

TENDER DOCUMENT

FOR

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

Estimated Cost (Rs. 64.12 Crores)

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

TENDER DRAWINGS

Issued to M/s



(भारत सरकार का उपक्रम-जल शक्ति मंत्रालय)
(A Government of India Undertaking-Ministry of Jal Shakti)

NORTH KOEL RESERVOIR PROJECT

FEBRUARY 2025

Completion of Balance
Works of North Koel
Reservoir Project

DRAWING REPORT – KARMA DY.
(OFFTAKING FROM RIGHT MAIN CANAL AT
56.77 KM)



WAPCOS LIMITED

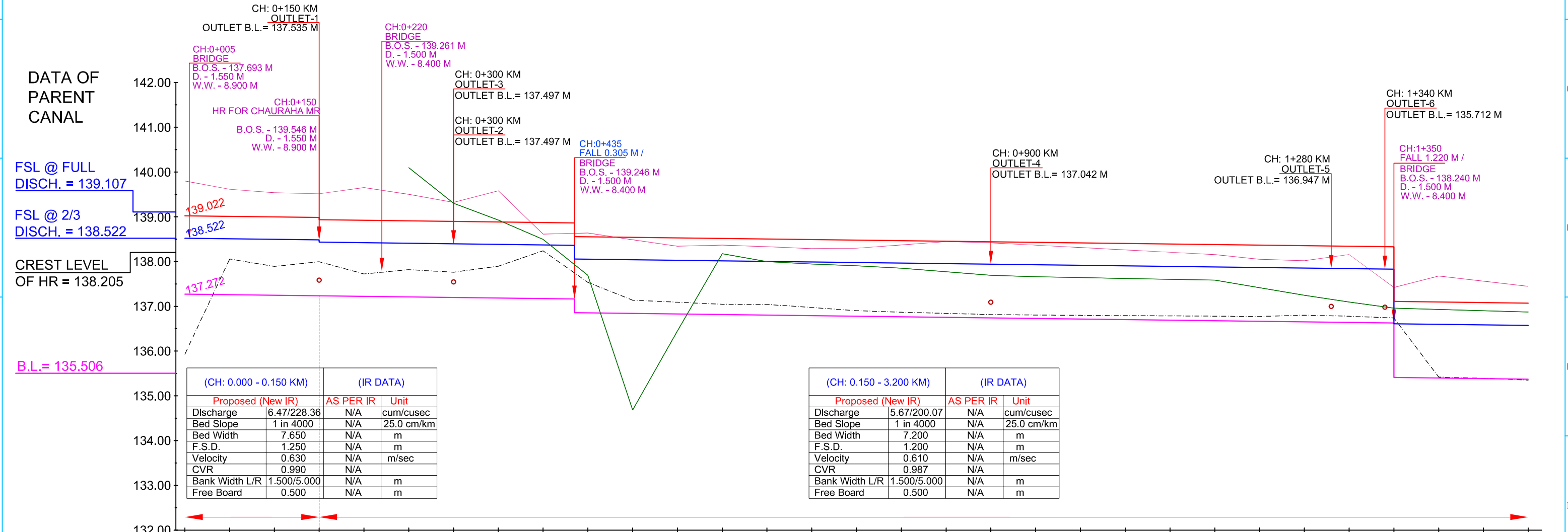
(GOVT. OF INDIA UNDERTAKING)
76- C SECTOR-18 INDUSTRIAL AREA,
GURUGRAM-122015 (HARYANA)



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L-SECTION

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 0+000 TO 1+500



Chainage IN KM	DESIGN DATA			EXISTING DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL	NSL
	139.022	138.522	137.272	135.930	139.801	
	139.010	138.510	137.260	138.057	139.616	
0+100	138.997	138.497	137.247	137.891	139.537	
0+150	138.985	138.485	137.235	137.996	139.514	
0+200	138.922	138.422	137.222	137.723	139.654	
0+250	138.910	138.410	137.210	137.819	139.502	140.097
0+300	138.897	138.397	137.197	137.762	139.321	139.303
0+350	138.885	138.385	137.185	137.896	139.581	138.927
0+400	138.872	138.372	137.172	138.242	138.613	138.496
0+450	138.863	138.363	137.163	138.363	138.639	137.692
0+500	138.842	138.042	136.842	137.137	138.488	134.685
0+550	138.530	138.030	136.830	137.091	138.342	136.453
0+600	138.517	138.017	136.817	137.045	138.369	138.174
0+650	138.505	138.005	136.805	137.041	138.332	137.999
0+700	138.492	137.992	136.792	136.975	138.288	137.946
0+750	138.480	137.980	136.780	136.903	138.298	137.906
0+800	138.467	137.967	136.767	136.868	138.371	137.850
0+850	138.455	137.955	136.755	136.842	138.445	137.772
0+900	138.442	137.942	136.742	136.816	138.419	137.694
0+950	138.430	137.930	136.730	136.805	138.366	137.660
1+000	138.417	137.917	136.717	136.799	138.313	137.641
1+050	138.405	137.905	136.705	136.793	138.260	137.622
1+100	138.392	137.892	136.692	136.786	138.208	137.603
1+150	138.380	137.880	136.680	136.780	138.155	137.584
1+200	138.367	137.867	136.667	136.773	138.050	137.416
1+250	138.355	137.855	136.655	136.802	138.020	137.247
1+300	138.342	137.842	136.642	136.779	138.158	137.096
1+350	138.330	137.830	136.630	136.740	137.422	136.959
1+400	137.097	136.597	135.397	135.420	137.677	136.929
1+450	137.085	136.585	135.385	135.391	137.562	136.900
1+500	137.072	136.572	135.372	135.351	137.447	136.871

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

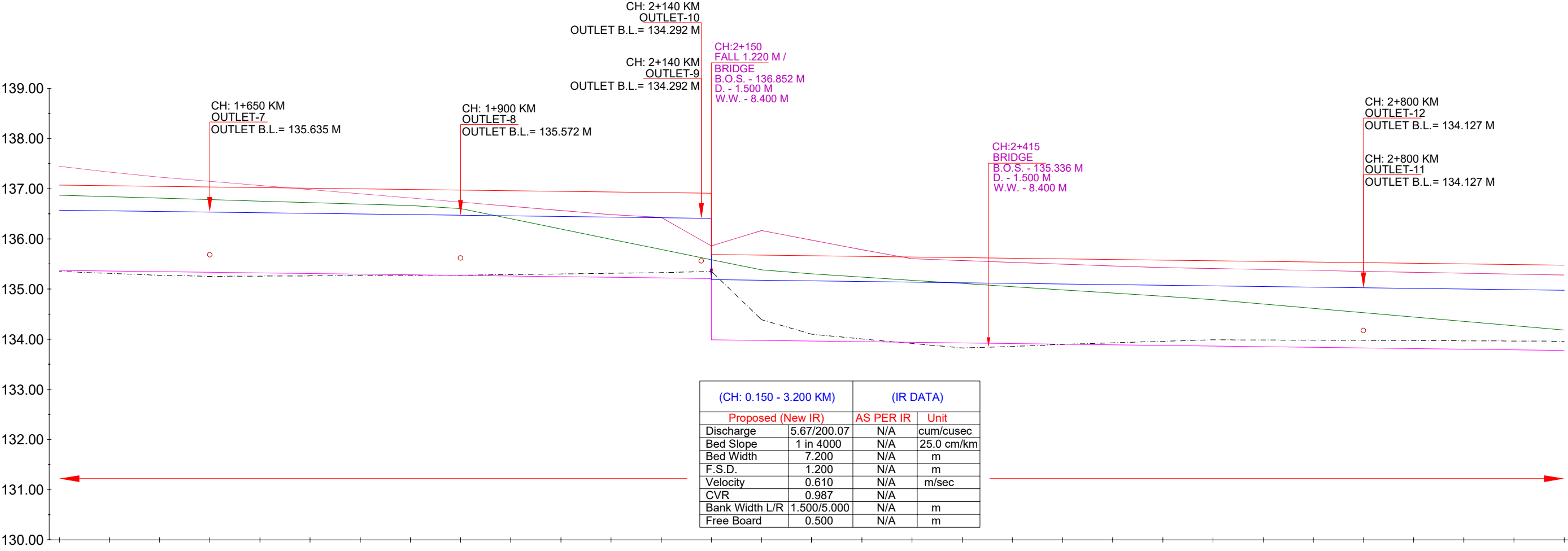
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

01 of 16

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 1+500 TO 3+000



Chainage	EXISTING DATA		DESIGN DATA	
	TOP OF BANK LEVEL		F.S.L.	
	Proposed Bed Level		Proposed Bed Level	
	NSL		NSL	
1+500	136.871	137.447	135.372	137.072
1+550	136.841	137.332	135.360	137.060
1+600	136.812	137.232	135.347	137.047
1+650	136.783	137.149	135.335	137.035
1+700	136.753	137.066	135.322	137.022
1+750	136.724	136.983	135.310	137.010
1+800	136.695	136.900	135.297	136.997
1+850	136.665	136.817	135.285	136.985
1+900	136.604	136.734	135.272	136.972
1+950	136.401	136.651	135.260	136.960
2+000	136.197	136.568	135.247	136.947
2+050	135.993	136.485	135.235	136.935
2+100	135.790	136.430	135.222	136.922
2+150	135.583	135.861	135.210	136.910
2+200	135.383	136.165	133.977	135.677
2+250	135.302	135.976	133.965	135.665
2+300	135.238	135.786	133.952	135.652
2+350	135.175	135.606	133.940	135.640
2+400	135.111	135.569	133.927	135.627
2+450	135.048	135.533	133.915	135.615
2+500	134.984	135.497	133.902	135.602
2+550	134.920	135.460	133.890	135.590
2+600	134.856	135.427	133.877	135.577
2+650	134.788	135.409	133.865	135.565
2+700	134.701	135.390	133.852	135.552
2+750	134.614	135.372	133.840	135.540
2+800	134.528	135.353	133.827	135.527
2+850	134.441	135.334	133.815	135.515
2+900	134.355	135.316	133.802	135.502
2+950	134.268	135.298	133.790	135.490
3+000	134.182	135.279	133.777	135.477

