rs.)						135782.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	5.89	Cum	584.64	3445.30	344.53		
		Coarse Aggregate	10.13	Cum	944.26	9568.34	956.83		
Total							1301.36		
AOC FOR FALL (Ch.-11.360 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	14.63	Cum	695.2	10167.30			
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.	19.500	Cum	6914.20	134826.90	8.04	8.39	16.77
3		Carriage of materials							
		Coarse Sand (60 Km lead)	8.385	Cum	1075.00	9013.88			
		Coarse Aggregates (100 Km lead)	16.770	Cum	1398.00	23444.46			
		Cement (30 km lead)	8.044	MT	742.00	5968.46			
		Brick (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						183421.00			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	8.39	Cum	584.64	4902.21	490.22		
		Coarse Aggregate	16.77	Cum	944.26	15835.24	1583.52		
Total							2073.74		
AOC FOR BRIDGE/FALL (Ch.-12.350 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.	0.37	Cum	5021.30	1836.59	0.04	0.12	
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.	3.658	Sqm	340.20	1244.32	0.190	0.053	
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.	3.658	Sqm	63.20	231.16	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.170	Cum	1075.00	183.23			

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)
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.237	MT	742.00	176.03			
		Brick (30 km lead)	182.000	No.	3.18	578.76			
TOTAL (In Rs.)						4250.08			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.17	Cum	584.64	99.65	9.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							9.96		
AOC FOR BRIDGE/FALL (Ch.-12.850 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 royalty as per specification and direction of E/I.	2.16	Cum	5021.30	10846.01	0.25	0.69	
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.	11.100	Sqm	340.20	3776.22	0.575	0.162	
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.	11.100	Sqm	63.20	701.52	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.853	Cum	1075.00	917.25			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.841	MT	742.00	623.95			
		Brick (30 km lead)	1080.000	No.	3.18	3434.40			
TOTAL (In Rs.)						20299.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.85	Cum	584.64	498.85	49.88		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							49.88		
AOC FOR BRIDGE (Ch.-13.230 Km)									
1	Structure requires no repair work.								
AOC FOR FALL (Ch.-13.600 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 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.	2.700	Cum	6914.20	18668.34	1.11	1.16	2.32
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.	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.	3.750	Sqm	340.20	1275.75	0.194	0.055	
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.	3.750	Sqm	63.20	237.00	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.336	Cum	1075.00	1435.93			
		Coarse Aggregates (100 Km lead)	2.322	Cum	1398.00	3246.16			
		Cement (30 km lead)	1.357	MT	742.00	1006.88			
		Brick (30 km lead)	187.000	No.	3.18	594.66			
TOTAL (In Rs.)						28347.70			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.34	Cum	584.64	780.93	78.09		
		Coarse Aggregate	2.32	Cum	944.26	2192.57	219.26		
Total							297.35		
AOC FOR FALL (Ch.-14.050 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.	165.000	Sqm	11.80	1947.72			
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 (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						1947.72			
		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.-14.490 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.	130.000	Sqm	11.80	1534.57			
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			
		Brick (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						1534.57			
		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 FALL (Ch.-14.700 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.	4.02	Cum	6381.70	25675.88	1.30	1.81	3.62
2		Carriage of materials							
		Coarse Sand (60 Km lead)	1.811	Cum	1075.00	1946.30			
		Coarse Aggregates (100 Km lead)	3.621	Cum	1398.00	5062.19			
		Cement (30 km lead)	1.304	MT	742.00	967.25			
TOTAL (In Rs.)						33651.62			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.81	Cum	584.64	1058.50	105.85		
		Coarse Aggregate	3.62	Cum	944.26	3419.19	341.92		
Total						447.77			
AOC FOR FALL/BRIDGE (Ch.-15.050 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.	1.30	Cum	6381.70	8271.72	0.42	0.58	1.17
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.583	Cum	1075.00	627.02			
		Coarse Aggregates (100 Km lead)	1.167	Cum	1398.00	1630.83			
		Cement (30 km lead)	0.420	MT	742.00	311.61			
TOTAL (In Rs.)						10841.17			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.58	Cum	584.64	341.00	34.10		
		Coarse Aggregate	1.17	Cum	944.26	1101.52	110.15		
Total						144.25			
AOC FOR FALL (Ch.-16.250 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.	37.500	Cum	2492.58	93471.75			
2		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)	0.000	MT	742.00	0.00			
TOTAL (In Rs.)						93471.75			
		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		

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.-16.860 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	12.99	Cum	695.2	9031.28			
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.)						9031.28			
		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.-17.275 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.	165.000	Sqm	11.80	1947.72			
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.	0.42	Cum	5021.30	2085.30	0.05	0.13	
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.	4.153	Sqm	340.20	1412.82	0.215	0.061	
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.	4.153	Sqm	63.20	262.46	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.194	Cum	1075.00	208.04			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.269	MT	742.00	199.86			
		Brick (30 km lead)	207.000	No.	3.18	658.26			
TOTAL (In Rs.)						6774.46			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.19	Cum	584.64	113.14	11.31		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							11.31		
AOC FOR CULVERT (Ch.-17.975 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.	110.000	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.	13.500	Sqm	340.20	4592.70	0.700	0.197	
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.197	Cum	1075.00	211.88			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.700	MT	742.00	519.28			
		Brick (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						6622.35			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.20	Cum	584.64	115.23	11.52		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							11.52		
AOC FOR PIPE CULVERT (Ch.-18.035 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		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 (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						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)
		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 HR OF SHUSNAR MR (Ch.-18.342 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			
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	3.11	Cum	695.2	2163.89			
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			
		Brick (30 km lead)	0.000	No.	3.18	0.00			
		TOTAL (In Rs.)				3816.51			
		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.-18.600 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.	160.000	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 royalty as per specification and direction of E/I.	0.63	Cum	5021.30	3138.31	0.07	0.20	
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.	6.250	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.	6.250	Sqm	63.20	395.00	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.291	Cum	1075.00	313.09			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.405	MT	742.00	300.79			
		Brick (30 km lead)	312.000	No.	3.18	992.16			
		TOTAL (In Rs.)				9154.31			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.29	Cum	584.64	170.28	17.03		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					17.03		
		Brick (30 km lead)	0.000	No.	3.18	0.00			
		TOTAL (In Rs.)				18478.89			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.29	Cum	584.64	170.28	17.03		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					17.03		
AOC FOR CULVERT (Ch.-19.400 Km)									
1	Structure requires no repair work.								
AOC FOR FALL(Ch.-19.480 Km)									
1	Structure requires no repair work.								
AOC FOR PIPE CULVERT (Ch.-19.740 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	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	13.98	Cum	695.2	9718.90			
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			
		Brick (30 km lead)	6990.000	No.	3.18	22228.20			
TOTAL (In Rs.)						33481.67			
		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 PIPE CULVERT/FALL (Ch.-19.850 Km)									
1	Structure requires no repair work.								
AOC FOR PIPE CULVERT/FALL (Ch.-21.350 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	4.03	Cum	695.2	2801.38			
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.)						2801.38			
		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 PIPE CULVERT/FALL (Ch.-22.150 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	14.26	Cum	695.2	9913.64			
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.)						9913.64			
		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 PIPE CULVERT/FALL (Ch.-23.050 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	3.11	Cum	695.2	2163.89			
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			
TOTAL (In Rs.)						2163.89			
		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 PIPE CULVERT/FALL (Ch.-23.300 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.	16.32	Cum	695.2	11348.4553			
2		Carriage of materials							
		Coarse Sand (60 Km lead)	0.000	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)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.000	MT	742.00	0.00			
TOTAL (In Rs.)						11348.46			
		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		
ABSTRACT OF COST OF REPAIRED STRUCTURES OF CHAURAHA MINOR									
AOC FOR CULVERT (Ch.-1.230 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 royalty as per specification and direction of E/I.	0.80	Cum	5021.30	4015.13	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.	15.392	Sqm	340.20	5236.49	0.798	0.225	
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.	15.392	Sqm	63.20	972.80	0.023		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.481	Cum	1075.00	516.65			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.913	MT	742.00	677.55			
TOTAL (In Rs.)						12481.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.48	Cum	584.64	280.98	28.10		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							28.10		
AOC FOR CULVERT (Ch.-1.920 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.	15.240	Sqm	340.20	5184.65	0.790	0.223	
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.	15.240	Sqm	63.20	963.17	0.023		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.223	Cum	1075.00	239.19			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.813	MT	742.00	603.17			
TOTAL (In Rs.)						6990.18			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.22	Cum	584.64	130.08	13.01		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							13.01		
AOC FOR PIPE PIPE CULVERT (Ch.-2.340 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 royalty as per specification and direction of E/I.	0.81	Cum	5021.30	4067.25	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.	15.000	Sqm	340.20	5103.00	0.778	0.219	
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.	15.000	Sqm	63.20	948.00	0.023		

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)	0.478	Cum	1075.00	514.07			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.893	MT	742.00	662.91			
TOTAL (In Rs.)						12357.62			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.48	Cum	584.64	279.57	27.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							27.96		
AOC FOR PIPE BRIDGE (Ch.-2.780 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.	13.716	Sqm	340.20	4666.18	0.711	0.200	
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.	13.716	Sqm	63.20	866.85	0.021		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.200	Cum	1075.00	215.27			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.732	MT	742.00	542.86			
TOTAL (In Rs.)						6291.16			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.20	Cum	584.64	117.08	11.71		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							11.71		
AOC FOR PIPE FALL (Ch.-3.130 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.	4.318	Cum	6914.20	29856.44	1.78	1.86	3.71
2		Carriage of materials							
		Coarse Sand (60 Km lead)	1.857	Cum	1075.00	1996.06			
		Coarse Aggregates (100 Km lead)	3.714	Cum	1398.00	5191.61			
		Cement (30 km lead)	1.781	MT	742.00	1321.67			
		Brick (30 km lead)	0.000	No.	3.18	0.00			
TOTAL (In Rs.)						38365.77			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.86	Cum	584.64	1085.56	108.56		
		Coarse Aggregate	3.71	Cum	944.26	3506.60	350.66		
Total							459.22		
AOC FOR BRIDGE (Ch.-3.445 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.	0.50	Cum	5021.30	2522.90	0.06	0.16	
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.	9.083	Sqm	340.20	3090.05	0.471	0.133	
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.	9.083	Sqm	63.20	574.05	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.293	Cum	1075.00	315.40			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.542	MT	742.00	402.44			
		Brick (30 km lead)	251.000	No.	3.18	798.18			
TOTAL (In Rs.)						7703.02			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.29	Cum	584.64	171.53	17.15		
		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							17.15		
AOC FOR BRIDGE (Ch.-4.175Km)									
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/l.	0.28	Cum	5021.30	1408.05	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/l.	12.741	Sqm	340.20	4334.37	0.660	0.186	
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/l.	12.741	Sqm	63.20	805.21	0.02		
4	Carriage of materials								
		Coarse Sand (60 Km lead)	0.276	Cum	1075.00	296.43			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.712	MT	742.00	528.22			
		Brick (30 km lead)	140.000	No.	3.18	445.20			
TOTAL (In Rs.)							7817.48		
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.28	Cum	584.64	161.21	16.12		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							16.12		
AOC FOR FALL (Ch.-4.240 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/l.	4.241	Cum	6914.20	29323.29	1.75	1.82	3.65
2	Carriage of materials								
		Coarse Sand (60 Km lead)	1.824	Cum	1075.00	1960.41			
		Coarse Aggregates (100 Km lead)	3.647	Cum	1398.00	5098.90			
		Cement (30 km lead)	1.749	MT	742.00	1298.07			
TOTAL (In Rs.)							37680.67		
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.82	Cum	584.64	1066.17	106.62		
		Coarse Aggregate	3.65	Cum	944.26	3443.98	344.40		
Total							451.02		
AOC FOR PIPE FALL/BRIDGE (Ch.-4.800 Km)									
1	Structure requires no repair work.								
AOC FOR PIPE BRIDGE (Ch.-5.165 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/l.	12.192	Sqm	340.20	4147.72	0.632	0.178	
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/l.	12.192	Sqm	63.20	770.53	0.018		
3	Carriage of materials								
		Coarse Sand (60 Km lead)	0.178	Cum	1075.00	191.35			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.650	MT	742.00	482.54			
TOTAL (In Rs.)							5592.14		
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.18	Cum	584.64	104.07	10.41		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							10.41		
AOC FOR FALL (Ch.-5.380 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/l.	120.000	Sqm	11.80	1416.53			

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	5.3.4	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
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.	22.80	Sqm	578.60	13192.08			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	0.972	Cum	1075.00	1044.90			
		Coarse Aggregates (100 Km lead)	1.944	Cum	1398.00	2717.71			
		Cement (30 km lead)	0.700	MT	742.00	519.28			
TOTAL (In Rs.)						32674.97			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.97	Cum	584.64	568.27	56.83		
		Coarse Aggregate	1.94	Cum	944.26	1835.64	183.56		
Total							240.39		
AOC FOR FALL (Ch.-6.400 Km)									
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto	120.000	Sqm	11.80	1416.53			
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.	19.44	Cum	6381.70	124060.25	6.30	8.75	17.50
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.	96.12	Sqm	578.60	55615.03			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	8.748	Cum	1075.00	9404.10			
		Coarse Aggregates (100 Km lead)	17.496	Cum	1398.00	24459.41			
		Cement (30 km lead)	6.299	MT	742.00	4673.53			
TOTAL (In Rs.)						219628.85			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	8.75	Cum	584.64	5114.43	511.44		
		Coarse Aggregate	17.50	Cum	944.26	16520.77	1652.08		
Total							2163.52		
AOC FOR FALL/BRIDGE (Ch.-6.520 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.	80.000	Sqm	11.80	944.35			
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.	2.300	Sqm	340.20	782.46	0.119	0.034	
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.	2.300	Sqm	63.20	145.36	0.00		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.034	Cum	1075.00	36.10			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.123	MT	742.00	91.03			
TOTAL (In Rs.)						1999.30			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.03	Cum	584.64	19.63	1.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							1.96		
ABSTRACT OF COST OF REPAIRED STRUCTURES OF NEURA SURAJMAL MINOR									
AOC FOR CULVERT (Ch.-0.065 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			

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 royalty as per specification and direction of E/I.	0.59	Cum	5021.30	2976.23	0.07	0.19	
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.	10.783	Sqm	340.20	3668.24	0.559	0.157	
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.	10.783	Sqm	63.20	681.46	0.02		
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.	5.40	Cum	6381.70	34461.18	1.75	2.43	4.86
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.	27.60	Sqm	578.60	15969.36			
7		Carriage of materials							
		Coarse Sand (60 Km lead)	2.777	Cum	1075.00	2985.38			
		Coarse Aggregates (100 Km lead)	4.860	Cum	1398.00	6794.28			
		Cement (30 km lead)	2.393	MT	742.00	1775.63			
		Brick (30 km lead)	296.000	No.	3.18	941.28			
TOTAL (In Rs.)						71315.43			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.78	Cum	584.64	1623.60	162.36		
		Coarse Aggregate	4.86	Cum	944.26	4589.10	458.91		
Total							621.27		
AOC FOR FALL (Ch.-0.180 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.	2.320	Cum	2492.58	5783.51	0.00		
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.	3.200	Cum	6914.20	22128.21	1.32	1.38	2.75
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.376	Cum	1075.00	1479.38			
		Coarse Aggregates (100 Km lead)	2.752	Cum	1398.00	3847.78			
		Cement (30 km lead)	1.324	MT	742.00	982.14			
TOTAL (In Rs.)						34221.02			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.38	Cum	584.64	804.57	80.46		
		Coarse Aggregate	2.75	Cum	944.26	2598.93	259.89		
Total							340.35		
AOC FOR CULVERT (Ch.-0.240 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.	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 royalty as per specification and direction of E/I.	0.63	Cum	5021.30	3148.83	0.07	0.20	
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.	11.357	Sqm	340.20	3863.60	0.589	0.166	

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.	11.357	Sqm	63.20	717.75	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.366	Cum	1075.00	393.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.678	MT	742.00	503.09			
		Brick (30 km lead)	313.000	No.	3.18	995.34			
TOTAL (In Rs.)						10684.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.37	Cum	584.64	214.26	21.43		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							21.43		
AOC FOR FALL (Ch.-0.780 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.	120.000	Sqm	11.80	1416.53			
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.)						1416.53			
		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		
AOC FOR FALL (Ch.-1.505 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.	200.000	Sqm	11.80	2360.88			
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.)						2360.88			
		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		
AOC FOR PIPE CULVERT (Ch.-1.850 Km)									
1	Structure requires no repair work.								
AOC FOR FALL (Ch.-2.095 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.	1.842	Cum	2492.58	4590.34	0.00		
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.	4.087	Cum	6914.20	28256.99	1.69	1.76	3.51
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.757	Cum	1075.00	1889.13			
		Coarse Aggregates (100 Km lead)	3.515	Cum	1398.00	4913.48			
		Cement (30 km lead)	1.689	MT	742.00	1252.92			
TOTAL (In Rs.)						40902.85			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.76	Cum	584.64	1027.40	102.74		
		Coarse Aggregate	3.51	Cum	944.26	3318.75	331.87		
Total							434.61		
AOC FOR CULVERT (Ch.-2.480 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.	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 royalty as per specification and direction of E/I.	0.63	Cum	5021.30	3148.83	0.07	0.20	
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.	11.357	Sqm	340.20	3863.60	0.589	0.166	
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.	11.357	Sqm	63.20	717.75	0.02		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.366	Cum	1075.00	393.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.678	MT	742.00	503.09			
		Brick (30 km lead)	313.000	No.	3.18	995.34			
TOTAL (In Rs.)						10684.98			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.37	Cum	584.64	214.26	21.43		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							21.43		
AOC FOR FALL (Ch.-2.665 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.	1.061	Cum	2492.58	2643.89	0.00		
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.	3.623	Cum	6914.20	25051.66	1.49	1.56	3.12
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.558	Cum	1075.00	1674.83			
		Coarse Aggregates (100 Km lead)	3.116	Cum	1398.00	4356.12			
		Cement (30 km lead)	1.496	MT	742.00	1110.16			
TOTAL (In Rs.)						34836.66			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.56	Cum	584.64	910.86	91.09		
		Coarse Aggregate	3.12	Cum	944.26	2942.28	294.23		
Total							385.31		
AOC FOR CULVERT (Ch.-2.745 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	5.4.6	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.	0.56	Cum	5021.30	2798.96	0.06	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.	5.047	Sqm	340.20	1717.16	0.262	0.074	
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.	5.047	Sqm	63.20	319.00	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.252	Cum	1075.00	270.97			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.333	MT	742.00	247.42			
		Brick (30 km lead)	278.000	No.	3.18	884.04			
TOTAL (In Rs.)						7417.99			

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	0.25	Cum	584.64	147.37	14.74		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					14.74		
AOC FOR FALL (Ch.-3.245 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.	2.70	Cum	6381.70	17230.59	0.87	1.22	2.43
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.	27.60	Sqm	578.60	15969.36			
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.215	Cum	1075.00	1306.13			
		Coarse Aggregates (100 Km lead)	2.430	Cum	1398.00	3397.14			
		Cement (30 km lead)	0.875	MT	742.00	649.10			
		TOTAL (In Rs.)				38552.32			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.22	Cum	584.64	710.34	71.03		
		Coarse Aggregate	2.43	Cum	944.26	2294.55	229.46		
		Total					300.49		
AOC FOR FALL (Ch.-4.225 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.	170.000	Sqm	11.80	2006.75			
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.)				2006.75			
		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		
AOC FOR PIPE CULVERT (Ch.-4.480 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		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.)				1416.53			
		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		
ABSTRACT OF COST OF REPAIRED STRUCTURES OF SHUSHNAR MINOR									
AOC FOR FALL/BRIDGE (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.	160.000	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 royalty as per specification and direction of E/I.	0.91	Cum	5021.30	4591.48	0.11	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.	12.820	Sqm	340.20	4361.36	0.665	0.187	

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.	8.820	Sqm	63.20	557.42	0.01		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.480	Cum	1075.00	515.76			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.783	MT	742.00	581.10			
		Brick (30 km lead)	457.000	No.	3.18	1453.26			
TOTAL (In Rs.)						13949.09			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.48	Cum	584.64	280.50	28.05		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							28.05		
AOC FOR FALL/BRIDGE (Ch.-0.700 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 royalty as per specification and direction of E/I.	0.33	Cum	5021.30	1679.38	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.	7.226	Sqm	340.20	2458.29	0.375	0.105	
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.	3.226	Sqm	63.20	203.88	0.00		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.213	Cum	1075.00	228.46			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.418	MT	742.00	310.13			
		Brick (30 km lead)	167.000	No.	3.18	531.06			
TOTAL (In Rs.)						6827.73			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.21	Cum	584.64	124.25	12.43		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							12.43		
AOC FOR FALL/BRIDGE (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.	130.000	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 royalty as per specification and direction of E/I.	0.29	Cum	5021.30	1443.80	0.03	0.09	
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.	2.778	Sqm	340.20	945.06	0.144	0.041	
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.	2.778	Sqm	63.20	175.57	0.00		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.133	Cum	1075.00	142.51			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.181	MT	742.00	134.52			
		Brick (30 km lead)	143.000	No.	3.18	454.74			
TOTAL (In Rs.)						4830.77			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.13	Cum	584.64	77.51	7.75		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							7.75		
AOC FOR BRIDGE (Ch.-1.995 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.	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 royalty as per specification and direction of E/I.	2.03	Cum	5021.30	10181.23	0.23	0.65	
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.	18.360	Sqm	340.20	6246.15	0.952	0.268	
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.	18.360	Sqm	63.20	1160.37	0.03		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.917	Cum	1075.00	985.66			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	1.213	MT	742.00	899.98			
		Brick (30 km lead)	1013.000	No.	3.18	3221.34			
TOTAL (In Rs.)						23993.22			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.92	Cum	584.64	536.05	53.61		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							53.61		
AOC FOR BOX CULVERT (Ch.-2.030 Km)									
1	Structure requires no repair work.								
AOC FOR BRIDGE (Ch.-2.570 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	5.5.5	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.	0.900	Sqm	340.20	306.18	0.047	0.013	
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.	6.858	Sqm	63.20	433.43	0.01		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.013	Cum	1075.00	14.13			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.057	MT	742.00	42.25			
TOTAL (In Rs.)						2212.51			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.01	Cum	584.64	7.68	0.77		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							0.77		
AOC FOR FALL (Ch.-2.750 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.	100.000	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.	18.294	Cum	2492.58	45600.26	0.03		
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)	0.027	MT	742.00	20.36			
		Brick (30 km lead)	9147.000	No.	3.18	29087.46			
TOTAL (In Rs.)						75888.52			
		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.-3.065 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.	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.	25.425	Cum	2492.58	63373.85	0.04		
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)	0.038	MT	742.00	28.30			
TOTAL (In Rs.)						64818.67			
		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/FALL (Ch.-3.700 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.	2.34	Cum	5021.30	11755.65	0.27	0.75	
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.	12.546	Sqm	340.20	4268.00	0.650	0.183	
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.	12.546	Sqm	63.20	792.88	0.02		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.932	Cum	1075.00	1002.26			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	0.939	MT	742.00	696.65			
		Brick (30 km lead)	1170.000	No.	3.18	3720.60			
TOTAL (In Rs.)						22236.04			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.93	Cum	584.64	545.08	54.51		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							54.51		
AOC FOR CULVERT (Ch.-4.300 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	5.3.4	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.	1.13	Cum	6381.70	7222.36	0.37	0.51	1.02
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.	9.59	Sqm	578.60	5550.25			
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.509	Cum	1075.00	547.47			
		Coarse Aggregates (100 Km lead)	1.019	Cum	1398.00	1423.94			
		Cement (30 km lead)	0.367	MT	742.00	272.08			
TOTAL (In Rs.)						16432.63			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.51	Cum	584.64	297.74	29.77		
		Coarse Aggregate	1.02	Cum	944.26	961.78	96.18		
Total							125.95		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND									
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KARMA DISTRIBUTARY									
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.005Km)									
1		Structure requires no repair work.							
QUANTITIES OF REPAIRING WORK OF HR FOR CHAUHARA MR (Ch.-0.150 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.							
		Gate Abutment	1	2.50	2.00	0.45	2.25	Cum	
		TOTAL						2.25	Cum
2	M-181	Structural Steel (Average rate of Angle, Joint and Channel) etc.		Area	Height	Density			
		Spindle 25 mm dia	1	0.000491	1.29	7850.00	4.97	Kg	
			1	0.000491	0.24	7850.00	0.92	Kg	
		1.5 X1.5 M MS GATE	1	2.250000	0.02	7850.00	264.94	Kg	
		I.M.C. Grove (100 x 50) 9.56 kg/m	2	9.56		0.70	13.38	Kg	
		TOTAL (In Kg)						284.21	Kg
		TOTAL						0.28	MT
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-0.220 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	3.6576	0.45	0.92	1.51	Cum	
		TOTAL						1.51	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		2.29	8.38	Sqm	
		TOTAL						8.38	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		0.3	1.10	Sqm	
		TOTAL						1.10	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-0.435 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	3.048	0.45	0.52	0.71	Cum	
		TOTAL						0.71	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		1.49	4.54	Sqm	

