TENDER DOCUMENT

FOR

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

Estimated Cost (Rs. 47.85 Crores)

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

TENDER DRAWINGS

Issued to M/s

WAPCOS

(भारत सरकार का उपक्रम–जल शक्ति मंत्रालय)

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

NORTH KOEL RESERVOIR PROJECT

JANUARY 2025

Completion of Balance Works of North Koel Reservoir Project

DRAWING REPORT – RUIR BRANCH CANAL (OFFTAKING FROM RIGHT MAIN CANAL AT 37.01 KM)







WAPCOS LIMITED

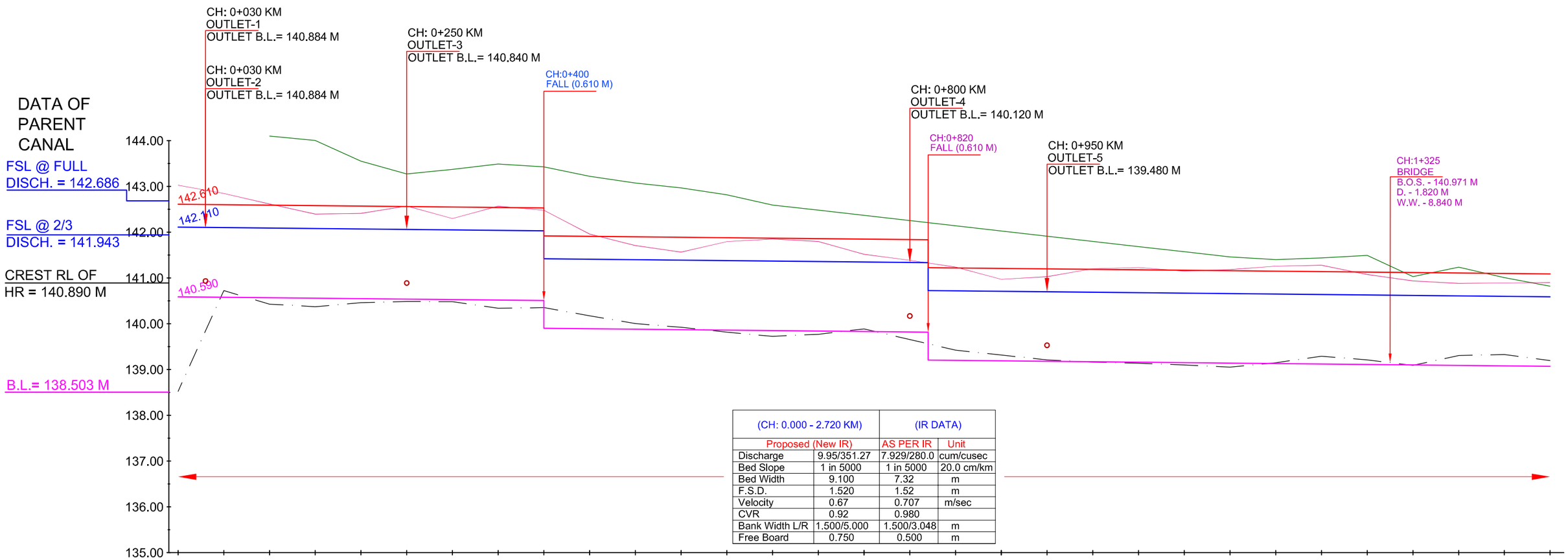
(GOVT. OF INDIA UNDERTAKING)

76- C SECTOR-18 INDUSTRIAL AREA, GURUGRAM-122015 (HARYANA)

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L-SECTION

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 2.720 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	9.95/351.27	7.929/280.0	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	9.100	7.32	m
F.S.D.	1.520	1.52	m
Velocity	0.67	0.707	m/sec
CVR	0.92	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	142.610	142.600	142.590	142.580	142.570	142.560	142.550	142.540	142.530	141.920	141.910	141.900	141.890	141.880	141.870	141.860	141.840	141.836	141.220	141.210	141.200	141.190	141.180	141.170	141.160	141.150	141.140	141.130	141.120	141.110	141.100
	F.S.L.	142.110	142.100	142.090	142.080	142.070	142.060	142.050	142.040	142.030	141.420	141.410	141.400	141.390	141.380	141.370	141.360	141.340	141.336	140.720	140.710	140.700	140.690	140.680	140.670	140.660	140.650	140.640	140.630	140.620	140.610	140.600
	Proposed Bed Level	140.590	140.580	140.570	140.560	140.550	140.540	140.530	140.520	140.510	139.900	139.890	139.880	139.870	139.860	139.850	139.840	139.820	139.816	139.200	139.190	139.180	139.170	139.160	139.150	139.140	139.130	139.120	139.110	139.100	139.090	139.080
EXISTING DATA	Bed Level	138.524	140.724	140.427	140.374	140.459	140.486	140.482	140.338	140.352	140.173	140.033	139.923	139.817	139.724	139.771	139.887	139.656		139.423	139.317	139.211	139.161	139.136	139.099	139.052	139.147	139.291	139.210	139.091	139.307	139.327	139.195
	TOP OF BANK LEVEL	143.027	142.847	142.617	142.397	142.411	142.573	142.299	142.569	142.479	141.959	141.708	141.565	141.796	141.853	141.797	141.519	141.387		141.239	140.972	141.028	141.204	141.229	141.149	141.183	141.258	141.280	141.077	140.936	140.881	140.891	140.901
	NSL			144.100	144.004	143.551	143.272	143.371	143.491	143.427	143.220	143.076	142.969	142.817	142.592	142.481	142.368	142.254		142.140	142.027	141.913	141.800	141.686	141.573	141.459	141.402	141.437	141.493	141.031	141.236	141.008	140.822
	Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

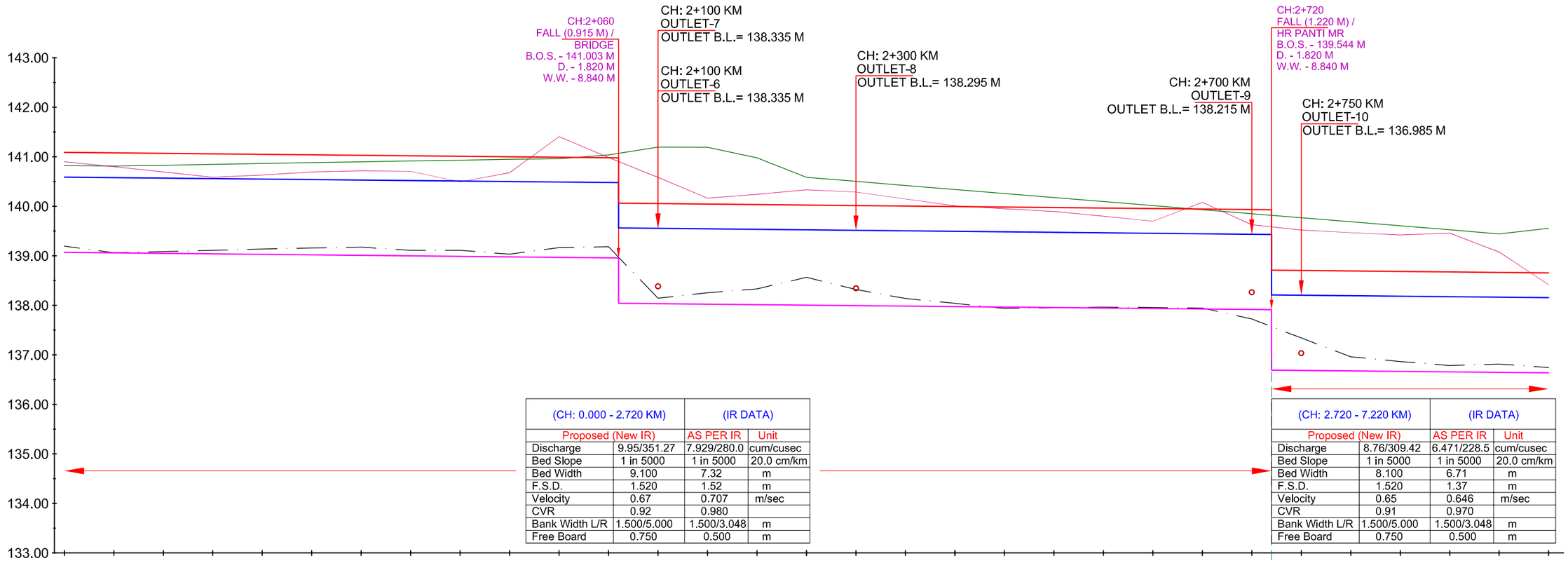
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 01 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 1+500 TO 3+000

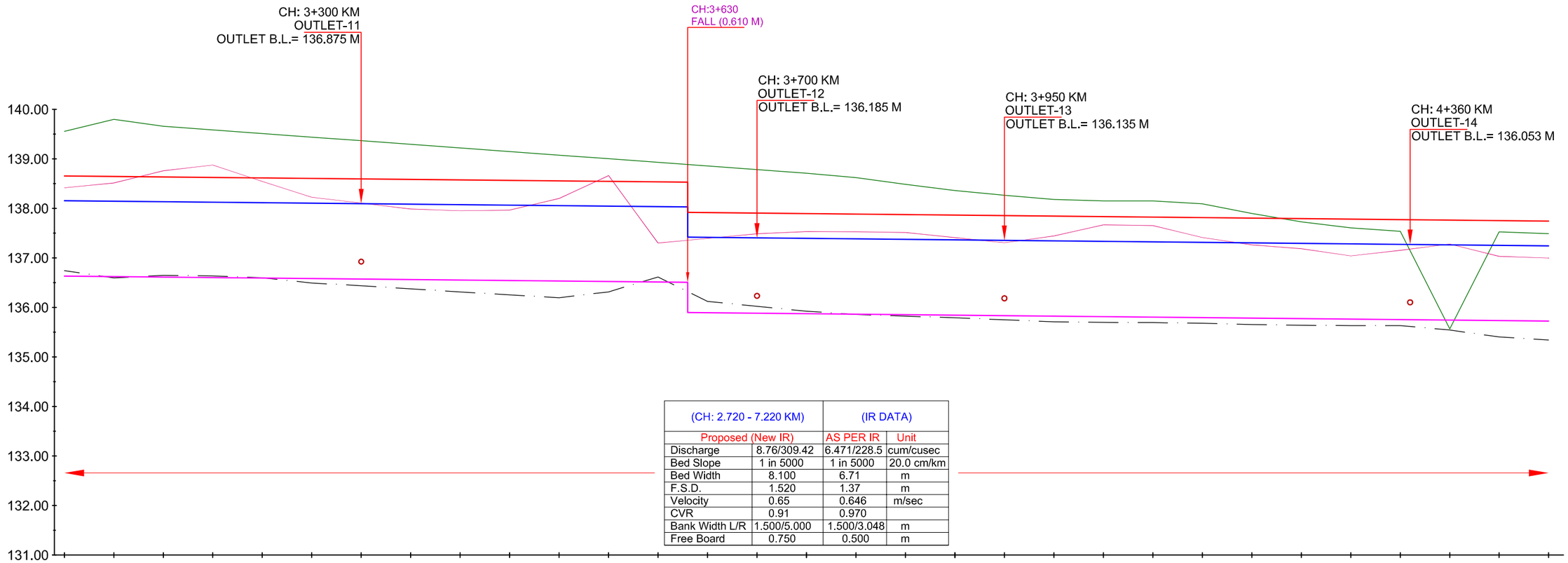


(CH: 0.000 - 2.720 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	9.95/351.27	7.929/280.0	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	9.100	7.32	m
F.S.D.	1.520	1.52	m
Velocity	0.67	0.707	m/sec
CVR	0.92	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 2.720 - 7.220 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	8.76/309.42	6.471/228.5	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	8.100	6.71	m
F.S.D.	1.520	1.37	m
Velocity	0.65	0.646	m/sec
CVR	0.91	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

| | | |

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 4+500



(CH: 2.720 - 7.220 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	8.76/309.42	6.471/228.5	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	8.100	6.71	m
F.S.D.	1.520	1.37	m
Velocity	0.65	0.646	m/sec
CVR	0.91	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400	3+450	3+500	3+550	3+600	3+650	3+700	3+750	3+800	3+850	3+900	3+950	4+000	4+050	4+100	4+150	4+200	4+250	4+300	4+350	4+400	4+450	4+500
DESIGN DATA	TOP OF BANK LEVEL	138.655	138.645	138.635	138.625	138.615	138.605	138.595	138.585	138.575	138.565	138.555	138.545	138.535	138.529 137.919 137.915	137.905	137.895	137.885	137.875	137.865	137.855	137.845	137.835	137.825	137.815	137.805	137.795	137.785	137.775	137.765	137.755	137.745
	F.S.L.	138.155	138.145	138.135	138.125	138.115	138.105	138.095	138.085	138.075	138.065	138.055	138.045	138.035	138.029 137.419 137.415	137.405	137.395	137.385	137.375	137.365	137.355	137.345	137.335	137.325	137.315	137.305	137.295	137.285	137.275	137.265	137.255	137.245
	Proposed Bed Level	136.635	136.625	136.615	136.605	136.595	136.585	136.575	136.565	136.555	136.545	136.535	136.525	136.515	136.509 135.899 135.895	135.885	135.875	135.865	135.855	135.845	135.835	135.825	135.815	135.805	135.795	135.785	135.775	135.765	135.755	135.745	135.735	135.725
EXISTING DATA	Bed Level	136.745	136.596	136.649	136.637	136.600	136.493	136.439	136.376	136.314	136.254	136.195	136.315	136.616	136.124	136.024	135.923	135.858	135.825	135.792	135.751	135.711	135.698	135.694	135.680	135.655	135.640	135.634	135.634	135.544	135.404	135.341
	TOP OF BANK LEVEL	138.416	138.514	138.761	138.877	138.546	138.225	138.108	137.989	137.954	137.967	138.202	138.663	137.301	137.395	137.488	137.534	137.529	137.515	137.410	137.306	137.444	137.668	137.653	137.413	137.264	137.186	137.041	137.153	137.281	137.033	136.997
	NSL	139.556	139.798	139.658	139.586	139.513	139.440	139.367	139.294	139.222	139.149	139.076	139.003	138.931	138.858	138.785	138.712	138.622	138.488	138.360	138.265	138.183	138.150	138.153	138.094	137.898	137.730	137.608	137.536	137.567	137.525	137.489
	Chainage IN KM	3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400	3+450	3+500	3+550	3+600	3+650	3+700	3+750	3+800	3+850	3+900	3+950	4+000	4+050	4+100	4+150	4+200	4+250	4+300	4+350	4+400	4+450	4+500

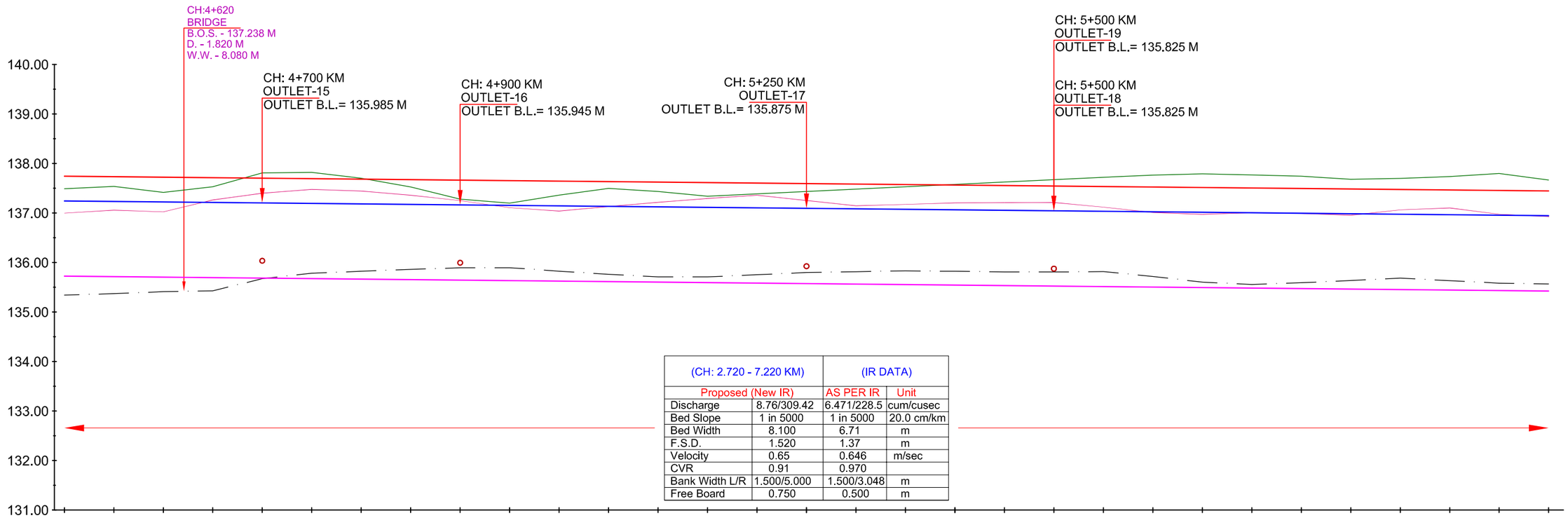
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 03 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 4+500 TO 6+000



(CH: 2.720 - 7.220 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	8.76/309.42	6.471/228.5	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	8.100	6.71	m
F.S.D.	1.520	1.37	m
Velocity	0.65	0.646	m/sec
CVR	0.91	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250
DESIGN DATA	TOP OF BANK LEVEL	137.745	137.735	137.725	137.715	137.705	137.695	137.685	137.675	137.665	137.655	137.645	137.635	137.625	137.615	137.605	137.595
	F.S.L.	137.245	137.235	137.225	137.215	137.205	137.195	137.185	137.175	137.165	137.155	137.145	137.135	137.125	137.115	137.105	137.095
	Proposed Bed Level	135.725	135.715	135.705	135.695	135.685	135.675	135.665	135.655	135.645	135.635	135.625	135.615	135.605	135.595	135.585	135.575
EXISTING DATA	Bed Level	135.341	135.372	135.411	135.429	135.672	135.783	135.823	135.860	135.895	135.895	135.826	135.762	135.710	135.710	135.754	135.798
	TOP OF BANK LEVEL	136.997	137.058	137.023	137.265	137.400	137.477	137.444	137.360	137.251	137.108	137.041	137.131	137.217	137.293	137.359	137.253
	NSL	137.489	137.539	137.418	137.532	137.808	137.822	137.703	137.527	137.280	137.201	137.360	137.499	137.434	137.341	137.388	137.436
	Chainage IN KM	4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250

	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	5+950	6+000
DESIGN DATA	137.585	137.575	137.565	137.555	137.545	137.535	137.525	137.515	137.505	137.495	137.485	137.475	137.465	137.455	137.445
	137.085	137.075	137.065	137.055	137.045	137.035	137.025	137.015	137.005	136.995	136.985	136.975	136.965	136.955	136.945
	135.565	135.555	135.545	135.535	135.525	135.515	135.505	135.495	135.485	135.475	135.465	135.455	135.445	135.435	135.425
EXISTING DATA	135.815	135.831	135.824	135.811	135.809	135.817	135.719	135.604	135.557	135.592	135.636	135.684	135.634	135.583	135.566
	137.147	137.174	137.204	137.210	137.213	137.119	137.010	136.974	137.006	136.991	136.956	137.063	137.103	136.975	136.930
	137.484	137.532	137.579	137.627	137.675	137.723	137.767	137.791	137.771	137.745	137.682	137.700	137.737	137.797	137.666
	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	5+950	6+000

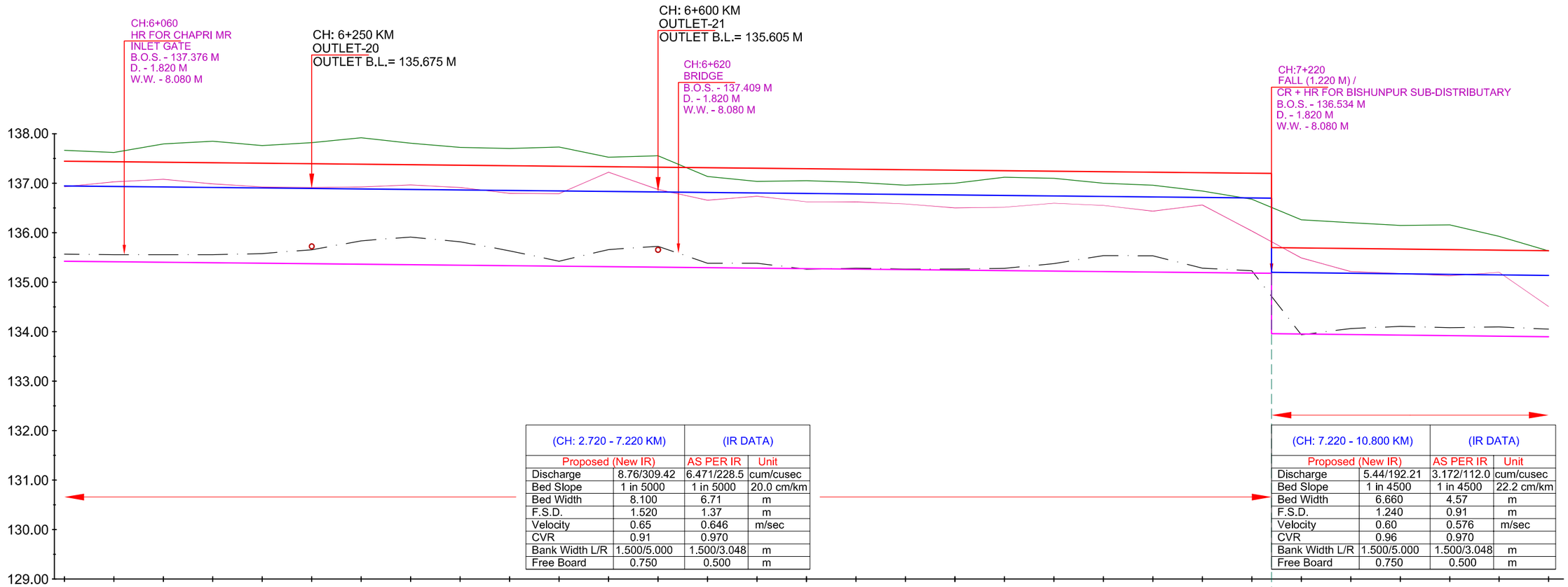
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 04 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 6+000 TO 7+500



(CH: 2.720 - 7.220 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	8.76/309.42	6.471/228.5	cum/cusec
Bed Slope	1 in 5000	1 in 5000	20.0 cm/km
Bed Width	8.100	6.71	m
F.S.D.	1.520	1.37	m
Velocity	0.65	0.646	m/sec
CVR	0.91	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 7.220 - 10.800 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	5.44/192.21	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.660	4.57	m
F.S.D.	1.240	0.91	m
Velocity	0.60	0.576	m/sec
CVR	0.96	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		6+000	6+050	6+100	6+150	6+200	6+250	6+300	6+350	6+400	6+450	6+500	6+550	6+600	6+650	6+700	6+750	6+800	6+850	6+900	6+950	7+000	7+050	7+100	7+150	7+200	7+220	7+250	7+300	7+350	7+400	7+450	7+500
DESIGN DATA	TOP OF BANK LEVEL	137.445	137.435	137.425	137.415	137.405	137.395	137.385	137.375	137.365	137.355	137.345	137.335	137.325	137.315	137.305	137.295	137.285	137.275	137.265	137.255	137.245	137.235	137.225	137.215	137.205	137.201	135.694	135.683	135.672	135.661	135.650	135.639
	F.S.L.	136.945	136.935	136.925	136.915	136.905	136.895	136.885	136.875	136.865	136.855	136.845	136.835	136.825	136.815	136.805	136.795	136.785	136.775	136.765	136.755	136.745	136.735	136.725	136.715	136.705	136.701	135.194	135.183	135.172	135.161	135.150	135.139
	Proposed Bed Level	135.425	135.415	135.405	135.395	135.385	135.375	135.365	135.355	135.345	135.335	135.325	135.315	135.305	135.295	135.285	135.275	135.265	135.255	135.245	135.235	135.225	135.215	135.205	135.195	135.185	135.181	133.954	133.943	133.932	133.921	133.910	133.899
EXISTING DATA	Bed Level	135.566	135.556	135.555	135.559	135.580	135.656	135.837	135.913	135.818	135.635	135.424	135.660	135.725	135.385	135.313	135.263	135.284	135.267	135.266	135.281	135.376	135.539	135.533	135.284	135.231	133.961	133.938	134.063	134.108	134.080	134.097	134.051
	TOP OF BANK LEVEL	136.930	137.030	137.080	136.988	136.926	136.915	136.927	136.966	136.914	136.797	136.791	137.225	136.874	136.656	136.737	136.626	136.624	136.582	136.503	136.516	136.597	136.553	136.438	136.563	136.036	135.701	135.492	135.217	135.175	135.133	135.200	134.509
	NSL	137.666	137.624	137.796	137.851	137.761	137.821	137.922	137.811	137.727	137.705	137.734	137.528	137.556	137.139	137.038	137.051	137.018	136.961	137.000	137.124	137.102	137.002	136.961	136.842	136.677	135.201	136.263	136.203	136.147	136.158	135.929	135.632
	Chainage IN KM	6+000	6+050	6+100	6+150	6+200	6+250	6+300	6+350	6+400	6+450	6+500	6+550	6+600	6+650	6+700	6+750	6+800	6+850	6+900	6+950	7+000	7+050	7+100	7+150	7+200	7+220	7+250	7+300	7+350	7+400	7+450	7+500

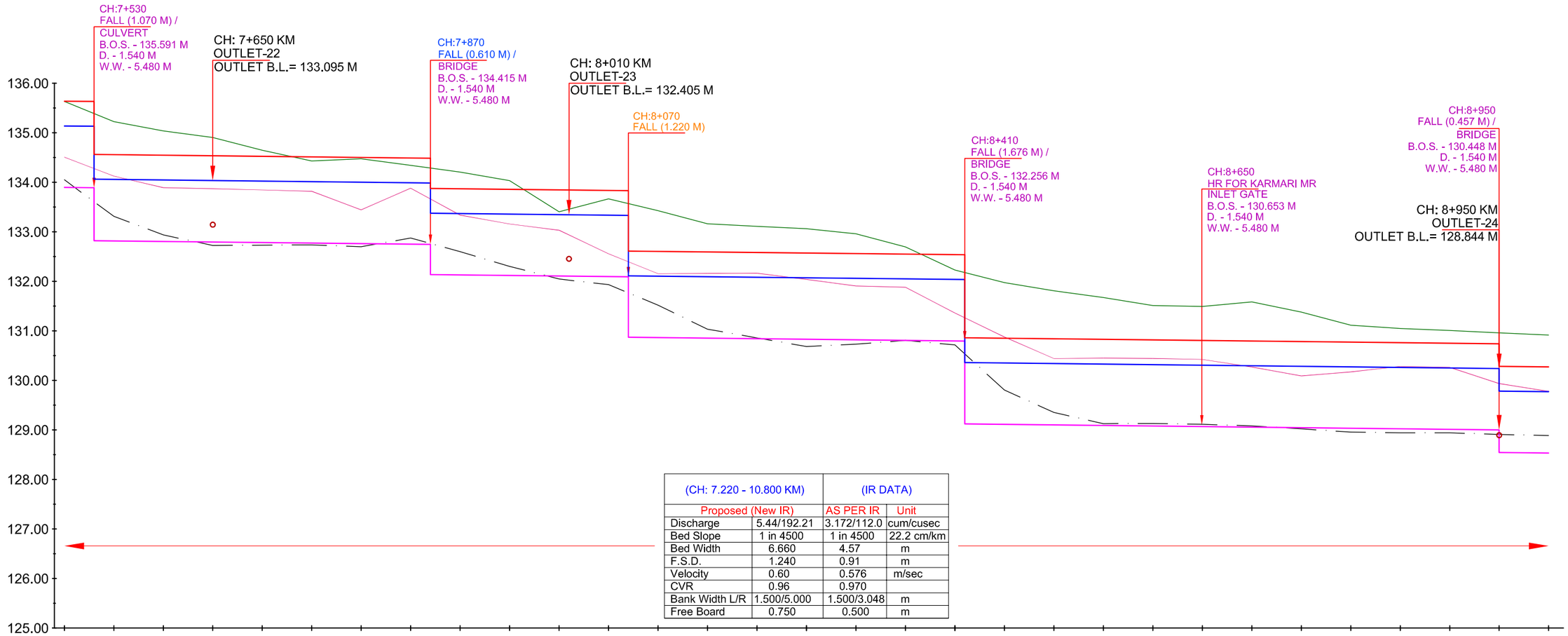
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 05 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 7+500 TO 9+000



(CH: 7.220 - 10.800 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	5.44/192.21	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.660	4.57	m
F.S.D.	1.240	0.91	m
Velocity	0.60	0.576	m/sec
CVR	0.96	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		7+500	7+550	7+600	7+650	7+700	7+750	7+800	7+850	7+900	7+950	8+000	8+050	8+100	8+150	8+200	8+250	8+300	8+350	8+400	8+450	8+500	8+550	8+600	8+650	8+700	8+750	8+800	8+850	8+900	8+950	9+000
DESIGN DATA	TOP OF BANK LEVEL	135.639	135.632 134.562 134.558	134.547	134.535	134.524	134.513	134.502	134.491	134.487 133.877 133.870	133.859	133.848	133.837	133.832 132.612 132.605	132.594	132.583	132.572	132.561	132.550	132.539 132.537 130.861	130.852	130.841	130.829	130.818	130.807	130.796	130.785	130.774	130.763	130.752	130.741 130.284	130.272
	F.S.L.	135.139	135.132 134.062 134.058	134.047	134.035	134.024	134.013	134.002	133.991	133.987 133.377 133.370	133.359	133.348	133.337	133.332 132.112 132.105	132.094	132.083	132.072	132.061	132.050	132.039 132.037 130.361	130.352	130.341	130.329	130.318	130.307	130.296	130.285	130.274	130.263	130.252	130.241 129.784	129.772
	Proposed Bed Level	133.899	133.892 132.822 132.818	132.807	132.795	132.784	132.773	132.762	132.751	132.747 132.137 132.130	132.119	132.108	132.097	132.092 130.872 130.865	130.854	130.843	130.832	130.821	130.810	130.799 130.797 129.121	129.112	129.101	129.089	129.078	129.067	129.056	129.045	129.034	129.023	129.012	129.001 128.544	128.532
EXISTING DATA	Bed Level	134.051	133.312	132.939	132.725	132.738	132.738	132.701	132.875	132.599	132.303	132.047	131.935	131.519	131.035	130.859	130.684	130.731	130.808	130.716	129.807	129.355	129.127	129.129	129.113	129.083	129.021	128.955	128.943	128.934	128.908	128.886
	TOP OF BANK LEVEL	134.509	134.127	133.894	133.871	133.847	133.819	133.444	133.882	133.339	133.159	133.033	132.557	132.156	132.161	132.166	132.039	131.908	131.883	131.361	130.878	130.443	130.451	130.443	130.424	130.271	130.091	130.171	130.284	130.264	129.937	129.779
	NSL	135.632	135.224	135.039	134.906	134.650	134.432	134.475	134.343	134.208	134.036	133.405	133.668	133.426	133.163	133.113	133.063	132.960	132.696	132.229	131.977	131.810	131.674	131.512	131.494	131.587	131.381	131.114	131.048	131.007	130.962	130.915
	Chainage IN KM	7+500	7+550	7+600	7+650	7+700	7+750	7+800	7+850	7+900	7+950	8+000	8+050	8+100	8+150	8+200	8+250	8+300	8+350	8+400	8+450	8+500	8+550	8+600	8+650	8+700	8+750	8+800	8+850	8+900	8+950	9+000

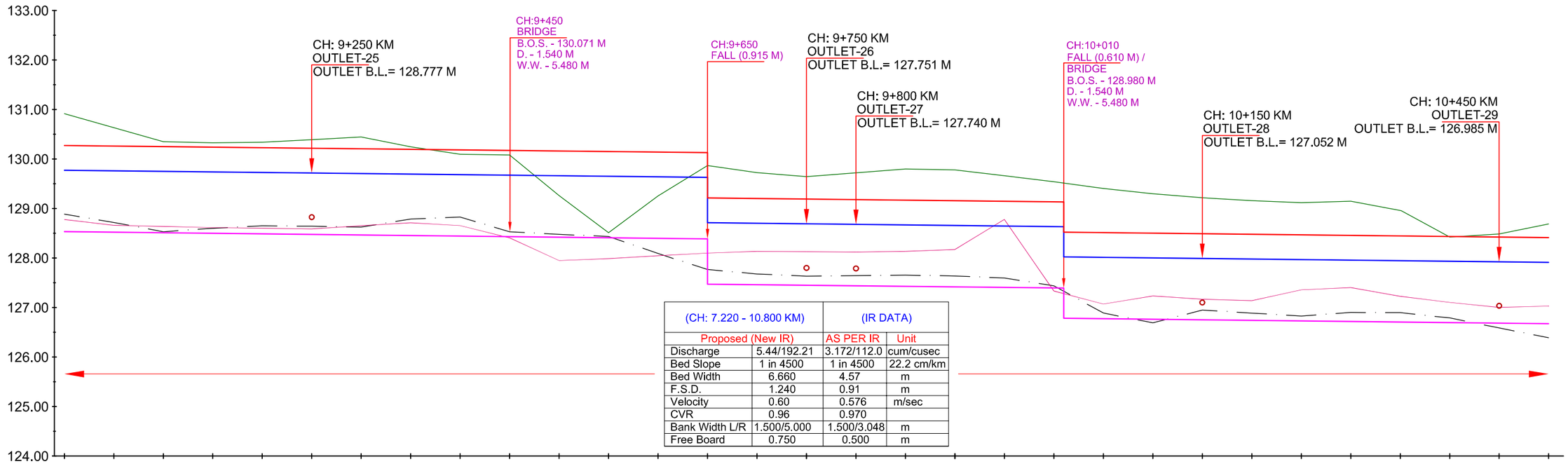
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 06 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 9+000 TO 10+500



(CH: 7.220 - 10.800 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	5.44/192.21	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.660	4.57	m
F.S.D.	1.240	0.91	m
Velocity	0.60	0.576	m/sec
CVR	0.96	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		9+000	9+050	9+100	9+150	9+200	9+250	9+300	9+350	9+400	9+450	9+500	9+550	9+600	9+650	9+700	9+750	9+800	9+850	9+900	9+950	10+000	10+050	10+100	10+150	10+200	10+250	10+300	10+350	10+400	10+450	10+500
DESIGN DATA	TOP OF BANK LEVEL	130.272	130.261	130.250	130.239	130.228	130.217	130.206	130.195	130.184	130.172	130.161	130.150	130.139	130.128 129.213	129.202	129.191	129.180	129.169	129.157	129.146	129.135 129.133 128.523	128.514	128.503	128.492	128.481	128.470	128.459	128.447	128.436	128.425	128.414
	F.S.L.	129.772	129.761	129.750	129.739	129.728	129.717	129.706	129.695	129.684	129.672	129.661	129.650	129.639	129.628 128.713	128.702	128.691	128.680	128.669	128.657	128.646	128.635 128.633 128.023	128.014	128.003	127.992	127.981	127.970	127.959	127.947	127.936	127.925	127.914
	Proposed Bed Level	128.532	128.521	128.510	128.499	128.488	128.477	128.466	128.455	128.444	128.432	128.421	128.410	128.399	128.388 127.473	127.462	127.451	127.440	127.429	127.417	127.406	127.395 127.393 126.783	126.774	126.763	126.752	126.741	126.730	126.719	126.707	126.696	126.685	126.674
EXISTING DATA	Bed Level	128.886	128.718	128.531	128.601	128.651	128.643	128.625	128.787	128.828	128.531	128.479	128.434	128.091	127.768	127.678	127.634	127.643	127.654	127.638	127.596	127.440	126.890	126.690	126.949	126.888	126.829	126.901	126.896	126.790	126.588	126.390
	TOP OF BANK LEVEL	129.779	129.662	129.638	129.615	129.601	129.587	129.653	129.714	129.656	129.407	128.949	128.987	129.046	129.100	129.135	129.128	129.120	129.134	129.172	129.781	128.334	128.071	128.233	128.168	128.138	128.358	128.402	128.227	128.104	128.004	128.031
	NSL	130.915	130.632	130.350	130.330	130.340	130.392	130.444	130.248	130.097	130.082	129.261	128.511	129.255	129.870	129.724	129.646	129.723	129.800	129.782	129.662	129.540	129.407	129.299	129.216	129.158	129.118	129.148	128.936	128.424	128.485	128.687
	Chainage IN KM	9+000	9+050	9+100	9+150	9+200	9+250	9+300	9+350	9+400	9+450	9+500	9+550	9+600	9+650	9+700	9+750	9+800	9+850	9+900	9+950	10+000	10+050	10+100	10+150	10+200	10+250	10+300	10+350	10+400	10+450	10+500

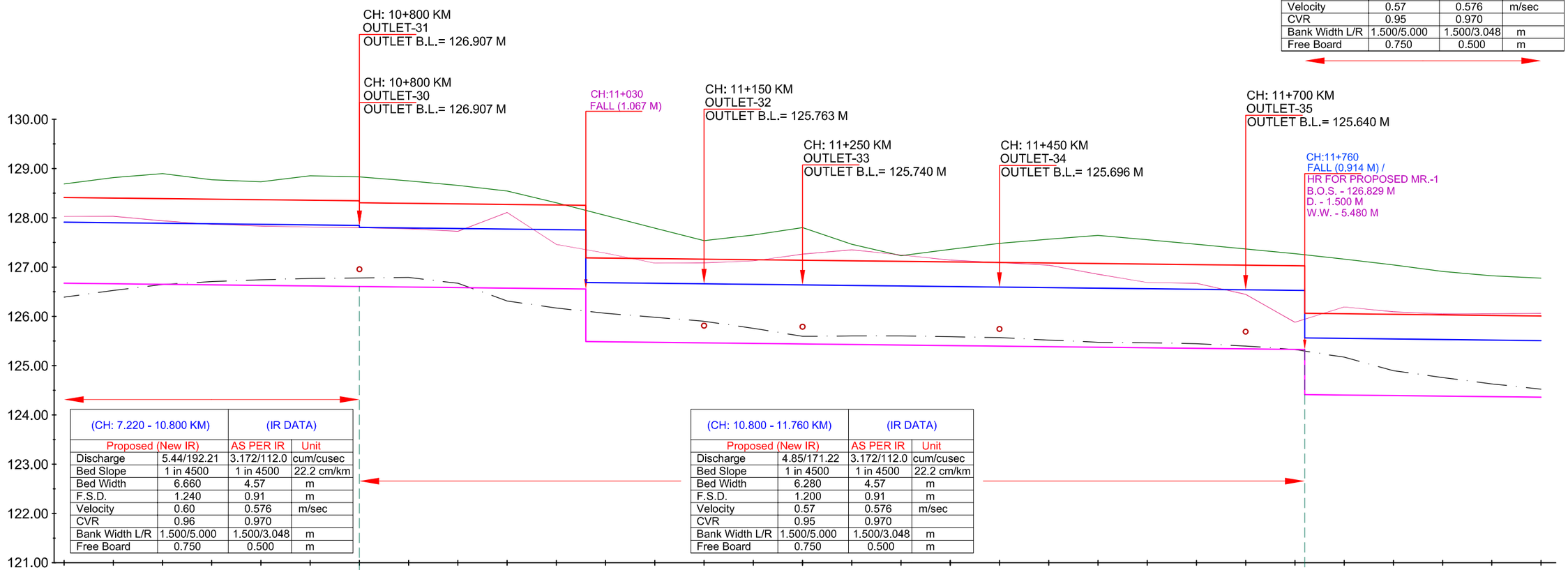
LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 07 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 10+500 TO 12+000

(CH: 11.760 - 15.850 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	4.32/152.62	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.000	4.57	m
F.S.D.	1.150	0.91	m
Velocity	0.57	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

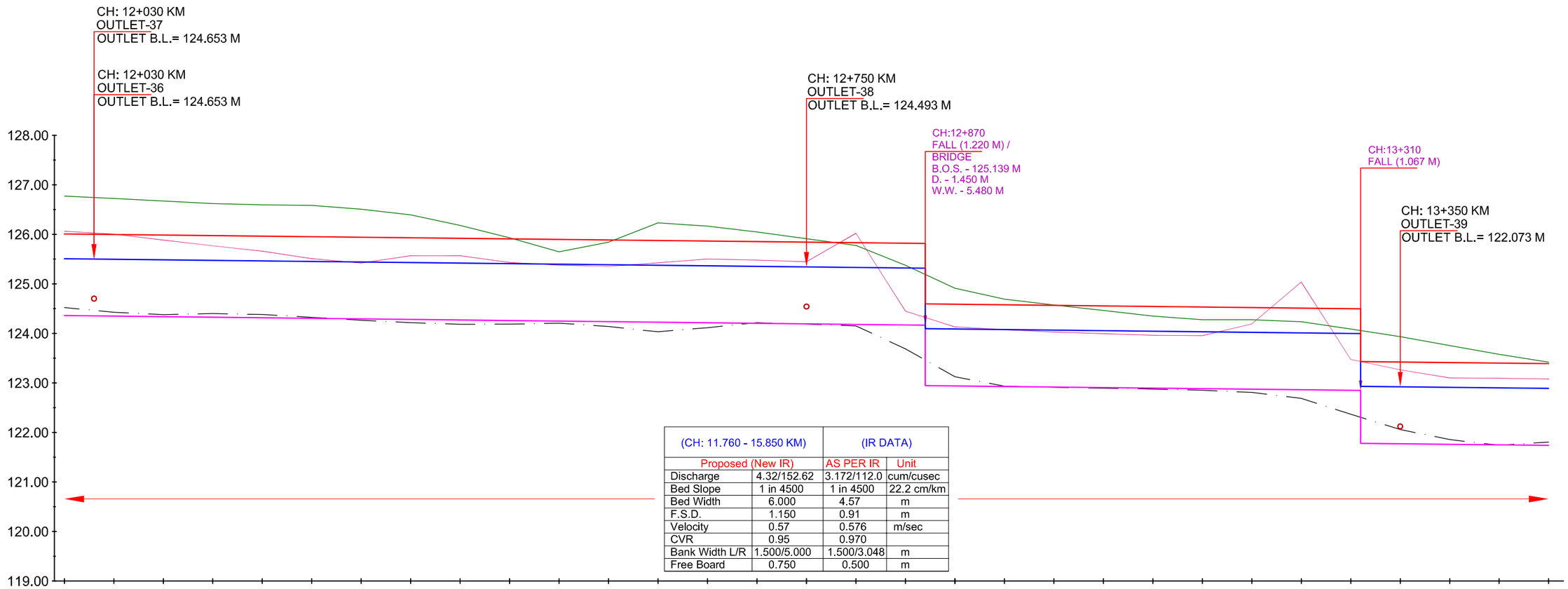


(CH: 7.220 - 10.800 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	5.44/192.21	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.660	4.57	m
F.S.D.	1.240	0.91	m
Velocity	0.60	0.576	m/sec
CVR	0.96	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 10.800 - 11.760 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	4.85/171.22	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.280	4.57	m
F.S.D.	1.200	0.91	m
Velocity	0.57	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

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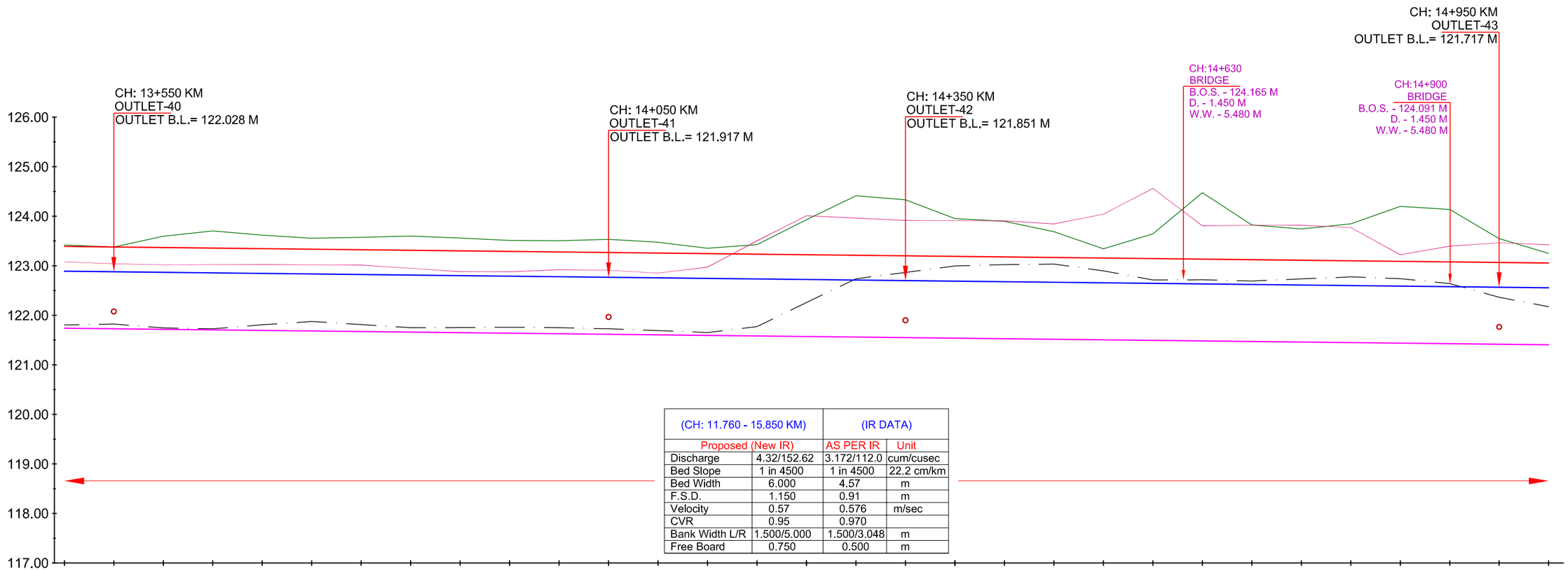
LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 12+000 TO 13+500



(CH: 11.760 - 15.850 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	4.32/152.62	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.000	4.57	m
F.S.D.	1.150	0.91	m
Velocity	0.57	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

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LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 13+500 TO 15+000



(CH: 11.760 - 15.850 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	4.32/152.62	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.000	4.57	m
F.S.D.	1.150	0.91	m
Velocity	0.57	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		13+500	13+550	13+600	13+650	13+700	13+750	13+800	13+850	13+900	13+950	14+000	14+050	14+100	14+150	14+200	14+250	14+300	14+350	14+400	14+450	14+500	14+550	14+600	14+650	14+700	14+750	14+800	14+850	14+900	14+950	15+000
DESIGN DATA	TOP OF BANK LEVEL	123.389	123.378	123.367	123.356	123.345	123.334	123.323	123.312	123.301	123.289	123.278	123.267	123.256	123.245	123.234	123.223	123.212	123.201	123.189	123.178	123.167	123.156	123.145	123.134	123.123	123.112	123.101	123.089	123.078	123.067	123.056
	F.S.L.	122.889	122.878	122.867	122.856	122.845	122.834	122.823	122.812	122.801	122.789	122.778	122.767	122.756	122.745	122.734	122.723	122.712	122.701	122.689	122.678	122.667	122.656	122.645	122.634	122.623	122.612	122.601	122.589	122.578	122.567	122.556
	Proposed Bed Level	121.739	121.728	121.717	121.706	121.695	121.684	121.673	121.662	121.651	121.639	121.628	121.617	121.606	121.595	121.584	121.573	121.562	121.551	121.539	121.528	121.517	121.506	121.495	121.484	121.473	121.462	121.451	121.439	121.428	121.417	121.406
EXISTING DATA	Bed Level	121.805	121.823	121.747	121.728	121.810	121.875	121.812	121.750	121.753	121.760	121.750	121.727	121.693	121.653	121.772	122.260	122.736	122.866	122.998	123.022	123.035	122.898	122.714	122.716	122.692	122.736	122.775	122.741	122.641	122.365	122.174
	TOP OF BANK LEVEL	123.079	123.042	123.019	123.023	123.026	123.020	123.013	122.949	122.882	122.877	122.923	122.909	122.854	122.974	123.503	124.009	123.962	123.914	123.910	123.908	123.846	124.041	124.562	123.808	123.817	123.820	123.773	123.223	123.397	123.464	123.426
	NSL	123.420	123.379	123.598	123.704	123.620	123.555	123.574	123.600	123.558	123.511	123.506	123.535	123.477	123.355	123.426	123.932	124.414	124.332	123.954	123.897	123.687	123.344	123.646	124.477	123.826	123.744	123.848	124.198	124.137	123.549	123.252
	Chainage IN KM																															

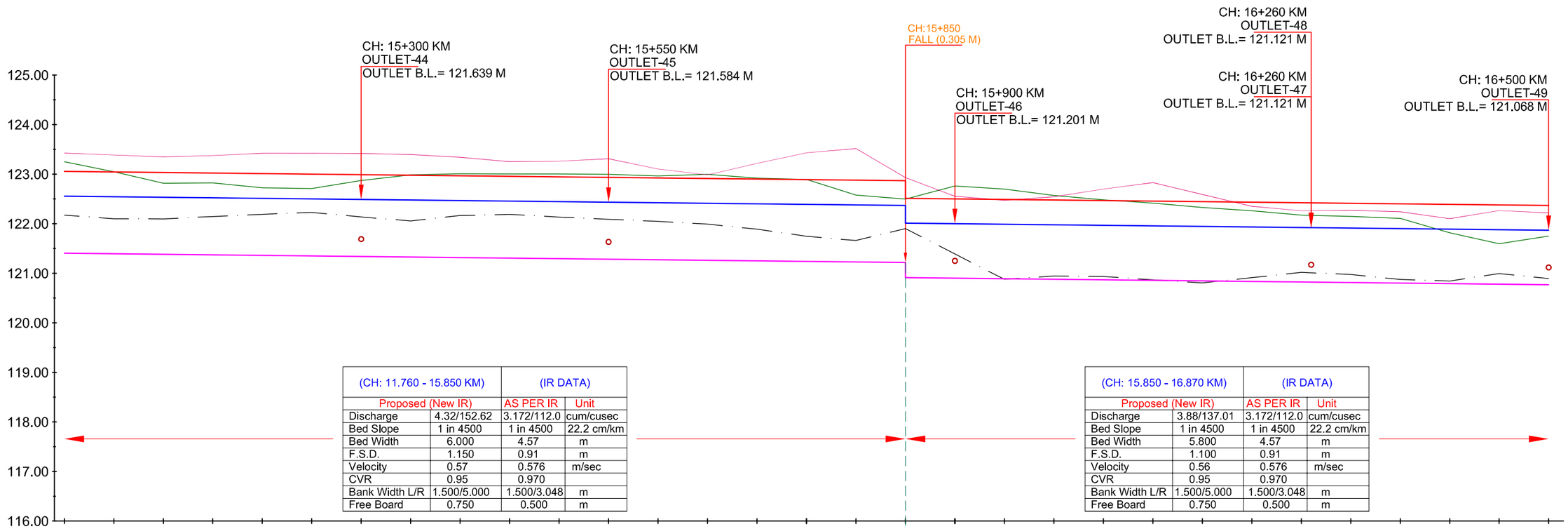
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 10 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 15+000 TO 16+500

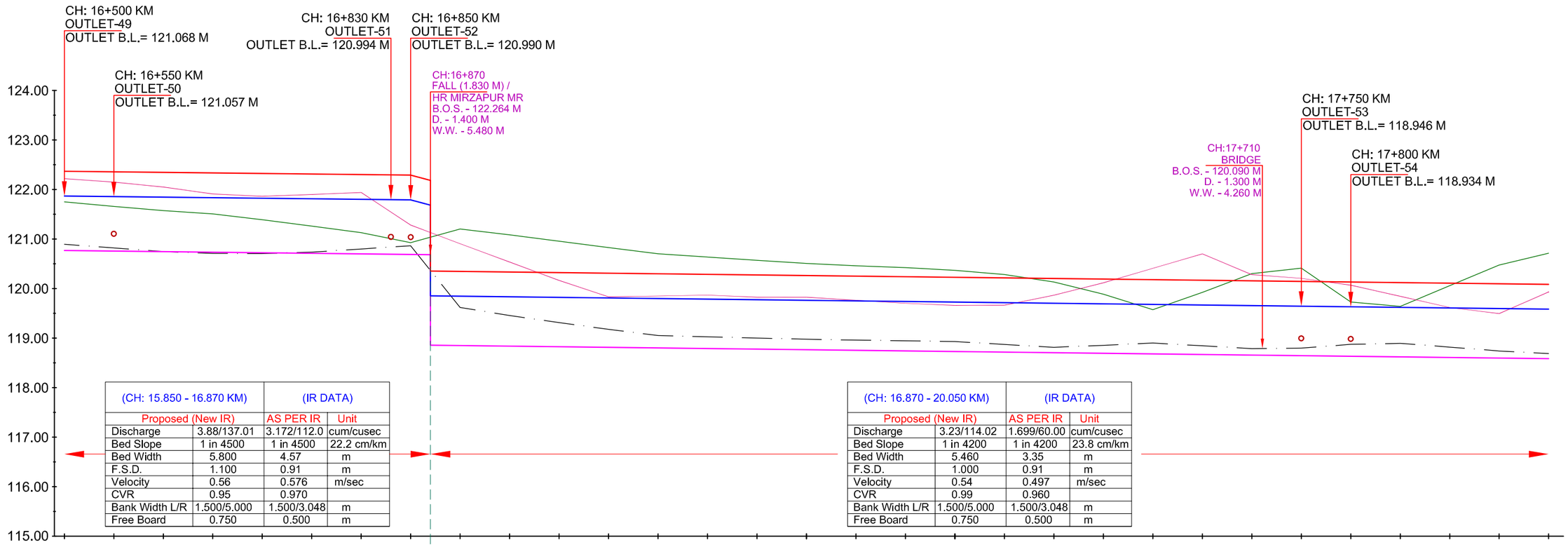


(CH: 11.760 - 15.850 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	4.32/152.62	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	6.000	4.57	m
F.S.D.	1.150	0.91	m
Velocity	0.57	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 15.850 - 16.870 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	3.88/137.01	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	5.800	4.57	m
F.S.D.	1.100	0.91	m
Velocity	0.56	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

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LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 16+500 TO 18+000



(CH: 15.850 - 16.870 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	3.88/137.01	3.172/112.0	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	5.800	4.57	m
F.S.D.	1.100	0.91	m
Velocity	0.56	0.576	m/sec
CVR	0.95	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 16.870 - 20.050 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	3.23/114.02	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	5.460	3.35	m
F.S.D.	1.000	0.91	m
Velocity	0.54	0.497	m/sec
CVR	0.99	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		Chainage IN KM	16+500	16+550	16+600	16+650	16+700	16+750	16+800	16+850	16+870	16+900	16+950	17+000	17+050	17+100	17+150	17+200	17+250	17+300	17+350	17+400	17+450	17+500	17+550	17+600	17+650	17+700	17+750	17+800	17+850	17+900	17+950	18+000
DESIGN DATA	TOP OF BANK LEVEL		122.368	122.357	122.346	122.334	122.323	122.312	122.301	122.290	122.186 / 120.356	120.348	120.337	120.325	120.313	120.301	120.289	120.277	120.265	120.253	120.241	120.229	120.217	120.206	120.194	120.182	120.170	120.158	120.146	120.134	120.122	120.110	120.098	120.087
	F.S.L.		121.868	121.857	121.846	121.834	121.823	121.812	121.801	121.790	121.686 / 119.856	119.848	119.837	119.825	119.813	119.801	119.789	119.777	119.765	119.753	119.741	119.729	119.717	119.706	119.694	119.682	119.670	119.658	119.646	119.634	119.622	119.610	119.598	119.587
	Proposed Bed Level		120.768	120.757	120.746	120.734	120.723	120.712	120.701	120.690	120.686 / 118.856	118.848	118.837	118.825	118.813	118.801	118.789	118.777	118.765	118.753	118.741	118.729	118.717	118.706	118.694	118.682	118.670	118.658	118.646	118.634	118.622	118.610	118.598	118.587
EXISTING DATA	Bed Level		120.893	120.819	120.748	120.711	120.706	120.737	120.800	120.864		119.620	119.455	119.313	119.178	119.051	119.026	119.002	118.977	118.961	118.946	118.931	118.873	118.814	118.855	118.902	118.845	118.788	118.797	118.875	118.894	118.818	118.741	118.688
	TOP OF BANK LEVEL		122.219	122.149	122.050	121.912	121.862	121.901	121.939	121.283		120.905	120.535	120.165	119.834	119.851	119.868	119.885	119.827	119.765	119.703	119.661	119.665	119.867	120.117	120.409	120.701	120.282	120.207	120.068	119.844	119.619	119.497	119.933
	NSL		121.751	121.660	121.574	121.507	121.389	121.263	121.128	120.927		121.203	121.086	120.957	120.828	120.704	120.636	120.569	120.510	120.462	120.422	120.367	120.283	120.135	119.888	119.574	119.924	120.302	120.412	119.730	119.642	120.059	120.474	120.713

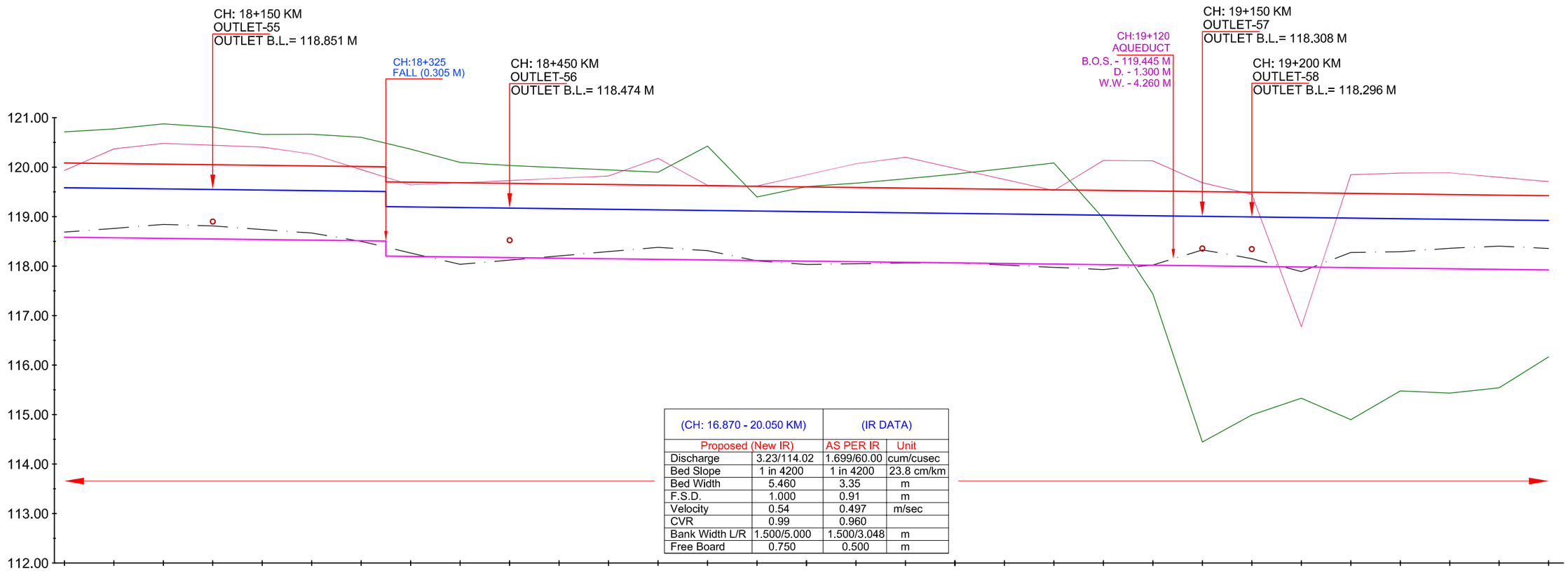
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 12 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 18+000 TO 19+500



(CH: 16.870 - 20.050 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	3.23/114.02	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	5.460	3.35	m
F.S.D.	1.000	0.91	m
Velocity	0.54	0.497	m/sec
CVR	0.99	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		Chainage IN KM	18+000	18+050	18+100	18+150	18+200	18+250	18+300	18+350	18+400	18+450	18+500	18+550	18+600	18+650	18+700	18+750	18+800	18+850	18+900	18+950	19+000	19+050	19+100	19+150	19+200	19+250	19+300	19+350	19+400	19+450	19+500
DESIGN DATA	TOP OF BANK LEVEL		120.087	120.075	120.063	120.051	120.039	120.027	120.015	120.009	119.698	119.686	119.674	119.662	119.651	119.639	119.627	119.615	119.603	119.591	119.579	119.567	119.555	119.543	119.532	119.520	119.508	119.496	119.484	119.472	119.460	119.448	119.436	119.424
	F.S.L.		119.587	119.575	119.563	119.551	119.539	119.527	119.515	119.509	119.198	119.186	119.174	119.162	119.151	119.139	119.127	119.115	119.103	119.091	119.079	119.067	119.055	119.043	119.032	119.020	119.008	118.996	118.984	118.972	118.960	118.948	118.936	118.924
	Proposed Bed Level		118.587	118.575	118.563	118.551	118.539	118.527	118.515	118.509	118.198	118.186	118.174	118.162	118.151	118.139	118.127	118.115	118.103	118.091	118.079	118.067	118.055	118.043	118.032	118.020	118.008	117.996	117.984	117.972	117.960	117.948	117.936	117.924
EXISTING DATA	Bed Level		118.688	118.763	118.844	118.812	118.739	118.669	118.502	118.266	118.036	118.122	118.208	118.295	118.381	118.313	118.016	118.035	118.049	118.066	118.068	118.023	117.977	117.932	118.022	118.329	118.152	117.892	118.277	118.293	118.361	118.406	118.359	
	TOP OF BANK LEVEL		119.933	120.370	120.481	120.445	120.409	120.266	119.952	119.641	119.685	119.731	119.777	119.822	120.179	119.636	119.622	119.847	120.072	120.201	119.978	119.753	119.529	120.135	120.129	119.687	119.451	116.776	119.848	119.881	119.888	119.798	119.708	
	NSL		120.713	120.772	120.875	120.810	120.662	120.667	120.603	120.365	120.098	120.033	119.990	119.946	119.900	120.426	119.398	119.608	119.679	119.766	119.861	119.973	120.087	118.966	117.439	114.445	114.994	115.330	114.898	115.477	115.436	115.540	116.167	

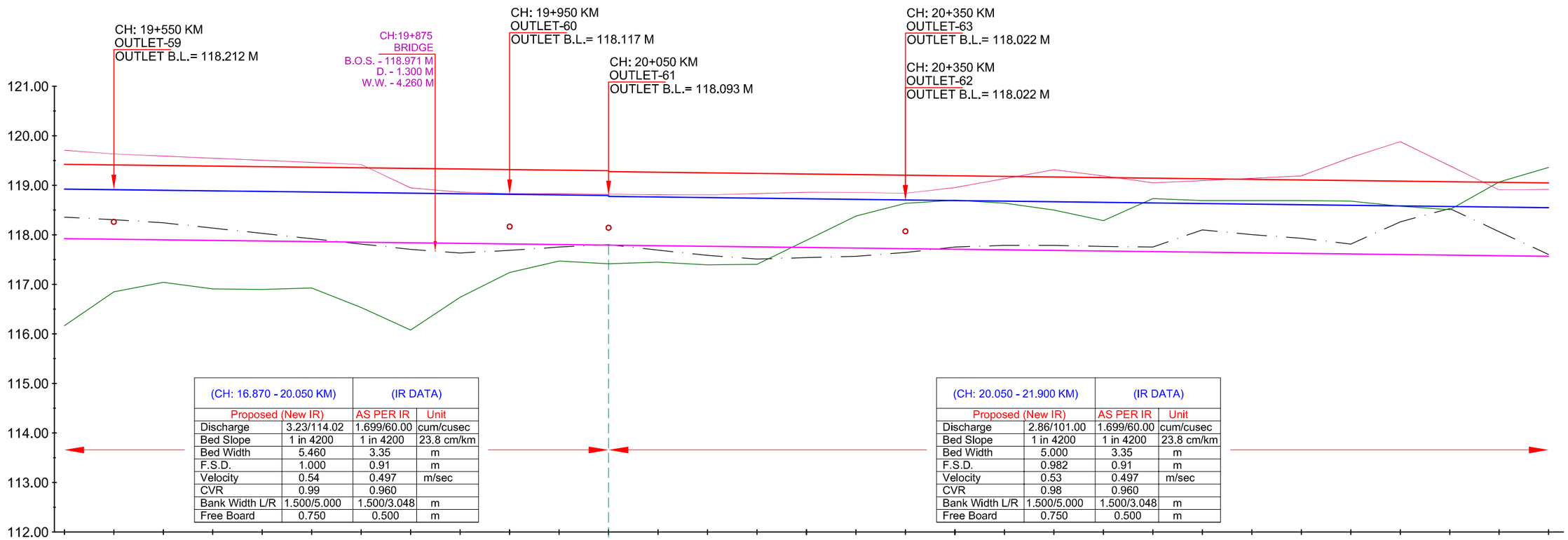
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 13 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 19+500 TO 21+000



(CH: 16.870 - 20.050 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	3.23/114.02	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	5.460	3.35	m
F.S.D.	1.000	0.91	m
Velocity	0.54	0.497	m/sec
CVR	0.99	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 20.050 - 21.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.86/101.00	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	5.000	3.35	m
F.S.D.	0.982	0.91	m
Velocity	0.53	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		19+500	19+550	19+600	19+650	19+700	19+750	19+800	19+850	19+900	19+950	20+000	20+050	20+100	20+150	20+200	20+250	20+300	20+350	20+400	20+450	20+500	20+550	20+600	20+650	20+700	20+750	20+800	20+850	20+900	20+950	21+000
DESIGN DATA	TOP OF BANK LEVEL	119.424	119.412	119.401	119.389	119.377	119.365	119.353	119.341	119.329	119.317	119.305	119.293	119.264	119.252	119.240	119.228	119.216	119.204	119.192	119.180	119.168	119.156	119.144	119.133	119.121	119.109	119.097	119.085	119.073	119.061	119.049
	F.S.L.	118.924	118.912	118.901	118.889	118.877	118.865	118.853	118.841	118.829	118.817	118.805	118.793	118.764	118.752	118.740	118.728	118.716	118.704	118.692	118.680	118.668	118.656	118.644	118.633	118.621	118.609	118.597	118.585	118.573	118.561	118.549
	Proposed Bed Level	117.924	117.912	117.901	117.889	117.877	117.865	117.853	117.841	117.829	117.817	117.805	117.793	117.782	117.770	117.758	117.746	117.734	117.722	117.710	117.698	117.686	117.674	117.662	117.651	117.639	117.627	117.615	117.603	117.591	117.579	117.567
EXISTING DATA	Bed Level	118.359	118.307	118.244	118.137	118.030	117.922	117.815	117.707	117.634	117.688	117.754	117.802	117.693	117.586	117.512	117.540	117.566	117.645	117.756	117.786	117.776	117.766	117.753	118.102	118.004	117.931	117.814	118.262	118.532	118.063	117.604
	TOP OF BANK LEVEL	119.708	119.633	119.591	119.548	119.506	119.463	119.420	118.948	118.863	118.848	118.833	118.821	118.809	118.807	118.834	118.860	118.858	118.840	118.955	119.135	119.316	119.190	119.050	119.096	119.144	119.191	119.561	119.882	119.396	118.910	118.919
	NSL	116.167	116.850	117.041	116.908	116.897	116.929	116.535	116.078	116.740	117.240	117.417	117.417	117.448	117.394	117.407	117.892	118.381	118.637	118.698	118.640	118.500	118.286	118.731	118.691	118.691	118.692	118.680	118.577	118.507	119.068	119.361
	Chainage IN KM	19+500	19+550	19+600	19+650	19+700	19+750	19+800	19+850	19+900	19+950	20+000	20+050	20+100	20+150	20+200	20+250	20+300	20+350	20+400	20+450	20+500	20+550	20+600	20+650	20+700	20+750	20+800	20+850	20+900	20+950	21+000

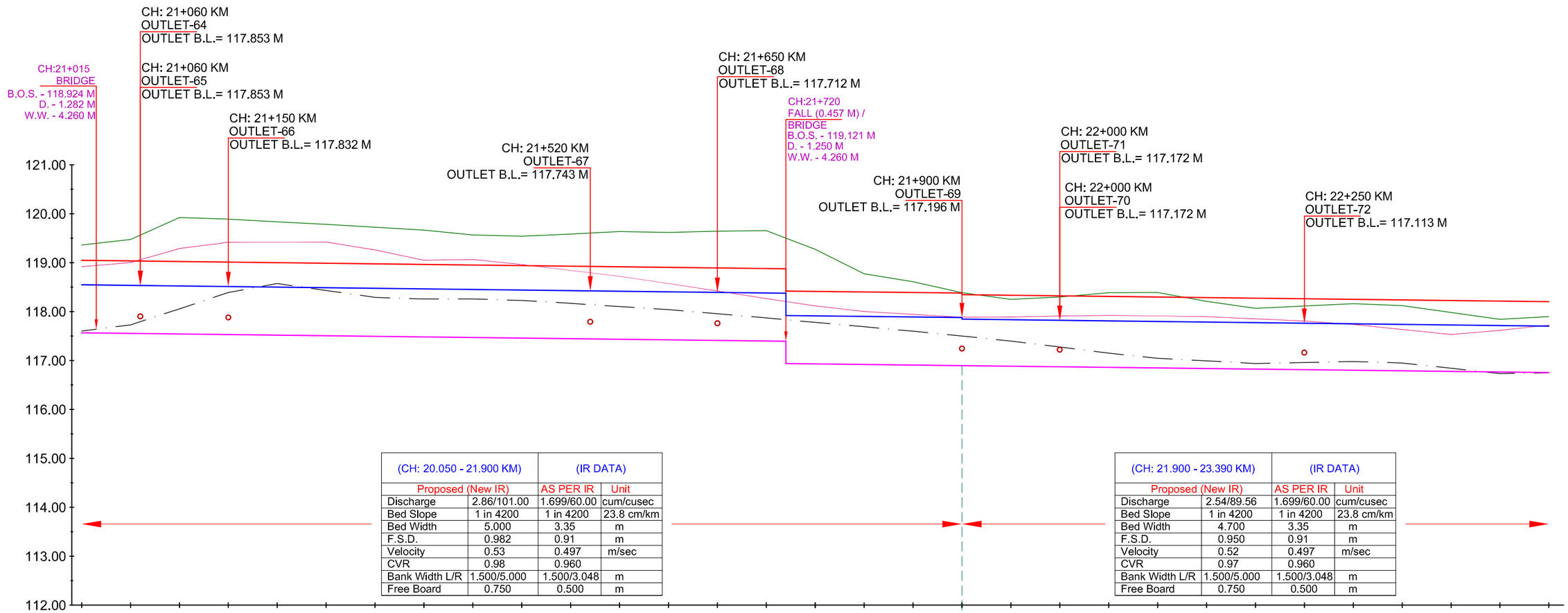
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 14 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 21+000 TO 22+500



(CH: 20.050 - 21.900 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	2.86/101.00	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	5.000	3.35	m
F.S.D.	0.982	0.91	m
Velocity	0.53	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 21.900 - 23.390 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	2.54/89.56	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.700	3.35	m
F.S.D.	0.950	0.91	m
Velocity	0.52	0.497	m/sec
CVR	0.97	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		Chainage IN KM	21+000	21+050	21+100	21+150	21+200	21+250	21+300	21+350	21+400	21+450	21+500	21+550	21+600	21+650	21+700	21+750	21+800	21+850	21+900	21+950	22+000	22+050	22+100	22+150	22+200	22+250	22+300	22+350	22+400	22+450	22+500
DESIGN DATA	TOP OF BANK LEVEL		119.049	119.037	119.025	119.014	119.002	118.990	118.978	118.966	118.954	118.942	118.930	118.918	118.906	118.894	118.883	118.878	118.421	118.414	118.402	118.390	118.378	118.346	118.334	118.322	118.310	118.298	118.286	118.275	118.263	118.251	118.239	118.227	118.215	118.203
	F.S.L.		118.549	118.537	118.525	118.514	118.502	118.490	118.478	118.466	118.454	118.442	118.430	118.418	118.406	118.394	118.383	118.378	117.921	117.914	117.902	117.890	117.878	117.846	117.834	117.822	117.810	117.798	117.786	117.775	117.763	117.751	117.739	117.727	117.715	117.703
	Proposed Bed Level		117.567	117.555	117.543	117.532	117.520	117.508	117.496	117.484	117.472	117.460	117.448	117.436	117.424	117.412	117.401	117.396	116.939	116.932	116.920	116.908	116.896	116.884	116.872	116.860	116.848	116.836	116.825	116.813	116.801	116.789	116.777	116.765	116.753
EXISTING DATA	Bed Level		117.604	117.730	118.056	118.390	118.574	118.432	118.292	118.257	118.258	118.229	118.169	118.104	118.040	117.957	117.871		117.780		117.692	117.600	117.501	117.398	117.277	117.151	117.046	116.994	116.939	116.959	116.980	116.950	116.842	116.734	116.749
	TOP OF BANK LEVEL		118.919	119.004	119.290	119.419	119.421	119.422	119.261	119.051	119.066	118.963	118.843	118.722	118.575	118.421	118.268		118.116		118.002	117.944	117.886	117.888	117.911	117.923	117.913	117.897	117.852	117.808	117.739	117.635	117.532	117.618	117.725
	NSL		119.361	119.477	119.925	119.891	119.835	119.785	119.725	119.667	119.569	119.540	119.584	119.638	119.617	119.644	119.656		119.272		118.774	118.611	118.388	118.252	118.299	118.388	118.392	118.212	118.068	118.115	118.161	118.123	117.982	117.841	117.899

LEGEND

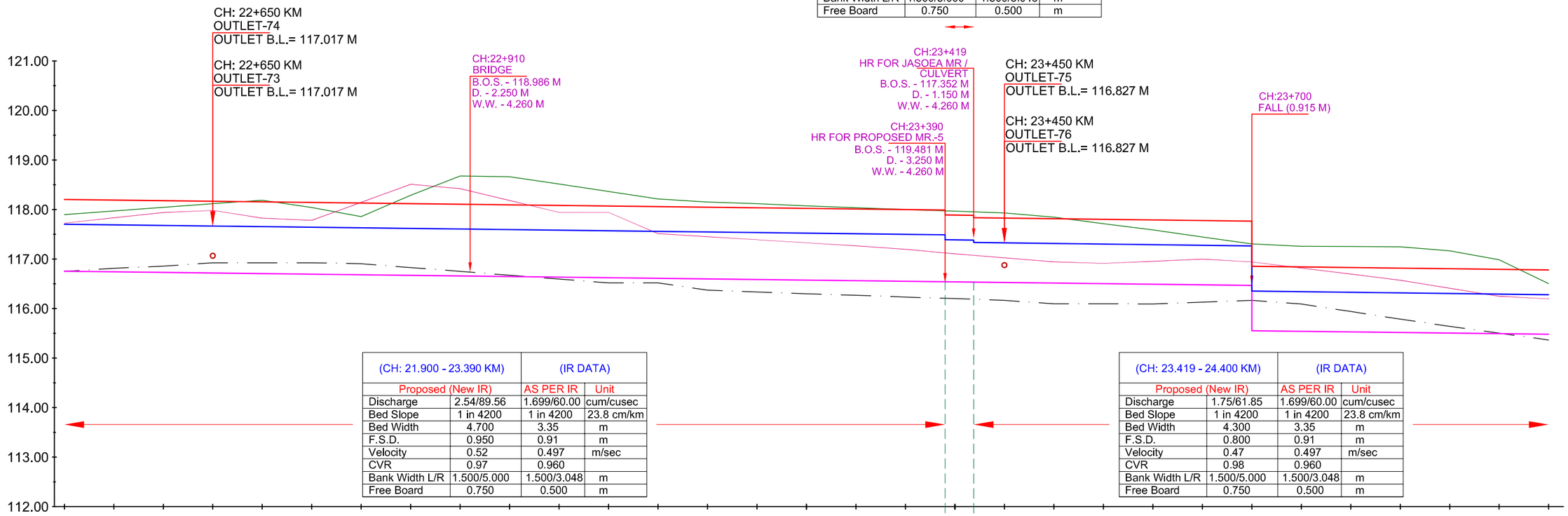
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 15 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 22+500 TO 24+000

(CH: 23.390 - 23.419 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.07/73.19	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.600	3.35	m
F.S.D.	0.850	0.91	m
Velocity	0.49	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m



(CH: 21.900 - 23.390 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.54/89.56	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.700	3.35	m
F.S.D.	0.950	0.91	m
Velocity	0.52	0.497	m/sec
CVR	0.97	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 23.419 - 24.400 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.75/61.85	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.300	3.35	m
F.S.D.	0.800	0.91	m
Velocity	0.47	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

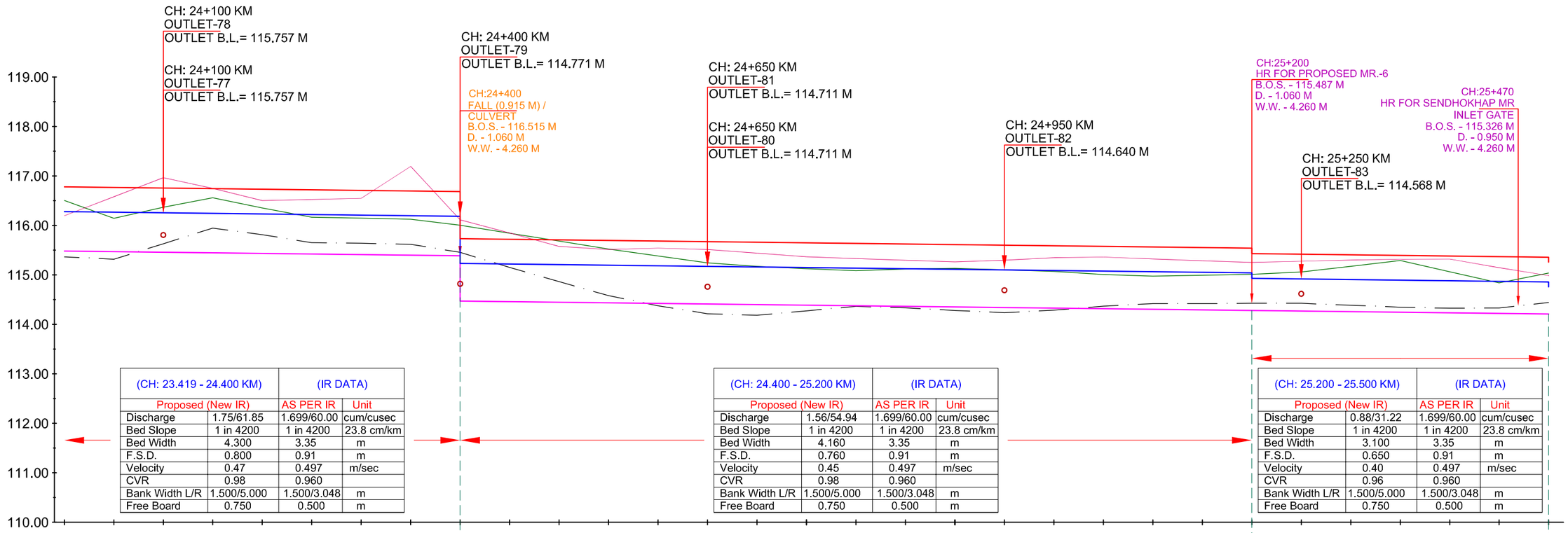
		Chainage IN KM	22+500	22+550	22+600	22+650	22+700	22+750	22+800	22+850	22+900	22+950	23+000	23+050	23+100	23+150	23+200	23+250	23+300	23+350	23+390	23+400	23+419	23+450	23+500	23+550	23+600	23+650	23+700	23+750	23+800	23+850	23+900	23+950	24+000
DESIGN DATA	TOP OF BANK LEVEL		118.203	118.191	118.179	118.167	118.155	118.144	118.132	118.120	118.108	118.096	118.084	118.072	118.060	118.048	118.036	118.025	118.013	118.001	117.991	117.889	117.884	117.827	117.815	117.803	117.791	117.779	117.767	116.840	116.829	116.817	116.805	116.793	116.781
	F.S.L.		117.703	117.691	117.679	117.667	117.655	117.644	117.632	117.620	117.608	117.596	117.584	117.572	117.560	117.548	117.536	117.525	117.513	117.501	117.491	117.389	117.384	117.327	117.315	117.303	117.291	117.279	116.352	116.340	116.329	116.317	116.305	116.293	116.281
	Proposed Bed Level		116.753	116.741	116.729	116.717	116.705	116.694	116.682	116.670	116.658	116.646	116.634	116.622	116.610	116.598	116.586	116.575	116.563	116.551	116.541	116.539	116.534	116.527	116.515	116.503	116.491	116.479	116.467	115.540	115.529	115.517	115.505	115.493	115.481
EXISTING DATA	Bed Level		116.749	116.814	116.856	116.924	116.924	116.925	116.905	116.829	116.752	116.674	116.596	116.519	116.441	116.372	116.335	116.300	116.269	116.231	116.202	116.165	116.131	116.097	116.093	116.128	116.166	116.091	115.941	115.786	115.641	115.503	115.366		
	TOP OF BANK LEVEL		117.725	117.833	117.941	117.983	117.828	117.783	118.147	118.510	118.423	118.182	117.943	117.943	117.514	117.452	117.391	117.329	117.267	117.199	117.105	117.024	116.943	116.913	116.956	116.999	116.942	116.820	116.698	116.572	116.410	116.248			
	NSL		117.899	117.972	118.045	118.118	118.188	118.041	117.856	118.287	118.677	118.664	118.515	118.365	118.216	118.153	118.119	118.074	118.036	118.001	117.967	117.932	117.845	117.714	117.589	117.447	117.307	117.257	117.253	117.248	117.167	116.987	116.503		

LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 16 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 24+000 TO 25+500



(CH: 23.419 - 24.400 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.75/61.85	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.300	3.35	m
F.S.D.	0.800	0.91	m
Velocity	0.47	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 24.400 - 25.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.56/54.94	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	4.160	3.35	m
F.S.D.	0.760	0.91	m
Velocity	0.45	0.497	m/sec
CVR	0.98	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 25.200 - 25.500 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.88/31.22	1.699/60.00	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	3.100	3.35	m
F.S.D.	0.650	0.91	m
Velocity	0.40	0.497	m/sec
CVR	0.96	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	116.781	116.769	116.757	116.745	116.733	116.721	116.710	116.698	116.686	115.731	115.719	115.707	115.695	115.683	115.671	115.659	115.647	115.635	115.624	115.612	115.600	115.588	115.576	115.564	115.552	115.540	115.430	115.418	115.406	115.395	115.383	115.371	115.359	115.259
	F.S.L.	116.281	116.269	116.257	116.245	116.233	116.221	116.210	116.198	116.186	115.231	115.219	115.207	115.195	115.183	115.171	115.159	115.147	115.135	115.124	115.112	115.100	115.088	115.076	115.064	115.052	115.040	114.930	114.918	114.906	114.895	114.883	114.871	114.859	114.759
	Proposed Bed Level	115.481	115.469	115.457	115.445	115.433	115.421	115.410	115.398	115.386	114.471	114.459	114.447	114.435	114.423	114.411	114.399	114.387	114.375	114.364	114.352	114.340	114.328	114.316	114.304	114.292	114.280	114.427	114.268	114.256	114.245	114.233	114.221	114.209	114.109
EXISTING DATA	Bed Level	115.366	115.317	115.631	115.946	115.812	115.653	115.639	115.619	115.455	115.152	114.864	114.580	114.377	114.215	114.183	114.274	114.364	114.334	114.281	114.236	114.287	114.367	114.419	114.422	114.427	114.426	114.387	114.348	114.327	114.332	114.442			
	TOP OF BANK LEVEL	116.196	116.581	116.966	116.749	116.503	116.525	116.549	117.194	116.114	115.848	115.576	115.515	115.541	115.513	115.441	115.263	115.297	115.349	115.361	115.323	115.285	115.253	115.277	115.301	115.318	114.966	115.321	115.147						
	NSL	116.503	116.146	116.367	116.560	116.353	116.168	116.147	116.127	116.003	115.843	115.683	115.524	115.382	115.244	115.173	115.134	115.103	115.072	115.009	114.975	114.994	115.013	115.060	115.175	115.290	115.063	114.838	115.037						
	Chainage IN KM	24+000	24+050	24+100	24+150	24+200	24+250	24+300	24+350	24+400	24+450	24+500	24+550	24+600	24+650	24+700	24+750	24+800	24+850	24+900	24+950	25+000	25+050	25+100	25+150	25+200	25+250	25+300	25+350	25+400	25+450	25+500			

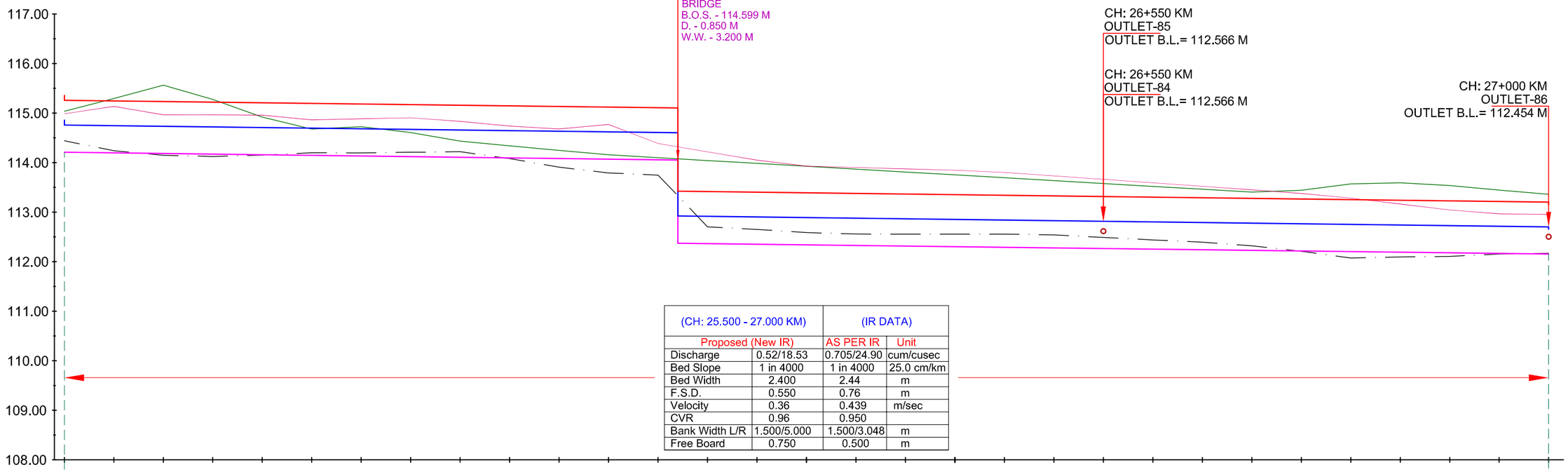
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 17 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 25+500 TO 27+000



(CH: 25.500 - 27.000 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.52/18.53	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	2.400	2.44	m
F.S.D.	0.550	0.76	m
Velocity	0.36	0.439	m/sec
CVR	0.96	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		25+500	25+550	25+600	25+650	25+700	25+750	25+800	25+850	25+900	25+950	26+000	26+050	26+100	26+150	26+200	26+250	26+300	26+350	26+400	26+450	26+500	26+550	26+600	26+650	26+700	26+750	26+800	26+850	26+900	26+950	27+000
DESIGN DATA	TOP OF BANK LEVEL	115.359	115.246	115.234	115.221	115.209	115.196	115.184	115.171	115.159	115.146	115.134	115.121	115.109	115.104	115.416	113.404	113.379	113.366	113.354	113.341	113.329	113.316	113.304	113.291	113.279	113.266	113.254	113.241	113.229	113.216	113.204
	F.S.L.	114.859	114.746	114.734	114.721	114.709	114.696	114.684	114.671	114.659	114.646	114.634	114.621	114.609	114.604	112.916	112.904	112.879	112.866	112.854	112.841	112.829	112.816	112.804	112.791	112.779	112.766	112.754	112.741	112.729	112.716	112.704
	Proposed Bed Level	114.209	114.196	114.184	114.171	114.159	114.146	114.134	114.121	114.109	114.096	114.084	114.071	114.059	114.054	112.366	112.354	112.329	112.316	112.304	112.291	112.279	112.266	112.254	112.241	112.229	112.216	112.204	112.191	112.179	112.166	112.154
EXISTING DATA	Bed Level	114.442	114.241	114.149	114.124	114.153	114.198	114.197	114.209	114.220	114.081	113.909	113.793	113.749	112.704	112.650	112.589	112.558	112.556	112.558	112.557	112.541	112.490	112.440	112.394	112.322	112.210	112.074	112.096	112.107	112.154	112.169
	TOP OF BANK LEVEL	114.986	115.136	114.966	114.966	114.959	114.864	114.885	114.906	114.833	114.739	114.679	114.773	114.387	114.218	114.050	113.929	113.902	113.875	113.847	113.802	113.733	113.663	113.593	113.523	113.451	113.378	113.284	113.164	113.045	112.967	112.956
	NSL	115.037	115.295	115.565	115.275	114.921	114.678	114.724	114.608	114.434	114.339	114.246	114.158	114.100	114.043	113.985	113.927	113.869	113.811	113.753	113.695	113.637	113.579	113.521	113.463	113.405	113.441	113.572	113.592	113.536	113.444	113.361
	Chainage IN KM	25+500	25+550	25+600	25+650	25+700	25+750	25+800	25+850	25+900	25+950	26+000	26+050	26+100	26+150	26+200	26+250	26+300	26+350	26+400	26+450	26+500	26+550	26+600	26+650	26+700	26+750	26+800	26+850	26+900	26+950	27+000

LEGEND

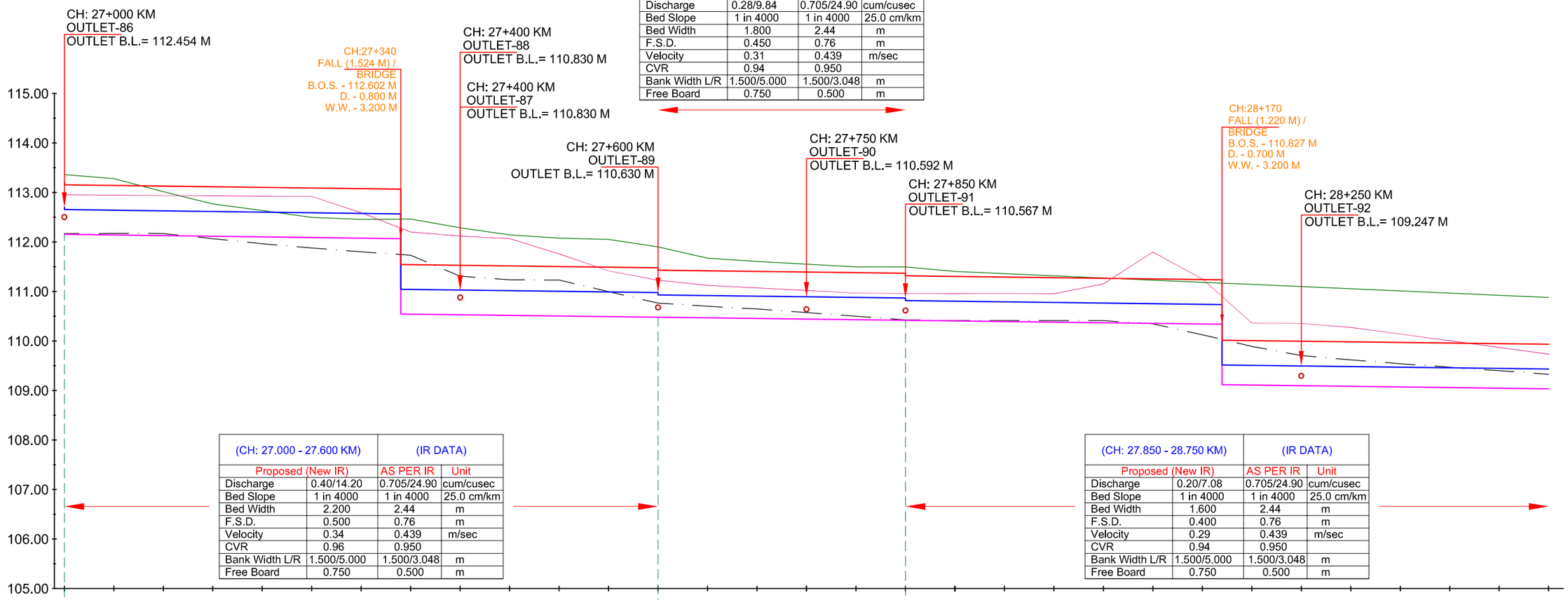
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 18 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 27+000 TO 28+500

(CH: 27.600 - 27.850 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.28/9.84	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	1.800	2.44	m
F.S.D.	0.450	0.76	m
Velocity	0.31	0.439	m/sec
CVR	0.94	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m



(CH: 27.000 - 27.600 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.40/14.20	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	2.200	2.44	m
F.S.D.	0.500	0.76	m
Velocity	0.34	0.439	m/sec
CVR	0.96	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 27.850 - 28.750 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/7.08	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	1.600	2.44	m
F.S.D.	0.400	0.76	m
Velocity	0.29	0.439	m/sec
CVR	0.94	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

		27+000	27+050	27+100	27+150	27+200	27+250	27+300	27+350	27+400	27+450	27+500	27+550	27+600	27+650	27+700	27+750	27+800	27+850	27+900	27+950	28+000	28+050	28+100	28+150	28+200	28+250	28+300	28+350	28+400	28+450	28+500
DESIGN DATA	TOP OF BANK LEVEL	113.204	113.141	113.129	113.116	113.104	113.091	113.079	113.069	111.545	111.542	111.530	111.517	111.505	111.492	111.480	111.430	111.417	111.405	111.392	111.380	111.367	111.317	111.305	111.292	111.280	111.267	111.255	111.242	111.237	110.017	110.010	109.997	109.985	109.972	109.960	109.947	109.935
	F.S.L.	112.704	112.641	112.629	112.616	112.604	112.591	112.579	112.569	111.045	111.042	111.030	111.017	111.005	110.992	110.980	110.930	110.917	110.905	110.892	110.880	110.867	110.817	110.805	110.792	110.780	110.767	110.755	110.742	110.737	109.517	109.510	109.497	109.485	109.472	109.460	109.447	109.435
	Proposed Bed Level	112.154	112.141	112.129	112.116	112.104	112.091	112.079	112.069	110.545	110.542	110.530	110.517	110.505	110.492	110.480	110.430	110.467	110.455	110.442	110.430	110.417	110.417	110.405	110.392	110.380	110.367	110.355	110.342	110.337	109.117	109.110	109.097	109.085	109.072	109.060	109.047	109.035
EXISTING DATA	Bed Level	112.169	112.173	112.172	112.069	111.966	111.880	111.802	111.734	111.308	111.236	111.231	110.998	110.766	110.703	110.647	110.574	110.500	110.426	110.414	110.413	110.412	110.412	110.346	110.127	109.892	109.706	109.619	109.542	109.471	109.400	109.329
	TOP OF BANK LEVEL	112.956	112.945	112.939	112.933	112.926	112.921	112.592	112.201	112.121	112.069	111.760	111.417	111.228	111.125	111.073	111.020	110.968	110.960	110.959	110.957	111.153	111.797	111.256	110.365	110.354	110.276	110.141	110.006	109.871	109.736
	NSL	113.361	113.280	113.015	112.771	112.637	112.496	112.458	112.465	112.289	112.144	112.077	112.053	111.902	111.672	111.609	111.554	111.499	111.449	111.405	111.361	111.318	111.274	111.230	111.186	111.143	111.099	111.055	111.011	110.968	110.924	110.880
	Chainage IN KM	27+000	27+050	27+100	27+150	27+200	27+250	27+300	27+350	27+400	27+450	27+500	27+550	27+600	27+650	27+700	27+750	27+800	27+850	27+900	27+950	28+000	28+050	28+100	28+150	28+200	28+250	28+300	28+350	28+400	28+450	28+500

LEGEND

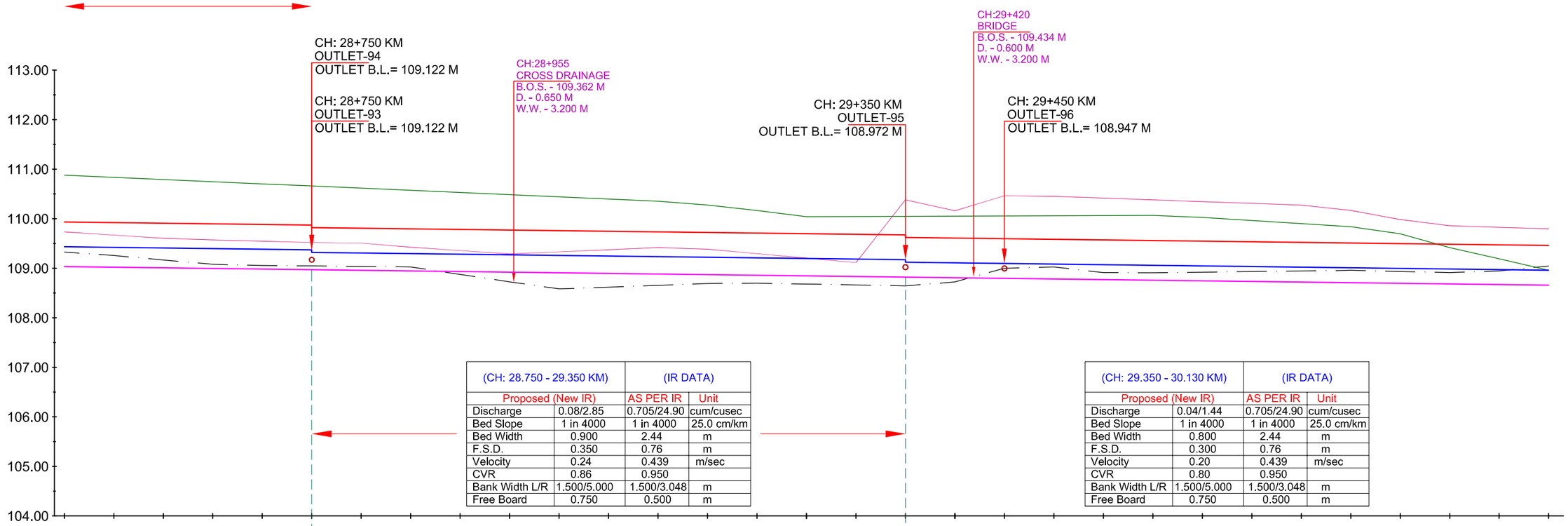
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 19 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 28+500 TO 30+000

(CH: 27.850 - 28.750 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/7.08	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	1.600	2.44	m
F.S.D.	0.400	0.76	m
Velocity	0.29	0.439	m/sec
CVR	0.94	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m



(CH: 28.750 - 29.350 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.85	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	0.900	2.44	m
F.S.D.	0.350	0.76	m
Velocity	0.24	0.439	m/sec
CVR	0.86	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

(CH: 29.350 - 30.130 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.44	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	0.800	2.44	m
F.S.D.	0.300	0.76	m
Velocity	0.20	0.439	m/sec
CVR	0.80	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	109.935	109.922	109.910	109.897	109.885	109.872	109.822	109.810	109.797	109.785	109.772	109.760	109.747	109.735	109.722	109.710	109.697	109.685	109.672	109.622	109.610	109.597	109.585	109.572	109.560	109.547	109.535	109.522	109.510	109.497	109.485	109.472	109.460
	F.S.L.	109.435	109.422	109.410	109.397	109.385	109.372	109.322	109.310	109.297	109.285	109.272	109.260	109.247	109.235	109.222	109.210	109.197	109.185	109.172	109.122	109.110	109.097	109.085	109.072	109.060	109.047	109.035	109.022	109.010	108.997	108.985	108.972	108.960
	Proposed Bed Level	109.035	109.022	109.010	108.997	108.985	108.972	108.960	108.947	108.935	108.922	108.910	108.897	108.885	108.872	108.860	108.847	108.835	108.822	108.810	108.797	108.785	108.772	108.760	108.747	108.735	108.722	108.710	108.697	108.685	108.672	108.660		
EXISTING DATA	Bed Level	109.329	109.257	109.168	109.080	109.055	109.047	109.036	109.026	108.876	108.726	108.584	108.618	108.657	108.693	108.699	108.681	108.663	108.646	108.724	109.000	109.026	108.912	108.908	108.920	108.934	108.944	108.959	108.935	108.914	108.944	109.045		
	TOP OF BANK LEVEL	109.736	109.671	109.605	109.572	109.546	109.520	109.509	109.426	109.358	109.289	109.332	109.375	109.419	109.385	109.295	109.205	109.115	110.362	110.160	110.464	110.451	110.418	110.382	110.346	110.311	110.275	110.169	109.985	109.859	109.827	109.796		
	NSL	110.836	110.836	110.792	110.749	110.705	110.661	110.617	110.574	110.530	110.486	110.442	110.399	110.355	110.277	110.166	110.043	110.046	110.049	110.052	110.056	110.059	110.062	110.066	110.025	109.963	109.901	109.839	109.696	109.415	109.192	108.960		
	Chainage IN KM	28+550	28+550	28+600	28+650	28+700	28+750	28+800	28+850	28+900	28+950	29+000	29+050	29+100	29+150	29+200	29+250	29+300	29+350	29+400	29+450	29+500	29+550	29+600	29+650	29+700	29+750	29+800	29+850	29+900	29+950	30+000		

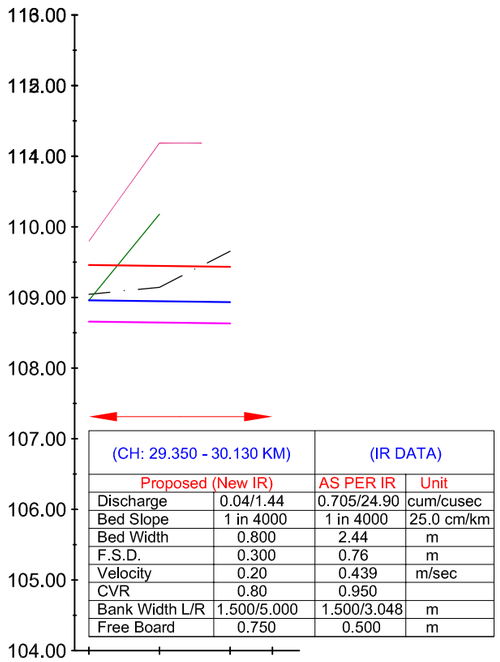
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 20 of 21
Drawn By:-	Checked By:- / Approved By:-

LONGITUDINAL SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 30+000 TO 30+130



(CH: 29.350 - 30.130 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.44	0.705/24.90	cum/cusec
Bed Slope	1 in 4000	1 in 4000	25.0 cm/km
Bed Width	0.800	2.44	m
F.S.D.	0.300	0.76	m
Velocity	0.20	0.439	m/sec
CVR	0.80	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.750	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	109.460	109.447	109.435	
	F.S.L.	108.960	108.947	108.935	
	Proposed Bed Level	108.660	108.647	108.635	
EXISTING DATA	Bed Level	109.045	109.146	109.654	
	TOP OF BANK LEVEL	109.796	111.187	111.187	
	NSL	108.960	110.181		
	Chainage IN KM	30+000	30+050	30+100	30+130

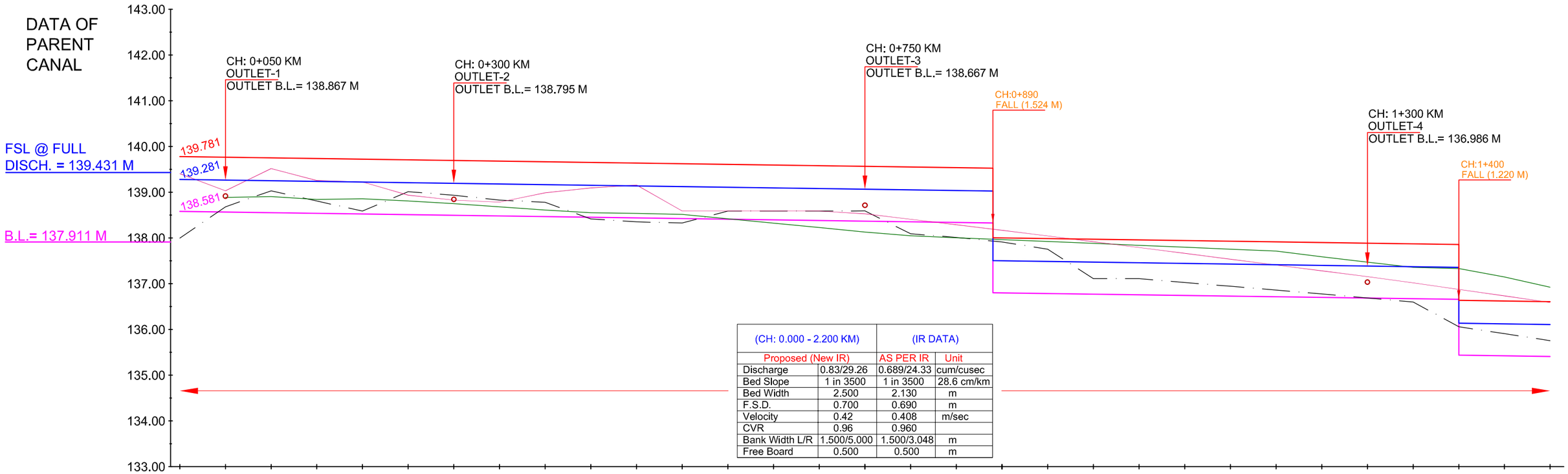
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ LSEC- 21 of 21
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 2.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.83/29.26	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	2.500	2.130	m
F.S.D.	0.700	0.690	m
Velocity	0.42	0.408	m/sec
CVR	0.96	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	139.781	139.767	139.752	139.738	139.724	139.710	139.695	139.681	139.667	139.652	139.638	139.624	139.610	139.595	139.581	139.567	139.552	139.538	139.527	139.000	137.986	137.971	137.957	137.943	137.928	137.914	137.900	137.886	137.871	137.857	136.637	136.623	136.608
	F.S.L.	139.281	139.267	139.252	139.238	139.224	139.210	139.195	139.181	139.167	139.152	139.138	139.124	139.110	139.095	139.081	139.067	139.052	139.038	139.027 138.003 137.500		137.486	137.471	137.457	137.443	137.428	137.414	137.400	137.386	137.371	137.357 136.137		136.123	136.108
	Proposed Bed Level	138.581	138.567	138.552	138.538	138.524	138.510	138.495	138.481	138.467	138.452	138.438	138.424	138.410	138.395	138.381	138.367	138.352	138.338	138.327 136.803 136.800		136.786	136.771	136.757	136.743	136.728	136.714	136.700	136.686	136.671	136.657 135.437		135.423	135.408
EXISTING DATA	Bed Level	137.998	138.680	139.032	138.809	138.588	139.013	138.935	138.829	138.781	138.418	138.352	138.327	138.590	138.590	138.589	138.591	138.091	138.013	137.913		137.756	137.562	137.110	137.027	136.944	136.861	136.776	136.688	136.601	136.059		135.908	135.756
	TOP OF BANK LEVEL	139.408	139.031	139.519	139.257	139.225	138.936	138.828	138.784	138.988	139.094	139.159	138.589	138.589	138.589	138.589	138.530	138.410	138.289	138.167		138.046	137.919	137.791	137.664	137.536	137.409	137.282	137.156	137.019	136.876		136.733	136.590
	NSL		138.886	138.907	138.843	138.859	138.811	138.750	138.682	138.612	138.554	138.536	138.514	138.420	138.323	138.227	138.130	138.047	138.005	137.965		137.923	137.882	137.839	137.797	137.755	137.714	137.589	137.473	137.359	137.330		137.146	136.924
	Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500		

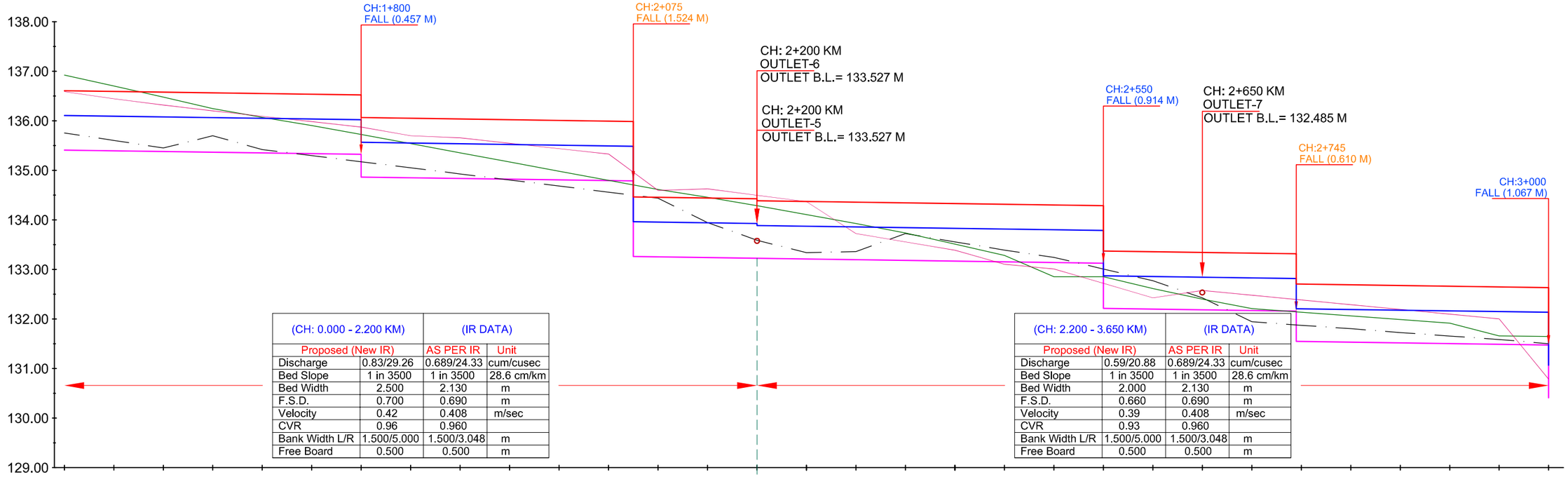
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF PANTI MR. (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ LSEC- 01 of 05
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 3+000



(CH: 0.000 - 2.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.83/29.26	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	2.500	2.130	m
F.S.D.	0.700	0.690	m
Velocity	0.42	0.408	m/sec
CVR	0.96	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 2.200 - 3.650 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.59/20.88	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	2.000	2.130	m
F.S.D.	0.660	0.690	m
Velocity	0.39	0.408	m/sec
CVR	0.93	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

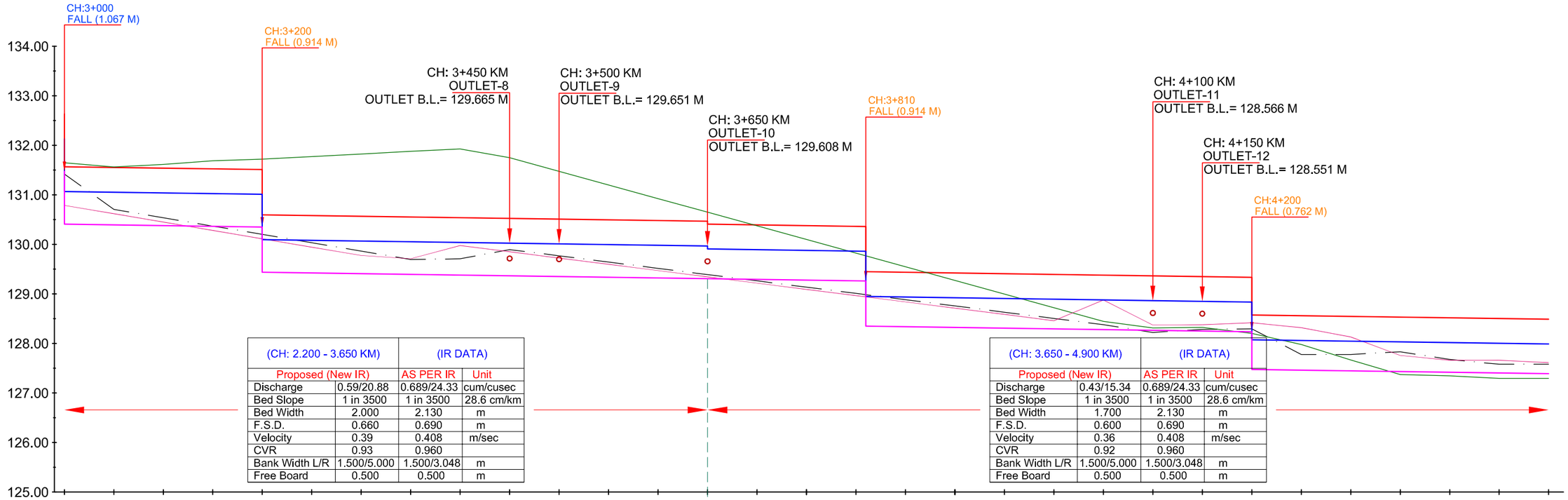
		1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450	2+500	2+550	2+600	2+650	2+700	2+750	2+800	2+850	2+900	2+950	3+000
DESIGN DATA	TOP OF BANK LEVEL	136.608	136.594	136.580	136.566	136.551	136.537	136.523 136.066	136.051	136.037	136.023	136.009	135.994	135.987 134.463	134.456	134.442	134.427 134.387	134.373	134.359	134.345	134.330	134.316	134.302	134.287 133.373	133.359	133.345	133.331	133.318 132.706	132.692	132.678	132.663	132.649	132.635 131.568
	F.S.L.	136.108	136.094	136.080	136.066	136.051	136.037	136.023 135.566	135.551	135.537	135.523	135.509	135.494	135.487 133.963	133.956	133.942	133.927 133.887	133.873	133.859	133.845	133.830	133.816	133.802	133.787 132.873	132.859	132.845	132.831	132.818 132.206	132.192	132.178	132.163	132.149	132.135 131.068
	Proposed Bed Level	135.408	135.394	135.380	135.366	135.351	135.337	135.323 134.866	134.851	134.837	134.823	134.809	134.794	134.787 133.263	133.256	133.242	133.227	133.213	133.199	133.185	133.170	133.156	133.142	133.127 132.213	132.199	132.185	132.171	132.158 131.546	131.532	131.518	131.503	131.489	131.475 130.408
EXISTING DATA	Bed Level	135.756	135.604	135.453	135.669	135.421	135.298	135.175	135.052	134.929	134.807	134.684	134.561	134.437	133.947	133.590	133.339	133.362	133.726	133.557	133.391	133.244	133.009	132.722	132.428	131.946	131.873	131.805	131.726	131.656	131.587	131.502
	TOP OF BANK LEVEL	136.590	136.446	136.319	136.202	136.093	135.984	135.875	135.700	135.657	135.548	135.439	135.330	134.595	134.629	134.497	134.368	133.725	133.557	133.389	133.107	133.009	132.722	132.427	132.575	132.480	132.385	132.289	132.194	132.098	132.003	130.788
	NSL	136.924	136.702	136.480	136.247	136.071	135.906	135.727	135.541	135.355	135.170	134.984	134.800	134.614	134.458	134.287	134.109	133.927	133.735	133.510	133.285	133.065	132.853	132.616	132.401	132.210	132.136	132.062	131.989	131.915	131.660	131.648
	Chainage IN KM	1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450	2+500	2+550	2+600	2+650	2+700	2+750	2+800	2+850	2+900	2+950	3+000

LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF PANTI MR. (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ LSEC- 02 of 05
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
FROM CH 3+000 TO 4+500



(CH: 2.200 - 3.650 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	0.59/20.88	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	2.000	2.130	m
F.S.D.	0.660	0.690	m
Velocity	0.39	0.408	m/sec
CVR	0.93	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 3.650 - 4.900 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	0.43/15.34	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	1.700	2.130	m
F.S.D.	0.600	0.690	m
Velocity	0.36	0.408	m/sec
CVR	0.92	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	132.635	131.554	131.539	131.525	131.511	130.582	130.568	130.554	130.540	130.525	130.511	130.497	130.482	130.468	130.394	130.380	130.365	129.437	129.423	129.408	129.394	129.380	129.366	129.351	129.337	128.561	128.546	128.532	128.518	128.504	128.489
	F.S.L.	132.135	131.054	131.039	131.025	131.011	130.082	130.068	130.054	130.040	130.025	130.011	129.997	129.982	129.968	129.894	129.880	129.865	128.937	128.923	128.908	128.894	128.880	128.866	128.851	128.837	128.061	128.046	128.032	128.018	128.004	127.989
	Proposed Bed Level	131.475	130.394	130.379	130.365	130.351	129.422	129.408	129.394	129.380	129.365	129.351	129.337	129.322	129.308	129.294	129.280	129.265	128.337	128.323	128.308	128.294	128.280	128.266	128.251	128.237	127.461	127.446	127.432	127.418	127.404	127.389
EXISTING DATA	Bed Level	131.502	130.788	130.620	130.451	130.283	130.115	129.946	129.775	129.709	129.977	129.851	129.724	129.598	129.471	129.345	129.218	129.092	128.965	128.839	128.712	128.586	128.459	128.304	128.366	128.376	127.762	127.859	127.914	127.757	127.709	127.661
	TOP OF BANK LEVEL	130.788	130.620	130.451	130.283	130.114	129.945	129.777	129.710	129.977	129.851	129.724	129.598	129.472	129.345	129.218	129.092	128.966	128.839	128.713	128.586	128.460	128.877	128.372	128.379	128.419	128.319	128.132	127.758	127.661	127.661	127.613
	NSL	131.648	131.563	131.616	131.668	131.721	131.773	131.825	131.878	131.928	131.751	131.476	131.201	130.925	130.650	130.375	130.099	129.824	129.548	129.273	128.998	128.722	128.447	128.341	128.324	128.203	127.978	127.665	127.371	127.345	127.319	127.293
	Chainage IN KM	3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400	3+450	3+500	3+550	3+600	3+650	3+700	3+750	3+800	3+850	3+900	3+950	4+000	4+050	4+100	4+150	4+200	4+250	4+300	4+350	4+400	4+450	4+500

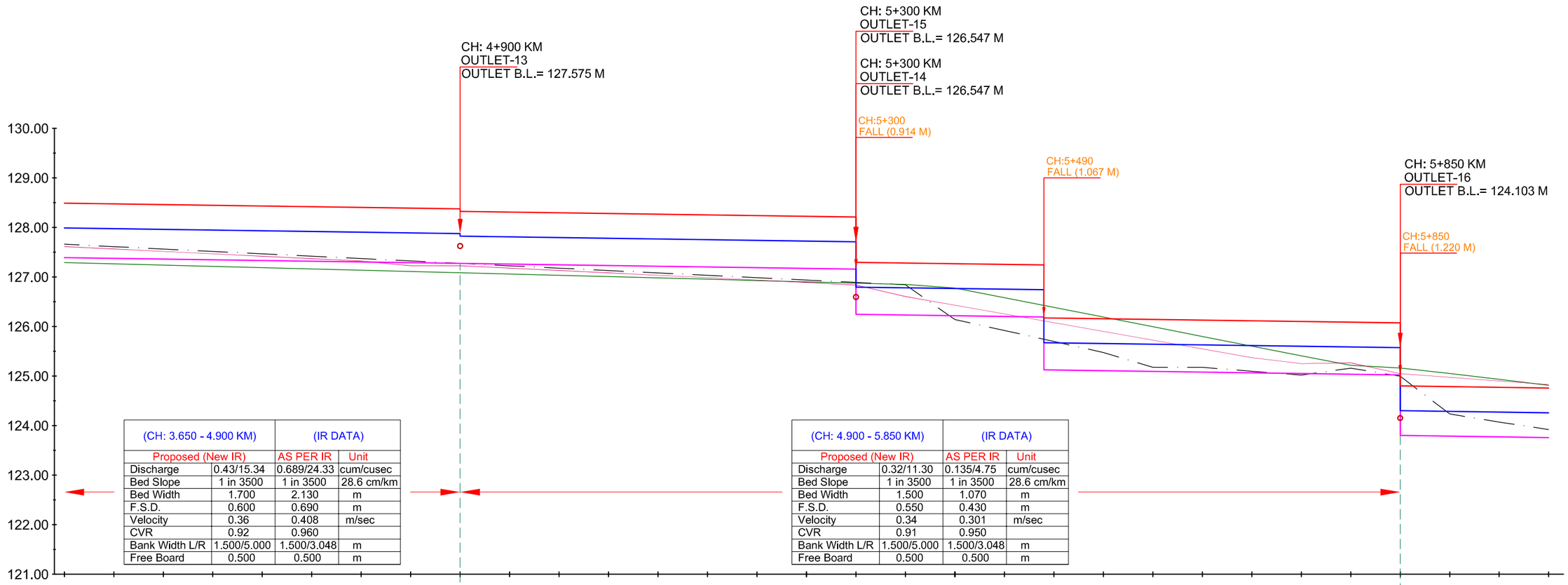
LEGEND

NSL		EXISTING BED LEVEL
EXISTING TOP OF BANK		PROPOSED BED LEVEL
EXISTING FALL		PROPOSED FSL
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF PANTI MR. (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ LSEC- 03 of 05
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
FROM CH 4+500 TO 6+000



(CH: 3.650 - 4.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.43/15.34	0.689/24.33	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	1.700	2.130	m
F.S.D.	0.600	0.690	m
Velocity	0.36	0.408	m/sec
CVR	0.92	0.960	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 4.900 - 5.850 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.32/11.30	0.135/4.75	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	1.500	1.070	m
F.S.D.	0.550	0.430	m
Velocity	0.34	0.301	m/sec
CVR	0.91	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	5+950	6+000
DESIGN DATA	TOP OF BANK LEVEL	128.489	128.475	128.461	128.446	128.432	128.418	128.404	128.389	128.375	128.311	128.296	128.282	128.268	128.254	128.239	128.225	128.211	128.282	127.268	127.254	127.242	126.158	126.144	126.130	126.115	126.101	126.087	126.073	124.788	124.774	124.760
	F.S.L.	127.989	127.975	127.961	127.946	127.932	127.918	127.904	127.889	127.875	127.811	127.796	127.782	127.768	127.754	127.739	127.725	127.711	126.782	126.768	126.754	126.742	125.658	125.644	125.630	125.615	125.601	125.587	125.573	124.288	124.274	124.260
	Proposed Bed Level	127.389	127.375	127.361	127.346	127.332	127.318	127.304	127.289	127.275	127.261	127.246	127.232	127.218	127.204	127.189	127.175	127.161	126.232	126.218	126.204	126.192	125.108	125.094	125.080	125.065	125.051	125.037	125.023	123.788	123.774	123.760
EXISTING DATA	Bed Level	127.661	127.613	127.565	127.516	127.468	127.420	127.372	127.323	127.275	127.227	127.179	127.131	127.082	127.034	126.986	126.938	126.890	126.841	126.142	125.920	125.698	125.476	125.256	125.176	125.098	125.020	125.159	124.996	124.235	124.071	123.921
	TOP OF BANK LEVEL	127.613	127.565	127.516	127.468	127.420	127.372	127.324	127.275	127.228	127.179	127.131	127.083	127.035	126.986	126.938	126.890	126.837	126.607	126.431	126.254	126.078	125.902	125.726	125.549	125.373	125.251	125.268	125.049	124.975	124.902	124.828
	NSL	127.293	127.267	127.241	127.215	127.189	127.163	127.137	127.111	127.085	127.059	127.033	127.007	126.981	126.955	126.929	126.903	126.877	126.851	126.776	126.581	126.386	126.191	125.996	125.800	125.605	125.410	125.216	125.163	125.053	124.933	124.814
	Chainage IN KM	4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	5+950	6+000

LEGEND

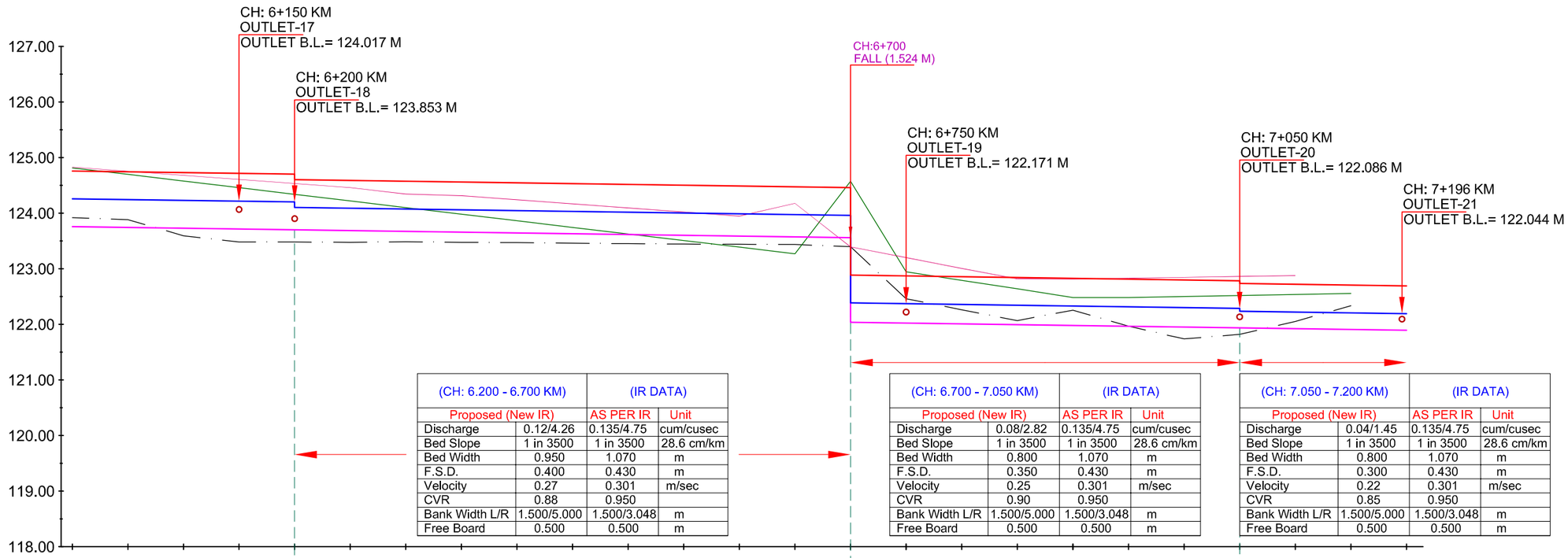
NSL		EXISTING BED LEVEL	
EXISTING TOP OF BANK		PROPOSED BED LEVEL	
EXISTING FALL		PROPOSED FSL	
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL	
NEW FALL			

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF PANTI MR. (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ LSEC- 04 of 05
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
FROM CH 6+000 TO 7+200

(CH: 5.850 - 6.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/7.05	0.135/4.75	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	1.100	1.070	m
F.S.D.	0.500	0.430	m
Velocity	0.31	0.301	m/sec
CVR	0.87	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m



(CH: 6.200 - 6.700 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.12/4.26	0.135/4.75	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	0.950	1.070	m
F.S.D.	0.400	0.430	m
Velocity	0.27	0.301	m/sec
CVR	0.88	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 6.700 - 7.050 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.82	0.135/4.75	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	0.800	1.070	m
F.S.D.	0.350	0.430	m
Velocity	0.25	0.301	m/sec
CVR	0.90	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 7.050 - 7.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.45	0.135/4.75	cum/cusec
Bed Slope	1 in 3500	1 in 3500	28.6 cm/km
Bed Width	0.800	1.070	m
F.S.D.	0.300	0.430	m
Velocity	0.22	0.301	m/sec
CVR	0.85	0.950	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	124.760	124.745	124.731	124.717	124.703	124.603	124.588	124.574	124.560	124.545	124.531	124.517	124.503	124.488	124.474	124.460	122.886	122.871	122.857	122.843	122.829	122.814	122.800	122.786	122.736	122.721	122.707	122.693
	F.S.L.	124.260	124.245	124.231	124.217	124.203	124.103	124.088	124.074	124.060	124.045	124.031	124.017	124.003	123.988	123.974	123.960	122.386	122.371	122.357	122.343	122.329	122.314	122.300	122.286	122.236	122.221	122.207	122.193
	Proposed Bed Level	123.760	123.745	123.731	123.717	123.703	123.603	123.688	123.674	123.660	123.645	123.631	123.617	123.603	123.588	123.574	123.560	122.036	122.021	122.007	121.993	121.979	121.964	121.950	121.936	121.921	121.907	121.893	
EXISTING DATA	Bed Level	123.921	123.883	123.594	123.483	123.482	123.476	123.487	123.475	123.470	123.460	123.452	123.445	123.441	123.437	123.397	122.460	122.263	122.067	122.255	121.966	121.738	121.821	122.052	122.334				
	TOP OF BANK LEVEL	124.828	124.755	124.681	124.608	124.535	124.461	124.346	124.314	124.241	124.167	124.094	124.020	123.947	124.178	123.394	123.200	123.007	122.818	122.814	122.830	122.846	122.863	122.879					
	NSL	124.814	124.698	124.579	124.459	124.340	124.221	124.102	123.983	123.864	123.745	123.626	123.508	123.389	123.270	124.575	122.944	122.792	122.639	122.482	122.484	122.502	122.521	122.539	122.557				
	Chainage IN KM	6+000	6+050	6+100	6+150	6+200	6+250	6+300	6+350	6+400	6+450	6+500	6+550	6+600	6+650	6+700	6+750	6+800	6+850	6+900	6+950	7+000	7+050	7+100	7+150	7+200			

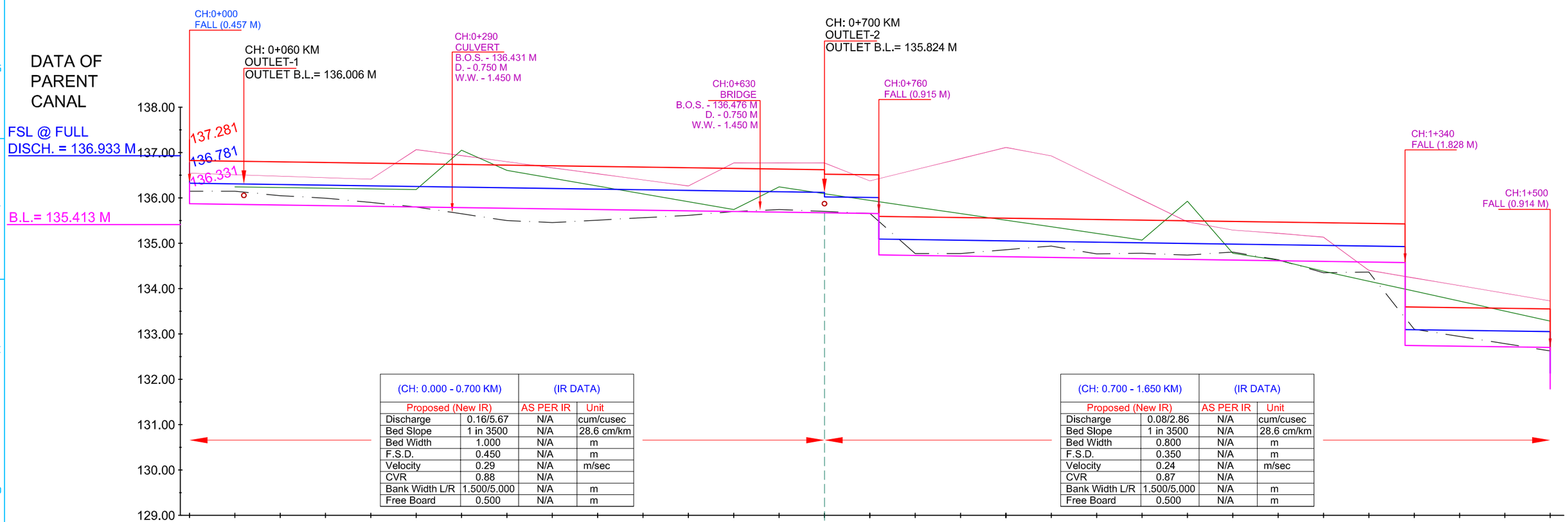
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF PANTI MR. (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ LSEC- 05 of 05
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 0.700 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.16/5.67	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.000	N/A	m
F.S.D.	0.450	N/A	m
Velocity	0.29	N/A	m/sec
CVR	0.88	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

(CH: 0.700 - 1.650 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.86	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	0.800	N/A	m
F.S.D.	0.350	N/A	m
Velocity	0.24	N/A	m/sec
CVR	0.87	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

		0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	137.281	136.809	136.795	136.781	136.766	136.752	136.738	136.724	136.709	136.695	136.681	136.666	136.652	136.638	136.624	136.509	136.580	135.566	135.551	135.537	135.523	135.509	135.494	135.480	135.466	135.451	135.437	135.426	133.581	133.566	133.552
		136.824														136.524	136.506												133.595			132.638
	F.S.L.	136.781	136.309	136.295	136.281	136.266	136.252	136.238	136.224	136.209	136.195	136.181	136.166	136.152	136.138	136.124	136.009	135.080	135.066	135.051	135.037	135.023	135.009	134.994	134.980	134.966	134.951	134.937	134.926	133.081	133.066	133.052
		136.324														136.024	136.006												133.095			132.138
	Proposed Bed Level	136.331	135.859	135.845	135.831	135.816	135.802	135.788	135.774	135.759	135.745	135.731	135.716	135.702	135.688	135.674	135.659	134.730	134.716	134.701	134.687	134.673	134.659	134.644	134.630	134.616	134.601	134.587	134.576	132.731	132.716	132.702
		135.874															135.656												132.745			131.788
EXISTING DATA	Bed Level	136.148	136.148	136.050	135.995	135.900	135.800	135.651	135.501	135.457	135.510	135.563	135.616	135.669	135.744	135.702	135.658	134.692	134.774	134.858	134.940	134.766	134.779	134.793	134.806	134.637	134.351	134.364	133.105	132.946	132.786	132.627
	TOP OF BANK LEVEL	136.545	136.512	136.479	136.446	136.413	137.067	136.933	136.799	136.666	136.532	136.398	136.264	136.772	136.772	136.772	136.376	136.622	136.868	137.114	136.928	136.443	135.959	135.474	135.292	135.219	135.135	134.404	134.235	134.067	133.898	133.729
	NSL		136.242	136.228	136.214	136.200	136.186	137.054	136.608	136.436	136.262	136.089	135.916	135.742	136.244	136.094	135.945	135.799	135.654	135.509	135.364	135.218	135.072	134.927	134.781	134.626	134.382	134.162	133.944	133.724	133.505	133.285
	Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

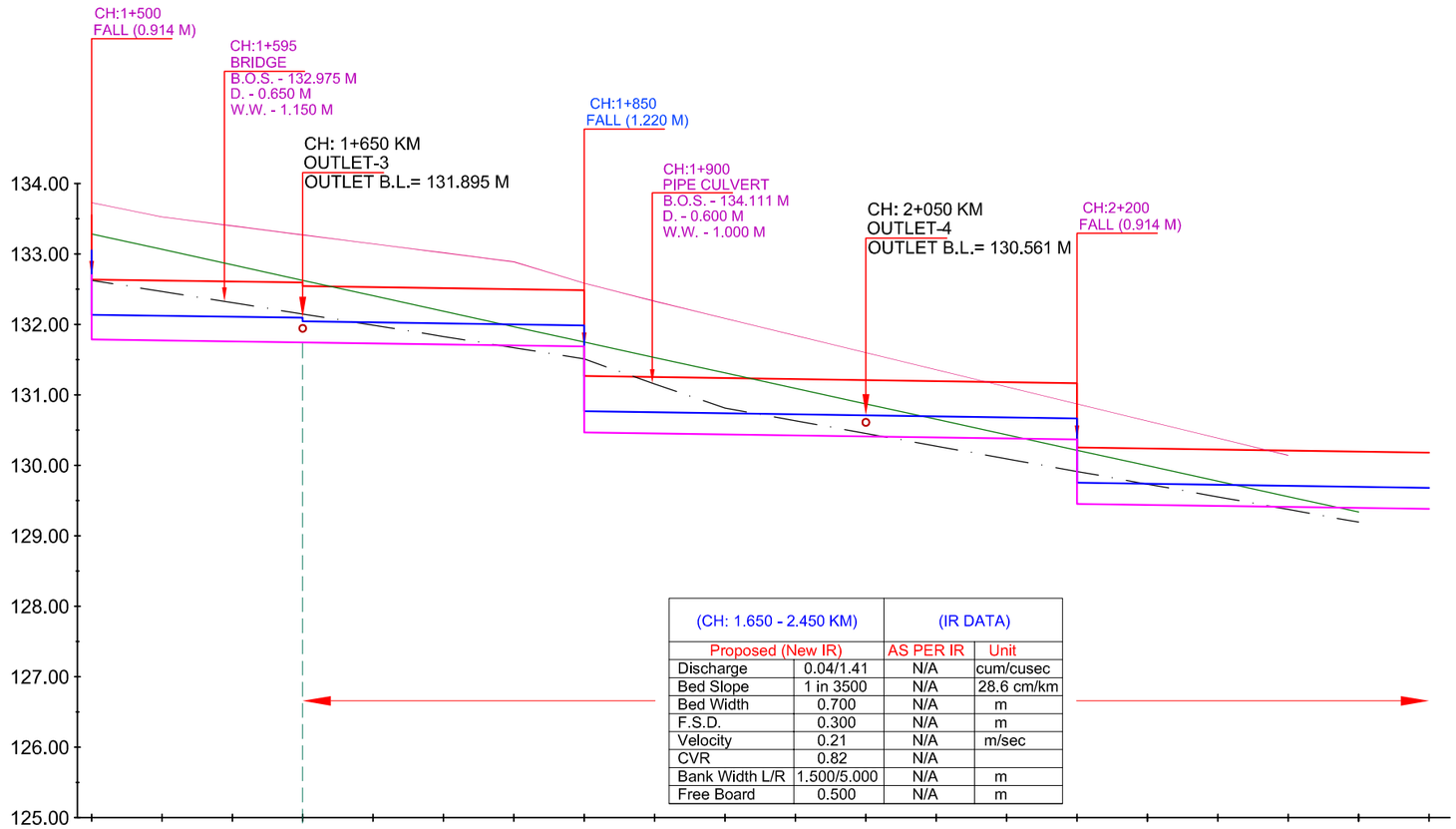
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ LSEC- 01 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 2+450



(CH: 1.650 - 2.450 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.41	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	0.700	N/A	m
F.S.D.	0.300	N/A	m
Velocity	0.21	N/A	m/sec
CVR	0.82	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

DESIGN DATA	TOP OF BANK LEVEL	133.552 132.638	132.624	132.609	132.595 132.545	132.531	132.517	132.502	132.488 131.288	131.254	131.239	131.225	131.211	131.197	131.182	131.168 130.254	130.240	130.225	130.211	130.197	130.183
	F.S.L.	133.052 132.138	132.124	132.109	132.095 132.045	132.031	132.017	132.002	131.988 130.788	130.754	130.739	130.725	130.711	130.697	130.682	130.668 129.754	129.740	129.725	129.711	129.697	129.683
	Proposed Bed Level	132.702 131.788	131.774	131.759	131.745	131.731	131.717	131.702	131.688 130.488	130.454	130.439	130.425	130.411	130.397	130.382	130.368 129.454	129.440	129.425	129.411	129.397	129.383
EXISTING DATA	Bed Level	132.627	132.468	132.309	132.149	131.990	131.830	131.671	131.511	131.154	130.814	130.634	130.454	130.274	130.094	129.914	129.734	129.554	129.374	129.194	
	TOP OF BANK LEVEL	133.729	133.527	133.400	133.272	133.145	133.017	132.889	132.586	132.329	132.086	131.844	131.601	131.358	131.115	130.872	130.629	130.387	130.144		
	NSL	133.285	133.066	132.846	132.627	132.408	132.188	131.969	131.750	131.531	131.312	131.092	130.873	130.654	130.434	130.215	129.996	129.776	129.557	129.338	
Chainage IN KM		1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450

LEGEND

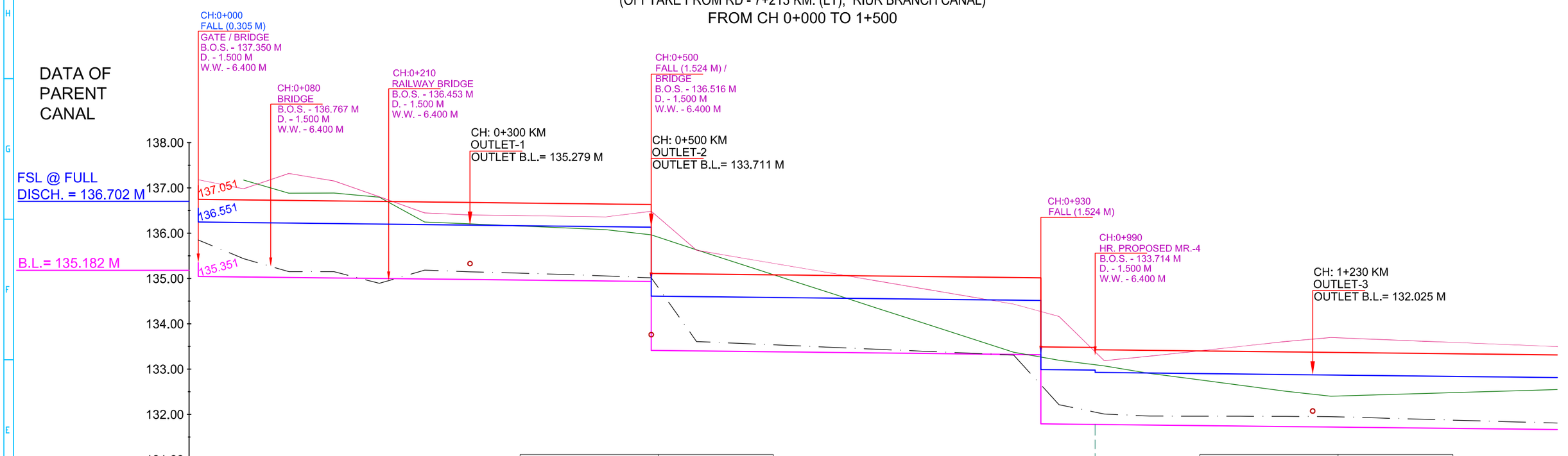
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ LSEC- 02 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500

DATA OF PARENT CANAL

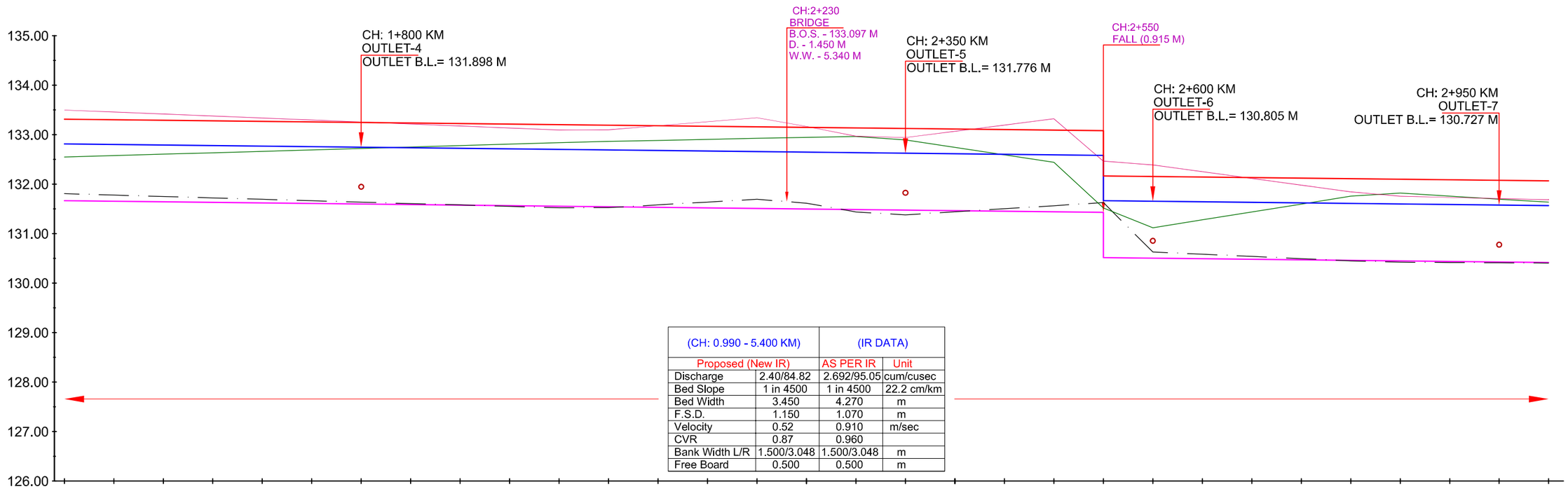


(CH: 0.000 - 0.990 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.68/94.73	3.99/141.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.600	5.180	m
F.S.D.	1.200	1.220	m
Velocity	0.54	0.597	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/5.000	m
Free Board	0.500	0.500	m

(CH: 0.990 - 5.400 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.40/84.82	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.450	4.270	m
F.S.D.	1.150	1.070	m
Velocity	0.52	0.910	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

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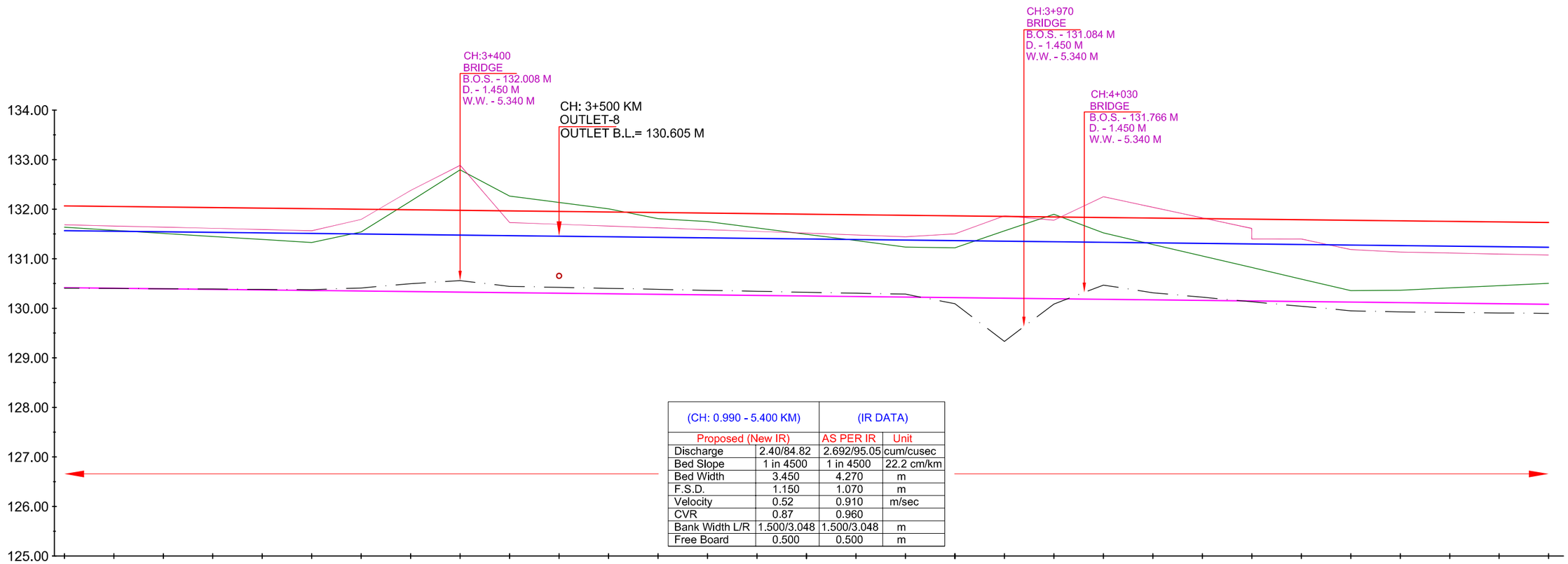
L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 3+000



(CH: 0.990 - 5.400 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.40/84.82	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.450	4.270	m
F.S.D.	1.150	1.070	m
Velocity	0.52	0.910	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

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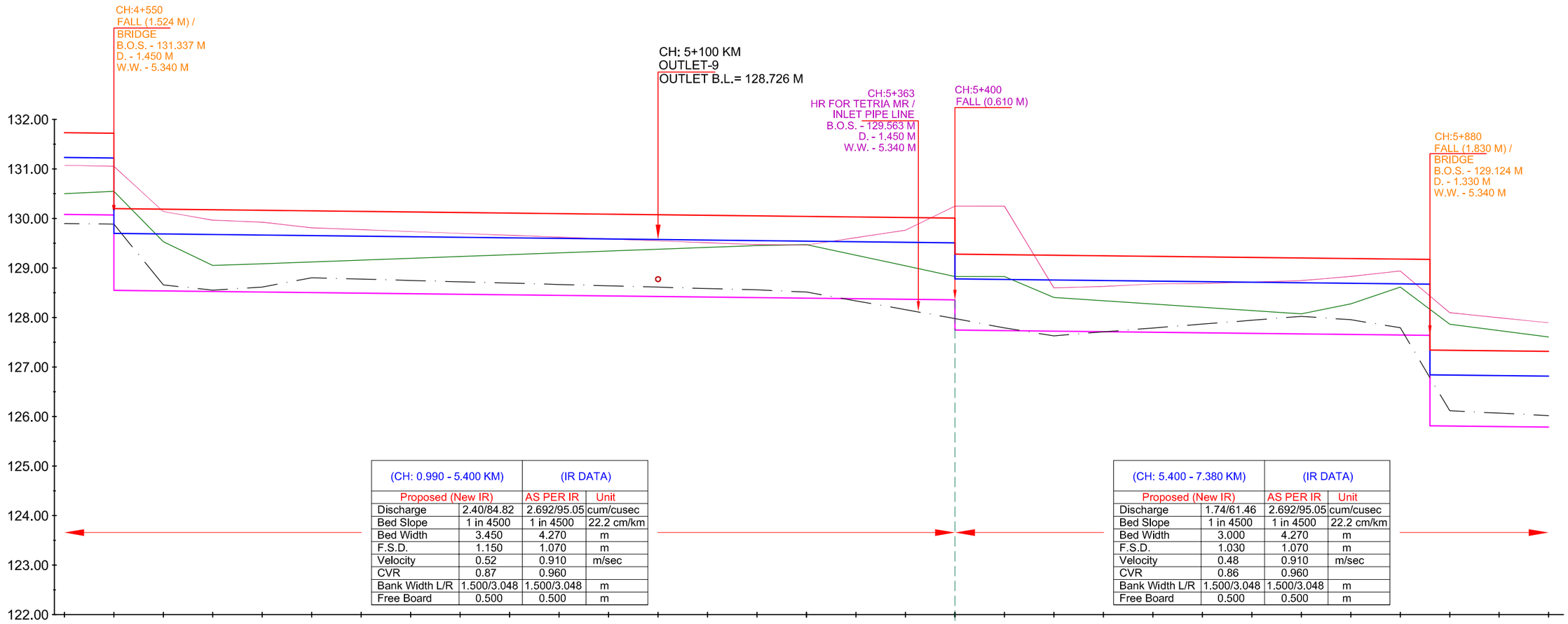
L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 3+000 TO 4+500



(CH: 0.990 - 5.400 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	2.40/84.82	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.450	4.270	m
F.S.D.	1.150	1.070	m
Velocity	0.52	0.910	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

| | | |

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 4+500 TO 6+000



(CH: 0.990 - 5.400 KM)	(IR DATA)		
Proposed (New IR)		AS PER IR	Unit
Discharge	2.40/84.82	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.450	4.270	m
F.S.D.	1.150	1.070	m
Velocity	0.52	0.910	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 5.400 - 7.380 KM)	(IR DATA)		
Proposed (New IR)		AS PER IR	Unit
Discharge	1.74/61.46	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.000	4.270	m
F.S.D.	1.030	1.070	m
Velocity	0.48	0.910	m/sec
CVR	0.86	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

		4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	6+000
DESIGN DATA	TOP OF BANK LEVEL	131.733	131.722 130.198	130.187	130.176	130.165	130.153	130.142	130.131	130.120	130.109	130.098	130.087	130.076	130.065	130.053	130.042	130.031	130.020	130.009	129.279	129.268	129.257	129.246	129.235	129.223	129.212	129.201	129.190	129.179	129.172 127.342 127.338	127.327	127.316
	F.S.L.	131.233	131.222 129.698	129.687	129.676	129.665	129.653	129.642	129.631	129.620	129.609	129.598	129.587	129.576	129.565	129.553	129.542	129.531	129.520	129.509 128.779	128.768	128.757	128.746	128.735	128.723	128.712	128.701	128.690	128.679	128.672 126.842 126.838	126.827	126.816
	Proposed Bed Level	130.083	130.072 128.548	128.537	128.526	128.515	128.503	128.492	128.481	128.470	128.459	128.448	128.437	128.426	128.415	128.403	128.392	128.381	128.370	128.359 127.749	127.738	127.727	127.716	127.705	127.693	127.682	127.671	127.660	127.649	127.642 125.812 125.808	125.797	125.786
EXISTING DATA	Bed Level	129.897	129.887	128.659	128.554	128.615	128.803	128.776	128.749	128.722	128.695	128.668	128.640	128.614	128.586	128.559	128.514	128.337	128.160	127.979	127.791	127.630	127.711	127.788	127.867	127.945	128.024	127.956	127.794	126.117	126.069	126.020
	TOP OF BANK LEVEL	131.075	131.055	130.141	129.967	129.927	129.812	129.774	129.737	129.700	129.662	129.626	129.587	129.549	129.512	129.474	129.464	129.614	129.764	130.250	130.250	128.598	128.627	128.677	128.687	128.716	128.746	128.830	128.941	128.098	127.996	127.894
	NSL	130.503	130.549	129.532	129.052	129.087	129.124	129.160	129.197	129.233	129.270	129.306	129.343	129.379	129.416	129.452	129.471	129.257	129.044	128.829	128.616	128.406	128.340	128.274	128.207	128.141	128.075	128.275	128.615	127.864	127.735	127.606
	Chainage IN KM	4+500	4+550	4+600	4+650	4+700	4+750	4+800	4+850	4+900	4+950	5+000	5+050	5+100	5+150	5+200	5+250	5+300	5+350	5+400	5+450	5+500	5+550	5+600	5+650	5+700	5+750	5+800	5+850	5+900	5+950	6+000

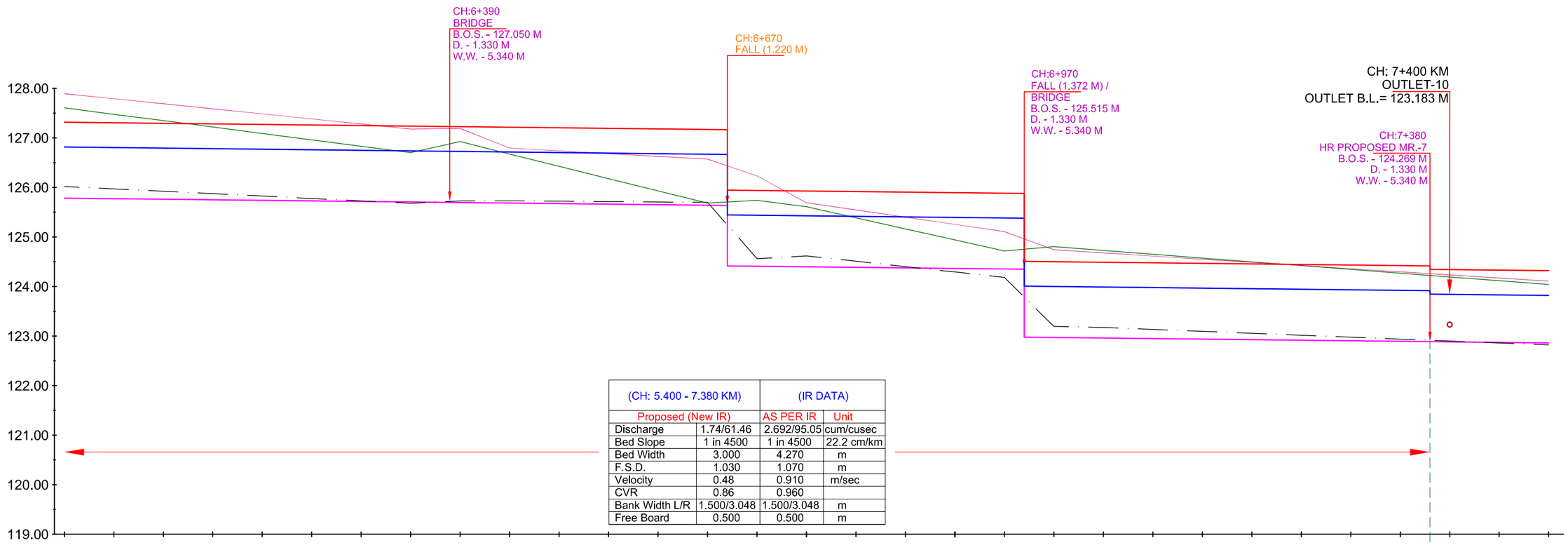
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 04 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 6+000 TO 7+500



(CH: 5.400 - 7.380 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.74/61.46	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	3.000	4.270	m
F.S.D.	1.030	1.070	m
Velocity	0.48	0.910	m/sec
CVR	0.86	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

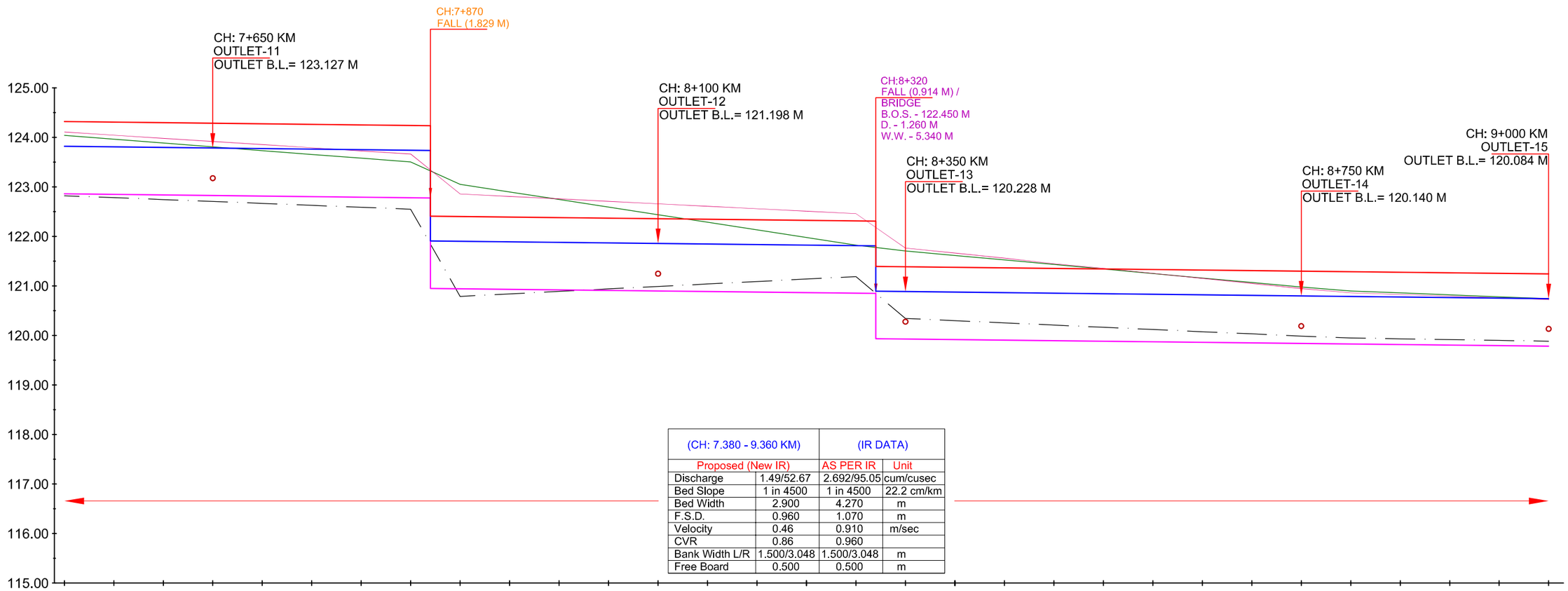
		6+000	6+050	6+100	6+150	6+200	6+250	6+300	6+350	6+400	6+450	6+500	6+550	6+600	6+650	6+700	6+750	6+800	6+850	6+900	6+950	7+000	7+050	7+100	7+150	7+200	7+250	7+300	7+350	7+380	7+400	7+450	7+500
DESIGN DATA	TOP OF BANK LEVEL	127.316	127.305	127.293	127.282	127.271	127.260	127.249	127.238	127.227	127.216	127.205	127.193	127.182	127.171	127.167	125.947	125.940	125.929	125.918	125.907	125.896	125.885	125.880	124.508	124.501	124.490	124.479	124.468	124.457	124.446	124.435	124.424	124.417	124.347	124.343	124.331	124.320
	F.S.L.	126.816	126.805	126.793	126.782	126.771	126.760	126.749	126.738	126.727	126.716	126.705	126.693	126.682	126.671	126.667	125.447	125.440	125.429	125.418	125.407	125.396	125.385	125.380	124.008	124.001	123.990	123.979	123.968	123.957	123.946	123.935	123.924	123.917	123.847	123.843	123.831	123.820
	Proposed Bed Level	125.786	125.775	125.763	125.752	125.741	125.730	125.719	125.708	125.697	125.686	125.675	125.663	125.652	125.641	125.637	124.417	124.410	124.399	124.388	124.377	124.366	124.355	124.350	122.978	122.971	122.960	122.949	122.938	122.927	122.916	122.905	122.894	122.887	122.883	122.883	122.871	122.860
EXISTING DATA	Bed Level	126.020	125.972	125.923	125.875	125.827	125.778	125.730	125.681	125.730	125.730	125.724	125.715	125.707	125.700	124.563	124.617	124.512	124.401	124.294	124.185	123.195	123.175	123.134	123.096	123.056	123.017	122.978	122.939	122.900	122.861	122.822						
	TOP OF BANK LEVEL	127.894	127.792	127.690	127.588	127.486	127.384	127.282	127.179	127.191	126.796	126.740	126.684	126.629	126.573	126.232	125.691	125.546	125.401	125.255	125.110	124.742	124.678	124.615	124.552	124.488	124.425	124.362	124.298	124.235	124.172	124.109						
	NSL	127.606	127.477	127.349	127.220	127.091	126.962	126.833	126.704	126.926	126.674	126.427	126.179	125.931	125.683	125.740	125.610	125.387	125.164	124.941	124.717	124.806	124.729	124.653	124.576	124.499	124.423	124.346	124.270	124.193	124.117	124.040						
	Chainage IN KM																																					

LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 05 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 7+500 TO 9+000



(CH: 7.380 - 9.360 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.49/52.67	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	2.900	4.270	m
F.S.D.	0.960	1.070	m
Velocity	0.46	0.910	m/sec
CVR	0.86	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

		7+500	7+550	7+600	7+650	7+700	7+750	7+800	7+850	7+900	7+950	8+000	8+050	8+100	8+150	8+200	8+250	8+300	8+350	8+400	8+450	8+500	8+550	8+600	8+650	8+700	8+750	8+800	8+850	8+900	8+950	9+000
DESIGN DATA	TOP OF BANK LEVEL	124.320	124.309	124.298	124.287	124.276	124.265	124.254	124.243	124.238 122.409	122.402	122.391	122.380	122.369	122.358	122.347	122.336	122.325	122.314	122.309 121.395	121.388	121.377	121.366	121.355	121.344	121.333	121.322	121.311	121.300	121.288	121.277	121.266	121.255	121.244
	F.S.L.	123.820	123.809	123.798	123.787	123.776	123.765	123.754	123.743	123.738 121.909	121.902	121.891	121.880	121.869	121.858	121.847	121.836	121.825	121.814	121.809 120.895	120.888	120.877	120.866	120.855	120.844	120.833	120.822	120.811	120.800	120.788	120.777	120.766	120.755	120.744
	Proposed Bed Level	122.860	122.849	122.838	122.827	122.816	122.805	122.794	122.783	122.778 120.949	120.942	120.931	120.920	120.909	120.898	120.887	120.876	120.865	120.854	120.849 119.935	119.928	119.917	119.906	119.895	119.884	119.873	119.862	119.851	119.840	119.828	119.817	119.806	119.795	119.784
EXISTING DATA	Bed Level	122.822	122.784	122.745	122.706	122.668	122.628	122.590	122.550	120.789	120.840	120.889	120.941	120.989	121.040	121.090	121.140	121.190	120.344	120.299	120.255	120.210	120.165	120.122	120.075	120.033	119.986	119.949	119.932	119.917	119.901	119.884
	TOP OF BANK LEVEL	124.109	124.045	123.982	123.918	123.855	123.792	123.729	123.666	122.858	122.809	122.759	122.710	122.659	122.610	122.560	122.510	122.461	121.766	121.664	121.562	121.450	121.358	121.255	121.154	121.051	120.949	120.862	120.828	120.795	120.761	120.728
	NSL	124.040	123.964	123.887	123.810	123.734	123.657	123.581	123.504	123.054	122.900	122.747	122.593	122.440	122.287	122.133	121.980	121.826	121.707	121.616	121.525	121.434	121.343	121.252	121.160	121.069	120.978	120.899	120.860	120.820	120.781	120.742
	Chainage IN KM	7+500	7+550	7+600	7+650	7+700	7+750	7+800	7+850	7+900	7+950	8+000	8+050	8+100	8+150	8+200	8+250	8+300	8+350	8+400	8+450	8+500	8+550	8+600	8+650	8+700	8+750	8+800	8+850	8+900	8+950	9+000

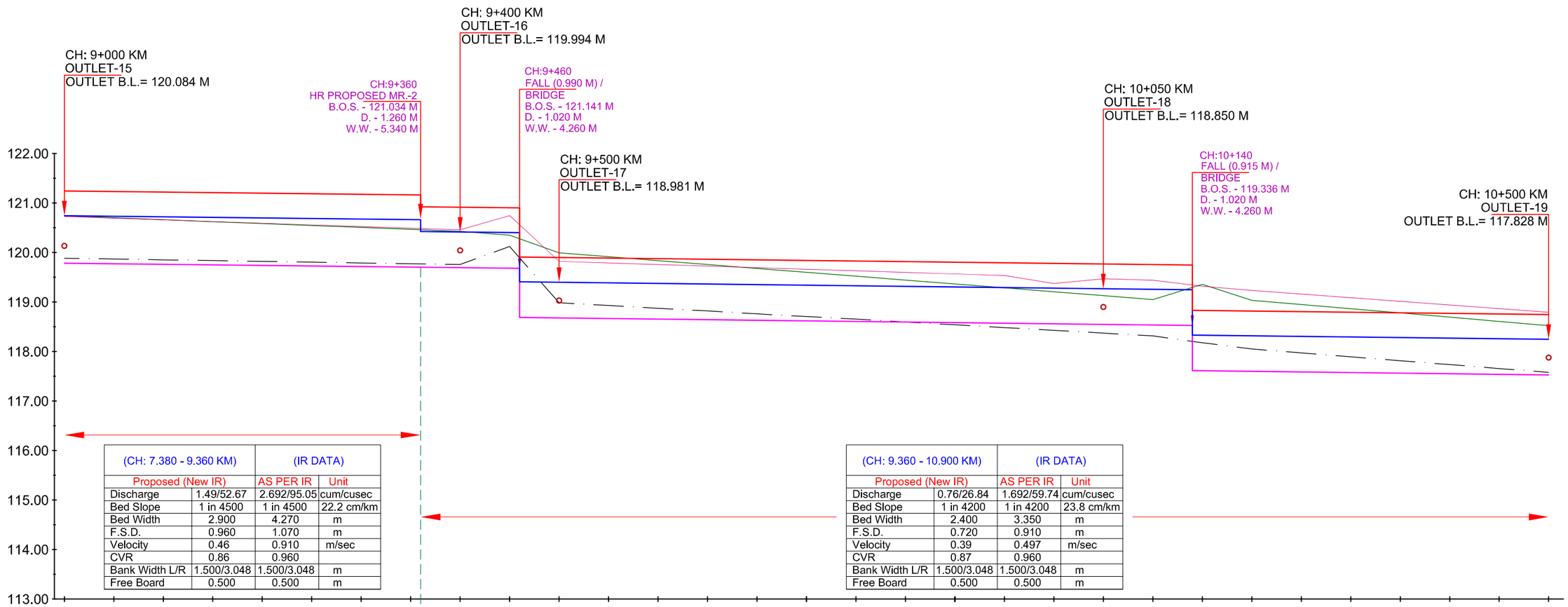
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 06 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 9+000 TO 10+500



(CH: 7.380 - 9.360 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	1.49/52.67	2.692/95.05	cum/cusec
Bed Slope	1 in 4500	1 in 4500	22.2 cm/km
Bed Width	2.900	4.270	m
F.S.D.	0.960	1.070	m
Velocity	0.46	0.910	m/sec
CVR	0.86	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 9.360 - 10.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.76/26.84	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	2.400	3.350	m
F.S.D.	0.720	0.910	m
Velocity	0.39	0.497	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

		Chainage IN KM	9+000	9+050	9+100	9+150	9+200	9+250	9+300	9+350	9+360	9+400	9+450	9+500	9+550	9+600	9+650	9+700	9+750	9+800	9+850	9+900	9+950	10+000	10+050	10+100	10+150	10+200	10+250	10+300	10+350	10+400	10+450	10+500
DESIGN DATA	TOP OF BANK LEVEL		121.244	121.233	121.222	121.211	121.200	121.188	121.177	121.166	121.164	120.924	120.914	120.903	120.900	119.910	119.901	119.889	119.877	119.865	119.853	119.841	119.829	119.817	119.805	119.794	119.782	119.770	119.758	119.748	118.833	118.831	118.819	118.807	118.795	118.783	118.771	118.759	118.748
	F.S.L.		120.744	120.733	120.722	120.711	120.700	120.688	120.677	120.666	120.664	120.424	120.414	120.403	120.400	119.410	119.401	119.389	119.377	119.365	119.353	119.341	119.329	119.317	119.305	119.294	119.282	119.270	119.258	119.248	118.333	118.331	118.319	118.307	118.295	118.283	118.271	118.259	118.248
	Proposed Bed Level		119.784	119.773	119.762	119.751	119.740	119.728	119.717	119.706	119.704		119.694	119.683	119.680	118.690	118.681	118.669	118.657	118.645	118.633	118.621	118.609	118.597	118.585	118.574	118.562	118.550	118.538	118.528	117.613	117.611	117.599	117.587	117.575	117.563	117.551	117.539	117.528
EXISTING DATA	Bed Level		119.884	119.870	119.852	119.838	119.820	119.806	119.788	119.774			119.757	120.121		118.985	118.930	118.873	118.819	118.761	118.707	118.654	118.596	118.541	118.484	118.428	118.372	118.316	118.177			118.051	117.972	117.893	117.814	117.736	117.657	117.579
	TOP OF BANK LEVEL		120.728	120.694	120.661	120.627	120.594	120.560	120.526	120.493			120.459	120.744		119.821	119.790	119.758	119.726	119.694	119.662	119.631	119.599	119.567	119.535	119.375	119.471	119.440	119.319			119.234	119.161	119.088	119.014	118.941	118.868	118.795
	NSL		120.742	120.703	120.663	120.624	120.585	120.546	120.507	120.467			120.428	120.351		119.993	119.915	119.836	119.758	119.679	119.600	119.522	119.443	119.364	119.286	119.207	119.129	119.050	119.356			119.035	118.950	118.865	118.780	118.695	118.609	118.524

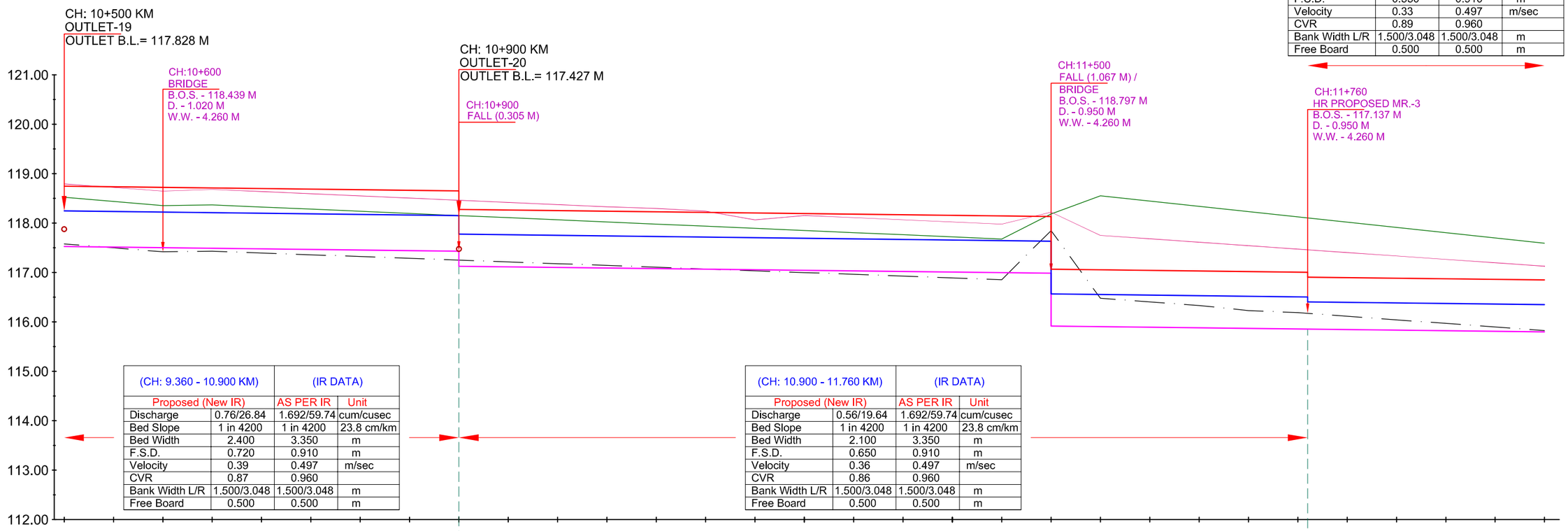
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 07 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 10+500 TO 12+000



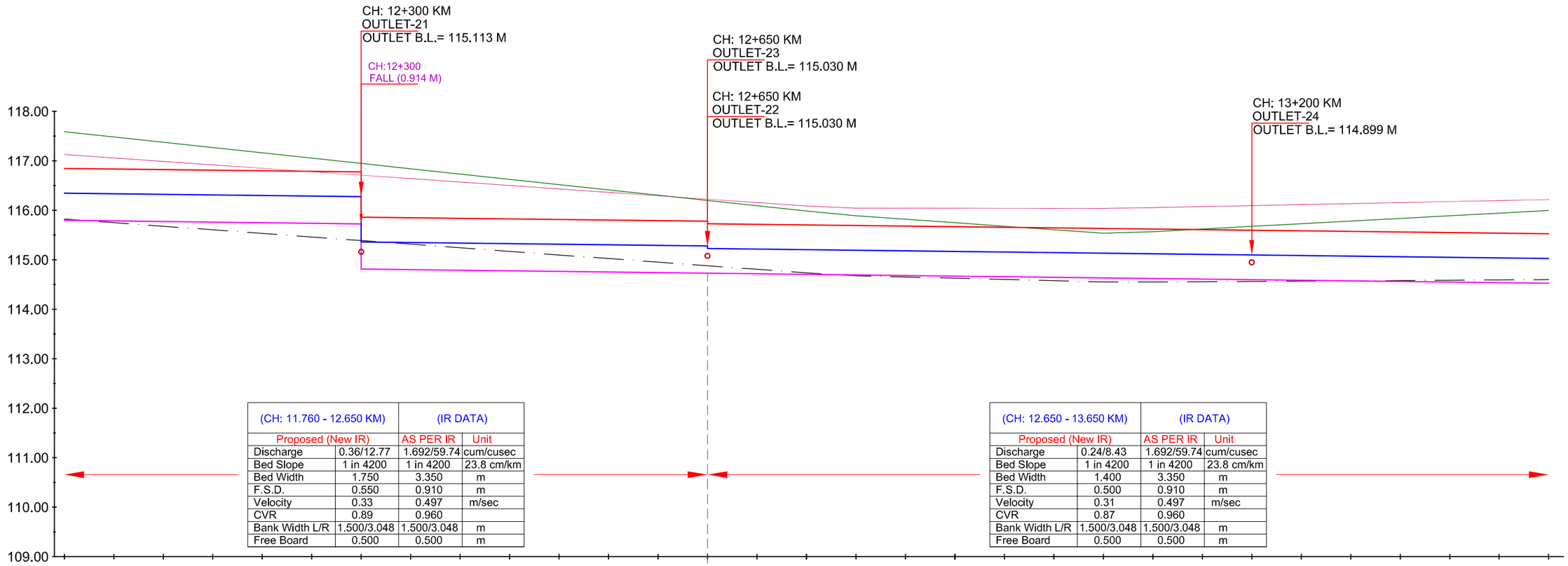
(CH: 11.760 - 12.650 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.36/12.77	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	1.750	3.350	m
F.S.D.	0.550	0.910	m
Velocity	0.33	0.497	m/sec
CVR	0.89	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 9.360 - 10.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.76/26.84	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	2.400	3.350	m
F.S.D.	0.720	0.910	m
Velocity	0.39	0.497	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 10.900 - 11.760 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.56/19.64	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	2.100	3.350	m
F.S.D.	0.650	0.910	m
Velocity	0.36	0.497	m/sec
CVR	0.86	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

| | | |

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 12+000 TO 13+500



(CH: 11.760 - 12.650 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	0.36/12.77	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	1.750	3.350	m
F.S.D.	0.550	0.910	m
Velocity	0.33	0.497	m/sec
CVR	0.89	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 12.650 - 13.650 KM)	(IR DATA)	
Proposed (New IR)	AS PER IR	Unit
Discharge	0.24/8.43	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	1.400	3.350	m
F.S.D.	0.500	0.910	m
Velocity	0.31	0.497	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

DESIGN DATA	TOP OF BANK LEVEL	116.848	116.837	116.825	116.813	116.801	116.789	116.777	115.863	115.851	115.839	115.827	115.815	115.803	115.792	115.780	115.730	115.718	115.706	115.694	115.682	115.670	115.658	115.646	115.634	115.623	115.611	115.599	115.587	115.575	115.563	115.551	115.539	115.527
	F.S.L.	116.348	116.337	116.325	116.313	116.301	116.289	116.277	115.363	115.351	115.339	115.327	115.315	115.303	115.292	115.280	115.230	115.218	115.206	115.194	115.182	115.170	115.158	115.146	115.134	115.123	115.111	115.099	115.087	115.075	115.063	115.051	115.039	115.027
	Proposed Bed Level	115.798	115.787	115.775	115.763	115.751	115.739	115.727	114.813	114.801	114.789	114.777	114.765	114.753	114.742	114.730	114.718	114.706	114.694	114.682	114.670	114.658	114.646	114.634	114.623	114.611	114.599	114.587	114.575	114.563	114.551	114.539	114.527	
EXISTING DATA	Bed Level	115.824	115.751	115.679	115.606	115.534	115.461	115.389	115.316	115.243	115.171	115.098	115.025	114.953	114.880	114.808	114.735	114.679	114.653	114.628	114.603	114.578	114.552	114.551	114.557	114.563	114.569	114.575	114.581	114.587	114.593	114.599		
	TOP OF BANK LEVEL	117.128	117.058	116.989	116.919	116.850	116.781	116.711	116.642	116.573	116.503	116.434	116.365	116.295	116.226	116.157	116.087	116.044	116.043	116.043	116.042	116.041	116.040	116.056	116.076	116.096	116.117	116.137	116.157	116.178	116.198	116.218		
	NSL	117.591	117.484	117.377	117.270	117.163	117.055	116.948	116.841	116.734	116.627	116.520	116.413	116.306	116.199	116.092	115.985	115.891	115.820	115.750	115.679	115.608	115.538	115.569	115.623	115.676	115.730	115.783	115.837	115.890	115.943	115.997		
	Chainage IN KM	12+000	12+050	12+100	12+150	12+200	12+250	12+300	12+350	12+400	12+450	12+500	12+550	12+600	12+650	12+700	12+750	12+800	12+850	12+900	12+950	13+000	13+050	13+100	13+150	13+200	13+250	13+300	13+350	13+400	13+450	13+500		