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

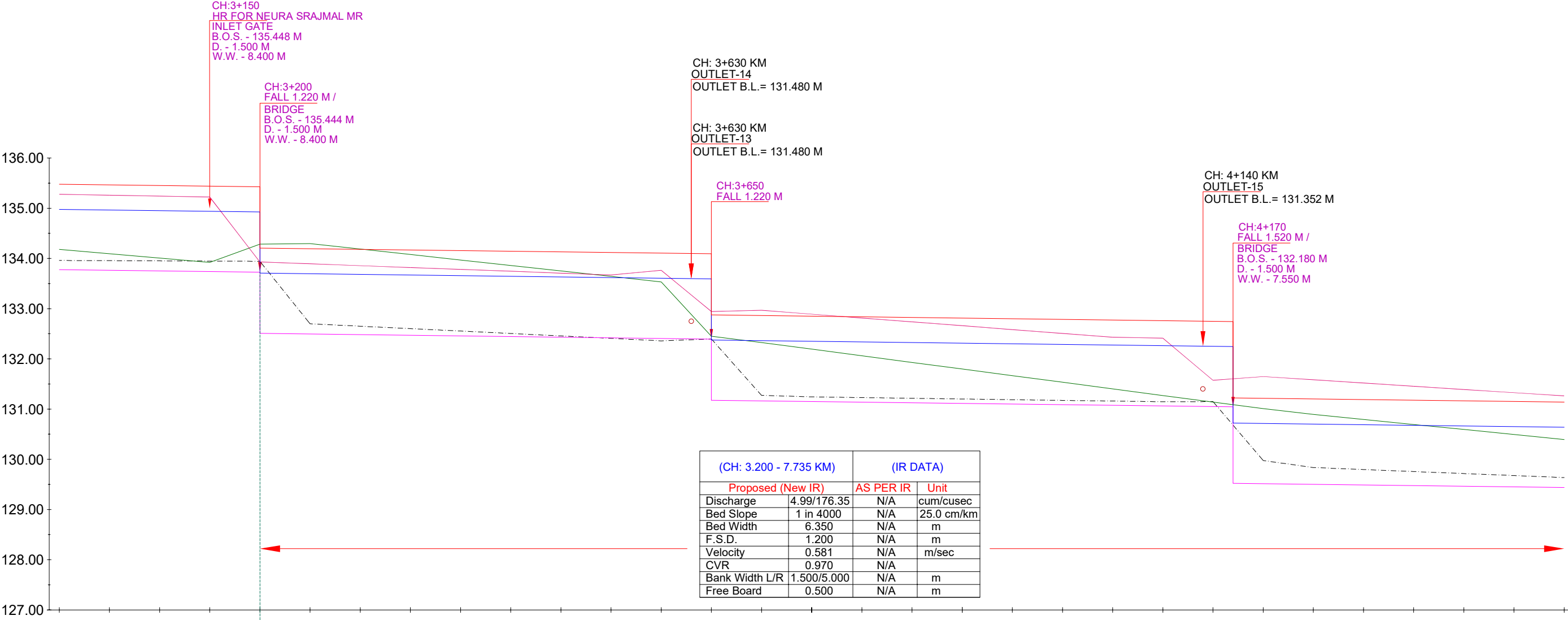
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NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 3+000 TO 4+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
	135.477	134.977	3+000
	135.465	134.965	3+050
	135.452	134.952	3+100
	135.440	134.940	3+150
	135.427	134.927	3+200
	135.415	134.915	3+250
	135.402	134.902	3+300
	135.390	134.890	3+350
	135.377	134.877	3+400
	135.365	134.865	3+450
	135.352	134.852	3+500
	135.340	134.840	3+550
	135.327	134.827	3+600
	135.315	134.815	3+650
	135.302	134.802	3+700
	135.290	134.790	3+750
	135.277	134.777	3+800
	135.265	134.765	3+850
	135.252	134.752	3+900
	135.240	134.740	3+950
	135.227	134.727	4+000
	135.215	134.715	4+050
	135.202	134.702	4+100
	135.190	134.690	4+150
	135.177	134.677	4+200
	135.165	134.665	4+250
	135.152	134.652	4+300
	135.140	134.640	4+350
	135.127	134.627	4+400
	135.115	134.615	4+450
	135.102	134.602	4+500

LEGEND

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

IMPLEMENTING AGENCY :-

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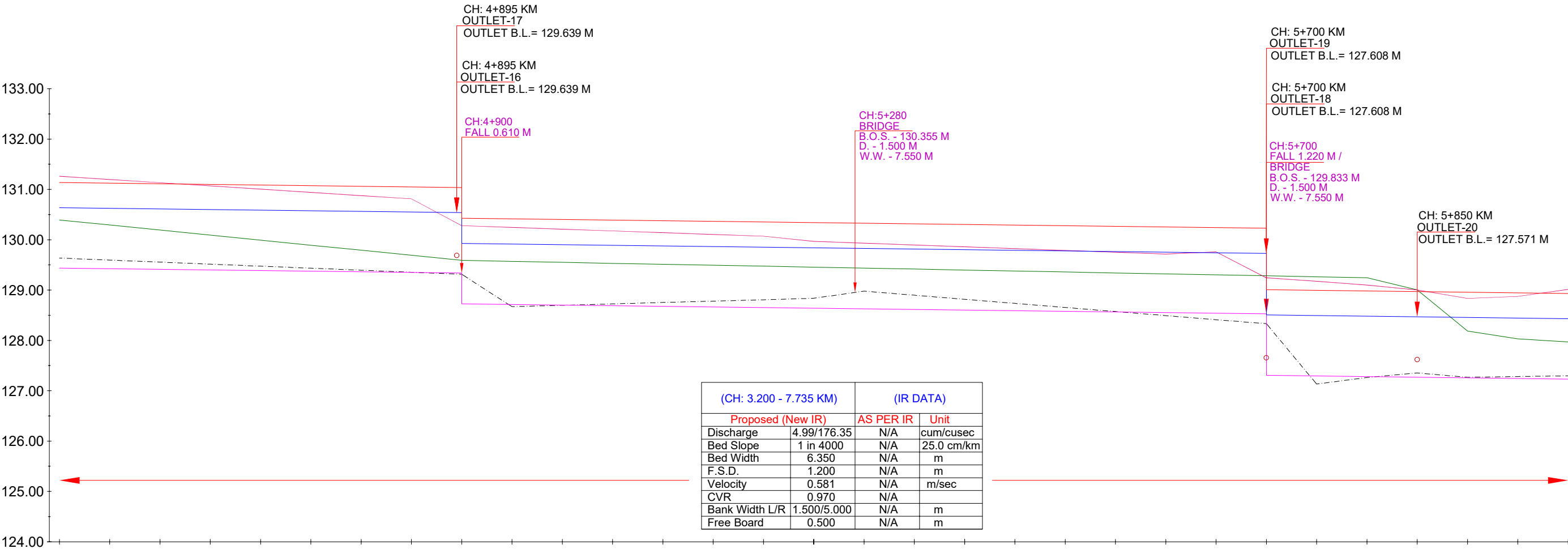
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NORTH KOEL RIGHT MAIN CANAL)

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WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

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L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 4+500 TO 6+000



Chainage IN KM	EXISTING DATA		DESIGN DATA	
	TOP OF BANK LEVEL		F.S.L.	
	Proposed Bed Level		Proposed Bed Level	
	Bed Level		Bed Level	
- 4+500	130.393	131.263	129.438	130.638
- 4+550	130.293	131.198	129.426	130.626
- 4+600	130.193	131.134	129.413	130.613
- 4+650	130.093	131.070	129.401	130.601
- 4+700	129.992	131.006	129.388	130.588
- 4+750	129.892	130.942	129.376	130.576
- 4+800	129.792	130.878	129.363	130.563
- 4+850	129.692	130.813	129.351	130.551
- 4+900	129.591	130.280	129.338	130.538
- 4+950	129.570	130.245	128.716	129.916
- 5+000	129.551	130.210	128.703	129.903
- 5+050	129.532	130.175	128.691	129.891
- 5+100	129.513	130.141	128.678	129.878
- 5+150	129.494	130.106	128.666	129.866
- 5+200	129.475	130.071	128.653	129.853
- 5+250	129.456	129.969	128.641	129.841
- 5+300	129.437	129.933	128.628	129.828
- 5+350	129.417	129.897	128.616	129.816
- 5+400	129.398	129.860	128.603	129.803
- 5+450	129.379	129.824	128.591	129.791
- 5+500	129.360	129.788	128.578	129.778
- 5+550	129.341	129.752	128.566	129.766
- 5+600	129.322	129.715	128.553	129.753
- 5+650	129.303	129.759	128.541	129.741
- 5+700	129.284	129.244	128.528	129.728
- 5+750	129.264	129.174	127.296	128.496
- 5+800	129.245	129.100	127.283	128.483
- 5+850	129.006	129.003	127.271	128.471
- 5+900	128.185	128.835	127.258	128.458
- 5+950	128.031	128.875	127.246	128.446
- 6+000	127.970	129.014	127.233	128.433

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



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NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

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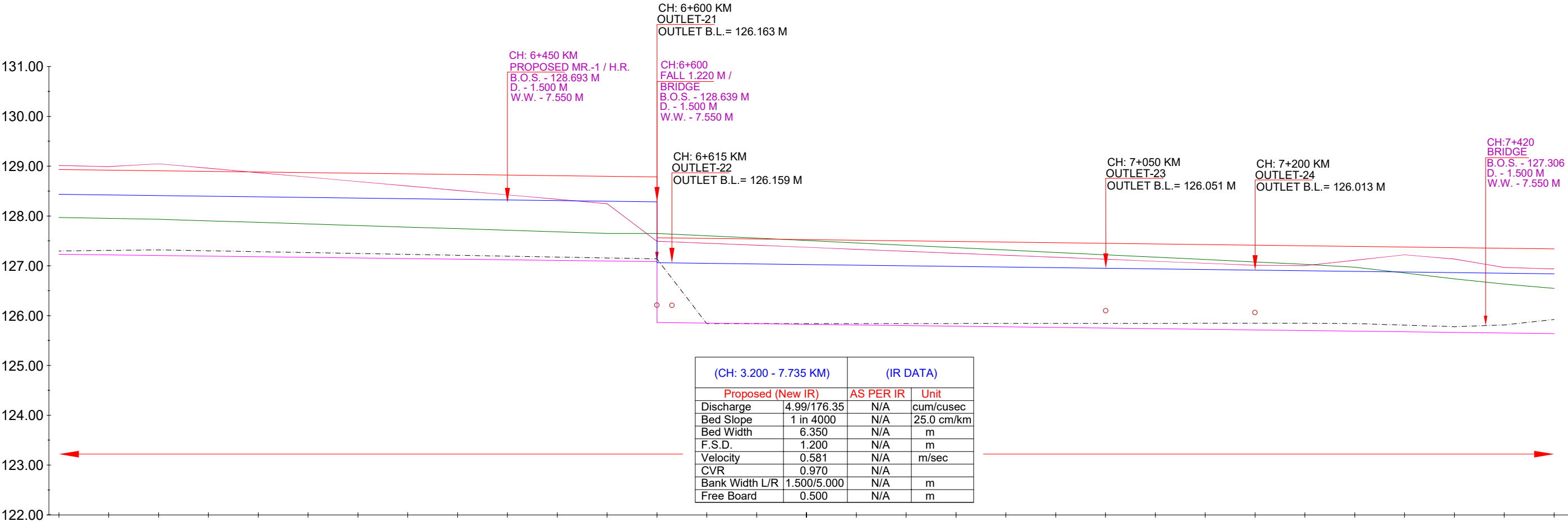
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NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