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					4.54	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.						
		<i>Parapet Wall</i>	1	3.05		0.3	0.91	Sqm
		TOTAL					0.91	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-1.350 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.						
		<i>Wing wall</i>	1	0.80		2	1.60	Sqm
		<i>Abutment</i>	1	0.40		3	1.20	Sqm
		TOTAL					2.80	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.						
		<i>Wing wall</i>	1	0.80		0.45	0.36	Sqm
		<i>Abutment</i>	1	0.40		0.3	0.12	Sqm
		TOTAL					0.48	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-2.150 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.						
		<i>Parapet Wall</i>	1	1.524	0.45	0.65	0.45	Cum
		TOTAL					0.45	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.						
		<i>Parapet Wall</i>	1	1.52		1.75	2.67	Sqm
		TOTAL					2.67	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.						
		<i>Parapet Wall</i>	1	1.52		0.3	0.46	Sqm
		TOTAL					0.46	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.						
		<i>Wing Wall D/S top</i>	2	6.00	0.45	0.15	0.81	Cum
		TOTAL					0.81	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.415 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	
		TOTAL						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.							
		<i>Parapet Wall</i>	1	10.67		1.93	20.59	<i>Sqm</i>	
		TOTAL						20.59	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.							
		<i>Parapet Wall</i>	1	10.67		1.93	20.59	<i>Sqm</i>	
		TOTAL						20.59	Sqm
QUANTITIES OF REPAIRING WORK FOR HR OF NEAURA SRAJMAL MR (Ch.-3.150 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.							
		<i>Abutment</i>	1	3.00	0.45	1.5	2.03	<i>Cum</i>	
		<i>Wing wall</i>	2	2.00	0.45	1.5	2.70	<i>Cum</i>	
		TOTAL						4.73	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/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	
		TOTAL						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.							
		<i>Parapet Wall U/S</i>	1	2.13		0.7	1.49	<i>Sqm</i>	
		<i>Parapet Wall D/S</i>	1	7.01		0.7	4.91	<i>Sqm</i>	
		TOTAL						6.40	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.							
		<i>Parapet Wall</i>	1	2.13		0.5	1.07	<i>Sqm</i>	
		<i>Parapet Wall</i>	1	7.01		0.5	3.51	<i>Sqm</i>	
		TOTAL						4.57	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.							
		<i>Peir Notch</i>	1	0.35	0.45	0.15	0.02	<i>Cum</i>	
		TOTAL						0.02	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.650 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.							
		<i>Crest</i>	1	0.67056	2.3165	0.3	0.47	<i>Cum</i>	

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
		TOTAL						0.47	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.							
		<i>Side Slope Pitching</i>	1	3.00	2.00	0.15	0.90	Cum	
		TOTAL						0.90	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-4.170 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.							
		<i>Parapet Wall U/S</i>	1	2.19456	0.1	0.5	0.11	Cum	
		<i>Parapet Wall D/S</i>	1	0.79248	0.1	0.5	0.04	Cum	
		<i>Crest</i>	1	0.48768	1.7069	0.3	0.25	Cum	
		TOTAL						0.40	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.							
		<i>Parapet Wall U/S</i>	1	2.19		1.09	2.39	Sqm	
		<i>Parapet Wall D/S</i>	1	0.79		1.09	0.86	Sqm	
		TOTAL						3.26	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.							
		<i>Parapet Wall U/S</i>	1	2.19		1.09	2.39	Sqm	
		<i>Parapet Wall D/S</i>	1	0.79		1.09	0.86	Sqm	
		TOTAL						3.26	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.900 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.							
		<i>D/S Floor</i>	1	13.72	4.51	0.3	18.56	Cum	
		TOTAL						18.56	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.							
		<i>D/S Floor</i>	1	13.72	4.51	0.5	30.94	Cum	
		TOTAL						30.94	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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.						
		Side Slope Pitching	2	10.00	3.00	0.15	9.00	Cum
		TOTAL					9.00	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-5.280 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 U/S	1	1.24968	0.25	0.5	0.16	Cum
		Parapet Wall D/S	1	3.84048	0.25	0.5	0.48	Cum
		TOTAL					0.64	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 U/S	1	1.25		1.25	1.56	Sqm
		Parapet Wall D/S	1	3.84		1.25	4.80	Sqm
		Wing wall D/S	1	1.50		0.5	0.75	Sqm
		TOTAL					7.11	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 U/S	1	1.25		1.25	1.56	Sqm
		Parapet Wall D/S	1	3.84		1.25	4.80	Sqm
		TOTAL					6.36	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-5.700 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 U/S	1	0.82296	0.25	0.5	0.10	Cum
		Parapet Wall D/S	1	6.37032	0.25	0.5	0.80	Cum
		TOTAL					0.90	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 U/S	1	0.82		1.25	1.03	Sqm
		Parapet Wall D/S	1	6.37		1.25	7.96	Sqm
		TOTAL					8.99	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 U/S	1	0.82		1.25	1.03	Sqm
		Parapet Wall D/S	1	6.37		1.25	7.96	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
TOTAL							8.99	Sqm
4	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>D/S Floor</i>	1	9.14	9.94	0.25	22.71	Cum
TOTAL							22.71	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 superstructure of various components of canal or embankment structures with approved quality coarse aggregate of required grade and approved quality of sand of requisite F.M. (washed and screened including necessary tools & plants, vibrating, curing royalty etc. excluding cost of form work as well as reinforcement, its cutting bending, binding & placing complete as per specification & direction of E/I.						
		<i>D/S Floor</i>	1	9.14	9.94	0.5	45.43	Cum
TOTAL							45.43	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-6.600 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.						
		<i>Parapet Wall U/S</i>	1	6.64	0.25	0.5	0.83	Cum
TOTAL							0.83	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.						
		<i>Parapet Wall U/S</i>	1	6.64		1.25	8.31	Sqm
TOTAL							8.31	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.						
		<i>Parapet Wall U/S</i>	1	6.64		1.25	8.31	Sqm
TOTAL							8.31	Sqm
4	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						
		<i>Ramp</i>	2	4.21		0.25	2.10	Cum
TOTAL							2.10	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-7.420Km)								
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.						
		<i>Middle Pier</i>	1	0.25	0.25	2	0.13	Cum
		<i>Parapet Wall U/S & D/S</i>	2	5.00	0.25	0.92	2.30	Cum
TOTAL							0.13	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.						
		<i>Parapet Wall U/S</i>	2	5.00		2.09	20.90	Sqm
		TOTAL					20.90	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.						
		<i>Parapet Wall U/S</i>	2	5.00		2.09	20.90	Sqm
		TOTAL					20.90	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-8.150 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.						
		<i>Wing Wall</i>	4	3.00	0.45	0.15	0.81	Cum
		TOTAL					0.81	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-9.150 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.						
		<i>Parapet Wall U/S & D/S</i>	2	5.97	0.25	0.6	1.79	Cum
		TOTAL					1.79	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.						
		<i>Parapet Wall U/S</i>	2	5.97		1.45	17.32	Sqm
		TOTAL					17.32	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.						
		<i>Parapet Wall U/S</i>	2	5.97		1.45	17.32	Sqm
		TOTAL					17.32	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.						
		<i>U/S Wing Wall</i>	2	2.40	0.45	2.3	4.97	Cum
		TOTAL					4.97	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.						
		<i>U/S Wing Wall</i>	4	2.40		2.3	22.08	Sqm
			4		0.45	2.3	4.14	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					26.22	Sqm
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.						
		<i>D/S Floor</i>	1	4.00	3.29	0.5	6.58	Cum
		TOTAL					6.58	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-11.360 Km)								
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>D/S Floor</i>	1	12.50	3.90	0.3	14.63	Cum
		TOTAL					14.63	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.						
		<i>D/S Floor</i>	1	12.50	3.90	0.4	19.50	Cum
		TOTAL					19.50	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-12.350 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.						
		<i>Parapet Wall D/S</i>	1	2.93	0.25	0.5	0.37	Cum
		TOTAL					0.37	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.						
		<i>Parapet Wall U/S</i>	1	2.93		1.25	3.66	Sqm
		TOTAL					3.66	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.						
		<i>Parapet Wall U/S</i>	1	2.93		1.25	3.66	Sqm
		TOTAL					3.66	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL (Ch.-12.850 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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall D/S</i>	2	3.00	0.45	0.8	2.16	Cum
		TOTAL					2.16	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.						
		<i>Parapet Wall U/S</i>	2	3.00		1.85	11.10	Sqm
		TOTAL					11.10	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.						
		<i>Parapet Wall U/S</i>	2	3.00		1.85	11.10	Sqm
		TOTAL					11.10	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-13.230 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-13.600 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	3.00	3	0.3	2.70	Cum
		TOTAL					2.70	Cum

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 royalty as per specification and direction of E/I.							
		<i>Parapet Wall</i>	1	3.00	0.25	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.							
		<i>Parapet Wall</i>	1	3.00		1.25	3.75	Sqm	
		TOTAL						3.75	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.							
		<i>Parapet Wall</i>	1	3.00		1.25	3.75	Sqm	
		TOTAL						3.75	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.050 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				165.00	Sqm	
			TOTAL					165.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.490 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				130.00	Sqm	
			TOTAL					130.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-14.700 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.							
		<i>Pitching in D/S Floor</i>	1	4.00	3.05	0.15	1.83	Cum	
		<i>Pitching in Slope</i>	2	4.00	1.83	0.15	2.19	Cum	
			TOTAL					4.02	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-15.050 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.							
		<i>Pitching in D/S Floor</i>	1	3.50	2.47	0.15	1.30	Cum	
			TOTAL					1.30	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-16.250 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.							
		<i>Abutment</i>	2	8.00	0.45	1.25	20.00	Cum	
		<i>Wing wall</i>	4	3.50	0.45	1.25	17.50	Cum	
			TOTAL					37.50	Cum
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-16.860 Km)									
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.							
		<i>Abutment</i>	1	3.05	0.45	2.5	3.43	Cum	
		<i>Wing wall</i>	2	3.96	0.45	2	7.13	Cum	
		<i>Crest</i>	3	1.52	0.79	0.67	2.43	Cum	
			TOTAL					12.99	Cum
2		New Structure Proposed.							
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-17.275 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				165.00	Sqm
		TOTAL					165.00	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.						
		<i>Parapet Wall U/S & D/S</i>	1	3.32	0.25	0.5	0.42	Cum
		TOTAL					0.42	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.						
		<i>Parapet Wall U/S & D/S</i>	1	3.32		1.25	4.15	Sqm
		TOTAL					4.15	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.						
		<i>Parapet Wall U/S</i>	1	3.32		1.25	4.15	Sqm
		TOTAL					4.15	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-17.975 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
		TOTAL					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.						
		<i>Abutment</i>	1	3.00		2	6.00	Sqm
		<i>Wing wall</i>	2	3.00		1.25	7.50	Sqm
		TOTAL					13.50	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-18.035 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
QUANTITIES OF REPAIRING WORK FOR HR OF SHUSNAR MR (Ch.-18.342 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
		TOTAL					140.00	Sqm
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Parapet</i>	2	2.44	0.55	1.01	2.69	Cum
		<i>Abutment of Gate</i>	2	0.35	0.50	1.22	0.42	Cum
		TOTAL					3.11	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-18.600 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				160.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	1	5.00	0.25	0.5	0.63	Cum
		TOTAL					0.63	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.						
		<i>Parapet Wall</i>	1	5.00		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.						
		<i>Parapet Wall</i>	1	5.00		1.25	6.25	Sqm
		TOTAL					6.25	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-19.400 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL(Ch.-19.480 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-19.740 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	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Wing wall</i>	4	3.00	0.45	1.20	6.48	Cum
		<i>Abutment</i>	2	5.00	0.50	1.50	7.50	Cum
		TOTAL					13.98	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-19.850 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-21.350 Km)								
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Parapet</i>	1	4.57	0.34	1.40	2.15	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		<i>Wing wall</i>	2	2.00	0.34	1.40	1.88	Cum
		TOTAL					4.03	Cum
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-22.150 Km)								
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Abutment</i>	2	3.66	0.55	1.77	7.10	Cum
		<i>Parapet</i>	1	2.44	0.55	1.01	1.35	Cum
		<i>Wing wall</i>	2	3.00	0.55	1.77	5.82	Cum
		TOTAL					14.26	Cum
2		New Structure Proposed						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-23.050 Km)								
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Parapet</i>	2	2.44	0.55	1.01	2.69	Cum
		<i>Well</i>	1	0.35		1.22	0.42	Cum
		TOTAL					3.11	Cum
2		New Structure Proposed						
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT/FALL (Ch.-23.300 Km)								
1	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable stacks within 15 meter lead and disposal of unserviceable materials with all leads as per building specifications and direction of E/I.						
		<i>Abutment</i>	2	3.05	0.49	1.80	5.35	Cum
		<i>Wing wall</i>	3	5.00	0.49	1.50	10.97	Cum
		TOTAL					16.32	Cum
2		New Structure Proposed						
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF CHAURAHA MINOR								
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-1.230 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
		TOTAL					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.						
		<i>Parapet Wall</i>	2	3.08	0.25	0.5	0.77	Cum
		<i>Cracks in Abutment</i>	1	1.00	0.15	0.2	0.03	Cum
		TOTAL					0.80	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.						
		<i>Parapet Wall</i>	4	3.08		1.25	15.39	Sqm
		TOTAL					15.39	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	4	3.08		1.25	15.39	Sqm
		TOTAL					15.39	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.920 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	4	3.05		1.25	15.24	Sqm
		TOTAL					15.24	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	4	3.05		1.25	15.24	Sqm
		TOTAL					15.24	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-2.340 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
		TOTAL					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 roalytv etc. complete job including roalytv as per specification and direction of E/I.						
		Parapet Wall	2	3.00	0.25	0.5	0.75	Cum
		Cracks in Abutment	2	1.00	0.15	0.2	0.06	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	4	3.00		1.25	15.00	Sqm
		TOTAL					15.00	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	4	3.00		1.25	15.00	Sqm
		TOTAL					15.00	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.780 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	4	2.74		1.25	13.72	Sqm
		TOTAL					13.72	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	4	2.74		1.25	13.72	Sqm
		TOTAL					13.72	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.130 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.						
		<i>D/S Floor</i>	1	5.06	1.71	0.5	4.32	Cum
		TOTAL					4.32	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.445 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.						
		<i>Parapet Wall D/S</i>	1	3.05	0.25	0.62	0.47	Cum
		<i>Cracks in Abutment</i>	1	1.00	0.15	0.2	0.03	Cum
		TOTAL					0.50	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.						
		<i>Parapet Wall D/S</i>	2	3.05		1.49	9.08	Sqm
		TOTAL					9.08	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.						
		<i>Parapet Wall D/S</i>	2	3.05		1.49	9.08	Sqm
		TOTAL					9.08	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-4.175Km)								
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.						
		<i>Parapet Wall U/S & D/S</i>	1	3.05	0.1	0.92	0.28	Cum
		TOTAL					0.28	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.						
		<i>Parapet Wall U/S & D/S</i>	2	3.05		2.09	12.74	Sqm
		TOTAL					12.74	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.						
		<i>Parapet Wall U/S & D/S</i>	2	3.05		2.09	12.74	Sqm
		TOTAL					12.74	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.240 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.						
		<i>D/S Floor</i>	1	5.06	1.68	0.5	4.24	Cum
		TOTAL					4.24	Cum
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-4.800 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-5.165 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.						
		<i>Parapet Wall</i>	4	2.44		1.25	12.19	Sqm
		TOTAL					12.19	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.						
		<i>Parapet Wall</i>	4	2.44		1.25	12.19	Sqm
		TOTAL					12.19	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-5.380 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	
			TOTAL					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.							
		<i>U/S Abutment</i>	1	2.40	0.45	2	2.16	Cum	
			TOTAL					2.16	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.							
		<i>U/S Abutment</i>	4	2.40		2	19.20	Sqm	
			4		0.45	2	3.60	Sqm	
			TOTAL					22.80	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-6.400 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				120.00	Sqm	
			TOTAL					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.							
		<i>U/S Abutment</i>	2	6.00	0.45	1.8	9.72	Cum	
		<i>U/S Wing wall</i>	4	3.00	0.45	1.8	9.72	Cum	
			TOTAL					19.44	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.							
		<i>U/S Abutment</i>	4	6.00		1.8	43.20	Sqm	
			4		0.45	1.8	3.24	Sqm	
		<i>U/S Wing wall</i>	8	3.00		1.8	43.20	Sqm	
			8		0.45	1.8	6.48	Sqm	
			TOTAL					96.12	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-6.520 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				80.00	Sqm	
			TOTAL					80.00	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.							
		<i>Parapet Wall U/S</i>	2	1.00		1.15	2.30	Sqm	
			TOTAL					2.30	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
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 U/S	2	1.00		1.15	2.30	Sqm
		TOTAL					2.30	Sqm
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF NEURA SURAJMAL MINOR								
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.065 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
		TOTAL					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.						
		Parapet Wall D/S	1	2.68	0.25	0.88	0.59	Cum
		TOTAL					0.59	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	2.68		2.01	10.78	Sqm
		TOTAL					10.78	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	2.68		2.01	10.78	Sqm
		TOTAL					10.78	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.						
		D/S Wing wall	2	3.00	0.45	2	5.40	Cum
		TOTAL					5.40	Cum
6	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.						
		U/S Abutment	4	3.00		2	24.00	Sqm
			4		0.45	2	3.60	Sqm
		TOTAL					27.60	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.180 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.						
		D/S Floor	1	5.00	1.60	0.29	2.32	Cum
		TOTAL					2.32	Cum

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.						
		<i>D/S Floor</i>	1	5.00	1.60	0.4	3.20	Cum
		TOTAL					3.20	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-0.240 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				90.00	Sqm
		TOTAL					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.						
		<i>Parapet Wall D/S</i>	1	2.74	0.25	0.91	0.63	Cum
		TOTAL					0.63	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.						
		<i>Parapet Wall D/S</i>	2	2.74		2.07	11.36	Sqm
		TOTAL					11.36	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.						
		<i>Parapet Wall D/S</i>	2	2.74		2.07	11.36	Sqm
		TOTAL					11.36	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-0.780 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				120.00	Sqm
		TOTAL					120.00	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-1.505 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
		TOTAL					200.00	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-1.850 Km)								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.095 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.						
		<i>D/S Floor</i>	1	3.80	1.62	0.3	1.84	Cum
		TOTAL					1.84	Cum

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.						
		<i>D/S Floor</i>	1	5.06	1.62	0.5	4.09	Cum
		TOTAL					4.09	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.480 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				90.00	Sqm
		TOTAL					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.						
		<i>Parapet Wall D/S</i>	1	2.74	0.25	0.91	0.63	Cum
		TOTAL					0.63	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.						
		<i>Parapet Wall D/S</i>	2	2.74		2.07	11.36	Sqm
		TOTAL					11.36	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.						
		<i>Parapet Wall D/S</i>	2	2.74		2.07	11.36	Sqm
		TOTAL					11.36	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.665 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.						
		<i>D/S Floor</i>	1	2.40	1.52	0.29	1.06	Cum
		TOTAL					1.06	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.						
		<i>D/S Floor</i>	1	4.75	1.52	0.5	3.62	Cum
		TOTAL					3.62	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-2.745 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

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 royalty as per specification and direction of E/I.						
		Parapet Wall U/S	1	1.52	0.25	0.91	0.35	Cum
		Parapet Wall D/S	1	0.91	0.25	0.91	0.21	Cum
		TOTAL					0.56	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 U/S	1	1.52		2.07	3.15	Sqm
		Parapet Wall D/S	1	0.91		2.07	1.89	Sqm
		TOTAL					5.05	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 U/S	1	1.52		2.07	3.15	Sqm
		Parapet Wall D/S	1	0.91		2.07	1.89	Sqm
		TOTAL					5.05	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-3.245 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.						
		U/S Abutment	1	3.00	0.45	2	2.70	Cum
		TOTAL					2.70	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.						
		U/S Abutment	4	3.00		2	24.00	Sqm
			4		0.45	2	3.60	Sqm
		TOTAL					27.60	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-4.225 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and						
			1				170.00	Sqm
		TOTAL					170.00	Sqm
QUANTITIES OF REPAIRING WORK FOR PIPE CULVERT (Ch.-4.480 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
		TOTAL					120.00	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF SHUSHNAR MINOR								
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (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				160.00	Sqm
		TOTAL					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 royalty as per specification and direction of E/I.						
		Parapet Wall U/S	1	3.00	0.25	0.61	0.46	Cum
		Parapet Wall D/S	1	3.00	0.25	0.61	0.46	Cum
		TOTAL					0.91	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 U/S	1	3.00		1.47	4.41	Sqm
		Parapet Wall D/S	1	3.00		1.47	4.41	Sqm
		Below Slab	1	4.00		1	4.00	Sqm
		TOTAL					12.82	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.						
		Parapet Wall U/S	1	3.00		1.47	4.41	Sqm
		Parapet Wall D/S	1	3.00		1.47	4.41	Sqm
		TOTAL					8.82	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (Ch.-0.700 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		Parapet Wall U/S	1	1.22	0.25	0.61	0.19	Cum
		Parapet Wall D/S	1	0.98	0.25	0.61	0.15	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 U/S	1	1.22		1.47	1.79	Sqm
		Parapet Wall D/S	1	0.98		1.47	1.43	Sqm
		Below Slab	1	4.00		1	4.00	Sqm
		TOTAL					7.23	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 U/S	1	1.22		1.47	1.79	Sqm
		Parapet Wall D/S	1	0.98		1.47	1.43	Sqm
		TOTAL					3.23	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL/BRIDGE (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
		TOTAL					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 royalty as per specification and direction of E/I.						
		Parapet Wall U/S	1	0.91	0.25	0.64	0.15	Cum
		Parapet Wall D/S	1	0.98	0.25	0.58	0.14	Cum
		TOTAL					0.29	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 U/S	1	0.91		1.47	1.34	Sqm
		Parapet Wall D/S	1	0.98		1.47	1.43	Sqm
		TOTAL					2.78	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 U/S	1	0.91		1.47	1.34	Sqm
		Parapet Wall D/S	1	0.98		1.47	1.43	Sqm
		TOTAL					2.78	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-1.995 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		Parapet Wall U/S	1	4.45	0.25	0.91	1.02	Cum
		Parapet Wall D/S	1	4.42	0.25	0.91	1.01	Cum
		TOTAL					2.03	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 U/S	1	4.45		2.07	9.21	Sqm
		Parapet Wall D/S	1	4.42		2.07	9.15	Sqm
		TOTAL					18.36	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 U/S	1	4.45		2.07	9.21	Sqm
		Parapet Wall D/S	1	4.42		2.07	9.15	Sqm
		TOTAL					18.36	Sqm
QUANTITIES OF REPAIRING WORK FOR BOX CULVERT (Ch.-2.030 Km)								
1		Structure requires no repair work.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-2.570 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
TOTAL							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.						
		<i>Abutment Crack</i>	1	0.45		2	0.90	Sqm
TOTAL							0.90	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.						
		<i>Abutment Top</i>	2	7.62		0.45	6.86	Sqm
TOTAL							6.86	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL (Ch.-2.750 Km)								
1	5.1.3	Jungle Clearance and weeding out shrubs including small tree upto 0.50 m girth and	1				100.00	Sqm
TOTAL							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.						
		<i>Wing wall</i>	4	3.00	0.30	1.2	4.39	Cum
		<i>Abutment</i>	2	6.71	0.30	1.2	4.91	Cum
		<i>Crest</i>	1	3.00	0.50	1	1.50	Cum
		<i>Floor</i>	1	5.00	3.00	0.5	7.50	Cum
TOTAL							18.29	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE (Ch.-3.065 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
TOTAL							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.						
		<i>Wing Wall</i>	4	3.00	0.45	1.5	8.10	Cum
		<i>Abutment</i>	2	5.50	0.45	1.5	7.43	Cum
		<i>Slab</i>	1	5.50	6.00	0.3	9.90	Cum
TOTAL							25.43	Cum
QUANTITIES OF REPAIRING WORK FOR CULVERT/FALL (Ch.-3.700 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.						
		<i>Parapet Wall U/S</i>	1	4.27	0.3	0.91	1.17	Cum
		<i>Parapet Wall D/S</i>	1	4.27	0.3	0.91	1.17	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
		TOTAL					2.34	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.						
		<i>Parapet Wall U/S</i>	1	4.27		1.47	6.27	<i>Sqm</i>
		<i>Parapet Wall D/S</i>	1	4.27		1.47	6.27	<i>Sqm</i>
		TOTAL					12.55	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.						
		<i>Parapet Wall U/S</i>	1	4.27		1.47	6.27	<i>Sqm</i>
		<i>Parapet Wall D/S</i>	1	4.27		1.47	6.27	<i>Sqm</i>
		TOTAL					12.55	Sqm
QUANTITIES OF REPAIRING WORK FOR CULVERT (Ch.-4.300 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	<i>Sqm</i>
		TOTAL					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.						
		<i>Parapet wall U/S</i>	1	4.51	0.25	0.67056	0.77	<i>Cum</i>
		<i>Parapet wall D/S</i>	1	2.13	0.25	0.67056	0.36	<i>Cum</i>
		TOTAL					1.13	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.						
		<i>Parapet wall U/S</i>	2	4.51		0.67056	6.05	<i>Sqm</i>
			2		0.25	0.67056	0.34	<i>Sqm</i>
		<i>Parapet wall D/S</i>	2	2.13		0.67056	2.86	<i>Sqm</i>
			2		0.25	0.67056	0.34	<i>Sqm</i>
		TOTAL					9.59	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 transporting 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 20 no., Total Seigniorage charges						151571.89		