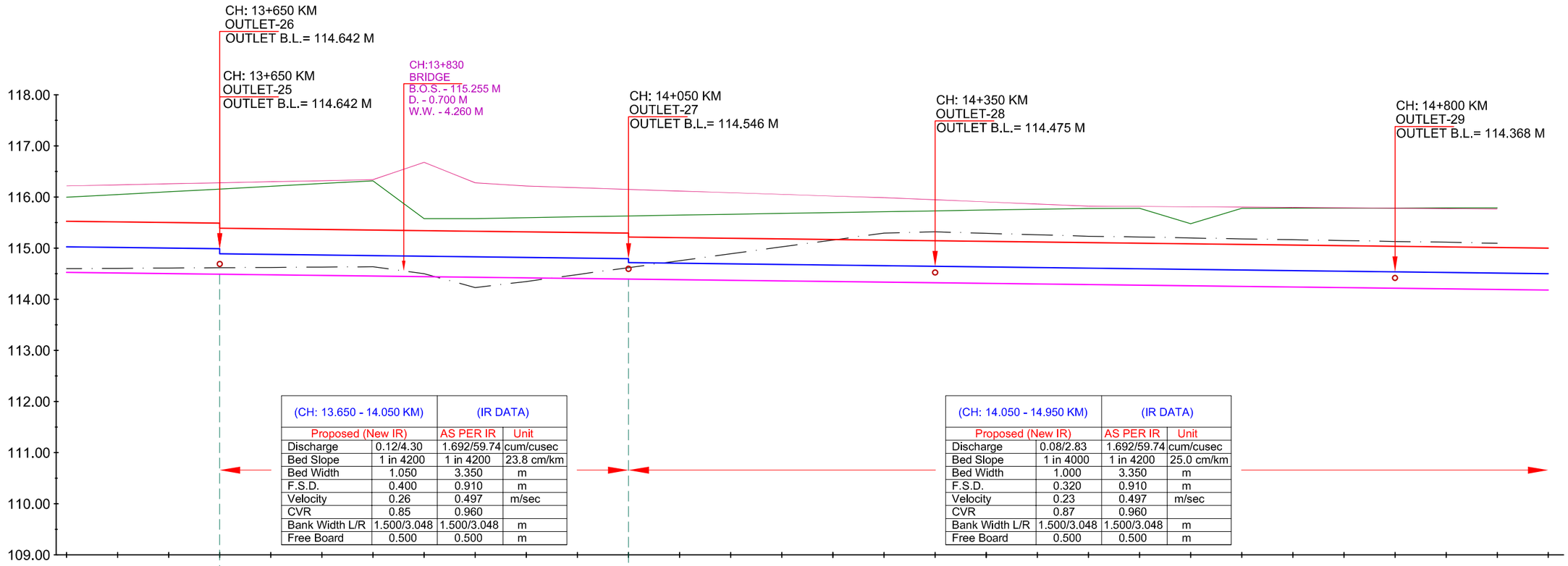
LEGEND

NSL		EXISTING BED LEVEL
EXISTING TOP OF BANK		PROPOSED BED LEVEL
EXISTING FALL		PROPOSED FSL
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 09 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
FROM CH 13+500 TO 14+950



(CH: 13.650 - 14.050 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.12/4.30	1.692/59.74	cum/cusec
Bed Slope	1 in 4200	1 in 4200	23.8 cm/km
Bed Width	1.050	3.350	m
F.S.D.	0.400	0.910	m
Velocity	0.26	0.497	m/sec
CVR	0.85	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 14.050 - 14.950 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.83	1.692/59.74	cum/cusec
Bed Slope	1 in 4000	1 in 4200	25.0 cm/km
Bed Width	1.000	3.350	m
F.S.D.	0.320	0.910	m
Velocity	0.23	0.497	m/sec
CVR	0.87	0.960	
Bank Width L/R	1.500/3.048	1.500/3.048	m
Free Board	0.500	0.500	m

		Chainage IN KM	13+500	13+550	13+600	13+650	13+700	13+750	13+800	13+850	13+900	13+950	14+000	14+050	14+100	14+150	14+200	14+250	14+300	14+350	14+400	14+450	14+500	14+550	14+600	14+650	14+700	14+750	14+800	14+850	14+900	14+950
DESIGN DATA	TOP OF BANK LEVEL		115.527	115.515	115.503	115.492	115.392	115.380	115.368	115.356	115.344	115.332	115.320	115.308	115.296	115.216	115.204	115.193	115.181	115.169	115.157	115.145	115.133	115.121	115.109	115.097	115.085	115.073	115.062	115.050	115.038	115.026	115.014	115.002
	F.S.L.		115.027	115.015	115.003	114.992	114.892	114.880	114.868	114.856	114.844	114.832	114.820	114.808	114.796	114.716	114.704	114.693	114.681	114.669	114.657	114.645	114.633	114.621	114.609	114.597	114.585	114.573	114.562	114.550	114.538	114.526	114.514	114.502
	Proposed Bed Level		114.527	114.515	114.503	114.492	114.480	114.468	114.456	114.444	114.432	114.420	114.408	114.396	114.384	114.373	114.361	114.349	114.337	114.325	114.313	114.301	114.289	114.277	114.265	114.253	114.242	114.230	114.218	114.206	114.194	114.182		
EXISTING DATA	Bed Level		114.599	114.605	114.612	114.617	114.624	114.630	114.636	114.501	114.228	114.348	114.484	114.620	114.755	114.889	115.026	115.160	115.295	115.320	115.290	115.263	115.234	115.219	115.199	115.182	115.165	115.149	115.130	115.117	115.095			
	TOP OF BANK LEVEL		116.218	116.239	116.259	116.279	116.300	116.320	116.340	116.680	116.280	116.216	116.184	116.151	116.118	116.086	116.053	116.020	115.987	115.948	115.906	115.863	115.824	115.817	115.810	115.803	115.796	115.790	115.782	115.776	115.769			
	NSL		115.997	116.050	116.104	116.157	116.211	116.264	116.318	115.580	115.580	115.597	115.614	115.630	115.647	115.663	115.680	115.696	115.713	115.730	115.746	115.763	115.777	115.779	115.780	115.781	115.783	115.784	115.785	115.787	115.788			

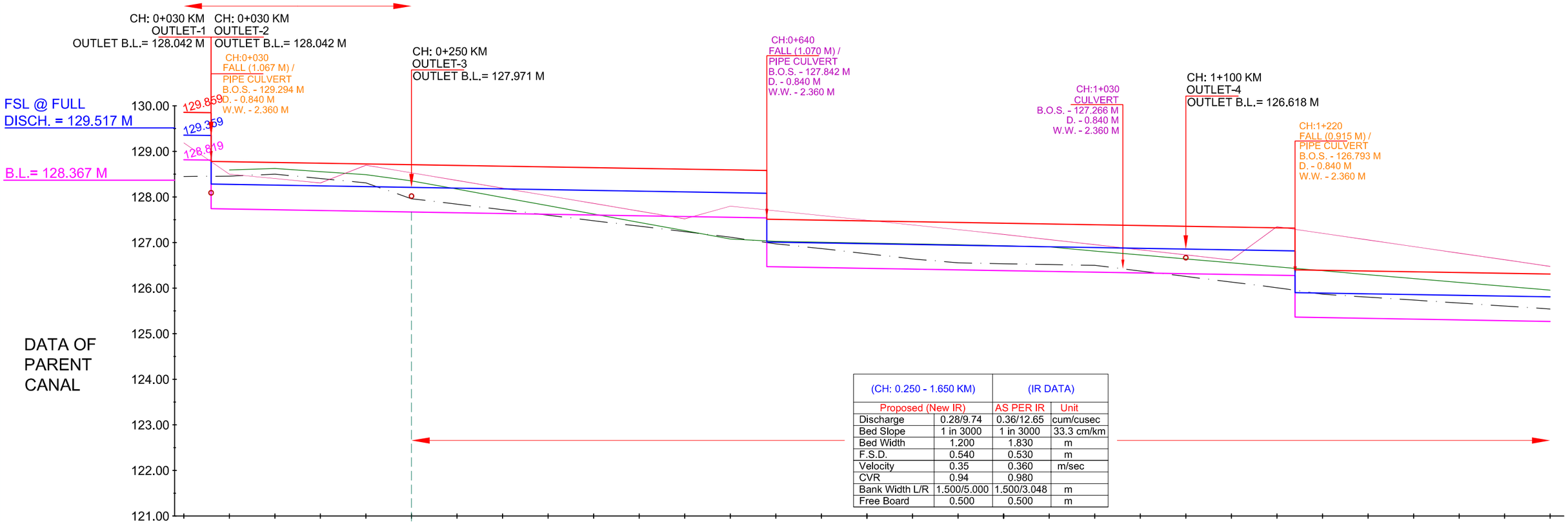
LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ LSEC- 10 of 10
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500

(CH: 0.000 - 0.250 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.40/13.97	0.36/12.65	cum/cusec
Bed Slope	1 in 3100	1 in 3000	32.3 cm/km
Bed Width	1.730	1.830	m
F.S.D.	0.540	0.530	m
Velocity	0.36	0.360	m/sec
CVR	0.97	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m



(CH: 0.250 - 1.650 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.28/9.74	0.36/12.65	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	1.200	1.830	m
F.S.D.	0.540	0.530	m
Velocity	0.35	0.360	m/sec
CVR	0.94	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL		129.859	129.849	128.782	128.776	128.760	128.744	128.727	128.711	128.695	128.678	128.661	128.645	128.628	128.611	128.595	128.581	127.511	127.508	127.491	127.475	127.458	127.441	127.425	127.408	127.391	127.375	127.358	127.341	127.325	127.318	126.403	126.393	126.376	126.360	126.343	126.326	126.310
	F.S.L.		129.359	129.349	128.282	128.276	128.260	128.244	128.227	128.211	128.195	128.178	128.161	128.145	128.128	128.111	128.095	128.081	127.011	127.008	126.991	126.975	126.958	126.941	126.925	126.908	126.891	126.875	126.858	126.841	126.825	126.818	125.903	125.893	125.876	125.860	125.843	125.826	125.810
	Proposed Bed Level		128.819	128.809	127.742	127.736	127.720	127.704	127.687	127.671	127.655	127.638	127.621	127.605	127.588	127.571	127.555	127.541	126.471	126.468	126.451	126.435	126.418	126.401	126.385	126.368	126.351	126.335	126.318	126.301	126.285	126.278	125.363	125.353	125.336	125.320	125.303	125.286	125.270
EXISTING DATA	Bed Level		128.450	128.457	128.501	128.405	128.309	127.962	127.842	127.721	127.601	127.480	127.360	127.239	127.118	126.973	126.868	126.755	126.642	126.555	126.535	126.518	126.500	126.377	126.257	126.133	126.010	125.867	125.802	125.738	125.673	125.608	125.543
	TOP OF BANK LEVEL		129.189	128.501	128.405	128.309	128.698	128.531	128.363	128.195	128.027	127.859	127.691	127.523	127.799	127.696	127.593	127.490	127.387	127.285	127.180	127.066	126.954	126.842	126.730	126.618	127.349	127.203	127.058	126.913	126.768	126.623	126.478
	NSL			128.594	128.627	128.558	128.490	128.355	128.173	127.990	127.808	127.625	127.443	127.261	127.078	127.027	127.008	126.989	126.970	126.952	126.932	126.904	126.815	126.729	126.642	126.555	126.468	126.382	126.296	126.211	126.125	126.040	125.955

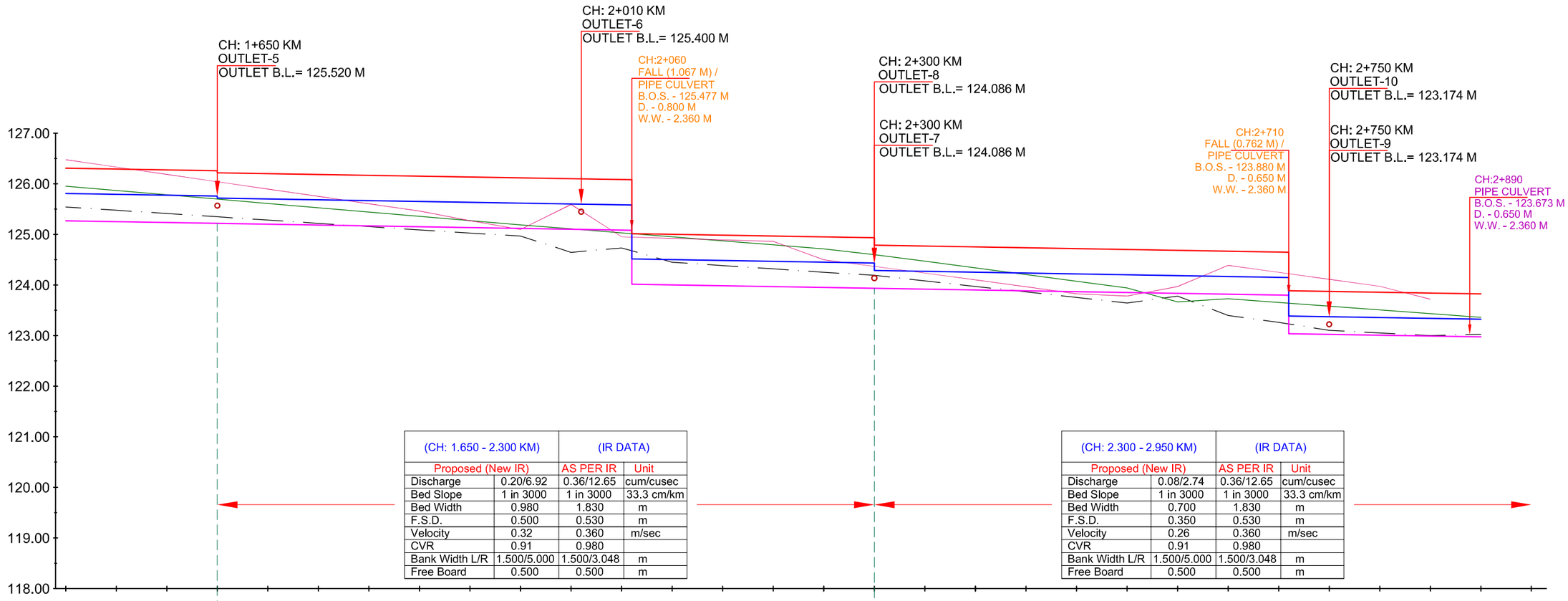
LEGEND

NSL		EXISTING BED LEVEL	
EXISTING TOP OF BANK		PROPOSED BED LEVEL	
EXISTING FALL		PROPOSED FSL	
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL	
NEW FALL			

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ LSEC- 01 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
FROM CH 1+500 TO 2+950



(CH: 1.650 - 2.300 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/6.92	0.36/12.65	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	0.980	1.830	m
F.S.D.	0.500	0.530	m
Velocity	0.32	0.360	m/sec
CVR	0.91	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 2.300 - 2.950 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.74	0.36/12.65	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	0.700	1.830	m
F.S.D.	0.350	0.530	m
Velocity	0.26	0.360	m/sec
CVR	0.91	0.980	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		Chainage IN KM	1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450	2+500	2+550	2+600	2+650	2+700	2+750	2+800	2+850	2+900	2+950
DESIGN DATA	TOP OF BANK LEVEL		126.310	126.293	126.276	126.260	126.220	126.203	126.186	126.170	126.153	126.136	126.120	126.103	126.086	126.053	125.003	124.986	124.969	124.953	124.936	124.786	124.769	124.753	124.736	124.719	124.703	124.686	124.669	124.653	124.649	123.887	123.874	123.857	123.841	123.824	
	F.S.L.		125.810	125.793	125.776	125.760	125.720	125.703	125.686	125.670	125.653	125.636	125.620	125.603	125.586	125.553	124.516	124.503	124.486	124.469	124.453	124.436	124.286	124.269	124.253	124.236	124.219	124.203	124.186	124.169	124.153	124.149	123.387	123.374	123.357	123.341	123.324	
	Proposed Bed Level		125.270	125.253	125.236	125.220	125.203	125.186	125.170	125.153	125.136	125.120	125.103	125.086	125.053	124.016	124.003	123.986	123.969	123.953	123.936	123.919	123.903	123.886	123.869	123.853	123.836	123.819	123.803	123.799	123.037	123.024	123.007	122.991	122.974		
EXISTING DATA	Bed Level		125.543	125.478	125.414	125.349	125.284	125.219	125.154	125.090	125.025	124.968	124.646	124.734	124.451	124.385	124.319	124.252	124.192	124.082	123.973	123.864	123.754	123.645	123.782	123.397	123.262	123.104	123.053	123.002	123.028						
	TOP OF BANK LEVEL		126.478	126.333	126.187	126.042	125.897	125.752	125.607	125.462	125.271	125.098	125.593	124.953	124.923	124.893	124.863	124.500	124.369	124.236	124.102	123.966	123.827	123.783	123.970	124.390	124.251	124.113	123.975	123.720							
	NSL		125.955	125.869	125.784	125.699	125.613	125.528	125.443	125.357	125.272	125.190	125.110	125.031	124.952	124.873	124.794	124.715	124.602	124.470	124.338	124.206	124.074	123.942	123.665	123.730	123.656	123.582	123.509	123.436	123.361						

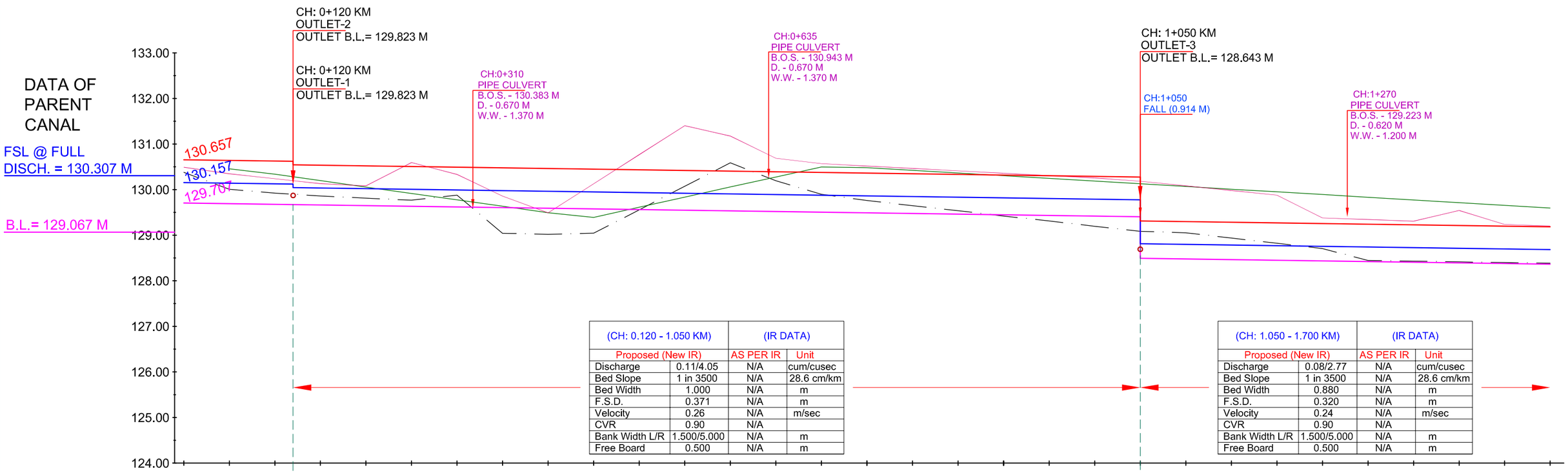
LEGEND			
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ LSEC- 02 of 02
Drawn By:-	Checked By:- / Approved By:-

(CH: 0.000 - 0.120 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/6.89	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.240	N/A	m
F.S.D.	0.450	N/A	m
Velocity	0.30	N/A	m/sec
CVR	0.91	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

L- SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.120 - 1.050 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.11/4.05	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.000	N/A	m
F.S.D.	0.371	N/A	m
Velocity	0.26	N/A	m/sec
CVR	0.90	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

(CH: 1.050 - 1.700 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.77	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	0.880	N/A	m
F.S.D.	0.320	N/A	m
Velocity	0.24	N/A	m/sec
CVR	0.90	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

		0+000	0+050	0+100	0+120	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	130.657	130.643	130.629	130.623 / 130.544	130.535	130.521	130.507	130.492	130.478	130.464	130.450	130.435	130.421	130.407	130.392	130.378	130.364	130.350	130.335	130.321	130.307	130.292	130.278 / 129.313	129.299	129.285	129.270	129.256	129.242	129.227	129.213	129.199	129.185
	F.S.L.	130.157	130.143	130.129	130.123 / 130.044	130.035	130.021	130.007	129.992	129.978	129.964	129.950	129.935	129.921	129.907	129.892	129.878	129.864	129.850	129.835	129.821	129.807	129.792	129.778 / 128.813	128.799	128.785	128.770	128.756	128.742	128.727	128.713	128.699	128.685
	Proposed Bed Level	129.707	129.693	129.679	129.673 / 129.673	129.664	129.650	129.636	129.621	129.607	129.593	129.579	129.564	129.550	129.536	129.521	129.507	129.493	129.479	129.464	129.450	129.436	129.421	129.407 / 128.493	128.479	128.465	128.450	128.436	128.422	128.407	128.393	128.379	128.365
EXISTING DATA	Bed Level	130.378	130.008	129.924		129.862	129.812	129.769	129.881	129.043	129.019	129.044	129.556	130.075	130.590	130.194	129.899	129.763	129.647	129.539	129.421	129.313	129.197	129.087	129.053	128.938	128.823	128.707	128.446	128.431	128.415	128.400	128.385
	TOP OF BANK LEVEL	130.492	130.349	130.240		130.132	130.085	130.595	130.335	129.857	129.493	130.130	130.768	131.405	131.177	130.689	130.571	130.518	130.466	130.413	130.361	130.308	130.256	130.185	130.084	129.982	129.880	129.380	129.344	129.308	129.542	129.236	129.200
	NSL		130.456	130.338		130.198	130.057	129.917	129.776	129.636	129.495	129.392	129.614	129.836	130.058	130.278	130.498	130.484	130.425	130.366	130.306	130.247	130.188	130.128	130.069	130.010	129.952	129.893	129.833	129.774	129.715	129.656	129.597
	Chainage IN KM	0+000	0+050	0+100	0+120	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

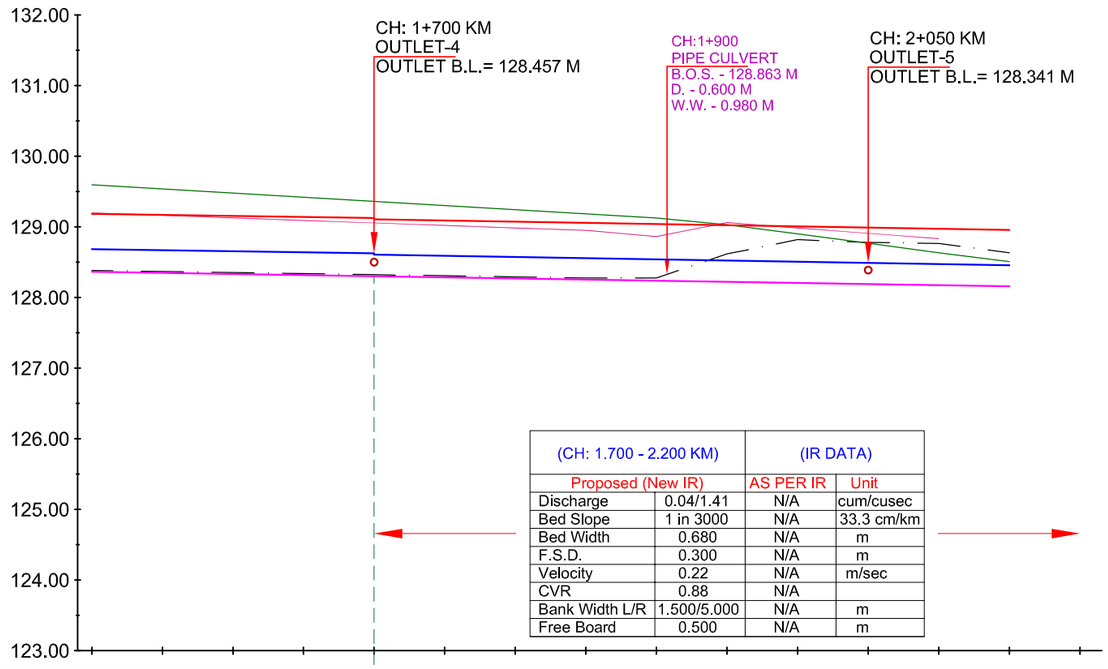
LEGEND

NSL		EXISTING BED LEVEL	
EXISTING TOP OF BANK		PROPOSED BED LEVEL	
EXISTING FALL		PROPOSED FSL	
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL	
NEW FALL			

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF KARMARI MR. (OFFTAKE FROM RD - 8+650 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ LSEC- 01 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 2+200



(CH: 1.700 - 2.200 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.41	N/A	cum/cusec
Bed Slope	1 in 3000	N/A	33.3 cm/km
Bed Width	0.680	N/A	m
F.S.D.	0.300	N/A	m
Velocity	0.22	N/A	m/sec
CVR	0.88	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

DESIGN DATA	TOP OF BANK LEVEL	129.185	129.170	129.156	129.142	129.127 ~~129.107~~	129.091	129.074	129.057	129.041	129.024	129.007	128.991	128.974	128.957	
	F.S.L.	128.685	128.670	128.656	128.642	128.627 ~~128.607~~	128.591	128.574	128.557	128.541	128.524	128.507	128.491	128.474	128.457	
	Proposed Bed Level	128.365	128.350	128.336	128.322	~~128.307~~	128.291	128.274	128.257	128.241	128.224	128.207	128.191	128.174	128.157	
EXISTING DATA	Bed Level	128.385	128.369	128.354	128.339	128.323	128.308	128.293	128.277	128.263	128.618	128.819	128.780	128.766	128.632	
	TOP OF BANK LEVEL	129.200	129.164	129.128	129.092	~~129.056~~	129.020	128.984	128.951	128.863	129.061	128.986	128.909	128.835		
	NSL	129.597	129.538	129.479	129.420	~~129.361~~	129.302	129.243	129.184	129.125	129.031	128.900	128.769	128.635	128.508	
	Chainage IN KM	1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200

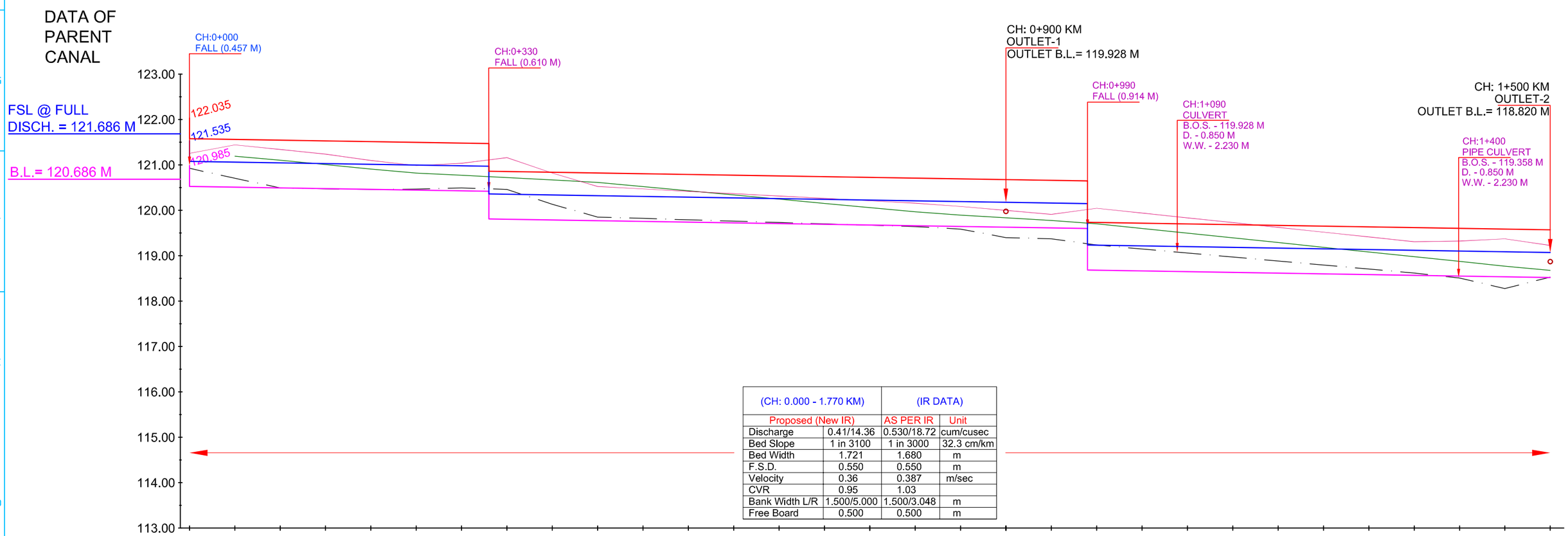
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF KARMARI MR. (OFFTAKE FROM RD - 8+650 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ LSEC- 02 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 1.770 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.41/14.36	0.530/18.72	cum/cusec
Bed Slope	1 in 3100	1 in 3000	32.3 cm/km
Bed Width	1.721	1.680	m
F.S.D.	0.550	0.550	m
Velocity	0.36	0.387	m/sec
CVR	0.95	1.03	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	122.035 121.578	121.562	121.546	121.530	121.513	121.497	121.481	121.472 120.862 120.855	120.839	120.823	120.807	120.791	120.774	120.758	120.742	120.726	120.710	120.694	120.678	120.662	120.649 119.735 119.731	119.715	119.699	119.683	119.667	119.651	119.635	119.619	119.602	119.586	119.570
	F.S.L.	121.535 121.078	121.062	121.046	121.030	121.013	120.997	120.981	120.972 120.362 120.355	120.339	120.323	120.307	120.291	120.274	120.258	120.242	120.226	120.210	120.194	120.178	120.162	120.149 119.235 119.231	119.215	119.199	119.183	119.167	119.151	119.135	119.119	119.102	119.086	119.070
	Proposed Bed Level	120.985 120.528	120.512	120.496	120.480	120.463	120.447	120.431	120.422 119.812 119.805	119.789	119.773	119.757	119.741	119.724	119.708	119.692	119.676	119.660	119.644	119.628	119.612	119.599 118.685 118.681	118.665	118.649	118.633	118.617	118.601	118.585	118.569	118.552	118.536	118.520
EXISTING DATA	Bed Level	120.926	120.706	120.495	120.472	120.460	120.468	120.493	120.460	120.134	119.850	119.823	119.791	119.762	119.732	119.702	119.672	119.642	119.587	119.398	119.373	119.237	119.149	119.060	118.972	118.883	118.795	118.706	118.618	118.508	118.278	118.528
	TOP OF BANK LEVEL	121.255	121.443	121.342	121.239	121.098	120.987	121.037	121.160	120.821	120.524	120.472	120.420	120.368	120.315	120.263	120.211	120.159	120.086	119.998	119.911	120.045	119.940	119.835	119.730	119.625	119.520	119.414	119.309	119.324	119.372	119.228
	NSL		121.193	121.104	121.007	120.910	120.822	120.772	120.722	120.672	120.616	120.523	120.431	120.338	120.246	120.153	120.061	119.968	119.894	119.837	119.778	119.705	119.601	119.498	119.394	119.290	119.186	119.082	118.978	118.875	118.771	118.679
	Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

LEGEND

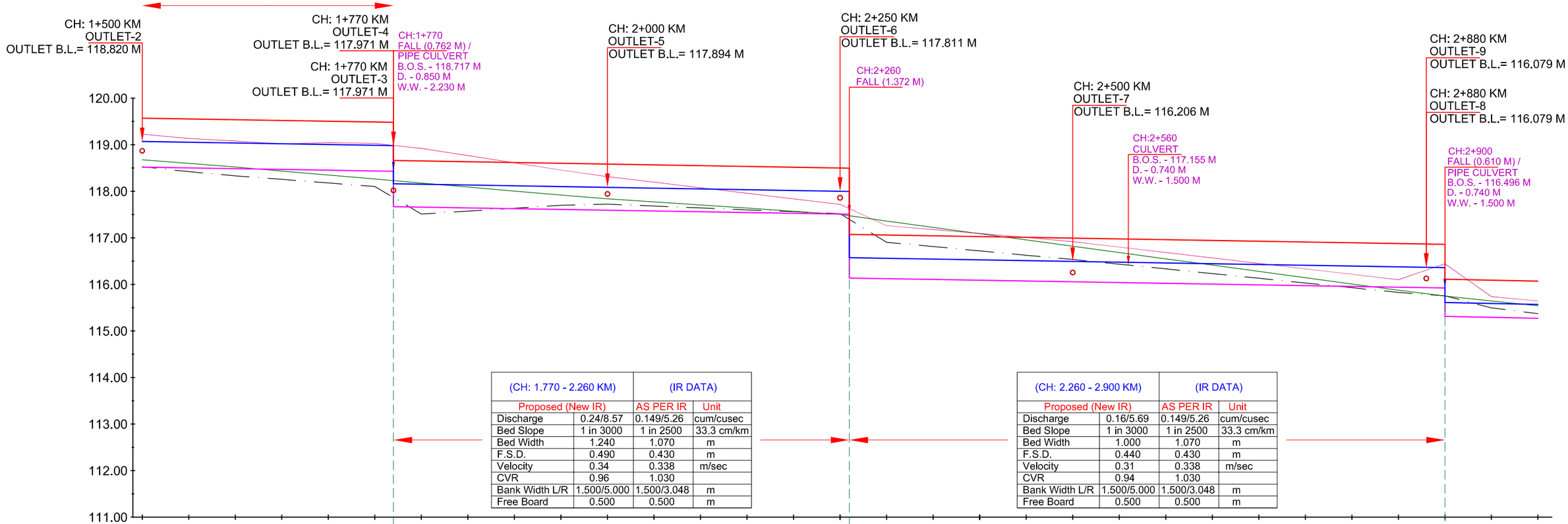
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF MIRZAPUR MR. (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ LSEC- 01 of 03
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 3+000

(CH: 0.000 - 1.770 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.41/14.36	0.530/18.72	cum/cusec
Bed Slope	1 in 3100	1 in 3000	32.3 cm/km
Bed Width	1.721	1.680	m
F.S.D.	0.550	0.550	m
Velocity	0.36	0.387	m/sec
CVR	0.95	1.03	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

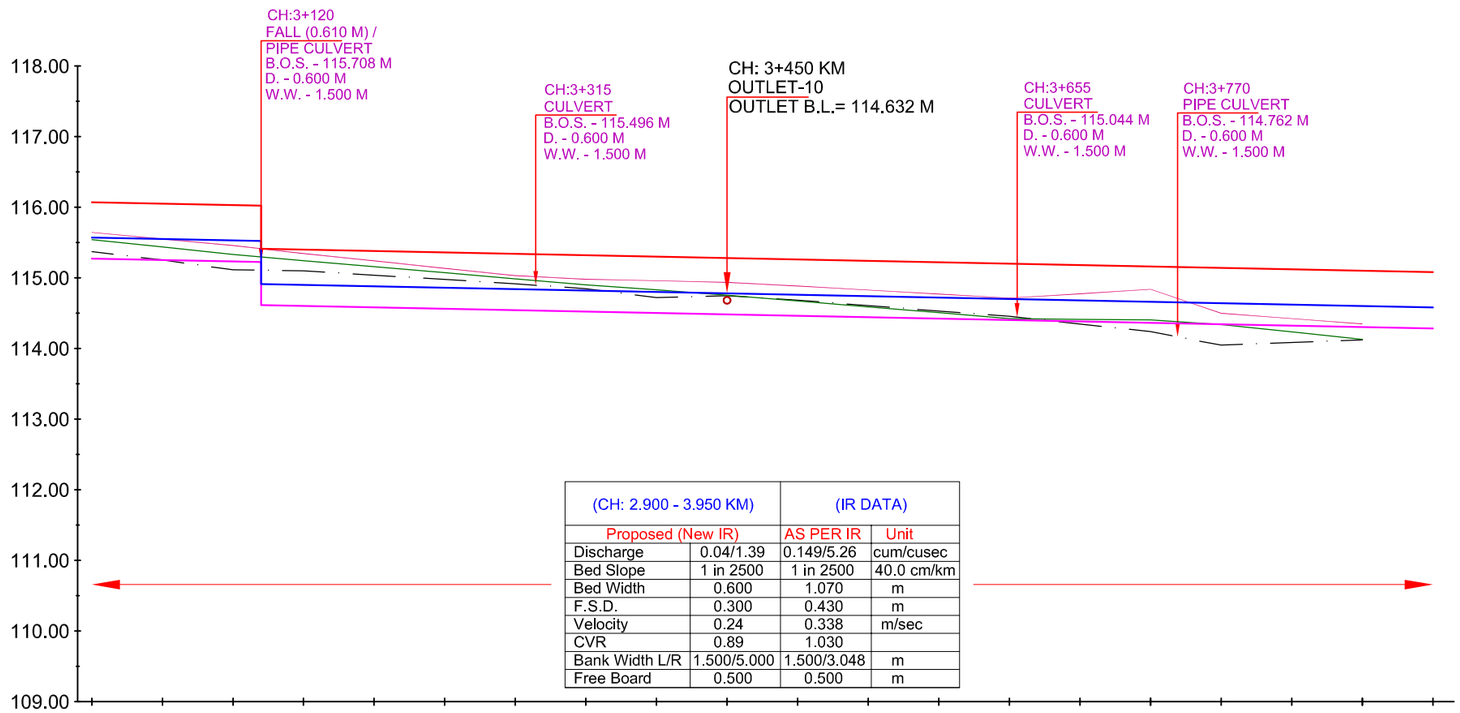


(CH: 1.770 - 2.260 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.24/8.57	0.149/5.26	cum/cusec
Bed Slope	1 in 3000	1 in 2500	33.3 cm/km
Bed Width	1.240	1.070	m
F.S.D.	0.490	0.430	m
Velocity	0.34	0.338	m/sec
CVR	0.96	1.030	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 2.260 - 2.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.16/5.69	0.149/5.26	cum/cusec
Bed Slope	1 in 3000	1 in 2500	33.3 cm/km
Bed Width	1.000	1.070	m
F.S.D.	0.440	0.430	m
Velocity	0.31	0.338	m/sec
CVR	0.94	1.030	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

| | | |

L- SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)
FROM CH 3+000 TO 3+950



(CH: 2.900 - 3.950 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.39	0.149/5.26	cum/cusec
Bed Slope	1 in 2500	1 in 2500	40.0 cm/km
Bed Width	0.600	1.070	m
F.S.D.	0.300	0.430	m
Velocity	0.24	0.338	m/sec
CVR	0.89	1.030	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		3+000	3+050	3+100	3+150	3+200	3+250	3+300	3+350	3+400	3+450	3+500	3+550	3+600	3+650	3+700	3+750	3+800	3+850	3+900	3+950
DESIGN DATA	TOP OF BANK LEVEL	116.072	116.052	116.032	116.024 115.414	115.402	115.382	115.362	115.342	115.322	115.302	115.282	115.262	115.242	115.222	115.202	115.182	115.162	115.142	115.122	115.102	115.082
	F.S.L.	115.572	115.552	115.532	115.524 114.914	114.902	114.882	114.862	114.842	114.822	114.802	114.782	114.762	114.742	114.722	114.702	114.682	114.662	114.642	114.622	114.602	114.582
	Proposed Bed Level	115.272	115.252	115.232	115.224 114.614	114.602	114.582	114.562	114.542	114.522	114.502	114.482	114.462	114.442	114.422	114.402	114.382	114.362	114.342	114.322	114.302	114.282
EXISTING DATA	Bed Level	115.373	115.253	115.114	115.099	115.039	114.978	114.917	114.847	114.722	114.746	114.685	114.608	114.530	114.455	114.347	114.239	114.047	114.086	114.123	
	TOP OF BANK LEVEL	115.645	115.551	115.458	115.345	115.241	115.136	115.033	114.981	114.960	114.936	114.885	114.828	114.771	114.714	114.775	114.839	114.500	114.424	114.347	
	NSL	115.541	115.437	115.332	115.244	115.159	115.074	114.988	114.903	114.832	114.756	114.673	114.590	114.507	114.424	114.414	114.405	114.340	114.235	114.130	
	Chainage IN KM																				

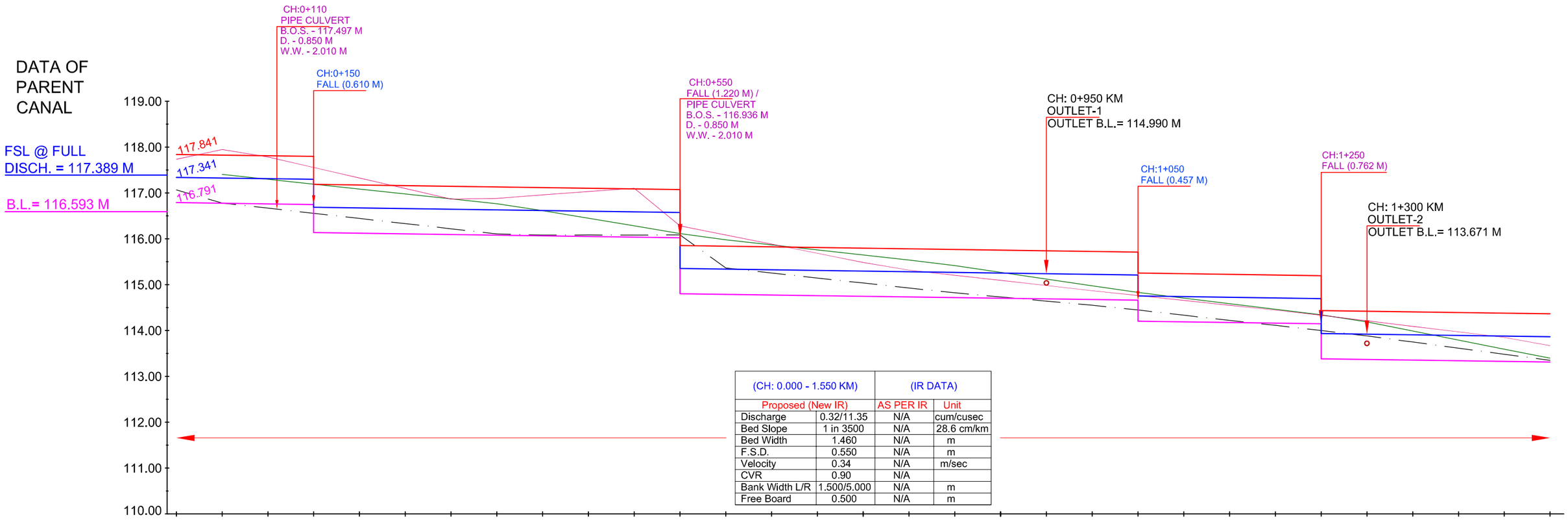
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF MIRZAPUR MR. (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ LSEC- 03 of 03
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 1.550 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.32/11.35	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.460	N/A	m
F.S.D.	0.550	N/A	m
Velocity	0.34	N/A	m/sec
CVR	0.90	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

		0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	117.841	117.827	117.812	117.798 117.188	117.174	117.160	117.145	117.131	117.117	117.102	117.088	117.074 115.854	115.840	115.825	115.811	115.797	115.782	115.768	115.754	115.740	115.725	115.711 115.254	115.240	115.225	115.211	115.197 114.435	114.421	114.406	114.392	114.378	114.363
	F.S.L.	117.341	117.327	117.312	117.298 116.688	116.674	116.660	116.645	116.631	116.617	116.602	116.588	116.574 115.354	115.340	115.325	115.311	115.297	115.282	115.268	115.254	115.240	115.225	115.211 114.754	114.740	114.725	114.711	114.697 113.935	113.921	113.906	113.892	113.878	113.863
	Proposed Bed Level	116.791	116.777	116.762	116.748 116.138	116.124	116.110	116.095	116.081	116.067	116.052	116.038	116.024 114.804	114.790	114.775	114.761	114.747	114.732	114.718	114.704	114.690	114.675	114.661 114.204	114.190	114.175	114.161	114.147 113.385	113.371	113.356	113.342	113.328	113.313
EXISTING DATA	Bed Level	117.067	116.782	116.669	116.557	116.444	116.332	116.219	116.107	116.081	116.084	116.081	116.086	115.364	115.255	115.145	115.036	114.926	114.823	114.732	114.642	114.551	114.449	114.334	114.222	114.113	114.000	113.882	113.749	113.616	113.483	113.350
	TOP OF BANK LEVEL	117.735	117.947	117.787	117.557	117.327	117.098	116.868	116.883	116.958	117.033	117.104	116.282	116.083	115.884	115.685	115.486	115.318	115.206	115.094	114.983	114.868	114.763	114.657	114.552	114.446	114.334	114.213	114.092	113.971	113.850	113.670
	NSL		117.405	117.299	117.192	117.086	116.979	116.873	116.767	116.614	116.449	116.284	116.116	115.978	115.868	115.758	115.649	115.539	115.416	115.269	115.122	114.976	114.830	114.707	114.585	114.463	114.341	114.188	113.990	113.792	113.594	113.396
	Chainage IN KM	0+000	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

LEGEND

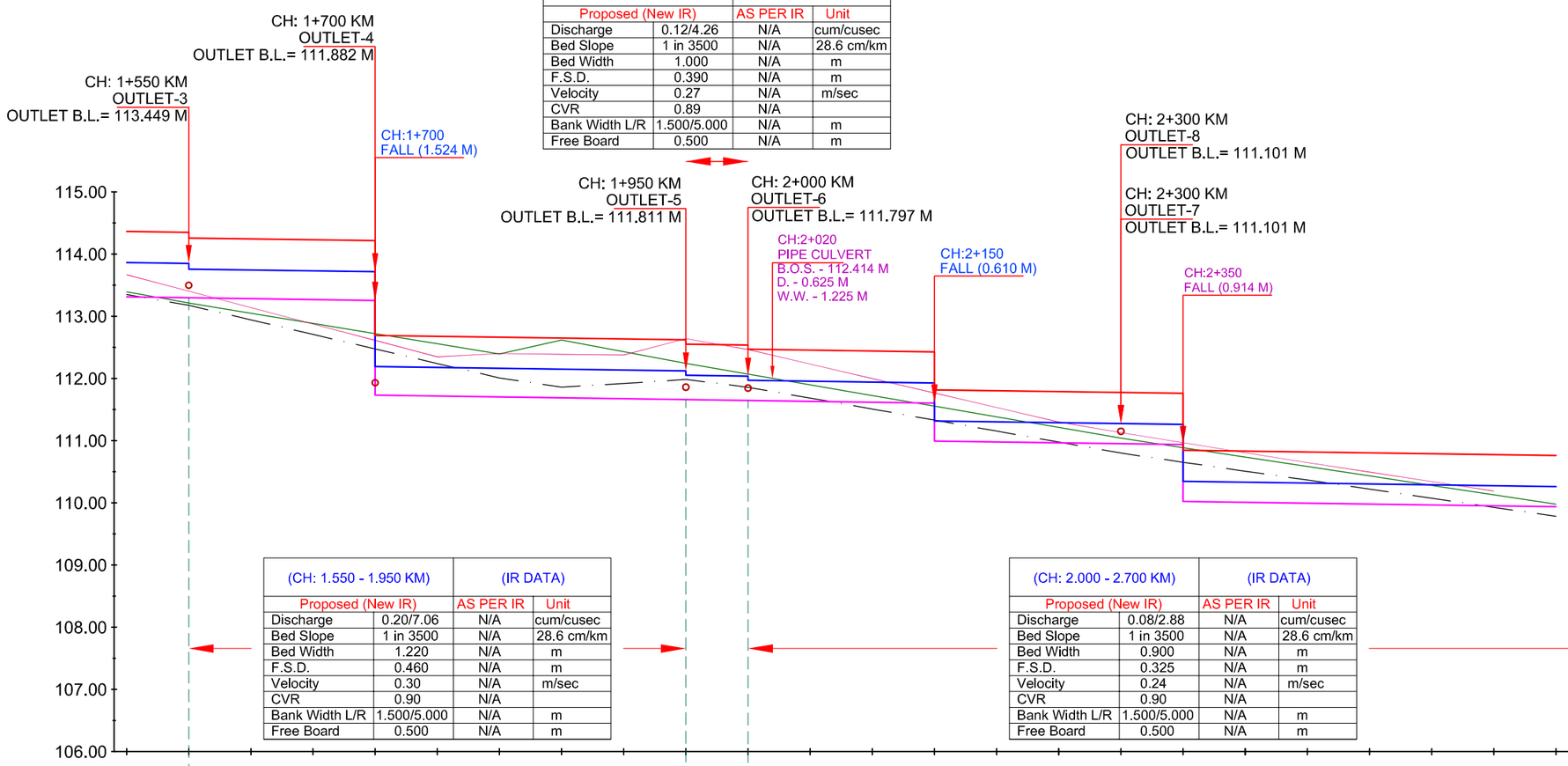
	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ LSEC- 01 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF JASOEA MR.
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 2+700

(CH: 1.950 - 2.000 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.12/4.26	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.000	N/A	m
F.S.D.	0.390	N/A	m
Velocity	0.27	N/A	m/sec
CVR	0.89	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m



(CH: 1.550 - 1.950 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.20/7.06	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	1.220	N/A	m
F.S.D.	0.460	N/A	m
Velocity	0.30	N/A	m/sec
CVR	0.90	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

(CH: 2.000 - 2.700 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.88	N/A	cum/cusec
Bed Slope	1 in 3500	N/A	28.6 cm/km
Bed Width	0.900	N/A	m
F.S.D.	0.325	N/A	m
Velocity	0.24	N/A	m/sec
CVR	0.90	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

	Chainage IN KM	1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450	2+500	2+550	2+600	2+650	2+700
DESIGN DATA	TOP OF BANK LEVEL	114.363	114.349 114.259	114.245	114.231	114.216 112.692	112.678	112.664	112.649	112.635	112.621 112.551	112.537 112.472	112.457	112.443	112.429 111.819	111.804	111.790	111.776	111.762 110.848	110.833	110.819	110.805	110.790	110.776	110.762	
	F.S.L.	113.863	113.849 113.759	113.745	113.731	113.716 112.192	112.178	112.164	112.149	112.135	112.121 112.051	112.037 111.972	111.957	111.943	111.929 111.319	111.304	111.290	111.276	111.262 110.348	110.333	110.319	110.305	110.290	110.276	110.262	
	Proposed Bed Level	113.313	113.299	113.285	113.271	113.256 111.732	111.718	111.704	111.689	111.675	111.661	111.647	111.632	111.618	111.604 110.994	110.979	110.965	110.951	110.937 110.023	110.008	109.994	109.980	109.965	109.951	109.937	
EXISTING DATA	Bed Level	113.350	113.176	112.944	112.709	112.476	112.240	112.010	111.861	111.921	111.985	111.859	111.685	111.509	111.331	111.155	110.978	110.801	110.653	110.509	110.367	110.221	110.074	109.929	109.783	
	TOP OF BANK LEVEL	113.670	113.405	113.141	112.877	112.612	112.348	112.402	112.390	112.377	112.641	112.466	112.233	112.000	111.768	111.535	111.302	111.130	110.968	110.807	110.648	110.495	110.343	110.190		
	NSL	113.396	113.213	113.050	112.886	112.723	112.560	112.396	112.618	112.430	112.243	112.069	111.897	111.726	111.555	111.384	111.213	111.042	110.888	110.737	110.585	110.434	110.282	110.130	109.978	

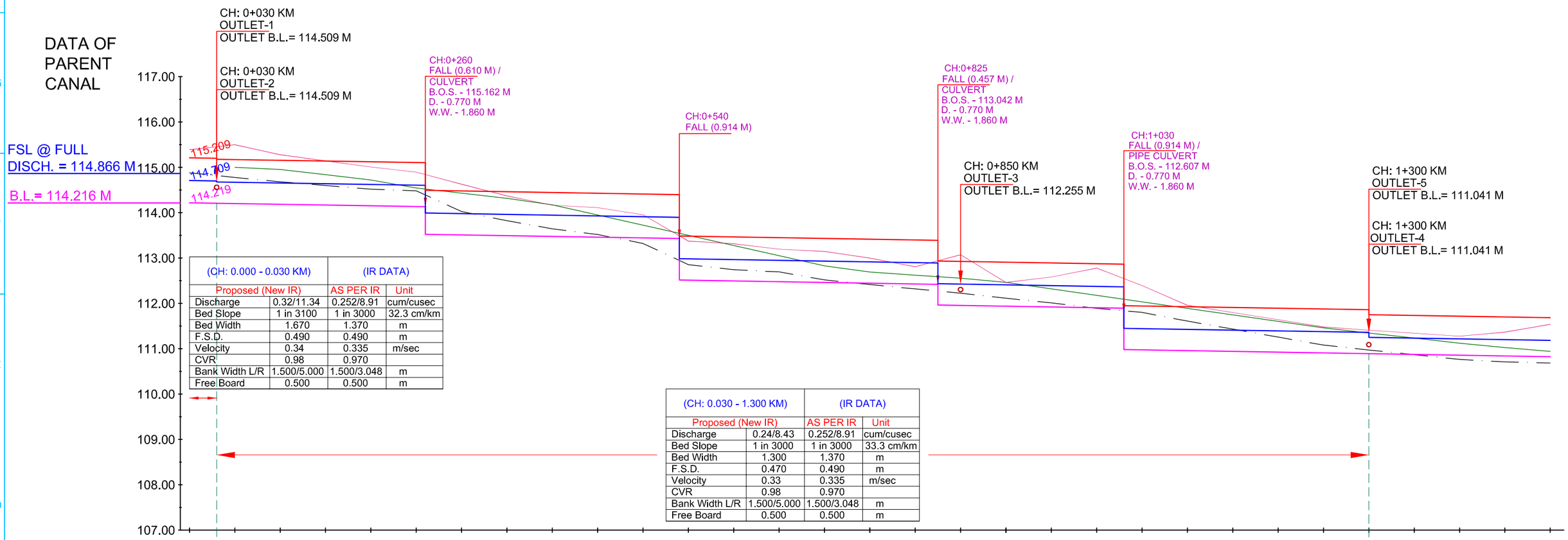
LEGEND

NSL		EXISTING BED LEVEL	
EXISTING TOP OF BANK		PROPOSED BED LEVEL	
EXISTING FALL		PROPOSED FSL	
MODIFIED FALL		PROPOSED TOP OF BANK LEVEL	
NEW FALL			

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ LSEC- 02 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
FROM CH 0+000 TO 1+500



(CH: 0.000 - 0.030 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.32/11.34	0.252/8.91	cum/cusec
Bed Slope	1 in 3100	1 in 3000	32.3 cm/km
Bed Width	1.670	1.370	m
F.S.D.	0.490	0.490	m
Velocity	0.34	0.335	m/sec
CVR	0.98	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 0.030 - 1.300 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.24/8.43	0.252/8.91	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	1.300	1.370	m
F.S.D.	0.470	0.490	m
Velocity	0.33	0.335	m/sec
CVR	0.98	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		0+000	0+030	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500
DESIGN DATA	TOP OF BANK LEVEL	115.209	115.199	115.172	115.156	115.139	115.122	115.106	114.479	114.462	114.446	114.429	114.412	114.399	113.465	113.448	113.432	113.415	113.398	113.390	112.908	112.891	112.875	112.865	111.927	111.911	111.894	111.877	111.861	111.734	111.717	111.701	111.684
	F.S.L.	114.709	114.699	114.672	114.656	114.639	114.622	114.606	113.979	113.962	113.946	113.929	113.912	113.899	112.965	112.948	112.932	112.915	112.898	112.890	112.408	112.391	112.375	112.365	111.427	111.411	111.394	111.377	111.361	111.234	111.217	111.201	111.184
	Proposed Bed Level	114.219	114.209	114.202	114.186	114.169	114.152	114.136	113.509	113.492	113.476	113.459	113.442	113.429	112.495	112.478	112.462	112.445	112.428	112.420	111.938	111.921	111.905	111.895	110.957	110.941	110.924	110.907	110.891	110.874	110.857	110.841	110.824
EXISTING DATA	Bed Level	114.881		114.777	114.683	114.600	114.518	114.484	114.025	113.824	113.644	113.518	113.322	112.855	112.742	112.694	112.518	112.415	112.319	112.225	112.113	112.013	111.892		111.610	111.433	111.257	111.081	110.973	110.869	110.765	110.709	110.686
	TOP OF BANK LEVEL	115.390		115.500	115.278	115.144	115.009	114.895	114.628	114.371	114.167	114.112	113.953	113.375	113.316	113.196	113.146	113.000	112.807	113.073	112.462	112.582	112.777	112.394	111.958	111.799	111.640	111.482	111.469	111.343	111.277	111.366	111.541
	NSL			115.001	114.955	114.838	114.720	114.547	114.433	114.318	114.175	113.950	113.726	113.501	113.277	113.052	112.827	112.692	112.624	112.557	112.464	112.321	112.177	112.034	111.890	111.747	111.603	111.460	111.346	111.235	111.123	111.026	110.941
	Chainage IN KM	0+000	0+030	0+050	0+100	0+150	0+200	0+250	0+300	0+350	0+400	0+450	0+500	0+550	0+600	0+650	0+700	0+750	0+800	0+850	0+900	0+950	1+000	1+050	1+100	1+150	1+200	1+250	1+300	1+350	1+400	1+450	1+500

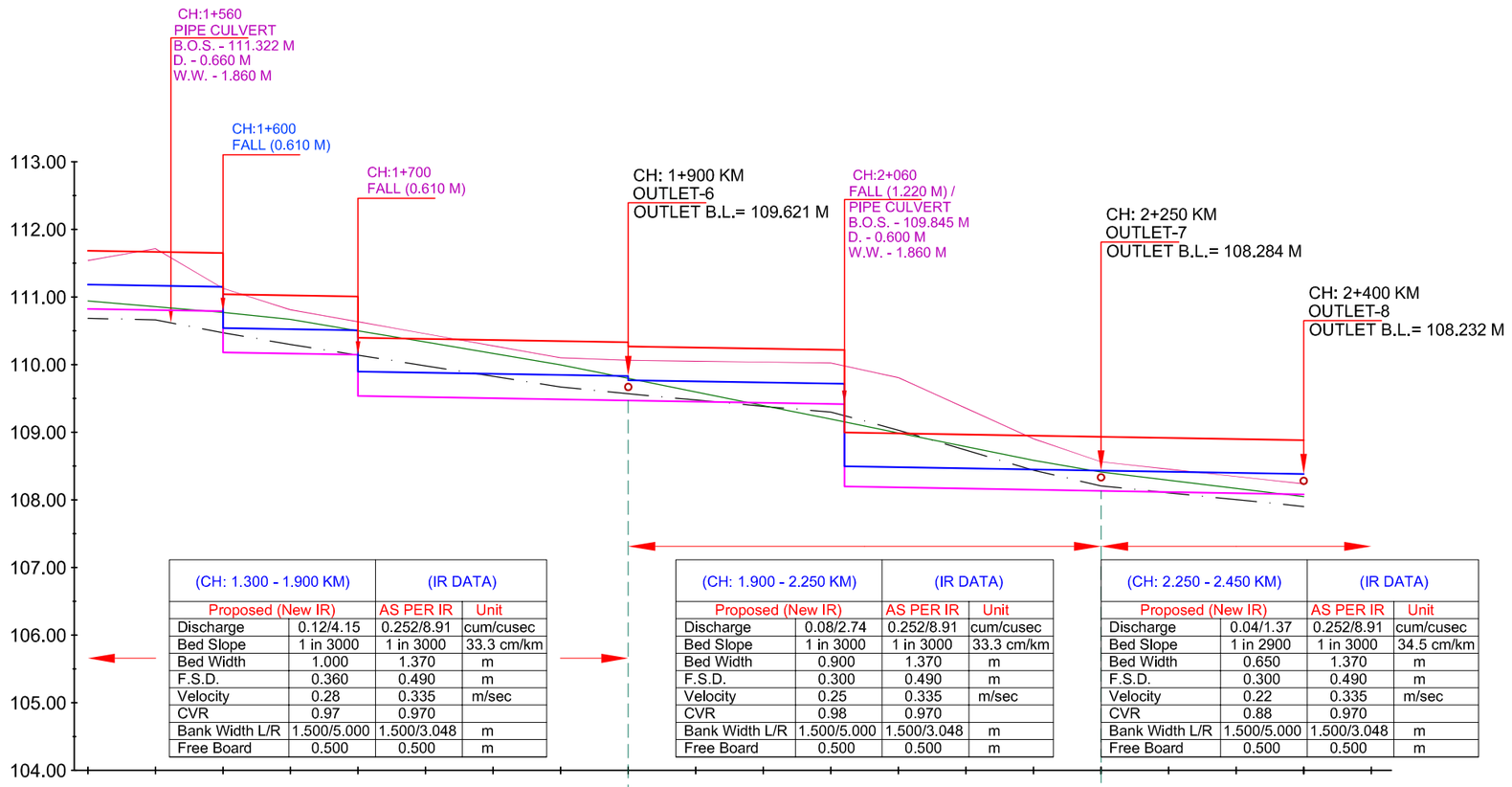
LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ LSEC- 01 of 02
Drawn By:-	Checked By:- / Approved By:-

L- SECTION OF SENDHOKHAP MR.
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
FROM CH 1+500 TO 2+450



(CH: 1.300 - 1.900 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.12/4.15	0.252/8.91	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	1.000	1.370	m
F.S.D.	0.360	0.490	m
Velocity	0.28	0.335	m/sec
CVR	0.97	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 1.900 - 2.250 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.08/2.74	0.252/8.91	cum/cusec
Bed Slope	1 in 3000	1 in 3000	33.3 cm/km
Bed Width	0.900	1.370	m
F.S.D.	0.300	0.490	m
Velocity	0.25	0.335	m/sec
CVR	0.98	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

(CH: 2.250 - 2.450 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.04/1.37	0.252/8.91	cum/cusec
Bed Slope	1 in 2900	1 in 3000	34.5 cm/km
Bed Width	0.650	1.370	m
F.S.D.	0.300	0.490	m
Velocity	0.22	0.335	m/sec
CVR	0.88	0.970	
Bank Width L/R	1.500/5.000	1.500/3.048	m
Free Board	0.500	0.500	m

		1+500	1+550	1+600	1+650	1+700	1+750	1+800	1+850	1+900	1+950	2+000	2+050	2+100	2+150	2+200	2+250	2+300	2+350	2+400	2+450
DESIGN DATA	TOP OF BANK LEVEL	111.684	111.667	111.651 111.041	111.024	111.007 110.397	110.381	110.364	110.347	110.331	110.254	110.237	110.221 110.217	108.984	108.967	108.951	108.934	108.917	108.900	108.882	
	F.S.L.	111.184	111.167	111.151 110.541	110.524	110.507 109.897	109.881	109.864	109.847	109.831	109.754	109.737	109.721 109.717	108.484	108.467	108.451	108.434	108.417	108.400	108.382	
	Proposed Bed Level	110.824	110.807	110.791 110.181	110.164	110.147 109.537	109.521	109.504	109.487	109.471	109.454	109.437	109.421 109.417	108.184	108.167	108.151	108.134	108.117	108.100	108.082	
EXISTING DATA	Bed Level	110.686	110.662	110.473	110.298	110.141	109.984	109.827	109.670	109.569	109.479	109.385	109.298	109.032	108.735	108.438	108.207	108.104	108.004	107.903	
	TOP OF BANK LEVEL	111.541	111.715	111.131	110.813	110.635	110.457	110.280	110.102	110.065	110.052	110.038	110.024	109.808	109.356	108.904	108.563	108.455	108.346	108.238	
	NSL	110.941	110.857	110.772	110.670	110.502	110.334	110.165	109.997	109.800	109.598	109.396	109.194	108.991	108.789	108.587	108.412	108.291	108.170	108.050	
	Chainage IN KM																				

LEGEND

	NSL		EXISTING BED LEVEL
	EXISTING TOP OF BANK		PROPOSED BED LEVEL
	EXISTING FALL		PROPOSED FSL
	MODIFIED FALL		PROPOSED TOP OF BANK LEVEL
	NEW FALL		

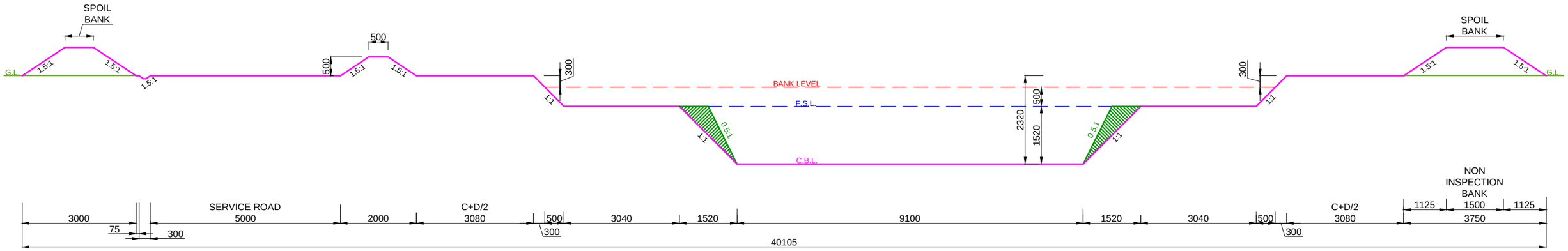
IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
DRAWING TITLE :-	L- SECTION OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
DRAWING NO. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ LSEC- 02 of 02
Drawn By:-	Checked By:- / Approved By:-

TYPICAL SECTION OF RUIR BRANCH CANAL

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.720 KM

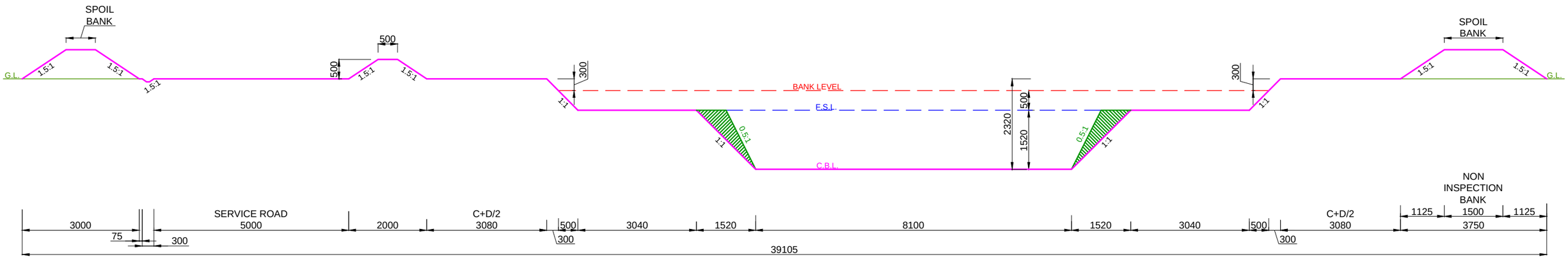
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 52	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 1 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.720 KM TO CH: 7.220 KM

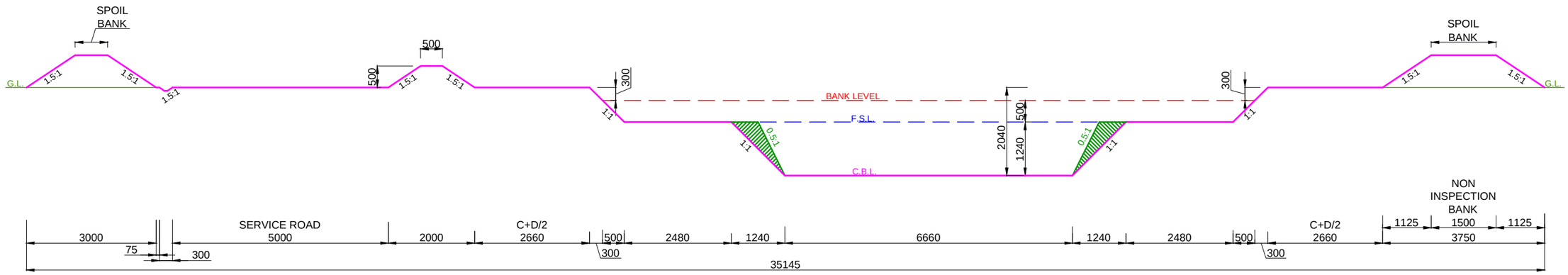
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 53	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 2 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 7.220 KM TO CH: 10.800 KM

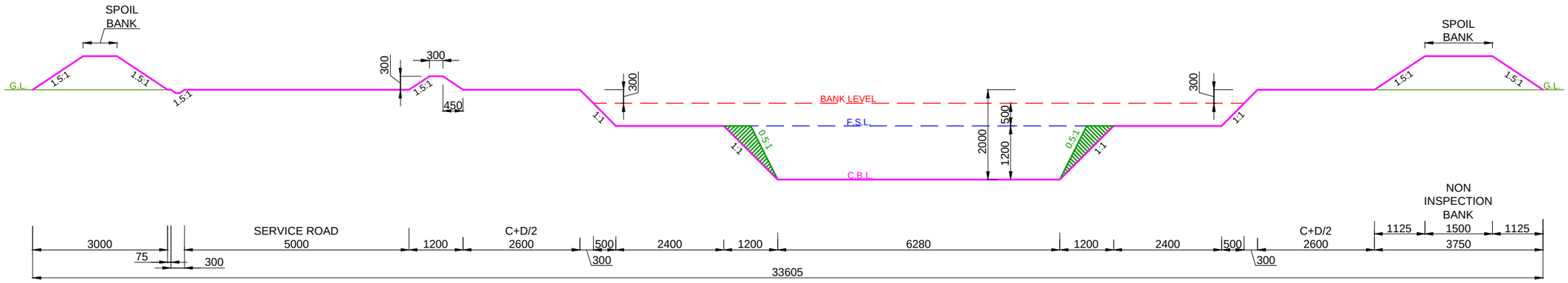
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-54	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 3 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 10.800 KM TO CH: 11.760 KM

NOTE:-

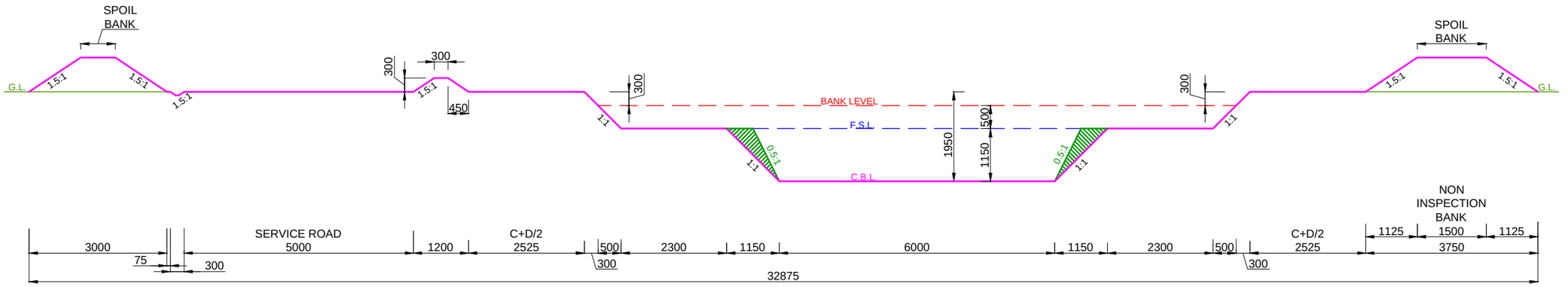
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 4 of 19

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TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 15.850 KM

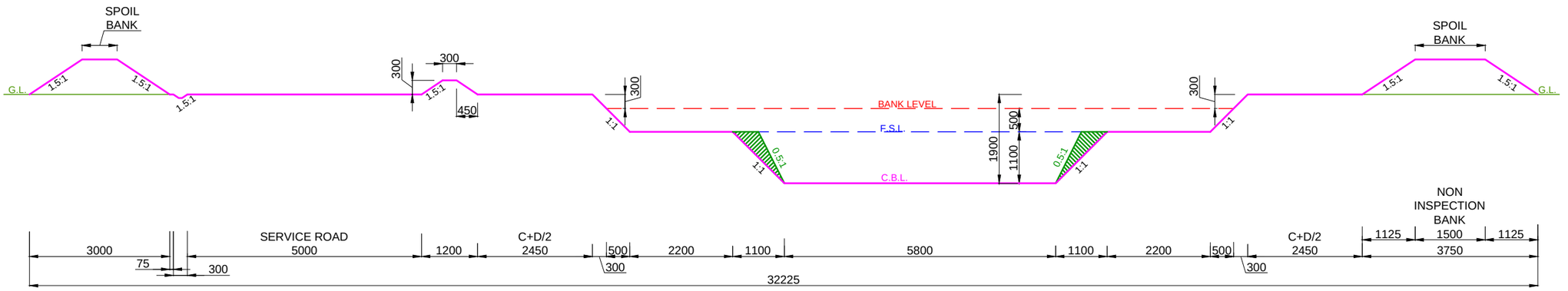
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 56	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 5 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 15.850 KM TO CH: 16.870 KM

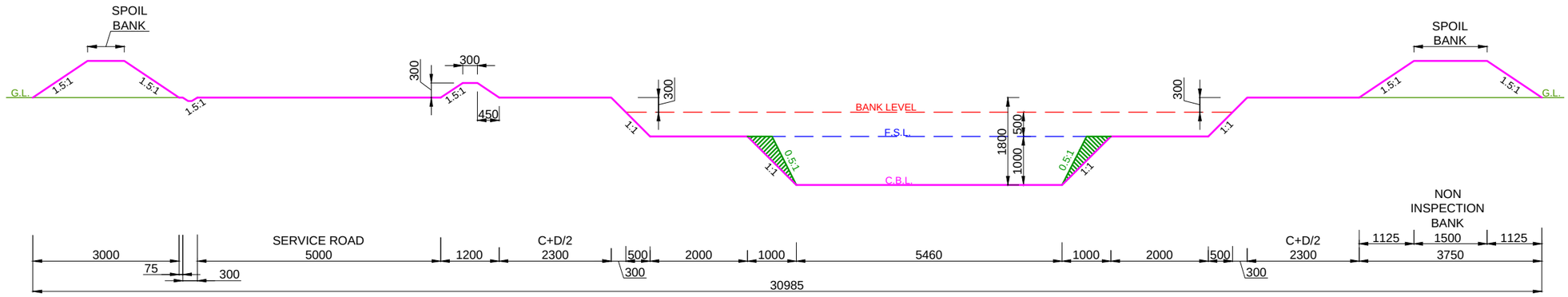
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-57	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 6 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 16.870 KM TO CH: 20.050 KM

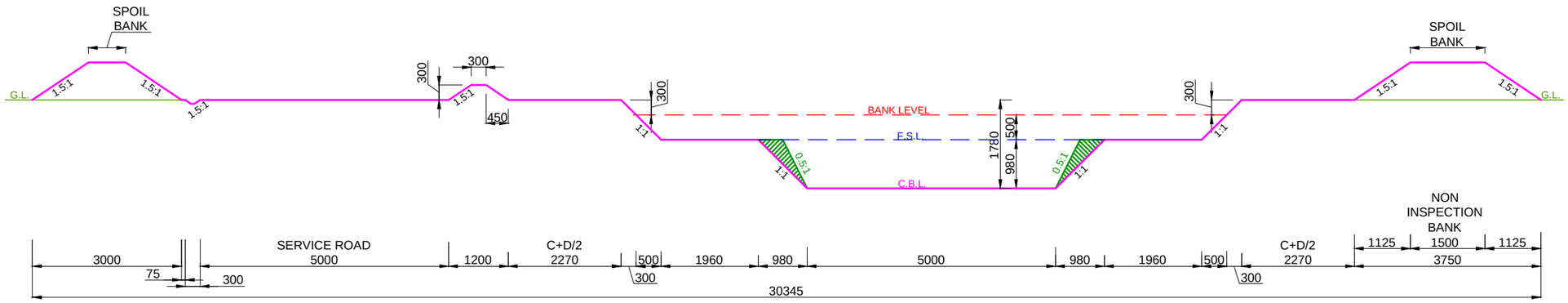
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 58	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 7 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 20.050 KM TO CH: 21.900 KM

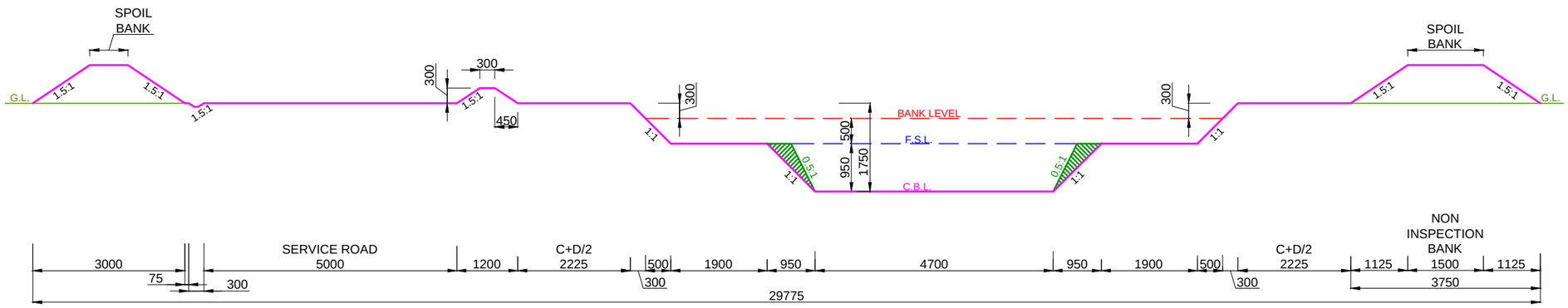
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 59	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 8 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 21.900 KM TO CH: 23.390 KM

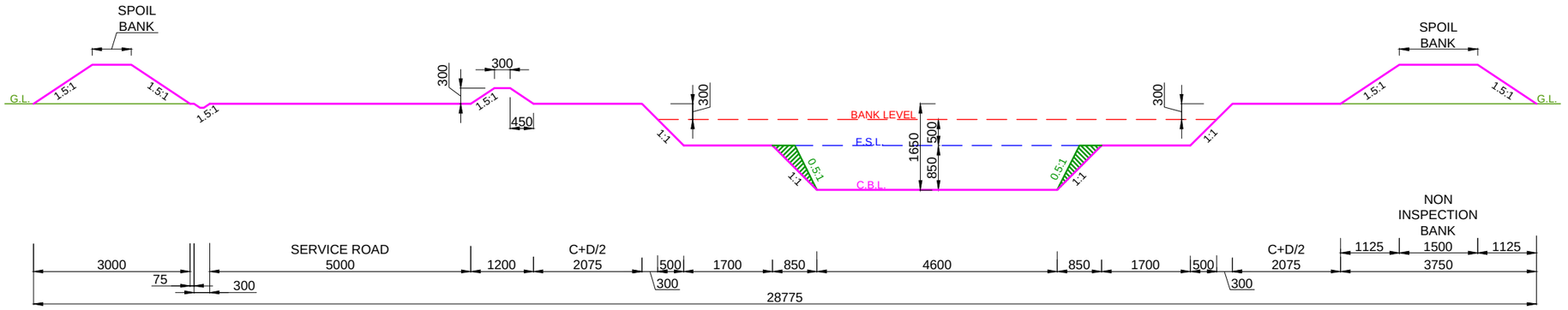
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 60	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 9 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 23.390 KM TO CH: 23.419 KM

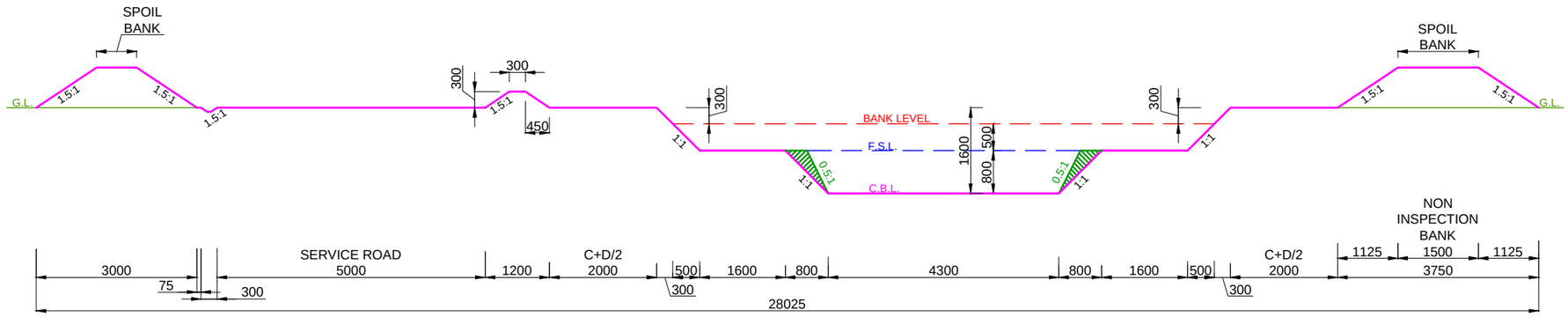
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-61	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 10 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 23.419 KM TO CH: 24.400 KM

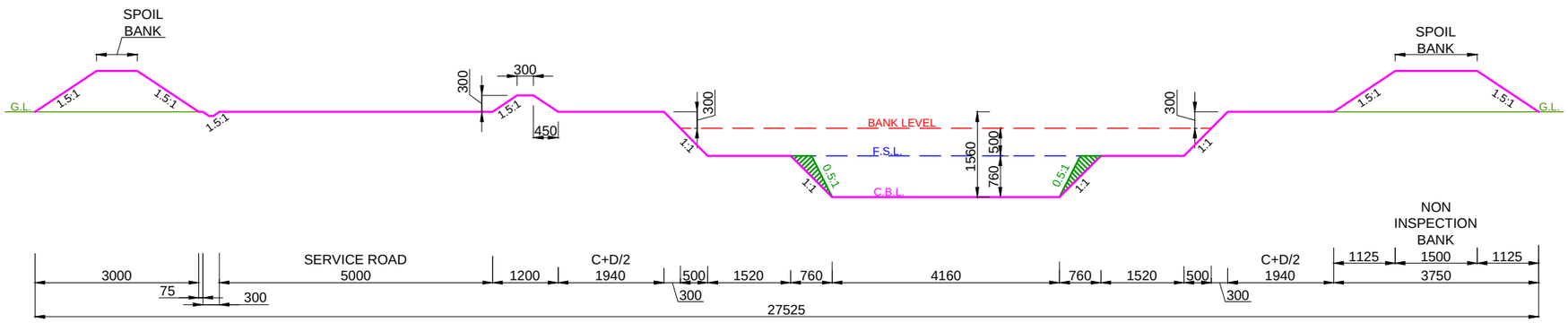
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-62	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 11 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 24.400 KM TO CH: 25.200 KM

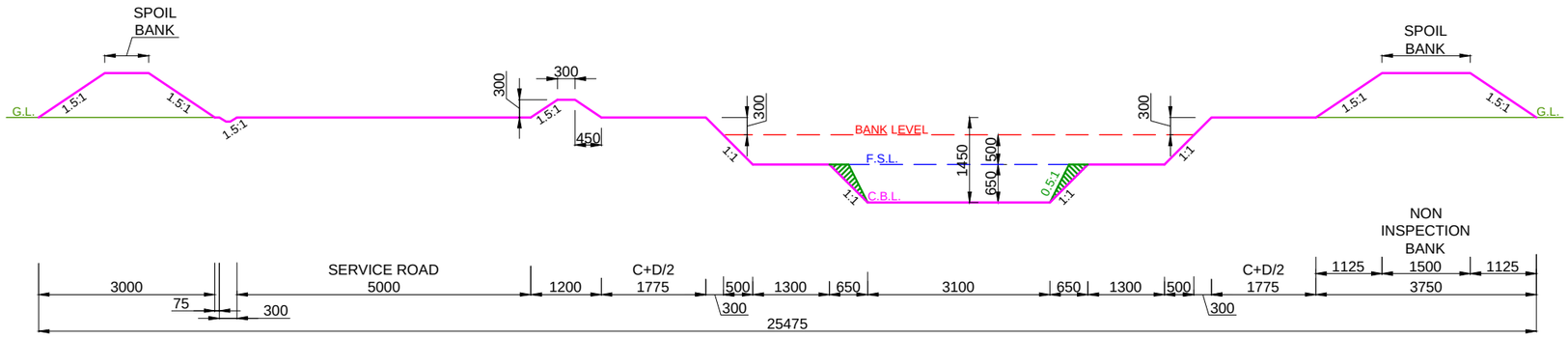
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-63	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 12 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 25.200 KM TO CH: 25.500 KM

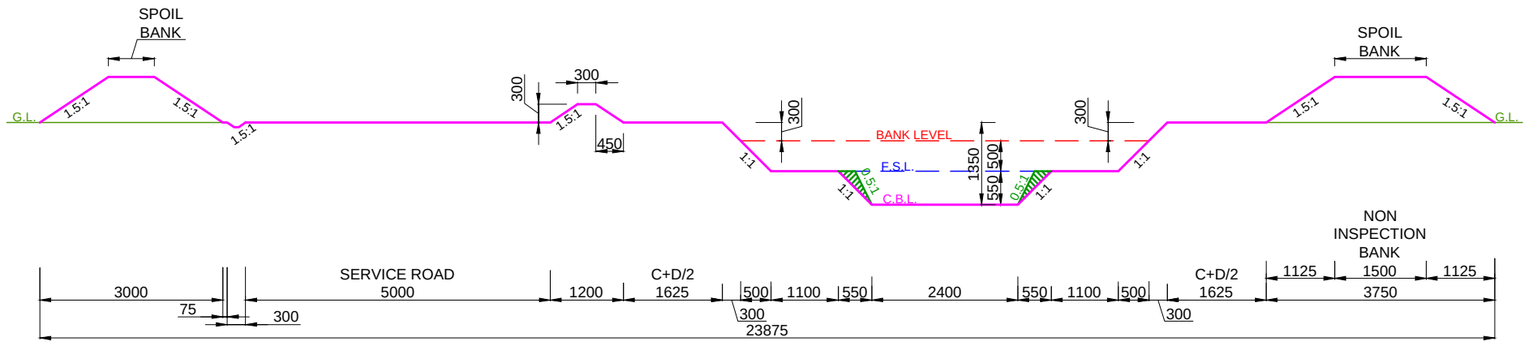
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-64	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 13 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 25.500 KM TO CH: 27.000 KM

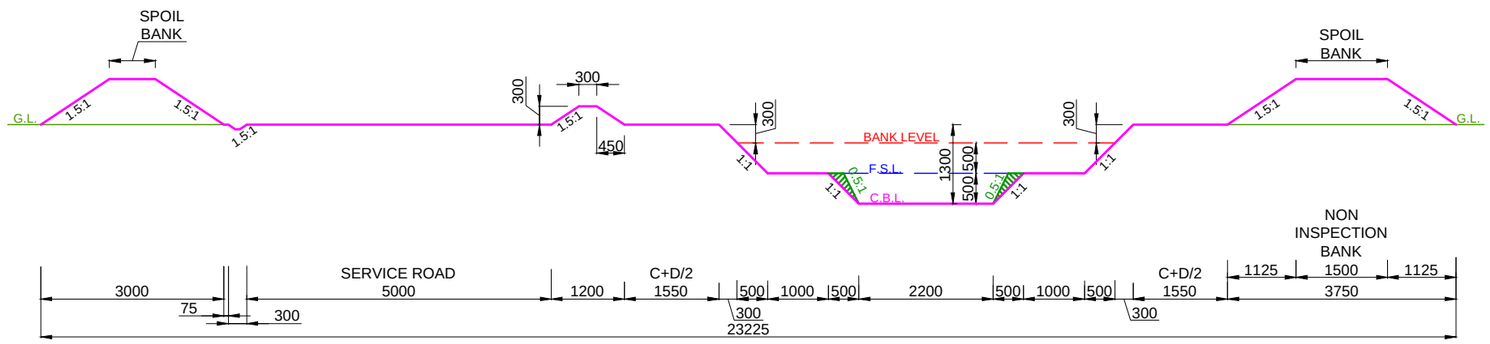
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 65	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 14 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 27.000 KM TO CH: 27.600 KM

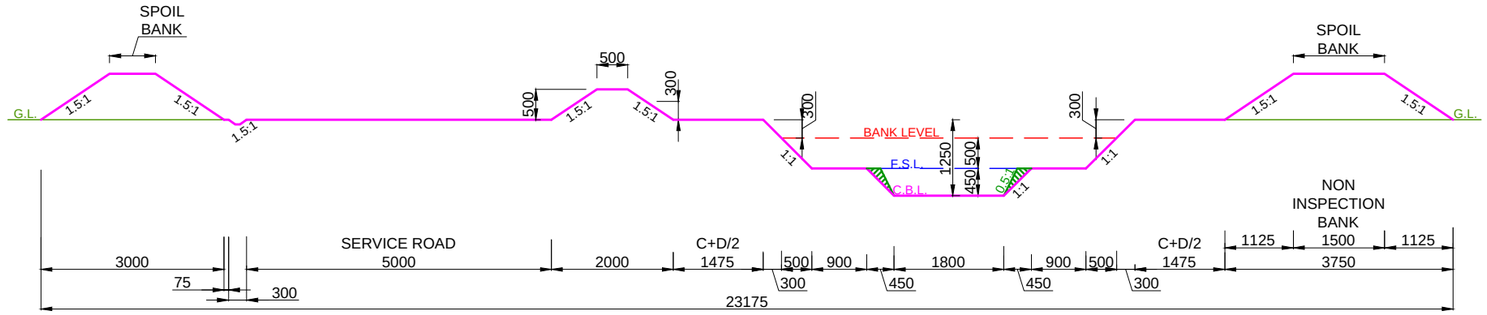
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 66	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 15 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 27.600 KM TO CH: 27.850 KM

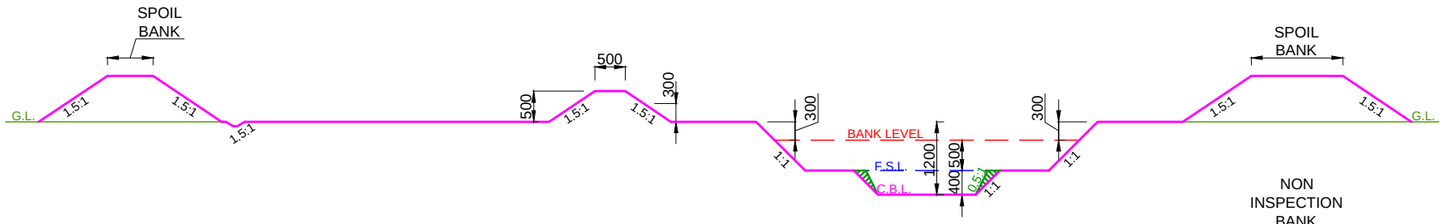
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-67	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 16 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 27.850 KM TO CH: 28.750 KM

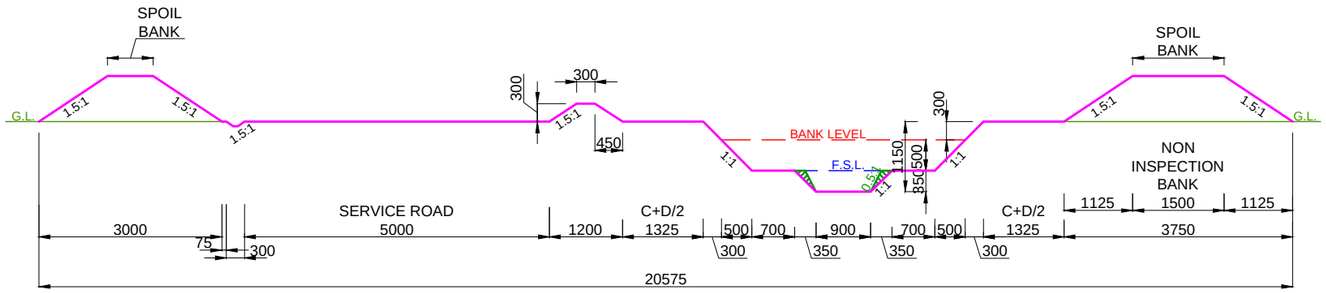
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 68	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 17 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 28.750 KM TO CH: 29.350 KM

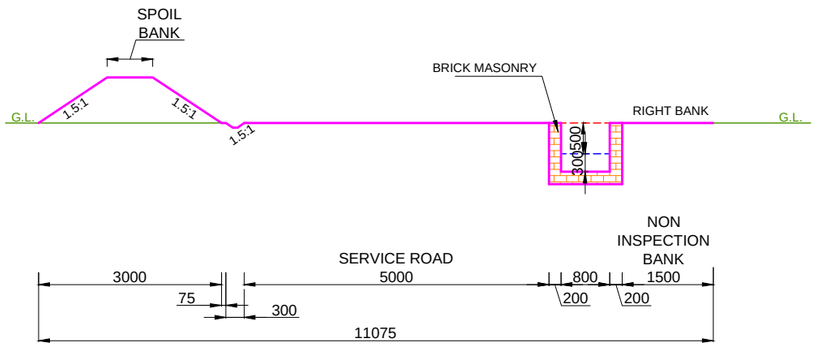
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 69	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 18 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 29.350 KM TO CH: 30.130 KM

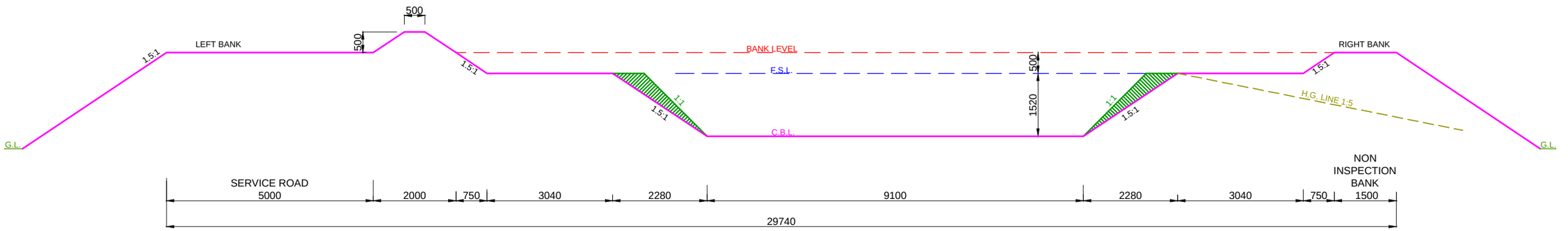
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 70	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FC) 19 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.720 KM

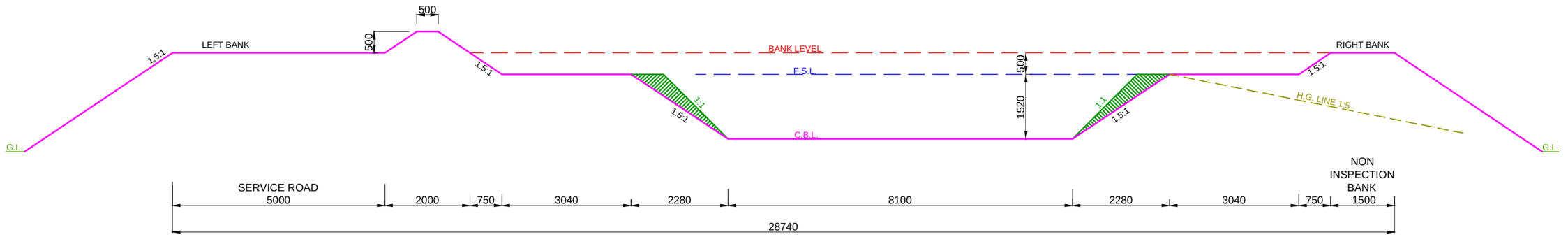
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 71	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 1 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.720 KM TO CH: 7.220 KM

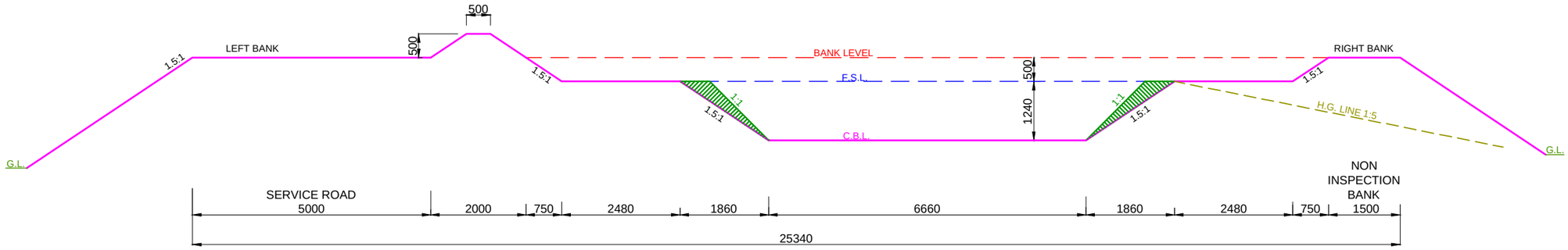
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-72	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 2 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 7.220 KM TO CH: 10.800 KM

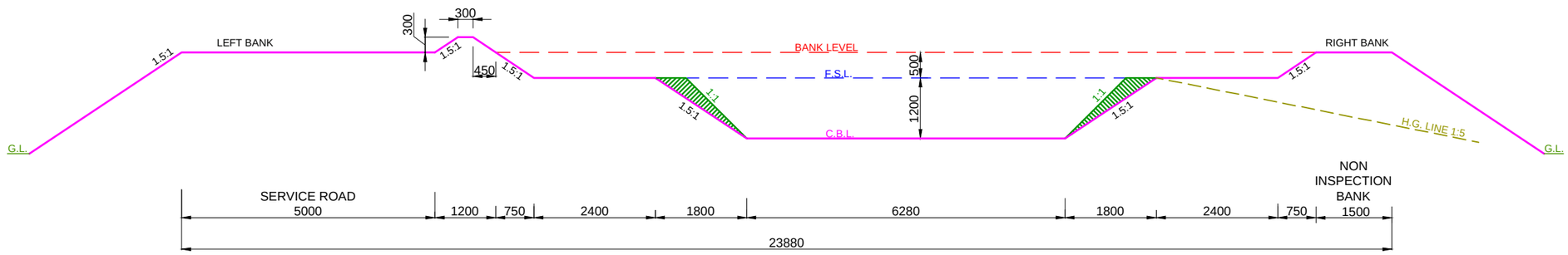
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 73	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 3 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 10.800 KM TO CH: 11.760 KM

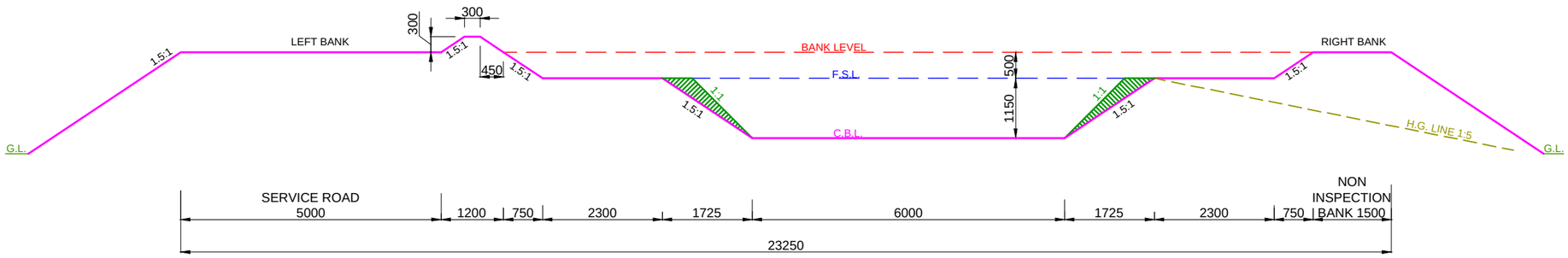
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 74	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 4 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 15.850 KM

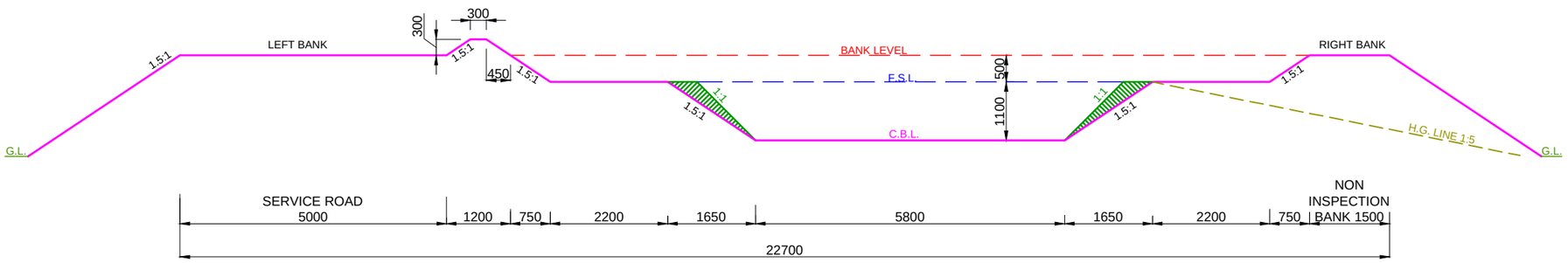
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-75	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 5 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 15.850 KM TO CH: 16.870 KM

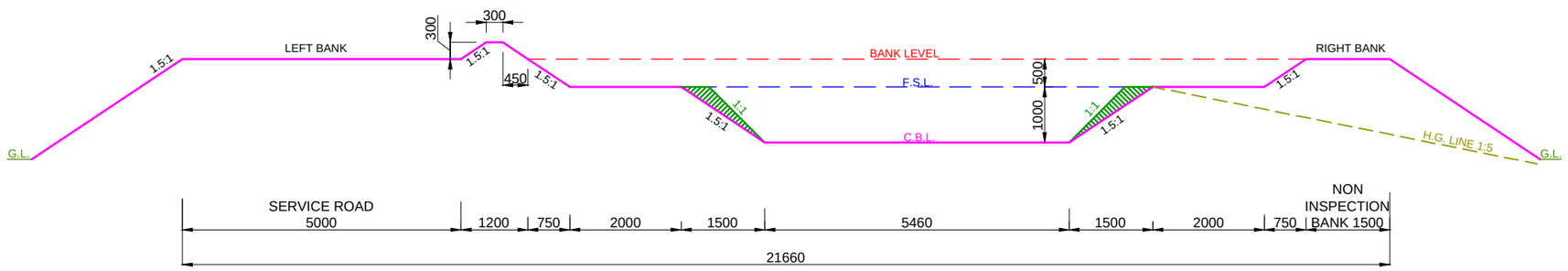
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 76	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 6 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 16.870 KM TO CH: 20.050 KM

NOTE:-

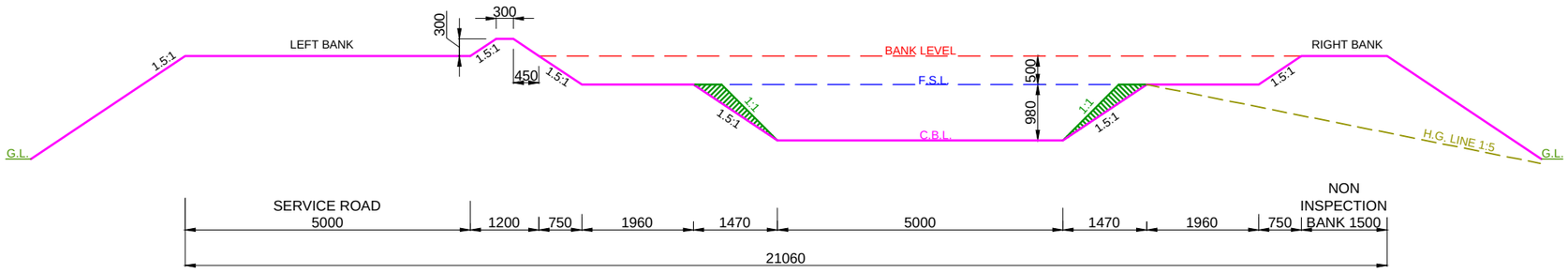
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 7 of 19

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TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 20.050 KM TO CH: 21.900 KM

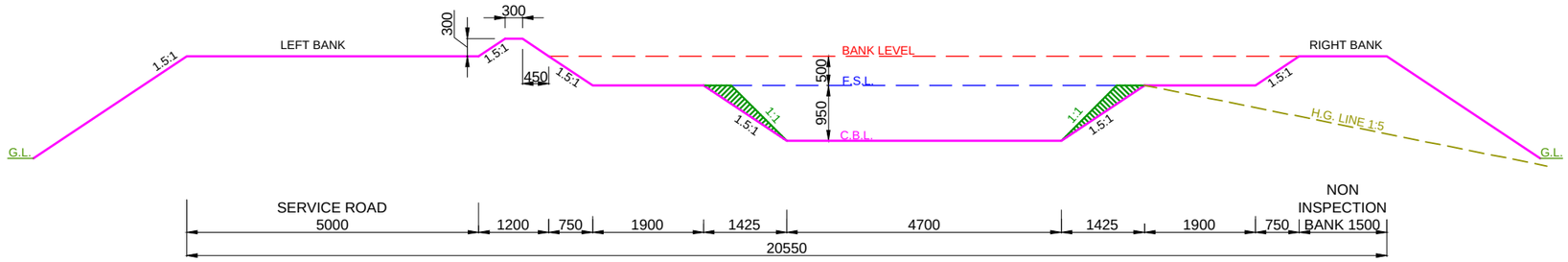
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 78	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 8 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 21.900 KM TO CH: 23.390 KM

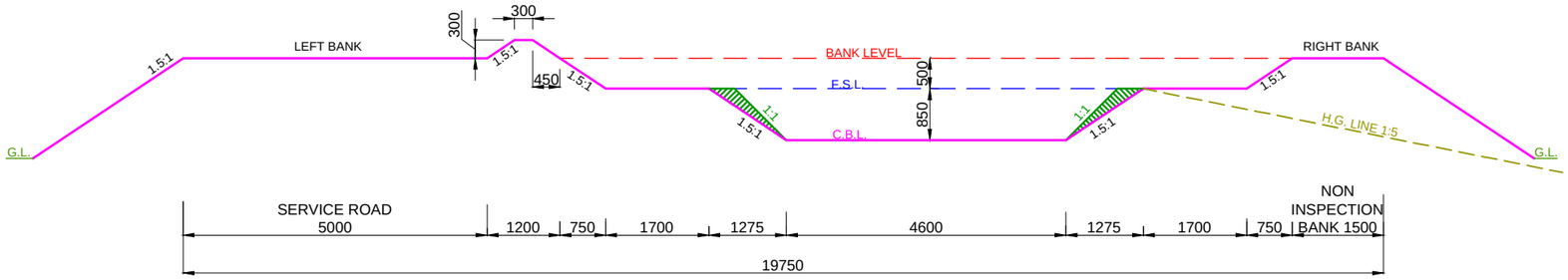
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 9 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 23.390 KM TO CH: 23.419 KM

NOTE:-

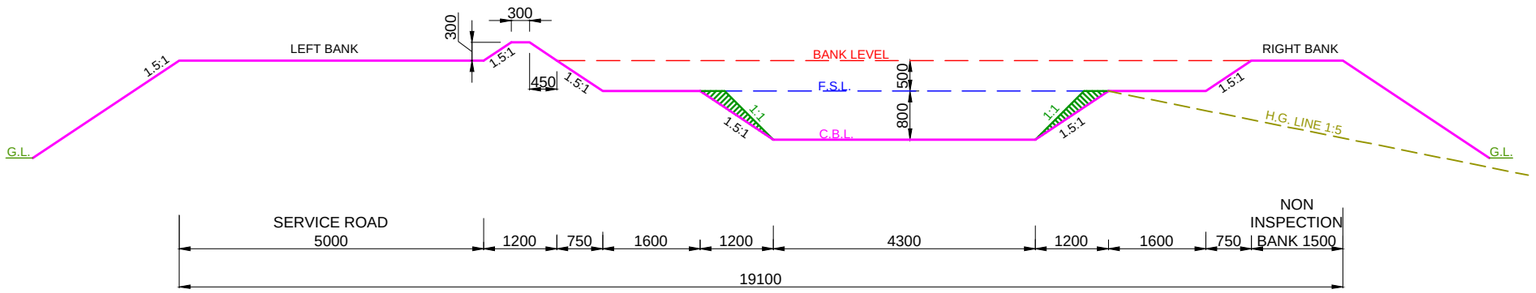
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 10 of 19

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TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 23.419 KM TO CH: 24.400 KM

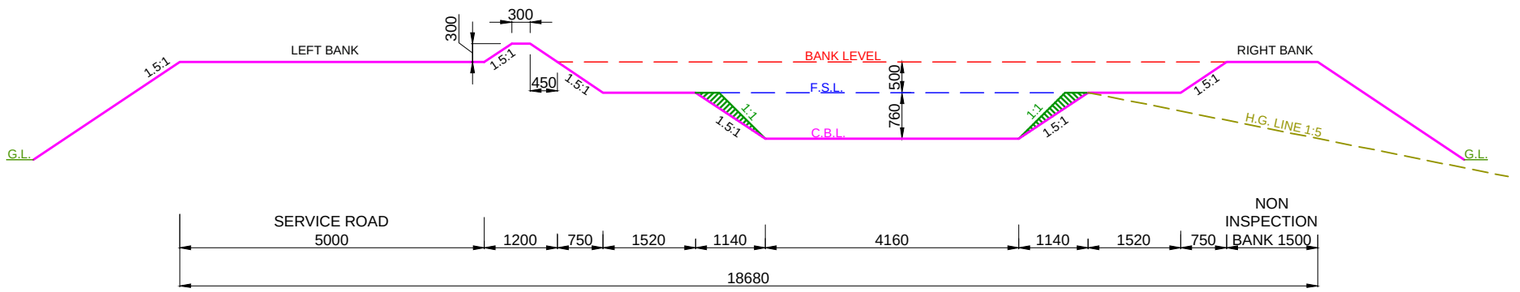
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 81	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 11 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 24.400 KM TO CH: 25.200 KM

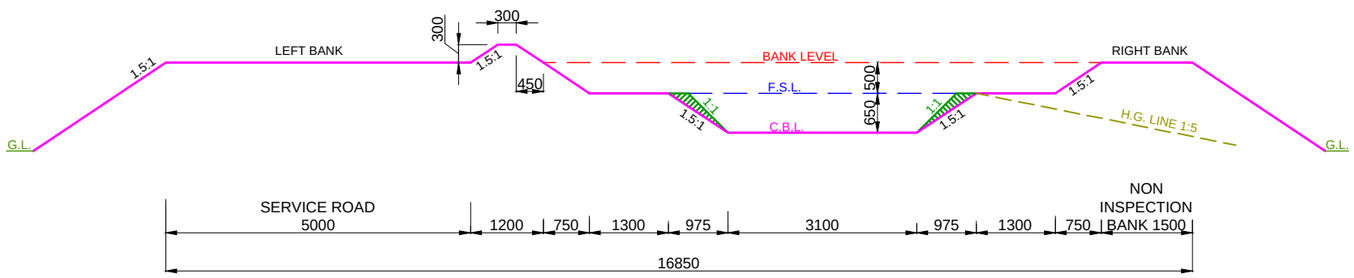
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 82	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 12 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 25.200 KM TO CH: 25.500 KM

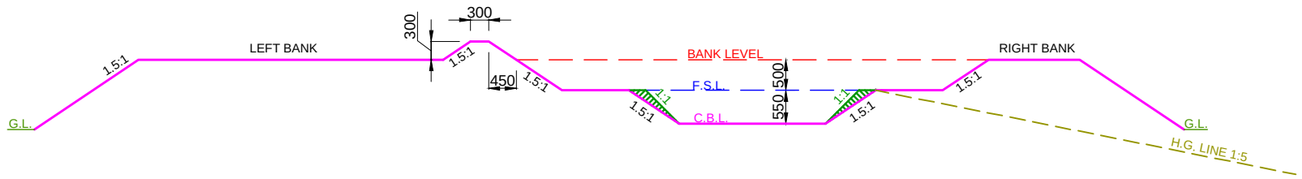
NOTE:-

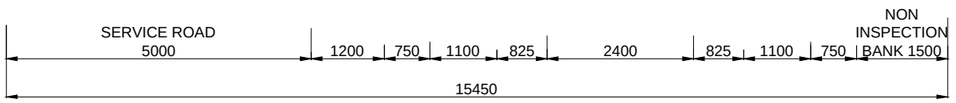
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 83	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 13 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING





DESIGN SECTION FROM CH: 25.500 KM TO CH: 27.000 KM

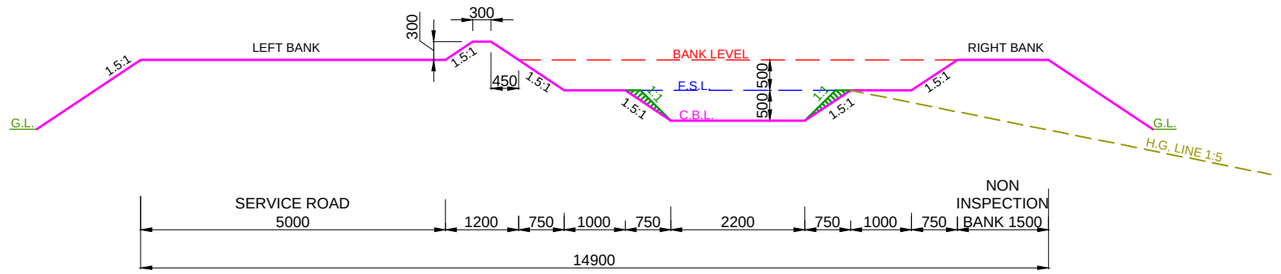
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 84	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 14 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 27.000 KM TO CH: 27.600 KM

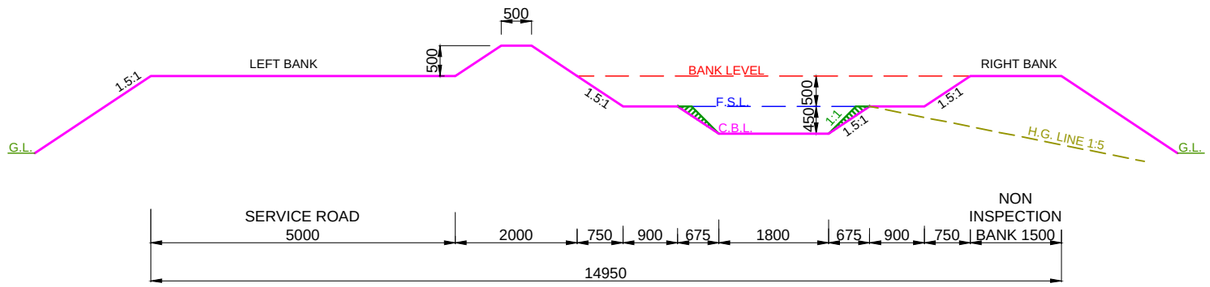
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 85	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 15 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 27.600 KM TO CH: 27.850 KM

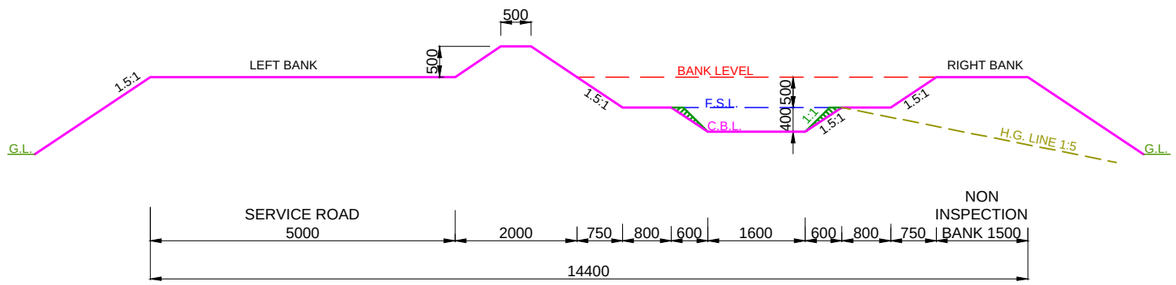
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 86	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 16 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 27.850 KM TO CH: 28.750 KM

NOTE:-

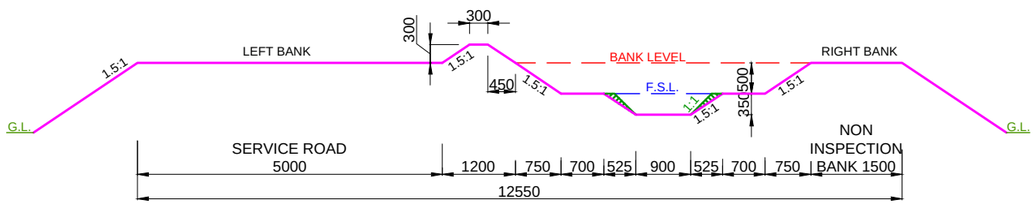
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 17 of 19

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TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 28.750 KM TO CH: 29.350 KM

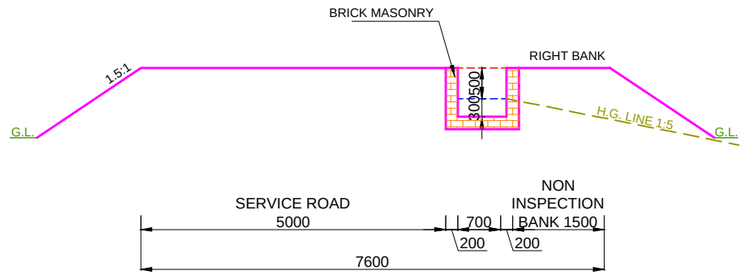
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 88	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 18 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 29.350 KM TO CH: 30.130 KM

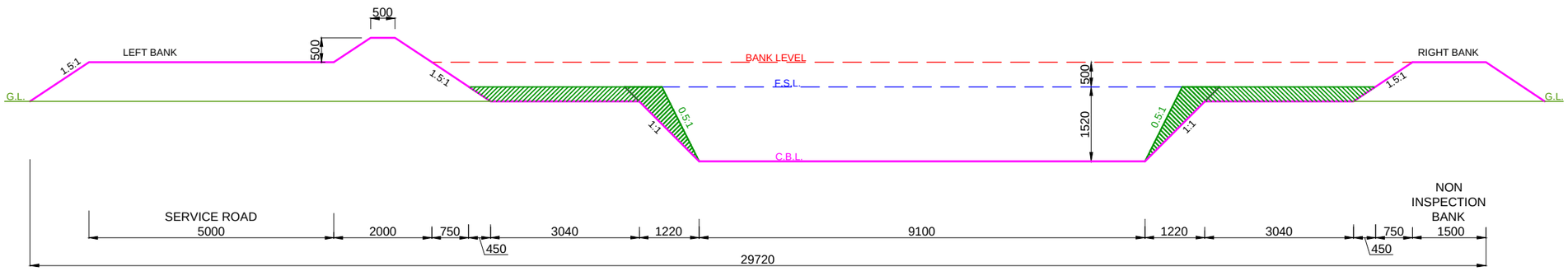
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 89	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(FF) 19 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.720 KM

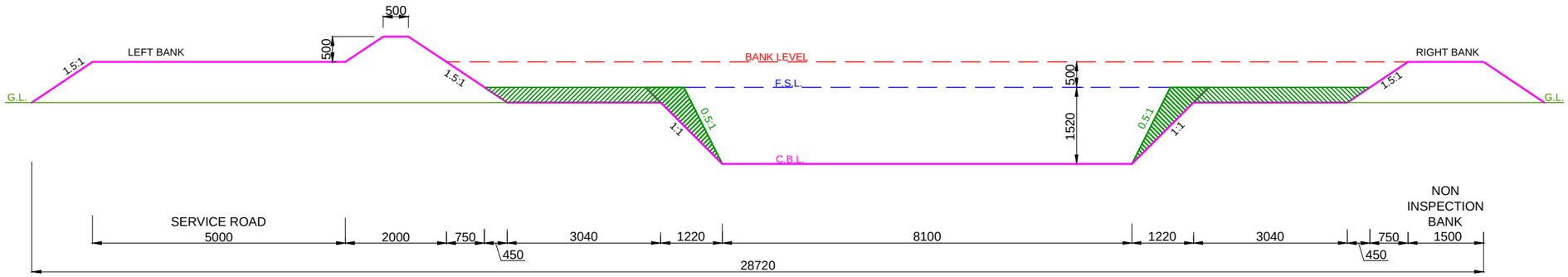
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 90	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 1 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.720 KM TO CH: 7.220 KM

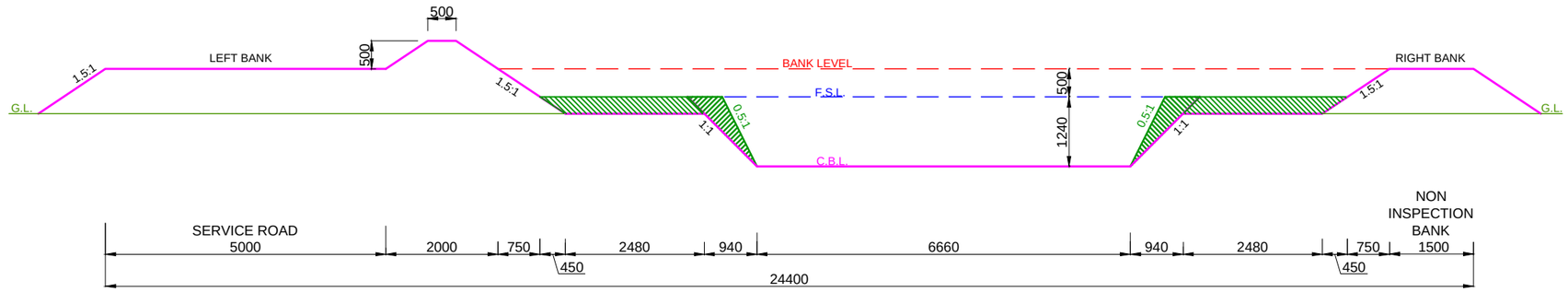
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 91	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 2 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 7.220 KM TO CH: 10.800 KM

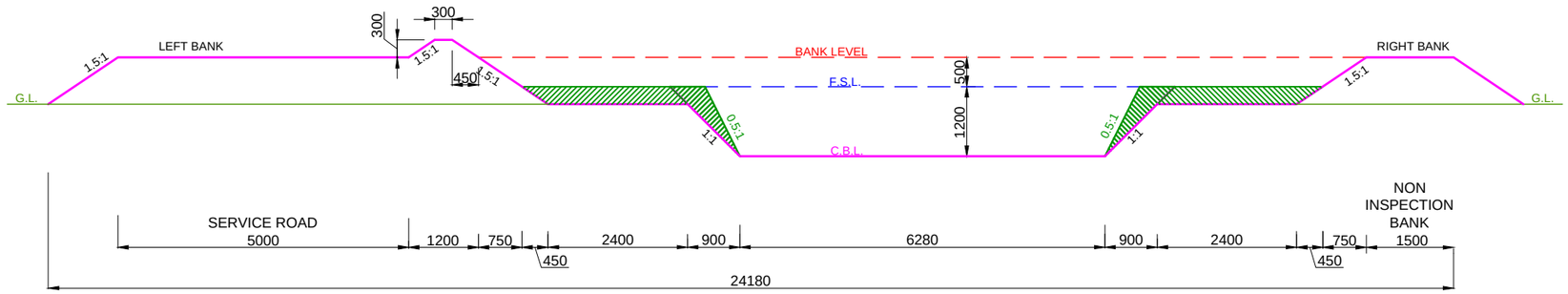
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 92	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 3 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 10.800 KM TO CH: 11.760 KM

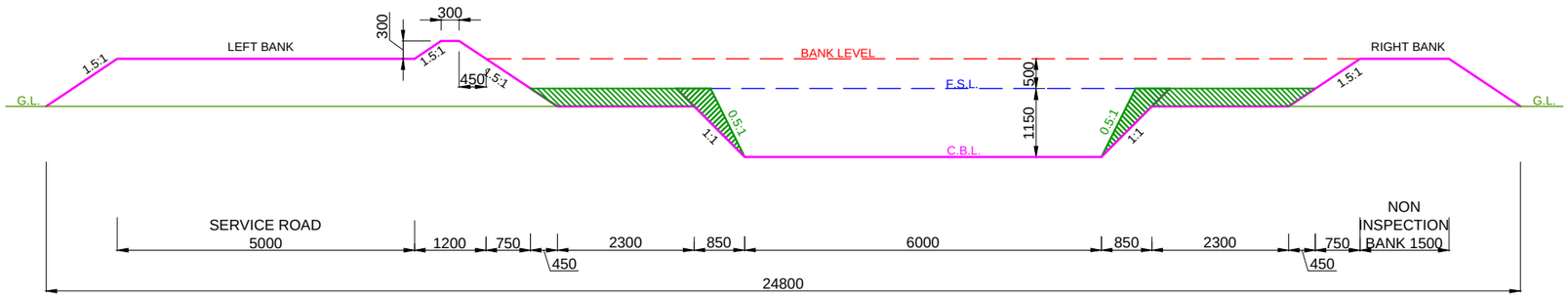
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 93	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 4 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 15.850 KM

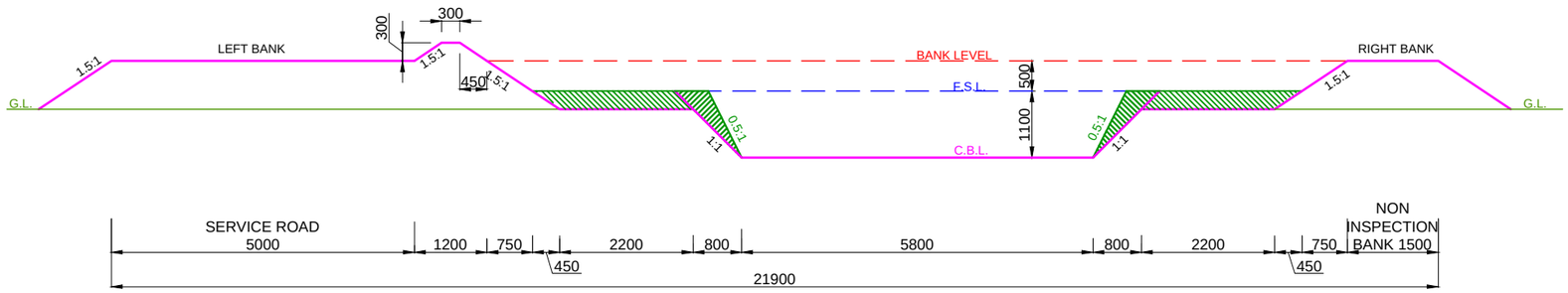
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 94	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 5 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 15.850 KM TO CH: 16.870 KM

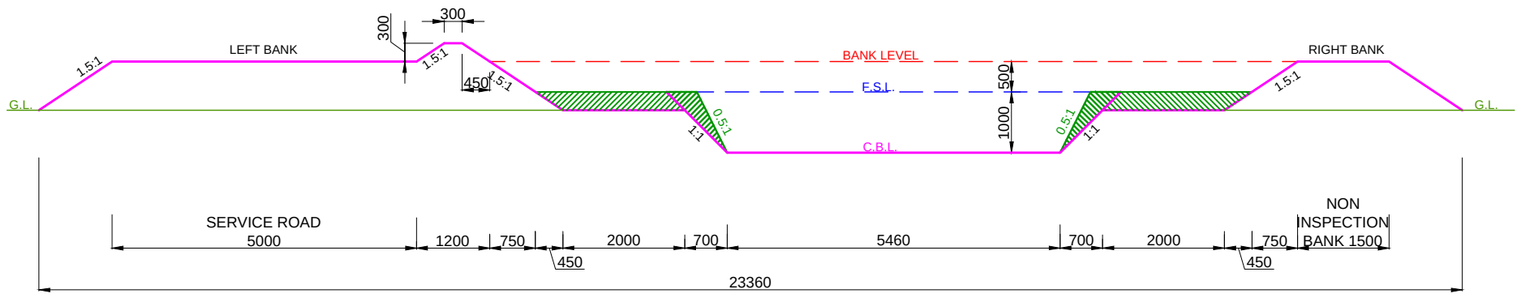
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 95	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 6 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 16.870 KM TO CH: 20.050 KM

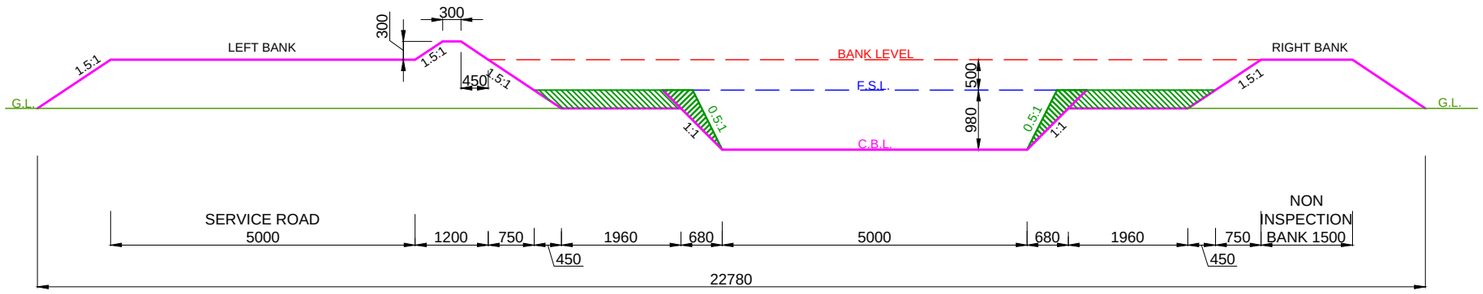
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 96	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 7 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 20.050 KM TO CH: 21.900 KM

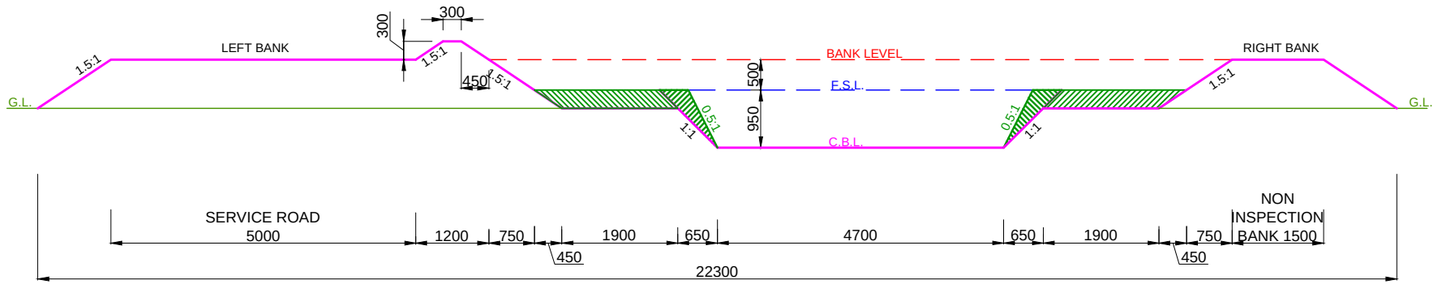
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 97	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 8 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 21.900 KM TO CH: 23.390 KM

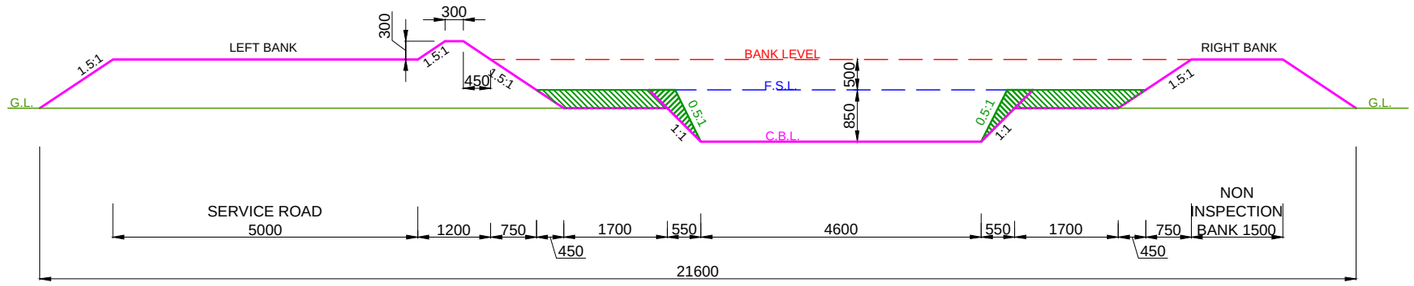
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 9 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 23.390 KM TO CH: 23.419 KM

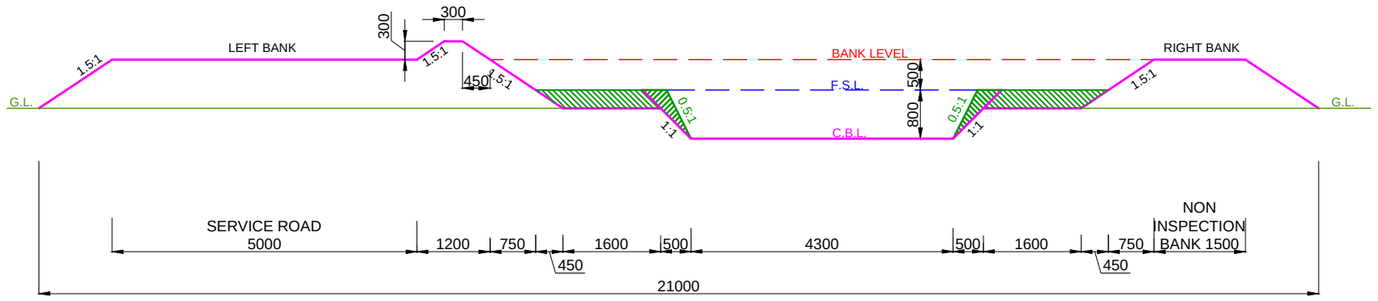
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 99	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 10 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 23.419 KM TO CH: 24.400 KM

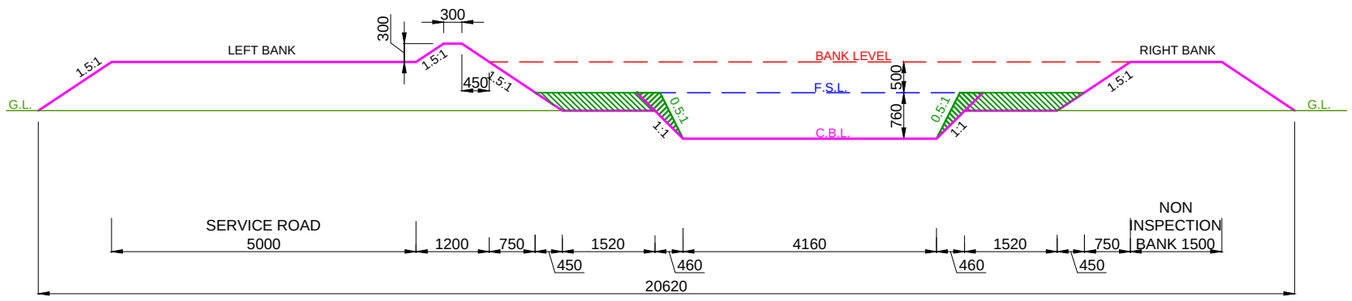
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 11 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 24.400 KM TO CH: 25.200 KM

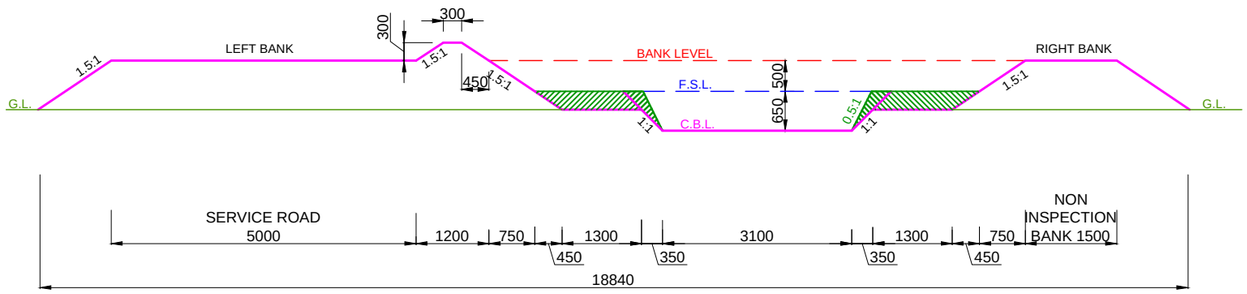
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 101	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 12 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 25.200 KM TO CH: 25.500 KM

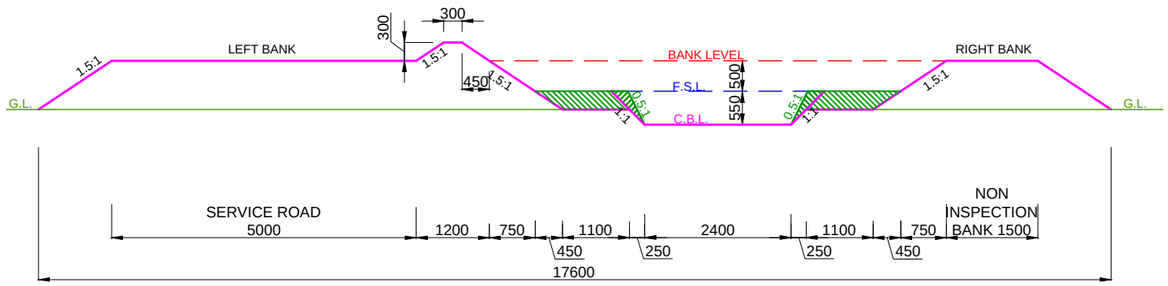
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 102	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 13 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 25.500 KM TO CH: 27.000 KM

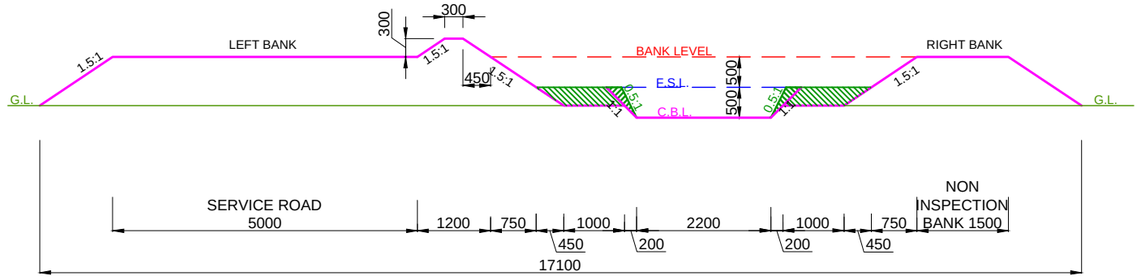
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 103

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 27.000 KM TO CH: 27.600 KM

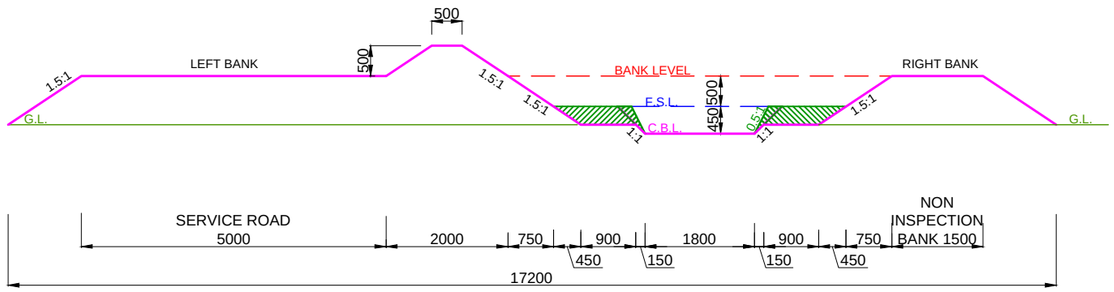
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 104

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 27.600 KM TO CH: 27.850 KM

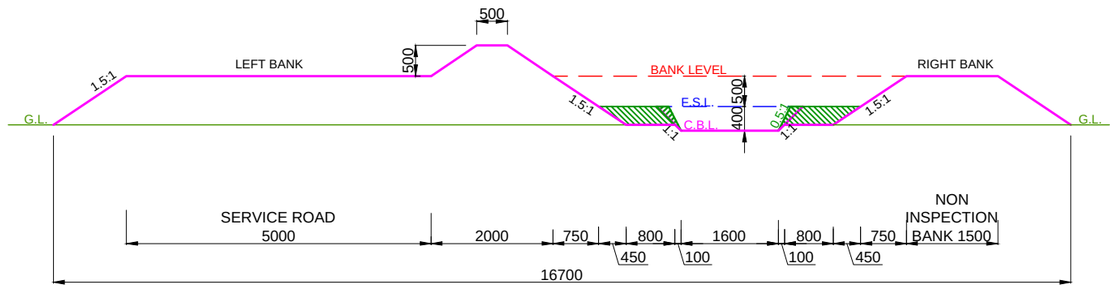
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 105	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 16 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 27.850 KM TO CH: 28.750 KM

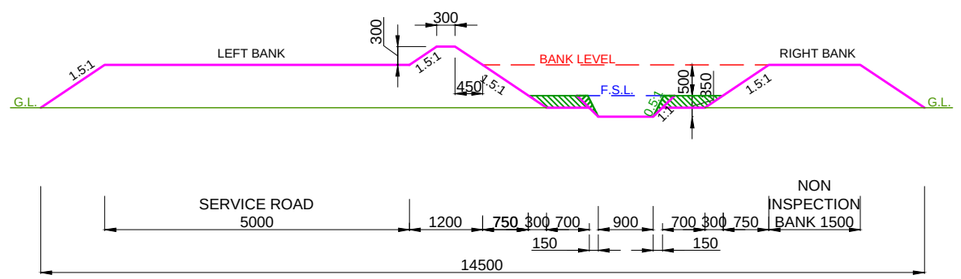
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 106	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 17 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 28.750 KM TO CH: 29.350 KM

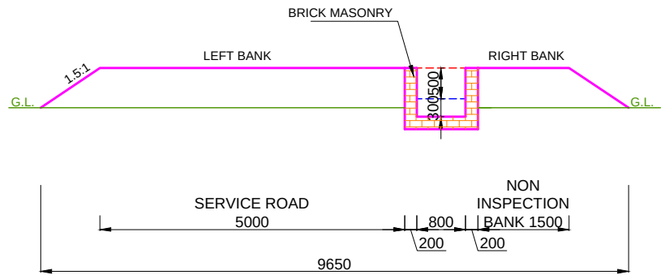
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- 107	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 18 of 19

TYPICAL X - SECTION OF RIUR BRANCH CANAL
(OFFTAKE FROM RD - 37+917 KM.(LT), NORTH KOEL RIGHT MAIN CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 29.350 KM TO CH: 30.130 KM

NOTE:-

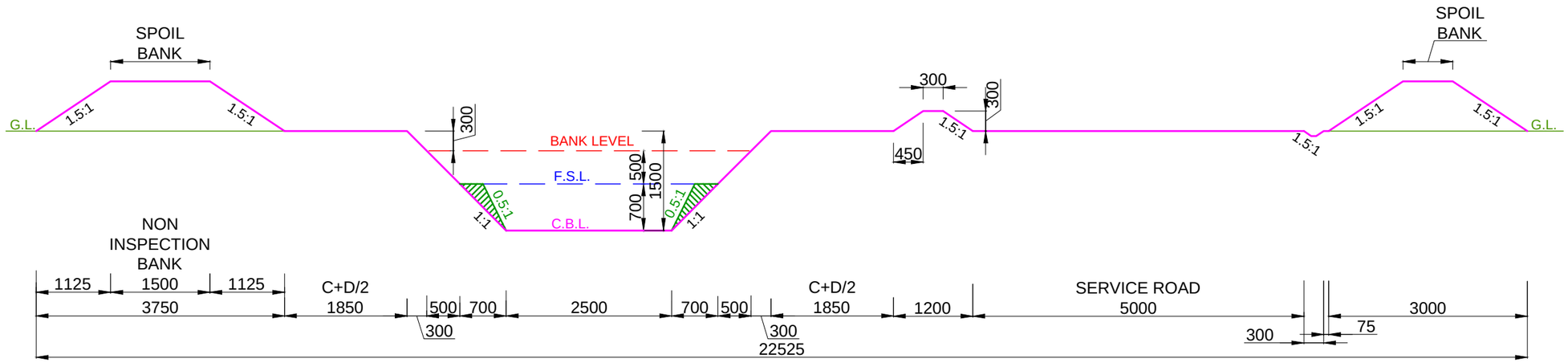
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X SECTION OF RIUR BRANCH CANAL (OFFTAKE FROM RD-37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
	FILL AREA		Drawing No. :- 108	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC /TYP-(PCF) 19 of 19

TYPICAL SECTION OF PANTI MINOR

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.200 KM

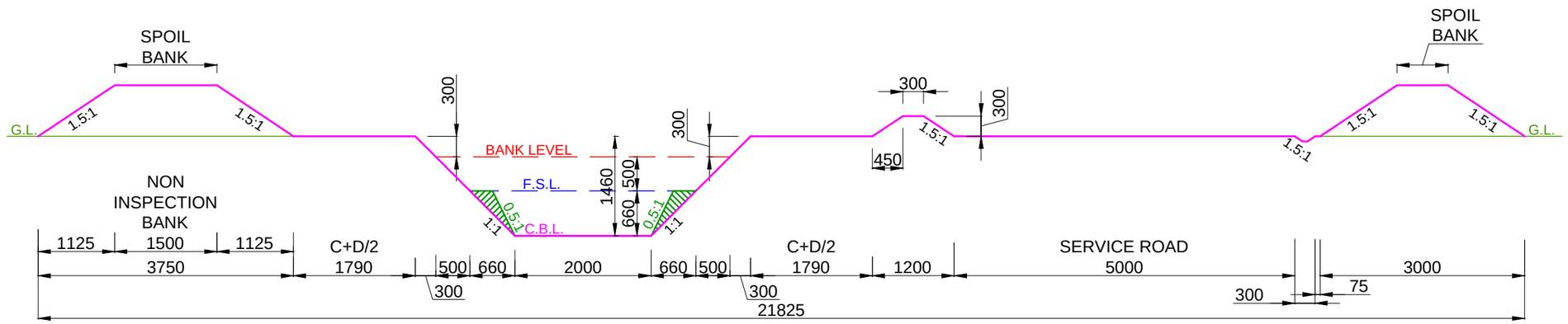
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 110	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 1 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.200 KM TO CH: 3.650 KM

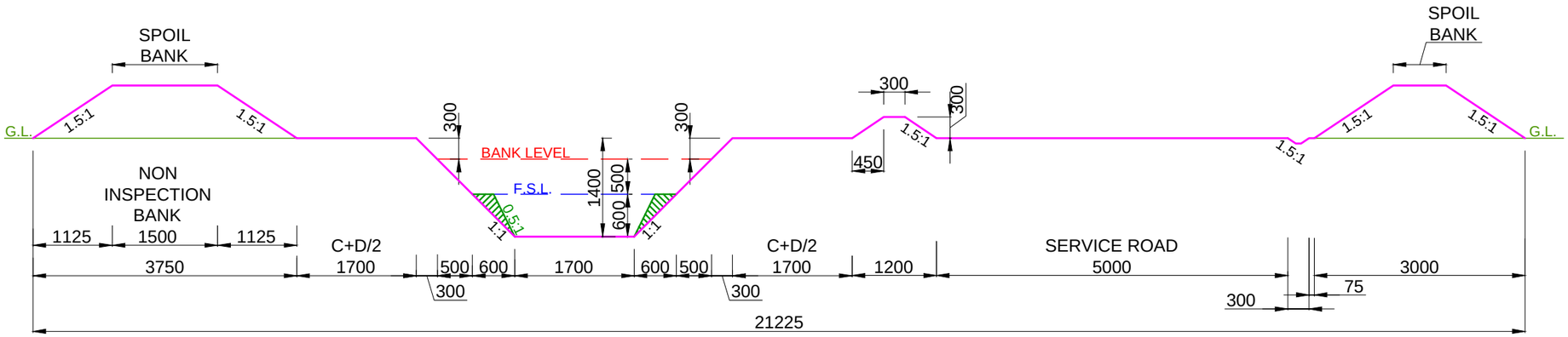
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 111	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 2 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 3.650 KM TO CH: 4.900 KM

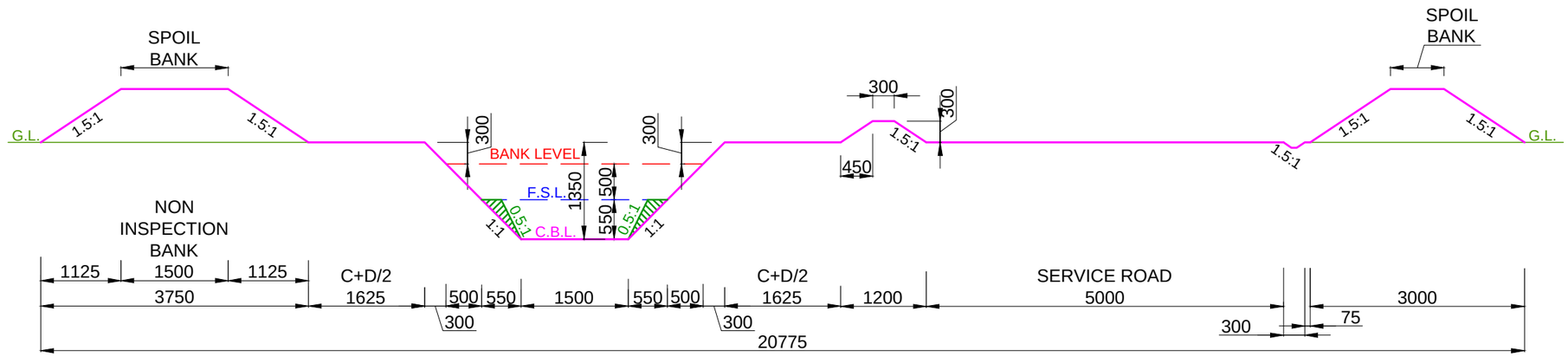
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 112	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 3 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 4.900 KM TO CH: 5.850 KM

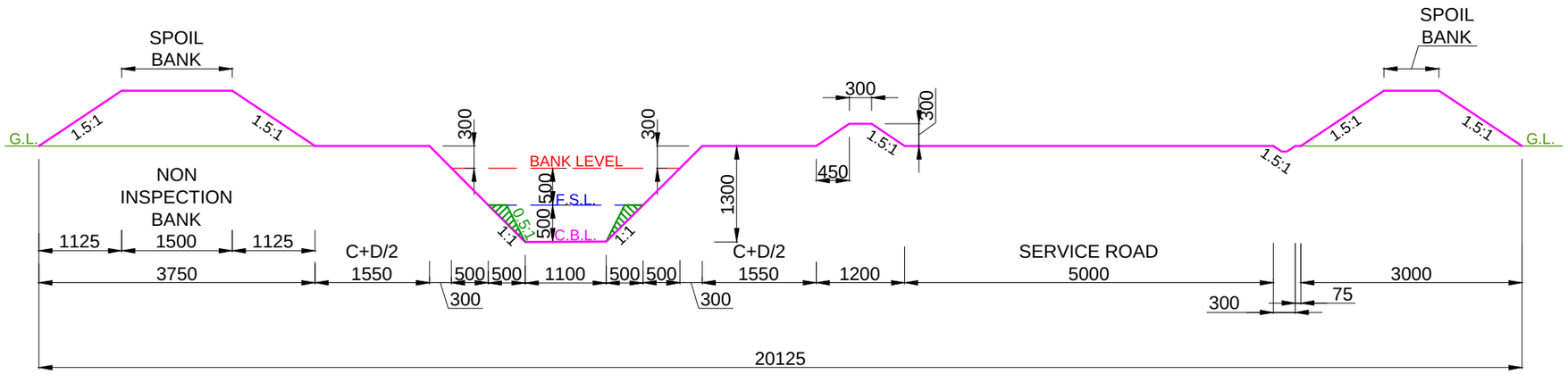
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 113	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 4 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 5.850 KM TO CH: 6.200 KM

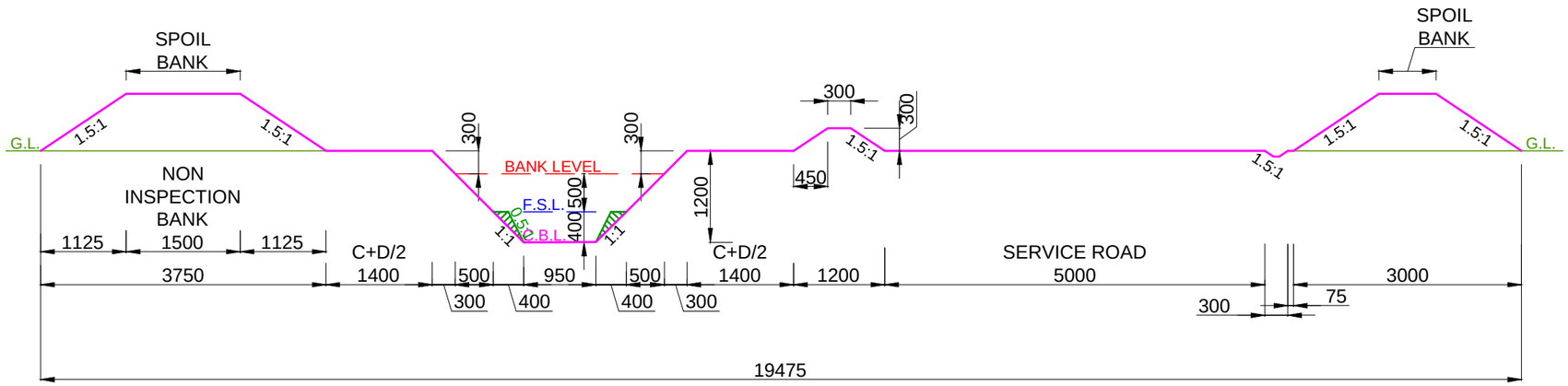
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 114	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 5 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 6.200 KM TO CH: 6.700 KM

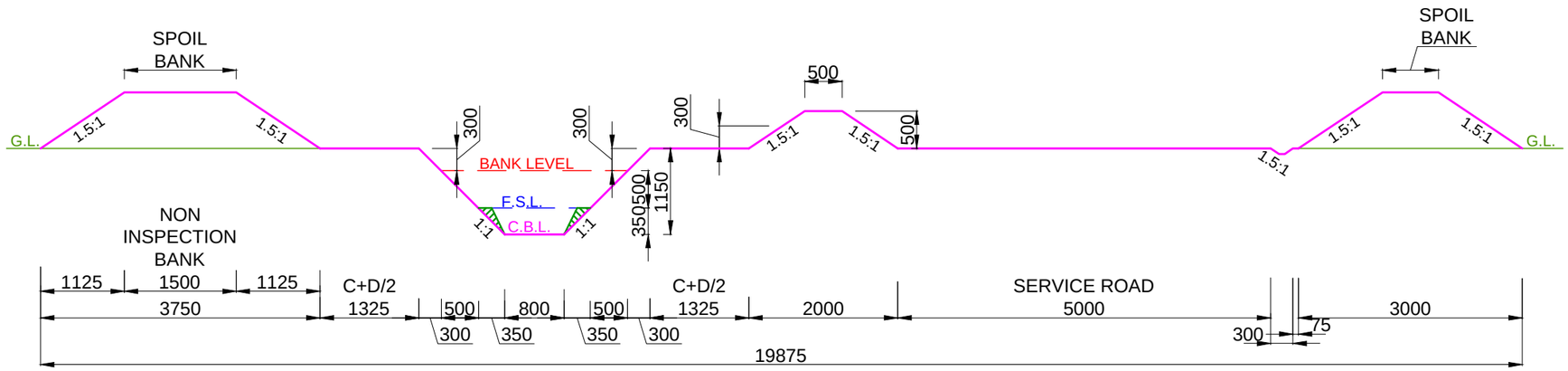
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 115	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 6 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 6.700 KM TO CH: 7.050 KM

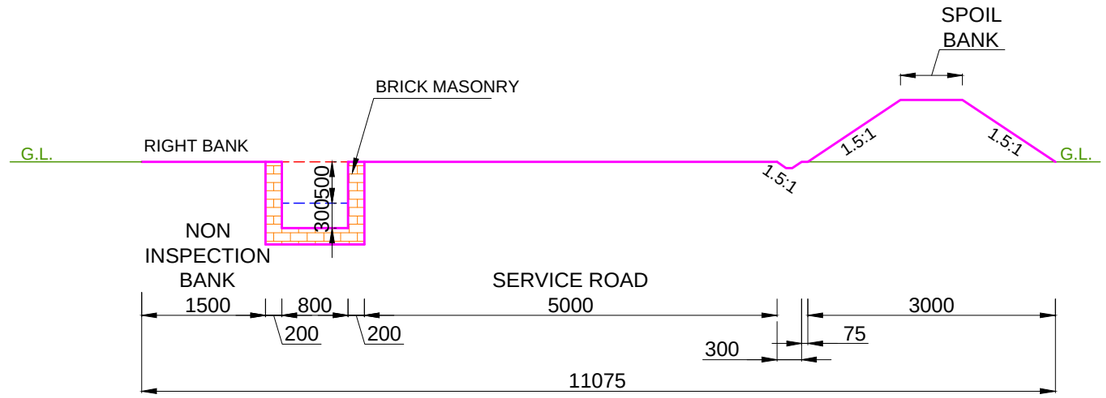
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 116	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 7 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 7.050 KM TO CH: 7.200 KM

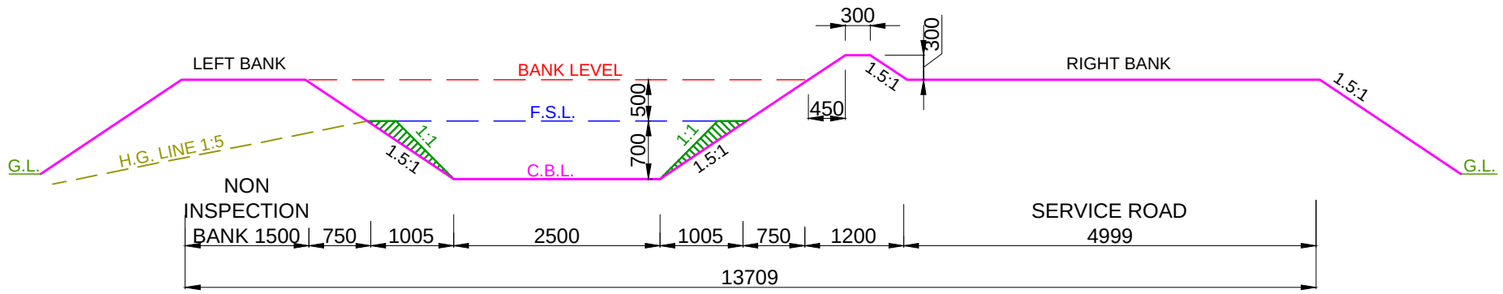
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 117	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FC) 8 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.200 KM

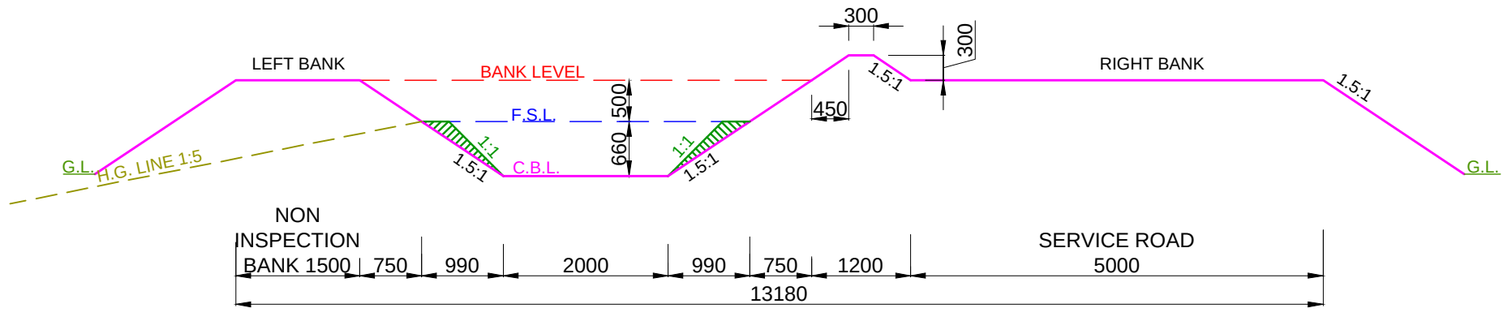
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 118	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 1 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.200 KM TO CH: 3.650 KM

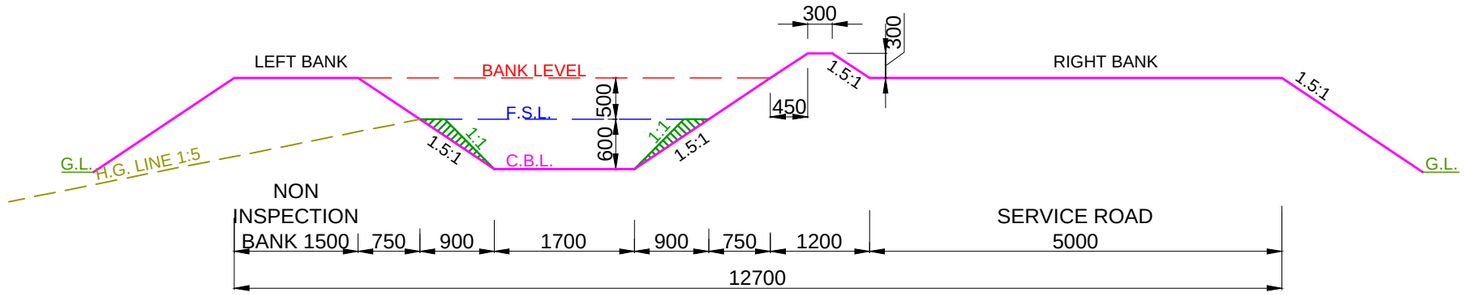
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 119	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 2 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 3.650 KM TO CH: 4.900 KM

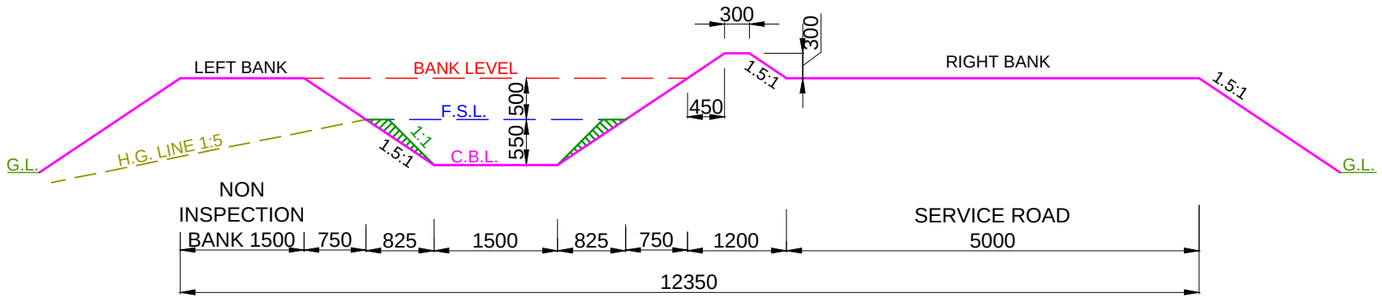
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 3 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 4.900 KM TO CH: 5.850 KM

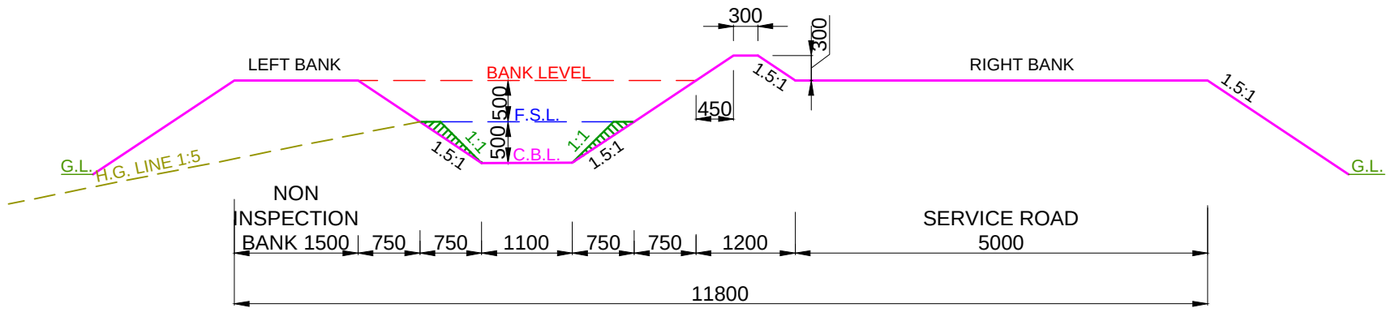
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
	FILL AREA		Drawing No. :- 121	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 4 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 5.850 KM TO CH: 6.200 KM

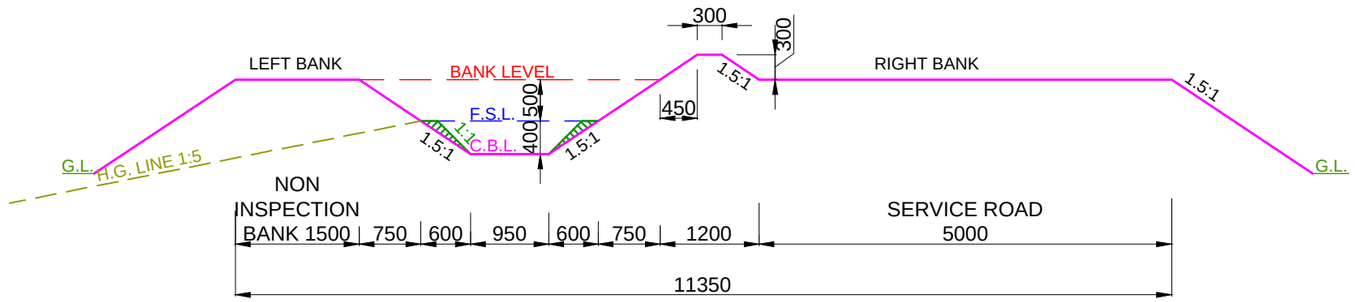
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 122	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 5 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 6.200 KM TO CH: 6.700 KM

NOTE:-

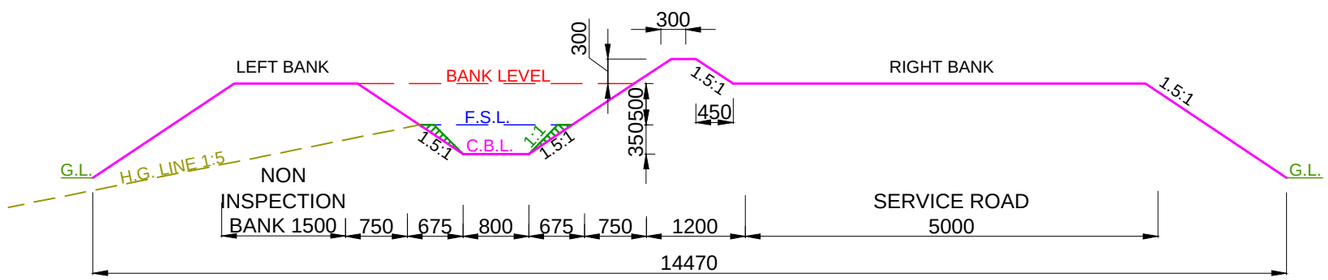
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 6 of 8

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TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 6.700 KM TO CH: 7.050 KM

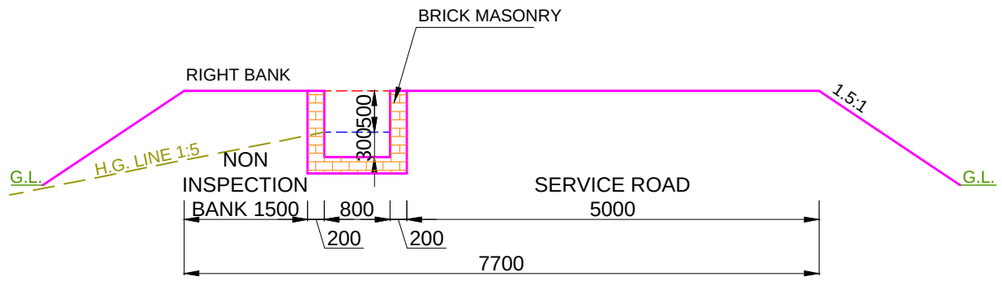
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 124	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 7 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 7.050 KM TO CH: 7.200 KM

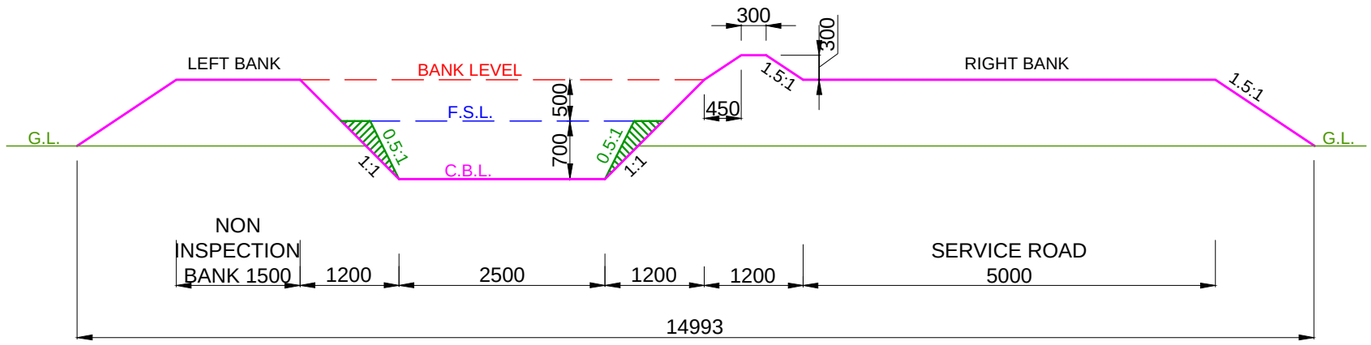
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 125	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(FF) 8 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 2.200 KM

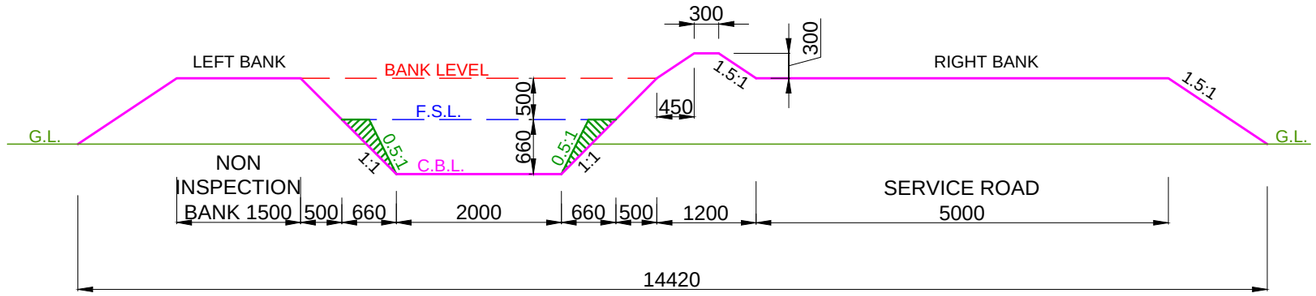
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 126	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 1 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.200 KM TO CH: 3.650 KM

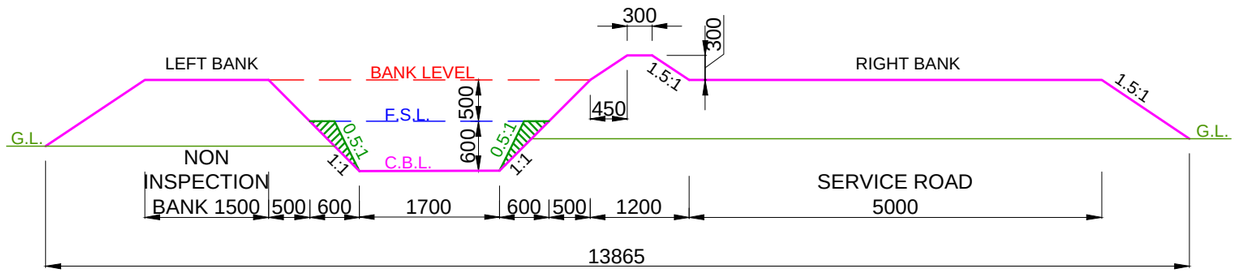
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 127	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 2 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 3.650 KM TO CH: 4.900 KM

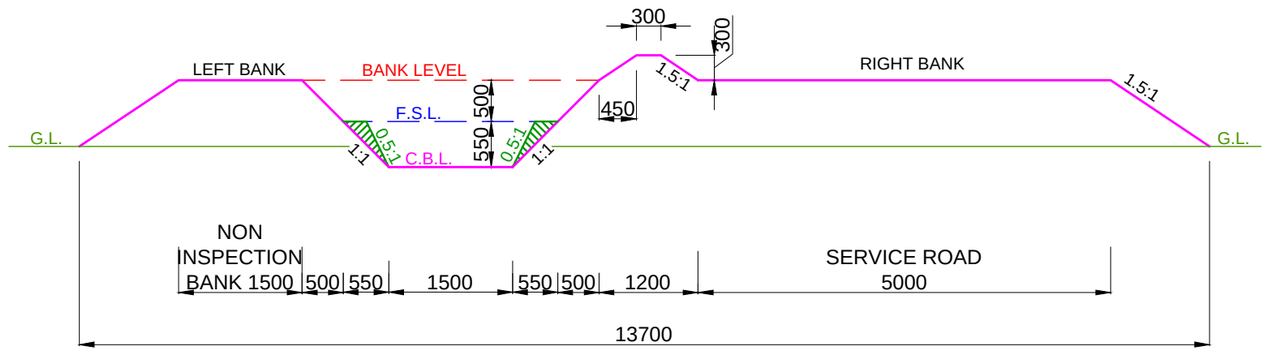
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 128	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 3 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 4.900 KM TO CH: 5.850 KM

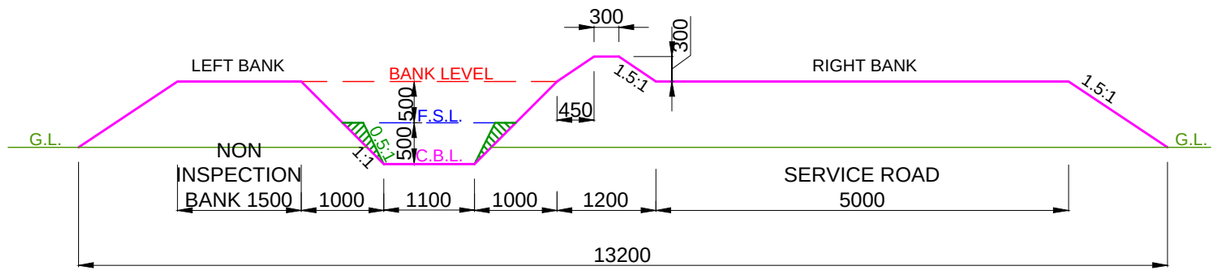
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 129	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 4 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 5.850 KM TO CH: 6.200 KM

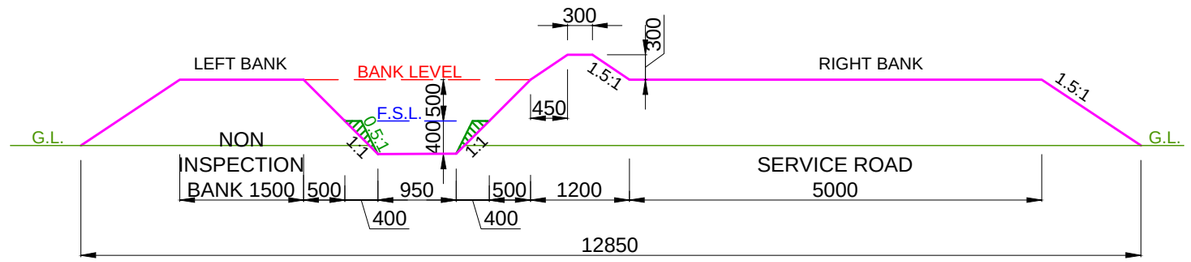
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 130	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 5 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 6.200 KM TO CH: 6.700 KM

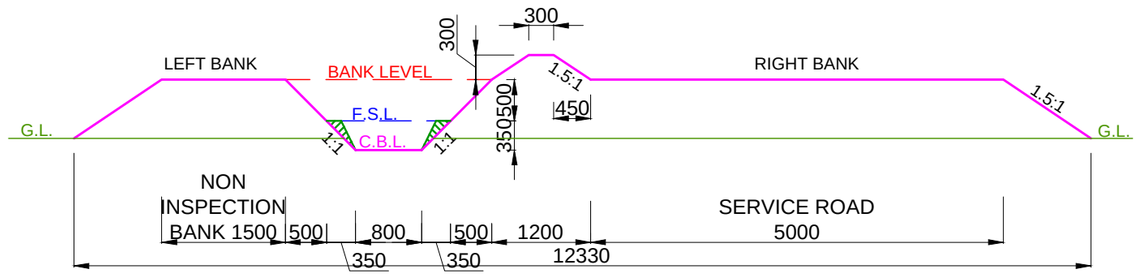
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 6 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 6.700 KM TO CH: 7.050 KM

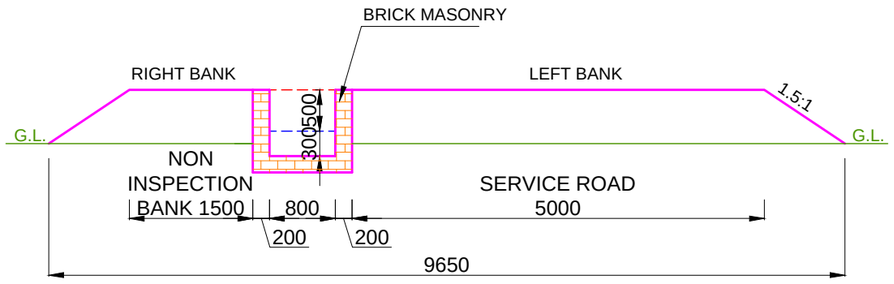
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
	FILL AREA		Drawing No. :- 132	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 7 of 8

TYPICAL X - SECTION OF PANTI MINOR
(OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 7.050 KM TO CH: 7.200 KM

NOTE:-

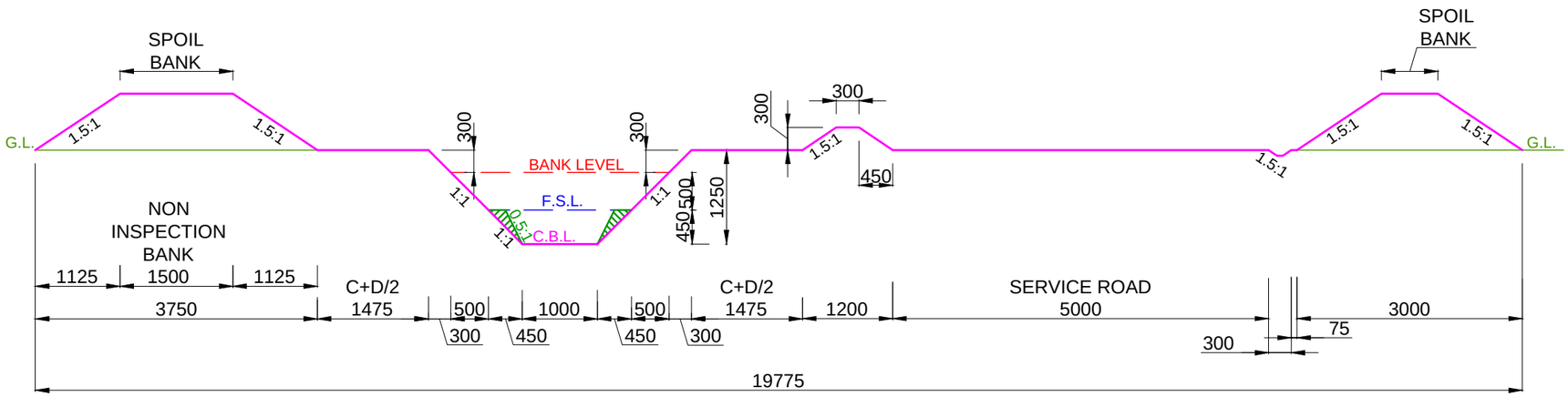
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 133	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC /TYP-(PCF) 8 of 8

TYPICAL SECTION OF ??APRI MINOR

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.700 KM

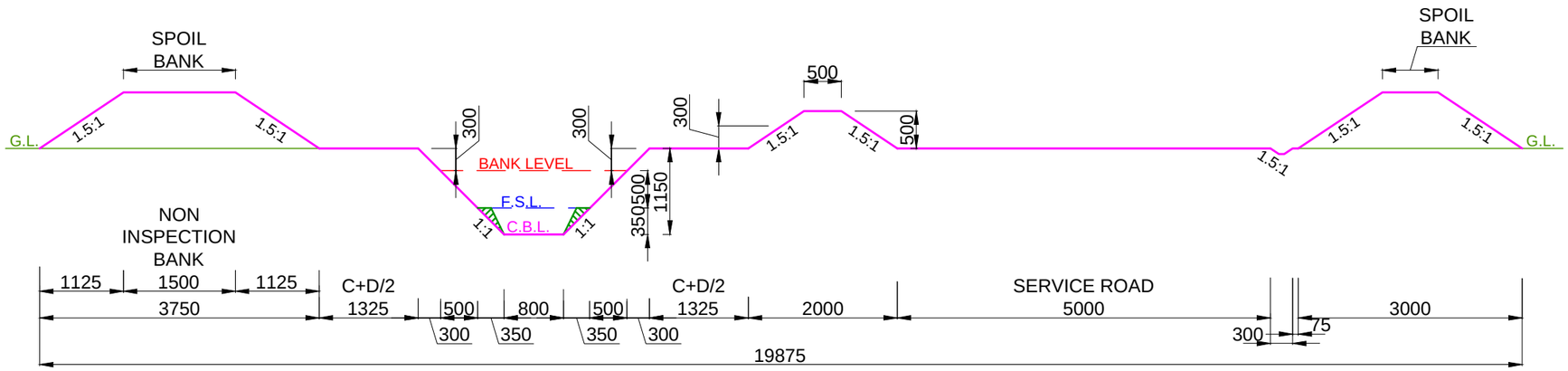
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 135	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FC) 1 of 3

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.700 KM TO CH: 1.650 KM

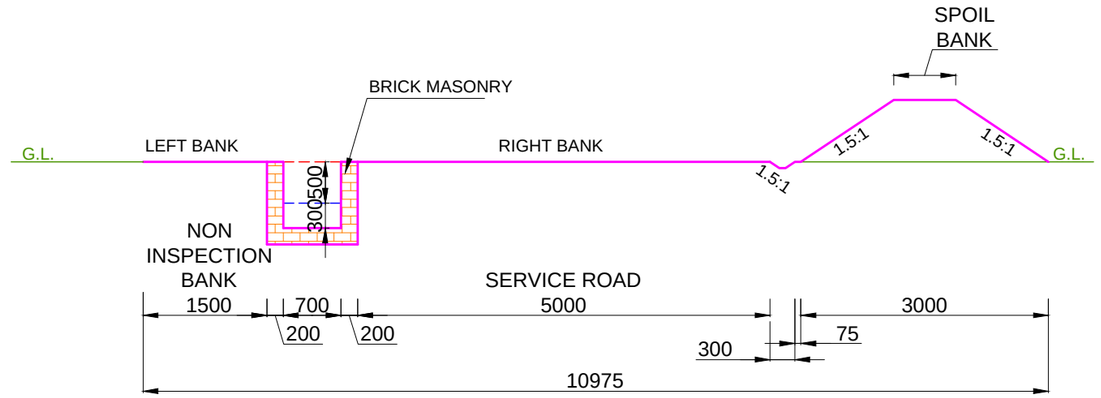
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FC) 136

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.650 KM TO CH: 2.450 KM

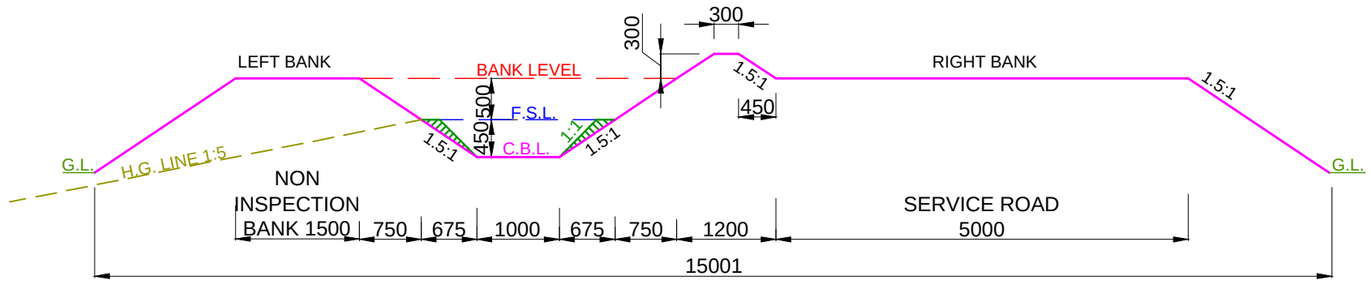
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FC) 137

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.700 KM

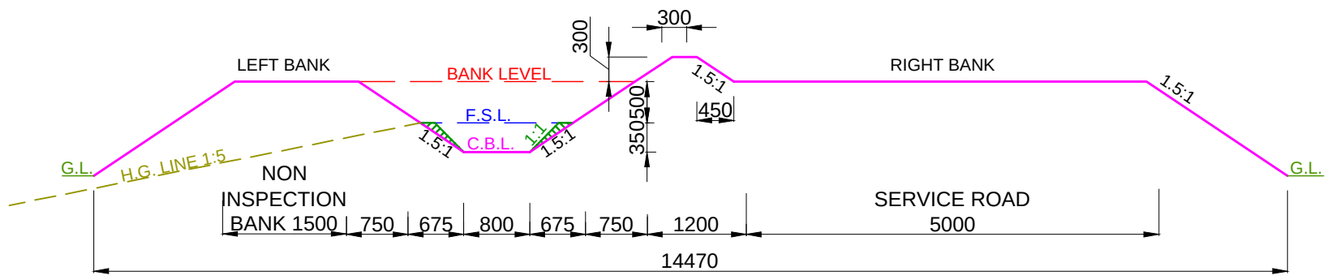
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FF) 138

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.700 KM TO CH: 1.650 KM

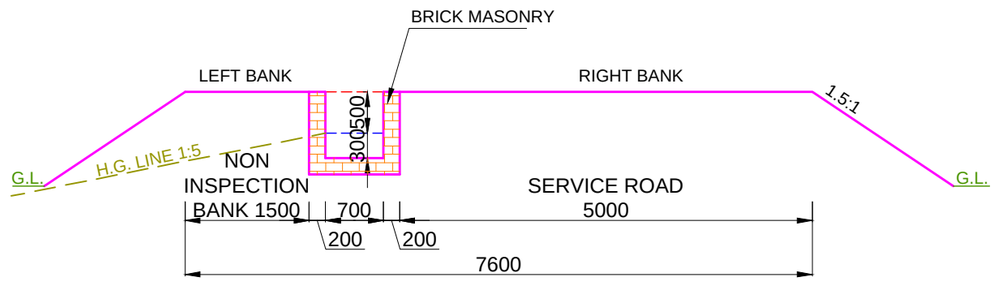
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FF) 139

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.650 KM TO CH: 2.450 KM

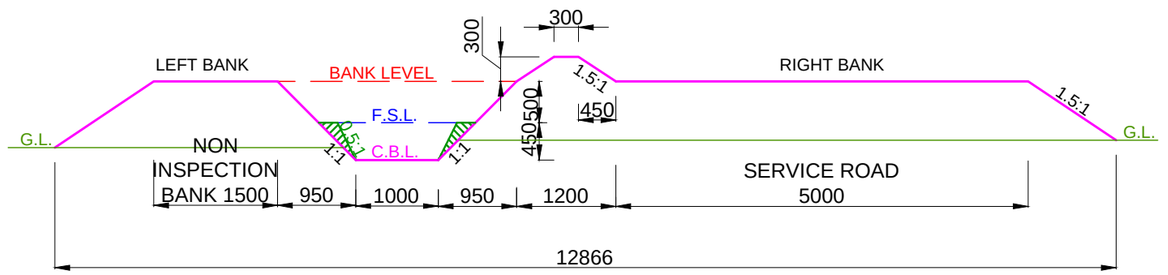
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
	FILL AREA		Drawing No. :- 140	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(FF) 3 of 3

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.700 KM

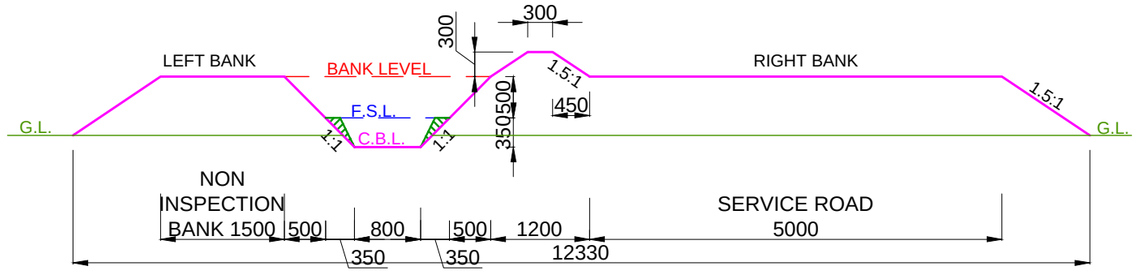
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 141	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(PCF) 1 of 3

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.700 KM TO CH: 1.650 KM

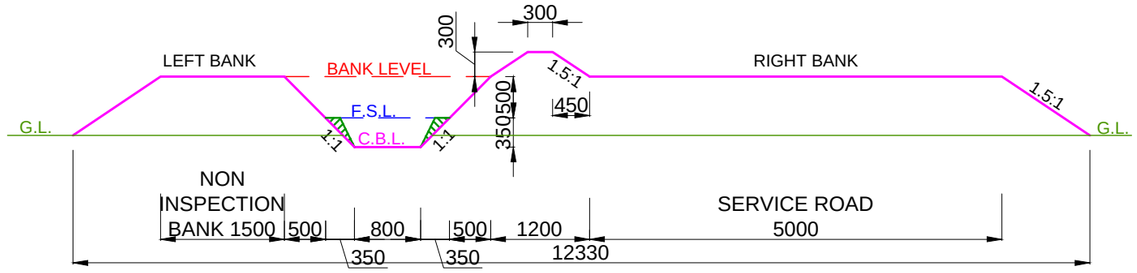
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 142	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(PCF) 2 of 3

TYPICAL X - SECTION OF CHAPRI MINOR
(OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.700 KM TO CH: 1.650 KM

NOTE:-

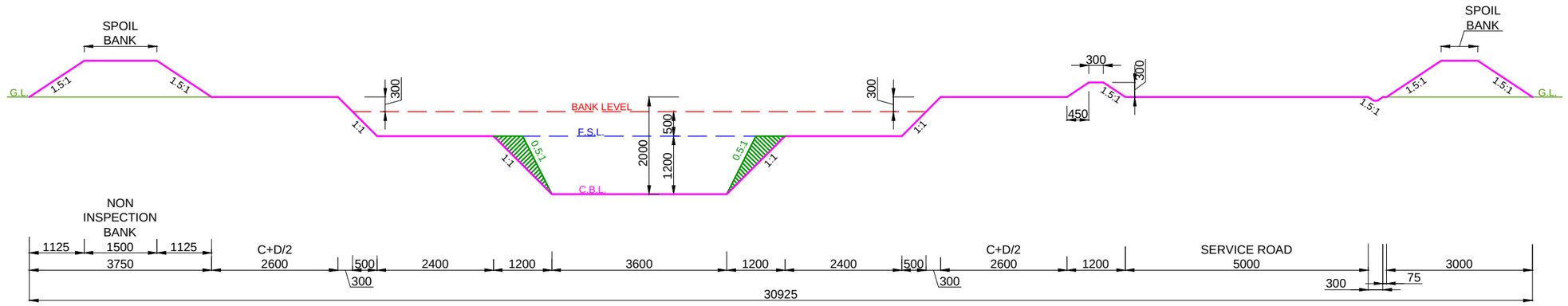
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC /TYP-(PCF) 143

TYPICAL SECTION OF BISHUNPUR SUB DY.