04 of 16

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 6+000 TO 7+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	128.933	128.433	6+000
TOP OF BANK LEVEL	128.921	128.421	6+050
NSL	128.908	128.408	6+100
	128.896	128.396	6+150
	128.883	128.383	6+200
	128.871	128.371	6+250
	128.858	128.358	6+300
	128.846	128.346	6+350
	128.833	128.333	6+400
	128.821	128.321	6+450
	128.808	128.308	6+500
	128.796	128.296	6+550
	128.783	128.283	6+600
	127.563	127.063	6+650
	127.551	127.051	6+700
	127.538	127.038	6+750
	127.526	127.026	6+800
	127.513	127.013	6+850
	127.501	127.001	6+900
	127.488	126.988	6+950
	127.476	126.976	7+000
	127.463	126.963	7+050
	127.451	126.951	7+100
	127.438	126.938	7+150
	127.426	126.926	7+200
	127.413	126.913	7+250
	127.401	126.901	7+300
	127.388	126.888	7+350
	127.376	126.876	7+400
	127.363	126.863	7+450
	127.351	126.851	7+500
	127.338	126.838	

LEGEND

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

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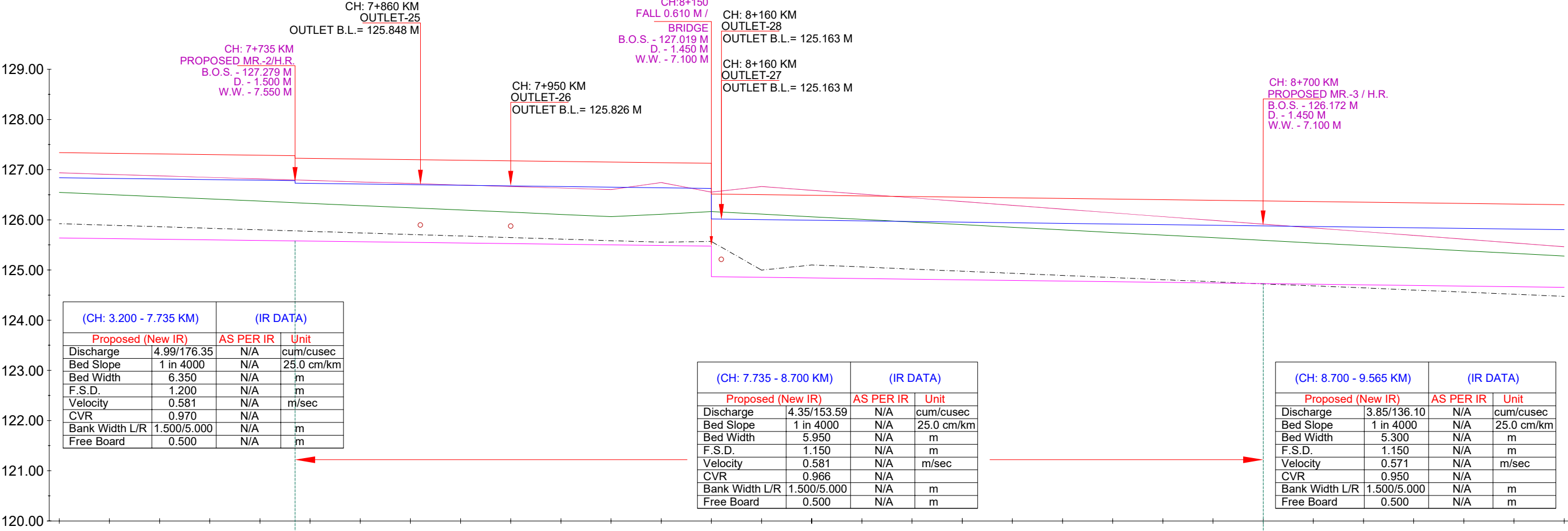
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WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

05 of 16

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 7+500 TO 9+000



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage IN KM						
7+500	126.548	126.937	125.923	125.638	126.838	127.338
7+550	126.503	126.906	125.892	125.626	126.826	127.326
7+600	126.460	126.876	125.863	125.613	126.813	127.313
7+650	126.416	126.846	125.831	125.601	126.801	127.301
7+700	126.372	126.815	125.801	125.588	126.788	127.288
7+735				125.579	126.779	127.279
7+750	126.328	126.785	125.770	125.576	126.726	127.226
7+800	126.284	126.754	125.739	125.563	126.713	127.213
7+850	126.240	126.724	125.708	125.551	126.701	127.201
7+900	126.196	126.694	125.678	125.538	126.688	127.188
7+950	126.152	126.663	125.646	125.526	126.676	127.176
8+000	126.108	126.633	125.616	125.513	126.663	127.163
8+050	126.064	126.602	125.584	125.501	126.651	127.151
8+100	126.112	126.744	125.555	125.488	126.638	127.138
8+150	126.165	126.552	125.569	125.476	126.626	127.126
8+200	126.113	126.664	124.998	124.853	126.003	126.503
8+250	126.061	126.589	125.100	124.841	125.991	126.491
8+300	126.009	126.514	125.062	124.828	125.978	126.478
8+350	125.957	126.439	125.017	124.816	125.966	126.466
8+400	125.904	126.364	124.977	124.803	125.953	126.453
8+450	125.852	126.289	124.934	124.791	125.941	126.441
8+500	125.800	126.214	124.892	124.778	125.928	126.428
8+550	125.748	126.139	124.850	124.766	125.916	126.416
8+600	125.696	126.064	124.807	124.753	125.903	126.403
8+650	125.644	125.989	124.767	124.741	125.891	126.391
8+700	125.591	125.915	124.722	124.728	125.878	126.378
8+750	125.539	125.840	124.684	124.716	125.866	126.366
8+800	125.487	125.765	124.645	124.703	125.853	126.353
8+850	125.435	125.690	124.600	124.691	125.841	126.341
8+900	125.383	125.615	124.560	124.678	125.828	126.328
8+950	125.331	125.540	124.517	124.666	125.816	126.316
9+000	125.278	125.465	124.475	124.653	125.803	126.303

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



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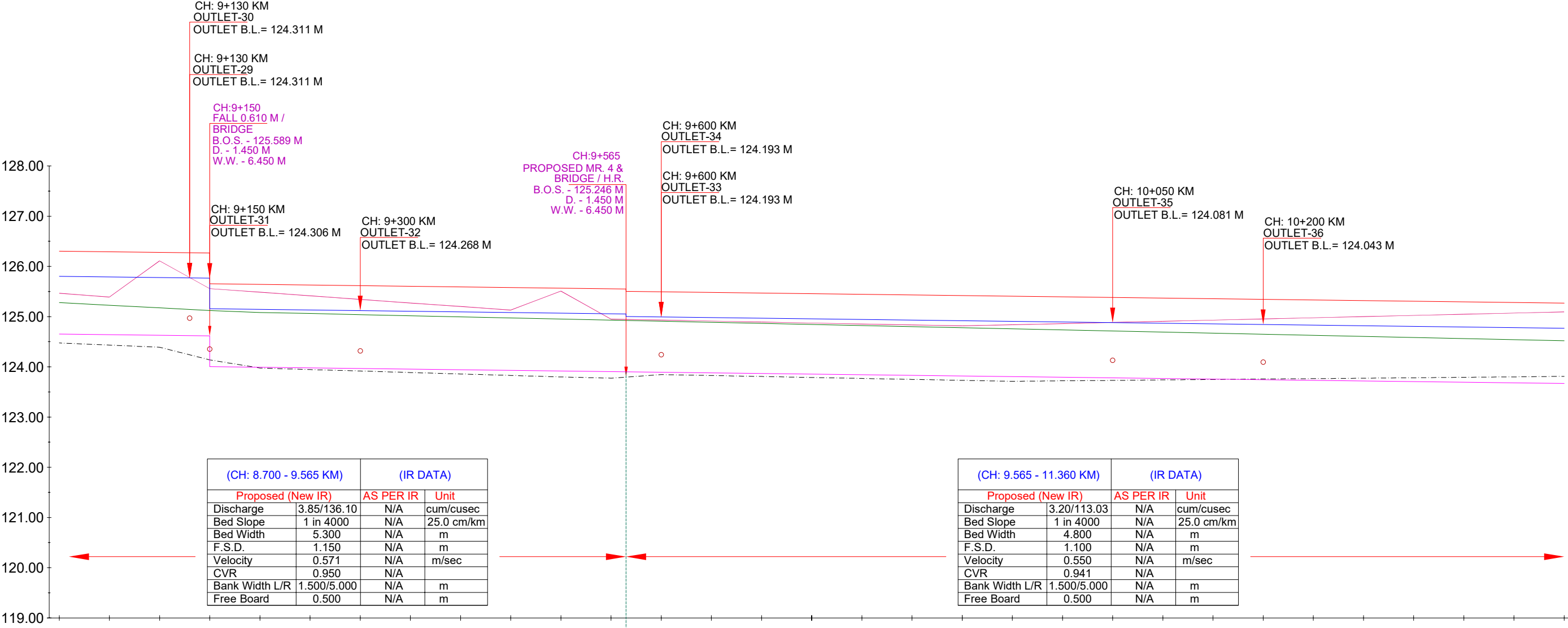
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DRAWING NO. :-

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L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 9+000 TO 10+500



EXISTING DATA	DESIGN DATA			Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	
Bed Level	124.475	125.803	124.653	9+000
TOP OF BANK LEVEL	125.465	125.390	125.558	9+050
NSL	125.278	125.226	125.174	9+100
	125.122	125.122	125.122	9+150
	125.083	125.083	125.083	9+200
	125.062	125.062	125.062	9+250
	125.040	125.040	125.040	9+300
	125.018	125.018	125.018	9+350
	124.996	124.996	124.996	9+400
	124.974	124.974	124.974	9+450
	124.953	124.953	124.953	9+500
	124.931	124.931	124.931	9+550
	124.909	124.909	124.909	9+565
	124.887	124.887	124.887	9+600
	124.865	124.865	124.865	9+650
	124.843	124.843	124.843	9+700
	124.822	124.822	124.822	9+750
	124.800	124.800	124.800	9+800
	124.778	124.778	124.778	9+850
	124.756	124.756	124.756	9+900
	124.735	124.735	124.735	9+950
	124.714	124.714	124.714	10+000
	124.692	124.692	124.692	10+050
	124.670	124.670	124.670	10+100
	124.649	124.649	124.649	10+150
	124.627	124.627	124.627	10+200
	124.605	124.605	124.605	10+250
	124.584	124.584	124.584	10+300
	124.562	124.562	124.562	10+350
	124.541	124.541	124.541	10+400
	124.519	124.519	124.519	10+450
	124.497	124.497	124.497	10+500