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 transporting to the embankment location within all lifts and lead upto 1000m.						
		<i>For Making RAMP</i>						
		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 place method with front end loader at OMC, and compacting with 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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	Rs.	155373.89
8	Other incidental charge , 3 % = of C	Rs.	4661.22
	<i>Total C+8 = D</i>	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, scaffolding and its removal wherever 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. reinforcements 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.								
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 foundation 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 MARCH 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				
		<i>Total</i>						1100.17			
		For 119 nos. outlet, Total Seigniorage charges						130920.60			

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, scaffolding and its removal wherever 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. reinforcements 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-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.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 including 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 M³
5	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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.	References 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 M³
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 embankments, unloading, 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 lifts 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	

Sl. No.	References 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%				₹ 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.	References 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.	References 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)				1441.00	
	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.	References 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				₹ 420.40	
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 M³

Sl. No.	References 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 M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References 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.	References 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.	References 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, propping 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.	References 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, propping 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.	References 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.	References 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 M³
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 M³

Sl. No.	References 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 M³
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 M³
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.	References 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.					
		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 M³
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 SI. No. 257
		Total				128.68	
		Labour					
		Head Mason	0.50	nos	569.00	284.50	

Sl. No.	References 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	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 2.5 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
	5.6.2.4	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)					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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
	5.6.2.5	Labour Charges for Laying of 1200 mm NP3 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 .					
		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	

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						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, scaffolding and its removal wherever 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 M³
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					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³
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 M³
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 royalty as per specification and direction of E/I.					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³

26	5.8.7	Dismantling pucca brick or lime work including stacking serviceable materials in countable 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					
		Semi Skilled Mazdoor	1.00	nos	440.00	₹ 440.00	SII-18
		Unskilled mazdoor	3.00	nos	424.00	₹ 1,272.00	SI-1
					total	₹ 1,712.00	
		Add Overhead charge & C.P @ 15 %				₹ 256.80	
						₹ 1,968.80	
		Rate per Cum			Say, Rs	₹ 695.20	Per M³

ITEM RATES					
Sl. No.	Reference		Particular	Unit	Rate (in Rs.)
1	WRD SOR 2025 & PL MARCH 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 MARCH 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 MARCH 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 MARCH 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 MARCH 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 MARCH 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 MARCH 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 2023 & PL JUNE 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, unloading, 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 MARCH 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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	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.		
			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 foundation 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, scaffolding and its removal wherever 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 CHHATISGAR H 2025	3.18 PWD NH SOR CHHATISGA RH 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 transporting 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

**Amba Division – Karma Basantpur Minor
(Total Cost – Rs. 2.24 Crores)**

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF COST (KARMA BASANTPUR MINOR)								
S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) Including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	KARMA BASANTPUR MINOR	1	Job	10203504.50	0.00	₹ 1,02,03,504.50	AOC Earthwork Karma Basantpur	8
2	Falls							
	KARMA BASANTPUR MINOR :							
	0.762 m Fall at Ch. 0.550 Km	1	No.	747308.45	6527.93	₹ 7,53,836.38	Fall (AOC) karma Basantpur	11
	0.762 m Fall at Ch. 1.150 Km	1	No.	741939.19	6527.93	₹ 7,48,467.12		13
	0.610 m Fall at Ch. 1.340 Km	1	No.	698758.62	6144.42	₹ 7,04,903.04		15
	1.830 m Fall at Ch. 2.680 Km	1	No.	1405515.90	12328.11	₹ 14,17,844.01		17
	0.457 m Fall at Ch. 3.250 Km	1	No.	580859.58	4935.27	₹ 5,85,794.86		19
	0.914 m Fall at Ch. 4.400 Km	1	No.	646488.04	5447.37	₹ 6,51,935.40		21
	0.610 m Fall at Ch. 4.792 Km	1	No.	558381.02	4755.26	₹ 5,63,136.28		23
	0.610 m Fall at Ch. 5.200 Km	1	No.	538637.04	4536.06	₹ 5,43,173.10		25
3	Repair of Structures							
	KARMA BASANTPUR MINOR	8	No.	608015.3189	2914.91	₹ 6,10,930.23	Abstract (Repair St.) Karma Basantpur	51
	Approach Road	6	No.	521018.55	7578.59	₹ 31,71,582.87	Approach Road AOC	52
4	Outlets							
	KARMA BASANTPUR MINOR	19	No.	127744.47	1100.17	₹ 24,48,048.17	Outlet-AOC	66
5	Kilometer Stone	7	No.	3853.40	0.00	₹ 26,973.80	Rates	99
TOTAL (In Rs.)						22430129.76		
TOTAL (In Lacs)						224.30		

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 (Tipper 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 of Cost =[(18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled 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		
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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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							
KARMA BASANTPUR MINOR - KM 0.000 TO KM 6.096 KM							
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
0		0.000	0	0	0.000	0	0.000
100	100	0.657	0.329	32.850	2.176	1.088	108.800
200	100	0.504	0.581	58.050	2.647	2.412	241.150
300	100	0.000	0.252	25.200	2.435	2.541	254.100
400	100	0.000	0.000	0.000	3.395	2.915	291.500
500	100	2.077	1.039	103.850	2.299	2.847	284.700
600	100	1.762	1.920	191.950	1.864	2.082	208.150
700	100	0.511	1.137	113.650	1.233	1.549	154.850
800	100	0.739	0.625	62.500	3.592	2.413	241.250
900	100	0.522	0.631	63.050	3.917	3.755	375.450
1000	100	1.486	1.004	100.400	1.531	2.724	272.400
1100	100	0.966	1.226	122.600	3.207	2.369	236.900
1200	100	2.487	1.727	172.650	4.068	3.638	363.750
1300	100	1.379	1.933	193.300	1.353	2.711	271.050
1400	100	1.852	1.616	161.550	1.678	1.516	151.550
1500	100	4.619	3.236	323.550	1.228	1.453	145.300
1600	100	0.304	2.462	246.150	5.499	3.364	336.350
1700	100	3.169	1.737	173.650	2.338	3.919	391.850
1800	100	1.256	2.213	221.250	1.531	1.935	193.450
1900	100	0.238	0.747	74.700	3.841	2.686	268.600
2000	100	0.006	0.122	12.200	3.400	3.621	362.050
2100	100	0.000	0.003	0.300	3.583	3.492	349.150
2200	100	1.103	0.552	55.150	4.200	3.892	389.150
2300	100	0.807	0.955	95.500	2.994	3.597	359.700
2400	100	0.442	0.625	62.450	3.051	3.023	302.250
2500	100	0.000	0.221	22.100	3.464	3.258	325.750
2600	100	0.000	0.000	0.000	6.733	5.099	509.850
2700	100	1.928	0.964	96.400	3.876	5.305	530.450
2800	100	0.908	1.418	141.800	6.442	5.159	515.900
2900	100	0.647	0.778	77.750	5.986	6.214	621.400
3000	100	0.294	0.471	47.050	6.324	6.155	615.500
3100	100	0.000	0.147	14.700	6.378	6.351	635.100
3200	100	0.000	0.000	0.000	6.338	6.358	635.800
3300	100	0.232	0.116	11.600	5.551	5.945	594.450
3400	100	0.147	0.190	18.950	5.318	5.435	543.450
3500	100	0.081	0.114	11.400	4.676	4.997	499.700
3600	100	0.075	0.078	7.800	4.284	4.480	448.000
3700	100	0.131	0.103	10.300	3.380	3.832	383.200
3800	100	0.067	0.099	9.900	4.763	4.072	407.150
3900	100	0.051	0.059	5.900	2.661	3.712	371.200
4000	100	0.034	0.043	4.250	2.901	2.781	278.100
4100	100	0.018	0.026	2.600	3.524	3.213	321.250
4200	100	3.223	1.621	162.050	0.620	2.072	207.200
4300	100	0.044	1.634	163.350	1.892	1.256	125.600

Change	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
		sq-m	sq-m	Cum	sq-m	sq-m	Cum
4400	100	0.000	0.022	2.200	5.936	3.914	391.400
4500	100	0.036	0.018	1.800	1.881	3.909	390.850
4600	100	0.076	0.056	5.600	3.153	2.517	251.700
4700	100	0.000	0.038	3.800	5.205	4.179	417.900
4800	100	0.365	0.183	18.250	2.478	3.842	384.150
4900	100	0.184	0.275	27.450	2.902	2.690	269.000
5000	100	0.028	0.106	10.600	4.145	3.524	352.350
5100	100	0.000	0.014	1.400	4.400	4.273	427.250
5200	100	0.415	0.208	20.750	2.590	3.495	349.500
5300	100	0.279	0.347	34.700	1.882	2.236	223.600
5400	100	0.164	0.222	22.150	1.786	1.834	183.400
5500	100	0.303	0.234	23.350	1.175	1.481	148.050
5600	100	0.000	0.152	15.150	3.859	2.517	251.700
5700	100	0.402	0.201	20.100	2.828	3.344	334.350
5800	100	0.042	0.222	22.200	4.819	3.824	382.350
5900	100	0.000	0.021	2.100	5.556	5.188	518.750
6000	100	0.000	0.000	0.000	9.569	7.563	756.250
6050	50	0.000	0.000	0.000	12.579	11.074	553.700
Total				3706.000			21708.750
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							3706.000
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							21708.750
NET QUANTITY OF EARTHWORK IN FILLING							18002.75

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND**KARMA BASANTPUR MINOR****JUNGLE CLEARANCE QUANTITY**

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 1.950	1950	3.95	7702.50	Sqm
1.950 - 3.250	1300	3.21	4173.00	Sqm
3.250 - 4.400	1150	2.78	3197.00	Sqm
4.400 - 5.200	800	2.33	1864.00	Sqm
5.200 - 5.690	490	2.12	1038.80	Sqm
5.690 - 6.050	360	1.85	666.00	Sqm
6.050 - 6.075	25	1.64	41.00	Sqm
6.075 - 6.096	21	1.41	29.61	Sqm
TOTAL			18711.91	Sqm

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 1.950	1950	3.95	0.15	1155.38	Cum
1.950 - 3.250	1300	3.21	0.15	625.95	Cum
3.250 - 4.400	1150	2.78	0.15	479.55	Cum
4.400 - 5.200	800	2.33	0.15	279.60	Cum
5.200 - 5.690	490	2.12	0.15	155.82	Cum
5.690 - 6.050	360	1.85	0.15	99.90	Cum
6.050 - 6.075	25	1.64	0.15	6.15	Cum
6.075 - 6.096	21	1.41	0.15	4.44	Cum
TOTAL				2806.79	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND						
ABSTRACT OF QUANTITY OF EARTHWORK FOR KARMA BASANTPUR 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.	18711.91	Sqm	11.80	220882.682
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.				
		<i>100% of Total Cutting for ordinary soil</i>	3706.00	Cum	156.50	579989
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1482.40	Cum	17.22	25523.24294
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.	18002.75	Cum	165.12	2972541.36
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, unloading, 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)	5400.83	Cum	174.89	944550.28
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	4500.69	Cum	217.92	980789.82
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	8101.24	Cum	319.14	2585428.94
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.				
			2806.79	Cum	196.10	550410.83
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.	21708.75	Cum	61.88	1343388.35
TOTAL COST OF EARTHWORK (in Rs.)						10203504.50
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						102.035

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND				
DETAILS OF QUANTITIES FOR EARTH WORK FOR KARMA BASANTPUR 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	18711.91	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	3706.000	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1482.4	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	18002.750	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	5400.83	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	4500.69	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	8101.24	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 including 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	2806.79	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	21708.75	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR KARMA BASANTPUR 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 0.762 METER AT CH. 0.550 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.	101.841	Cum	195.20	19879.37			
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.	11.69	Cum	6381.70	74613.78	3.79	5.26	10.52
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.	46.59	Cum	6914.20	322135.25	19.22	20.03	40.07
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.	0.78	Cum	8151.40	6389.39	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.	1.10	MT	73574.90	80726.65			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	163.81	Sqm	578.60	94778.07			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.19	Cum	694.61	829.36			
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.	1.19	Cum	1237.00	1476.98			
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.	1.19	Cum	1377.70	1644.97			
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.	1.19	Cum	516.50	616.70			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.46	Sqm	63.20	597.92			
13	Providing Drainage Spouts complete as per drawings & technical 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	28.30	Cum	149.30	4224.57			

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)	25.601	Cum	1075.00	27520.96			
	Coarse Aggregates (100 Km lead)	52.404	Cum	1398.00	73260.26			
	Cement (30 km lead)	23.451	MT	742.00	17400.74			
	Boulder (60 Km lead)	1.19	Cum	1159.00	1383.85			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	1.10	MT	742.00	814.13			
	TOTAL (In Rs.)				747308.45			
	TOTAL (In Rs.)				747308.45			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	25.60	Cum	584.64	14967.30	1496.73		
	Coarse Aggregate	52.40	Cum	944.26	49482.64	4948.26		
	Boulders	1.19	Cum	694.61	829.36	82.94		
	<i>Total</i>					6527.93		
	For 1 nos. fall, Total Seigniorage charges					6527.93		

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. 1.150 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.	79.977	Cum	195.20	15611.47			
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.	11.69	Cum	6381.70	74613.78	3.79	5.26	10.52
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.	46.59	Cum	6914.20	322135.25	19.22	20.03	40.07
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.	0.78	Cum	8151.40	6389.39	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.	1.10	MT	73574.90	80726.65			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	163.81	Sqm	578.60	94778.07			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.19	Cum	694.61	829.36			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.19	Cum	1237.00	1476.98			
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.	1.19	Cum	1377.70	1644.97			
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.	1.19	Cum	516.50	616.70			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.46	Sqm	63.20	597.92			
13	Providing Drainage Spouts complete as per drawings & technical 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	20.92	Cum	149.30	3123.21			

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)	25.601	Cum	1075.00	27520.96			
	Coarse Aggregates (100 Km lead)	52.404	Cum	1398.00	73260.26			
	Cement (30 km lead)	23.451	MT	742.00	17400.74			
	Boulder (60 Km lead)	1.19	Cum	1159.00	1383.85			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	1.10	MT	742.00	814.13			
	TOTAL (In Rs.)				741939.19			
	TOTAL (In Rs.)				741939.19			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	25.60	Cum	584.64	14967.30	1496.73		
	Coarse Aggregate	52.40	Cum	944.26	49482.64	4948.26		
	Boulders	1.19	Cum	694.61	829.36	82.94		
	<i>Total</i>					6527.93		
	For 1 nos. fall, Total Seigniorage charges					6527.93		

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. 1.340 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.	78.191	Cum	195.20	15262.85			
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.	11.56	Cum	6381.70	73756.07	3.74	5.20	10.40
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.	43.15	Cum	6914.20	298324.78	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.	0.76	Cum	8151.40	6194.37	0.43	0.30	0.60
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	74759.78			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	155.46	Sqm	578.60	89946.80			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	1.19	Cum	694.61	829.36			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncracked) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	1.19	Cum	1237.00	1476.98			
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.	1.19	Cum	1377.70	1644.97			
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.	1.19	Cum	516.50	616.70			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.37	Sqm	63.20	592.23			
13	Providing Drainage Spouts complete as per drawings & technical 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	20.88	Cum	149.30	3117.62			

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)	24.050	Cum	1075.00	25854.06			
	Coarse Aggregates (100 Km lead)	49.302	Cum	1398.00	68924.43			
	Cement (30 km lead)	21.973	MT	742.00	16304.33			
	Boulder (60 Km lead)	1.19	Cum	1159.00	1383.85			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	1.02	MT	742.00	753.95			
	TOTAL (In Rs.)				698758.62			
	TOTAL (In Rs.)				698758.62			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	24.05	Cum	584.64	14060.76	1406.08		
	Coarse Aggregate	49.30	Cum	944.26	46554.07	4655.41		
	Boulders	1.19	Cum	694.61	829.36	82.94		
	<i>Total</i>					6144.42		
	For 1 nos. fall, Total Seigniorage charges					6144.42		

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 1.830 METER AT CH. 2.680 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.	161.425	Cum	195.20	31510.12			
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.	14.25	Cum	6381.70	90934.96	4.62	6.41	12.82
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.	99.03	Cum	6914.20	684727.73	40.85	42.58	85.17
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.	0.90	Cum	8151.40	7339.93	0.51	0.35	0.71
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.	2.33	MT	73574.90	171591.82			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	279.87	Sqm	578.60	161934.23			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.75	Cum	694.61	520.96			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.75	Cum	1237.00	927.75			
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.	0.75	Cum	1377.70	1033.28			
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.	0.75	Cum	516.50	387.38			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	13.01	Sqm	63.20	822.48			
13	Providing Drainage Spouts complete as per drawings & technical 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	39.99	Cum	149.30	5970.28			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	49.347	Cum	1075.00	53048.22			
	Coarse Aggregates (100 Km lead)	99.453	Cum	1398.00	139035.80			
	Cement (30 km lead)	45.978	MT	742.00	34115.73			
	Boulder (60 Km lead)	0.75	Cum	1159.00	869.25			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	2.33	MT	742.00	1730.50			
	TOTAL (In Rs.)				1405515.90			
	TOTAL (In Rs.)				1405515.90			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	49.35	Cum	584.64	28850.33	2885.03		
	Coarse Aggregate	99.45	Cum	944.26	93909.83	9390.98		
	Boulders	0.75	Cum	694.61	520.96	52.10		
	<i>Total</i>					12328.11		
	For 1 nos. fall, Total Seigniorage charges					12328.11		

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 FALL OF HEIGHT 0.457 METER AT CH. 3.250 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.	75.055	Cum	195.20	14650.82			
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.	9.53	Cum	6381.70	60825.13	3.09	4.29	8.58
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.	35.09	Cum	6914.20	242594.12	14.47	15.09	30.17
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	5239.43	0.36	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.	0.83	MT	73574.90	60793.75			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	139.54	Sqm	578.60	80735.66			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.49	Cum	694.61	341.75			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) 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	608.60			
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	677.83			
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	254.12			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.45	Sqm	63.20	597.07			
13	Providing Drainage Spouts complete as per drawings & technical 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	22.57	Cum	149.30	3369.30			

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)	19.627	Cum	1075.00	21098.86			
	Coarse Aggregates (100 Km lead)	39.752	Cum	1398.00	55573.46			
	Cement (30 km lead)	17.926	MT	742.00	13300.85			
	Boulder (60 Km lead)	0.49	Cum	1159.00	570.23			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	0.83	MT	742.00	613.10			
	TOTAL (In Rs.)				580859.58			
	TOTAL (In Rs.)				580859.58			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	19.63	Cum	584.64	11474.64	1147.46		
	Coarse Aggregate	39.75	Cum	944.26	37536.33	3753.63		
	Boulders	0.49	Cum	694.61	341.75	34.17		
	<i>Total</i>					4935.27		
	For 1 nos. fall, Total Seigniorage charges					4935.27		

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)
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 4.400 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.	91.075	Cum	195.20	17777.78			
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.	9.31	Cum	6381.70	59405.17	3.02	4.19	8.38
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.	40.54	Cum	6914.20	280296.22	16.72	17.43	34.86
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.	0.66	Cum	8151.40	5341.33	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.	0.95	MT	73574.90	70241.84			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	153.50	Sqm	578.60	88815.60			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.22	Cum	694.61	154.20			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.22	Cum	1237.00	274.61			
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.	0.22	Cum	1377.70	305.85			
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.	0.22	Cum	516.50	114.66			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.81	Sqm	63.20	619.82			
13	Providing Drainage Spouts complete as per drawings & technical 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	21.67	Cum	149.30	3235.44			

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)	21.876	Cum	1075.00	23517.04			
	Coarse Aggregates (100 Km lead)	43.981	Cum	1398.00	61485.70			
	Cement (30 km lead)	20.110	MT	742.00	14921.60			
	Boulder (60 Km lead)	0.22	Cum	1159.00	257.30			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	0.95	MT	742.00	708.39			
	TOTAL (In Rs.)				646488.04			
	TOTAL (In Rs.)				646488.04			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	21.88	Cum	584.64	12789.77	1278.98		
	Coarse Aggregate	43.98	Cum	944.26	41529.68	4152.97		
	Boulders	0.22	Cum	694.61	154.20	15.42		
	<i>Total</i>					5447.37		
	For 1 nos. fall, Total Seigniorage charges					5447.37		

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)
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 4.792 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.	40.020	Cum	195.20	7811.93			
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.	8.82	Cum	6381.70	56303.73	2.86	3.97	7.94
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.	34.58	Cum	6914.20	239076.98	14.26	14.87	29.74
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.	0.61	Cum	8151.40	5003.45	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.	0.81	MT	73574.90	59912.36			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	139.68	Sqm	578.60	80818.07			
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.	9.00	Sqm	680.10	6120.90			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.22	Cum	694.61	154.20			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) complete job (materials within 150m lead) with all lifts including royalty etc. complete as per approved design, specifications and direction of E/I.	0.22	Cum	1237.00	274.61			
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.	0.22	Cum	1377.70	305.85			
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.	0.22	Cum	516.50	114.66			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.37	Sqm	63.20	591.95			
13	Providing Drainage Spouts complete as per drawings & technical 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	6.72	Cum	149.30	1003.71			

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)
15	Carriage of materials							
	Coarse Sand (60 Km lead)	19.078	Cum	1075.00	20508.85			
	Coarse Aggregates (100 Km lead)	38.384	Cum	1398.00	53661.02			
	Cement (30 km lead)	17.470	MT	742.00	12962.65			
	Boulder (60 Km lead)	0.22	Cum	1159.00	257.30			
	Brick (15 km lead)	540.00	No.	3.18	1717.20			
	Steel (30 Km lead)	0.81	MT	742.00	604.21			
	TOTAL (In Rs.)				558381.02			
	TOTAL (In Rs.)				558381.02			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	19.08	Cum	584.64	11153.76	1115.38		
	Coarse Aggregate	38.38	Cum	944.26	36244.60	3624.46		
	Boulders	0.22	Cum	694.61	154.20	15.42		
	<i>Total</i>					4755.26		
	For 1 nos. fall, Total Seigniorage charges					4755.26		