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.990 KM

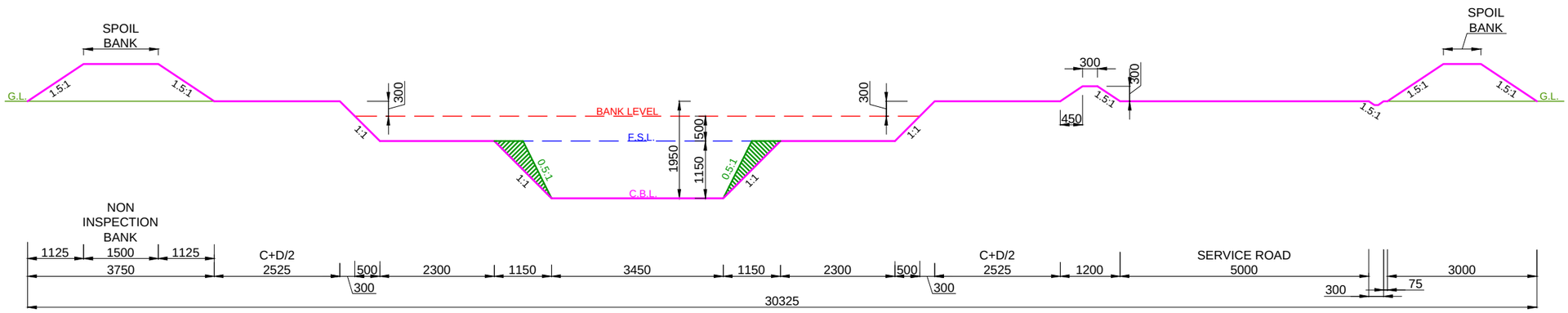
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 145	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 1 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.990 KM TO CH: 5.400 KM

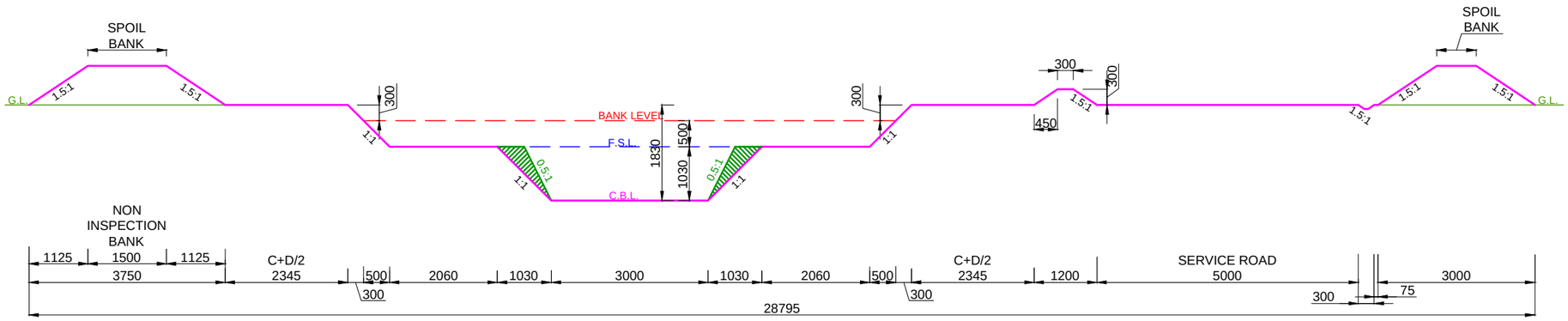
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 146 2 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 5.400 KM TO CH: 7.380 KM

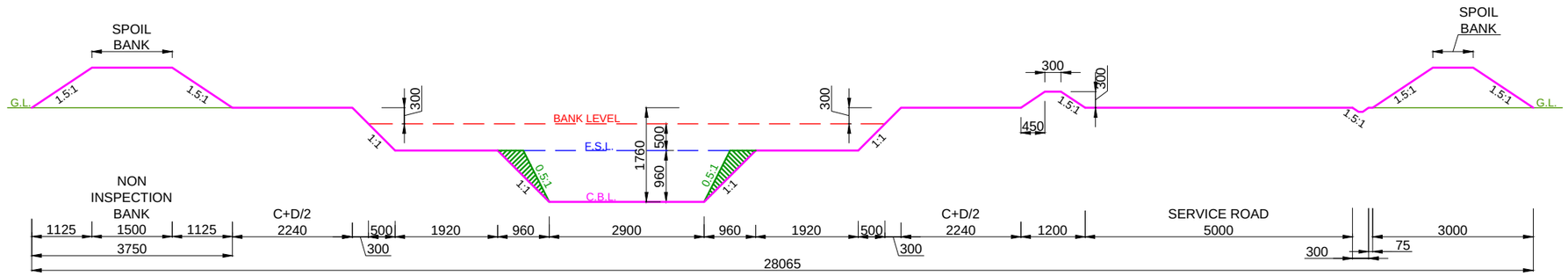
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 147	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 3 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 7.380 KM TO CH: 9.360 KM

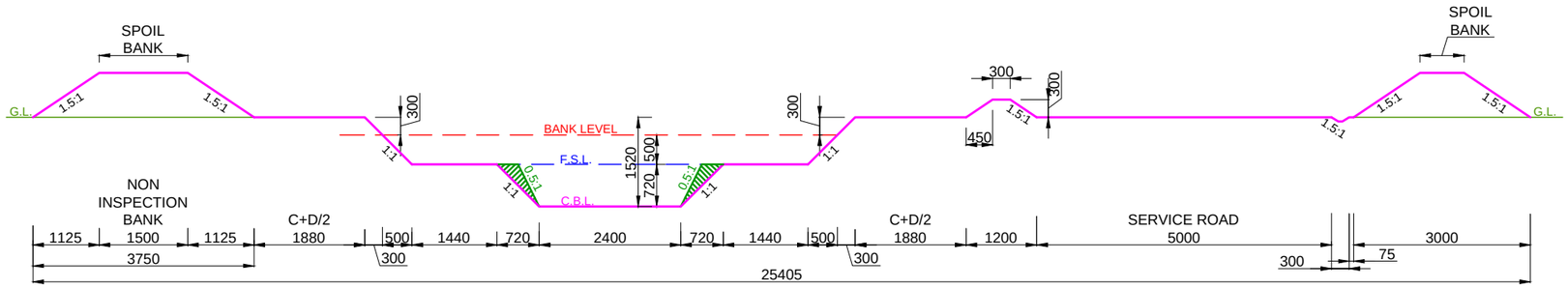
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 148	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 4 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 9.360 KM TO CH: 10.900 KM

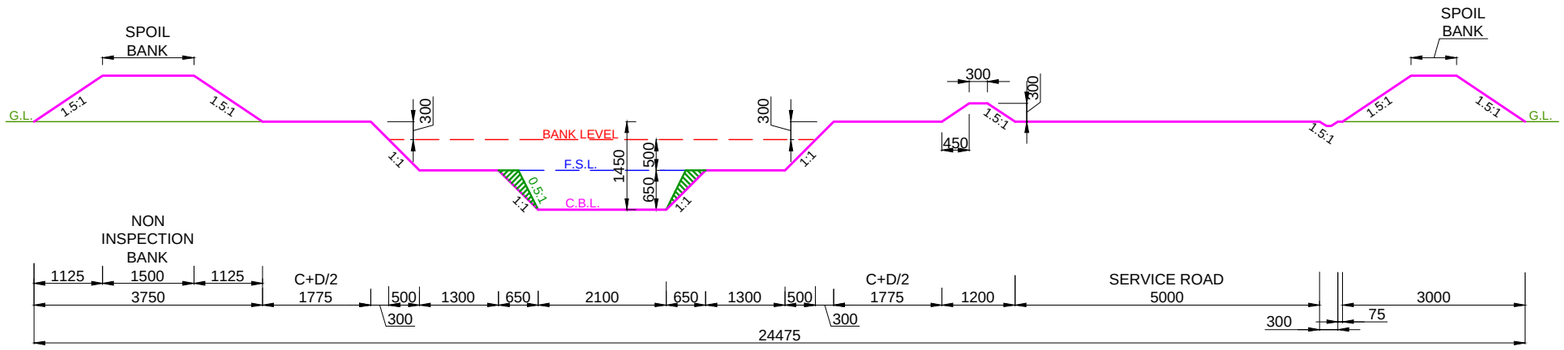
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 5 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 10.900 KM TO CH: 11.760 KM

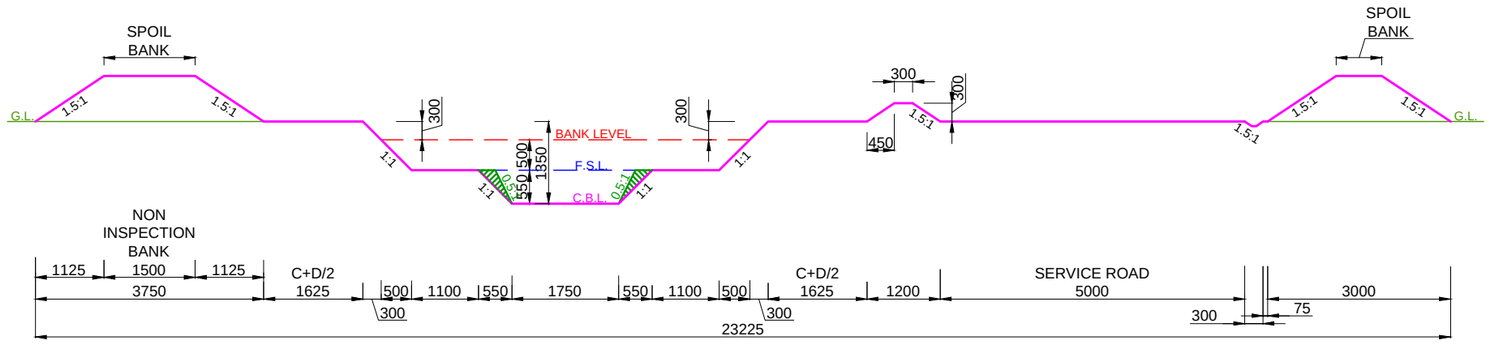
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 150	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 6 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 12.650 KM

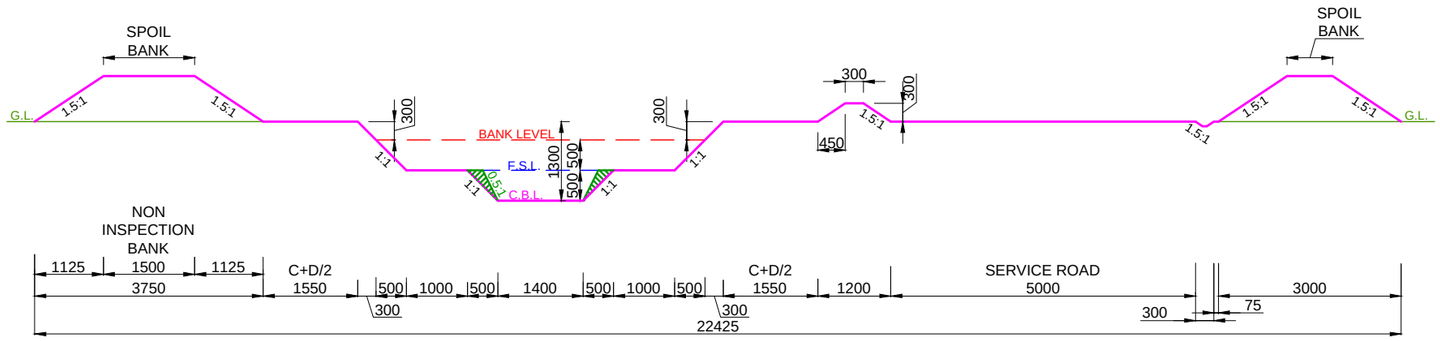
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 7 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 12.650 KM TO CH: 13.650 KM

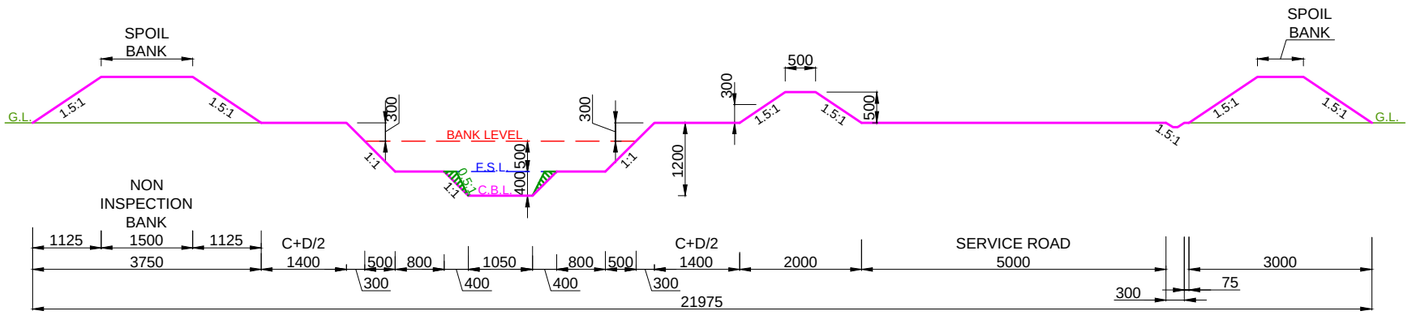
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
	FILL AREA		Drawing No. :- 152	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 8 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 13.650 KM TO CH: 14.050 KM

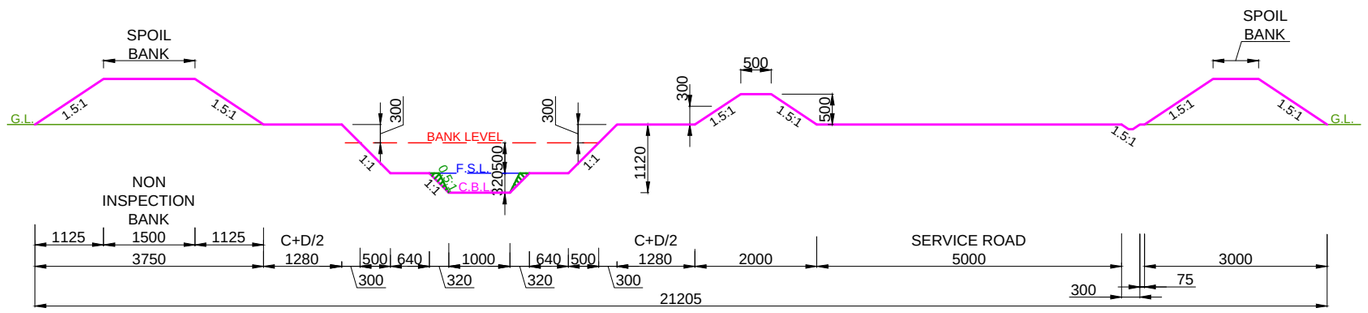
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-153	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 9 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 14.050 KM TO CH: 14.950 KM

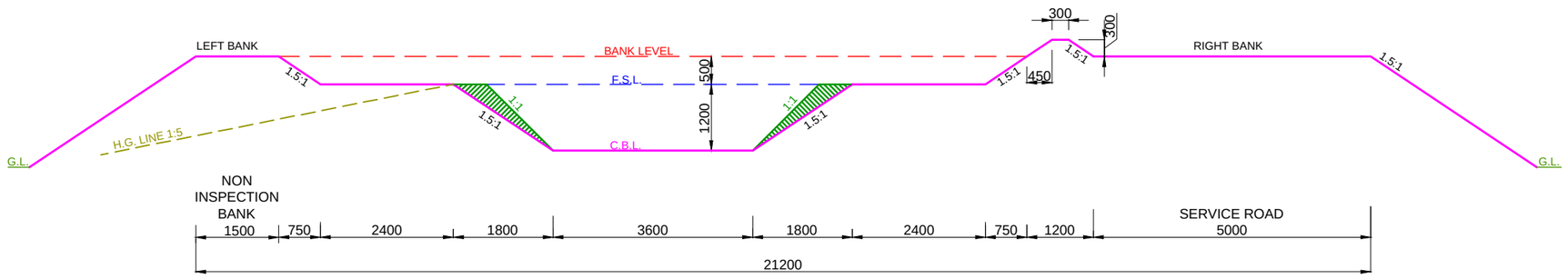
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 154	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FC) 10 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.990 KM

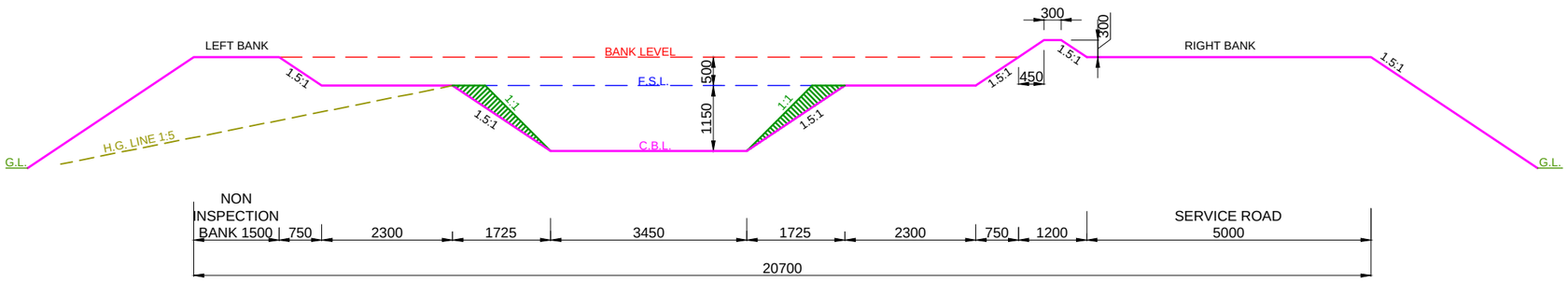
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 155	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 1 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.990 KM TO CH: 5.400 KM

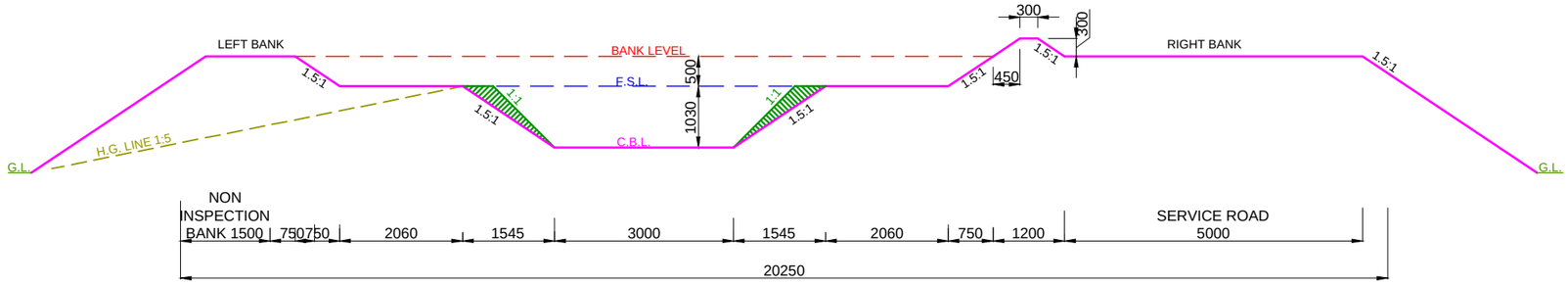
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 156	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 2 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 5.400 KM TO CH: 7.380 KM

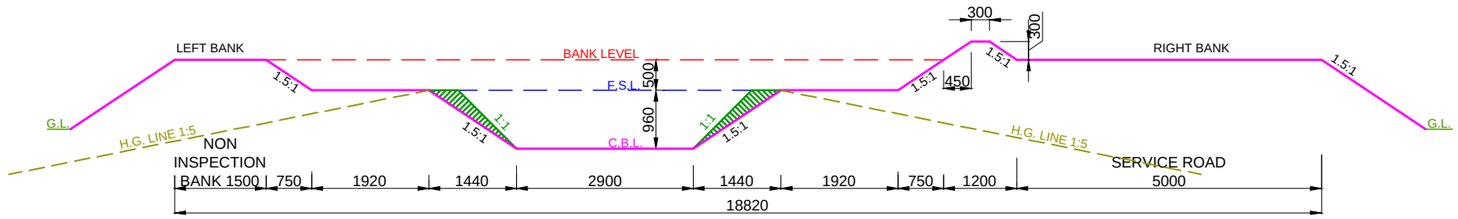
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
CUT AREA		WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 157	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 3 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 7.380 KM TO CH: 9.360 KM

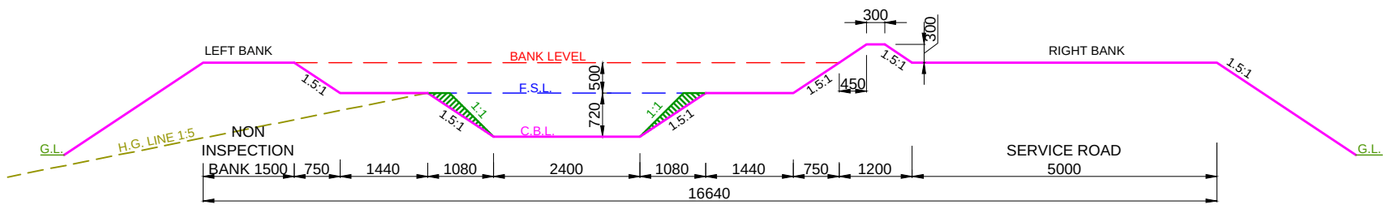
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 158	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 4 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 9.360 KM TO CH: 10.900 KM

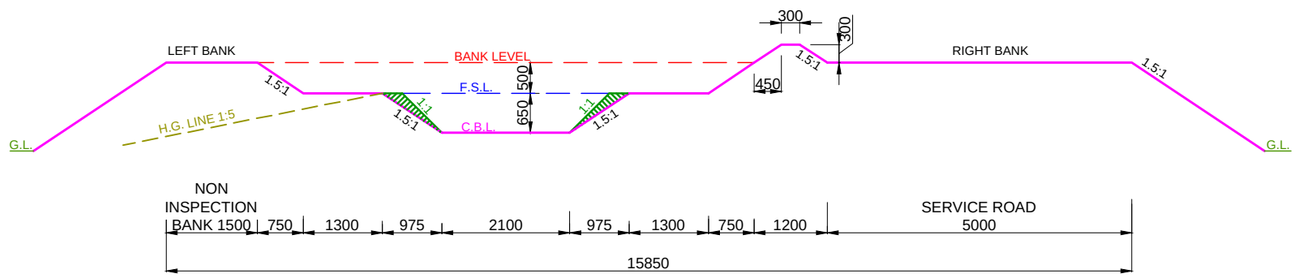
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 159	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 5 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 10.900 KM TO CH: 11.760 KM

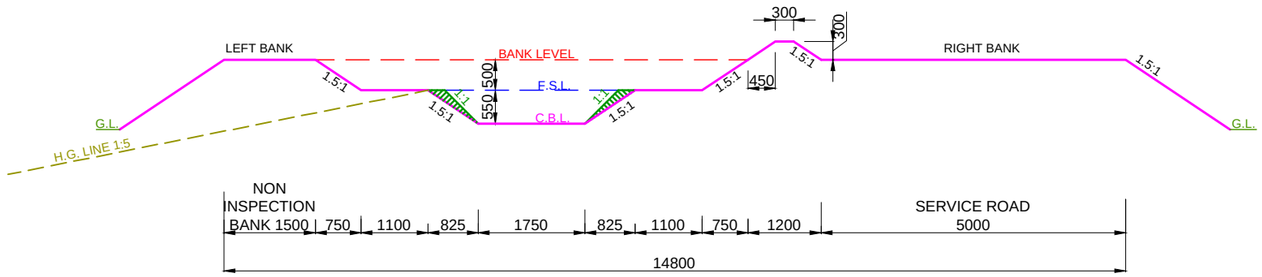
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 160	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 6 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 12.650 KM

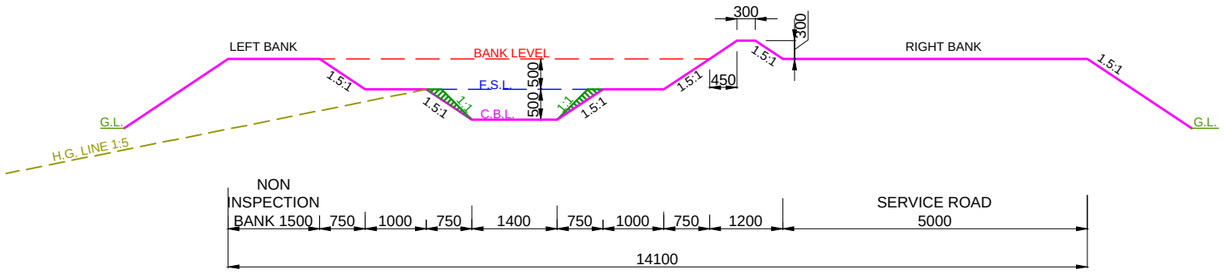
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 161	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 7 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 12.650 KM TO CH: 13.650 KM

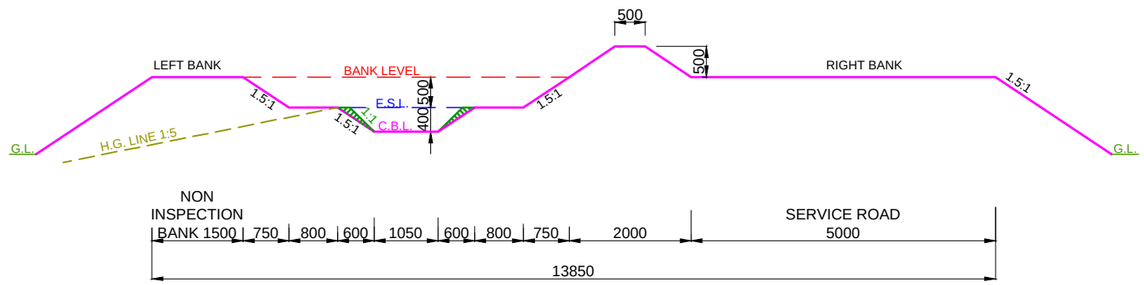
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 162	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 8 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 13.650 KM TO CH: 14.050 KM

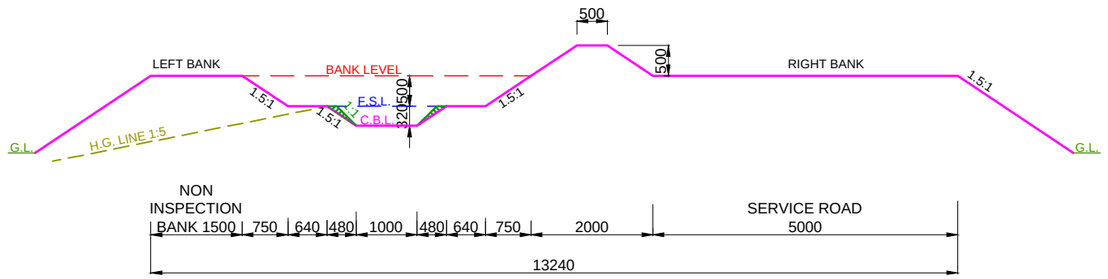
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 163	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 9 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 14.050 KM TO CH: 14.950 KM

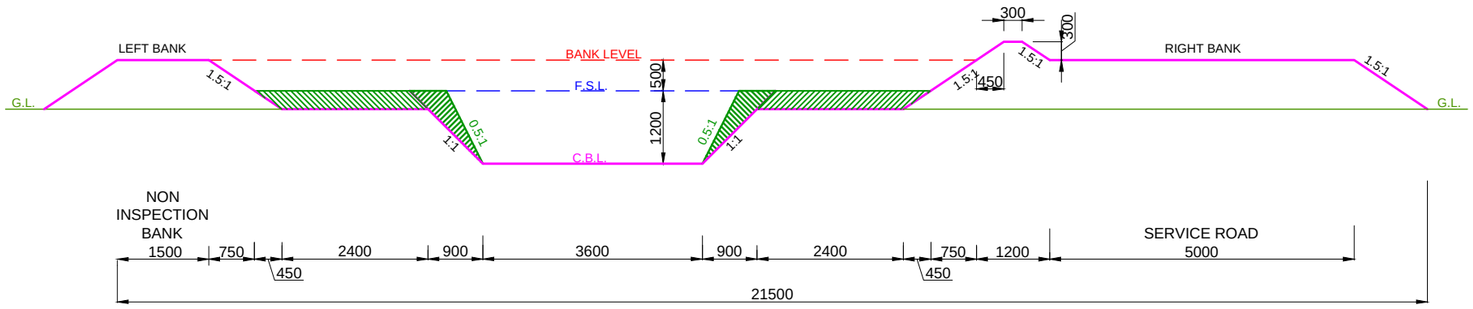
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 164	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(FF) 10 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.990 KM

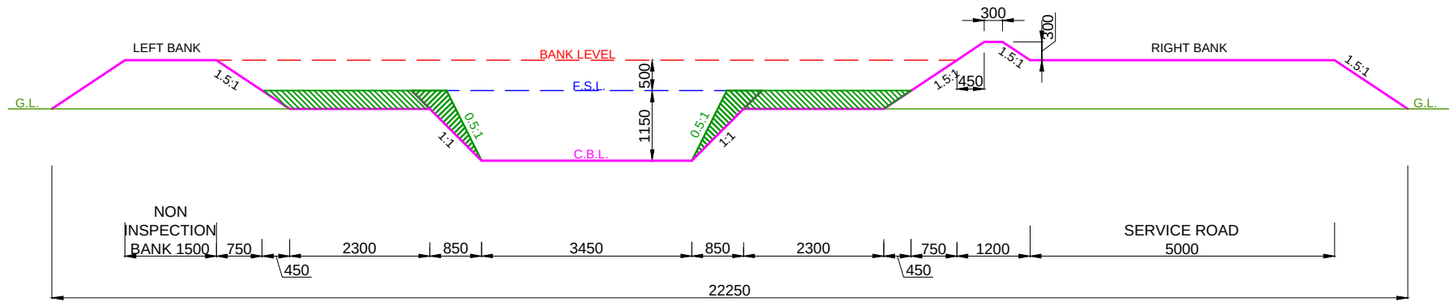
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 1 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.990 KM TO CH: 5.400 KM

NOTE:-

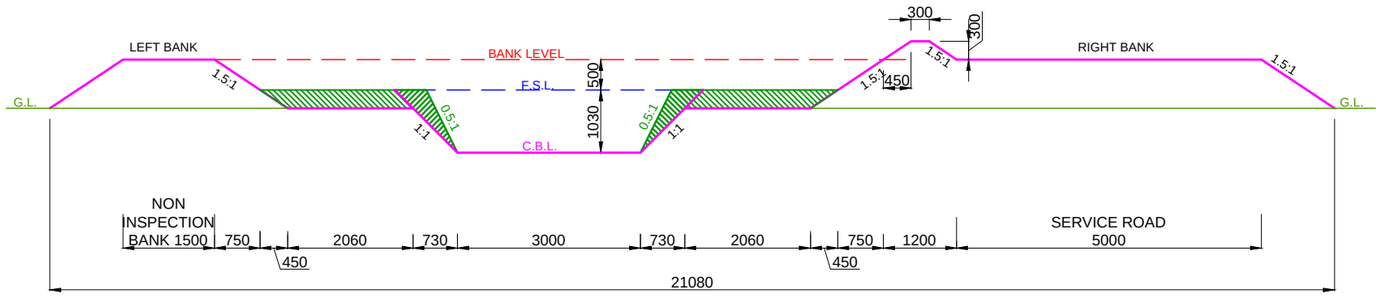
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 2 of 10

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TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY
(OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 5.400 KM TO CH: 7.380 KM

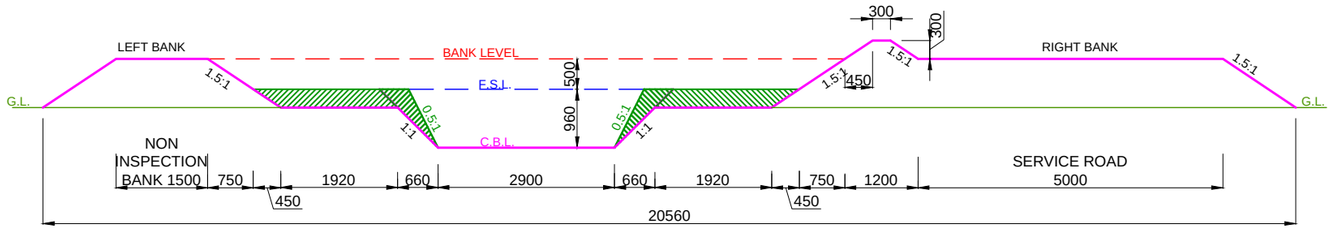
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 3 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 7.380 KM TO CH: 9.360 KM

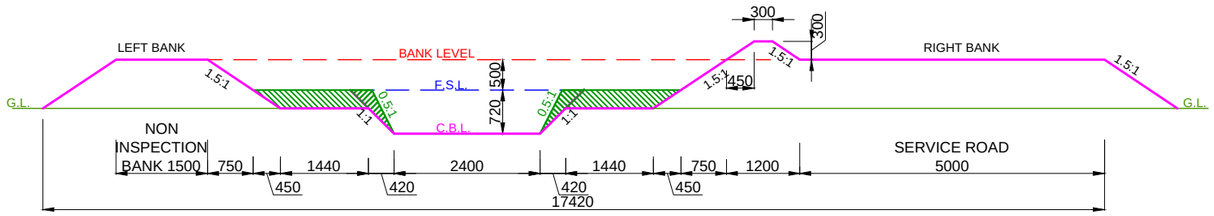
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 4 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 9.360 KM TO CH: 10.900 KM

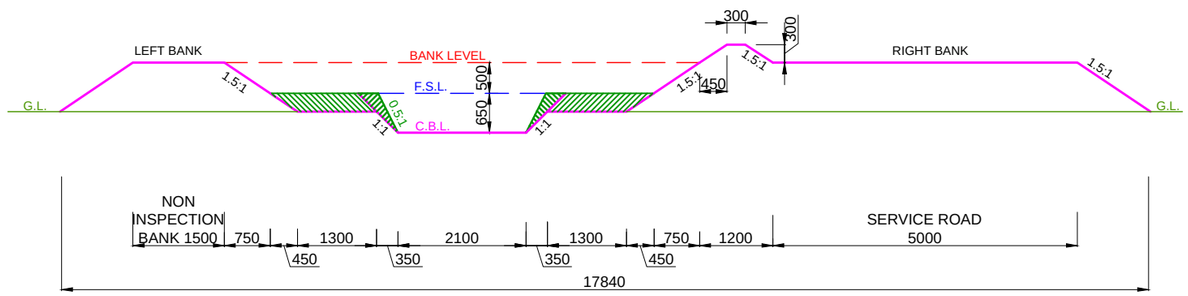
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 169	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 5 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 10.900 KM TO CH: 11.760 KM

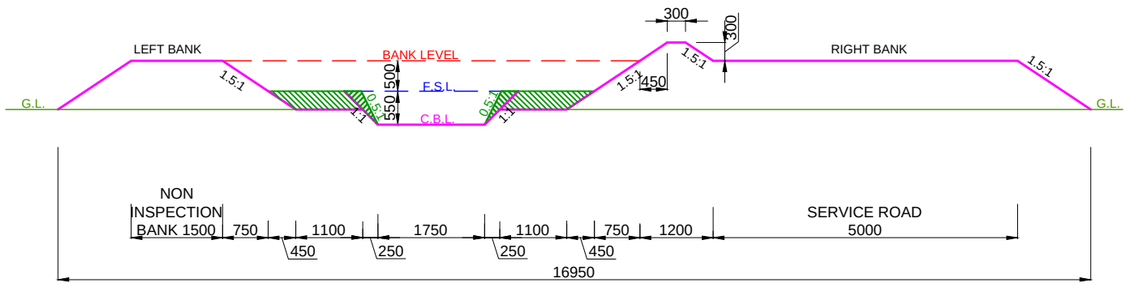
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 170	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 6 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 11.760 KM TO CH: 12.650 KM

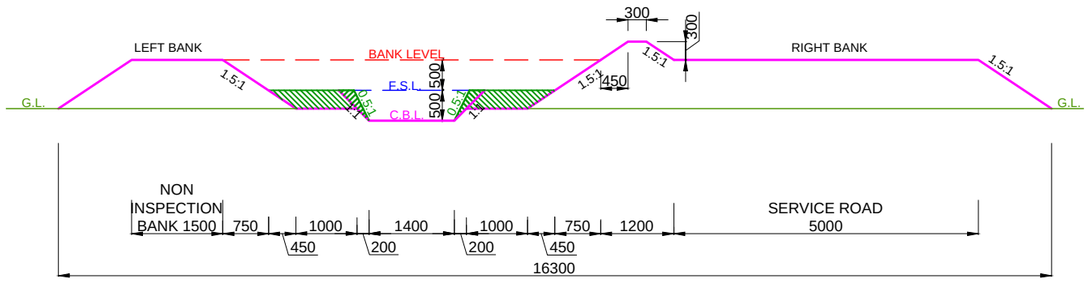
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 171	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 7 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 12.650 KM TO CH: 13.650 KM

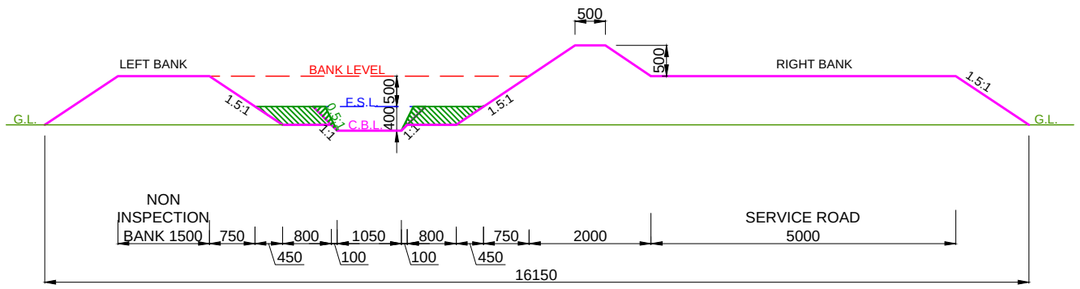
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 172	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 8 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 13.650 KM TO CH: 14.050 KM

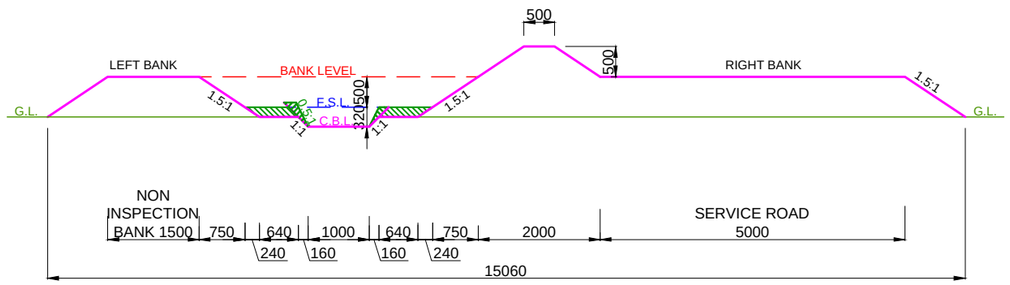
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 173	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 9 of 10

TYPICAL X - SECTION OF BISHUNPUR SUB-DISTRIBUTARY (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 14.050 KM TO CH: 14.950 KM

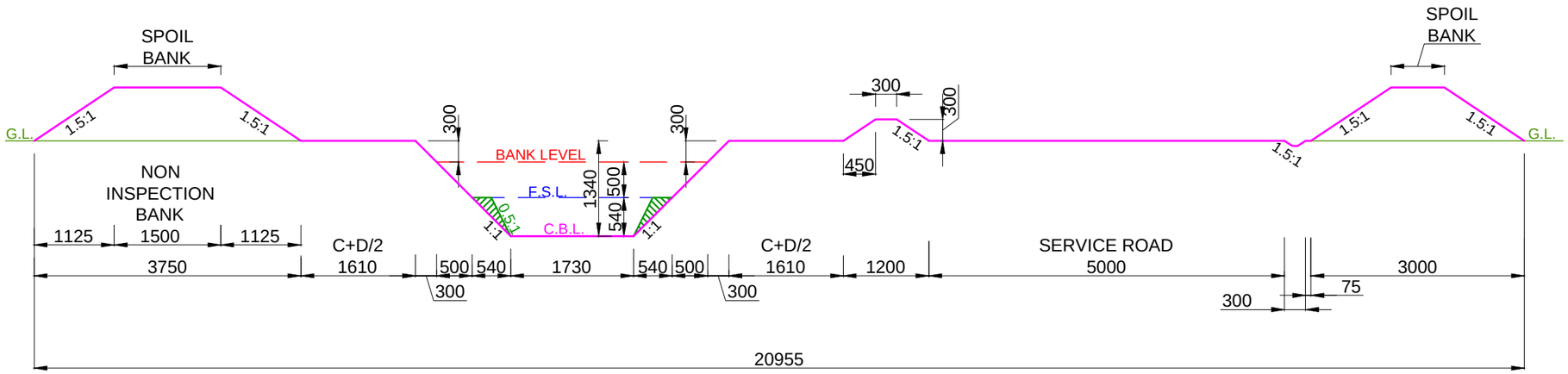
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SEC OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), RIUR BRANCH CANAL)
			Drawing No. :- 174	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC /TYP-(PCF) 10 of 10

TYPICAL SECTION OF TETARIA MINOR

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



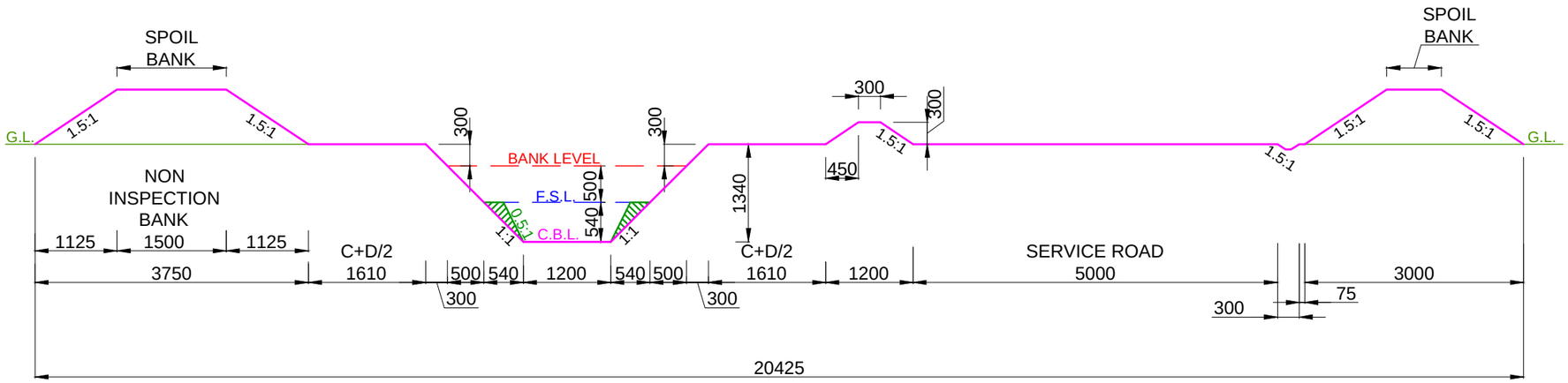
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.250 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :- 176	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FC) 1 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.250 KM TO CH: 1.650 KM

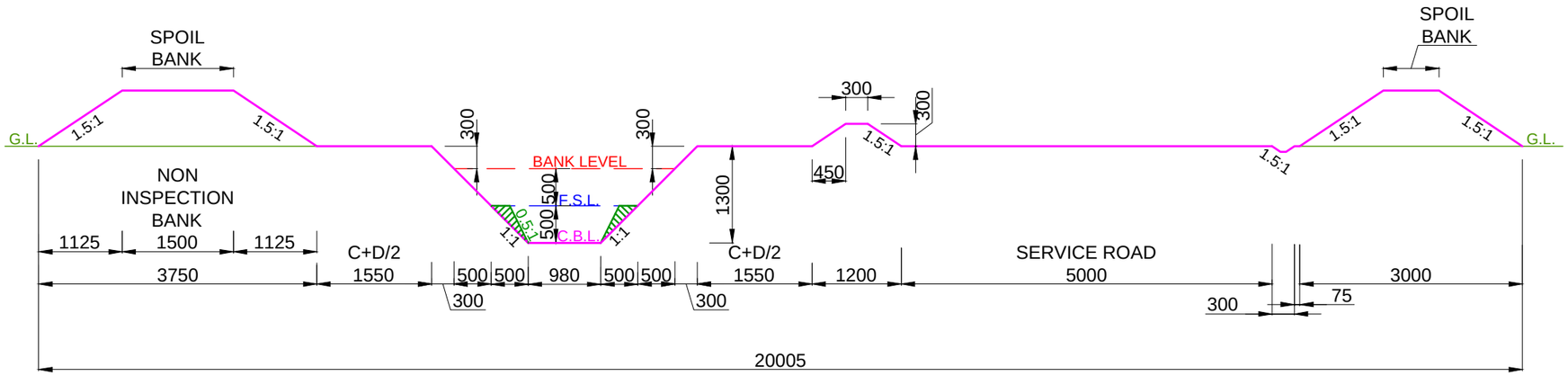
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :- 177	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FC) 2 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.650 KM TO CH: 2.300 KM

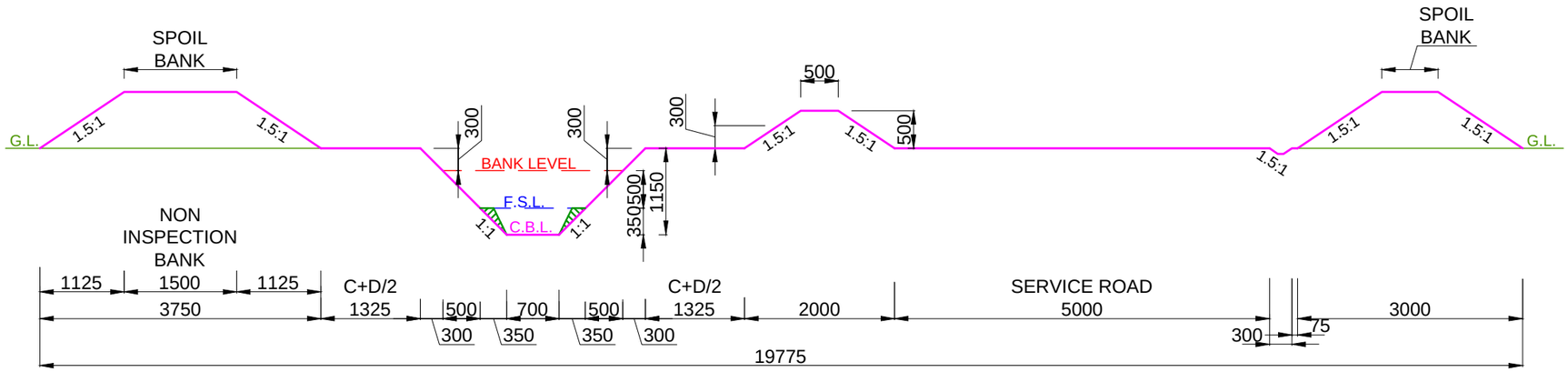
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :- 178	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FC) 3 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.300 KM TO CH: 2.950 KM

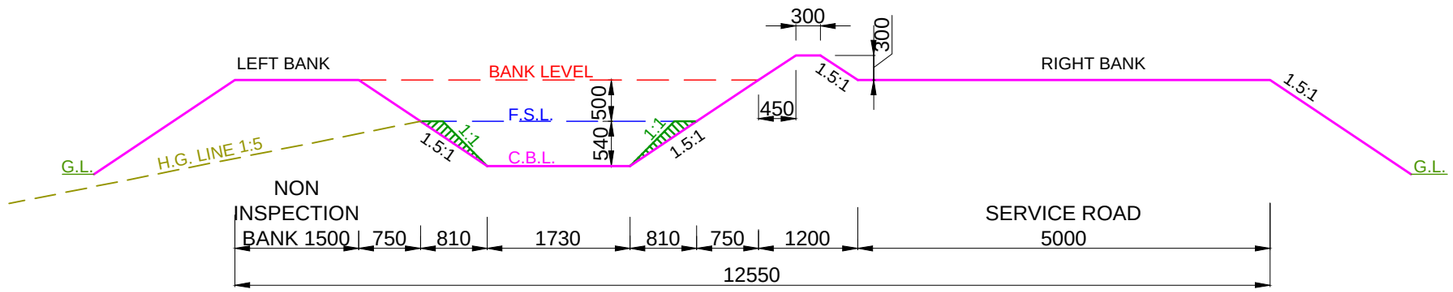
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FC) 179

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.250 KM

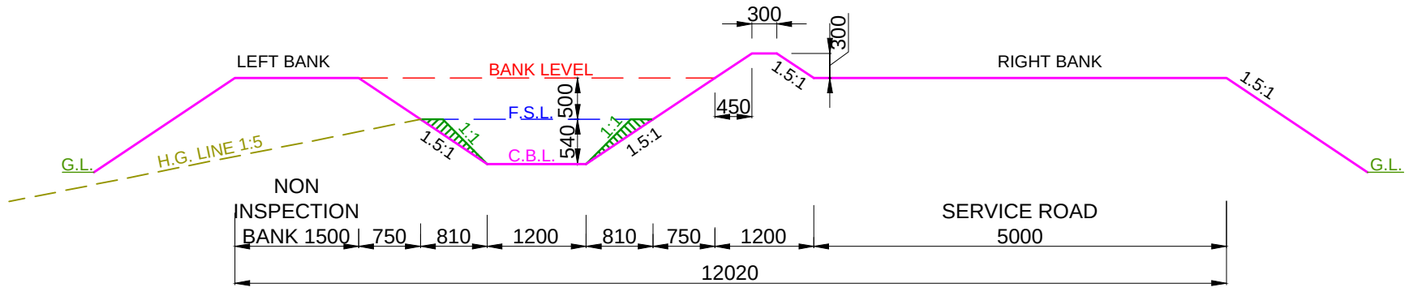
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FF) 180

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.250 KM TO CH: 1.650 KM

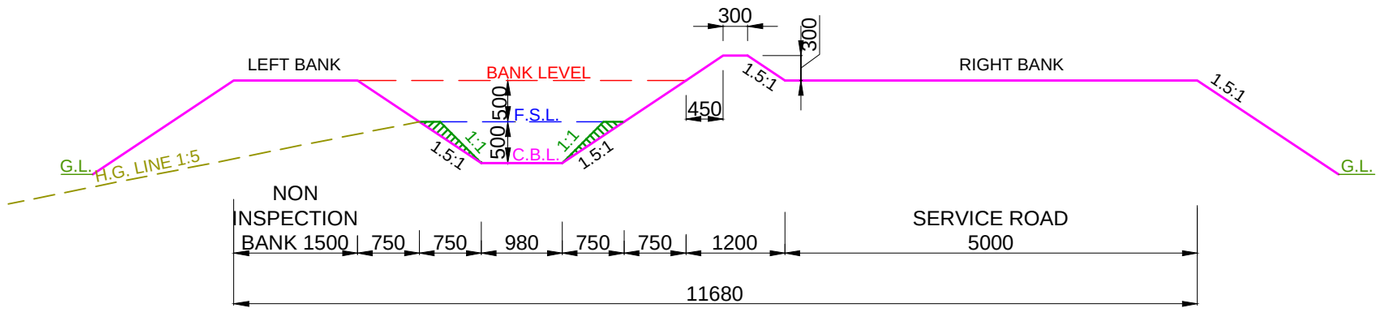
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FF) 181

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.650 KM TO CH: 2.300 KM

NOTE:-

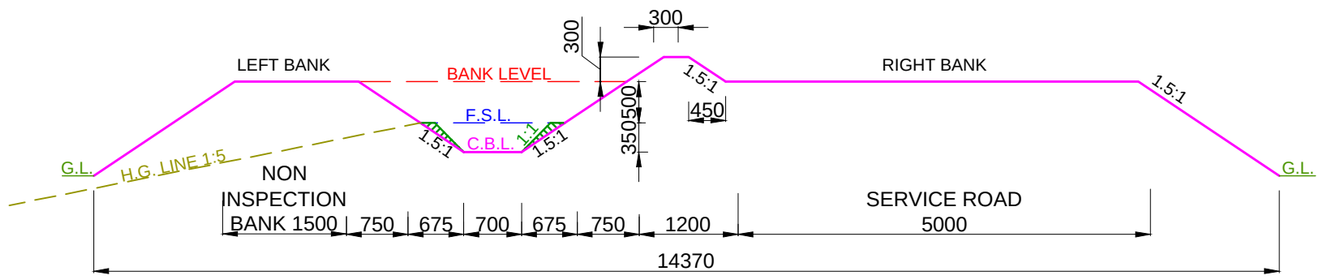
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FF) 3 of 4

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TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.300 KM TO CH: 2.950 KM

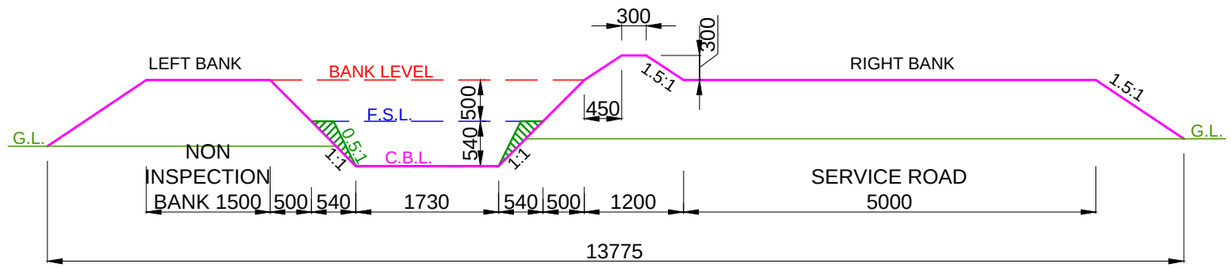
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.250 KM

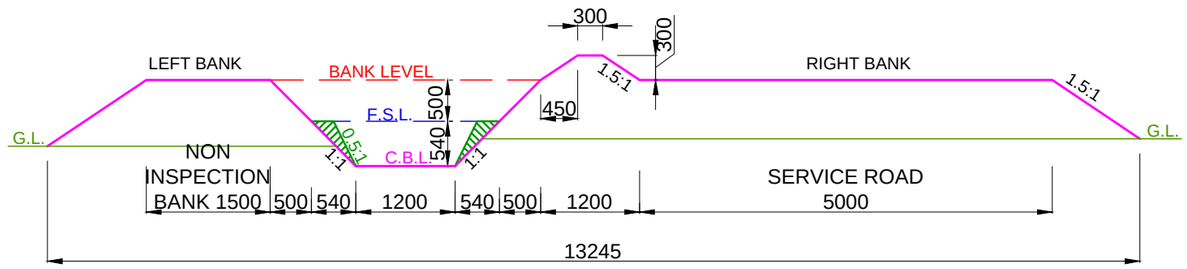
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(PCF) 184 1 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.250 KM TO CH: 1.650 KM

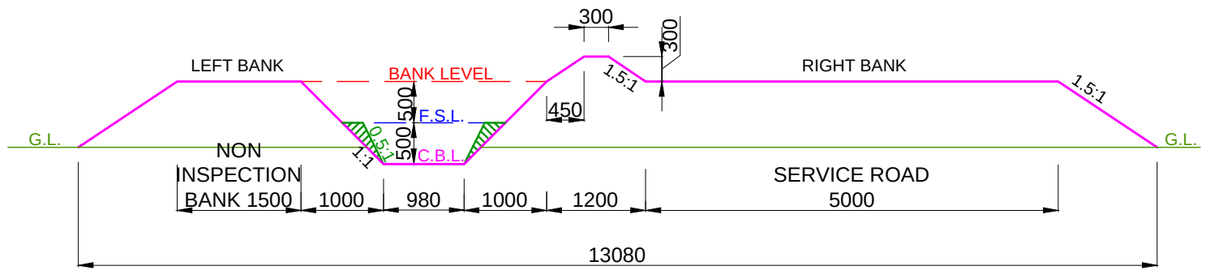
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :- 185	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(PCF) 2 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.650 KM TO CH: 2.300 KM

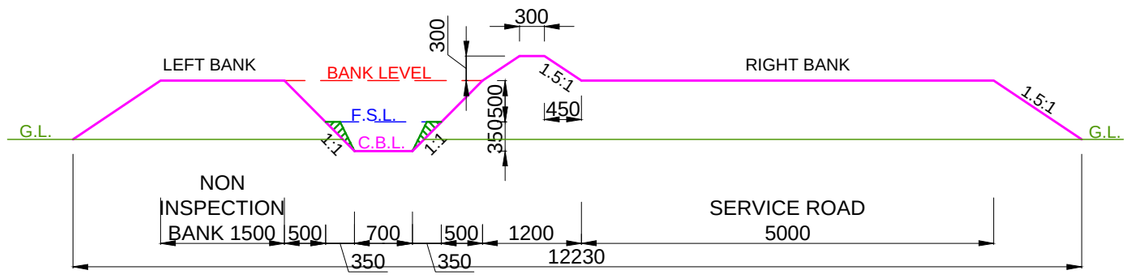
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :- 186	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(PCF) 3 of 4

TYPICAL X - SECTION OF TETRIA MINOR
(OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.300 KM TO CH: 2.950 KM

NOTE:-

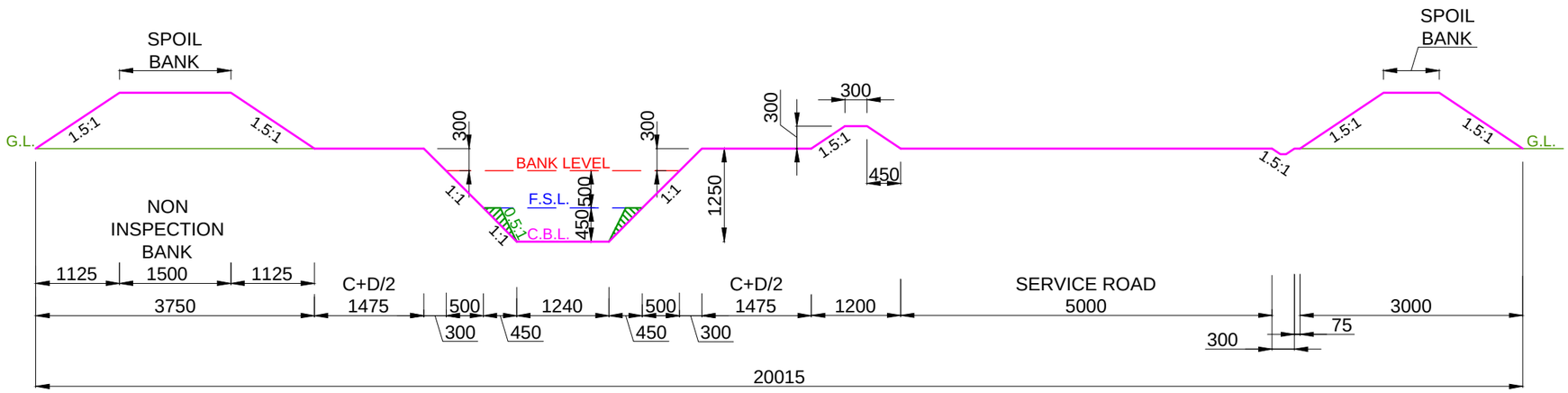
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DISTRIBUTARY CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC /TYP-(PCF) 187 4 of 4

TYPICAL SECTION OF KARMARI MINOR

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.120 KM

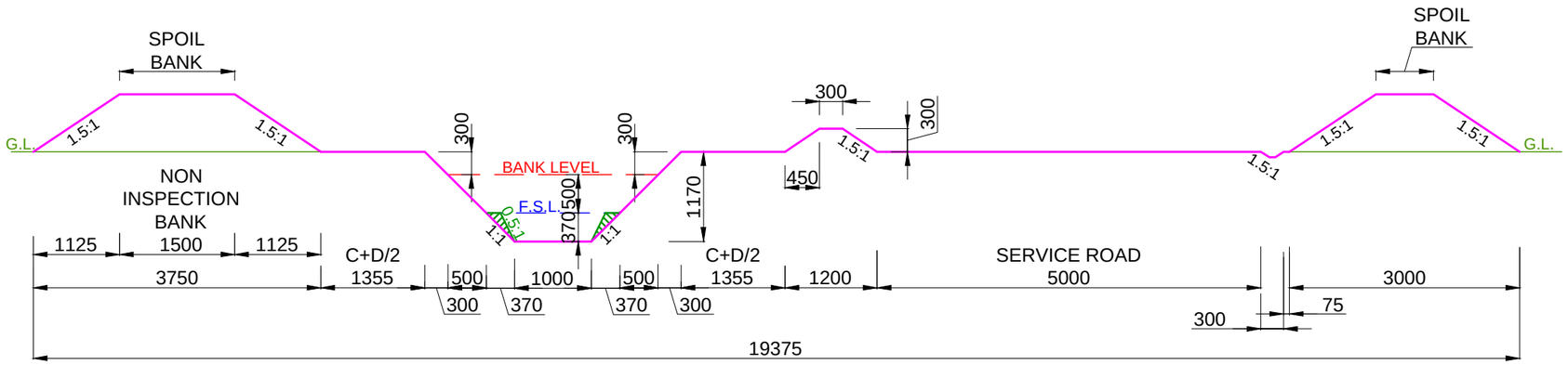
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 189	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FC) 1 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.120 KM TO CH: 1.050 KM

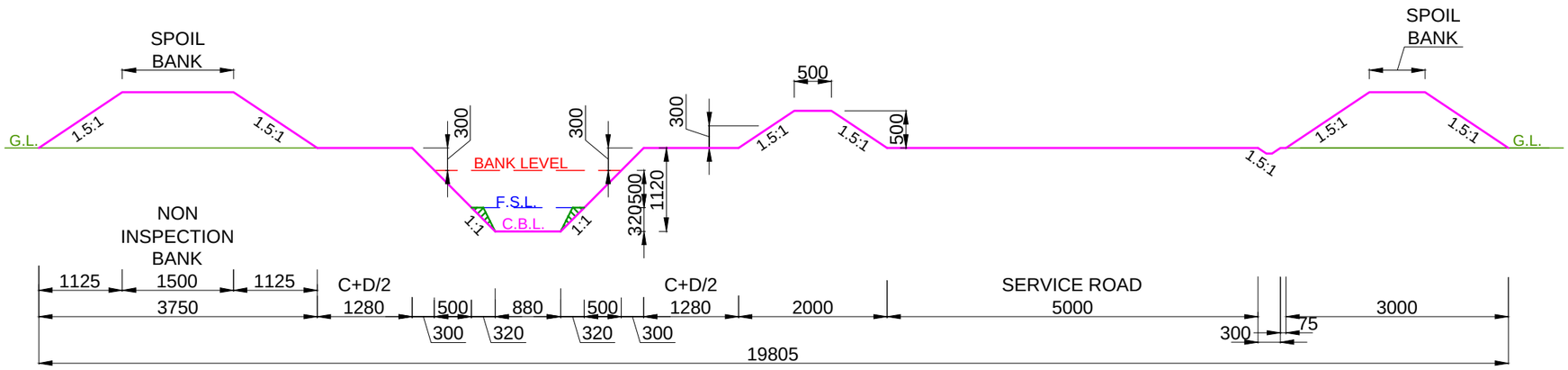
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FC) 190 2 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.050 KM TO CH: 1.700 KM

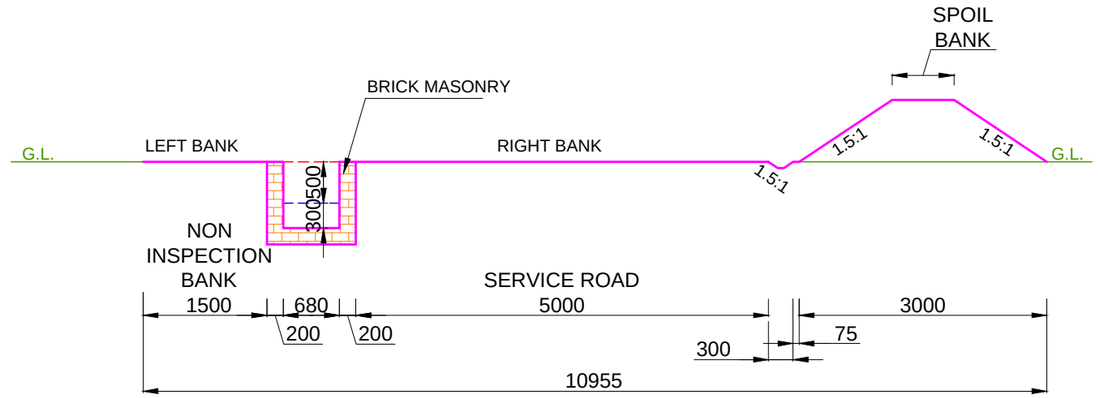
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 191	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FC) 3 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.700 KM TO CH: 2.200 KM

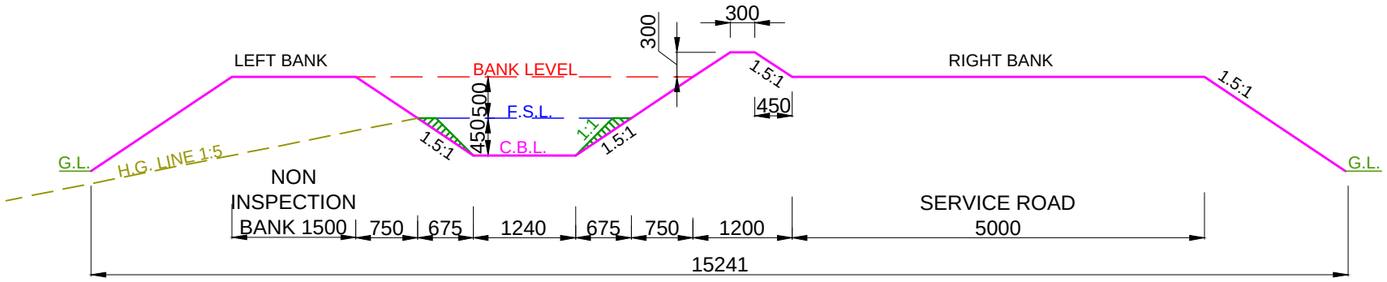
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 192	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.120 KM

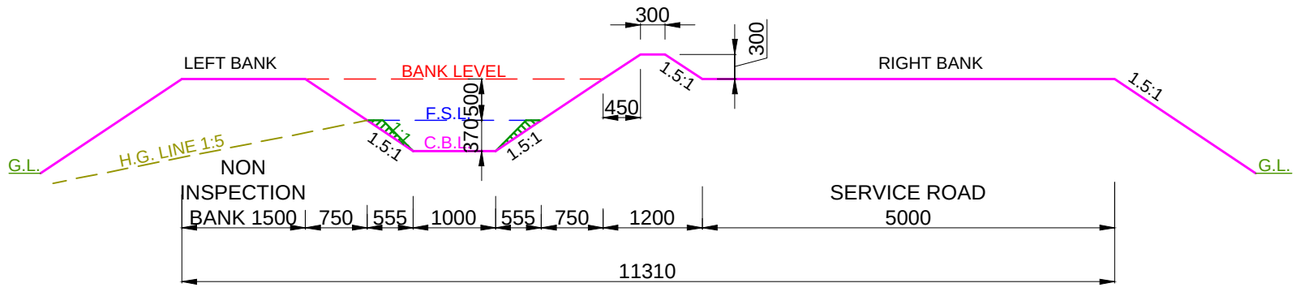
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FF) 193 1 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.120 KM TO CH: 1.050 KM

NOTE:-

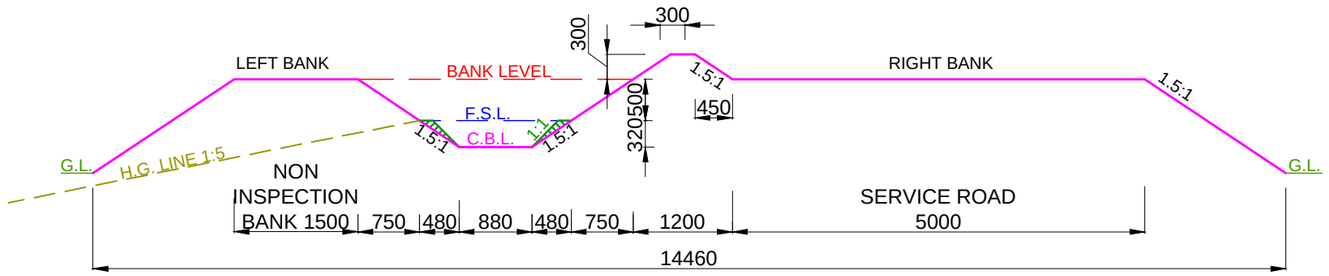
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FF) 2 of 4

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TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.050 KM TO CH: 1.700 KM

NOTE:-

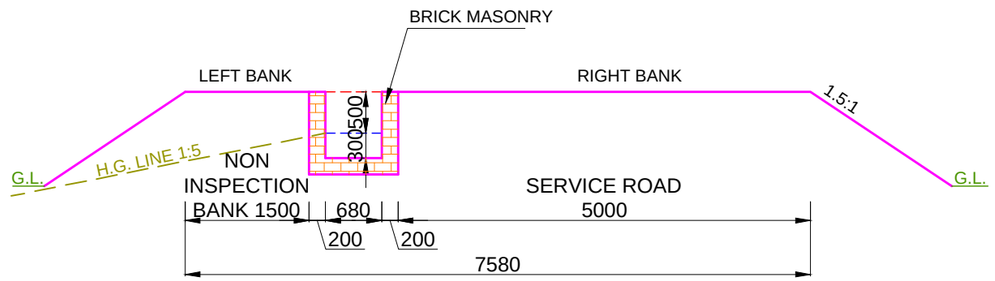
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FF) 3 of 4

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TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.700 KM TO CH: 2.200 KM

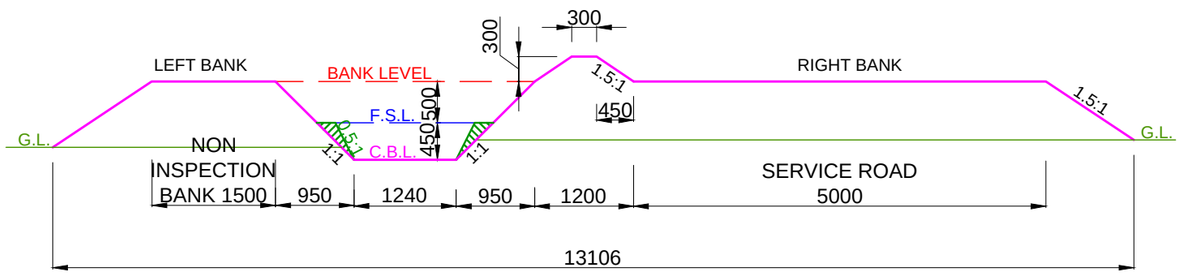
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 196	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.120 KM

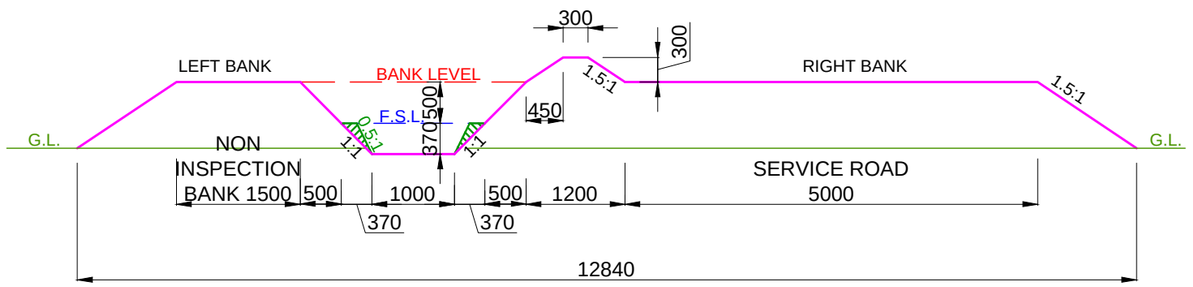
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 197	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(PCF) 1 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.120 KM TO CH: 1.050 KM

NOTE:-

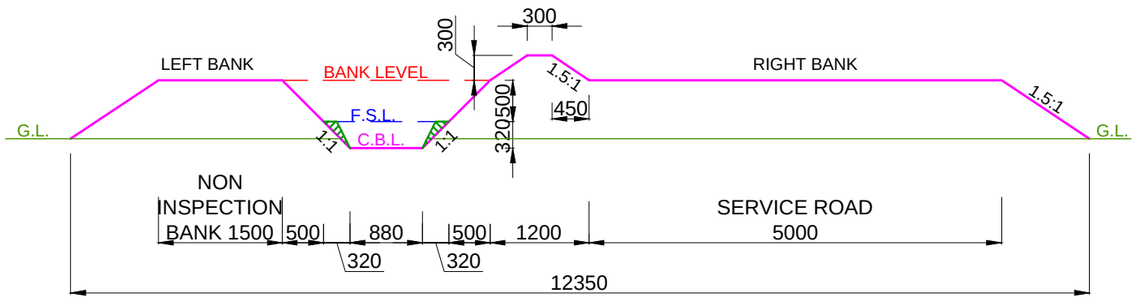
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(PCF) 2 of 4

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TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.050 KM TO CH: 1.700 KM

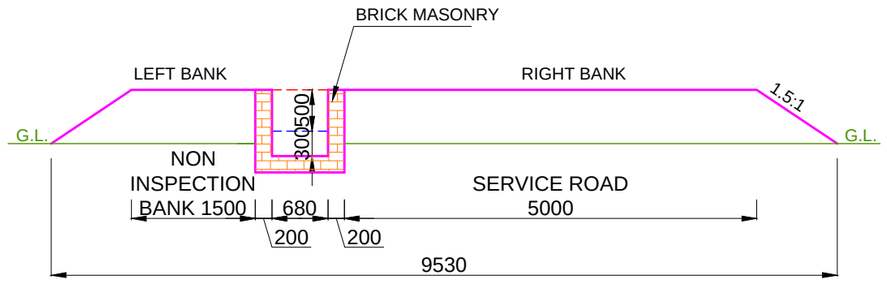
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(PCF) 3 of 4

TYPICAL X - SECTION OF KARMARI MINOR
(OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.700 KM TO CH: 2.200 KM

NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

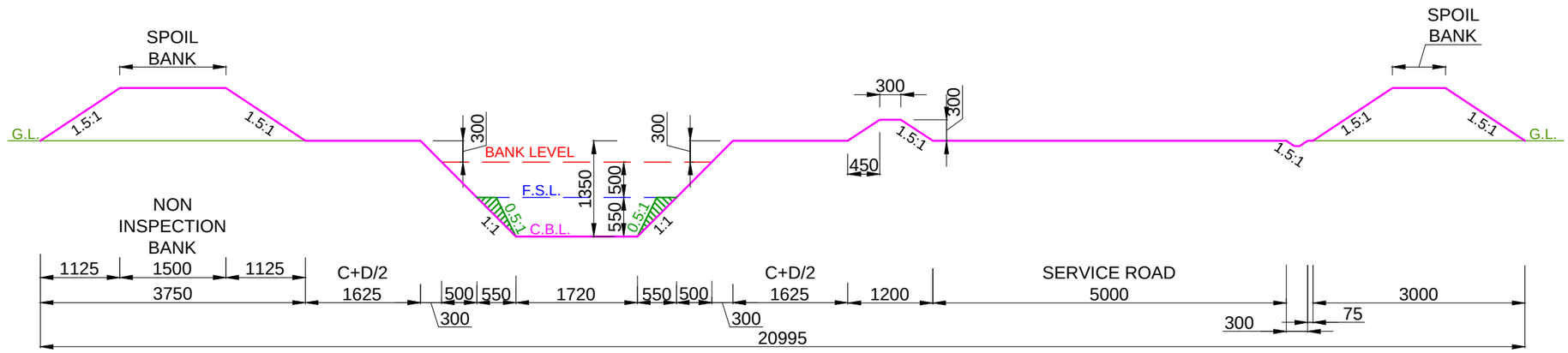
LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF KARMARI MINOR (OFFTAKE FROM RD - 8+650 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC /TYP-(PCF) 4 of 4

200

TYPICAL SECTION OF MIRZAPUR MINOR

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.770 KM

NOTE:-

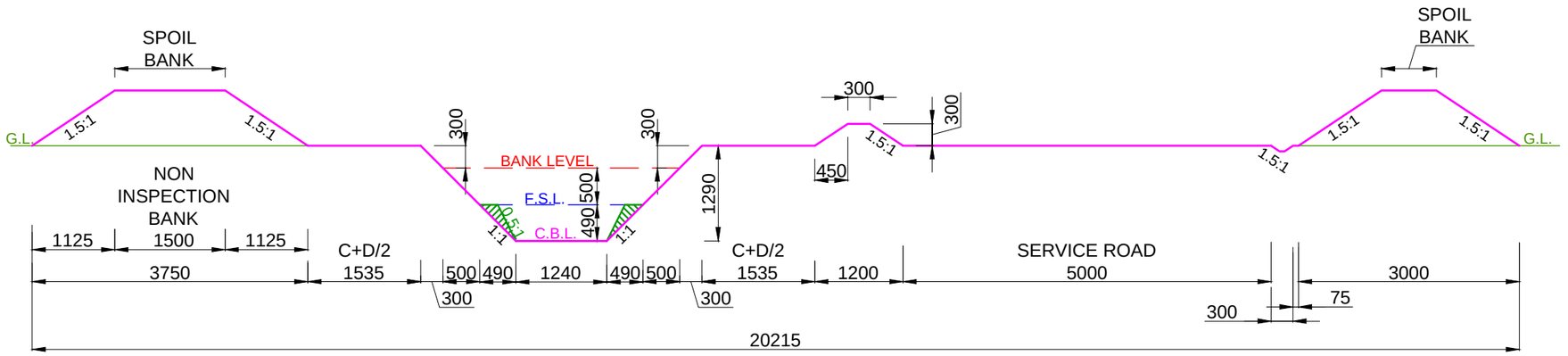
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FC) 1 of 4

202

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.770 KM TO CH: 2.260 KM

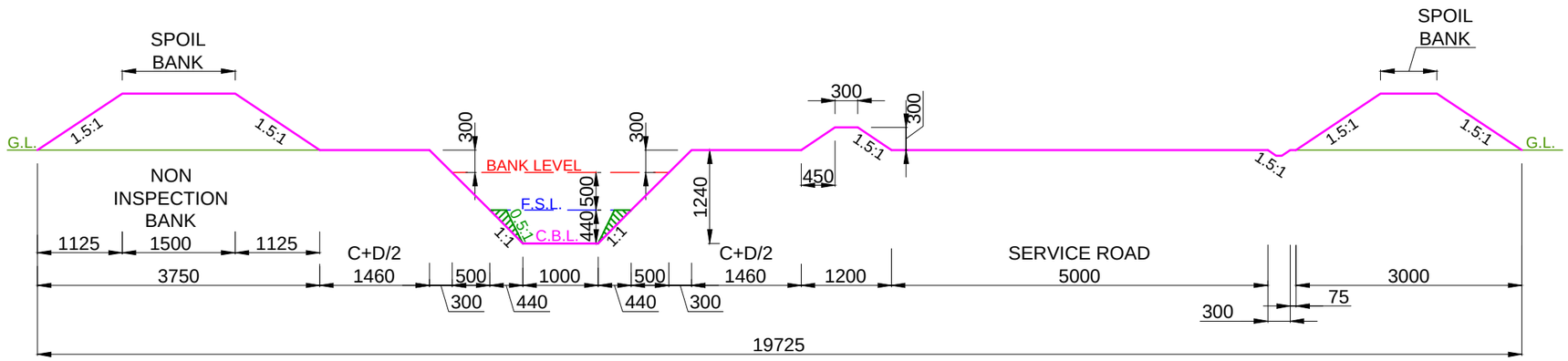
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 203	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FC) 2 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.260 KM TO CH: 2.900 KM

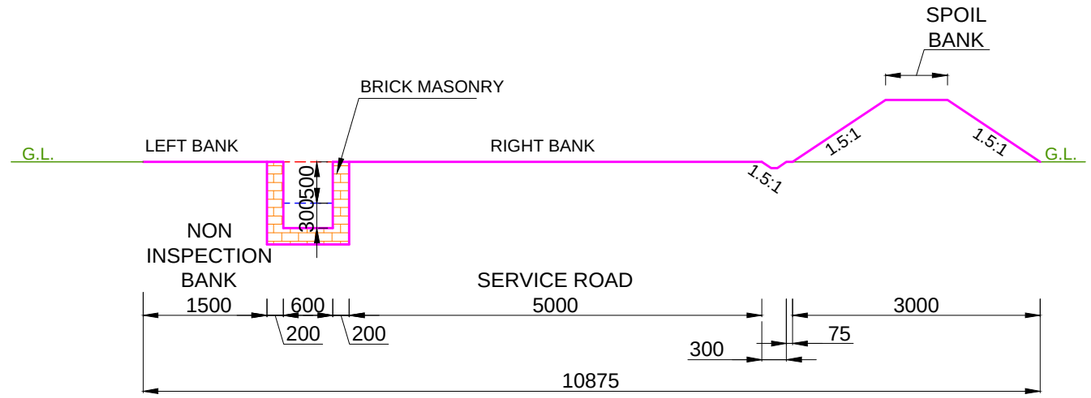
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 204	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FC) 3 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.900 KM TO CH: 3.950 KM

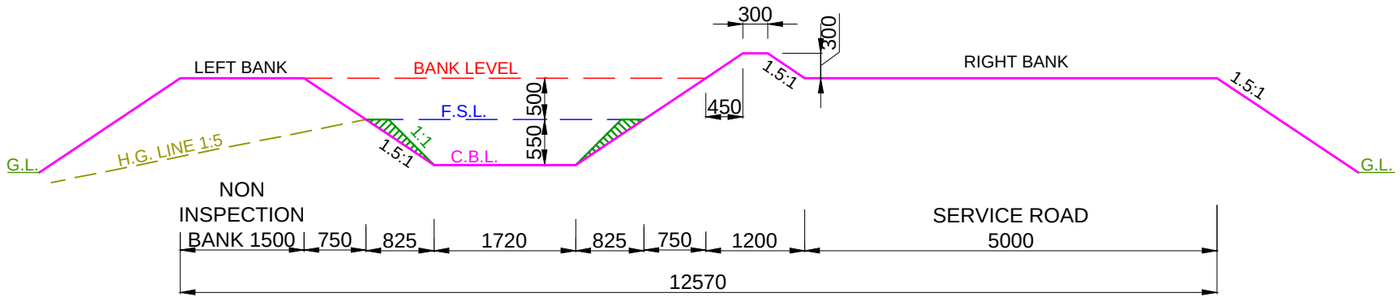
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 205	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.770 KM

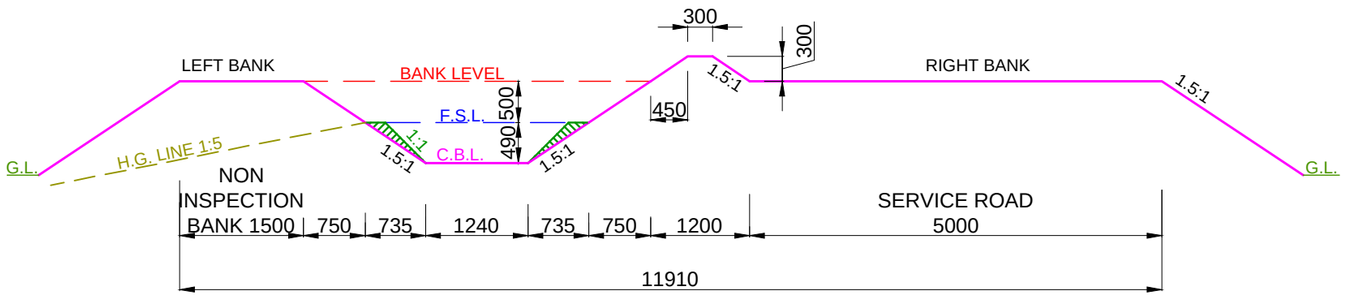
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FF) 206 1 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.770 KM TO CH: 2.260 KM

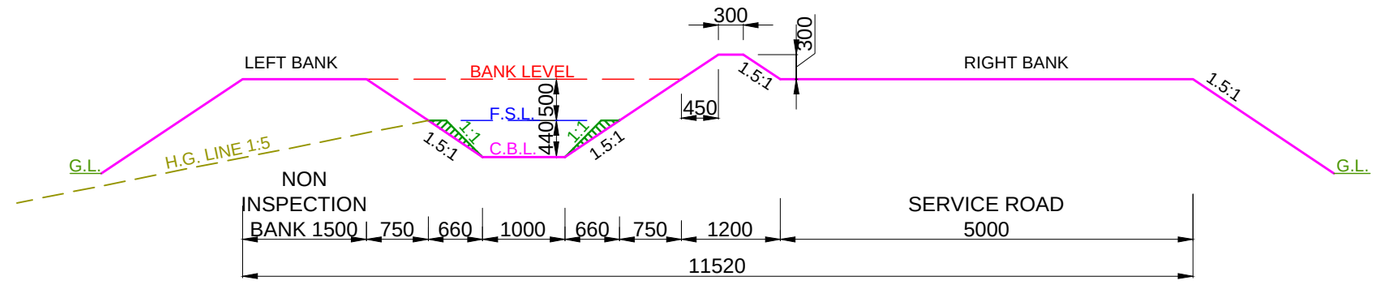
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 207	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FF) 2 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.260 KM TO CH: 2.900 KM

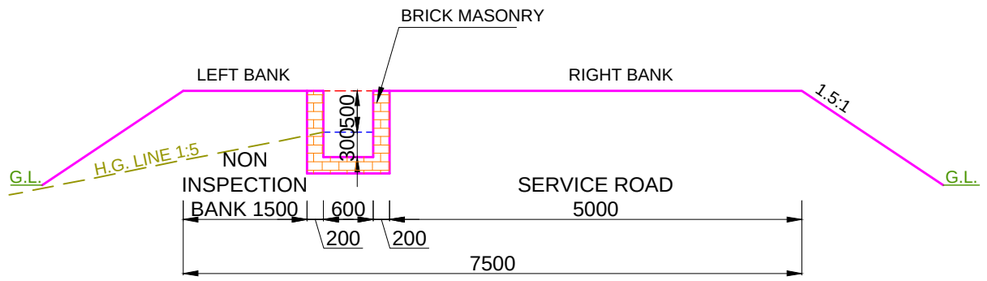
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FF) 208 3 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.900 KM TO CH: 3.950 KM

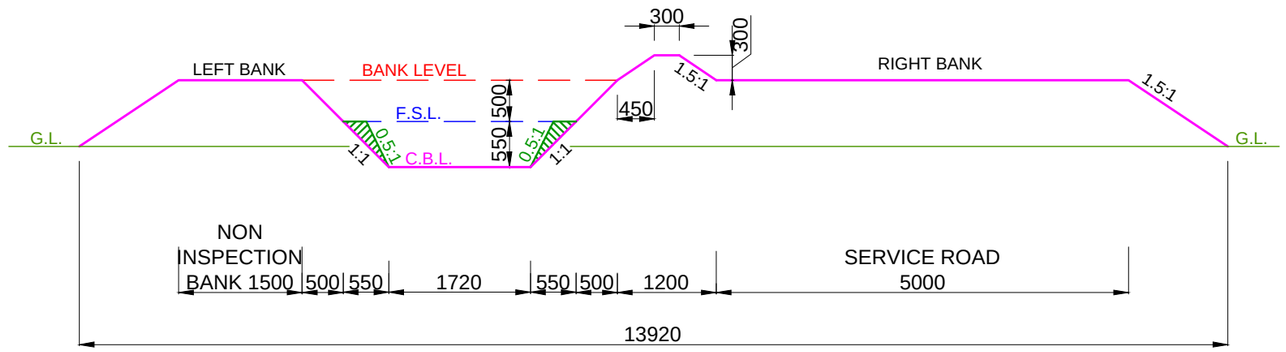
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 209	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.770 KM

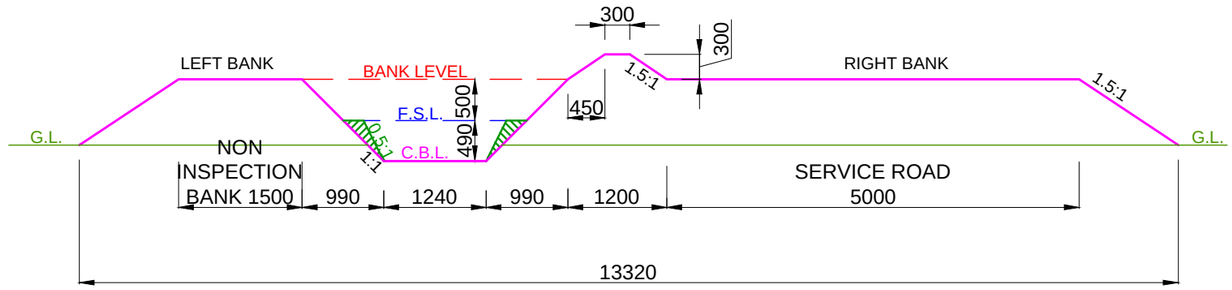
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 210	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(PCF) 1 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.770 KM TO CH: 2.260 KM

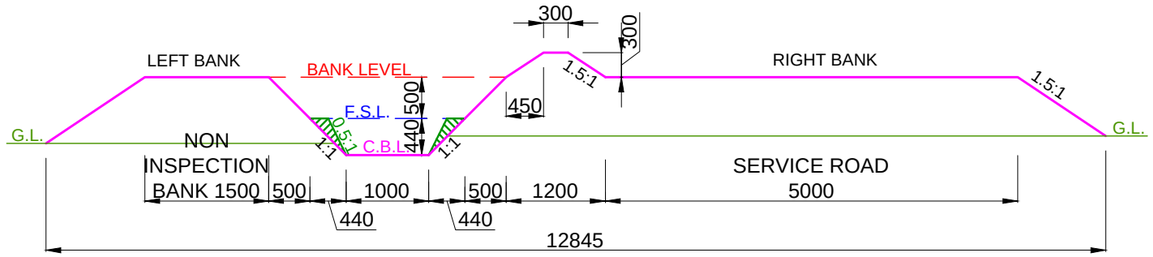
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND	Prepared by :-		
CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
		Drawing No. :- 211	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(PCF) 2 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.260 KM TO CH: 2.900 KM

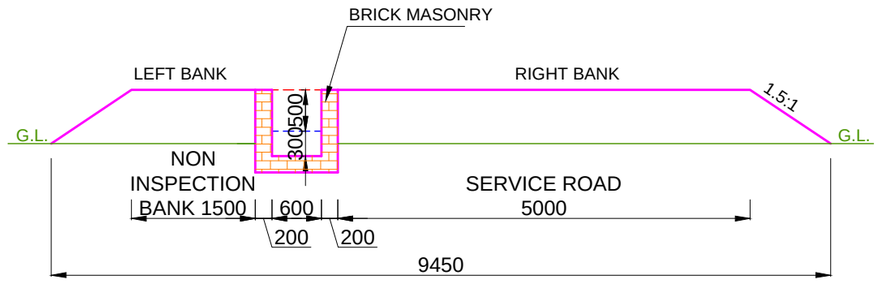
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 212	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(PCF) 3 of 4

TYPICAL X - SECTION OF MIRZAPUR MINOR
(OFFTAKE FROM RD - 16+870 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.900 KM TO CH: 3.950 KM

NOTE:-

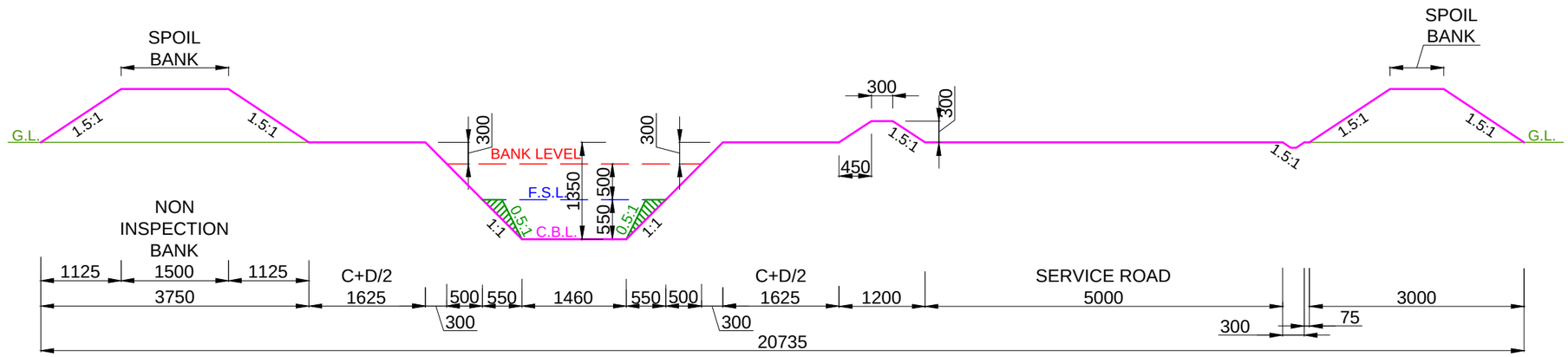
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
			Drawing No. :- 213	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC /TYP-(PCF) 4 of 4

TYPICAL SECTION OF JASOEA MINOR

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.550 KM

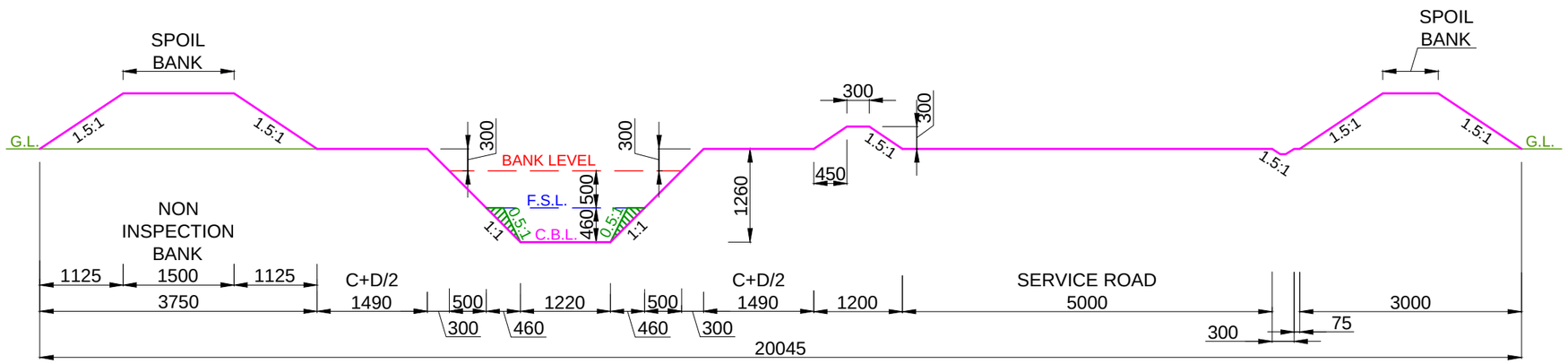
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 215	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FC) 1 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.550 KM TO CH: 1.950 KM

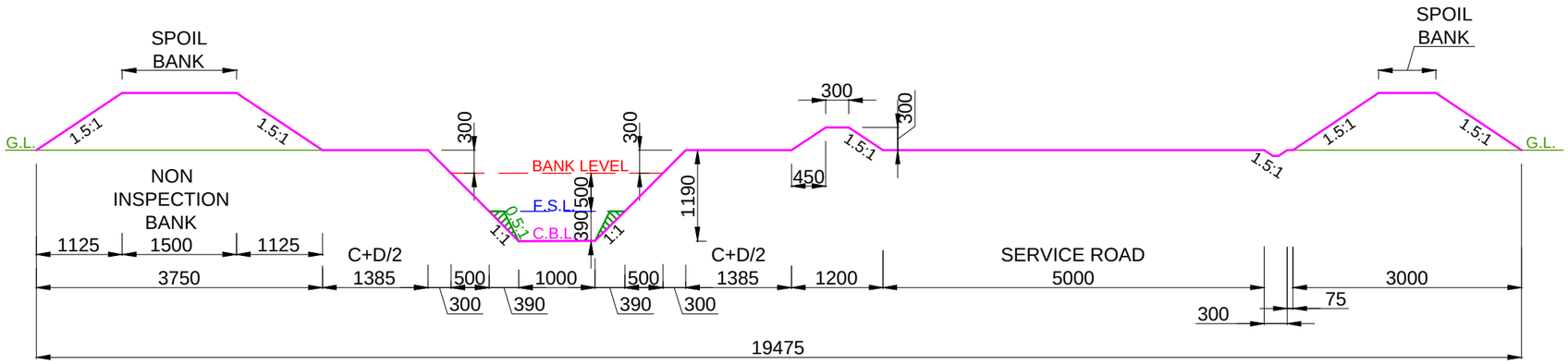
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 216	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FC) 2 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.950 KM TO CH: 2.000 KM

NOTE:-

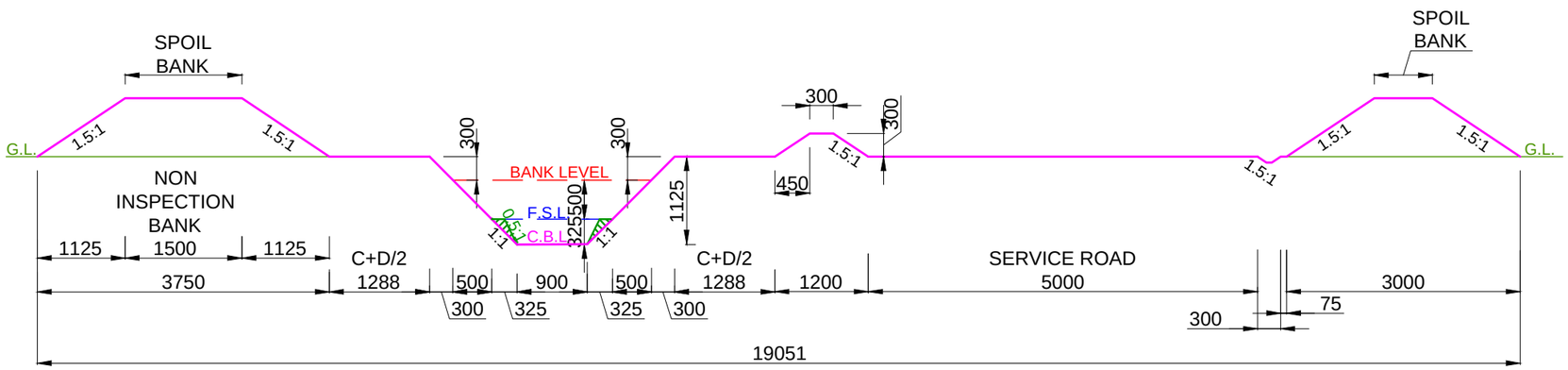
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FC) 3 of 4

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TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.000 KM TO CH: 2.700 KM

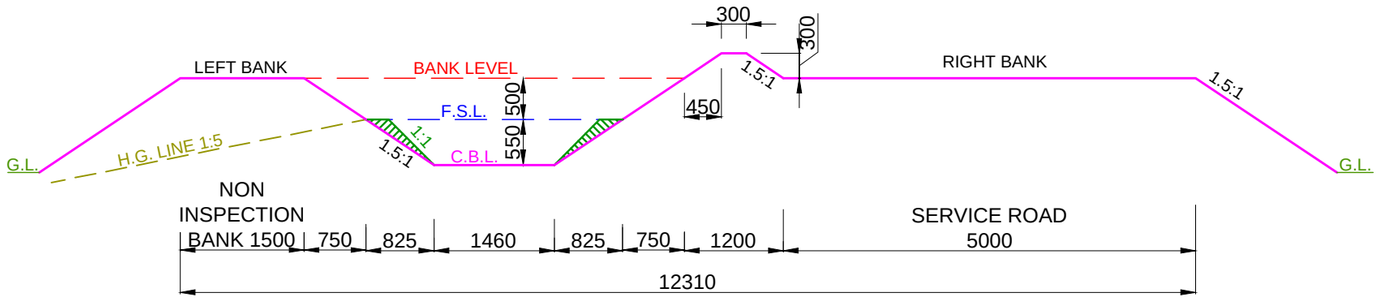
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 218	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.550 KM

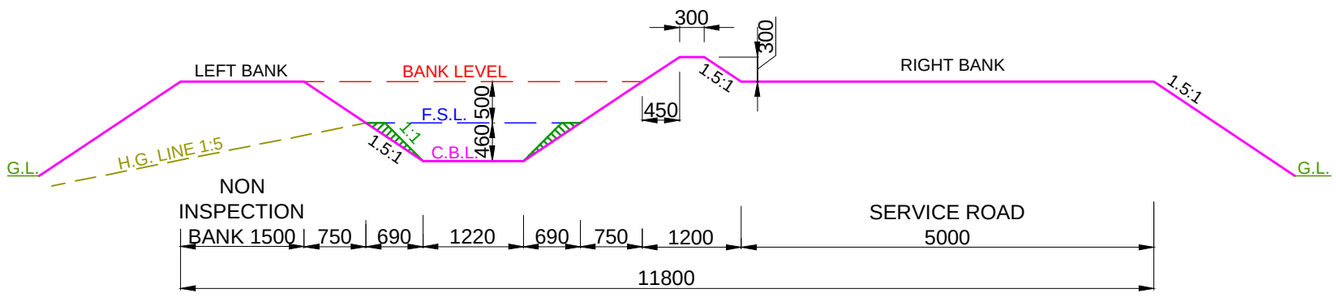
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FF) 219 1 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.550 KM TO CH: 1.950 KM

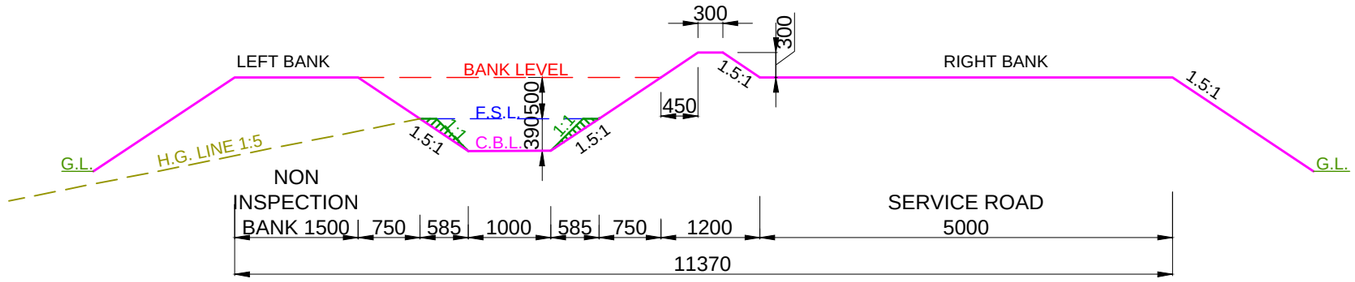
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FF) 220

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.950 KM TO CH: 2.000 KM

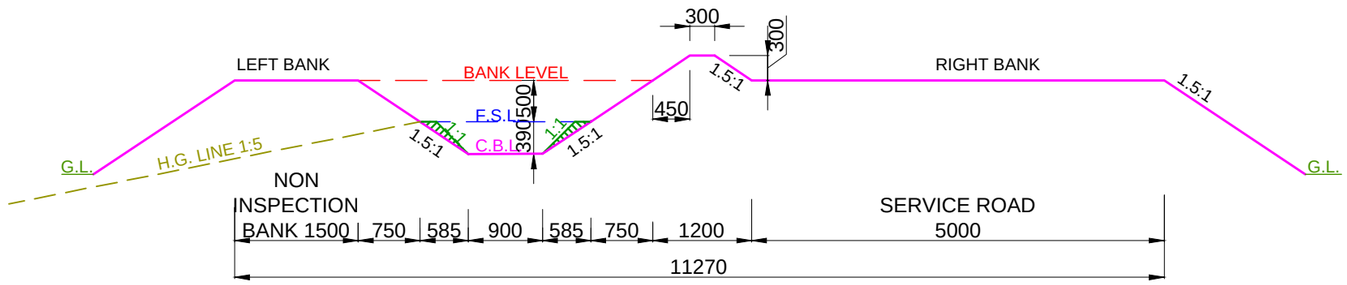
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 221	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FF) 3 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.000 KM TO CH: 2.700 KM

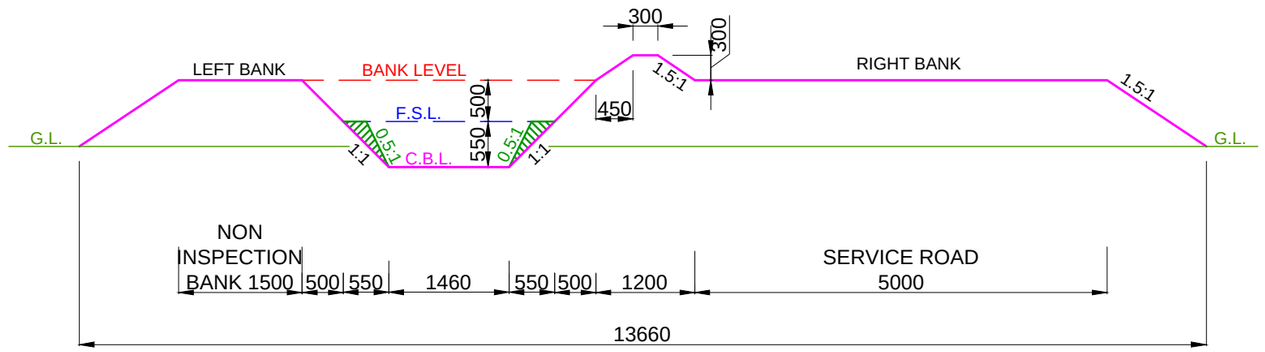
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 222	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.550 KM

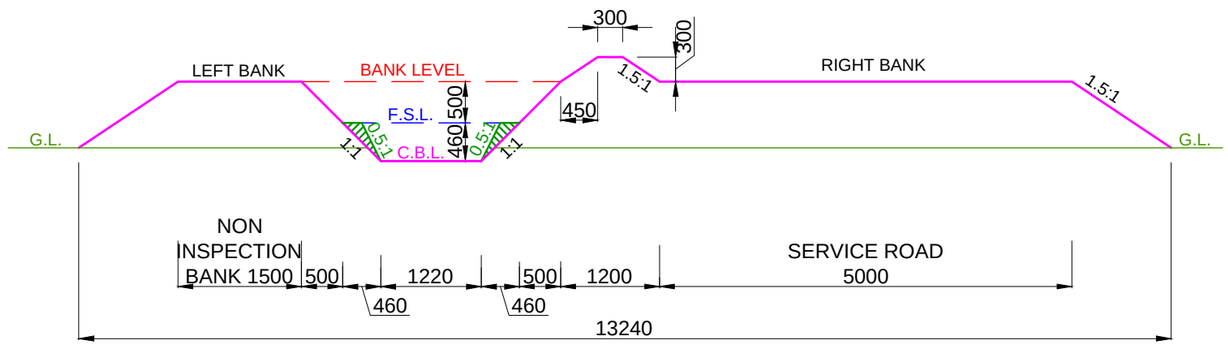
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-223	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(PCF) 1 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.550 KM TO CH: 1.950 KM

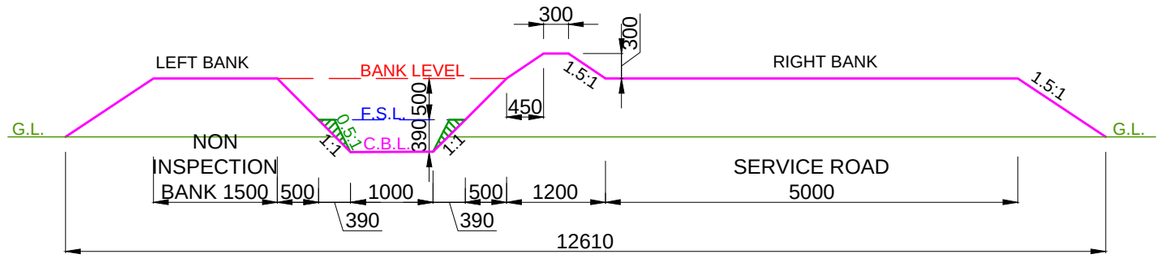
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 224	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(PCF) 2 of 4

TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.950 KM TO CH: 2.000 KM

NOTE:-

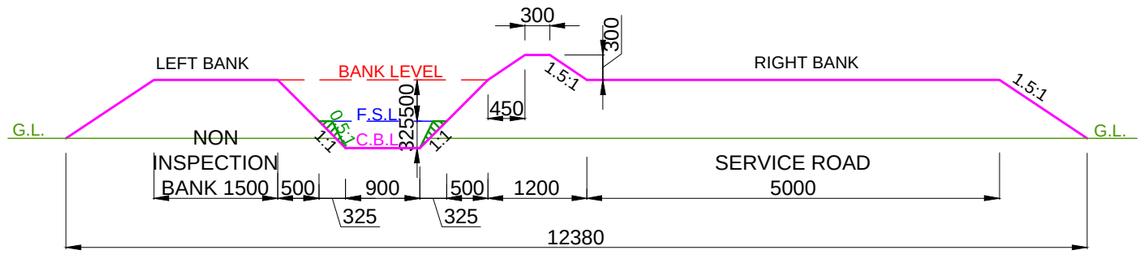
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(PCF) 3 of 4

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TYPICAL X - SECTION OF JASOEA MINOR
(OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.000 KM TO CH: 2.700 KM

NOTE:-

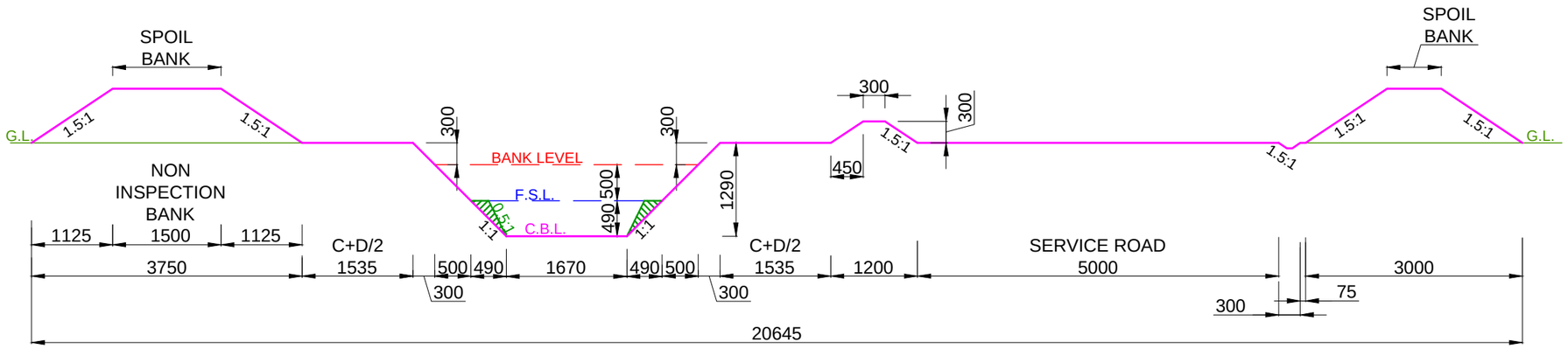
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF JASOEA MINOR (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 226	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC /TYP-(PCF) 4 of 4

TYPICAL SECTION OF SENDHOKHAP MINOR

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.030 KM

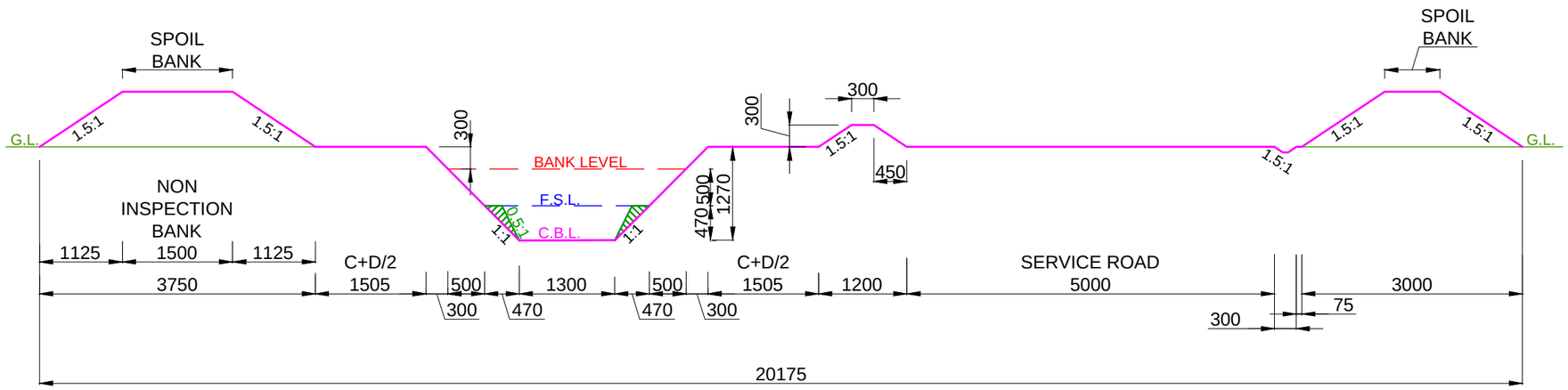
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
CUT AREA			Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
FILL AREA			Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 228	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FC) 1 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 0.030 KM TO CH: 1.300 KM

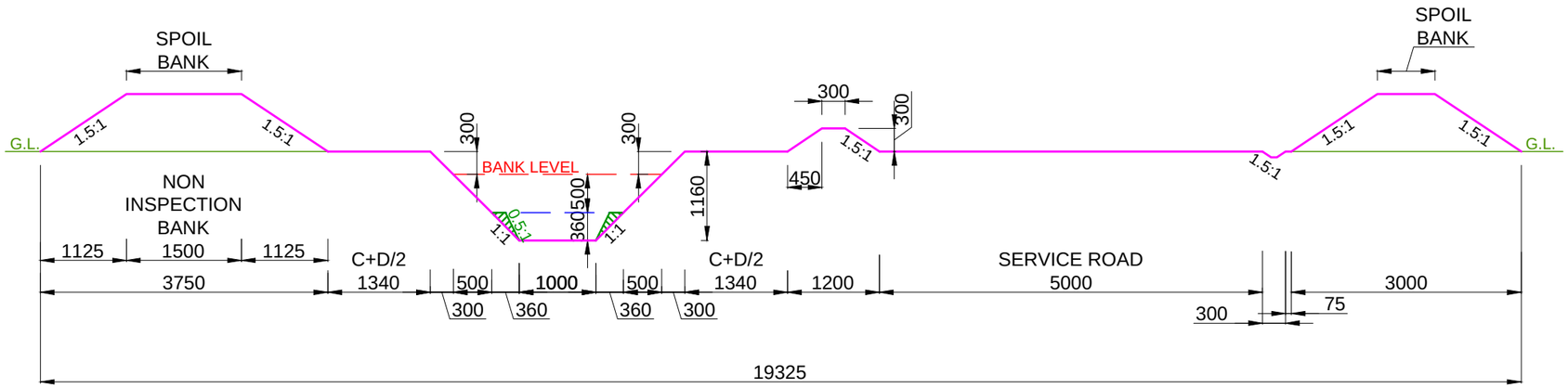
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 229	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FC) 2 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.300 KM TO CH: 1.900 KM

NOTE:-

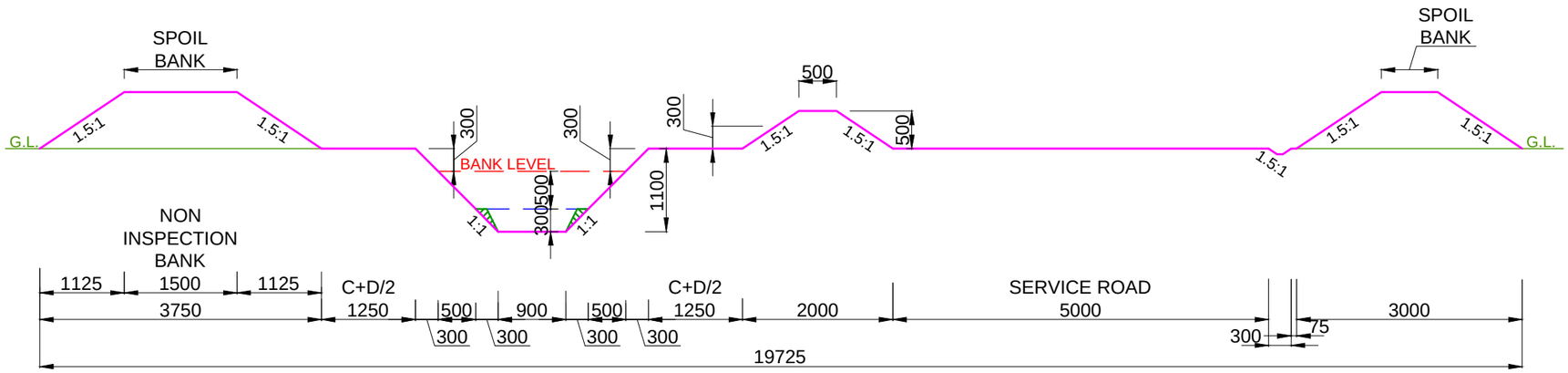
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FC) 3 of 5

230

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 1.900 KM TO CH: 2.250 KM

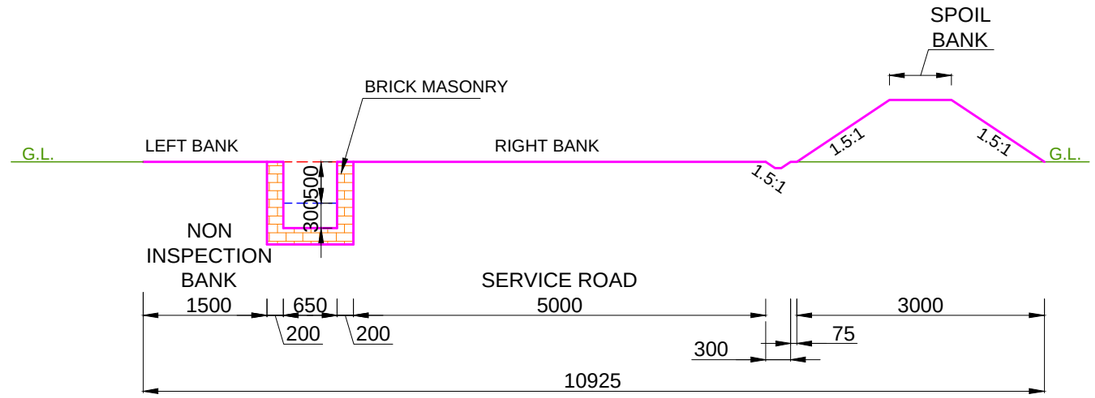
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 231	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FC) 4 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 2.250 KM TO CH: 2.450 KM

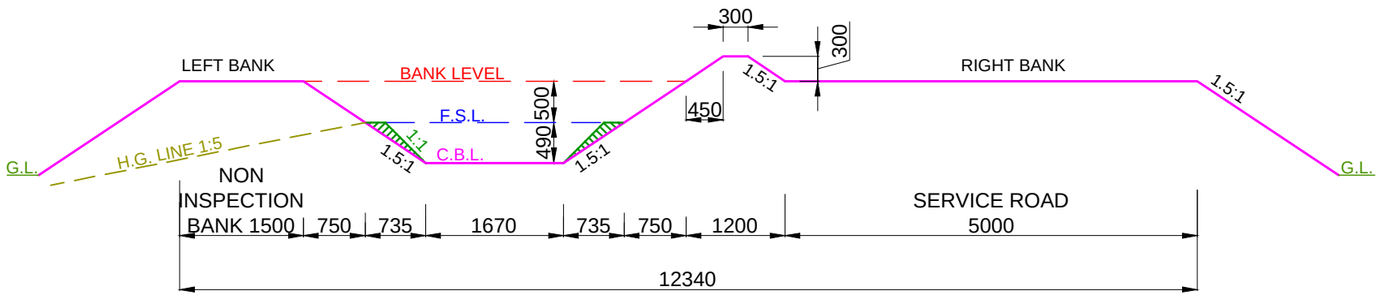
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 232	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FC) 5 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.030 KM

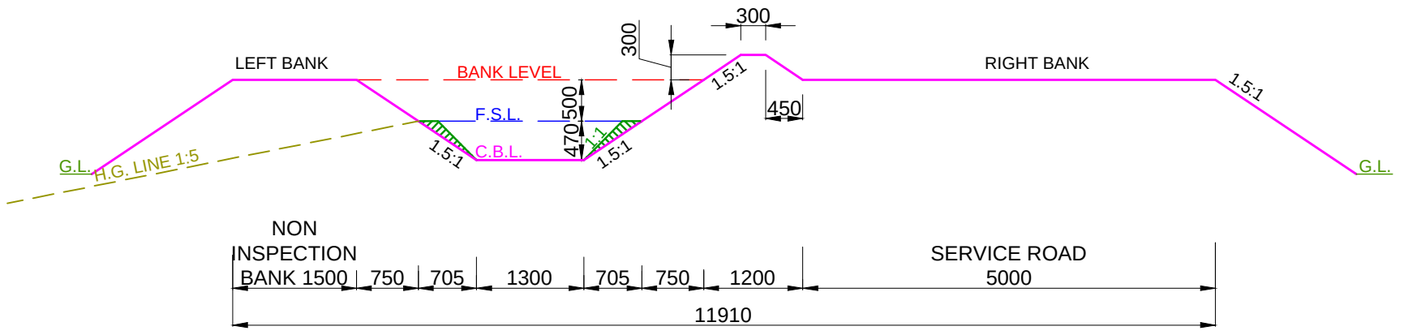
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 233	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FF) 1 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 0.030 KM TO CH: 1.300 KM

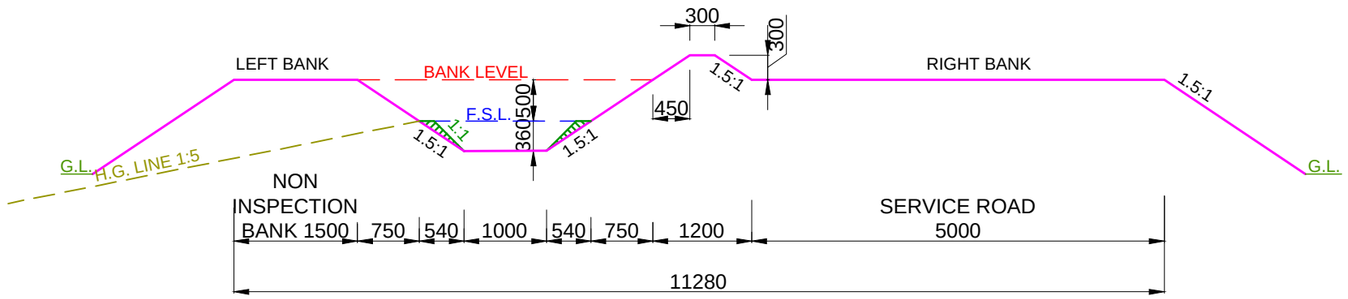
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 234	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FF) 2 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.300 KM TO CH: 1.900 KM

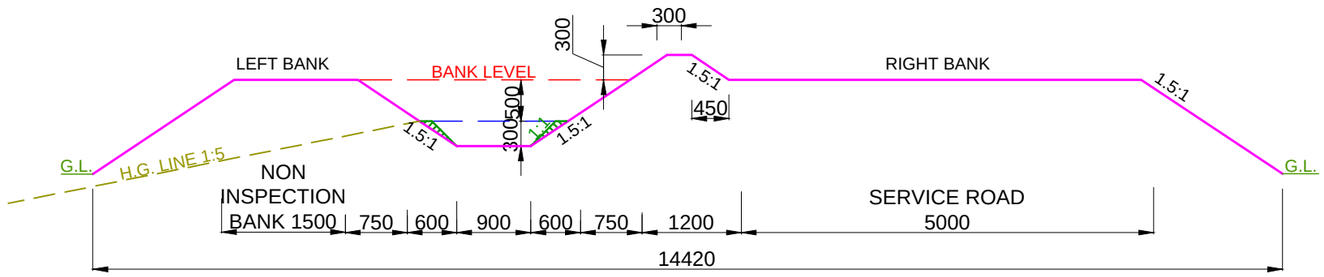
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 235	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FF) 3 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 1.900 KM TO CH: 2.250 KM

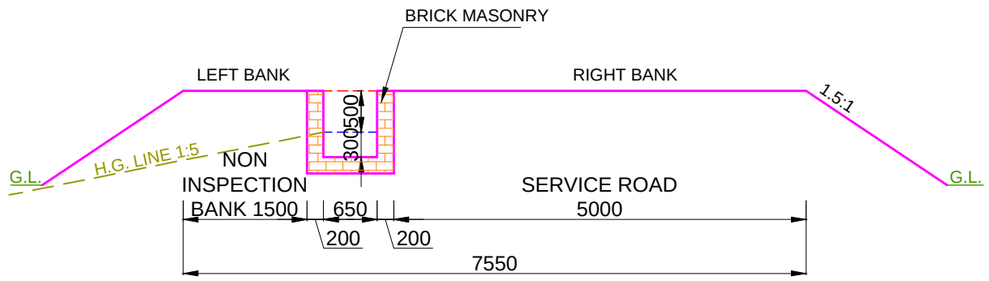
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 236	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FF) 4 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 2.250 KM TO CH: 2.450 KM

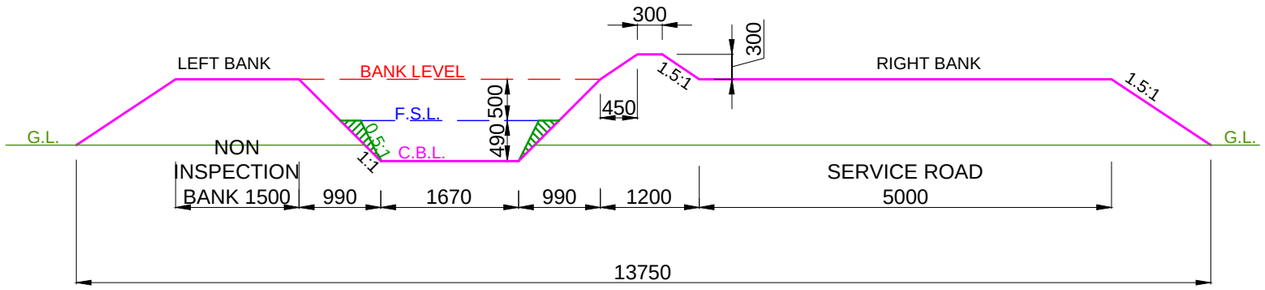
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 237	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(FF) 5 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.030 KM

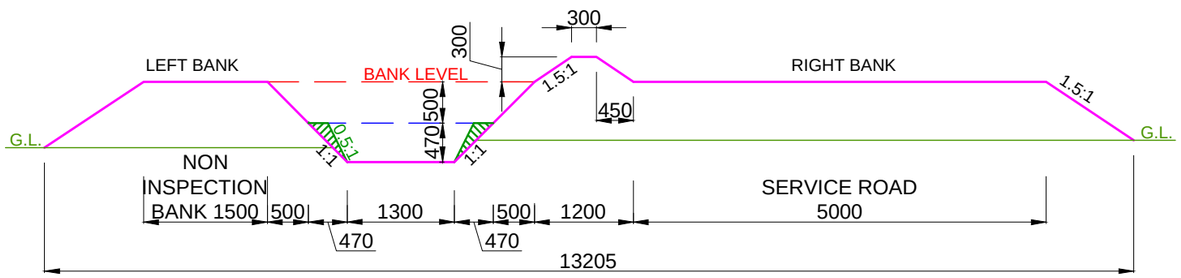
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 238	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(PCF) 1 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.030 KM TO CH: 1.300 KM

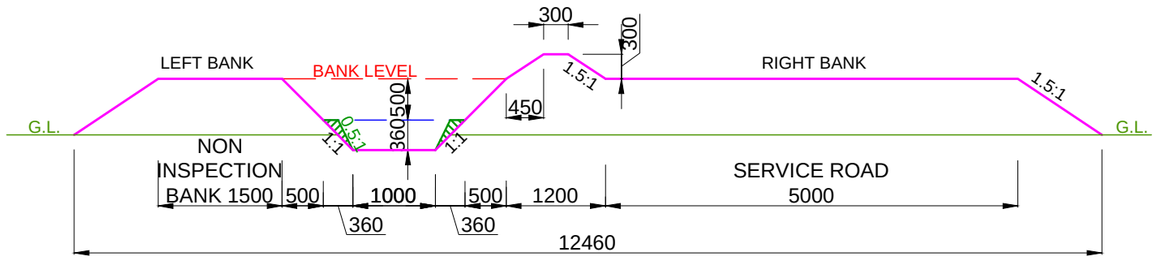
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :-		
	CUT AREA	WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(PCF) 239 2 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.300 KM TO CH: 1.900 KM

NOTE:-

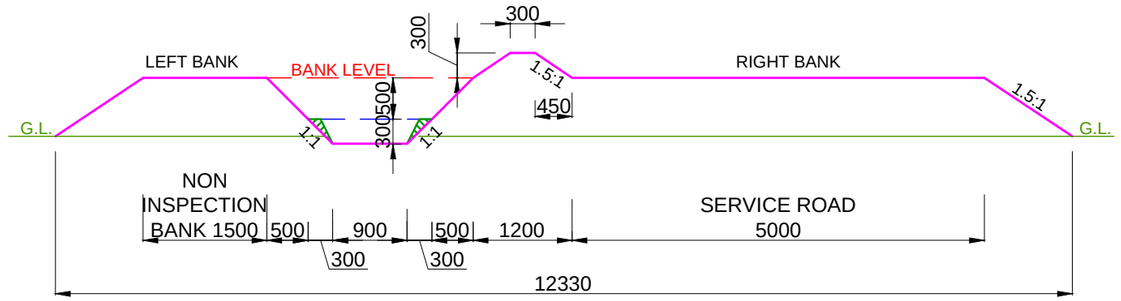
1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(PCF) 3 of 5

240

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 1.900 KM TO CH: 2.250 KM

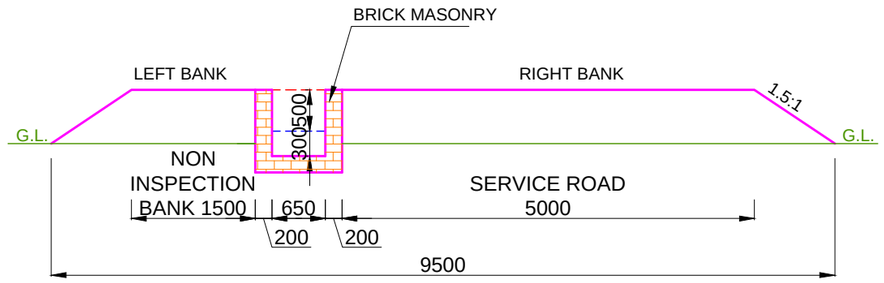
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 241	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(PCF) 4 of 5

TYPICAL X - SECTION OF SENDHOKHAP MINOR
(OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 2.250 KM TO CH: 2.450 KM

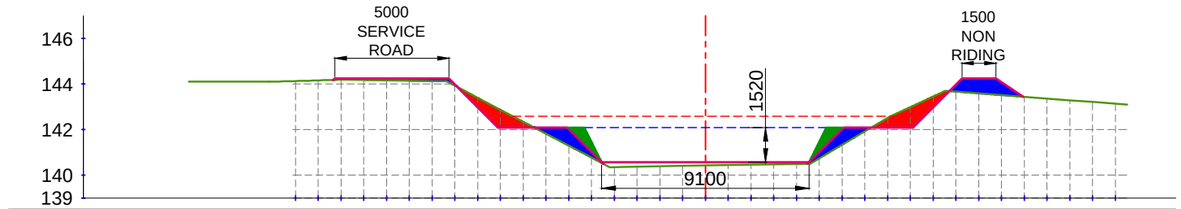
NOTE:-

1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING , INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND		Prepared by :- WAPCOS LTD.		
	CUT AREA		Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	FILL AREA		Drawing Title :-	X - SECTION OF SENDHOKHA MR. (OFFTAKE FROM RD - 25+470 KM. (RT), RIUR BRANCH CANAL)
			Drawing No. :- 242	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC /TYP-(PCF) 5 of 5

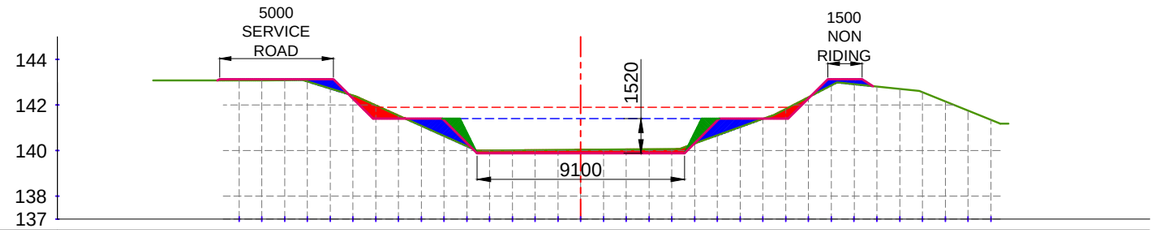
CROSS SECTION OF RUIR BRANCH CANAL

X SECTION OF RIUR BR. CANAL



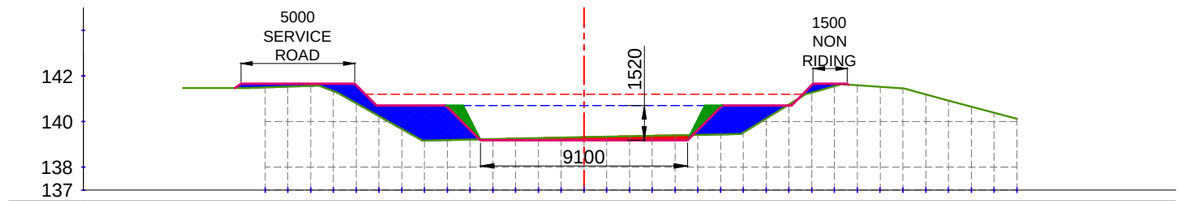
| | | |

X SECTION OF RIUR BR. CANAL



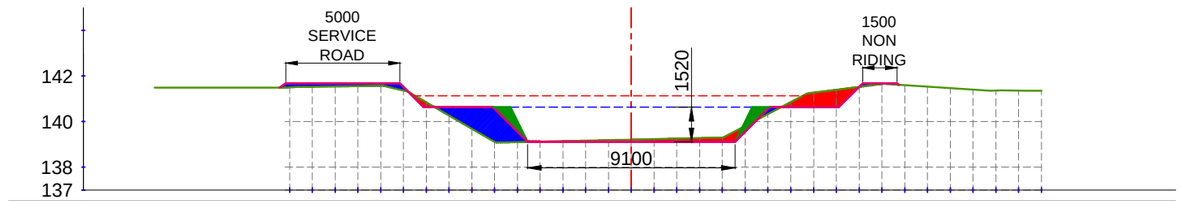
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X SECTION OF RIUR BR. CANAL



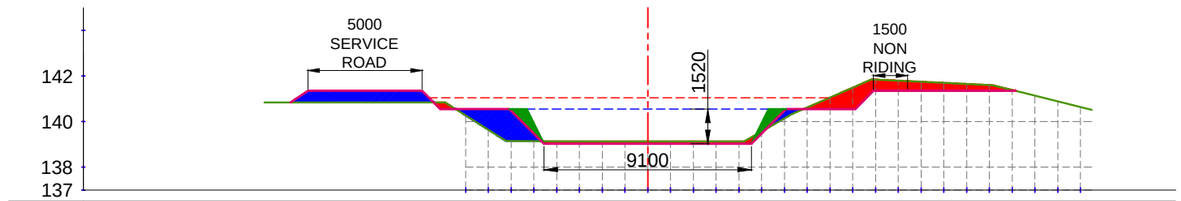
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X SECTION OF RIUR BR. CANAL



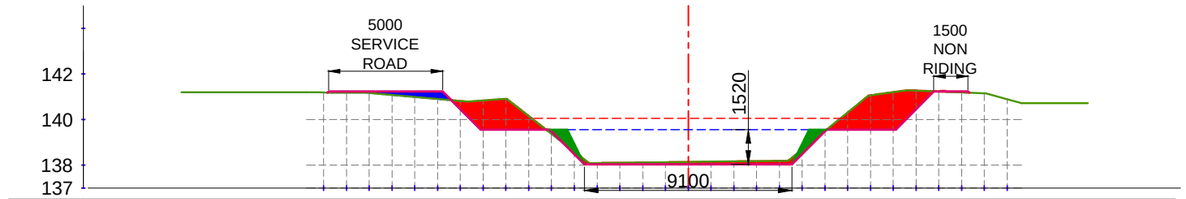
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X SECTION OF RIUR BR. CANAL



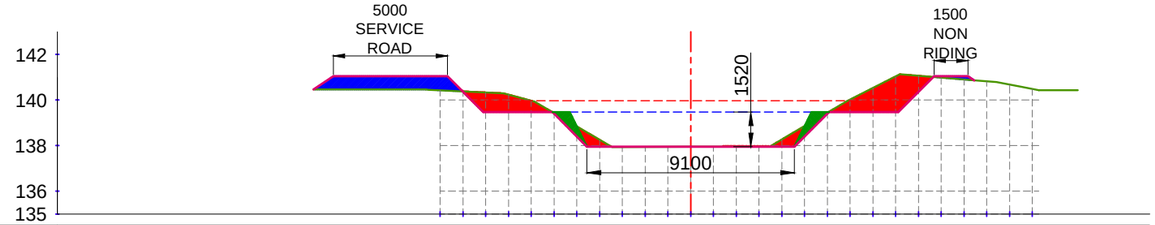
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X SECTION OF RIUR BR. CANAL



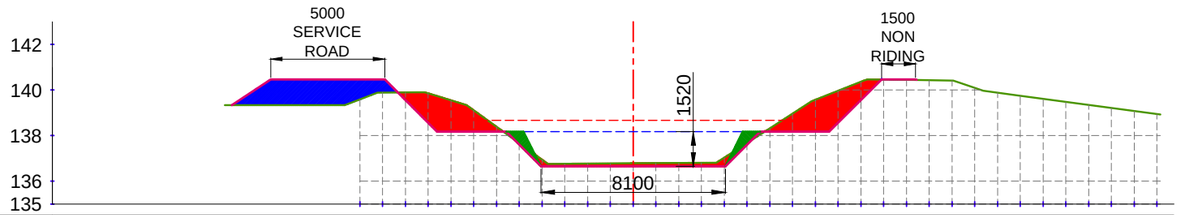
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X SECTION OF RIUR BR. CANAL



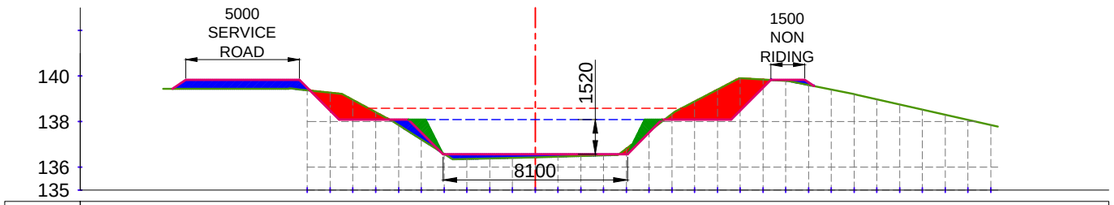
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X SECTION OF RIUR BR. CANAL



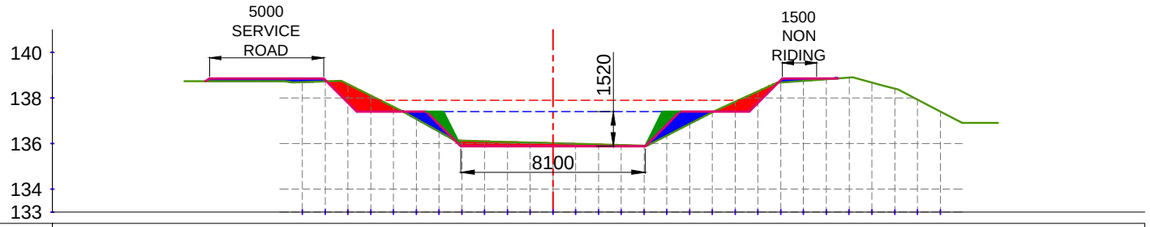
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X SECTION OF RIUR BR. CANAL



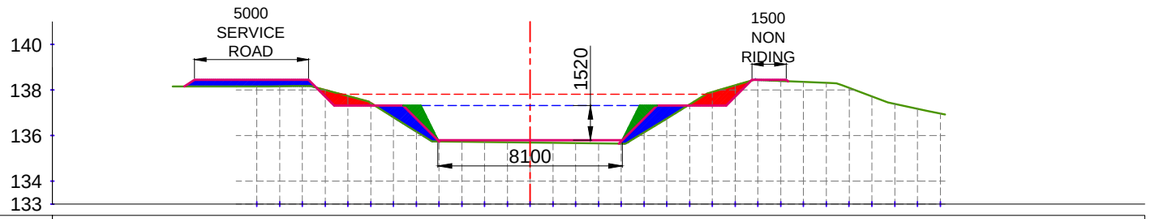
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X SECTION OF RIUR BR. CANAL



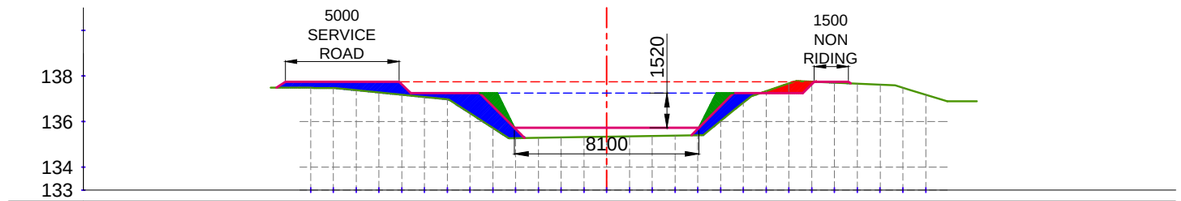
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X SECTION OF RIUR BR. CANAL



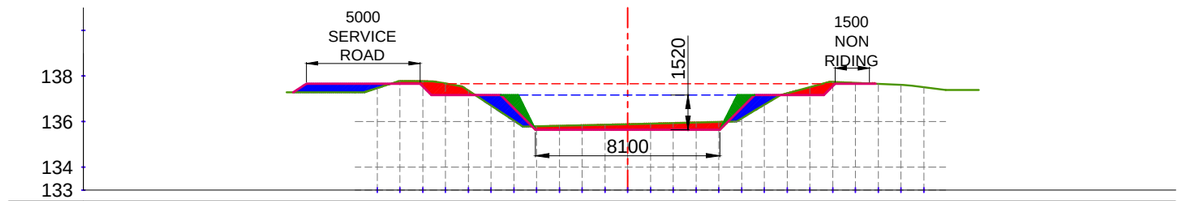
| | | |

X SECTION OF RIUR BR. CANAL



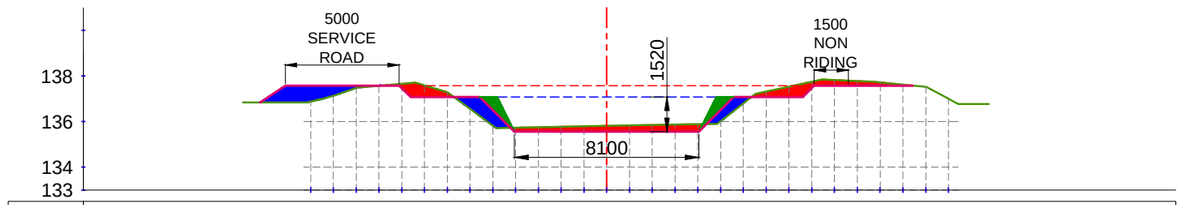
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X SECTION OF RIUR BR. CANAL



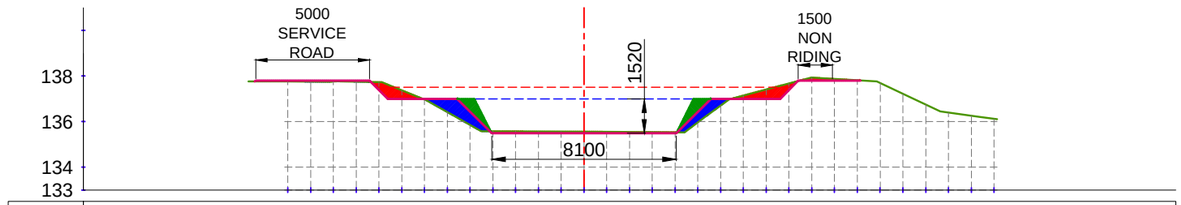
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X SECTION OF RIUR BR. CANAL



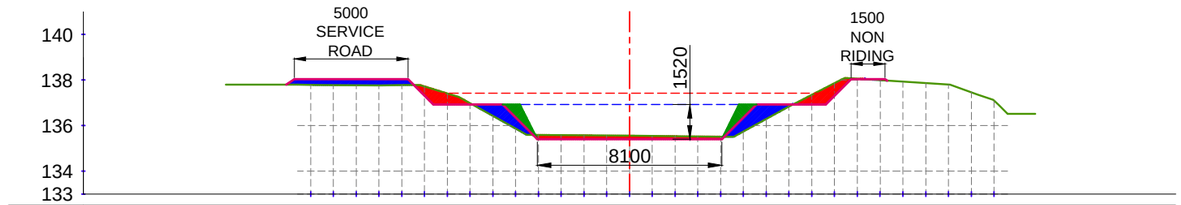
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X SECTION OF RIUR BR. CANAL



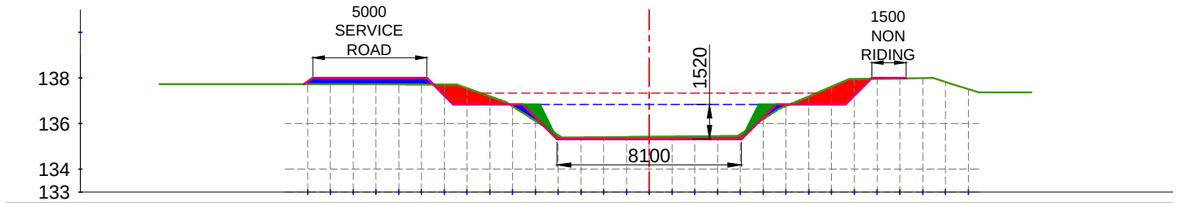
| | | |

X SECTION OF RIUR BR. CANAL



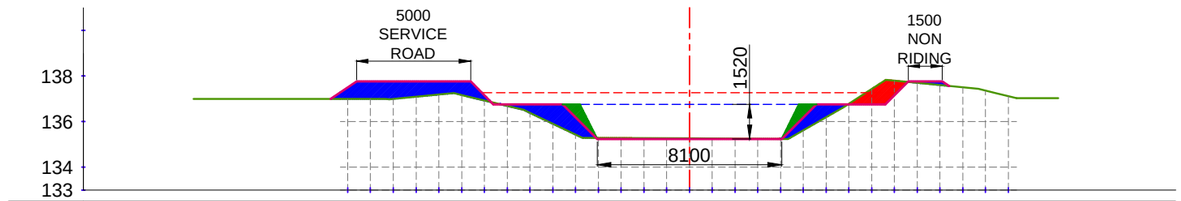
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X SECTION OF RIUR BR. CANAL



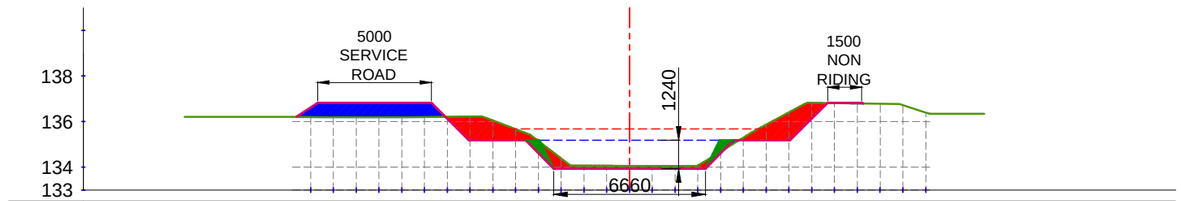
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X SECTION OF RIUR BR. CANAL



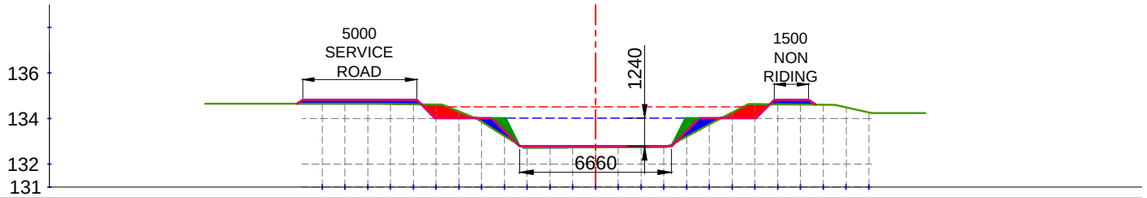
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X SECTION OF RIUR BR. CANAL



| | | |

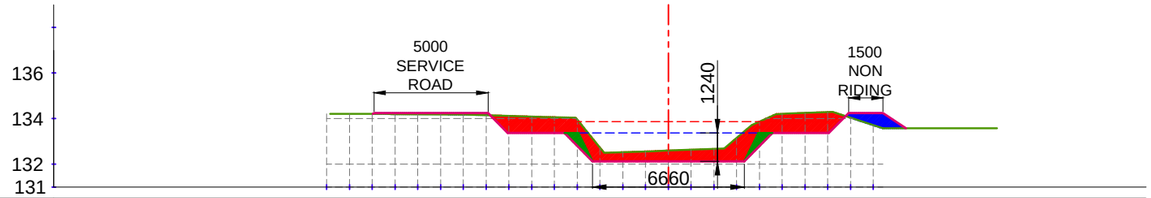
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	134.652	134.654	134.656	134.648	134.635	134.622	134.313	133.872	133.247	132.724	132.729	132.734	132.738	132.743	132.748	132.753	133.212	133.752	134.271	134.632	134.626	134.620	134.613	134.500	134.270
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 1.553
FILLING AREA (SQ.M) = 2.450

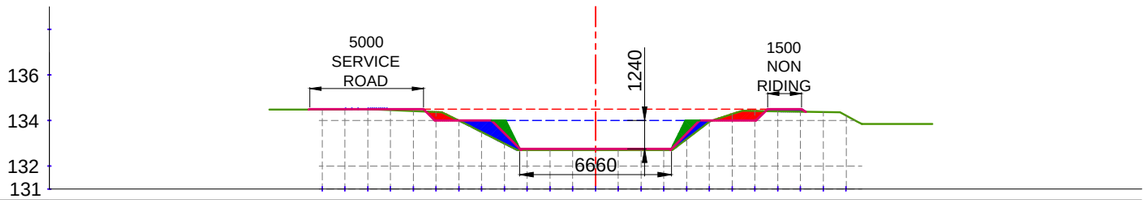
CH. (KM):- 7+700
DESIGNED BED LEVEL = 132.784 M



EXIST. LEVEL (M)	134.208	134.207	134.205	134.201	134.194	134.187	134.180	134.154	134.125	134.095	134.066	133.965	132.725	132.530	132.565	132.599	132.634	132.668	133.153	133.873	134.212	134.252	134.291	134.038	133.707
OFFSET (M)	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 10.055
FILLING AREA (SQ.M) = 1.240

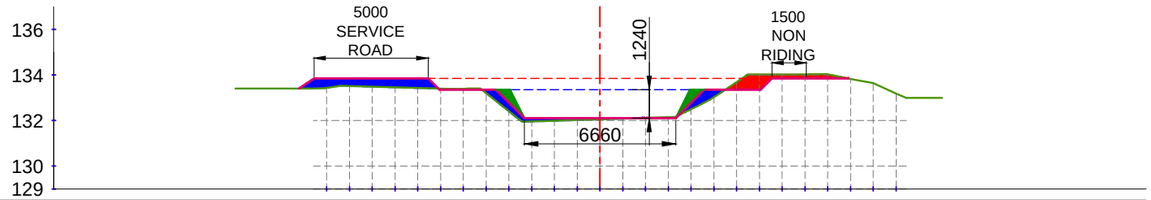
CH. (KM):- 7+900
DESIGNED BED LEVEL = 132.130 M



EXIST. LEVEL (M)	134.476	134.489	134.497	134.456	134.415	134.374	133.996	133.497	132.986	132.695	132.697	132.699	132.701	132.703	132.705	132.706	133.189	133.955	134.289	134.421	134.405	134.389	134.372	134.217
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.946
FILLING AREA (SQ.M) = 1.627

CH. (KM):- 7+800
DESIGNED BED LEVEL = 132.762 M



EXIST. LEVEL (M)	133.431	133.513	133.483	133.453	133.423	133.393	133.391	133.202	132.399	131.956	131.987	132.017	132.047	132.077	132.107	132.138	132.498	133.028	133.690	134.018	134.022	134.026	134.021	133.830	133.637	133.185
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 1.542
FILLING AREA (SQ.M) = 3.795

CH. (KM):- 8+000
DESIGNED BED LEVEL = 132.108 M

LEGEND

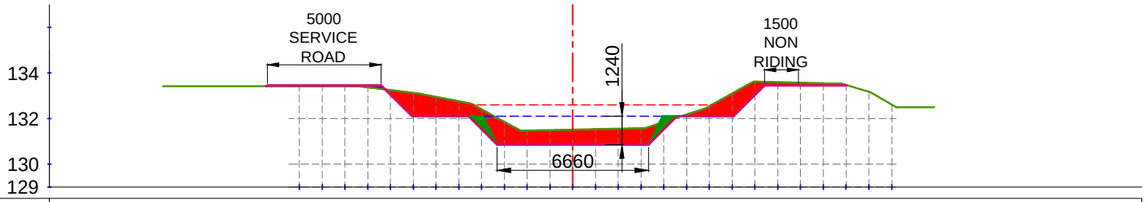
CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

Prepared by :-

WAPCOS LTD.

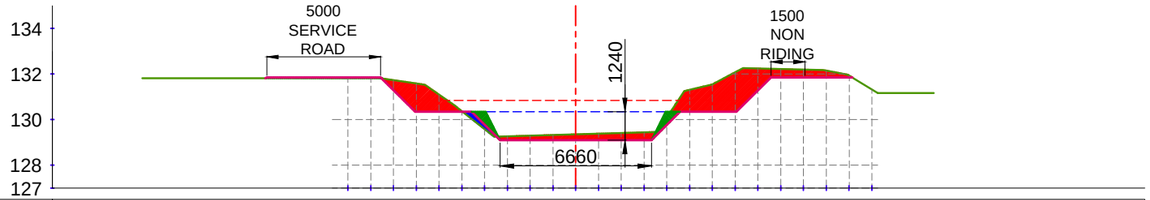
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 20 of 75

X SECTION OF RIUR BR. CANAL



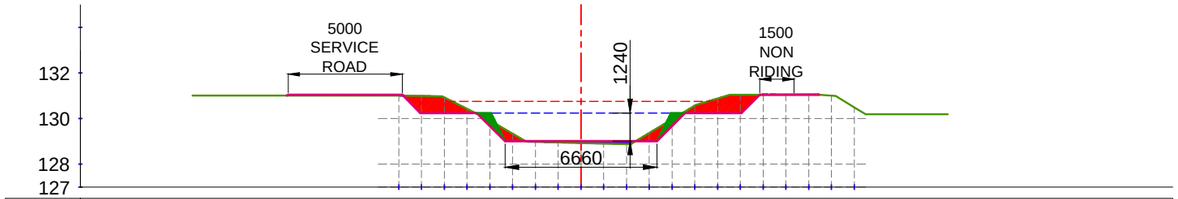
| | | |

X SECTION OF RIUR BR. CANAL



| | | |

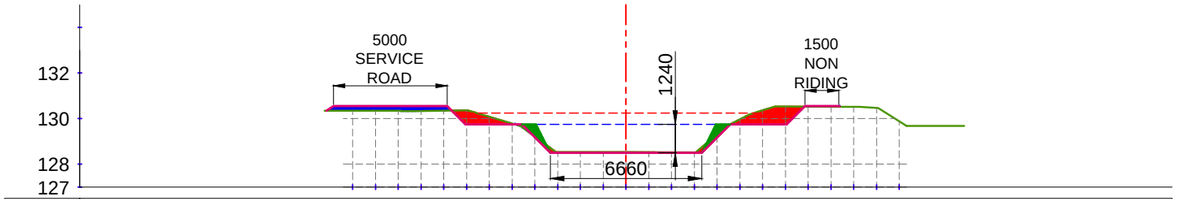
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	131.006	130.993	130.933	130.427	129.915	129.336	128.980	128.957	128.934	128.912	128.889	129.375	129.977	130.579	130.891	131.051	131.055	131.058	131.062	131.014	130.492		
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12		

CUTTING AREA (SQ.M) = 3.915
FILLING AREA (SQ.M) = 0.589

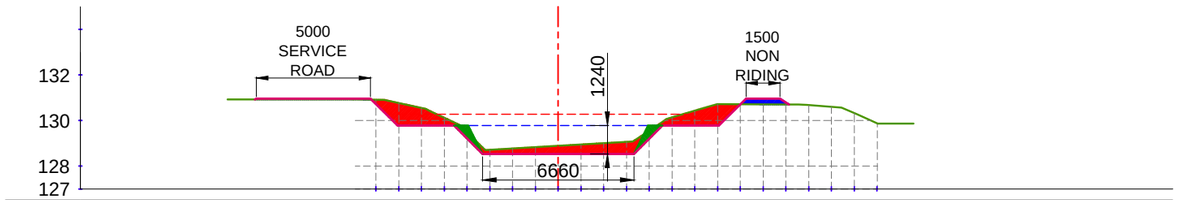
CH. (KM):- 8+900
DESIGNED BED LEVEL = 129.012 M



EXIST. LEVEL (M)	130.350	130.349	130.348	130.341	130.354	130.368	130.085	129.782	129.211	128.541	128.537	128.534	128.531	128.528	128.525	128.522	129.337	129.976	130.367	130.533	130.531	130.529	130.526	130.470	129.881
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 2.711
FILLING AREA (SQ.M) = 1.143

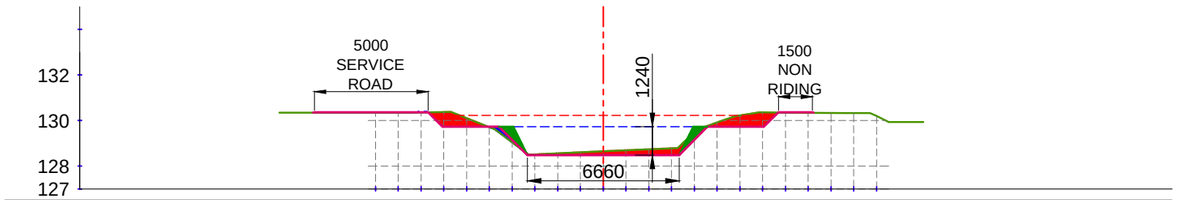
CH. (KM):- 9+100
DESIGNED BED LEVEL = 128.510 M



EXIST. LEVEL (M)	130.914	130.769	130.548	130.123	129.487	128.710	128.769	128.828	128.886	128.944	129.003	129.061	129.561	130.141	130.431	130.714	130.712	130.710	130.708	130.675	130.601	130.325	129.880	
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

CUTTING AREA (SQ.M) = 6.750
FILLING AREA (SQ.M) = 0.716

CH. (KM):- 9+000
DESIGNED BED LEVEL = 128.532 M



EXIST. LEVEL (M)	130.340	130.340	130.354	130.368	130.103	129.705	129.046	128.518	128.562	128.606	128.651	128.695	128.740	128.784	129.461	129.914	130.224	130.352	130.345	130.338	130.331	130.328	130.193
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 3.315
FILLING AREA (SQ.M) = 0.329

CH. (KM):- 9+200
DESIGNED BED LEVEL = 128.488 M

LEGEND

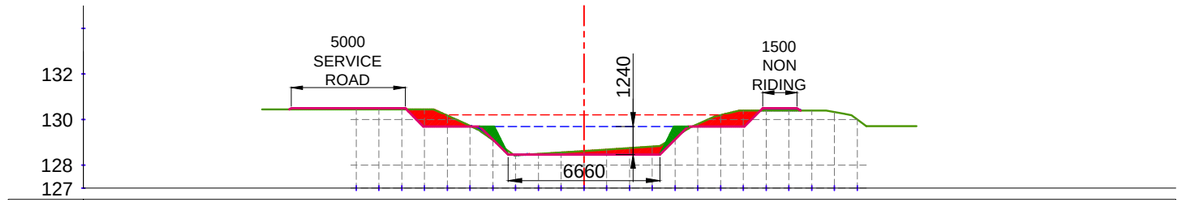
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

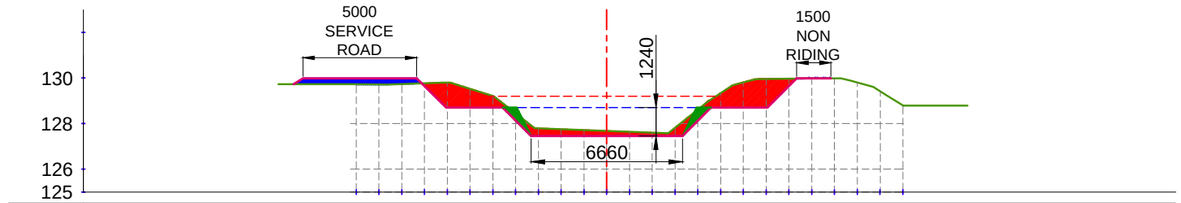
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 23 of 75

X SECTION OF RIUR BR. CANAL



| | | |

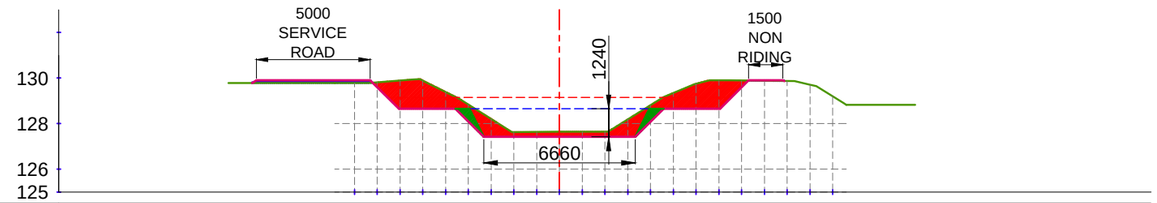
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	129.723	129.722	129.740	129.770	129.801	129.528	129.210	128.449	127.792	127.754	127.716	127.678	127.640	127.602	127.820	128.624	129.346	129.811	129.965	129.974	129.982	129.991	129.800	129.424	128.808
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 7.650
FILLING AREA (SQ.M) = 1.423

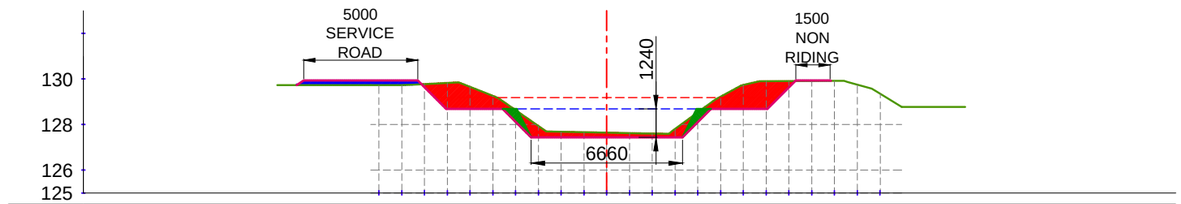
CH. (KM):- 9+700
DESIGNED BED LEVEL = 127.462 M



EXIST. LEVEL (M)	129.781	129.810	129.889	129.894	129.393	128.837	128.205	127.627	127.632	127.638	127.644	127.650	128.192	128.810	129.341	129.745	129.906	129.894	129.881	129.869	129.706	129.196			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12			

CUTTING AREA (SQ.M) = 9.982
FILLING AREA (SQ.M) = 0.714

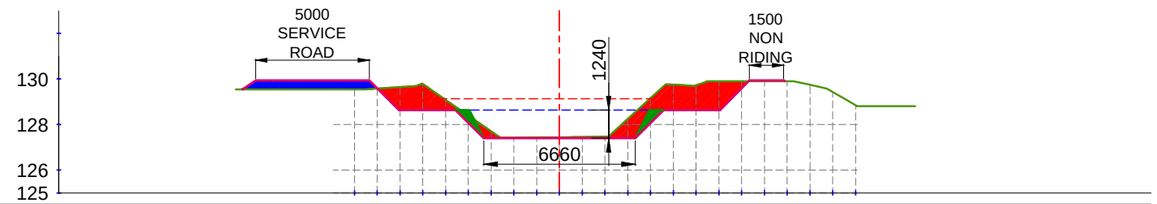
CH. (KM):- 9+900
DESIGNED BED LEVEL = 127.417 M



EXIST. LEVEL (M)	129.723	129.726	129.777	129.827	129.652	129.256	128.629	127.934	127.678	127.661	127.643	127.625	127.608	127.798	128.533	129.222	129.738	129.904	129.906	129.908	129.910	129.751	129.347		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12		

CUTTING AREA (SQ.M) = 7.871
FILLING AREA (SQ.M) = 1.099

CH. (KM):- 9+800
DESIGNED BED LEVEL = 127.440 M



EXIST. LEVEL (M)	129.539	129.577	129.645	129.780	129.081	128.387	127.696	127.418	127.429	127.440	127.451	127.462	128.242	129.154	129.750	129.725	129.901	129.898	129.895	129.892	129.737	129.427	128.840		
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13		

CUTTING AREA (SQ.M) = 8.367
FILLING AREA (SQ.M) = 2.142

CH. (KM):- 10+000
DESIGNED BED LEVEL = 127.395 M

LEGEND

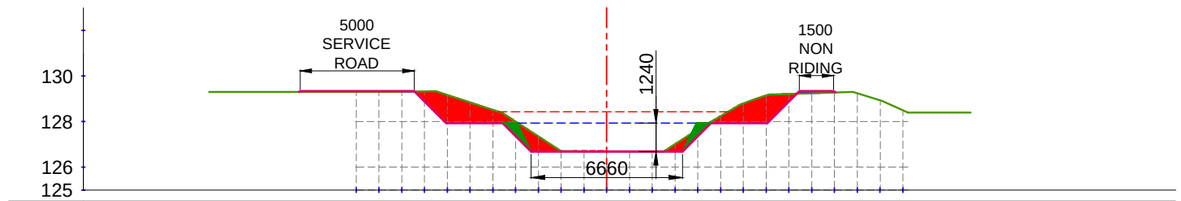
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 25 of 75

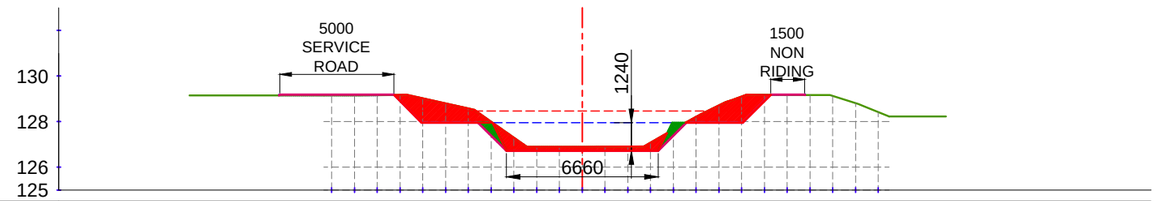
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	129.299	129.297	129.304	129.325	129.170	128.844	128.517	128.002	127.348	126.702	126.696	126.690	126.684	126.678	127.018	127.659	128.250	128.805	129.159	129.221	129.251	129.281	129.250	128.938	128.495
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 7.052
FILLING AREA (SQ.M) = 0.308

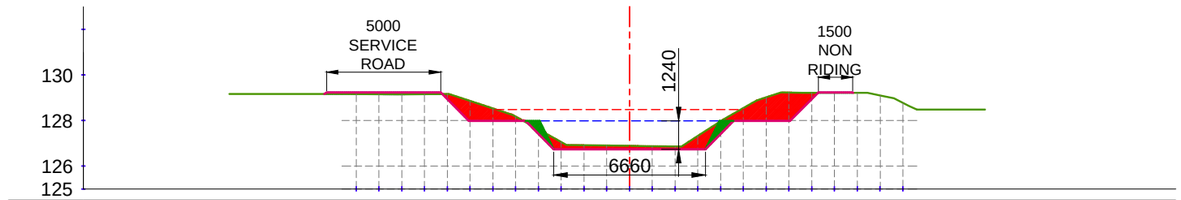
CH. (KM):- 10+100
DESIGNED BED LEVEL = 126.763 M



EXIST. LEVEL (M)	129.148	129.146	129.158	129.174	129.018	128.796	128.574	127.998	127.296	126.895	126.898	126.901	126.905	126.908	127.080	127.652	128.220	128.709	129.107	129.177	129.172	129.167	129.122	128.814	128.412
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 7.094
FILLING AREA (SQ.M) = 0.153

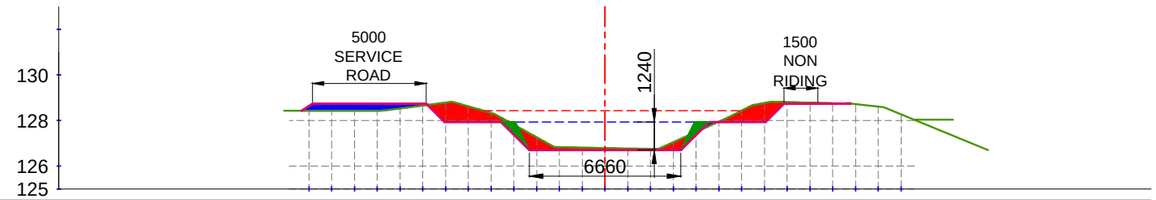
CH. (KM):- 10+300
DESIGNED BED LEVEL = 126.719 M



EXIST. LEVEL (M)	129.157	129.155	129.154	129.157	129.161	128.858	128.534	128.179	127.616	127.053	126.916	126.902	126.888	126.873	126.859	127.324	127.968	128.553	129.016	129.224	129.219	129.214	129.209	129.094	128.775
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 6.625
FILLING AREA (SQ.M) = 0.370

CH. (KM):- 10+200
DESIGNED BED LEVEL = 126.741 M



EXIST. LEVEL (M)	128.423	128.422	128.421	128.420	128.529	128.657	128.784	128.622	128.334	127.815	127.259	126.827	126.809	126.790	126.771	126.753	127.044	127.497	127.950	128.435	128.774	128.810	128.785	128.759	128.713	128.614	128.272
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 4.835
FILLING AREA (SQ.M) = 1.459

CH. (KM):- 10+400
DESIGNED BED LEVEL = 126.696 M

LEGEND

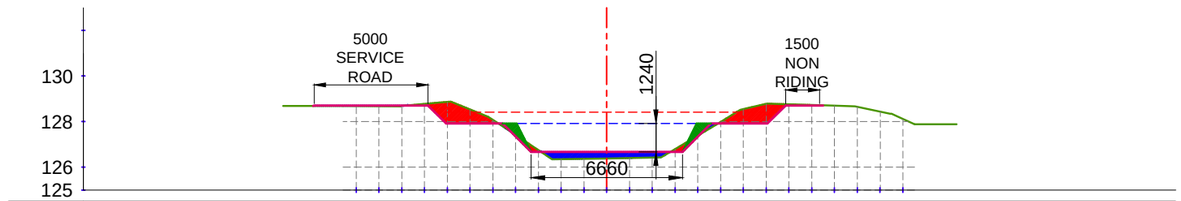
CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

Prepared by :-

WAPCOS LTD.