LEGEND

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

IMPLEMENTING AGENCY :-

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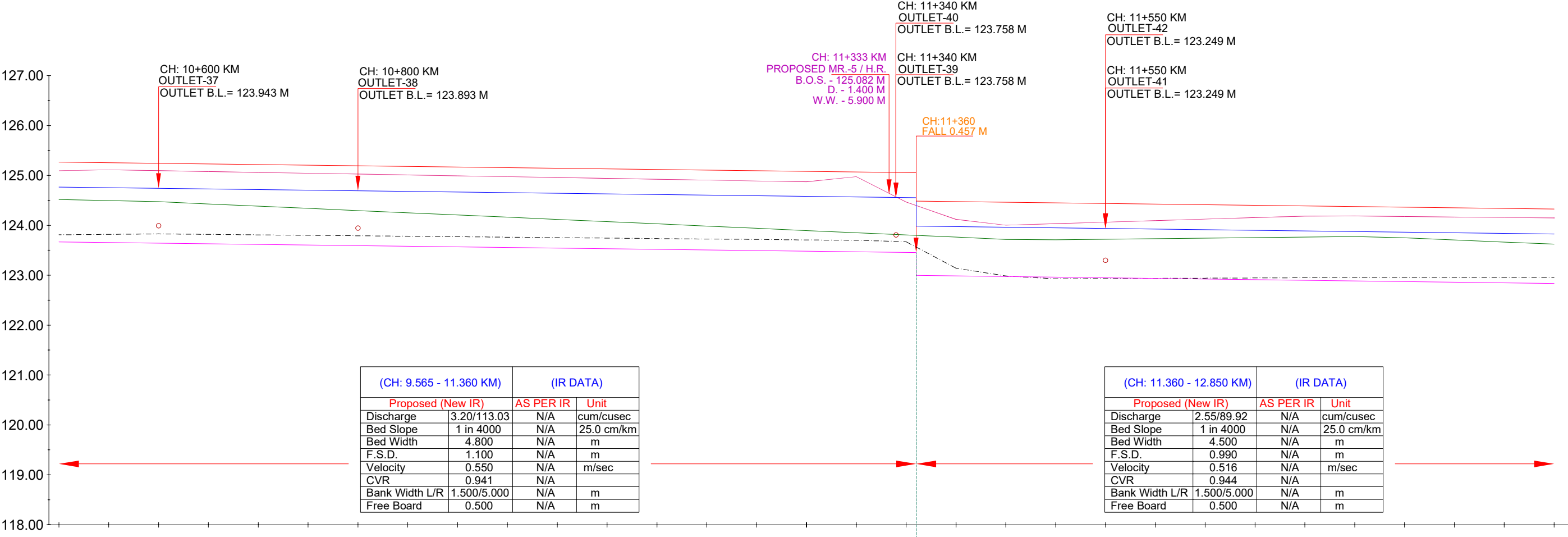
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NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 10+500 TO 12+000



EXISTING DATA	DESIGN DATA																												
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL	NSL	Chainage IN KM																						
	125.268	124.768	123.668	123.811	125.094	124.519	-10+500	125.256	124.756	123.656	123.818	125.113	124.497	124.473	125.079	124.429	-10+550	125.243	124.743	123.643	123.828	125.096	124.473	125.079	124.429	124.384	125.061	124.340	-10+700
	125.231	124.731	123.631	123.819	125.079	124.429	-10+650	125.218	124.718	123.618	123.809	125.044	124.340	124.296	125.027	124.251	-10+750	125.193	124.693	123.593	123.791	125.010	124.251	125.010	124.251	124.163	124.958	123.753	-10+950
	125.181	124.681	123.581	123.781	125.010	124.251	-10+850	125.168	124.668	123.568	123.772	124.993	124.207	124.163	124.975	124.163	-10+900	125.156	124.656	123.556	123.762	124.958	124.163	124.958	124.163	124.118	124.941	123.744	-10+950
	125.143	124.643	123.543	123.753	124.958	124.163	-11+000	125.131	124.631	123.531	123.744	124.941	124.074	124.030	124.924	123.985	-11+050	125.118	124.618	123.518	123.734	124.924	124.030	124.924	123.985	123.941	124.872	123.707	-11+200
	125.106	124.606	123.506	123.725	124.907	123.985	-11+150	125.093	124.581	123.493	123.718	124.889	123.941	123.896	124.872	123.896	-11+250	125.081	124.568	123.468	123.700	124.872	123.896	124.872	123.896	123.852	124.852	123.700	-11+300
	125.056	124.556	123.456	123.672	124.856	123.807	-11+350	125.053	124.553	123.453	123.672	124.856	123.807	123.764	124.856	123.764	-11+400	125.056	124.556	123.456	123.672	124.856	123.807	124.856	123.764	123.764	124.856	123.672	-11+400
	124.986	124.486	123.386	123.641	124.786	123.719	-11+450	124.974	124.474	123.374	123.641	124.786	123.719	123.674	124.786	123.674	-11+500	124.964	124.464	123.364	123.631	124.776	123.709	124.776	123.674	123.674	124.776	123.631	-11+500
	124.951	124.451	123.351	123.627	124.751	123.709	-11+550	124.939	124.439	123.359	123.627	124.751	123.709	123.659	124.751	123.659	-11+600	124.926	124.426	123.346	123.618	124.736	123.709	124.736	123.659	123.659	124.736	123.618	-11+600
	124.914	124.414	123.314	123.603	124.714	123.709	-11+650	124.901	124.401	123.341	123.603	124.714	123.709	123.641	124.714	123.641	-11+700	124.889	124.389	123.339	123.603	124.714	123.709	124.714	123.641	123.641	124.714	123.603	-11+700
	124.874	124.374	123.304	123.588	124.674	123.709	-11+750	124.861	124.361	123.321	123.588	124.674	123.709	123.627	124.674	123.627	-11+800	124.849	124.349	123.309	123.588	124.674	123.709	124.674	123.627	123.627	124.674	123.588	-11+800
	124.839	124.339	123.289	123.572	124.639	123.709	-11+850	124.826	124.326	123.296	123.572	124.639	123.709	123.618	124.639	123.618	-11+900	124.814	124.314	123.294	123.572	124.639	123.709	124.639	123.618	123.618	124.639	123.572	-11+900
	124.801	124.301	123.271	123.556	124.601	123.709	-11+950	124.788	124.288	123.288	123.556	124.601	123.709	123.603	124.601	123.603	-12+000	124.776	124.276	123.276	123.556	124.601	123.709	124.601	123.603	123.603	124.601	123.556	-12+000

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

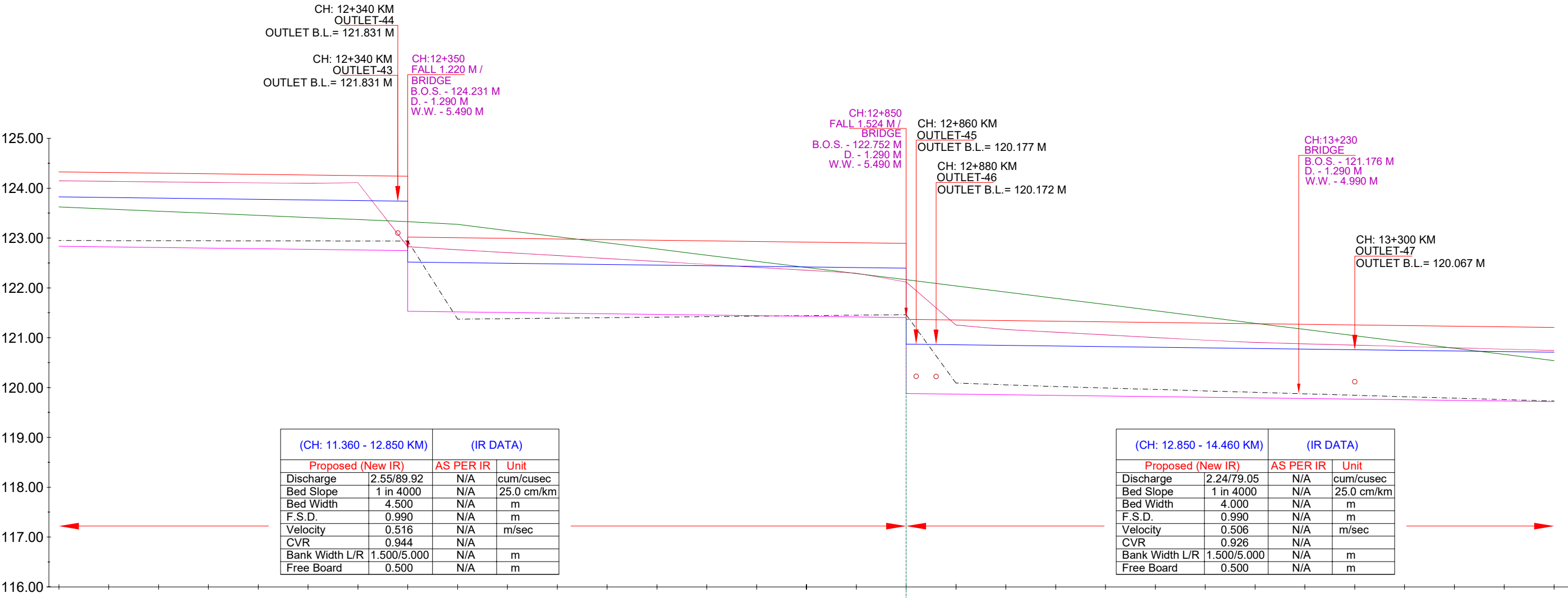
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