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 0.610 METER AT CH. 5.200 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.	53.027	Cum	195.20	10350.78			
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.	8.50	Cum	6381.70	54229.96	2.75	3.82	7.65
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.	32.96	Cum	6914.20	227916.14	13.60	14.17	28.35
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	4710.65	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.	0.78	MT	73574.90	57115.47			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	135.52	Sqm	578.60	78410.34			
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.	8.57	Sqm	680.10	5827.10			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.17	Cum	694.61	120.86			
9	Labour Charges for pitching on apron slope of bank with stone boulders duly packed (uncratered) 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	215.24			
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.	0.17	Cum	1377.70	239.72			
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	89.87			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	9.24	Sqm	63.20	584.21			
13	Providing Drainage Spouts complete as per drawings & technical 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	13.84	Cum	149.30	2066.65			

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)	18.224	Cum	1075.00	19590.43			
	Coarse Aggregates (100 Km lead)	36.627	Cum	1398.00	51204.67			
	Cement (30 km lead)	16.678	MT	742.00	12375.35			
	Boulder (60 Km lead)	0.17	Cum	1159.00	201.67			
	Brick (15 km lead)	514.00	No.	3.18	1634.52			
	Steel (30 Km lead)	0.78	MT	742.00	576.01			
	TOTAL (In Rs.)				538637.04			
	TOTAL (In Rs.)				538637.04			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	18.22	Cum	584.64	10654.28	1065.43		
	Coarse Aggregate	36.63	Cum	944.26	34585.50	3458.55		
	Boulders	0.17	Cum	694.61	120.86	12.09		
				<i>Total</i>		4536.06		
				For 1 nos. fall, Total Seigniorage charges		4536.06		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR KARMA BASANTPUR MINOR

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 0.550 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.69	2.741	11.309	Cum
	<i>Section 2-2</i>	2	3.00	1.24	2.741	20.327	Cum
	<i>Section 3-3</i>	2	1.70	1.12	2.541	9.642	Cum
	<i>Section 5-5</i>	2	2.64	1.84	2.741	26.718	Cum
	<i>Section 6-6</i>	2	1.10	1.12	2.541	6.233	Cum
	<i>U/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>U/S Floor</i>	1	2.000	2.590	1.612	8.350	Cum
	<i>D/S Floor</i>	1	3.000	2.590	0.850	6.605	Cum
		1	2.000	2.590	0.650	3.367	Cum
	<i>D/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>Toe Wall D/S Portion</i>	1	7.020	0.750	0.900	4.739	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						101.84	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.						
	<i>PCC Below Floor</i>	1	0.542	2.59	0.15	0.21	Cum
		1	0.783	2.59	0.15	0.30	Cum
		1	4.377	2.59	0.15	1.70	Cum
		1	0.283	2.59	0.15	0.11	Cum
		1	0.638	2.59	0.15	0.25	Cum
		1	0.782	2.59	0.15	0.30	Cum
		1	0.542	2.59	0.15	0.21	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.69	0.15	0.62	Cum
	<i>Section 2-2</i>	2	3.00	1.24	0.15	1.11	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.15	0.57	Cum
	<i>Section 5-5</i>	2	2.64	1.84	0.15	1.46	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	7.02	0.75	0.30	1.58	Cum
	<i>Toe Wall D/S Portion</i>	1	6.72	0.45	0.60	1.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					11.69	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	0.45	0.45	0.40	Cum
		2	0.99	0.92	1.57	2.88	Cum
		2	0.99	1.54	0.50	1.53	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.69	0.81	3.37	Cum
		2	3.00	1.09	0.50	3.26	Cum
	<i>Section 3-3</i>	2	1.75	0.45	0.45	0.71	Cum
		2	1.75	0.63	0.61	1.35	Cum
		2	1.75	0.97	0.50	1.69	Cum
	<i>Section 5-5</i>	2	2.60	0.45	0.45	1.05	Cum
		2	2.60	0.92	1.57	7.53	Cum
		2	2.60	1.54	0.50	4.01	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	2.59	0.70	1.13	Cum
		1	5.00	2.59	0.50	6.48	Cum
		1	0.31	2.59	0.20	0.16	Cum
		1	0.20	2.59	0.40	0.21	Cum
		1	1.80	2.59	0.50	2.33	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.63	2.59	0.70	1.13	Cum
	Crest	1	0.98	2.59	1.09	2.77	Cum
	TOTAL					46.59	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	2.59	0.15	0.31	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	10.51	0.45	0.05	0.24	Cum
	On Abutment Top (Right Side)	1	10.51	0.45	0.05	0.24	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	46.59	0.30%	0.14	7850	1097.20	Kg
	Total Weight in Metric Tonne					1.10	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	0.99		0.45	1.79	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.99		1.57	6.24	Sqm
		4		0.92	1.57	5.79	Sqm
		4	0.99		0.50	1.99	Sqm
		4		1.54	0.50	3.09	Sqm
	Section 2-2	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.81	9.72	Sqm
		4		0.69	0.81	2.25	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.09	0.50	2.17	Sqm
	Section 3-3	4	1.75		0.45	3.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.75		0.61	4.26	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.75		0.50	3.49	Sqm
		4		0.97	0.50	1.93	Sqm
	Section 5-5	4	2.60		0.45	4.68	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.60		1.57	16.34	Sqm
		4		0.92	1.57	5.79	Sqm
		4	2.60		0.50	5.20	Sqm
		4		1.54	0.50	3.09	Sqm
	Section 6-6	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
		2	5.00		0.50	5.00	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.31		0.20	0.12	Sqm
		2		2.59	0.20	1.04	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.59	0.40	2.07	Sqm
		2	1.80		0.50	1.80	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
	Crest	2	0.9815		1.09	2.14	Sqm
		2		2.59	1.09	5.65	Sqm
	Toe Wall D/S Portion	2	7.02		0.30	4.21	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	6.72		0.60	8.06	Sqm
		2		0.45	0.60	0.54	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					163.81	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.99	0.30	1.19	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	1.99	0.15	1.19	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.51	0.45		4.73	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.51	0.45		4.73	Sqm
	TOTAL					9.46	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		2.72		2.72	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.91		4.655	Cum
	<i>Section 2-2</i>	2	3.00	0.91		5.460	Cum
	<i>Section 3-3</i>	2	1.70	0.70		2.390	Cum
	<i>Section 5-5</i>	2	2.64	1.91		10.102	Cum
	<i>Section 6-6</i>	2	1.10	0.70		1.545	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.59	0.09		0.466	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					28.30	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.762 METER AT CH. 1.150 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.69	1.947	8.033	Cum
	<i>Section 2-2</i>	2	3.00	1.24	1.947	14.439	Cum
	<i>Section 3-3</i>	2	1.70	1.12	1.747	6.629	Cum
	<i>Section 5-5</i>	2	2.64	1.84	1.947	18.979	Cum
	<i>Section 6-6</i>	2	1.10	1.12	1.747	4.285	Cum
	<i>U/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>U/S Floor</i>	1	2.000	2.590	1.612	8.350	Cum
	<i>D/S Floor</i>	1	3.000	2.590	0.850	6.605	Cum
		1	2.000	2.590	0.650	3.367	Cum
	<i>D/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>Toe Wall D/S Portion</i>	1	7.020	0.750	0.900	4.739	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						79.98	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.						
	<i>PCC Below Floor</i>	1	0.542	2.59	0.15	0.21	Cum
		1	0.783	2.59	0.15	0.30	Cum
		1	4.377	2.59	0.15	1.70	Cum
		1	0.283	2.59	0.15	0.11	Cum
		1	0.638	2.59	0.15	0.25	Cum
		1	0.782	2.59	0.15	0.30	Cum
		1	0.542	2.59	0.15	0.21	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.22	1.69	0.15	0.62	Cum
	<i>Section 2-2</i>	2	3.00	1.24	0.15	1.11	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.15	0.57	Cum
	<i>Section 5-5</i>	2	2.64	1.84	0.15	1.46	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	7.02	0.75	0.30	1.58	Cum
	<i>Toe Wall D/S Portion</i>	1	6.72	0.45	0.60	1.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					11.69	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.99	0.45	0.45	0.40	Cum
		2	0.99	0.92	1.57	2.88	Cum
		2	0.99	1.54	0.50	1.53	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.69	0.81	3.37	Cum
		2	3.00	1.09	0.50	3.26	Cum
	<i>Section 3-3</i>	2	1.75	0.45	0.45	0.71	Cum
		2	1.75	0.63	0.61	1.35	Cum
		2	1.75	0.97	0.50	1.69	Cum
	<i>Section 5-5</i>	2	2.60	0.45	0.45	1.05	Cum
		2	2.60	0.92	1.57	7.53	Cum
		2	2.60	1.54	0.50	4.01	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	2.59	0.70	1.13	Cum
		1	5.00	2.59	0.50	6.48	Cum
		1	0.31	2.59	0.20	0.16	Cum
		1	0.20	2.59	0.40	0.21	Cum
		1	1.80	2.59	0.50	2.33	Cum
		1	0.63	2.59	0.70	1.13	Cum
	<i>Crest</i>	1	0.98	2.59	1.09	2.77	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					46.59	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.						
	<i>Over Crest</i>	1	0.80	2.59	0.15	0.31	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.51	0.45	0.05	0.24	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.51	0.45	0.05	0.24	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	46.59	0.30%	0.14	7850	1097.20	Kg
	Total Weight in Metric Tonne					1.10	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.99		0.45	1.79	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.99		1.57	6.24	Sqm
		4		0.92	1.57	5.79	Sqm
		4	0.99		0.50	1.99	Sqm
		4		1.54	0.50	3.09	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.81	9.72	Sqm
		4		0.69	0.81	2.25	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.09	0.50	2.17	Sqm
	<i>Section 3-3</i>	4	1.75		0.45	3.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.75		0.61	4.26	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.75		0.50	3.49	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Section 5-5</i>	4	2.60		0.45	4.68	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.60		1.57	16.34	Sqm
		4		0.92	1.57	5.79	Sqm
		4	2.60		0.50	5.20	Sqm
		4		1.54	0.50	3.09	Sqm
	<i>Section 6-6</i>	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
		2	5.00		0.50	5.00	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.31		0.20	0.12	Sqm
		2		2.59	0.20	1.04	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.59	0.40	2.07	Sqm
		2	1.80		0.50	1.80	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
	<i>Crest</i>	2	0.9815		1.09	2.14	Sqm
		2		2.59	1.09	5.65	Sqm
	<i>Toe Wall D/S Portion</i>	2	7.02		0.30	4.21	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.72		0.60	8.06	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					163.81	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.99	0.30	1.19	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	1.99	0.15	1.19	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.51	0.45		4.73	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.51	0.45		4.73	Sqm
	TOTAL					9.46	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		2.72		2.72	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.22	0.97		2.364	Cum
	<i>Section 2-2</i>	2	3.00	0.90		5.390	Cum
	<i>Section 3-3</i>	2	1.70	0.70		2.363	Cum
	<i>Section 5-5</i>	2	2.64	0.97		5.130	Cum
	<i>Section 6-6</i>	2	1.10	0.70		1.528	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.59	0.09		0.466	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					20.92	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 1.340 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.60	1.975	7.198	Cum
	<i>Section 2-2</i>	2	3.00	1.24	1.975	14.647	Cum
	<i>Section 3-3</i>	2	1.70	1.12	1.775	6.735	Cum
	<i>Section 5-5</i>	2	2.66	1.75	1.975	18.432	Cum
	<i>Section 6-6</i>	2	1.10	1.12	1.775	4.354	Cum
	<i>U/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>U/S Floor</i>	1	2.000	2.590	1.460	7.563	Cum
	<i>D/S Floor</i>	1	3.000	2.590	0.850	6.605	Cum
		1	2.000	2.590	0.650	3.367	Cum
	<i>D/S Key Floor</i>	1	0.625	2.590	0.850	1.376	Cum
	<i>Toe Wall D/S Portion</i>	1	7.020	0.750	0.900	4.739	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						78.19	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.						
	<i>PCC Below Floor</i>	1	0.542	2.59	0.15	0.21	Cum
		1	0.783	2.59	0.15	0.30	Cum
		1	4.377	2.59	0.15	1.70	Cum
		1	0.283	2.59	0.15	0.11	Cum
		1	0.638	2.59	0.15	0.25	Cum
		1	0.782	2.59	0.15	0.30	Cum
		1	0.542	2.59	0.15	0.21	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.60	0.15	0.55	Cum
	<i>Section 2-2</i>	2	3.00	1.24	0.15	1.11	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.15	0.57	Cum
	<i>Section 5-5</i>	2	2.66	1.75	0.15	1.40	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	7.02	0.75	0.30	1.58	Cum
	<i>Toe Wall D/S Portion</i>	1	6.72	0.45	0.60	1.81	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					11.56	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.91	0.45	0.45	0.37	Cum
		2	0.91	0.88	1.42	2.27	Cum
		2	0.91	1.45	0.50	1.32	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.69	0.81	3.37	Cum
		2	3.00	1.09	0.50	3.26	Cum
	<i>Section 3-3</i>	2	1.37	0.45	0.45	0.55	Cum
		2	1.37	0.63	0.61	1.06	Cum
		2	1.37	0.97	0.50	1.32	Cum
	<i>Section 5-5</i>	2	2.62	0.45	0.45	1.06	Cum
		2	2.62	0.88	1.42	6.51	Cum
		2	2.62	1.45	0.50	3.80	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	2.59	0.70	1.13	Cum
		1	5.00	2.59	0.50	6.48	Cum
		1	0.31	2.59	0.20	0.16	Cum
		1	0.20	2.59	0.40	0.21	Cum
		1	1.80	2.59	0.50	2.33	Cum
		1	0.63	2.59	0.70	1.13	Cum
	<i>Crest</i>	1	0.91	2.59	0.94	2.21	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.						
	<i>Over Crest</i>	1	0.75	2.59	0.15	0.29	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.41	0.45	0.05	0.23	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.41	0.45	0.05	0.23	Cum
	TOTAL					0.76	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	0.30%	0.13	7850	1016.10	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						
	<i>Section 1-1</i>	4	0.91		0.45	1.64	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.91		1.42	5.18	Sqm
		4		0.88	1.42	4.97	Sqm
		4	0.91		0.50	1.83	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.81	9.72	Sqm
		4		0.69	0.81	2.25	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.09	0.50	2.17	Sqm
	<i>Section 3-3</i>	4	1.37		0.45	2.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.37		0.61	3.34	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.37		0.50	2.73	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Section 5-5</i>	4	2.62		0.45	4.72	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.62		1.42	14.87	Sqm
		4		0.88	1.42	4.97	Sqm
		4	2.62		0.50	5.24	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 6-6</i>	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
		2	5.00		0.50	5.00	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.31		0.20	0.12	Sqm
		2		2.59	0.20	1.04	Sqm
		2	0.20		0.40	0.16	Sqm
		2		2.59	0.40	2.07	Sqm
		2	1.80		0.50	1.80	Sqm
		2		2.59	0.50	2.59	Sqm
		2	0.63		0.70	0.88	Sqm
		2		2.59	0.70	3.63	Sqm
	<i>Crest</i>	2	0.9065		0.94	1.70	Sqm
		2		2.59	0.94	4.87	Sqm
	<i>Toe Wall D/S Portion</i>	2	7.02		0.30	4.21	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	6.72		0.60	8.06	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					155.46	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	1.99	0.30	1.19	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	1.99	0.15	1.19	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.41	0.45		4.69	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.41	0.45		4.69	Sqm
	TOTAL					9.37	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		2.48		2.48	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.00		2.275	Cum
	<i>Section 2-2</i>	2	3.00	0.91		5.442	Cum
	<i>Section 3-3</i>	2	1.70	0.70		2.390	Cum
	<i>Section 5-5</i>	2	2.66	1.00		5.327	Cum
	<i>Section 6-6</i>	2	1.10	0.70		1.545	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	2.59	0.09		0.466	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					20.88	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.830 METER AT CH. 2.680 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.53	2.33	2.930	20.988	Cum
	<i>Section 2-2</i>	2	4.25	1.24	2.930	30.783	Cum
	<i>Section 3-3</i>	2	3.95	1.12	2.730	24.069	Cum
	<i>Section 5-5</i>	2	2.51	2.48	2.930	36.558	Cum
	<i>Section 6-6</i>	2	1.10	1.12	2.730	6.697	Cum
	<i>U/S Key Floor</i>	1	0.725	1.850	1.250	1.677	Cum
	<i>U/S Floor</i>	1	1.880	1.850	2.479	8.622	Cum
	<i>D/S Floor</i>	1	5.862	1.850	1.300	14.098	Cum
		1	4.250	1.850	1.100	8.649	Cum
	<i>D/S Key Floor</i>	1	0.900	1.850	1.950	3.247	Cum
	<i>Toe Wall D/S Portion</i>	1	6.280	0.750	0.900	4.239	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						161.42	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.						
	<i>PCC Below Floor</i>	1	0.542	1.85	0.15	0.15	Cum
		1	1.229	1.85	0.15	0.34	Cum
		1	0.283	1.85	0.15	0.08	Cum
		1	0.636	1.85	0.15	0.18	Cum
		1	5.986	1.85	0.15	1.66	Cum
		1	0.565	1.85	0.15	0.16	Cum
		1	0.600	1.85	0.15	0.17	Cum
		1	0.070	1.85	0.15	0.02	Cum
		1	1.695	1.85	0.15	0.47	Cum
		1	2.012	1.85	0.15	0.56	Cum
		1	0.542	1.85	0.15	0.15	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.53	2.33	0.15	1.07	Cum
	<i>Section 2-2</i>	2	4.25	1.24	0.15	1.58	Cum
	<i>Section 3-3</i>	2	3.95	1.12	0.15	1.32	Cum
	<i>Section 5-5</i>	2	2.51	2.48	0.15	1.87	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	6.28	0.75	0.30	1.41	Cum
	<i>Toe Wall D/S Portion</i>	1	5.98	0.45	0.60	1.61	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					14.25	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.38	0.45	0.45	0.56	Cum
		2	1.38	1.24	2.64	9.08	Cum
		2	1.38	2.18	0.95	5.75	Cum
	<i>Section 2-2</i>	2	4.25	0.45	0.45	1.72	Cum
		2	4.25	0.69	0.81	4.77	Cum
		2	4.25	1.09	0.95	8.77	Cum
	<i>Section 3-3</i>	2	3.62	0.45	0.45	1.46	Cum
		2	3.62	0.63	0.61	2.79	Cum
		2	3.62	0.97	0.70	4.89	Cum
	<i>Section 5-5</i>	2	2.47	0.45	0.45	1.00	Cum
		2	2.47	1.24	2.64	16.18	Cum
		2	2.47	2.18	0.95	10.24	Cum
	<i>Section 6-6</i>	2	1.73	0.45	0.45	0.70	Cum
		2	1.73	0.63	0.61	1.34	Cum
		2	1.73	0.97	0.70	2.34	Cum
	<i>Floor</i>	1	0.73	1.85	1.10	1.48	Cum
		1	1.37	1.85	0.50	1.27	Cum
		1	0.73	1.85	0.45	0.60	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	5.86	1.85	0.95	10.30	Cum
		1	0.65	1.85	0.20	0.24	Cum
		1	0.08	1.85		0.15	Cum
		1	0.80	1.85	0.75	1.11	Cum
		1	0.73	1.85	0.05	0.07	Cum
		1	3.20	1.85	0.70	4.14	Cum
		1	0.90	1.85	1.80	3.00	Cum
	Crest	1	1.26	1.85	2.19	5.08	Cum
	TOTAL					99.03	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	1.85	0.15	0.25	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	14.46	0.45	0.05	0.33	Cum
	On Abutment Top (Right Side)	1	14.46	0.45	0.05	0.33	Cum
	TOTAL					0.90	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	99.03	0.30%	0.30	7850	2332.21	Kg
	Total Weight in Metric Tonne					2.33	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.38		0.45	2.49	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.38		2.64	14.62	Sqm
		4		1.24	2.64	13.12	Sqm
		4	1.38		0.95	5.26	Sqm
		4		2.18	0.95	8.30	Sqm
	Section 2-2	4	4.25		0.45	7.65	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.25		0.81	13.77	Sqm
		4		0.69	0.81	2.25	Sqm
		4	4.25		0.95	16.15	Sqm
		4		1.09	0.95	4.13	Sqm
	Section 3-3	4	3.62		0.45	6.51	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.62		0.61	8.83	Sqm
		4		0.63	0.61	1.54	Sqm
		4	3.62		0.70	10.13	Sqm
		4		0.97	0.70	2.70	Sqm
	Section 5-5	4	2.47		0.45	4.44	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.47		2.64	26.06	Sqm
		4		1.24	2.64	13.12	Sqm
		4	2.47		0.95	9.38	Sqm
		4		2.18	0.95	8.30	Sqm
	Section 6-6	4	1.73		0.45	3.12	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.73		0.61	4.23	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.73		0.70	4.85	Sqm
		4		0.97	0.70	2.70	Sqm
	Floor	2	0.73		1.10	1.60	Sqm
		2		1.85	1.10	4.07	Sqm
		2	1.37		0.50	1.37	Sqm
		2		1.85	0.50	1.85	Sqm
		2	0.73		0.45	0.65	Sqm
		2		1.85	0.45	1.67	Sqm
		2	5.86		0.95	11.14	Sqm
		2		1.85	0.95	3.52	Sqm
		2	0.65		0.20	0.26	Sqm
		2		1.85	0.20	0.74	Sqm
		2	0.80		0.75	1.20	Sqm
		2		1.85	0.75	2.78	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		2	0.73		0.05	0.07	Sqm
		2		1.85	0.05	0.19	Sqm
		2	3.20		0.70	4.48	Sqm
		2		1.85	0.70	2.59	Sqm
		2	0.90		1.80	3.24	Sqm
		2		1.85	1.80	6.66	Sqm
	Crest	2	1.26		2.19	5.49	Sqm
		2		1.85	2.19	8.08	Sqm
	Toe Wall D/S Portion	2	6.28		0.30	3.77	Sqm
		2		0.75	0.30	0.45	Sqm
	Toe Wall D/S Portion	2	5.98		0.60	7.18	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					279.87	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	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	In D/S Portion	1	2.00	1.25	0.30	0.75	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	1.25	0.15	0.75	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	14.46	0.45		6.51	Sqm
	On Abutment Top (Right Side)	1	14.46	0.45		6.51	Sqm
	TOTAL					13.01	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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		14.87		14.87	Cum
	Abutment						
	Section 1-1	2	1.53	1.13		3.456	Cum
	Section 2-2	2	4.25	0.98		8.305	Cum
	Section 3-3	2	3.95	0.73		5.783	Cum
	Section 5-5	2	2.51	1.13		5.656	Cum
	Section 6-6	2	1.10	0.73		1.609	Cum
	D/S protection	2					
	Toe wall	2	2.00	0.08		0.307	Cum
	TOTAL					39.99	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.457 METER AT CH. 3.250 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.94	1.51	2.291	6.486	Cum
	<i>Section 2-2</i>	2	2.50	1.24	2.291	14.158	Cum
	<i>Section 3-3</i>	2	2.20	1.12	2.091	10.268	Cum
	<i>Section 5-5</i>	2	2.99	1.66	2.291	22.719	Cum
	<i>Section 6-6</i>	2	1.10	1.12	2.091	5.129	Cum
	<i>U/S Key Floor</i>	1	0.625	1.420	0.850	0.754	Cum
	<i>U/S Floor</i>	1	2.000	1.420	1.307	3.712	Cum
	<i>D/S Floor</i>	1	2.500	1.420	0.850	3.018	Cum
		1	2.500	1.420	0.650	2.308	Cum
	<i>D/S Key Floor</i>	1	0.625	1.420	0.850	0.754	Cum
	<i>Toe Wall D/S Portion</i>	1	5.850	0.750	0.900	3.949	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						75.06	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.						
	<i>PCC Below Floor</i>	1	0.542	1.42	0.15	0.12	Cum
		1	0.783	1.42	0.15	0.17	Cum
		1	3.877	1.42	0.15	0.83	Cum
		1	0.283	1.42	0.15	0.06	Cum
		1	1.138	1.42	0.15	0.24	Cum
		1	0.782	1.42	0.15	0.17	Cum
		1	0.542	1.42	0.15	0.12	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	0.94	1.51	0.15	0.42	Cum
	<i>Section 2-2</i>	2	2.50	1.24	0.15	0.93	Cum
	<i>Section 3-3</i>	2	2.20	1.12	0.15	0.74	Cum
	<i>Section 5-5</i>	2	2.99	1.66	0.15	1.49	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	5.85	0.75	0.30	1.32	Cum
	<i>Toe Wall D/S Portion</i>	1	5.55	0.45	0.60	1.50	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					9.53	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.71	0.45	0.45	0.29	Cum
		2	0.71	0.83	1.27	1.50	Cum
		2	0.71	1.36	0.50	0.97	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.69	0.81	2.81	Cum
		2	2.50	1.09	0.50	2.72	Cum
	<i>Section 3-3</i>	2	1.87	0.45	0.45	0.76	Cum
		2	1.87	0.63	0.61	1.44	Cum
		2	1.87	0.97	0.50	1.80	Cum
	<i>Section 5-5</i>	2	2.94	0.45	0.45	1.19	Cum
		2	2.94	0.83	1.27	6.19	Cum
		2	2.94	1.36	0.50	4.00	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	1.42	0.70	0.62	Cum
		1	4.50	1.42	0.50	3.20	Cum
		1	0.31	1.42	0.20	0.09	Cum
		1	0.20	1.42	0.40	0.11	Cum
		1	2.30	1.42	0.50	1.63	Cum
		1	0.63	1.42	0.70	0.62	Cum
	<i>Crest</i>	1	0.72	1.42	0.73	0.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					35.09	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.						
	<i>Over Crest</i>	1	0.60	1.42	0.20	0.17	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.50	0.45	0.05	0.24	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.50	0.45	0.05	0.24	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	35.09	0.30%	0.11	7850	826.28	Kg
	Total Weight in Metric Tonne					0.83	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.71		0.45	1.28	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.71		1.27	3.61	Sqm
		4		0.83	1.27	4.21	Sqm
		4	0.71		0.50	1.43	Sqm
		4		1.36	0.50	2.72	Sqm
	<i>Section 2-2</i>	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.81	8.10	Sqm
		4		0.69	0.81	2.25	Sqm
		4	2.50		0.50	5.00	Sqm
		4		1.09	0.50	2.17	Sqm
	<i>Section 3-3</i>	4	1.87		0.45	3.36	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.87		0.61	4.56	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.87		0.50	3.73	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Section 5-5</i>	4	2.94		0.45	5.30	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.94		1.27	14.91	Sqm
		4		0.83	1.27	4.21	Sqm
		4	2.94		0.50	5.89	Sqm
		4		1.36	0.50	2.72	Sqm
	<i>Section 6-6</i>	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		1.42	0.70	1.99	Sqm
		2	4.50		0.50	4.50	Sqm
		2		1.42	0.50	1.42	Sqm
		2	0.31		0.20	0.12	Sqm
		2		1.42	0.20	0.57	Sqm
		2	0.20		0.40	0.16	Sqm
		2		1.42	0.40	1.14	Sqm
		2	2.30		0.50	2.30	Sqm
		2		1.42	0.50	1.42	Sqm
		2	0.63		0.70	0.88	Sqm
		2		1.42	0.70	1.99	Sqm
	<i>Crest</i>	2	0.722		0.732	1.06	Sqm
		2		1.42	0.732	2.08	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.85		0.30	3.51	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.55		0.60	6.66	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					139.54	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.82	0.30	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	0.82	0.15	0.49	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.50	0.45		4.72	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.50	0.45		4.72	Sqm
	TOTAL					9.45	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.72		1.72	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.94	1.33		2.499	Cum
	<i>Section 2-2</i>	2	2.50	0.91		4.535	Cum
	<i>Section 3-3</i>	2	2.20	0.70		3.093	Cum
	<i>Section 5-5</i>	2	2.99	1.33		7.963	Cum
	<i>Section 6-6</i>	2	1.10	0.70		1.545	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.42	0.09		0.256	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					22.57	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.914 METER AT CH. 4.400 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.10	1.78	2.664	10.427	Cum
	<i>Section 2-2</i>	2	3.17	1.24	2.664	20.889	Cum
	<i>Section 3-3</i>	2	1.70	1.12	2.464	9.349	Cum
	<i>Section 5-5</i>	2	2.94	1.93	2.664	30.321	Cum
	<i>Section 6-6</i>	2	1.10	1.12	2.464	6.044	Cum
	<i>U/S Key Floor</i>	1	0.625	0.970	0.850	0.515	Cum
	<i>U/S Floor</i>	1	2.000	0.970	1.764	3.422	Cum
	<i>D/S Floor</i>	1	3.500	0.970	0.850	2.886	Cum
		1	2.000	0.970	0.650	1.261	Cum
	<i>D/S Key Floor</i>	1	0.625	0.970	0.850	0.515	Cum
	<i>Toe Wall D/S Portion</i>	1	5.400	0.750	0.900	3.645	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						91.07	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.						
	<i>PCC Below Floor</i>	1	0.542	0.97	0.15	0.08	Cum
		1	0.783	0.97	0.15	0.11	Cum
		1	4.877	0.97	0.15	0.71	Cum
		1	0.283	0.97	0.15	0.04	Cum
		1	0.638	0.97	0.15	0.09	Cum
		1	0.782	0.97	0.15	0.11	Cum
		1	0.542	0.97	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.10	1.78	0.15	0.59	Cum
	<i>Section 2-2</i>	2	3.17	1.24	0.15	1.18	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.15	0.57	Cum
	<i>Section 5-5</i>	2	2.94	1.93	0.15	1.71	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	5.40	0.75	0.30	1.22	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.45	0.60	1.38	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					9.31	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.87	0.45	0.45	0.35	Cum
		2	0.87	0.97	1.72	2.90	Cum
		2	0.87	1.63	0.50	1.42	Cum
	<i>Section 2-2</i>	2	3.17	0.45	0.45	1.28	Cum
		2	3.17	0.69	0.81	3.56	Cum
		2	3.17	1.09	0.50	3.44	Cum
	<i>Section 3-3</i>	2	1.37	0.45	0.45	0.55	Cum
		2	1.37	0.63	0.61	1.06	Cum
		2	1.37	0.97	0.50	1.32	Cum
	<i>Section 5-5</i>	2	2.90	0.45	0.45	1.17	Cum
		2	2.90	0.97	1.72	9.67	Cum
		2	2.90	1.63	0.50	4.74	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	0.97	0.70	0.42	Cum
		1	5.50	0.97	0.50	2.67	Cum
		1	0.31	0.97	0.20	0.06	Cum
		1	0.20	0.97	0.40	0.08	Cum
		1	1.80	0.97	0.50	0.87	Cum
		1	0.63	0.97	0.70	0.42	Cum
	<i>Crest</i>	1	1.04	0.97	1.14	1.15	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					40.54	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.						
	<i>Over Crest</i>	1	0.85	0.97	0.20	0.16	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.90	0.45	0.05	0.25	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.90	0.45	0.05	0.25	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	40.54	0.30%	0.12	7850	954.70	Kg
	Total Weight in Metric Tonne					0.95	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	0.87		0.45	1.57	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.87		1.72	6.00	Sqm
		4		0.97	1.72	6.67	Sqm
		4	0.87		0.50	1.74	Sqm
		4		1.63	0.50	3.27	Sqm
	<i>Section 2-2</i>	4	3.17		0.45	5.71	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.17		0.81	10.28	Sqm
		4		0.69	0.81	2.25	Sqm
		4	3.17		0.50	6.34	Sqm
		4		1.09	0.50	2.17	Sqm
	<i>Section 3-3</i>	4	1.37		0.45	2.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.37		0.61	3.34	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.37		0.50	2.73	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Section 5-5</i>	4	2.90		0.45	5.22	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.90		1.72	20.00	Sqm
		4		0.97	1.72	6.67	Sqm
		4	2.90		0.50	5.80	Sqm
		4		1.63	0.50	3.27	Sqm
	<i>Section 6-6</i>	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.97	0.70	1.36	Sqm
		2	5.50		0.50	5.50	Sqm
		2		0.97	0.50	0.97	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.97	0.20	0.39	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.97	0.40	0.78	Sqm
		2	1.80		0.50	1.80	Sqm
		2		0.97	0.50	0.97	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.97	0.70	1.36	Sqm
	<i>Crest</i>	2	1.0395		1.138	2.37	Sqm
		2		0.97	1.138	2.21	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.40		0.30	3.24	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.10		0.60	6.12	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					153.50	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.37	0.30	0.22	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	0.37	0.15	0.22	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.90	0.45		4.90	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.90	0.45		4.90	Sqm
	TOTAL					9.81	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		3.26		3.26	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.10	0.96		2.106	Cum
	<i>Section 2-2</i>	2	3.17	0.89		5.659	Cum
	<i>Section 3-3</i>	2	1.70	0.69		2.343	Cum
	<i>Section 5-5</i>	2	2.94	0.96		5.650	Cum
	<i>Section 6-6</i>	2	1.10	0.69		1.514	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.97	0.09		0.175	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					21.67	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 4.792 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.60	1.060	3.855	Cum
	<i>Section 2-2</i>	2	3.00	1.24	1.060	7.861	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.860	3.263	Cum
	<i>Section 5-5</i>	2	2.66	1.75	1.060	9.889	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.860	2.110	Cum
	<i>U/S Key Floor</i>	1	0.625	0.970	0.850	0.515	Cum
	<i>U/S Floor</i>	1	2.000	0.970	1.460	2.832	Cum
	<i>D/S Floor</i>	1	3.000	0.970	0.850	2.474	Cum
		1	2.000	0.970	0.650	1.261	Cum
	<i>D/S Key Floor</i>	1	0.625	0.970	0.850	0.515	Cum
	<i>Toe Wall D/S Portion</i>	1	5.400	0.750	0.900	3.645	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						40.02	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.						
	<i>PCC Below Floor</i>	1	0.542	0.97	0.15	0.08	Cum
		1	0.783	0.97	0.15	0.11	Cum
		1	4.377	0.97	0.15	0.64	Cum
		1	0.283	0.97	0.15	0.04	Cum
		1	0.638	0.97	0.15	0.09	Cum
		1	0.782	0.97	0.15	0.11	Cum
		1	0.542	0.97	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.14	1.60	0.15	0.55	Cum
	<i>Section 2-2</i>	2	3.00	1.24	0.15	1.11	Cum
	<i>Section 3-3</i>	2	1.70	1.12	0.15	0.57	Cum
	<i>Section 5-5</i>	2	2.66	1.75	0.15	1.40	Cum
	<i>Section 6-6</i>	2	1.10	1.12	0.15	0.37	Cum
	<i>Toe Wall D/S Portion</i>	1	5.40	0.75	0.30	1.22	Cum
	<i>Toe Wall D/S Portion</i>	1	5.10	0.45	0.60	1.38	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					8.82	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.91	0.45	0.45	0.37	Cum
		2	0.91	0.88	1.42	2.26	Cum
		2	0.91	1.45	0.50	1.32	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.69	0.81	3.37	Cum
		2	3.00	1.09	0.50	3.26	Cum
	<i>Section 3-3</i>	2	1.37	0.45	0.45	0.55	Cum
		2	1.37	0.63	0.61	1.06	Cum
		2	1.37	0.97	0.50	1.32	Cum
	<i>Section 5-5</i>	2	2.62	0.45	0.45	1.06	Cum
		2	2.62	0.88	1.42	6.52	Cum
		2	2.62	1.45	0.50	3.80	Cum
	<i>Section 6-6</i>	2	1.58	0.45	0.45	0.64	Cum
		2	1.58	0.63	0.61	1.22	Cum
		2	1.58	0.97	0.50	1.53	Cum
	<i>Floor</i>	1	0.63	0.97	0.70	0.42	Cum
		1	5.00	0.97	0.50	2.43	Cum
		1	0.31	0.97	0.20	0.06	Cum
		1	0.20	0.97	0.40	0.08	Cum
		1	1.80	0.97	0.50	0.87	Cum
		1	0.63	0.97	0.70	0.42	Cum
	<i>Crest</i>	1	0.90	0.97	0.92	0.81	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					34.58	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.						
	<i>Over Crest</i>	1	0.75	0.97	0.20	0.15	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.41	0.45	0.05	0.23	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.41	0.45	0.05	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	34.58	0.30%	0.10	7850	814.30	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						
	<i>Section 1-1</i>	4	0.91		0.45	1.63	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.91		1.42	5.15	Sqm
		4		0.88	1.42	4.98	Sqm
		4	0.91		0.50	1.81	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.81	9.72	Sqm
		4		0.69	0.81	2.25	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.09	0.50	2.17	Sqm
	<i>Section 3-3</i>	4	1.37		0.45	2.46	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.37		0.61	3.34	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.37		0.50	2.73	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Section 5-5</i>	4	2.62		0.45	4.72	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.62		1.42	14.88	Sqm
		4		0.88	1.42	4.98	Sqm
		4	2.62		0.50	5.24	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 6-6</i>	4	1.58		0.45	2.85	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.58		0.61	3.86	Sqm
		4		0.63	0.61	1.54	Sqm
		4	1.58		0.50	3.16	Sqm
		4		0.97	0.50	1.93	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.97	0.70	1.36	Sqm
		2	5.00		0.50	5.00	Sqm
		2		0.97	0.50	0.97	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.97	0.20	0.39	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.97	0.40	0.78	Sqm
		2	1.80		0.50	1.80	Sqm
		2		0.97	0.50	0.97	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.97	0.70	1.36	Sqm
	<i>Crest</i>	2	0.904		0.924	1.67	Sqm
		2		0.97	0.924	1.79	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.40		0.30	3.24	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.10		0.60	6.12	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					139.68	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.25		9.00	Sqm
	TOTAL					9.00	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.37	0.30	0.22	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	0.37	0.15	0.22	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.41	0.45		4.68	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.41	0.45		4.68	Sqm
	TOTAL					9.37	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.35		1.35	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.14	0.25		0.565	Cum
	<i>Section 2-2</i>	2	3.00	0.25		1.494	Cum
	<i>Section 3-3</i>	2	1.70	0.15		0.517	Cum
	<i>Section 5-5</i>	2	2.66	0.25		1.326	Cum
	<i>Section 6-6</i>	2	1.10	0.15		0.334	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.97	0.09		0.175	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					6.72	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 5.200 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.03	1.60	1.617	5.336	Cum
	<i>Section 2-2</i>	2	3.00	1.20	1.617	11.642	Cum
	<i>Section 3-3</i>	2	1.70	1.08	1.417	5.203	Cum
	<i>Section 5-5</i>	2	2.72	1.75	1.617	15.406	Cum
	<i>Section 6-6</i>	2	1.05	1.08	1.417	3.198	Cum
	<i>U/S Key Floor</i>	1	0.625	0.890	0.850	0.473	Cum
	<i>U/S Floor</i>	1	2.000	0.890	1.460	2.599	Cum
	<i>D/S Floor</i>	1	3.000	0.890	0.850	2.270	Cum
		1	2.000	0.890	0.650	1.157	Cum
	<i>D/S Key Floor</i>	1	0.625	0.890	0.850	0.473	Cum
	<i>Toe Wall D/S Portion</i>	1	5.140	0.750	0.900	3.470	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	2.000	0.600	0.750	1.800	Cum
						53.03	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.						
	<i>PCC Below Floor</i>	1	0.542	0.89	0.15	0.07	Cum
		1	0.783	0.89	0.15	0.10	Cum
		1	4.568	0.89	0.15	0.61	Cum
		1	0.283	0.89	0.15	0.04	Cum
		1	0.447	0.89	0.15	0.06	Cum
		1	0.782	0.89	0.15	0.10	Cum
		1	0.542	0.89	0.15	0.07	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.03	1.60	0.15	0.50	Cum
	<i>Section 2-2</i>	2	3.00	1.20	0.15	1.08	Cum
	<i>Section 3-3</i>	2	1.70	1.08	0.15	0.55	Cum
	<i>Section 5-5</i>	2	2.72	1.75	0.15	1.43	Cum
	<i>Section 6-6</i>	2	1.05	1.08	0.15	0.34	Cum
	<i>Toe Wall D/S Portion</i>	1	5.14	0.75	0.30	1.16	Cum
	<i>Toe Wall D/S Portion</i>	1	4.84	0.45	0.60	1.31	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.60	0.15	0.36	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	2.00	0.30	0.60	0.72	Cum
	TOTAL					8.50	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	0.81	0.45	0.45	0.33	Cum
		2	0.81	0.88	1.42	2.00	Cum
		2	0.81	1.45	0.50	1.17	Cum
	<i>Section 2-2</i>	2	3.00	0.45	0.45	1.22	Cum
		2	3.00	0.68	0.75	3.04	Cum
		2	3.00	1.05	0.50	3.15	Cum
	<i>Section 3-3</i>	2	1.39	0.45	0.45	0.56	Cum
		2	1.39	0.62	0.55	0.94	Cum
		2	1.39	0.93	0.50	1.29	Cum
	<i>Section 5-5</i>	2	2.67	0.45	0.45	1.08	Cum
		2	2.67	0.88	1.42	6.65	Cum
		2	2.67	1.45	0.50	3.88	Cum
	<i>Section 6-6</i>	2	1.51	0.45	0.45	0.61	Cum
		2	1.51	0.62	0.55	1.02	Cum
		2	1.51	0.93	0.50	1.40	Cum
	<i>Floor</i>	1	0.63	0.89	0.70	0.39	Cum
		1	5.00	0.89	0.50	2.23	Cum
		1	0.31	0.89	0.20	0.05	Cum
		1	0.20	0.89	0.40	0.07	Cum
		1	1.80	0.89	0.50	0.80	Cum
		1	0.63	0.89	0.70	0.39	Cum
	<i>Crest</i>	1	0.80	0.89	0.97	0.69	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					32.96	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.						
	<i>Over Crest</i>	1	0.65	0.89	0.20	0.12	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	10.27	0.45	0.05	0.23	Cum
	<i>On Abutment Top (Right Side)</i>	1	10.27	0.45	0.05	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	32.96	0.30%	0.10	7850	776.29	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						
	<i>Section 1-1</i>	4	0.81		0.45	1.45	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.81		1.42	4.57	Sqm
		4		0.88	1.42	4.98	Sqm
		4	0.81		0.50	1.61	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 2-2</i>	4	3.00		0.45	5.40	Sqm
		4		0.45	0.45	0.81	Sqm
		4	3.00		0.75	9.00	Sqm
		4		0.68	0.75	2.03	Sqm
		4	3.00		0.50	6.00	Sqm
		4		1.05	0.50	2.10	Sqm
	<i>Section 3-3</i>	4	1.39		0.45	2.49	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.39		0.55	3.05	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.39		0.50	2.77	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Section 5-5</i>	4	2.67		0.45	4.81	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.67		1.42	15.19	Sqm
		4		0.88	1.42	4.98	Sqm
		4	2.67		0.50	5.35	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 6-6</i>	4	1.51		0.45	2.72	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.51		0.55	3.32	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.51		0.50	3.02	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.89	0.70	1.25	Sqm
		2	5.00		0.50	5.00	Sqm
		2		0.89	0.50	0.89	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.89	0.20	0.36	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.89	0.40	0.71	Sqm
		2	1.80		0.50	1.80	Sqm
		2		0.89	0.50	0.89	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.89	0.70	1.25	Sqm
	<i>Crest</i>	2	0.8025		0.965	1.55	Sqm
		2		0.89	0.965	1.72	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.14		0.30	3.08	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.84		0.60	5.81	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.15	1.20	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	2.00		0.60	4.80	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					135.52	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.						
	<i>In D/S Portion On Slopes</i>	2	2.00	2.14		8.57	Sqm
	TOTAL					8.57	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	2.00	0.29	0.30	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	2.00	0.29	0.15	0.17	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	10.27	0.45		4.62	Sqm
	<i>On Abutment Top (Right Side)</i>	1	10.27	0.45		4.62	Sqm
	TOTAL					9.24	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.52		1.52	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.03	0.65		1.331	Cum
	<i>Section 2-2</i>	2	3.00	0.63		3.792	Cum
	<i>Section 3-3</i>	2	1.70	0.47		1.591	Cum
	<i>Section 5-5</i>	2	2.72	0.65		3.513	Cum
	<i>Section 6-6</i>	2	1.05	0.47		0.978	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.89	0.09		0.160	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					13.84	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF KARMA BASANTPUR			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	FALL	0.460	₹ 95,508.03
2	BRIDGE/ FALL	0.730	₹ 19,904.52
3	FALL	1.340	₹ 78,171.61
4	BRIDGE	1.480	₹ 24,906.04
5	FALL	1.650	₹ 28,101.73
6	FALL	2.160	₹ 87,956.06
7	BRIDGE/ FALL	2.680	₹ 57,642.08
8	BRIDGE/ FALL	4.180	₹ 32,397.78
9	FALL	4.792	₹ 79,277.49
10	FALL	5.200	₹ 40,206.36
11	BRIDGE	5.330	₹ 29,373.77
12	BRIDGE/ FALL	5.690	₹ 34,569.86
Total In Rs.			₹ 6,08,015.32
Total In Lakhs.			₹ 6.08