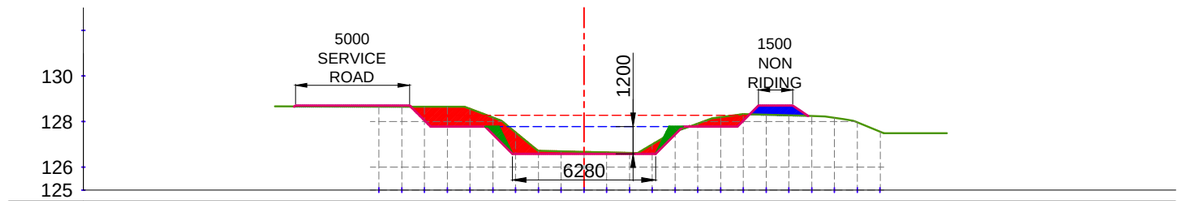
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 26 of 75

X SECTION OF RIUR BR. CANAL



| | | |

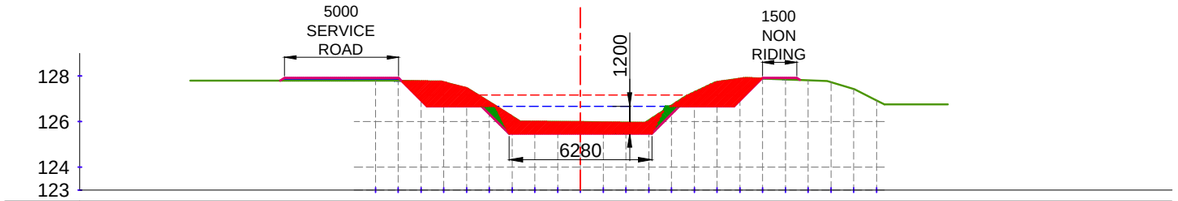
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	128.660	128.659	128.657	128.653	128.559	128.178	127.524	126.718	126.695	126.672	126.649	126.626	127.001	127.561	127.921	128.194	128.325	128.299	128.274	128.248	128.169	127.970	127.556	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 5.106
FILLING AREA (SQ.M) = 1.100

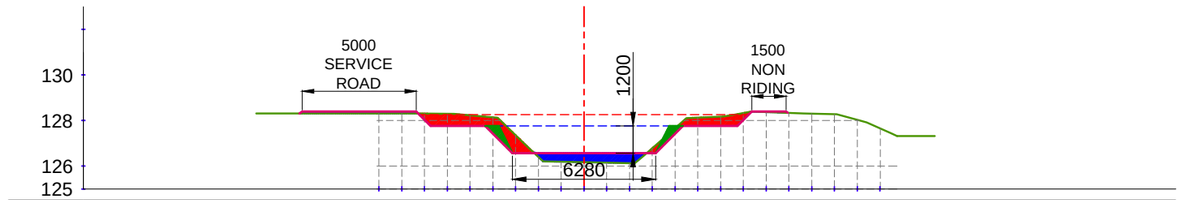
CH. (KM):- 10+900
DESIGNED BED LEVEL = 126.585 M



EXIST. LEVEL (M)	127.793	127.790	127.778	127.736	127.475	126.862	126.233	126.003	125.993	125.982	125.971	125.960	126.058	126.717	127.300	127.747	127.889	127.893	127.853	127.814	127.728	127.431	126.935	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 9.416
FILLING AREA (SQ.M) = 0.772

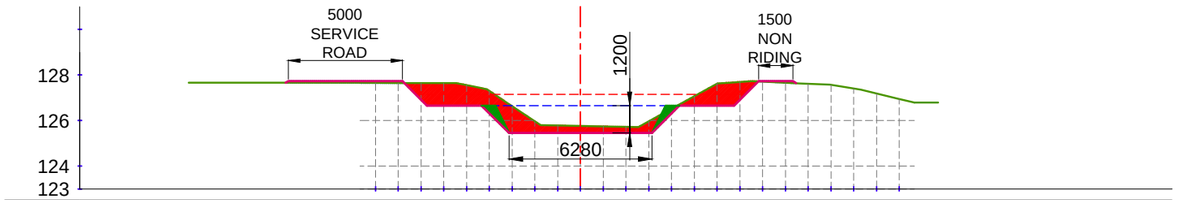
CH. (KM):- 11+100
DESIGNED BED LEVEL = 125.474 M



EXIST. LEVEL (M)	128.308	128.309	128.302	128.292	128.227	128.137	127.357	126.399	126.191	126.170	126.149	126.128	126.795	127.665	128.124	128.163	128.324	128.366	128.336	128.306	128.275	128.029	127.657	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 3.619
FILLING AREA (SQ.M) = 2.224

CH. (KM):- 11+000
DESIGNED BED LEVEL = 126.563 M



EXIST. LEVEL (M)	127.649	127.647	127.646	127.647	127.550	127.298	126.626	125.955	125.778	125.759	125.741	125.723	125.963	126.517	127.068	127.618	127.693	127.709	127.660	127.612	127.558	127.400	127.184	126.940	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

CUTTING AREA (SQ.M) = 8.582
FILLING AREA (SQ.M) = 0.494

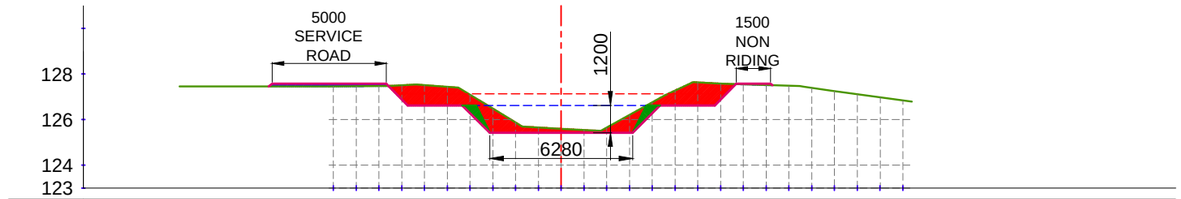
CH. (KM):- 11+200
DESIGNED BED LEVEL = 125.452 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	
	F.S.L.	WAPCOS LTD.	
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

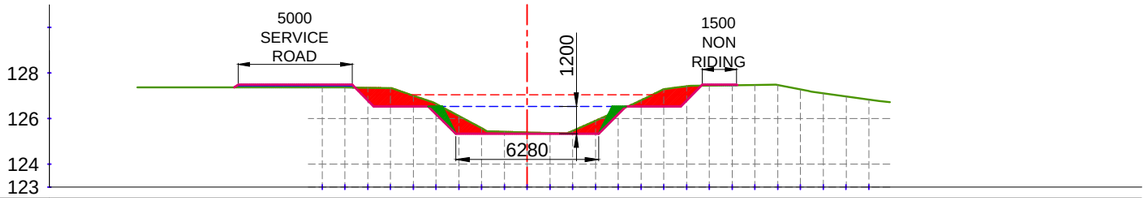
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 28 of 75

X SECTION OF RIUR BR. CANAL



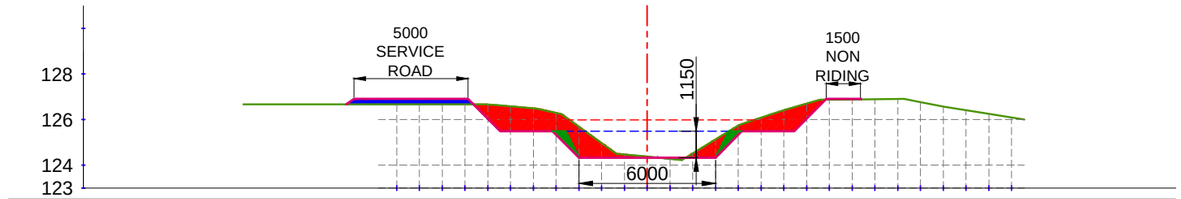
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X SECTION OF RIUR BR. CANAL



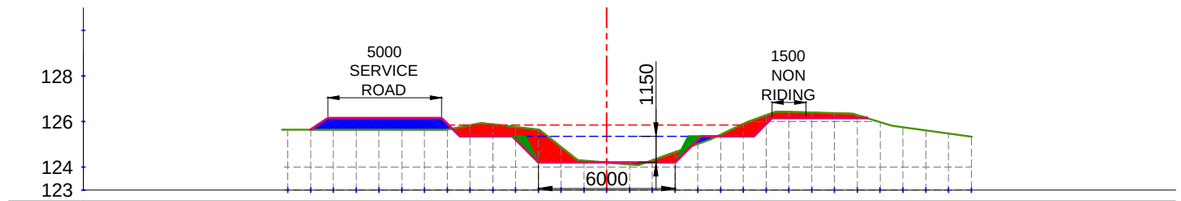
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X SECTION OF RIUR BR. CANAL



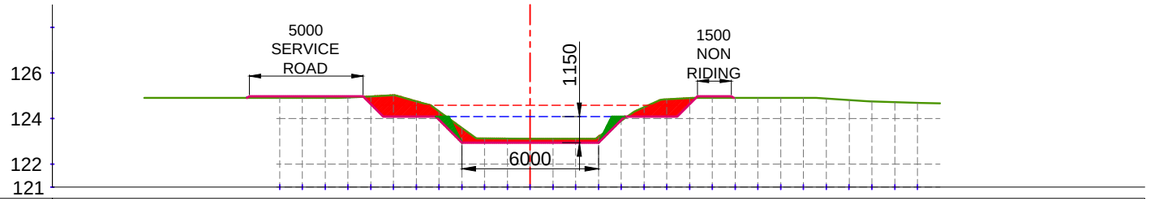
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X SECTION OF RIUR BR. CANAL



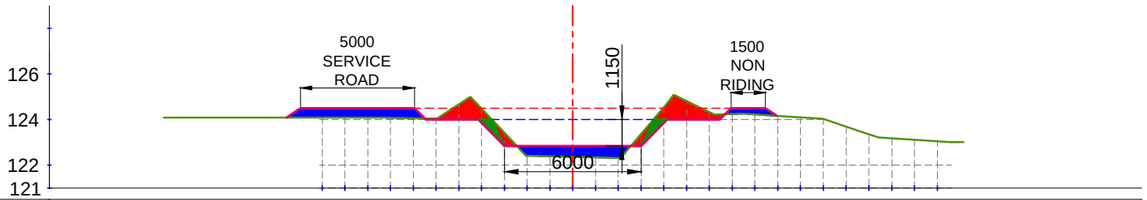
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X SECTION OF RIUR BR. CANAL



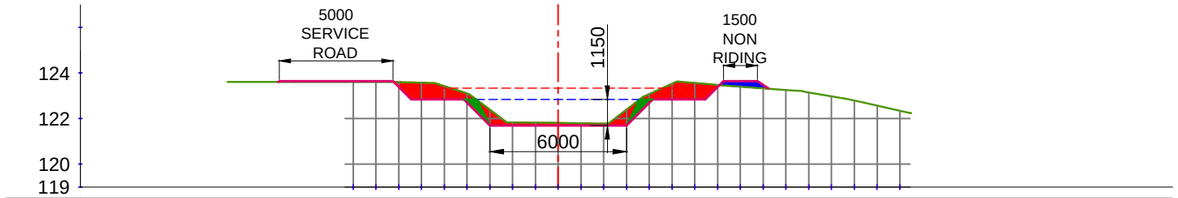
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X SECTION OF RIUR BR. CANAL



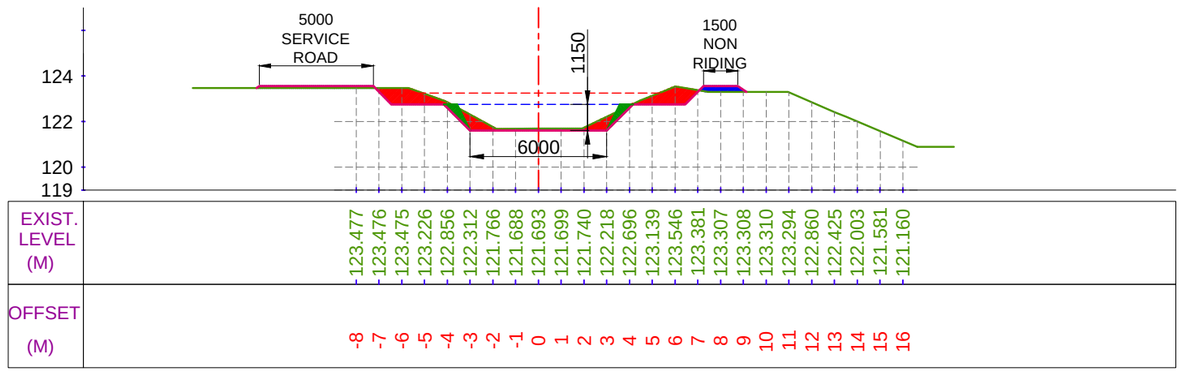
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X SECTION OF RIUR BR. CANAL



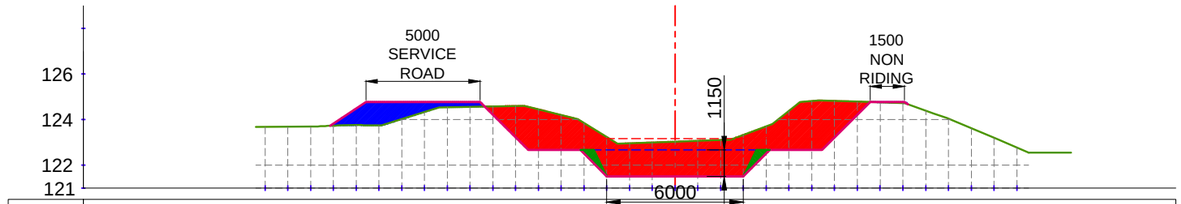
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X SECTION OF RIUR BR. CANAL



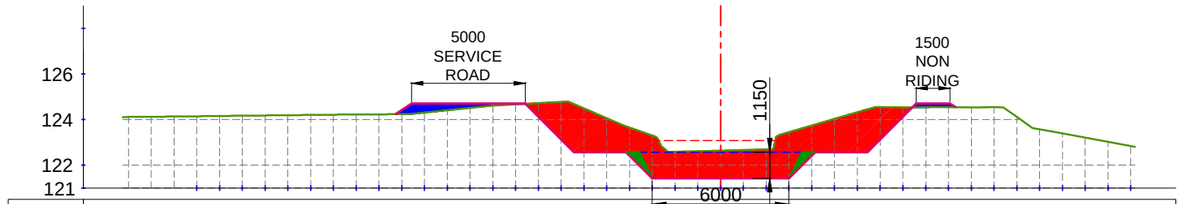
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X SECTION OF RIUR BR. CANAL



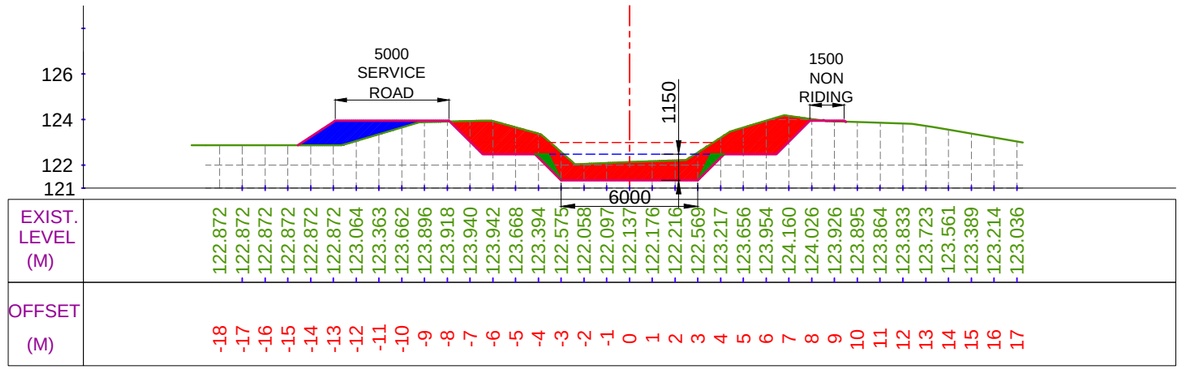
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X SECTION OF RIUR BR. CANAL



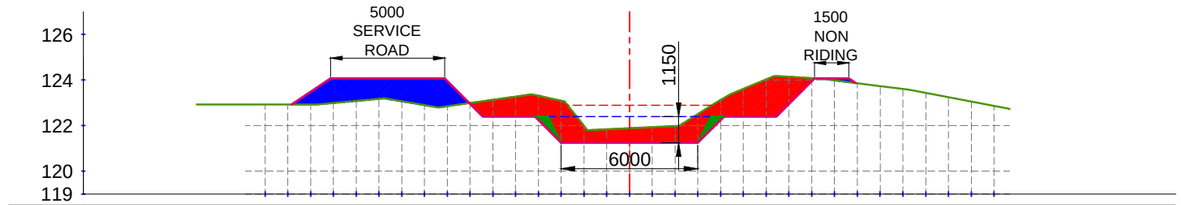
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X SECTION OF RIUR BR. CANAL



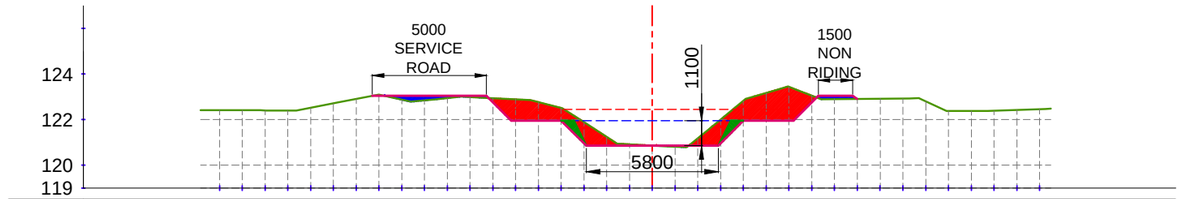
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X SECTION OF RIUR BR. CANAL



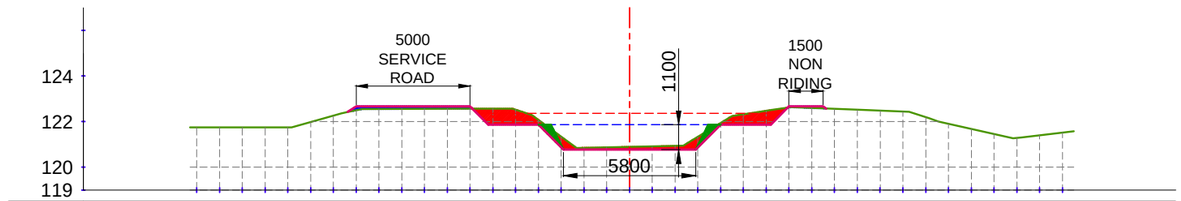
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X SECTION OF RIUR BR. CANAL



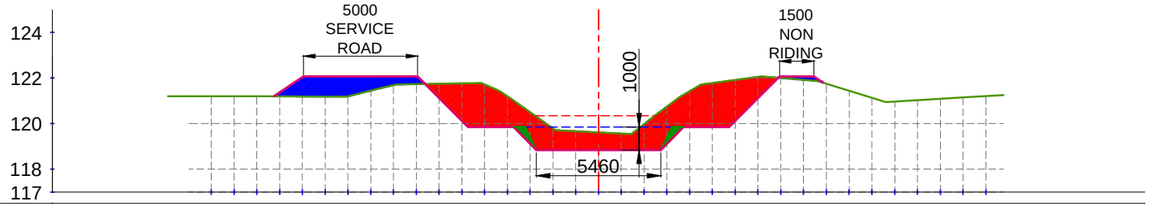
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X SECTION OF RIUR BR. CANAL



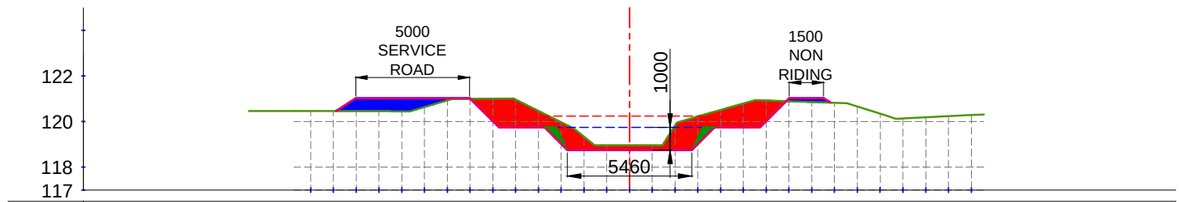
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X SECTION OF RIUR BR. CANAL



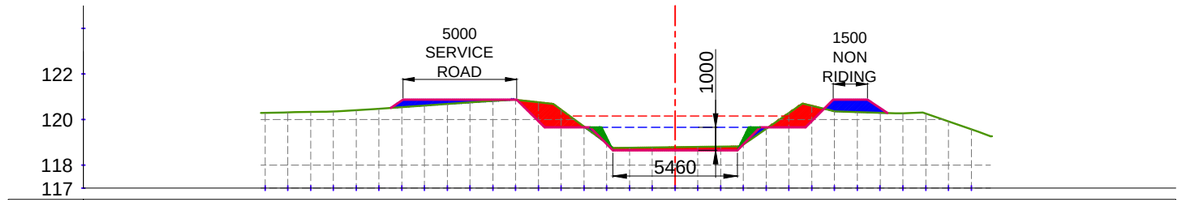
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X SECTION OF RIUR BR. CANAL



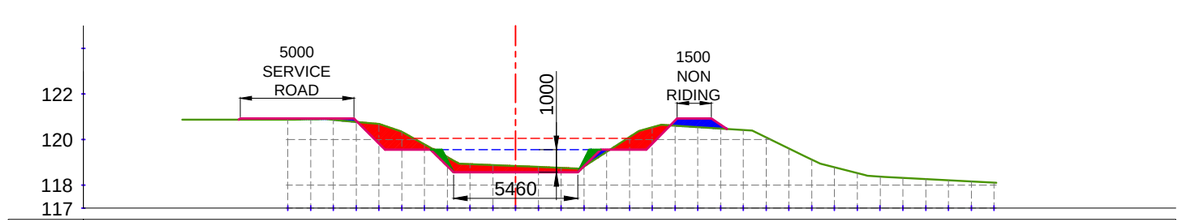
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X SECTION OF RIUR BR. CANAL



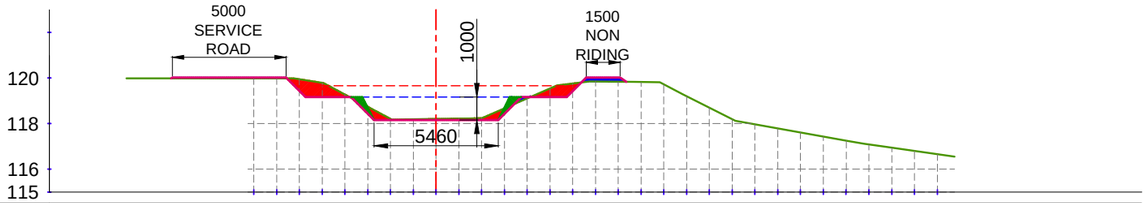
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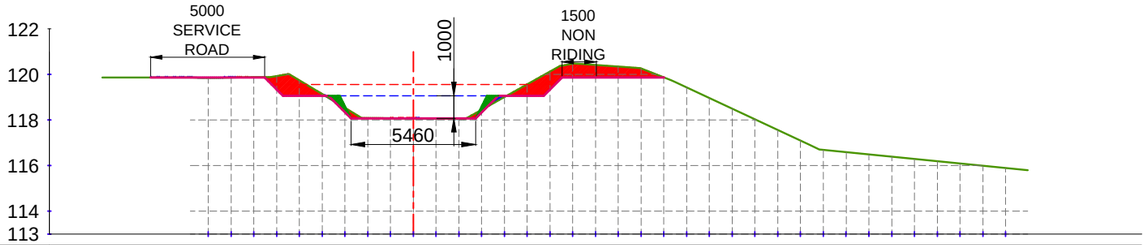
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X SECTION OF RIUR BR. CANAL



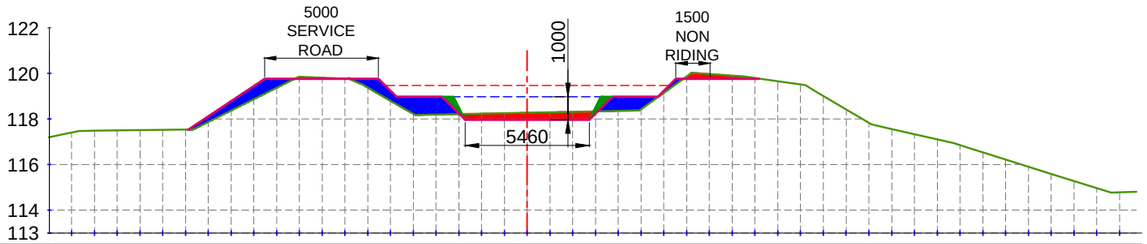
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X SECTION OF RIUR BR. CANAL



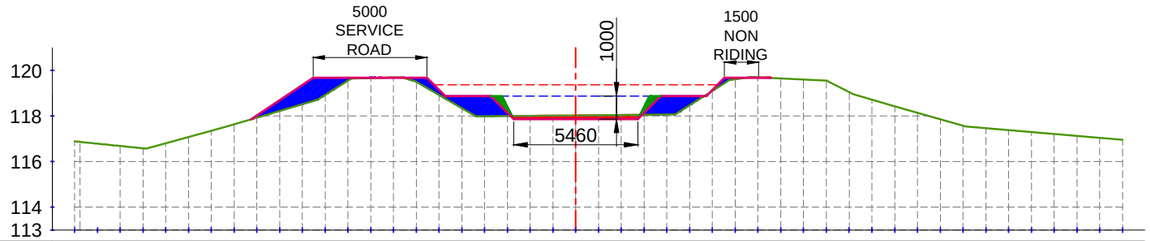
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X SECTION OF RIUR BR. CANAL



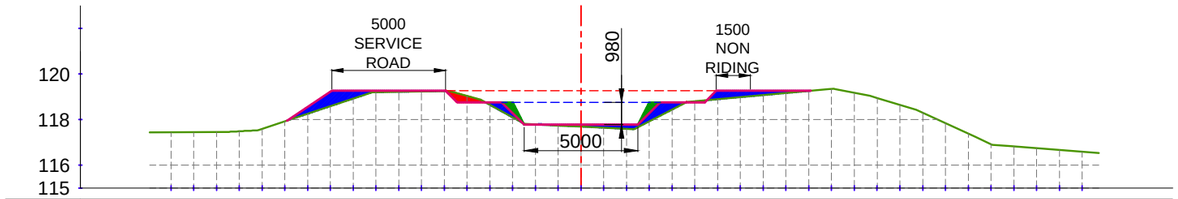
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X SECTION OF RIUR BR. CANAL



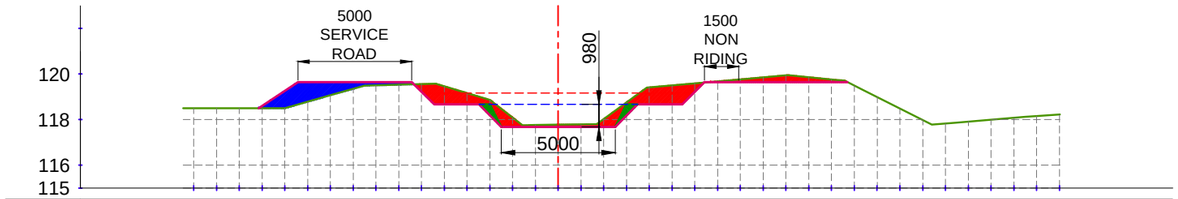
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X SECTION OF RIUR BR. CANAL



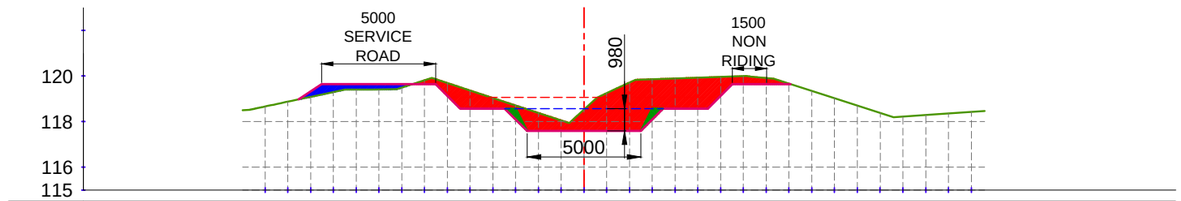
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X SECTION OF RIUR BR. CANAL



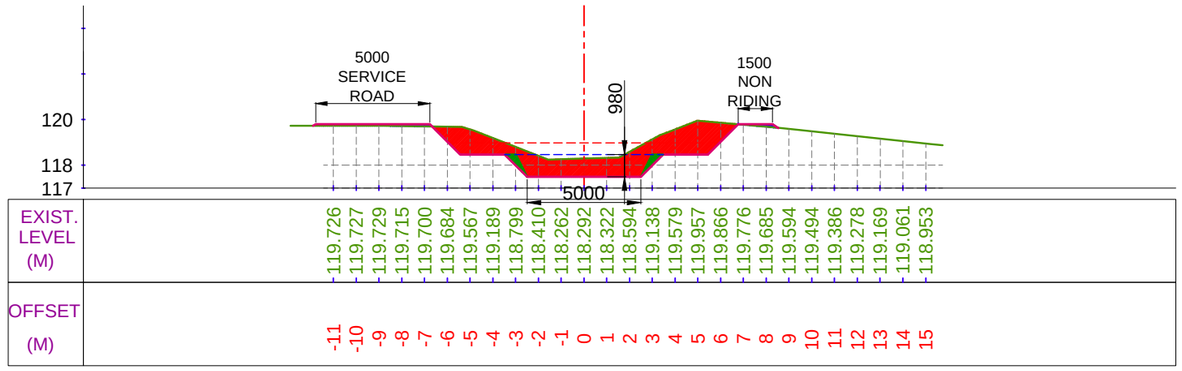
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X SECTION OF RIUR BR. CANAL



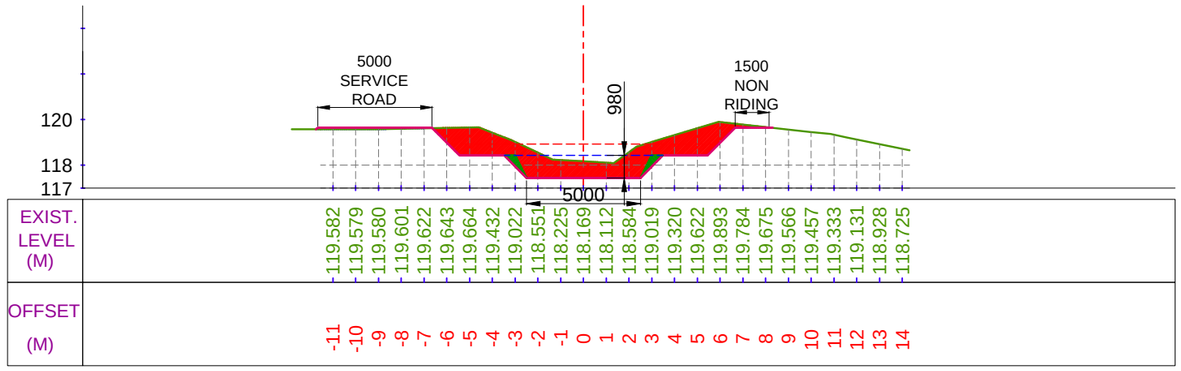
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X SECTION OF RIUR BR. CANAL



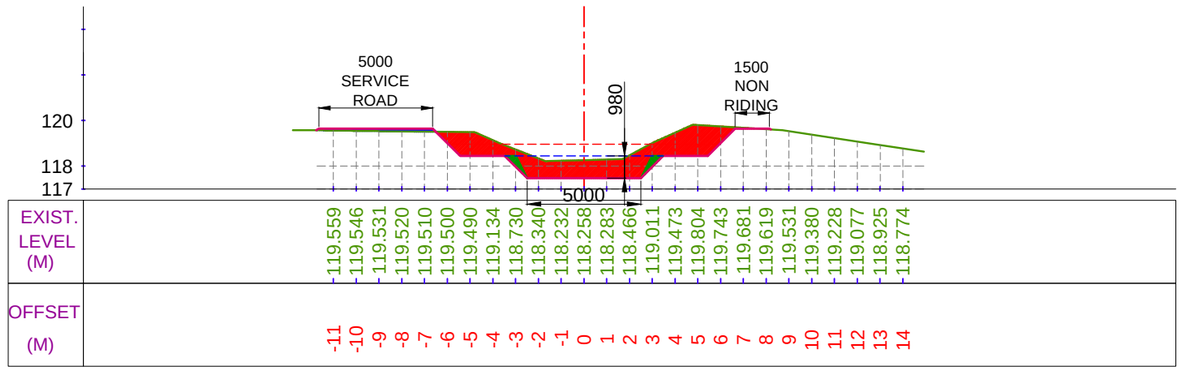
CUTTING AREA (SQ.M) = 11.714
FILLING AREA (SQ.M) = 0.579

CH. (KM):- 21+300
DESIGNED BED LEVEL = 117.496 M



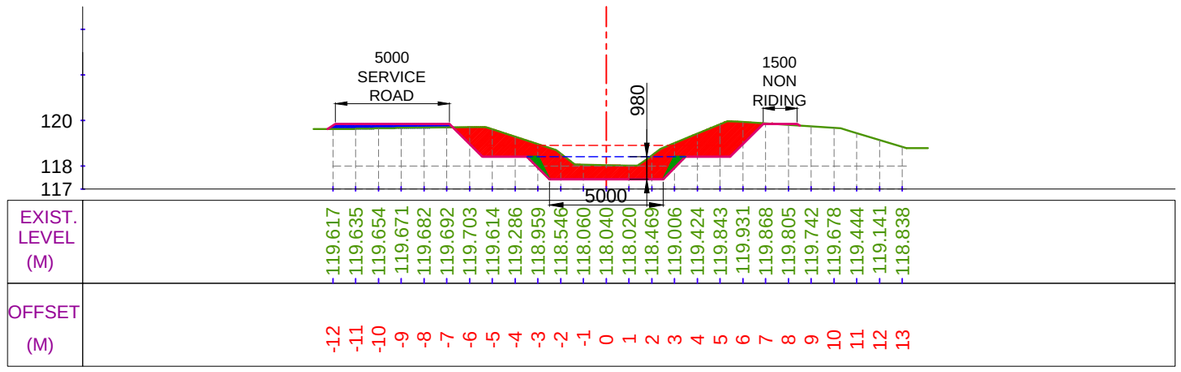
CUTTING AREA (SQ.M) = 12.111
FILLING AREA (SQ.M) = 0.257

CH. (KM):- 21+500
DESIGNED BED LEVEL = 117.448 M



CUTTING AREA (SQ.M) = 10.862
FILLING AREA (SQ.M) = 0.593

CH. (KM):- 21+400
DESIGNED BED LEVEL = 117.472 M



CUTTING AREA (SQ.M) = 12.001
FILLING AREA (SQ.M) = 0.994

CH. (KM):- 21+600
DESIGNED BED LEVEL = 117.424 M

LEGEND

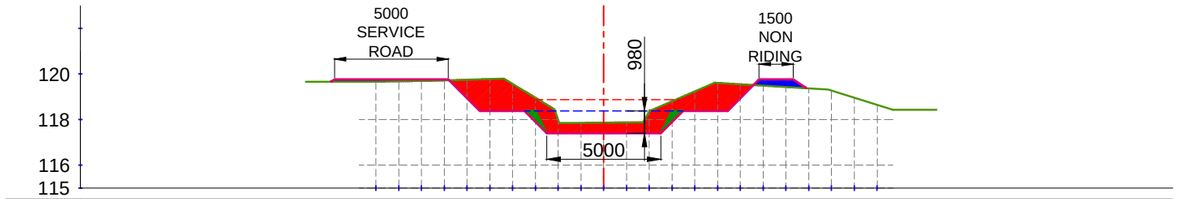
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 54 of 75

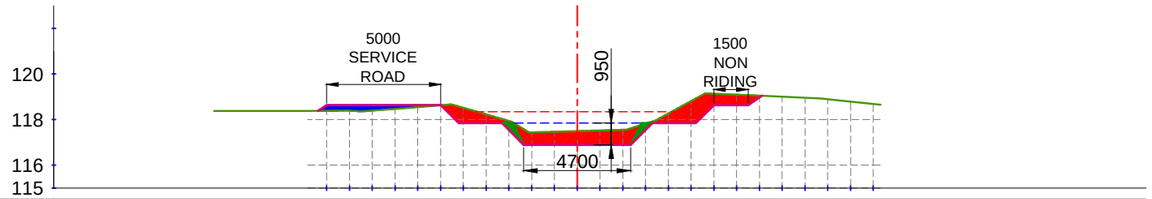
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	119.666	119.680	119.695	119.724	119.754	119.784	119.570	118.964	117.981	117.858	117.871	117.884	118.372	118.814	119.245	119.616	119.556	119.496	119.436	119.377	119.281	118.968	118.655	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 10.635
FILLING AREA (SQ.M) = 0.993

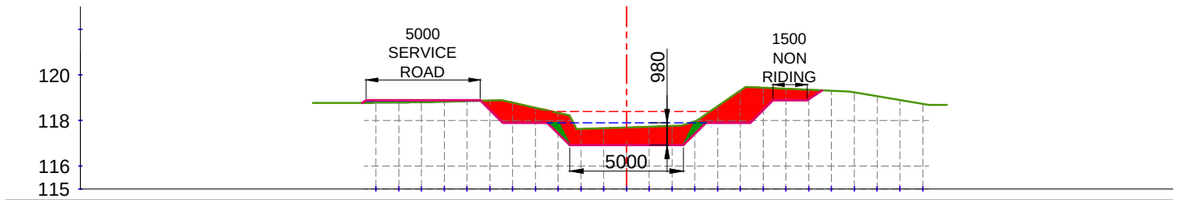
CH. (KM):- 21+700
DESIGNED BED LEVEL = 117.401 M



EXIST. LEVEL (M)	118.390	118.391	118.397	118.476	118.554	118.633	118.518	118.233	117.948	117.445	117.473	117.501	117.529	117.557	117.831	118.273	118.822	119.139	119.095	119.051	119.008	118.964	118.902	118.798	118.693
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 7.019
FILLING AREA (SQ.M) = 0.966

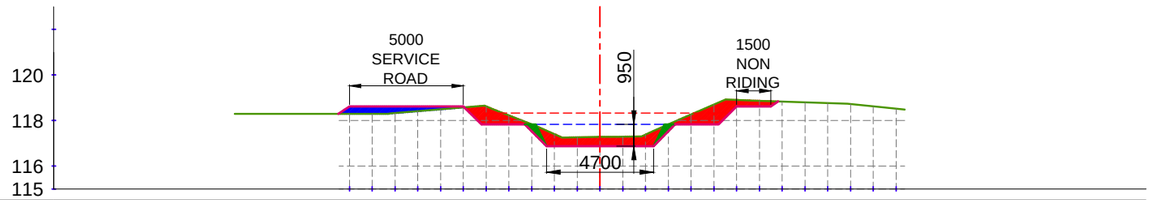
CH. (KM):- 21+900
DESIGNED BED LEVEL = 116.896 M



EXIST. LEVEL (M)	118.780	118.791	118.802	118.824	118.849	118.874	118.783	118.562	118.340	117.627	117.660	117.692	117.725	117.758	117.969	118.623	119.310	119.437	119.391	119.344	119.298	119.230	119.062	118.895	118.727
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 10.875
FILLING AREA (SQ.M) = 0.393

CH. (KM):- 21+800
DESIGNED BED LEVEL = 116.920 M



EXIST. LEVEL (M)	118.299	118.299	118.321	118.403	118.485	118.568	118.617	118.223	117.829	117.403	117.263	117.277	117.291	117.383	117.830	118.268	118.698	118.902	118.867	118.832	118.797	118.762	118.718	118.619	118.519
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 5.657
FILLING AREA (SQ.M) = 2.256

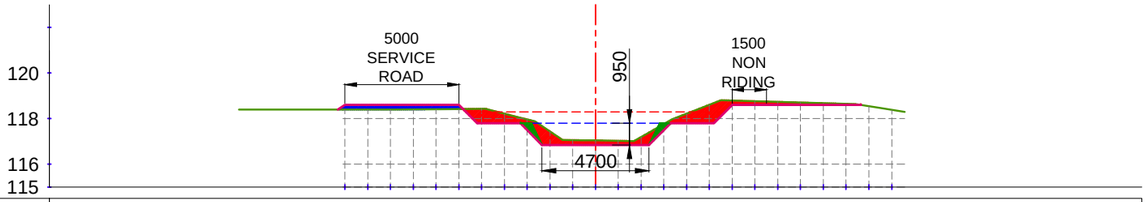
CH. (KM):- 22+000
DESIGNED BED LEVEL = 116.872 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 55 of 75

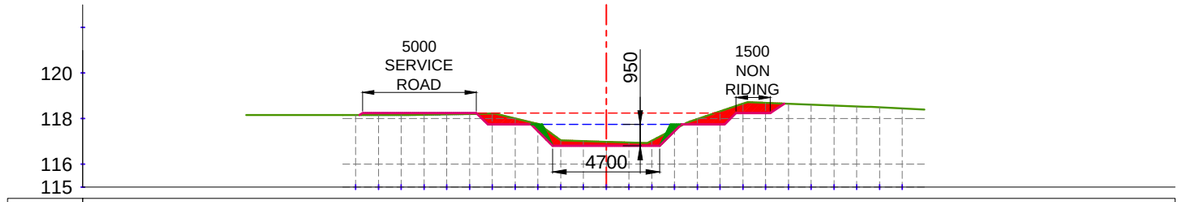
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	118.392	118.393	118.394	118.402	118.413	118.423	118.434	118.223	117.965	117.436	117.062	117.046	117.029	117.197	117.765	118.221	118.615	118.797	118.768	118.738	118.709	118.680	118.651	118.544	118.382
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 4.986
FILLING AREA (SQ.M) = 1.029

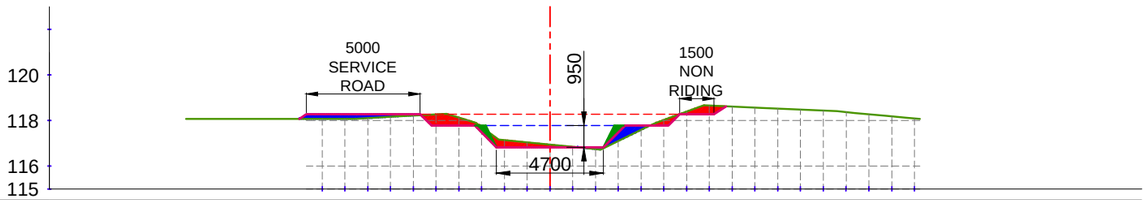
CH. (KM):- 22+100
DESIGNED BED LEVEL = 116.848 M



EXIST. LEVEL (M)	118.161	118.161	118.161	118.173	118.190	118.206	118.222	118.009	117.770	117.042	117.010	116.980	116.950	117.028	117.543	117.986	118.319	118.653	118.694	118.655	118.617	118.578	118.539	118.496	118.447
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 3.456
FILLING AREA (SQ.M) = 0.380

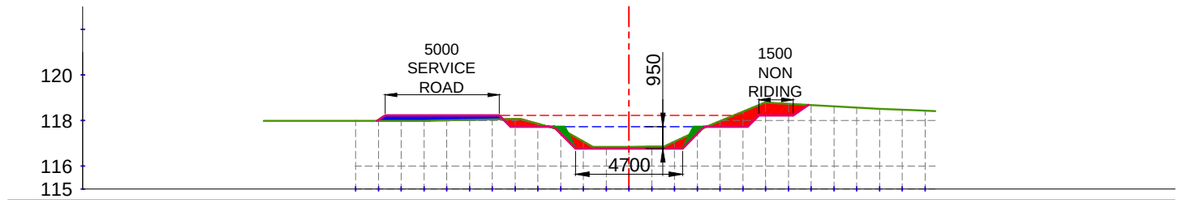
CH. (KM):- 22+300
DESIGNED BED LEVEL = 116.801 M



EXIST. LEVEL (M)	118.069	118.069	118.102	118.158	118.215	118.271	118.131	117.712	117.135	117.037	116.939	116.840	116.741	117.101	117.588	118.027	118.390	118.653	118.612	118.571	118.528	118.484	118.440	118.371	118.275	118.183	118.092
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

CUTTING AREA (SQ.M) = 2.240
FILLING AREA (SQ.M) = 1.451

CH. (KM):- 22+200
DESIGNED BED LEVEL = 116.825 M



EXIST. LEVEL (M)	117.982	117.984	117.985	117.986	118.007	118.028	118.049	118.070	117.858	117.581	117.069	116.835	116.842	116.849	117.070	117.538	117.976	118.389	118.782	118.727	118.672	118.617	118.561	118.507	118.468	118.430
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 3.115
FILLING AREA (SQ.M) = 1.160

CH. (KM):- 22+400
DESIGNED BED LEVEL = 116.777 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

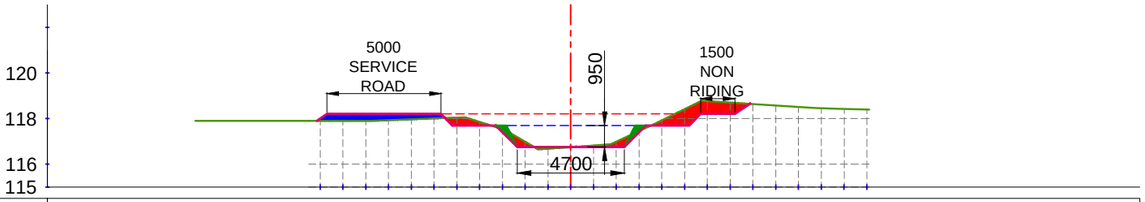
Prepared by :-

WAPCOS LTD.

299

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 56 of 75

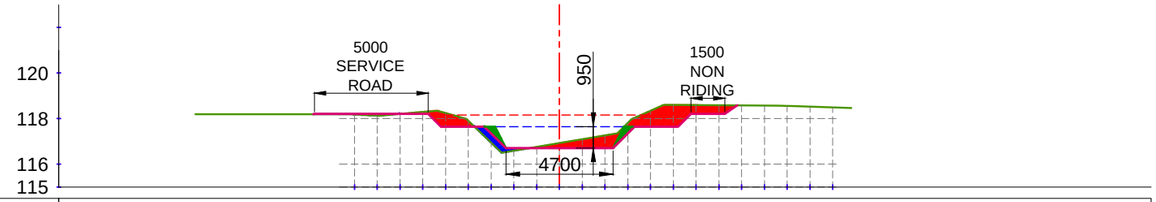
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	117.899	117.899	117.898	117.929	117.968	118.007	118.046	117.859	117.540	116.984	116.679	116.749	116.820	116.988	117.456	117.932	118.419	118.771	118.706	118.641	118.576	118.511	118.456	118.430	118.404
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 2.982
FILLING AREA (SQ.M) = 1.533

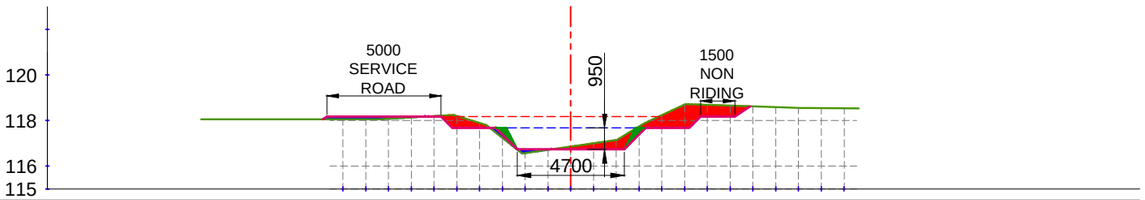
CH. (KM):- 22+500
DESIGNED BED LEVEL = 116.753 M



EXIST. LEVEL (M)	118.182	118.129	118.208	118.297	118.248	117.902	116.939	116.588	116.756	116.924	117.092	117.260	117.823	118.350	118.602	118.596	118.590	118.584	118.578	118.560	118.527	118.495			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12			

CUTTING AREA (SQ.M) = 4.706
FILLING AREA (SQ.M) = 0.731

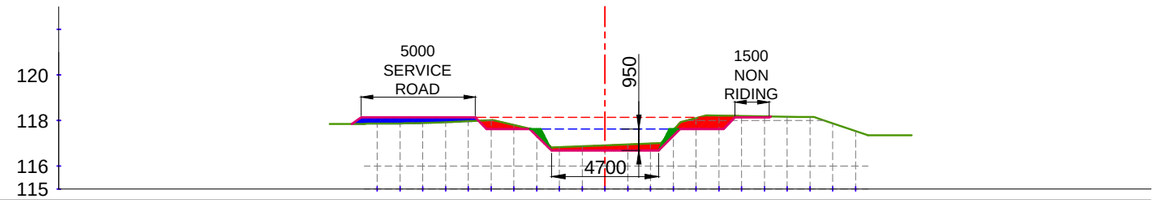
CH. (KM):- 22+700
DESIGNED BED LEVEL = 116.705 M



EXIST. LEVEL (M)	118.045	118.045	118.071	118.133	118.195	118.199	117.887	117.235	116.564	116.710	116.856	117.002	117.147	117.747	118.241	118.704	118.685	118.652	118.619	118.586	118.553	118.543	118.534		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12		

CUTTING AREA (SQ.M) = 4.218
FILLING AREA (SQ.M) = 0.731

CH. (KM):- 22+600
DESIGNED BED LEVEL = 116.729 M



EXIST. LEVEL (M)	117.862	117.872	117.890	117.930	117.969	118.009	117.800	117.405	116.825	116.865	116.905	116.945	116.984	117.588	118.108	118.210	118.197	118.183	118.169	118.156	117.874	117.533			
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11			

CUTTING AREA (SQ.M) = 2.799
FILLING AREA (SQ.M) = 1.230

CH. (KM):- 22+800
DESIGNED BED LEVEL = 116.682 M

LEGEND

CUT AREA	EXISTING BED LINE	FILL AREA	DESIGNED BED LINE
	F.S.L.		H.G. LINE

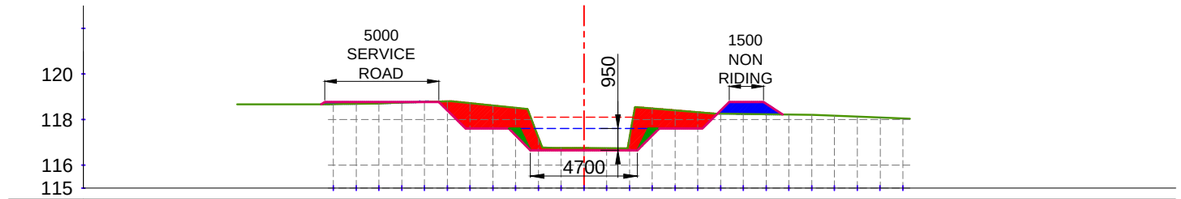
Prepared by :-

WAPCOS LTD.

300

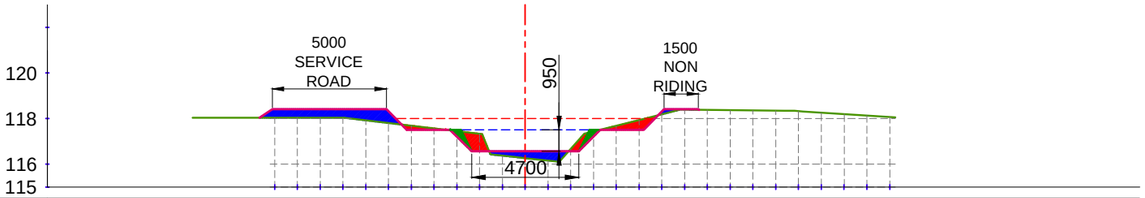
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 57 of 75

X SECTION OF RIUR BR. CANAL



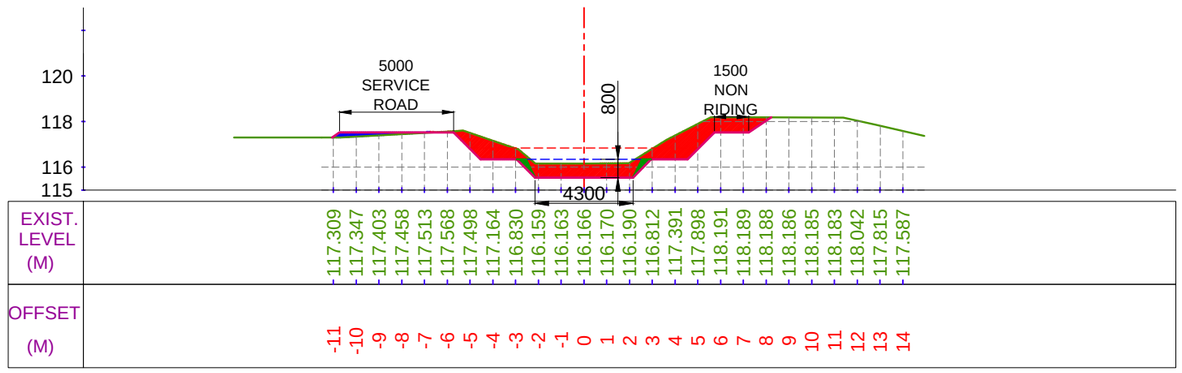
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X SECTION OF RIUR BR. CANAL



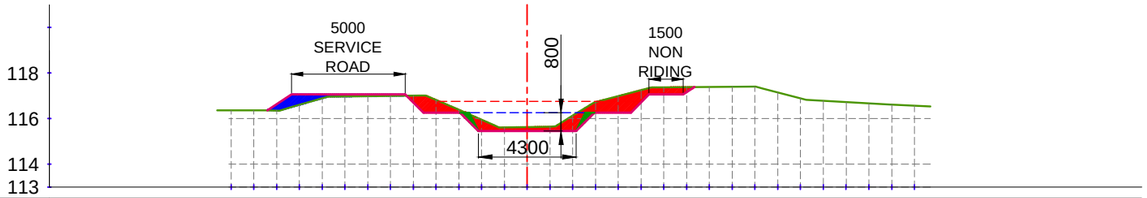
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X SECTION OF RIUR BR. CANAL



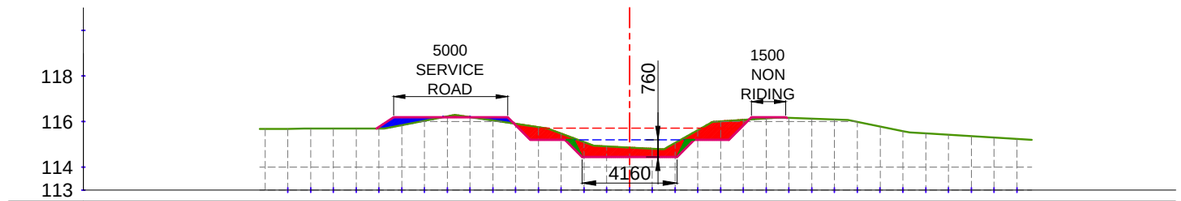
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X SECTION OF RIUR BR. CANAL



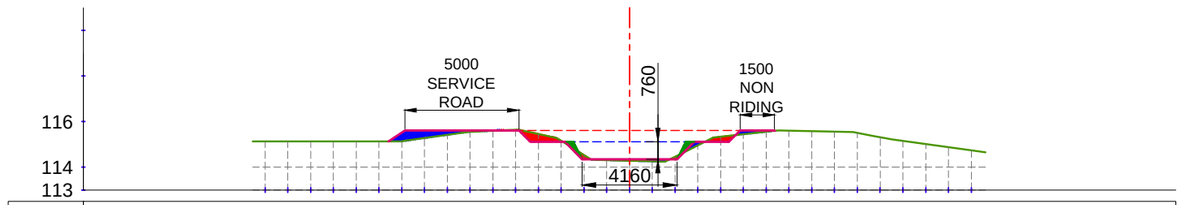
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X SECTION OF RIUR BR. CANAL



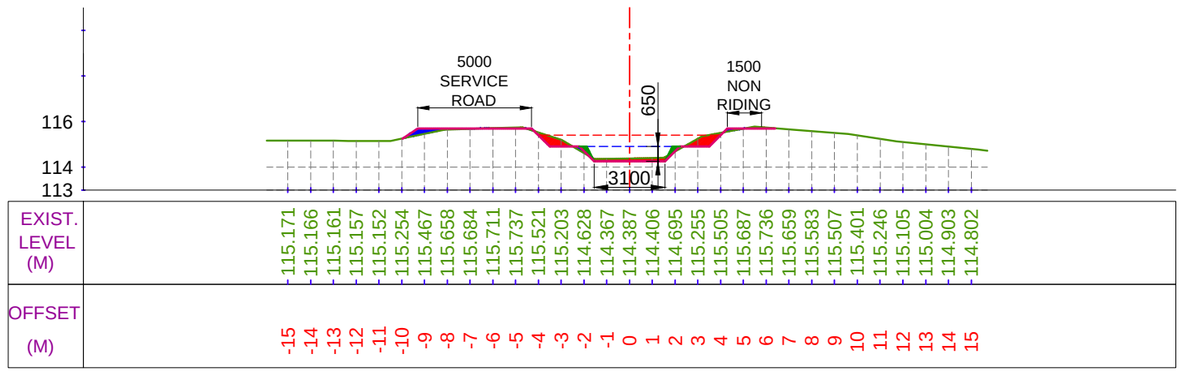
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X SECTION OF RIUR BR. CANAL



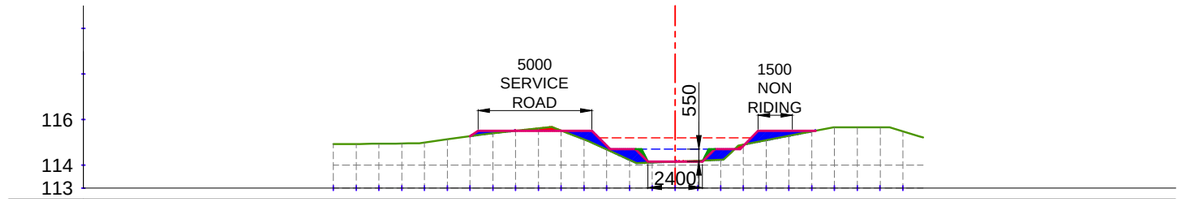
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X SECTION OF RIUR BR. CANAL



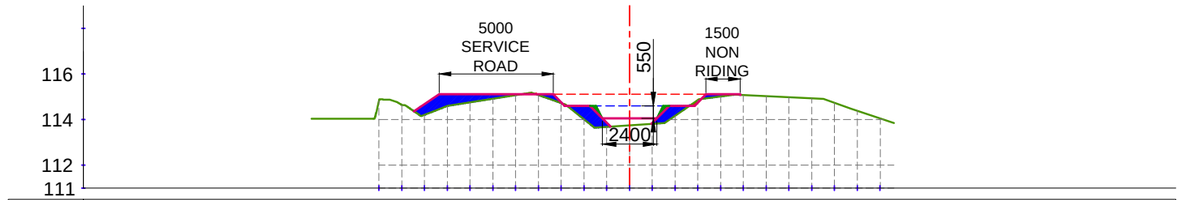
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X SECTION OF RIUR BR. CANAL



| | | |

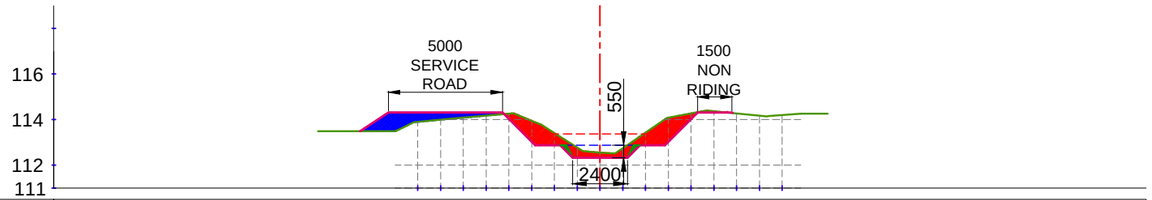
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	114.834	114.649	114.209	114.605	114.763	114.921	115.076	115.076	114.729	114.014	113.679	113.749	113.818	114.170	114.860	115.014	115.083	115.035	114.986	114.938	114.742	114.395	114.054
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.075
FILLING AREA (SQ.M) = 3.169

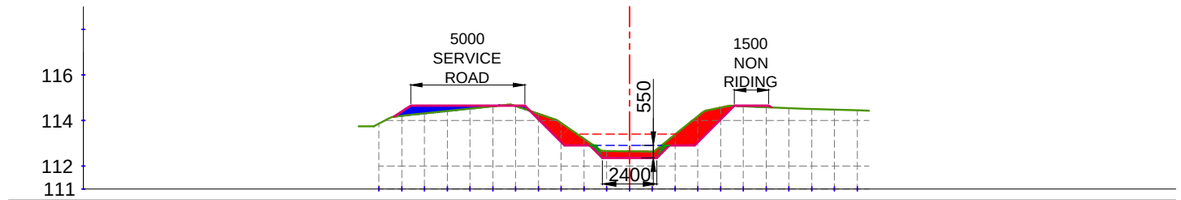
CH. (KM):- 26+100
DESIGNED BED LEVEL = 114.059 M



EXIST. LEVEL (M)	113.905	113.995	114.086	114.176	114.267	113.951	113.402	112.766	112.558	112.747	113.433	114.088	114.273	114.369	114.275	114.180	114.199						
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8						

CUTTING AREA (SQ.M) = 4.396
FILLING AREA (SQ.M) = 2.244

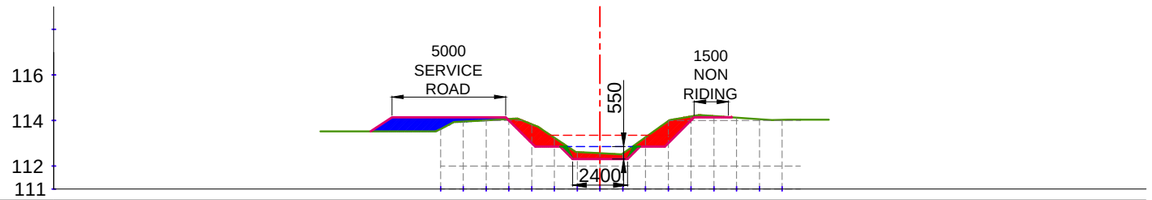
CH. (KM):- 26+300
DESIGNED BED LEVEL = 112.329 M



EXIST. LEVEL (M)	113.866	114.202	114.308	114.414	114.521	114.627	114.635	114.293	113.884	113.191	112.659	112.650	112.641	113.389	114.190	114.571	114.631	114.585	114.539	114.500	114.473	114.446	
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	

CUTTING AREA (SQ.M) = 4.183
FILLING AREA (SQ.M) = 1.082

CH. (KM):- 26+200
DESIGNED BED LEVEL = 112.354 M



EXIST. LEVEL (M)	113.631	113.950	114.010	114.071	113.836	113.236	112.609	112.558	112.540	113.261	113.981	114.183	114.196	114.126	114.056	114.024							
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8							

CUTTING AREA (SQ.M) = 3.633
FILLING AREA (SQ.M) = 2.151

CH. (KM):- 26+400
DESIGNED BED LEVEL = 112.304 M

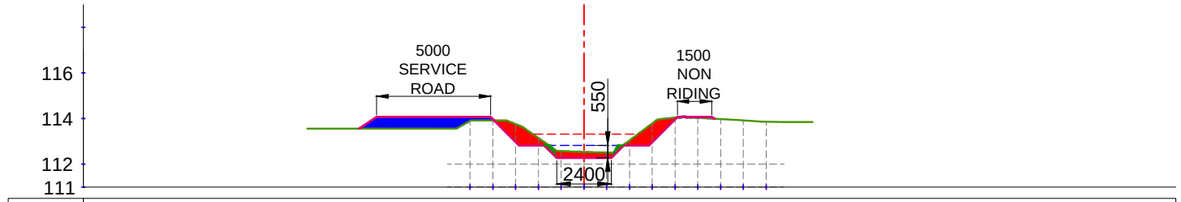
LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 66 of 75

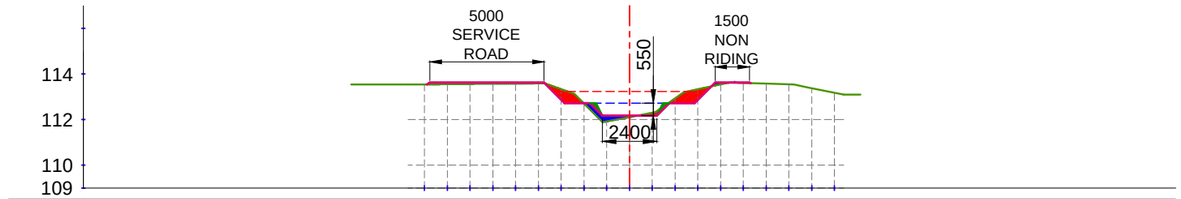
309

X SECTION OF RIUR BR. CANAL



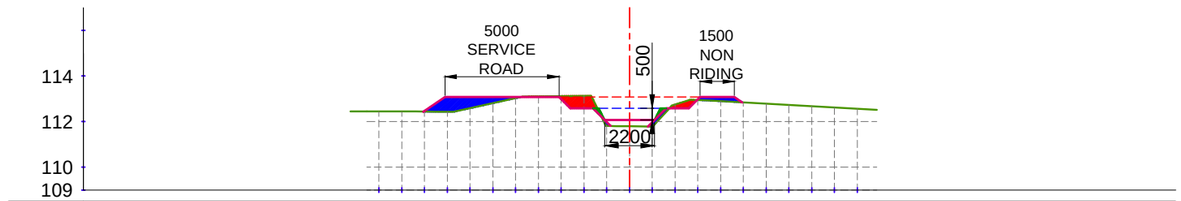
| | | |

X SECTION OF RIUR BR. CANAL



| | | |

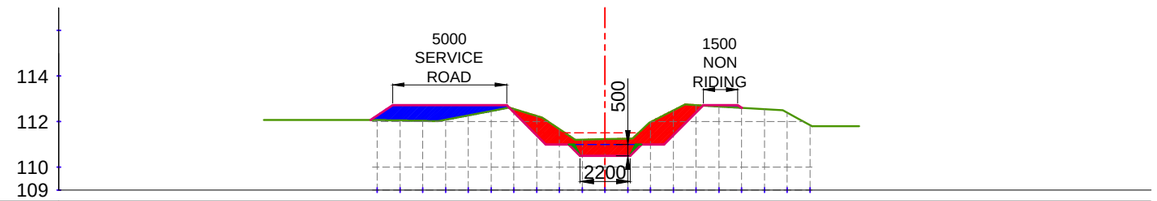
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	112.454	112.446	112.439	112.432	112.587	112.806	113.025	113.113	113.125	113.137	111.814	111.802	111.789	112.750	112.945	112.896	112.847	112.795	112.738	112.681	112.624	112.567
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 1.051
FILLING AREA (SQ.M) = 2.000

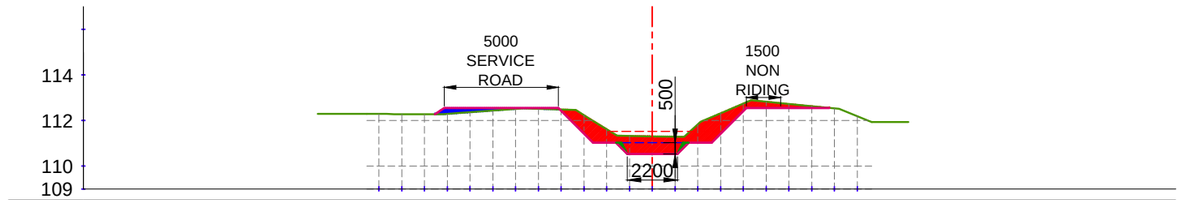
CH. (KM):- 27+300
DESIGNED BED LEVEL = 112.079 M



EXIST. LEVEL (M)	112.073	112.053	112.034	112.083	112.273	112.463	112.551	112.250	111.668	111.205	111.231	111.257	111.989	112.499	112.727	112.667	112.606	112.546	112.389	111.838		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9		

CUTTING AREA (SQ.M) = 5.995
FILLING AREA (SQ.M) = 3.068

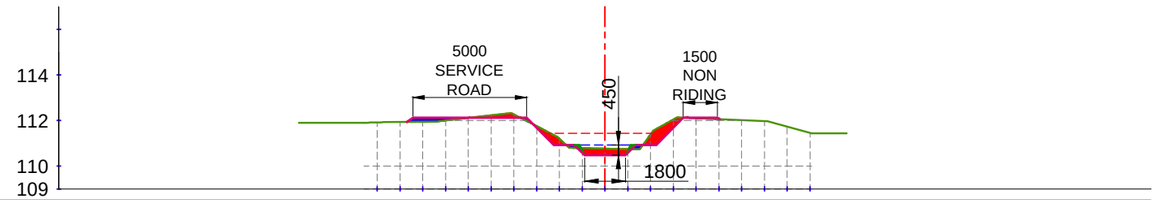
CH. (KM):- 27+500
DESIGNED BED LEVEL = 110.505 M



EXIST. LEVEL (M)	112.286	112.281	112.275	112.285	112.361	112.435	112.509	112.513	112.481	112.236	111.612	111.321	111.308	111.293	111.832	112.319	112.742	112.818	112.723	112.628	112.534	112.188
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 6.120
FILLING AREA (SQ.M) = 0.654

CH. (KM):- 27+400
DESIGNED BED LEVEL = 110.530 M



EXIST. LEVEL (M)	111.918	111.935	111.940	111.998	112.113	112.228	112.265	111.750	111.202	110.787	110.766	110.744	111.400	112.044	112.097	112.054	112.011	111.967	111.730	111.460		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9		

CUTTING AREA (SQ.M) = 1.849
FILLING AREA (SQ.M) = 0.518

CH. (KM):- 27+600
DESIGNED BED LEVEL = 110.480 M

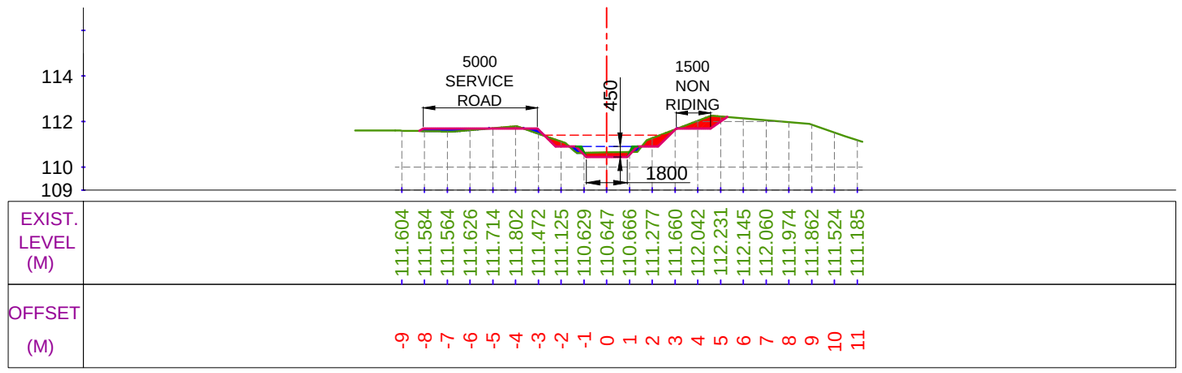
LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

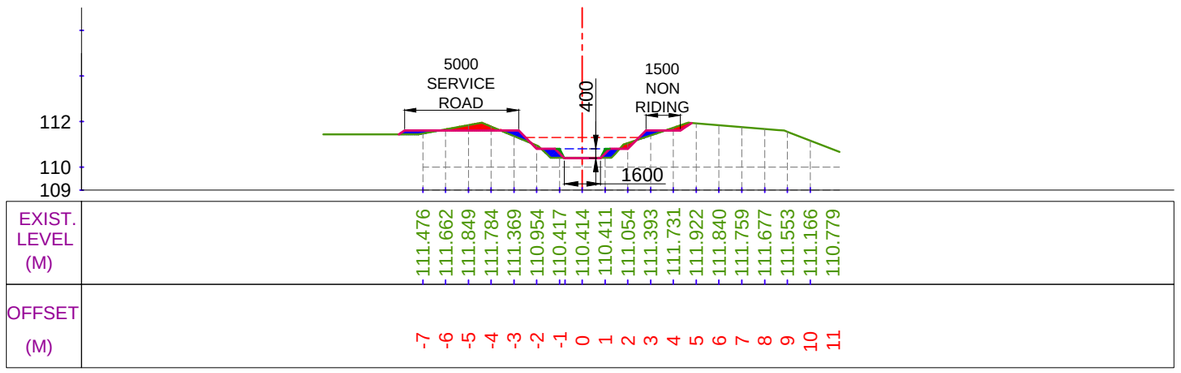
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 69 of 75



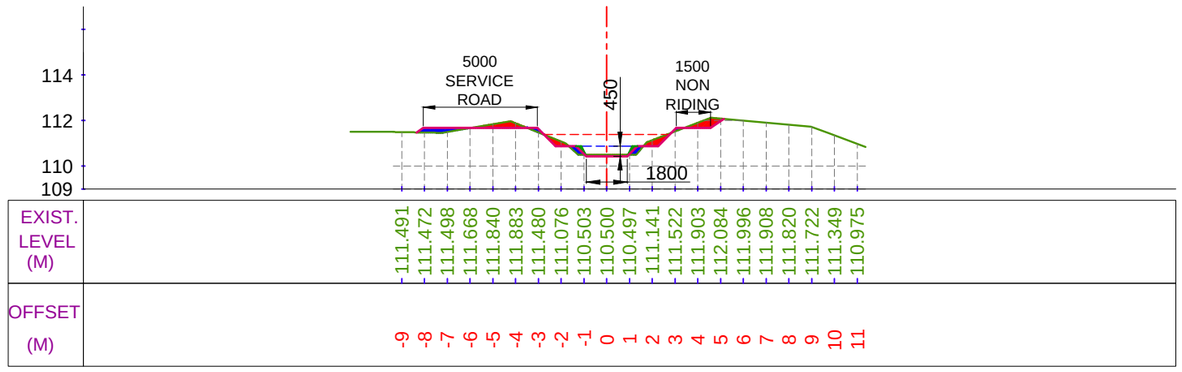
CUTTING AREA (SQ.M) = 1.620
FILLING AREA (SQ.M) = 0.527

CH. (KM):- 27+700
DESIGNED BED LEVEL = 110.455 M



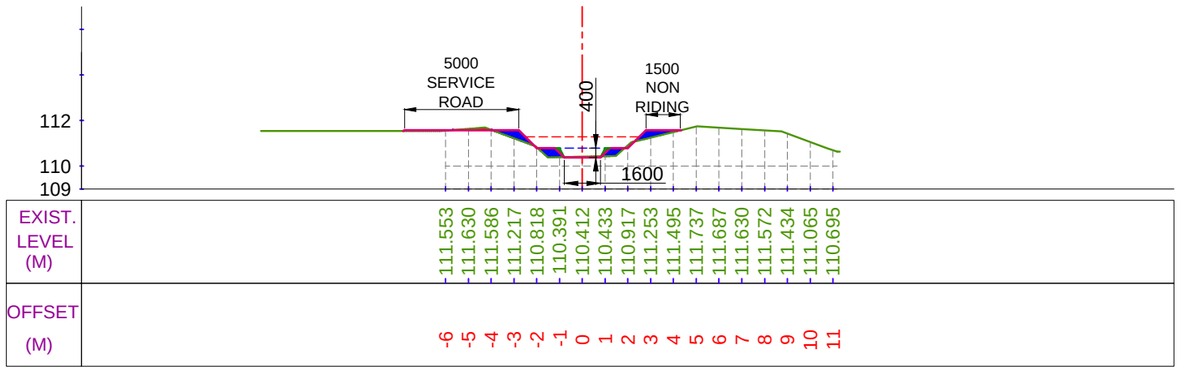
CUTTING AREA (SQ.M) = 0.780
FILLING AREA (SQ.M) = 0.988

CH. (KM):- 27+900
DESIGNED BED LEVEL = 110.405 M



CUTTING AREA (SQ.M) = 1.280
FILLING AREA (SQ.M) = 0.685

CH. (KM):- 27+800
DESIGNED BED LEVEL = 110.430 M



CUTTING AREA (SQ.M) = 0.183
FILLING AREA (SQ.M) = 1.390

CH. (KM):- 28+000
DESIGNED BED LEVEL = 110.380 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

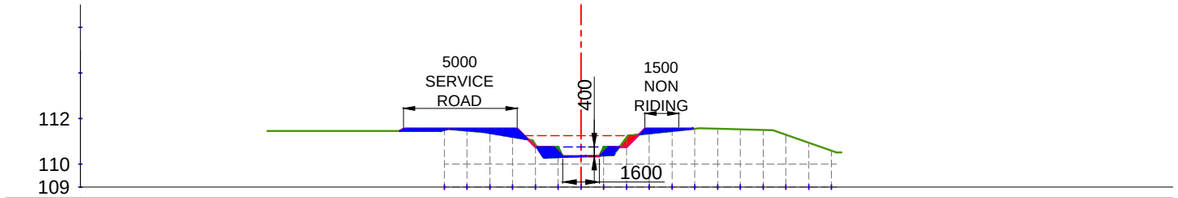
Prepared by :-

WAPCOS LTD.

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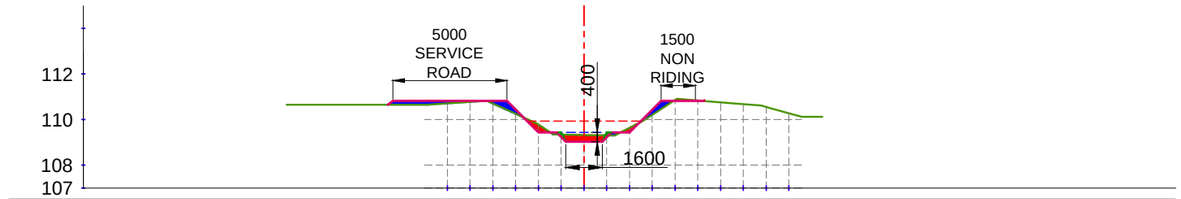
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 70 of 75

X SECTION OF RIUR BR. CANAL



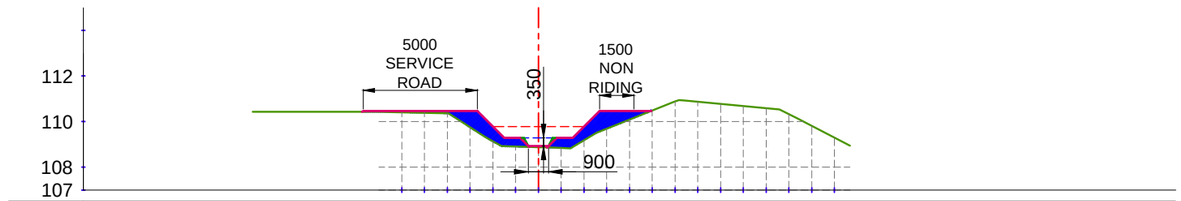
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X SECTION OF RIUR BR. CANAL



| | | |

X SECTION OF RIUR BR. CANAL

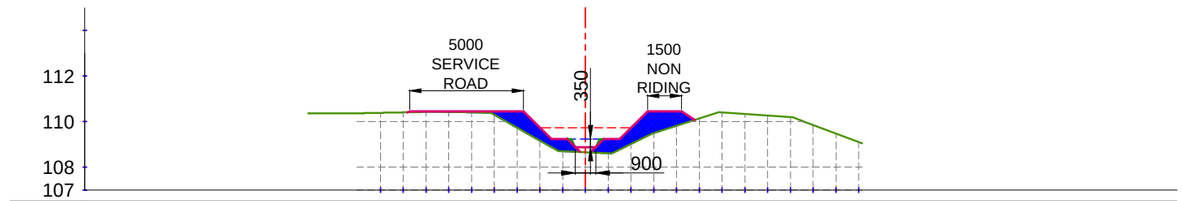


EXIST. LEVEL (M)	110.416	110.392	110.369	109.755	109.139	108.906	108.876	108.847	109.189	109.693	110.091	110.489	110.887	110.874	110.779	110.684	110.590	110.322	109.809	109.296					
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13					

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.208

CH. (KM):- 28+900

DESIGNED BED LEVEL = 108.935 M

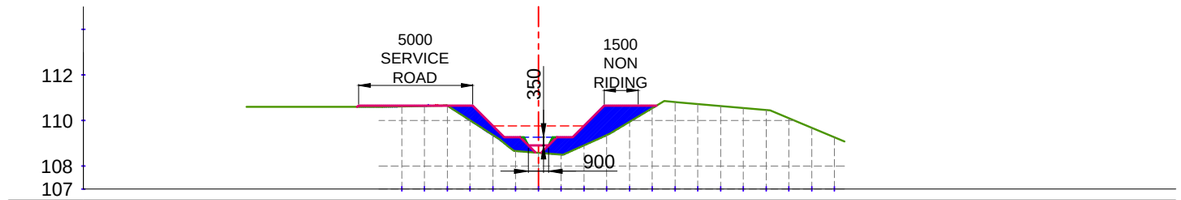


EXIST. LEVEL (M)	110.387	110.408	110.428	110.423	110.402	110.300	109.732	109.166	108.700	108.657	108.613	109.023	109.502	109.824	110.146	110.411	110.340	110.269	110.198	109.855	109.480	109.105			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.984

CH. (KM):- 29+100

DESIGNED BED LEVEL = 108.885 M

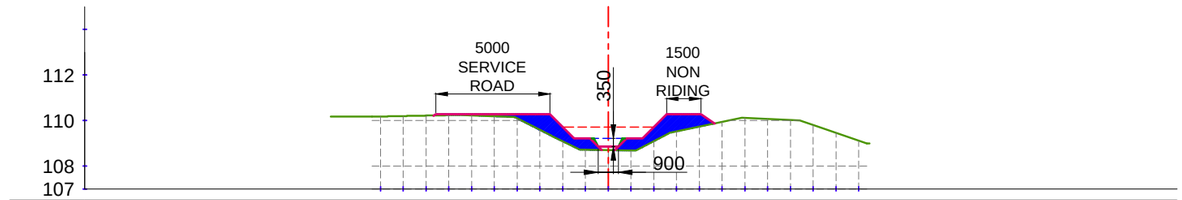


EXIST. LEVEL (M)	110.613	110.638	110.654	110.004	109.354	108.666	108.584	108.501	108.911	109.361	109.940	110.539	110.809	110.720	110.632	110.543	110.455	110.095	109.676	109.257					
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13					

CUTTING AREA (SQ.M) = 0.006
FILLING AREA (SQ.M) = 5.359

CH. (KM):- 29+000

DESIGNED BED LEVEL = 108.910 M



EXIST. LEVEL (M)	110.174	110.194	110.215	110.235	110.227	110.185	110.088	109.581	109.085	108.714	108.699	108.684	109.092	109.524	109.732	109.940	110.115	110.068	110.021	109.802	109.461	109.120			
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.500

CH. (KM):- 29+200

DESIGNED BED LEVEL = 108.860 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

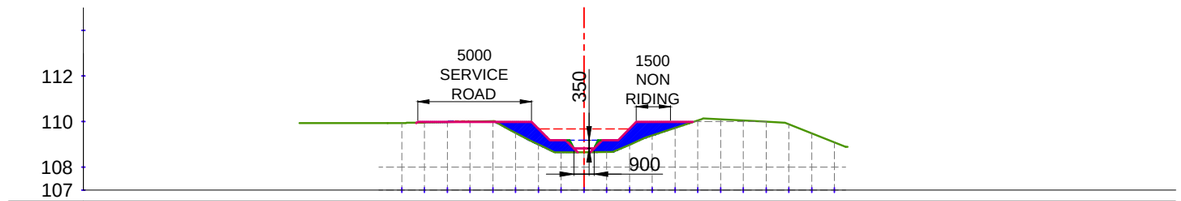
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 73 of 75

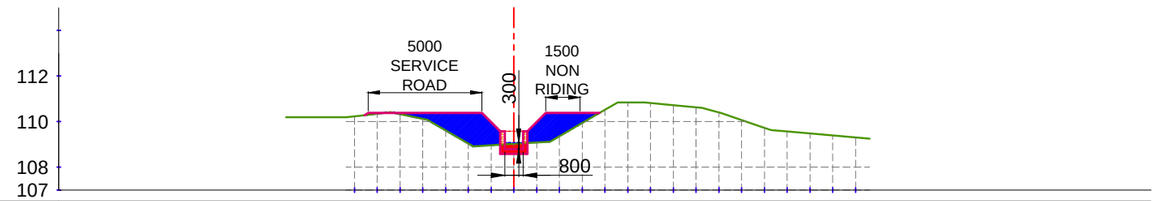
X SECTION OF RIUR BR. CANAL



EXIST. LEVEL (M)	109.942	109.962	109.980	109.997	110.014	109.506	108.992	108.662	108.663	108.665	108.987	109.390	109.725	110.059	110.098	110.049	110.000	109.880	109.487	109.093		
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11		

CUTTING AREA (SQ.M) = 0.027
FILLING AREA (SQ.M) = 3.743

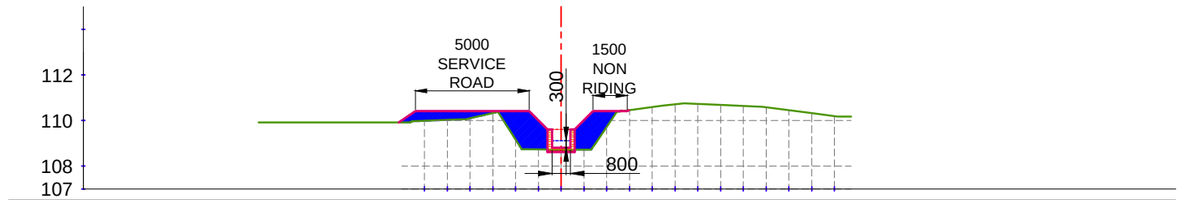
CH. (KM):- 29+300
DESIGNED BED LEVEL = 108.835 M



EXIST. LEVEL (M)	110.230	110.343	110.327	110.124	109.617	109.038	108.964	109.026	109.088	109.366	109.944	110.523	110.841	110.814	110.724	110.633	110.400	110.066	109.727	109.565	109.479	109.392	109.306
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

CUTTING AREA (SQ.M) = 0.534
FILLING AREA (SQ.M) = 5.755

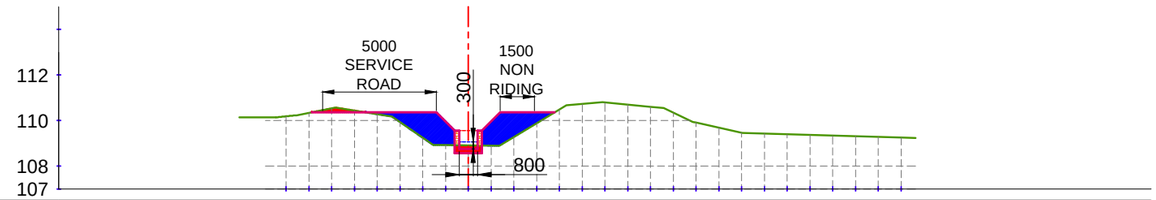
CH. (KM):- 29+500
DESIGNED BED LEVEL = 108.785 M



EXIST. LEVEL (M)	109.983	110.022	110.094	110.326	109.160	108.730	108.724	108.718	109.732	110.457	110.587	110.712	110.732	110.686	110.640	110.582	110.452	110.323	110.194			
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12			

CUTTING AREA (SQ.M) = 0.142
FILLING AREA (SQ.M) = 5.659

CH. (KM):- 29+400
DESIGNED BED LEVEL = 108.810 M



EXIST. LEVEL (M)	110.183	110.337	110.532	110.437	110.276	109.925	109.238	108.919	108.908	108.897	109.277	109.880	110.484	110.723	110.788	110.694	110.600	110.345	109.909	109.687	109.465	109.429	109.400	109.370	109.341	109.312	109.282	109.253
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

CUTTING AREA (SQ.M) = 0.663
FILLING AREA (SQ.M) = 5.204

CH. (KM):- 29+600
DESIGNED BED LEVEL = 108.760 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

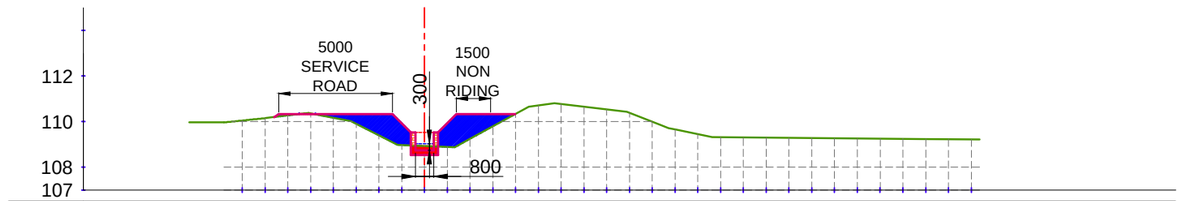
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF RIUR BR. CANAL (OFFTAKE FROM RD -37+917 KM.(L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ XSEC- 74 of 75

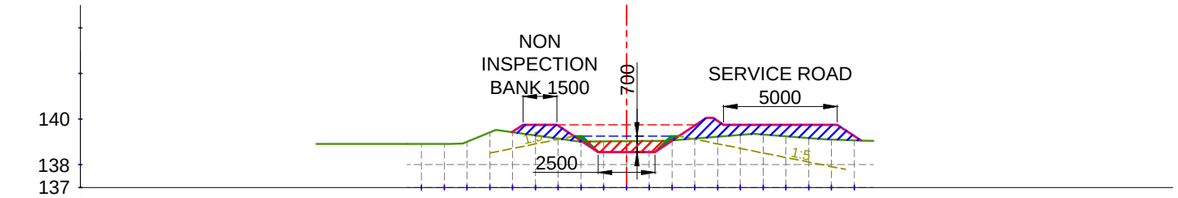
X SECTION OF RIUR BR. CANAL



| | | |

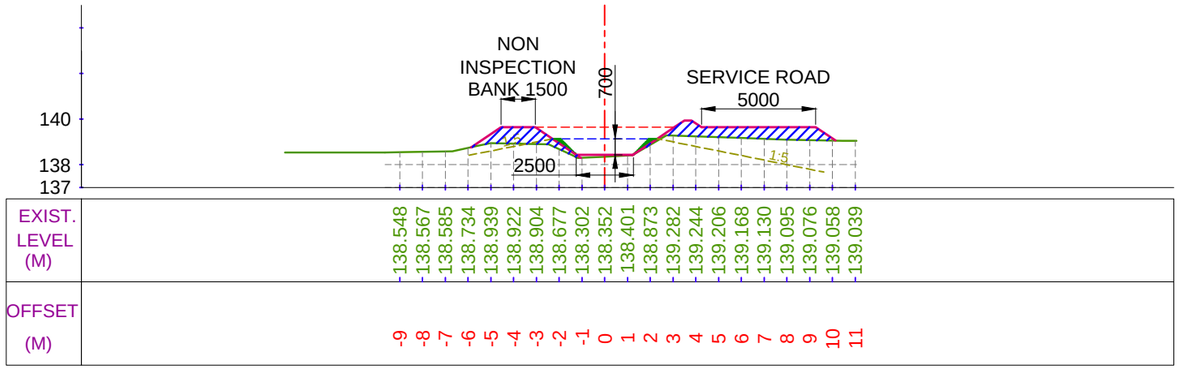
CROSS SECTION OF PANTI MINOR

X SECTION OF PANTI MINOR



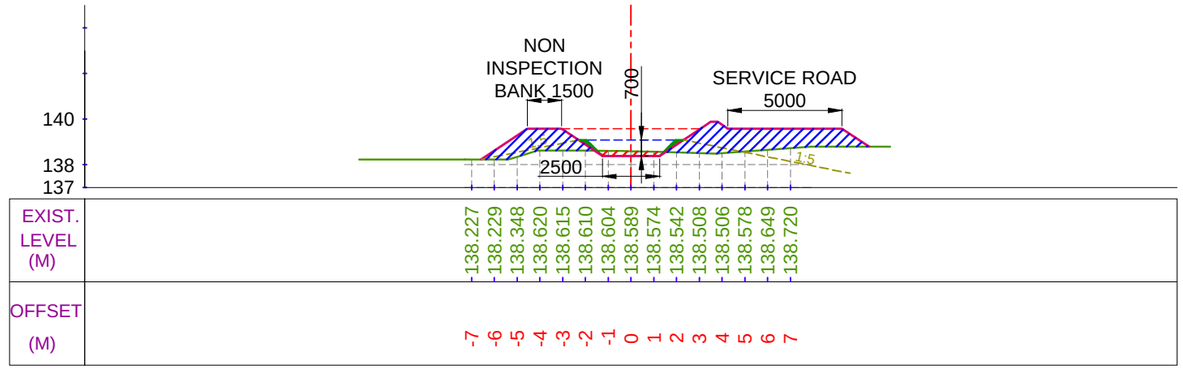
| | | |

X SECTION OF PANTI MINOR



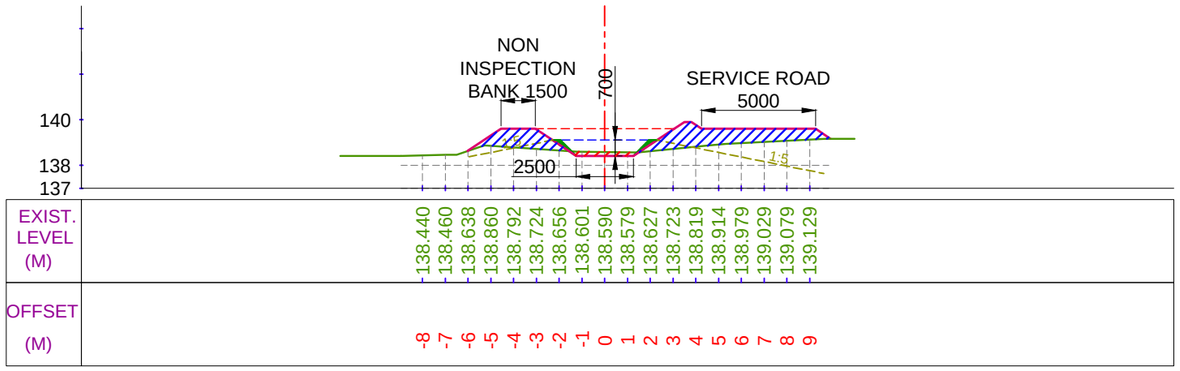
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.689

CH. (KM):- 0+500
DESIGNED BED LEVEL = 138.438 M



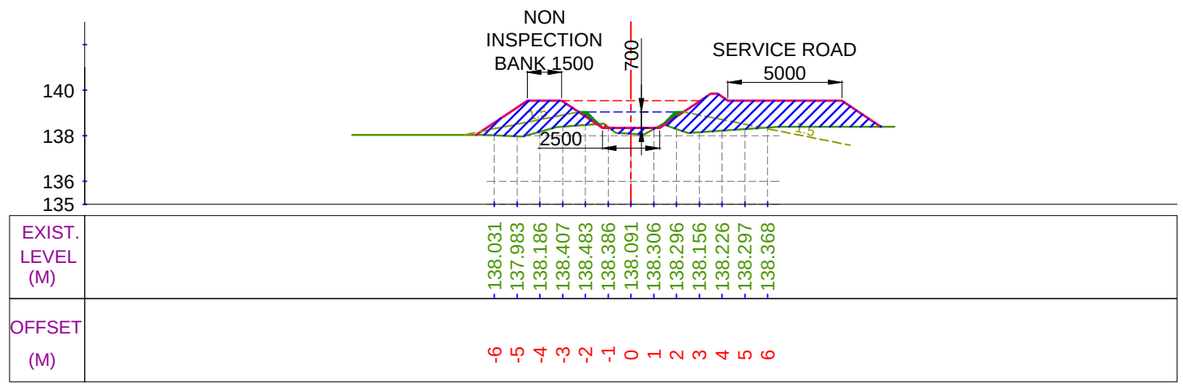
CUTTING AREA (SQ.M) = 0.562
FILLING AREA (SQ.M) = 10.723

CH. (KM):- 0+700
DESIGNED BED LEVEL = 138.381 M



CUTTING AREA (SQ.M) = 0.485
FILLING AREA (SQ.M) = 7.407

CH. (KM):- 0+600
DESIGNED BED LEVEL = 138.410 M



CUTTING AREA (SQ.M) = 0.065
FILLING AREA (SQ.M) = 15.043

CH. (KM):- 0+800
DESIGNED BED LEVEL = 138.352 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

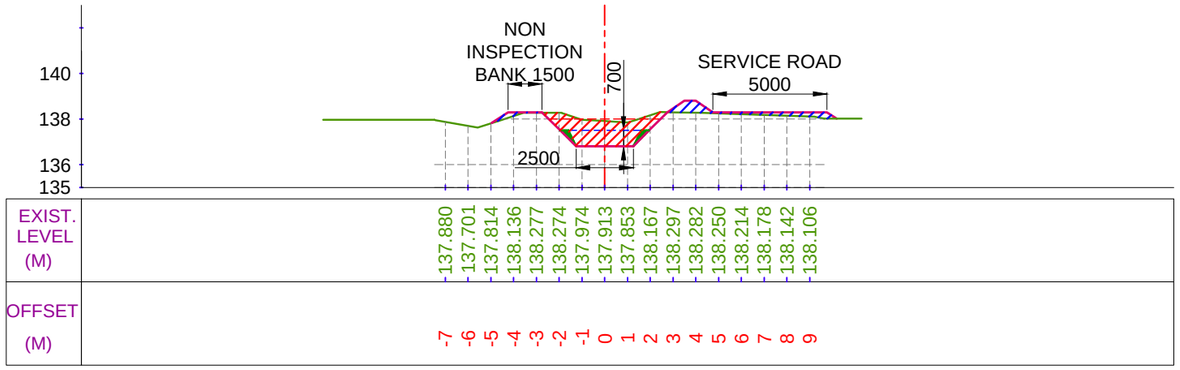
Prepared by :-

WAPCOS LTD.

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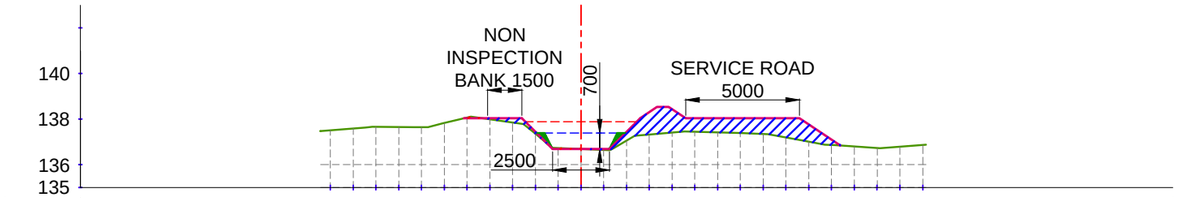
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 2 of 18

X SECTION OF PANTI MINOR



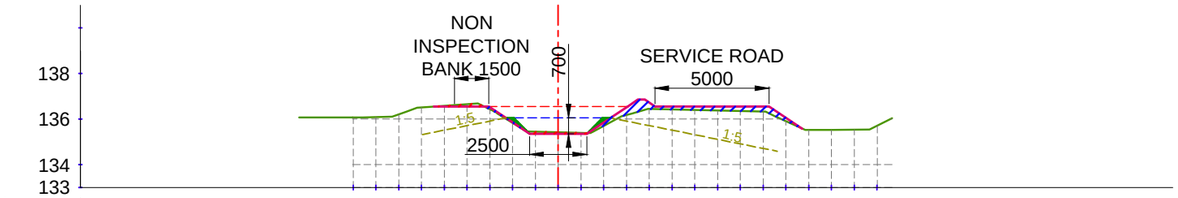
| | | |

X SECTION OF PANTI MINOR



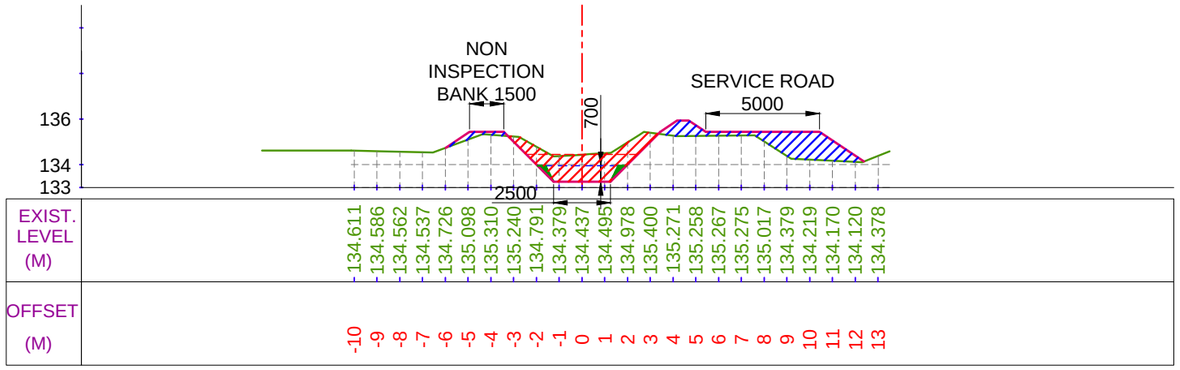
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X SECTION OF PANTI MINOR



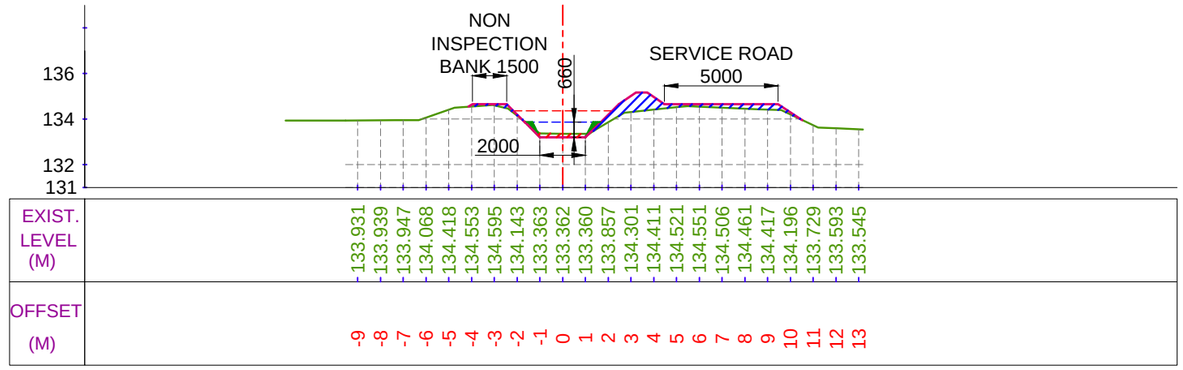
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X SECTION OF PANTI MINOR



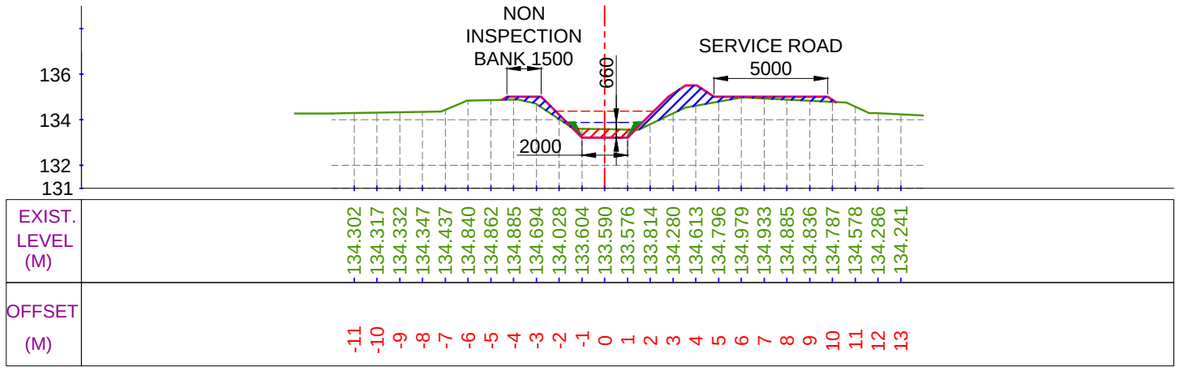
CUTTING AREA (SQ.M) = 5.662
FILLING AREA (SQ.M) = 5.538

CH. (KM):- 2+100
DESIGNED BED LEVEL = 133.256 M



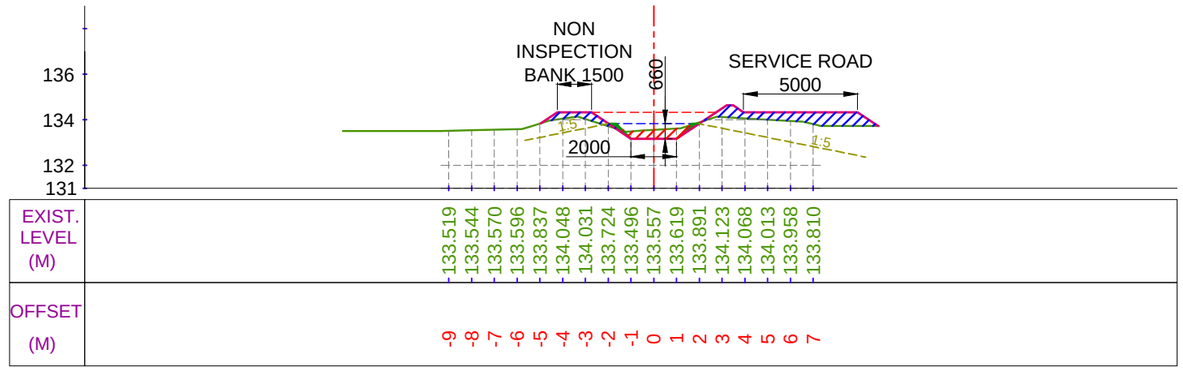
CUTTING AREA (SQ.M) = 0.343
FILLING AREA (SQ.M) = 2.752

CH. (KM):- 2+300
DESIGNED BED LEVEL =133.199 M



CUTTING AREA (SQ.M) = 0.792
FILLING AREA (SQ.M) = 3.594

CH. (KM):- 2+200
DESIGNED BED LEVEL = 133.227 M



CUTTING AREA (SQ.M) = 0.961
FILLING AREA (SQ.M) = 3.752

CH. (KM):- 2+400
DESIGNED BED LEVEL = 133.170 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

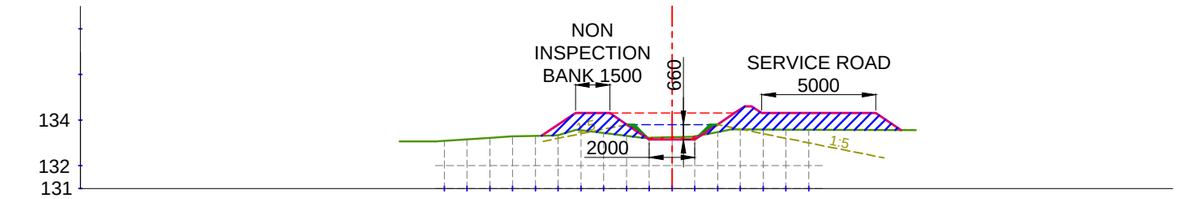
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 6 of 18

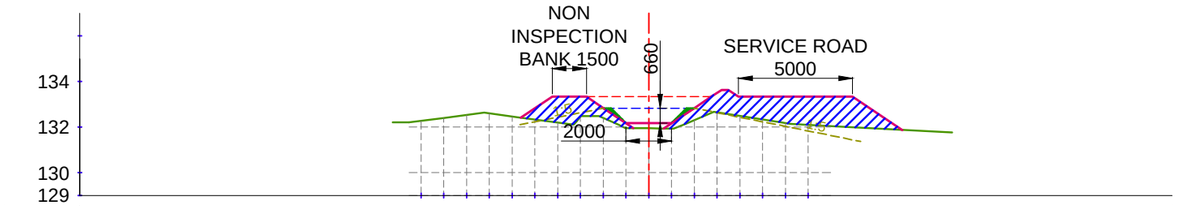
X SECTION OF PANTI MINOR



EXIST. LEVEL (M)	133.091	133.155	133.219	133.280	133.306	133.339	133.554	133.426	133.300	133.216	133.244	133.291	133.477	133.589	133.584	133.578	133.574				
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6				

CUTTING AREA (SQ.M) = 0.222
FILLING AREA (SQ.M) = 8.236

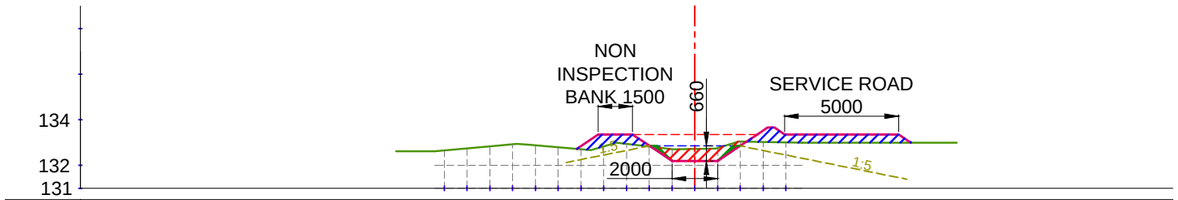
CH. (KM):- 2+500
DESIGNED BED LEVEL = 133.142 M



EXIST. LEVEL (M)	132.277	132.403	132.530	132.597	132.466	132.336	132.205	132.463	132.404	131.958	131.946	131.933	132.307	132.639	132.483	132.328	132.172	132.095			
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 12.443

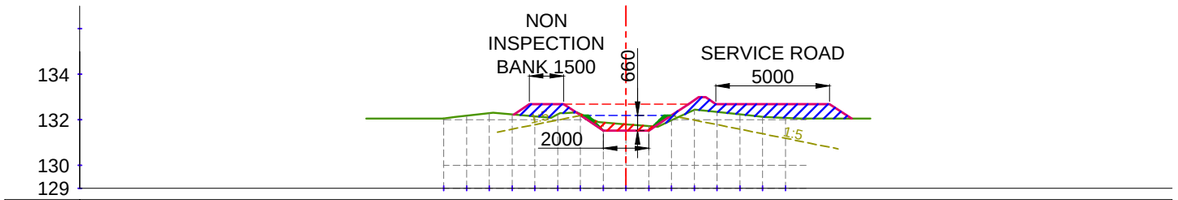
CH. (KM):- 2+700
DESIGNED BED LEVEL = 132.171 M



EXIST. LEVEL (M)	132.656	132.748	132.840	132.931	132.881	132.797	132.714	132.840	132.950	132.834	132.719	132.722	132.759	133.049	133.029	133.009					
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4					

CUTTING AREA (SQ.M) = 1.501
FILLING AREA (SQ.M) = 3.768

CH. (KM):- 2+600
DESIGNED BED LEVEL = 132.199 M



EXIST. LEVEL (M)	132.065	132.178	132.291	132.238	132.152	132.241	132.252	131.879	131.805	131.729	131.979	132.439	132.342	132.237	132.131	132.088					
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7					

CUTTING AREA (SQ.M) = 0.646
FILLING AREA (SQ.M) = 5.031

CH. (KM):- 2+800
DESIGNED BED LEVEL =131.532 M

LEGEND

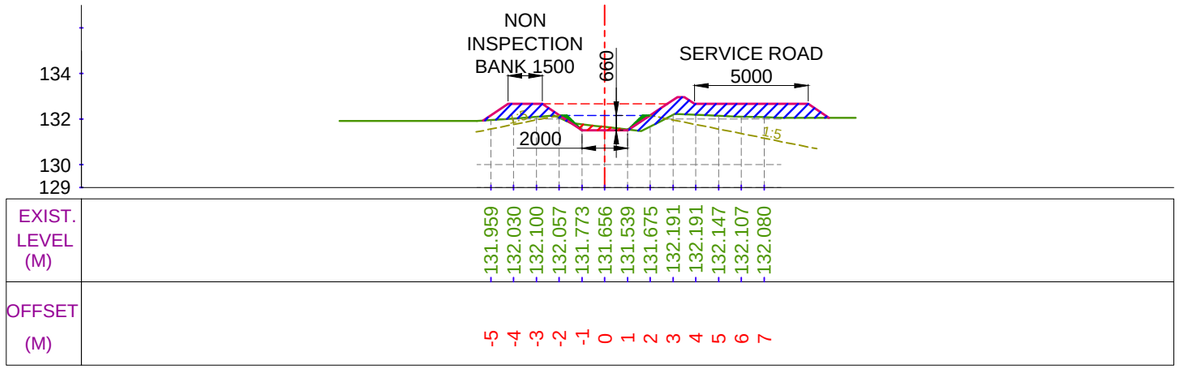
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

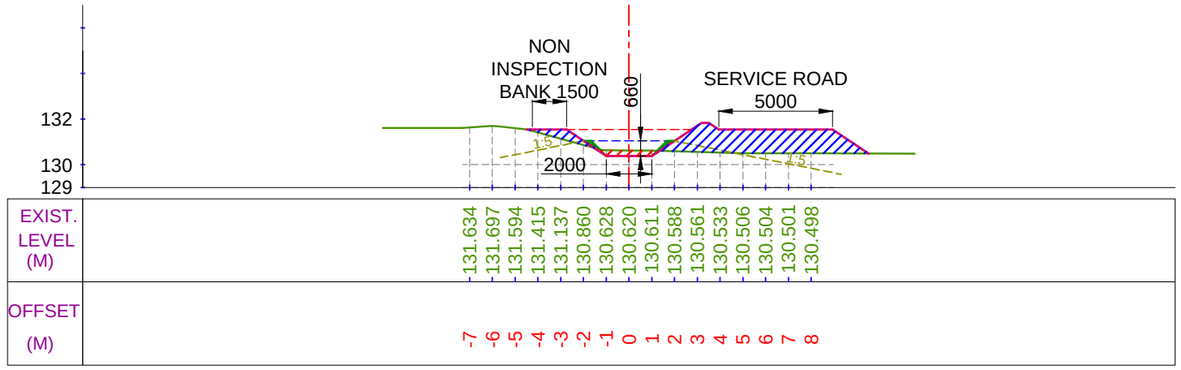
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 7 of 18

X SECTION OF PANTI MINOR



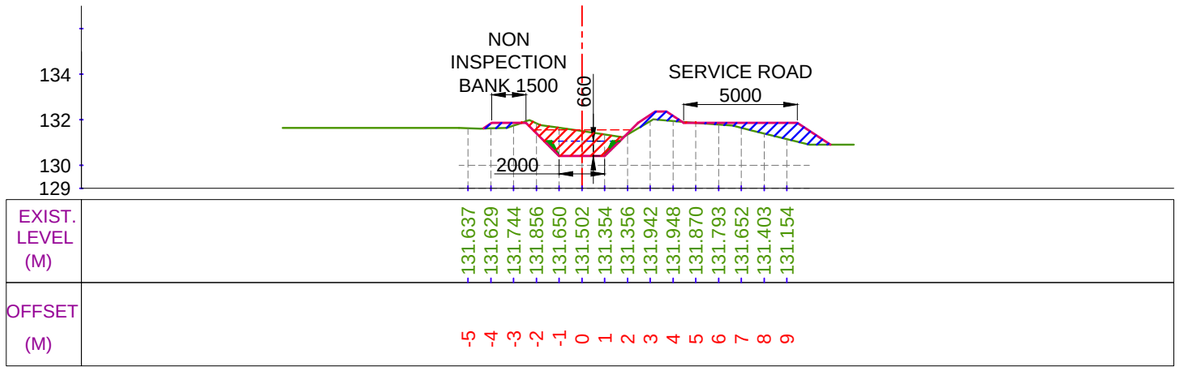
CUTTING AREA (SQ.M) = 0.348
FILLING AREA (SQ.M) = 6.060

CH. (KM):- 2+900
DESIGNED BED LEVEL = 131.503 M



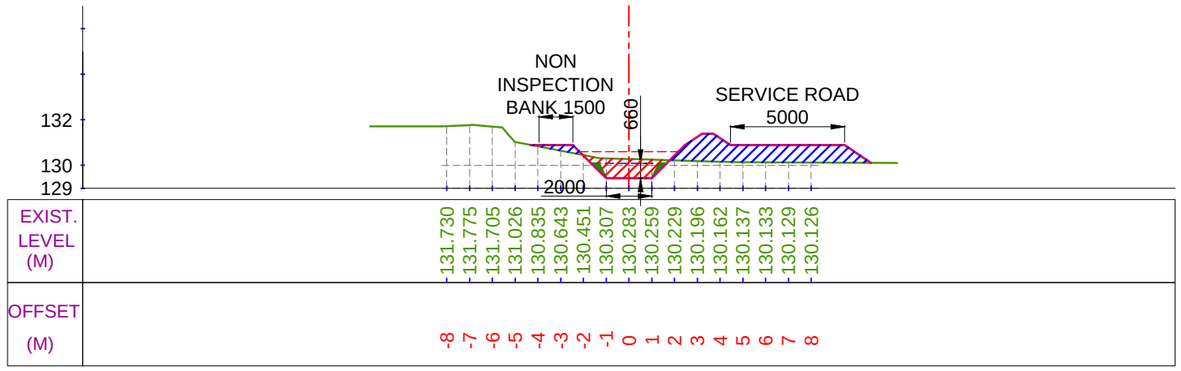
CUTTING AREA (SQ.M) = 0.541
FILLING AREA (SQ.M) = 8.776

CH. (KM):- 3+100
DESIGNED BED LEVEL = 130.379 M



CUTTING AREA (SQ.M) = 3.341
FILLING AREA (SQ.M) = 2.977

CH. (KM):- 3+000
DESIGNED BED LEVEL =130.408 M



CUTTING AREA (SQ.M) = 2.228
FILLING AREA (SQ.M) = 6.987

CH. (KM):- 3+200
DESIGNED BED LEVEL = 129.437 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

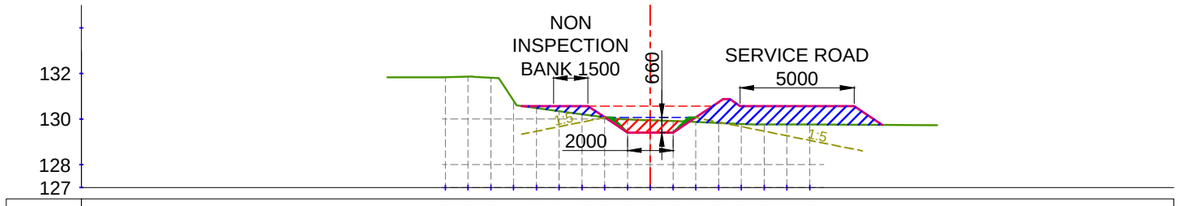
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 8 of 18

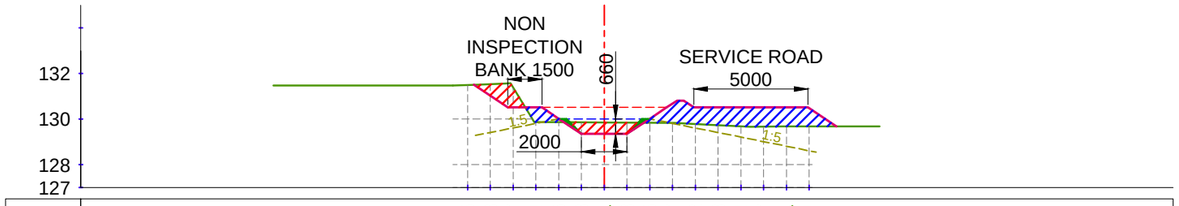
X SECTION OF PANTI MINOR



EXIST. LEVEL (M)	131.829	131.855	131.818	130.794	130.482	130.347	130.213	130.078	129.983	129.946	129.909	129.870	129.830	129.789	129.766	129.762	129.758
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

CUTTING AREA (SQ.M) = 1.370
FILLING AREA (SQ.M) = 6.751

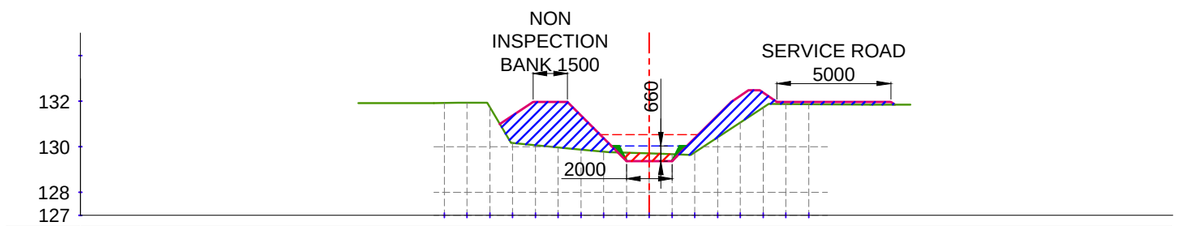
CH. (KM):- 3+300
DESIGNED BED LEVEL = 129.408 M



EXIST. LEVEL (M)	131.495	131.528	131.377	129.874	129.866	129.858	129.851	129.843	129.835	129.827	129.782	129.733	129.684	129.667	129.671	129.674	
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	

CUTTING AREA (SQ.M) = 2.502
FILLING AREA (SQ.M) = 6.653

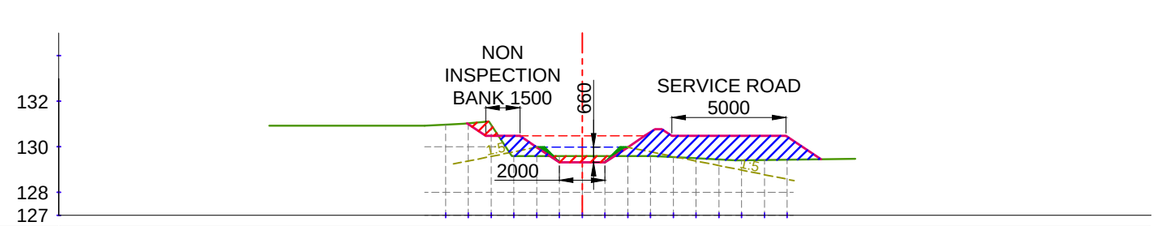
CH. (KM):- 3+500
DESIGNED BED LEVEL = 129.351 M



EXIST. LEVEL (M)	131.932	131.937	131.743	130.168	130.073	129.979	129.885	129.791	129.743	129.709	129.677	129.769	130.422	131.075	131.728	131.879	131.874
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

CUTTING AREA (SQ.M) = 0.714
FILLING AREA (SQ.M) = 10.944

CH. (KM):- 3+400
DESIGNED BED LEVEL = 129.380 M



EXIST. LEVEL (M)	130.974	131.037	130.961	129.600	129.599	129.598	129.598	129.597	129.596	129.595	129.548	129.496	129.444	129.410	129.425	129.440	
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	

CUTTING AREA (SQ.M) = 1.107
FILLING AREA (SQ.M) = 8.990

CH. (KM):- 3+600
DESIGNED BED LEVEL =129.322 M

LEGEND

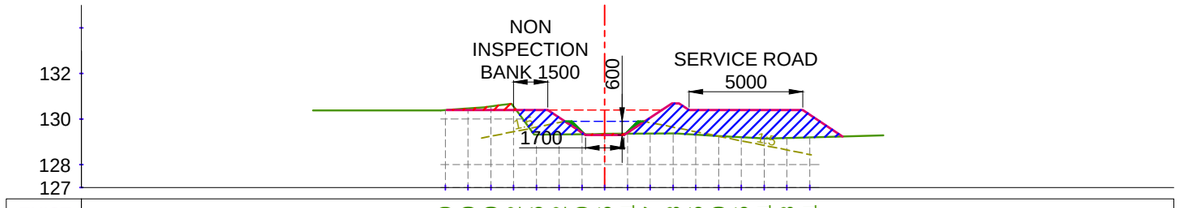
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 9 of 18

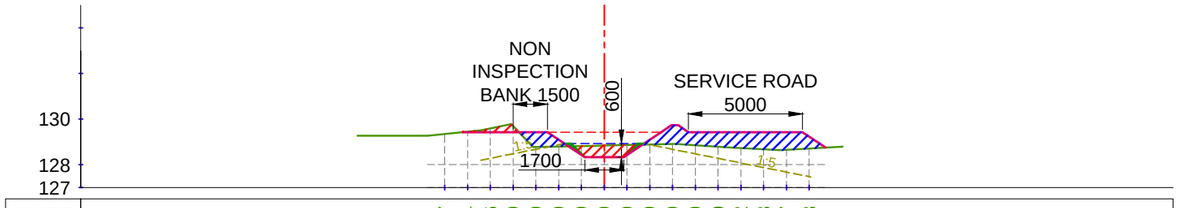
X SECTION OF PANTI MINOR



EXIST. LEVEL (M)	130.389	130.460	130.550	130.542	129.326	129.332	129.339	129.345	129.351	129.357	129.363	129.315	129.260	129.205	129.151	129.173	129.201
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.450
FILLING AREA (SQ.M) = 11.112

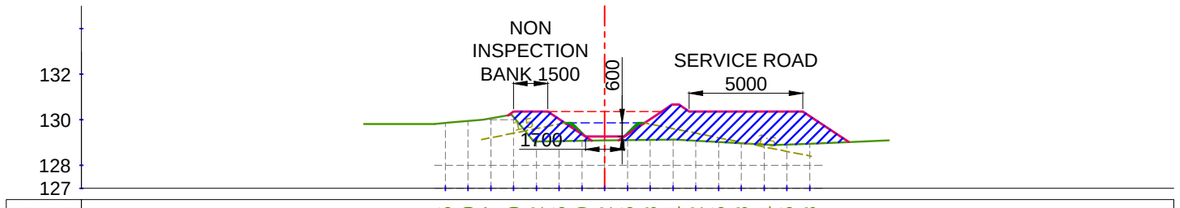
CH. (KM):- 3+700
DESIGNED BED LEVEL =129.294 M



EXIST. LEVEL (M)	129.347	129.444	129.586	129.699	128.779	128.799	128.819	128.839	128.859	128.879	128.899	128.849	128.790	128.732	128.673	128.647	128.708
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 1.524
FILLING AREA (SQ.M) = 5.802

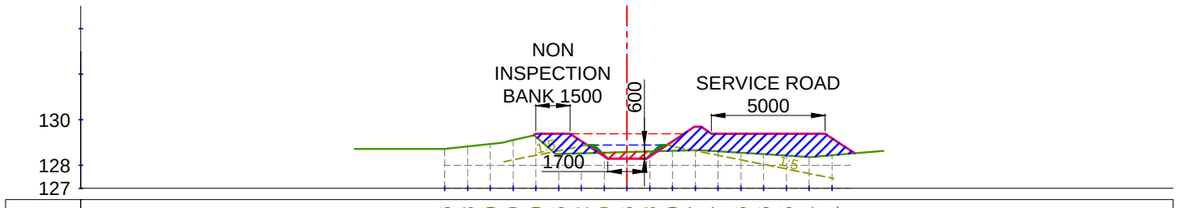
CH. (KM):- 3+900
DESIGNED BED LEVEL = 128.323 M



EXIST. LEVEL (M)	129.865	129.950	130.067	130.120	129.052	129.065	129.079	129.092	129.105	129.118	129.131	129.082	129.025	128.968	128.911	128.915	128.958
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 14.040

CH. (KM):- 3+800
DESIGNED BED LEVEL =129.265 M



EXIST. LEVEL (M)	128.726	128.833	128.940	129.109	129.270	128.505	128.532	128.559	128.586	128.613	128.640	128.667	128.617	128.556	128.496	128.435	128.374	128.451
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.583
FILLING AREA (SQ.M) = 8.242

CH. (KM):- 4+000
DESIGNED BED LEVEL =128.294 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

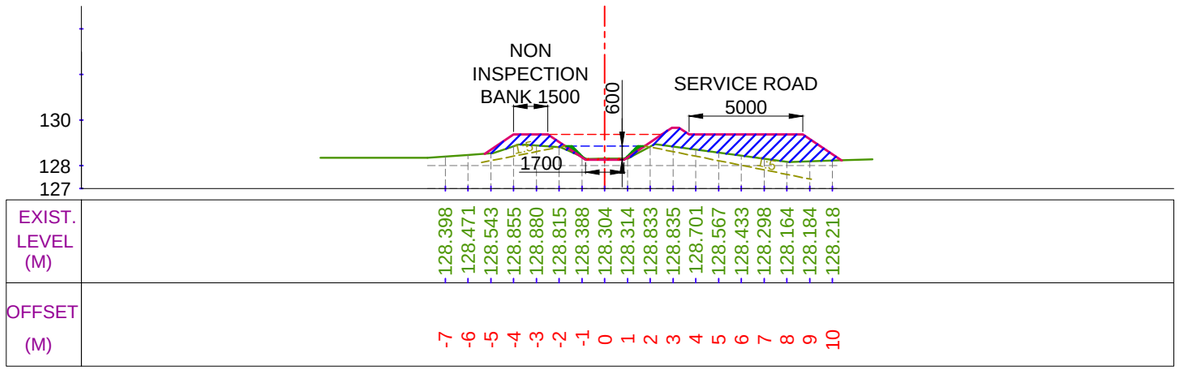
Prepared by :-

WAPCOS LTD.

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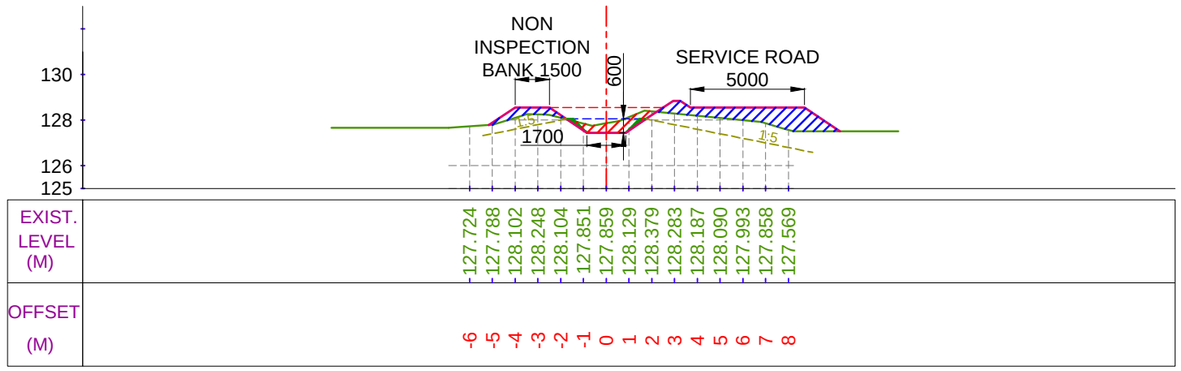
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 10 of 18

X SECTION OF PANTI MINOR



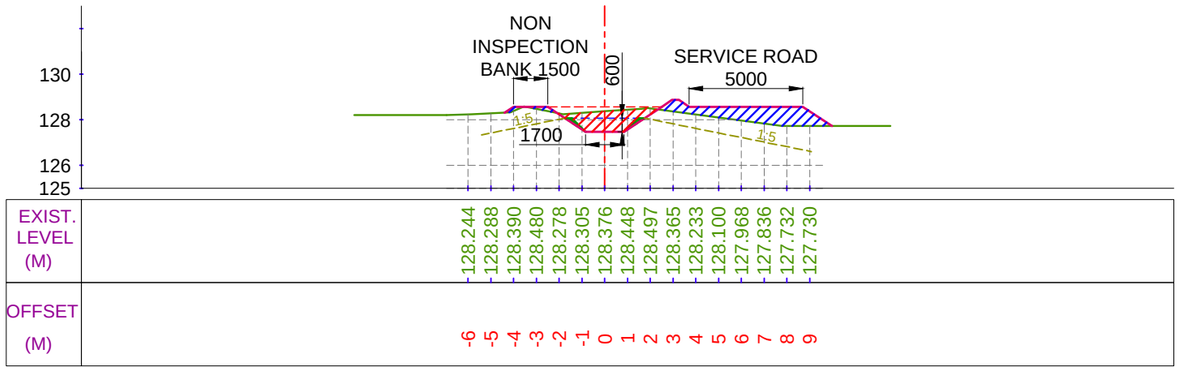
CUTTING AREA (SQ.M) = 0.069
FILLING AREA (SQ.M) = 8.297

CH. (KM):- 4+100
DESIGNED BED LEVEL =128.266 M



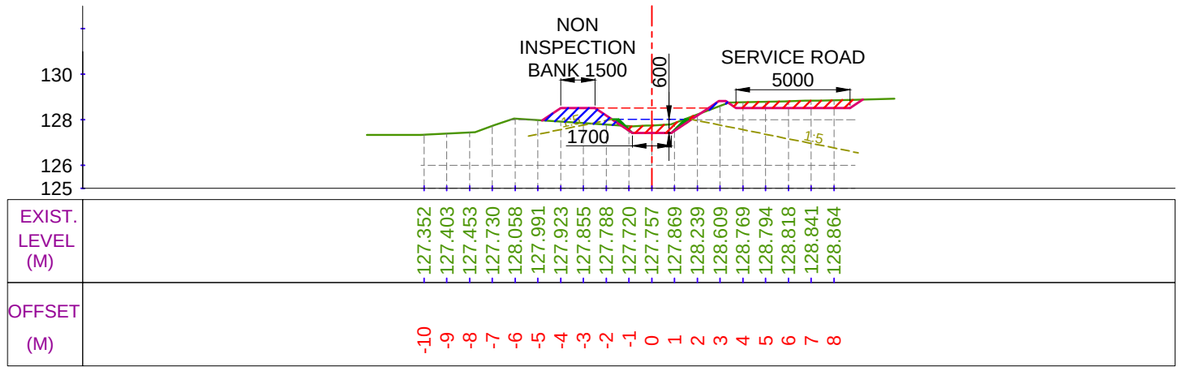
CUTTING AREA (SQ.M) = 1.260
FILLING AREA (SQ.M) = 5.448

CH. (KM):- 4+300
DESIGNED BED LEVEL =127.446 M



CUTTING AREA (SQ.M) = 2.588
FILLING AREA (SQ.M) = 4.372

CH. (KM):- 4+200
DESIGNED BED LEVEL =127.475 M



CUTTING AREA (SQ.M) = 2.461
FILLING AREA (SQ.M) = 1.760

CH. (KM):- 4+400
DESIGNED BED LEVEL =127.418 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

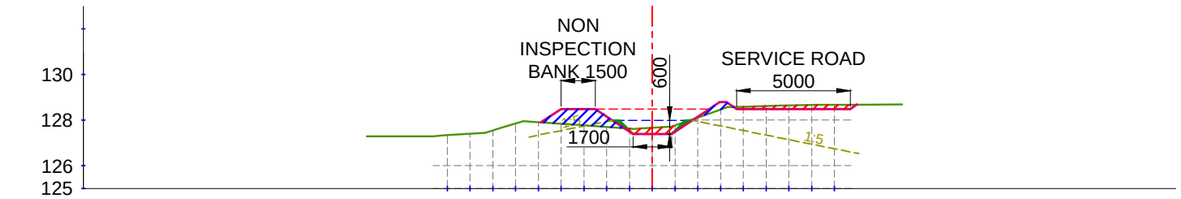
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 11 of 18

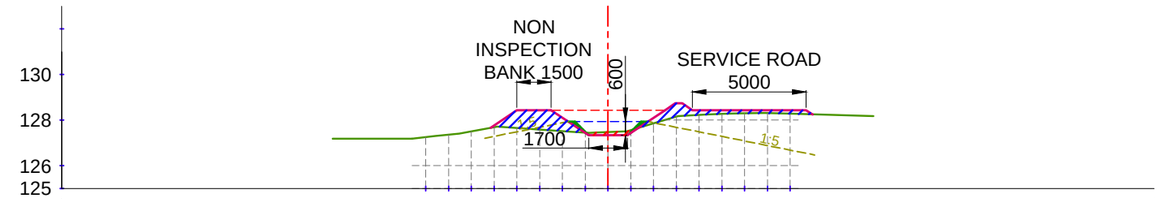
X SECTION OF PANTI MINOR



EXIST. LEVEL (M)	127.335	127.400	127.547	127.846	127.903	127.834	127.766	127.698	127.629	127.661	127.763	128.112	128.461	128.584	128.617	128.644	128.664	128.673
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 1.360
FILLING AREA (SQ.M) = 2.143

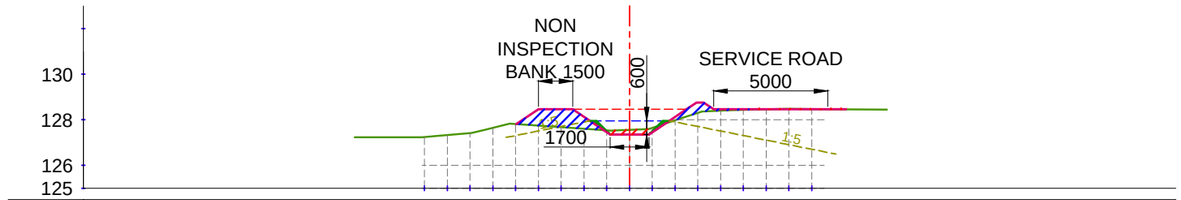
CH. (KM):- 4+500
DESIGNED BED LEVEL =127.389 M



EXIST. LEVEL (M)	127.251	127.352	127.502	127.693	127.658	127.588	127.518	127.448	127.468	127.550	127.851	128.152	128.221	128.274	128.292	128.302	128.274	
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	

CUTTING AREA (SQ.M) = 0.259
FILLING AREA (SQ.M) = 3.943

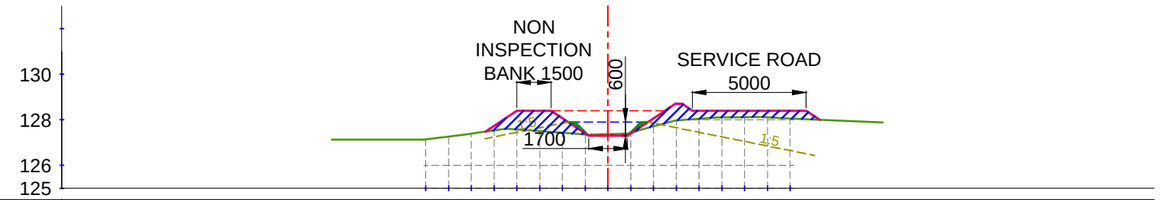
CH. (KM):- 4+700
DESIGNED BED LEVEL =127.332 M



EXIST. LEVEL (M)	127.251	127.334	127.417	127.652	127.815	127.746	127.677	127.608	127.538	127.565	127.657	127.983	128.309	128.401	128.443	128.469	128.486	128.477
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.457
FILLING AREA (SQ.M) = 2.674

CH. (KM):- 4+600
DESIGNED BED LEVEL =127.361 M



EXIST. LEVEL (M)	127.148	127.271	127.395	127.532	127.572	127.500	127.428	127.357	127.372	127.443	127.716	127.981	128.045	128.102	128.115	128.112	128.066	
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	

CUTTING AREA (SQ.M) = 0.123
FILLING AREA (SQ.M) = 5.429

CH. (KM):- 4+800
DESIGNED BED LEVEL = 127.304 M

LEGEND

CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

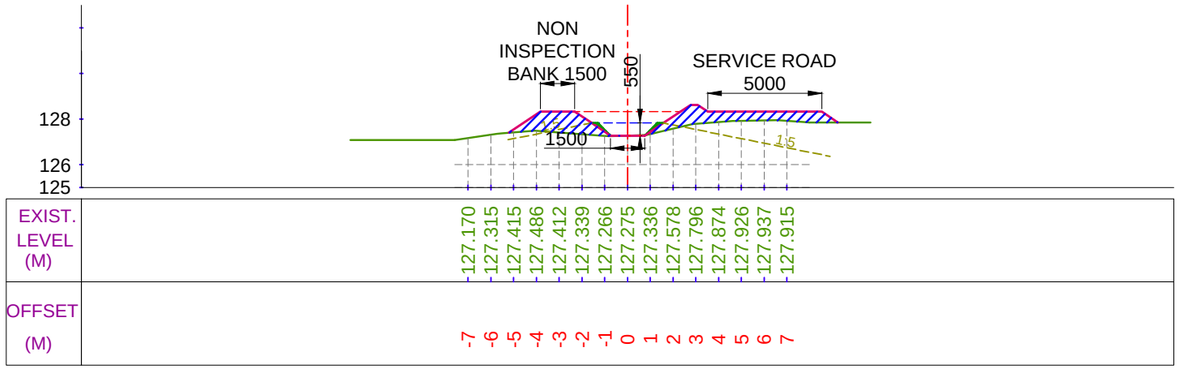
Prepared by :-

WAPCOS LTD.

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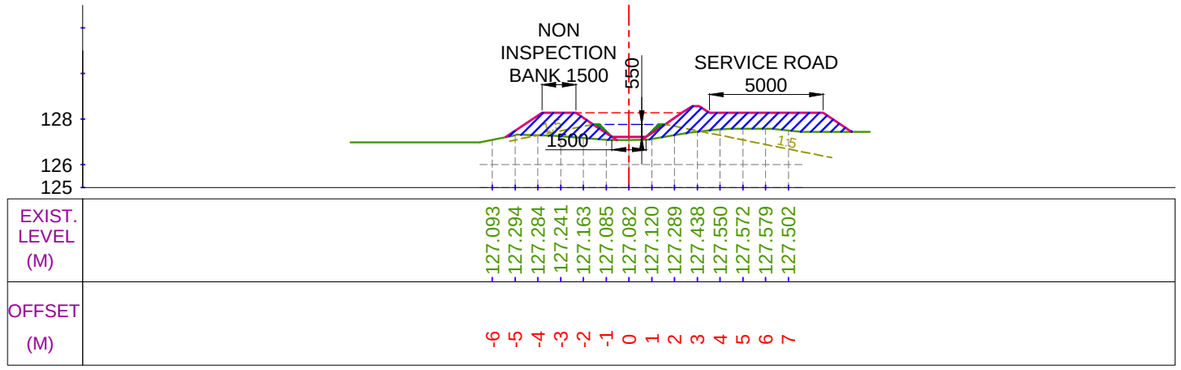
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 12 of 18

X SECTION OF PANTI MINOR



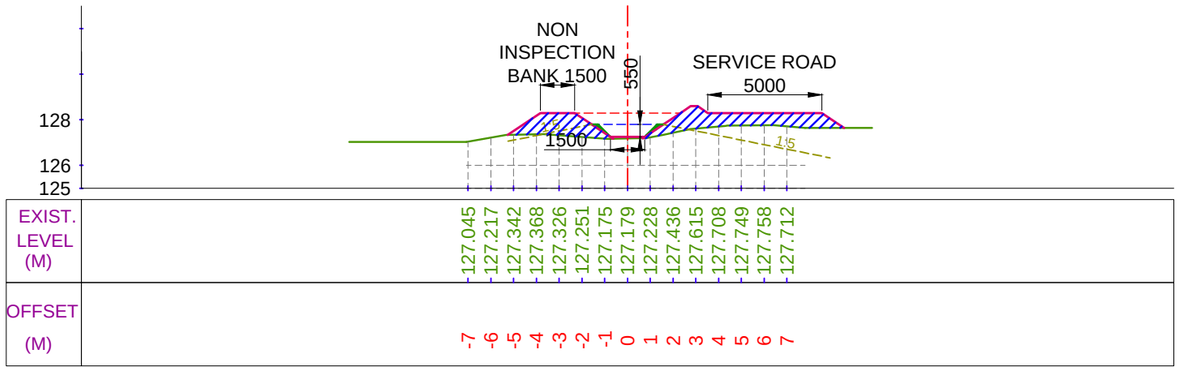
CUTTING AREA (SQ.M) = 0.008
FILLING AREA (SQ.M) = 6.414

CH. (KM):- 4+900
DESIGNED BED LEVEL =127.275 M



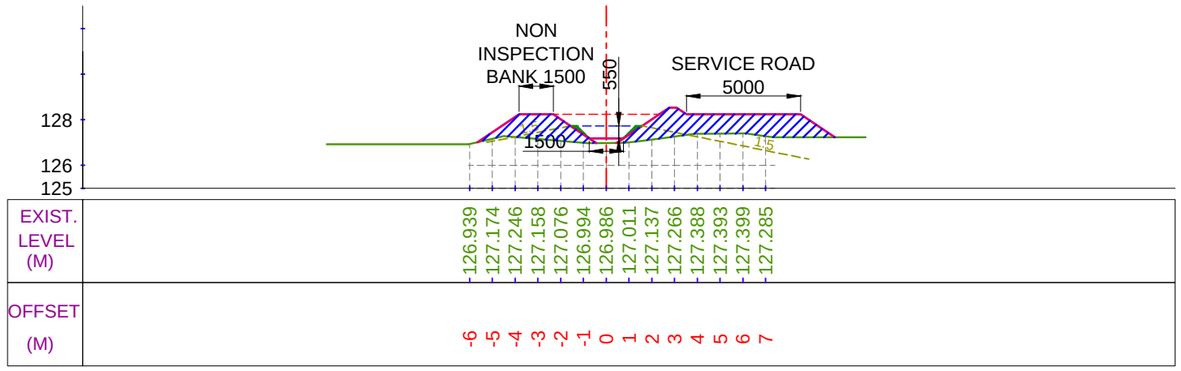
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.556

CH. (KM):- 5+100
DESIGNED BED LEVEL =127.218 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.956

CH. (KM):- 5+000
DESIGNED BED LEVEL =127.246 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.218

CH. (KM):- 5+200
DESIGNED BED LEVEL 127.189 M

LEGEND

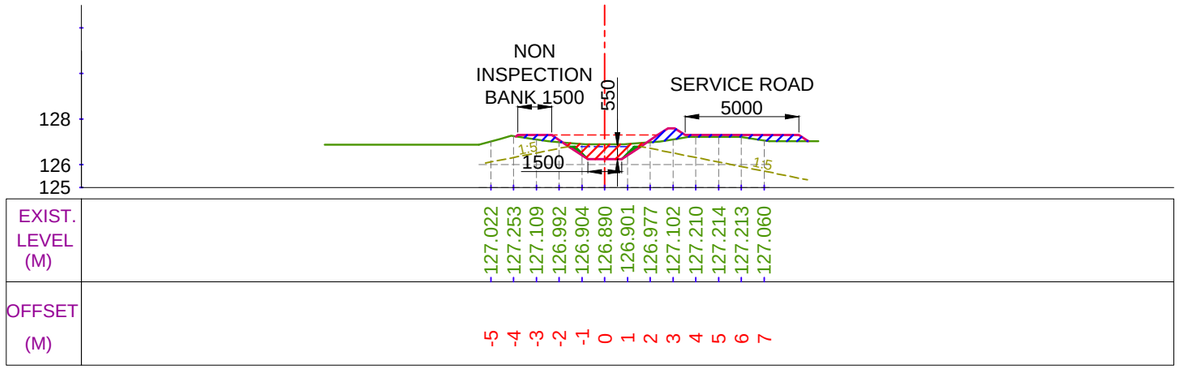
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

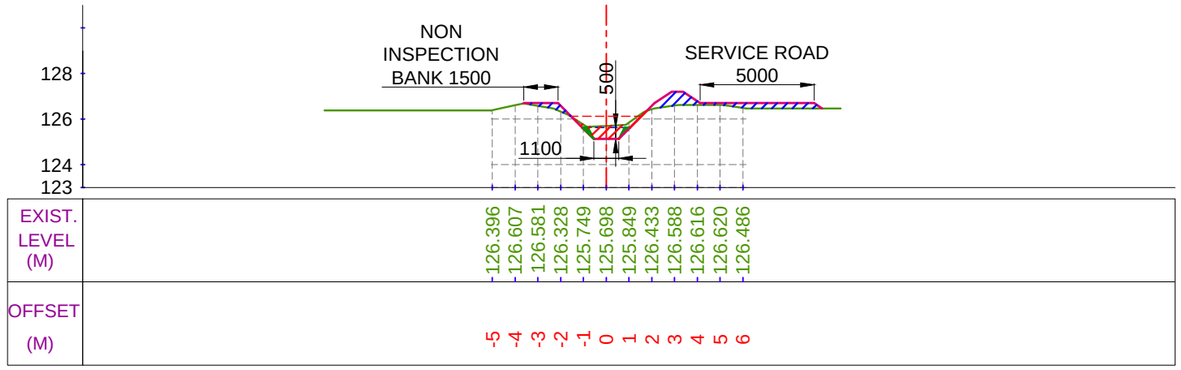
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 13 of 18

X SECTION OF PANTI MINOR



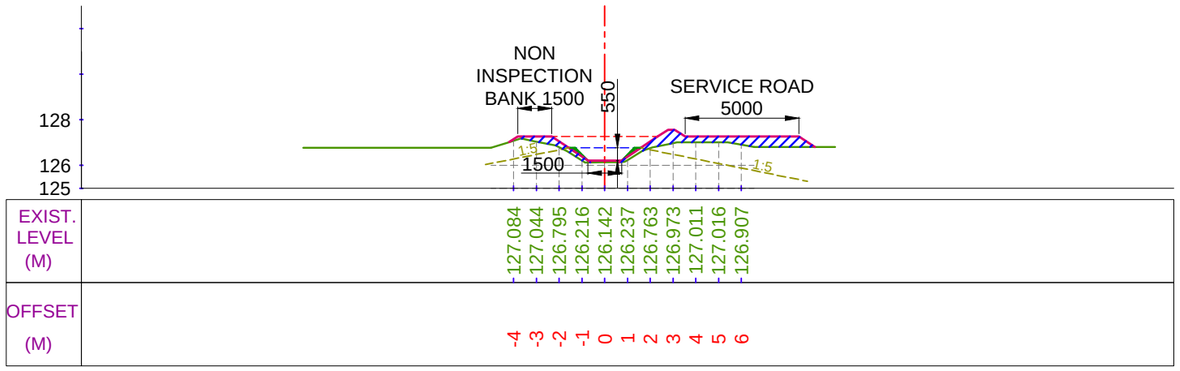
CUTTING AREA (SQ.M) = 1.503
FILLING AREA (SQ.M) = 1.717

CH. (KM):- 5+300
DESIGNED BED LEVEL =126.247 M



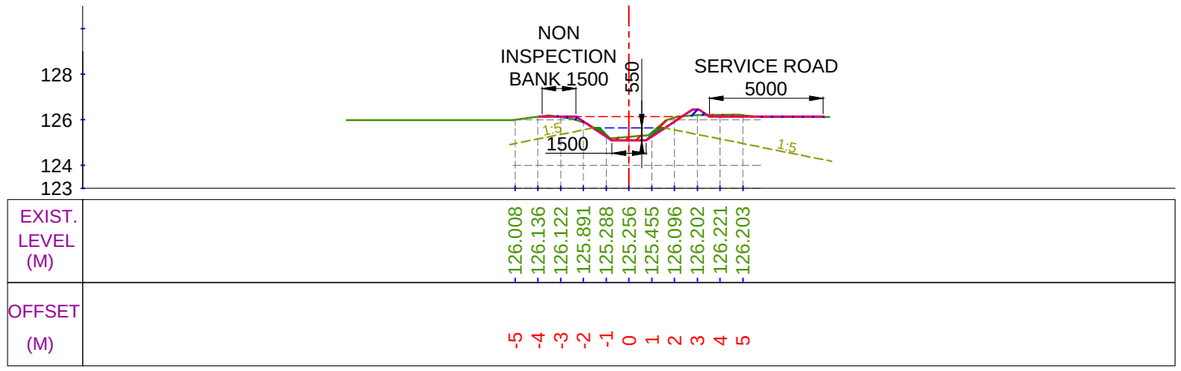
CUTTING AREA (SQ.M) = 1.008
FILLING AREA (SQ.M) = 2.164

CH. (KM):- 5+500
DESIGNED BED LEVEL =125.123 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.577

CH. (KM):- 5+400
DESIGNED BED LEVEL =126.218 M



CUTTING AREA (SQ.M) = 0.644
FILLING AREA (SQ.M) = 0.324

CH. (KM):- 5+600
DESIGNED BED LEVEL =125.094 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

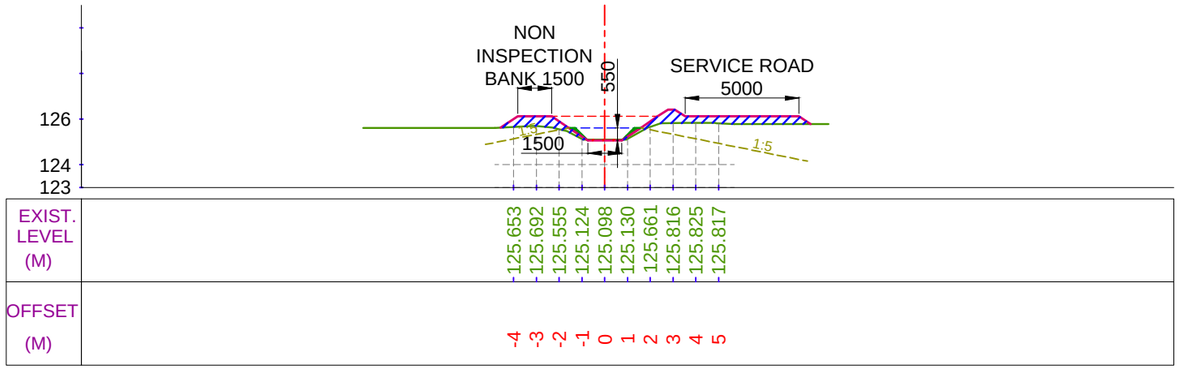
Prepared by :-

WAPCOS LTD.

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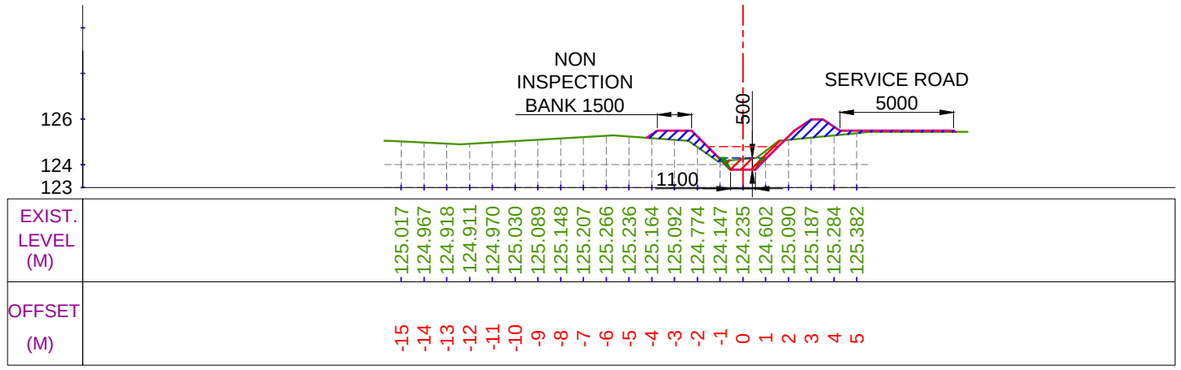
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 14 of 18

X SECTION OF PANTI MINOR



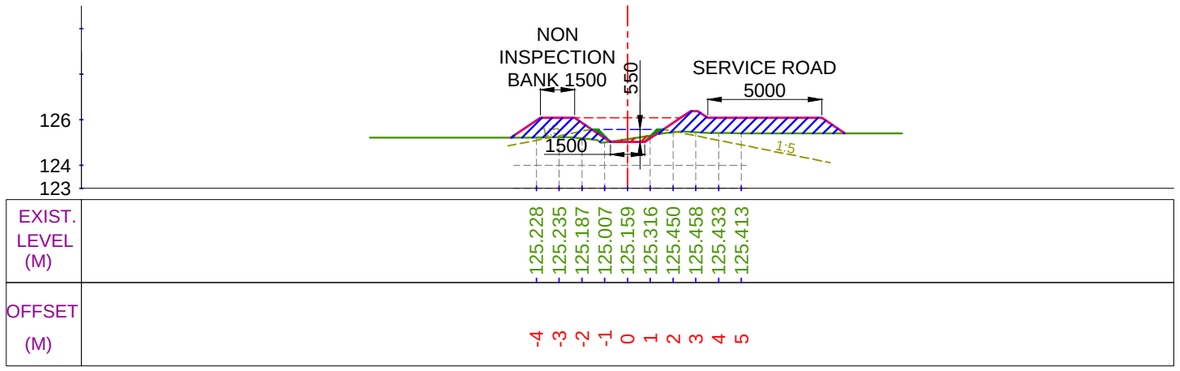
CUTTING AREA (SQ.M) = 0.051
FILLING AREA (SQ.M) = 3.721

CH. (KM):- 5+700
DESIGNED BED LEVEL =125.065 M



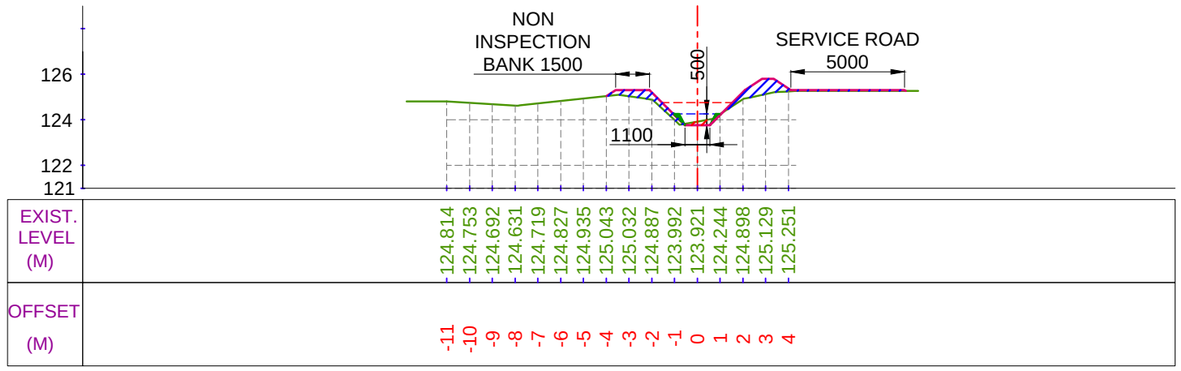
CUTTING AREA (SQ.M) = 0.857
FILLING AREA (SQ.M) = 2.738

CH. (KM):- 5+900
DESIGNED BED LEVEL =123.788 M



CUTTING AREA (SQ.M) = 0.217
FILLING AREA (SQ.M) = 7.553

CH. (KM):- 5+800
DESIGNED BED LEVEL =125.037 M



CUTTING AREA (SQ.M) = 0.196
FILLING AREA (SQ.M) = 2.168

CH. (KM):- 6+000
DESIGNED BED LEVEL =123.760 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

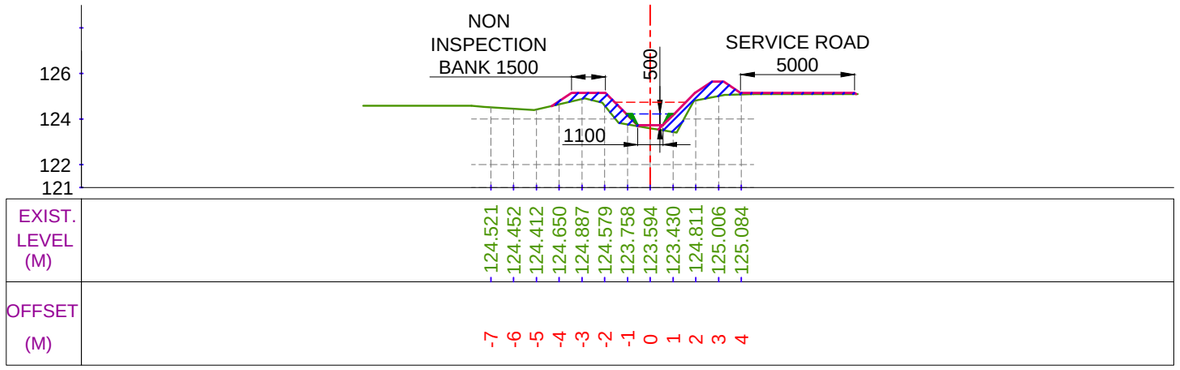
Prepared by :-

WAPCOS LTD.

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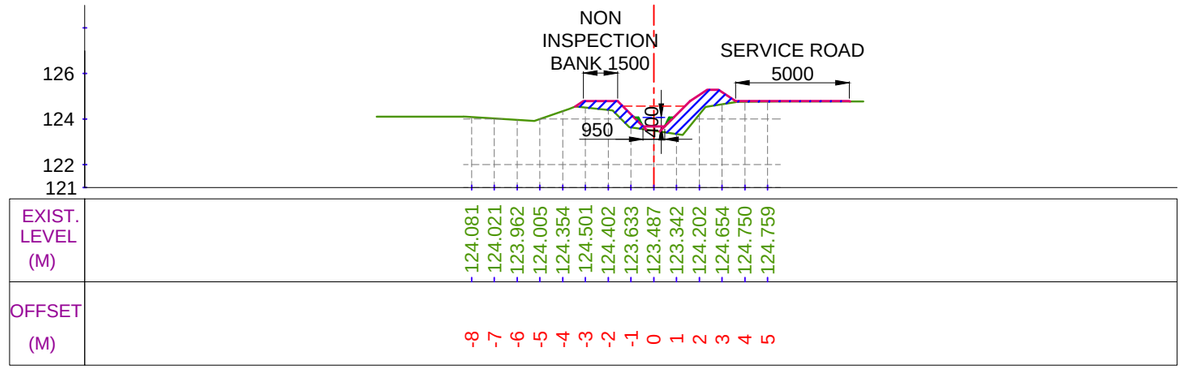
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 15 of 18

X SECTION OF PANTI MINOR



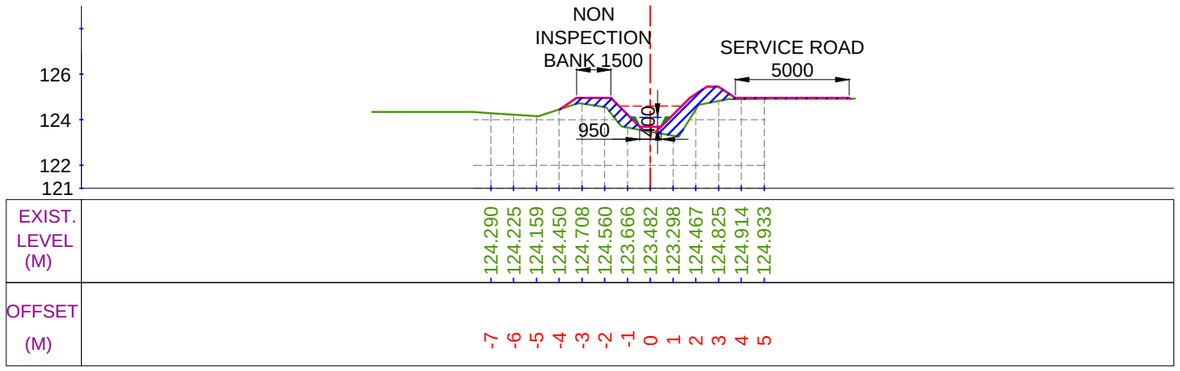
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.443

CH. (KM):- 6+100
DESIGNED BED LEVEL =123.731 M



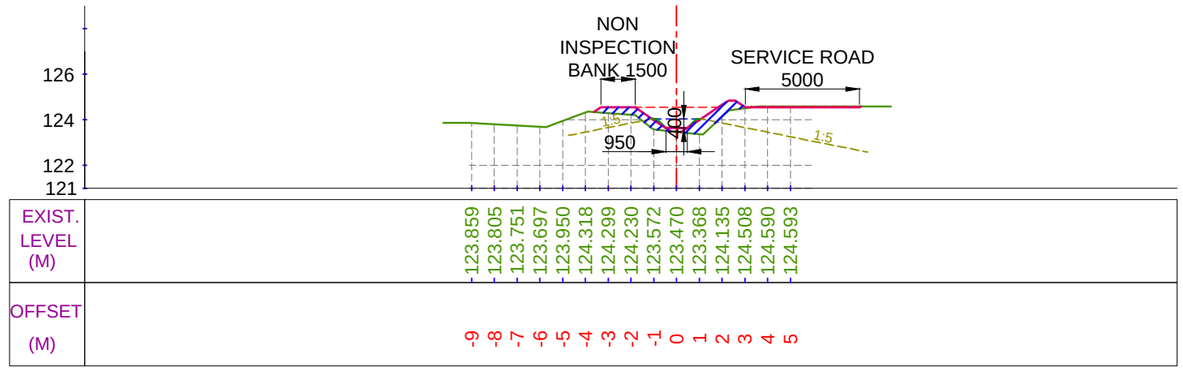
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.498

CH. (KM):- 6+300
DESIGNED BED LEVEL = 123.674 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.721

CH. (KM):- 6+200
DESIGNED BED LEVEL =123.703 M



CUTTING AREA (SQ.M) = 0.225
FILLING AREA (SQ.M) = 2.183

CH. (KM):- 6+400
DESIGNED BED LEVEL = 123.645 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

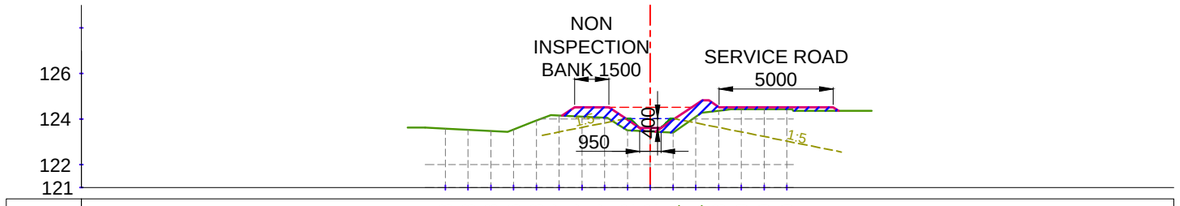
Prepared by :-

WAPCOS LTD.