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L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 12+000 TO 13+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	124.326	123.826	12+000
TOP OF BANK LEVEL	124.314	123.824	12+050
NSL	124.301	123.811	12+100
	124.289	123.799	12+150
	124.276	123.776	12+200
	124.264	123.764	12+250
	124.251	123.751	12+300
	124.239	123.739	12+350
	123.019	122.519	12+400
	123.006	122.506	12+450
	122.994	122.494	12+500
	122.981	122.481	12+550
	122.969	122.469	12+600
	122.956	122.456	12+650
	122.944	122.444	12+700
	122.931	122.431	12+750
	122.919	122.419	12+800
	122.906	122.406	12+850
	122.894	122.394	12+900
	121.370	120.870	12+950
	121.357	120.857	13+000
	121.345	120.845	13+050
	121.332	120.832	13+100
	121.320	120.820	13+150
	121.307	120.807	13+200
	121.295	120.795	13+250
	121.282	120.782	13+300
	121.270	120.770	13+350
	121.257	120.757	13+400
	121.245	120.745	13+450
	121.232	120.732	13+500
	121.220	120.720	
	121.207	120.707	

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

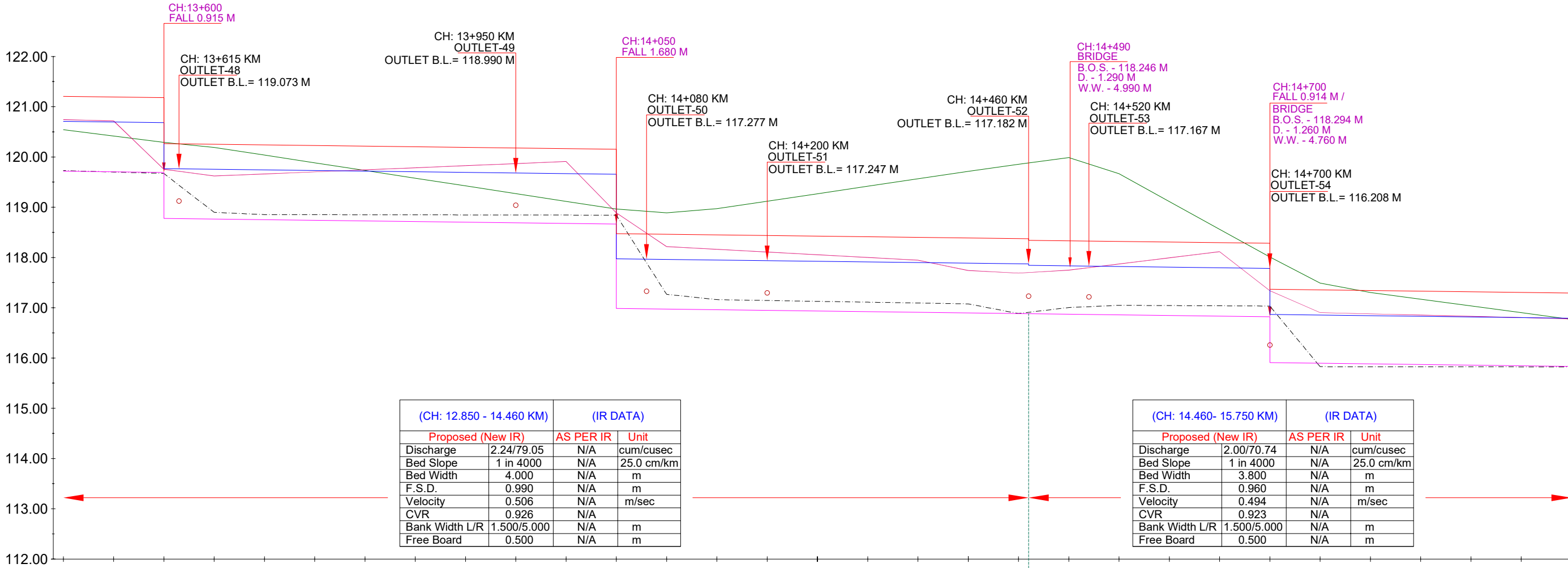
L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

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FROM CH 13+500 TO 15+000



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	BANK LEVEL
13+500	120.539	120.743	119.729	119.717	120.707	121.207
13+550	120.414	120.717	119.700	119.705	120.695	121.195
13+600	120.289	119.755	119.672	119.692 118.777	120.682 119.767	121.182 120.267
13+650	120.189	119.621	118.898	118.765	119.755	120.255
13+700	120.036	119.662	118.853	118.752	119.742	120.242
13+750	119.882	119.703	118.852	118.740	119.730	120.230
13+800	119.729	119.745	118.850	118.727	119.717	120.217
13+850	119.576	119.786	118.849	118.715	119.705	120.205
13+900	119.422	119.827	118.847	118.702	119.692	120.192
13+950	119.268	119.868	118.846	118.690	119.680	120.180
14+000	119.115	119.910	118.844	118.677	119.667	120.167
14+050	118.962	118.888	118.842	118.665 116.985	119.655 117.975	120.155 118.475
14+100	118.887	118.217	117.267	116.972	117.962	118.462
14+150	118.971	118.163	117.161	116.960	117.950	118.450
14+200	119.119	118.109	117.144	116.947	117.937	118.437
14+250	119.267	118.055	117.127	116.935	117.925	118.425
14+300	119.415	118.000	117.111	116.922	117.912	118.412
14+350	119.563	117.946	117.094	116.910	117.900	118.400
14+400	119.711	117.740	117.077	116.897	117.887	118.387
14+450	119.851	117.689	116.885	116.885 116.882	117.875 117.872	118.375 118.372
14+460				117.842 117.842	117.842 117.842	118.342 118.342
14+500	119.986	117.749	117.004	116.872	117.832	118.332
14+550	119.665	117.871	117.048	116.860	117.820	118.320
14+600	119.112	117.994	117.043	116.847	117.807	118.307
14+650	118.559	118.117	117.039	116.835	117.795	118.295
14+700	118.006	117.340	117.034	116.822 115.968	117.782 116.868	118.282 117.368
14+750	117.487	116.903	115.828	115.896	116.856	117.356
14+800	117.300	116.878	115.826	115.883	116.843	117.343
14+850	117.167	116.854	115.826	115.871	116.831	117.331
14+900	117.033	116.829	115.825	115.858	116.818	117.318
14+950	116.900	116.804	115.824	115.846	116.806	117.306
15+000	116.766	116.779	115.822	115.833	116.793	117.293

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

WAPCOS LTD.

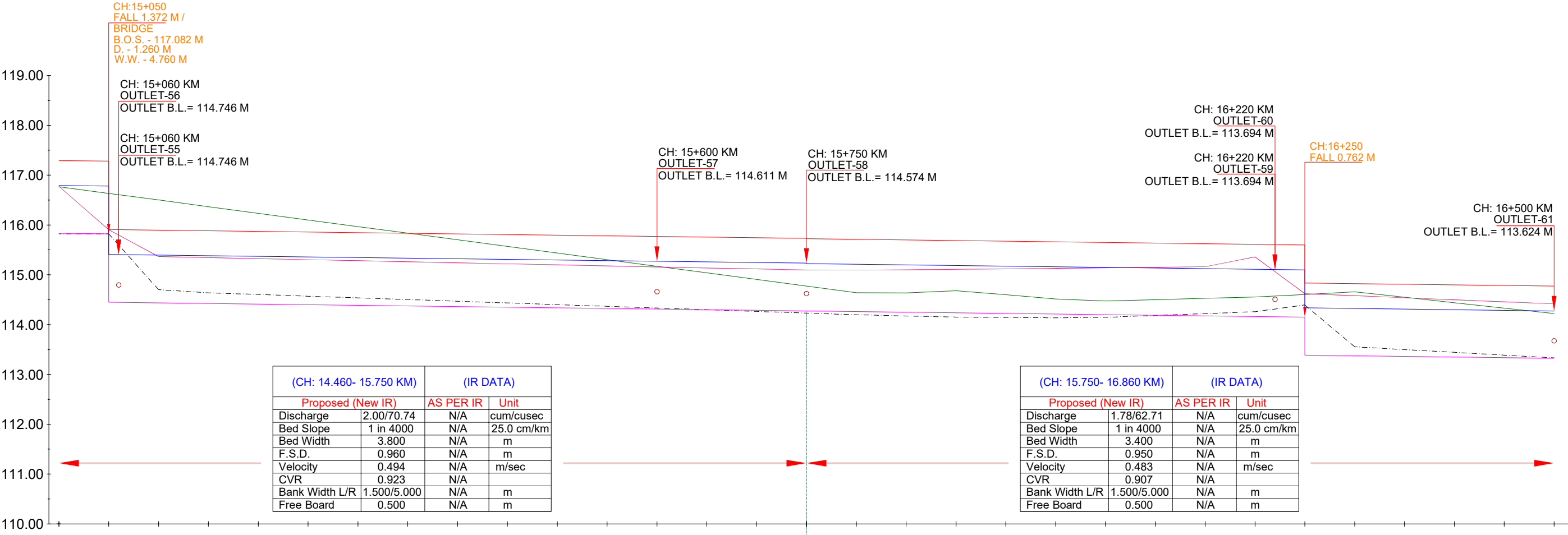


NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 15+000 TO 16+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	115.822	116.793	117.293
TOP OF BANK LEVEL	116.779	116.781	117.281
NSL	116.766	115.409	115.909
	116.633	115.821	115.896
	116.502	114.436	115.884
	116.367	114.424	115.871
	116.234	114.411	115.859
	116.101	114.399	115.846
	115.968	114.386	115.834
	115.835	114.374	115.821
	115.703	114.361	115.809
	115.570	114.349	115.796
	115.437	114.336	115.784
	115.304	114.324	115.771
	115.171	114.311	115.759
	115.039	114.299	115.746
	114.906	114.286	115.734
	114.773	114.274	115.724
	114.640	114.261	115.711
	114.635	114.249	115.699
	114.679	114.236	115.686
	114.599	114.224	115.674
	114.515	114.211	115.661
	114.474	114.199	115.649
	114.501	114.186	115.636
	114.528	114.174	115.624
	114.554	114.161	115.611
	114.603	114.149	115.599
	114.658	114.387	114.837
	114.549	114.374	114.824
	114.440	114.362	114.812
	114.331	114.349	114.799
	114.222	114.337	114.787
	114.147	114.324	114.774