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR C/O OF APPROACH ROAD			
Sl. No.	APPROACH ROAD	NOS.	Amount (In Rs.)
1		6.000	₹ 31,26,111.30
Total In Rs.			₹ 31,26,111.30
Total In Lakhs.			₹ 31.26

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 transporting 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 6 no., Total Seigniorage charges						45471.57		

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 transporting to the embankment location within all lifts and lead upto 1000m.							
		<i>For Making RAMP</i>							
			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 place method with front end loader at OMC, and compacting with 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									
ABSTRACT OF COST OF REPAIRED STRUCTURES OF KARMA BASANTPUR MINOR									
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 AT (CH.0.460 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.	1.87	Cum	6381.70	11952.45	0.61	0.84	1.69
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.	8.83	Cum	6914.20	61031.70	3.64	3.80	7.59
4	Carriage of materials								
		Coarse Sand (60 Km lead)	4.638	Cum	1075.00	4986.31			
		Coarse Aggregates (100 Km lead)	9.277	Cum	1398.00	12969.05			
		Cement (30 km lead)	4.248	MT	742.00	3151.99			
TOTAL (In Rs.)						95508.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	4.64	Cum	584.64	2711.81	271.18		
		Coarse Aggregate	9.28	Cum	944.26	8759.77	875.98		
Total							1147.16		
AOC FOR BRIDGE/FALL AT (CH.0.730 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.	0.64	Cum	5021.30	3233.72	0.07	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.	13.58	Sqm	340.20	4619.92	14.08	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.	1.400	Sqm	63.20	88.48	0.002		
4	Carriage of materials								
		Coarse Sand (60 Km lead)	0.404	Cum	1075.00	434.67			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	14.156	MT	742.00	10503.78			
		Brick (15 km lead)	322.00	No.	3.18	1023.96			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						19904.52			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.40	Cum	584.64	236.40	23.64		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							23.64		
AOC FOR FALL AT (CH.1.340 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.	31.36	Cum	2492.58	78171.61			
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			
		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.)						78171.61			
		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 MARCH 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		
AOC FOR BRIDGE AT (CH.1.480 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.	0.81	Cum	5021.30	4046.77	0.09	0.26	
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.	16.99	Sqm	340.20	5781.49	17.62	0.25	
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.	1.752	Sqm	63.20	110.73	0.003		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.506	Cum	1075.00	543.96			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	17.715	MT	742.00	13144.73			
		Brick (15 km lead)	402.00	No.	3.18	1278.36			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
		TOTAL (In Rs.)				24906.04			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.51	Cum	584.64	295.84	29.58		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					29.58		
AOC FOR FALL AT (CH.1.650 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.	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.	3.22	Cum	6381.70	20540.70	1.04	1.45	2.90
3		Carriage of materials							
		Coarse Sand (60 Km lead)	1.448	Cum	1075.00	1557.04			
		Coarse Aggregates (100 Km lead)	2.897	Cum	1398.00	4049.75			
		Cement (30 km lead)	1.043	MT	742.00	773.80			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		TOTAL (In Rs.)				28101.73			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.45	Cum	584.64	846.80	84.68		
		Coarse Aggregate	2.90	Cum	944.26	2735.35	273.54		
		Total					358.21		
AOC FOR FALL AT (CH.2.160 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.	2.69	Cum	6381.70	17179.50	0.87	1.21	2.42
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.	5.84	Cum	6914.20	40399.78	2.41	2.51	5.02
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.	14.551	Sqm	578.60	8419.38			