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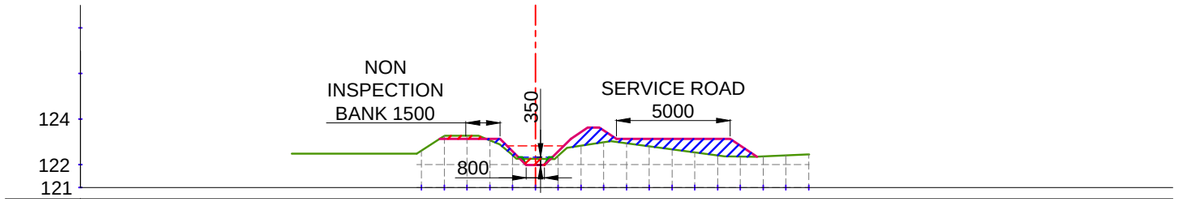
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 16 of 18

X SECTION OF PANTI MINOR



| | | |

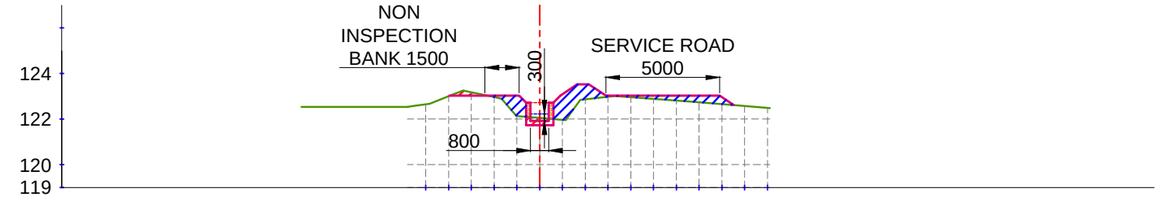
X SECTION OF PANTI MINOR



EXIST. LEVEL (M)	122.614	123.261	123.266	123.066	122.405	122.255	122.389	122.831	122.985	122.944	122.810	122.676	122.542	122.408	122.353	122.359	122.405	122.454					
OFFSET (M)	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12					

CUTTING AREA (SQ.M) = 0.502
FILLING AREA (SQ.M) = 4.213

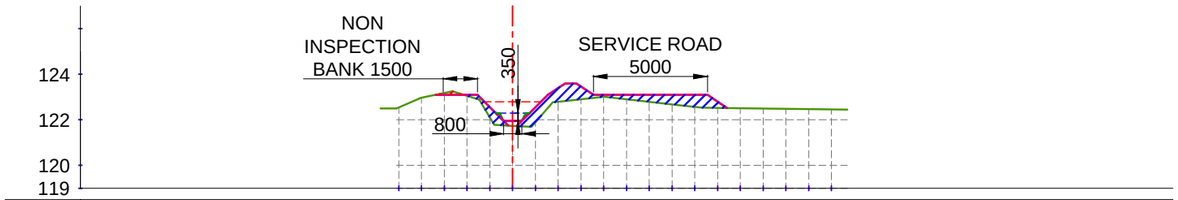
CH. (KM):- 6+900
DESIGNED BED LEVEL =121.979 M



EXIST. LEVEL (M)	122.645	123.003	123.177	122.961	122.135	122.052	121.968	122.860	122.976	122.961	122.889	122.817	122.743	122.658	122.573	122.488							
OFFSET (M)	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10							

CUTTING AREA (SQ.M) = 0.595
FILLING AREA (SQ.M) = 3.318

CH. (KM):- 7+100
DESIGNED BED LEVEL =121.921 M



EXIST. LEVEL (M)	122.548	122.972	123.174	123.053	122.094	121.738	121.890	122.798	122.905	123.011	122.902	122.791	122.681	122.570	122.526	122.512	122.499	122.486	122.472	122.459			
OFFSET (M)	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14			

CUTTING AREA (SQ.M) = 0.089
FILLING AREA (SQ.M) = 4.126

CH. (KM):- 7+000
DESIGNED BED LEVEL = 121.950 M

LEGEND

CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

Prepared by :-

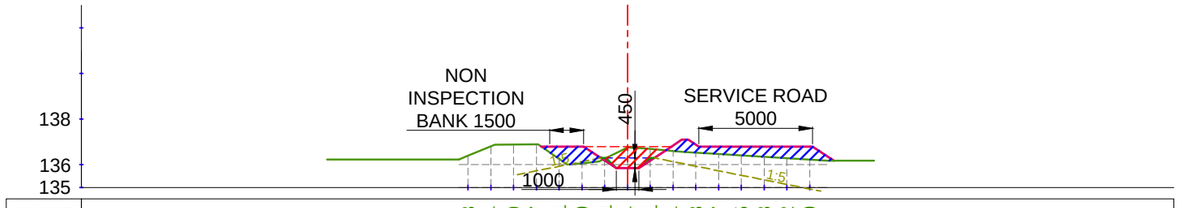
WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ XSEC- 18 of 18

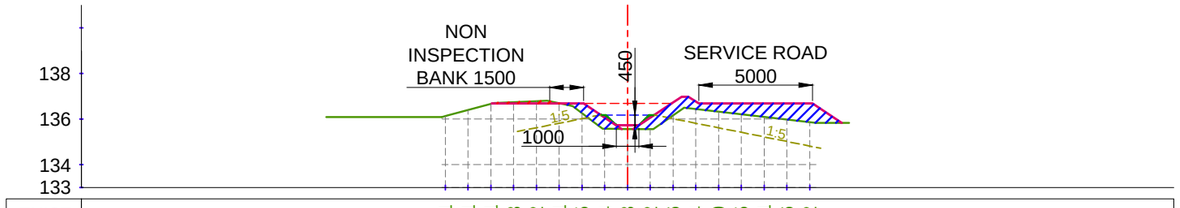
CROSS SECTION OF CHAPRI MINOR

X SECTION OF CHAPRI MINOR



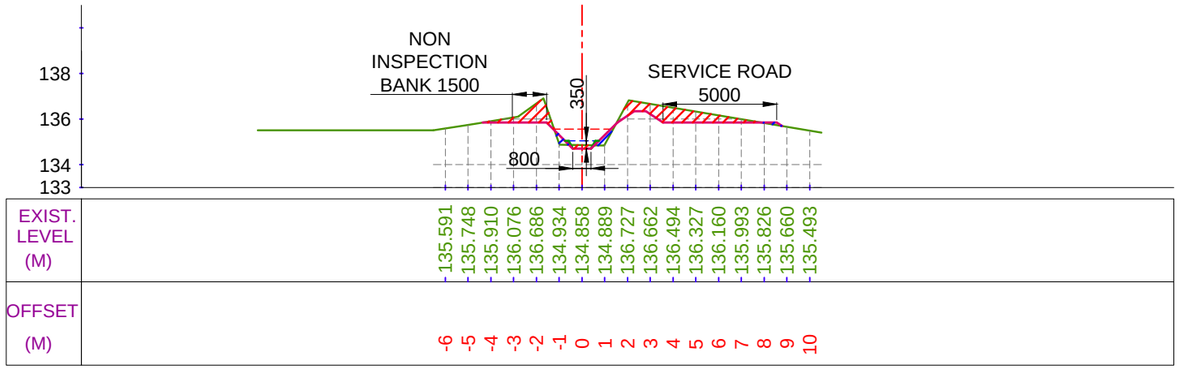
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X SECTION OF CHAPRI MINOR



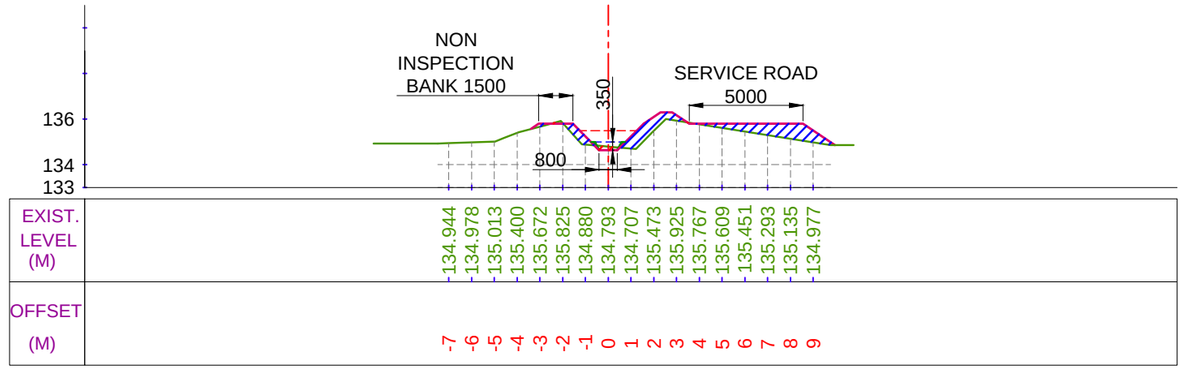
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X SECTION OF CHAPRI MINOR



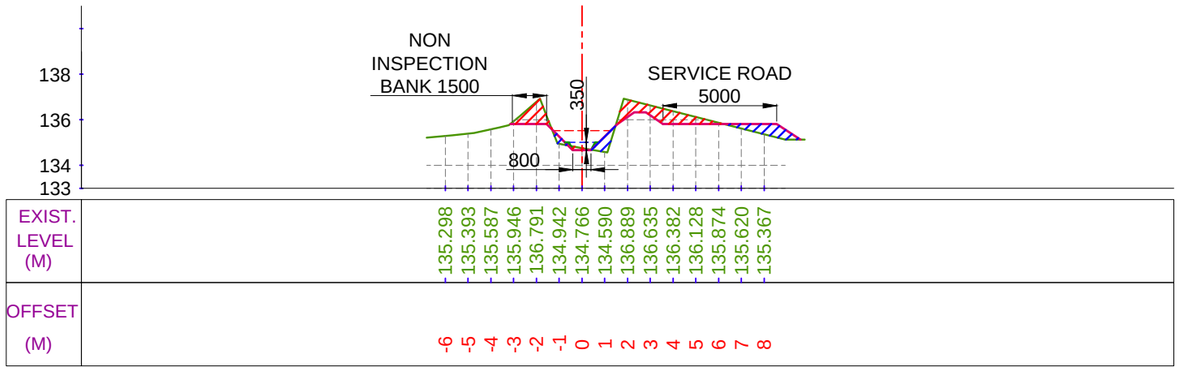
CUTTING AREA (SQ.M) = 3.752
FILLING AREA (SQ.M) = 0.387

CH. (KM):- 0+900
DESIGNED BED LEVEL =134.701 M



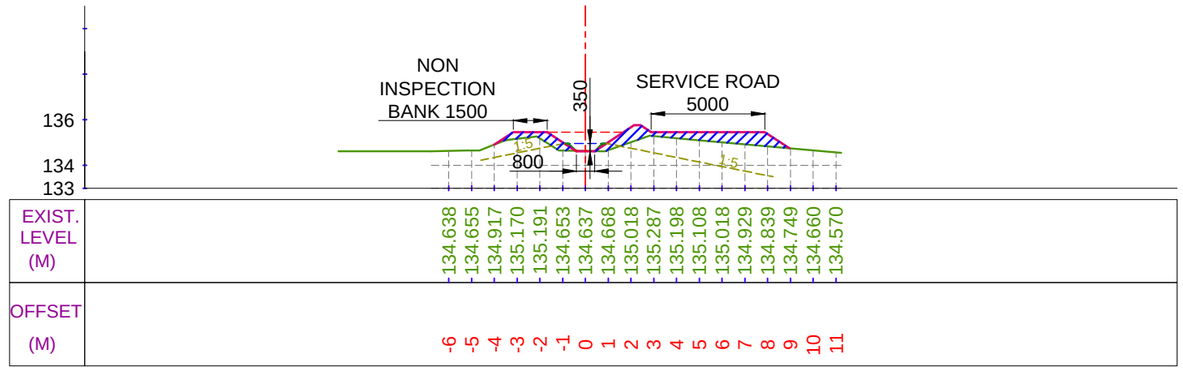
CUTTING AREA (SQ.M) = 0.174
FILLING AREA (SQ.M) = 4.102

CH. (KM):- 1+100
DESIGNED BED LEVEL =134.644 M



CUTTING AREA (SQ.M) = 3.034
FILLING AREA (SQ.M) = 1.613

CH. (KM):- 1+000
DESIGNED BED LEVEL = 134.673 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.294

CH. (KM):- 1+200
DESIGNED BED LEVEL =134.616 M

LEGEND

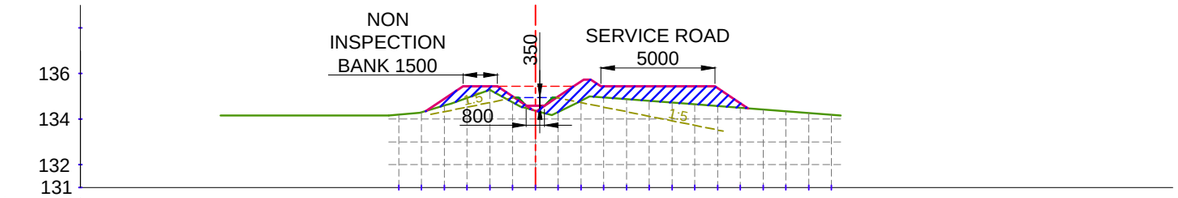
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC- 3 of 6

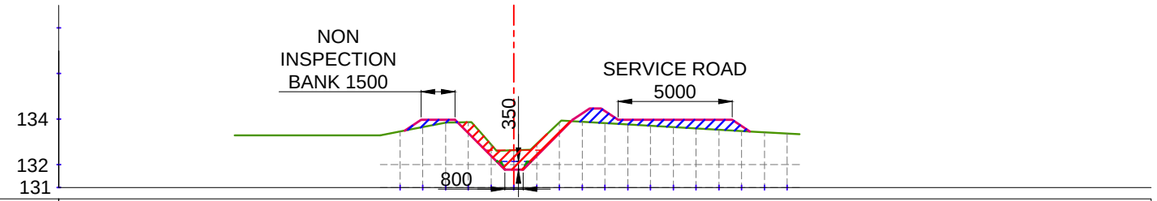
X SECTION OF CHAPRI MINOR



EXIST. LEVEL (M)	134.196	134.289	134.593	134.928	135.274	134.728	134.364	134.307	134.801	134.945	134.869	134.794	134.718	134.643	134.568	134.492	134.417	134.341	134.266	134.191					
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13					

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.103

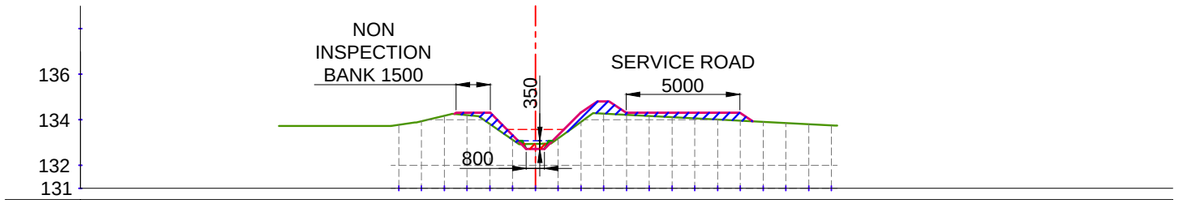
CH. (KM):- 1+300
DESIGNED BED LEVEL =134.587 M



EXIST. LEVEL (M)	133.452	133.647	133.844	133.863	132.888	132.627	132.908	133.861	133.878	133.821	133.764	133.706	133.649	133.592	133.535	133.478	133.421	133.364							
OFFSET (M)	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12							

CUTTING AREA (SQ.M) = 2.627
FILLING AREA (SQ.M) = 3.095

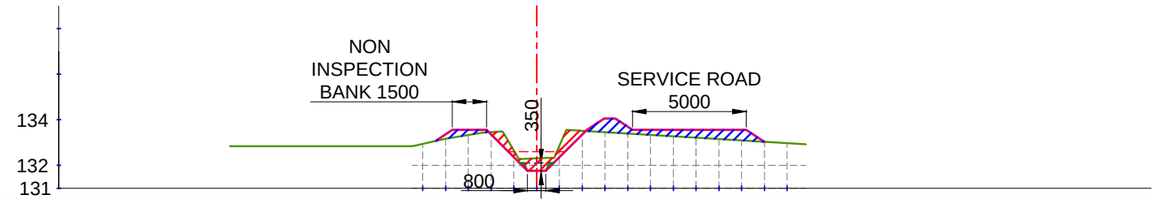
CH. (KM):- 1+500
DESIGNED BED LEVEL =131.788 M



EXIST. LEVEL (M)	133.776	133.946	134.184	134.208	133.820	133.130	132.946	133.187	133.916	134.280	134.228	134.176	134.124	134.071	134.019	133.967	133.915	133.862	133.810	133.758					
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13					

CUTTING AREA (SQ.M) = 0.195
FILLING AREA (SQ.M) = 2.914

CH. (KM):- 1+400
DESIGNED BED LEVEL =132.731 M



EXIST. LEVEL (M)	132.951	133.168	133.332	133.464	132.642	132.309	132.862	133.513	133.452	133.392	133.332	133.272	133.212	133.152	133.092	133.031	132.971								
OFFSET (M)	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11								

CUTTING AREA (SQ.M) = 1.783
FILLING AREA (SQ.M) = 3.202

CH. (KM):- 1+600
DESIGNED BED LEVEL = 131.759 M

LEGEND

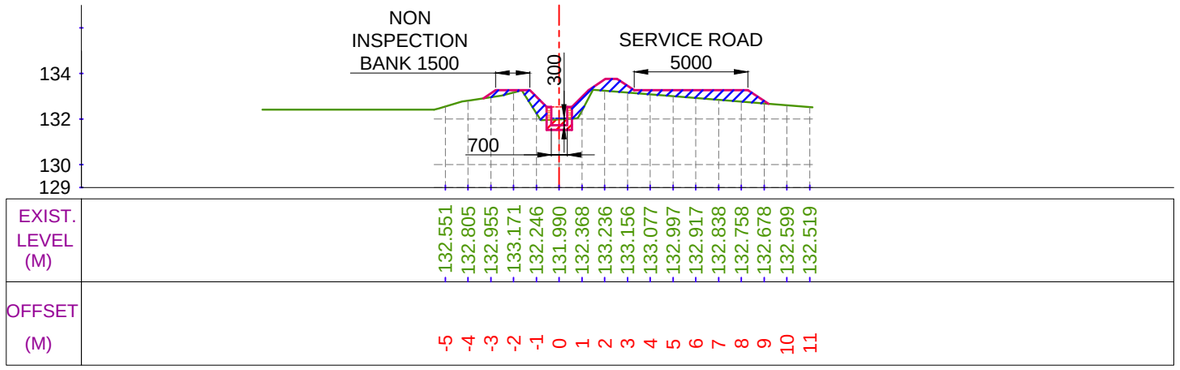
	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

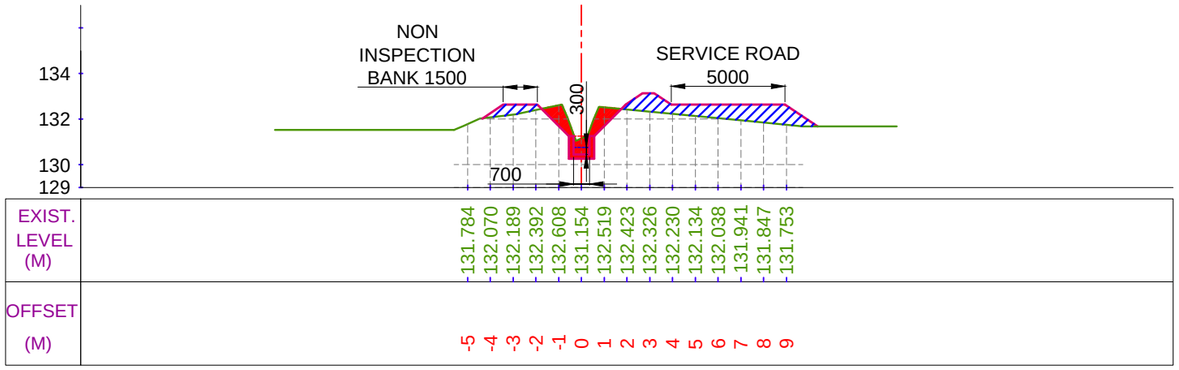
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC- 4 of 6

X SECTION OF CHAPRI MINOR



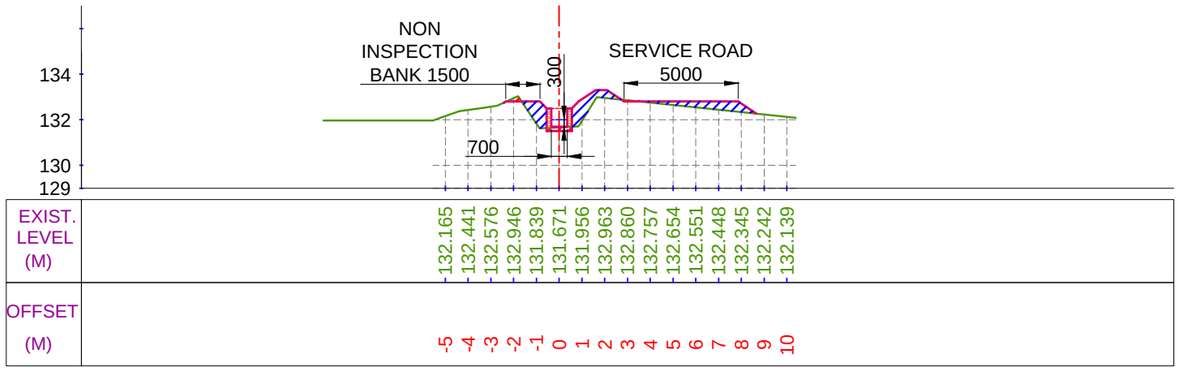
CUTTING AREA (SQ.M) = 0.505
FILLING AREA (SQ.M) = 3.986

CH. (KM):- 1+700
DESIGNED BED LEVEL = 131.731 M



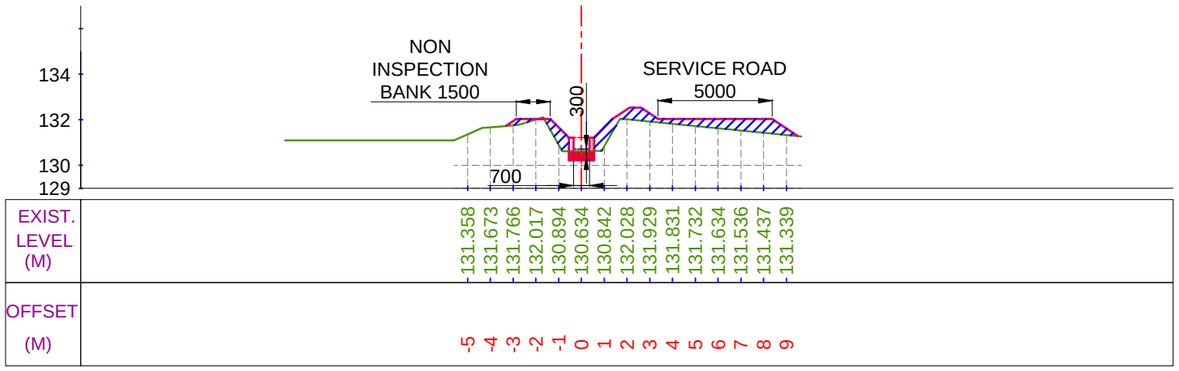
CUTTING AREA (SQ.M) = 2.685
FILLING AREA (SQ.M) = 5.945

CH. (KM):- 1+900
DESIGNED BED LEVEL = 130.454 M



CUTTING AREA (SQ.M) = 0.263
FILLING AREA (SQ.M) = 3.006

CH. (KM):- 1+800
DESIGNED BED LEVEL = 131.702 M



CUTTING AREA (SQ.M) = 0.461
FILLING AREA (SQ.M) = 4.602

CH. (KM):- 2+000
DESIGNED BED LEVEL = 130.425 M

LEGEND

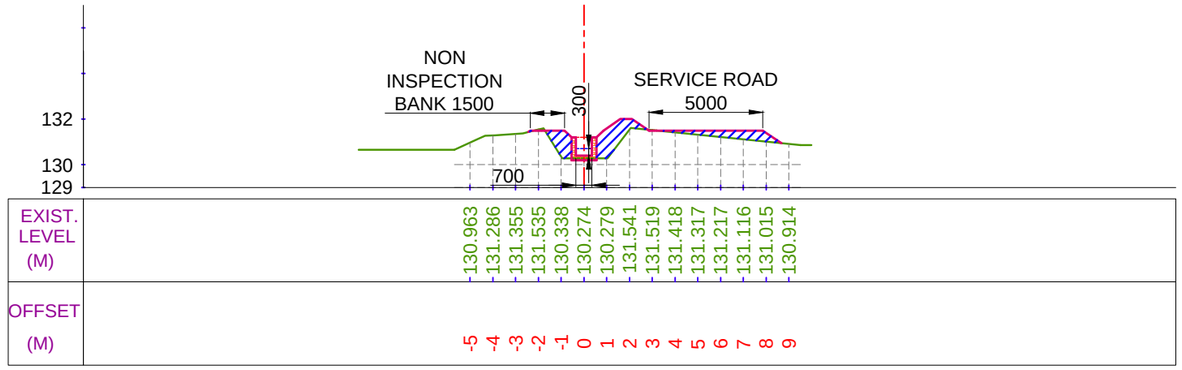
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

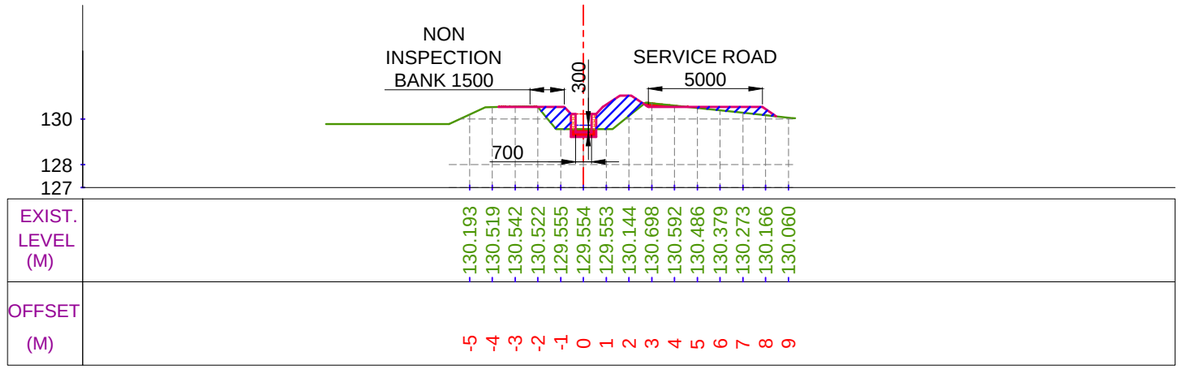
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC- 5 of 6

X SECTION OF CHAPRI MINOR



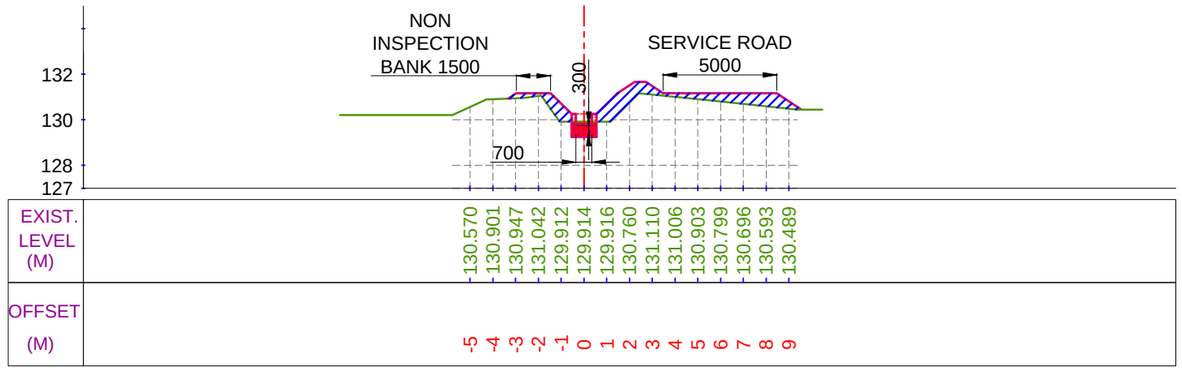
CUTTING AREA (SQ.M) = 0.113
FILLING AREA (SQ.M) = 3.869

CH. (KM):- 2+100
DESIGNED BED LEVEL = 130.397 M



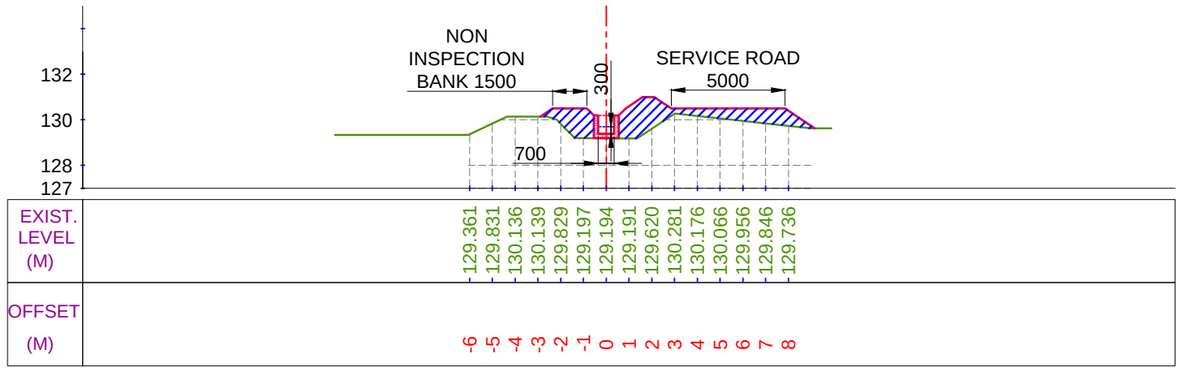
CUTTING AREA (SQ.M) = 0.580
FILLING AREA (SQ.M) = 3.474

CH. (KM):- 2+300
DESIGNED BED LEVEL = 129.425 M



CUTTING AREA (SQ.M) = 0.726
FILLING AREA (SQ.M) = 5.018

CH. (KM):- 2+200
DESIGNED BED LEVEL = 129.454 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.628

CH. (KM):- 2+400
DESIGNED BED LEVEL = 129.397 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

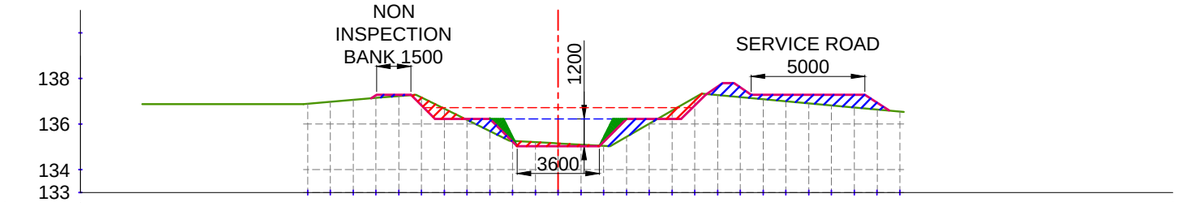
WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF CHAPRI MR. (OFFTAKE FROM RD - 6+060 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ XSEC- 6 of 6

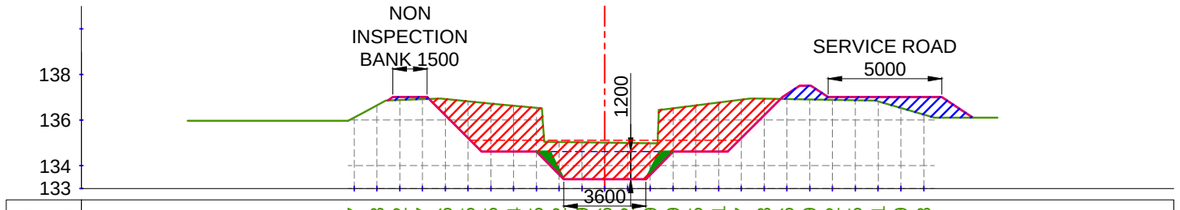
CROSS SECTION OF BISHUNPUR SUB DY.

X SECTION OF BISHUNPUR SUB DY.



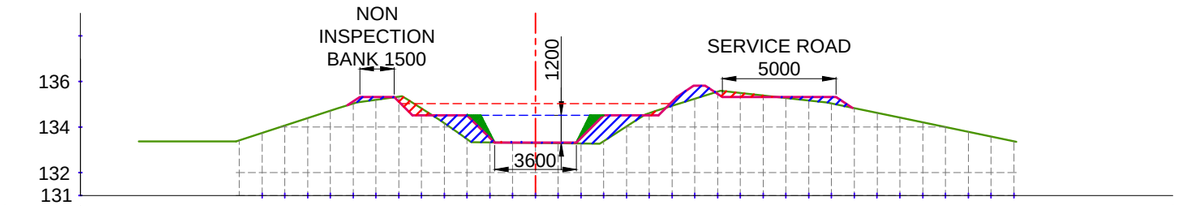
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X SECTION OF BISHUNPUR SUB DY.



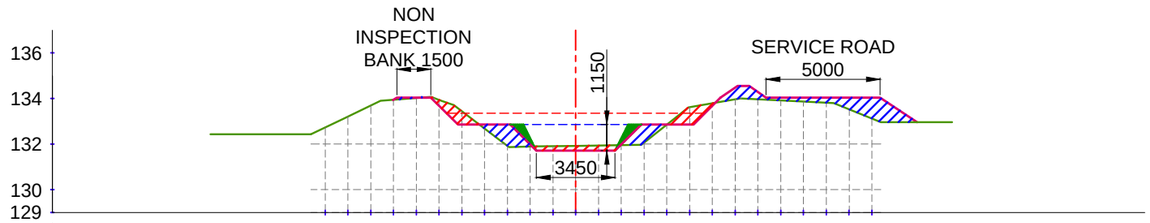
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X SECTION OF BISHUNPUR SUB DY.



| | | |

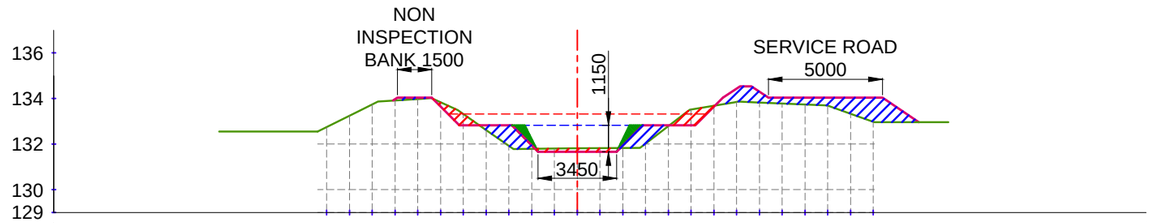
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	132.735	133.214	133.693	133.939	134.013	133.937	133.433	132.681	131.928	131.888	131.905	131.923	131.940	131.957	132.069	132.862	133.622	133.793	133.965	133.965	133.915	133.866	133.816	133.523	133.116
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 2.476
FILLING AREA (SQ.M) = 5.680

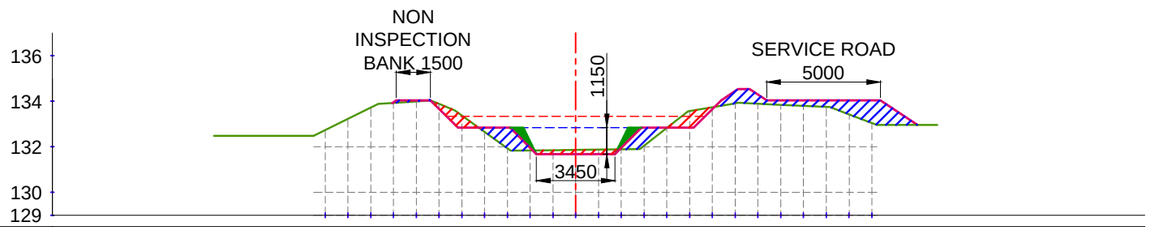
CH. (KM):- 1+300
DESIGNED BED LEVEL = 131.709 M



EXIST. LEVEL (M)	132.742	133.243	133.744	133.916	133.981	133.826	133.315	132.618	131.922	131.793	131.801	131.808	131.816	131.823	132.014	132.785	133.517	133.684	133.851	133.819	133.776	133.732	133.683	133.333	132.983
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 1.954
FILLING AREA (SQ.M) = 6.857

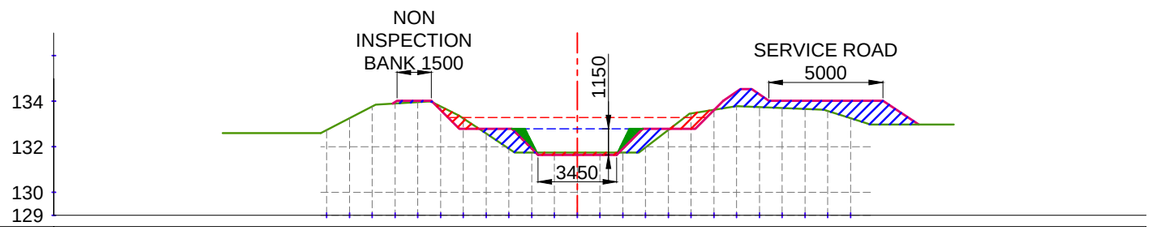
CH. (KM):- 1+500
DESIGNED BED LEVEL = 131.665 M



EXIST. LEVEL (M)	132.740	133.229	133.718	133.928	133.997	133.882	133.376	132.651	131.927	131.841	131.853	131.865	131.878	131.890	132.042	132.824	133.569	133.739	133.908	133.892	133.845	133.798	133.752	133.423	133.045
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 2.214
FILLING AREA (SQ.M) = 6.297

CH. (KM):- 1+400
DESIGNED BED LEVEL = 131.687 M



EXIST. LEVEL (M)	132.742	133.258	133.773	133.903	133.964	133.770	133.250	132.582	131.914	131.746	131.749	131.751	131.753	131.756	131.985	132.745	133.465	133.629	133.788	133.748	133.707	133.666	133.574	133.252
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 1.703
FILLING AREA (SQ.M) = 7.383

CH. (KM):- 1+600
DESIGNED BED LEVEL = 131.642 M

LEGEND

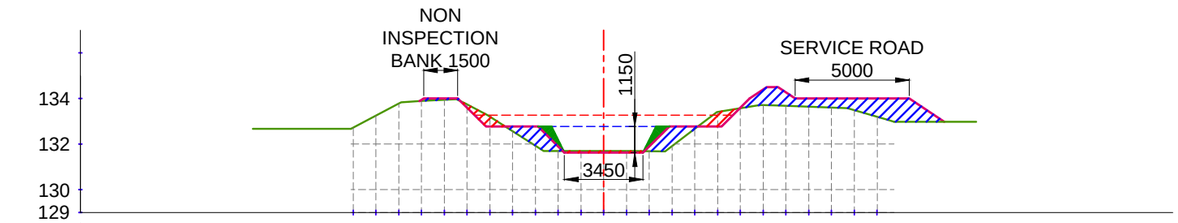
CUT AREA	EXISTING BED LINE
	F.S.L.
FILL AREA	DESIGNED BED LINE
	H.G. LINE

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 4 of 38

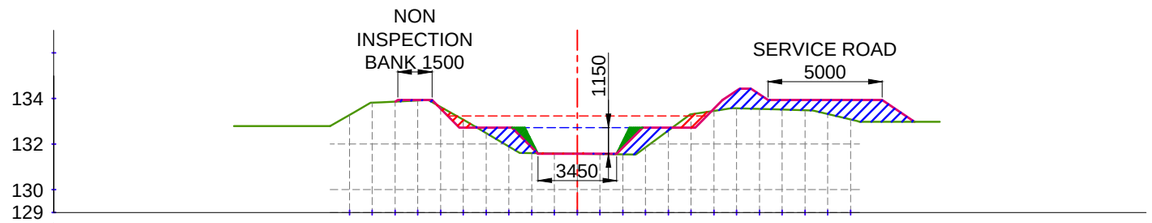
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	132.717	133.249	133.781	133.888	133.944	133.736	133.210	132.570	131.930	131.700	131.697	131.694	131.691	131.688	131.922	132.673	133.406	133.567	133.715	133.678	133.641	133.603	133.487	133.194
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 1.459
FILLING AREA (SQ.M) = 7.664

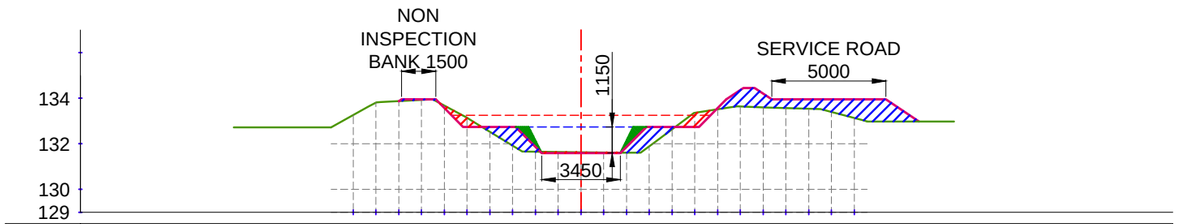
CH. (KM):- 1+700
DESIGNED BED LEVEL = 131.620 M



EXIST. LEVEL (M)	133.275	133.812	133.861	133.909	133.622	133.062	132.478	131.893	131.609	131.594	131.580	131.566	131.551	131.862	132.594	133.302	133.457	133.568	133.538	133.507	133.477	133.313	133.078	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 0.971
FILLING AREA (SQ.M) = 8.038

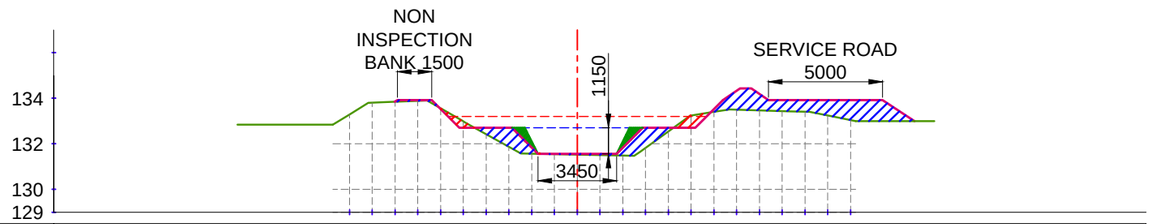
CH. (KM):- 1+900
DESIGNED BED LEVEL = 131.576 M



EXIST. LEVEL (M)	133.262	133.815	133.875	133.927	133.679	133.138	132.525	131.913	131.654	131.645	131.637	131.629	131.620	131.893	132.634	133.354	133.512	133.641	133.607	133.574	133.540	133.395	133.131	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 1.205
FILLING AREA (SQ.M) = 7.692

CH. (KM):- 1+800
DESIGNED BED LEVEL = 131.598 M



EXIST. LEVEL (M)	133.287	133.801	133.846	133.891	133.564	132.985	132.427	131.870	131.564	131.543	131.523	131.503	131.482	131.831	132.554	133.250	133.401	133.495	133.469	133.442	133.416	133.242	133.035	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 0.820
FILLING AREA (SQ.M) = 8.626

CH. (KM):- 2+000
DESIGNED BED LEVEL = 131.554 M

LEGEND

CUT AREA

FILL AREA

EXISTING BED LINE

F.S.L.

DESIGNED BED LINE

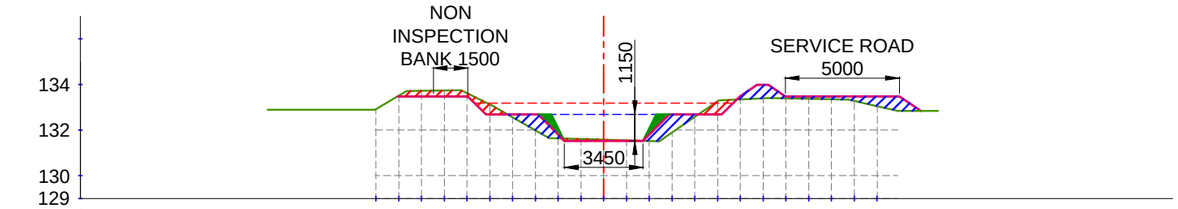
H.G. LINE

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 350

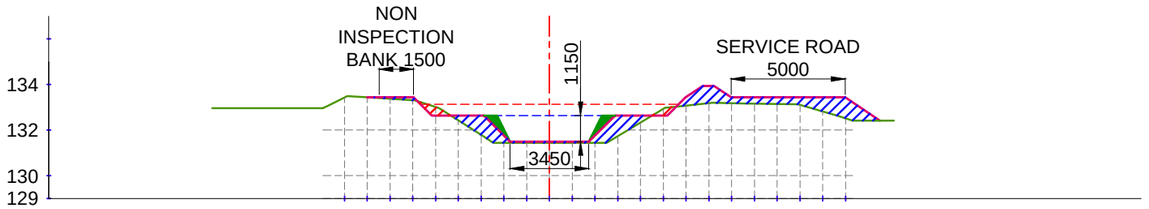
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	132.912	133.510	133.723	133.738	133.620	133.121	132.559	131.989	131.637	131.610	131.582	131.555	131.527	131.898	132.582	133.267	133.347	133.395	133.390	133.367	133.345	133.279	133.053	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 1.967
FILLING AREA (SQ.M) = 4.497

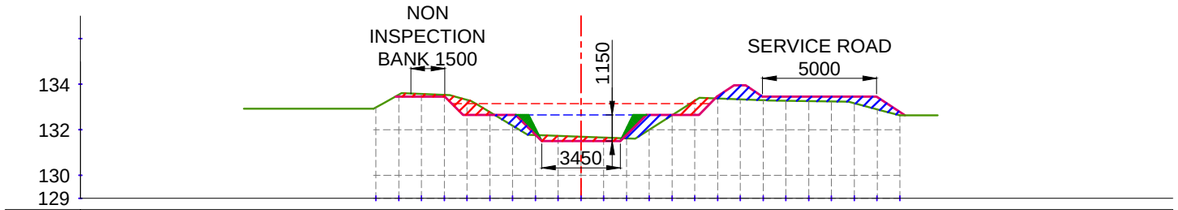
CH. (KM):- 2+100
DESIGNED BED LEVEL =131.531 M



EXIST. LEVEL (M)	133.433	133.436	133.370	133.304	133.011	132.420	131.779	131.437	131.437	131.438	131.439	131.439	131.733	132.334	132.934	133.072	133.174	133.178	133.163	133.148	133.107	132.810	132.513	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 0.543
FILLING AREA (SQ.M) = 7.253

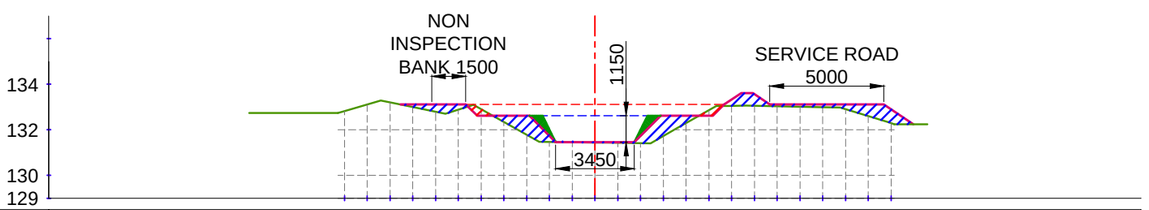
CH. (KM):- 2+300
DESIGNED BED LEVEL = 131.487 M



EXIST. LEVEL (M)	132.984	133.536	133.571	133.532	133.319	132.774	132.174	131.765	131.730	131.694	131.658	131.623	132.007	132.648	133.290	133.380	133.341	133.302	133.282	133.263	133.244	133.161	132.897	132.634	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	

CUTTING AREA (SQ.M) = 2.455
FILLING AREA (SQ.M) = 3.896

CH. (KM):- 2+200
DESIGNED BED LEVEL = 131.509 M



EXIST. LEVEL (M)	132.826	133.118	133.210	133.003	132.796	132.883	132.904	132.346	131.788	131.470	131.456	131.442	131.428	131.414	131.725	132.294	132.863	133.052	133.054	133.035	133.016	132.998	132.908	132.600	132.291
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.422
FILLING AREA (SQ.M) = 5.945

CH. (KM):- 2+400
DESIGNED BED LEVEL = 131.465 M

LEGEND

CUT AREA

FILL AREA

EXISTING BED LINE

F.S.L.

DESIGNED BED LINE

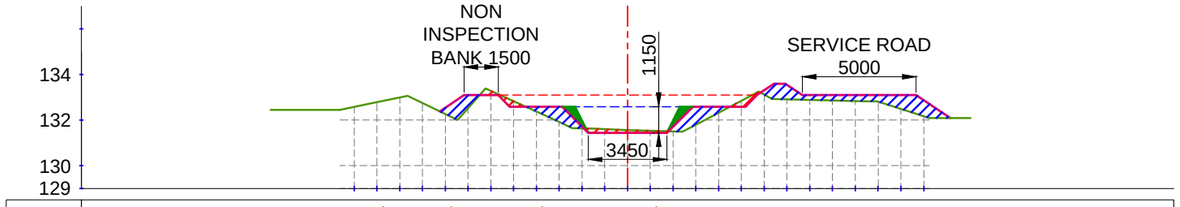
H.G. LINE

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 6 of 38

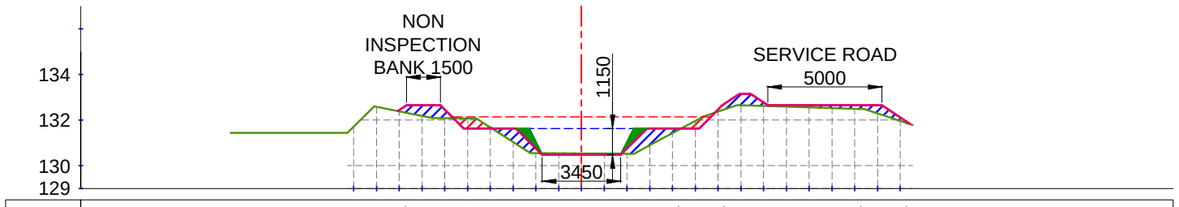
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	132.573	132.781	132.990	132.747	132.261	132.529	133.285	132.828	132.371	131.914	131.634	131.600	131.565	131.531	131.497	131.796	132.323	132.850	133.116	132.909	132.886	132.862	132.838	132.803	132.489	132.175
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 1.019
FILLING AREA (SQ.M) = 6.374

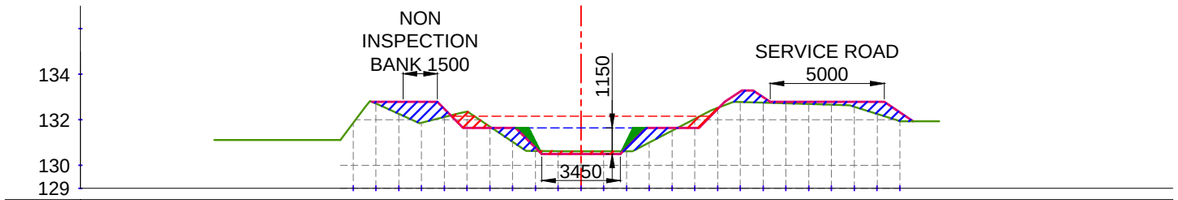
CH. (KM):- 2+500
DESIGNED BED LEVEL = 131.442 M



EXIST. LEVEL (M)	131.708	132.583	132.381	132.178	132.084	132.079	131.676	131.038	130.555	130.547	130.540	130.532	130.525	130.898	131.431	131.963	132.371	132.647	132.616	132.585	132.553	132.522	132.491	132.286	131.961
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

CUTTING AREA (SQ.M) = 1.021
FILLING AREA (SQ.M) = 4.521

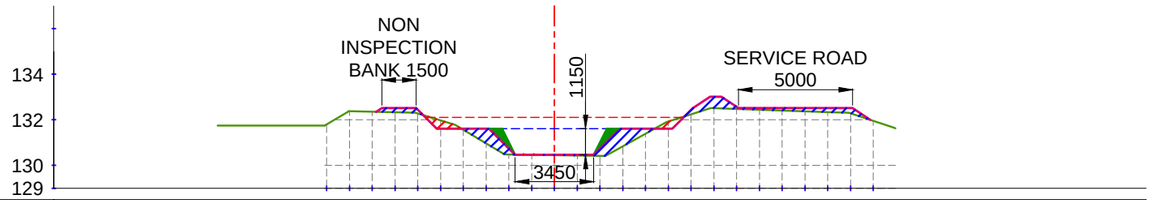
CH. (KM):- 2+700
DESIGNED BED LEVEL = 130.483 M



EXIST. LEVEL (M)	131.860	132.712	132.264	131.878	132.124	132.371	131.703	131.033	130.632	130.630	130.628	130.627	130.625	131.010	131.527	132.044	132.521	132.780	132.752	132.724	132.697	132.669	132.581	132.261	131.941
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

CUTTING AREA (SQ.M) = 1.571
FILLING AREA (SQ.M) = 5.659

CH. (KM):- 2+600
DESIGNED BED LEVEL = 130.505 M



EXIST. LEVEL (M)	131.811	132.373	132.354	132.334	132.285	131.978	131.563	130.963	130.479	130.465	130.451	130.437	130.424	130.846	131.399	131.931	132.244	132.511	132.477	132.443	132.409	132.375	132.341	132.284	131.952
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

CUTTING AREA (SQ.M) = 0.666
FILLING AREA (SQ.M) = 4.054

CH. (KM):- 2+800
DESIGNED BED LEVEL = 130.461 M

LEGEND

CUT AREA

FILL AREA

EXISTING BED LINE

F.S.L.

DESIGNED BED LINE

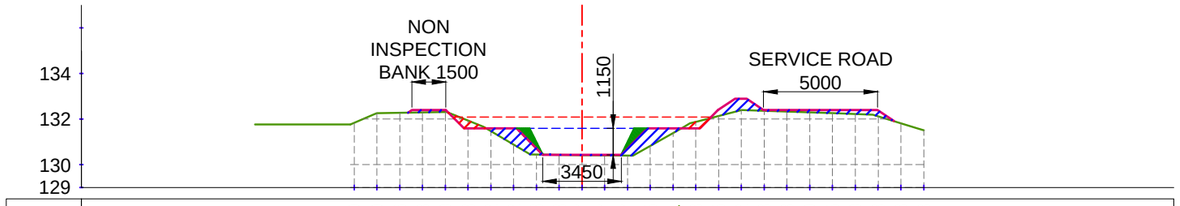
H.G. LINE

Prepared by :-

WAPCOS LTD.

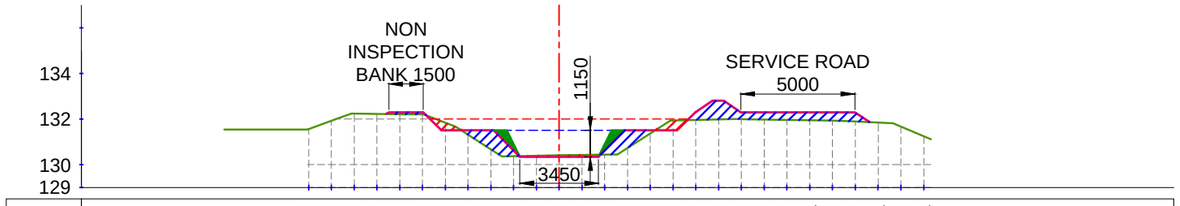
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 7 of 38

X SECTION OF BISHUNPUR SUB DY.



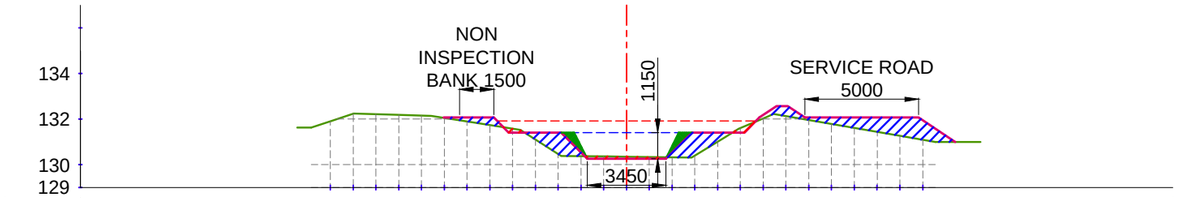
| | | |

X SECTION OF BISHUNPUR SUB DY.



| | | |

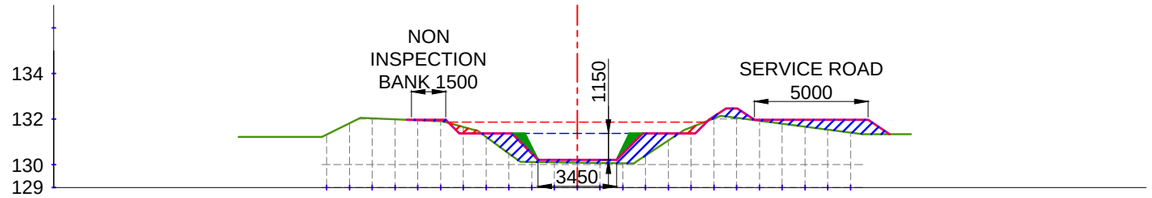
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	131.905	132.242	132.219	132.189	132.160	132.057	131.899	131.741	131.583	131.103	130.463	130.370	130.357	130.344	130.332	130.319	130.392	131.007	131.607	132.030	132.126	131.953	131.781	131.608	131.435	131.262	131.089
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.547
FILLING AREA (SQ.M) = 7.332

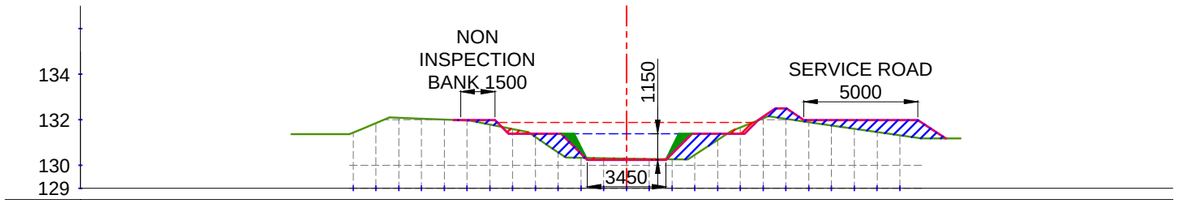
CH. (KM):- 3+700
DESIGNED BED LEVEL = 130.261 M



EXIST. LEVEL (M)	131.326	131.823	132.030	131.987	131.944	131.900	131.652	131.213	130.486	130.117	130.104	130.091	130.078	130.065	130.394	131.059	131.639	132.028	132.048	131.920	131.792	131.664	131.536	131.409	
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 0.498
FILLING AREA (SQ.M) = 5.936

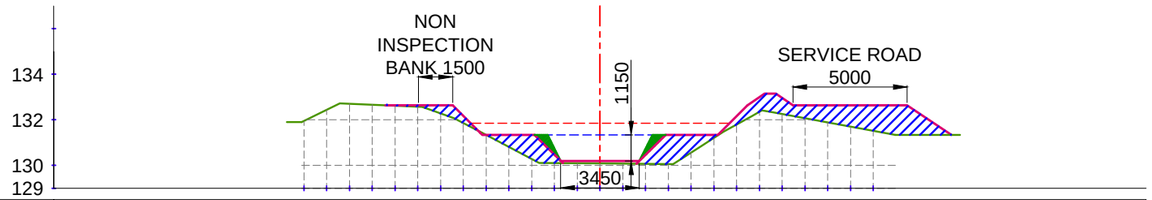
CH. (KM):- 3+900
DESIGNED BED LEVEL = 130.216 M



EXIST. LEVEL (M)	131.436	131.854	132.086	132.049	132.012	131.975	131.793	131.593	131.245	130.571	130.332	130.319	130.305	130.291	130.277	130.475	131.120	131.668	132.071	132.046	131.901	131.756	131.610	131.465	131.320
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.647
FILLING AREA (SQ.M) = 5.873

CH. (KM):- 3+800
DESIGNED BED LEVEL = 130.239 M



EXIST. LEVEL (M)	131.946	132.443	132.712	132.668	132.625	132.581	132.282	131.855	131.338	130.813	130.284	130.105	130.096	130.086	130.076	130.067	130.057	130.567	131.213	131.804	132.356	132.253	132.070	131.886	131.703	131.519
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.014
FILLING AREA (SQ.M) = 12.920

CH. (KM):- 4+000
DESIGNED BED LEVEL = 130.194 M

LEGEND

CUT AREA

FILL AREA

EXISTING BED LINE

F.S.L.

DESIGNED BED LINE

H.G. LINE

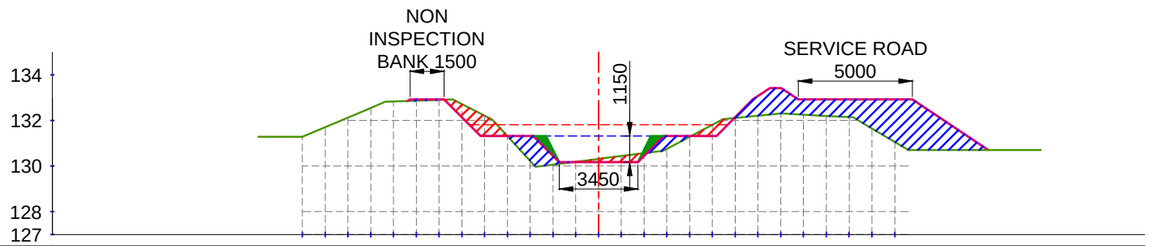
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 10 of 38

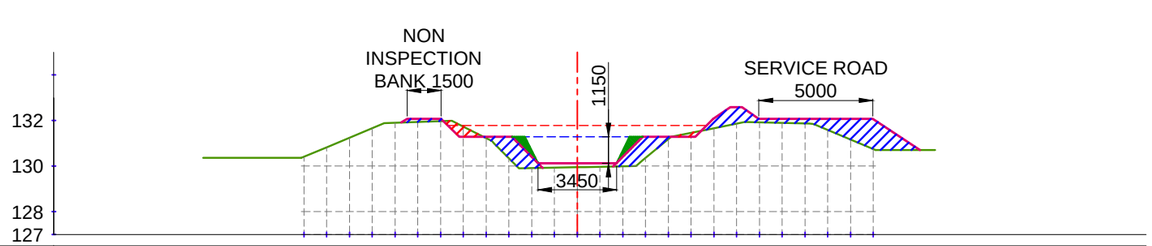
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	131.292	131.711	132.130	132.549	132.828	132.865	132.901	132.718	132.206	131.318	130.223	130.068	130.192	130.315	130.438	130.561	130.752	131.283	131.813	132.109	132.212	132.315	132.261	132.205	132.148	131.649	131.059
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 2.690
FILLING AREA (SQ.M) = 13.923

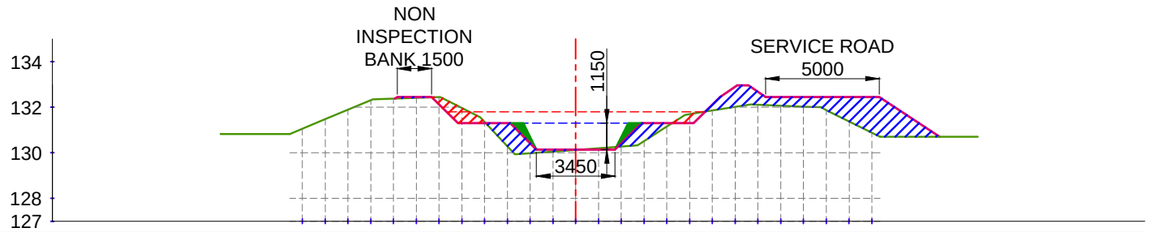
CH. (KM):- 4+100
DESIGNED BED LEVEL = 130.172 M



EXIST. LEVEL (M)	130.403	130.822	131.241	131.660	131.900	131.936	131.973	131.734	131.222	130.342	129.909	129.930	129.951	129.972	129.993	130.354	131.180	131.460	131.664	131.867	131.920	131.893	131.866	131.582	131.161	130.739
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.665
FILLING AREA (SQ.M) = 8.219

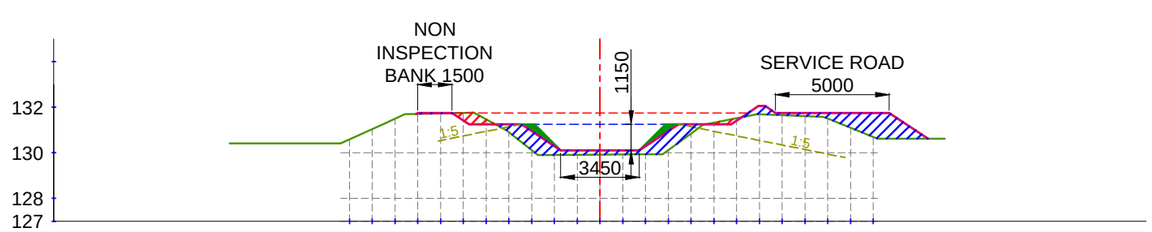
CH. (KM):- 4+300
DESIGNED BED LEVEL = 130.127 M



EXIST. LEVEL (M)	131.057	131.476	131.895	132.314	132.382	132.419	132.455	131.970	131.351	130.291	129.985	130.059	130.133	130.208	130.282	130.523	131.163	131.701	131.860	132.019	132.114	132.072	132.029	131.877	131.376	130.876
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 1.412
FILLING AREA (SQ.M) = 10.493

CH. (KM):- 4+200
DESIGNED BED LEVEL = 130.150 M



EXIST. LEVEL (M)	130.590	131.044	131.498	131.707	131.729	131.752	131.472	130.908	130.117	129.902	129.910	129.917	129.925	129.933	130.122	130.852	131.322	131.516	131.687	131.649	131.611	131.502	131.096	130.690		
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12		

CUTTING AREA (SQ.M) = 0.693
FILLING AREA (SQ.M) = 7.543

CH. (KM):- 4+400
DESIGNED BED LEVEL = 130.105 M

LEGEND

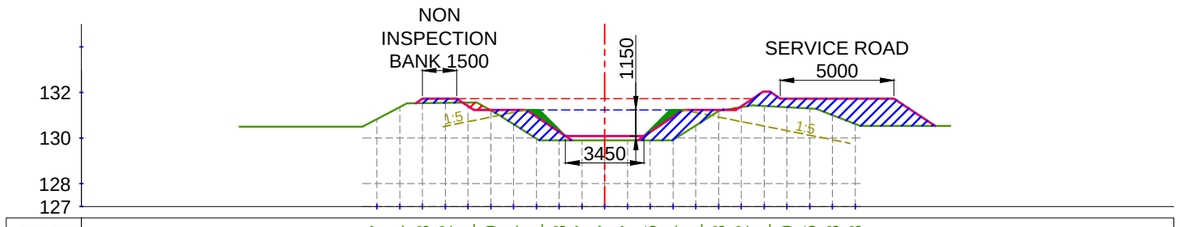
CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 11 of 38

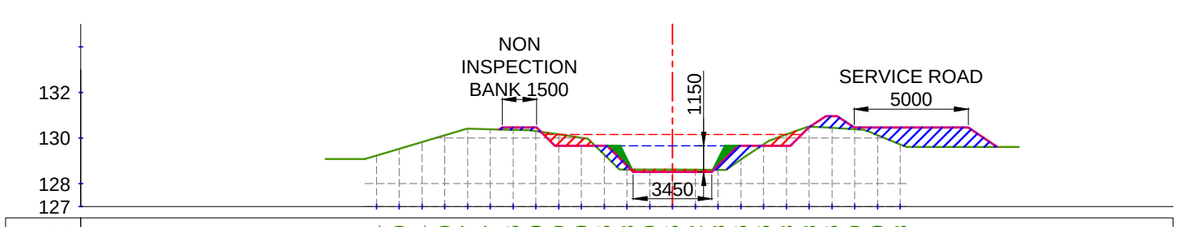
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	130.837	131.364	131.533	131.542	131.551	131.209	130.604	129.971	129.898	129.897	129.897	129.897	129.896	129.914	130.551	131.188	131.362	131.411	131.359	131.306	131.008	130.618
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.244
FILLING AREA (SQ.M) = 10.248

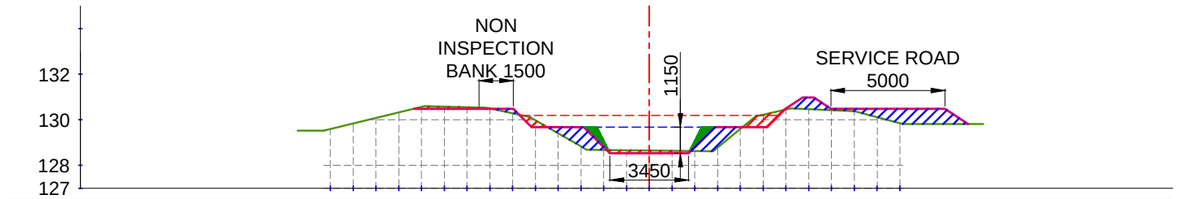
CH. (KM):- 4+500
DESIGNED BED LEVEL =130.083 M



EXIST. LEVEL (M)	129.234	129.529	129.824	130.119	130.407	130.387	130.366	130.310	130.159	130.010	129.275	128.623	128.619	128.615	128.612	128.608	129.056	129.736	130.163	130.503	130.446	130.389	130.120	129.718
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 1.811
FILLING AREA (SQ.M) = 5.976

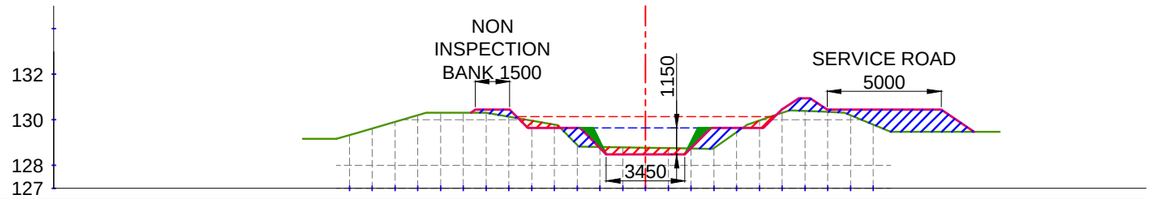
CH. (KM):- 4+700
DESIGNED BED LEVEL = 128.515 M



EXIST. LEVEL (M)	129.604	129.844	130.084	130.324	130.565	130.579	130.558	130.507	130.289	129.981	129.407	128.833	128.683	128.671	128.659	128.648	128.636	128.797	129.607	130.226	130.462	130.476	130.432	130.388	130.120	129.852
OFFSET (M)	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 1.546
FILLING AREA (SQ.M) = 5.651

CH. (KM):- 4+600
DESIGNED BED LEVEL = 128.537 M



EXIST. LEVEL (M)	129.329	129.623	129.916	130.210	130.317	130.316	130.312	130.138	129.964	129.790	128.904	128.811	128.794	128.776	128.758	128.740	128.767	129.462	129.968	130.311	130.393	130.349	130.207	129.792
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 1.731
FILLING AREA (SQ.M) = 6.918

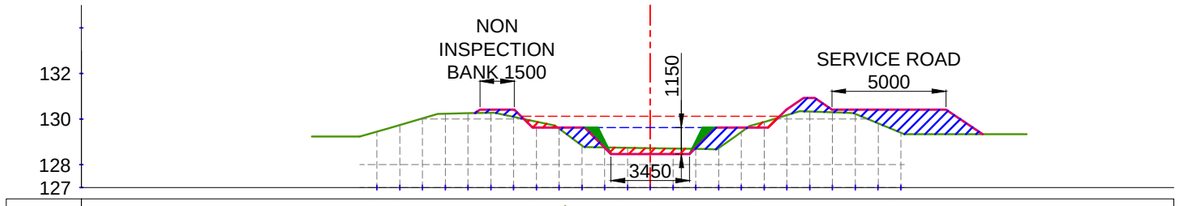
CH. (KM):- 4+800
DESIGNED BED LEVEL = 128.492 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	
	F.S.L.	WAPCOS LTD.	
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 12 of 38

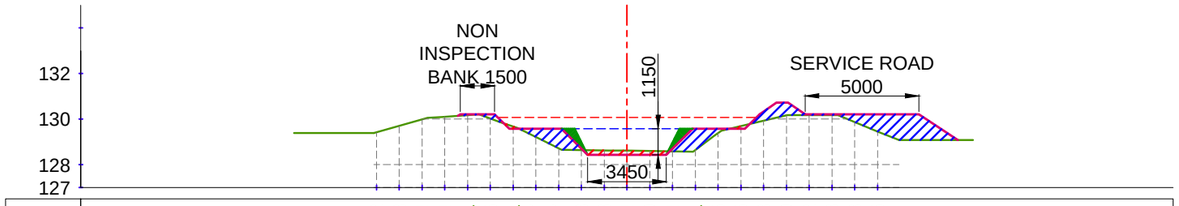
X SECTION OF BISHUNPUR SUB DY.



	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
EXIST. LEVEL (M)	129.453	129.745	130.037	130.236	130.255	130.275	130.098	129.886	129.581	128.839	128.755	128.739	128.722	128.705	128.688	128.727	129.435	129.878	130.174	130.327	130.295	130.229	129.817	129.405
OFFSET (M)																								

CUTTING AREA (SQ.M) = 1.387
FILLING AREA (SQ.M) = 7.635

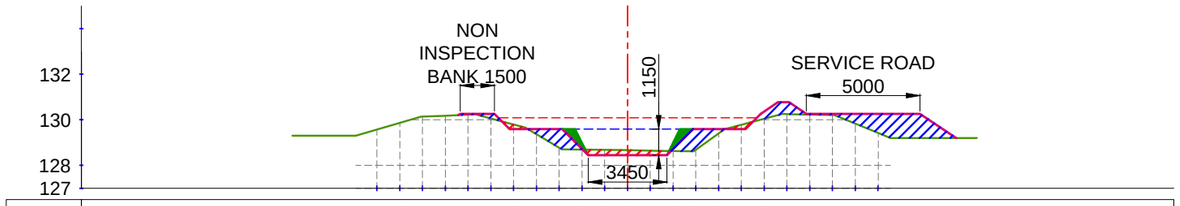
CH. (KM):- 4+900
DESIGNED BED LEVEL = 128.470 M



	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
EXIST. LEVEL (M)	129.412	129.698	129.984	130.104	130.171	130.026	129.671	129.207	128.717	128.643	128.628	128.614	128.599	128.584	128.651	129.385	129.696	129.933	130.169	130.172	130.168	129.863	129.456
OFFSET (M)																							

CUTTING AREA (SQ.M) = 0.791
FILLING AREA (SQ.M) = 7.260

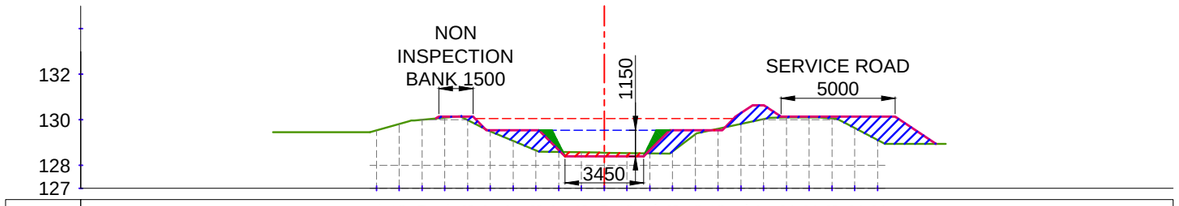
CH. (KM):- 5+100
DESIGNED BED LEVEL =128.426 M



	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11
EXIST. LEVEL (M)	129.577	129.866	130.143	130.185	130.227	130.061	129.793	129.367	128.777	128.699	128.683	128.668	128.652	128.636	128.689	129.409	129.787	130.049	130.255	130.237	130.218	129.841	129.431
OFFSET (M)																							

CUTTING AREA (SQ.M) = 1.071
FILLING AREA (SQ.M) = 6.866

CH. (KM):- 5+000
DESIGNED BED LEVEL = 128.448 M



	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
EXIST. LEVEL (M)	129.534	129.815	130.009	130.104	129.998	129.497	129.077	128.658	128.587	128.573	128.559	128.545	128.531	128.613	129.365	129.605	129.821	130.037	130.102	130.112	130.068	129.632	129.112
OFFSET (M)																							

CUTTING AREA (SQ.M) = 0.581
FILLING AREA (SQ.M) = 7.127

CH. (KM):- 5+200
DESIGNED BED LEVEL = 128.403 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

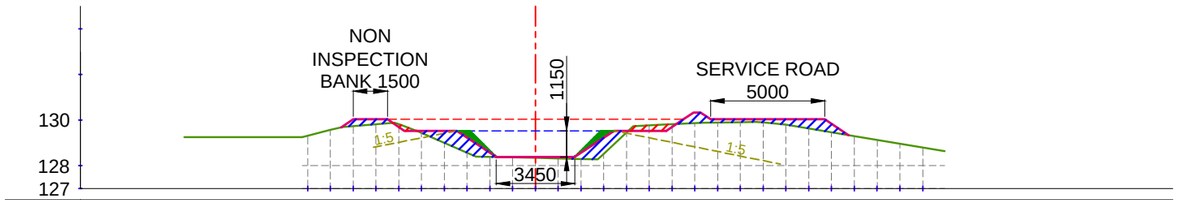
Prepared by :-

WAPCOS LTD.

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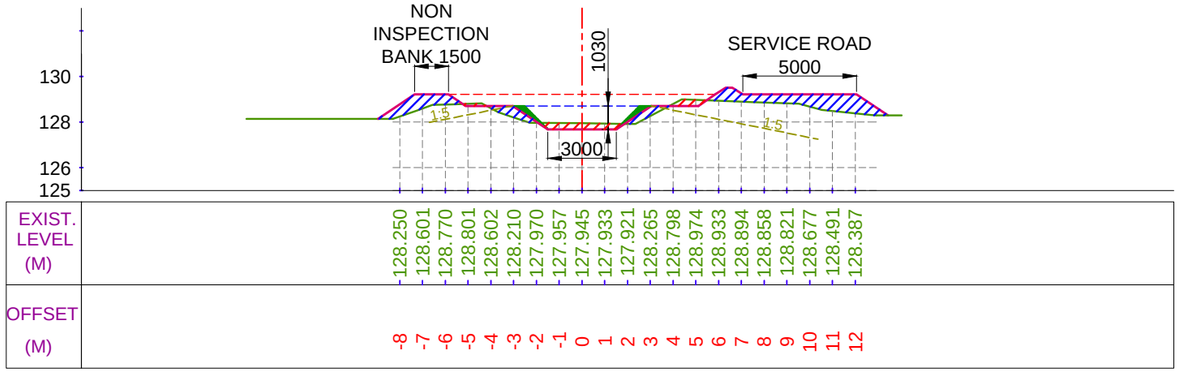
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 13 of 38

X SECTION OF BISHUNPUR SUB DY.



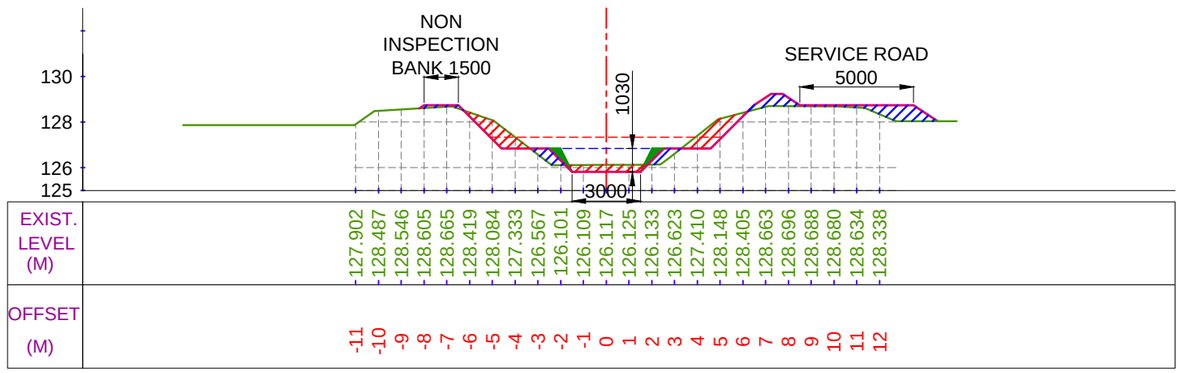
| | | |

X SECTION OF BISHUNPUR SUB DY.



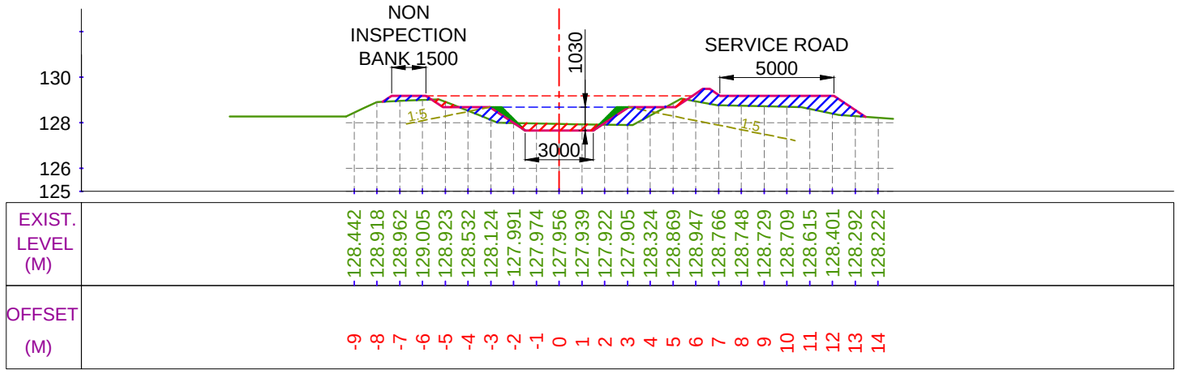
CUTTING AREA (SQ.M) = 1.266
FILLING AREA (SQ.M) = 6.590

CH. (KM):- 5+700
DESIGNED BED LEVEL = 127.682 M



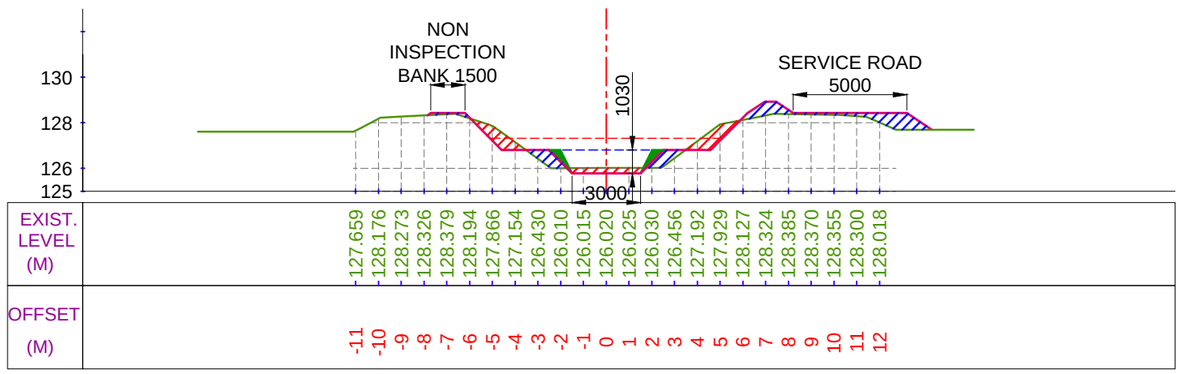
CUTTING AREA (SQ.M) = 4.085
FILLING AREA (SQ.M) = 3.619

CH. (KM):- 5+900
DESIGNED BED LEVEL = 125.808 M



CUTTING AREA (SQ.M) = 1.288
FILLING AREA (SQ.M) = 6.038

CH. (KM):- 5+800
DESIGNED BED LEVEL = 127.660 M



CUTTING AREA (SQ.M) = 2.794
FILLING AREA (SQ.M) = 3.930

CH. (KM):- 6+000
DESIGNED BED LEVEL = 125.786 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

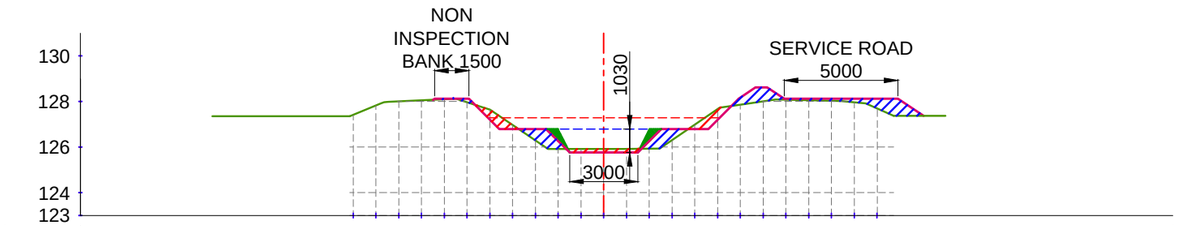
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 15 of 38

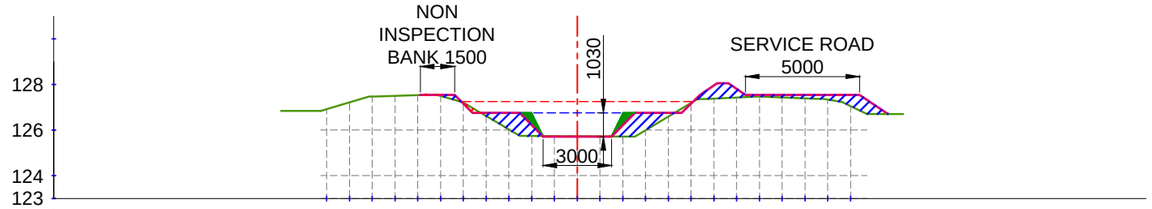
X SECTION OF BISHUNPUR SUB DY.



	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
EXIST. LEVEL (M)	127.412	127.826	128.003	128.050	128.097	127.965	127.647	126.971	126.291	125.919	125.921	125.923	125.925	125.927	126.299	126.987	127.675	127.865	128.008	128.076	128.055	128.033	127.969	127.695
OFFSET (M)																								

CUTTING AREA (SQ.M) = 1.733
FILLING AREA (SQ.M) = 4.240

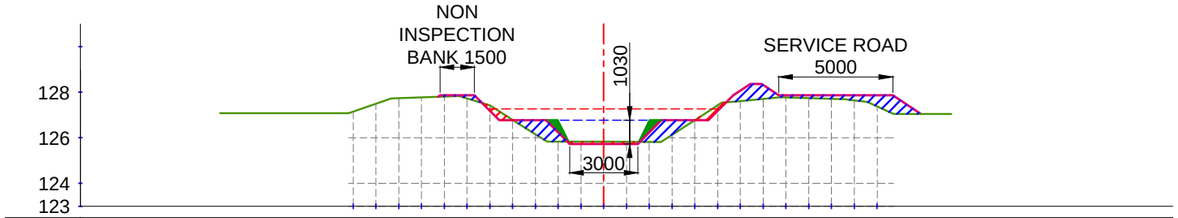
CH. (KM):- 6+100
DESIGNED BED LEVEL = 125.763 M



	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
EXIST. LEVEL (M)	126.910	127.207	127.472	127.505	127.537	127.500	127.203	126.612	126.021	125.737	125.733	125.730	125.726	125.723	125.998	126.595	127.192	127.381	127.427	127.468	127.432	127.395	127.329	127.054
OFFSET (M)																								

CUTTING AREA (SQ.M) = 0.210
FILLING AREA (SQ.M) = 5.374

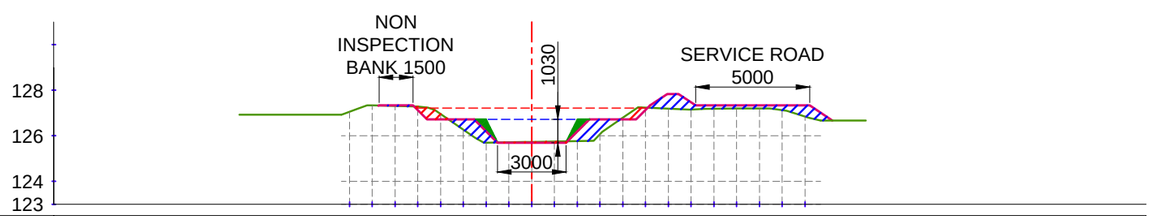
CH. (KM):- 6+300
DESIGNED BED LEVEL = 125.719 M



	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
EXIST. LEVEL (M)	127.162	127.507	127.736	127.776	127.816	127.734	127.426	126.790	126.155	125.828	125.827	125.827	125.826	125.825	126.146	126.788	127.430	127.618	127.709	127.771	127.742	127.713	127.645	127.374
OFFSET (M)																								

CUTTING AREA (SQ.M) = 0.869
FILLING AREA (SQ.M) = 5.137

CH. (KM):- 6+200
DESIGNED BED LEVEL = 125.741 M



	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12
EXIST. LEVEL (M)	127.050	127.332	127.307	127.281	126.961	126.272	125.695	125.713	125.730	125.747	125.764	126.078	126.799	127.237	127.197	127.160	127.190	127.198	127.204	127.125	126.852
OFFSET (M)																					

CUTTING AREA (SQ.M) = 0.820
FILLING AREA (SQ.M) = 4.354

CH. (KM):- 6+400
DESIGNED BED LEVEL = 125.697 M

LEGEND

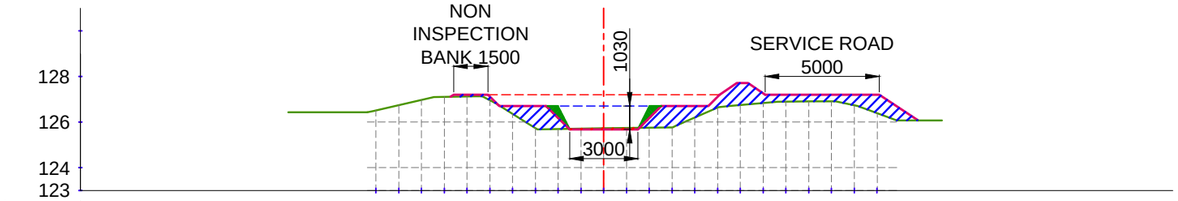
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 16 of 38

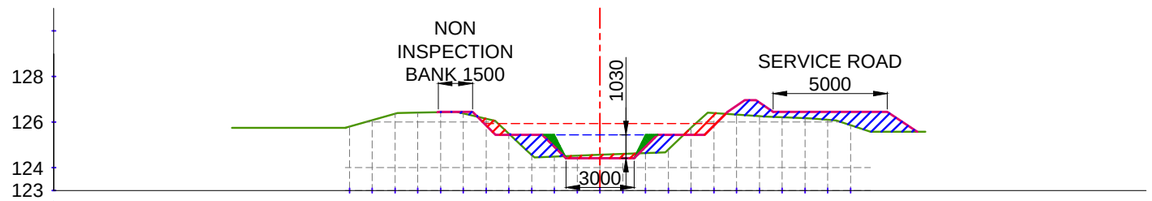
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	126.516	126.747	126.978	127.108	127.120	126.957	126.366	125.741	125.695	125.709	125.724	125.738	125.753	125.768	126.197	126.636	126.745	126.839	126.900	126.905	126.910	126.731	126.388	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 0.150
FILLING AREA (SQ.M) = 8.323

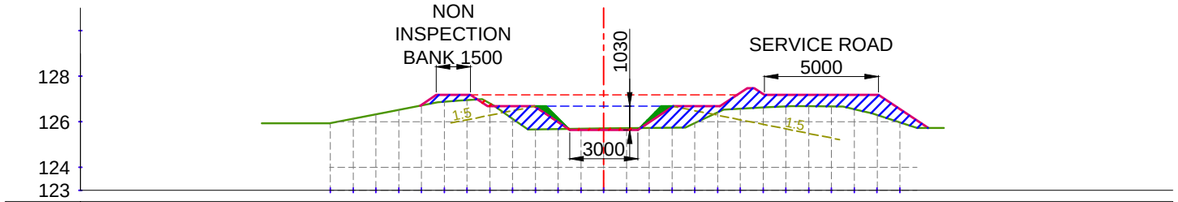
CH. (KM):- 6+500
DESIGNED BED LEVEL = 125.675 M



EXIST. LEVEL (M)	125.793	126.082	126.372	126.418	126.432	126.376	126.143	125.489	124.559	124.486	124.525	124.563	124.602	124.641	124.796	125.742	126.398	126.326	126.255	126.211	126.173	126.099	125.860	
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 1.741
FILLING AREA (SQ.M) = 6.253

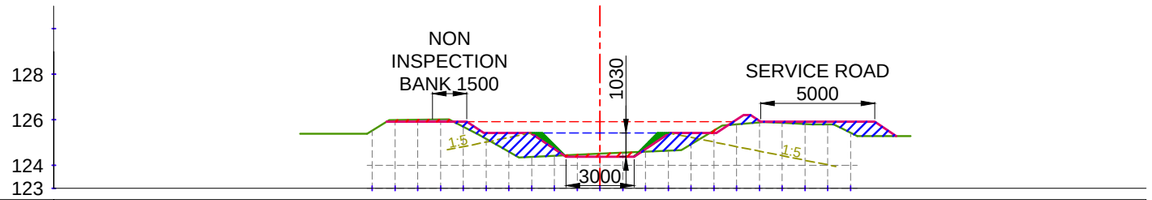
CH. (KM):- 6+700
DESIGNED BED LEVEL = 124.410 M



EXIST. LEVEL (M)	125.939	126.136	126.332	126.528	126.724	126.884	126.952	126.810	126.136	125.672	125.684	125.695	125.707	125.719	125.730	125.742	125.947	126.420	126.577	126.628	126.680	126.685	126.673	126.551	126.295	125.971
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.257
FILLING AREA (SQ.M) = 9.556

CH. (KM):- 6+600
DESIGNED BED LEVEL = 125.652 M



EXIST. LEVEL (M)	125.530	125.986	126.000	126.014	125.697	125.172	124.605	124.380	124.424	124.468	124.512	124.556	124.600	124.644	124.934	125.538	125.804	125.887	125.864	125.819	125.799	125.430		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11		

CUTTING AREA (SQ.M) = 0.718
FILLING AREA (SQ.M) = 5.620

CH. (KM):- 6+800
DESIGNED BED LEVEL =124.388 M

LEGEND

CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

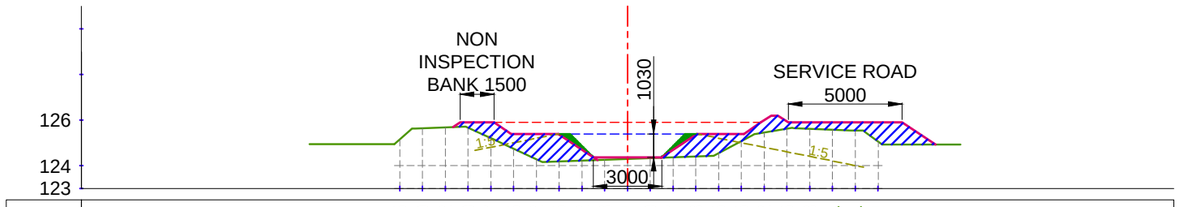
Prepared by :-

WAPCOS LTD.

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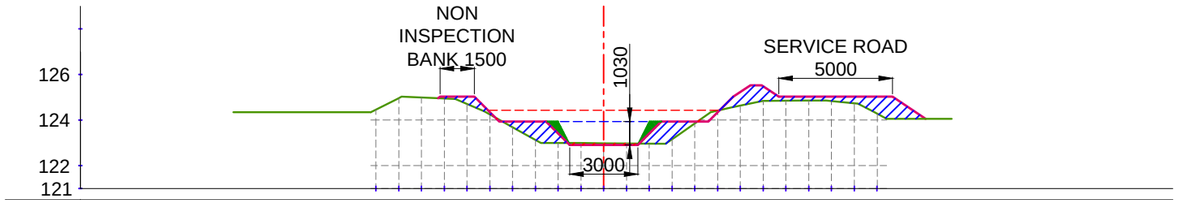
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 17 of 38

X SECTION OF BISHUNPUR SUB DY.



| | | |

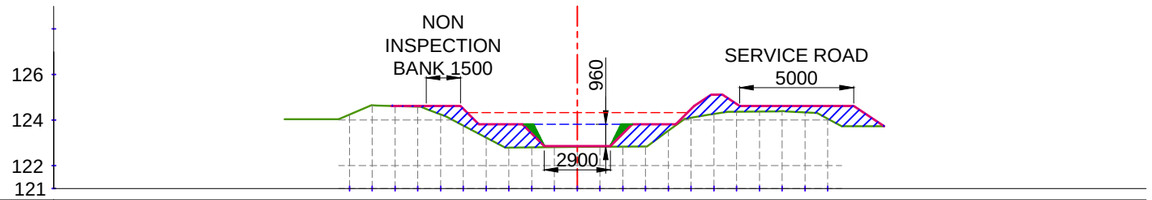
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	124.460	124.966	124.993	124.951	124.707	124.244	123.688	123.132	122.995	122.986	122.978	122.969	122.960	123.160	123.862	124.417	124.632	124.843	124.849	124.854	124.838	124.743	124.282
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.413
FILLING AREA (SQ.M) = 7.005

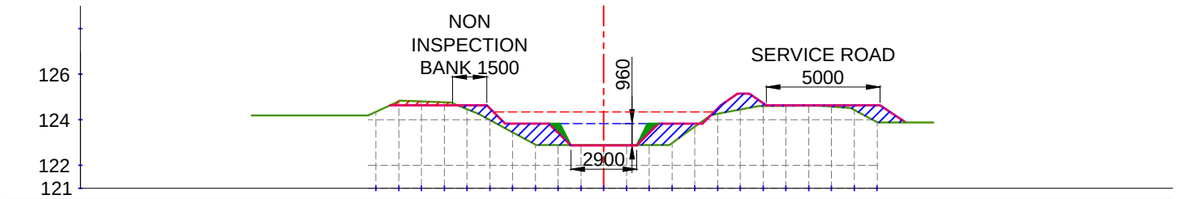
CH. (KM):- 7+300
DESIGNED BED LEVEL = 122.905 M



EXIST. LEVEL (M)	124.241	124.645	124.615	124.586	124.248	123.758	123.236	122.798	122.806	122.814	122.822	122.831	122.839	122.847	123.535	124.108	124.268	124.369	124.378	124.388	124.334	124.053	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.118

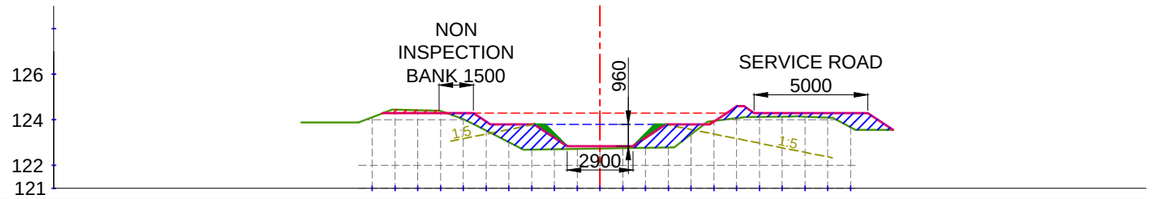
CH. (KM):- 7+500
DESIGNED BED LEVEL = 122.860 M



EXIST. LEVEL (M)	124.355	124.820	124.803	124.767	124.472	123.997	123.458	122.920	122.899	122.900	122.900	122.900	122.901	122.981	123.700	124.263	124.453	124.606	124.613	124.621	124.579	124.432	123.902
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.478
FILLING AREA (SQ.M) = 6.163

CH. (KM):- 7+400
DESIGNED BED LEVEL = 122.883 M



EXIST. LEVEL (M)	124.118	124.451	124.429	124.395	124.033	123.527	123.021	122.699	122.714	122.730	122.745	122.760	122.775	122.791	123.366	123.951	124.075	124.133	124.145	124.139	124.101	123.673	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 0.362
FILLING AREA (SQ.M) = 7.243

CH. (KM):- 7+600
DESIGNED BED LEVEL =122.838 M

LEGEND

CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

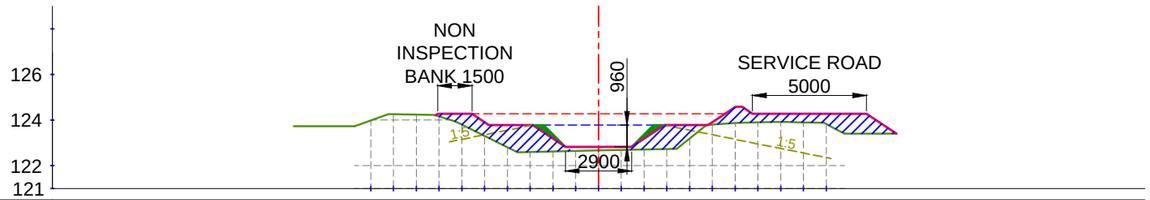
Prepared by :-

WAPCOS LTD.

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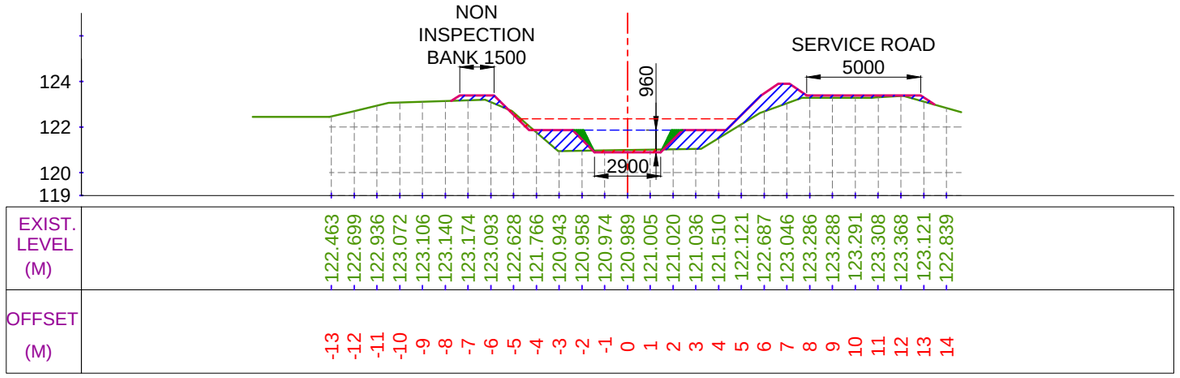
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 19 of 38

X SECTION OF BISHUNPUR SUB DY.



| | | |

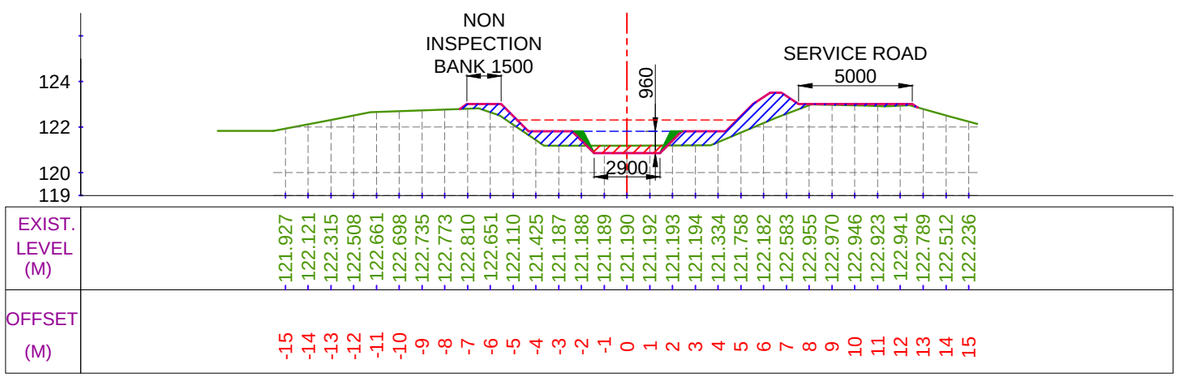
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	122.463	122.699	122.936	123.072	123.106	123.140	123.174	123.093	122.628	121.766	120.943	120.958	120.974	120.989	121.005	121.020	121.036	121.510	122.121	122.687	123.046	123.286	123.288	123.291	123.308	123.368	123.121	122.839		
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14		

CUTTING AREA (SQ.M) = 0.404
FILLING AREA (SQ.M) = 6.183

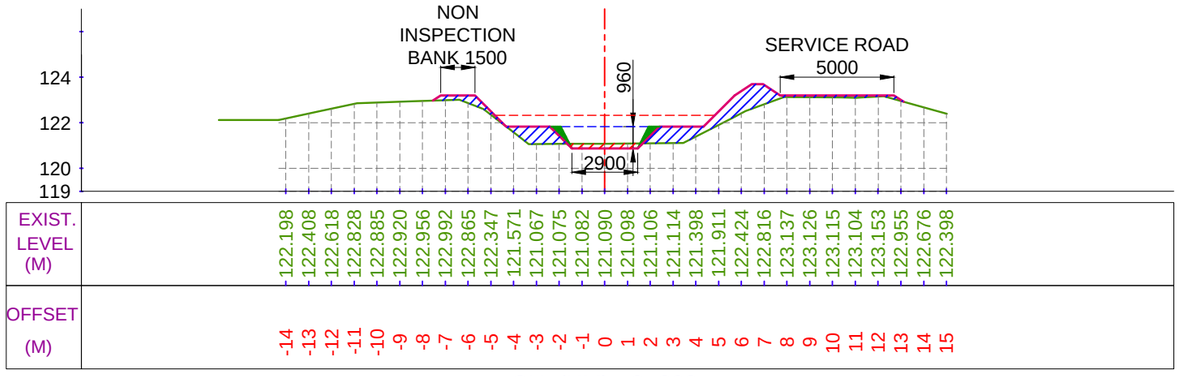
CH. (KM):- 8+100
DESIGNED BED LEVEL = 120.898 M



EXIST. LEVEL (M)	121.927	122.121	122.315	122.508	122.661	122.698	122.735	122.773	122.810	122.651	122.110	121.425	121.187	121.188	121.189	121.190	121.192	121.193	121.194	121.334	121.758	122.182	122.583	122.955	122.970	122.946	122.923	122.941	122.789	122.512	122.236
OFFSET (M)	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

CUTTING AREA (SQ.M) = 1.032
FILLING AREA (SQ.M) = 6.455

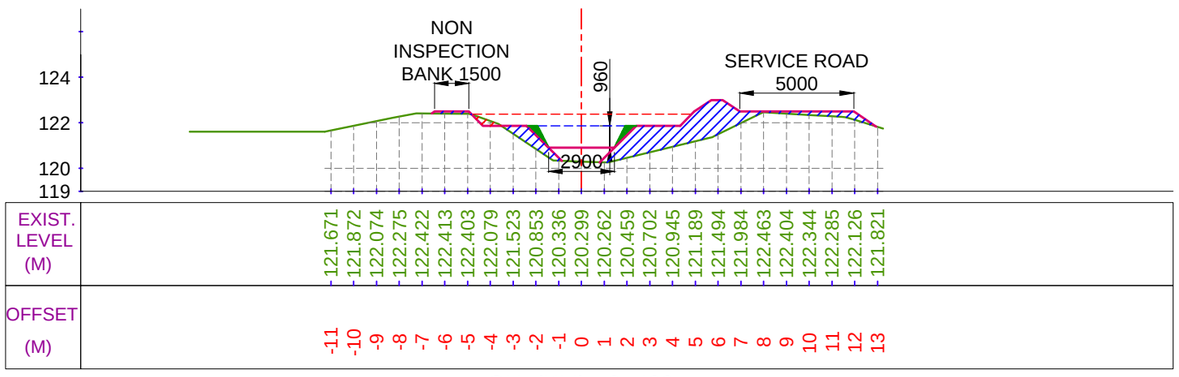
CH. (KM):- 8+300
DESIGNED BED LEVEL = 120.854 M



EXIST. LEVEL (M)	122.198	122.408	122.618	122.828	122.885	122.920	122.956	122.992	122.865	122.347	121.571	121.067	121.075	121.082	121.090	121.098	121.106	121.114	121.398	121.911	122.424	122.816	123.137	123.126	123.115	123.104	123.153	122.955	122.676	122.398
OFFSET (M)	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

CUTTING AREA (SQ.M) = 0.644
FILLING AREA (SQ.M) = 6.423

CH. (KM):- 8+200
DESIGNED BED LEVEL = 120.876 M



EXIST. LEVEL (M)	121.671	121.872	122.074	122.275	122.422	122.413	122.403	122.079	121.523	120.853	120.336	120.299	120.262	120.459	120.702	120.945	121.189	121.494	121.984	122.463	122.404	122.344	122.285	122.126	121.821					
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13					

CUTTING AREA (SQ.M) = 0.216
FILLING AREA (SQ.M) = 8.834

CH. (KM):- 8+400
DESIGNED BED LEVEL = 119.917 M

LEGEND

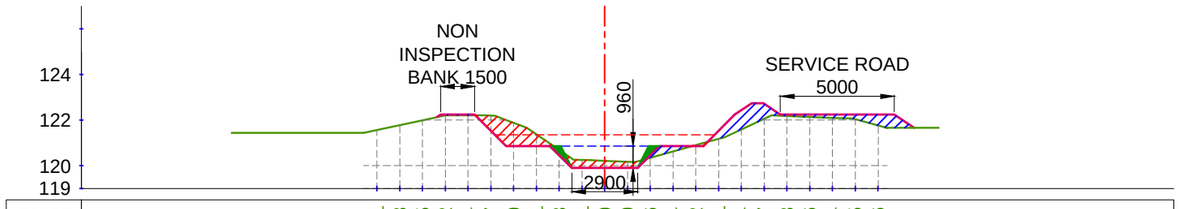
CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 21 of 38

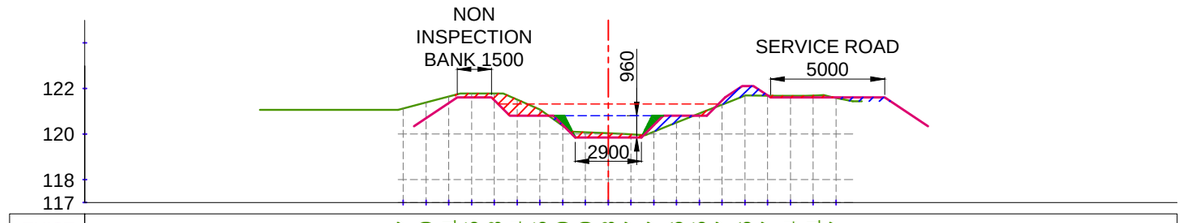
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	121.561	121.778	121.995	122.212	122.204	122.197	121.880	121.371	120.693	120.251	120.210	120.170	120.346	120.624	120.902	121.181	121.594	122.057	122.178	122.136	122.094	122.035	121.756	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 3.279
FILLING AREA (SQ.M) = 3.575

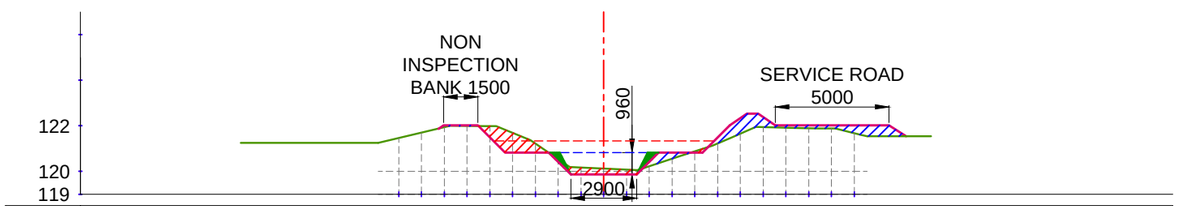
CH. (KM):- 8+500
DESIGNED BED LEVEL = 119.895 M



EXIST. LEVEL (M)	121.127	121.389	121.651	121.785	121.783	121.514	121.075	120.369	120.079	120.033	119.987	120.107	120.506	120.905	121.297	121.686	121.687	121.684	121.691	121.587				
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10				

CUTTING AREA (SQ.M) = 2.350
FILLING AREA (SQ.M) = 1.692

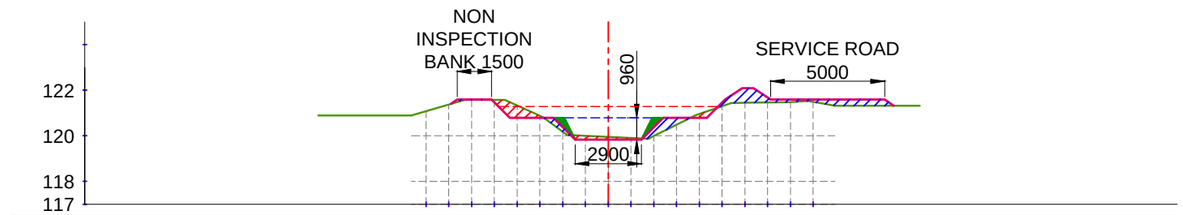
CH. (KM):- 8+700
DESIGNED BED LEVEL = 119.851 M



EXIST. LEVEL (M)	121.465	121.701	121.938	121.995	121.990	121.693	121.222	120.533	120.165	120.122	120.078	120.229	120.556	120.883	121.232	121.661	121.941	121.918	121.894	121.886	121.679			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11			

CUTTING AREA (SQ.M) = 2.521
FILLING AREA (SQ.M) = 3.383

CH. (KM):- 8+600
DESIGNED BED LEVEL =119.873 M



EXIST. LEVEL (M)	121.088	121.380	121.582	121.582	121.332	120.875	120.180	119.997	119.949	119.902	119.989	120.490	120.966	121.309	121.456	121.470	121.485	121.486						
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9						

CUTTING AREA (SQ.M) = 1.375
FILLING AREA (SQ.M) = 2.844

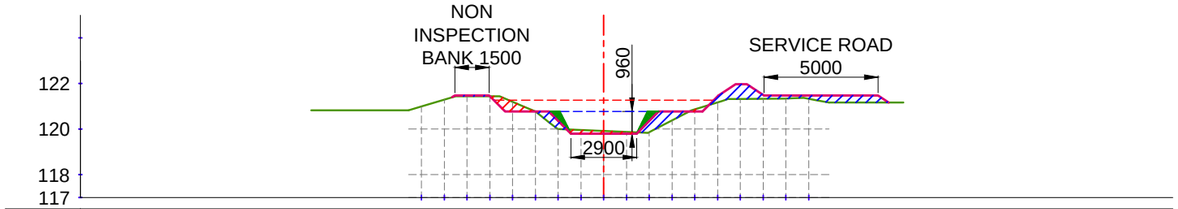
CH. (KM):- 8+800
DESIGNED BED LEVEL = 119.828 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 22 of 38

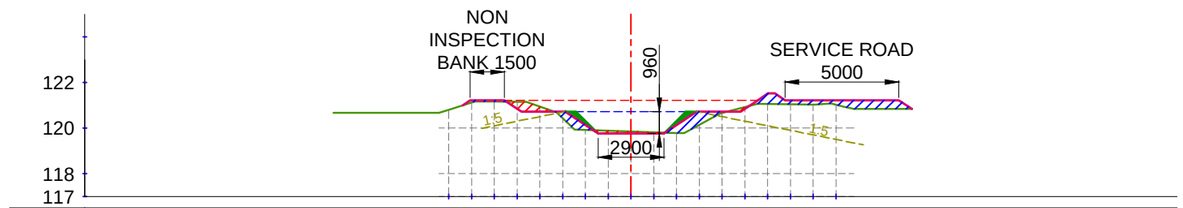
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	120.993	121.294	121.443	121.437	121.195	120.771	120.000	119.959	119.917	119.875	119.862	120.376	120.863	121.177	121.323	121.327	121.334	121.332
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 1.016
FILLING AREA (SQ.M) = 3.485

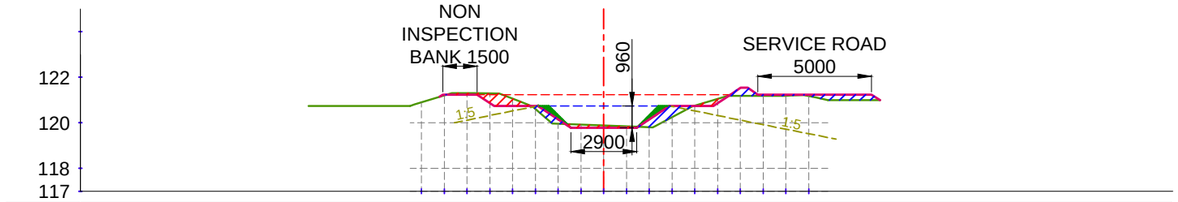
CH. (KM):- 8+900
DESIGNED BED LEVEL = 119.806 M



EXIST. LEVEL (M)	120.805	121.127	121.160	121.145	120.935	120.427	119.920	119.886	119.852	119.818	119.784	120.139	120.662	120.921	121.059	121.044	121.031	121.023
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.823
FILLING AREA (SQ.M) = 3.507

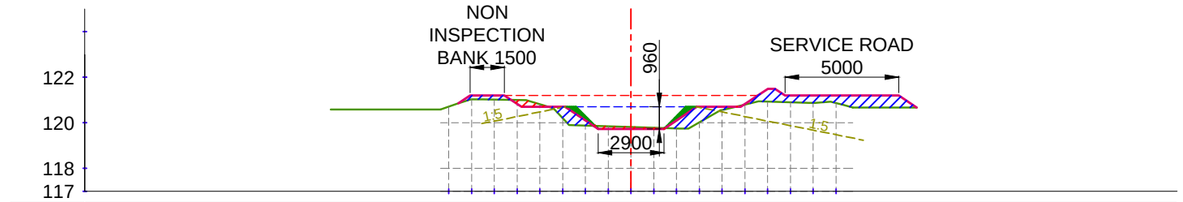
CH. (KM):- 9+100
DESIGNED BED LEVEL = 119.762 M



EXIST. LEVEL (M)	120.899	121.209	121.302	121.292	121.063	120.612	119.959	119.922	119.884	119.847	119.810	120.259	120.762	121.048	121.190	121.186	121.182	121.178
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 1.300
FILLING AREA (SQ.M) = 2.159

CH. (KM):- 9+000
DESIGNED BED LEVEL = 119.784 M



EXIST. LEVEL (M)	120.710	121.036	121.018	120.999	120.815	120.206	119.881	119.850	119.820	119.789	119.758	120.012	120.563	120.797	120.928	120.903	120.879	120.867
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.521
FILLING AREA (SQ.M) = 5.046

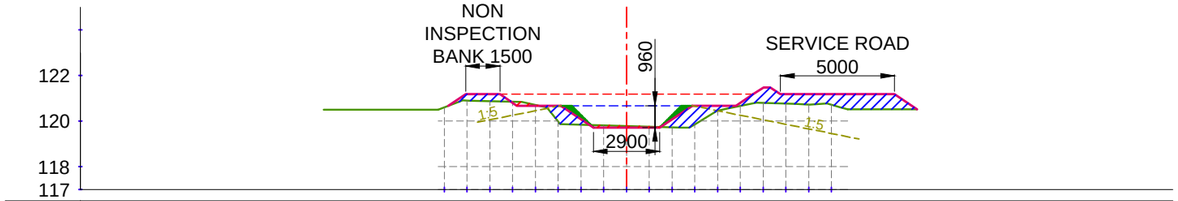
CH. (KM):- 9+200
DESIGNED BED LEVEL = 119.740 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 23 of 38

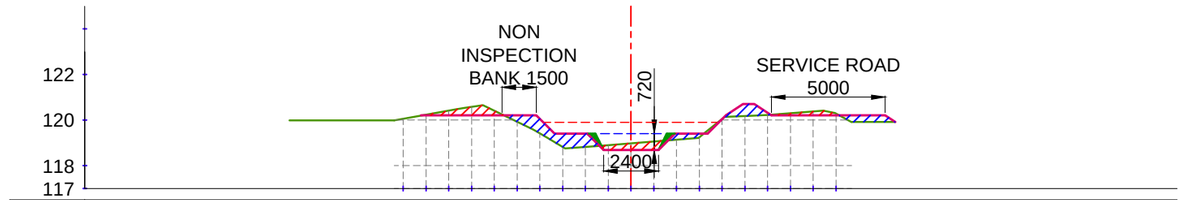
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	120.605	120.897	120.875	120.853	120.710	119.971	119.845	119.817	119.788	119.760	119.732	119.860	120.459	120.667	120.799	120.764	120.729	120.719
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.335
FILLING AREA (SQ.M) = 6.692

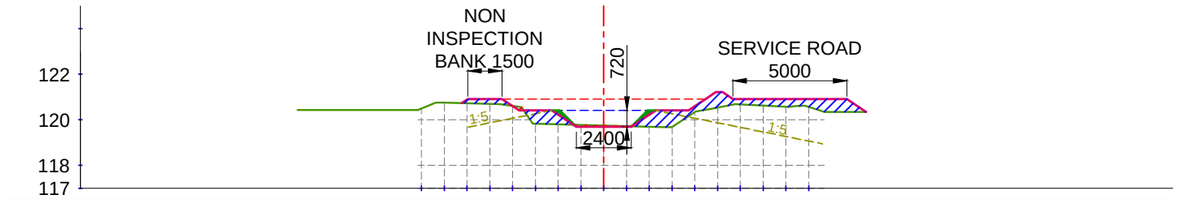
CH. (KM):- 9+300
DESIGNED BED LEVEL = 119.717 M



EXIST. LEVEL (M)	120.064	120.240	120.416	120.579	120.411	119.921	119.415	118.816	118.823	118.904	118.985	119.066	119.147	119.256	120.049	120.174	120.218	120.299	120.380	120.284
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 2.061
FILLING AREA (SQ.M) = 3.411

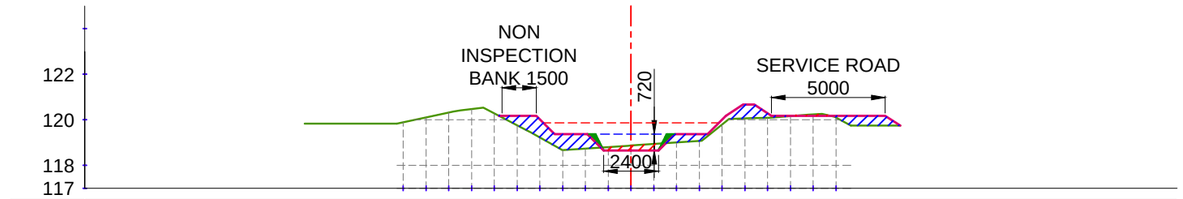
CH. (KM):- 9+500
DESIGNED BED LEVEL = 118.681 M



EXIST. LEVEL (M)	120.495	120.756	120.732	120.707	120.613	119.835	119.809	119.783	119.757	119.731	119.705	119.689	120.343	120.541	120.672	120.626	120.581	120.574
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.204
FILLING AREA (SQ.M) = 5.466

CH. (KM):- 9+400
DESIGNED BED LEVEL = 119.694 M



EXIST. LEVEL (M)	119.896	120.112	120.327	120.468	120.281	119.764	119.225	118.672	118.739	118.806	118.873	118.939	119.006	119.073	119.794	120.060	120.096	120.164	120.235	120.108
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.611
FILLING AREA (SQ.M) = 4.907

CH. (KM):- 9+600
DESIGNED BED LEVEL = 118.657 M

LEGEND

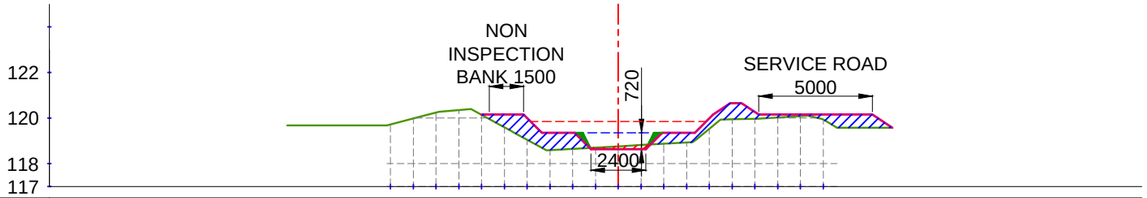
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 24 of 38

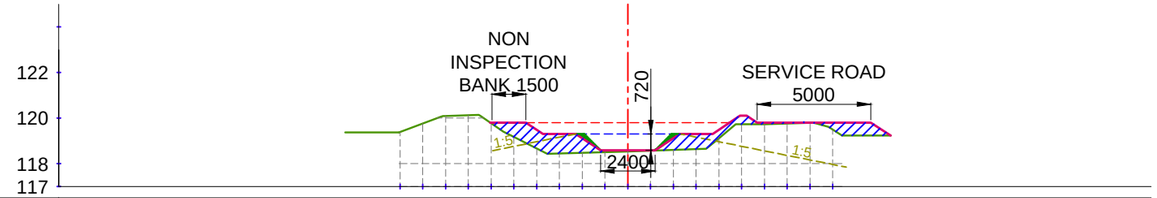
X SECTION OF BISHUNPUR SUB DY.



	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9
EXIST. LEVEL (M)	119.720	119.981	120.242	120.355	120.147	119.594	119.050	118.598	118.652	118.706	118.761	118.815	118.869	118.923	119.536	119.947	119.974	120.030	120.089	119.931
OFFSET (M)																				

CUTTING AREA (SQ.M) = 0.316
FILLING AREA (SQ.M) = 6.779

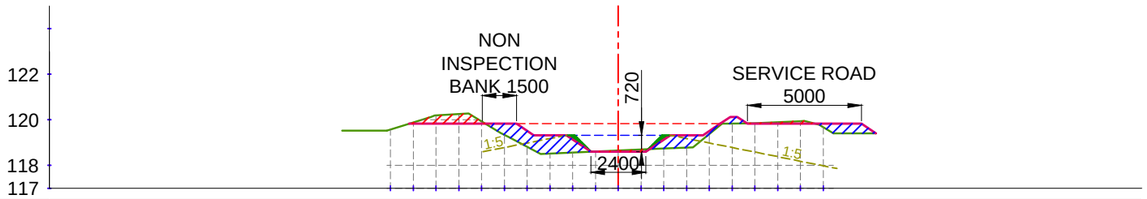
CH. (KM):- 9+700
DESIGNED BED LEVEL = 118.633 M



	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9
EXIST. LEVEL (M)	119.383	119.761	120.097	120.132	119.767	119.164	118.660	118.446	118.478	118.509	118.541	118.573	118.604	118.636	119.119	119.732	119.734	119.766	119.798	119.491
OFFSET (M)																				

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.431

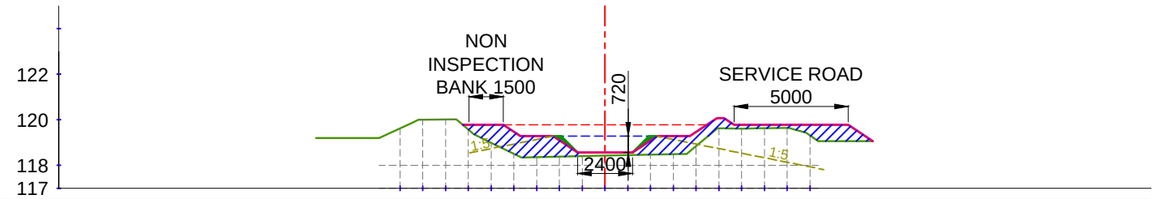
CH. (KM):- 9+900
DESIGNED BED LEVEL = 118.585 M



	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9
EXIST. LEVEL (M)	119.574	119.888	120.189	120.249	119.929	119.338	118.817	118.527	118.569	118.612	118.654	118.697	118.739	118.781	119.380	119.840	119.856	119.902	119.948	119.674
OFFSET (M)																				

CUTTING AREA (SQ.M) = 1.280
FILLING AREA (SQ.M) = 4.728

CH. (KM):- 9+800
DESIGNED BED LEVEL = 118.609 M



	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9
EXIST. LEVEL (M)	119.630	120.003	120.015	119.571	118.999	118.510	118.363	118.385	118.407	118.428	118.450	118.472	118.493	118.855	119.630	119.613	119.630	119.647	119.308
OFFSET (M)																			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.442

CH. (KM):- 10+000
DESIGNED BED LEVEL = 118.562 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

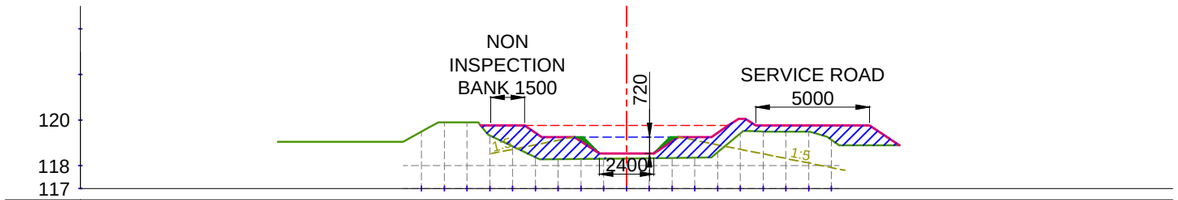
Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 25 of 38

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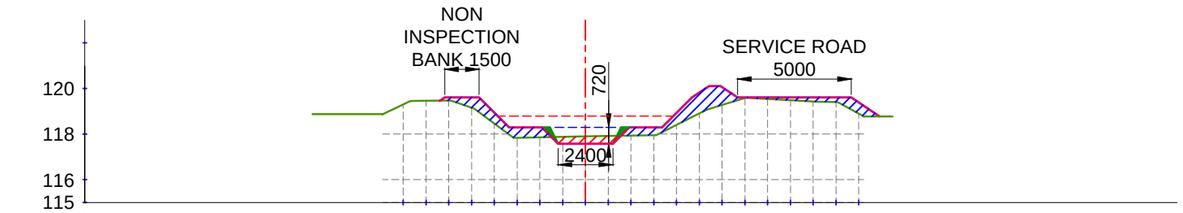
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	119.495	119.906	119.897	119.318	118.841	118.363	118.278	118.291	118.303	118.316	118.328	118.341	118.353	118.589	119.424	119.494	119.493	119.495	119.124			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.521

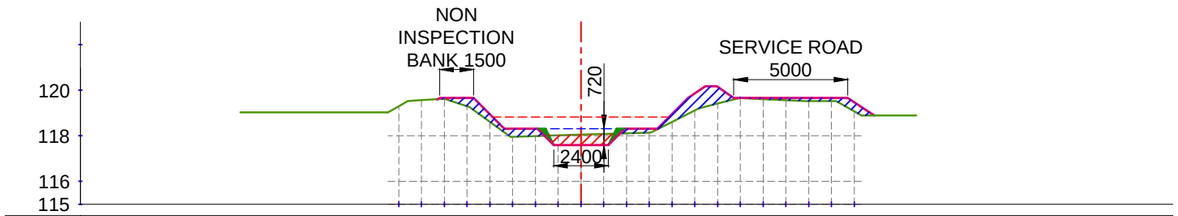
CH. (KM):- 10+100
DESIGNED BED LEVEL = 118.538 M



EXIST. LEVEL (M)	119.304	119.455	119.468	119.153	118.466	117.838	117.856	117.875	117.893	117.912	117.930	117.948	118.401	118.907	119.275	119.580	119.535	119.479	119.429	119.406	118.892	
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 0.815
FILLING AREA (SQ.M) = 5.851

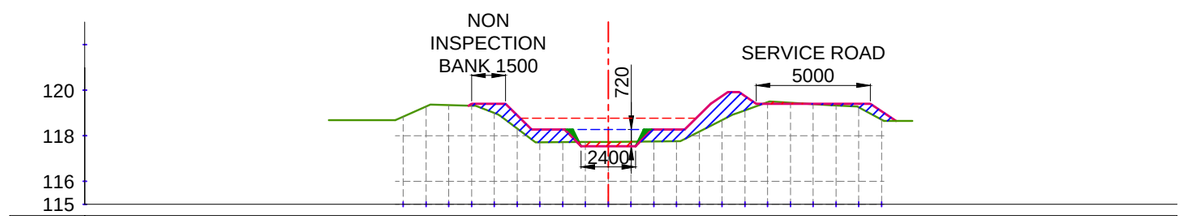
CH. (KM):- 10+300
DESIGNED BED LEVEL = 117.575 M



EXIST. LEVEL (M)	119.302	119.562	119.621	119.299	118.615	117.965	117.993	118.022	118.051	118.079	118.108	118.136	118.614	119.116	119.415	119.668	119.617	119.565	119.523	119.524	119.069	
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	

CUTTING AREA (SQ.M) = 1.187
FILLING AREA (SQ.M) = 4.333

CH. (KM):- 10+200
DESIGNED BED LEVEL = 117.599 M



EXIST. LEVEL (M)	118.844	119.283	119.346	119.322	119.009	118.317	117.710	117.719	117.727	117.736	117.744	117.753	117.761	118.188	118.697	119.124	119.482	119.453	119.393	119.334	119.249	118.719
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.549
FILLING AREA (SQ.M) = 6.041

CH. (KM):- 10+400
DESIGNED BED LEVEL = 117.551 M

LEGEND

CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

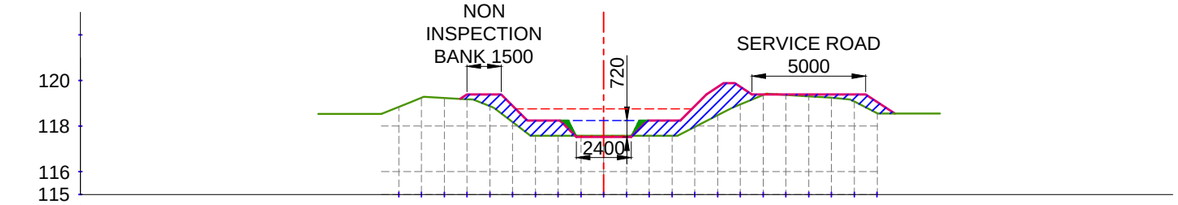
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 26 of 38

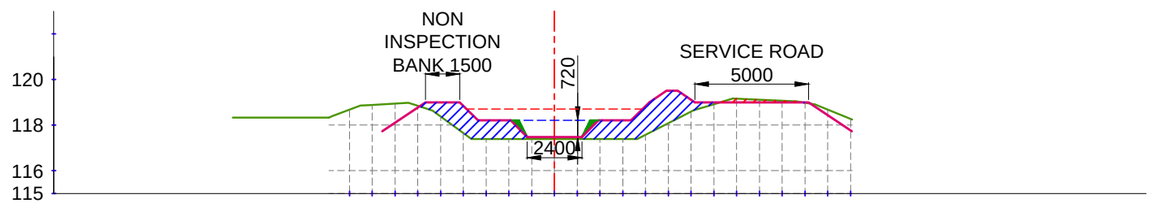
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	118.836	119.246	119.235	119.180	118.872	118.178	117.582	117.581	117.580	117.579	117.578	117.577	117.576	117.967	118.479	118.955	119.373	119.373	119.309	119.242	119.070	118.556		
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12		

CUTTING AREA (SQ.M) = 0.136
FILLING AREA (SQ.M) = 7.958

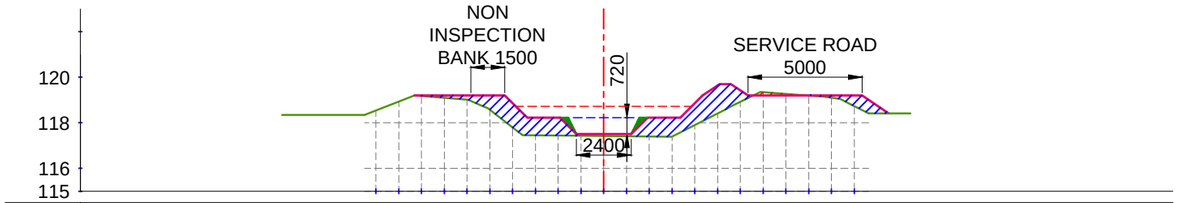
CH. (KM):- 10+500
DESIGNED BED LEVEL = 117.528 M



EXIST. LEVEL (M)	118.676	118.889	118.947	118.844	118.375	117.649	117.394	117.394	117.394	117.395	117.395	117.395	117.395	117.577	118.083	118.588	118.916	119.157	119.111	119.066	118.975	118.673	118.269	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 0.333
FILLING AREA (SQ.M) = 8.322

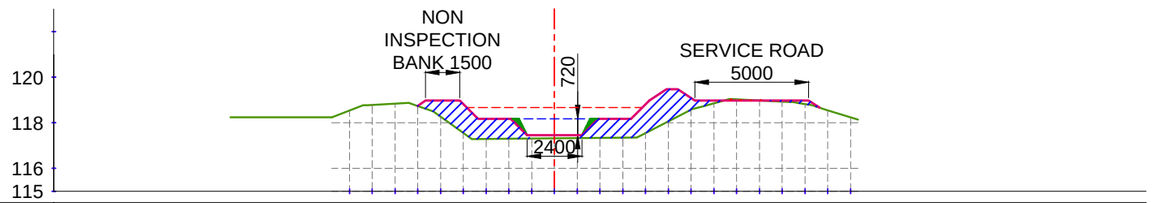
CH. (KM):- 10+700
DESIGNED BED LEVEL =117.480 M



EXIST. LEVEL (M)	118.547	118.936	119.179	119.098	119.017	118.577	117.794	117.450	117.439	117.429	117.419	117.408	117.398	117.392	117.907	118.422	118.921	119.341	119.272	119.203	119.104	118.738		
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11		

CUTTING AREA (SQ.M) = 0.175
FILLING AREA (SQ.M) = 8.757

CH. (KM):- 10+600
DESIGNED BED LEVEL = 117.504 M



EXIST. LEVEL (M)	118.541	118.793	118.847	118.739	118.267	117.555	117.297	117.306	117.314	117.323	117.331	117.340	117.348	117.546	118.060	118.575	118.859	119.030	118.983	118.936	118.821	118.548	118.236	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	

CUTTING AREA (SQ.M) = 0.059
FILLING AREA (SQ.M) = 8.937

CH. (KM):- 10+800
DESIGNED BED LEVEL = 117.456 M

LEGEND

CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

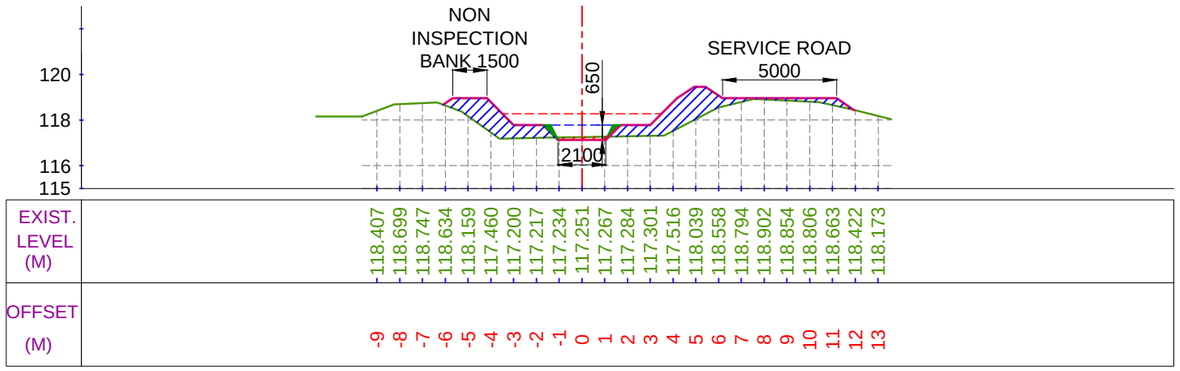
Prepared by :-

WAPCOS LTD.

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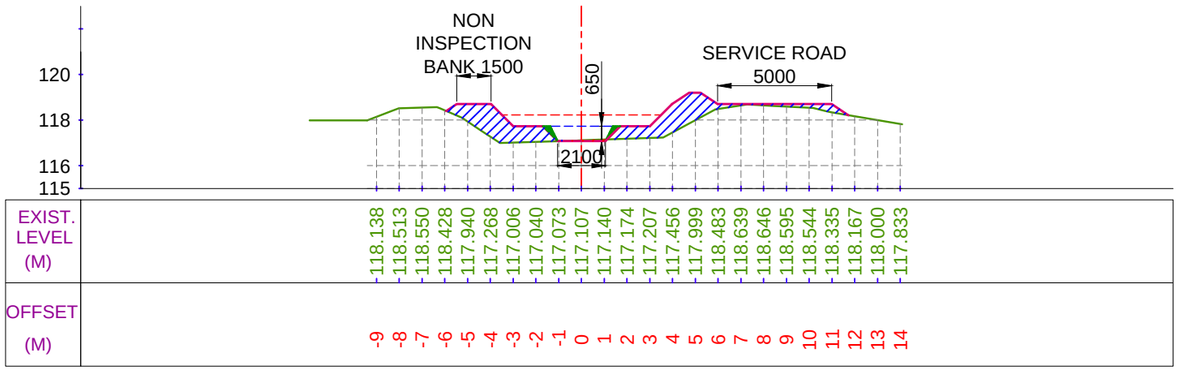
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 27 of 38

X SECTION OF BISHUNPUR SUB DY.



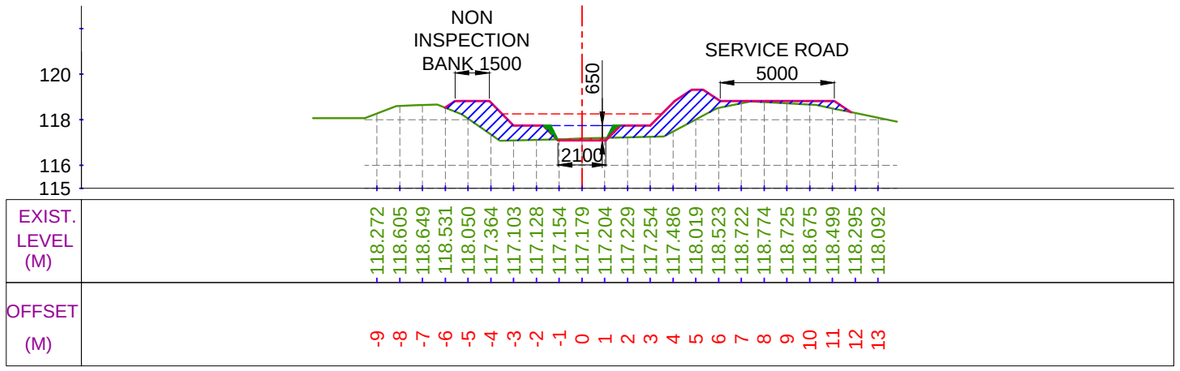
CUTTING AREA (SQ.M) = 0.268
FILLING AREA (SQ.M) = 8.578

CH. (KM):- 10+900
DESIGNED BED LEVEL = 117.127 M



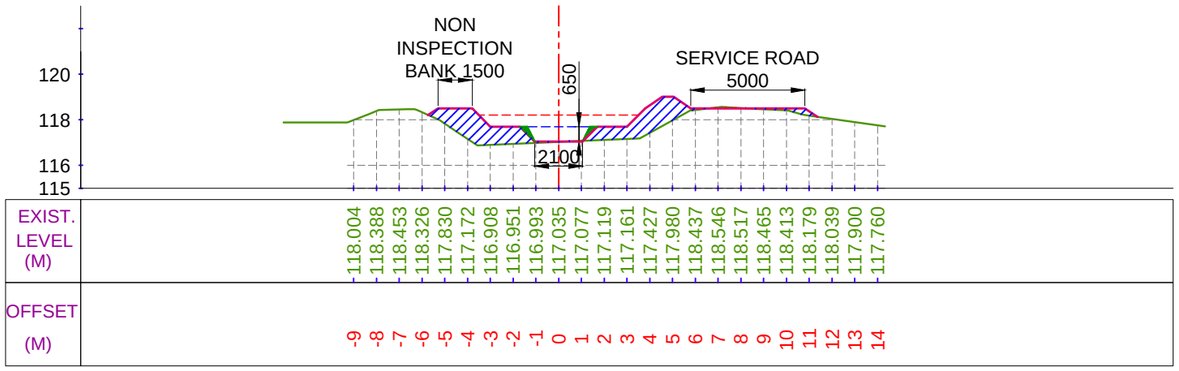
CUTTING AREA (SQ.M) = 0.058
FILLING AREA (SQ.M) = 8.502

CH. (KM):- 11+100
DESIGNED BED LEVEL = 117.080 M



CUTTING AREA (SQ.M) = 0.160
FILLING AREA (SQ.M) = 8.529

CH. (KM):- 11+000
DESIGNED BED LEVEL = 117.104 M



CUTTING AREA (SQ.M) = 0.050
FILLING AREA (SQ.M) = 7.750

CH. (KM):- 11+200
DESIGNED BED LEVEL = 117.056 M

LEGEND

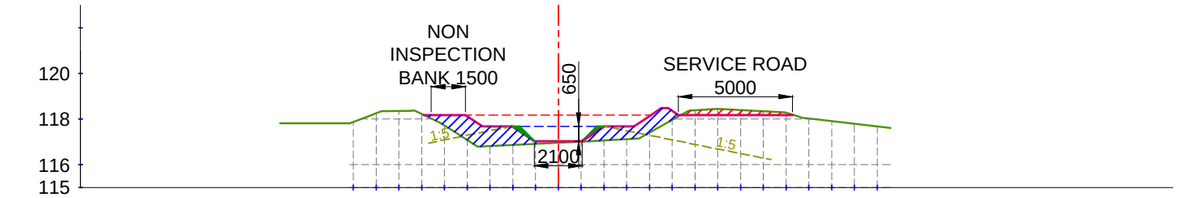
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 28 of 38

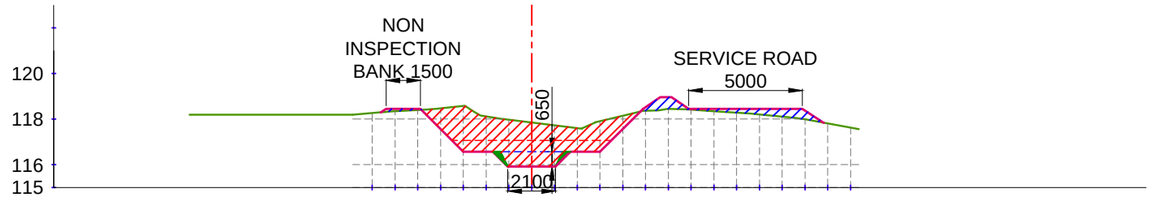
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	117.869	118.254	118.356	118.226	117.719	117.075	116.811	116.861	116.912	116.963	117.013	117.064	117.115	117.398	117.963	118.382	118.441	118.388	118.335	118.269	118.027	117.911	117.794	117.677		
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14		

CUTTING AREA (SQ.M) = 0.865
FILLING AREA (SQ.M) = 5.548

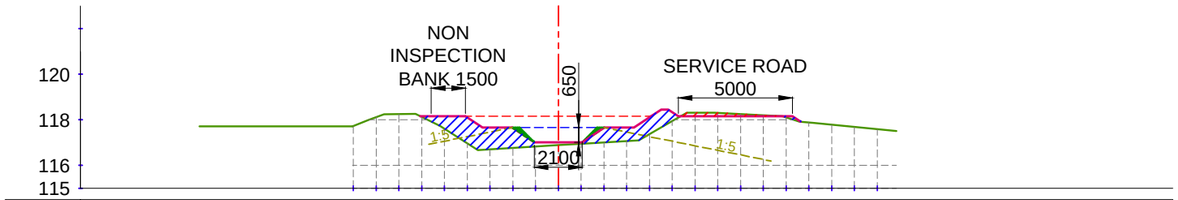
CH. (KM):- 11+300
DESIGNED BED LEVEL = 117.032 M



EXIST. LEVEL (M)	118.260	118.338	118.397	118.469	118.582	118.111	117.968	117.847	117.727	117.607	117.907	118.147	118.364	118.455	118.410	118.345	118.280	118.199	118.101	117.983	117.799	117.615				
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14				

CUTTING AREA (SQ.M) = 12.636
FILLING AREA (SQ.M) = 2.194

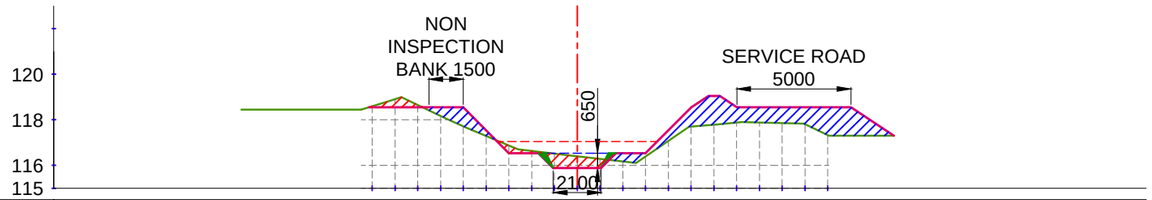
CH. (KM):- 11+500
DESIGNED BED LEVEL = 115.917 M



EXIST. LEVEL (M)	117.735	118.120	118.261	118.125	117.607	116.977	116.713	116.772	116.831	116.891	116.950	117.009	117.069	117.371	117.946	118.319	118.313	118.259	118.205	118.107	117.880	117.782	117.683	117.585		
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14		

CUTTING AREA (SQ.M) = 0.462
FILLING AREA (SQ.M) = 6.053

CH. (KM):- 11+400
DESIGNED BED LEVEL = 117.008 M



EXIST. LEVEL (M)	118.597	118.907	118.655	118.180	117.723	117.296	116.872	116.634	116.520	116.405	116.290	116.175	116.391	117.076	117.701	117.790	117.880	117.880	117.857	117.807	117.321					
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11					

CUTTING AREA (SQ.M) = 2.034
FILLING AREA (SQ.M) = 10.444

CH. (KM):- 11+600
DESIGNED BED LEVEL = 115.894 M

LEGEND

CUT AREA	EXISTING BED LINE		
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

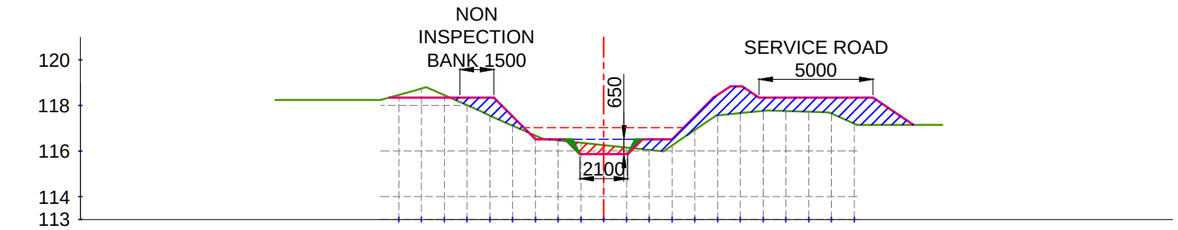
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 29 of 38

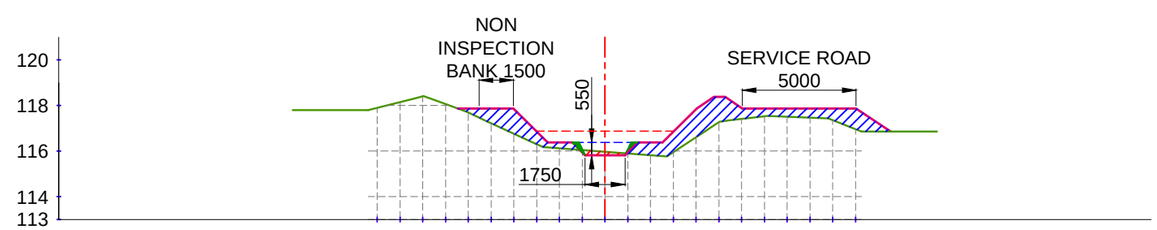
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	118.458	118.742	118.450	118.015	117.554	117.118	116.683	116.462	116.361	116.260	116.159	116.057	116.247	116.924	117.563	117.663	117.762	117.757	117.728	117.653	117.207	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 0.957
FILLING AREA (SQ.M) = 10.092

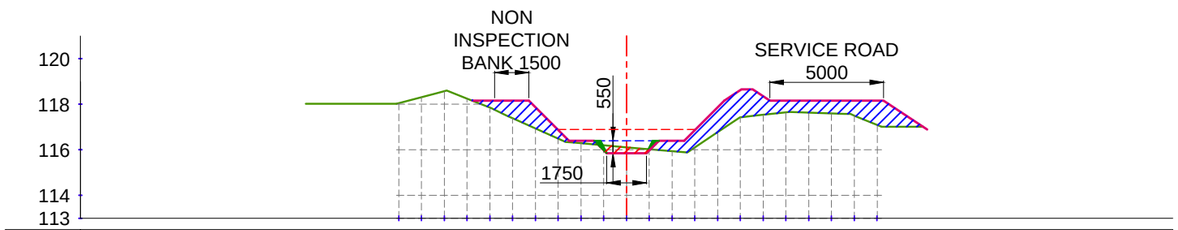
CH. (KM):- 11+700
DESIGNED BED LEVEL = 115.870 M



EXIST. LEVEL (M)	117.904	118.151	118.397	118.060	117.700	117.214	116.759	116.303	116.120	116.045	115.970	115.894	115.819	115.962	116.621	117.280	117.407	117.529	117.510	117.470	117.353	116.967
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.272
FILLING AREA (SQ.M) = 9.932

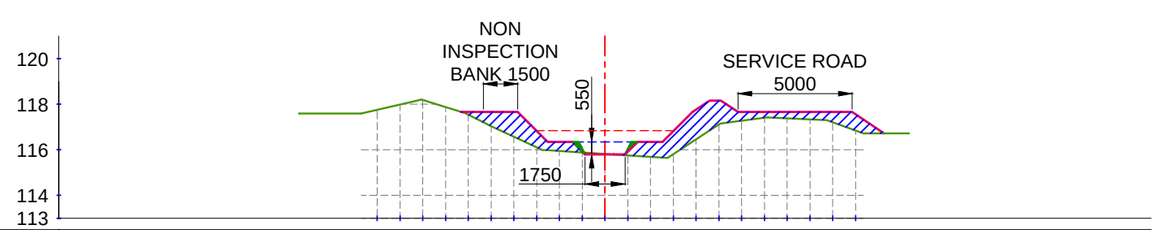
CH. (KM):- 11+900
DESIGNED BED LEVEL = 115.822 M



EXIST. LEVEL (M)	118.045	118.308	118.571	118.251	117.856	117.384	116.939	116.494	116.290	116.203	116.115	116.027	115.939	116.104	116.772	117.425	117.535	117.645	117.634	117.599	117.502	117.088
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.510
FILLING AREA (SQ.M) = 11.063

CH. (KM):- 11+800
DESIGNED BED LEVEL = 115.846 M



EXIST. LEVEL (M)	117.756	117.988	118.189	117.876	117.537	117.043	116.578	116.113	115.949	115.887	115.824	115.762	115.699	115.820	116.471	117.122	117.280	117.413	117.386	117.339	117.206	116.842
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.054
FILLING AREA (SQ.M) = 9.812

CH. (KM):- 12+000
DESIGNED BED LEVEL = 115.798 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

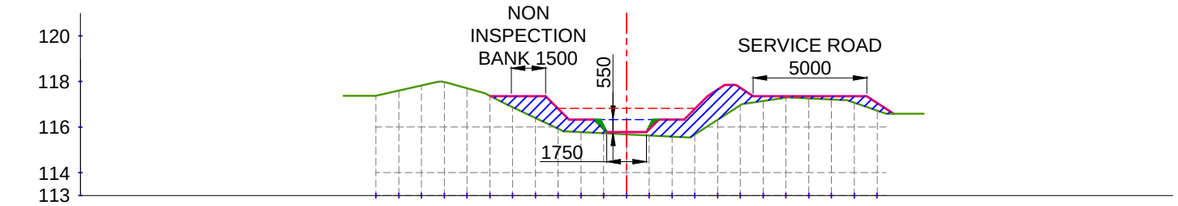
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 30 of 38

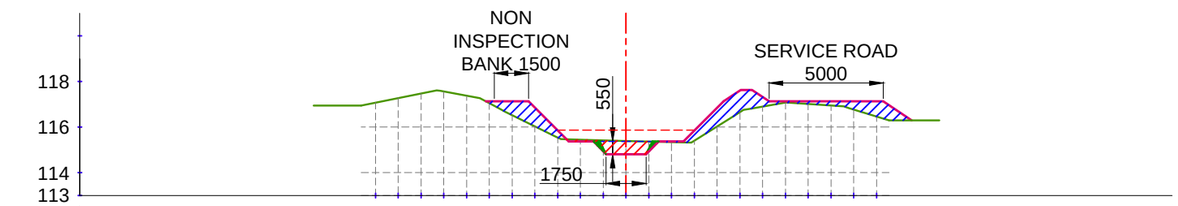
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	117.380	117.601	117.821	117.971	117.699	117.373	116.871	116.396	115.921	115.780	115.730	115.679	115.629	115.578	115.679	116.321	116.963	117.151	117.297	117.261	117.209	117.060	116.716
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.503

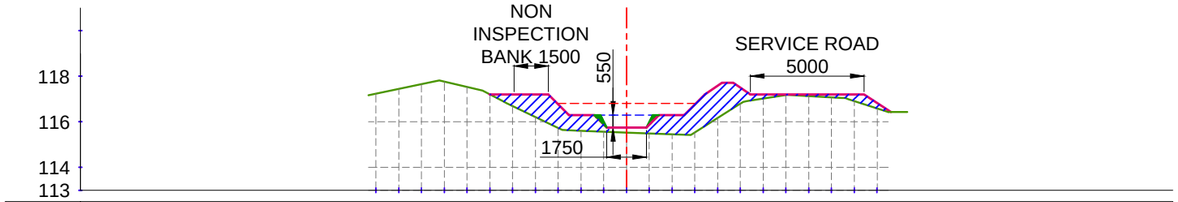
CH. (KM):- 12+100
DESIGNED BED LEVEL = 115.775 M



EXIST. LEVEL (M)	117.075	117.276	117.478	117.557	117.369	117.039	116.523	116.029	115.535	115.443	115.416	115.389	115.362	115.335	115.398	116.024	116.649	116.894	117.068	117.010	116.946	116.772	116.460
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 1.281
FILLING AREA (SQ.M) = 6.097

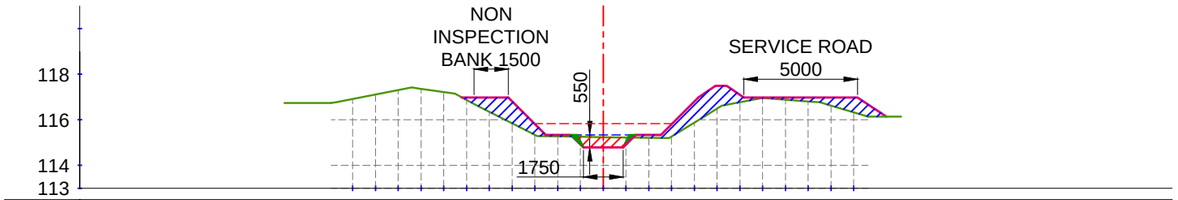
CH. (KM):- 12+300
DESIGNED BED LEVEL = 114.813 M



EXIST. LEVEL (M)	117.231	117.441	117.651	117.761	117.531	117.207	116.698	116.213	115.728	115.611	115.573	115.534	115.495	115.457	115.538	116.172	116.806	117.023	117.183	117.136	117.077	116.916	116.589
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.125

CH. (KM):- 12+200
DESIGNED BED LEVEL = 115.751 M



EXIST. LEVEL (M)	116.916	117.110	117.303	117.361	117.216	116.869	116.346	115.843	115.340	115.275	115.259	115.243	115.228	115.212	115.261	115.878	116.494	116.766	116.954	116.884	116.813	116.628	116.329
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.899
FILLING AREA (SQ.M) = 6.681

CH. (KM):- 12+400
DESIGNED BED LEVEL =114.789 M

LEGEND

CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

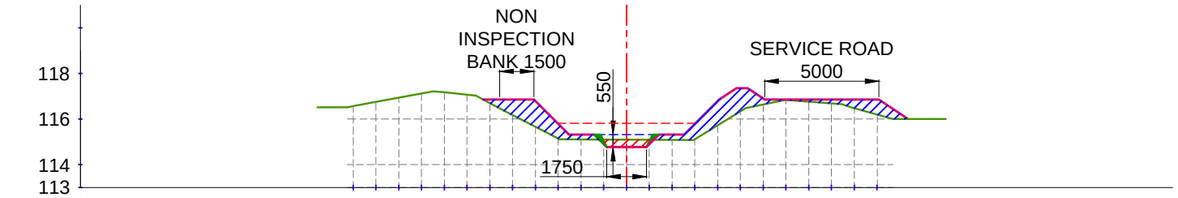
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 31 of 38

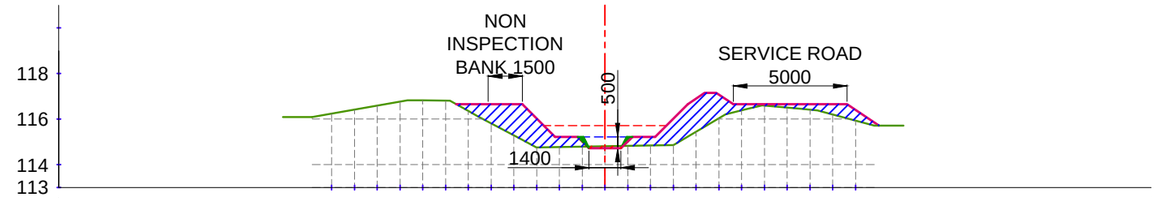
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	116.567	116.753	116.940	117.127	117.172	117.070	116.698	116.169	115.656	115.144	115.108	115.103	115.098	115.093	115.088	115.124	115.732	116.340	116.638	116.834	116.757	116.679	116.485	116.198
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.638
FILLING AREA (SQ.M) = 7.541

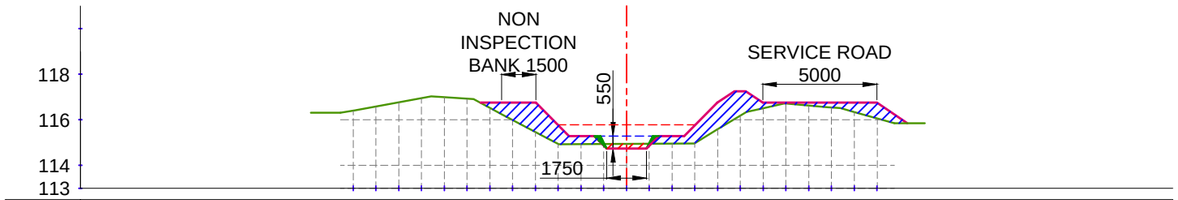
CH. (KM):- 12+500
DESIGNED BED LEVEL = 114.765 M



EXIST. LEVEL (M)	116.244	116.419	116.594	116.769	116.819	116.804	116.351	115.810	115.279	114.759	114.775	114.791	114.808	114.824	114.840	114.856	115.443	116.034	116.380	116.592	116.501	116.411	116.201	115.933
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.129
FILLING AREA (SQ.M) = 10.232

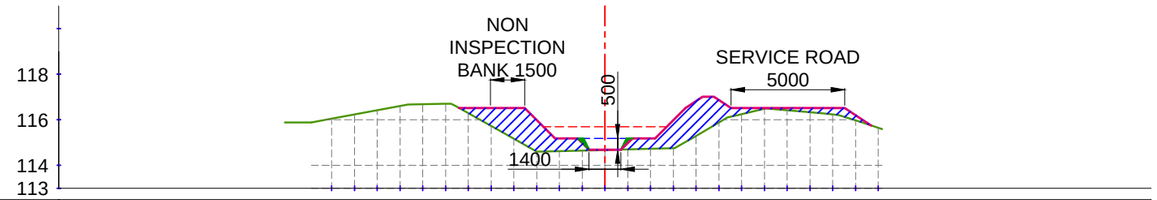
CH. (KM):- 12+700
DESIGNED BED LEVEL = 114.718 M



EXIST. LEVEL (M)	116.407	116.587	116.768	116.949	116.991	116.933	116.525	115.990	115.468	114.947	114.941	114.947	114.953	114.959	114.964	114.988	115.587	116.187	116.509	116.713	116.629	116.545	116.343	116.066
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.391
FILLING AREA (SQ.M) = 8.575

CH. (KM):- 12+600
DESIGNED BED LEVEL = 114.742 M



EXIST. LEVEL (M)	116.057	116.243	116.430	116.616	116.691	116.708	116.290	115.730	115.169	114.608	114.632	114.655	114.679	114.702	114.726	114.749	115.303	115.888	116.254	116.491	116.419	116.330	116.241	115.973	115.647
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.214

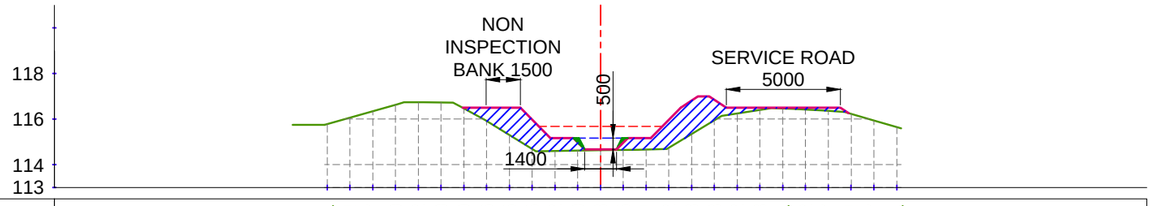
CH. (KM):- 12+800
DESIGNED BED LEVEL = 114.694 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

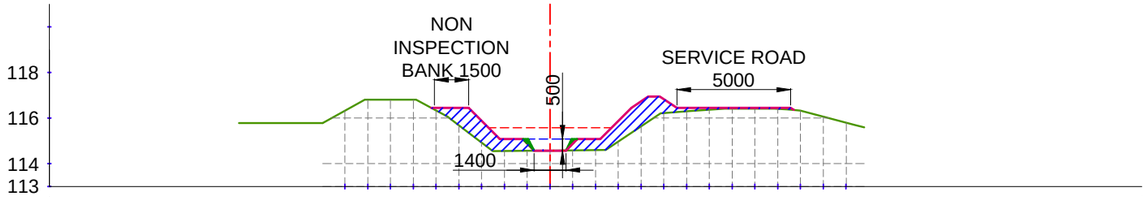
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 32 of 38

X SECTION OF BISHUNPUR SUB DY.



| | | |

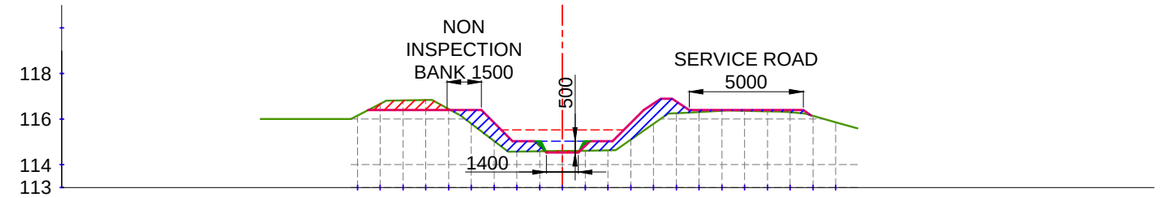
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	116.329	116.809	116.808	116.806	116.329	115.679	114.924	114.554	114.564	114.575	114.586	114.597	114.971	115.636	116.220	116.292	116.364	116.414	116.415	116.406	116.330	116.065	115.800			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.412

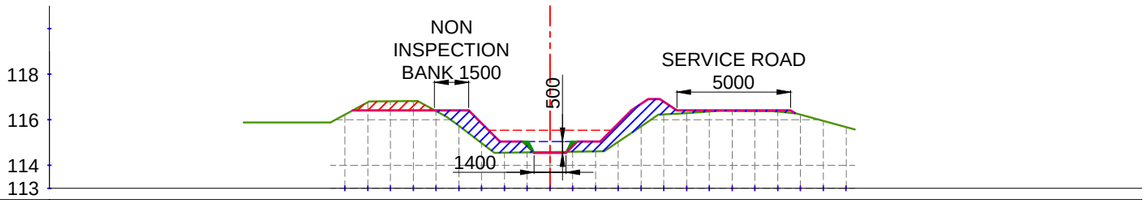
CH. (KM):- 13+300
DESIGNED BED LEVEL = 114.575 M



EXIST. LEVEL (M)	116.147	116.671	116.818	116.841	116.447	115.792	115.038	114.572	114.586	114.599	114.613	114.627	115.099	115.795	116.258	116.311	116.364	116.363	116.345	116.297	116.135	115.854				
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12				

CUTTING AREA (SQ.M) = 1.320
FILLING AREA (SQ.M) = 5.209

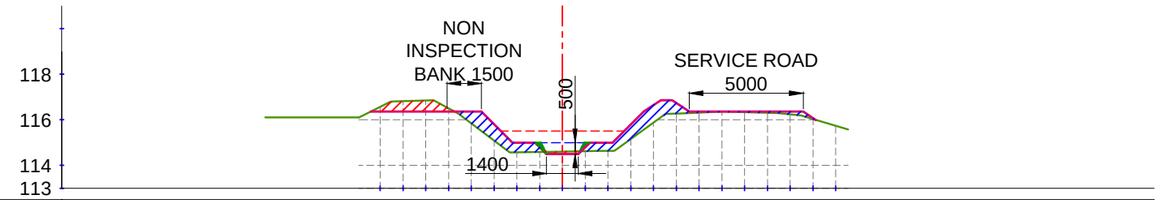
CH. (KM):- 13+500
DESIGNED BED LEVEL = 114.527 M



EXIST. LEVEL (M)	116.234	116.776	116.814	116.824	116.388	115.735	114.981	114.563	114.575	114.587	114.600	114.612	115.034	115.714	116.240	116.303	116.366	116.390	116.382	116.353	116.234	115.962	115.689			
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13			

CUTTING AREA (SQ.M) = 1.197
FILLING AREA (SQ.M) = 5.786

CH. (KM):- 13+400
DESIGNED BED LEVEL = 114.551 M



EXIST. LEVEL (M)	116.575	116.817	116.855	116.506	115.849	115.095	114.581	114.596	114.612	114.627	114.642	115.167	115.880	116.274	116.315	116.357	116.333	116.306	116.238	116.032	115.739					
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12					

CUTTING AREA (SQ.M) = 1.445
FILLING AREA (SQ.M) = 4.689

CH. (KM):- 13+600
DESIGNED BED LEVEL = 114.503 M

LEGEND

CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

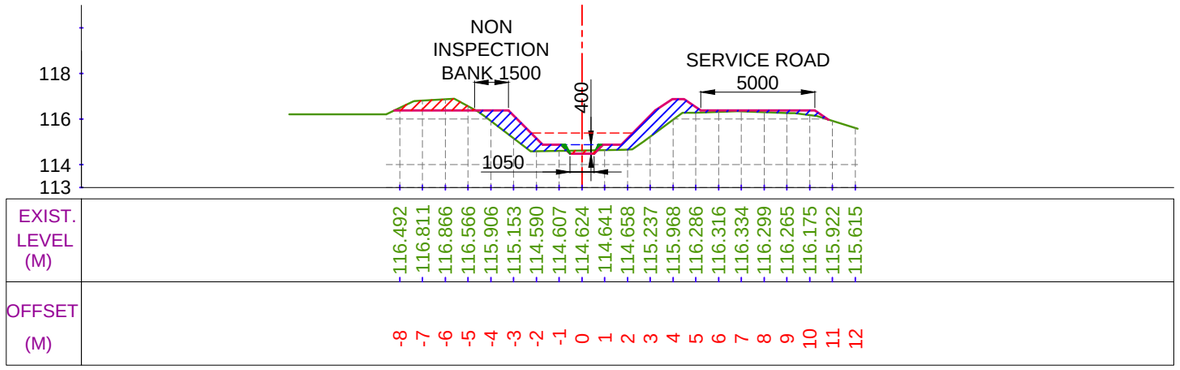
Prepared by :-

WAPCOS LTD.

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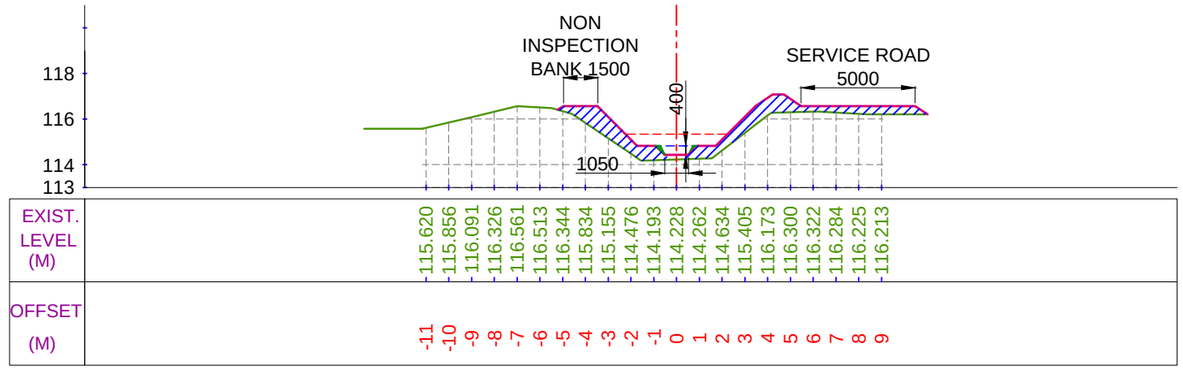
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 34 of 38

X SECTION OF BISHUNPUR SUB DY.



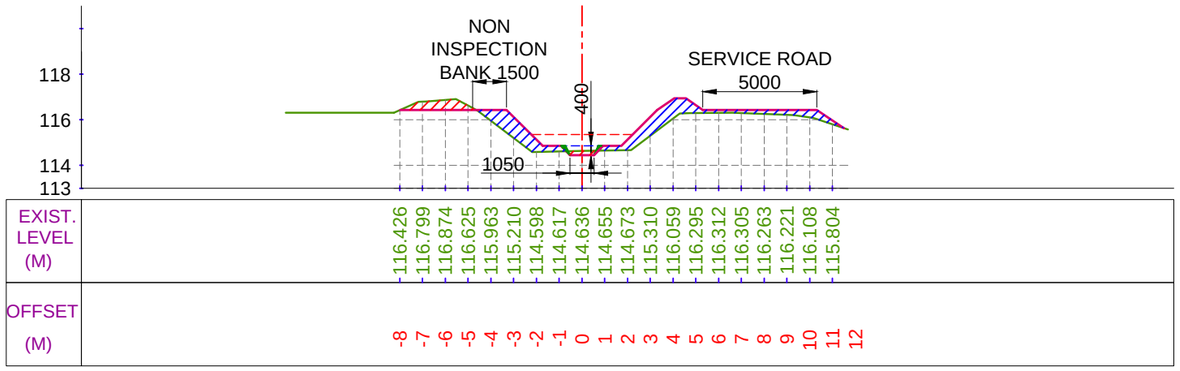
CUTTING AREA (SQ.M) = 1.403
FILLING AREA (SQ.M) = 5.367

CH. (KM):- 13+700
DESIGNED BED LEVEL = 114.480 M



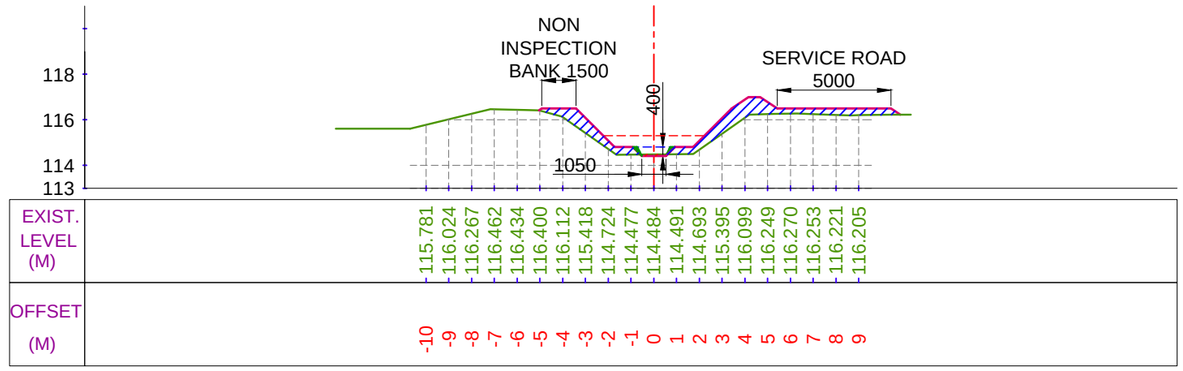
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.839

CH. (KM):- 13+900
DESIGNED BED LEVEL = 114.432 M



CUTTING AREA (SQ.M) = 1.224
FILLING AREA (SQ.M) = 5.769

CH. (KM):- 13+800
DESIGNED BED LEVEL = 114.456 M



CUTTING AREA (SQ.M) = 0.083
FILLING AREA (SQ.M) = 5.741

CH. (KM):- 14+000
DESIGNED BED LEVEL = 114.408 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

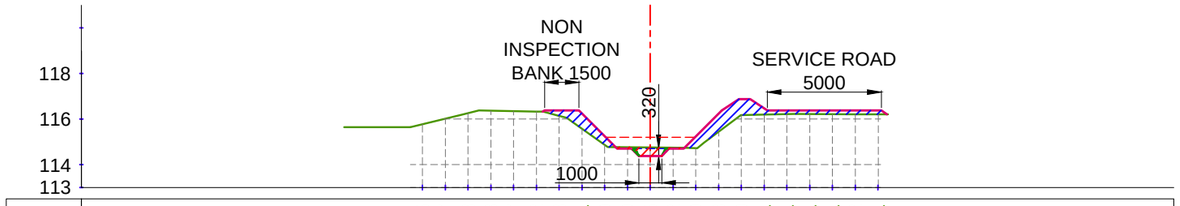
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 35 of 38

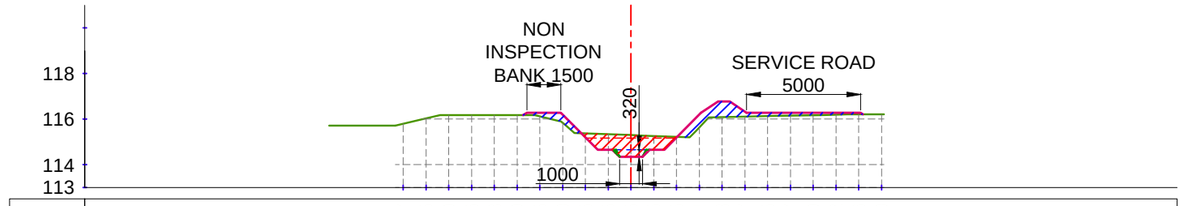
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	115.775	116.017	116.258	116.363	116.347	116.332	116.143	115.581	114.869	114.769	114.755	114.742	114.729	115.443	116.180	116.201	116.221	116.211	116.202	116.211	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 0.524
FILLING AREA (SQ.M) = 4.252

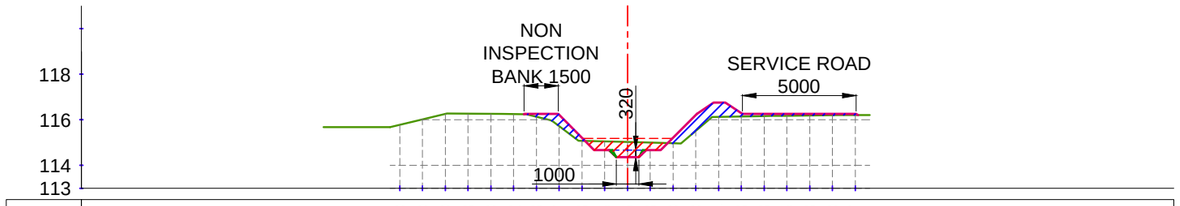
CH. (KM):- 14+100
DESIGNED BED LEVEL = 114.384 M



EXIST. LEVEL (M)	115.797	116.035	116.179	116.176	116.173	116.169	116.115	115.830	115.375	115.335	115.295	115.255	115.215	115.644	116.088	116.107	116.125	116.147	116.169	116.192	116.206	116.210
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 2.649
FILLING AREA (SQ.M) = 2.637

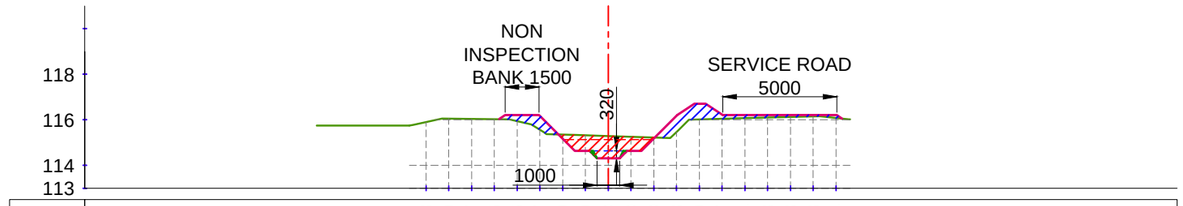
CH. (KM):- 14+300
DESIGNED BED LEVEL = 114.337 M



EXIST. LEVEL (M)	115.780	116.020	116.260	116.268	116.260	116.252	116.138	115.717	115.083	115.055	115.026	114.998	114.970	115.520	116.134	116.153	116.173	116.185	116.193	116.200	116.207	
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	

CUTTING AREA (SQ.M) = 1.502
FILLING AREA (SQ.M) = 2.736

CH. (KM):- 14+200
DESIGNED BED LEVEL = 114.361 M



EXIST. LEVEL (M)	115.908	116.059	116.047	116.036	115.946	115.557	115.349	115.319	115.290	115.260	115.230	115.473	116.019	116.047	116.074	116.098	116.123	116.148	116.084		
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10		

CUTTING AREA (SQ.M) = 2.724
FILLING AREA (SQ.M) = 2.922

CH. (KM):- 14+400
DESIGNED BED LEVEL = 114.313 M

LEGEND

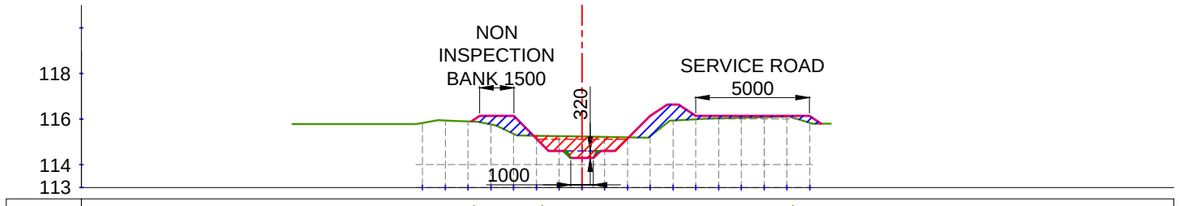
CUT AREA	EXISTING BED LINE	F.S.L.	
FILL AREA	DESIGNED BED LINE	H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 36 of 38

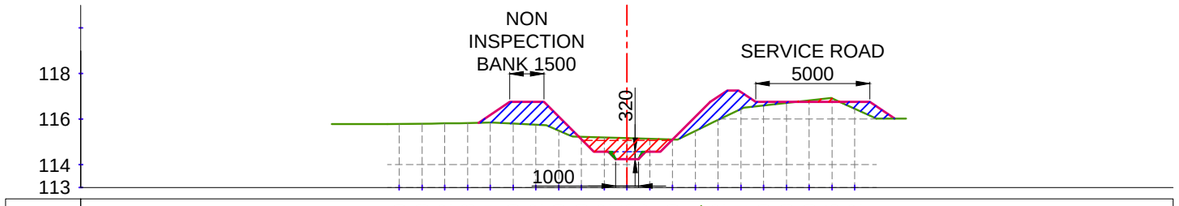
X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	115.829	115.935	115.901	115.762	115.349	115.271	115.252	115.234	115.215	115.196	115.255	115.943	115.995	116.035	116.060	116.086	116.111	115.832			
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10			

CUTTING AREA (SQ.M) = 2.587
FILLING AREA (SQ.M) = 3.418

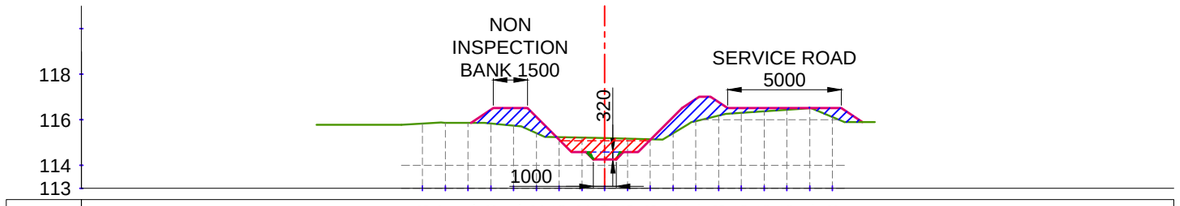
CH. (KM):- 14+500
DESIGNED BED LEVEL = 114.289 M



EXIST. LEVEL (M)	115.789	115.800	115.812	115.828	115.844	115.799	115.752	115.499	115.220	115.192	115.165	115.137	115.109	115.481	115.962	116.434	116.589	116.700	116.810	116.905	116.452
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 2.647
FILLING AREA (SQ.M) = 6.396

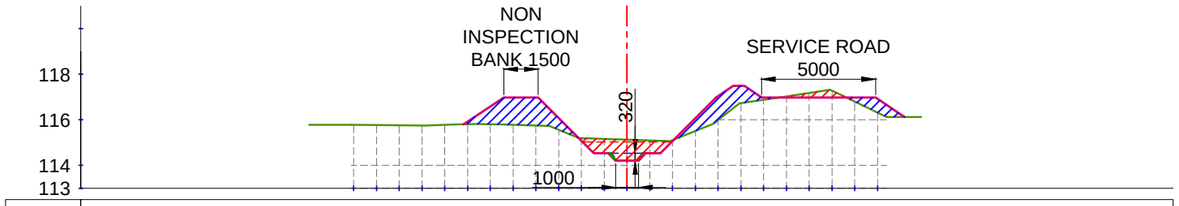
CH. (KM):- 14+700
DESIGNED BED LEVEL = 114.242 M



EXIST. LEVEL (M)	115.833	115.877	115.871	115.840	115.751	115.422	115.245	115.222	115.199	115.176	115.153	115.414	115.944	116.183	116.305	116.375	116.445	116.514	116.120		
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10		

CUTTING AREA (SQ.M) = 2.543
FILLING AREA (SQ.M) = 5.589

CH. (KM):- 14+600
DESIGNED BED LEVEL = 114.265 M



EXIST. LEVEL (M)	115.784	115.771	115.758	115.746	115.775	115.811	115.807	115.781	115.755	115.569	115.199	115.164	115.130	115.095	115.110	115.515	116.005	116.736	116.885	117.034	117.184	117.279	116.799	116.318
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 2.950
FILLING AREA (SQ.M) = 7.264

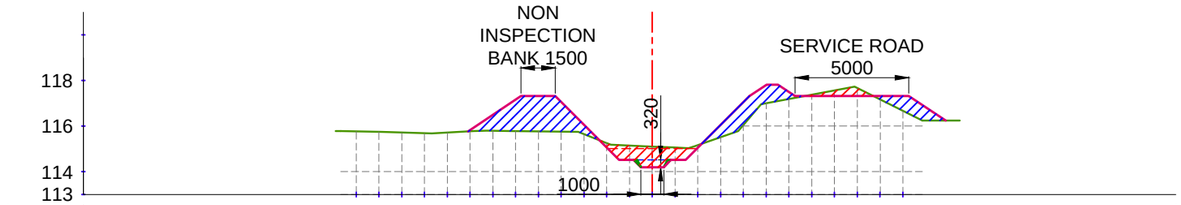
CH. (KM):- 14+800
DESIGNED BED LEVEL = 114.218 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 37 of 38

X SECTION OF BISHUNPUR SUB DY.