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

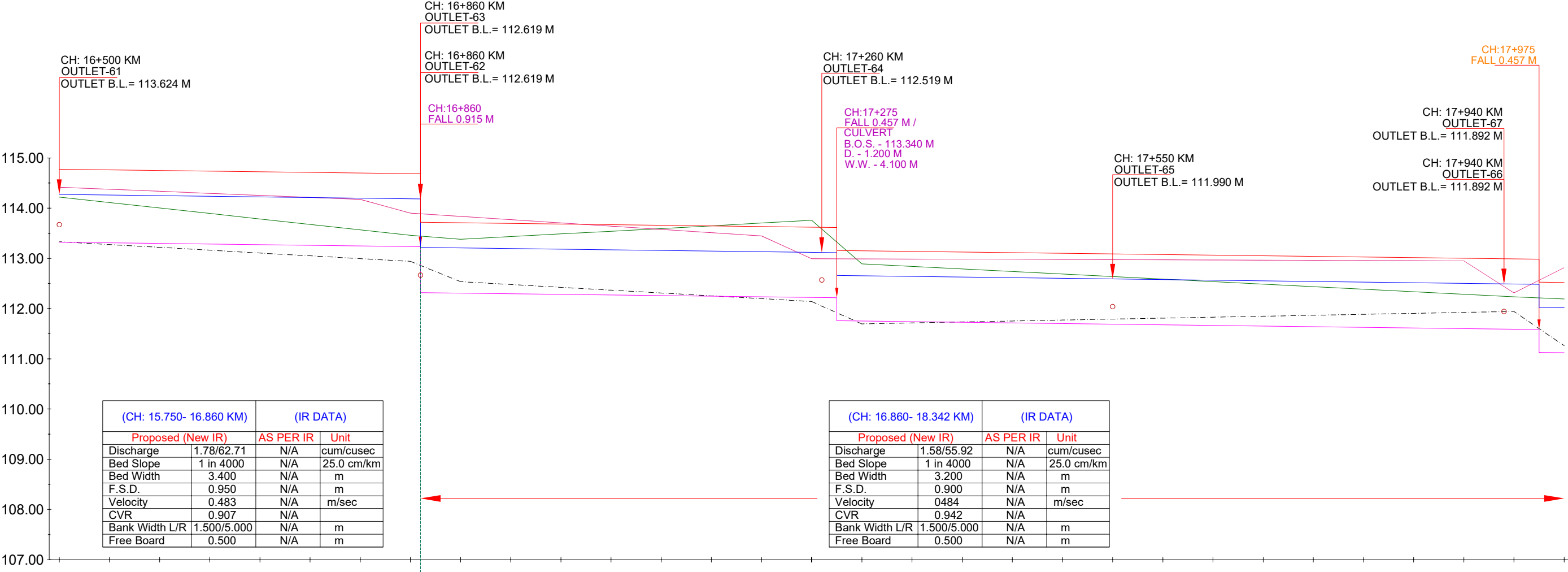
DRAWING TITLE :-

L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 16+500 TO 18+000



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-16+500	114.222	114.417	113.332	113.324	114.274	114.774
-16+550	114.113	114.377	113.275	113.312	114.262	114.762
-16+600	114.004	114.336	113.220	113.299	114.249	114.749
-16+650	113.895	114.296	113.164	113.287	114.237	114.737
-16+700	113.786	114.255	113.106	113.274	114.224	114.724
-16+750	113.677	114.215	113.051	113.262	114.212	114.712
-16+800	113.568	114.174	112.995	113.249	114.199	114.699
-16+850	113.459	113.902	112.941	113.237	114.187	114.687
-16+860				113.234	114.184	114.684
				112.319	113.219	113.719
-16+900	113.379	113.837	112.536	112.309	113.209	113.709
-16+950	113.433	113.772	112.480	112.297	113.197	113.697
-17+000	113.487	113.707	112.423	112.284	113.184	113.684
-17+050	113.541	113.643	112.367	112.272	113.172	113.672
-17+100	113.595	113.578	112.311	112.259	113.159	113.659
-17+150	113.649	113.514	112.254	112.247	113.147	113.647
-17+200	113.704	113.449	112.199	112.234	113.134	113.634
-17+250	113.758	112.994	112.140	112.222	113.122	113.622
				112.215	113.115	113.615
				111.758	112.658	113.158
-17+300	112.890	112.991	111.696	111.752	112.652	113.152
-17+350	112.840	112.988	111.715	111.740	112.640	113.140
-17+400	112.789	112.984	111.734	111.727	112.627	113.127
-17+450	112.739	112.981	111.753	111.715	112.615	113.115
-17+500	112.688	112.978	111.772	111.702	112.602	113.102
-17+550	112.638	112.975	111.791	111.690	112.590	113.090
-17+600	112.587	112.971	111.810	111.677	112.577	113.077
-17+650	112.537	112.968	111.829	111.665	112.565	113.065
-17+700	112.487	112.965	111.848	111.652	112.552	113.052
-17+750	112.436	112.962	111.867	111.640	112.540	113.040
-17+800	112.386	112.958	111.886	111.627	112.527	113.027
-17+850	112.335	112.955	111.905	111.615	112.515	113.015
-17+900	112.285	112.952	111.924	111.602	112.502	113.002
-17+950	112.234	112.949	111.943	111.590	112.490	112.990

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

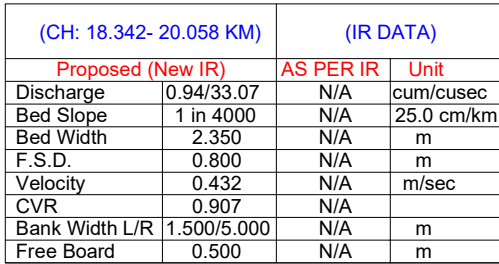
L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

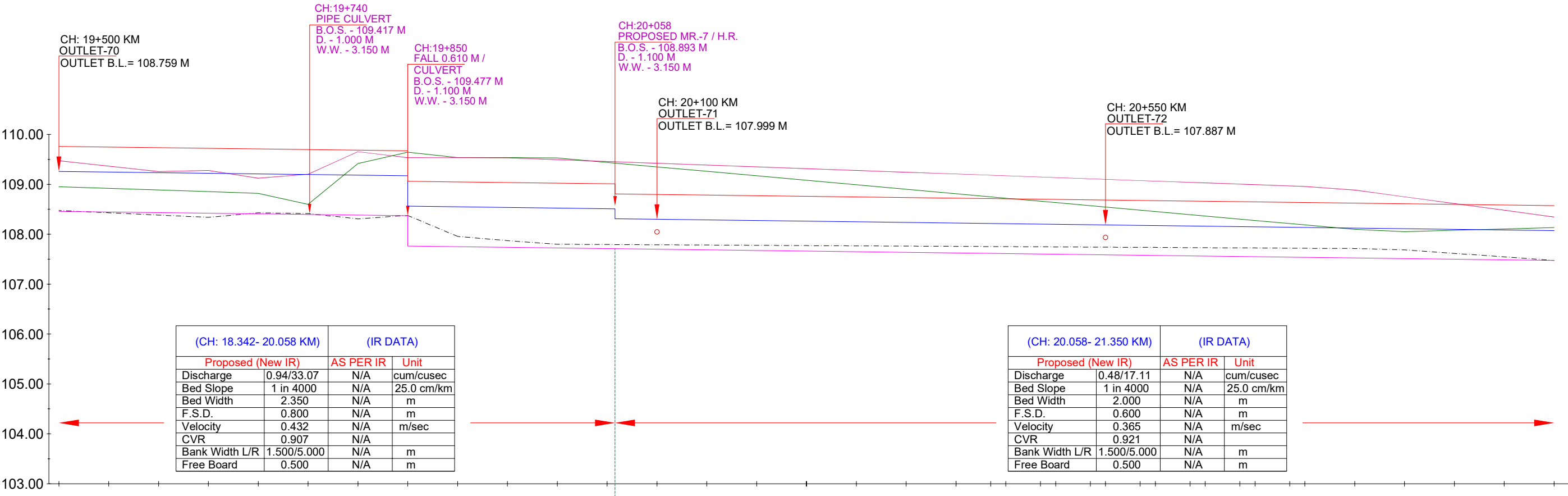
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ LSEC-

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L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 19+500 TO 21+000



Chainage IN KM	EXISTING DATA		DESIGN DATA	
	NSL	TOP OF BANK LEVEL	Proposed Bed Level	F.S.L.
-19+500	108.952	109.474	108.459	109.259
-19+550	108.919	109.365	108.447	109.247
-19+600	108.886	109.256	108.434	109.234
-19+650	108.853	109.277	108.422	109.222
-19+700	108.820	109.123	108.409	109.209
-19+750	108.599	109.203	108.397	109.197
-19+800	109.415	109.655	108.384	109.184
-19+850	109.642	109.534	108.372	109.172
-19+900	109.534	109.534	107.749	108.549
-19+950	109.534	109.530	107.737	108.537
-20+000	109.528	109.494	107.724	108.524
-20+050	109.439	109.458	107.712	108.512
-20+058	108.510	108.510	107.710	108.510
-20+100	109.349	109.423	107.699	108.299
-20+150	109.260	109.387	107.687	108.287
-20+200	109.171	109.351	107.674	108.274
-20+250	109.081	109.315	107.662	108.262
-20+300	108.992	109.279	107.649	108.249
-20+350	108.902	109.243	107.637	108.237
-20+400	108.813	109.208	107.624	108.224
-20+450	108.723	109.172	107.612	108.212
-20+500	108.634	109.136	107.599	108.199
-20+550	108.545	109.100	107.587	108.187
-20+600	108.455	109.064	107.574	108.174
-20+650	108.366	109.028	107.562	108.162
-20+700	108.276	108.993	107.549	108.149
-20+750	108.187	108.957	107.537	108.137
-20+800	108.097	108.886	107.524	108.124
-20+850	108.051	108.751	107.512	108.112
-20+900	108.079	108.616	107.499	108.099
-20+950	108.106	108.481	107.487	108.087
-21+000	108.133	108.346	107.474	108.074