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	WRD 5.3.22	Providing M.S. reinforcements per approved design, drawing, removal of rust, cutting, bending, including supplying annealed wire, placing M.S. rods in position complete job as per specifications and direction of E/I.	0.05	Mt	73574.90	3886.99			
6		Carriage of materials							
		Coarse Sand (60 Km lead)	3.724	Cum	1075.00	4003.19			
		Coarse Aggregates (100 Km lead)	7.448	Cum	1398.00	10412.01			
		Cement (30 km lead)	3.282	MT	742.00	2435.58			
		Brick (15 km lead)	0.00	No.	3.18	0.00			
		Steel (30 Km lead)	0.05	MT	742.00	39.20			
TOTAL (In Rs.)						87956.06			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	3.72	Cum	584.64	2177.14	217.71		
		Coarse Aggregate	7.45	Cum	944.26	7032.65	703.26		
<i>Total</i>							920.98		
AOC FOR BRIDGE/FALL AT (CH.2.680 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.	23.13	Cum	2492.58	57642.08			
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			
		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.)						57642.08			
		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		
<i>Total</i>							0.00		
AOC FOR BRIDGE/FALL AT (CH.4.180 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.	0.45	Cum	5021.30	2252.88	0.05	0.14	
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.	9.46	Sqm	340.20	3218.63	9.81	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.	0.975	Sqm	63.20	61.64	0.001		
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.	2.22	Cum	6381.70	14139.47	0.72	1.00	1.99
5		Carriage of materials							
		Coarse Sand (60 Km lead)	1.279	Cum	1075.00	1374.64			
		Coarse Aggregates (100 Km lead)	1.994	Cum	1398.00	2787.70			
		Cement (30 km lead)	10.580	MT	742.00	7850.49			
		Brick (15 km lead)	224.00	No.	3.18	712.32			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						32397.78			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.28	Cum	584.64	747.60	74.76		
		Coarse Aggregate	1.99	Cum	944.26	1882.92	188.29		
<i>Total</i>							263.05		

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 AT (CH.4.792 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.	31.81	Cum	2492.58	79277.49			
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			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						79277.49			
		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		
<i>Total</i>							0.00		
AOC FOR FALL AT (CH.5.200 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.	16.13	Cum	2492.58	40206.36			
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			
		Steel (30 Km lead)	0.00	MT	742.00	0.00			
TOTAL (In Rs.)						40206.36			
		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		
<i>Total</i>							0.00		
AOC FOR BRIDGE AT (CH.5.330 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.	25.52	Sqm	340.20	8681.90	26.46	0.37	
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.	10.241	Sqm	63.20	647.25	0.015		
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.373	Cum	1075.00	400.54			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	26.474	MT	742.00	19644.08			
		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.)						29373.77			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.37	Cum	584.64	217.83	21.78		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
<i>Total</i>							21.78		
AOC FOR BRIDGE/FALL AT (CH.5.690 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 royalty 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.	12.54	Sqm	340.20	4266.11	13.00	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.	10.000	Sqm	63.20	632.00	0.015		

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	5.3.4	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.	1.02	Cum	6381.70	6535.68	0.33	0.46	0.92	
6		Carriage of materials								
		Coarse Sand (60 Km lead)	1.086	Cum	1075.00	1166.96				
		Coarse Aggregates (100 Km lead)	0.922	Cum	1398.00	1288.56				
		Cement (30 km lead)	13.507	MT	742.00	10022.39				
		Brick (15 km lead)	690.00	No.	3.18	2194.20				
		Steel (30 Km lead)	0.00	MT	742.00	0.00				
TOTAL (In Rs.)						34569.86				
		Seigniorage @10%			Rate	Amount in Rs.	10%			
		Coarse Sand	1.09	Cum	584.64	634.65	63.47			
		Coarse Aggregate	0.92	Cum	944.26	870.34	87.03			
		<i>Total</i>						150.50		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF KARMA BASANTPUR MINOR

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.0.460 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	
		TOTAL						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.							
		<i>Abutment Top</i>	2	12.80	0.49	0.15	1.87	<i>Cum</i>	
		TOTAL						1.87	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.							
		<i>Floor</i>	1	7.00	2.44	0.5	8.53	<i>Cum</i>	
		<i>Crest</i>	1	2.44	0.60	0.2	0.29	<i>Cum</i>	
		TOTAL						8.83	Cum
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL AT (CH.0.730 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.							
		<i>Parapet Wall</i>	2	3.50	0.1	0.92	0.64	<i>Cum</i>	
		TOTAL						0.64	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.							
		<i>Parapet Wall U/S</i>	1	3.50		1.94	6.79	<i>Sqm</i>	
		<i>Parapet Wall D/S</i>	1	3.50		1.94	6.79	<i>Sqm</i>	
		TOTAL						13.58	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.							
		<i>Parapet Wall U/S</i>	1	3.50		0.2	0.70	<i>Sqm</i>	
		<i>Parapet Wall D/S</i>	1	3.50		0.2	0.70	<i>Sqm</i>	
		TOTAL						1.40	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.1.340 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.							
		<i>Abutment</i>	2	13.11	0.5	1.2	15.73	Cum	
		<i>Crest</i>	1	2.56	0.6096	1.2	1.87	Cum	
		<i>Floor</i>	1	7.00	2.5603	0.5	8.96	Cum	
		<i>Wing wall U/S & D/S</i>	4	2.00	0.50	1.2	4.80	Cum	
		TOTAL						31.36	Cum
2		New fall is proposed at this location.							
QUANTITIES OF REPAIRING WORK FOR BRIDGE AT (CH.1.480 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.							
		<i>Wing Wall</i>	2	4.38	0.1	0.92	0.81	Cum	
		TOTAL						0.81	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.							
		<i>Wing Wall U/S</i>	1	4.38		1.94	8.50	Sqm	
		<i>Wing Wall D/S</i>	1	4.38		1.94	8.50	Sqm	
		TOTAL						16.99	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.							
		<i>Wing Wall U/S</i>	1	4.38		0.2	0.88	Sqm	
		<i>Wing Wall D/S</i>	1	4.38		0.2	0.88	Sqm	
		TOTAL						1.75	Sqm
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.1.650 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				100.00	Sqm	
		TOTAL						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.							
		<i>Abutment</i>	1	3.50	0.49	1.2	2.05	Cum	
		<i>Wing Wall</i>	2	1.00	0.49	1.2	1.17	Cum	
		TOTAL						3.22	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.2.160 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	5.3.4	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.						
		<i>Abutment</i>	1	3.00	0.49	1.2	1.76	Cum
		<i>Wing Wall</i>	2	0.80	0.49	1.2	0.94	Cum
		TOTAL					2.69	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.						
		<i>Floor</i>	1	6.00	2.16	0.45	5.84	Cum
		TOTAL					5.84	Cum
4	WRD 5.3.22	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.						
		<i>0.25% skin Reinforcement for Transition Walls</i>	2.69	0.0025	0.007	7850	52.83	kg
		TOTAL Weight of Steel (in Kg)					52.83	kg
		TOTAL Weight of Steel (in Tonne)					0.05	MT
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.						
		<i>Abutment</i>	2	3.00		1.2	7.20	Sqm
			2		0.49	1.2	1.17	Sqm
		<i>Wing Wall</i>	4	0.80		1.2	3.84	Sqm
			4		0.49	1.2	2.34	Sqm
		TOTAL					14.55	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL AT (CH.2.680 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.						
		<i>Abutment</i>	2	7.90	0.5	1.2	9.48	Cum
		<i>Crest</i>	1	2.44	0.4572	0.8	0.89	Cum
		<i>Floor</i>	1	8.00	2.44	0.5	9.75	Cum
		<i>Wing wall U/S & D/S</i>	2	2.50	0.50	1.2	3.00	Cum
		TOTAL					23.13	Cum

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
2		New fall is proposed at this location.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL AT (CH.4.180 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.						
		<i>Parapet Wall</i>	2	2.44	0.1	0.92	0.45	Cum
		TOTAL					0.45	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.						
		<i>Parapet Wall U/S</i>	1	2.44		1.94	4.73	Sqm
		<i>Parapet Wall D/S</i>	1	2.44		1.94	4.73	Sqm
		TOTAL					9.46	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.						
		<i>Parapet Wall U/S</i>	1	2.44		0.2	0.49	Sqm
		<i>Parapet Wall D/S</i>	1	2.44		0.2	0.49	Sqm
		TOTAL					0.98	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.						
		<i>Abutment</i>	2	9.14	0.49	0.15	1.34	Cum
		<i>Wing wall</i>	4	3.00	0.49	0.15	0.88	Cum
		TOTAL					2.22	Cum
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.4.792 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.						
		<i>Abutment</i>	2	12.19	0.5	1.2	14.63	Cum
		<i>Crest</i>	1	1.65	0.4877	0.8	0.64	Cum
		<i>Floor</i>	1	5.00	1.65	0.5	4.11	Cum
		<i>Wing wall U/S & D/S</i>	2	3.00	0.50	1.2	3.60	Cum
		<i>Parapet</i>	1	3.00	0.50	0.8	1.20	Cum
		<i>Slab</i>	2	5.00	3.05	0.25	7.62	Cum
		TOTAL					31.81	Cum
2		New fall is proposed at this location.						

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH.5.200 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.						
		<i>Abutment</i>	2	7.62	0.5	1.2	9.14	Cum
		<i>Crest</i>	1	1.52	0.4572	0.8	0.56	Cum
		<i>Floor</i>	1	4.50	1.52	0.5	3.43	Cum
		<i>Wing wall U/S & D/S</i>	2	2.50	0.50	1.2	3.00	Cum
		TOTAL					16.13	Cum
2		New fall is proposed at this location.						
QUANTITIES OF REPAIRING WORK FOR BRIDGE AT (CH.5.330 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.						
		<i>Wing wall</i>	4	2.50		2	20.00	Sqm
		<i>Parapet</i>	2	3.00		0.92	5.52	Sqm
		TOTAL					25.52	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.						
		<i>Wing Wall U/S & D/S</i>	4	2.50		0.7315	7.32	Sqm
		<i>Parapet Wall U/S & D/S</i>	2	3.00		0.4877	2.93	Sqm
		TOTAL					10.24	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE/FALL AT (CH.5.690 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	5.4.6	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.						
		<i>Parapet Wall</i>	2	3.00	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.						
		<i>Parapet Wall U/S</i>	1	3.00		2.09	6.27	Sqm
		<i>Parapet Wall D/S</i>	1	3.00		2.09	6.27	Sqm
		TOTAL					12.54	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.							
		<i>Parapet Wall U/S</i>	1	3.00		0.5	1.50	<i>Sqm</i>	
		<i>Parapet Wall D/S</i>	1	3.00		0.5	1.50	<i>Sqm</i>	
		<i>Wing Wall</i>	2	2.50		0.5	2.50	<i>Sqm</i>	
		<i>Abutment</i>	2	4.50		0.5	4.50	<i>Sqm</i>	
		TOTAL						10.00	<i>Sqm</i>
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.							
		<i>Abutment top</i>	2	4.50	0.49	0.15	0.66	<i>Cum</i>	
		<i>Wing wall top</i>	2	2.50	0.49	0.15	0.37	<i>Cum</i>	
		TOTAL						1.02	<i>Cum</i>

**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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	Rs.	155373.89
8	Other incidental charge , 3 % = of C	Rs.	4661.22
	<i>Total C+8 = D</i>	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, scaffolding and its removal wherever 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				

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)	
5	WRD 5.3.22	Providing M.S. reinforcements 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.									
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 foundation 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				
		<i>Total</i>					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 &						
	<i>Toe Wall Base in Canal Portion</i>	1	1.5	0.75	0.15	0.17	Cum
	<i>Coping on Stem of Toe Wall</i>	1	1.50	0.45	0.075	0.05	Cum
	<i>Gate Structure (Section A-B)</i>	1	1.80	0.75	0.15	0.20	Cum
	<i>Coping (Section A-B)</i>	1	1.5	0.45	0.075	0.05	Cum
	<i>Water Course (Section C-D)</i>	1	15.00	1.50	0.15	3.38	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.075	0.45	Cum
	<i>Coping above Walls(Section C-D)</i>	2	15	0.40	0.075	0.90	Cum
	<i>Below transition walls</i>	1	1.5	1.2	0.15	0.27	Cum
		1	1.5	0.75	0.15	0.17	Cum
	<i>Gate Structure (Section A-B)</i>	2	1.50	0.45	1.21	1.63	Cum
	<i>Toe Wall stem</i>	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, scaffolding and its removal wherever required including royalty etc. all complete job as per specification and direction of E/I.						
	<i>Transition Walls in U/S</i>	2	1.50	0.45	1.04	1.40	Cum
	<i>Water Course (Section C-D)</i>	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 .						
	<i>150 mm Dia R.C.C. Pipe</i>	1			7.5	7.5	RM
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	<i>Spindle 25 mm dia</i>	1	0.000491	7850.00	1.29	4.97	Kg
		1	0.000491	7850.00	0.24	0.92	Kg
	<i>300 X300 MM MS GATE</i>	1		60.00		60.00	Kg
	<i>I.M.C. Grove (100 x 50) 9.56 kg/m</i>	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 .						
	<i>Toe Wall Base in Canal Portion</i>	1	1.50	0.75	0.10	0.11	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.10	0.60	Cum
	<i>Below transition walls</i>	1	1.50	1.19	0.10	0.18	Cum
	TOTAL					0.89	Cum
6	Providing M.S. reinforcements 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.						
	<i>RCC M-15 (Providing Reinforcement @ 0.24%)</i>	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.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 M³

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 M³
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, unloading, 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	

Sl. No.	References 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.	References 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.	References 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.	References 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 M³

Sl. No.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	(C)	TMT grade Fe-500 12 mm					
	(A)	Providing MS reinforcement plain (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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 (Including 5% wastage)	1.050	MT	50500	₹ 53,025.00	
	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.	References 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, propping 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.	References 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, propping 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.	References 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 M³
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.	References 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 M³
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 M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						3503.19	
					Say, Rs	₹ 1,237.00	Per M³
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 M³
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 M³

Sl. No.	References 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 2.5 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.	References 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
	5.6.2.4	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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.5	Labour Charges for Laying of 1200 mm NP3 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 .					
		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, scaffolding and its removal wherever 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.	References 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 M³

Sl. No.	Refrences SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
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 M³
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	

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 royalty 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	
						12365.52	
		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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 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, unloading, 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 2023 & PL JUNE 2024	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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	Providing M.S. reinforcements 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.		
			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 foundation 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, scaffolding and its removal wherever 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 CHHATISGAR H 2025	3.18 PWD NH SOR CHHATISGA RH 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 transporting 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

**Amba Division – Ratanpur Minor
(Total Cost – Rs. 1.50 Crores)**

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

S. No.	Items	Qty.	Unit	Rate	Seigniorage Charges	Amount (Rs.) including Seigniorage Charges	Reference for Rate	Page no.
1	Earthwork							
	<i>RATANPUR MINOR</i>	1	Job	5996410.36	0.00	₹ 59,96,410.36	AOC Earthwork Ratanpur Mr.	8
2	Falls							
	RATANPUR MINOR :							
	<i>1.524 m Fall at Ch. 0.900 Km</i>	1	No.	921223.78	7928.61	₹ 9,29,152.39	Fall (AOC) Ratanpur Mr.	12
	<i>0.610 m Fall at Ch. 2.325 Km</i>	1	No.	452511.30	3811.81	₹ 4,56,323.11		14
	<i>0.914 m Fall at Ch. 3.000 Km</i>	1	No.	334722.29	2679.53	₹ 3,37,401.82		15
3	Pipe Culvert (1.445 Km)	1	No.	499017.03	4358.96	₹ 5,03,375.99	Pipe Culvert AOC	26
4	Brick Section	1	No.	3802020.34	10102.58	₹ 38,12,122.92	Brick Sec	31
5	<i>Repair of Structures</i>							
	<i>RATANPUR MINOR</i>	6	No.	206560.22	1301.54	₹ 2,07,861.76	Abstract (Repair St.) Ratanpur mr.	32
	<i>Approach Road</i>	3	No.	521018.55	7578.59	₹ 15,85,791.43	Approach Road AOC	39
6	Outlets							
	<i>RATANPUR MINOR</i>	9	No.	127744.47	1100.17	₹ 11,59,601.77	Outlet-AOC	43
7	Kilometer Stone	5	No.	3853.40	0.00	₹ 19,267.00	Rates	75
TOTAL (In Rs.)						₹ 1,50,07,308.55		
TOTAL (In Lacs)						150.07		

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 (Tipper 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 of Cost = (18H _{sa} .L _s +18H _{ua} .L _u +18H _{ka} .L _k)+18 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Graveled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed		
							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 (Tipper 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			Cost of Carriage =[(25H _{sa} .L _s +25H _{ua} .L _u +25H _{ka} .L _k)+25 X _a	Per Unit Rate =(col 17 / Net Payable capacity)
							For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled Road	For Kacha Track & Track in River Bed / Nallah Bed & Choe Bed	For Surface Road	For Unsurfaced Gravelled 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		
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} x4 ^{3/4} x2 ^{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							
RATANPUR MINOR - KM 0.000 TO KM 3.650 KM							
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
		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	6.305	3.153	315.250
200	100	0.466	0.233	23.300	3.686	4.996	499.550
300	100	0.000	0.233	23.300	5.270	4.478	447.800
400	100	1.259	0.630	62.950	2.106	3.688	368.800
500	100	0.761	1.010	101.000	2.352	2.229	222.900
600	100	0.416	0.589	58.850	3.256	2.804	280.400
700	100	0.182	0.299	29.900	2.378	2.817	281.700
800	100	0.041	0.112	11.150	4.169	3.274	327.350
900	100	6.178	3.110	310.950	3.305	3.737	373.700
1000	100	0.441	3.310	330.950	2.735	3.020	302.000
1100	100	1.906	1.174	117.350	1.588	2.162	216.150
1200	100	0.285	1.096	109.550	3.624	2.606	260.600
1300	100	0.225	0.255	25.500	3.976	3.800	380.000
1400	100	0.155	0.190	19.000	4.551	4.264	426.350
1500	100	0.000	0.078	7.750	7.405	5.978	597.800
1600	100	0.000	0.000	0.000	10.876	9.141	914.050
1700	100	0.830	0.415	41.500	1.605	6.241	624.050
1800	100	0.801	0.816	81.550	1.144	1.375	137.450
1900	100	0.376	0.589	58.850	3.550	2.347	234.700
2000	100	0.179	0.278	27.750	6.788	5.169	516.900
2100	100	5.344	2.762	276.150	4.464	5.626	562.600
2200	100	0.109	2.727	272.650	2.327	3.396	339.550
2300	100	0.000	0.055	5.450	3.394	2.861	286.050
2400	100	0.516	0.258	25.800	1.908	2.651	265.100
2500	100	0.291	0.404	40.350	2.138	2.023	202.300
2600	100	0.120	0.206	20.550	2.165	2.152	215.150
2700	100	2.142	1.131	113.100	0.805	1.485	148.500
2800	100	0.474	1.308	130.800	4.124	2.465	246.450
2900	100	0.392	0.433	43.300	3.995	4.060	405.950
3000	100	1.194	0.793	79.300	3.360	3.678	367.750
3100	100	0.978	1.086	108.600	3.628	3.494	349.400
3200	100	0.769	0.874	87.350	3.970	3.799	379.900
3300	100	0.560	0.665	66.450	4.178	4.074	407.400
3400	100	0.350	0.455	45.500	4.272	4.225	422.500
3500	100	0.141	0.246	24.550	4.356	4.314	431.400
3600	100	0.000	0.071	7.050	4.402	4.379	437.900
3650	50	0.000	0.000	0.000	4.430	4.416	220.800
Total				2788.100			13416.200
TOTAL QUANTITY OF EARTHWORK IN EXCAVATION							2788.100
TOTAL QUANTITY OF EARTHWORK IN BACKFILLING							13416.200
NET QUANTITY OF EARTHWORK IN FILLING							10628.10

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND**RATANPUR MINOR****JUNGLE CLEARANCE QUANTITY**

Reaches (km)	Length (m)	Perimeter (m)	Quantity	
0.00 - 0.060	60	2.76	165.60	Sqm
0.060 - 0.850	790	2.44	1927.60	Sqm
0.850 - 1.675	825	2.18	1798.50	Sqm
1.675 - 2.175	500	1.97	985.00	Sqm
2.175 - 2.743	568	1.73	982.64	Sqm
2.743 - 3.700	957	1.30	1244.10	Sqm
TOTAL			7103.44	Sqm

LIP CUTTING QUANTITY

Reaches (km)	Length (m)	Perimeter (m)	Thickness (m)	Quantity	
0.00 - 0.060	60	2.760	0.15	24.84	Cum
0.060 - 0.850	790	2.440	0.15	289.14	Cum
0.850 - 1.675	825	2.180	0.15	269.78	Cum
1.675 - 2.175	500	1.970	0.15	147.75	Cum
2.175 - 2.743	568	1.730	0.15	147.40	Cum
2.743 - 3.700	957	1.300	0.15	186.62	Cum
TOTAL				1065.52	Cum

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

ABSTRACT OF QUANTITY OF EARTHWORK FOR RATANPUR MINOR

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
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.	7103.44	Sqm	11.80	83851.7756
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.				
		<i>100% of Total Cutting for ordinary soil</i>	2788.10	Cum	156.50	436337.65
3	5.1.22	<i>Extra for wet earth all complete as per specifications and direction of E/I.</i>	1115.24	Cum	17.22	19201.66045
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.	10628.10	Cum	165.12	1754868.94
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, unloading, 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)	3188.43	Cum	174.89	557624.52
B.	5.1.46.2	Lead Beyond 500 m but upto 1 km (25% of net filling)	2657.03	Cum	217.92	579018.89
C.	5.1.46.4	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	4782.65	Cum	319.14	1526333.33

Sl. No.	Reference Clause no.	Particular	Quantity	Unit	Rate (in Rs.)	Amount in Rs.
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 including 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.				
			1065.52	Cum	196.10	208947.69
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.	13416.20	Cum	61.88	830225.91
TOTAL COST OF EARTHWORK (in Rs.)						5996410.36
TOTAL COST OF EARTHWORK (in Rs. Lakhs)						59.964

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES FOR EARTH WORK FOR RATANPUR 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	7103.44	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	2788.100	Cum
3	Extra for wet earth all complete as per specifications and direction of E/I.			
	(40% of Total Cutting)	1	1115.24	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	10628.100	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	3188.43	Cum
b.	Lead Beyond 500 m but upto 1 km (25% of net filling)	1	2657.03	Cum

S.No.	Items	No.	Quantity	Unit
c.	Lead Beyond 1.5 km but upto 2 km (45% of net filling)	1	4782.65	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 including 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	1065.52	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	13416.20	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
ABSTRACT OF QUANTITIES OF SHARDA TYPE FALL FOR RATANPUR MINOR								
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. 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.	98.117	Cum	195.20	19152.47			
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.	10.87	Cum	6381.70	69361.21	3.52	4.89	9.78
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.	62.28	Cum	6914.20	430618.95	25.69	26.78	53.56
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.	0.79	Cum	8151.40	6442.70	0.45	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.	1.47	MT	73574.90	107912.51			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	203.28	Sqm	578.60	117619.79			
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			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	11.49	Sqm	63.20	726.02			
13	Providing Drainage Spouts complete as per drawings & technical 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	32.75	Cum	149.30	4889.77			

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)	31.980	Cum	1075.00	34378.23			
	Coarse Aggregates (100 Km lead)	63.967	Cum	1398.00	89426.44			
	Cement (30 km lead)	29.660	MT	742.00	22007.93			
	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)	1.47	MT	742.00	1088.29			
	TOTAL (In Rs.)				921223.78			
	TOTAL (In Rs.)				921223.78			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	31.98	Cum	584.64	18696.64	1869.66		
	Coarse Aggregate	63.97	Cum	944.26	60401.87	6040.19		
	Boulders	0.27	Cum	694.61	187.54	18.75		
	<i>Total</i>					7928.61		
	For 1 nos. fall, Total Seigniorage charges					7928.61		

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. 2.325 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.	32.393	Cum	195.20	6323.12			
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.	7.47	Cum	6381.70	47649.45	2.42	3.36	6.72
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.	27.45	Cum	6914.20	189788.46	11.32	11.80	23.61
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.	0.52	Cum	8151.40	4251.24	0.30	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.	0.65	MT	73574.90	47560.72			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	116.36	Sqm	578.60	67328.54			
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.	5.35	Sqm	680.10	3635.81			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.16	Cum	694.61	109.40			
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.	0.16	Cum	1237.00	194.83			
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.	0.16	Cum	1377.70	216.99			
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.	0.16	Cum	516.50	81.35			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	8.44	Sqm	63.20	533.14			
13	Providing Drainage Spouts complete as per drawings & technical 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	13.89	Cum	149.30	2074.26			