EXIST. LEVEL (M)	115.769	115.741	115.713	115.686	115.712	115.765	115.799	115.786	115.772	115.758	115.644	115.245	115.139	115.095	115.052	115.171	115.519	116.054	117.003	117.188	117.373	117.559	117.665	117.166	116.668
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 3.093

FILLING AREA (SQ.M) = 9.405

CH. (KM):- 14+900

DESIGNED BED LEVEL = 114.194 M

LEGEND

CUT AREA	EXISTING BED LINE
	F.S.L.
FILL AREA	DESIGNED BED LINE
	H.G. LINE

Prepared by :-

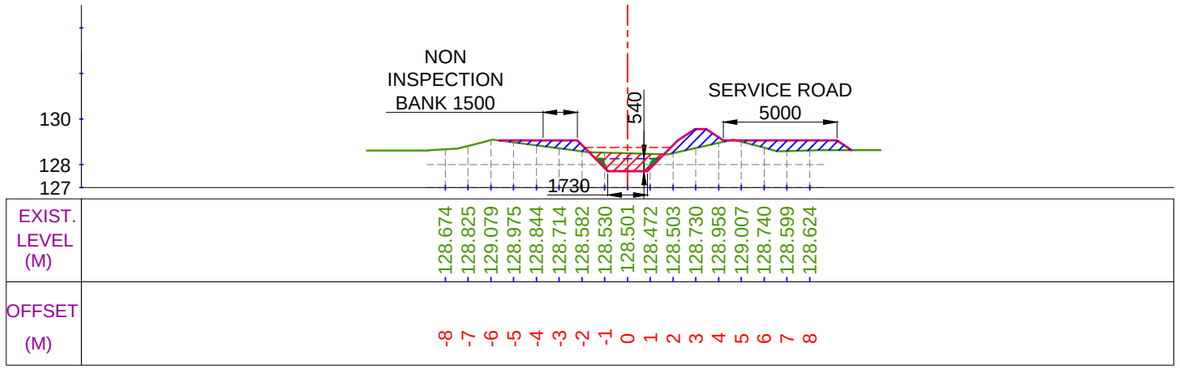
WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SEC OF BISHUNPUR SUB-DY (OFFTAKE FROM RD-7+213 KM. (LT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ XSEC- 38 of 38

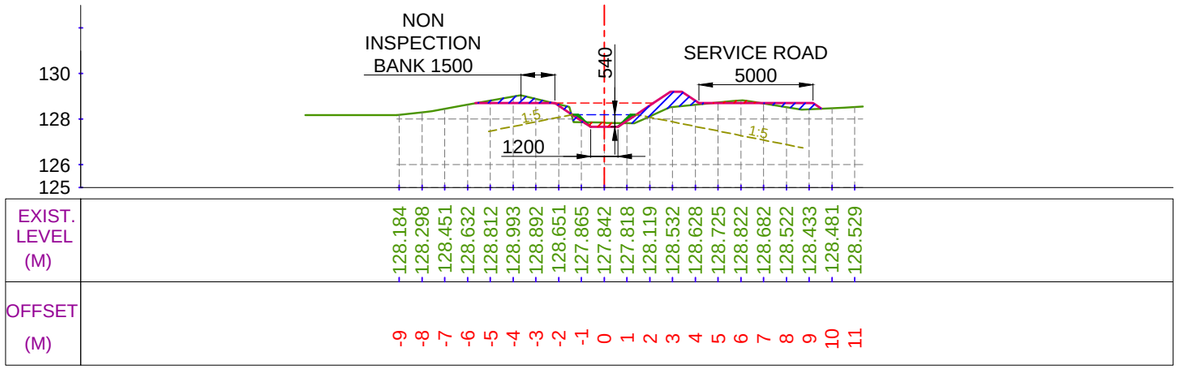
CROSS SECTION OF TETARIA MINOR

X SECTION OF TETRIA MINOR



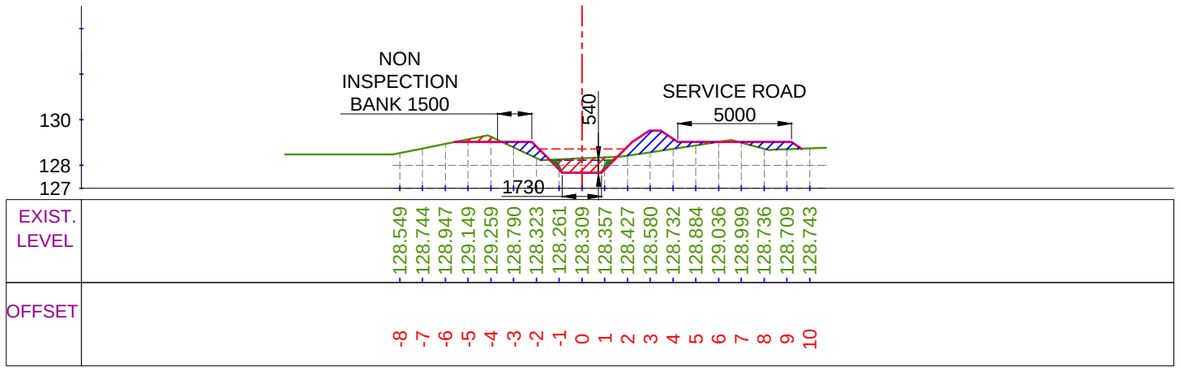
CUTTING AREA (SQ.M) = 1.818
FILLING AREA (SQ.M) = 3.965

CH. (KM):- 0+100
DESIGNED BED LEVEL = 127.720 M



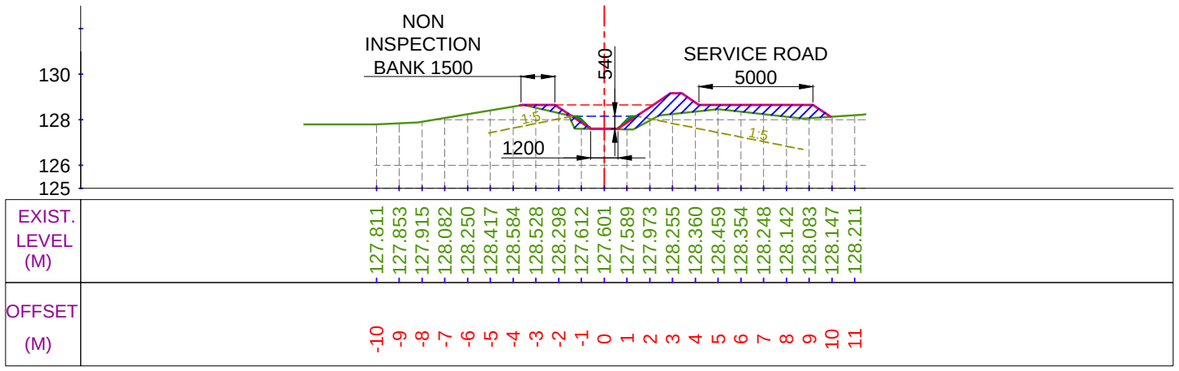
CUTTING AREA (SQ.M) = 0.409
FILLING AREA (SQ.M) = 2.658

CH. (KM):- 0+300
DESIGNED BED LEVEL = 127.655 M



CUTTING AREA (SQ.M) = 1.677
FILLING AREA (SQ.M) = 3.174

CH. (KM):- 0+200
DESIGNED BED LEVEL = 127.687 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.820

CH. (KM):- 0+400
DESIGNED BED LEVEL = 127.621 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

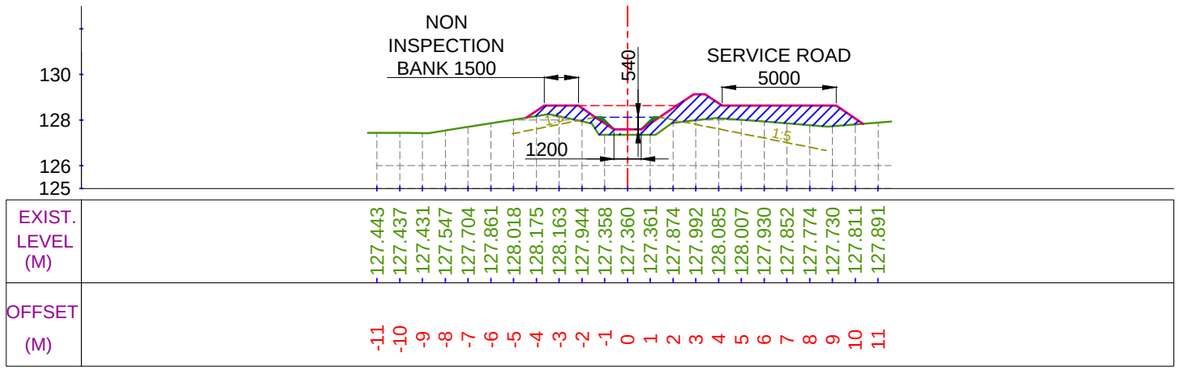
Prepared by :-

WAPCOS LTD.

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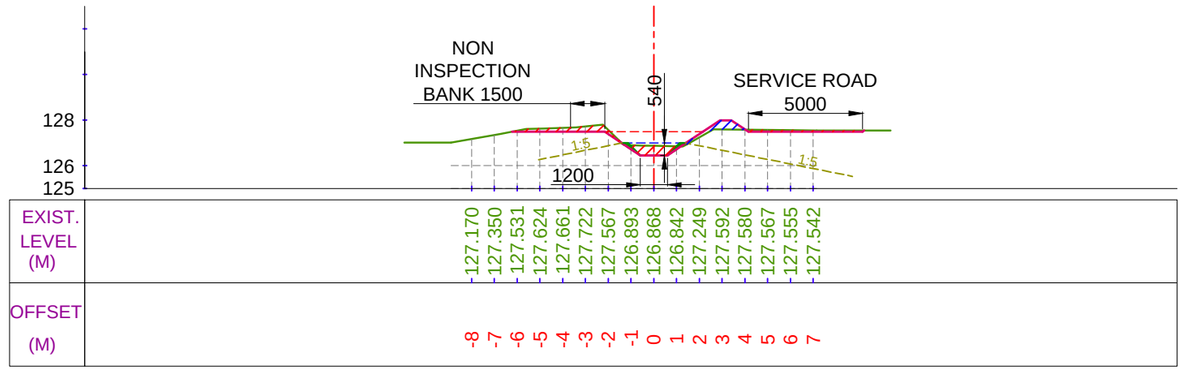
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 1 of 8

X SECTION OF TETRIA MINOR



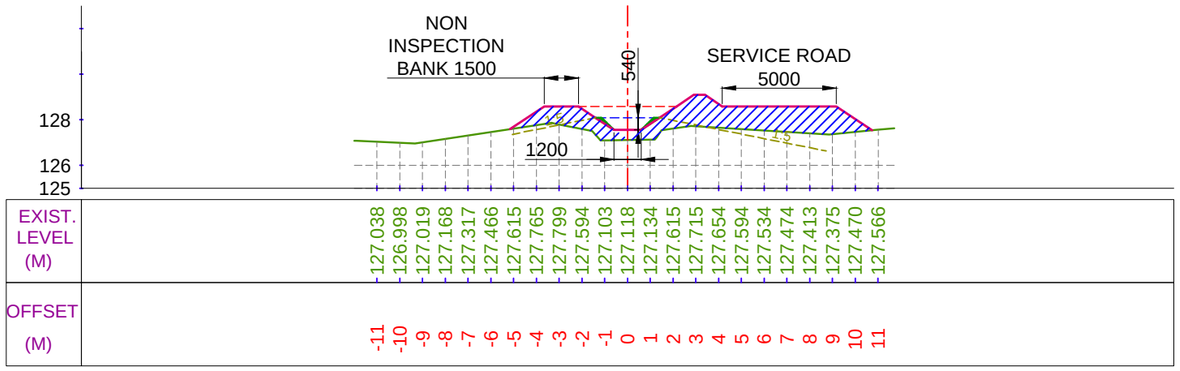
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.733

CH. (KM):- 0+500
DESIGNED BED LEVEL = 127.588 M



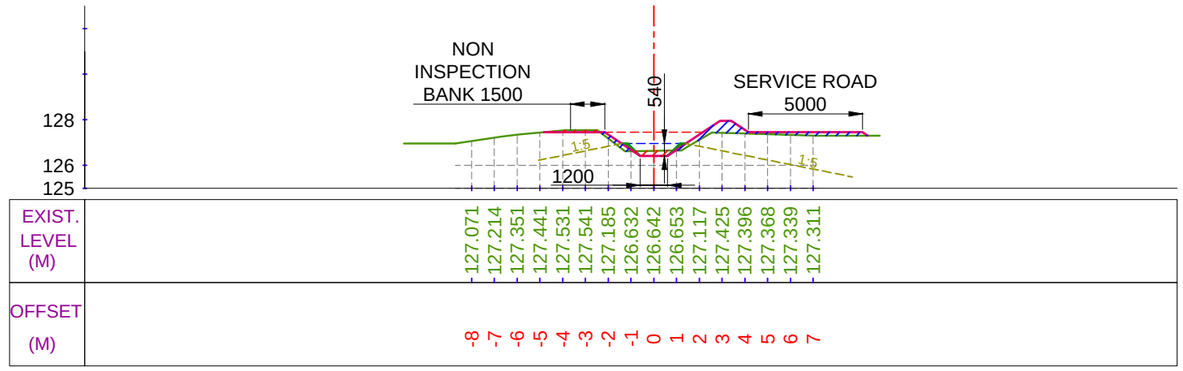
CUTTING AREA (SQ.M) = 1.750
FILLING AREA (SQ.M) = 0.590

CH. (KM):- 0+700
DESIGNED BED LEVEL = 126.451 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 13.278

CH. (KM):- 0+600
DESIGNED BED LEVEL = 127.555 M



CUTTING AREA (SQ.M) = 0.480
FILLING AREA (SQ.M) = 1.837

CH. (KM):- 0+800
DESIGNED BED LEVEL = 126.418 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

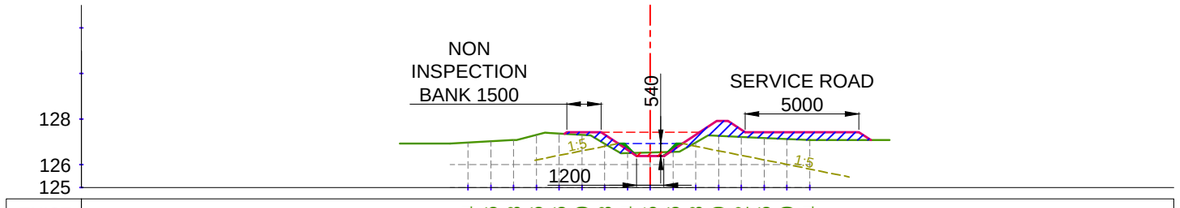
Prepared by :-

WAPCOS LTD.

386

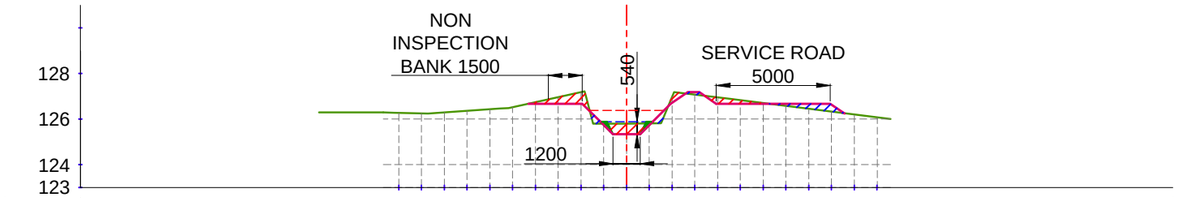
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 2 of 8

X SECTION OF TETRIA MINOR



| | | |

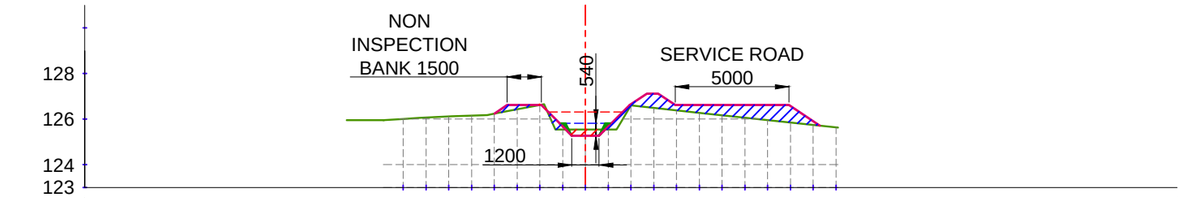
X SECTION OF TETRIA MINOR



EXIST. LEVEL (M)	126.278	126.252	126.293	126.362	126.431	126.526	126.745	126.964	127.183	125.797	125.802	125.808	126.987	127.074	126.949	126.823	126.698	126.573	126.447	126.322	126.197	126.072
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 1.964
FILLING AREA (SQ.M) = 0.931

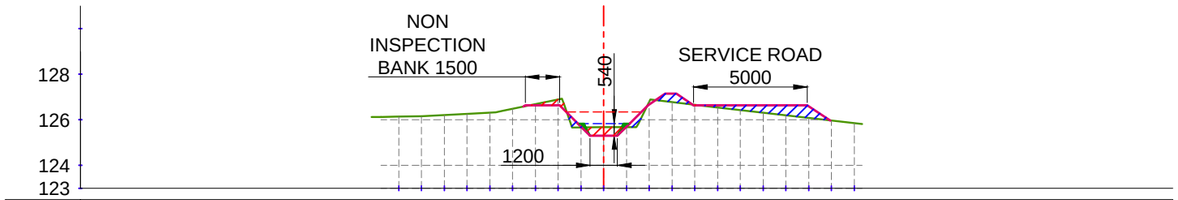
CH. (KM):- 1+300
DESIGNED BED LEVEL =125.336 M



EXIST. LEVEL (M)	126.011	126.069	126.111	126.152	126.238	126.428	126.617	125.543	125.544	126.595	126.489	126.383	126.277	126.171	126.065	125.959	125.853	125.747	125.641		
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 0.385
FILLING AREA (SQ.M) = 4.524

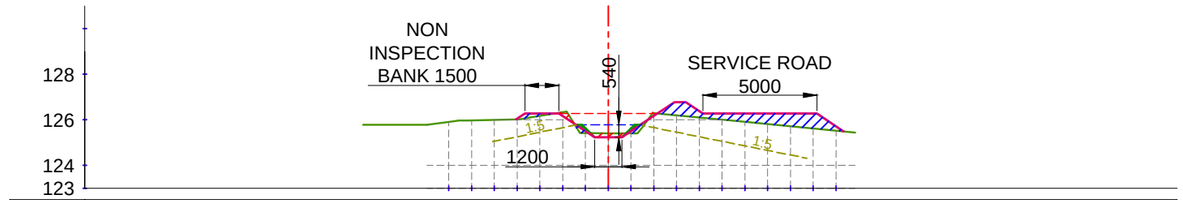
CH. (KM):- 1+500
DESIGNED BED LEVEL = 125.270 M



EXIST. LEVEL (M)	126.137	126.151	126.207	126.263	126.320	126.487	126.693	126.899	125.670	125.673	125.676	126.812	126.781	126.665	126.549	126.433	126.318	126.202	126.086	125.970	125.854	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	

CUTTING AREA (SQ.M) = 0.803
FILLING AREA (SQ.M) = 2.321

CH. (KM):- 1+400
DESIGNED BED LEVEL = 125.303 M



EXIST. LEVEL (M)	125.908	125.978	126.001	126.024	126.171	126.336	125.416	125.414	125.411	126.295	126.199	126.104	126.008	125.912	125.816	125.721	125.625	125.529			
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10			

CUTTING AREA (SQ.M) = 0.394
FILLING AREA (SQ.M) = 3.719

CH. (KM):- 1+600
DESIGNED BED LEVEL = 125.236 M

LEGEND

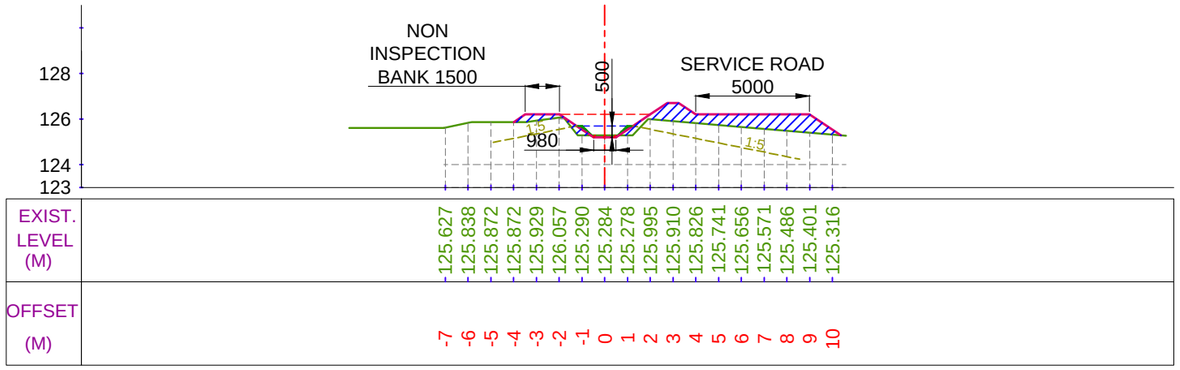
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

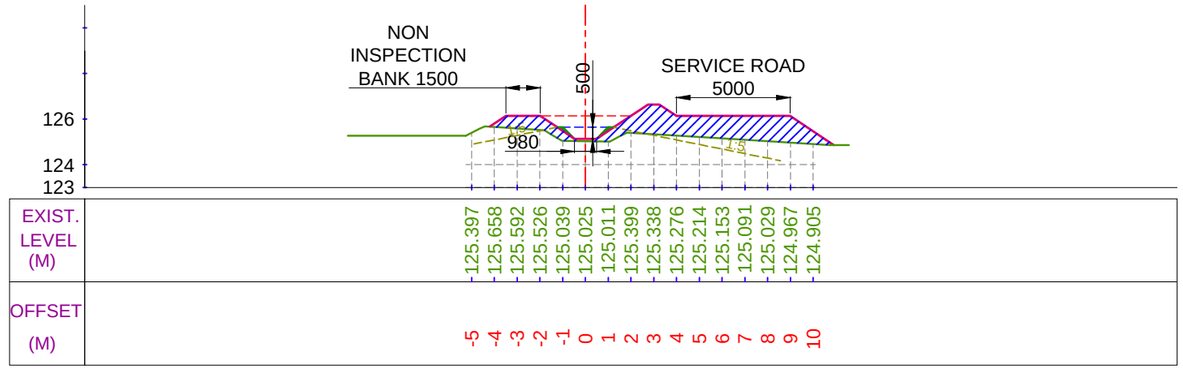
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 4 of 8

X SECTION OF TETRIA MINOR



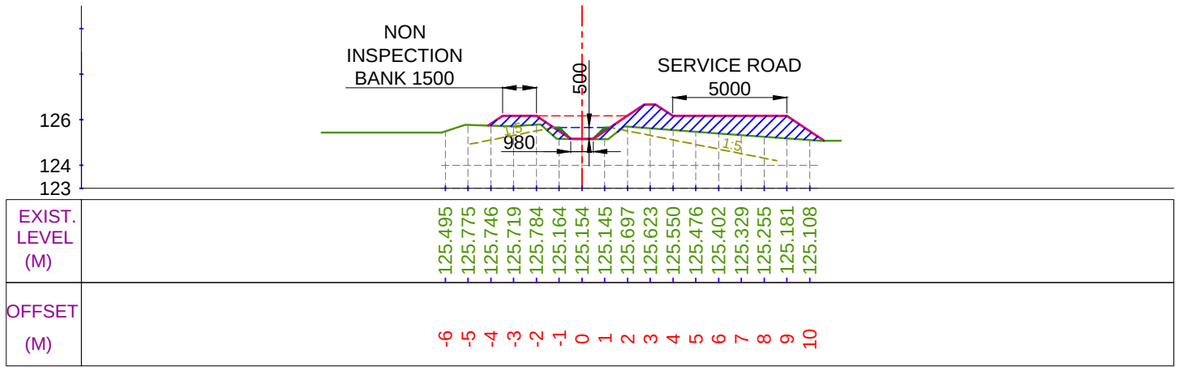
CUTTING AREA (SQ.M) = 0.086
FILLING AREA (SQ.M) = 5.718

CH. (KM):- 1+700
DESIGNED BED LEVEL = 125.203 M



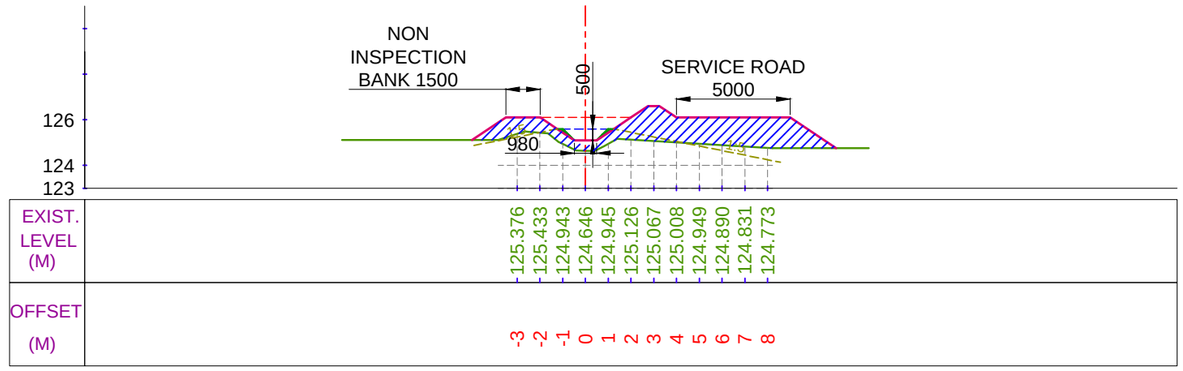
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 10.801

CH. (KM):- 1+900
DESIGNED BED LEVEL = 125.136 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.275

CH. (KM):- 1+800
DESIGNED BED LEVEL = 125.170 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 13.947

CH. (KM):- 2+000
DESIGNED BED LEVEL = 125.103 M

LEGEND

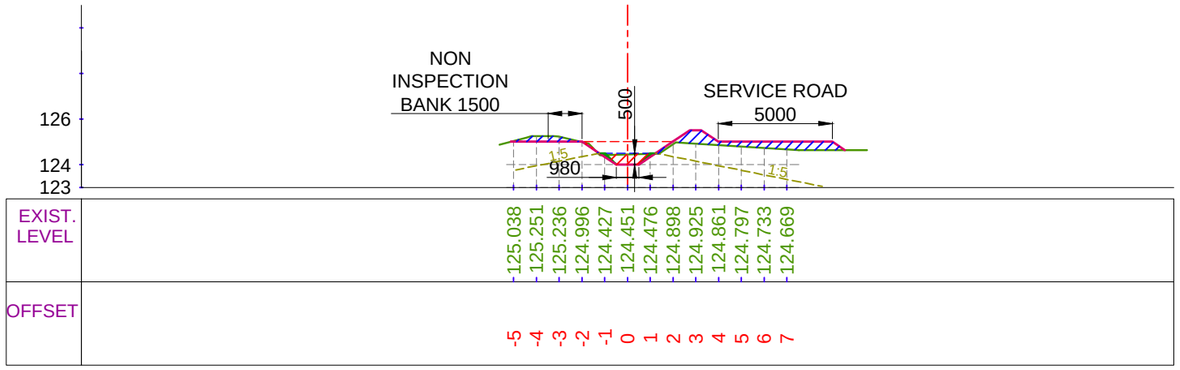
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

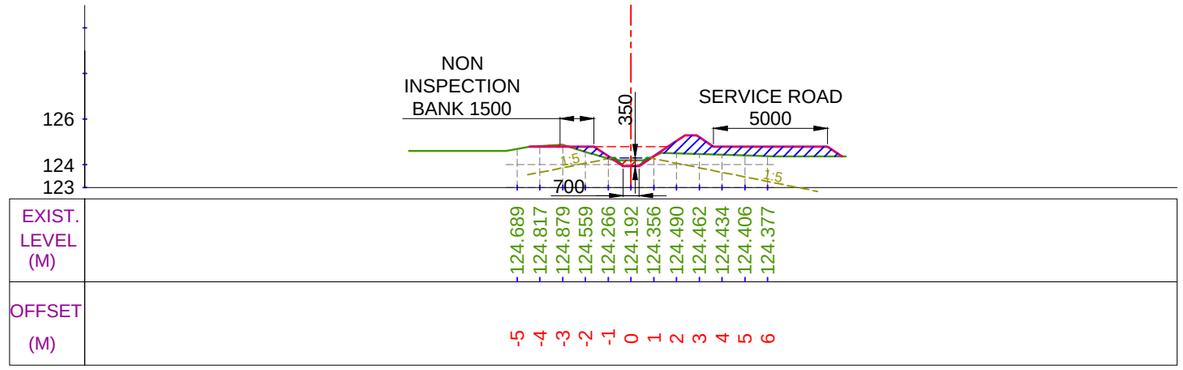
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 5 of 8

X SECTION OF TETRIA MINOR



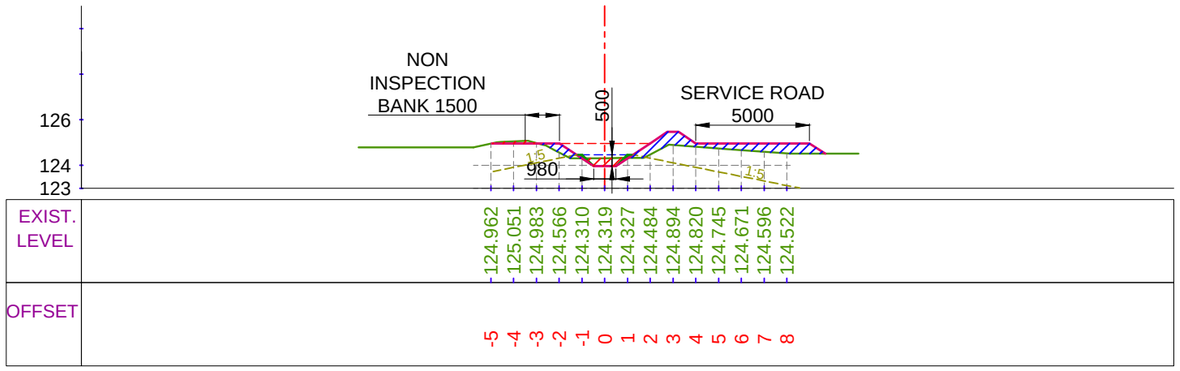
CUTTING AREA (SQ.M) = 0.674
FILLING AREA (SQ.M) = 2.934

CH. (KM):- 2+100
DESIGNED BED LEVEL = 124.003 M



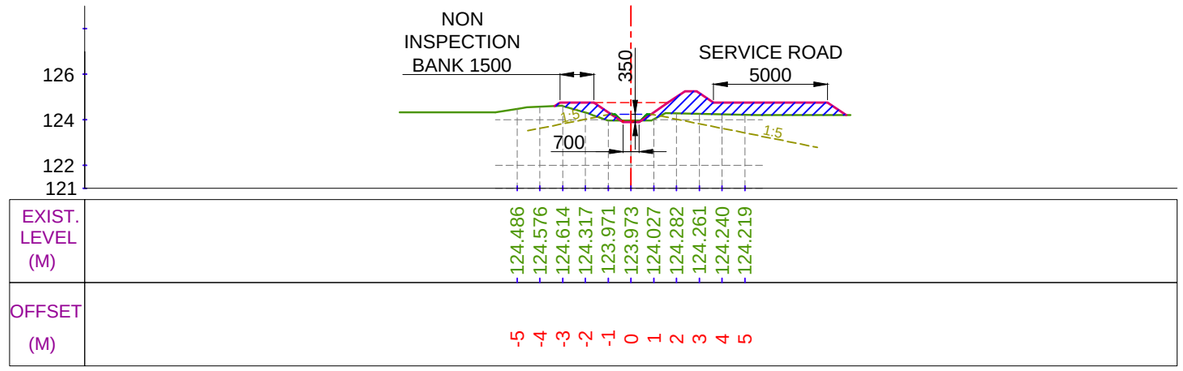
CUTTING AREA (SQ.M) = 0.328
FILLING AREA (SQ.M) = 3.775

CH. (KM):- 2+300
DESIGNED BED LEVEL = 123.936 M



CUTTING AREA (SQ.M) = 0.603
FILLING AREA (SQ.M) = 3.496

CH. (KM):- 2+200
DESIGNED BED LEVEL = 123.969 M



CUTTING AREA (SQ.M) = 0.054
FILLING AREA (SQ.M) = 5.744

CH. (KM):- 2+400
DESIGNED BED LEVEL = 123.903 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

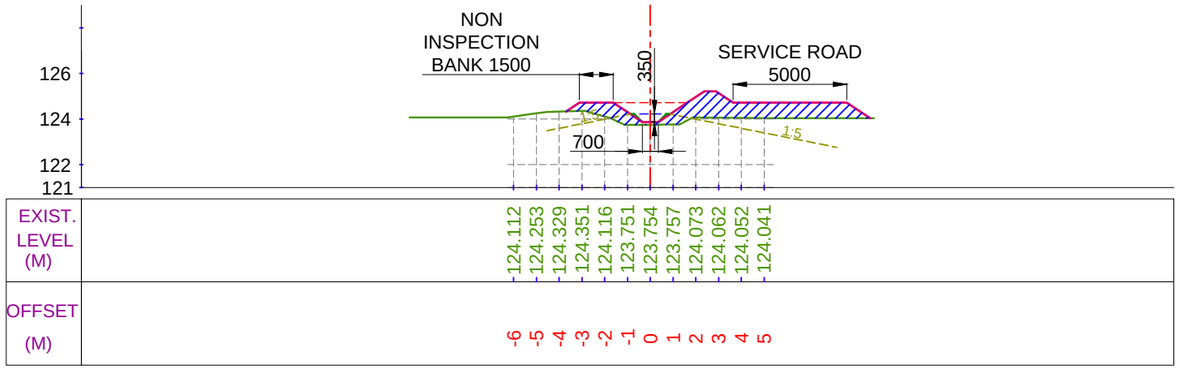
Prepared by :-

WAPCOS LTD.

390

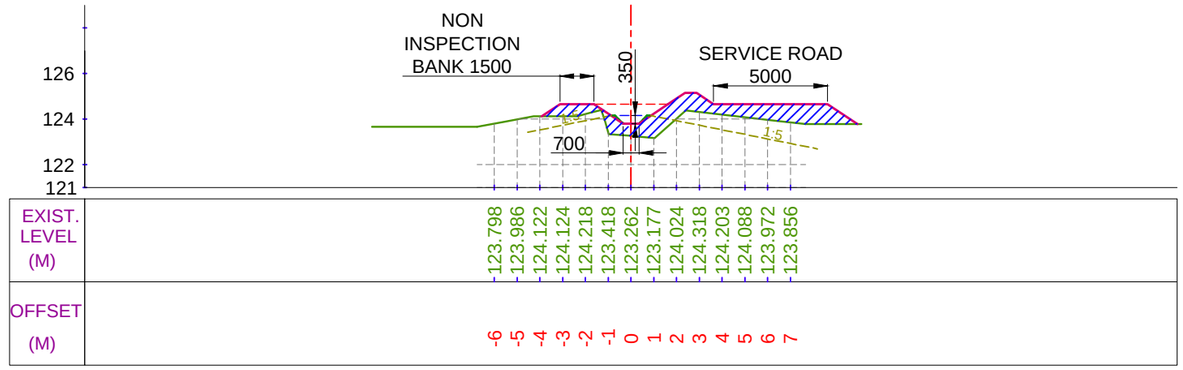
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 6 of 8

X SECTION OF TETRIA MINOR



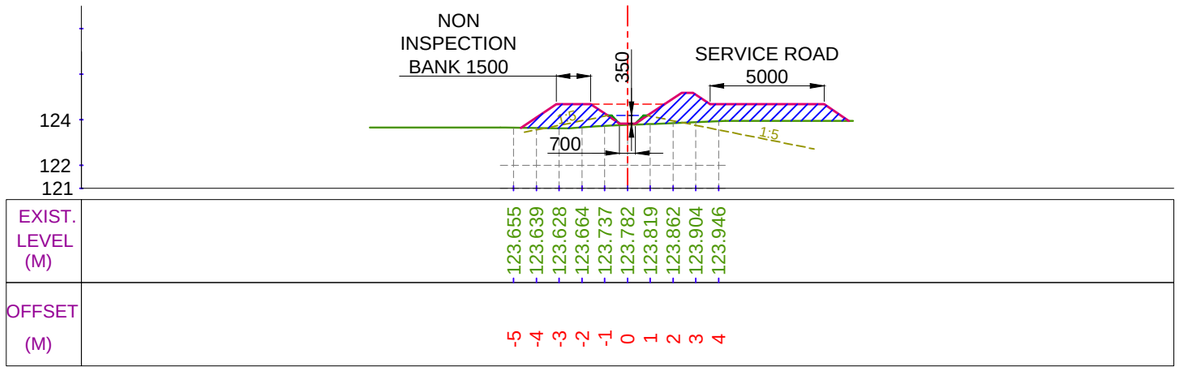
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.869

CH. (KM):- 2+500
DESIGNED BED LEVEL = 123.869 M



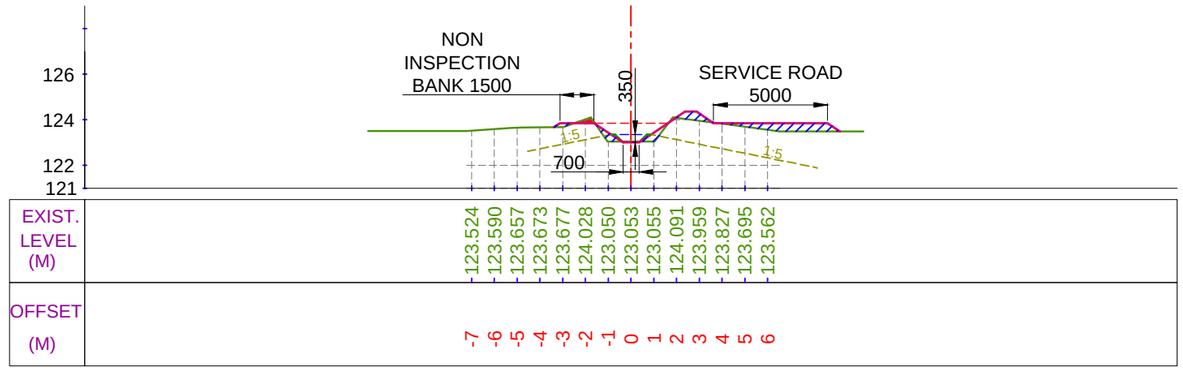
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.569

CH. (KM):- 2+700
DESIGNED BED LEVEL = 123.803 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.890

CH. (KM):- 2+600
DESIGNED BED LEVEL = 123.836 M



CUTTING AREA (SQ.M) = 0.168
FILLING AREA (SQ.M) = 2.321

CH. (KM):- 2+800
DESIGNED BED LEVEL = 123.007 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

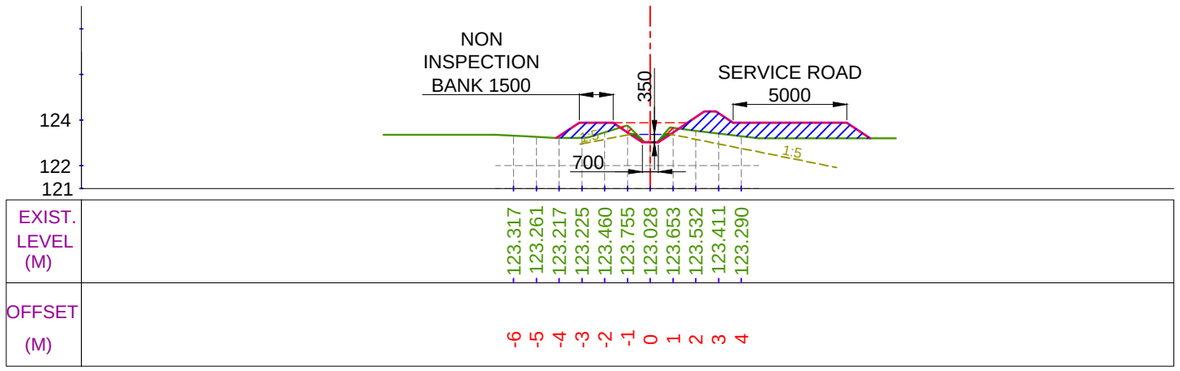
Prepared by :-

WAPCOS LTD.

391

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 7 of 8

X SECTION OF TETRIA MINOR



CUTTING AREA (SQ.M) = 0.279

FILLING AREA (SQ.M) = 6.355

CH. (KM):- 2+900

DESIGNED BED LEVEL = 122.974 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

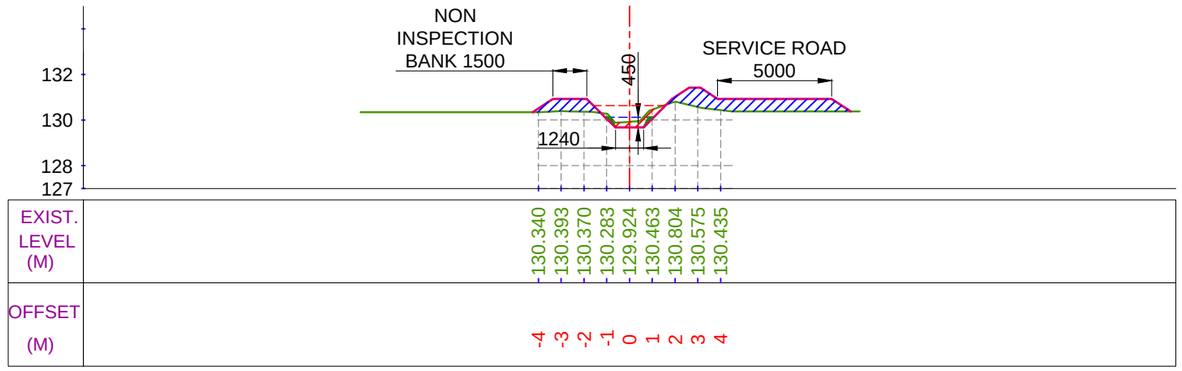
WAPCOS LTD.

392

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X- SECTION OF TETRIA MR. (OFFTAKE FROM RD - 5+363 KM. (R), BISHUNPUR SUB-DISTRIBUTARY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ XSEC- 8 of 8

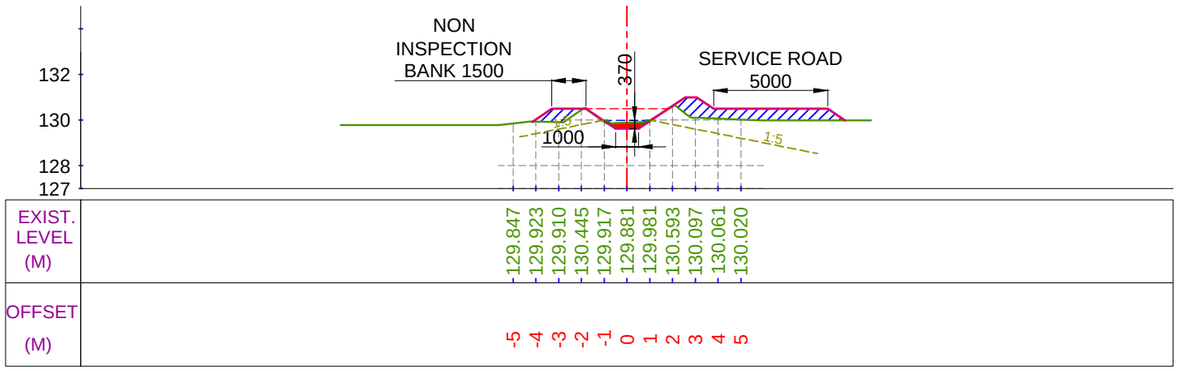
CROSS SECTION OF KARMARI MINOR

X SECTION OF KARMARI MINOR



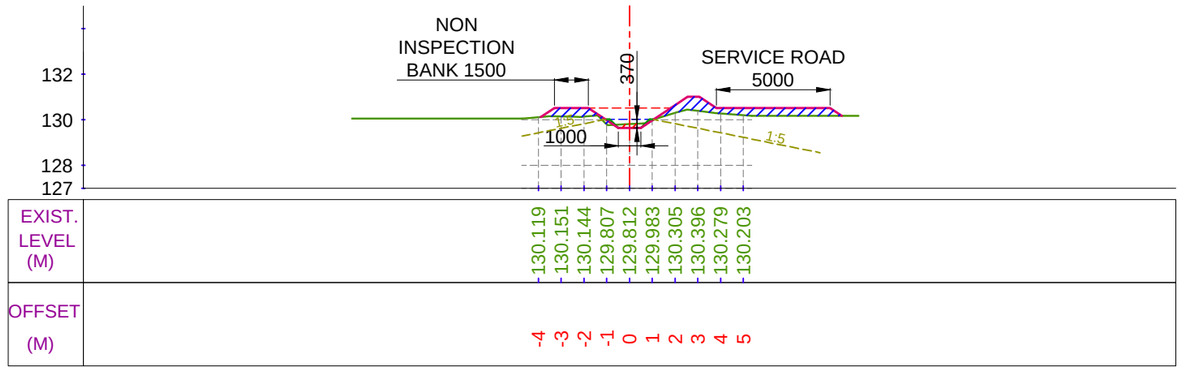
CUTTING AREA (SQ.M) = 0.590
FILLING AREA (SQ.M) = 5.499

CH. (KM):- 0+100
DESIGNED BED LEVEL = 129.679 M



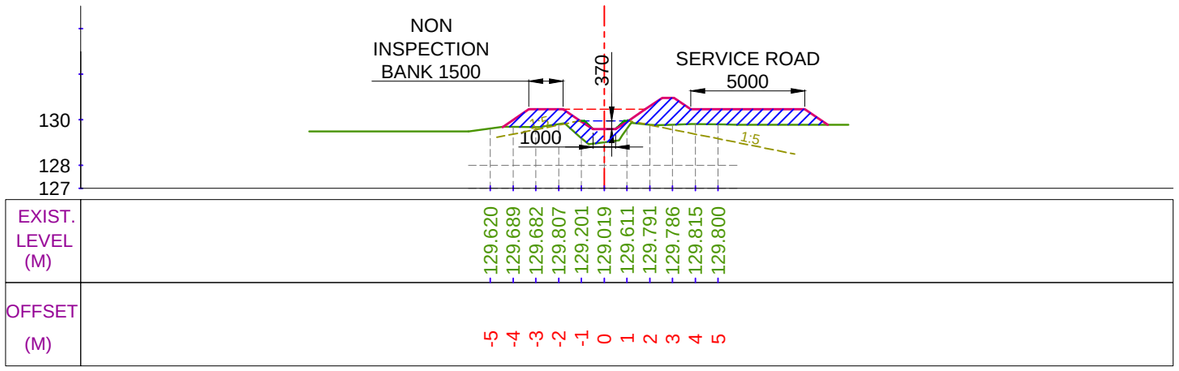
CUTTING AREA (SQ.M) = 0.336
FILLING AREA (SQ.M) = 4.545

CH. (KM):- 0+300
DESIGNED BED LEVEL =129.621 M



CUTTING AREA (SQ.M) = 0.189
FILLING AREA (SQ.M) = 3.575

CH. (KM):- 0+200
DESIGNED BED LEVEL = 129.650 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.049

CH. (KM):- 0+400
DESIGNED BED LEVEL = 129.593 M

LEGEND

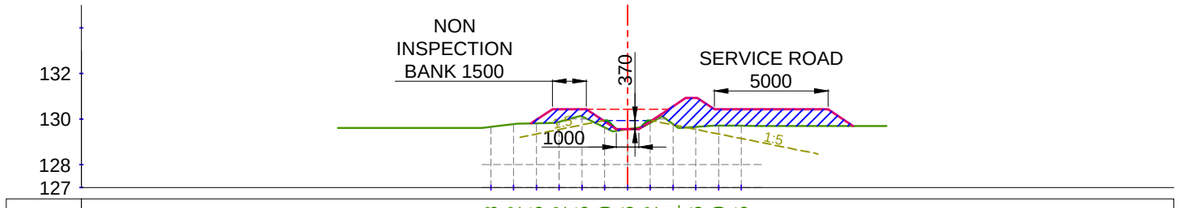
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

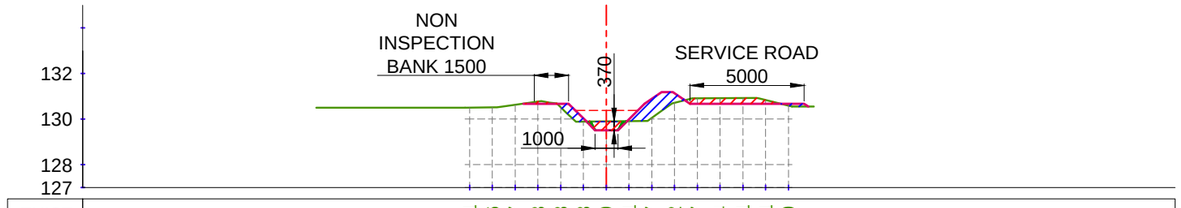
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 1 of 6

X SECTION OF KARMARI MINOR



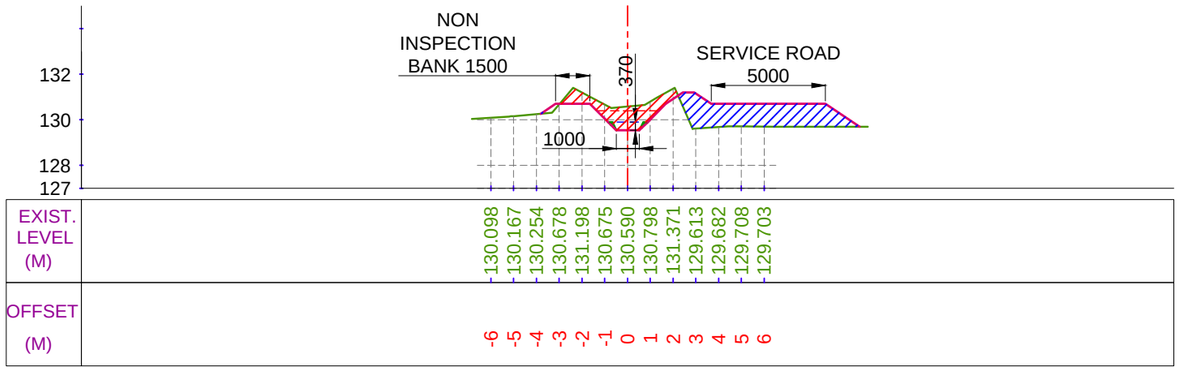
CUTTING AREA (SQ.M) = 0.020
FILLING AREA (SQ.M) = 7.701

CH. (KM):- 0+500
DESIGNED BED LEVEL = 129.564 M



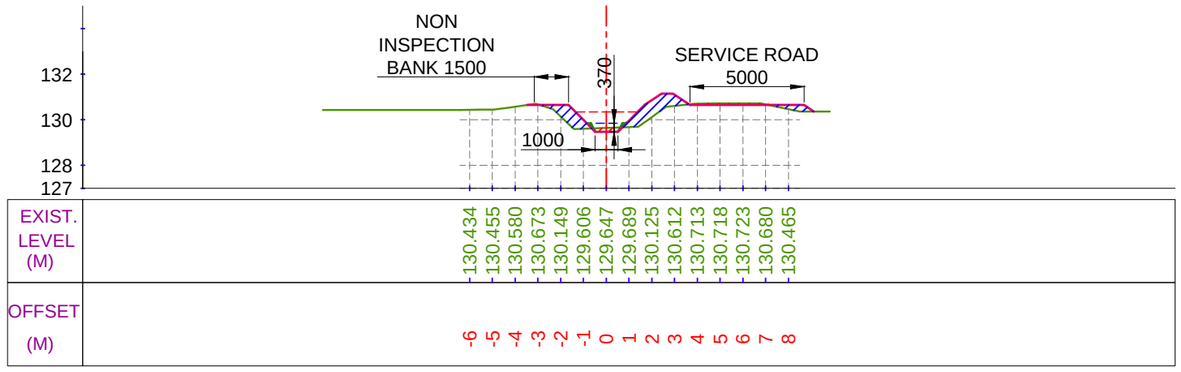
CUTTING AREA (SQ.M) = 1.404
FILLING AREA (SQ.M) = 1.837

CH. (KM):- 0+700
DESIGNED BED LEVEL = 129.507 M



CUTTING AREA (SQ.M) = 3.353
FILLING AREA (SQ.M) = 7.578

CH. (KM):- 0+600
DESIGNED BED LEVEL = 129.536 M



CUTTING AREA (SQ.M) = 0.427
FILLING AREA (SQ.M) = 2.694

CH. (KM):- 0+800
DESIGNED BED LEVEL = 129.479 M

LEGEND

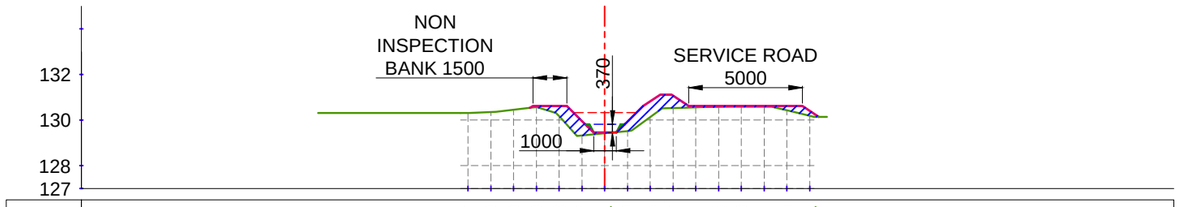
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 2 of 6

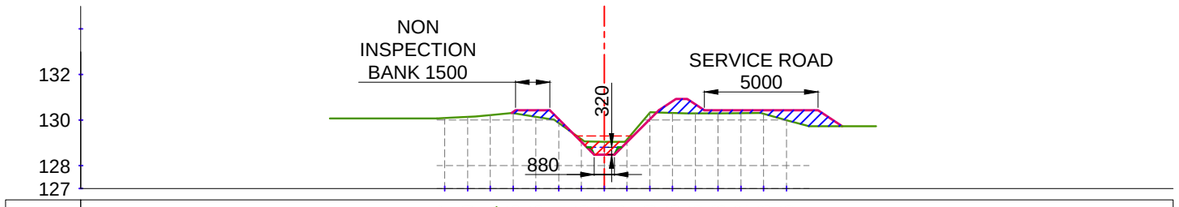
X SECTION OF KARMARI MINOR



EXIST. LEVEL (M)	130.317	130.349	130.449	130.570	130.168	129.322	129.421	129.519	130.135	130.527	130.564	130.576	130.580	130.584	130.426	130.191			
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9			

CUTTING AREA (SQ.M) = 0.002
FILLING AREA (SQ.M) = 3.337

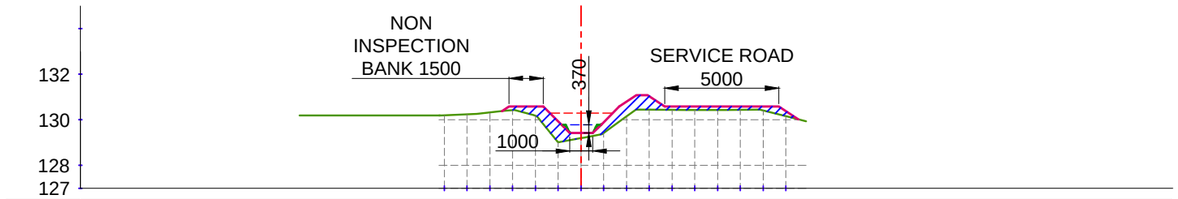
CH. (KM):- 0+900
DESIGNED BED LEVEL = 129.450 M



EXIST. LEVEL (M)	130.087	130.139	130.221	130.305	130.145	129.874	129.145	129.053	129.147	130.330	130.316	130.295	130.298	130.302	130.268	129.995			
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8			

CUTTING AREA (SQ.M) = 1.060
FILLING AREA (SQ.M) = 3.267

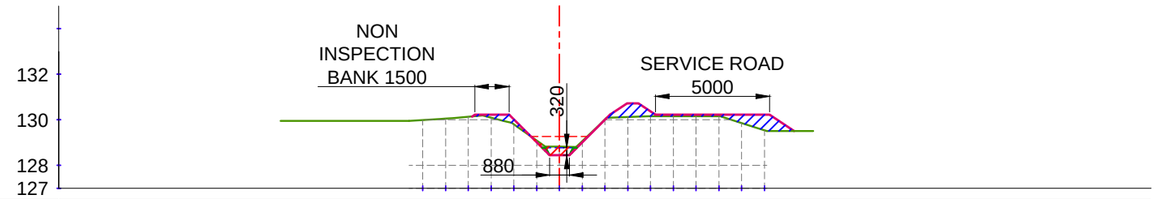
CH. (KM):- 1+100
DESIGNED BED LEVEL = 128.479 M



EXIST. LEVEL (M)	130.197	130.239	130.322	130.432	130.184	129.017	129.197	129.417	130.149	130.445	130.438	130.434	130.438	130.442	130.408	130.156			
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10		

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.106

CH. (KM):- 1+000
DESIGNED BED LEVEL = 129.421 M



EXIST. LEVEL (M)	129.992	130.059	130.136	130.094	129.800	129.097	128.823	129.070	130.031	130.124	130.154	130.158	130.161	130.164	129.864	129.546			
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9			

CUTTING AREA (SQ.M) = 0.520
FILLING AREA (SQ.M) = 2.665

CH. (KM):- 1+200
DESIGNED BED LEVEL = 128.450 M

LEGEND

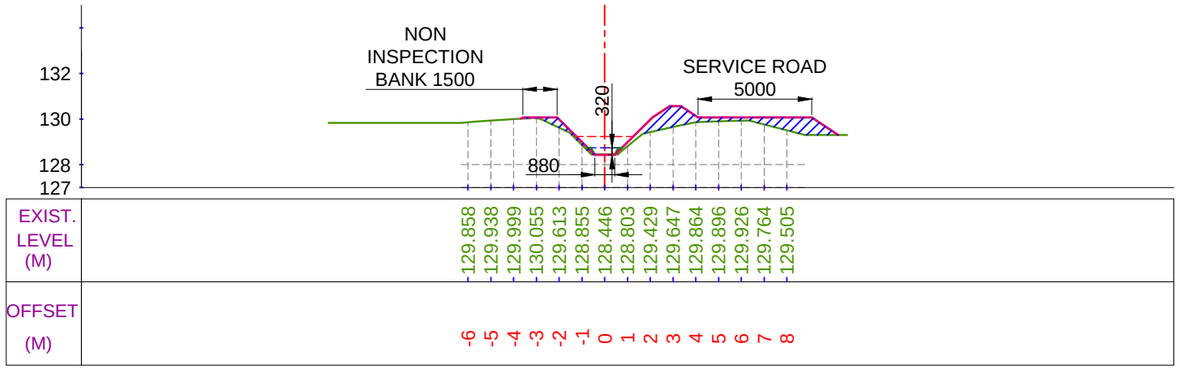
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

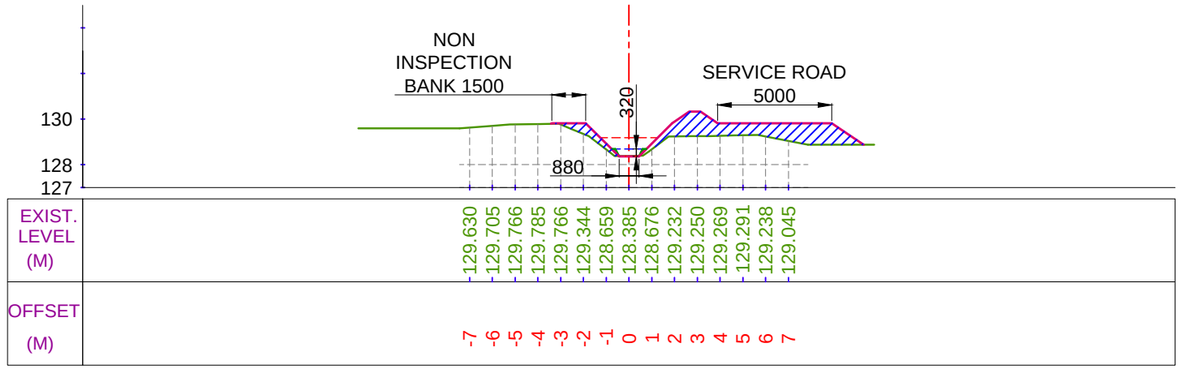
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 3 of 6

X SECTION OF KARMARI MINOR



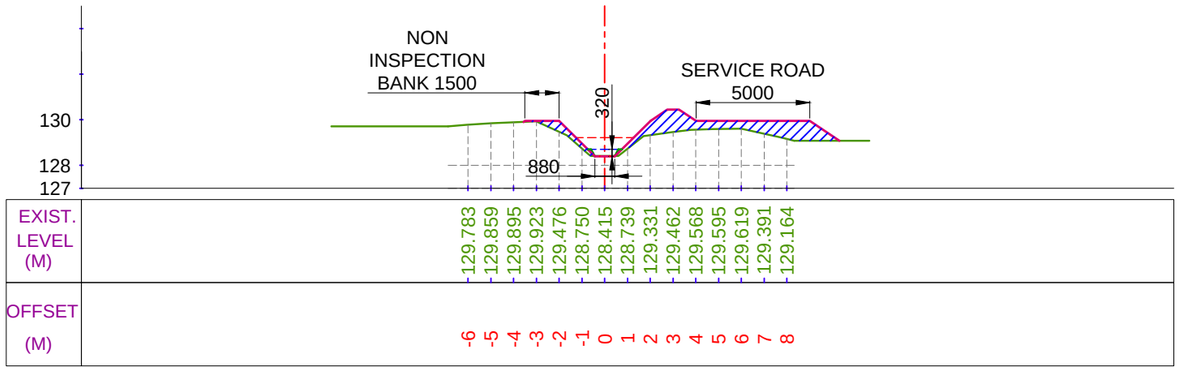
CUTTING AREA (SQ.M) = 0.021
FILLING AREA (SQ.M) = 4.519

CH. (KM):- 1+300
DESIGNED BED LEVEL = 128.422 M



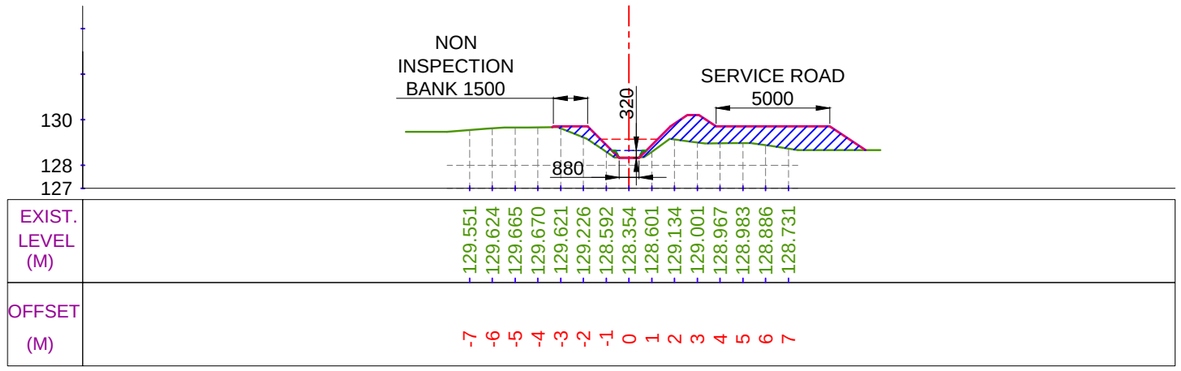
CUTTING AREA (SQ.M) = 0.018
FILLING AREA (SQ.M) = 7.139

CH. (KM):- 1+500
DESIGNED BED LEVEL = 128.365 M



CUTTING AREA (SQ.M) = 0.020
FILLING AREA (SQ.M) = 5.951

CH. (KM):- 1+400
DESIGNED BED LEVEL = 128.393 M



CUTTING AREA (SQ.M) = 0.016
FILLING AREA (SQ.M) = 8.518

CH. (KM):- 1+600
DESIGNED BED LEVEL = 128.336 M

LEGEND

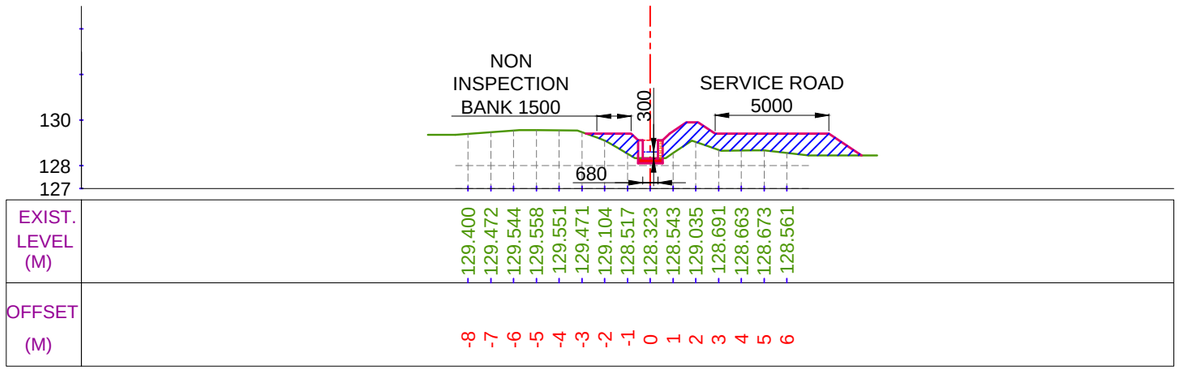
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

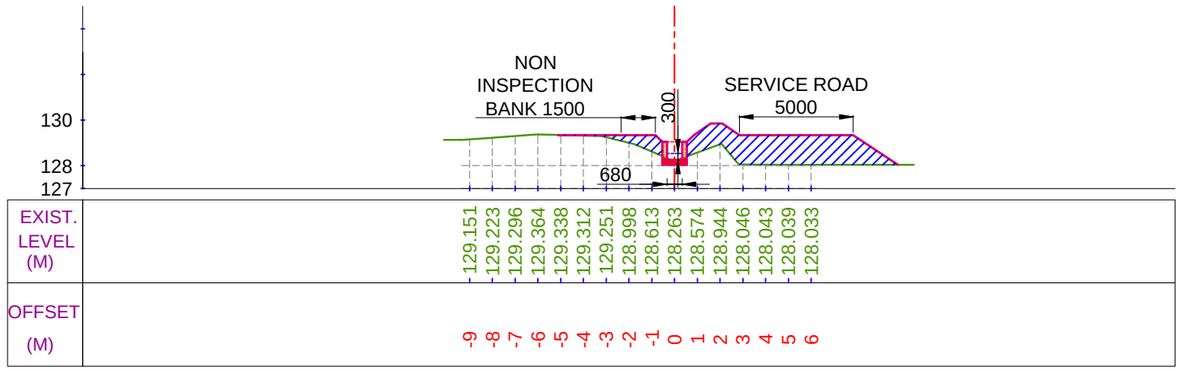
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 4 of 6

X SECTION OF KARMARI MINOR



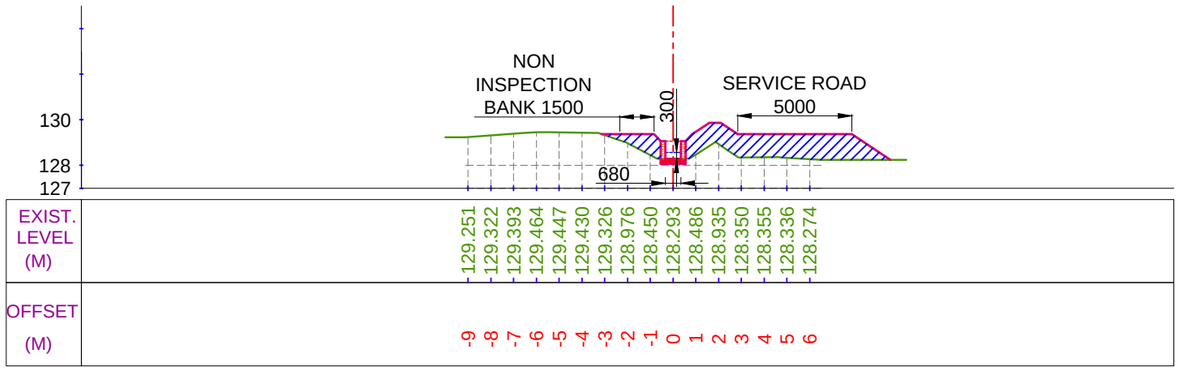
CUTTING AREA (SQ.M) = 0.234
FILLING AREA (SQ.M) = 7.927

CH. (KM):- 1+700
DESIGNED BED LEVEL = 128.307 M



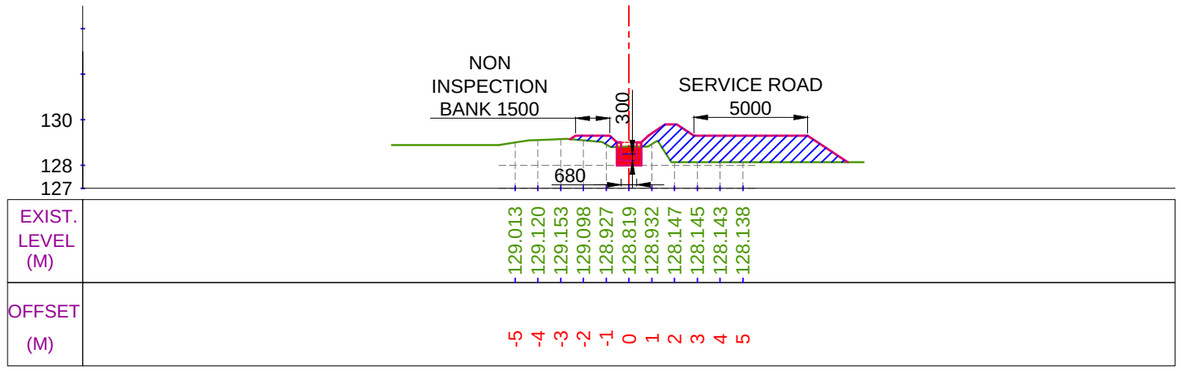
CUTTING AREA (SQ.M) = 0.293
FILLING AREA (SQ.M) = 11.177

CH. (KM):- 1+900
DESIGNED BED LEVEL = 128.241 M



CUTTING AREA (SQ.M) = 0.236
FILLING AREA (SQ.M) = 9.852

CH. (KM):- 1+800
DESIGNED BED LEVEL = 128.274 M



CUTTING AREA (SQ.M) = 0.877
FILLING AREA (SQ.M) = 9.810

CH. (KM):- 2+000
DESIGNED BED LEVEL = 128.207 M

LEGEND

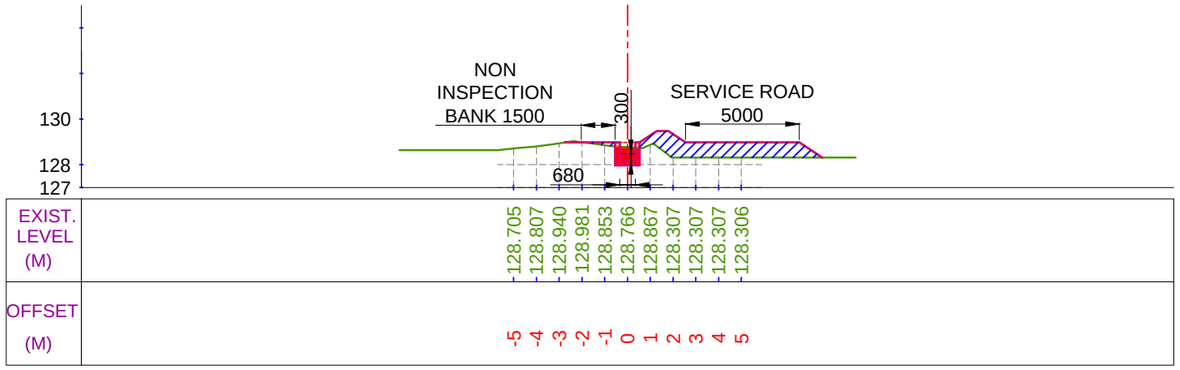
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 5 of 6

X SECTION OF KARMARI MINOR



CUTTING AREA (SQ.M) = 0.876

FILLING AREA (SQ.M) = 5.213

CH. (KM):- 2+100

DESIGNED BED LEVEL = 128.174 M

LEGEND	
CUT AREA	EXISTING BED LINE
	F.S.L.
FILL AREA	DESIGNED BED LINE
	H.G. LINE

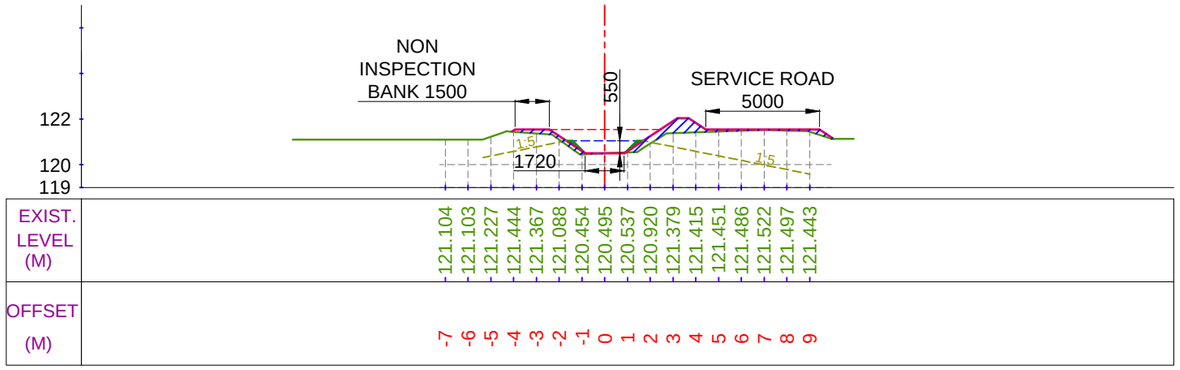
Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF KARMARI MINOR (OFFTAKE FROM RD -8+650 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ XSEC- 6 of 6

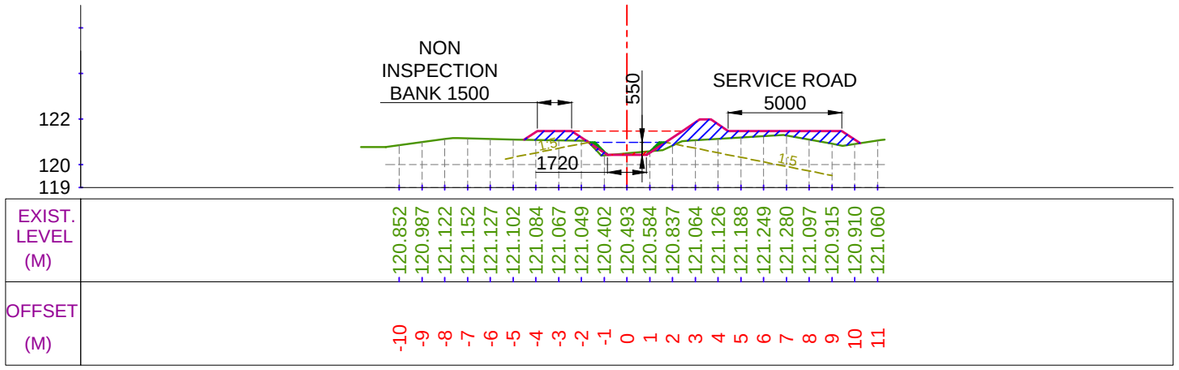
CROSS SECTION OF MIRZAPUR MINOR

X SECTION OF MIRZAPUR MINOR



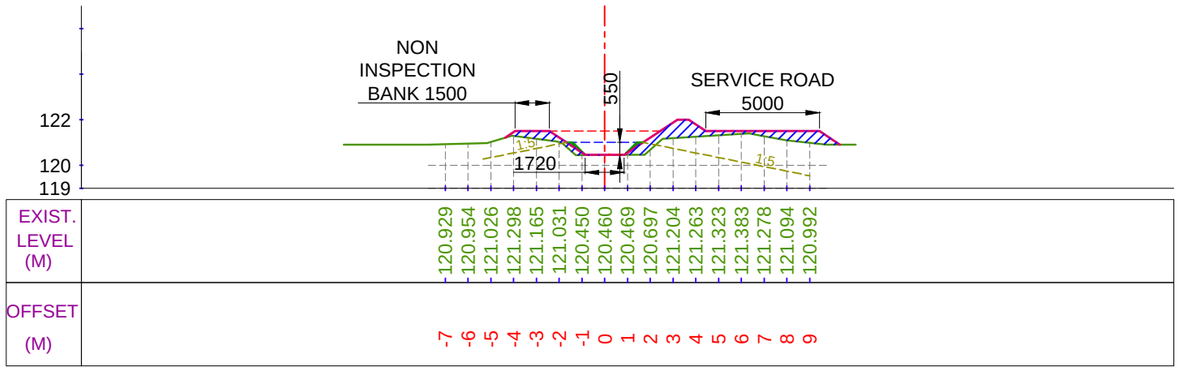
CUTTING AREA (SQ.M) = 0.016
FILLING AREA (SQ.M) = 2.335

CH. (KM):- 0+100
DESIGNED BED LEVEL = 120.496 M



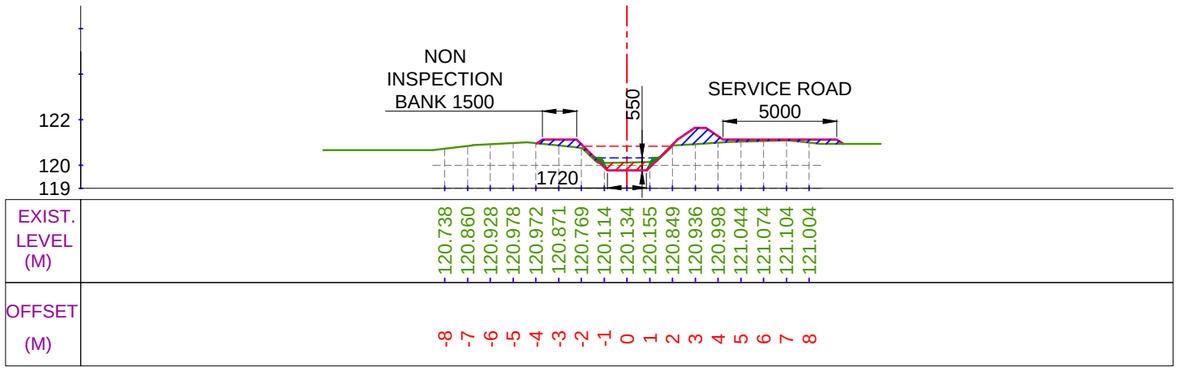
CUTTING AREA (SQ.M) = 0.120
FILLING AREA (SQ.M) = 4.675

CH. (KM):- 0+300
DESIGNED BED LEVEL = 120.431 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.364

CH. (KM):- 0+200
DESIGNED BED LEVEL =120.463 M



CUTTING AREA (SQ.M) = 0.654
FILLING AREA (SQ.M) = 2.194

CH. (KM):- 0+400
DESIGNED BED LEVEL = 119.789 M

LEGEND

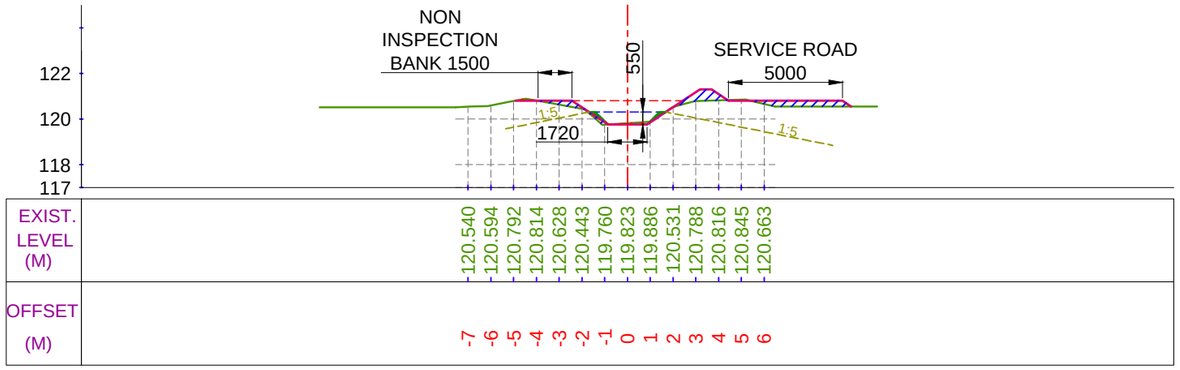
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 1 of 10

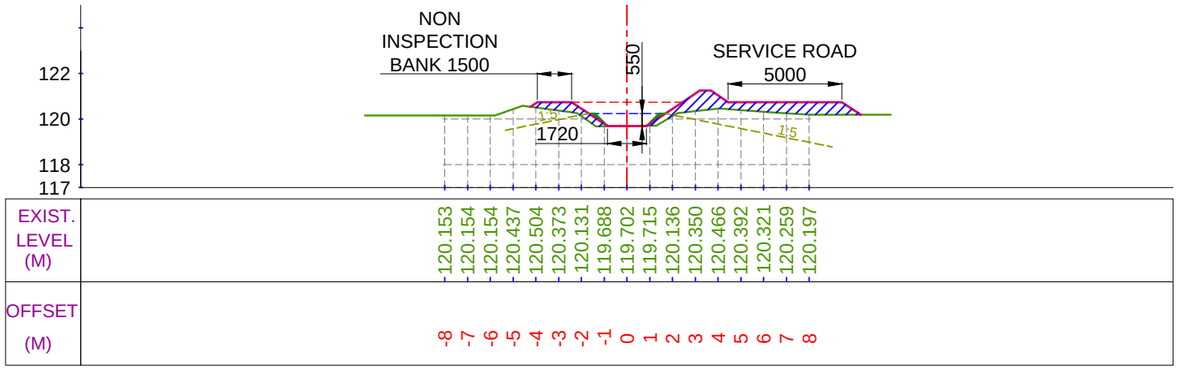
X SECTION OF MIRZAPUR MINOR



EXIST. LEVEL (M)	120.540	120.594	120.792	120.814	120.628	120.443	119.760	119.823	119.886	120.531	120.788	120.816	120.845	120.663
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6

CUTTING AREA (SQ.M) = 0.176
FILLING AREA (SQ.M) = 2.041

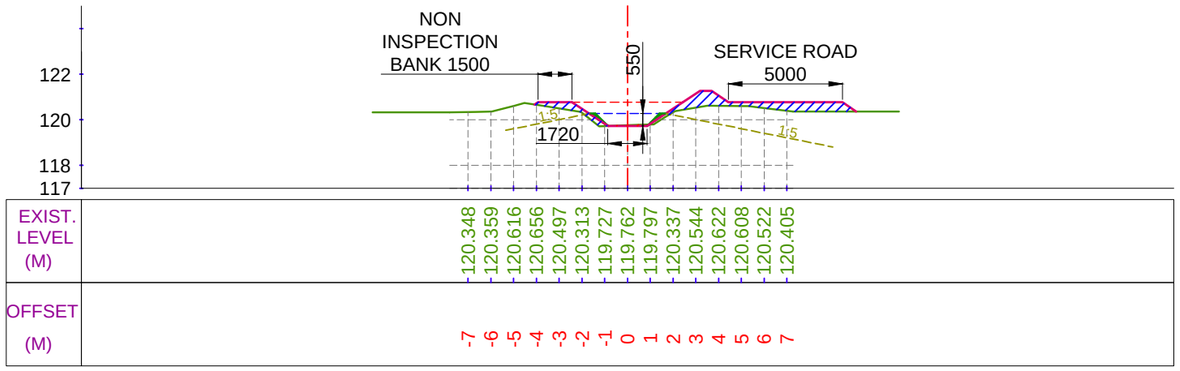
CH. (KM):- 0+500
DESIGNED BED LEVEL = 119.757 M



EXIST. LEVEL (M)	120.153	120.154	120.154	120.437	120.504	120.373	120.131	119.688	119.702	119.715	120.136	120.350	120.466	120.392	120.321	120.259	120.197
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.017
FILLING AREA (SQ.M) = 5.298

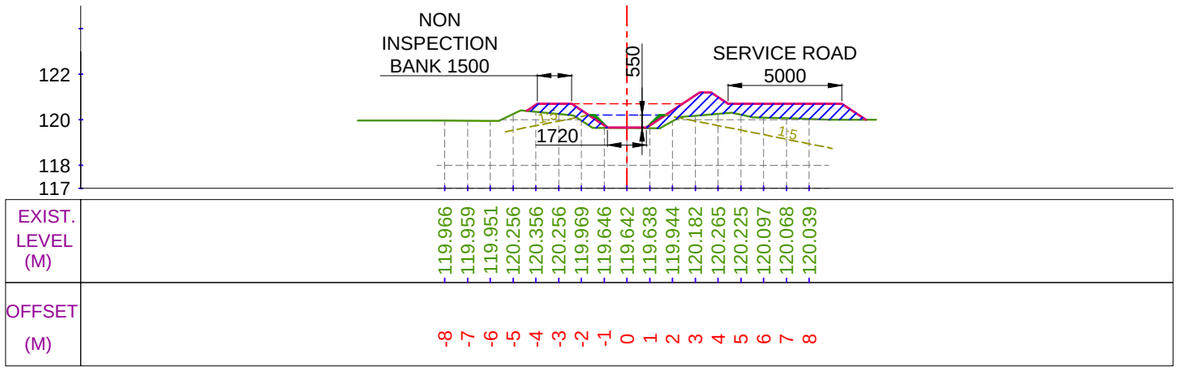
CH. (KM):- 0+700
DESIGNED BED LEVEL = 119.692 M



EXIST. LEVEL (M)	120.348	120.359	120.616	120.656	120.497	120.313	119.727	119.762	119.797	120.337	120.544	120.622	120.608	120.522	120.405
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

CUTTING AREA (SQ.M) = 0.068
FILLING AREA (SQ.M) = 3.633

CH. (KM):- 0+600
DESIGNED BED LEVEL = 119.724 M



EXIST. LEVEL (M)	119.966	119.959	119.951	120.256	120.356	120.256	119.969	119.646	119.642	119.638	119.944	120.182	120.265	120.225	120.097	120.068	120.039
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.961

CH. (KM):- 0+800
DESIGNED BED LEVEL = 119.660 M

LEGEND

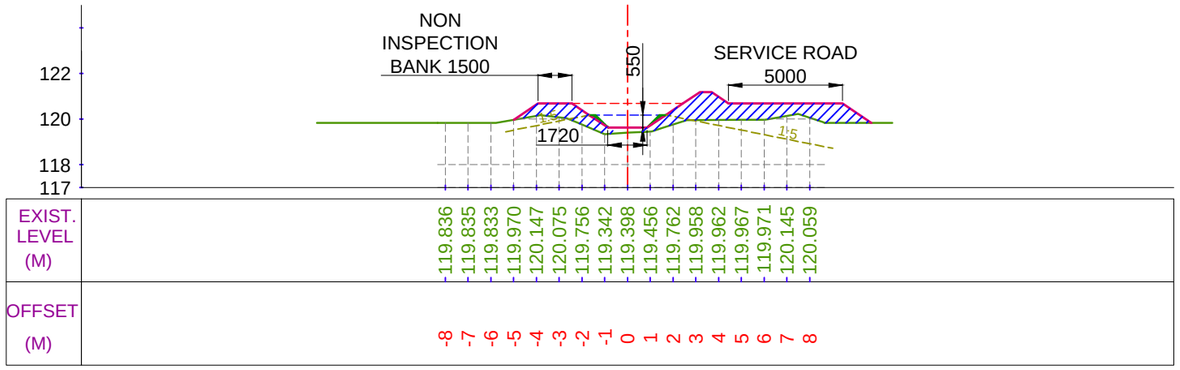
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

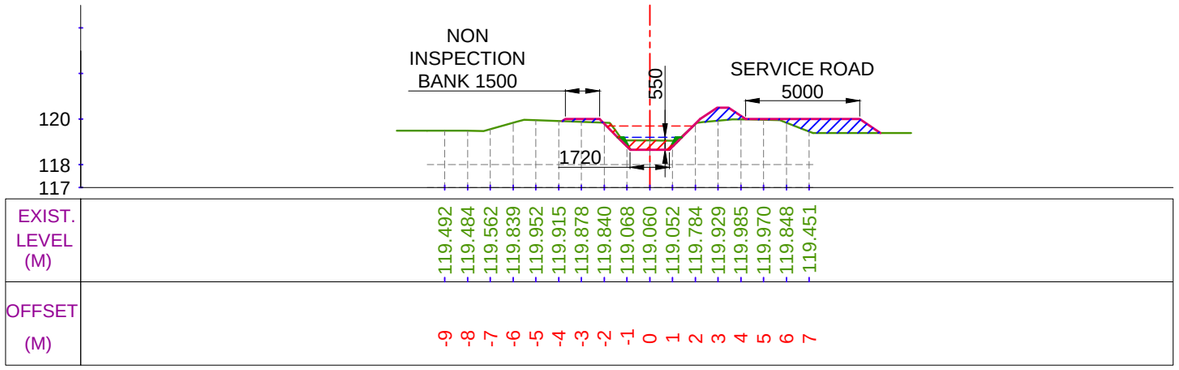
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 2 of 10

X SECTION OF MIRZAPUR MINOR



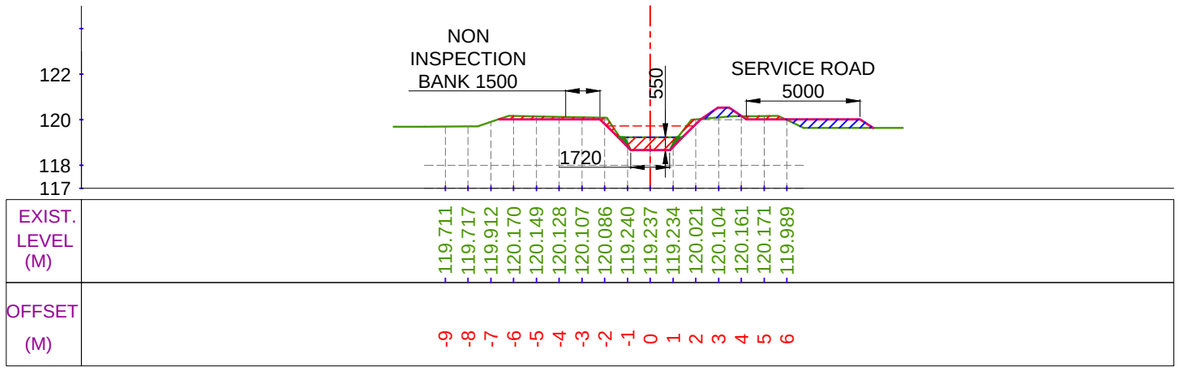
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.855

CH. (KM):- 0+900
DESIGNED BED LEVEL = 119.628 M



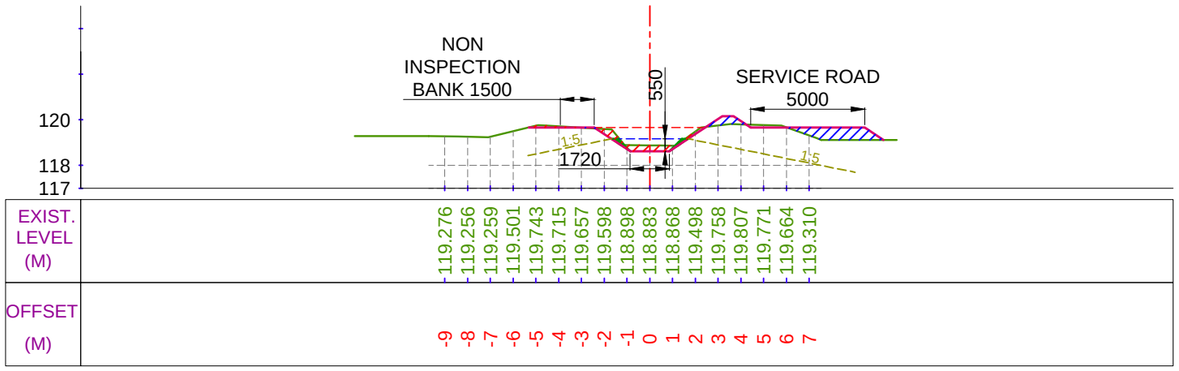
CUTTING AREA (SQ.M) = 0.936
FILLING AREA (SQ.M) = 3.004

CH. (KM):- 1+100
DESIGNED BED LEVEL = 118.649 M



CUTTING AREA (SQ.M) = 2.194
FILLING AREA (SQ.M) = 1.674

CH. (KM):- 1+000
DESIGNED BED LEVEL = 118.681 M



CUTTING AREA (SQ.M) = 0.957
FILLING AREA (SQ.M) = 2.106

CH. (KM):- 1+200
DESIGNED BED LEVEL = 118.617 M

LEGEND

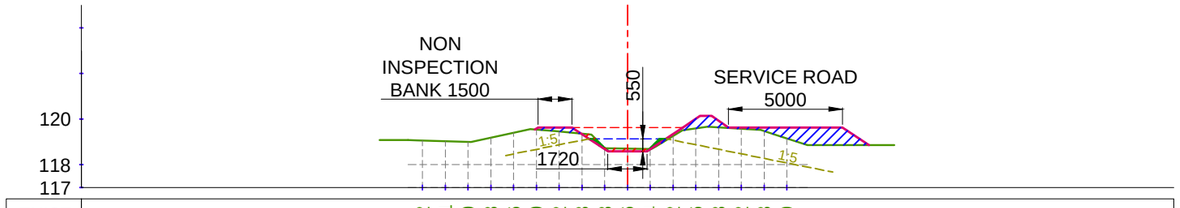
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

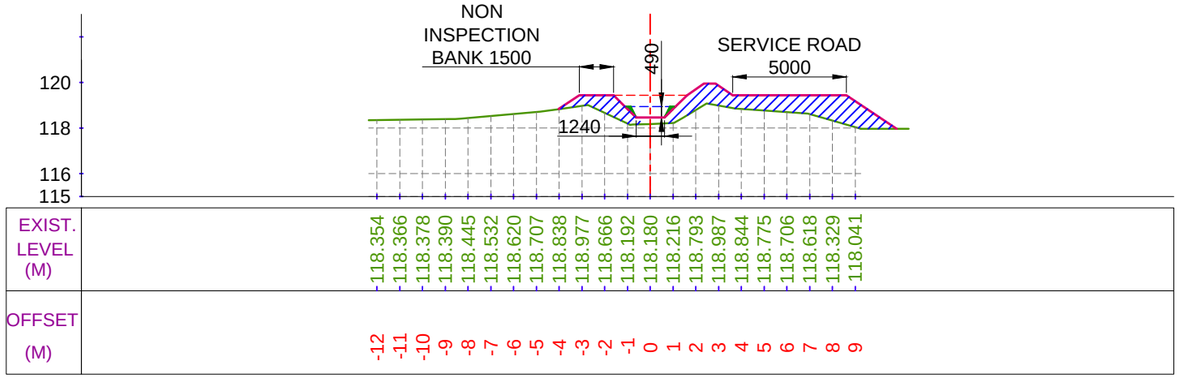
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 3 of 10

X SECTION OF MIRZAPUR MINOR



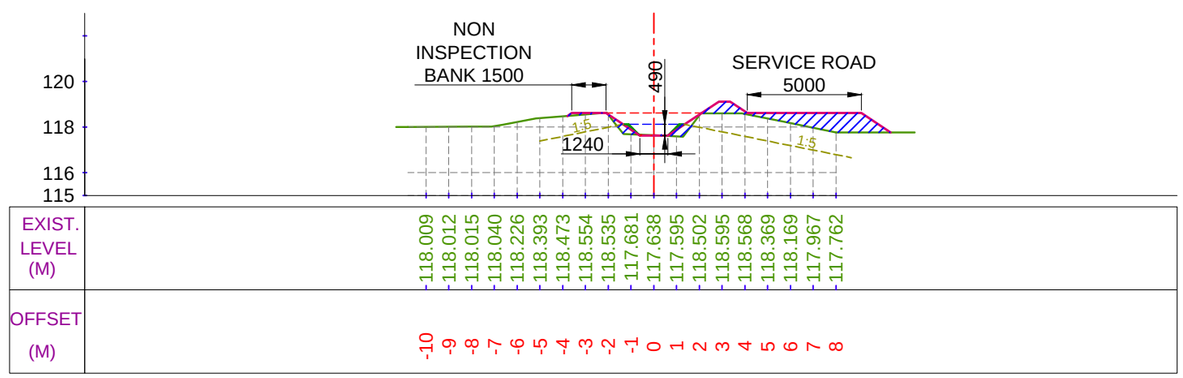
| | | |

X SECTION OF MIRZAPUR MINOR



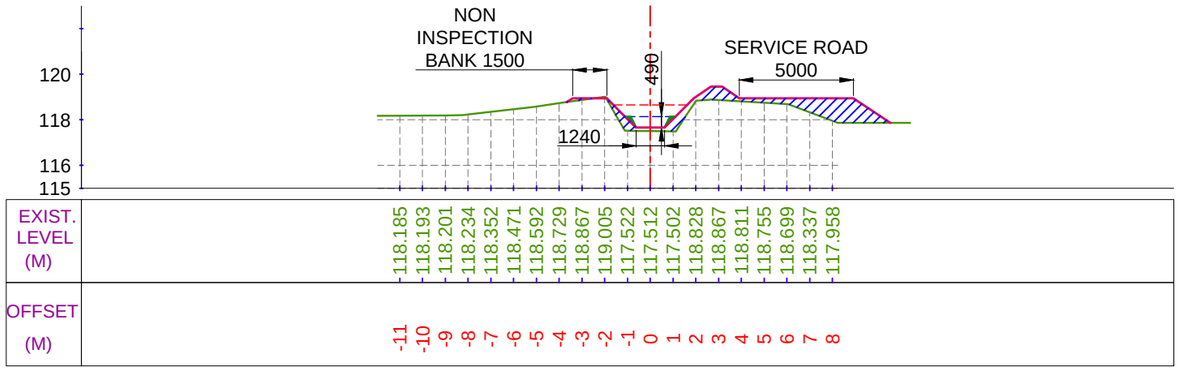
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.887

CH. (KM):- 1+700
DESIGNED BED LEVEL = 118.456 M



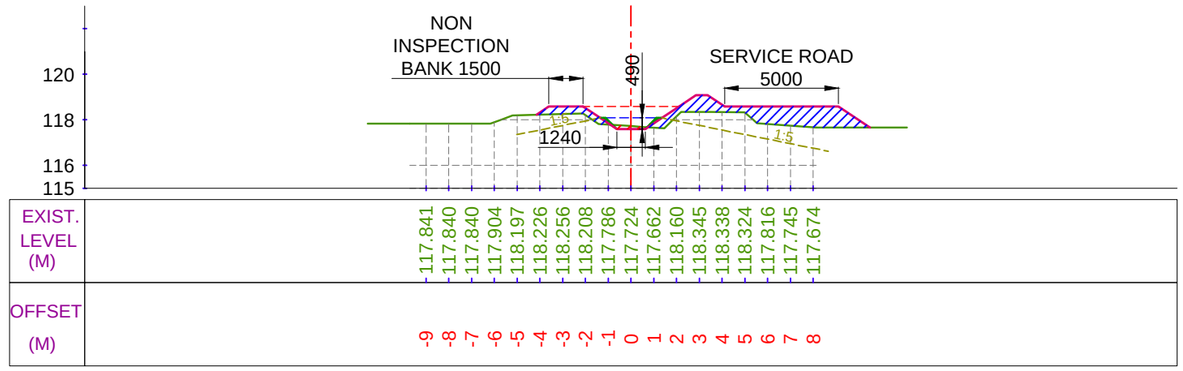
CUTTING AREA (SQ.M) = 0.018
FILLING AREA (SQ.M) = 4.760

CH. (KM):- 1+900
DESIGNED BED LEVEL = 117.628 M



CUTTING AREA (SQ.M) = 0.013
FILLING AREA (SQ.M) = 5.467

CH. (KM):- 1+800
DESIGNED BED LEVEL = 117.661 M



CUTTING AREA (SQ.M) = 0.180
FILLING AREA (SQ.M) = 6.610

CH. (KM):- 2+000
DESIGNED BED LEVEL = 117.594 M

LEGEND

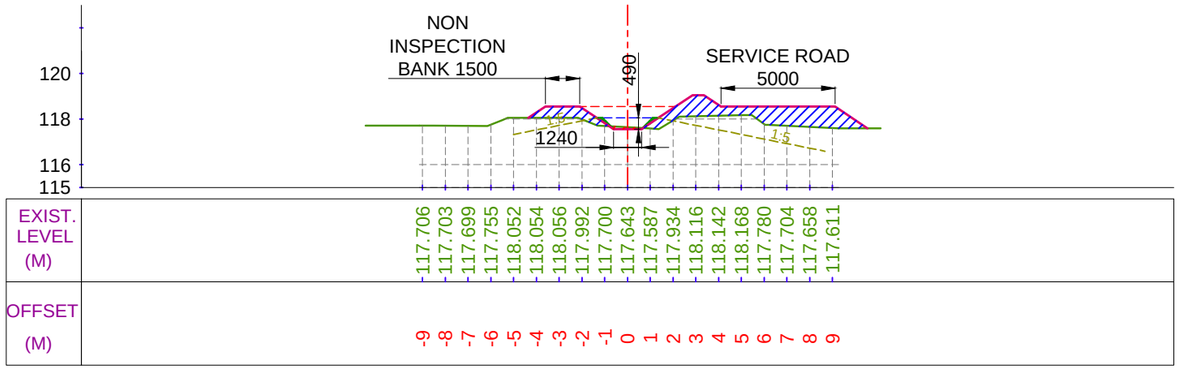
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

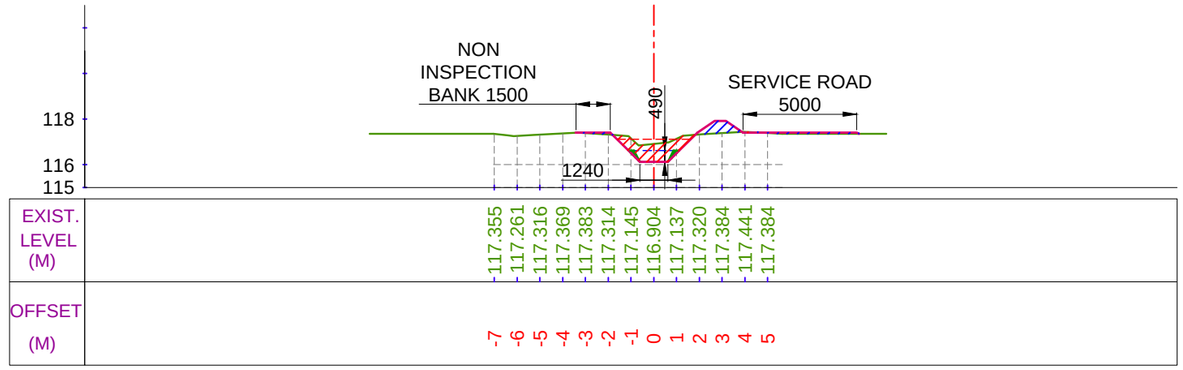
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 5 of 10

X SECTION OF MIRZAPUR MINOR



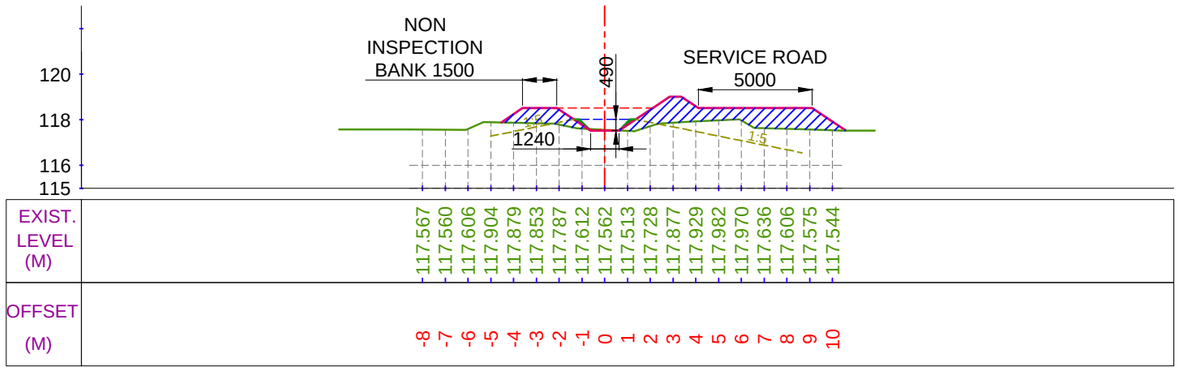
CUTTING AREA (SQ.M) = 0.110
FILLING AREA (SQ.M) = 7.611

CH. (KM):- 2+100
DESIGNED BED LEVEL = 117.561 M



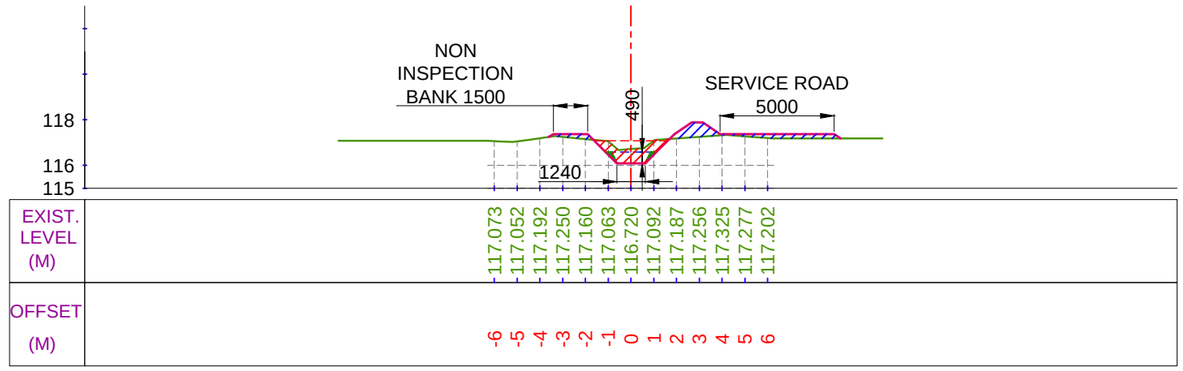
CUTTING AREA (SQ.M) = 1.966
FILLING AREA (SQ.M) = 1.035

CH. (KM):- 2+300
DESIGNED BED LEVEL = 116.122 M



CUTTING AREA (SQ.M) = 0.045
FILLING AREA (SQ.M) = 8.821

CH. (KM):- 2+200
DESIGNED BED LEVEL = 117.528 M



CUTTING AREA (SQ.M) = 1.576
FILLING AREA (SQ.M) = 1.996

CH. (KM):- 2+400
DESIGNED BED LEVEL = 116.089 M

LEGEND

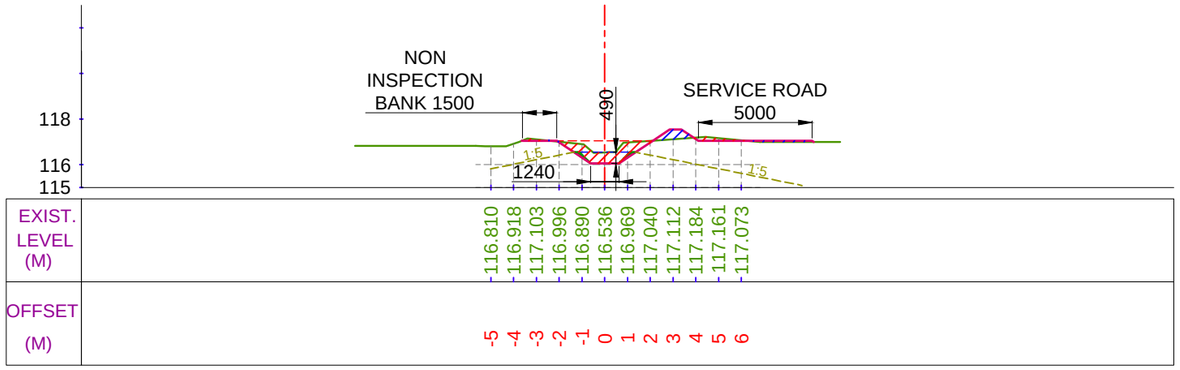
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

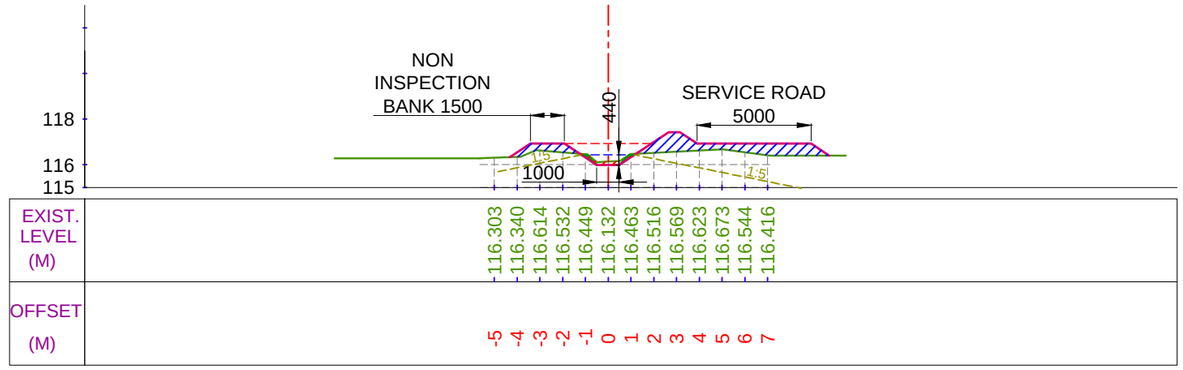
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 6 of 10

X SECTION OF MIRZAPUR MINOR



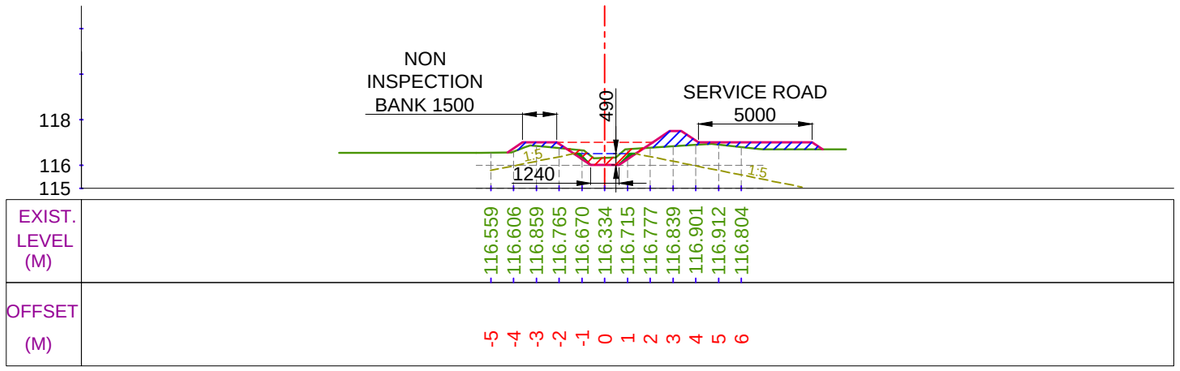
CUTTING AREA (SQ.M) = 1.937
FILLING AREA (SQ.M) = 0.617

CH. (KM):- 2+500
DESIGNED BED LEVEL = 116.056 M



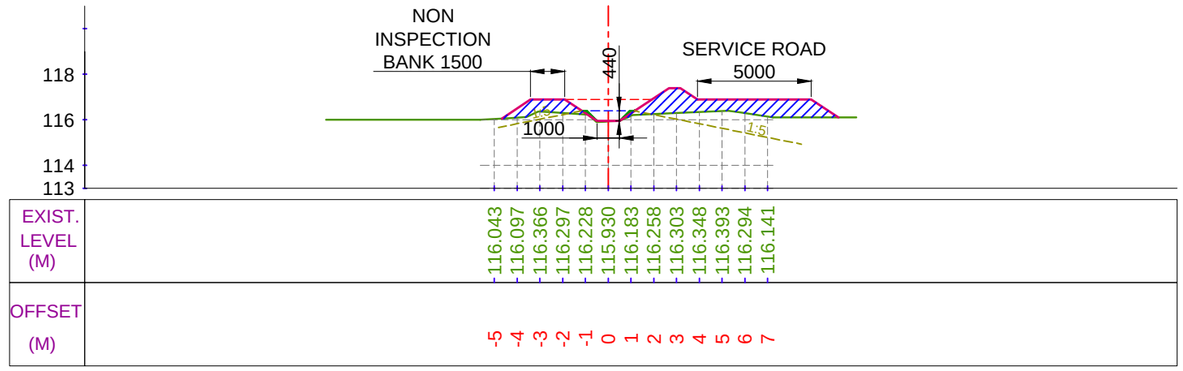
CUTTING AREA (SQ.M) = 0.224
FILLING AREA (SQ.M) = 4.672

CH. (KM):- 2+700
DESIGNED BED LEVEL = 115.989 M



CUTTING AREA (SQ.M) = 0.916
FILLING AREA (SQ.M) = 2.642

CH. (KM):- 2+600
DESIGNED BED LEVEL = 116.022 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.577

CH. (KM):- 2+800
DESIGNED BED LEVEL = 115.956 M

LEGEND

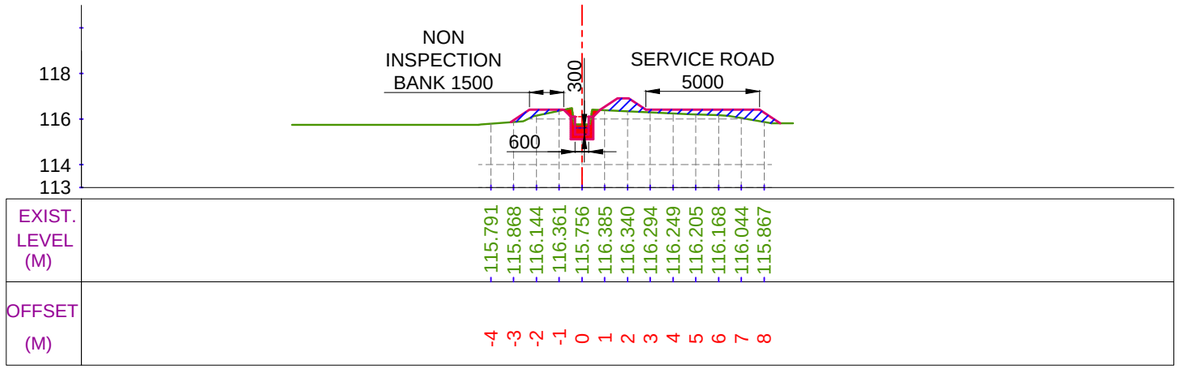
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

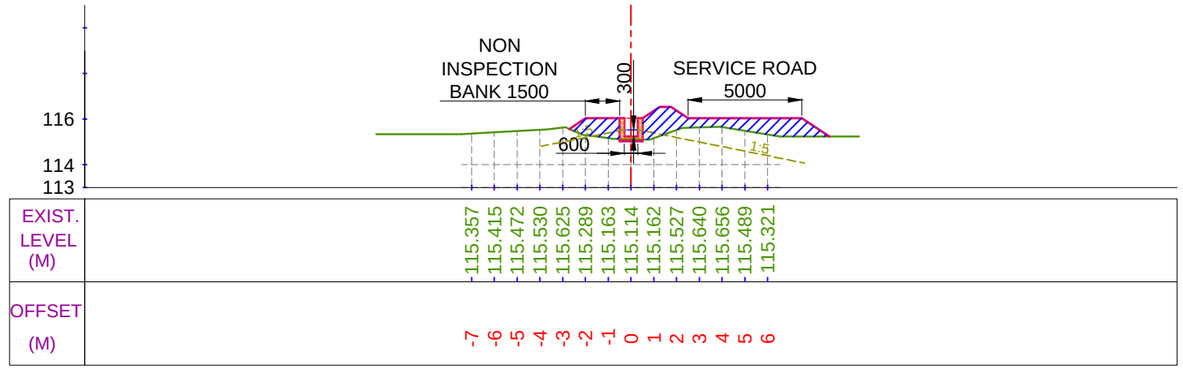
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 7 of 10

X SECTION OF MIRZAPUR MINOR



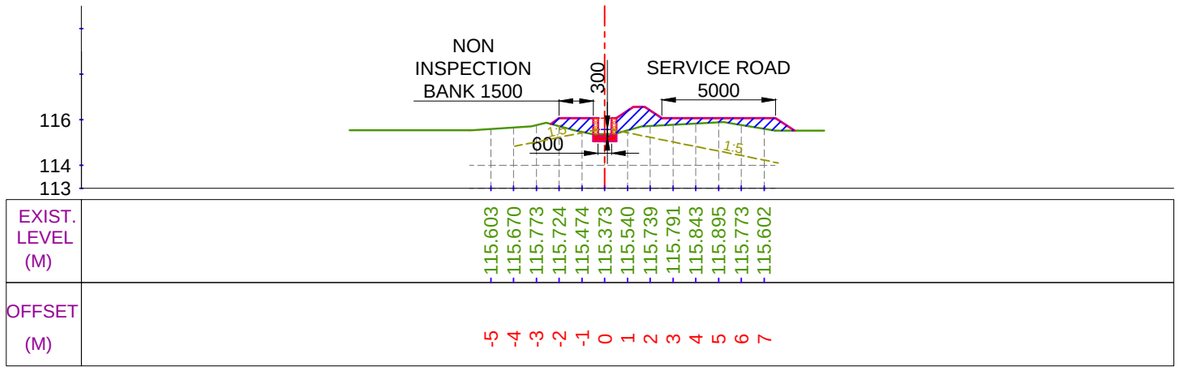
CUTTING AREA (SQ.M) = 0.892
FILLING AREA (SQ.M) = 2.661

CH. (KM):- 2+900
DESIGNED BED LEVEL = 115.312 M



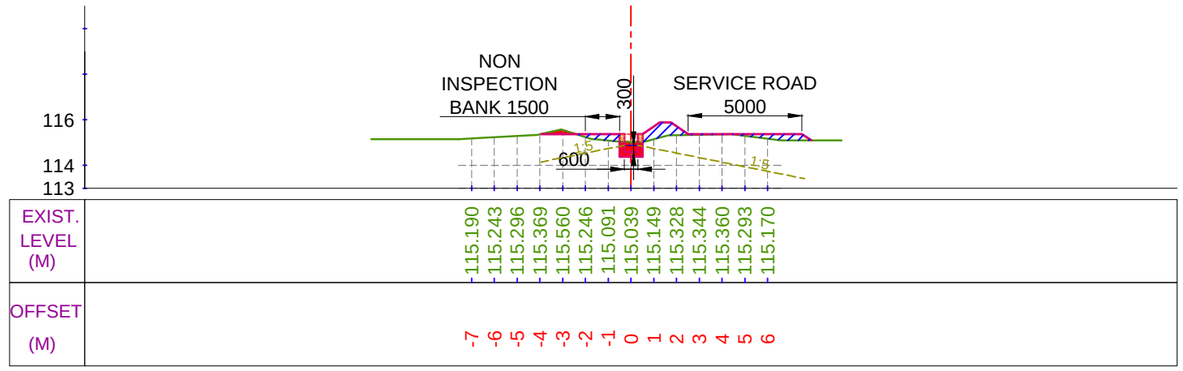
CUTTING AREA (SQ.M) = 0.082
FILLING AREA (SQ.M) = 6.836

CH. (KM):- 3+100
DESIGNED BED LEVEL = 115.232 M



CUTTING AREA (SQ.M) = 0.302
FILLING AREA (SQ.M) = 4.057

CH. (KM):- 3+000
DESIGNED BED LEVEL = 115.272 M



CUTTING AREA (SQ.M) = 0.803
FILLING AREA (SQ.M) = 2.042

CH. (KM):- 3+200
DESIGNED BED LEVEL = 114.582 M

LEGEND

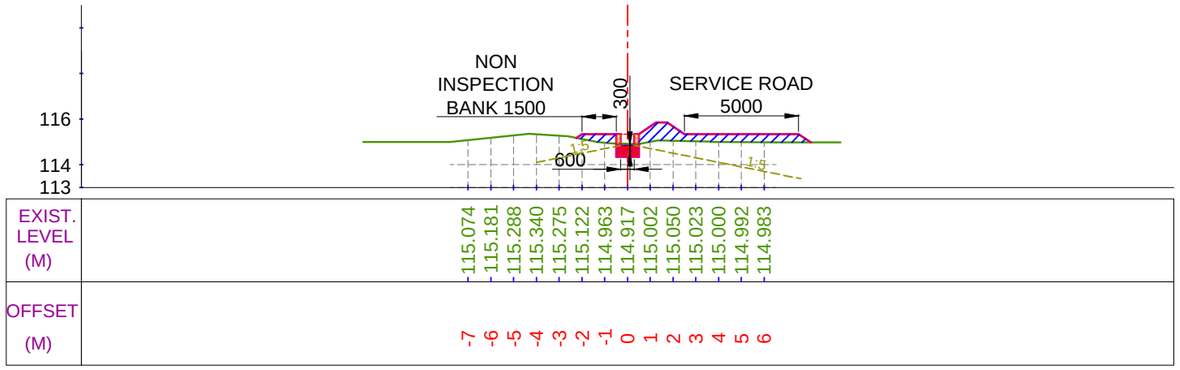
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

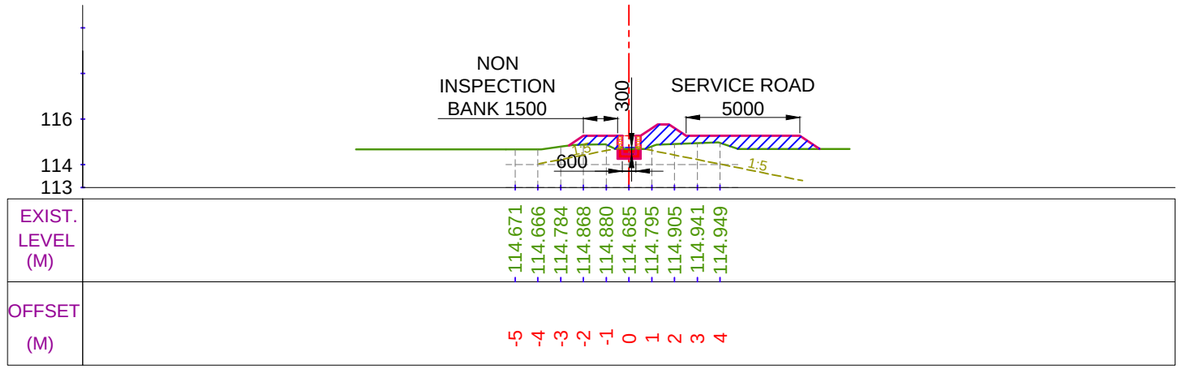
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 8 of 10

X SECTION OF MIRZAPUR MINOR



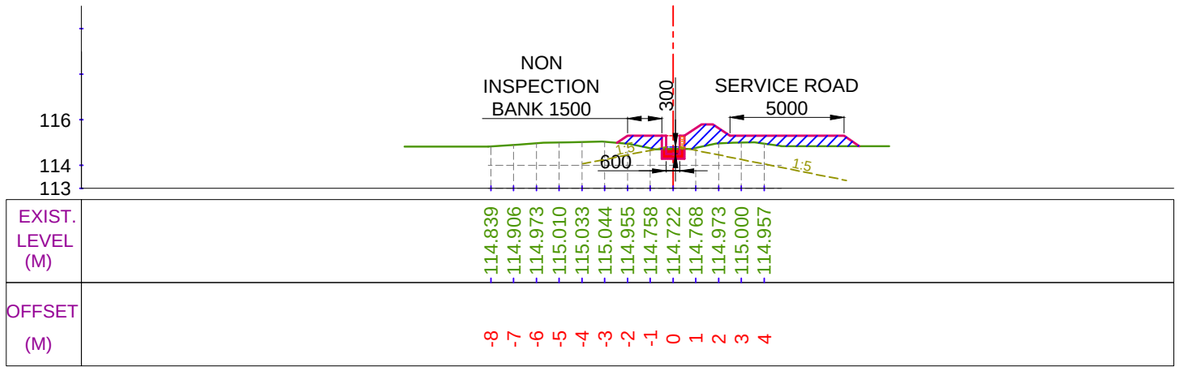
CUTTING AREA (SQ.M) = 0.575
FILLING AREA (SQ.M) = 3.629

CH. (KM):- 3+300
DESIGNED BED LEVEL = 114.542 M



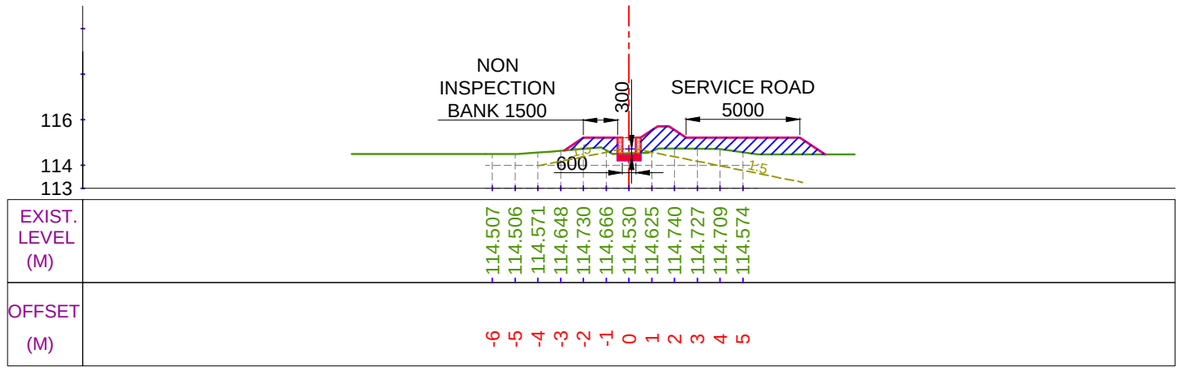
CUTTING AREA (SQ.M) = 0.423
FILLING AREA (SQ.M) = 4.843

CH. (KM):- 3+500
DESIGNED BED LEVEL = 114.462 M



CUTTING AREA (SQ.M) = 0.420
FILLING AREA (SQ.M) = 4.451

CH. (KM):- 3+400
DESIGNED BED LEVEL = 114.502 M



CUTTING AREA (SQ.M) = 0.308
FILLING AREA (SQ.M) = 6.240

CH. (KM):- 3+600
DESIGNED BED LEVEL = 114.422 M

LEGEND

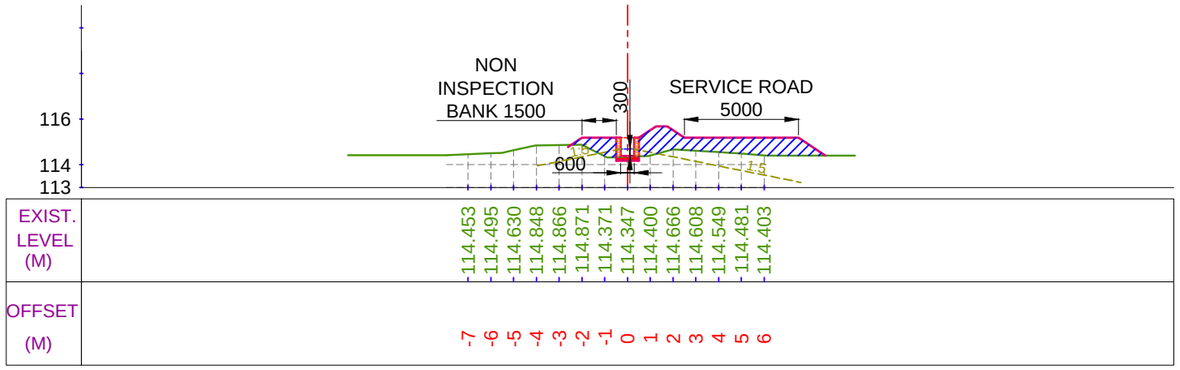
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

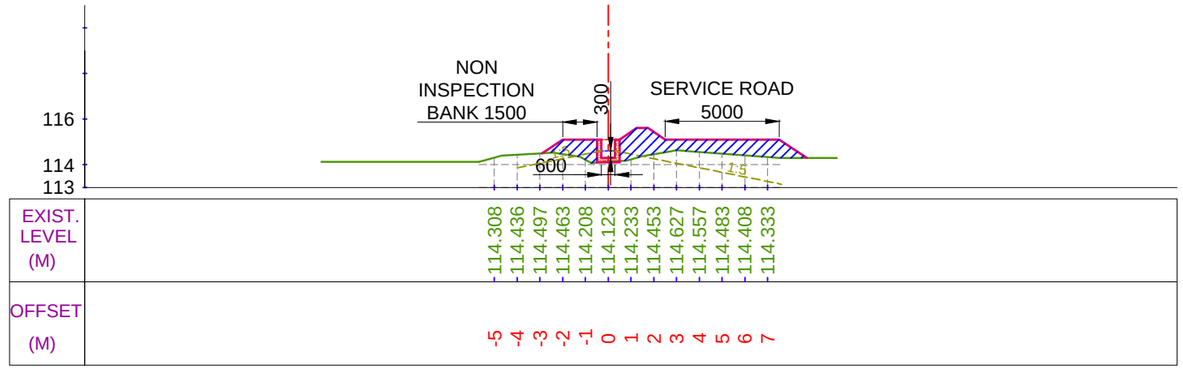
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 9 of 10

X SECTION OF MIRZAPUR MINOR



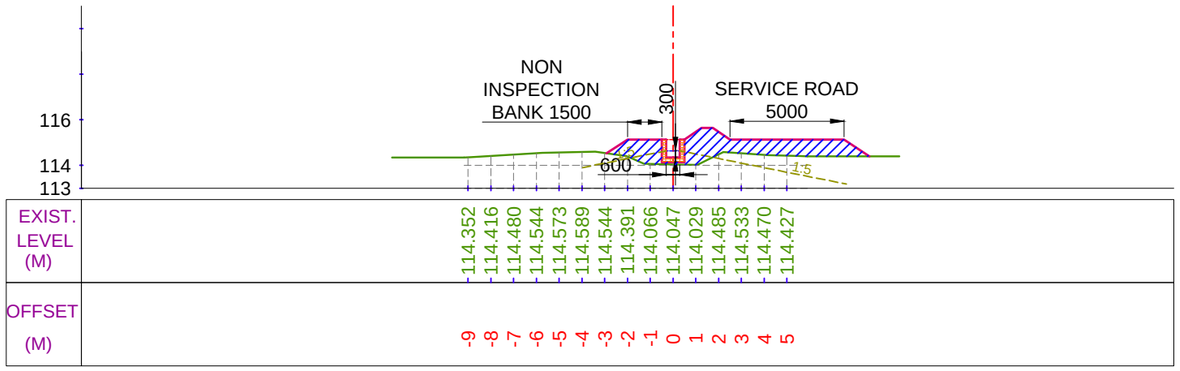
CUTTING AREA (SQ.M) = 0.165
FILLING AREA (SQ.M) = 6.926

CH. (KM):- 3+700
DESIGNED BED LEVEL = 114.382 M



CUTTING AREA (SQ.M) = 0.022
FILLING AREA (SQ.M) = 7.249

CH. (KM):- 3+900
DESIGNED BED LEVEL = 114.302 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.207

CH. (KM):- 3+800
DESIGNED BED LEVEL = 114.342 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

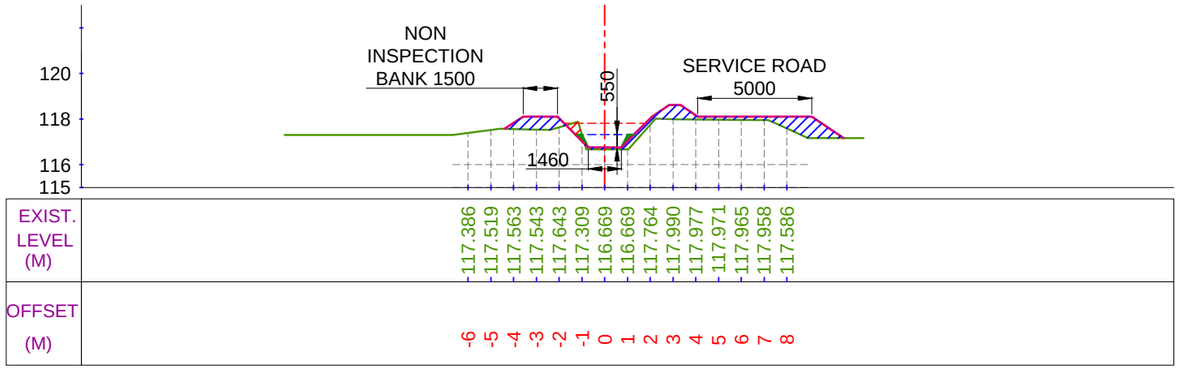
Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF MIRZAPUR MINOR (OFFTAKE FROM RD - 16+870 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ XSEC- 10 of 10

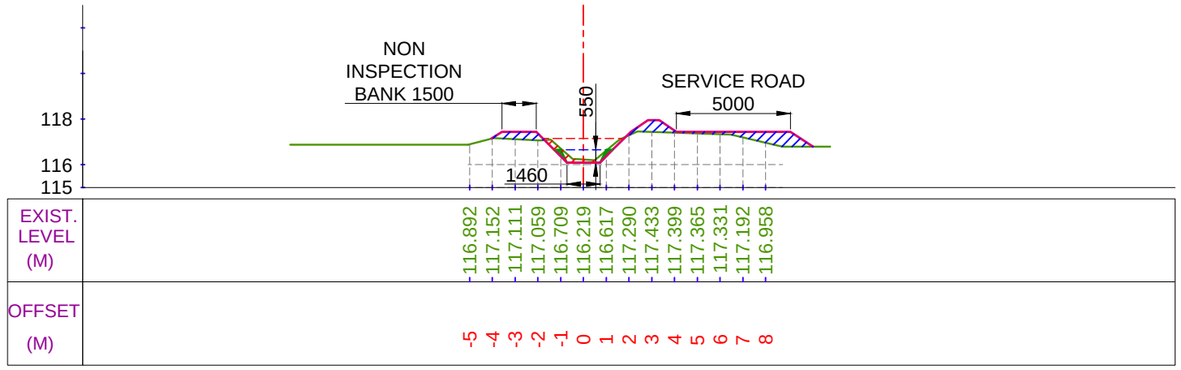
CROSS SECTION OF JASOEA MINOR

X SECTION OF JASOEA MINOR



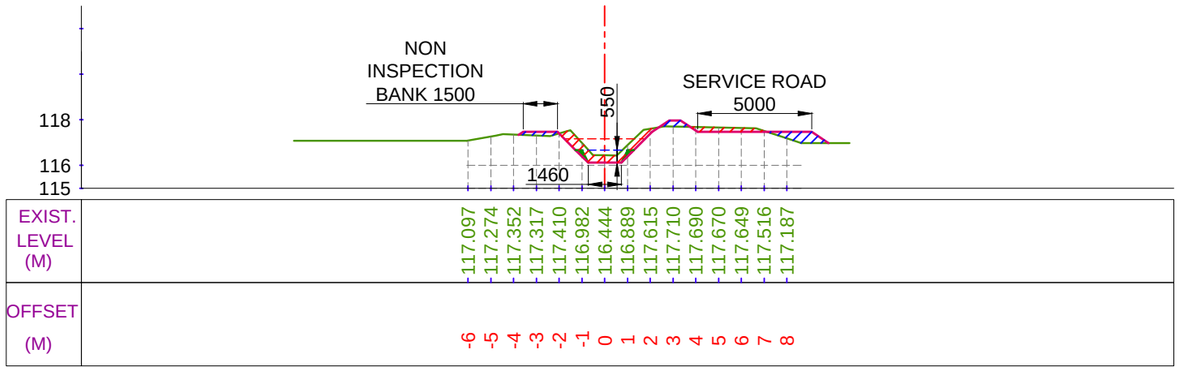
CUTTING AREA (SQ.M) = 0.220
FILLING AREA (SQ.M) = 4.824

CH. (KM):- 0+100
DESIGNED BED LEVEL = 116.762 M



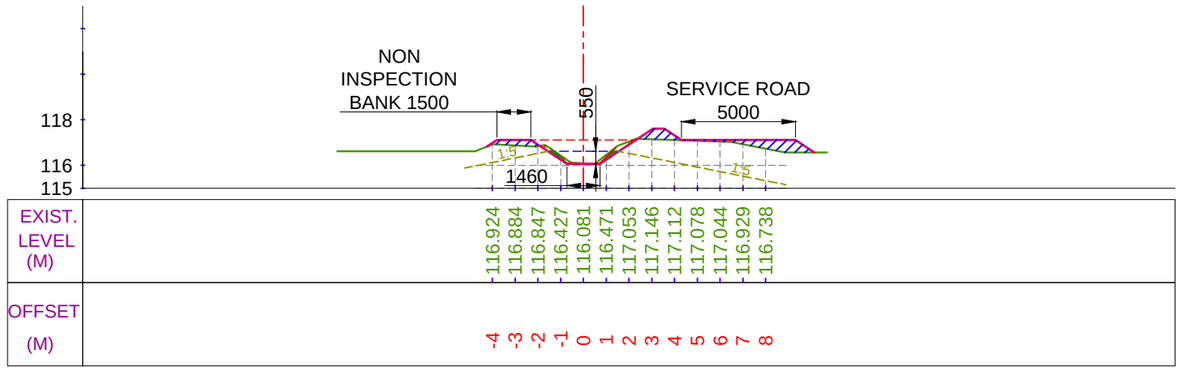
CUTTING AREA (SQ.M) = 0.575
FILLING AREA (SQ.M) = 2.997

CH. (KM):- 0+300
DESIGNED BED LEVEL = 116.095 M



CUTTING AREA (SQ.M) = 2.164
FILLING AREA (SQ.M) = 1.266

CH. (KM):- 0+200
DESIGNED BED LEVEL = 116.124 M



CUTTING AREA (SQ.M) = 0.432
FILLING AREA (SQ.M) = 2.360

CH. (KM):- 0+400
DESIGNED BED LEVEL = 116.067 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

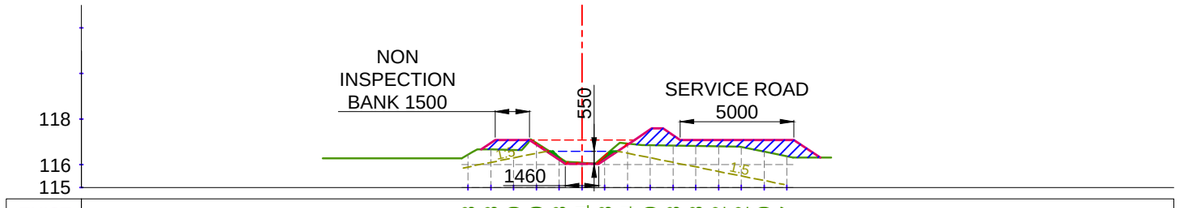
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 1 of 7

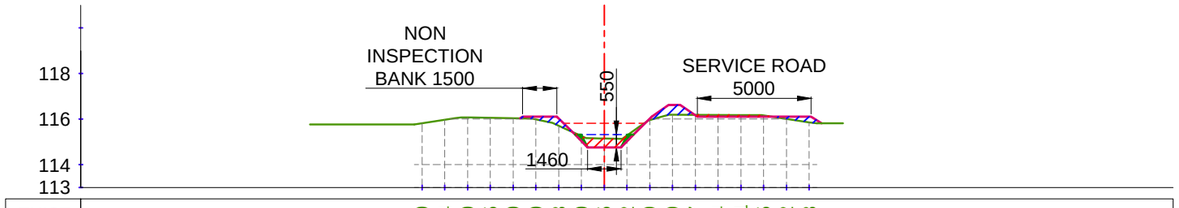
X SECTION OF JASOEA MINOR



EXIST. LEVEL	116.443	116.663	116.639	116.950	116.313	116.081	116.403	116.924	116.849	116.833	116.818	116.802	116.772	116.569	116.367
OFFSET	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.328
FILLING AREA (SQ.M) = 4.341

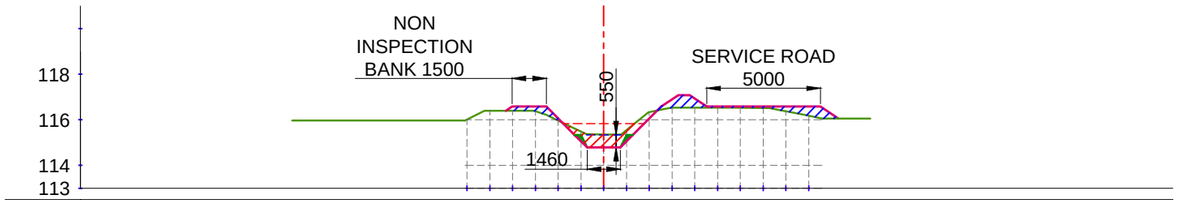
CH. (KM):- 0+500
DESIGNED BED LEVEL =116.038 M



EXIST. LEVEL (M)	115.810	115.964	116.070	116.055	116.040	115.990	115.703	115.250	115.145	115.282	115.959	116.189	116.187	116.184	116.181	116.165	116.012	115.858
OFFSET (M)	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.948
FILLING AREA (SQ.M) = 1.250

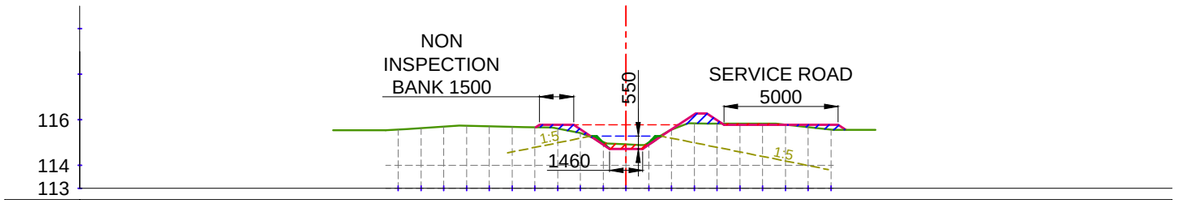
CH. (KM):- 0+700
DESIGNED BED LEVEL =114.761 M



EXIST. LEVEL	116.025	116.403	116.397	116.376	115.970	115.487	115.364	115.551	116.346	116.533	116.532	116.530	116.529	116.527	116.378	116.177
OFFSET	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 1.589
FILLING AREA (SQ.M) = 2.187

CH. (KM):- 0+600
DESIGNED BED LEVEL =114.790 M



EXIST. LEVEL (M)	115.574	115.638	115.701	115.737	115.718	115.698	115.678	115.615	115.430	115.023	114.926	115.001	115.571	115.845	115.841	115.837	115.833	115.785	115.675	115.566
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.465
FILLING AREA (SQ.M) = 1.254

CH. (KM):- 0+800
DESIGNED BED LEVEL = 114.732 M

LEGEND

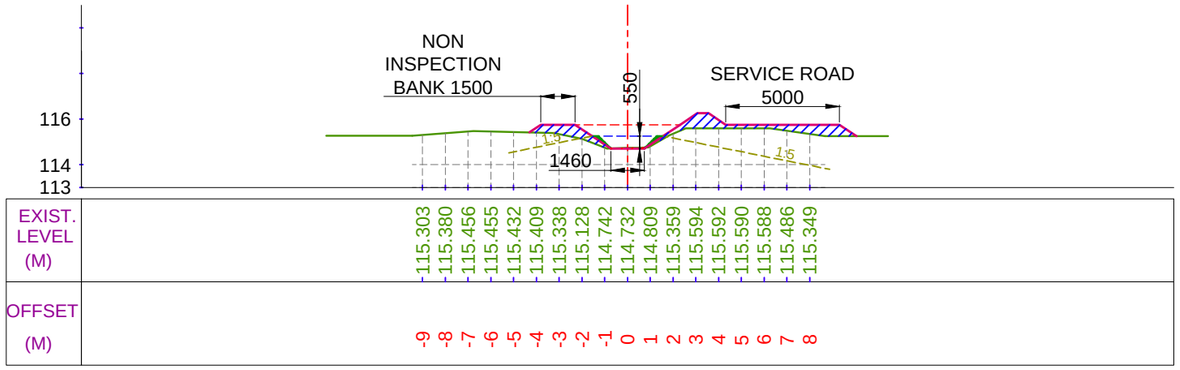
CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

Prepared by :-

WAPCOS LTD.

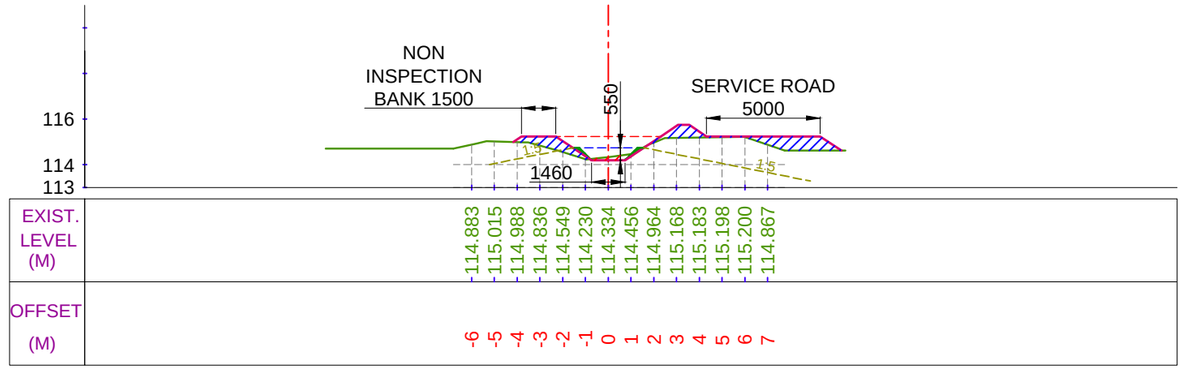
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 2 of 7

X SECTION OF JASOEA MINOR



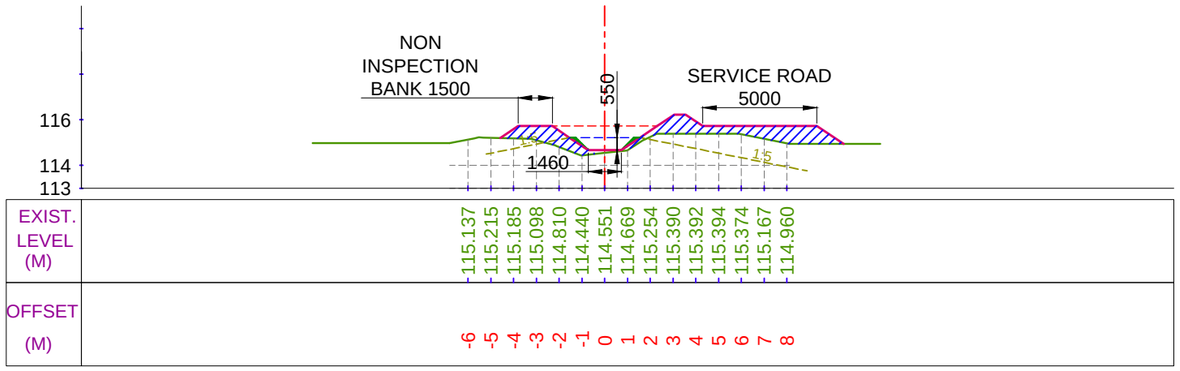
CUTTING AREA (SQ.M) = 0.042
FILLING AREA (SQ.M) = 3.959

CH. (KM):- 0+900
DESIGNED BED LEVEL = 114.704 M



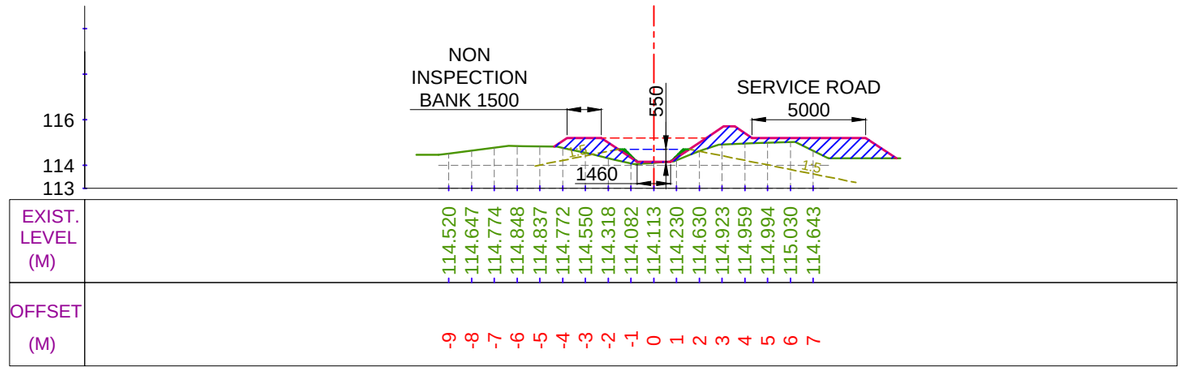
CUTTING AREA (SQ.M) = 0.243
FILLING AREA (SQ.M) = 3.846

CH. (KM):- 1+100
DESIGNED BED LEVEL = 114.190 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.878

CH. (KM):- 1+000
DESIGNED BED LEVEL = 114.675 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.801

CH. (KM):- 1+200
DESIGNED BED LEVEL = 114.161 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

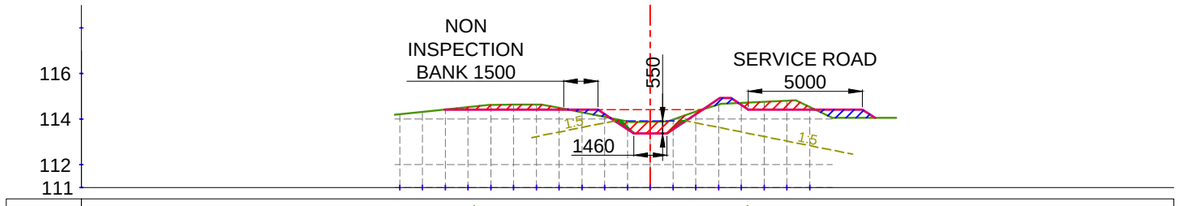
Prepared by :-

WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 3 of 7

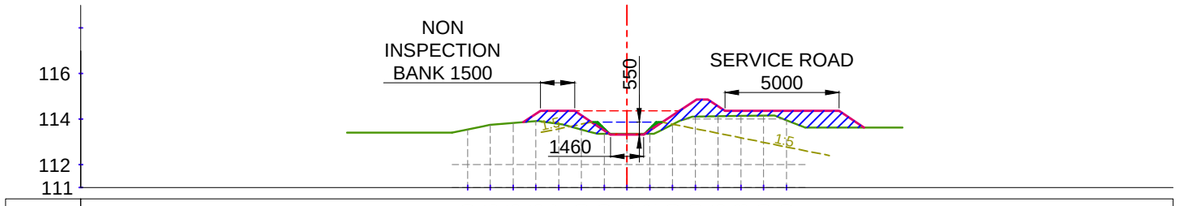
X SECTION OF JASOEA MINOR



EXIST. LEVEL (M)	114.212	114.318	114.424	114.531	114.626	114.632	114.637	114.489	114.295	114.094	113.893	113.882	113.978	114.332	114.634	114.711	114.760	114.810	114.525
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

CUTTING AREA (SQ.M) = 3.031
FILLING AREA (SQ.M) = 1.254

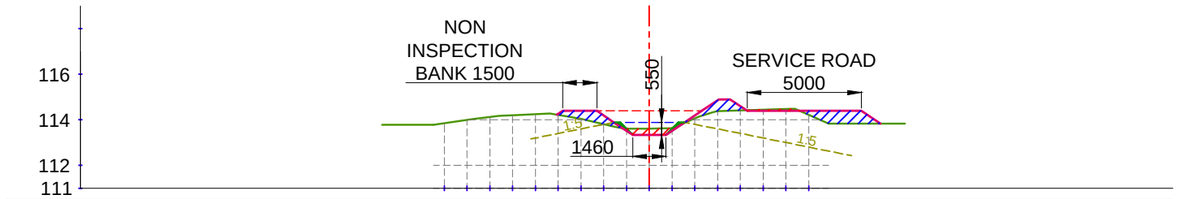
CH. (KM):- 1+300
DESIGNED BED LEVEL =113.371 M



EXIST. LEVEL (M)	113.539	113.745	113.825	113.905	113.787	113.540	113.349	113.350	113.352	113.770	114.100	114.116	114.133	114.149	113.949			
OFFSET (M)	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7			

CUTTING AREA (SQ.M) = 0.056
FILLING AREA (SQ.M) = 5.019

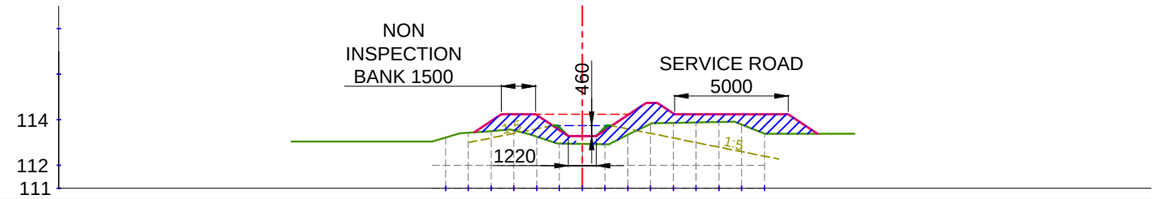
CH. (KM):- 1+500
DESIGNED BED LEVEL =113.313 M



EXIST. LEVEL (M)	113.857	113.993	114.129	114.208	114.250	114.213	114.041	113.812	113.607	113.616	113.648	114.072	114.384	114.416	114.448	114.480	114.225	
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	

CUTTING AREA (SQ.M) = 0.630
FILLING AREA (SQ.M) = 2.977

CH. (KM):- 1+400
DESIGNED BED LEVEL =113.342 M



EXIST. LEVEL (M)	113.223	113.433	113.512	113.534	113.270	112.957	112.944	112.931	113.338	113.821	113.872	113.892	113.912	113.797	113.400			
OFFSET (M)	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8			

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.538

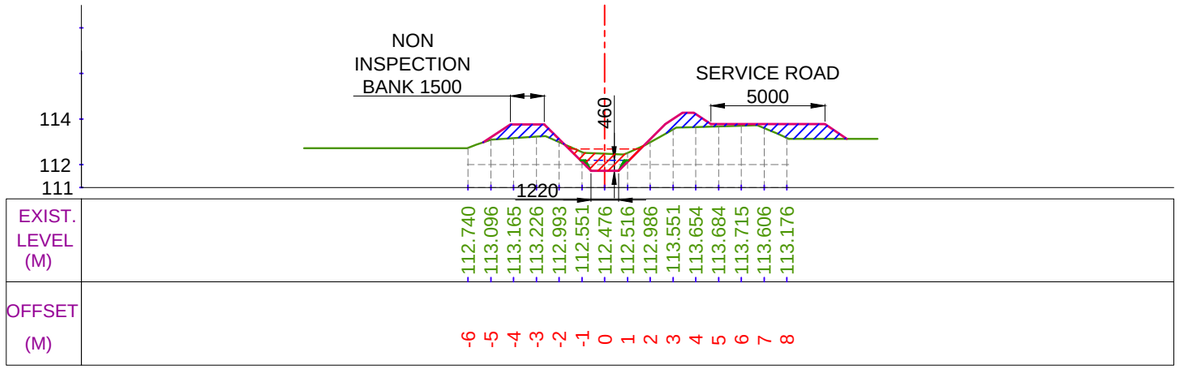
CH. (KM):- 1+600
DESIGNED BED LEVEL = 113.285 M

LEGEND

CUT AREA	EXISTING BED LINE	Prepared by :-	WAPCOS LTD.
	F.S.L.		
FILL AREA	DESIGNED BED LINE		
	H.G. LINE		

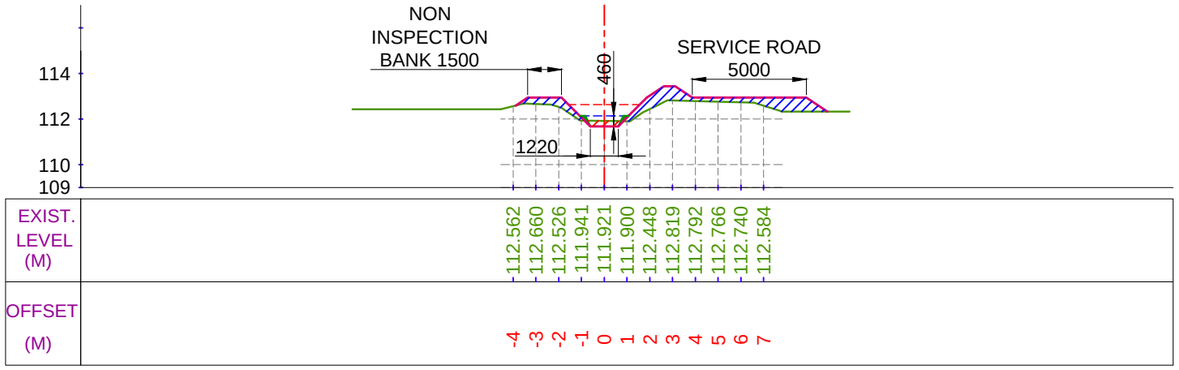
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 4 of 7

X SECTION OF JASOEA MINOR



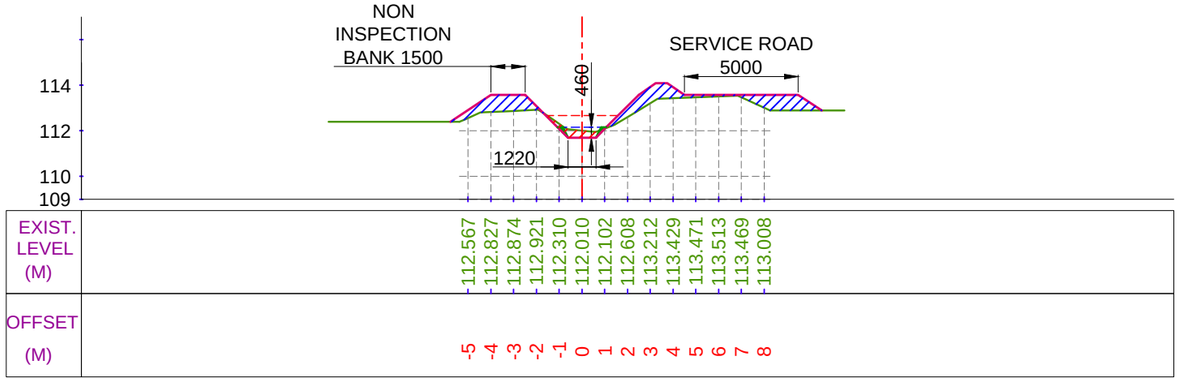
CUTTING AREA (SQ.M) = 1.542
FILLING AREA (SQ.M) = 4.519

CH. (KM):- 1+700
DESIGNED BED LEVEL = 111.732 M



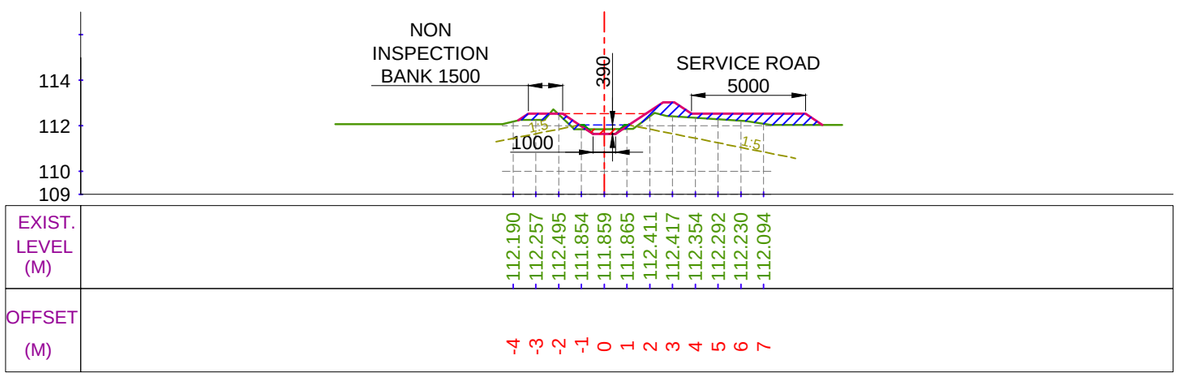
CUTTING AREA (SQ.M) = 0.330
FILLING AREA (SQ.M) = 4.125

CH. (KM):- 1+900
DESIGNED BED LEVEL = 111.675 M



CUTTING AREA (SQ.M) = 0.520
FILLING AREA (SQ.M) = 5.633

CH. (KM):- 1+800
DESIGNED BED LEVEL = 111.704 M



CUTTING AREA (SQ.M) = 0.289
FILLING AREA (SQ.M) = 3.554

CH. (KM):- 2+000
DESIGNED BED LEVEL = 111.647 M

LEGEND

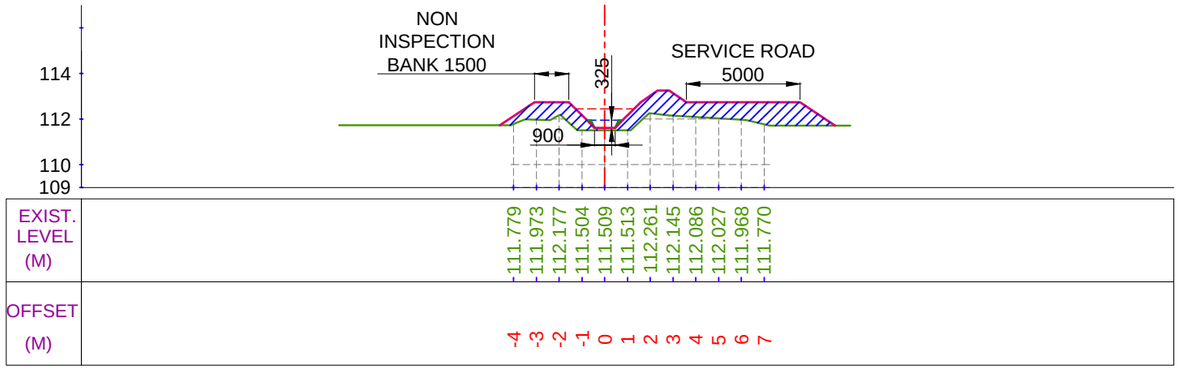
CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

Prepared by :-

WAPCOS LTD.

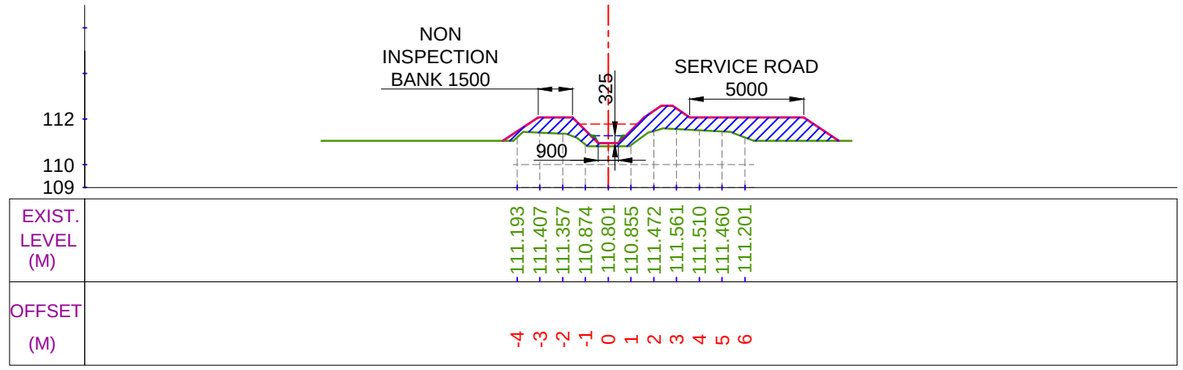
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 5 of 7

X SECTION OF JASOEA MINOR



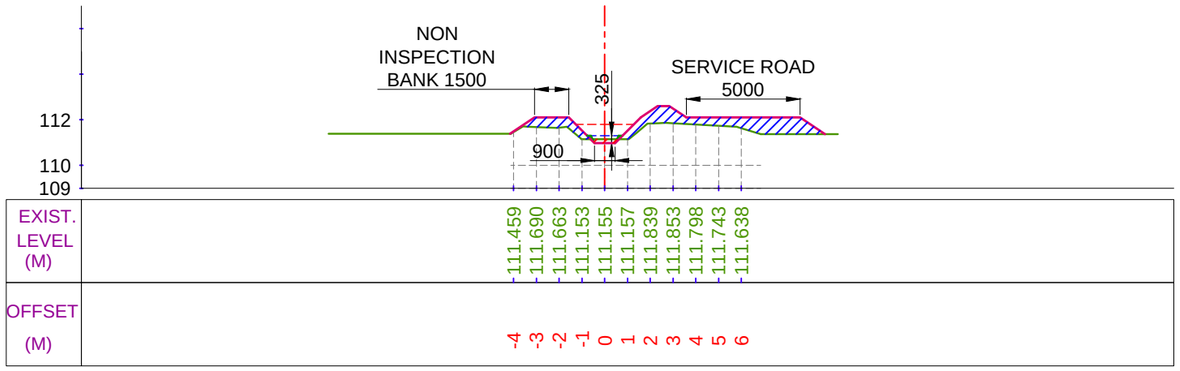
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.822

CH. (KM):- 2+100
DESIGNED BED LEVEL = 111.618 M



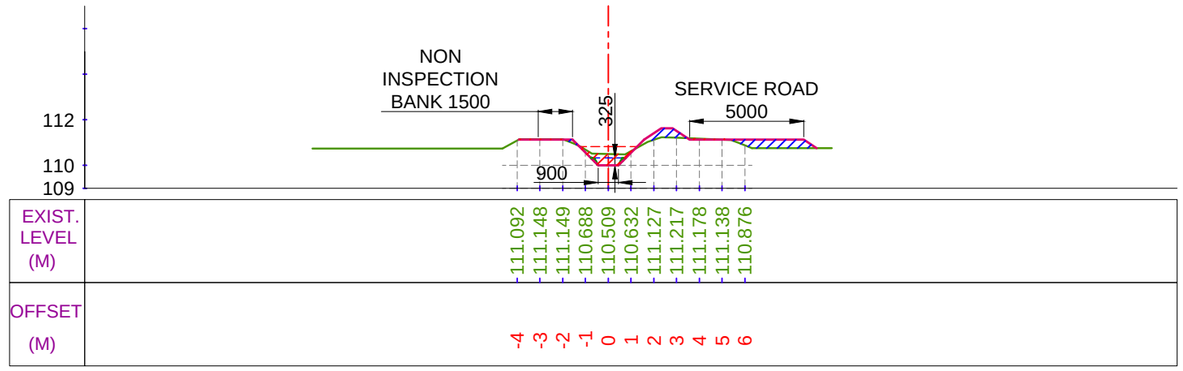
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.507

CH. (KM):- 2+300
DESIGNED BED LEVEL = 110.951 M



CUTTING AREA (SQ.M) = 0.174
FILLING AREA (SQ.M) = 5.617

CH. (KM):- 2+200
DESIGNED BED LEVEL = 110.979 M



CUTTING AREA (SQ.M) = 0.793
FILLING AREA (SQ.M) = 1.775

CH. (KM):- 2+400
DESIGNED BED LEVEL = 110.008 M

LEGEND

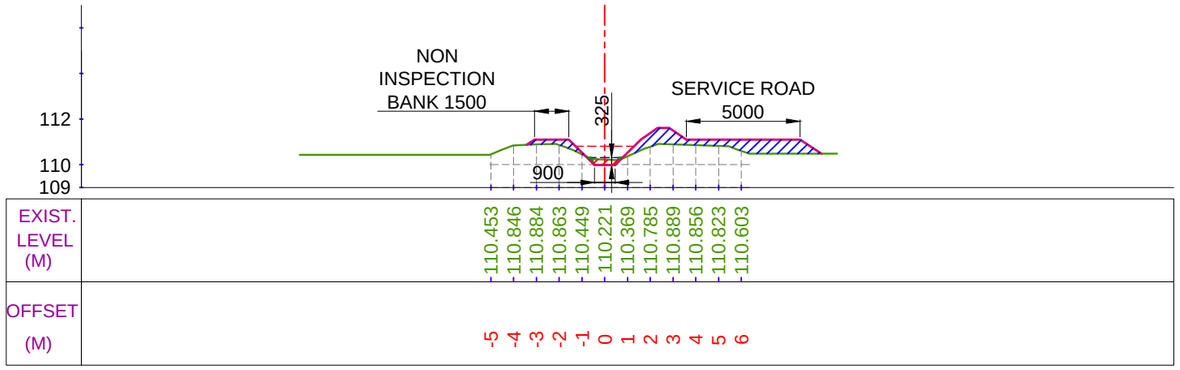
	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 6 of 7

X SECTION OF JASOEA MINOR

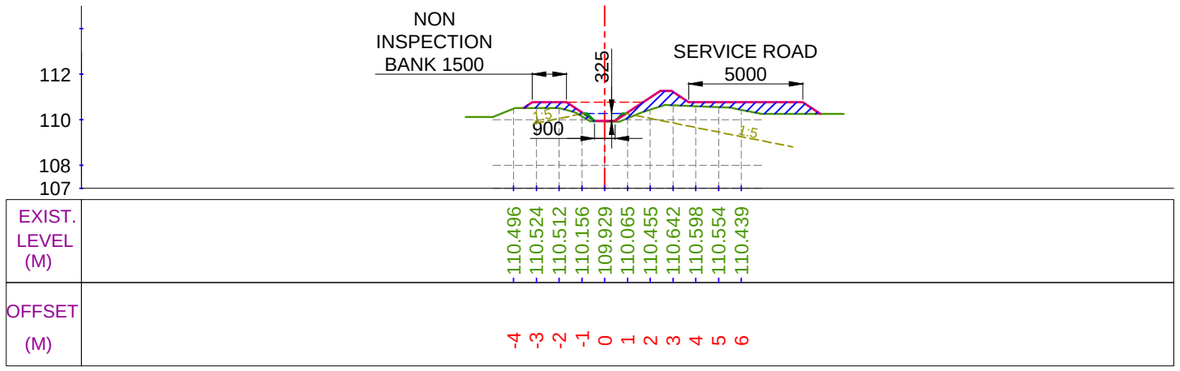


CUTTING AREA (SQ.M) = 0.246

FILLING AREA (SQ.M) = 4.509

CH. (KM):- 2+500

DESIGNED BED LEVEL = 109.980 M



CUTTING AREA (SQ.M) = 0.000

FILLING AREA (SQ.M) = 4.041

CH. (KM):- 2+600

DESIGNED BED LEVEL = 109.951 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

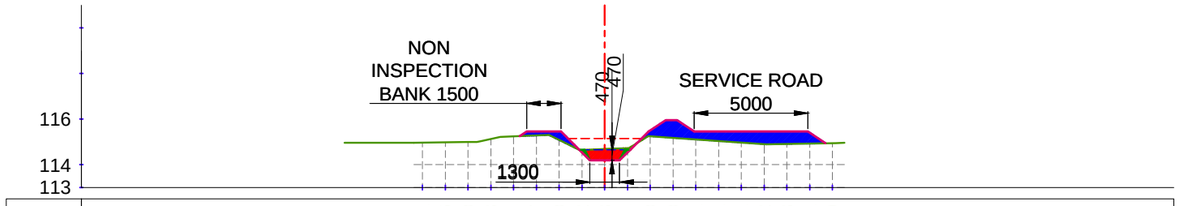
WAPCOS LTD.

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Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF JASOEA MINOR (OFFTAKE FROM RD -23+400 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ XSEC- 7 of 7

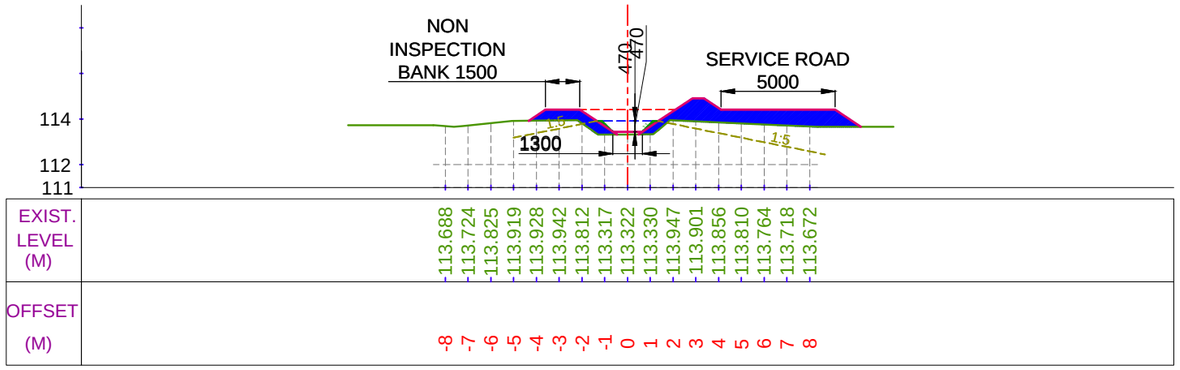
CROSS SECTION OF SENDHOKHAP MINOR

X SECTION OF SENDHOKHAP MINOR



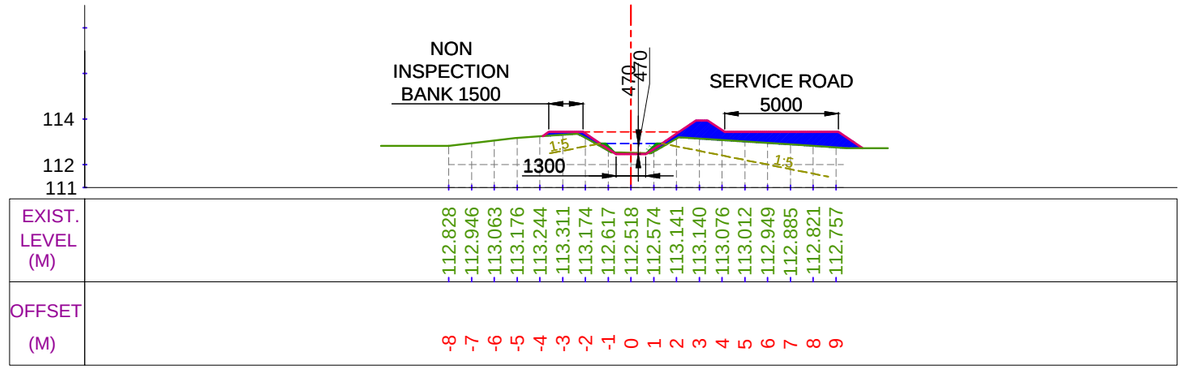
| | | |

X SECTION OF SENDHOKHAP MINOR



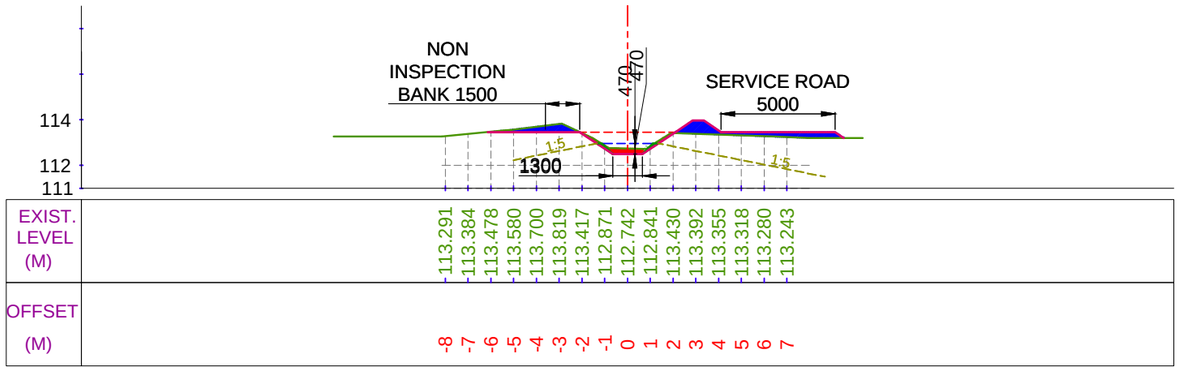
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.497

CH. (KM):- 0+500
DESIGNED BED LEVEL = 113.442 M



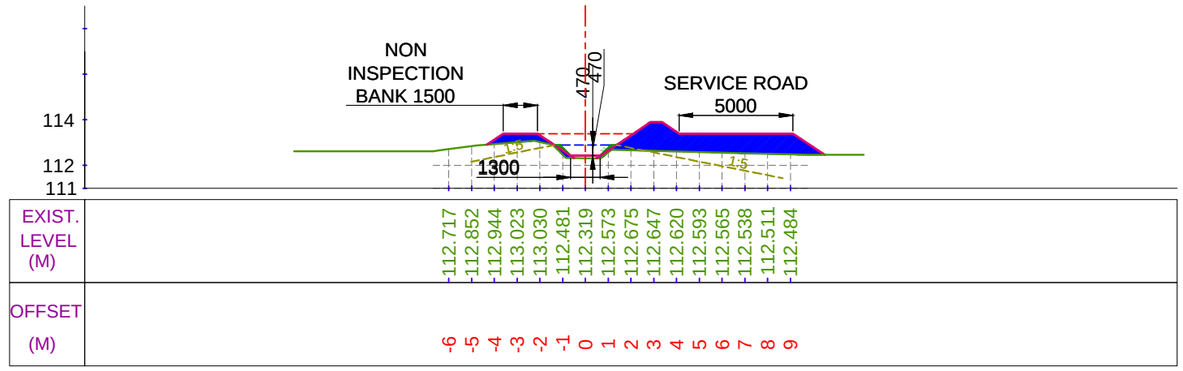
CUTTING AREA (SQ.M) = 0.076
FILLING AREA (SQ.M) = 4.790

CH. (KM):- 0+700
DESIGNED BED LEVEL = 112.462 M



CUTTING AREA (SQ.M) = 0.531
FILLING AREA (SQ.M) = 2.558

CH. (KM):- 0+600
DESIGNED BED LEVEL = 112.495 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.419

CH. (KM):- 0+800
DESIGNED BED LEVEL = 112.428 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

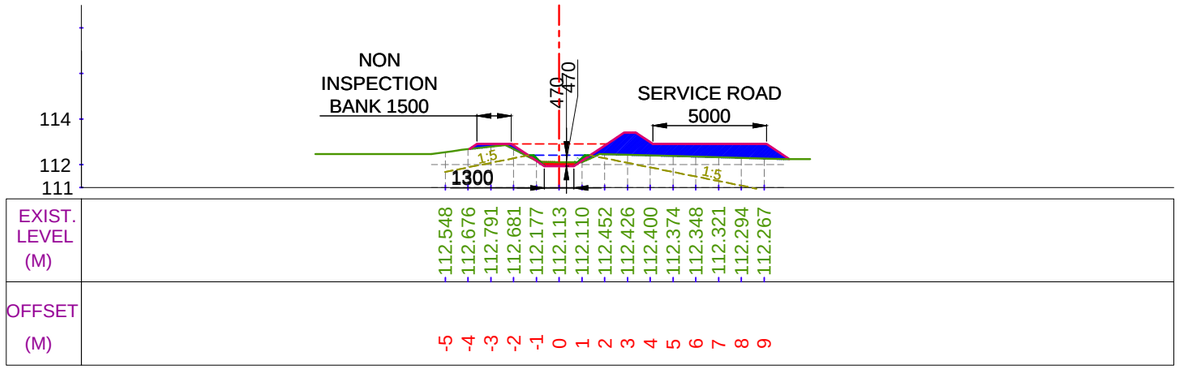
Prepared by :-

WAPCOS LTD.