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

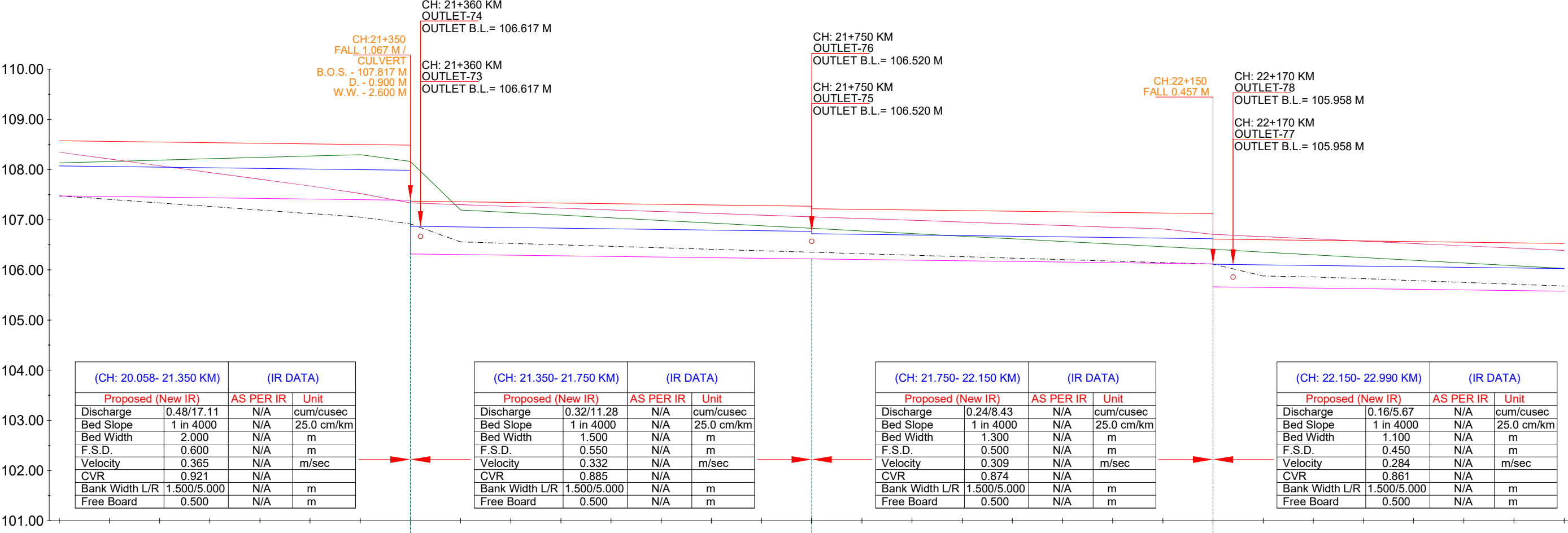
DRAWING TITLE :-

L- SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)

DRAWING NO. :-

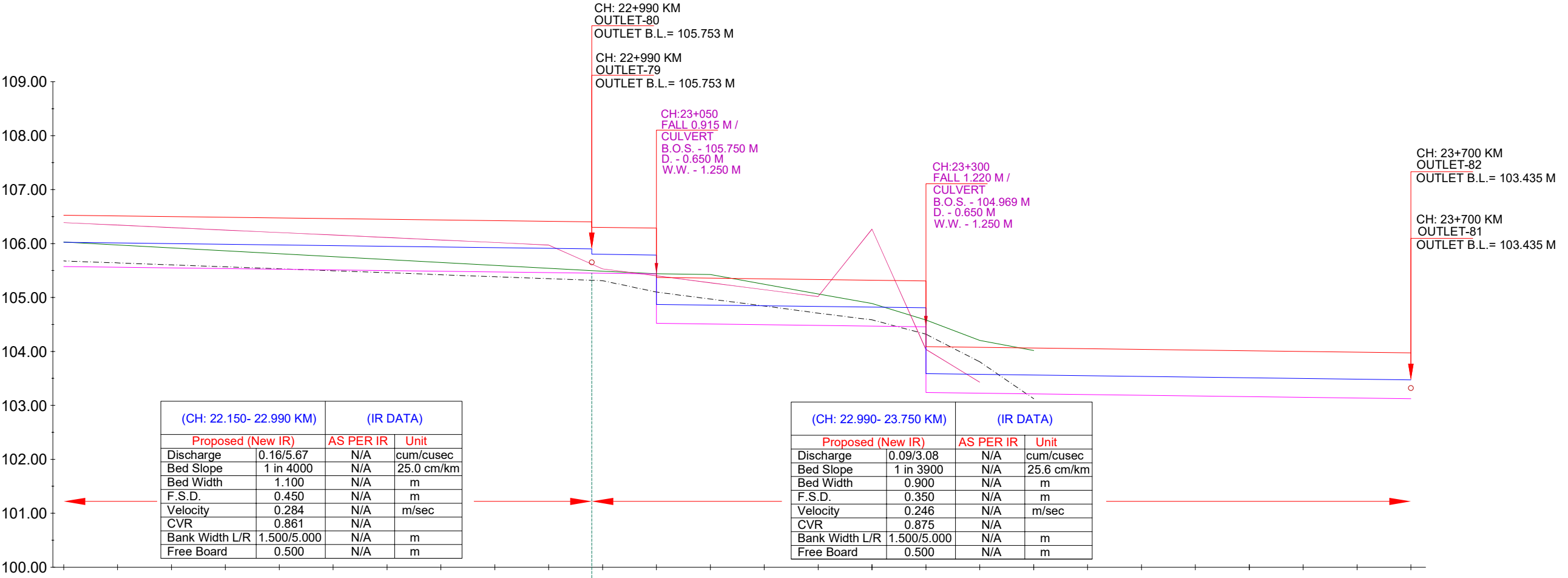
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L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 21+000 TO 22+500



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage IN KM						
-21+000	108.133	108.346	107.474	107.474	108.074	108.574
-21+050	108.160	108.211	107.407	107.462	108.062	108.562
-21+100	108.188	108.077	107.334	107.449	108.049	108.549
-21+150	108.215	107.942	107.264	107.437	108.037	108.537
-21+200	108.242	107.807	107.194	107.424	108.024	108.524
-21+250	108.270	107.673	107.123	107.412	108.012	108.512
-21+300	108.297	107.523	107.053	107.399	107.999	108.499
-21+350	108.462	107.335	106.917	107.387	107.987	108.487
-21+400	107.195	107.300	106.558	106.320	106.870	107.370
-21+450	107.143	107.266	106.528	106.307	106.857	107.357
-21+500	107.091	107.231	106.499	106.295	106.845	107.345
-21+550	107.038	107.196	106.470	106.282	106.832	107.332
-21+600	106.986	107.162	106.440	106.270	106.820	107.320
-21+650	106.933	107.127	106.411	106.257	106.807	107.307
-21+700	106.881	107.092	106.381	106.245	106.795	107.295
-21+750	106.829	107.058	106.352	106.232	106.782	107.282
-21+800	106.776	107.023	106.322	106.220	106.770	107.270
-21+850	106.724	106.989	106.293	106.207	106.720	107.220
-21+900	106.672	106.954	106.263	106.195	106.707	107.207
-21+950	106.619	106.919	106.234	106.182	106.695	107.195
-22+000	106.567	106.885	106.205	106.170	106.682	107.182
-22+050	106.515	106.850	106.175	106.157	106.670	107.170
-22+100	106.462	106.816	106.146	106.145	106.657	107.157
-22+150	106.410	106.781	106.116	106.132	106.645	107.145
-22+200	106.352	106.663	105.878	106.120	106.632	107.132
-22+250	106.298	106.618	105.859	106.113	106.620	107.120
-22+300	106.244	106.572	105.825	106.100	106.608	107.108
-22+350	106.190	106.526	105.787	106.075	106.598	107.096
-22+400	106.136	106.480	105.751	106.050	106.588	107.084
-22+450	106.082	106.434	105.715	106.038	106.575	107.072
-22+500	106.028	106.388	105.678	106.025	106.563	107.060

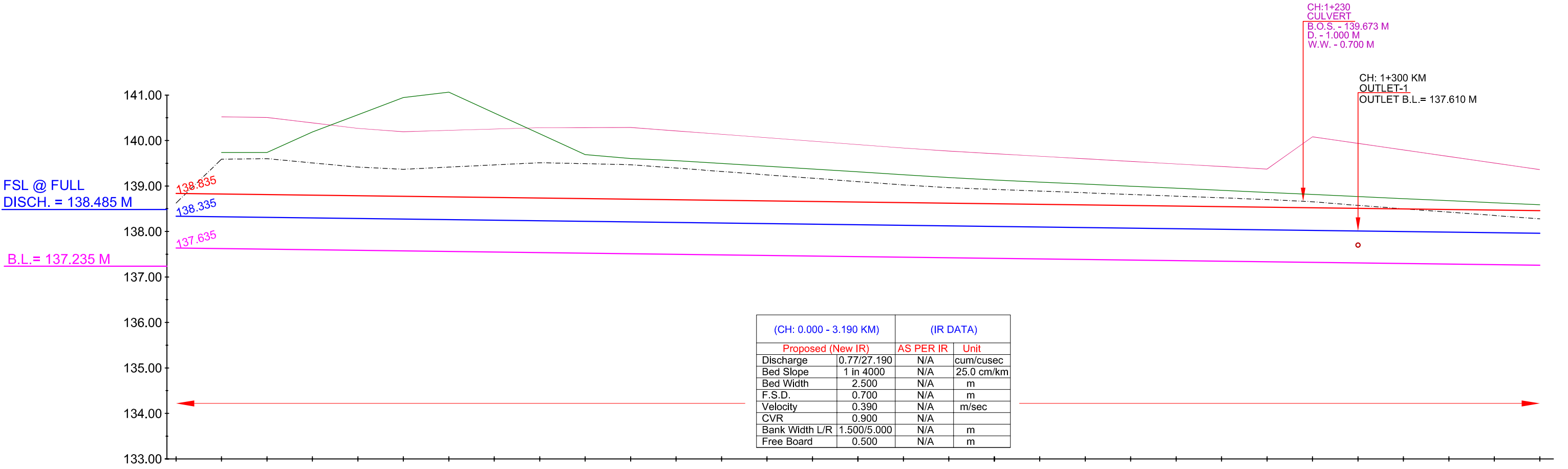
L- SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
FROM CH 22+500 TO 23+450



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
-22+500	106.028	106.388	105.678	105.575	106.025	106.525
-22+550	105.974	106.342	105.642	105.563	106.013	106.513
-22+600	105.919	106.296	105.605	105.550	106.000	106.500
-22+650	105.865	106.250	105.569	105.538	105.988	106.488
-22+700	105.811	106.204	105.532	105.525	105.975	106.475
-22+750	105.757	106.158	105.496	105.513	105.963	106.463
-22+800	105.703	106.112	105.459	105.500	105.950	106.450
-22+850	105.649	106.066	105.422	105.488	105.938	106.438
-22+900	105.595	106.020	105.386	105.475	105.925	106.425
-22+950	105.541	105.971	105.349	105.463	105.913	106.413
-22+990				105.453	105.903	106.403
-23+000	105.487	105.530	105.312	105.450	105.800	106.300
-23+050	105.442	105.402	105.100	105.437	105.787	106.287
-23+100	105.425	105.274	104.971	104.522	104.872	105.372
-23+150	105.246	105.145	104.843	104.509	104.859	105.359
-23+200	105.067	105.145	104.843	104.496	104.846	105.346
-23+250	104.888	105.017	104.710	104.484	104.834	105.334
-23+300	104.581	106.267	104.585	104.471	104.821	105.321
-23+350	104.205	104.038	104.319	104.458	104.808	105.308
-23+400	104.016	104.038	104.319	103.238	103.588	104.088
-23+450		103.430	103.807	103.225	103.575	104.075
-23+500		103.123	103.123	103.212	103.562	104.062
-23+550				103.200	103.550	104.050
-23+600				103.187	103.537	104.037
-23+650				103.174	103.524	104.024
-23+700				103.161	103.511	104.011
-23+750				103.148	103.498	103.998
				103.135	103.485	103.985
				103.123	103.473	103.973