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)	15.366	Cum	1075.00	16518.95			
	Coarse Aggregates (100 Km lead)	30.738	Cum	1398.00	42971.93			
	Cement (30 km lead)	14.038	MT	742.00	10415.92			
	Boulder (60 Km lead)	0.16	Cum	1159.00	182.54			
	Brick (15 km lead)	320.00	No.	3.18	1017.60			
	Steel (30 Km lead)	0.65	MT	742.00	479.65			
	TOTAL (In Rs.)				452511.30			
	TOTAL (In Rs.)				452511.30			
	Seigniorage @10%			Rate	Amount in Rs.	10%		
	Coarse Sand	15.37	Cum	584.64	8983.85	898.39		
	Coarse Aggregate	30.74	Cum	944.26	29024.80	2902.48		
	Boulders	0.16	Cum	694.61	109.40	10.94		
	<i>Total</i>						3811.81	
	For 1 nos. fall, Total Seigniorage charges						3811.81	

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. 3.000 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.	41.682	Cum	195.20	8136.31			
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.	5.10	Cum	6381.70	32535.49	1.65	2.29	4.59
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.	19.36	Cum	6914.20	133853.16	7.99	8.32	16.65
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.	0.39	Cum	8151.40	3158.38	0.22	0.15	0.31
5	Providing M.S. reinforcements 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.	0.46	MT	73574.90	33543.42			
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.	96.99	Sqm	578.60	56118.04			
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.	4.05	Sqm	680.10	2754.41			
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	0.23	Cum	694.61	156.29			
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.	0.23	Cum	1237.00	278.33			
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.	0.23	Cum	1377.70	309.98			
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.	0.23	Cum	516.50	116.21			
12	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.	6.28	Sqm	63.20	396.85			
13	Providing Drainage Spouts complete as per drawings & technical 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	12.10	Cum	149.30	1807.02			
15	Carriage of materials							
	Coarse Sand (60 Km lead)	10.770	Cum	1075.00	11577.50			
	Coarse Aggregates (100 Km lead)	21.543	Cum	1398.00	30117.68			
	Cement (30 km lead)	9.857	MT	742.00	7314.03			
	Boulder (60 Km lead)	0.23	Cum	1159.00	260.78			
	Brick (15 km lead)	243.00	No.	3.18	772.74			
	Steel (30 Km lead)	0.46	MT	742.00	338.28			
TOTAL (In Rs.)					334722.29			
TOTAL (In Rs.)					334722.29			
Seigniorage @10%					Rate	Amount in Rs.	10%	
	Coarse Sand	10.77	Cum	584.64	6296.44	629.64		
	Coarse Aggregate	21.54	Cum	944.26	20342.58	2034.26		
	Boulders	0.23	Cum	694.61	156.29	15.63		
<i>Total</i>						2679.53		
For 1 nos. fall, Total Seigniorage charges						2679.53		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF SHARDA TYPE FALL FOR RATANPUR MINOR

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 1.524 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.46	2.08	2.411	14.697	Cum
	<i>Section 2-2</i>	2	4.00	1.13	2.411	21.873	Cum
	<i>Section 3-3</i>	2	2.70	1.01	2.211	12.107	Cum
	<i>Section 5-5</i>	2	2.42	2.23	2.411	26.015	Cum
	<i>Section 6-6</i>	2	1.28	1.01	2.211	5.721	Cum
	<i>U/S Key Floor</i>	1	0.625	1.200	0.850	0.638	Cum
	<i>U/S Floor</i>	1	3.500	1.200	0.450	1.890	Cum
	<i>D/S Floor</i>	1	4.000	1.200	0.850	4.080	Cum
		1	5.605	1.200	0.300	2.018	Cum
		1	3.000	1.200	0.650	2.340	Cum
	<i>D/S Key Floor</i>	1	0.800	1.200	1.550	1.488	Cum
	<i>Toe Wall D/S Portion</i>	1	5.780	0.750	0.900	3.902	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	Cum
						98.12	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.						
	<i>PCC Below Floor</i>	1	0.542	1.20	0.15	0.10	Cum
		1	0.783	1.20	0.15	0.14	Cum
		1	6.842	1.20	0.15	1.23	Cum
		1	0.566	1.20	0.15	0.10	Cum
		1	1.246	1.20	0.15	0.22	Cum
		1	1.565	1.20	0.15	0.28	Cum
		1	0.542	1.20	0.15	0.10	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.46	2.08	0.15	0.91	Cum
	<i>Section 2-2</i>	2	4.00	1.13	0.15	1.36	Cum
	<i>Section 3-3</i>	2	2.70	1.01	0.15	0.82	Cum
	<i>Section 5-5</i>	2	2.42	2.23	0.15	1.62	Cum
	<i>Section 6-6</i>	2	1.28	1.01	0.15	0.39	Cum
	<i>Toe Wall D/S Portion</i>	1	5.78	0.75	0.30	1.30	Cum
	<i>Toe Wall D/S Portion</i>	1	5.48	0.45	0.60	1.48	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					10.87	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.24	0.45	0.45	0.50	Cum
		2	1.24	1.12	2.22	6.15	Cum
		2	1.24	1.93	0.80	3.83	Cum
	<i>Section 2-2</i>	2	4.00	0.45	0.45	1.62	Cum
		2	4.00	0.64	0.64	3.29	Cum
		2	4.00	0.98	0.80	6.30	Cum
	<i>Section 3-3</i>	2	2.42	0.45	0.45	0.98	Cum
		2	2.42	0.58	0.44	1.24	Cum
		2	2.42	0.86	0.50	2.09	Cum
	<i>Section 5-5</i>	2	2.37	0.45	0.45	0.96	Cum
		2	2.37	1.12	2.22	11.78	Cum
		2	2.37	1.93	0.80	7.34	Cum
	<i>Section 6-6</i>	2	1.71	0.45	0.45	0.69	Cum
		2	1.71	0.58	0.44	0.87	Cum
		2	1.71	0.86	0.50	1.48	Cum
	<i>Floor</i>	1	0.63	1.20	0.70	0.53	Cum
		1	7.50	1.20	0.50	4.50	Cum
		1	5.60	1.20	0.30	2.02	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		1	0.25	1.20	0.40	0.12	Cum
		1	0.20	1.20	0.50	0.12	Cum
		1	2.80	1.20	0.60	2.02	Cum
		1	0.80	1.20	1.40	1.34	Cum
	Crest	1	1.19	1.20	1.77	2.53	Cum
	TOTAL					62.28	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	0.90	1.20	0.20	0.22	Cum
	Coping over Abutment Top						
	On Abutment Top (Left Side)	1	12.76	0.45	0.05	0.29	Cum
	On Abutment Top (Right Side)	1	12.76	0.45	0.05	0.29	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	62.28	0.30%	0.19	7850	1466.70	Kg
	Total Weight in Metric Tonne					1.47	MT
6	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	Section 1-1	4	1.24		0.45	2.23	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.24		2.22	11.01	Sqm
		4		1.12	2.22	9.94	Sqm
		4	1.24		0.80	3.96	Sqm
		4		1.93	0.80	6.19	Sqm
	Section 2-2	4	4.00		0.45	7.20	Sqm
		4		0.45	0.45	0.81	Sqm
		4	4.00		0.64	10.24	Sqm
		4		0.64	0.64	1.64	Sqm
		4	4.00		0.80	12.80	Sqm
		4		0.98	0.80	3.15	Sqm
	Section 3-3	4	2.42		0.45	4.35	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.42		0.44	4.26	Sqm
		4		0.58	0.44	1.02	Sqm
		4	2.42		0.50	4.84	Sqm
		4		0.86	0.50	1.73	Sqm
	Section 5-5	4	2.37		0.45	4.27	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.37		2.22	21.09	Sqm
		4		1.12	2.22	9.94	Sqm
		4	2.37		0.80	7.59	Sqm
		4		1.93	0.80	6.19	Sqm
	Section 6-6	4	1.71		0.45	3.07	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.71		0.44	3.01	Sqm
		4		0.58	0.44	1.02	Sqm
		4	1.71		0.50	3.42	Sqm
		4		0.86	0.50	1.73	Sqm
	Floor	2	0.63		0.70	0.88	Sqm
		2		1.20	0.70	1.68	Sqm
		2	7.50		0.50	7.50	Sqm
		2		1.20	0.50	1.20	Sqm
		2	5.60		0.30	3.36	Sqm
		2		1.20	0.30	0.72	Sqm
		2	0.25		0.40	0.20	Sqm
		2		1.20	0.40	0.96	Sqm
		2	0.20		0.50	0.20	Sqm
		2		1.20	0.50	1.20	Sqm
		2	2.80		0.60	3.36	Sqm
		2		1.20	0.60	1.44	Sqm
		2	0.80		1.40	2.24	Sqm
		2		1.20	1.40	3.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Crest</i>	2	1.194		1.765	4.21	Sqm
		2		1.2	1.765	4.24	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.78		0.30	3.47	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	5.48		0.60	6.58	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					203.28	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.94		5.83	Sqm
	TOTAL					5.83	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.60	0.30	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	0.60	0.15	0.27	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	12.76	0.45		5.74	Sqm
	<i>On Abutment Top (Right Side)</i>	1	12.76	0.45		5.74	Sqm
	TOTAL					11.49	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		11.40		11.40	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.46	1.20		3.516	Cum
	<i>Section 2-2</i>	2	4.00	0.78		6.216	Cum
	<i>Section 3-3</i>	2	2.70	0.56		3.035	Cum
	<i>Section 5-5</i>	2	2.42	1.20		5.806	Cum
	<i>Section 6-6</i>	2	1.28	0.56		1.434	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	1.20	0.09		0.216	Cum
		2	0.60	0.94		1.128	Cum
	TOTAL					32.75	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.610 METER AT CH. 2.325 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.28	1.45	1.047	6.913	Cum
	<i>Section 2-2</i>	2	1.50	1.08	1.047	3.392	Cum
	<i>Section 3-3</i>	2	2.00	0.96	0.847	3.252	Cum
	<i>Section 5-5</i>	2	2.14	1.60	1.047	7.167	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.847	1.407	Cum
	<i>U/S Key Floor</i>	1	0.625	0.950	0.850	0.505	Cum
	<i>U/S Floor</i>	1	2.000	0.950	0.650	1.235	Cum
	<i>D/S Floor</i>	1	2.500	0.950	0.850	2.019	Cum
		1	2.500	0.950	0.650	1.544	Cum
	<i>D/S Key Floor</i>	1	0.625	0.950	0.850	0.505	Cum
	<i>Toe Wall D/S Portion</i>	1	4.600	0.750	0.900	3.105	Cum
	<i>Boulder Pitching (D/S Portion)</i>	2	1.500	0.600	0.750	1.350	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.						
	<i>PCC Below Floor</i>	1	0.542	0.95	0.15	0.08	Cum
		1	0.783	0.95	0.15	0.11	Cum
		1	3.876	0.95	0.15	0.55	Cum
		1	0.283	0.95	0.15	0.04	Cum
		1	1.138	0.95	0.15	0.16	Cum
		1	0.782	0.95	0.15	0.11	Cum
		1	0.542	0.95	0.15	0.08	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	2.28	1.45	0.15	0.99	Cum
	<i>Section 2-2</i>	2	1.50	1.08	0.15	0.49	Cum
	<i>Section 3-3</i>	2	2.00	0.96	0.15	0.58	Cum
	<i>Section 5-5</i>	2	2.14	1.60	0.15	1.03	Cum
	<i>Section 6-6</i>	2	0.87	0.96	0.15	0.25	Cum
	<i>Toe Wall D/S Portion</i>	1	4.60	0.75	0.30	1.04	Cum
	<i>Toe Wall D/S Portion</i>	1	4.30	0.45	0.60	1.16	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.60	0.15	0.27	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					7.47	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.05	0.45	0.45	0.83	Cum
		2	2.05	0.80	1.16	3.79	Cum
		2	2.05	1.30	0.50	2.65	Cum
	<i>Section 2-2</i>	2	1.50	0.45	0.45	0.61	Cum
		2	1.50	0.62	0.55	1.01	Cum
		2	1.50	0.93	0.50	1.40	Cum
	<i>Section 3-3</i>	2	1.75	0.45	0.45	0.71	Cum
		2	1.75	0.56	0.35	0.68	Cum
		2	1.75	0.81	0.50	1.41	Cum
	<i>Section 5-5</i>	2	2.10	0.45	0.45	0.85	Cum
		2	2.10	0.80	1.16	3.89	Cum
		2	2.10	1.30	0.50	2.72	Cum
	<i>Section 6-6</i>	2	1.27	0.45	0.45	0.51	Cum
		2	1.27	0.56	0.35	0.49	Cum
		2	1.27	0.81	0.50	1.03	Cum
	<i>Floor</i>	1	0.63	0.95	0.70	0.42	Cum
		1	4.50	0.95	0.50	2.14	Cum
		1	0.31	0.95	0.20	0.06	Cum
		1	0.20	0.95	0.40	0.08	Cum
		1	2.30	0.95	0.50	1.09	Cum
		1	0.63	0.95	0.70	0.42	Cum
	<i>Crest</i>	1	0.83	0.95	0.85	0.67	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					27.45	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.						
	<i>Over Crest</i>	1	0.70	0.95	0.15	0.10	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	9.37	0.45	0.05	0.21	Cum
	<i>On Abutment Top (Right Side)</i>	1	9.37	0.45	0.05	0.21	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.						
	Taking Skin reinforcement @0.3% of M-20	27.45	0.30%	0.08	7850	646.43	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						
	<i>Section 1-1</i>	4	2.05		0.45	3.68	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.05		1.16	9.50	Sqm
		4		0.80	1.16	3.70	Sqm
		4	2.05		0.50	4.09	Sqm
		4		1.30	0.50	2.59	Sqm
	<i>Section 2-2</i>	4	1.50		0.45	2.70	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.50		0.55	3.30	Sqm
		4		0.62	0.55	1.35	Sqm
		4	1.50		0.50	3.00	Sqm
		4		0.93	0.50	1.86	Sqm
	<i>Section 3-3</i>	4	1.75		0.45	3.14	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.75		0.35	2.44	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.75		0.50	3.49	Sqm
		4		0.81	0.50	1.62	Sqm
	<i>Section 5-5</i>	4	2.10		0.45	3.78	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.10		1.16	9.75	Sqm
		4		0.80	1.16	3.70	Sqm
		4	2.10		0.50	4.20	Sqm
		4		1.30	0.50	2.59	Sqm
	<i>Section 6-6</i>	4	1.27		0.45	2.29	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.27		0.35	1.78	Sqm
		4		0.56	0.35	0.78	Sqm
		4	1.27		0.50	2.54	Sqm
		4		0.81	0.50	1.62	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.95	0.70	1.33	Sqm
		2	4.50		0.50	4.50	Sqm
		2		0.95	0.50	0.95	Sqm
		2	0.31		0.20	0.12	Sqm
		2		0.95	0.20	0.38	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.95	0.40	0.76	Sqm
		2	2.30		0.50	2.30	Sqm
		2		0.95	0.50	0.95	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.95	0.70	1.33	Sqm
	<i>Crest</i>	2	0.8325		0.845	1.41	Sqm
		2		0.95	0.845	1.61	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.60		0.30	2.76	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	4.30		0.60	5.16	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		0.60	0.15	0.36	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					116.36	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.						
	<i>In D/S Portion On Slopes</i>	2	1.50	1.78		5.35	Sqm
	TOTAL					5.35	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.35	0.30	0.16	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	0.35	0.15	0.16	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	9.37	0.45		4.22	Sqm
	<i>On Abutment Top (Right Side)</i>	1	9.37	0.45		4.22	Sqm
	TOTAL					8.44	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.54		1.54	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	2.28	0.74		3.383	Cum
	<i>Section 2-2</i>	2	1.50	0.65		1.950	Cum
	<i>Section 3-3</i>	2	2.00	0.47		1.892	Cum
	<i>Section 5-5</i>	2	2.14	0.74		3.178	Cum
	<i>Section 6-6</i>	2	0.87	0.47		0.818	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.95	0.09		0.171	Cum
		2	0.60	0.80		0.960	Cum
	TOTAL					13.89	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
SHARDA TYPE FALL OF HEIGHT 0.914 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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.60	2.235	8.857	Cum
	<i>Section 2-2</i>	2	2.50	1.05	2.235	11.734	Cum
	<i>Section 3-3</i>	2	1.27	0.93	2.035	4.807	Cum
	<i>Section 5-5</i>	2	0.59	1.75	2.235	4.630	Cum
	<i>Section 6-6</i>	2	1.08	0.93	2.035	4.088	Cum
	<i>U/S Key Floor</i>	1	0.625	0.700	0.850	0.372	Cum
	<i>U/S Floor</i>	1	2.500	0.700	0.650	1.138	Cum
	<i>D/S Floor</i>	1	2.500	0.700	0.850	1.488	Cum
		1	2.500	0.700	0.650	1.138	Cum
	<i>D/S Key Floor</i>	1	0.625	0.700	0.850	0.372	Cum
	<i>Toe Wall D/S Portion</i>	1	2.200	0.750	0.900	1.485	Cum
	<i>Boulder Pitching (D/S Portion)</i>	1	1.500	1.400	0.750	1.575	Cum
						41.68	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.						
	<i>PCC Below Floor</i>	1	0.542	0.70	0.15	0.06	Cum
		1	0.783	0.70	0.15	0.08	Cum
		1	4.418	0.70	0.15	0.46	Cum
		1	0.283	0.70	0.15	0.03	Cum
		1	1.096	0.70	0.15	0.12	Cum
		1	0.783	0.70	0.15	0.08	Cum
		1	0.542	0.70	0.15	0.06	Cum
	<i>PCC Below Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.60	0.15	0.59	Cum
	<i>Section 2-2</i>	2	2.50	1.05	0.15	0.79	Cum
	<i>Section 3-3</i>	2	1.27	0.93	0.15	0.35	Cum
	<i>Section 5-5</i>	2	0.59	1.75	0.15	0.31	Cum
	<i>Section 6-6</i>	2	1.08	0.93	0.15	0.30	Cum
	<i>Toe Wall D/S Portion</i>	1	2.20	0.75	0.30	0.50	Cum
	<i>Toe Wall D/S Portion</i>	1	1.90	0.45	0.60	0.51	Cum
	<i>Toe Wall for resting Brick Edging</i>	1	1.50	1.40	0.15	0.32	Cum
	<i>Toe Wall for resting Brick Edging</i>	2	1.50	0.30	0.60	0.54	Cum
	TOTAL					5.10	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.						
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.02	0.45	0.45	0.41	Cum
		2	1.02	0.87	1.41	2.51	Cum
		2	1.02	1.45	0.50	1.47	Cum
	<i>Section 2-2</i>	2	2.50	0.45	0.45	1.01	Cum
		2	2.50	0.60	0.50	1.50	Cum
		2	2.50	0.90	0.50	2.25	Cum
	<i>Section 3-3</i>	2	1.96	0.45	0.45	0.79	Cum
		2	1.96	0.54	0.30	0.64	Cum
		2	1.96	0.78	0.50	1.53	Cum
	<i>Section 5-5</i>	2	0.55	0.45	0.45	0.22	Cum
		2	0.55	0.87	1.41	1.36	Cum
		2	0.55	1.45	0.50	0.79	Cum
	<i>Section 6-6</i>	2	0.54	0.45	0.45	0.22	Cum
		2	0.54	0.54	0.30	0.17	Cum
		2	0.54	0.78	0.50	0.42	Cum
	<i>Floor</i>	1	0.63	0.70	0.70	0.31	Cum
		1	5.00	0.70	0.50	1.75	Cum
		1	0.35	0.70	0.20	0.05	Cum
		1	0.20	0.70	0.40	0.06	Cum
		1	2.30	0.70	0.50	0.81	Cum
		1	0.63	0.70	0.70	0.31	Cum
	<i>Crest</i>	1	0.98	0.70	1.15	0.79	Cum

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	TOTAL					19.36	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.						
	<i>Over Crest</i>	1	0.70	0.70	0.15	0.07	Cum
	<i>Coping over Abutment Top</i>						
	<i>On Abutment Top (Left Side)</i>	1	6.98	0.45	0.05	0.16	Cum
	<i>On Abutment Top (Right Side)</i>	1	6.98	0.45	0.05	0.16	Cum
	TOTAL					0.39	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.						
		Quantity	Percent		Density		
	Taking Skin reinforcement @0.3% of M-20	19.36	0.30%	0.06	7850	455.91	Kg
	Total Weight in Metric Tonne					0.46	MT
6	Providing shuttering including strutting, proping etc. and its removal after use in foundation as per specification and direction of E/I.						
	Abutment						
	<i>Section 1-1</i>	4	1.02		0.45	1.83	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.02		1.41	5.74	Sqm
		4		0.87	1.41	4.94	Sqm
		4	1.02		0.50	2.03	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 2-2</i>	4	2.50		0.45	4.50	Sqm
		4		0.45	0.45	0.81	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.60	0.50	1.20	Sqm
		4	2.50		0.50	5.00	Sqm
		4		0.90	0.50	1.80	Sqm
	<i>Section 3-3</i>	4	1.96		0.45	3.53	Sqm
		4		0.45	0.45	0.81	Sqm
		4	1.96		0.30	2.35	Sqm
		4		0.54	0.30	0.65	Sqm
		4	1.96		0.50	3.92	Sqm
		4		0.78	0.50	1.56	Sqm
	<i>Section 5-5</i>	4	0.55		0.45	0.99	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.55		1.41	3.11	Sqm
		4		0.87	1.41	4.94	Sqm
		4	0.55		0.50	1.10	Sqm
		4		1.45	0.50	2.90	Sqm
	<i>Section 6-6</i>	4	0.54		0.45	0.97	Sqm
		4		0.45	0.45	0.81	Sqm
		4	0.54		0.30	0.65	Sqm
		4		0.54	0.30	0.65	Sqm
		4	0.54		0.50	1.08	Sqm
		4		0.78	0.50	1.56	Sqm
	<i>Floor</i>	2	0.63		0.70	0.88	Sqm
		2		0.70	0.70	0.98	Sqm
		2	5.00		0.50	5.00	Sqm
		2		0.70	0.50	0.70	Sqm
		2	0.35		0.20	0.14	Sqm
		2		0.70	0.20	0.28	Sqm
		2	0.20		0.40	0.16	Sqm
		2		0.70	0.40	0.56	Sqm
		2	2.30		0.50	2.30	Sqm
		2		0.70	0.50	0.70	Sqm
		2	0.63		0.70	0.88	Sqm
		2		0.70	0.70	0.98	Sqm
	<i>Crest</i>	2	0.9825		1.146	2.25	Sqm
		2		0.7	1.146	1.60	Sqm
	<i>Toe Wall D/S Portion</i>	2	2.20		0.30	1.32	Sqm
		2		0.75	0.30	0.45	Sqm
	<i>Toe Wall D/S Portion</i>	2	1.90		0.60	2.28	Sqm
		2		0.45	0.60	0.54	Sqm
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.15	0.90	Sqm
		4		1.40	0.15	0.84	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
	<i>Toe Wall for resting Brick Edging</i>	4	1.50		0.60	3.60	Sqm
		4		0.30	0.60	0.72	Sqm
	TOTAL					96.99	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.						
	<i>In D/S Portion On Slopes</i>	1	1.50	2.70		4.05	Sqm
	TOTAL					4.05	Sqm
8	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.						
	<i>In D/S Portion</i>	1	1.50	0.50	0.30	0.23	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	0.50	0.15	0.23	Cum
10	Providing 1.5 mm thick cement punning including curing complete job as per specification & direction of E/I.						
	<i>On Abutment Top (Left Side)</i>	1	6.98	0.45		3.14	Sqm
	<i>On Abutment Top (Right Side)</i>	1	6.98	0.45		3.14	Sqm
	TOTAL					6.28	Sqm
11	Providing Drainage Spouts complete as per drawings & technical specifications & as per clause 2705 of specifications.						
		1	2			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						
	<i>Under U/S floor</i>	1		1.54		1.54	Cum
	<i>Abutment</i>						
	<i>Section 1-1</i>	2	1.24	1.30		3.224	Cum
	<i>Section 2-2</i>	2	2.50	0.62		3.120	Cum
	<i>Section 3-3</i>	2	1.27	0.43		1.097	Cum
	<i>Section 5-5</i>	2	0.59	1.30		1.541	Cum
	<i>Section 6-6</i>	2	1.08	0.43		0.933	Cum
	<i>D/S protection</i>	2					
	<i>Toe wall</i>	2	0.70	0.09		0.126	Cum
		2	0.60	0.44		0.522	Cum
	TOTAL					12.10	Cum

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

ABSTRACT OF COST OF PIPE CULVERT OF 1.445 KM OF RATANPUR MR.