421

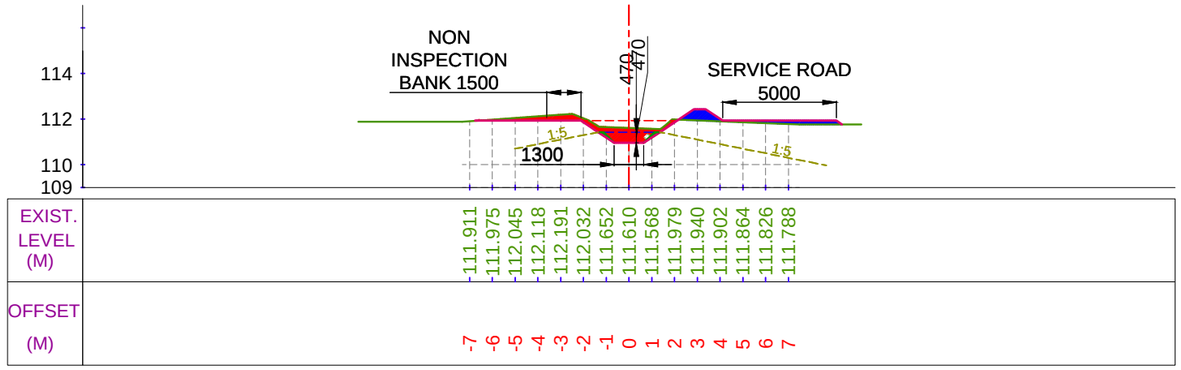
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC- 2 of 6

X SECTION OF SENDHOKHAP MINOR



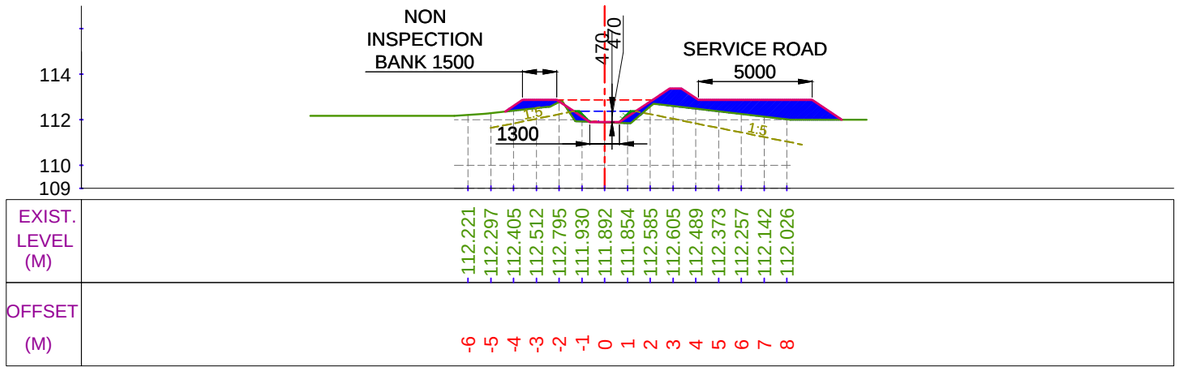
CUTTING AREA (SQ.M) = 0.258
FILLING AREA (SQ.M) = 5.322

CH. (KM):- 0+900
DESIGNED BED LEVEL = 111.938 M



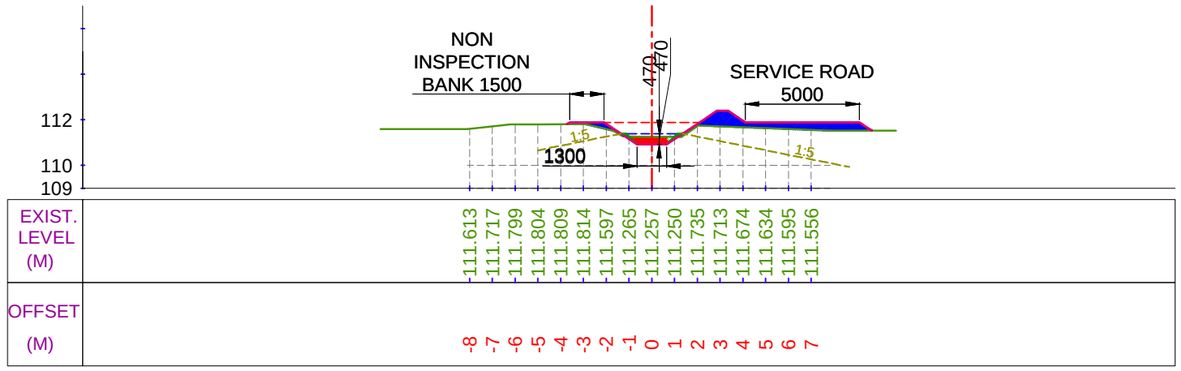
CUTTING AREA (SQ.M) = 2.318
FILLING AREA (SQ.M) = 1.197

CH. (KM):- 1+100
DESIGNED BED LEVEL = 110.957 M



CUTTING AREA (SQ.M) = 0.015
FILLING AREA (SQ.M) = 6.421

CH. (KM):- 1+000
DESIGNED BED LEVEL = 111.905 M



CUTTING AREA (SQ.M) = 0.545
FILLING AREA (SQ.M) = 3.089

CH. (KM):- 1+200
DESIGNED BED LEVEL = 110.924 M

LEGEND

CUT AREA	EXISTING BED LINE	
	F.S.L.	
FILL AREA	DESIGNED BED LINE	
	H.G. LINE	

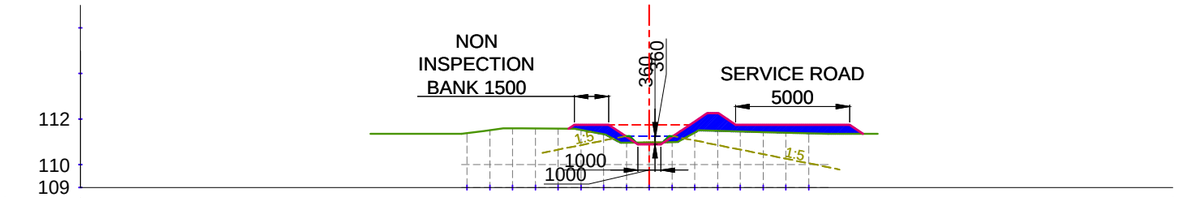
Prepared by :-

WAPCOS LTD.

422

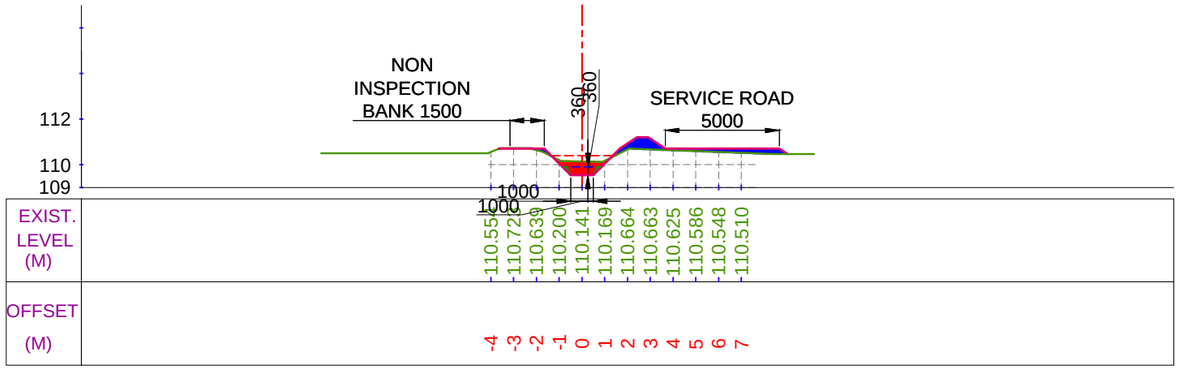
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC- 3 of 6

X SECTION OF SENDHOKHAP MINOR



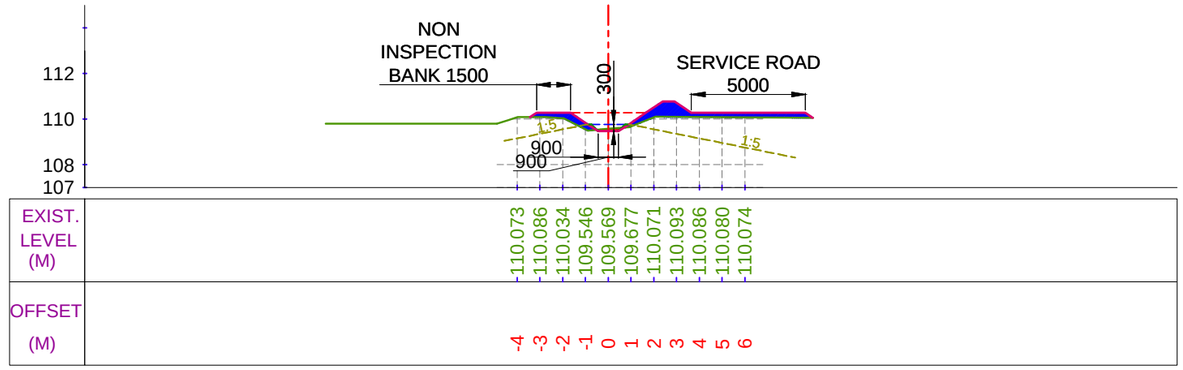
| | | |

X SECTION OF SENDHOKHAP MINOR



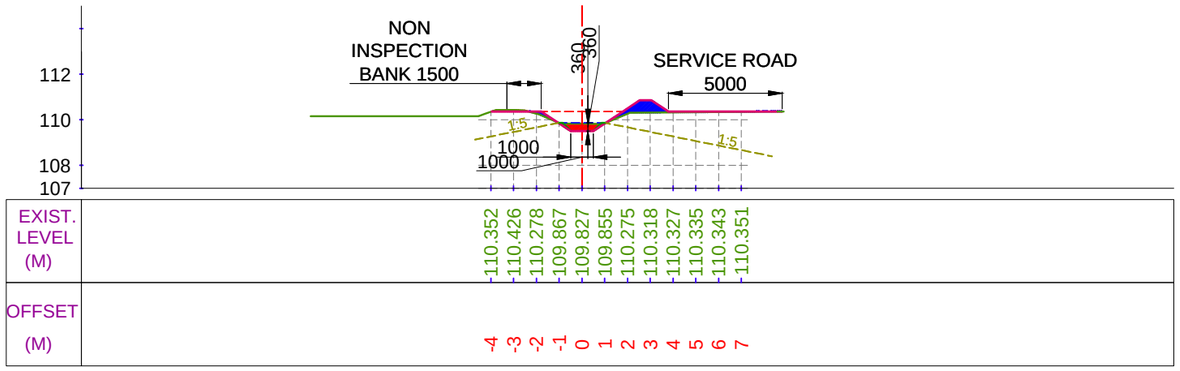
CUTTING AREA (SQ.M) = 0.975
FILLING AREA (SQ.M) = 1.638

CH. (KM):- 1+700
DESIGNED BED LEVEL = 109.537 M



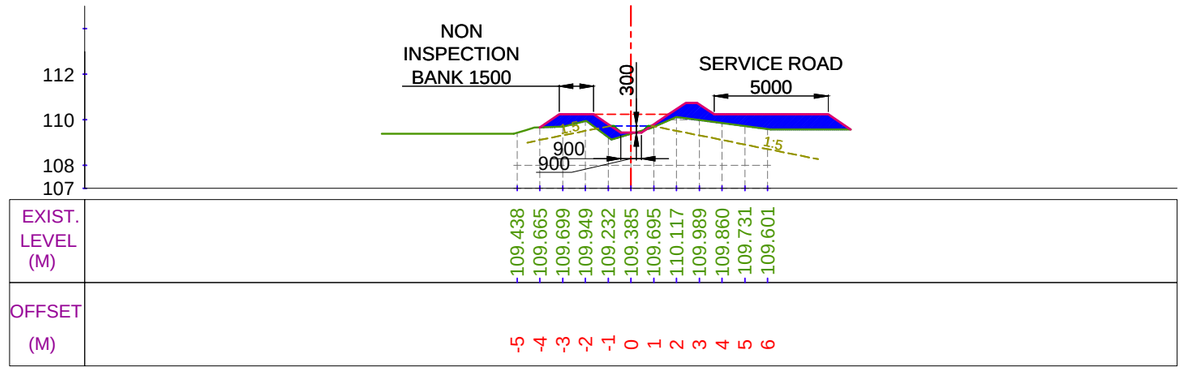
CUTTING AREA (SQ.M) = 0.100
FILLING AREA (SQ.M) = 2.985

CH. (KM):- 1+900
DESIGNED BED LEVEL = 109.471 M



CUTTING AREA (SQ.M) = 0.517
FILLING AREA (SQ.M) = 0.987

CH. (KM):- 1+800
DESIGNED BED LEVEL =109.504 M



CUTTING AREA (SQ.M) = 0.016
FILLING AREA (SQ.M) = 5.902

CH. (KM):- 2+000
DESIGNED BED LEVEL = 109.437 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

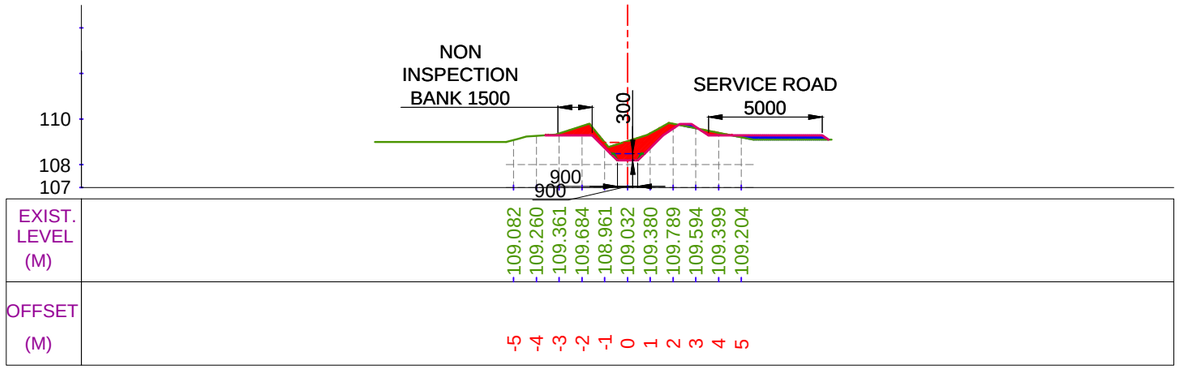
Prepared by :-

WAPCOS LTD.

424

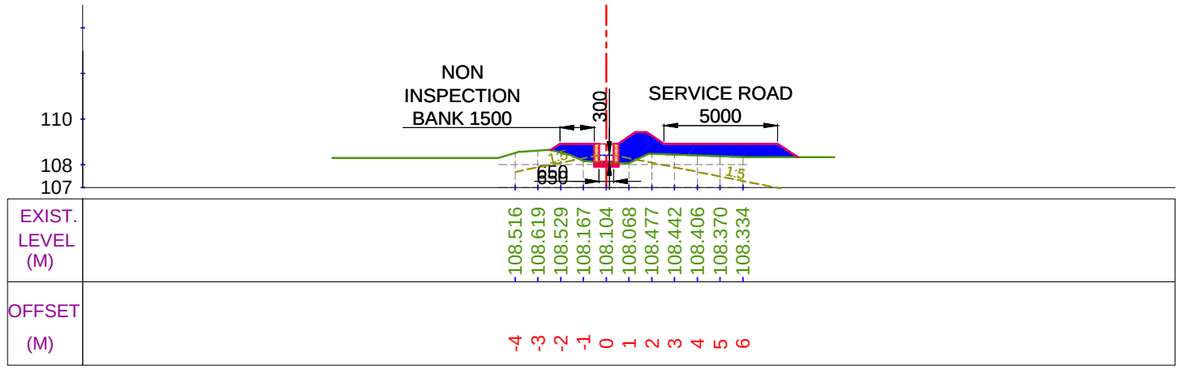
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC- 5 of 6

X SECTION OF SENDHOKHAP MINOR



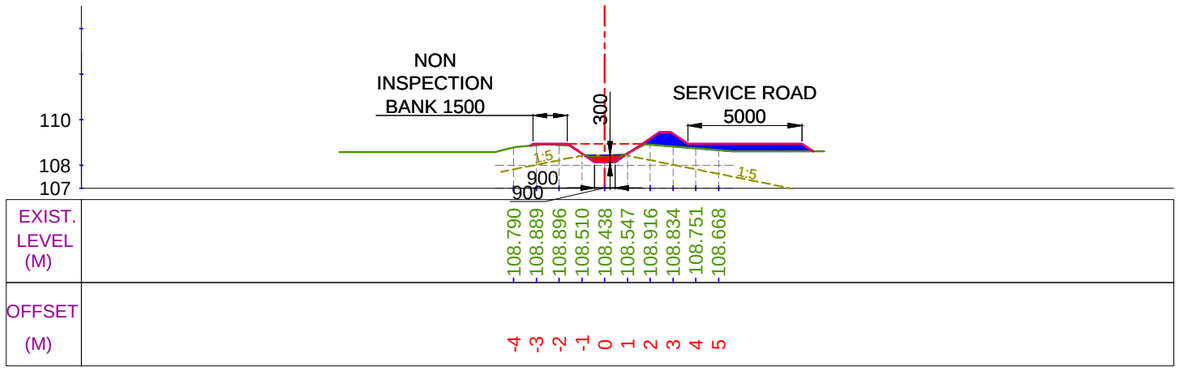
CUTTING AREA (SQ.M) = 2.599
FILLING AREA (SQ.M) = 0.745

CH. (KM):- 2+100
DESIGNED BED LEVEL = 108.184 M



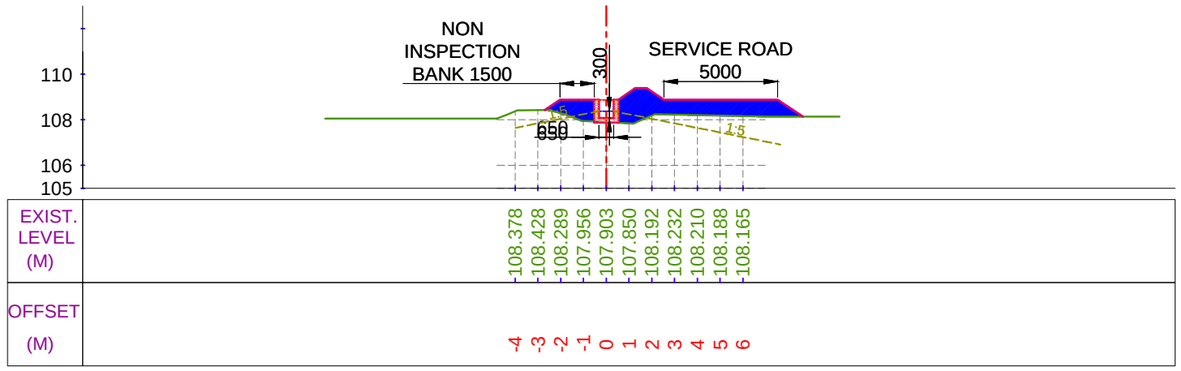
CUTTING AREA (SQ.M) = 0.196
FILLING AREA (SQ.M) = 5.854

CH. (KM):- 2+300
DESIGNED BED LEVEL = 108.117 M



CUTTING AREA (SQ.M) = 0.356
FILLING AREA (SQ.M) = 2.510

CH. (KM):- 2+200
DESIGNED BED LEVEL = 108.151 M



CUTTING AREA (SQ.M) = 0.023
FILLING AREA (SQ.M) = 7.633

CH. (KM):- 2+400
DESIGNED BED LEVEL = 108.082 M

LEGEND

CUT AREA		EXISTING BED LINE	
		F.S.L.	
FILL AREA		DESIGNED BED LINE	
		H.G. LINE	

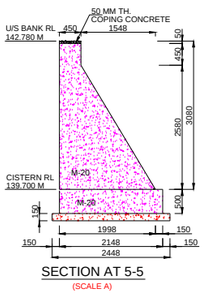
Prepared by :-

WAPCOS LTD.

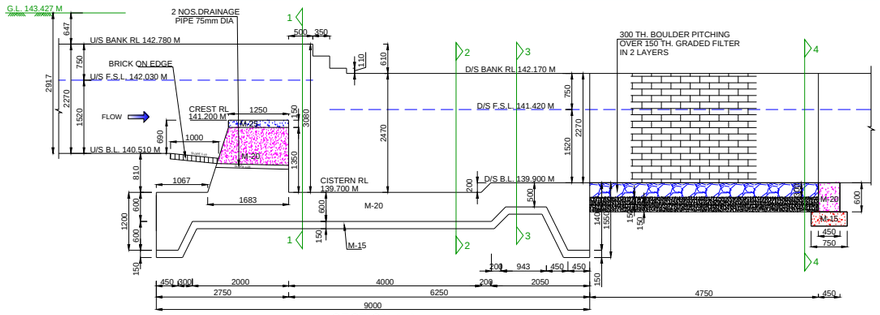
425

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ XSEC- 6 of 6

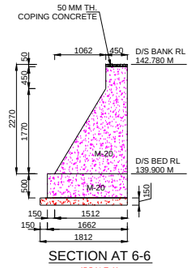
DRAWINGS OF STRUCTURE



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

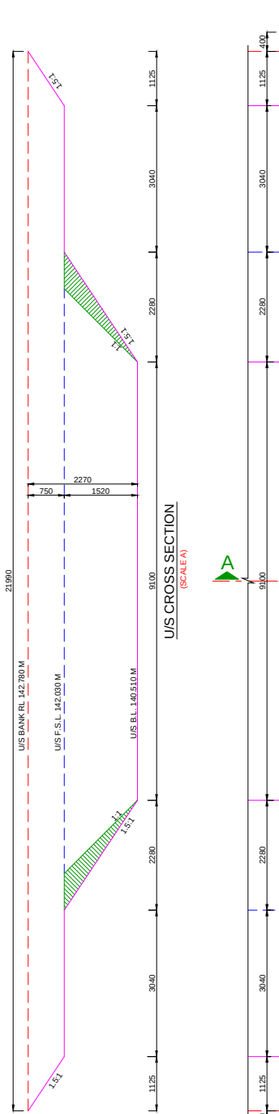
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

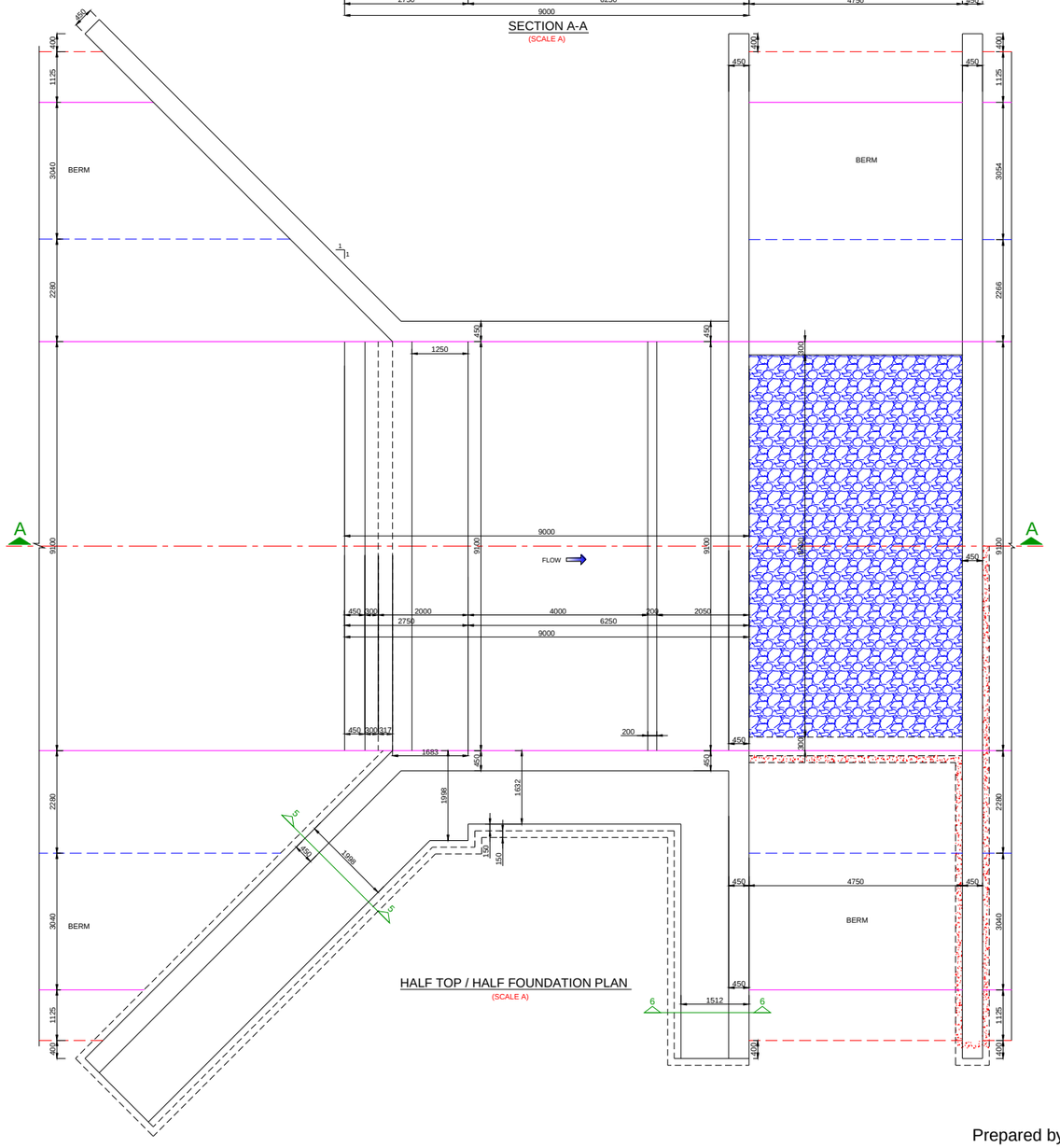
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

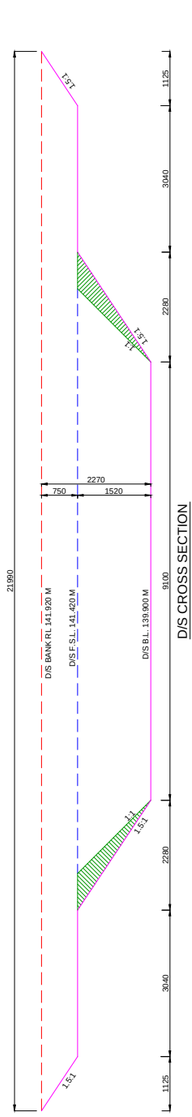
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

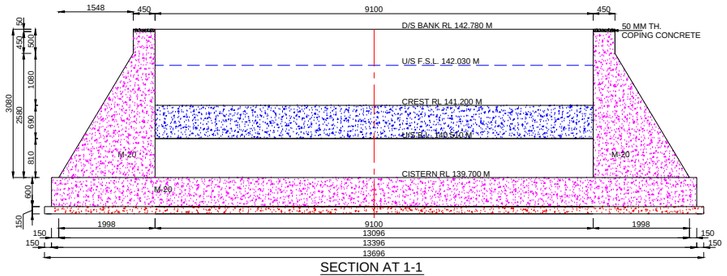
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	9.950	9.950	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	1.520	1.520	METRE
BED WIDTH	9.100	9.100	METRE
BED SLOPE	1 : 5000	1 : 5000	



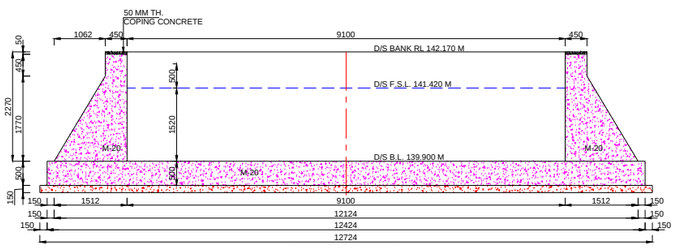






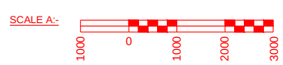
SECTION AT 1-1
(SCALE A)

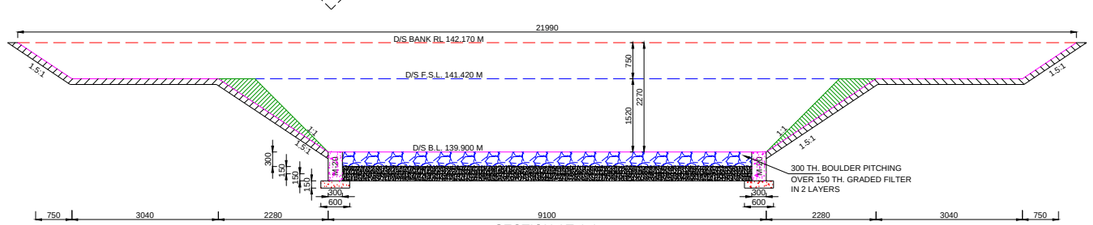
SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)

SCALE A:-



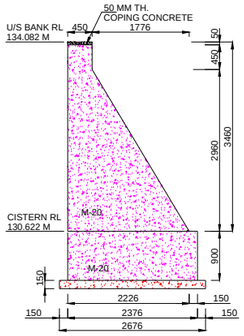


SECTION AT 4-4
(SCALE A)

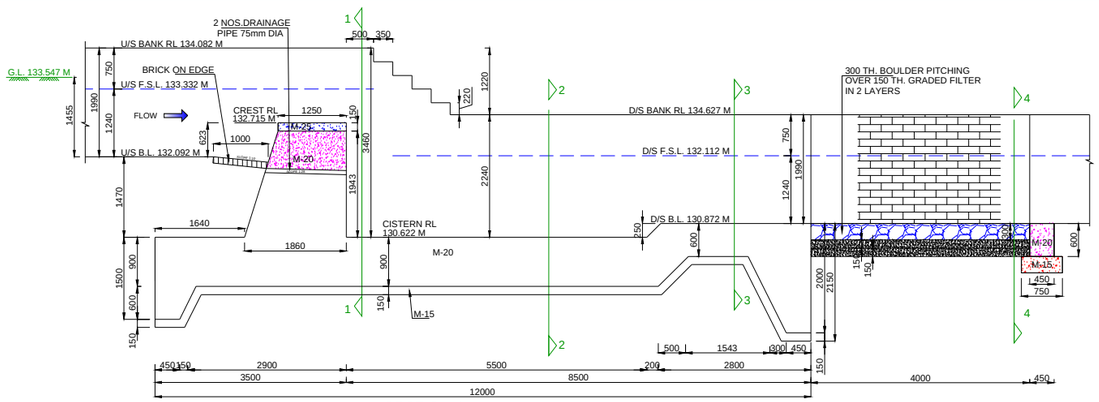
Prepared by :-

WAPCOS LTD.

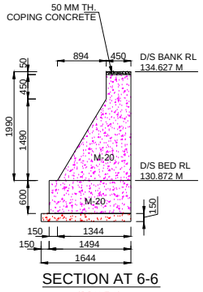
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 0.400 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 1
Drawn by:-	Checked by:- Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

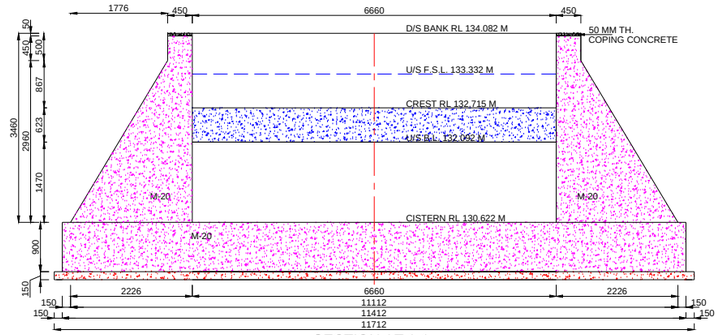
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

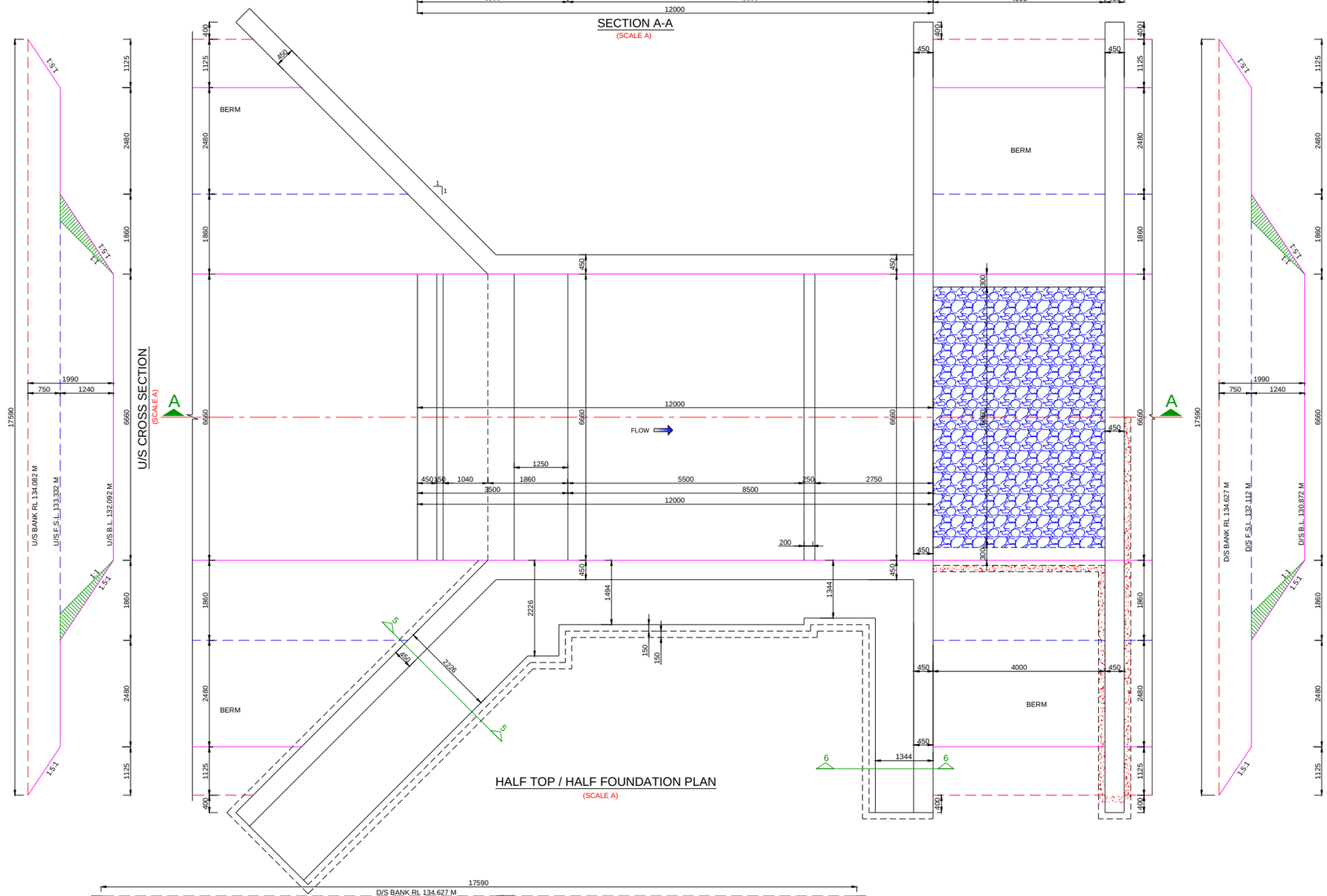
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	5.440	5.440	CUMEC
VERTICAL DROP	1.220	1.220	METRE
FULL SUPPLY DEPTH	1.240	1.240	METRE
BED WIDTH	6.660	6.660	METRE
BED SLOPE	1 : 4500	1 : 4500	

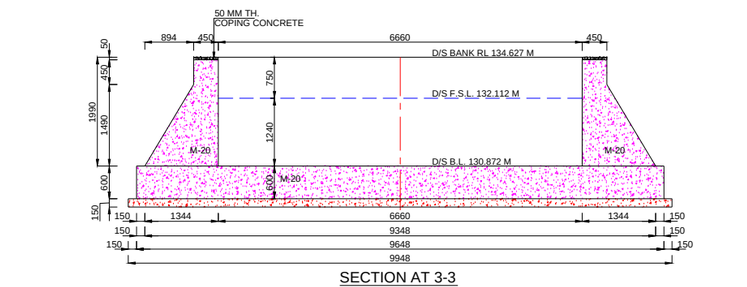


SECTION AT 1-1
(SCALE A)



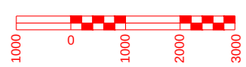
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)

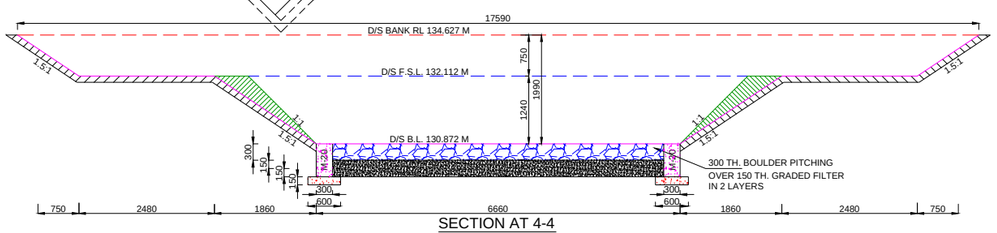
SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)

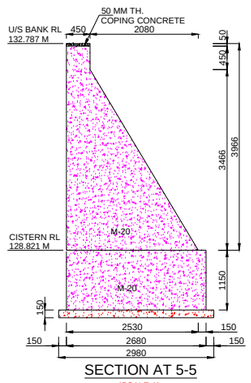
SCALE A:-



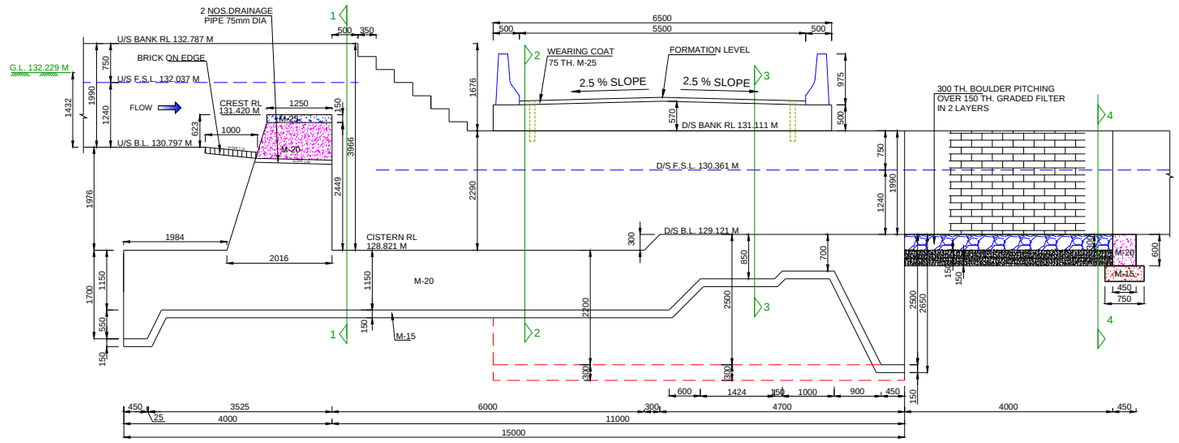


SECTION AT 4-4
(SCALE A)

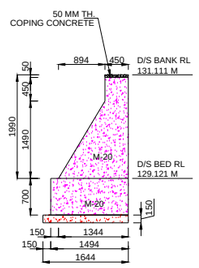
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	Drawing Title :-	SHARDA TYPE 1.220 M HT. FALL AT KM. 8.070 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

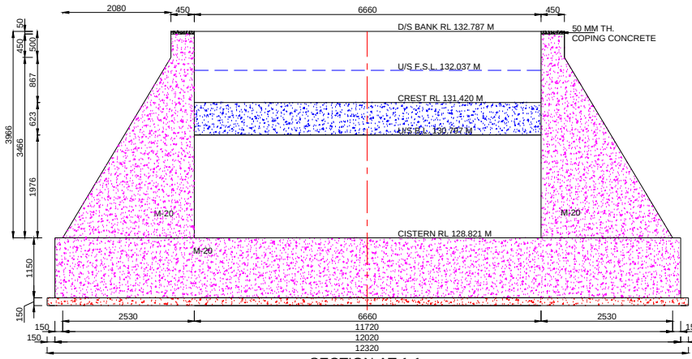
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FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

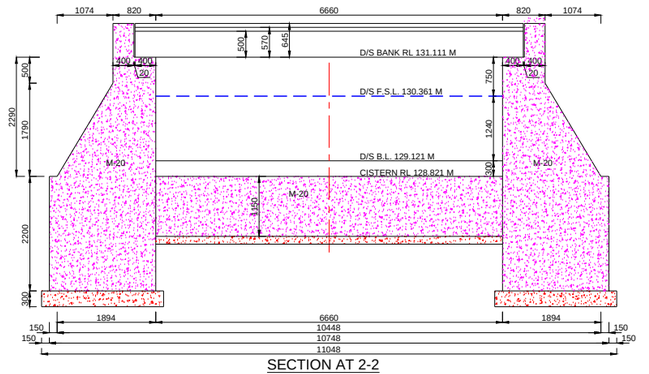
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5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

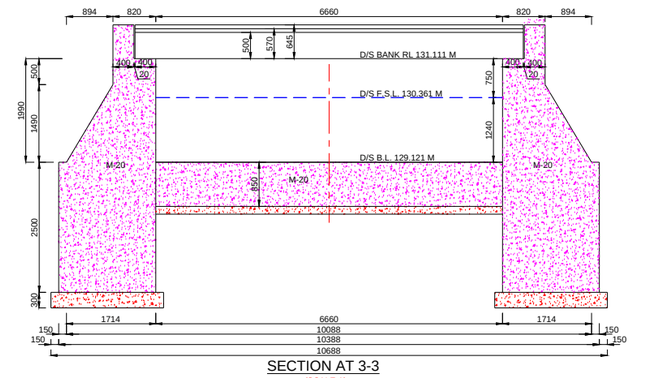
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	5.440	5.440	CUMEC
VERTICAL DROP	1.676	1.676	METRE
FULL SUPPLY DEPTH	1.240	1.240	METRE
BED WIDTH	6.660	6.660	METRE
BED SLOPE	1 : 4500	1 : 4500	



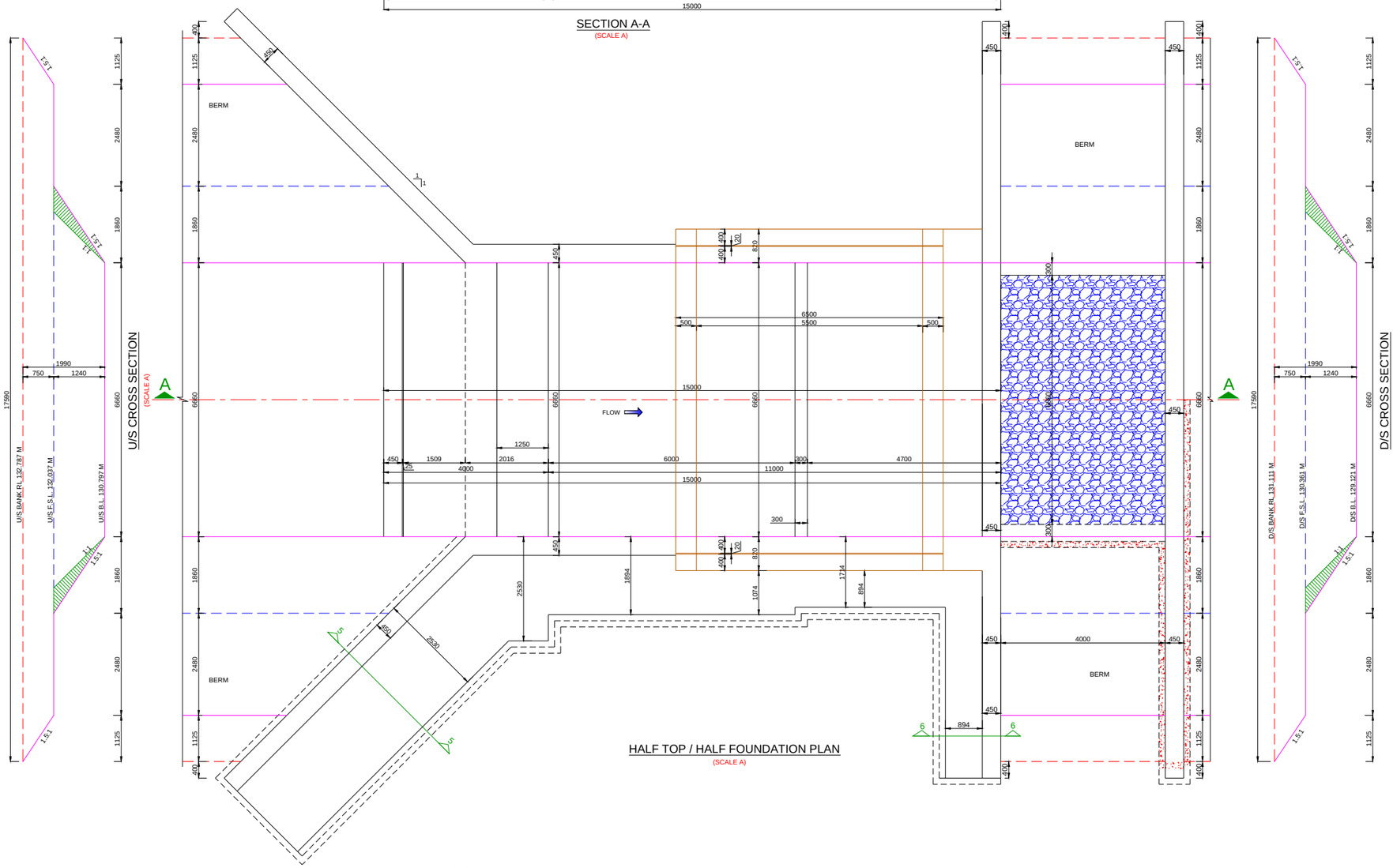
SECTION AT 1-1
(SCALE A)



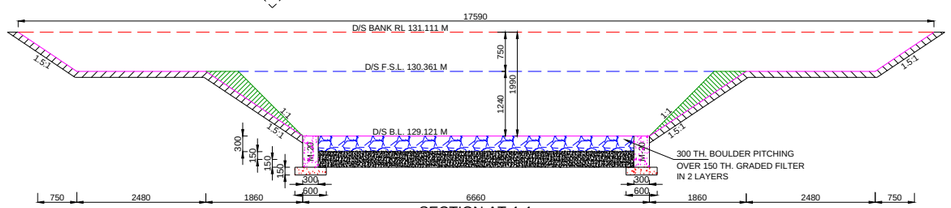
SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)



HALF TOP / HALF FOUNDATION PLAN
(SCALE A)

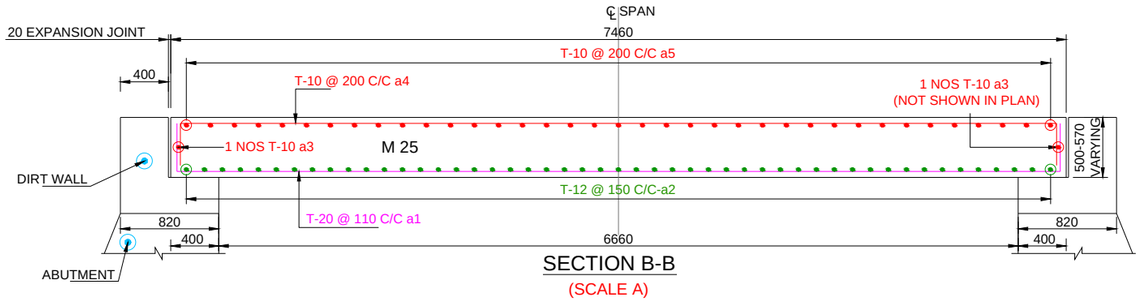


SECTION AT 4-4
(SCALE A)

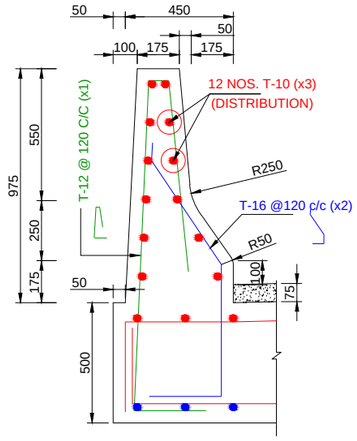
SCALE A:-

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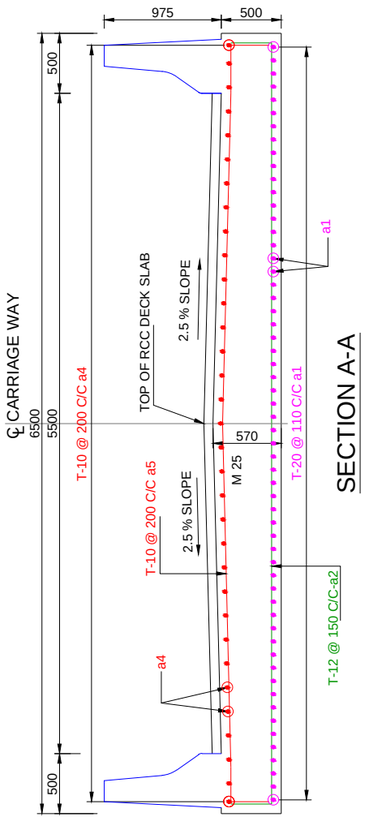
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.676 M HT. FALL CUM BRG. AT KM. 8.410 OF RUIR BR. CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 2
	Drawn by:-	Checked by:- / Approved by:-



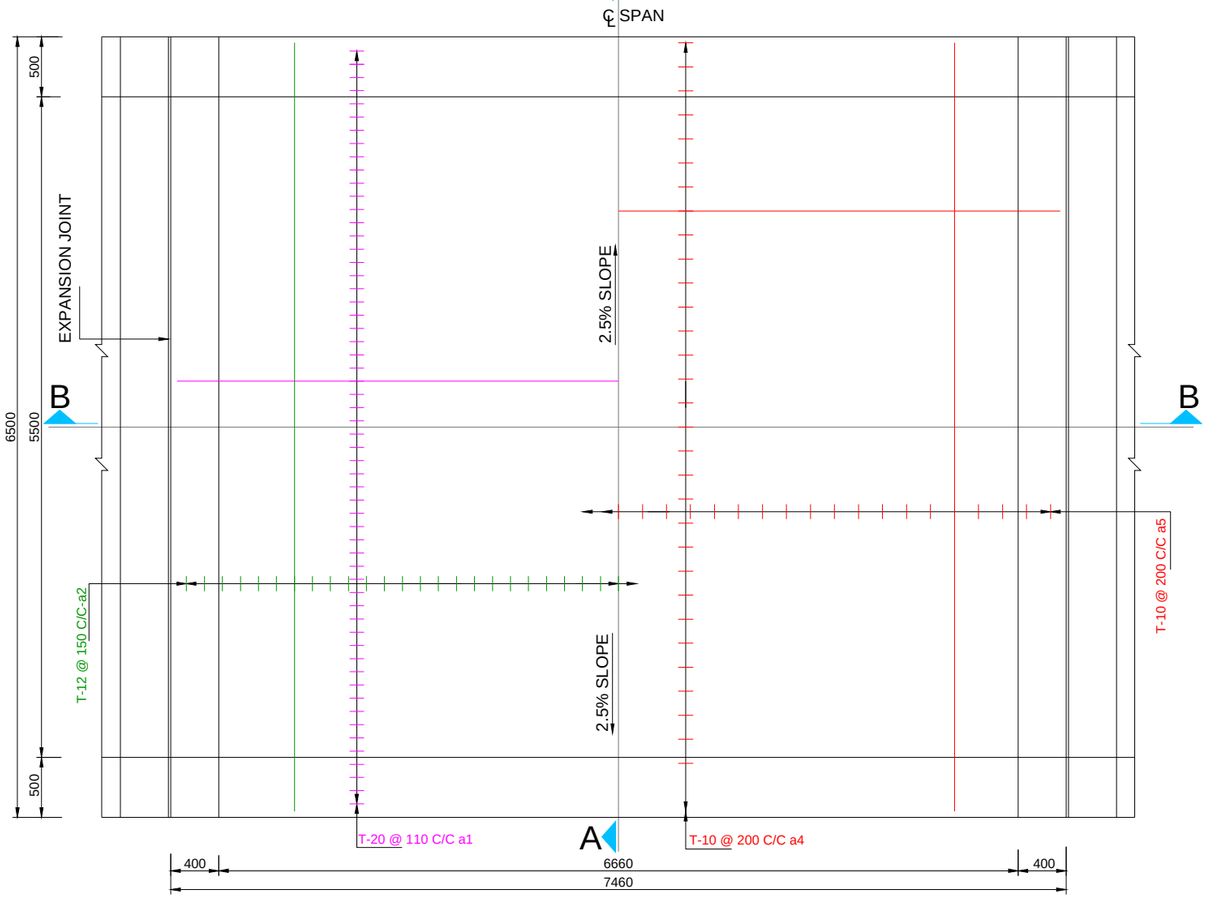
SECTION B-B
(SCALE A)



REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB
(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB
(SCALE A)

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (f_y=500N/mm^2) (IS 456 CLAUSE 26.2.1)

TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = α1. lbnet
WHERE, αl = 1.0 for p%≤25%
αl = 1.15 for 25%≤p%≤33%
αl = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

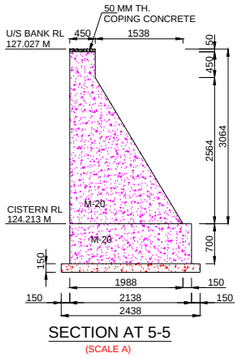
BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	400, R=80, 7360, 400	20	110	59
2	a2	400, R=50, 6400, 400	12	150	49
3	a3	6400	10	-	2
4	a4	7360, 400, R=40, 400	10	200	31
5	a5	400, 450, 2750, 2750, 450, 400	10	200	37

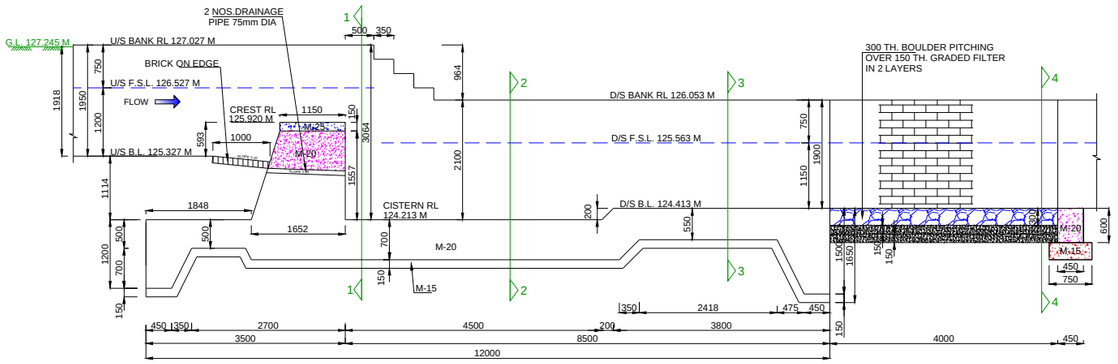
CRASH BARRIER					
1	x1	75, 1226, 950, 300	12	120	64X2
2	x2	75, 540, 400, 300	16	120	64X2
3	x3	7670	12	-	10X2

SCALE A:- 400 0 400 800 1200
SCALE B:- 200 0 200 400 600

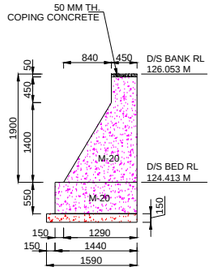
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 8.410 OF RUIR BR. CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

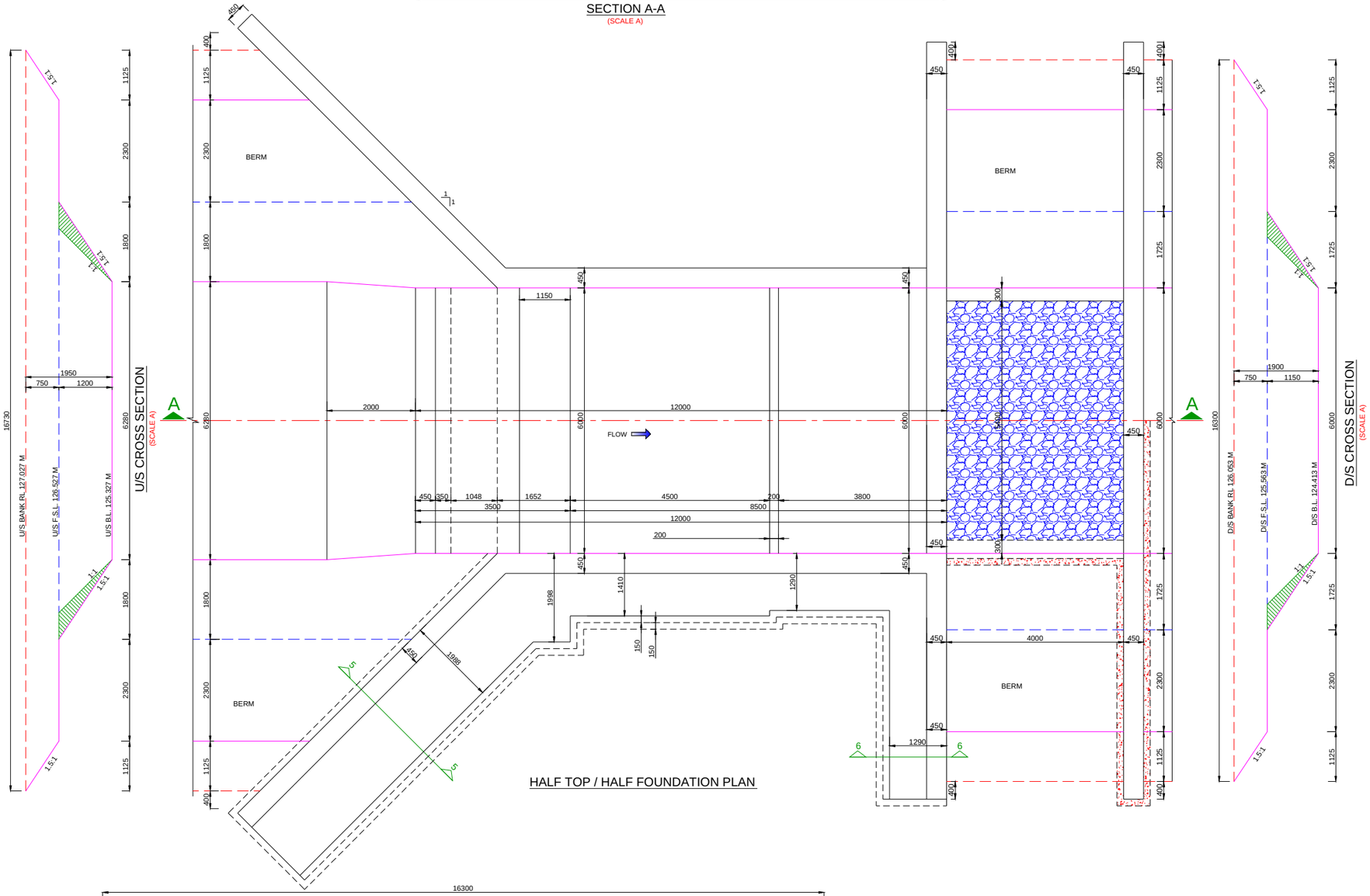
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

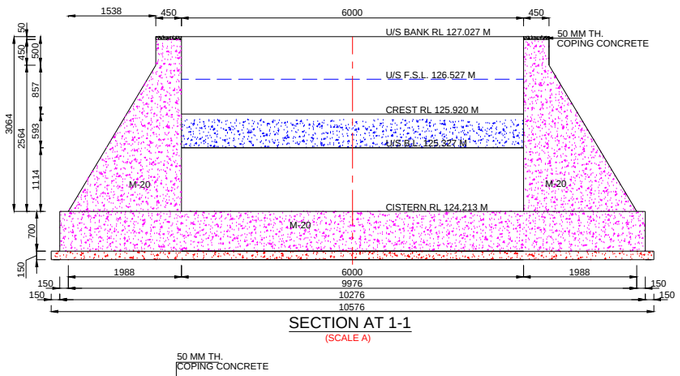
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	4.850	4.850	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	1.150	1.200	METRE
BED WIDTH	6.280	6.000	METRE
BED SLOPE	1 : 4500	1 : 4500	



HALF TOP / HALF FOUNDATION PLAN



SECTION AT 1-1
(SCALE A)

SECTION AT 2-2
(SCALE A)

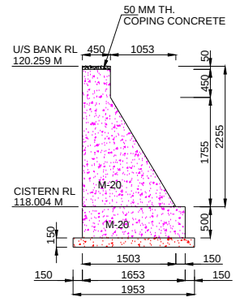
SECTION AT 3-3
(SCALE A)

SECTION AT 4-4
(SCALE A)

SCALE A:-

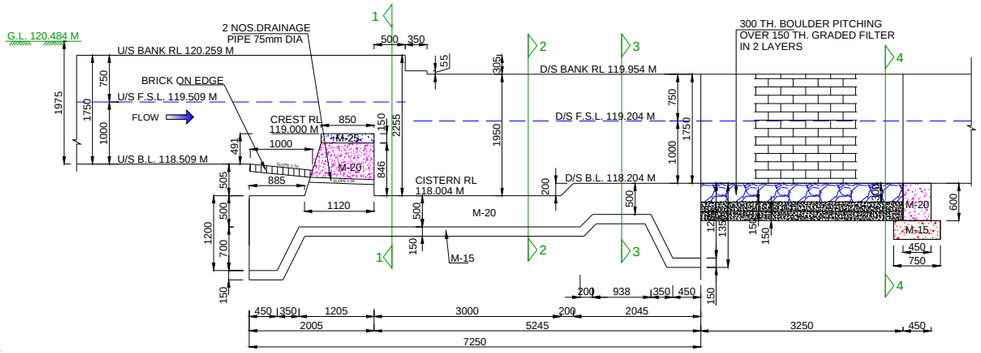
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Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.914 M HT. FALL AT KM. 11.760 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



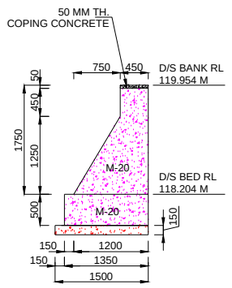
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

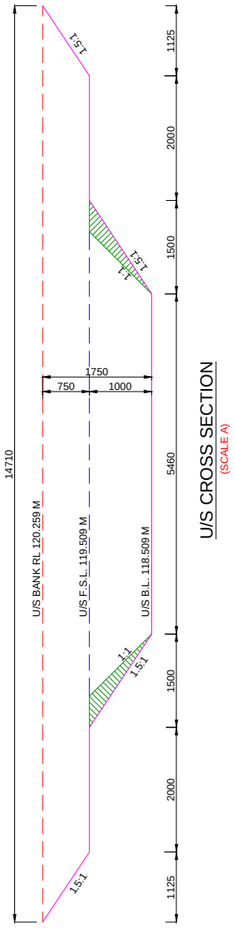
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

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5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

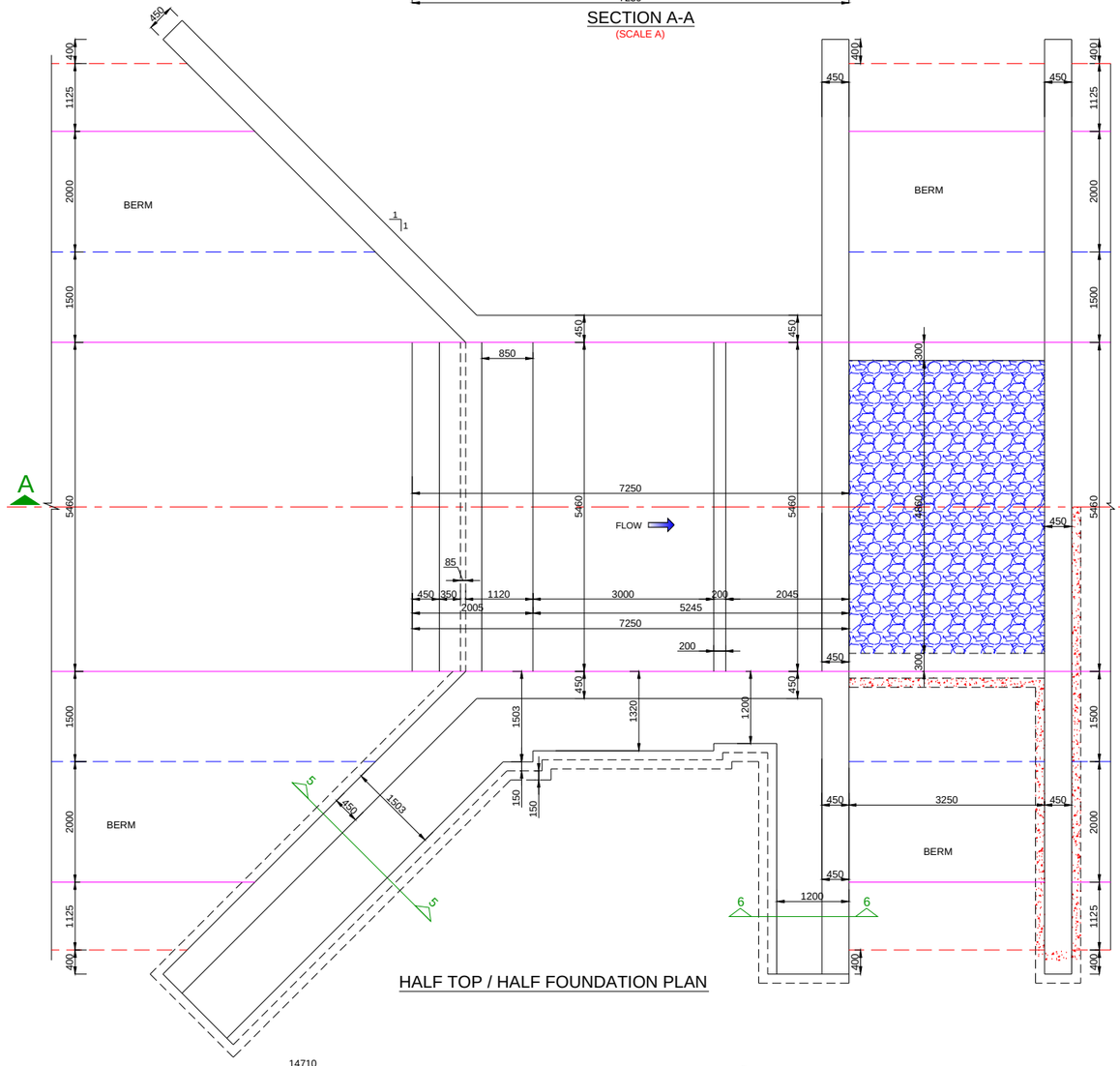
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	3.230	3.230	CUMEC
VERTICAL DROP	0.305	0.305	METRE
FULL SUPPLY DEPTH	1.000	1.000	METRE
BED WIDTH	5.460	5.460	METRE
BED SLOPE	1 : 4200	1 : 4200	

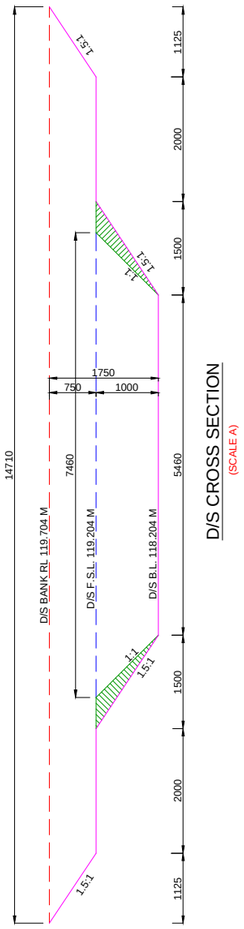


U/S CROSS SECTION

(SCALE A)

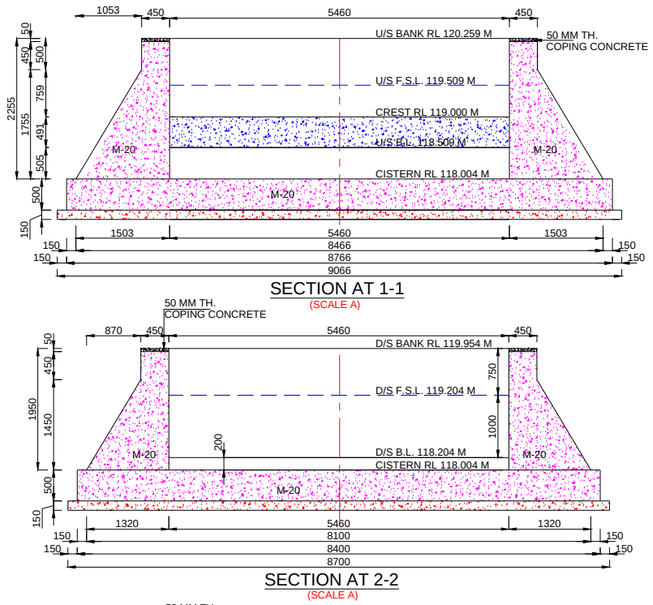


HALF TOP / HALF FOUNDATION PLAN



D/S CROSS SECTION

(SCALE A)

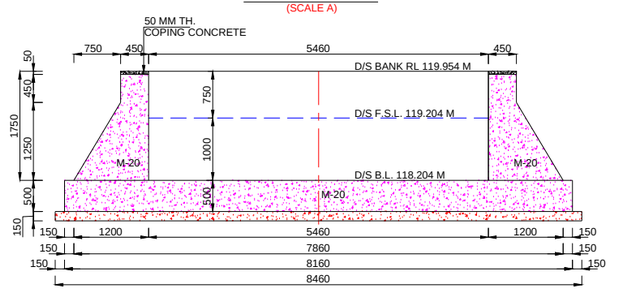


SECTION AT 1-1

(SCALE A)

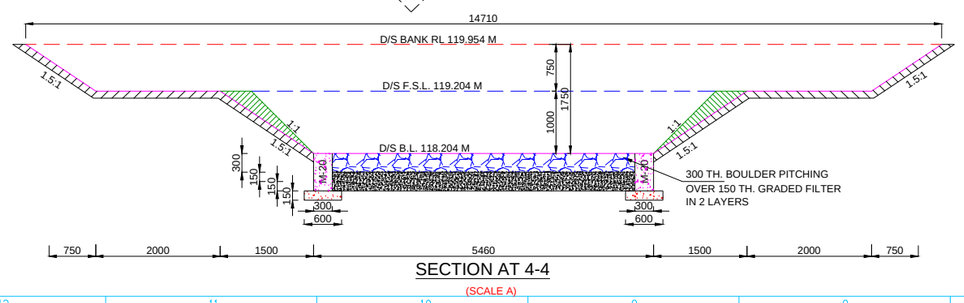
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



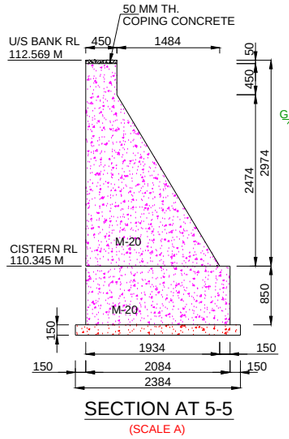
SECTION AT 4-4

(SCALE A)

SCALE A:-

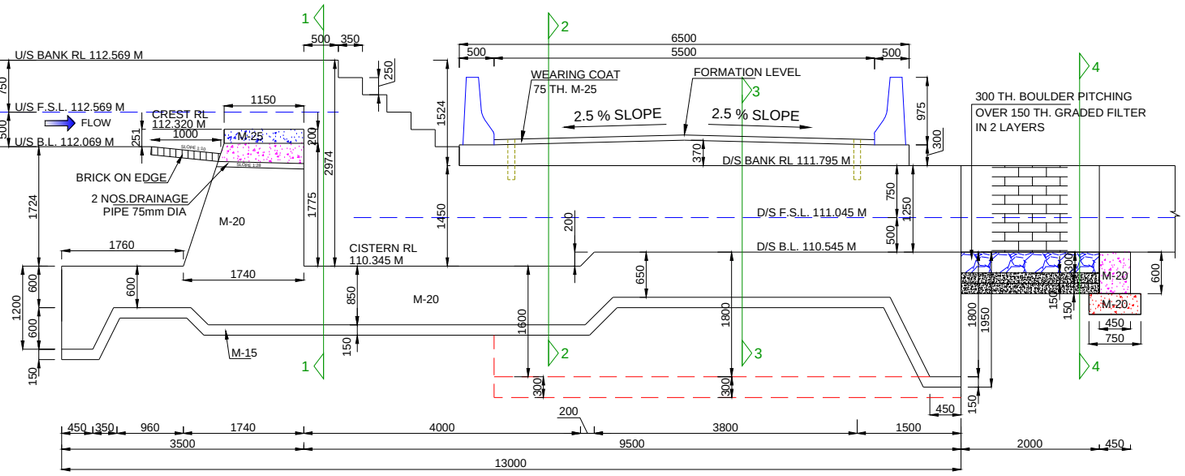
1000 0 1000 2000 3000

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.305 M HT. FALL AT KM. 18.325 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



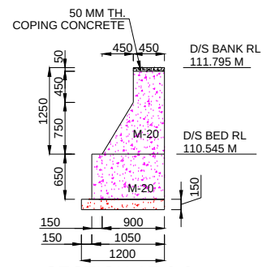
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

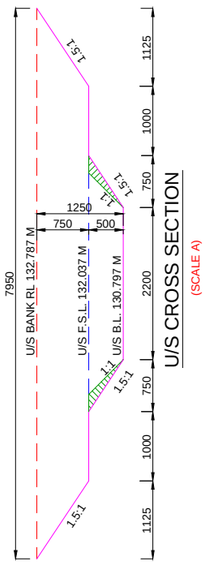
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

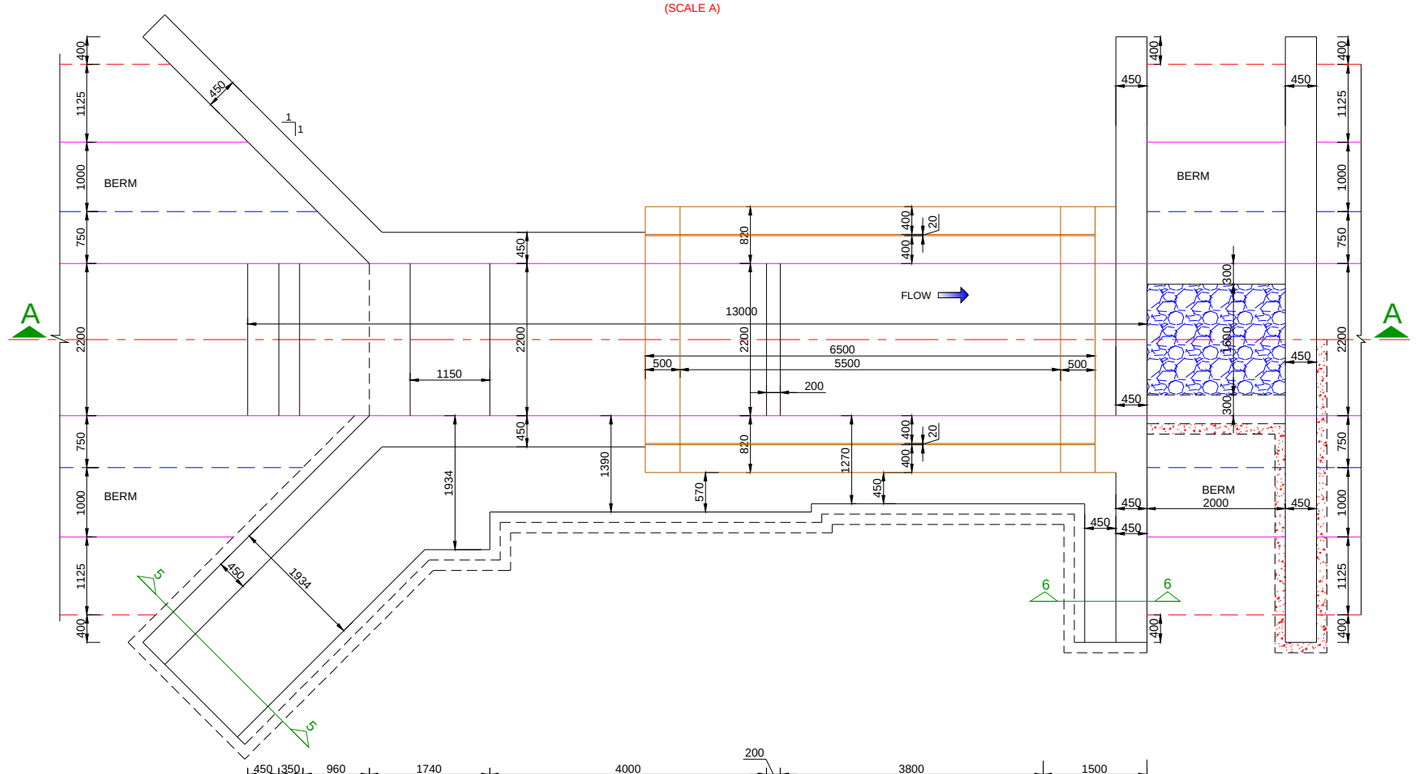
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.400	0.400	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	0.500	0.500	METRE
BED WIDTH	2.200	2.200	METRE
BED SLOPE	1 : 4000	1 : 4000	



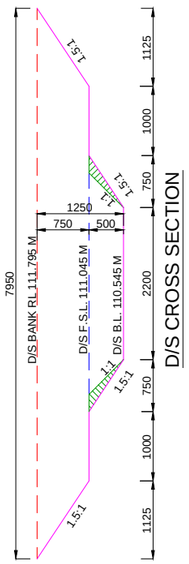
U/S CROSS SECTION

(SCALE A)



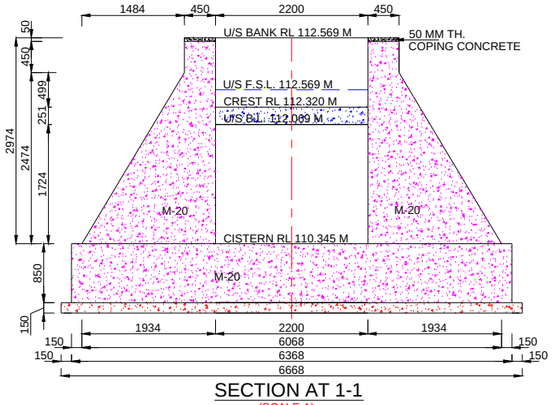
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



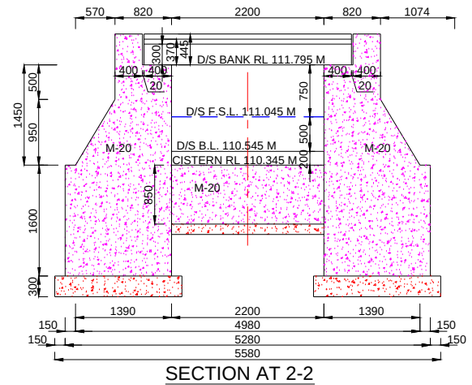
D/S CROSS SECTION

(SCALE A)



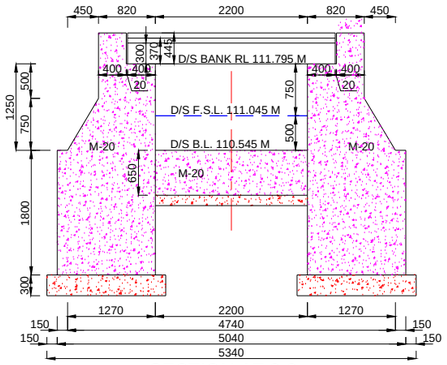
SECTION AT 1-1

(SCALE A)



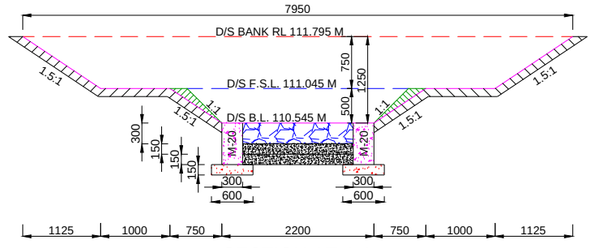
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



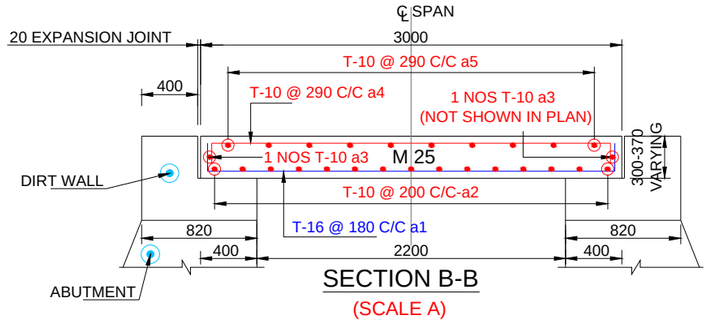
SECTION AT 4-4

(SCALE A)

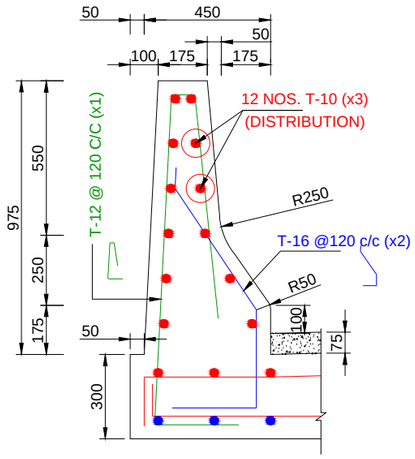
SCALE A:-

1000 0 1000 2000 3000

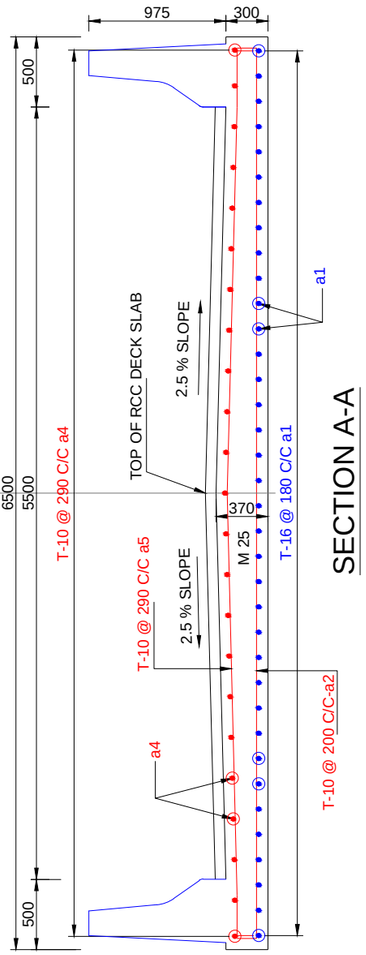
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.524 M HT. FALL AT KM. 27.340 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 2
	Drawn by:-	Checked by:- / Approved by:-



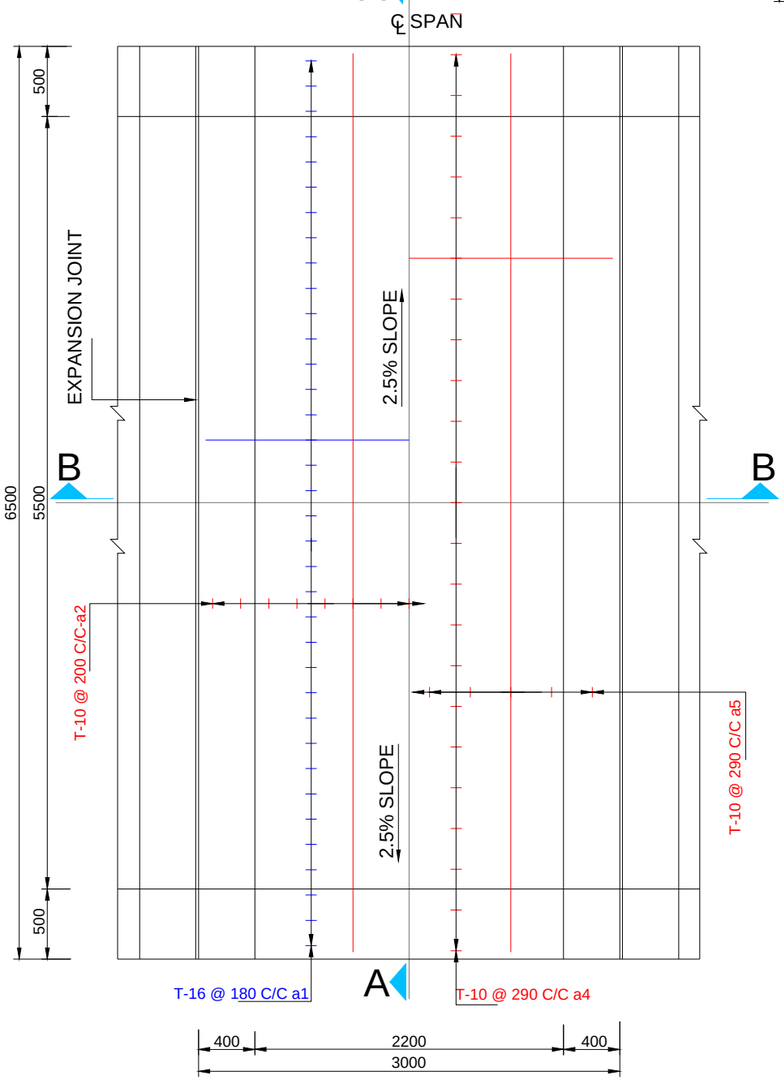
SECTION B-B
(SCALE A)



REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB
(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB
(SCALE A)

BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale) (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	200, R=80, 2900, 200	16	180	36
2	a2	200, R=50, 6400, 200	10	200	15
3	a3	6400	10	-	2
4	a4	2900, 200, R=40, 200	10	290	23
5	a5	450, 2750, 2750, 450, 200, 200	10	290	10
CRASH BARRIER					
1	x1	75, 1176, 950, 300	12	120	24X2
2	x2	75, 540, 350, 300	16	120	24X2
3	x3	2900	12	-	10X2

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (fy=500N/mm²) (IS 456 CLAUSE 26.2.1)

TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

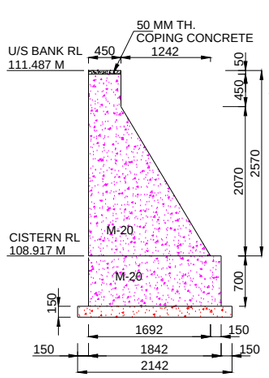
16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = α1. lbnet
WHERE, α1 = 1.0 for p%≤25%
α1 = 1.15 for 25%≤p%≤33%
α1 = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

SCALE A:- 400 0 400 800 1200
SCALE B:- 200 0 200 400 600

434

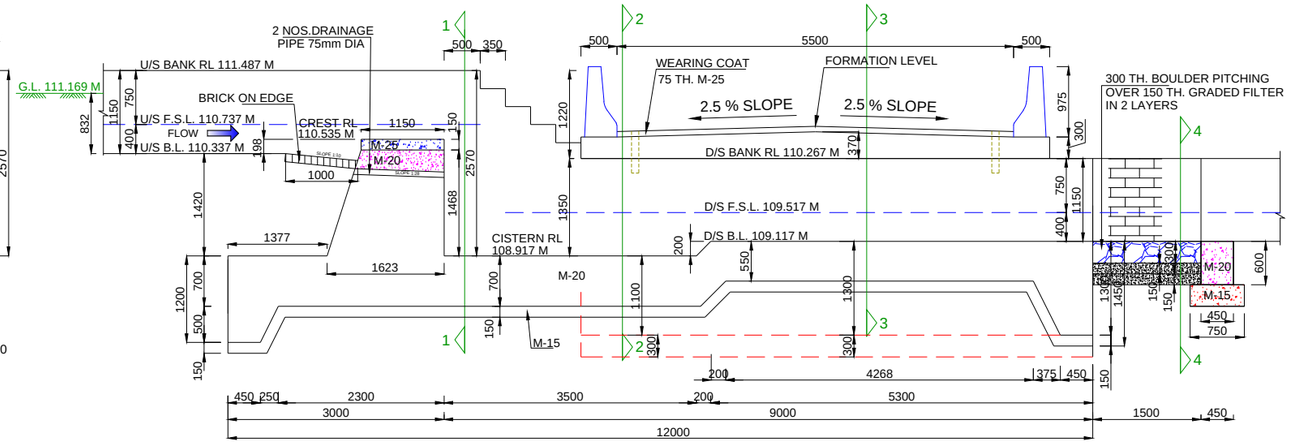
Prepared by :-
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 27.340 OF RUIR BR. CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
Drawn by:-	Checked by:- Approved by:-



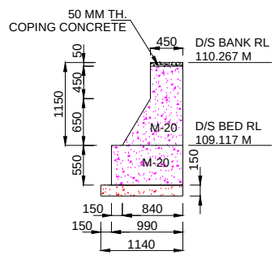
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

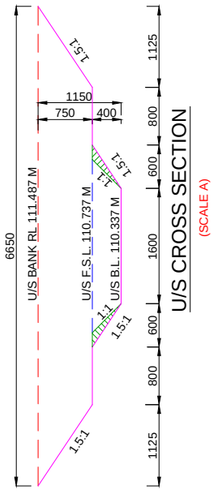
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

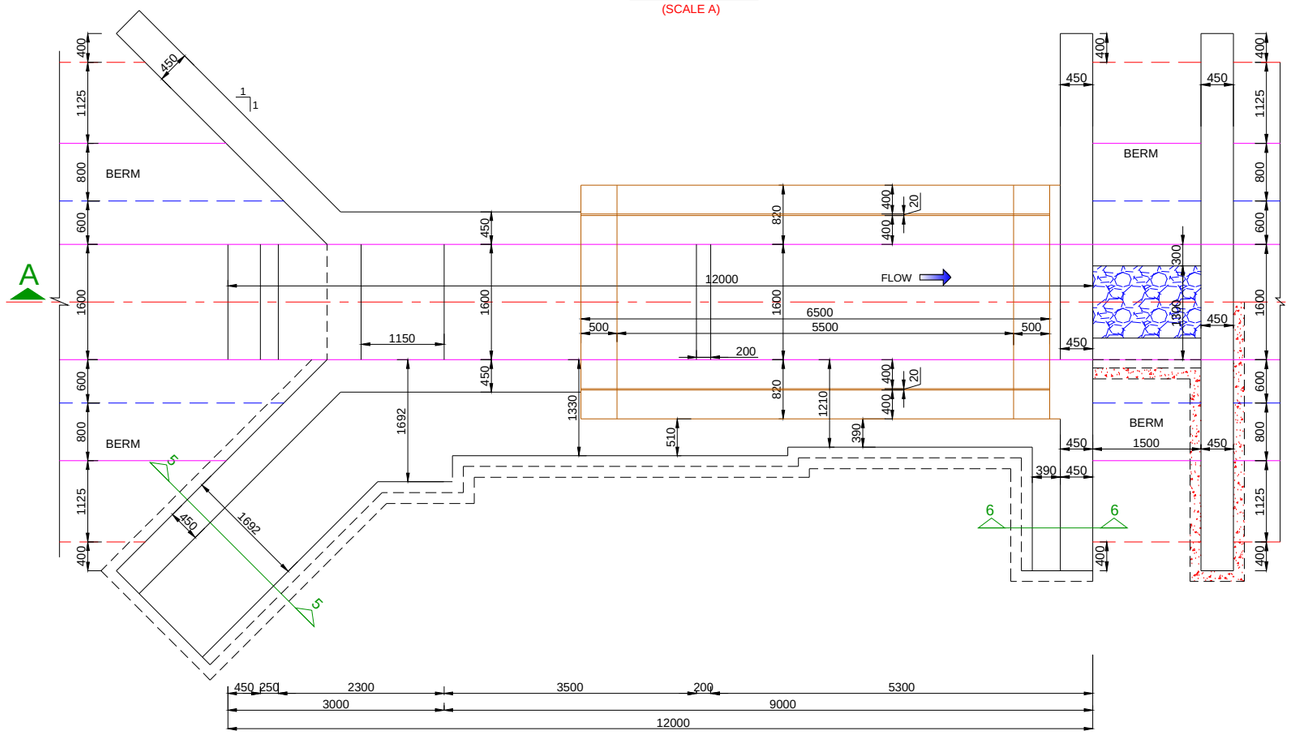
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.200	0.200	CUMEC
VERTICAL DROP	1.220	1.220	METRE
FULL SUPPLY DEPTH	0.400	0.400	METRE
BED WIDTH	1.600	1.600	METRE
BED SLOPE	1 : 3500	1 : 3500	



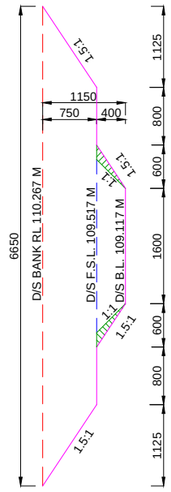
U/S CROSS SECTION

(SCALE A)



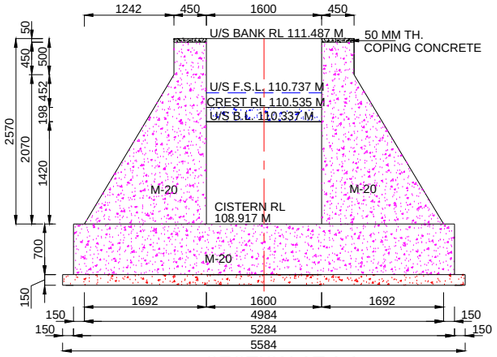
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



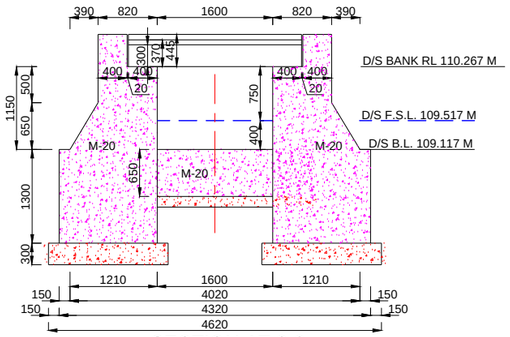
D/S CROSS SECTION

(SCALE A)



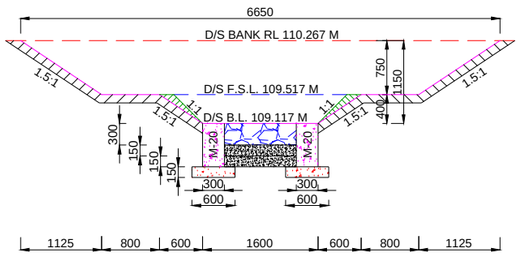
SECTION AT 1-1

(SCALE A)



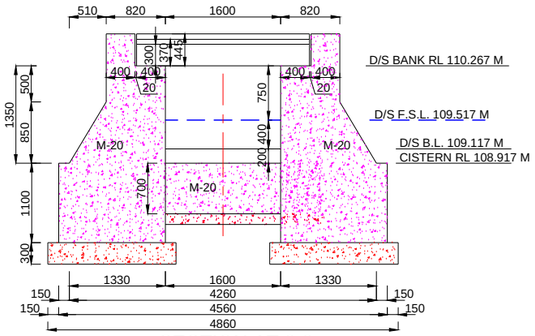
SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

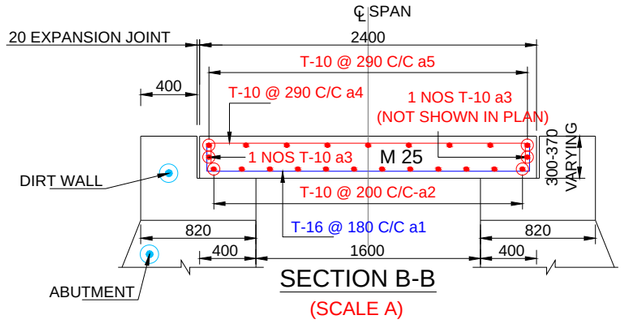
(SCALE A)



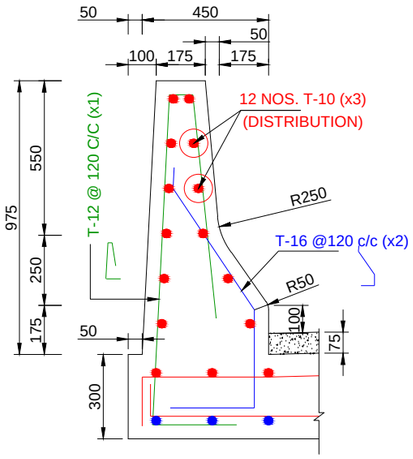
SECTION AT 2-2

(SCALE A)

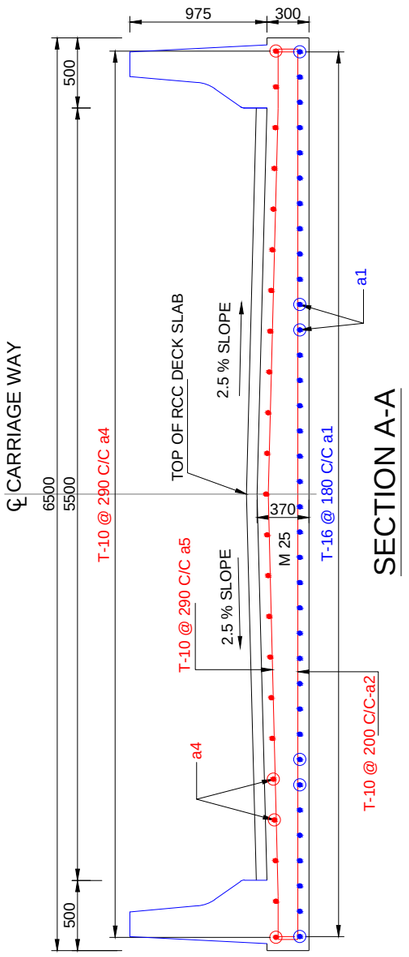
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.220 M HT. FALL AT KM. 28.170 OF RUIR BRANCH CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 1 of 2
	Drawn by:-	Checked by:- Approved by:-



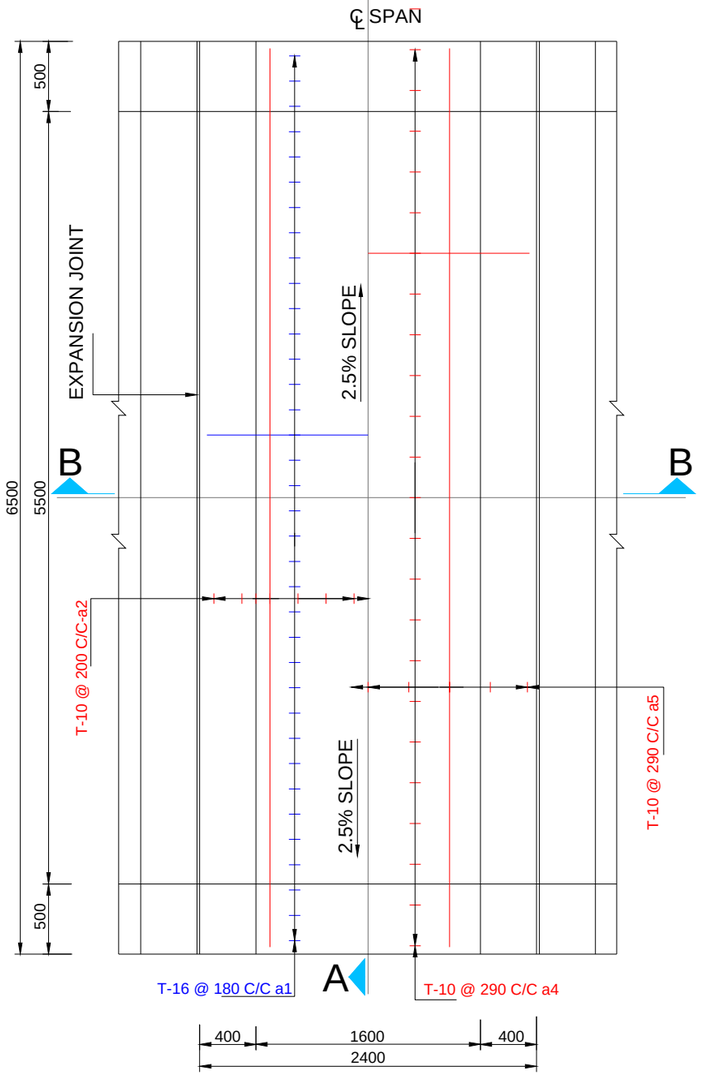
SECTION B-B
(SCALE A)



REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB
(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB
(SCALE A)

BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale) (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	200, R=80, 2300, 200	16	180	36
2	a2	200, R=50, 6400, 200	10	200	12
3	a3	6400	10	-	2
4	a4	2300, 200, R=40, 200	10	290	23
5	a5	450, 2750, 2750, 450, 200, 200	10	290	9
CRASH BARRIER					
1	x1	75, 1176, 950, 300	12	120	19X2
2	x2	75, 540, 350, 300	16	120	19X2
3	x3	2300	12	-	10X2

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (f_y=500N/mm²) (IS 456 CLAUSE 26.2.1)

TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

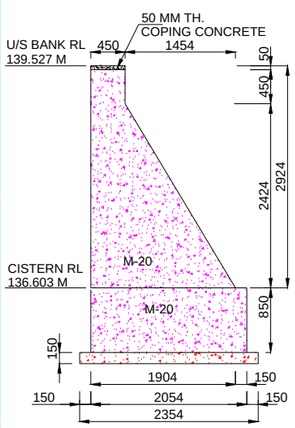
16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = α1. lbnet
WHERE, α1 = 1.0 for p%≤25%
α1 = 1.15 for 25%≤p%≤33%
α1 = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

SCALE A:- 400 0 400 800 1200
SCALE B:- 200 0 200 400 600

436

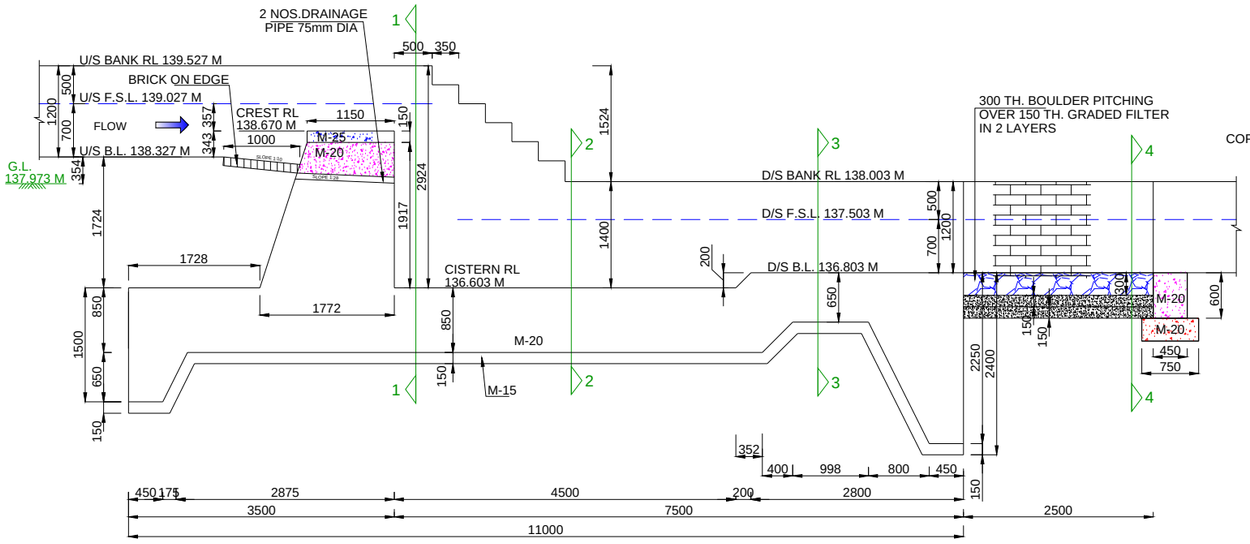
Prepared by :-
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 28.170 OF RUIR BR. CANAL (OFFTAKE FROM RD - 37+917 KM.(L), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
Drawn by:-	Checked by:- Approved by:-



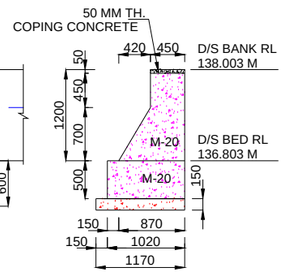
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

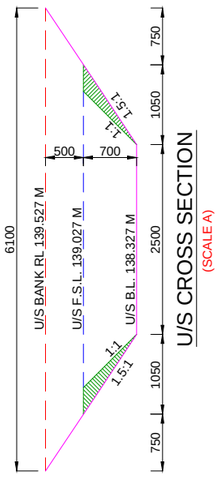
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

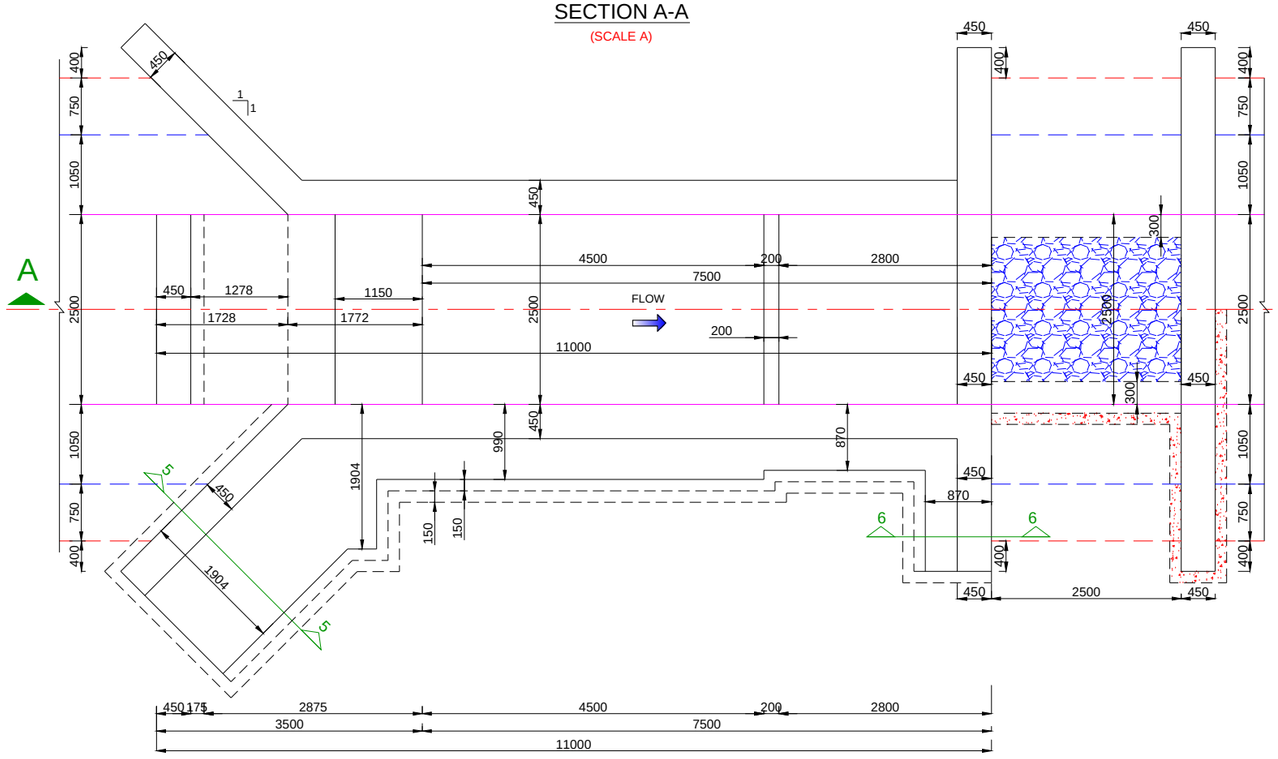
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.830	0.830	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	0.700	0.700	METRE
BED WIDTH	2.500	2.500	METRE
BED SLOPE	1 : 3500	1 : 3500	



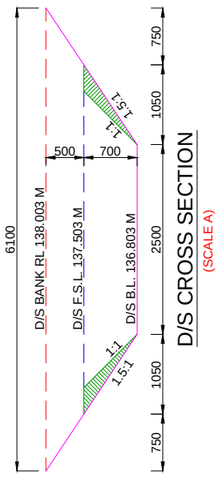
U/S CROSS SECTION

(SCALE A)



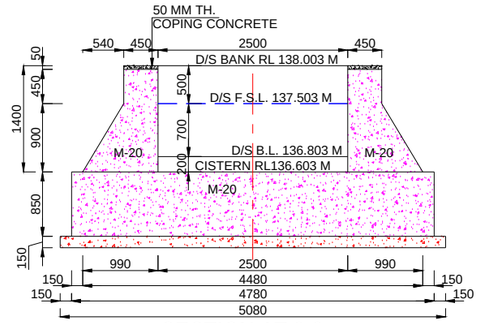
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



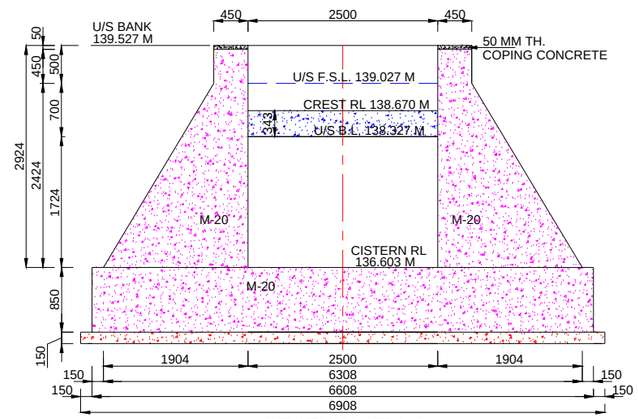
D/S CROSS SECTION

(SCALE A)



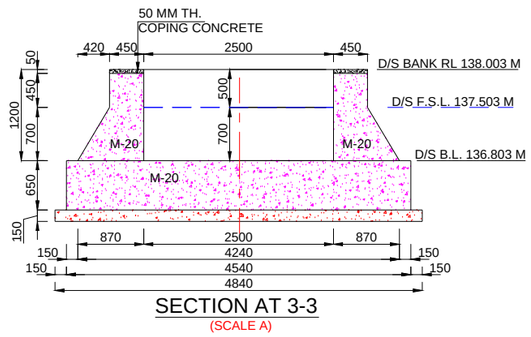
SECTION AT 2-2

(SCALE A)



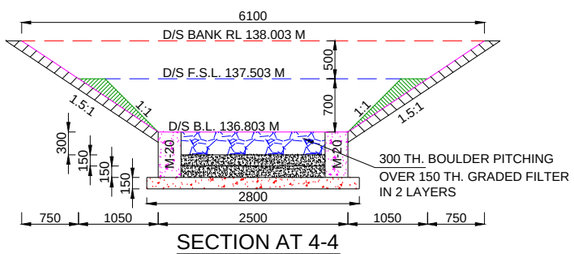
SECTION AT 1-1

(SCALE A)



SECTION AT 3-3

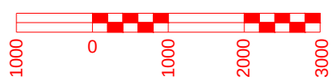
(SCALE A)



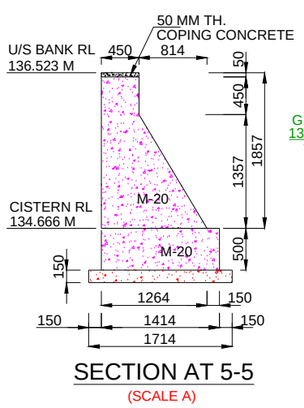
SECTION AT 4-4

(SCALE A)

SCALE A:-

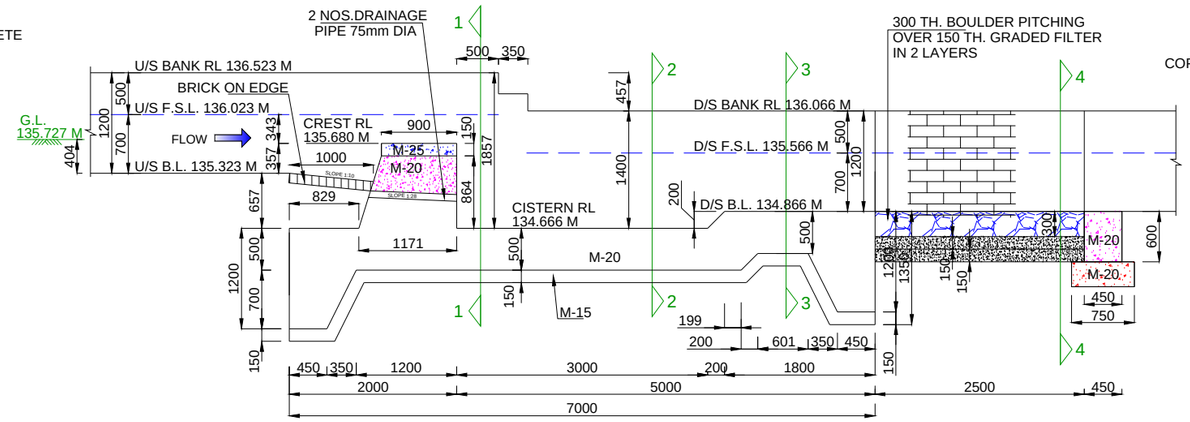


Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.524 M HT. FALL AT KM. 0.890 OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



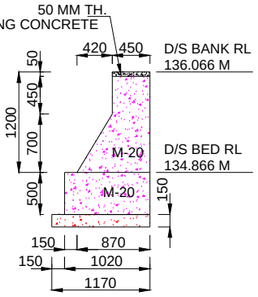
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

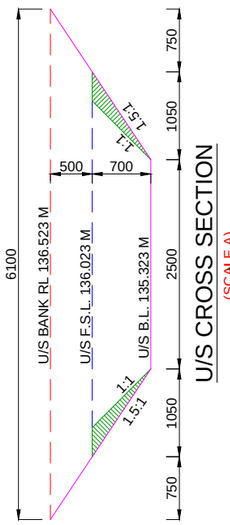
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FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

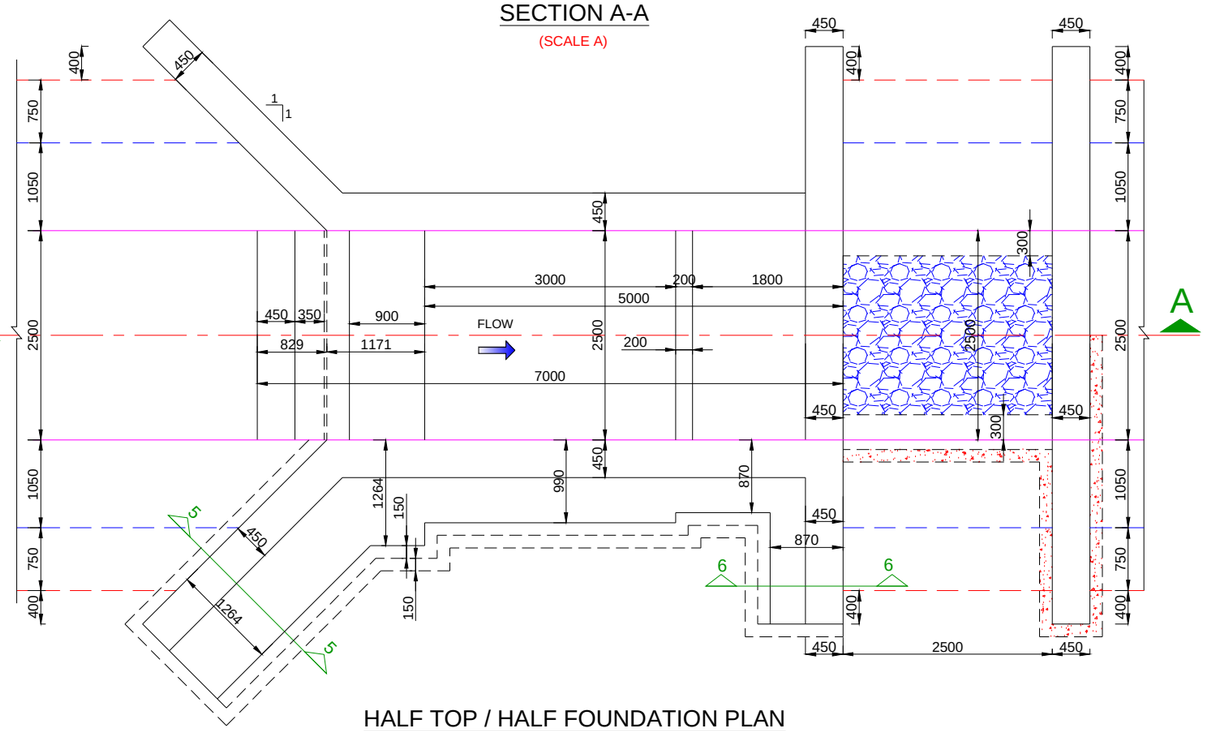
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.830	0.830	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.700	0.700	METRE
BED WIDTH	2.500	2.500	METRE
BED SLOPE	1 : 3500	1 : 3500	

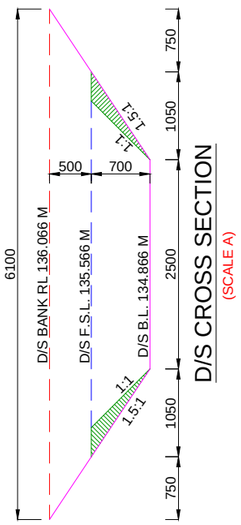


(SCALE A)

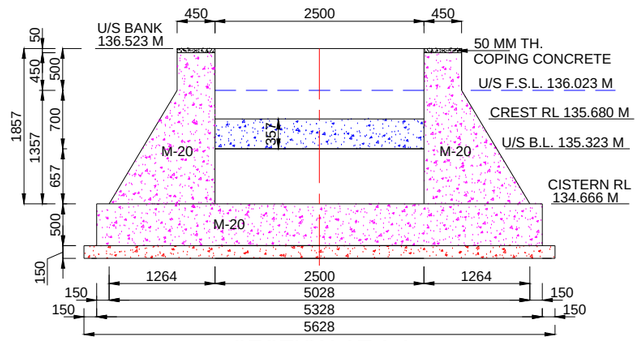


HALF TOP / HALF FOUNDATION PLAN

(SCALE A)

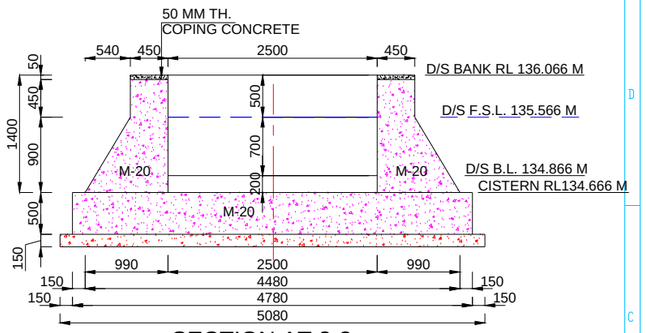


(SCALE A)



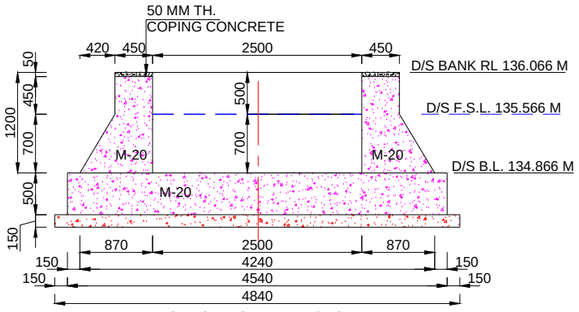
SECTION AT 1-1

(SCALE A)



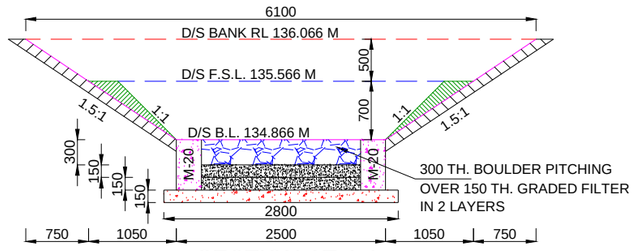
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

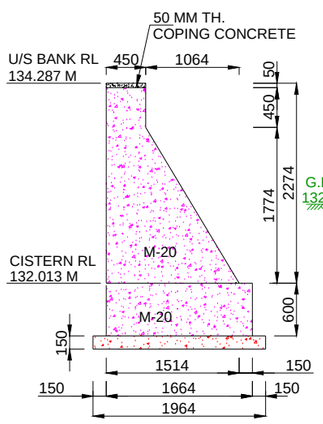
(SCALE A)

SCALE A:-

1000 0 1000 2000 3000

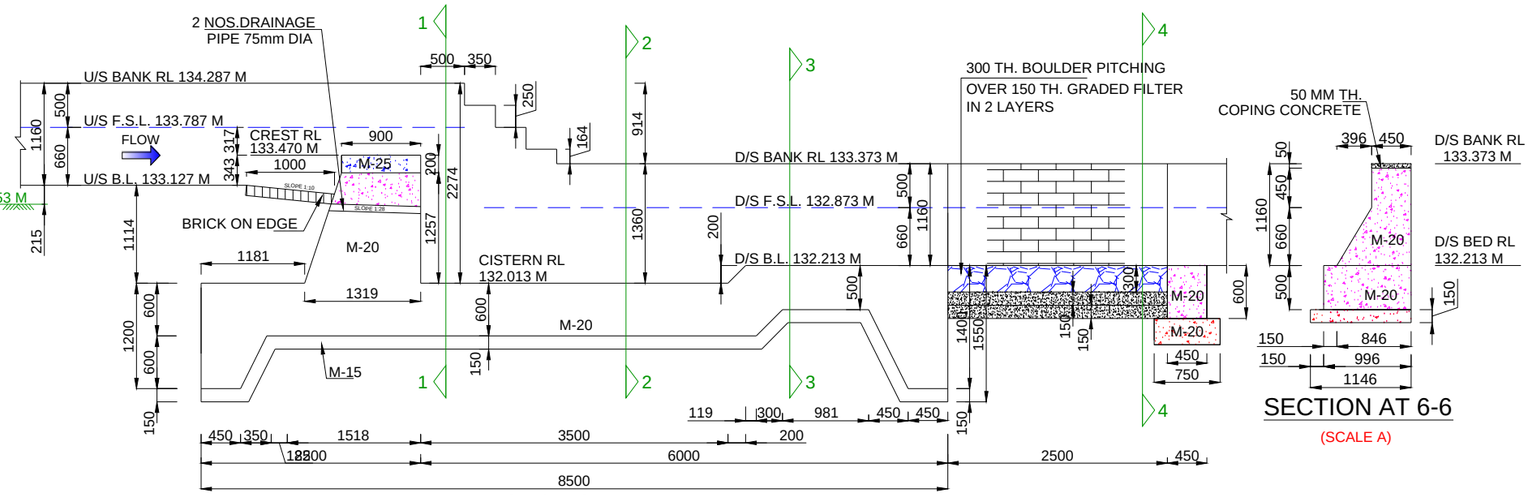
50 MM TH.
COPING CONCRETE

Prepared by :-	
WAPCOS LTD.	
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 1.800 OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ FALL 1 of 1
Drawn by:-	Checked by:- Approved by:-



SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)

SECTION AT 6-6

(SCALE A)

NOTES:-

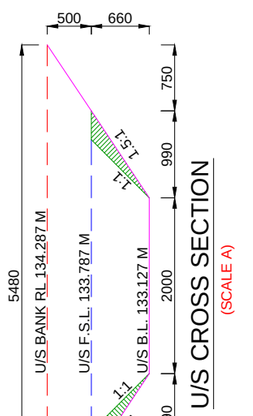
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

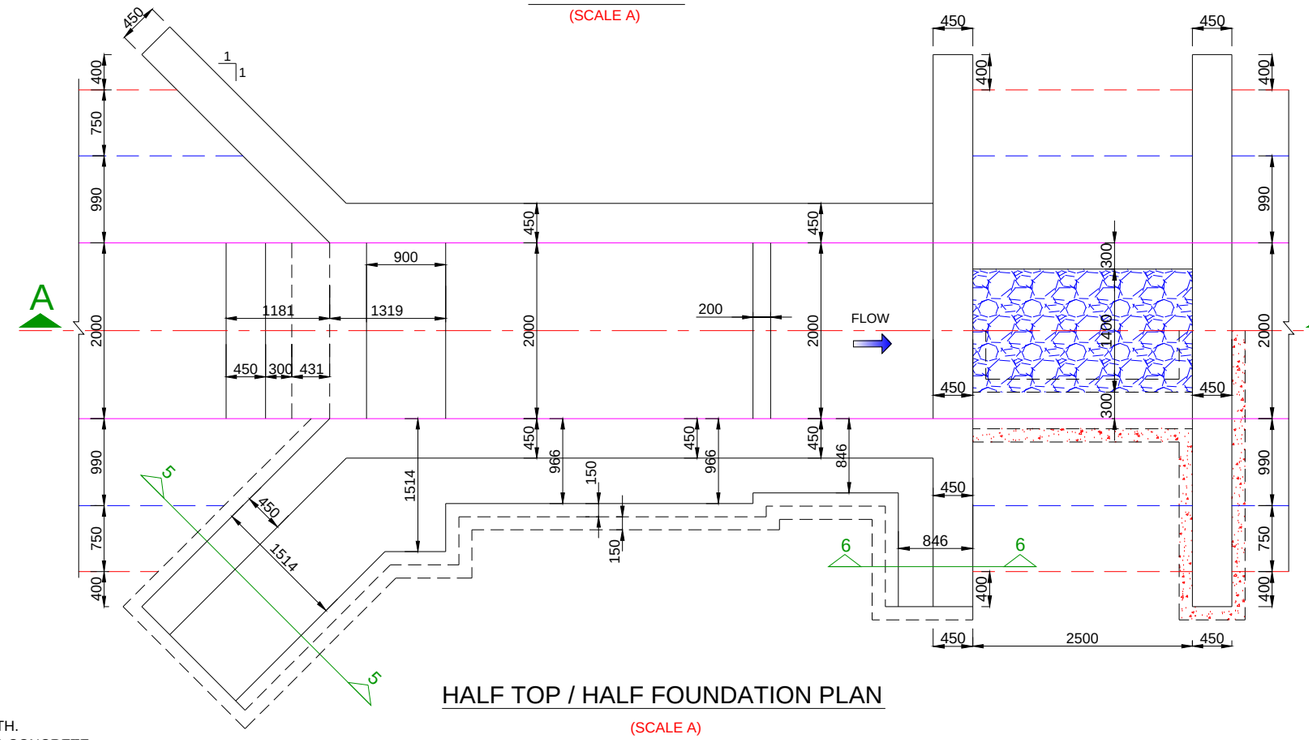
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.590	0.590	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	0.660	0.660	METRE
BED WIDTH	2.000	2.000	METRE
BED SLOPE	1 : 3500	1 : 3500	



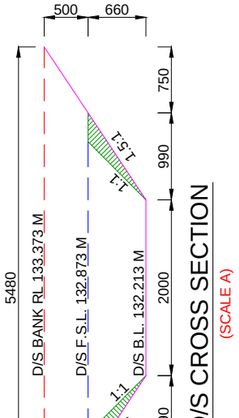
U/S CROSS SECTION

(SCALE A)



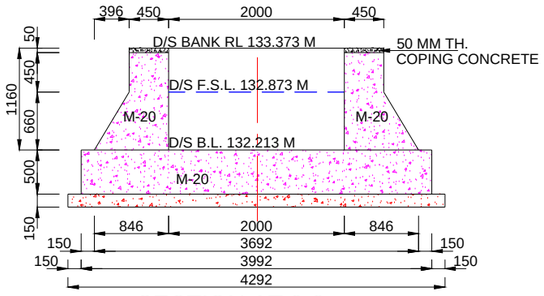
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



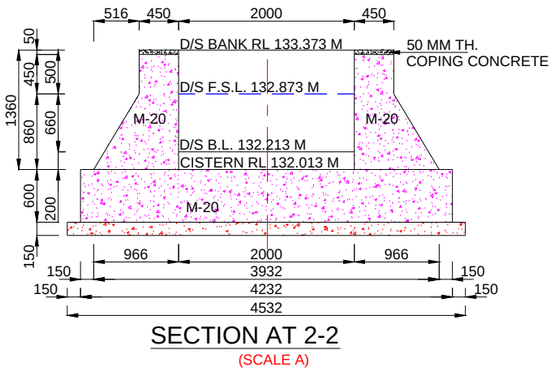
D/S CROSS SECTION

(SCALE A)



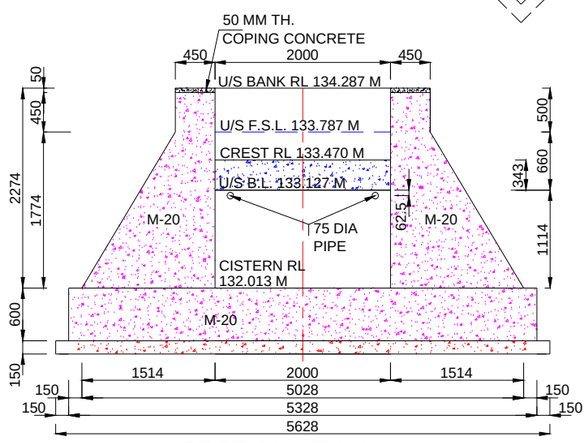
SECTION AT 3-3

(SCALE A)



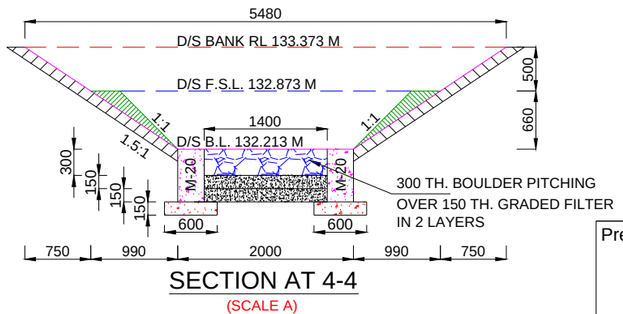
SECTION AT 2-2

(SCALE A)



SECTION AT 1-1

(SCALE A)



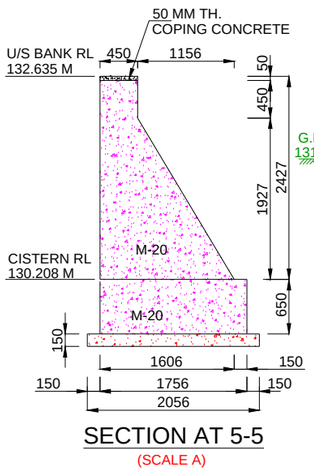
SECTION AT 4-4

(SCALE A)

SCALE A:-

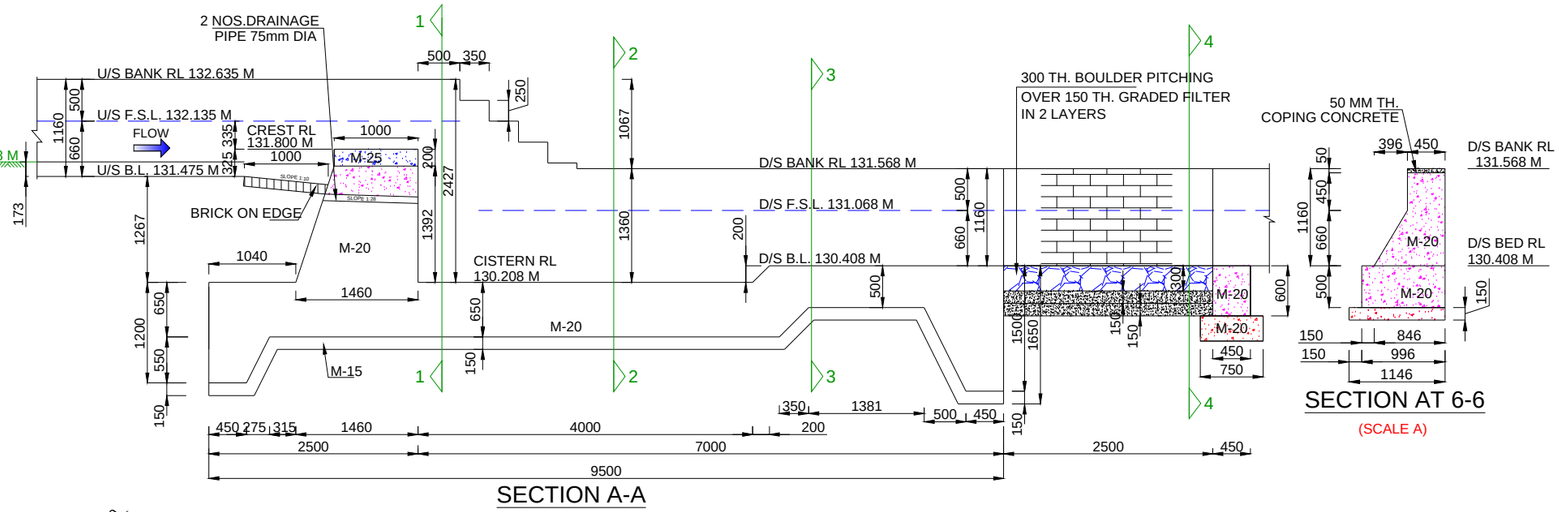
1000 0 1000 2000 3000

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.914 M HT. FALL AT KM. 2.550 OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)

SECTION AT 6-6

(SCALE A)

NOTES:-

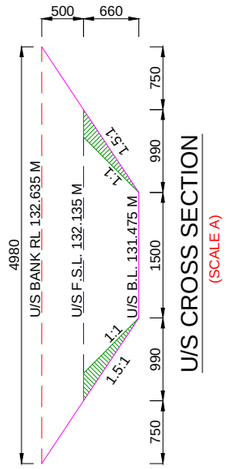
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FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

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5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

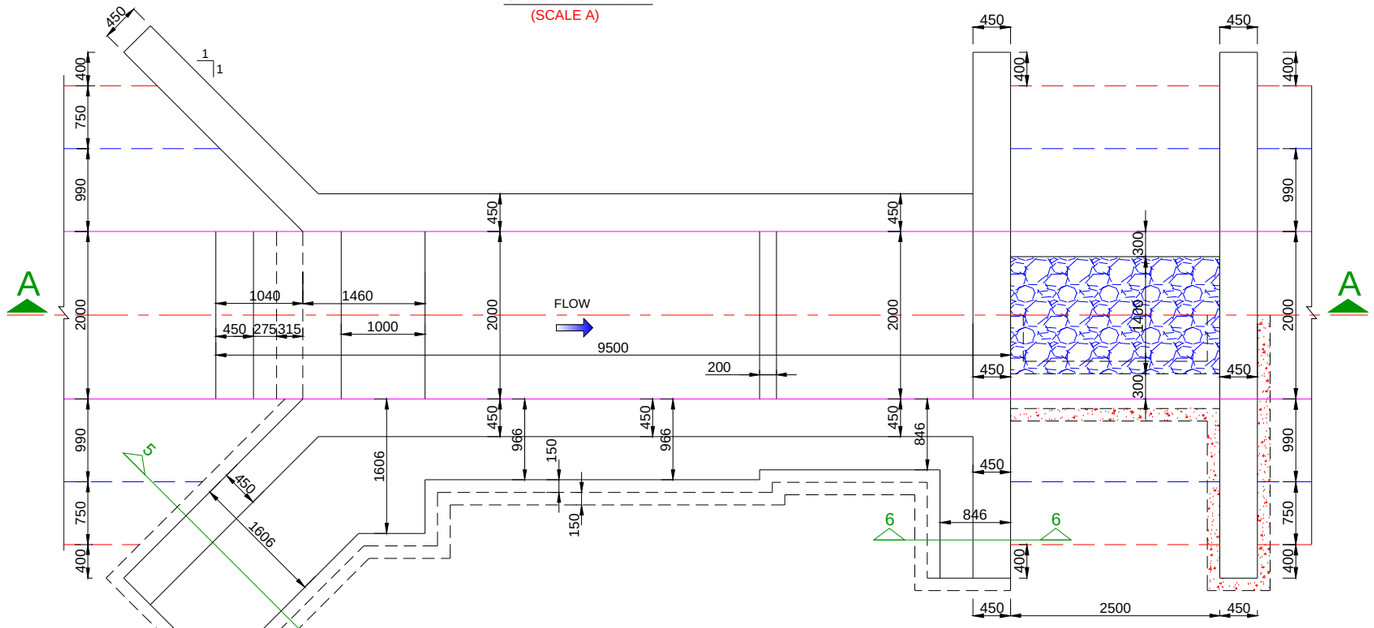
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.590	0.590	CUMEC
VERTICAL DROP	1.067	1.067	METRE
FULL SUPPLY DEPTH	0.660	0.660	METRE
BED WIDTH	2.000	2.000	METRE
BED SLOPE	1 : 3500	1 : 3500	



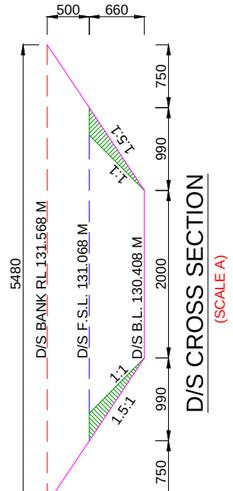
U/S CROSS SECTION

(SCALE A)



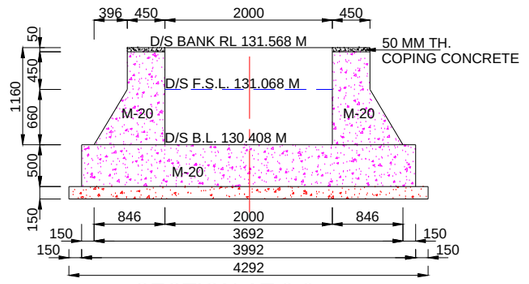
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



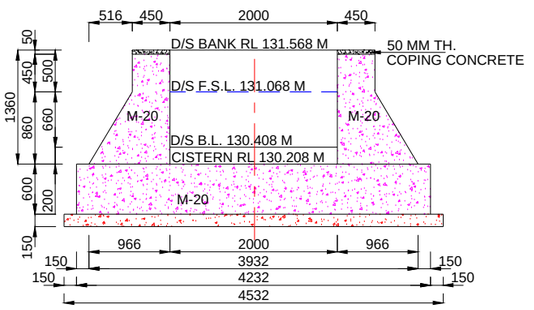
D/S CROSS SECTION

(SCALE A)



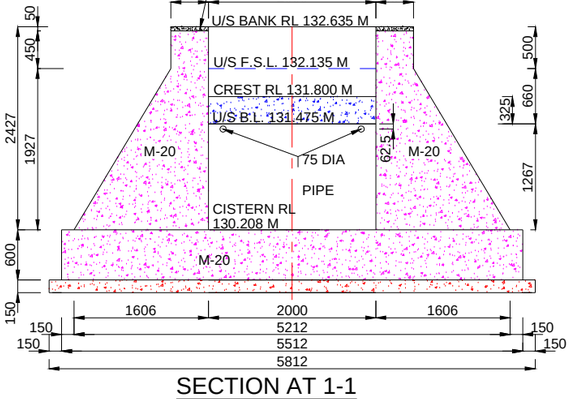
SECTION AT 3-3

(SCALE A)



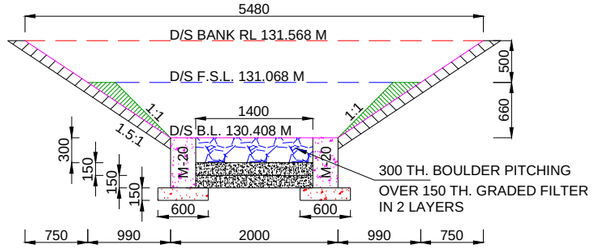
SECTION AT 2-2

(SCALE A)



SECTION AT 1-1

(SCALE A)



SECTION AT 4-4

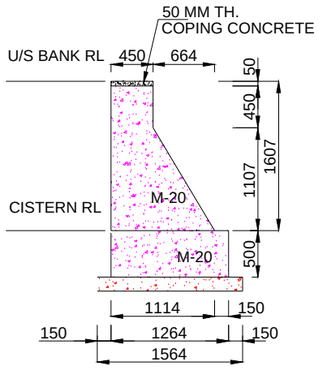
(SCALE A)

SCALE A:-



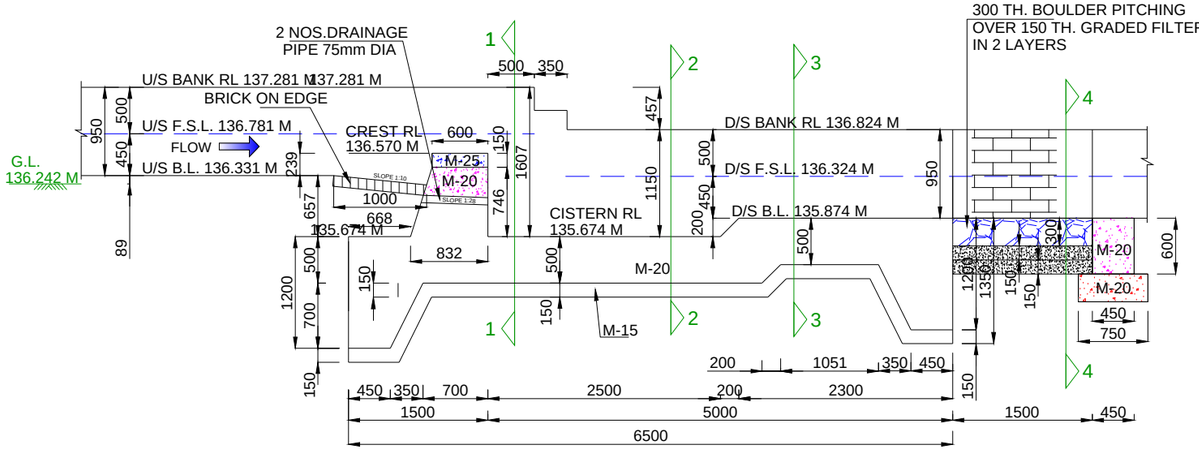
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.067 M HT. FALL AT KM. 3.000 OF PANTI MINOR (OFFTAKE FROM RD - 2+720 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-01/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-

440



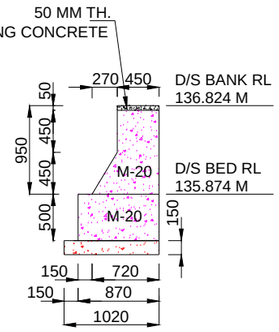
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

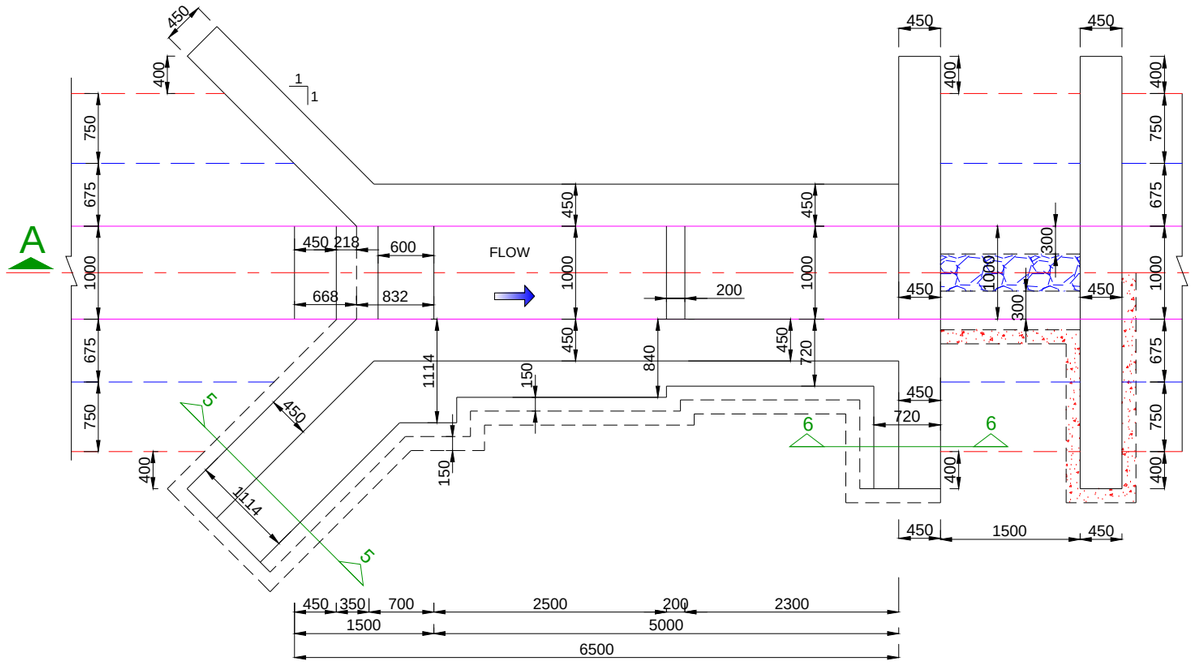
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.160	0.160	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.450	0.450	METRE
BED WIDTH	1.000	1.000	METRE
BED SLOPE	1 : 3500	1 : 3500	

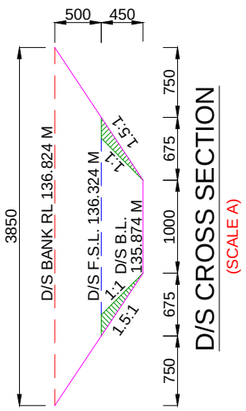
U/S CROSS SECTION

(SCALE A)



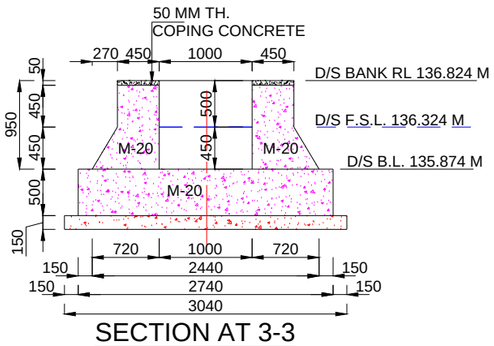
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



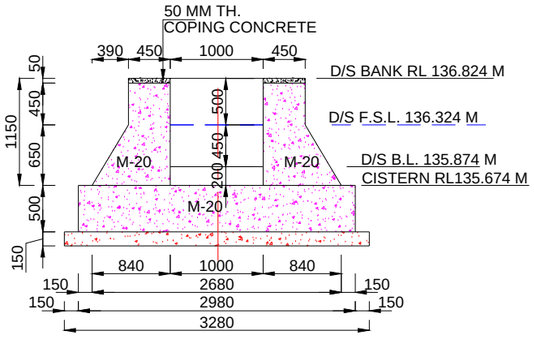
D/S CROSS SECTION

(SCALE A)



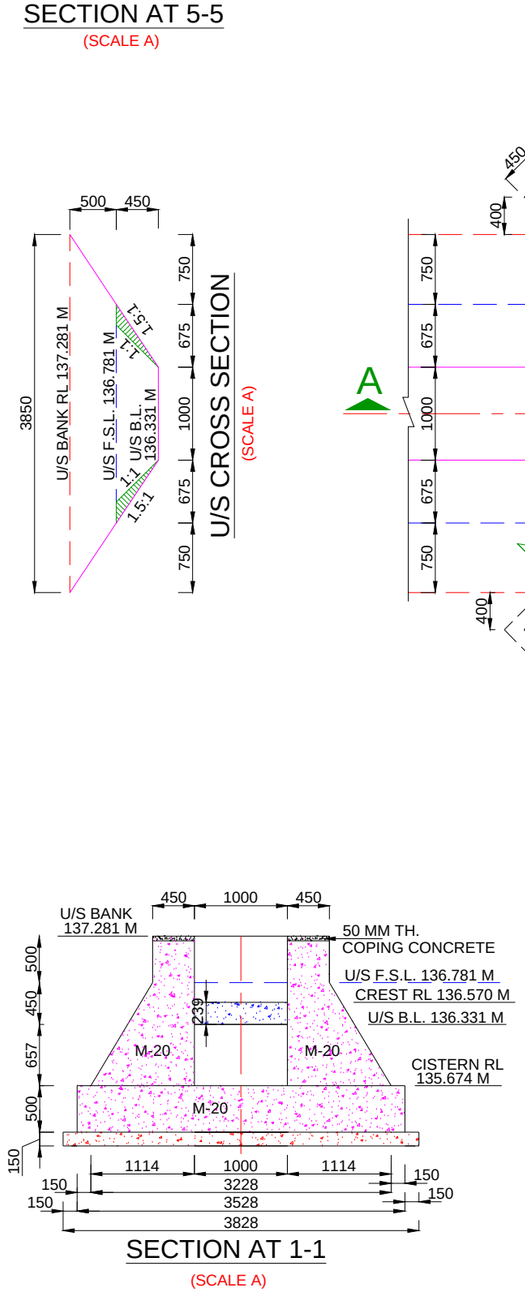
SECTION AT 3-3

(SCALE A)



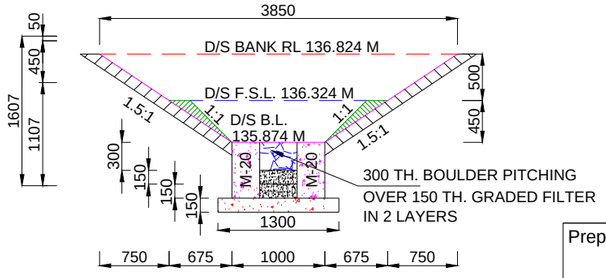
SECTION AT 2-2

(SCALE A)



SECTION AT 1-1

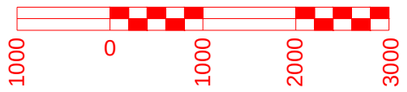
(SCALE A)



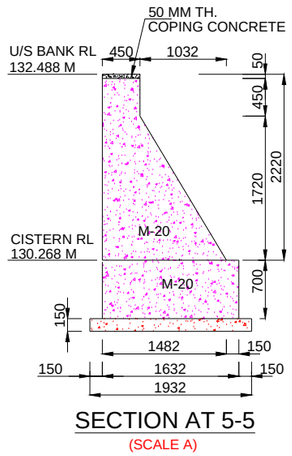
SECTION AT 4-4

(SCALE A)

SCALE A:-

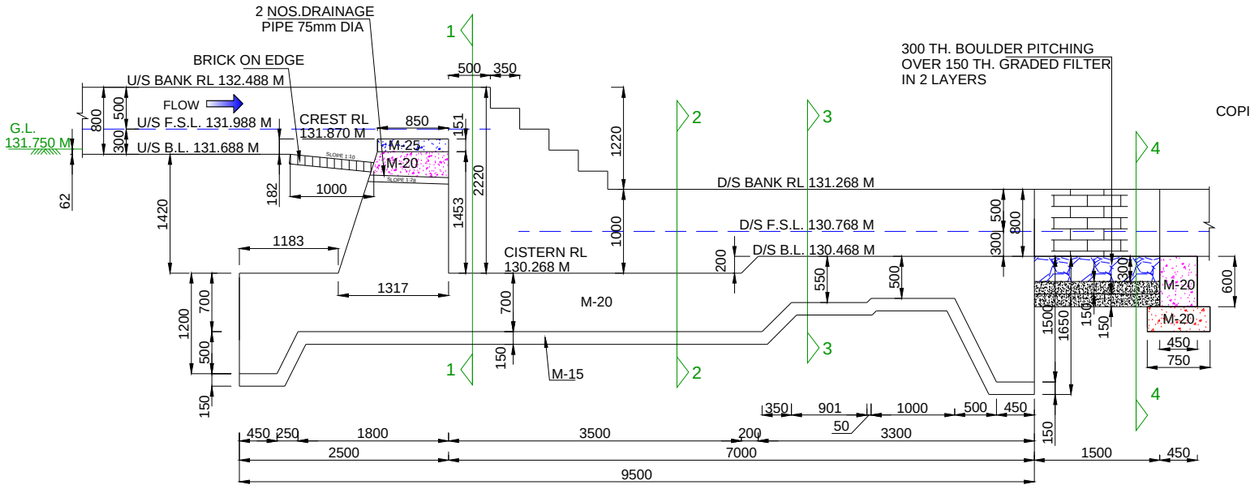


Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.067 M HT. FALL AT KM. 0.000 OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



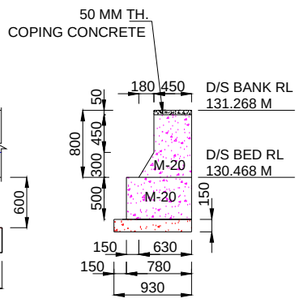
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

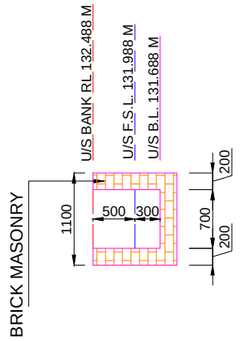
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
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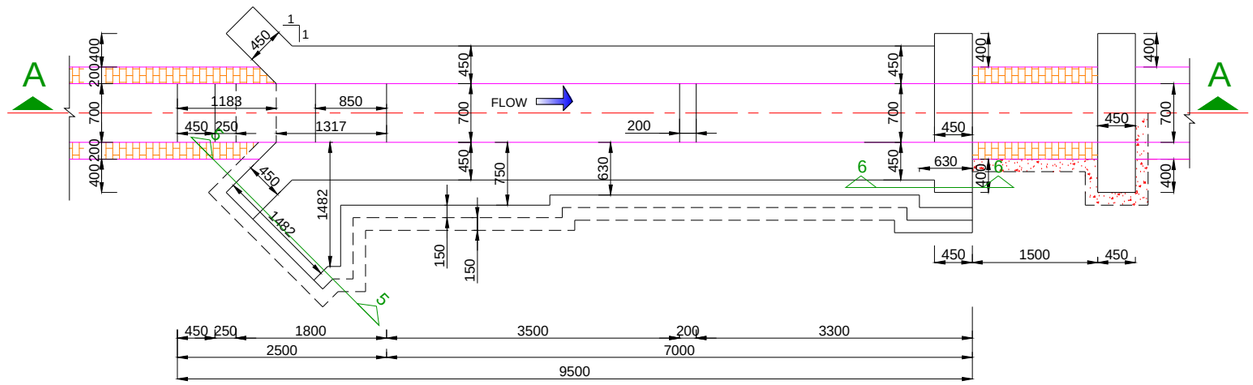
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

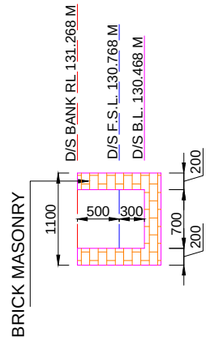
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.040	0.040	CUMEC
VERTICAL DROP	1.220	1.220	METRE
FULL SUPPLY DEPTH	0.300	0.300	METRE
BED WIDTH	0.700	0.700	METRE
BED SLOPE	1 : 3000	1 : 3000	

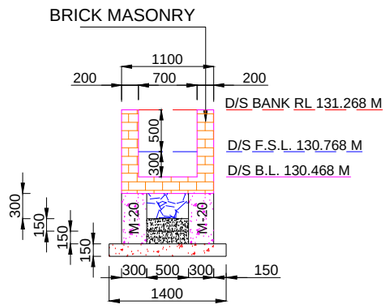




HALF TOP / HALF FOUNDATION PLAN

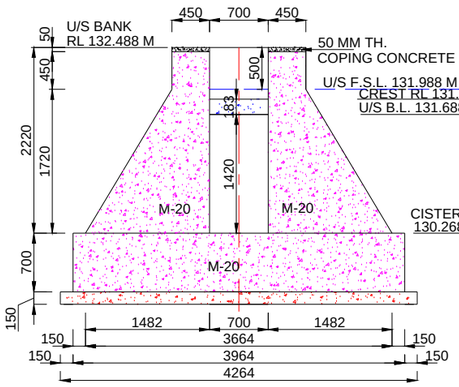
(SCALE A)





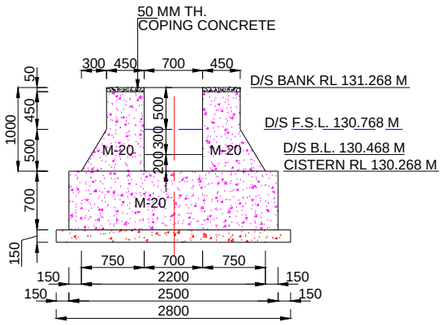
SECTION AT 4-4

(SCALE A)



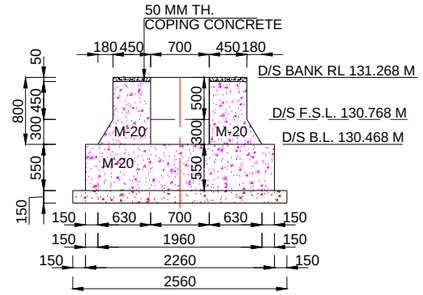
SECTION AT 1-1

(SCALE A)



SECTION AT 2-2

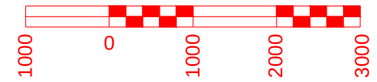
(SCALE A)



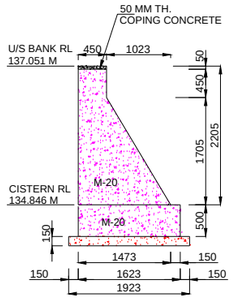
SECTION AT 3-3

(SCALE A)

SCALE A:-

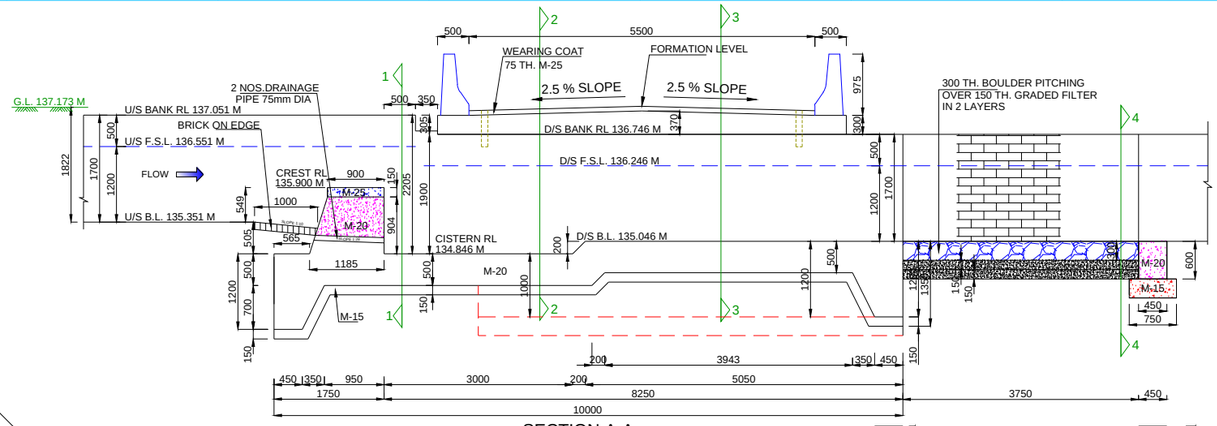


Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.220 M HT. FALL AT KM. 1.850 OF CHAPRI MINOR (OFFTAKE FROM RD - 6+060 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-02/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



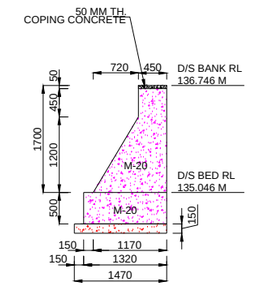
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

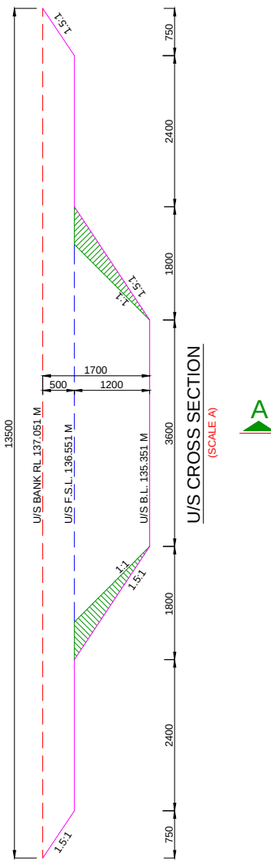
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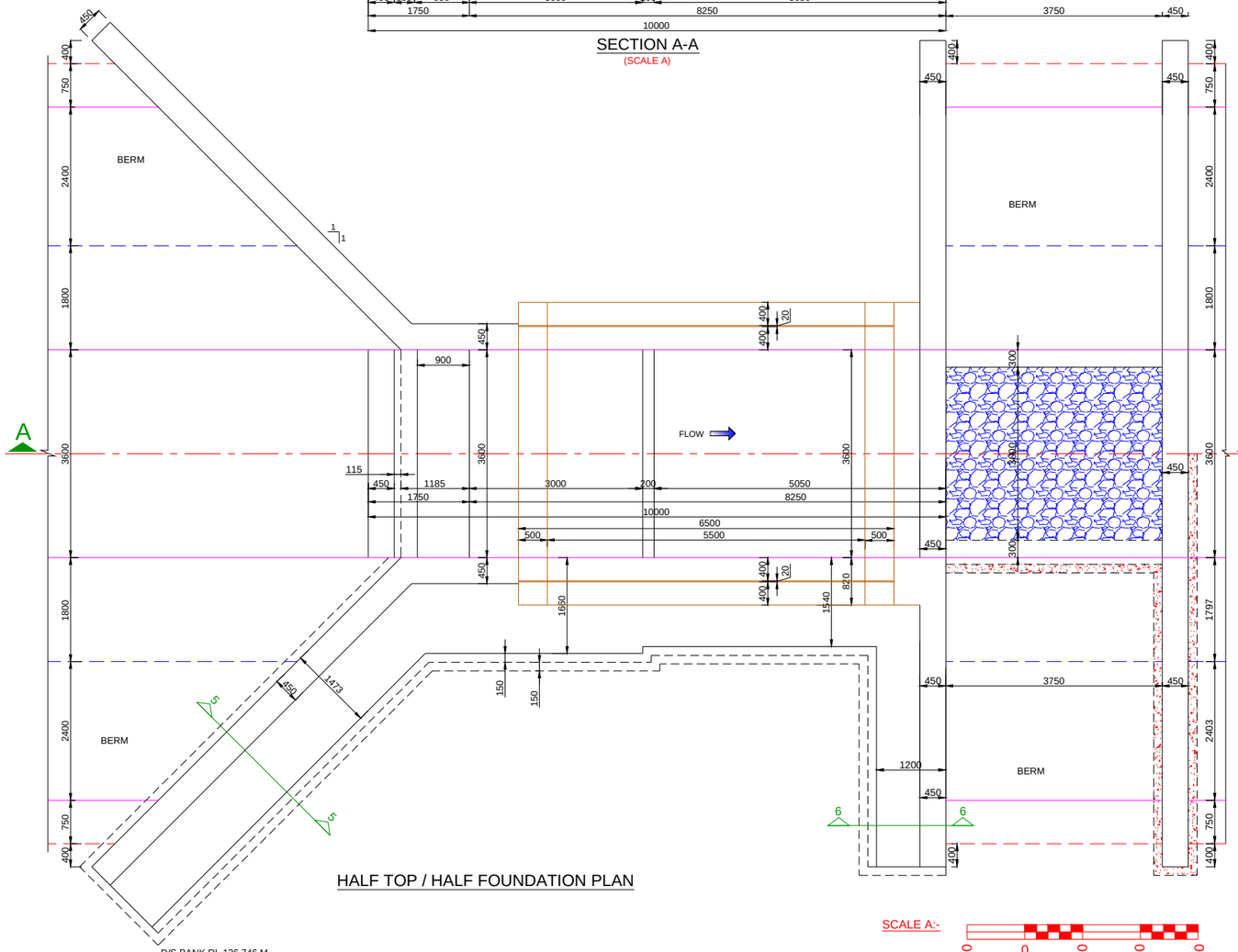
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

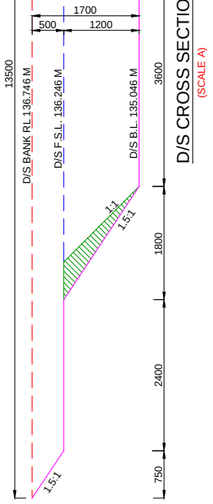
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5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

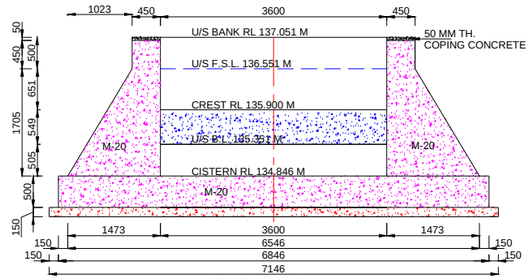
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	2.680	2.680	CUMEC
VERTICAL DROP	0.305	0.305	METRE
FULL SUPPLY DEPTH	1.200	1.200	METRE
BED WIDTH	3.600	3.600	METRE
BED SLOPE	1 : 4500	1 : 4500	







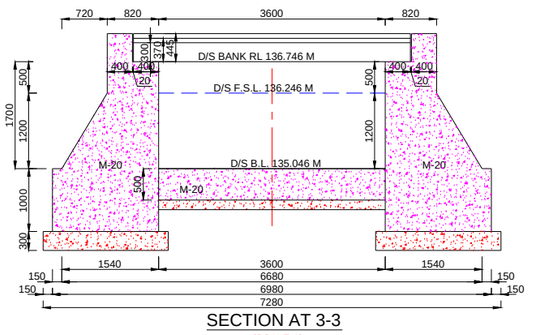


SECTION AT 1-1

(SCALE A)

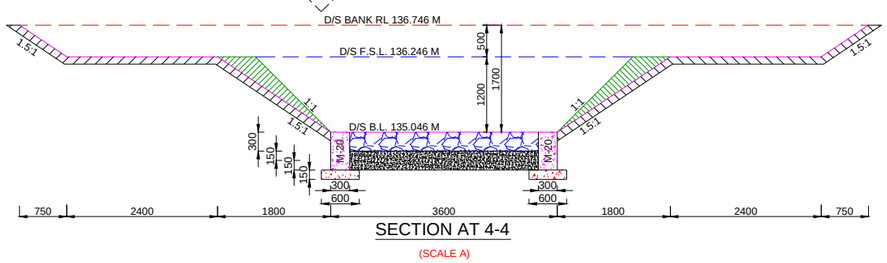
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



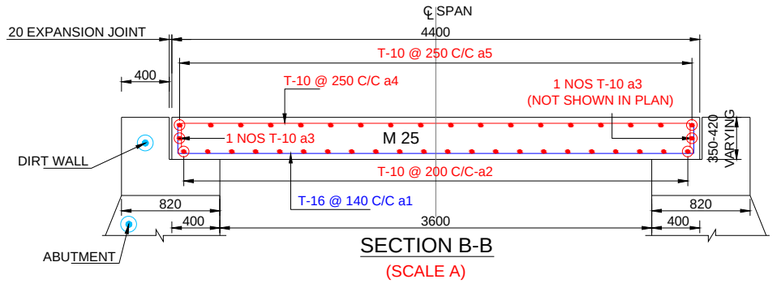
SECTION AT 4-4

(SCALE A)

SCALE A:-

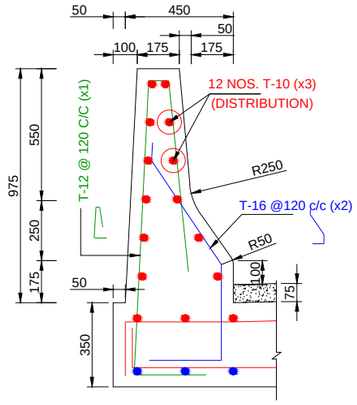
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Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.305 M HT. FALL AT KM. 0.000 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ FALL 1 of 2
	Drawn by:-	Checked by:- / Approved by:-



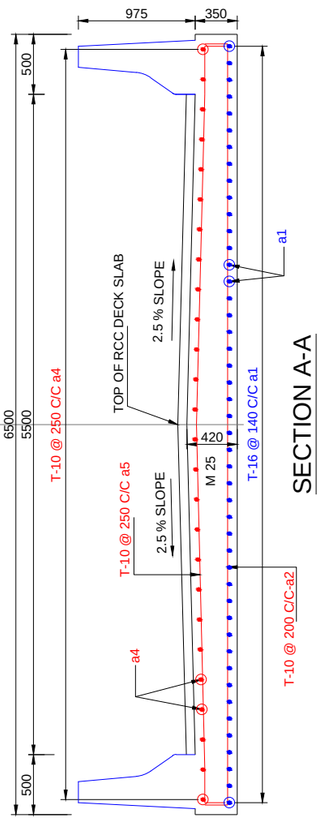
SECTION B-B

(SCALE A)

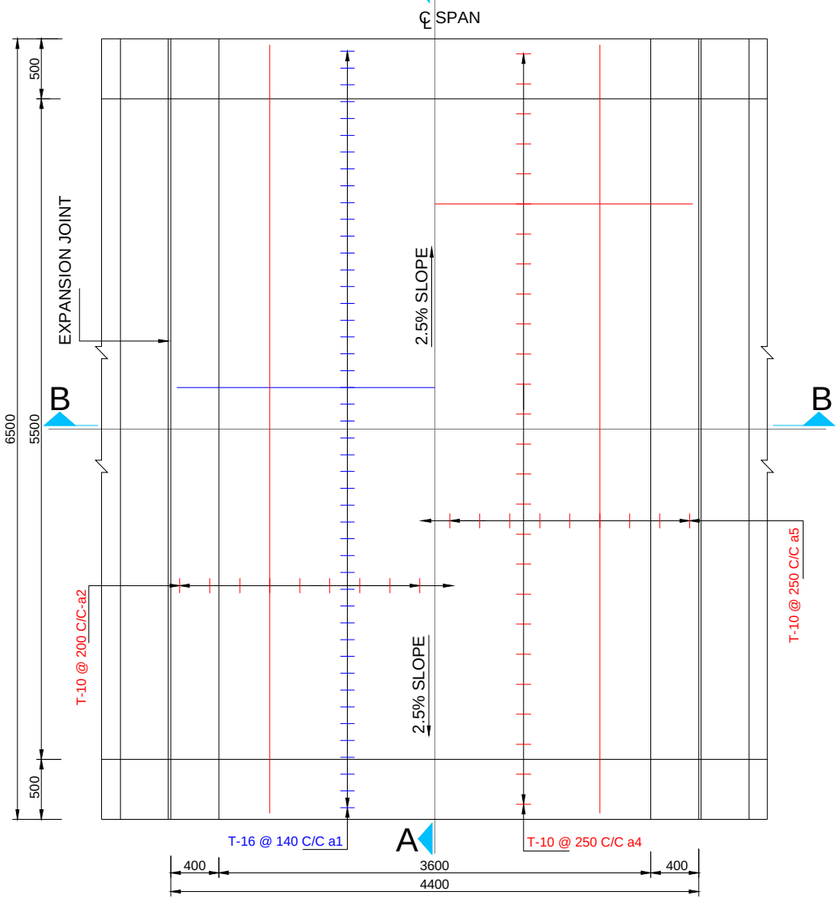


REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB

(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB

(SCALE A)

NOTES:-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
   BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (fy=500N/mm²) (IS 456 CLAUSE 26.2.1)							
TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
    LAP LENGTH = α1. lbnet
    WHERE, α1 = 1.0 for p%≤25%
    α1 = 1.15 for 25%≤p%≤33%
    α1 = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	250, R=80, 4300, 250	16	140	45
2	a2	250, R=50, 6400, 250	10	200	22
3	a3	6400	10	-	2
4	a4	4300, 250, R=40, 250	10	250	26
5	a5	250, 450, 2750, 2750, 450, 250	10	250	18

CRASH BARRIER					
1	x1	75, 1226, 950, 300	12	120	36X2
2	x2	75, 540, 300, 400	16	120	36X2
3	x3	4300	12	-	10X2

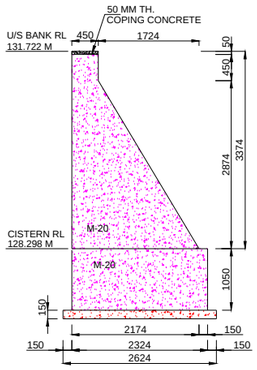
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SCALE B:- 200 0 200 400 600

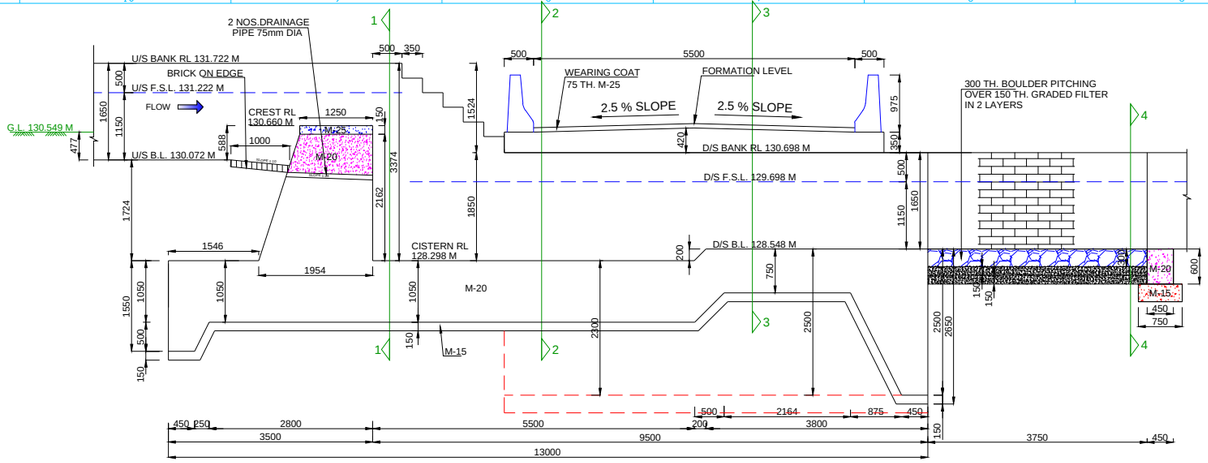
Prepared by :-

WAPCOS LTD.

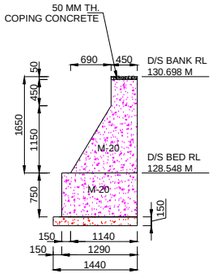
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 0.000 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
Drawn by:-	Checked by:- Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

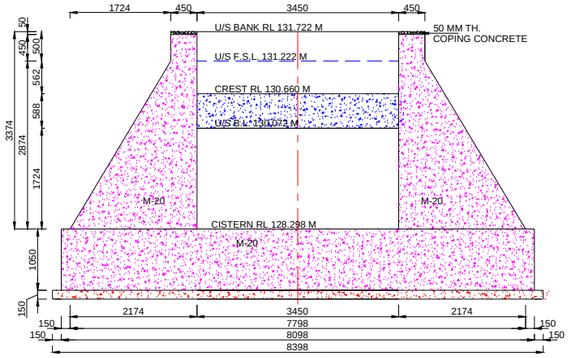
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

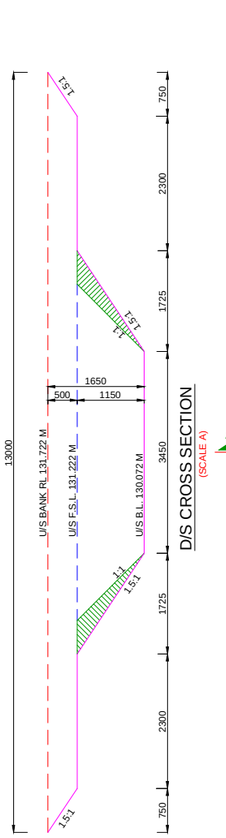
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

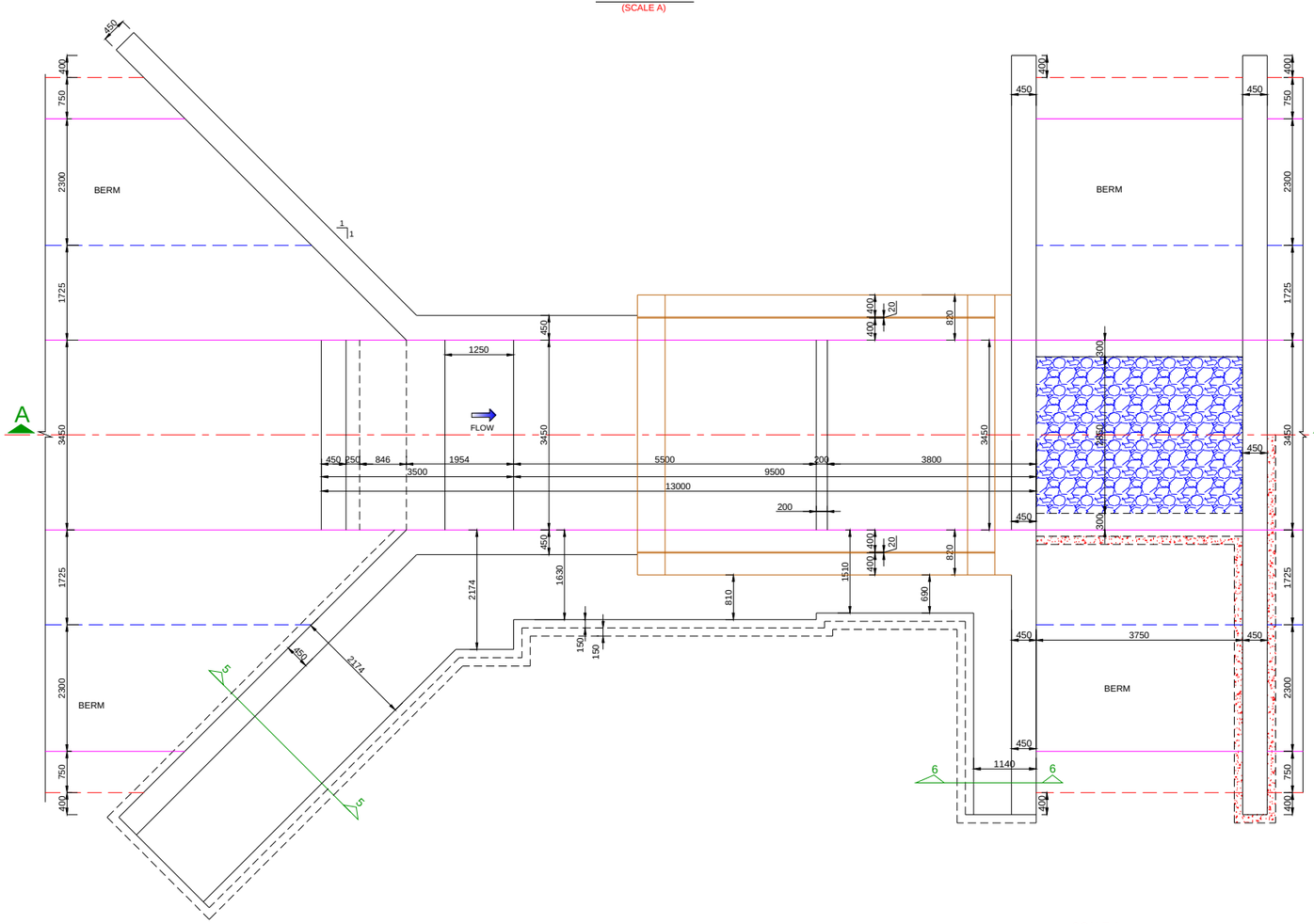
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	2.400	2.400	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	1.150	1.150	METRE
BED WIDTH	3.450	3.450	METRE
BED SLOPE	1 : 4500	1 : 4500	

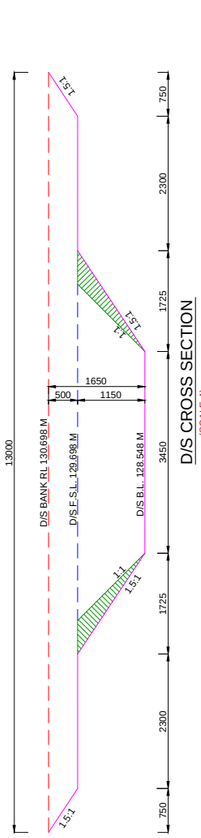


SECTION AT 1-1
(SCALE A)

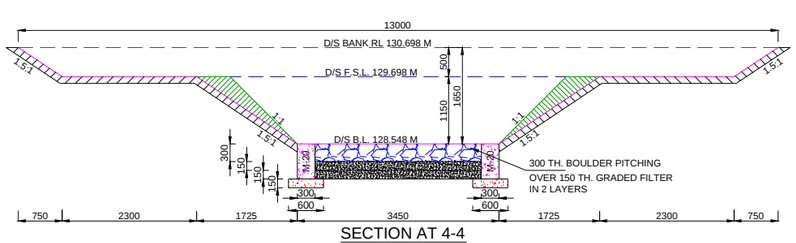


D/S CROSS SECTION
(SCALE A)



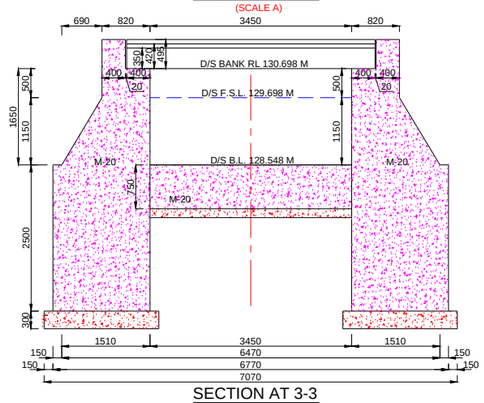


D/S CROSS SECTION
(SCALE A)



SECTION AT 4-4
(SCALE A)

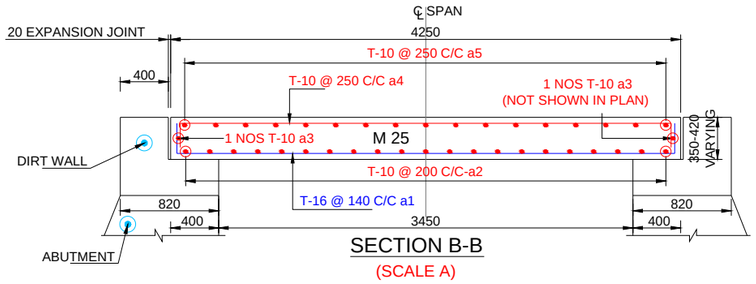
SECTION AT 2-2
(SCALE A)



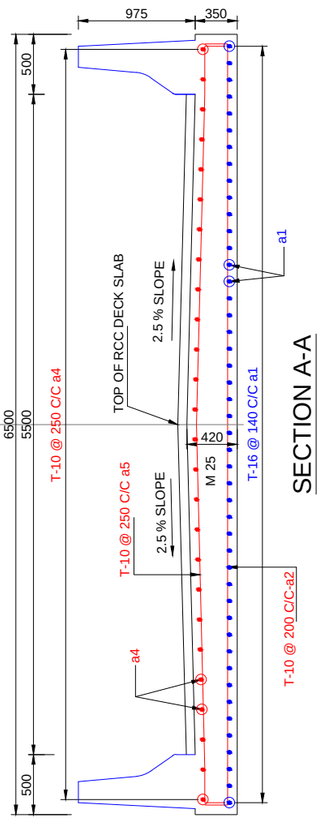
SECTION AT 3-3
(SCALE A)

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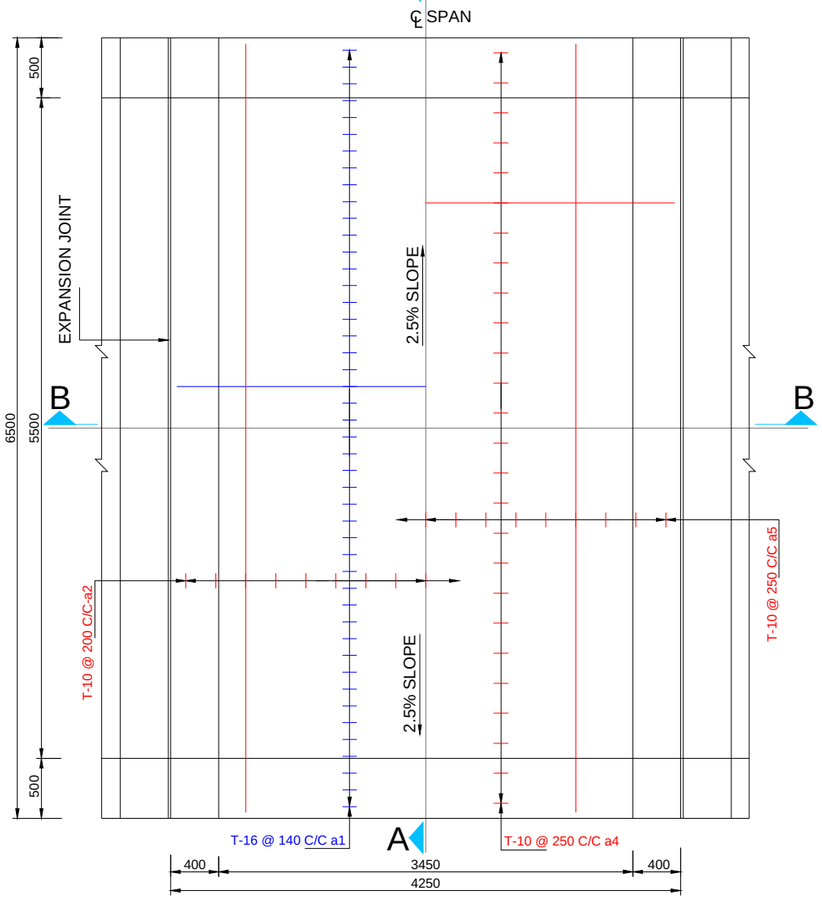
Prepared by :- WAPCOS LTD.	
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 1.524 M HT. FALL AT KM. 4.550 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ FALL 1 of 2
Drawn by:-	Checked by:- / Approved by:-



SECTION B-B
(SCALE A)

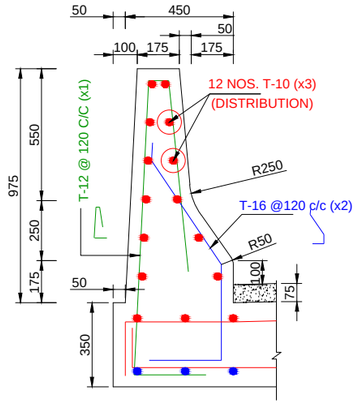


SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB
(SCALE A)



REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB
(SCALE B)

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (fy=500N/mm²) (IS 456 CLAUSE 26.2.1)							
TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = α1. lbnet
WHERE, α1 = 1.0 for p%≤25%
α1 = 1.15 for 25%≤p%≤33%
α1 = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

BAR BENDING SCHEDULE

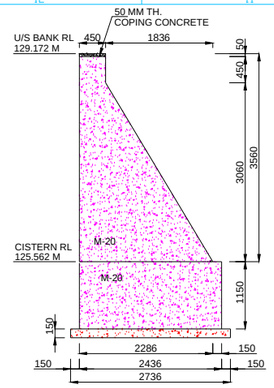
S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	250, R=80, 4150, 250	16	140	45
2	a2	250, R=50, 6400, 250	10	200	21
3	a3	6400	10	-	2
4	a4	4150, 250, R=40, 250	10	250	26
5	a5	250, 450, 2750, 2750, 450, 250	10	250	17

CRASH BARRIER					
1	x1	75, 1226, 950, 300	12	120	35X2
2	x2	75, 540, 400, 300	16	120	35X2
3	x3	4150	12	-	10X2

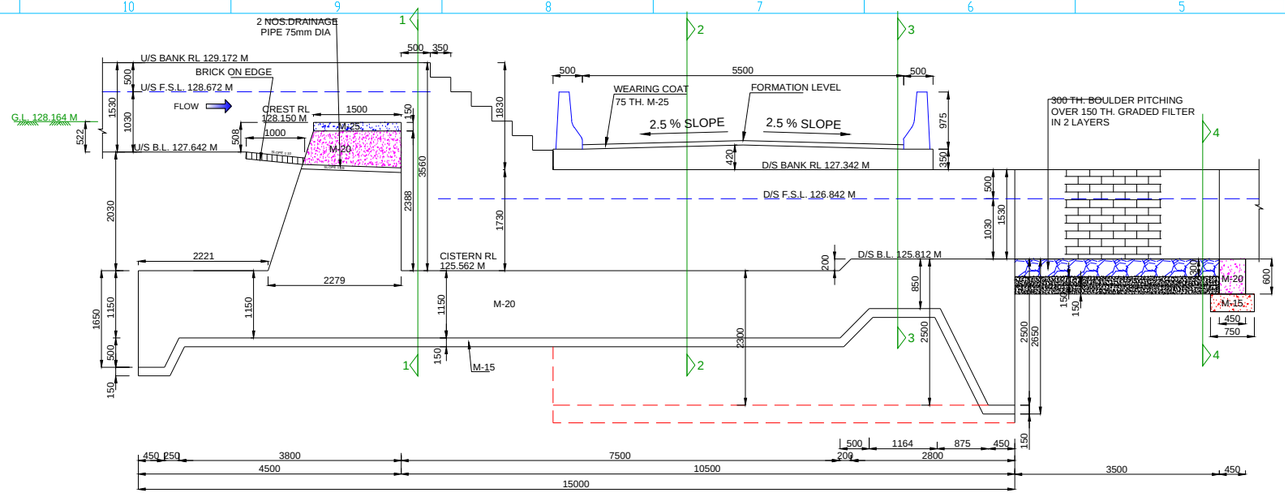
SCALE A:- 400 0 400 800 1200
SCALE B:- 200 0 200 400 600

Prepared by :-
WAPCOS LTD.

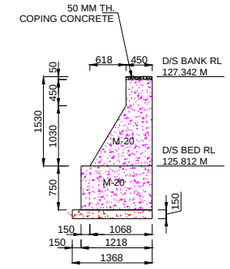
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 4.550 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
Drawn by:-	Checked by:- Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

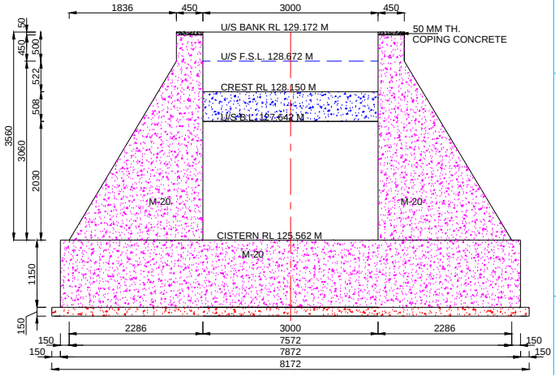
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

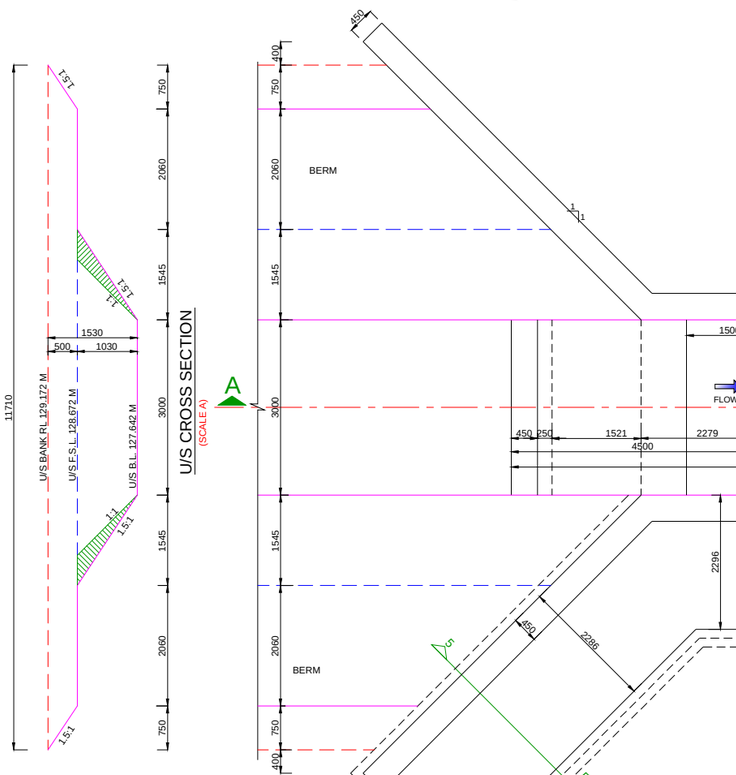
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

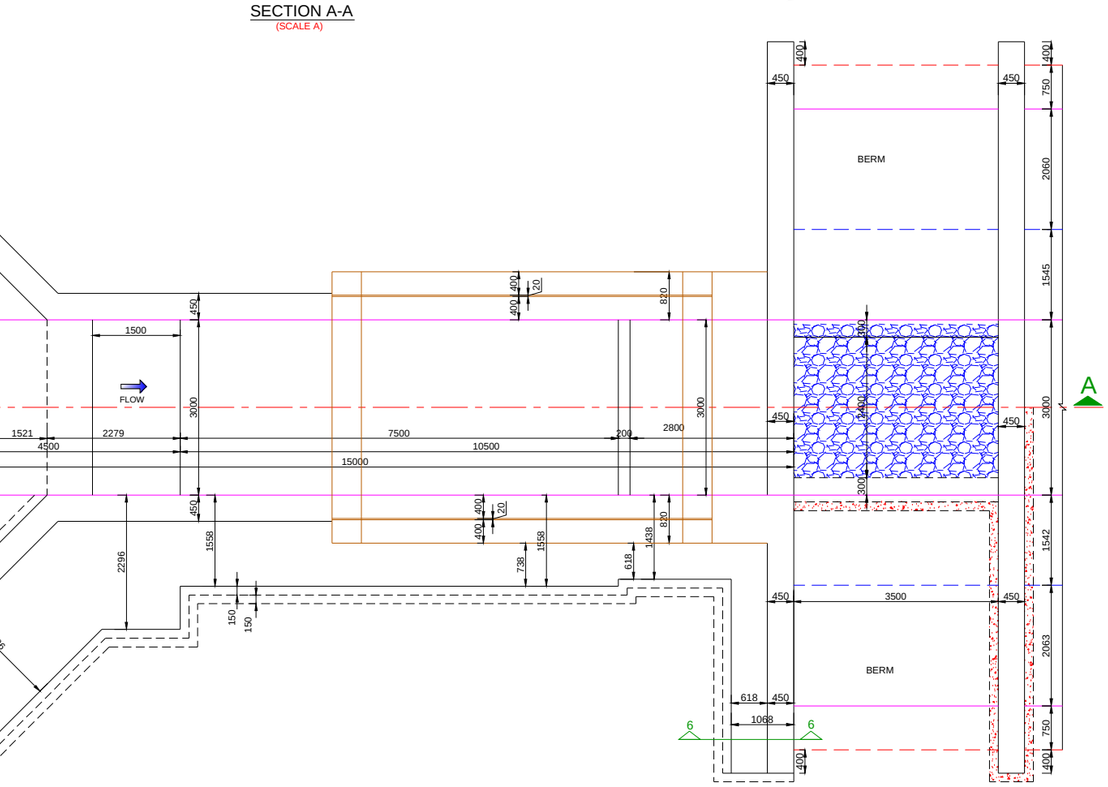
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	1.740	1.740	CUMEC
VERTICAL DROP	1.830	1.830	METRE
FULL SUPPLY DEPTH	1.030	1.030	METRE
BED WIDTH	3.000	3.000	METRE
BED SLOPE	1 : 4500	1 : 4500	

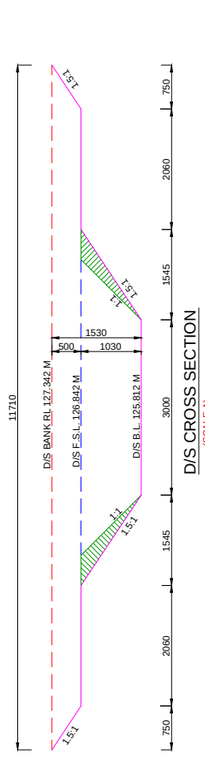


SECTION AT 1-1
(SCALE A)



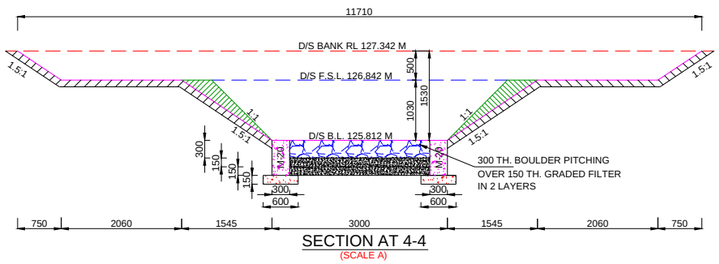
U/S CROSS SECTION
(SCALE A)



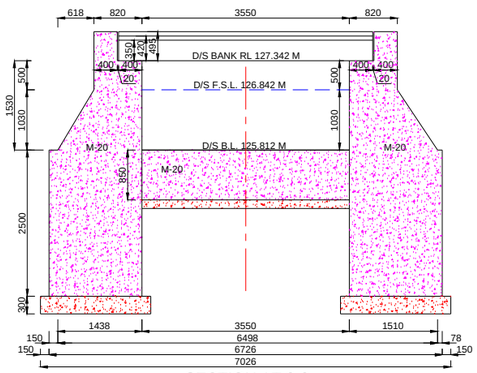


D/S CROSS SECTION
(SCALE A)

SECTION AT 2-2
(SCALE A)



SECTION AT 4-4
(SCALE A)

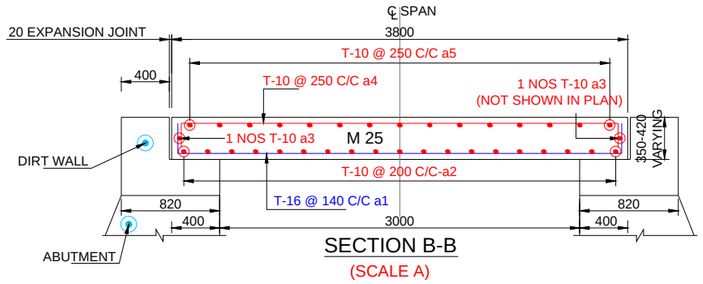


SECTION AT 3-3
(SCALE A)

SCALE A:-

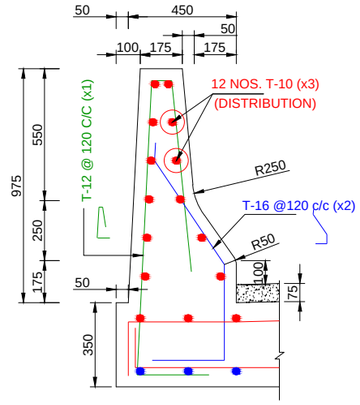
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Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.830 M HT. FALL AT KM. 5.880 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03/ FALL 1 of 2
	Drawn by:-	Checked by:- / Approved by:-



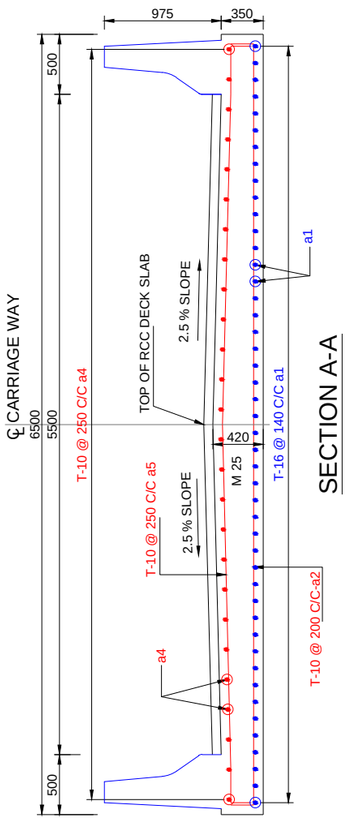
SECTION B-B

(SCALE A)

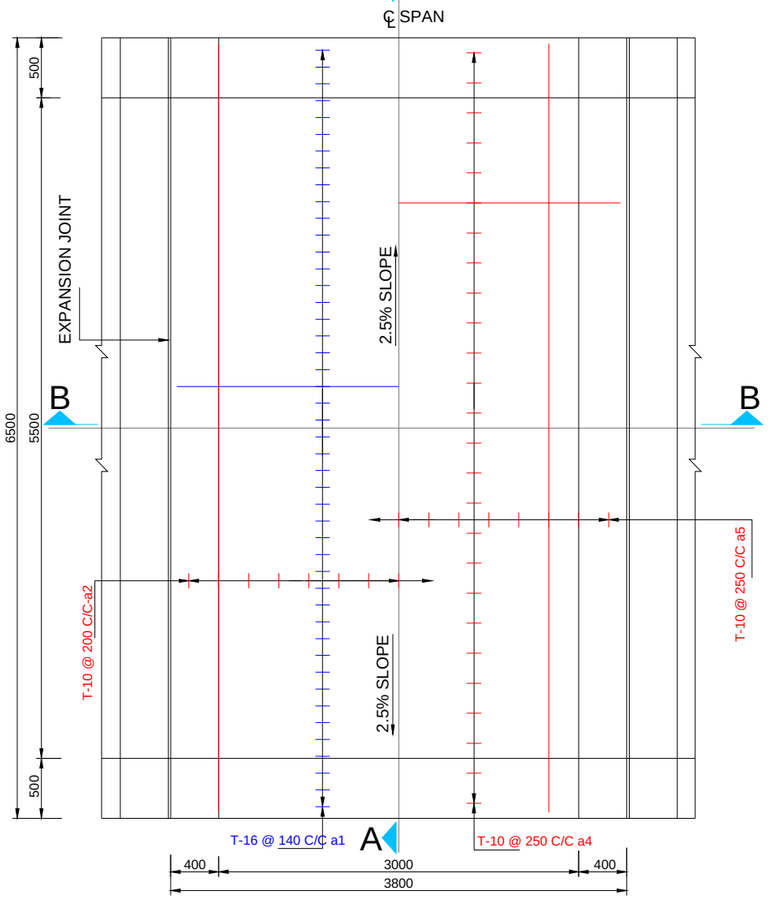


REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB

(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB

(SCALE A)

NOTES:-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
   BRIDGE SLAB & PARAPET M-25
4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (fy=500N/mm²) (IS 456 CLAUSE 26.2.1)							
TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
    LAP LENGTH = α1. lbnet
    WHERE, α1 = 1.0 for p%≤25%
    α1 = 1.15 for 25%≤p%≤33%
    α1 = 1.4 for 33%≤p%≤50%
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

BAR BENDING SCHEDULE

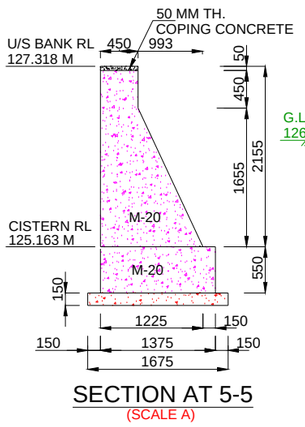
S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	250, R=80, 3800, 250	16	140	45
2	a2	250, R=50, 6400, 250	10	200	19
3	a3	6400	10	-	2
4	a4	3800, 250, R=40, 250	10	250	26
5	a5	250, 450, 2750, 2750, 450, 250	10	250	15

CRASH BARRIER					
1	x1	75, 1226, 950, 300	12	120	32X2
2	x2	75, 540, 300, 400	16	120	32X2
3	x3	3800	12	-	10X2

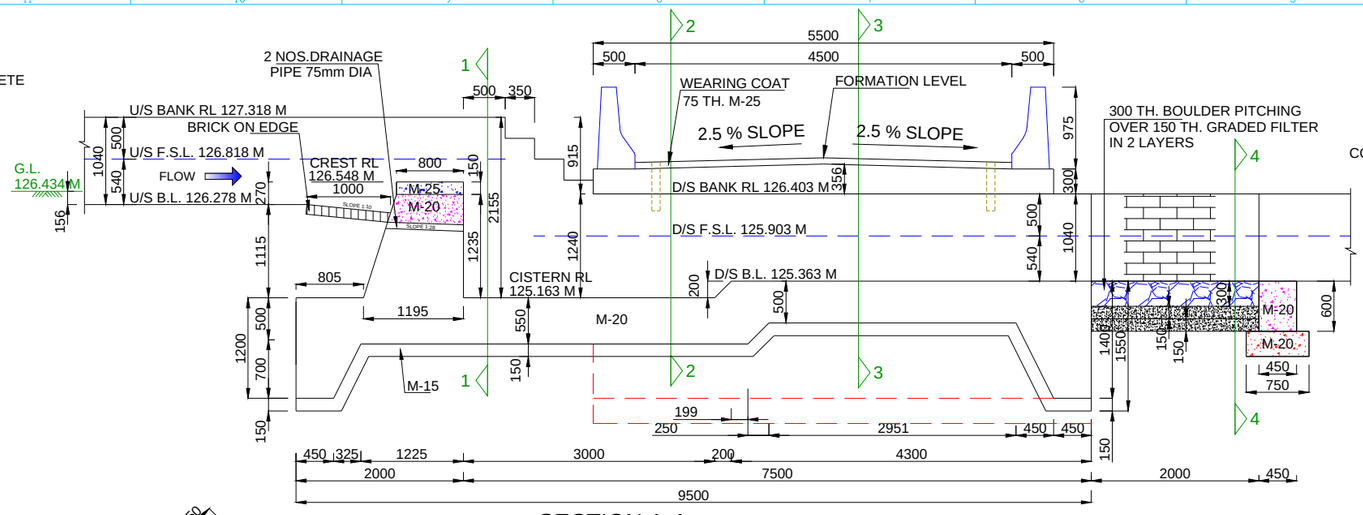
SCALE A:- 400 0 400 800 1200

SCALE B:- 200 0 200 400 600

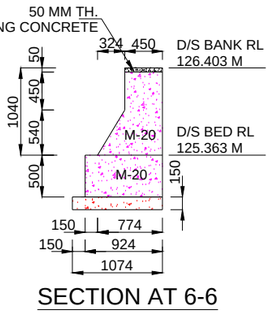
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 5.880 OF BISHUNPUR SUB-DY. (OFFTAKE FROM RD - 7+213 KM. (LT), NORTH KOEL RMC)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

NOTES:-

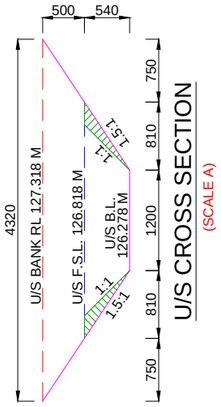
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

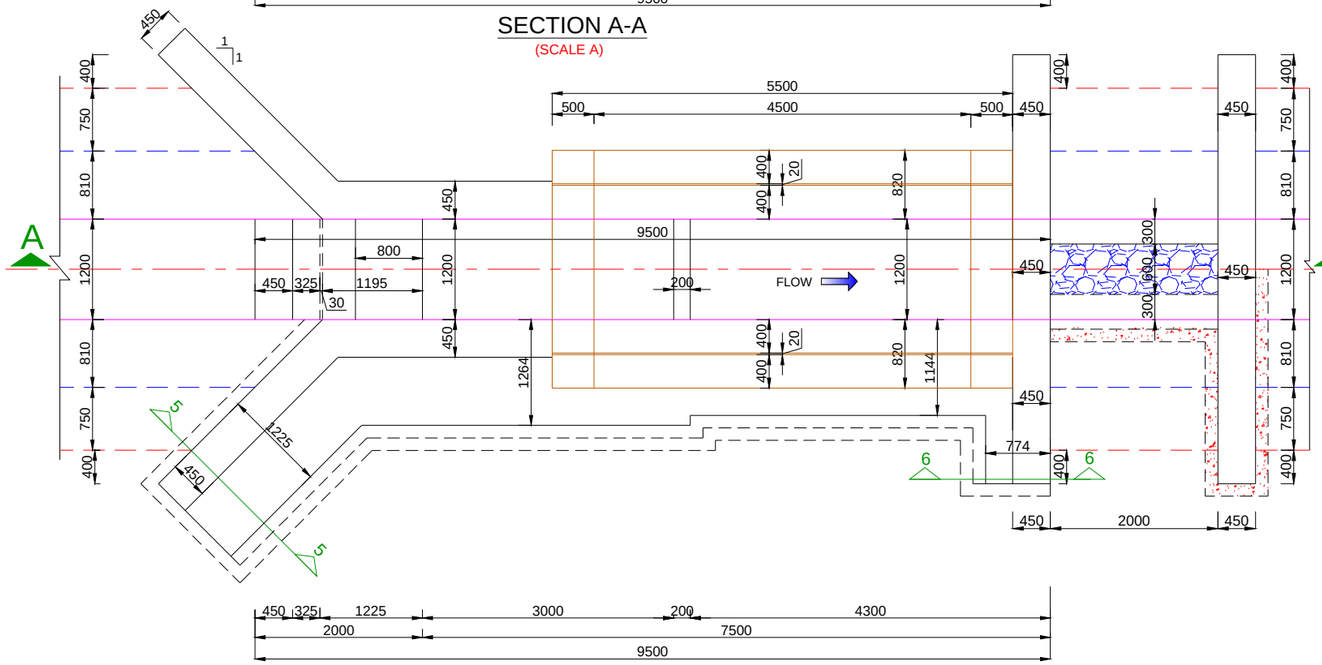
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

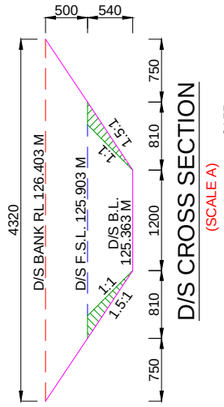
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.280	0.280	CUMEC
VERTICAL DROP	0.915	0.915	METRE
FULL SUPPLY DEPTH	0.540	0.540	METRE
BED WIDTH	1.200	1.200	METRE
BED SLOPE	1 : 3000	1 : 3100	



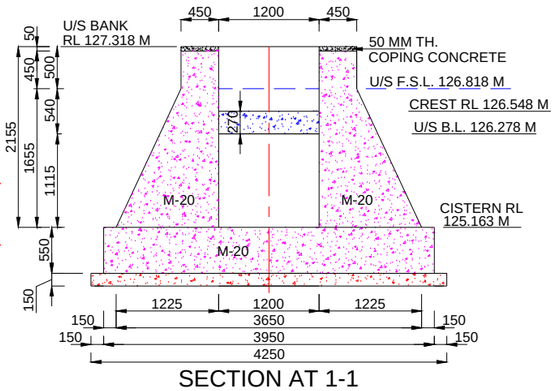
U/S CROSS SECTION
(SCALE A)



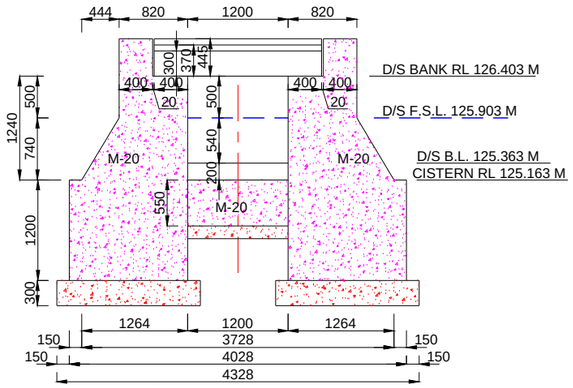
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



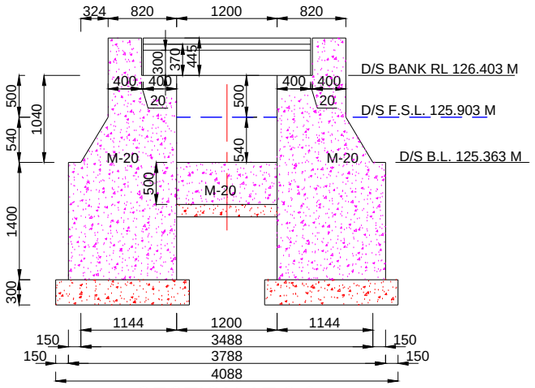
D/S CROSS SECTION
(SCALE A)



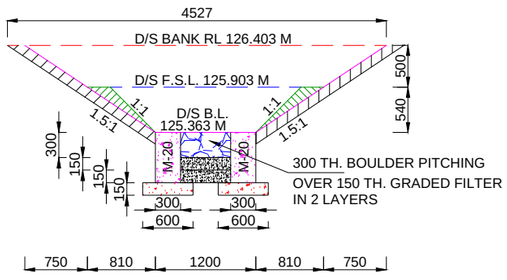
SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)

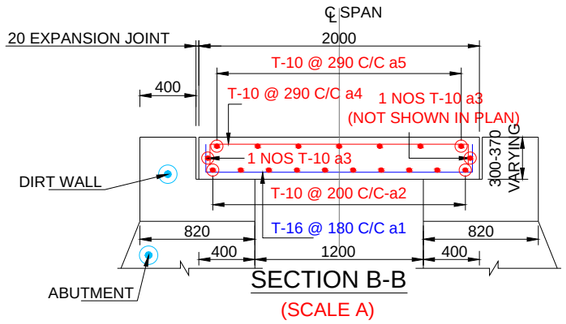


SECTION AT 4-4
(SCALE A)

SCALE A:-

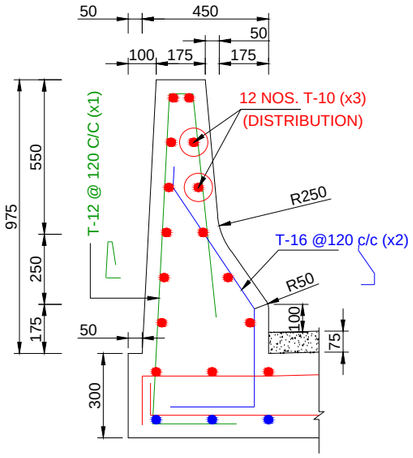
1000 0 1000 2000 3000

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.915 M HT. FALL AT KM. 1.220 OF TETRIA MINOR (OFFTAKE FROM RD - 5+363 KM. (RT), BISHUNPUR SUB-DY CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ FALL 1 of 2
	Drawn by:-	Checked by:- / Approved by:-



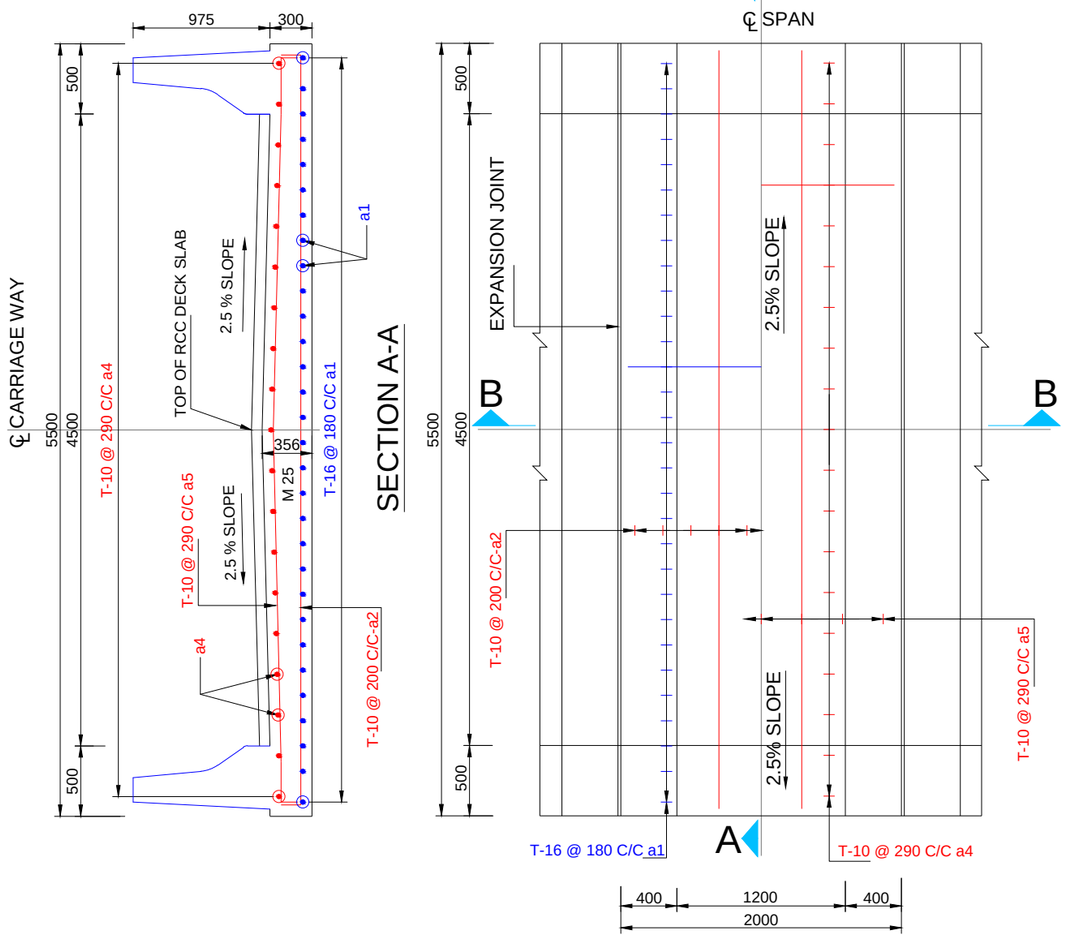
SECTION B-B

(SCALE A)



REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB

(SCALE B)



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB

(SCALE A)

BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	R=80, 200, 1900, 200	16	180	36
2	a2	R=50, 200, 6400, 200	10	200	10
3	a3	6400	10	-	2
4	a4	1900, 200, R=40, 200	10	290	23
5	a5	450, 2750, 2750, 450, 200, 200	10	290	7
CRASH BARRIER					
1	x1	75, 1176, 950, 300	12	120	16X2
2	x2	75, 540, 350, 300	16	120	16X2
3	x3	1900	12	-	10X2

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.

2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

BRIDGE SLAB & PARAPET M-25

4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.

5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.

6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.

7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.

8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.

9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.

10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.

11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.

12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.

13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.

14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (f_y=500N/mm^2) (IS 456 CLAUSE 26.2.1)

TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)

LAP LENGTH = α1. lbnet

WHERE, α1 = 1.0 for p%≤25%

α1 = 1.15 for 25%≤p%≤33%

α1 = 1.4 for 33%≤p%≤50%

17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)

18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.

19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.

20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

SCALE A:- 400 0 400 800 1200

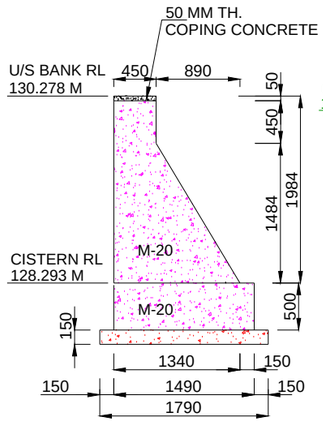
SCALE B:- 200 0 200 400 600

450

Prepared by :-

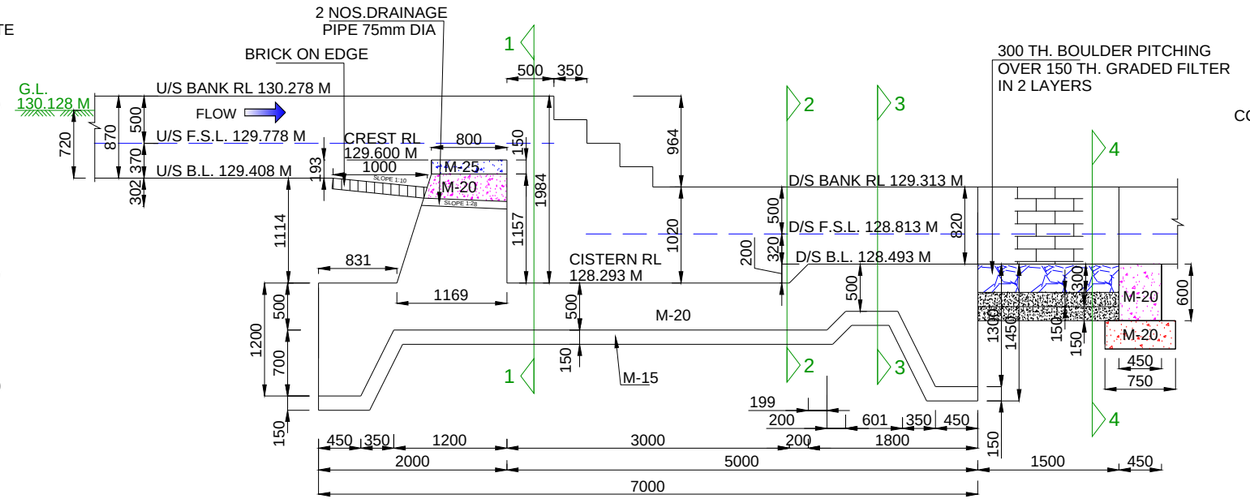
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 1.220 OF TETRIA MR. (OFFTAKE FROM RD -5+363 KM.(RT), BISHUNPUR SUB-DY CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/ FALL 2 of 2
Drawn by:-	Checked by:- Approved by:-



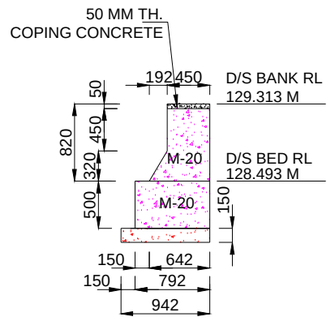
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

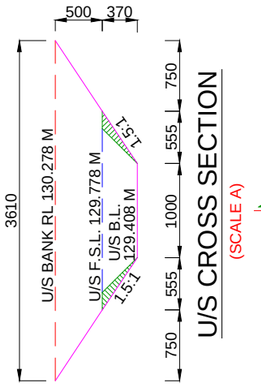
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

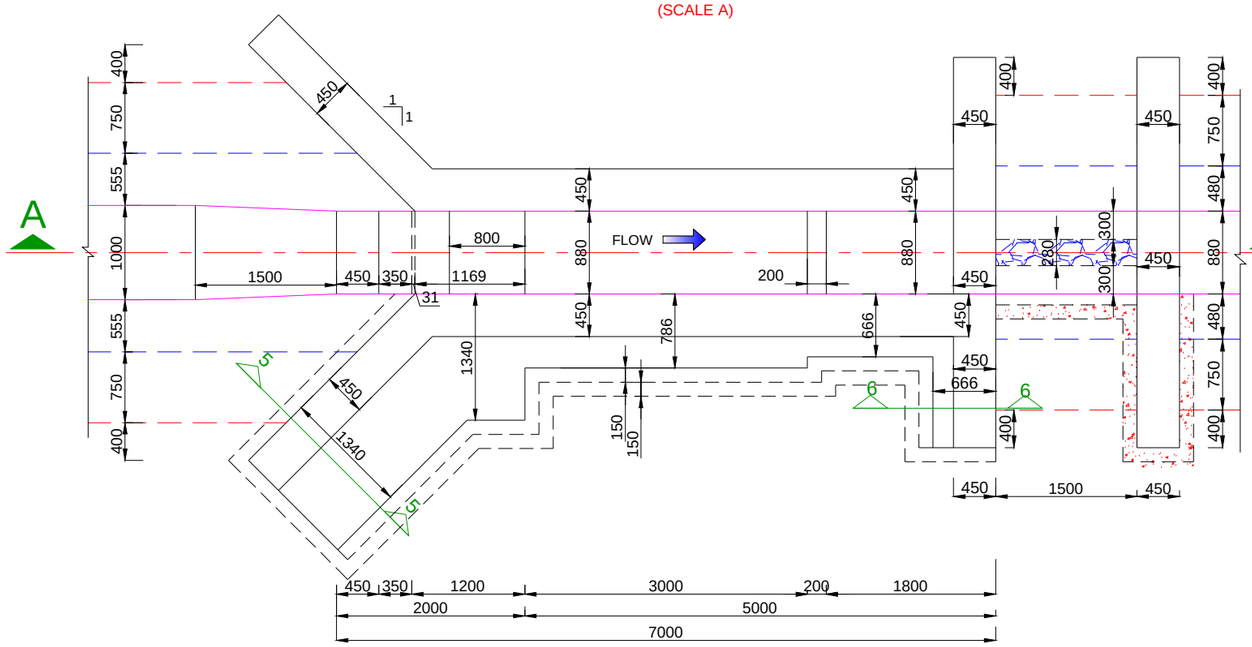
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.110	0.080	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	0.370	0.320	METRE
BED WIDTH	1.000	0.880	METRE
BED SLOPE	1 : 3500	1 : 3500	



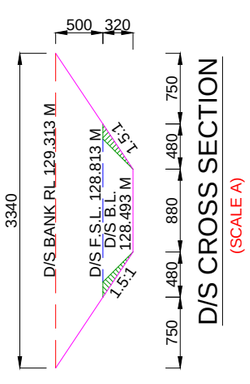
U/S CROSS SECTION

(SCALE A)



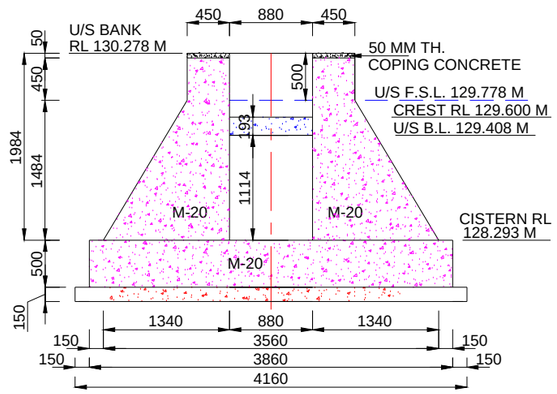
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



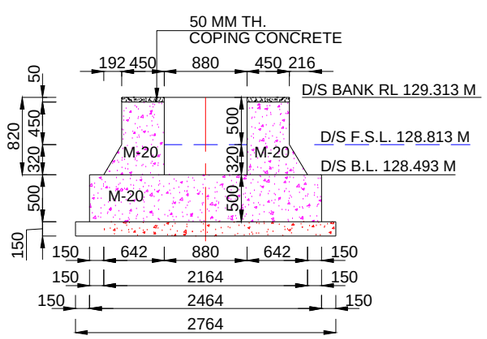
D/S CROSS SECTION

(SCALE A)



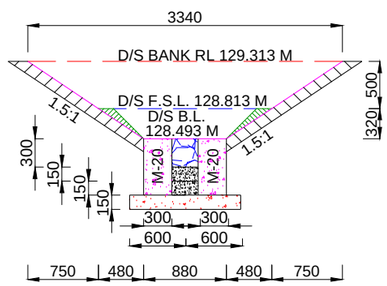
SECTION AT 1-1

(SCALE A)



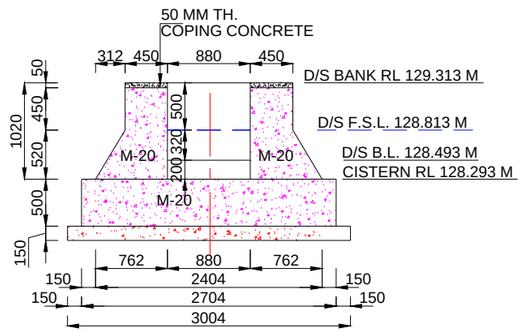
SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

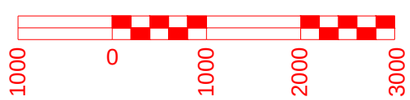
(SCALE A)



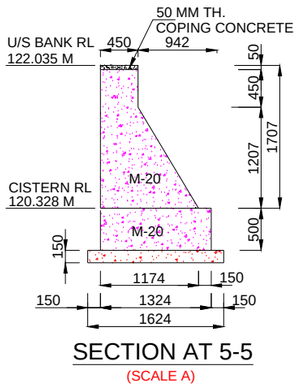
SECTION AT 2-2

(SCALE A)

SCALE A:-

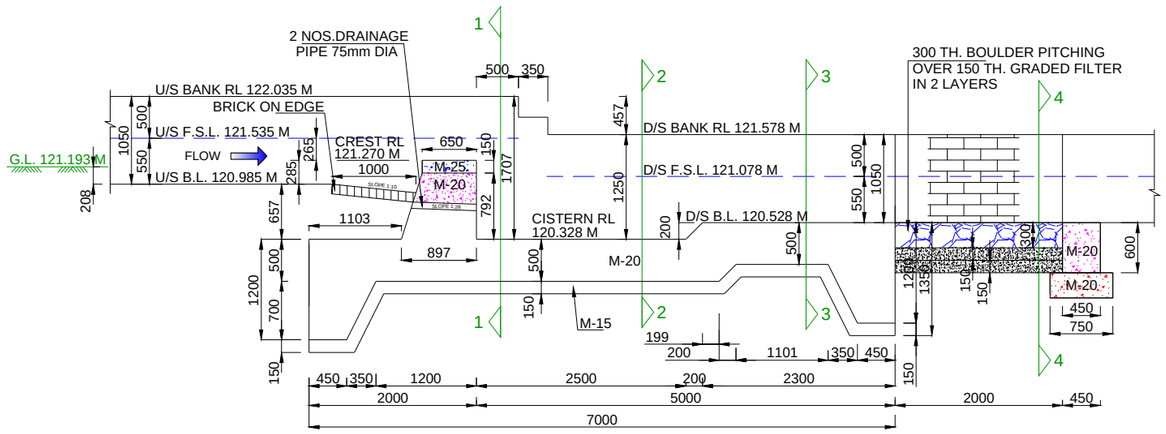


Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.914 M HT. FALL AT KM. 1.050 OF KARMARI MR. (OFFTAKE FROM RD - 8+650 KM. (R), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



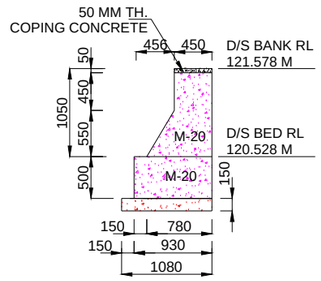
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

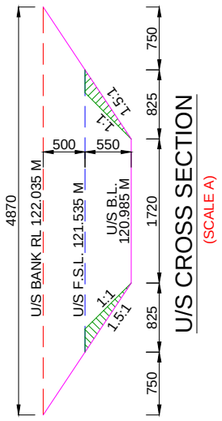
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

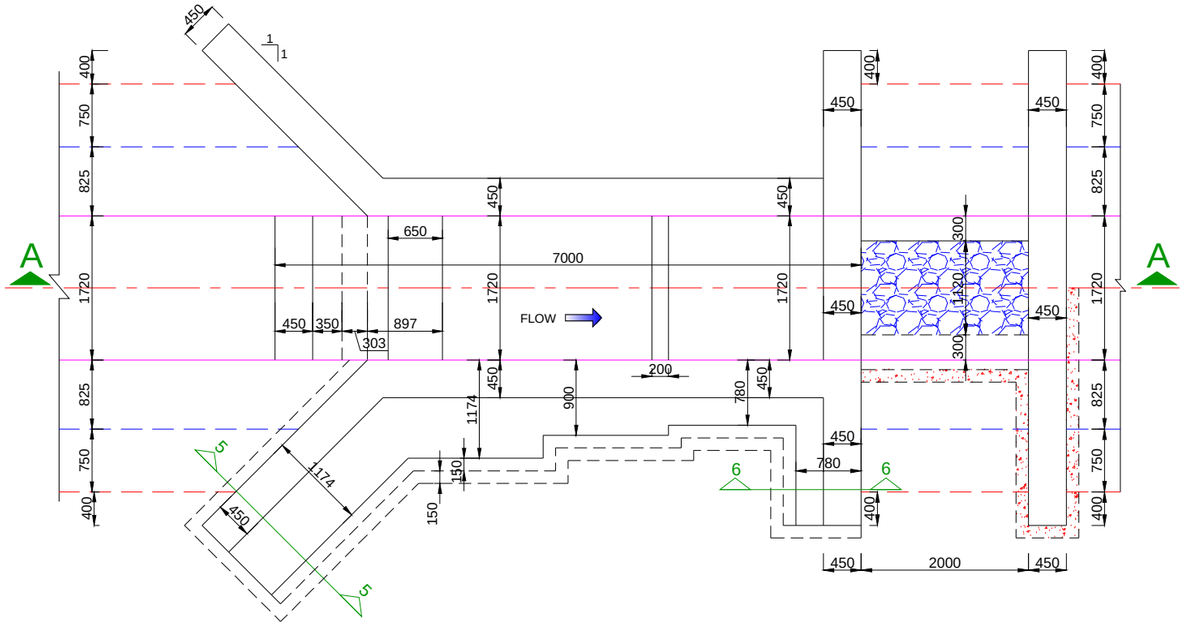
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.410	0.410	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.550	0.550	METRE
BED WIDTH	1.720	1.720	METRE
BED SLOPE	1 : 3100	1 : 3100	



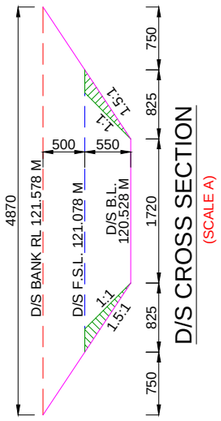
U/S CROSS SECTION

(SCALE A)



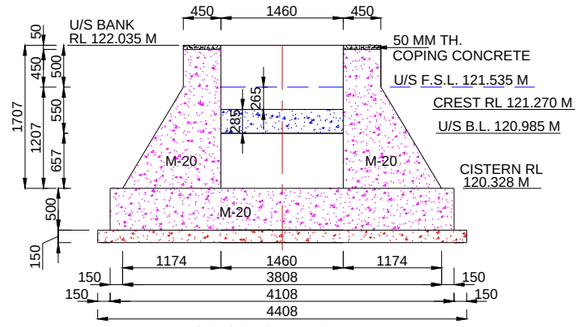
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



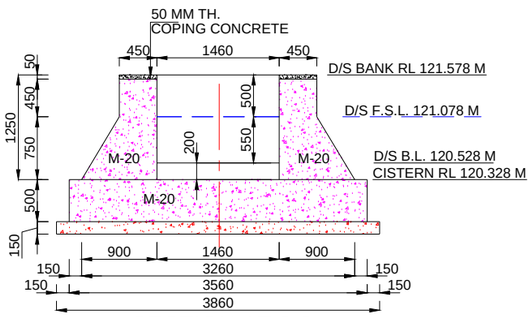
D/S CROSS SECTION

(SCALE A)



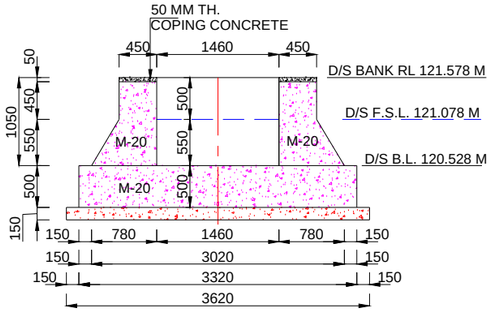
SECTION AT 1-1

(SCALE A)



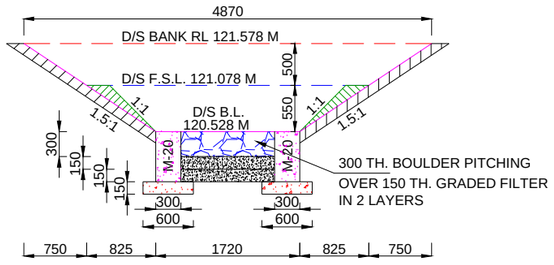
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



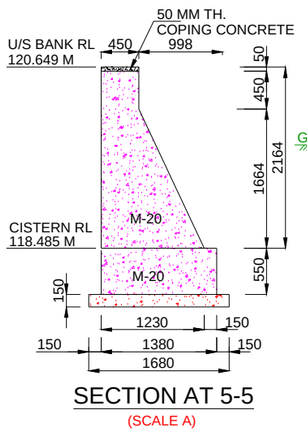
SECTION AT 4-4

(SCALE A)

SCALE A:-

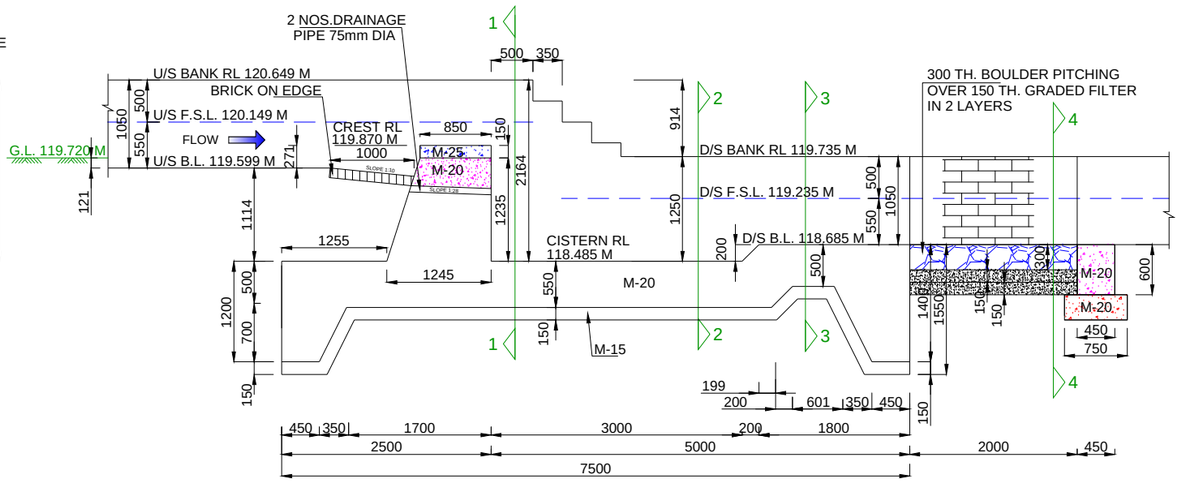
1000 0 1000 2000 3000

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 0.000 OF MIRZAPUR MR. (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5

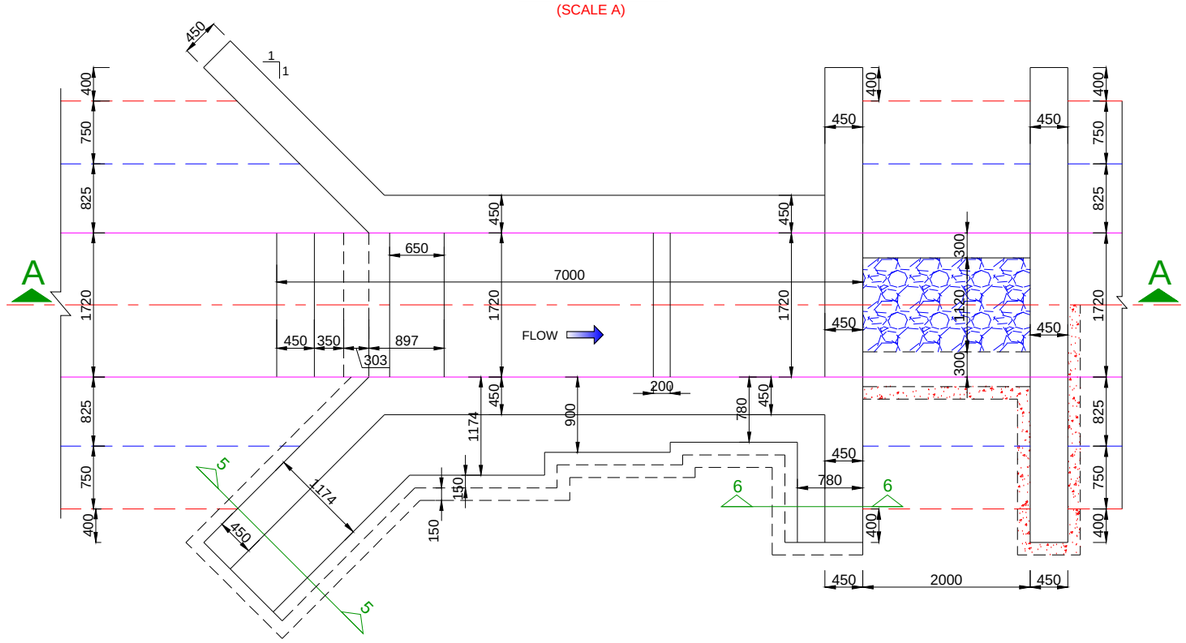
(SCALE A)



SECTION A-A

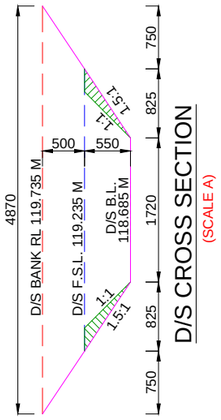
(SCALE A)

(SCALE A)

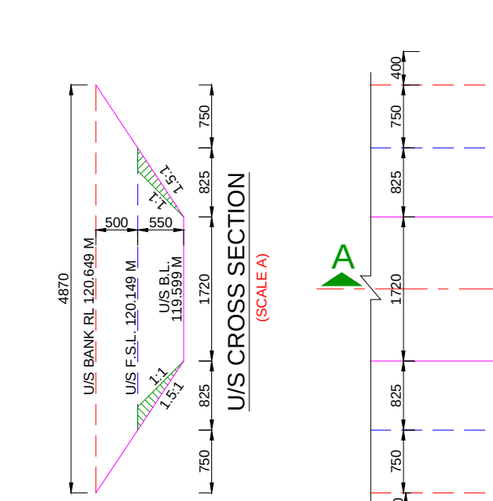


HALF TOP / HALF FOUNDATION PLAN

(SCALE A)

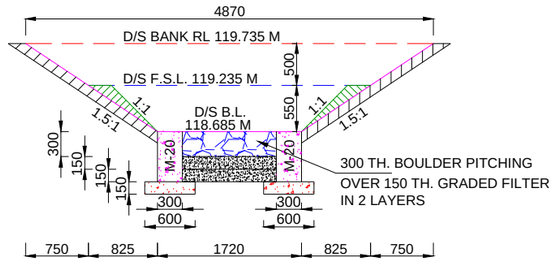


(SCALE A)



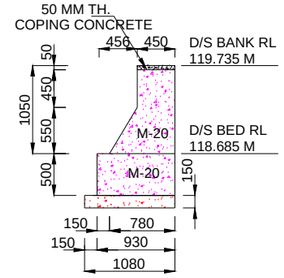
SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

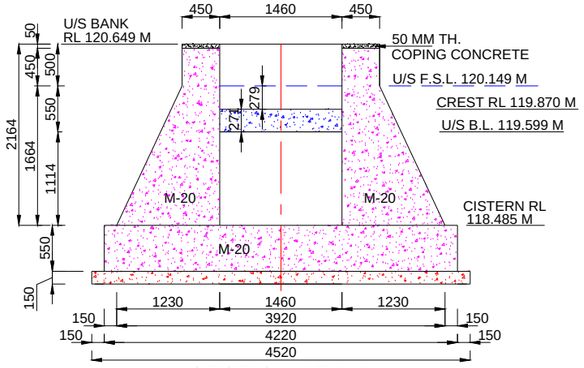
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

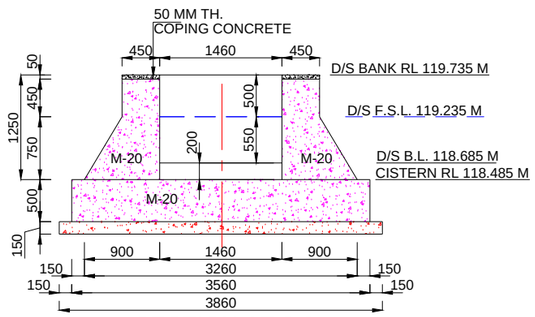
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.410	0.410	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	0.550	0.550	METRE
BED WIDTH	1.720	1.720	METRE
BED SLOPE	1 : 3100	1 : 3100	



SECTION AT 1-1

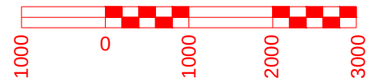
(SCALE A)



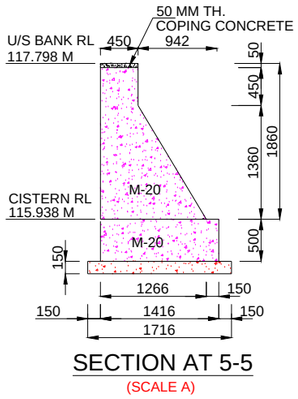
SECTION AT 2-2

(SCALE A)

SCALE A:-

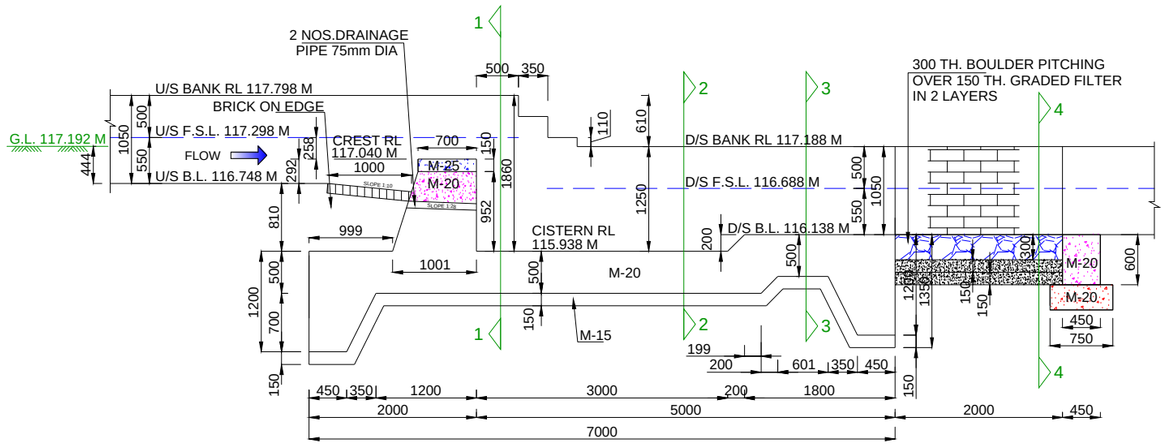


Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 0.000 OF MIRZAPUR MR. (OFFTAKE FROM RD - 16+870 KM.(RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-05/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



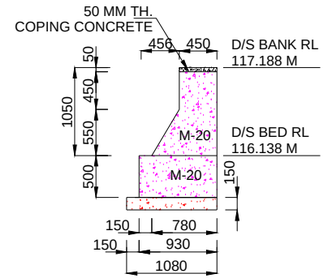
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

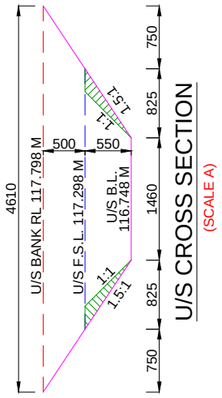
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

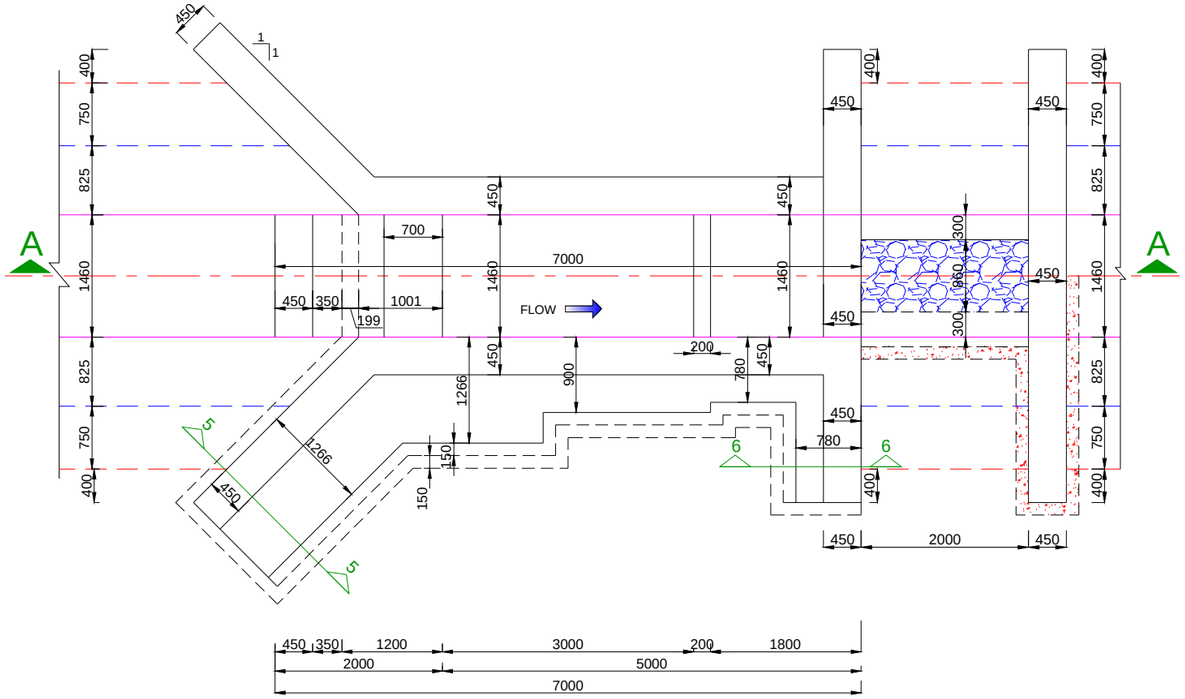
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.320	0.320	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.550	0.550	METRE
BED WIDTH	1.460	1.460	METRE
BED SLOPE	1 : 3500	1 : 3500	



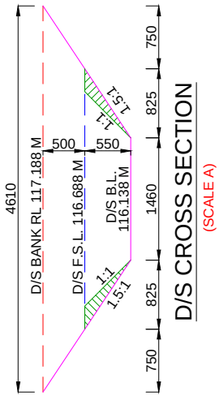
U/S CROSS SECTION

(SCALE A)



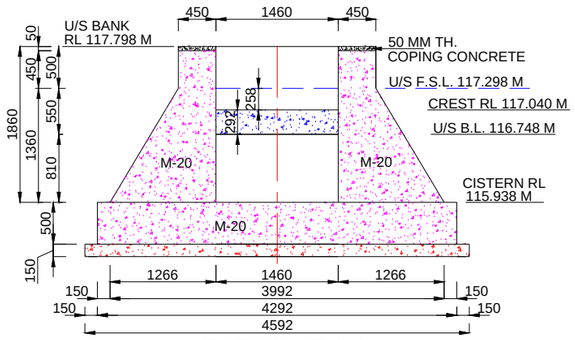
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



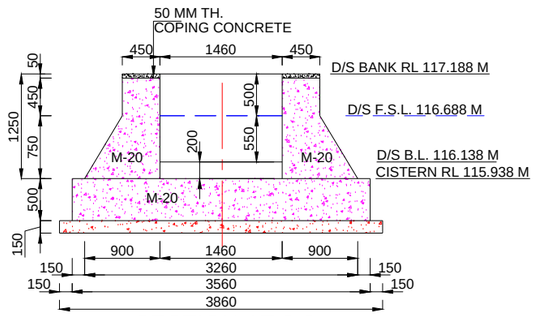
D/S CROSS SECTION

(SCALE A)



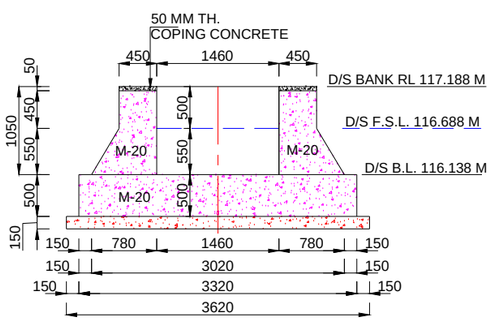
SECTION AT 1-1

(SCALE A)



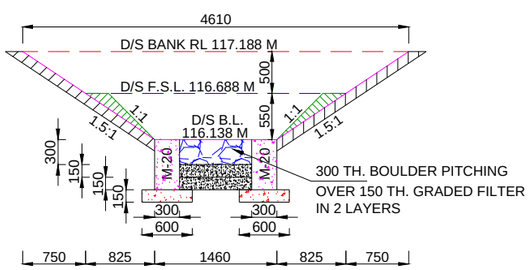
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



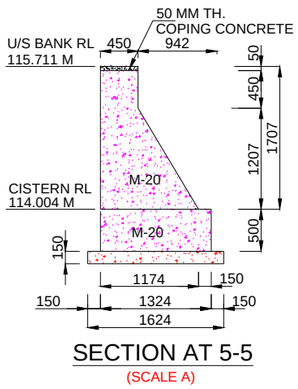
SECTION AT 4-4

(SCALE A)

SCALE A:-

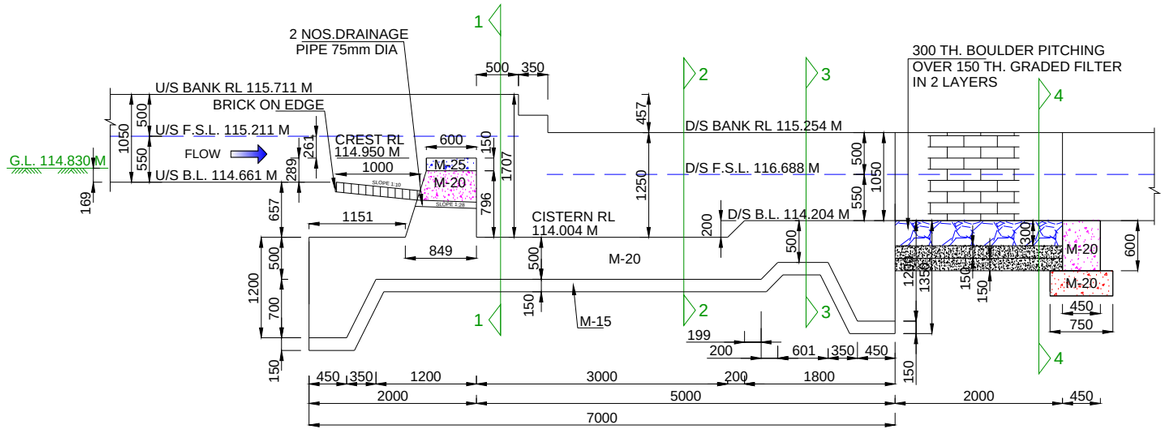
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Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 0.150 OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



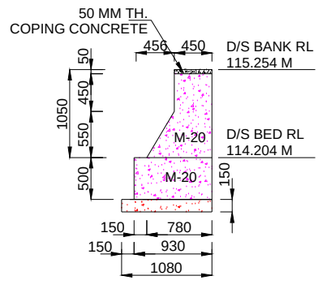
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

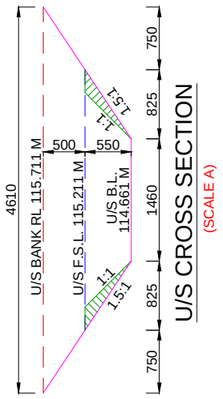
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

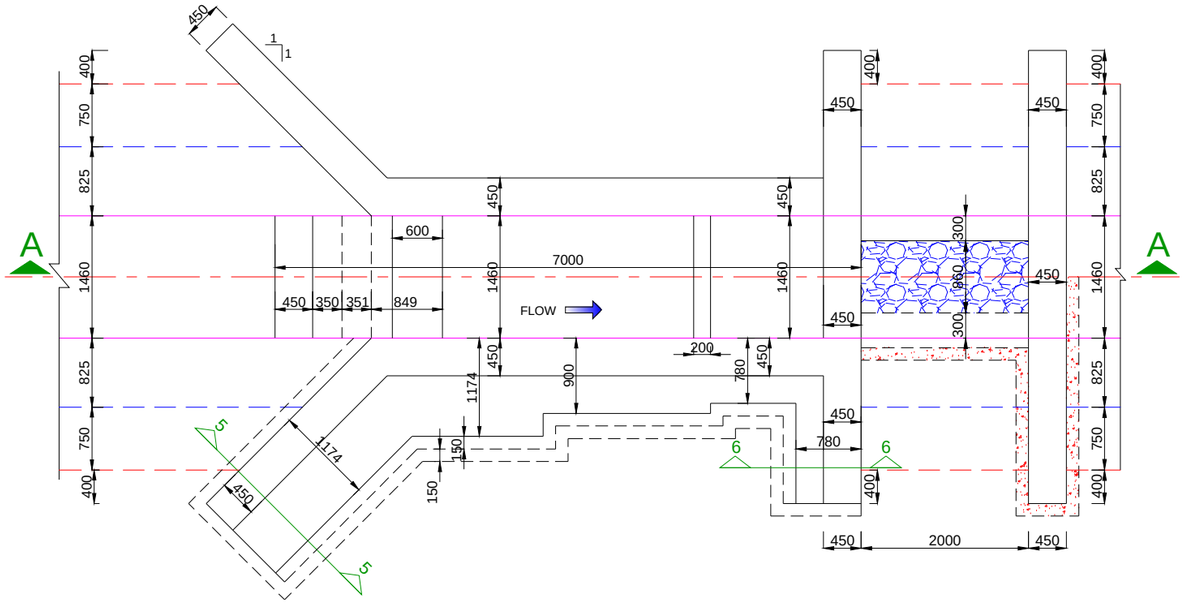
HYDRAULIC:- DATA

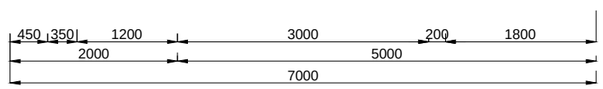
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.320	0.320	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.550	0.550	METRE
BED WIDTH	1.460	1.460	METRE
BED SLOPE	1 : 3500	1 : 3500	



U/S CROSS SECTION

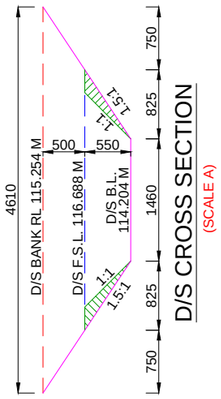
(SCALE A)





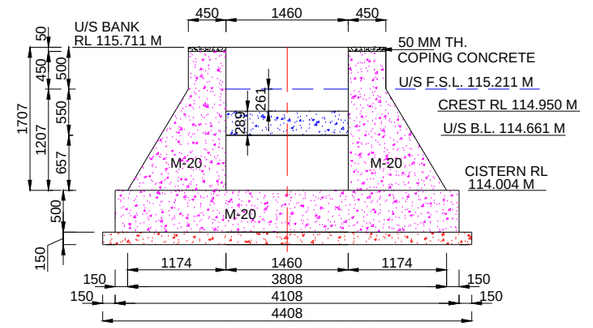
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



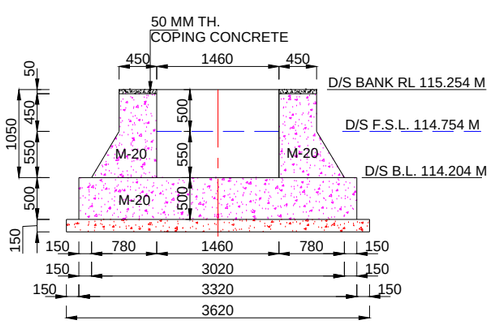
D/S CROSS SECTION

(SCALE A)



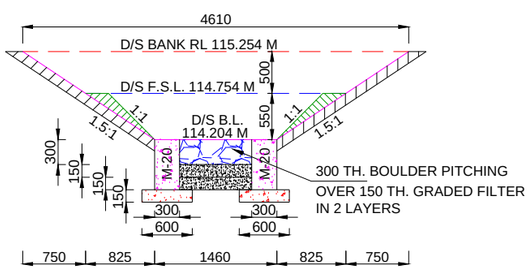
SECTION AT 1-1

(SCALE A)



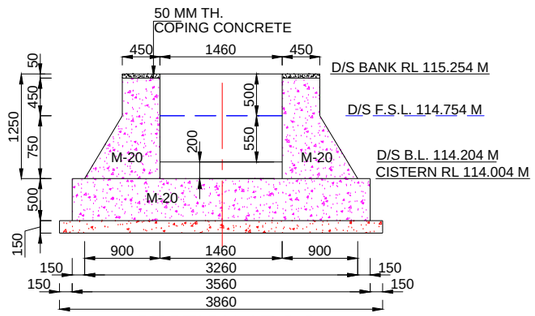
SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

(SCALE A)



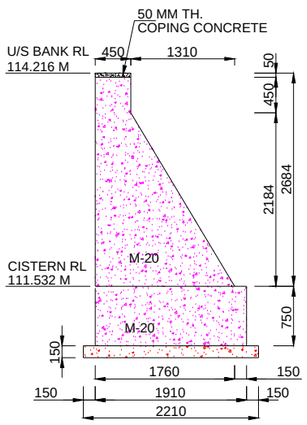
SECTION AT 2-2

(SCALE A)

SCALE A:-

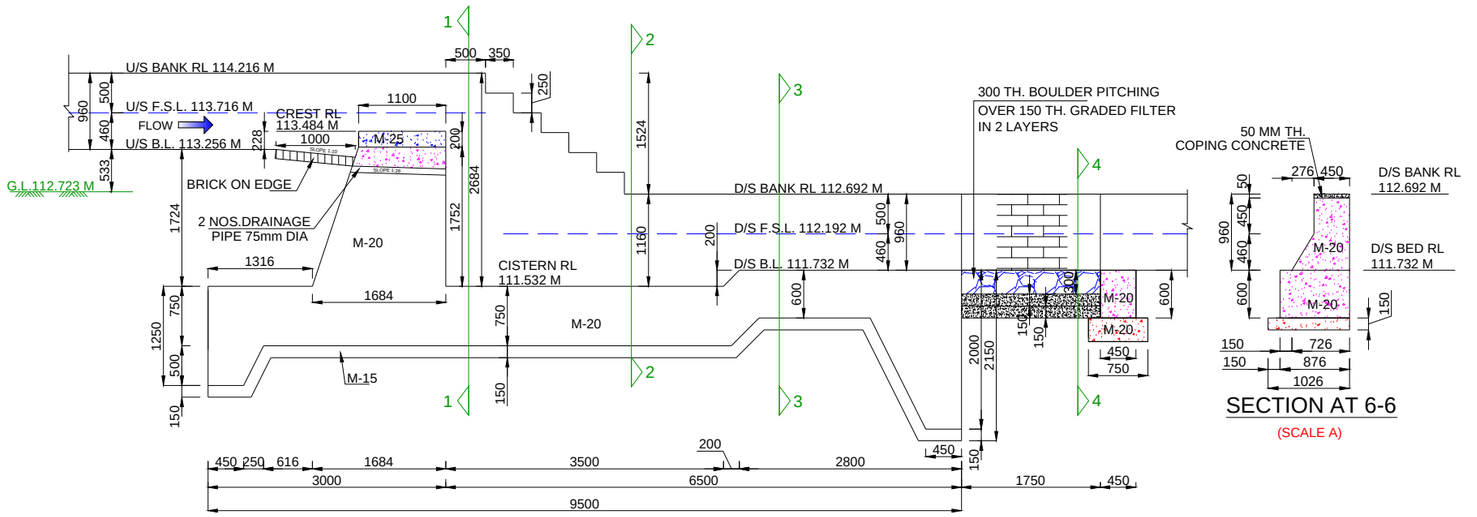
1000 0 1000 2000 3000

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 1.050 OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)

SECTION AT 6-6

(SCALE A)

NOTES:-

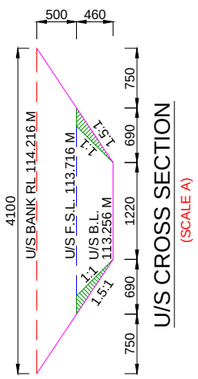
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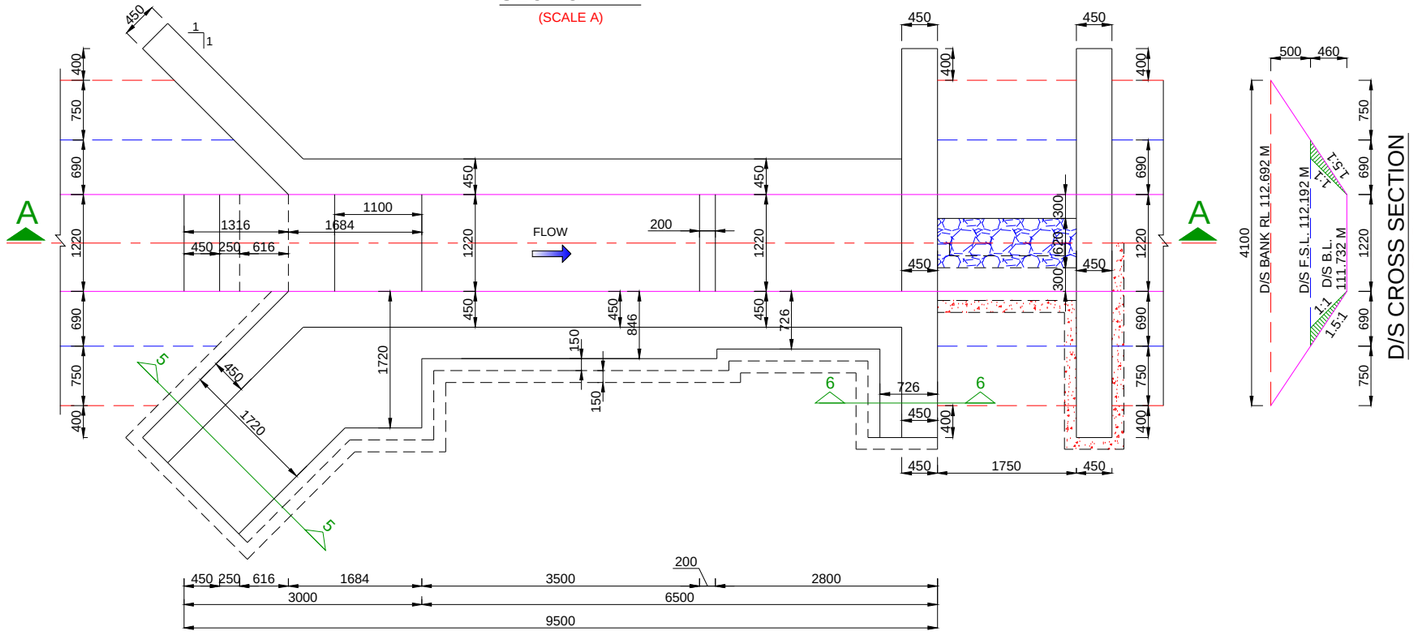
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.200	0.200	CUMEC
VERTICAL DROP	1.524	1.524	METRE
FULL SUPPLY DEPTH	0.460	0.460	METRE
BED WIDTH	1.220	1.220	METRE
BED SLOPE	1 : 3500	1 : 3500	



U/S CROSS SECTION

(SCALE A)

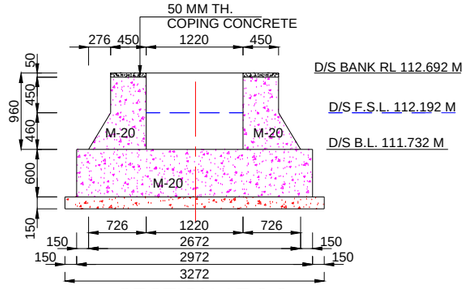


HALF TOP / HALF FOUNDATION PLAN

(SCALE A)

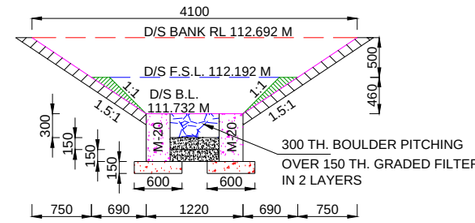
D/S CROSS SECTION

(SCALE A)



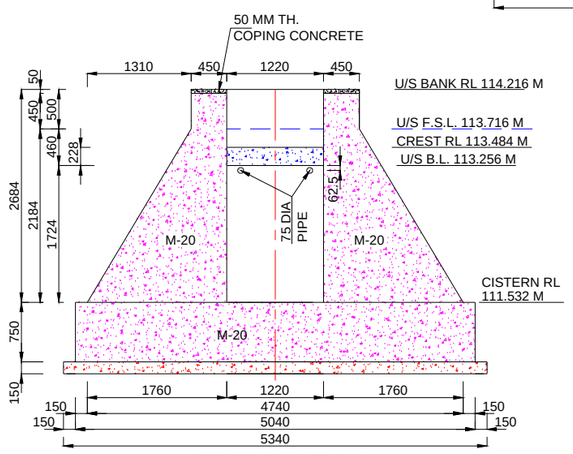
SECTION AT 3-3

(SCALE A)



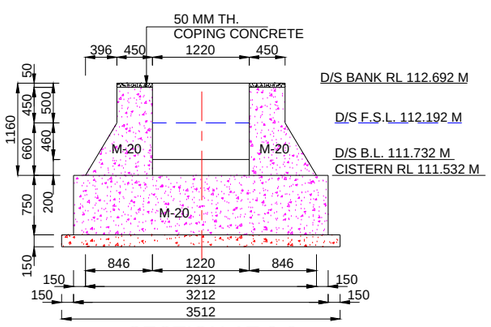
SECTION AT 4-4

(SCALE A)



SECTION AT 1-1

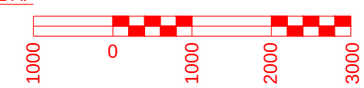
(SCALE A)



SECTION AT 2-2

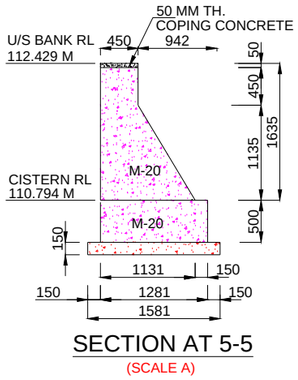
(SCALE A)

SCALE A:-



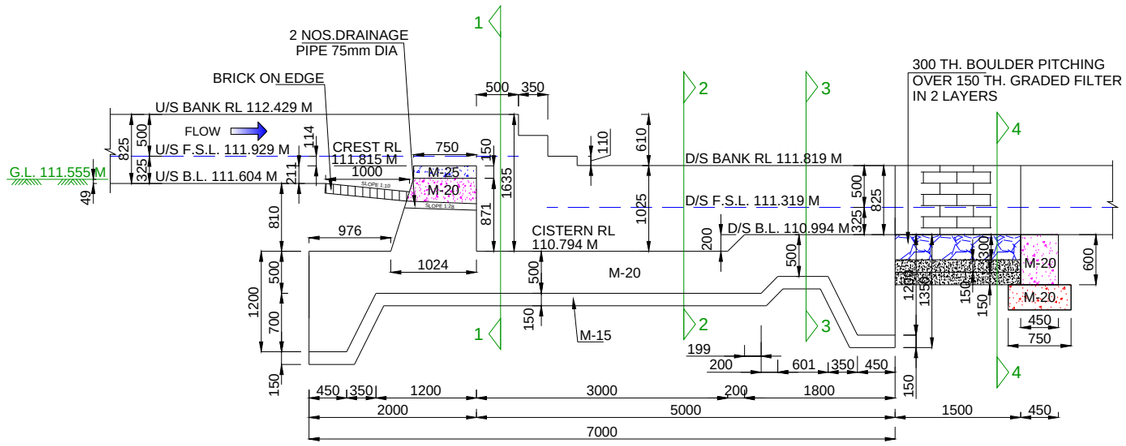
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.524 M HT. FALL AT KM. 1.700 OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-

456



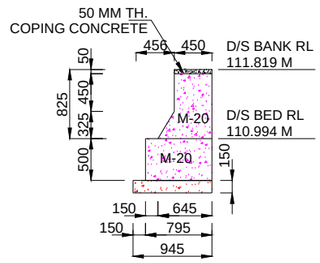
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

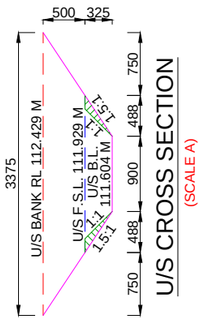
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

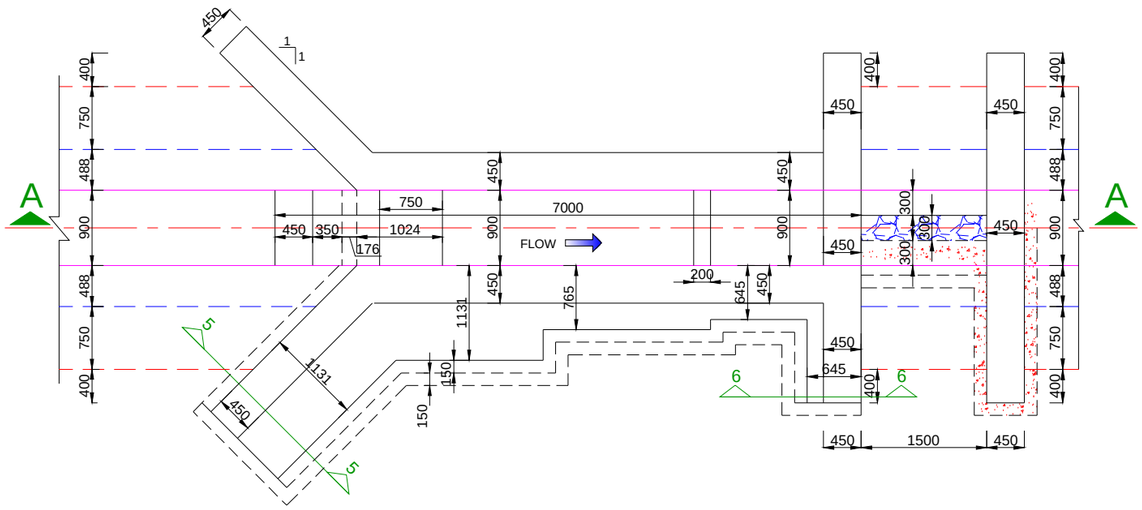
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.080	0.080	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.325	0.325	METRE
BED WIDTH	0.900	0.900	METRE
BED SLOPE	1 : 3500	1 : 3500	



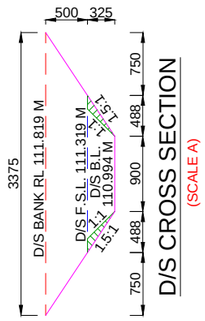
U/S CROSS SECTION

(SCALE A)



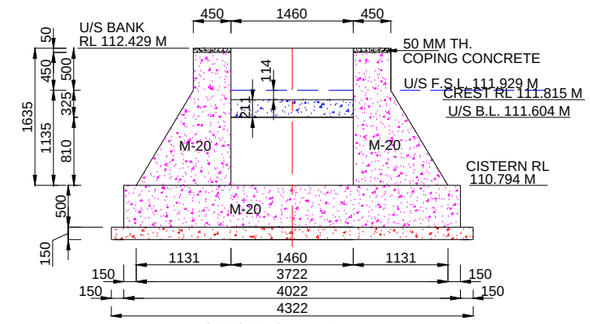
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



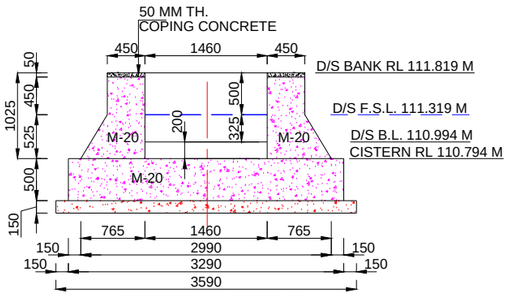
D/S CROSS SECTION

(SCALE A)



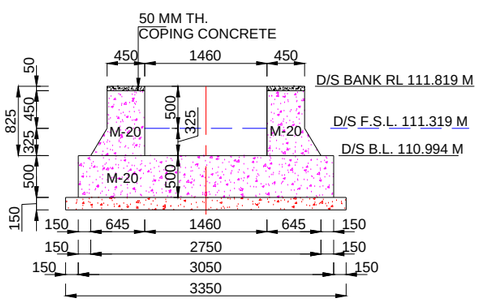
SECTION AT 1-1

(SCALE A)



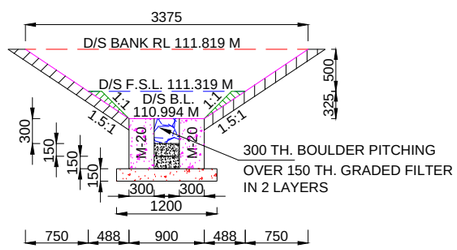
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

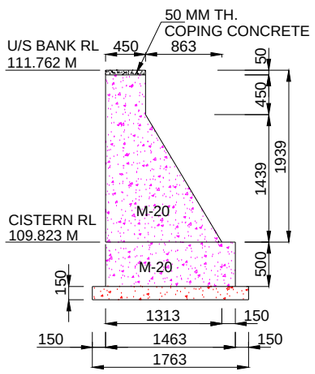
(SCALE A)

SCALE A:-

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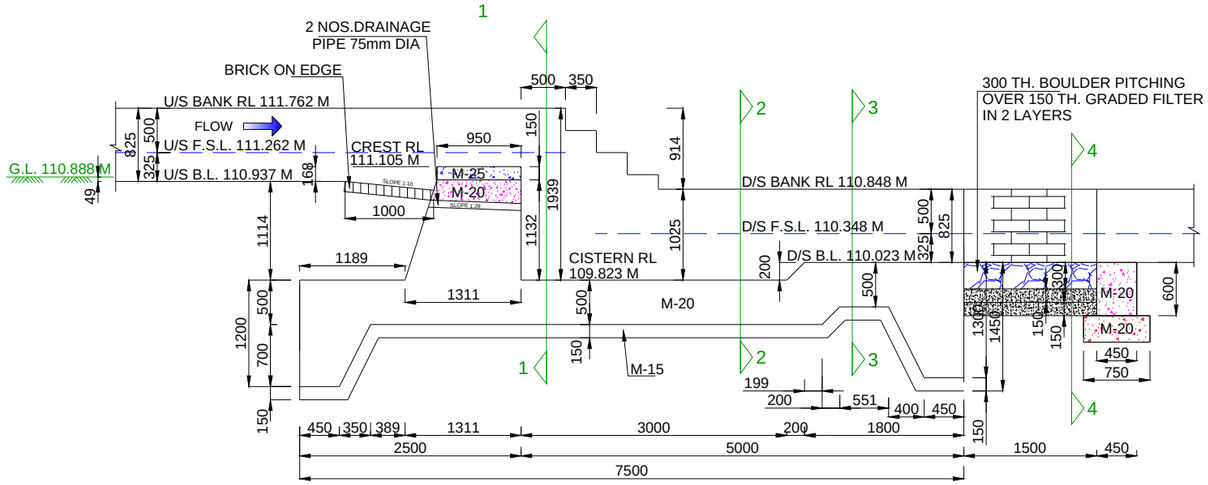
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 2.150 OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-

457



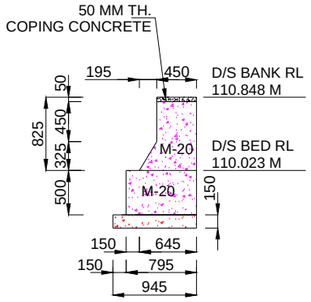
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

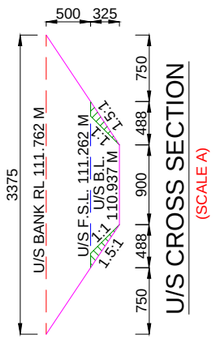
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

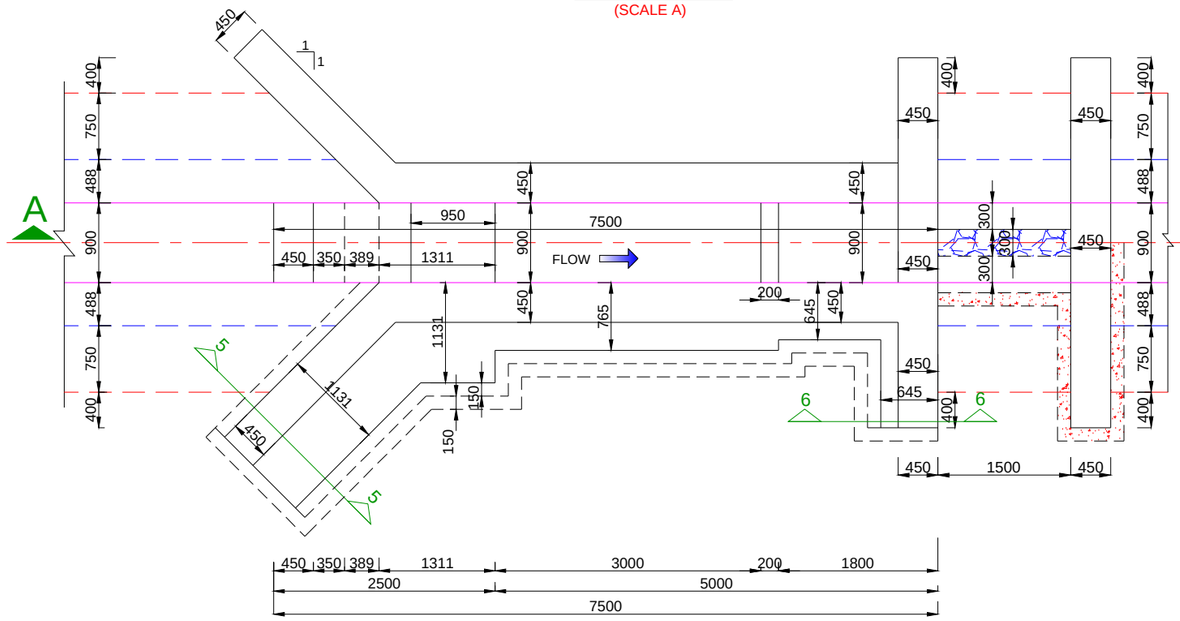
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.080	0.080	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	0.325	0.325	METRE
BED WIDTH	0.900	0.900	METRE
BED SLOPE	1 : 3500	1 : 3500	



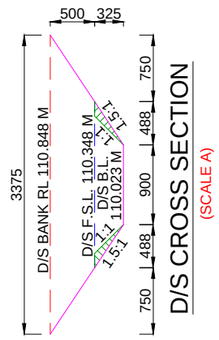
U/S CROSS SECTION

(SCALE A)



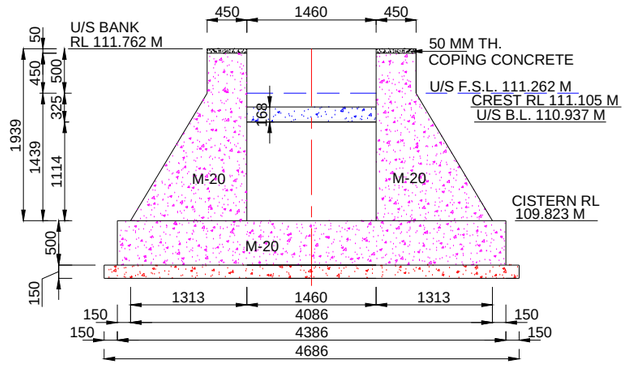
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



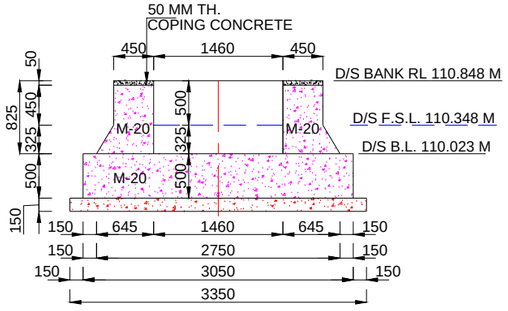
D/S CROSS SECTION

(SCALE A)



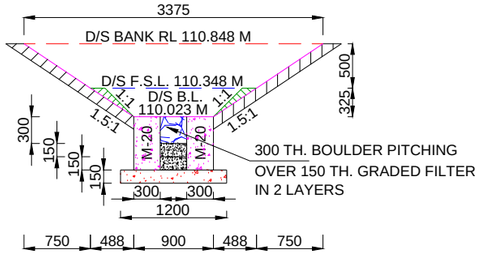
SECTION AT 1-1

(SCALE A)



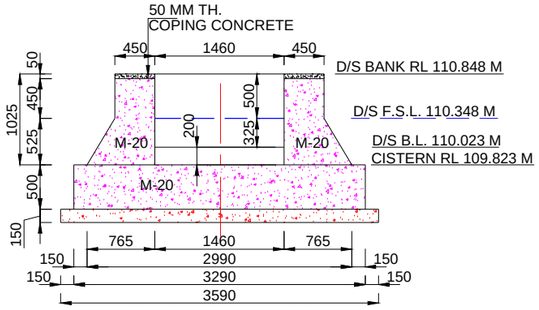
SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

(SCALE A)



SECTION AT 2-2

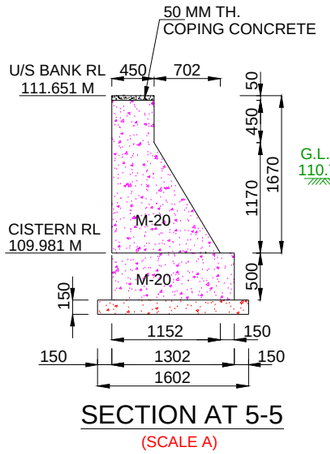
(SCALE A)

SCALE A:-



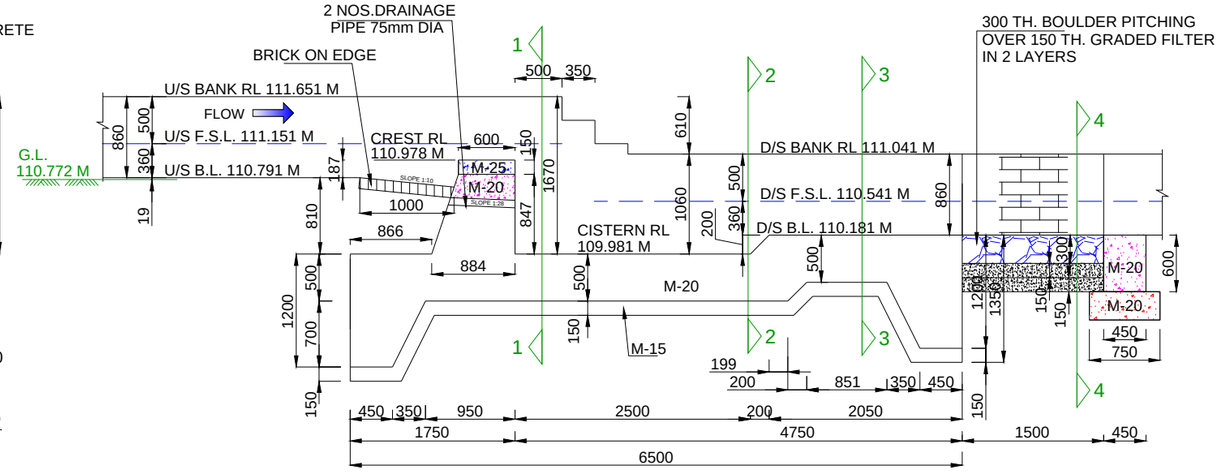
458

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.914 M HT. FALL AT KM. 2.350 OF JASOEA MR. (OFFTAKE FROM RD - 23+400 KM. (RT), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/ FALL 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



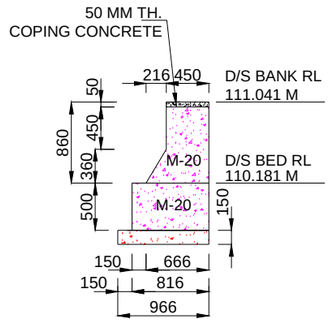
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

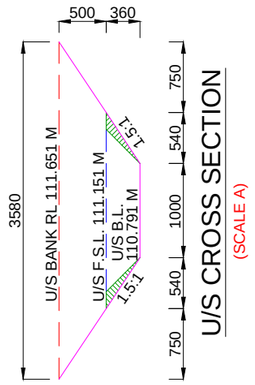
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FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

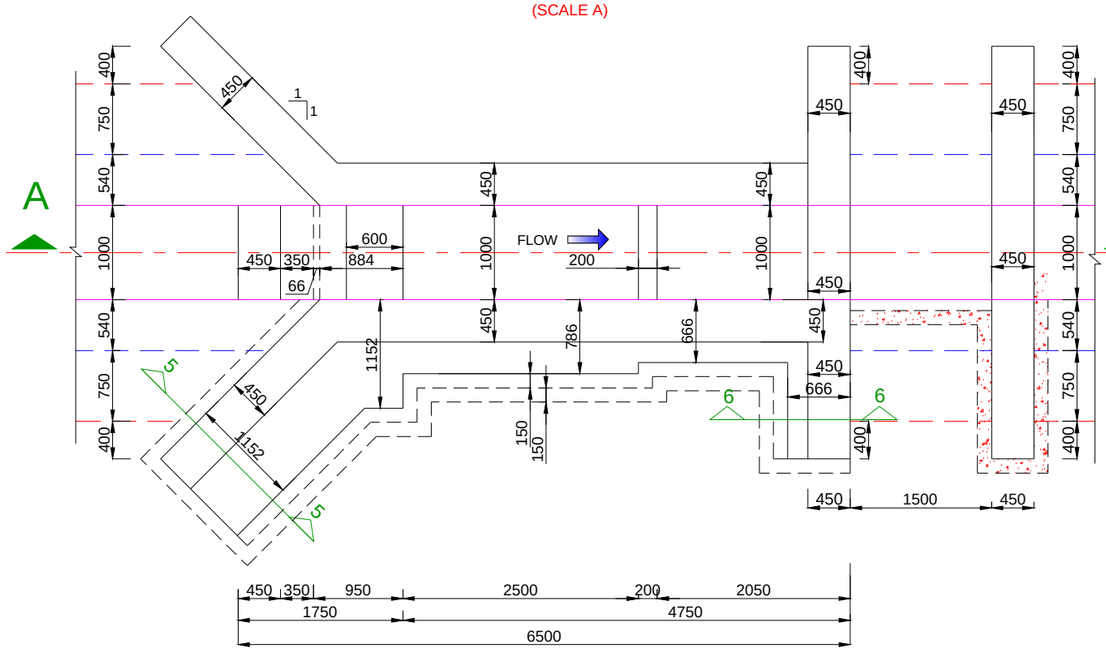
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.120	0.120	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.360	0.360	METRE
BED WIDTH	1.000	1.000	METRE
BED SLOPE	1 : 3000	1 : 3000	



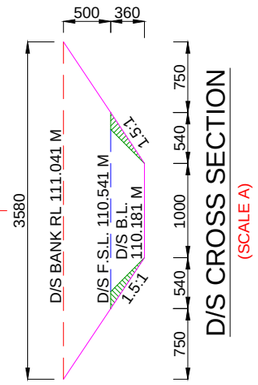
U/S CROSS SECTION

(SCALE A)



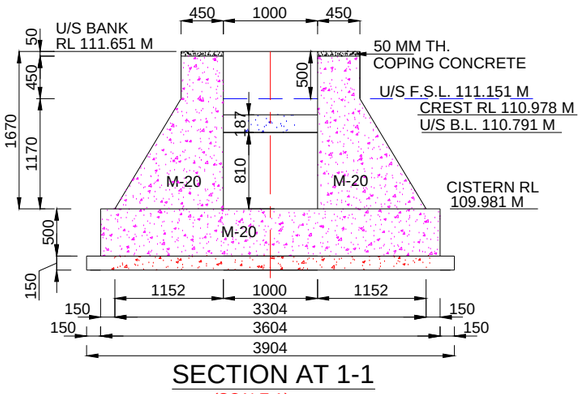
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



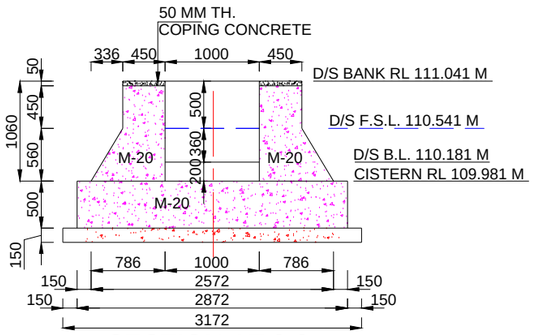
D/S CROSS SECTION

(SCALE A)



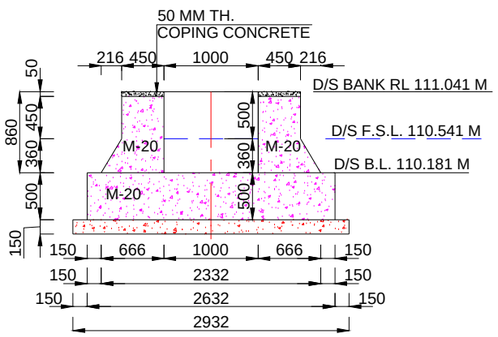
SECTION AT 1-1

(SCALE A)



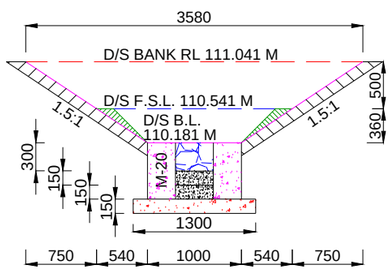
SECTION AT 2-2

(SCALE A)



SECTION AT 3-3

(SCALE A)



SECTION AT 4-4

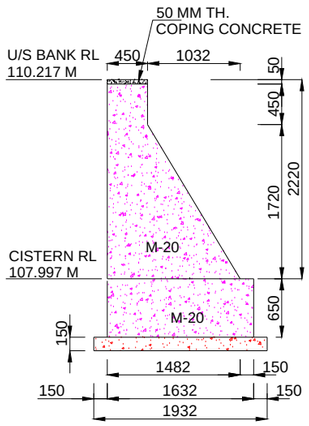
(SCALE A)

SCALE A:-

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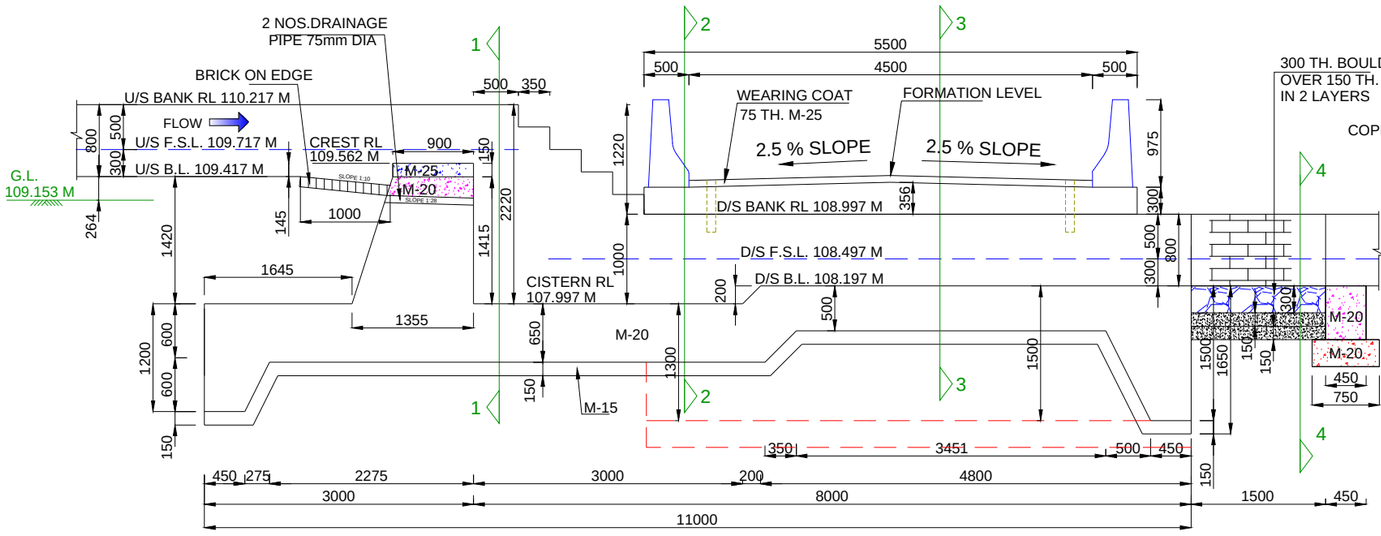
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 1.600 OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ LSEC- 1 of 1
	Drawn by:-	Checked by:- / Approved by:-

459



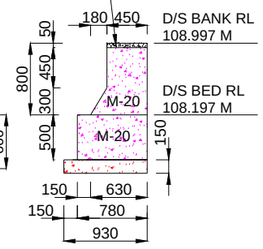
SECTION AT 5-5

(SCALE A)



SECTION A-A

(SCALE A)



SECTION AT 6-6

(SCALE A)

NOTES:-

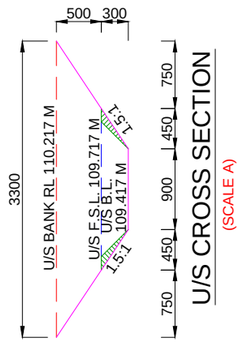
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FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20

4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

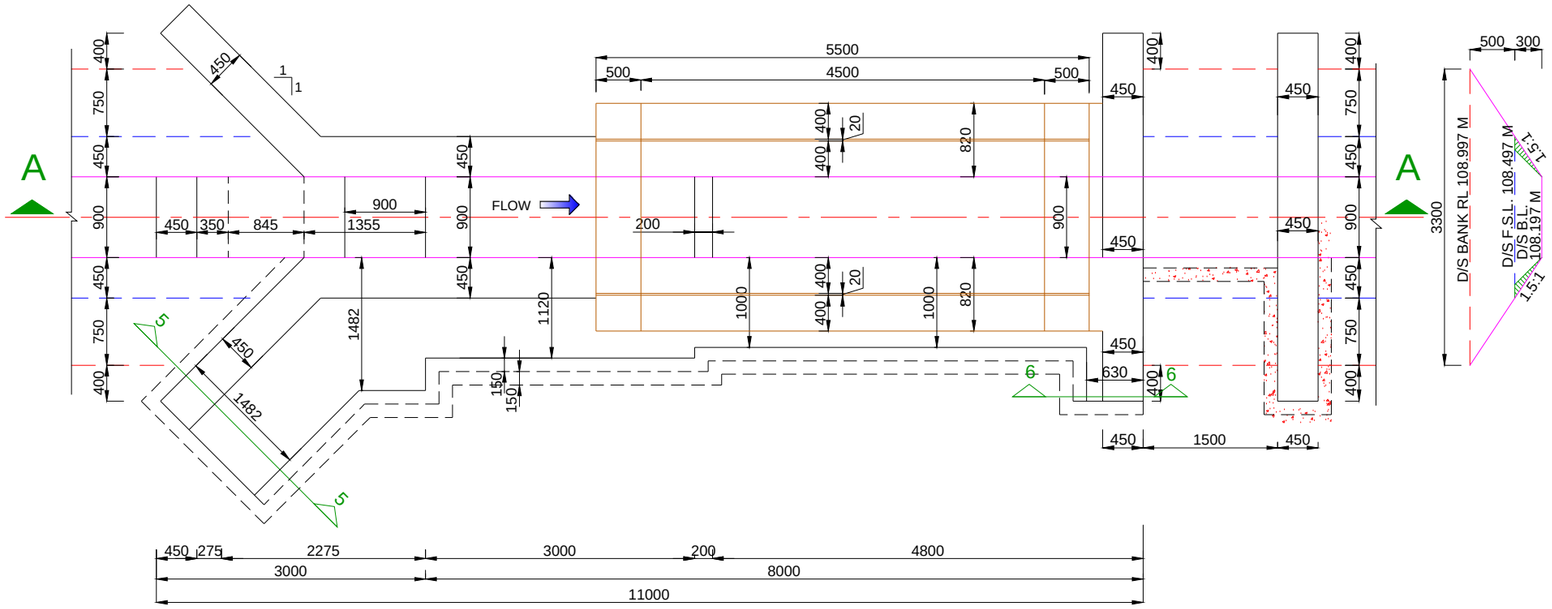
HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.080	0.080	CUMEC
VERTICAL DROP	1.220	1.220	METRE
FULL SUPPLY DEPTH	0.300	0.300	METRE
BED WIDTH	0.900	0.900	METRE
BED SLOPE	1 : 3000	1 : 3000	



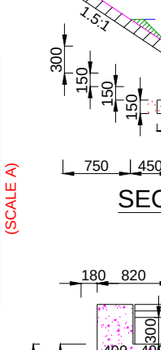
U/S CROSS SECTION

(SCALE A)



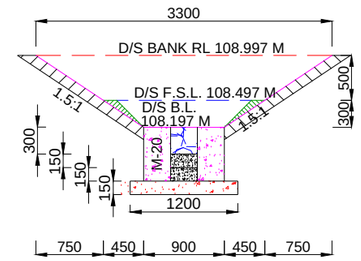
HALF TOP / HALF FOUNDATION PLAN

(SCALE A)



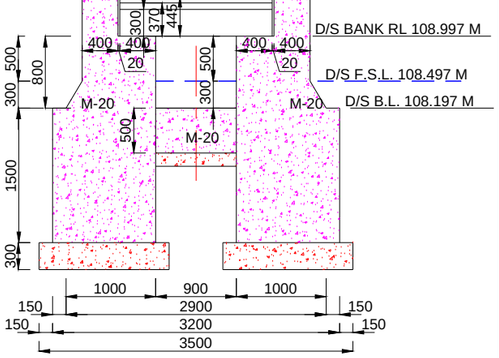
D/S CROSS SECTION

(SCALE A)



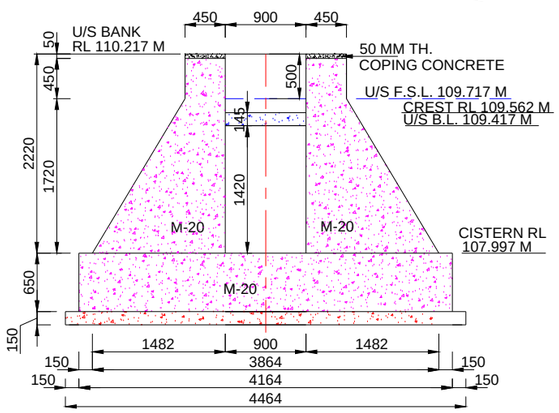
SECTION AT 4-4

(SCALE A)



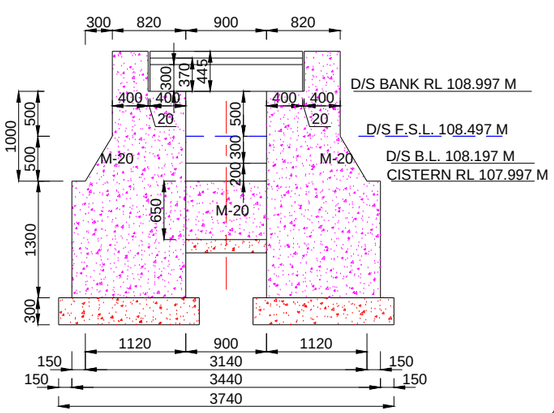
SECTION AT 3-3

(SCALE A)



SECTION AT 1-1

(SCALE A)



SECTION AT 2-2

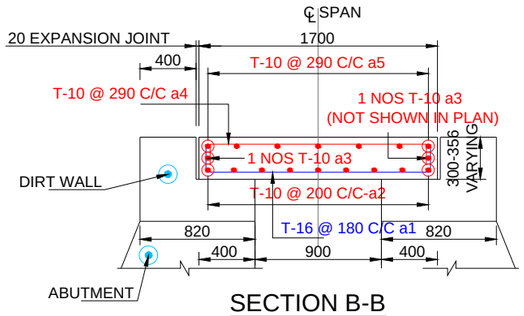
(SCALE A)

SCALE A:-

1000 0 1000 2000 3000

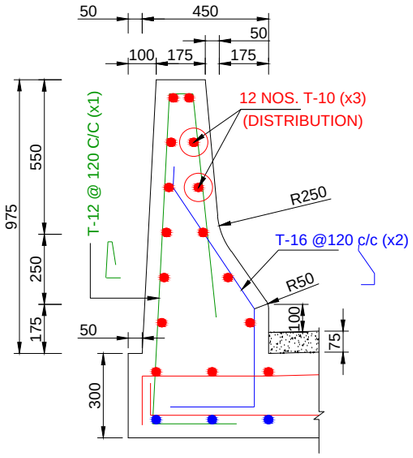
Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	SHARDA TYPE 1.220 M HT. FALL AT KM. 2.060 OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BRANCH CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-07/ LSEC- 1 of 2
	Drawn by:-	Checked by:- / Approved by:-

460



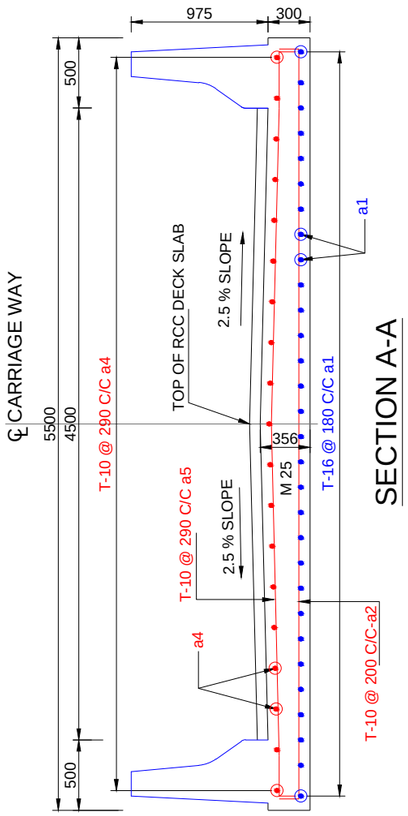
SECTION B-B

(SCALE A)

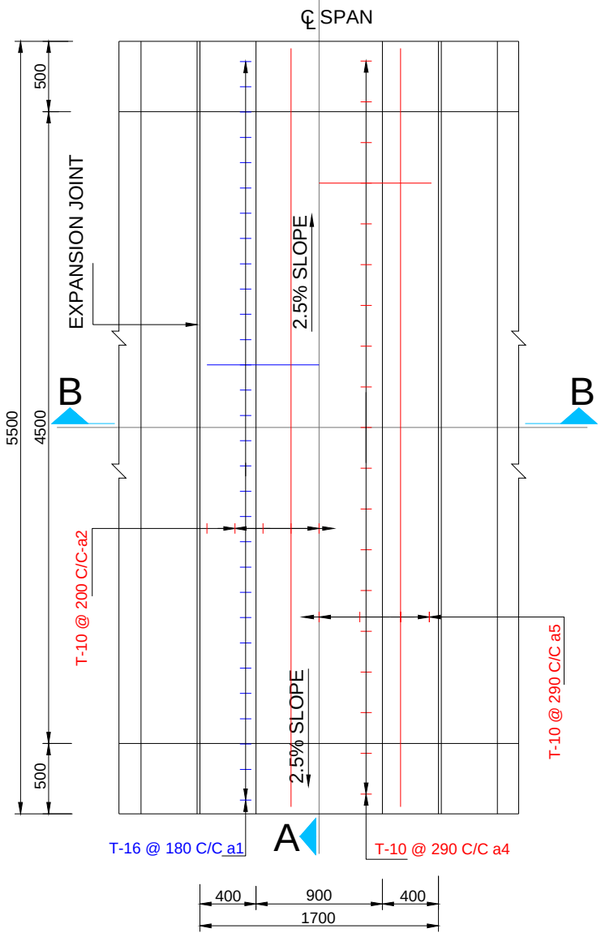


REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB

(SCALE B)



SECTION A-A



BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB

(SCALE A)

BAR BENDING SCHEDULE

S. No.	Type of bars	Shape of bars (not to scale) (Dimensions are in millimetres)	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1	R=80, 200, 1600, 200	16	180	30
2	a2	R=50, 200, 5400, 200	10	200	9
3	a3	5400	10	-	2
4	a4	1600, 200, R=40, 200	10	290	19
5	a5	450, 2250, 2250, 450, 200, 200	10	290	7
CRASH BARRIER					
1	x1	75, 1176, 950, 300	12	120	13X2
2	x2	75, 540, 350, 300	16	120	13X2
3	x3	1600	12	-	10X2

NOTES:-

1 ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.

2 THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.

3 ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

BRIDGE SLAB & PARAPET M-25

4. ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 500) COMFORMING I.S. 1786.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
6. THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHERWISE.
7. BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
8. REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
9. 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
10. APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
11. TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
12. THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
13. 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
14. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
15. THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:

DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS (fy=500N/mm²) (IS 456 CLAUSE 26.2.1)

TENSION BARS GRADE OF CONCRETE				COMPRESSION BARS GRADE OF CONCRETE			
M15	M20	M25	M30	M15	M20	M25	M30
68.00	56.60	48.50	45.30	54.40	45.30	38.80	36.30
81.60	68.00	58.30	54.40	65.30	54.40	46.60	43.50
108.80	90.60	77.70	72.50	87.00	87.00	62.10	58.00
135.90	113.30	97.10	90.60	108.80	108.80	77.70	72.50
169.90	141.60	121.40	113.30	135.90	135.90	97.10	90.60
217.50	181.30	155.40	145.00	174.00	174.00	124.30	116.00

1. THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
2. THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.

16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR IS POSSIBLE IN CASE LAPPING OF BARS BECOMES UNAVOIDABLE, MINIMUM LAP LENGTH OF REINFORCEMENT BARS SHALL BE CALCULATED AS FOLLOW WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)

LAP LENGTH = $\alpha 1$. lbnet

WHERE, $\alpha 1$ = 1.0 for p%≤25%

$\alpha 1$ = 1.15 for 25%≤p%≤33%

$\alpha 1$ = 1.4 for 33%≤p%≤50%

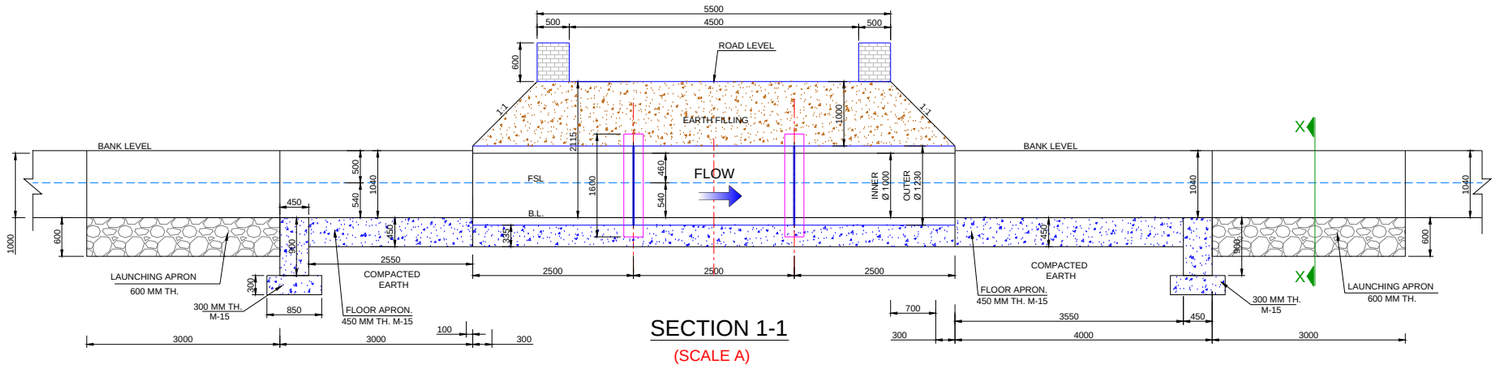
17. THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
18. THE LAP LENGTH MUST BE AT LEAST EQUAL TO DEVELOPMENT LENGTH IN NO CASE, THE LAP LENGTH SHOULD BE LESS THAN 30Ø FOR FLEXURAL AND DIRECT TENSION AND 24Ø FOR COMPRESSION.
19. LAP SPLICES SHALL BE CONSIDERED AS STAGGERED IF THE C/C DISTANCE OF SPLICES IS NOT LESS THAN 1.3 TIMES THE LAP LENGTH CALCULATED.
20. WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

SCALE A:- 400 0 400 800 1200

SCALE B:- 200 0 200 400 600

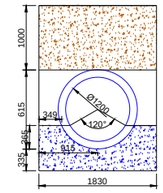
461

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 2.060 OF SENDHOKHAP MR. (OFFTAKE FROM RD - 25+470 KM. (R), RIUR BR. CANAL)
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04/ FALL 2 of 2
	Drawn by:-	Checked by:- / Approved by:-



SECTION 1-1

(SCALE A)



DETAILS OF JOINT OF PIPE

(SCALE B)

DESIGN DATA:-

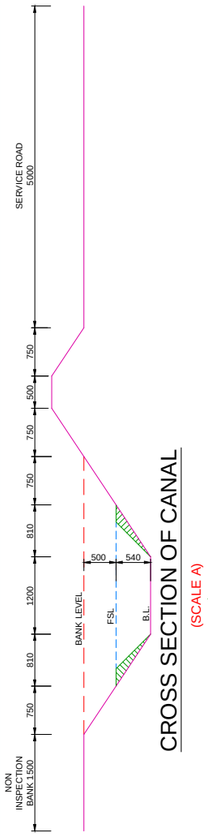
DISCHARGE	0.280 CUMEC
BED LEVEL	126.341 M
BED WIDTH	1.200 M
WATER DEPTH	0.540 M
FREE BOARD	0.500 M
CARRIAGE WAY	5.500 M
NO. OF PIPE	1 NOS.
SIDE SLOPE	1 IN 1
INTERNAL DIA OF PIPE	1.000 M

NOTES :-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE
   TRANSITION WALL M-20
   BASE CONCRETE & CURTAIN WALL M-15

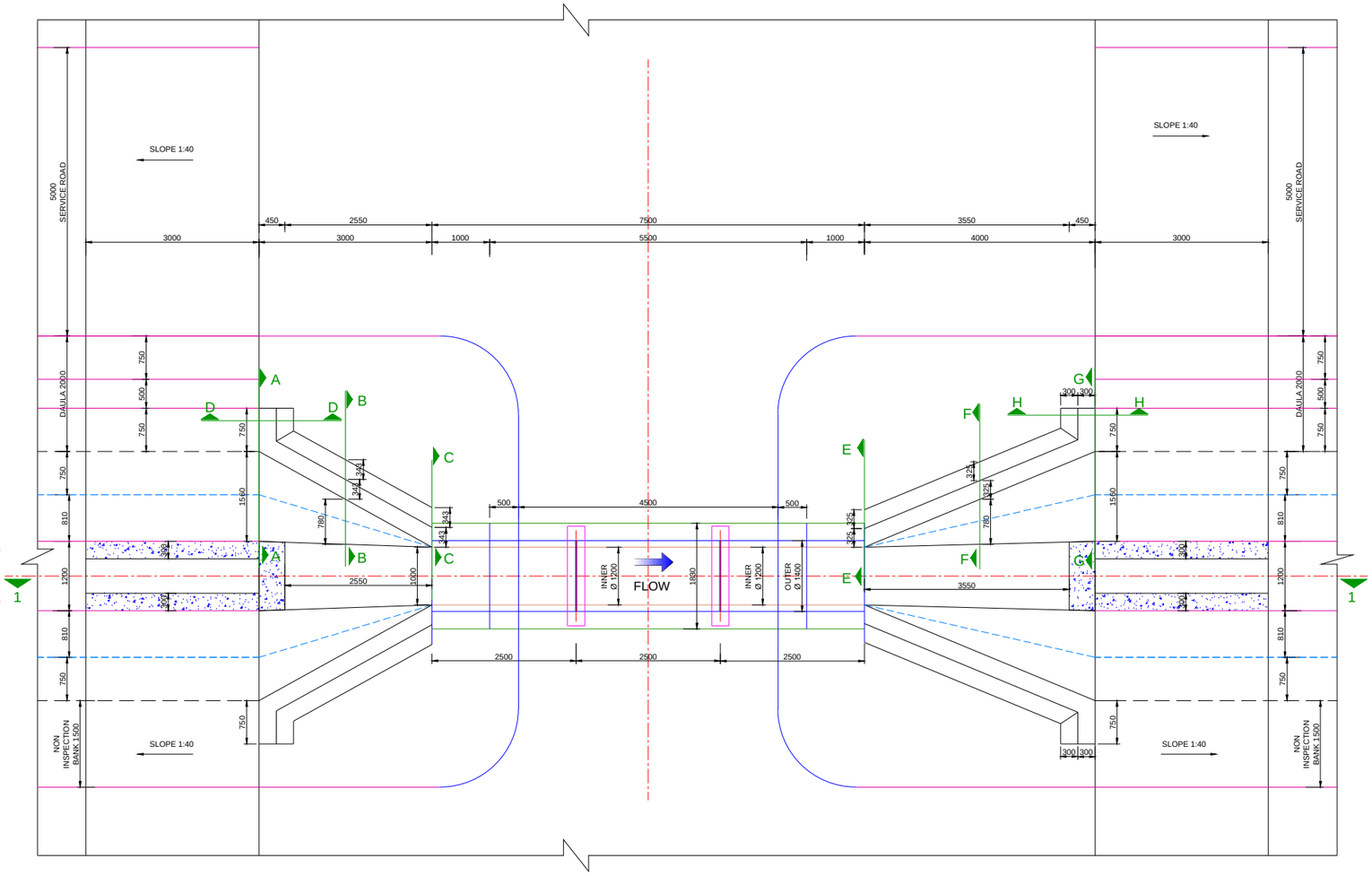
TRANSITIONS WALL

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. WEEP HOLES WITH A DIAMETER OF 80MM, SPACED AT 1500MM IN A STAGGERED ARRANGEMENT, SHALL BE PROVIDED IN THE TRANSITION WALL WITH A 1:20 SLOPE TOWARDS THE CANAL TO ENSURE PROPER DRAINAGE.
4. SKIN REINFORCEMENT OF 12 Ø @250 MM C/C FOR TEMPERATURE STRESSES SHALL BE PROVIDED IN TRANSITIONS WALL.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.



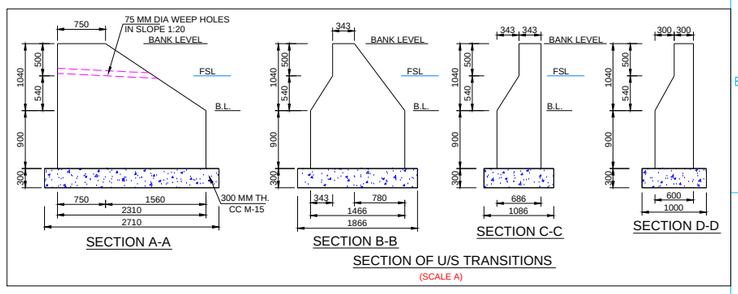
CROSS SECTION OF CANAL

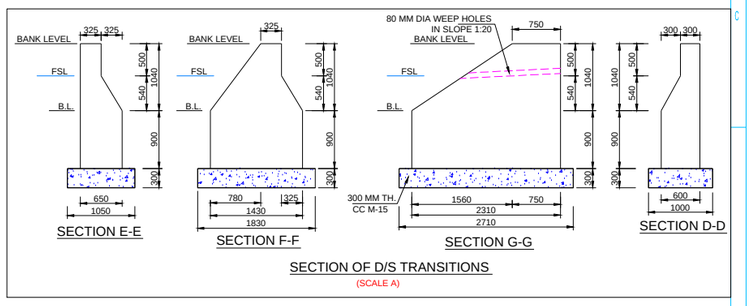
(SCALE A)

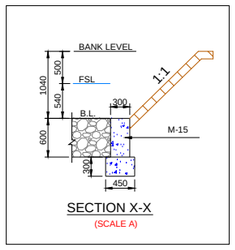


LAYOUT PLAN

(SCALE A)







SCALE A:-

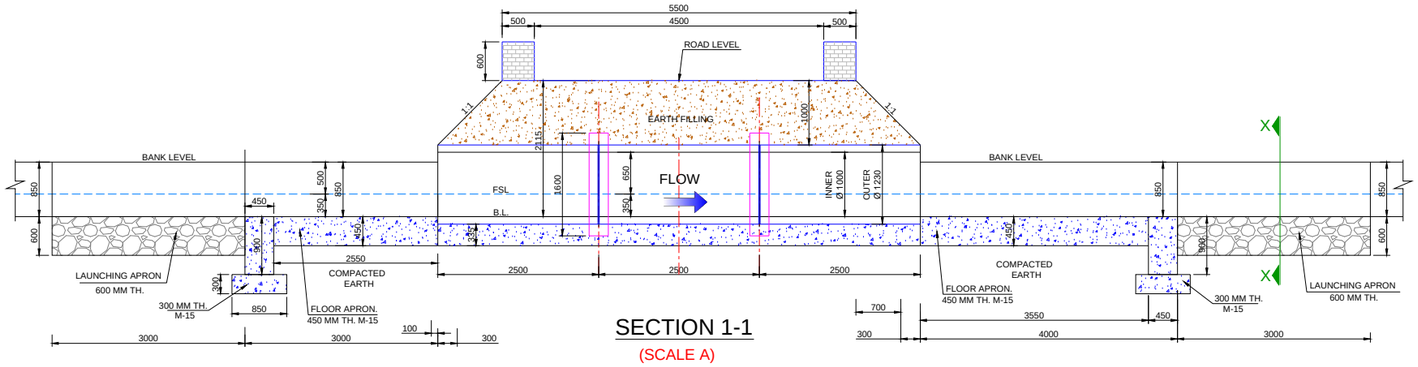
SCALE B:-

462

Prepared by :-

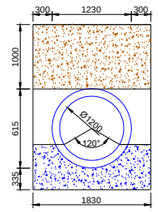
WAPCOS LTD.

Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	GENERAL ARRANGEMENT DRAWING OF PIPE CULVERT AT KM 1.030 OF TETRIA MR.
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/PIPE BRG. 1 of 1
Drawn by:-	Checked by:- Approved by:-



SECTION 1-1

(SCALE A)



DETAILS OF JOINT OF PIPE

(SCALE B)

DESIGN DATA:-

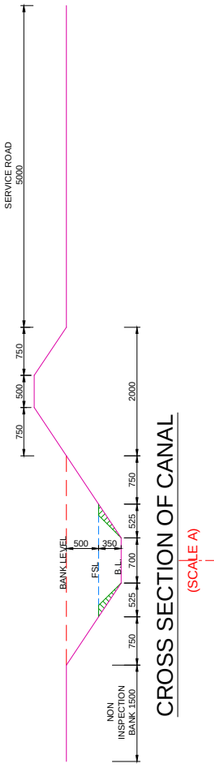
DISCHARGE	0.080 CUMEC
BED LEVEL	122.977 M
BED WIDTH	0.700 M
WATER DEPTH	0.350 M
FREE BOARD	0.500 M
CARRIAGE WAY	5.500 M
NO. OF PIPE	1 NOS.
SIDE SLOPE	1 IN 1
INTERNAL DIA OF PIPE	1.000 M

NOTES :-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE
   TRANSITION WALL M-20
   BASE CONCRETE & CURTAIN WALL M-15

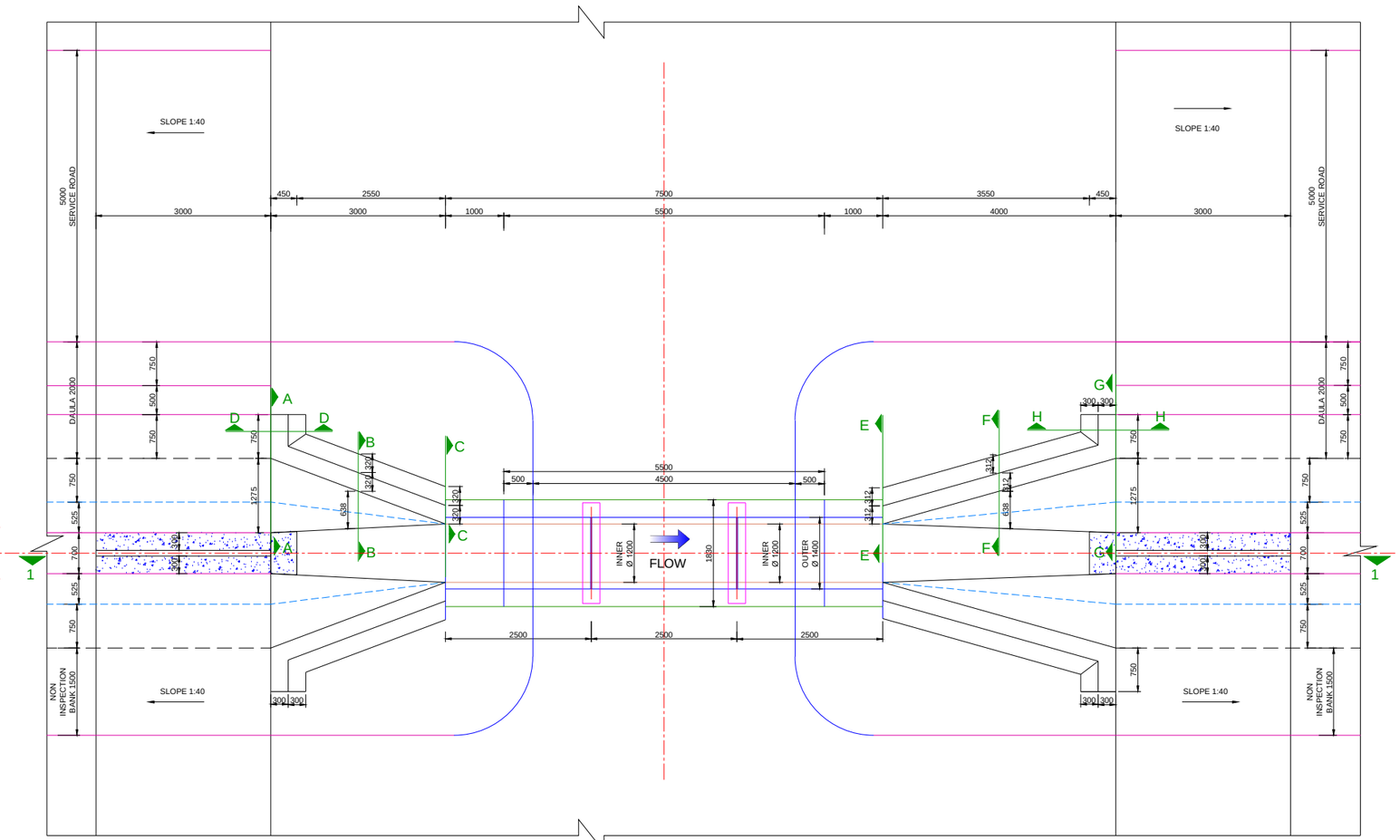
TRANSITIONS WALL

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. WEEP HOLES WITH A DIAMETER OF 80MM, SPACED AT 1500MM IN A STAGGERED ARRANGEMENT, SHALL BE PROVIDED IN THE TRANSITION WALL WITH A 1:20 SLOPE TOWARDS THE CANAL TO ENSURE PROPER DRAINAGE.
4. SKIN REINFORCEMENT OF 12 Ø @250 MM C/C FOR TEMPERATURE STRESSES SHALL BE PROVIDED IN TRANSITIONS WALL.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.



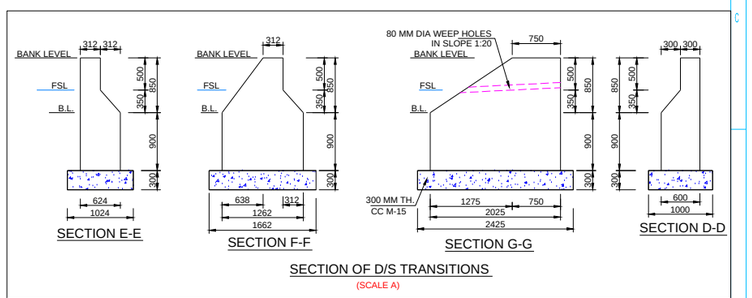
CROSS SECTION OF CANAL

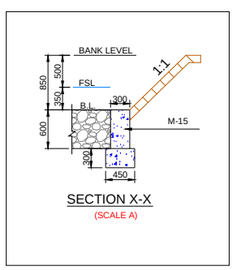
(SCALE A)



LAYOUT PLAN

(SCALE A)





SECTION X-X

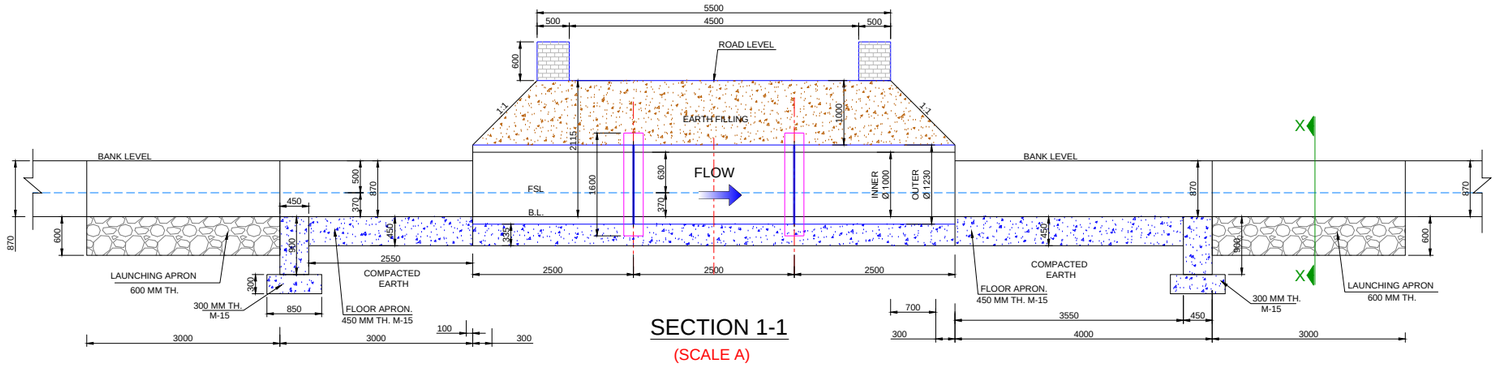
(SCALE A)

SCALE A:- 500 0 500 1000 1500

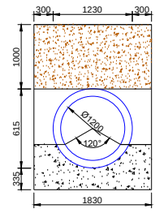
SCALE B:- 250 0 250 500 750

463

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	GENERAL ARRANGEMENT DRAWING OF PIPE CULVERT AT KM 2.890 OF TETRIA MR.
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-03-01/PIPE BRG. 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION 1-1
(SCALE A)



DETAILS OF JOINT OF PIPE
(SCALE B)

DESIGN DATA:-

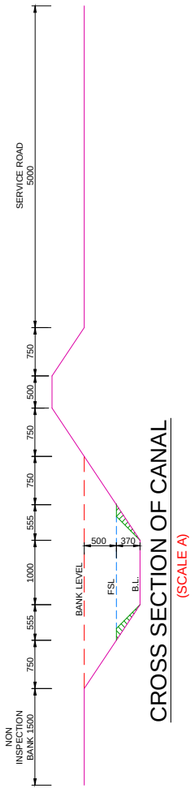
DISCHARGE	0.110 CUMEC
BED LEVEL	129.526 M
BED WIDTH	1.000 M
WATER DEPTH	0.370 M
FREE BOARD	0.500 M
CARRIAGE WAY	5.500 M
NO. OF PIPE	1 NOS.
SIDE SLOPE	1 IN 1
INTERNAL DIA OF PIPE	1.000 M

NOTES :-

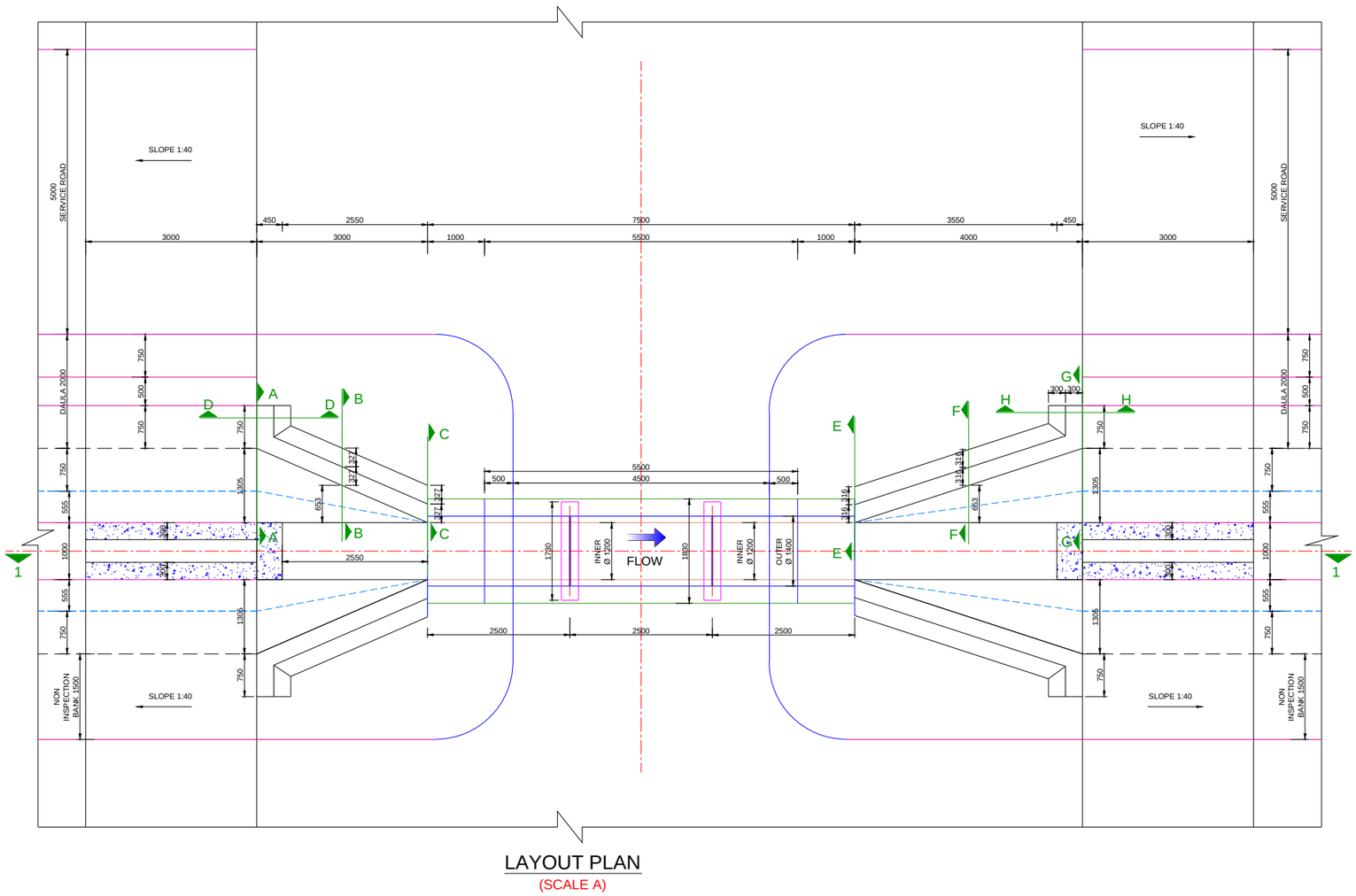
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
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3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE
   TRANSITION WALL M-20
   BASE CONCRETE & CURTAIN WALL M-15

TRANSITIONS WALL

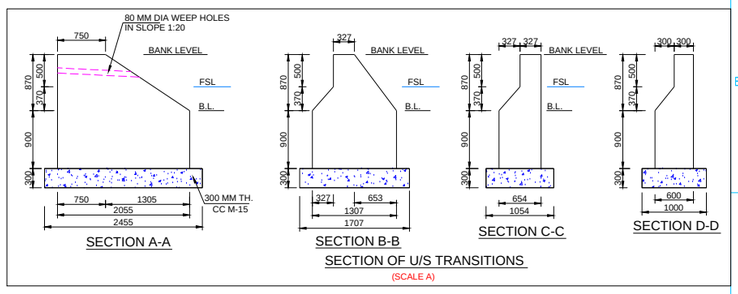
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. WEEP HOLES WITH A DIAMETER OF 80MM, SPACED AT 1500MM IN A STAGGERED ARRANGEMENT, SHALL BE PROVIDED IN THE TRANSITION WALL WITH A 1:20 SLOPE TOWARDS THE CANAL TO ENSURE PROPER DRAINAGE.
4. SKIN REINFORCEMENT OF 12 Ø @250 MM C/C FOR TEMPERATURE STRESSES SHALL BE PROVIDED IN TRANSITIONS WALL.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.

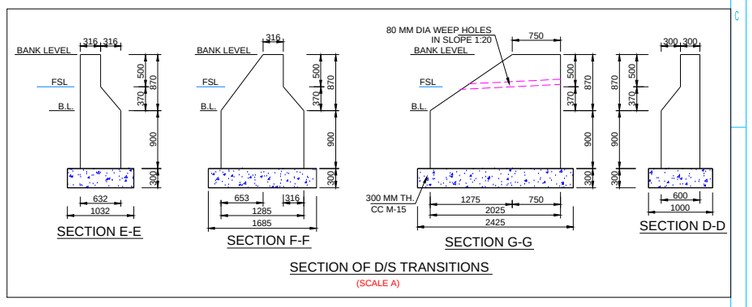


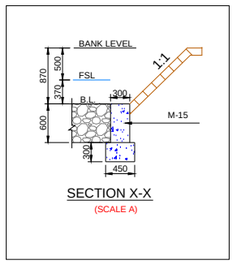
CROSS SECTION OF CANAL
(SCALE A)



LAYOUT PLAN
(SCALE A)







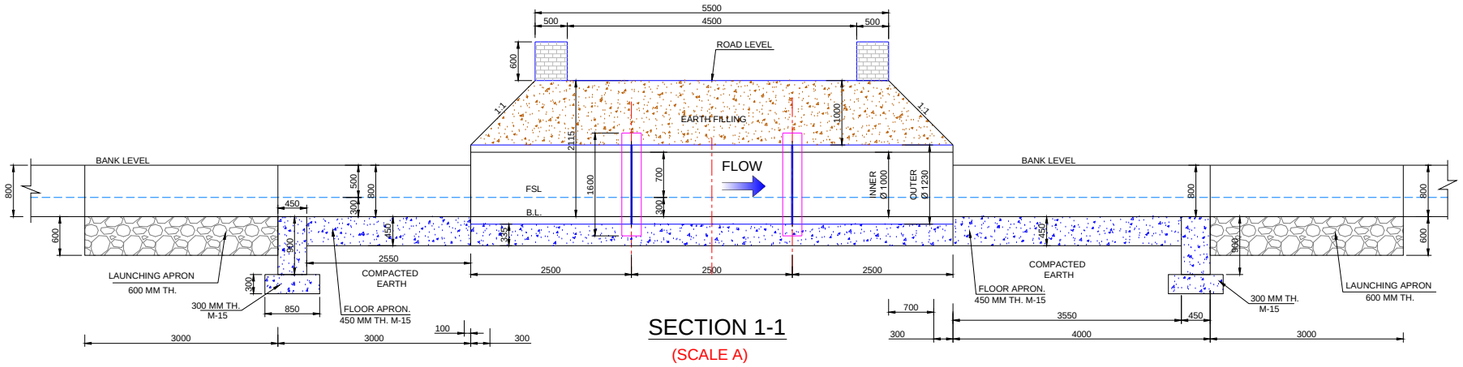
SECTION X-X
(SCALE A)

SCALE A:- 0 500 1000 1500

SCALE B:- 250 0 250 500 750

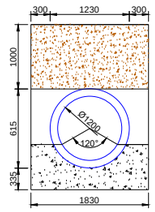
464

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	GENERAL ARRANGEMENT DRAWING OF PIPE CULVERT AT KM 0.635 OF KARMARI MR.
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/PIPE BRG. 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION 1-1

(SCALE A)



DETAILS OF JOINT OF PIPE

(SCALE B)

DESIGN DATA:-

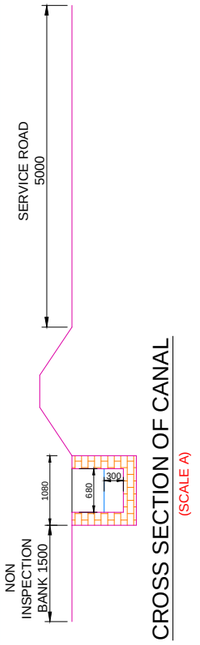
DISCHARGE	0.040 CUMEC
BED LEVEL	128.241 M
BED WIDTH	0.680 M
WATER DEPTH	0.300 M
FREE BOARD	0.500 M
CARRIAGE WAY	5.500 M
NO. OF PIPE	1 NOS.
SIDE SLOPE	1 IN 1
INTERNAL DIA OF PIPE	1.000 M

NOTES :-

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE
   TRANSITION WALL M-20
   BASE CONCRETE & CURTAIN WALL M-15

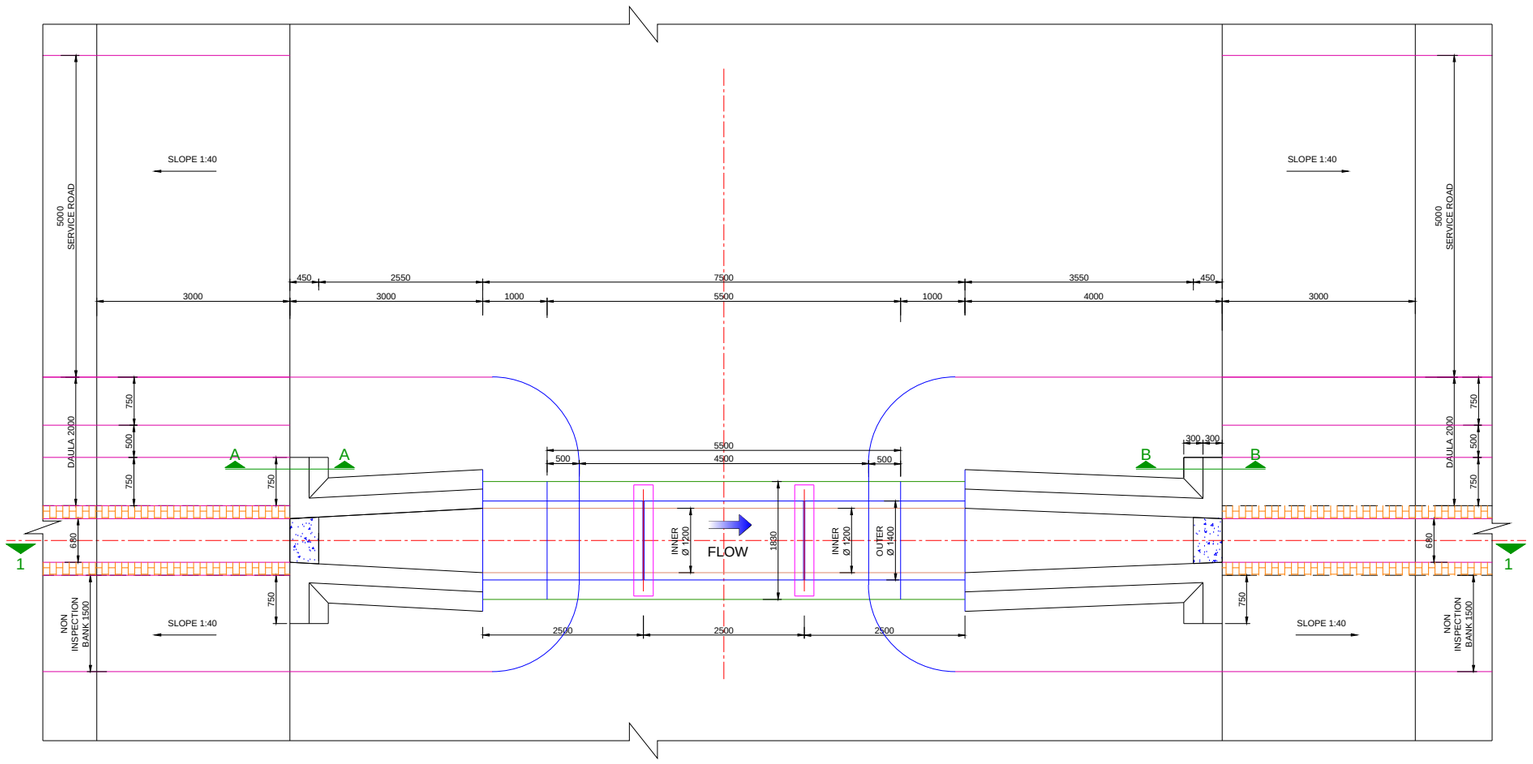
TRANSITIONS WALL

1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. WEEP HOLES WITH A DIAMETER OF 80MM, SPACED AT 1500MM IN A STAGGERED ARRANGEMENT, SHALL BE PROVIDED IN THE TRANSITION WALL WITH A 1:20 SLOPE TOWARDS THE CANAL TO ENSURE PROPER DRAINAGE.
4. SKIN REINFORCEMENT OF 12 Ø @250 MM C/C FOR TEMPERATURE STRESSES SHALL BE PROVIDED IN TRANSITIONS WALL.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.



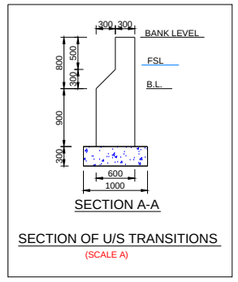
CROSS SECTION OF CANAL

(SCALE A)



LAYOUT PLAN

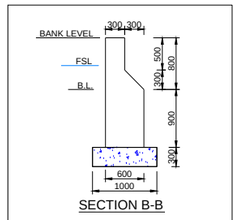
(SCALE A)



SECTION A-A

SECTION OF U/S TRANSITIONS

(SCALE A)



SECTION B-B

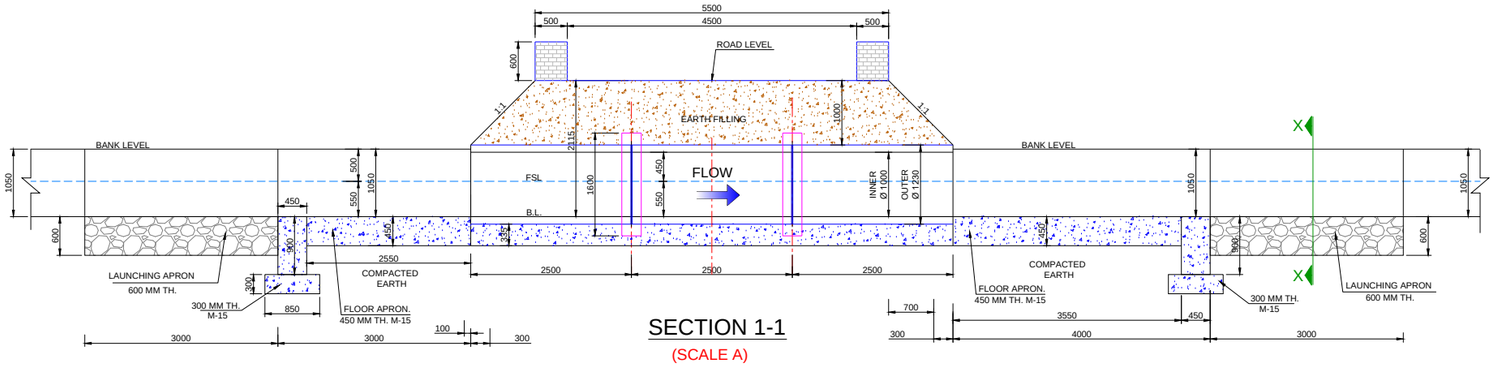
SECTION OF D/S TRANSITIONS

(SCALE A)

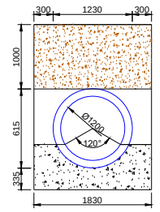
SCALE A:-

SCALE B:-

Prepared by :-		
WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	GENERAL ARRANGEMENT DRAWING OF PIPE CULVERT AT KM 1.900 OF KARMARI MR.
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-04/PIPE BRG. 1 of 1
	Drawn by:-	Checked by:- / Approved by:-



SECTION 1-1
(SCALE A)



DETAILS OF JOINT OF PIPE
(SCALE B)

DESIGN DATA:-

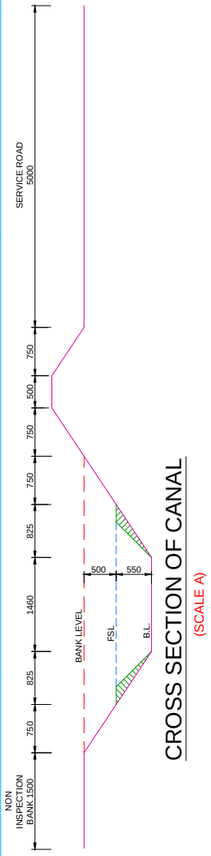
DISCHARGE	0.320 CUMEC
BED LEVEL	116.760 M
BED WIDTH	1.460 M
WATER DEPTH	0.550 M
FREE BOARD	0.500 M
CARRIAGE WAY	5.500 M
NO. OF PIPE	1 NOS.
SIDE SLOPE	1 IN 1
INTERNAL DIA OF PIPE	1.000 M

NOTES :-

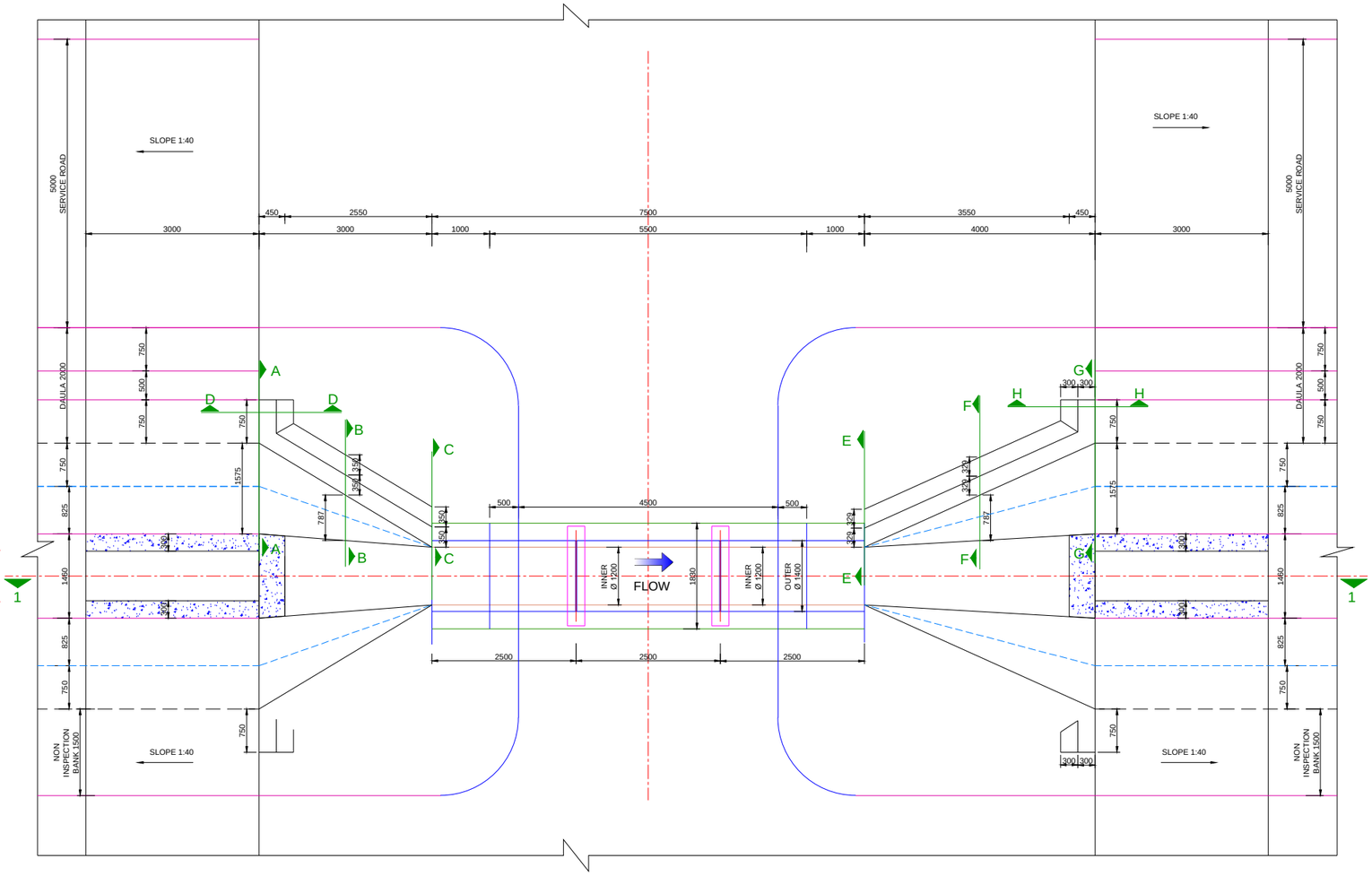
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE
   TRANSITION WALL M-20
   BASE CONCRETE & CURTAIN WALL M-15

TRANSITIONS WALL

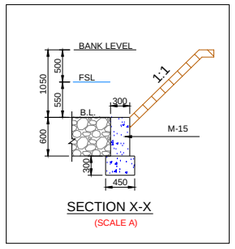
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. WEEP HOLES WITH A DIAMETER OF 80MM, SPACED AT 1500MM IN A STAGGERED ARRANGEMENT, SHALL BE PROVIDED IN THE TRANSITION WALL WITH A 1:20 SLOPE TOWARDS THE CANAL TO ENSURE PROPER DRAINAGE.
4. SKIN REINFORCEMENT OF 12 Ø @250 MM C/C FOR TEMPERATURE STRESSES SHALL BE PROVIDED IN TRANSITIONS WALL.
5. MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.



CROSS SECTION OF CANAL
(SCALE A)

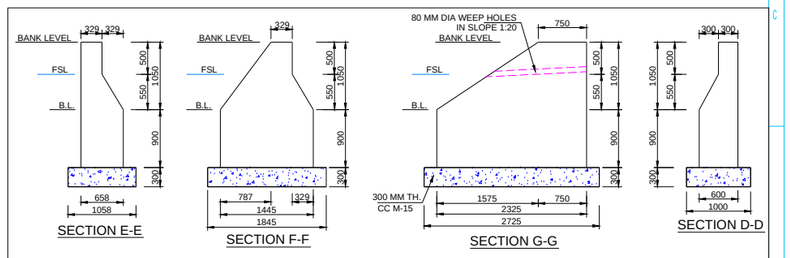


LAYOUT PLAN
(SCALE A)



SECTION X-X
(SCALE A)

SECTION OF U/S TRANSITIONS
(SCALE A)



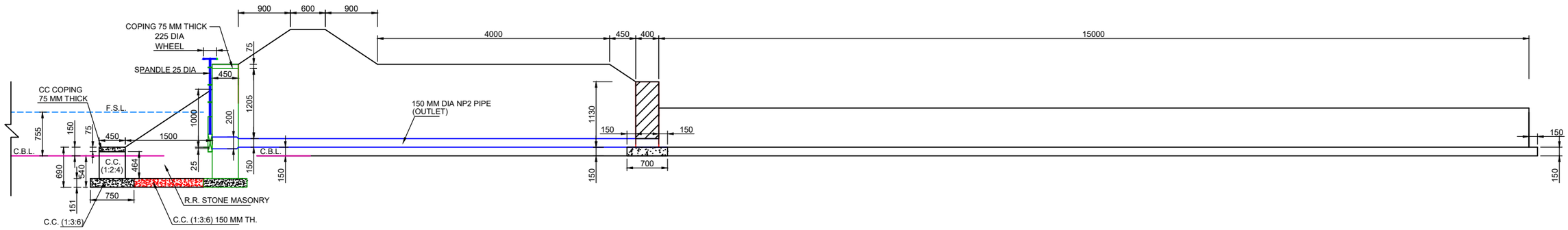
SECTION OF D/S TRANSITIONS
(SCALE A)

SCALE A:- 0 500 500 1000 1500

SCALE B:- 250 0 250 500 750

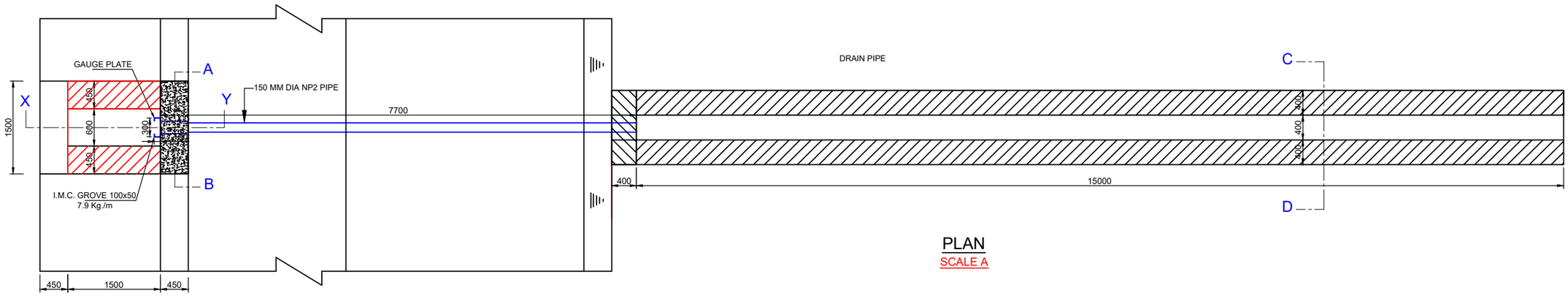
466

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	GENERAL ARRANGEMENT DRAWING OF PIPE CULVERT AT KM 0.110 OF JASOEA MR.
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-04-06/PIPE BRG. 1 of 1
	Drawn by:-	Checked by:- / Approved by:-

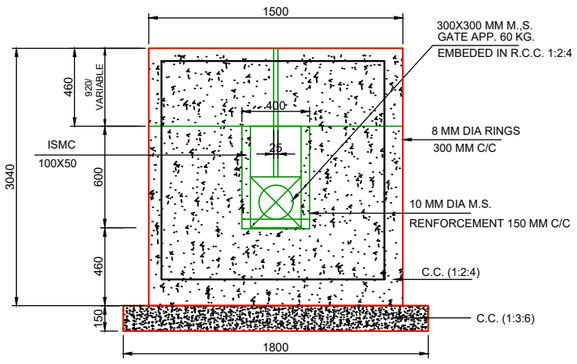


SECTION X-Y
SCALE A

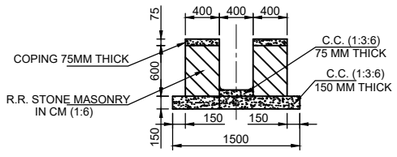
ELEVATION
SCALE A



PLAN
SCALE A



SECTION A-B
SCALE B



SECTION C-D
SCALE A

NOTES

1. ALL DIMENSIONS ARE IN MM EXCEPT LEVELS IN METRES UNLESS OTHERWISE SPECIFIED. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED. NO DIMENSION SHALL BE SCALED OFF.
2. ALL MASONRY WORKS SHALL BE DONE AS PER SPECIFICATION OF GOVT. OF JHARKHAND
3. THIS DWG. IS FOR OUTLET PIPE OF 150 MM DIA EMBEDED IN MASONRY.
4. 300X300 MM SIZE GATE SHALL BE FIXED IN ISMC. 100X50 FRAME.
5. THE GATE SHALL BE LIFTED THROUGH SPANDLE, THIS SPANDLE SHALL BE KEY LOCKED TO AVOID UNNECCESSARY OPERATION BY UN-AUTHORIZED PERSON.
6. THE 600 MM DIA DRAIN PIPE SHALL BE PROVIDED BELOW GULE DRAIN IF REQUIRED AT THE LOCATION.

SCALE A:- 0 1000 2000 3000 4000MM

SCALE B:- 0 2000 4000 6000 8000MM

Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	TYPICAL OUTLET DRAWING
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ OUTLET 1 of 1
	Drawn by:-	Checked by:- / Approved by:-