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	5.1.3	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	5.1.8	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.	53.134	Cum	156.50	8315.48			
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.	16.28	Cum	6381.70	103914.24	5.28	7.33	14.65
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.	21.883	Cum	6914.20	151300.06	9.03	9.41	18.82
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.	120.567	Sqm	578.60	69760.10			
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 per specification & direction of E/I.	0.43	MT	73574.90	31596.32			
7	WRD M-002	Supply of quarried stone 150-200 mm size for hand broken at Source Quarry.	2.88	Cum	694.61	2000.48			
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.	2.88	Cum	1237.00	3562.56			
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	5.7.16	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.	7.72	Sqm	680.10	5253.09			

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)
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 royalty as per specification and direction of E/I.	0.77	Cum	5021.30	3886.49	0.09	0.25	
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.	4.386	Sqm	340.20	1492.12	0.066	0.088	
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.	1.806	Sqm	63.20	114.14	0.003		
16	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	29.66	Cum	149.30	4428.12			
17		Carriage of materials							
		Coarse Sand (60 Km lead)	17.072	Cum	1075.00	18352.72			
		Coarse Aggregates (100 Km lead)	33.474	Cum	1398.00	46796.38			
		Cement (30 km lead)	14.460	MT	742.00	10729.28			
		Steel (30 km lead)	0.429	MT	742.00	318.65			
		Boulder (60 km lead)	2.880	Cum	1159.00	3337.92			
		Hume Pipe (30 Km Lead)	7.500	Rm	919.00	6892.50			
TOTAL (In Rs.)						499017.03			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	17.07	Cum	584.64	9981.15	998.12		
		Coarse Aggregate	33.47	Cum	944.26	31607.97	3160.80		
		Boulder (60 km lead)	2.88	Cum	694.61	2000.48	200.05		
Total							4358.96		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND

DETAILS OF QUANTITIES OF PIPE CULVERT AT KM 1.445 OF RATANPUR 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.						
	<i>U/S Toe Wall</i>	1	1.13	0.85	1.20	1.15	Cum
	<i>D/S Toe Wall</i>	1	1.13	0.85	1.20	1.15	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.90	1.62	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.47	Cum
		2	2.24	1.88	1.20	10.07	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.24	1.07	2.14	10.24	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	1.20	1.47	Cum
		2	2.24	1.88	1.20	10.06	Cum
	<i>Extra for Slope (.5:1)</i>	2	2.24	1.07	2.14	10.24	Cum
	<i>C.C Floor Apron in (U/S Portion)</i>	1	1.55	0.83	0.45	0.58	Cum
	<i>C.C Floor Apron in (D/S Portion)</i>	1	1.55	0.83	0.45	0.58	Cum
	<i>Launching Apron in U/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	<i>Launching Apron in D/S Portion</i>	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					53.13	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.						
	<i>PCC Below U/S Curtain Wall</i>	1	1.13	0.85	0.30	0.29	Cum
	<i>U/S Curtain Wall Stem</i>	1	1.13	0.45	0.90	0.46	Cum
	<i>PCC Below D/S Curtain Wall</i>	1	1.13	0.85	0.30	0.29	Cum
	<i>D/S Curtain Wall Stem</i>	1	1.13	0.45	0.90	0.46	Cum
	<i>U/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>D/S Toe Wall Base (For Resting Brick Pitching)</i>	2	2.00	0.45	0.30	0.54	Cum
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	2	2.00	0.30	0.60	0.72	Cum
	<i>Floor Apron (U/S Portion)</i>	1	1.55	0.83	0.45	0.58	Cum
	<i>Floor Apron (D/S Portion)</i>	1	1.55	0.83	0.45	0.58	Cum
	<i>U/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.37	Cum
		2	2.24	1.88	0.30	2.52	Cum
	<i>D/S Transitions Floor (Left & Right)</i>	2	0.61	1.00	0.30	0.37	Cum
		2	2.24	1.88	0.30	2.52	Cum
	<i>PCC Below Hume Pipe</i>	1	7.50	1.29	0.41	3.92	Cum
	<i>PCC Below Hume Pipe in (Curve Portion)</i>	2	7.50	0.49	0.20	1.43	Cum
	TOTAL					16.28	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)						
	<i>Section D-D</i>	2	0.61	0.60	0.90	0.66	Cum
		2	0.61	0.45	0.44	0.24	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section A-A & Section C-C</i>	2	2.24	1.48	0.90	5.94	Cum
		2	2.24	1.21	0.44	2.38	Cum
		2	2.24	0.76	0.50	1.70	Cum
	D/S Transition Walls (Left & Right)						
	<i>Section H-H</i>	2	0.61	0.60	0.90	0.66	Cum
		2	0.61	0.45	0.44	0.24	Cum
		2	0.61	0.30	0.50	0.18	Cum
	<i>Average of Section E-E & Section G-G</i>	2	2.24	1.48	0.90	5.94	Cum
		2	2.24	1.21	0.44	2.38	Cum
		2	2.24	0.76	0.50	1.70	Cum
	<i>Collar Joint</i>	2	1.19	0.30	1.20	0.86	Cum
	<i>Deduct Hume Pipe Area</i>	1		1.19		-1.19	Cum
	TOTAL					21.88	Cum
5	Providing shuttering including strutting, propping etc. and its removal after use in foundation as per specification and direction of E/I.						
	<i>U/S Curtain Wall Stem</i>	2	1.13		0.90	2.04	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>D/S Curtain Wall Stem</i>	2	1.13		0.90	2.04	Sqm
		2		0.45	0.90	0.81	Sqm
	<i>U/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>D/S Toe Wall Stem (For Resting Brick Pitching)</i>	4	2.00		0.90	7.20	Sqm
		4		0.30	0.90	1.08	Sqm
	<i>Floor Apron (U/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.83	0.45	0.75	Sqm
	<i>Floor Apron (D/S Portion)</i>	2	1.55		0.45	1.40	Sqm
		2		0.83	0.45	0.75	Sqm
	<i>U/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.24		0.30	2.68	Sqm
		4		1.88	0.30	2.25	Sqm
	<i>D/S Transitions Floor (Left & Right)</i>	4	0.61		0.30	0.73	Sqm
		4		1.00	0.30	1.20	Sqm
		4	2.24		0.30	2.68	Sqm
		4		1.88	0.30	2.25	Sqm
	U/S Transition Walls (Left & Right)						
	<i>Section D-D</i>	4	0.61		0.90	2.20	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.44	1.08	Sqm
		4		0.45	0.44	0.79	Sqm
		4	0.61		0.50	1.22	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
		4		0.30	0.50	0.60	Sqm
	Average of Section A-A & Section C-C	4	2.24		0.90	8.05	Sqm
		4		1.48	0.90	5.31	Sqm
		4	2.24		0.44	3.94	Sqm
		4		1.21	0.44	2.13	Sqm
		4	2.24		0.50	4.47	Sqm
		4		0.76	0.50	1.52	Sqm
	D/S Transition Walls (Left & Right)						
	Section H-H	4	0.61		0.90	2.20	Sqm
		4		0.60	0.90	2.16	Sqm
		4	0.61		0.44	1.08	Sqm
		4		0.45	0.44	0.79	Sqm
		4	0.61		0.50	1.22	Sqm
		4		0.30	0.50	0.60	Sqm
	Average of Section E-E & Section G-G	4	2.24		0.90	8.05	Sqm
		4		1.48	0.90	5.31	Sqm
		4	2.24		0.44	3.94	Sqm
		4		1.21	0.44	2.13	Sqm
		4	2.24		0.50	4.47	Sqm
		4		0.76	0.50	1.52	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					120.57	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	21.88	0.25%	0.05	7850	429.44	Kg
	TOTAL Weight of steel (in kg)					429.44	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	1.20	0.60	1.44	Cum
	Launching Apron in D/S Portion	1	2.00	1.20	0.60	1.44	Cum
	TOTAL					2.88	Cum
8	Supplying 600 mm 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	1.93	2.00		3.86	Sqm
	On Slopes in D/S Portion	1	1.93	2.00		3.86	Sqm
	TOTAL					7.72	Sqm

S.No.	Items	No.	Length	Width	Height	Quantity	Unit
11	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.						
	<i>Parapet</i>	2	1.29	0.5	0.6	0.77	Cum
	TOTAL					0.77	Cum
12	Providing 25mm thick cement plaster (1:4) with approved quality of sand 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.						
	<i>Parapet</i>	2	1.29		1.7	4.39	Sqm
	TOTAL					4.39	Sqm
13	Providing 1.5 mm thick cement punning including curing, carriage of water with all leads and lifts as per building specification & direction of E/I.						
	<i>Parapet top</i>	2	1.29		0.7	1.81	Sqm
	TOTAL					1.81	Sqm
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						
	<i>U/S Transitions Walls</i>	2	2.24	1.07	2.14	10.24	Cum
	<i>D/S Transitions Walls</i>	2	2.24	1.07	2.14	10.24	Cum
	<i>U/S Toe Wall</i>	1	1.13		0.15	0.17	Cum
	<i>D/S Toe Wall</i>	1	1.13		0.15	0.17	Cum
	<i>Above Hume Pipe</i>	1	1.29		6.85	8.835	Cum
	TOTAL					29.66	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	Ratanpur Minor	2700-3700	1000.000	0.540	540.000	Cum	5021.30	₹ 27,11,502.00	62.21	172.80
	Total				540.00			₹ 27,11,502.00	62.21	172.80
2	Carriage of materials									
	Coarse Sand (60 Km lead)				172.800	Cum	1075.00	₹ 1,85,760.00		
	Cement (30 km lead)				62.208	MT	742.00	₹ 46,158.34		
	Brick (15 km lead)				270000.00	No.	3.18	₹ 8,58,600.00		
	Carriage of materials Total (In Rs.)							₹ 10,90,518.34		
	SUB TOTAL (In Rs.)							₹ 38,02,020.34		
	Seigniorage @10%				Rate	Amount in Rs.	10%			
	Coarse Sand		172.80	Cum	584.64	101025.79	10102.58			
	Total							₹ 10,102.58		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND			
DETAILED ESTIMATE FOR REPAIR STRUCTURES WORK OF RATANPUR MINOR			
Sl. No.	Structure Type	Chainage In Km	Amount (In Rs.)
1	BRIDGE	0.105	₹ 28,308.88
2	BRIDGE	0.210	₹ 21,680.09
3	FALL (1.067M)	0.305	₹ 17,667.33
4	FALL (1.524 M)	0.900	₹ 25,603.18
5	CULVERT	1.445	₹ 0.00
6	FALL (1.524 M)	1.660	₹ 16,061.00
7	FALL (1.676 M)	2.100	₹ 35,934.04
8	BRIDGE	2.670	₹ 0.00
9	FALL (1.067 M)	2.700	₹ 61,305.71
Total In Rs.			₹ 2,06,560.22
Total In Lakhs.			₹ 2.07

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 RATANPUR MINOR									
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 BRIDGE AT (CH.0.105 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 royalty as per specification and direction of E/I.	2.14	Cum	5021.30	10736.40	0.25	0.68	
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.	11.62	Sqm	340.20	3953.29	12.05	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.	2.789	Sqm	63.20	176.26	0.004		
5		Carriage of materials							
		Coarse Sand (60 Km lead)	0.854	Cum	1075.00	917.91			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	12.299	MT	742.00	9125.59			
		Brick (30 km lead)	1069.00	No.	3.18	3399.42			
TOTAL (In Rs.)						28308.88			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.85	Cum	584.64	499.21	49.92		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							49.92		
AOC FOR BRIDGE AT (CH. 0.210 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	5.5.5	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.	19.111	Sqm	340.20	6501.55	19.81	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.	2.743	Sqm	63.20	173.37	0.004		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.279	Cum	1075.00	299.95			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	19.818	MT	742.00	14705.22			
TOTAL (In Rs.)						21680.09			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.28	Cum	584.64	163.13	16.31		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
Total							16.31		
AOC FOR FALL AT CH. 0.305 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.	1.28	Cum	6914.20	8867.09	0.53	0.55	1.10
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.	0.75	Cum	6381.70	4786.28	0.24	0.34	0.68
3		Carriage of materials							
		Coarse Sand (60 Km lead)	0.889	Cum	1075.00	955.62			
		Coarse Aggregates (100 Km lead)	1.778	Cum	1398.00	2485.51			
		Cement (30 km lead)	0.772	MT	742.00	572.83			
TOTAL (In Rs.)						17667.33			

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)
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.89	Cum	584.64	519.72	51.97		
		Coarse Aggregate	1.78	Cum	944.26	1678.80	167.88		
		Total					219.85		
AOC FOR FALL AT (CH. 0.900 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.	10.27	Cum	2492.58	25603.18			
		TOTAL (In Rs.)				25603.18			
AOC FOR CULVERT AT CH. 1.445 KM									
1		Structure is in good condition and does not require any repair works.							
AOC FOR FALL AT CH. 1.660 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.	1.92	Cum	6381.70	12254.40	0.62	0.86	1.73
4		Carriage of materials							
		Coarse Sand (60 Km lead)	0.864	Cum	1075.00	928.92			
		Coarse Aggregates (100 Km lead)	1.728	Cum	1398.00	2416.05			
		Cement (30 km lead)	0.622	MT	742.00	461.64			
		TOTAL (In Rs.)				16061.00			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	0.86	Cum	584.64	505.19	50.52		
		Coarse Aggregate	1.73	Cum	944.26	1631.89	163.19		
		Total					213.71		
AOC FOR FALL AT CH. 2.100 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.	3.05	Cum	5021.30	15320.74	0.35	0.98	
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.	12.741	Sqm	340.20	4334.37	13.21	0.19	
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.	1.829	Sqm	63.20	115.58	0.003		
4		Carriage of materials							
		Coarse Sand (60 Km lead)	1.162	Cum	1075.00	1249.56			
		Coarse Aggregates (100 Km lead)	0.000	Cum	1398.00	0.00			
		Cement (30 km lead)	13.564	MT	742.00	10064.29			
		Brick (30 km lead)	1525.00	No.	3.18	4849.50			
		TOTAL (In Rs.)				35934.04			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	1.16	Cum	584.64	679.57	67.96		
		Coarse Aggregate	0.00	Cum	944.26	0.00	0.00		
		Total					67.96		
AOC FOR BRIDGE AT CH. 2.670 KM									
		Under Construction by RCD							
AOC FOR FALL AT CH. 2.700 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.	6.90	Cum	6914.20	47708.41	2.85	2.97	5.93
2		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)	2.967	Cum	1075.00	3189.55			
		Coarse Aggregates (100 Km lead)	5.934	Cum	1398.00	8295.81			
		Cement (30 km lead)	2.846	MT	742.00	2111.94			
TOTAL (In Rs.)						61305.71			
		Seigniorage @10%			Rate	Amount in Rs.	10%		
		Coarse Sand	2.97	Cum	584.64	1734.64	173.46		
		Coarse Aggregate	5.93	Cum	944.26	5603.29	560.33		
Total							733.79		

NORTH KOEL RESERVOIR PROJECT , BIHAR AND JHARKHAND								
DETAILS OF QUANTITIES OF REPAIRED STRUCTURES OF RATANPUR MINOR								
S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR BRIDGE AT (CH.0.105 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
		TOTAL					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 royalty as per specification and direction of E/I.						
		<i>Parapet Wall</i>	2	4.65	0.25	0.92	2.14	Cum
		TOTAL					2.14	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.						
		<i>Parapet Wall U/S</i>	1	4.65		1.25	5.81	Sqm
		<i>Parapet Wall D/S</i>	1	4.65		1.25	5.81	Sqm
		TOTAL					11.62	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.						
		<i>Parapet Wall U/S</i>	1	4.65		0.3	1.39	Sqm
		<i>Parapet Wall D/S</i>	1	4.65		0.3	1.39	Sqm
		TOTAL					2.79	Sqm
QUANTITIES OF REPAIRING WORK FOR BRIDGE AT (CH. 0.210 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	5.5.5	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.						
		<i>Parapet Wall U/S</i>	1	4.57		2.09	9.56	Sqm
		<i>Parapet Wall D/S</i>	1	4.57		2.09	9.56	Sqm
		TOTAL					19.11	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.						
		<i>Parapet Wall U/S</i>	1	4.57		0.3	1.37	Sqm
		<i>Parapet Wall D/S</i>	1	4.57		0.3	1.37	Sqm
		TOTAL					2.74	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit
QUANTITIES OF REPAIRING WORK FOR FALL AT CH. 0.305 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						
		<i>FLOOR</i>	1	5.00	1.68	0.153	1.28	<i>Cum</i>
		TOTAL					1.28	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.						
		<i>ABUTMENT TOP</i>	2	5.00	0.50	0.15	0.75	<i>Cum</i>
		TOTAL					0.75	Cum
QUANTITIES OF REPAIRING WORK FOR FALL AT (CH. 0.900 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.						
		<i>ABUTMENT</i>	2	13.72	0.25	1	6.86	<i>Cum</i>
		<i>WING</i>	4	2.00	0.43	1	3.41	<i>Cum</i>
		TOTAL					10.27	Cum
2		New fall is proposed at this location.						
QUANTITIES OF REPAIRING WORK FOR CULVERT AT CH. 1.445 KM								
1		Structure requires no repair work.						
QUANTITIES OF REPAIRING WORK FOR FALL AT CH. 1.660 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.						
		<i>ABUTMENT TOP</i>	2	12.80	0.50	0.15	1.92	<i>Cum</i>
		TOTAL					1.92	Cum
QUANTITIES OF REPAIRING WORK FOR FALL AT CH. 2.100 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.						
		<i>Parapet Wall U/S</i>	1	2.44	0.56	0.92	1.26	<i>Cum</i>
		<i>Wing wall U/S</i>	1	3.66	0.5334	0.92	1.79	<i>Cum</i>
		TOTAL					3.05	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.						
		<i>Parapet Wall U/S</i>	1	2.44		2.09	5.10	<i>Sqm</i>
		<i>Wing wall U/S</i>	1	3.66		2.09	7.64	<i>Sqm</i>
		TOTAL					12.74	Sqm

S.No.	Reference Clause	Items	No.	Length	Width	Height	Quantity	Unit	
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.							
		<i>Parapet Wall U/S</i>	1	2.44		0.3	0.73	<i>Sqm</i>	
		<i>Wing wall U/S</i>	1	3.66		0.3	1.10	<i>Sqm</i>	
		TOTAL						1.83	<i>Sqm</i>
QUANTITIES OF REPAIRING WORK FOR CULVERT AT CH. 2.670 KM									
Under Construction by RCD									
QUANTITIES OF REPAIRING WORK FOR FALL AT CH. 2.700 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.							
		<i>FLOOR</i>	1	6.00	1.68	0.686	6.90	<i>Cum</i>	
		TOTAL						6.90	<i>Cum</i>

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 transporting 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 transporting to the embankment location within all lifts and lead upto 1000m.						
		<i>For Making RAMP</i>						
		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 place method with front end loader at OMC, and compacting with 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
	<i>Total 1+2+3= (B) =</i>	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
	<i>Total = B+4+5+6+7 = C</i>	Rs.	155373.89
8	Other incidental charge , 3 % = of C	Rs.	4661.22
	<i>Total C+8 = D</i>	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, scaffolding and its removal wherever 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. reinforcements 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.								
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			
		<i>Total</i>					1100.17			
		For 9 nos. outlet, Total Seigniorage charges					9901.56			

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 &						
	<i>Toe Wall Base in Canal Portion</i>	1	1.5	0.75	0.15	0.17	Cum
	<i>Coping on Stem of Toe Wall</i>	1	1.50	0.45	0.075	0.05	Cum
	<i>Gate Structure (Section A-B)</i>	1	1.80	0.75	0.15	0.20	Cum
	<i>Coping (Section A-B)</i>	1	1.5	0.45	0.075	0.05	Cum
	<i>Water Course (Section C-D)</i>	1	15.00	1.50	0.15	3.38	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.075	0.45	Cum
	<i>Coping above Walls(Section C-D)</i>	2	15	0.40	0.075	0.90	Cum
	<i>Below transition walls</i>	1	1.5	1.2	0.15	0.27	Cum
		1	1.5	0.75	0.15	0.17	Cum
	<i>Gate Structure (Section A-B)</i>	2	1.50	0.45	1.21	1.63	Cum
	<i>Toe Wall stem</i>	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, scaffolding and its removal wherever required including royalty etc. all complete job as per specification and direction of E/I.						
	<i>Transition Walls in U/S</i>	2	1.50	0.45	1.04	1.40	Cum
	<i>Water Course (Section C-D)</i>	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 .						
	<i>150 mm Dia R.C.C. Pipe</i>	1			7.5	7.5	RM
4	Structural Steel (Average rate of Angle, Joint and Channel) etc.						
	<i>Spindle 25 mm dia</i>	1	0.000491	7850.00	1.29	4.97	Kg
		1	0.000491	7850.00	0.24	0.92	Kg
	<i>300 X300 MM MS GATE</i>	1		60.00		60.00	Kg
	<i>I.M.C. Grove (100 x 50) 9.56 kg/m</i>	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 .						
	<i>Toe Wall Base in Canal Portion</i>	1	1.50	0.75	0.10	0.11	Cum
	<i>Water Course Floor (Section C-D)</i>	1	15.00	0.40	0.10	0.60	Cum
	<i>Below transition walls</i>	1	1.50	1.19	0.10	0.18	Cum
	TOTAL					0.89	Cum
6	Providing M.S. reinforcements 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.						
	<i>RCC M-15 (Providing Reinforcement @ 0.24%)</i>	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.	References 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 M²
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	SI-1
					Total	₹ 3,854.16	
		Add Overhead charge &c.P @ 15 %				₹ 578.12	
						₹ 4,432.28	
		Rate per Cum			Say, Rs	₹ 156.50	Per M³
	NOTE:-	Add royalty of earth Rs. 33.00 where needed without overhead charges & C.P.					

Sl. No.	References 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 M³
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 M³
5	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.					

Sl. No.	References 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	SI-1
		Add Overhead charge &C.P @ 15 %				₹ 63.60	
						₹ 487.60	
		Rate per Cum			Say, Rs	₹ 17.22	Per M³
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	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 M³
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.	References 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 M³
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 embankments, unloading, 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 lifts 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	

Sl. No.	References 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.	References 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.	References 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.	References 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 initial 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 M³

Sl. No.	References 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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	C.	HIRE CHARGES OF MACHINE					
		(i)Concrete mixer (10 H.P) for 2.832 cum consists on the basic of mixer production capacity 1.98 m3 per hour. Used rate per hourx2.832/1.98	1.43	hr	351	₹ 501.93	
		(ii) Vibrator 1no. To vibrate 2.832 cum on the basic of vibrator capacity 1.98 cum per hour. Used rate per hourx2.832/1.98	1.43	hr	405	₹ 579.15	
		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 M³
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.	References 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 m ³ 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 M³
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.	References 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 Vibrator Capacity 1.98 m ³ 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 M³
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.	References 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 M³
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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
						₹ 23,084.66	
		Rate per Cum			Say, Rs	₹ 8,151.40	Per M³
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.	References 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.	References 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, propping 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.	References 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, propping 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.	References 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.	References 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 M³
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 M³

Sl. No.	References 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 M³
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 M³

Sl. No.	References 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 M³
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.					
		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 M³

Sl. No.	References 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 2.5 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.	References 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
	5.6.2.4	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.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
	5.6.2.5	Labour Charges for Laying of 1200 mm NP3 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 .					
		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, scaffolding and its removal wherever 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.	References 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 M³
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 M³
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.					

Sl. No.	References SOR No.	Description	Quantity	Unit	Rate	Amount	Ref
		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 royalty 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	
						12365.52	
		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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	5.1.22	Extra for wet earth all complete as per specifications and direction of E/I.	Cum	17.22
6	WRD SOR 2023 & PL JUNE 2024	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 2023 & PL JUNE 2024	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 2023 & PL JUNE 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, unloading, 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 2023 & PL JUNE 2024	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 & technical specifications & as per clause 2705 of specifications.	NO.	5588.70
18	WRD SOR 2025 & PL 2025	WRD 5.3.22	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.		
			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 foundation 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, scaffolding and its removal wherever 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 transporting 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