CHAURAHA MINOR

L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage						
+ 0+000			138.623	137.635	138.335	138.835
+ 0+050	139.737	140.522	139.588	137.623	138.323	138.823
+ 0+100	139.737	140.507	139.602	137.610	138.310	138.810
+ 0+150	140.187	140.387	139.507	137.598	138.298	138.798
+ 0+200	140.565	140.267	139.415	137.585	138.285	138.785
+ 0+250	140.944	140.194	139.367	137.573	138.273	138.773
+ 0+300	141.062	140.224	139.415	137.560	138.260	138.760
+ 0+350	140.605	140.253	139.463	137.548	138.248	138.748
+ 0+400	140.148	140.282	139.512	137.535	138.235	138.735
+ 0+450	139.691	140.285	139.491	137.523	138.223	138.723
+ 0+500	139.605	140.288	139.467	137.510	138.210	138.710
+ 0+550	139.558	140.213	139.395	137.498	138.198	138.698
+ 0+600	139.496	140.137	139.320	137.485	138.185	138.685
+ 0+650	139.434	140.062	139.245	137.473	138.173	138.673
+ 0+700	139.372	139.986	139.172	137.460	138.160	138.660
+ 0+750	139.311	139.911	139.096	137.448	138.148	138.648
+ 0+800	139.249	139.835	139.023	137.435	138.135	138.635
+ 0+850	139.187	139.768	138.963	137.423	138.123	138.623
+ 0+900	139.133	139.712	138.926	137.410	138.110	138.610
+ 0+950	139.087	139.655	138.888	137.398	138.098	138.598
+ 1+000	139.042	139.598	138.851	137.385	138.085	138.585
+ 1+050	138.996	139.542	138.814	137.373	138.073	138.573
+ 1+100	138.951	139.485	138.777	137.360	138.060	138.560
+ 1+150	138.905	139.429	138.740	137.348	138.048	138.548
+ 1+200	138.860	139.372	138.702	137.335	138.035	138.535
+ 1+250	138.814	140.081	138.654	137.323	138.023	138.523
+ 1+300	138.769	139.937	138.573	137.310	138.010	138.510
+ 1+350	138.723	139.794	138.499	137.298	137.998	138.498
+ 1+400	138.678	139.650	138.426	137.285	137.985	138.485
+ 1+450	138.632	139.506	138.352	137.273	137.973	138.473
+ 1+500	138.587	139.362	138.278	137.260	137.960	138.460

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

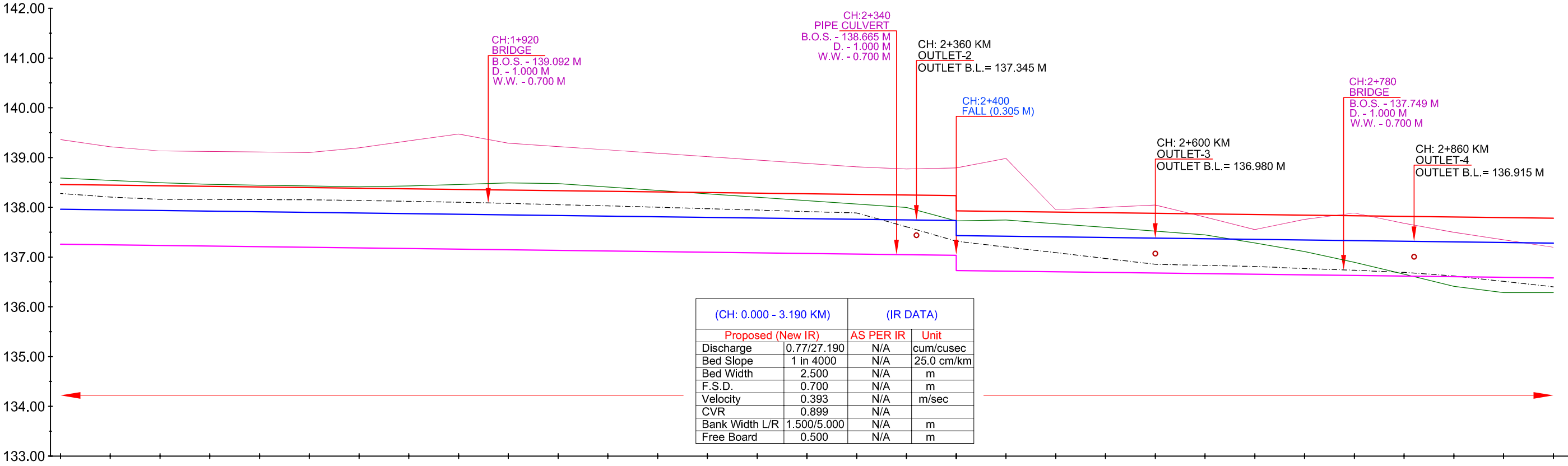
L- SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R),
KARMA DISTRIBUTARY CANAL

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ LSEC-

01 of 06

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L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000



Chainage	EXISTING DATA				DESIGN DATA			
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL		
1+500	138.587	139.362	138.278	137.260	137.960	138.460		
1+550	138.541	139.218	138.205	137.248	137.948	138.448		
1+600	138.496	139.132	138.161	137.235	137.935	138.435		
1+650	138.462	139.122	138.158	137.223	137.923	138.423		
1+700	138.445	139.112	138.155	137.210	137.910	138.410		
1+750	138.428	139.102	138.151	137.198	137.898	138.398		
1+800	138.411	139.196	138.138	137.185	137.885	138.385		
1+850	138.428	139.335	138.120	137.173	137.873	138.373		
1+900	138.460	139.474	138.101	137.160	137.860	138.360		
1+950	138.491	139.290	138.079	137.148	137.848	138.348		
2+000	138.475	139.222	138.052	137.135	137.835	138.335		
2+050	138.407	139.154	138.028	137.123	137.823	138.323		
2+100	138.339	139.086	138.002	137.110	137.810	138.310		
2+150	138.271	139.019	137.972	137.098	137.798	138.298		
2+200	138.202	138.951	137.945	137.085	137.785	138.285		
2+250	138.134	138.883	137.913	137.073	137.773	138.273		
2+300	138.066	138.815	137.887	137.060	137.760	138.260		
2+350	137.998	138.771	137.609	137.048	137.748	138.248		
2+400	137.725	138.791	137.318	137.035	137.735	138.235		
2+450	137.746	138.984	137.202	136.718	137.418	137.918		
2+500	137.670	137.950	137.089	136.705	137.405	137.905		
2+550	137.596	137.998	136.971	136.693	137.393	137.893		
2+600	137.521	138.046	136.854	136.680	137.380	137.880		
2+650	137.446	137.803	136.832	136.668	137.368	137.868		
2+700	137.284	137.553	136.811	136.655	137.355	137.855		
2+750	137.110	137.758	136.769	136.643	137.343	137.843		
2+800	136.896	137.885	136.735	136.630	137.330	137.830		
2+850	136.655	137.679	136.691	136.618	137.318	137.818		
2+900	136.410	137.497	136.620	136.605	137.305	137.805		
2+950	136.287	137.347	136.511	136.593	137.293	137.793		
3+000	136.284	137.197	136.402	136.580	137.280	137.780		

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

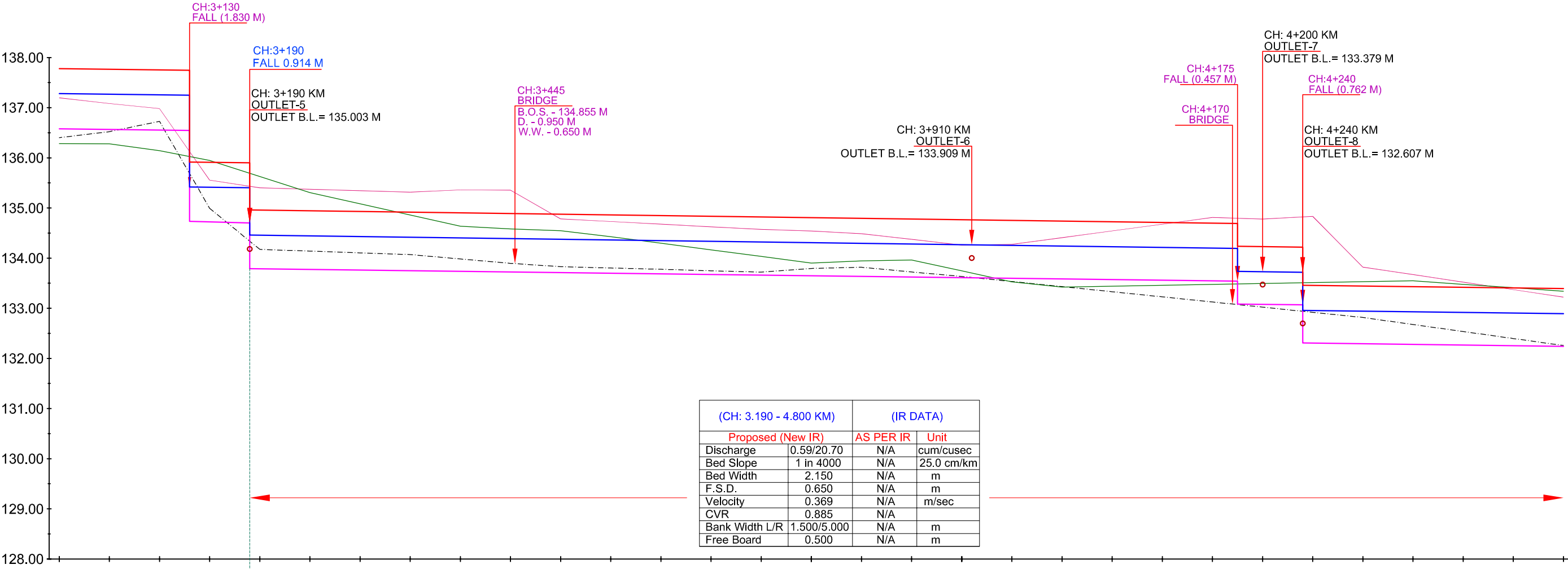
IMPLEMENTING AGENCY :-
WAPCOS LTD.


PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
L- SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R),
KARMA DISTRIBUTARY CANAL
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ LSEC-02 of 06

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L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 3+000 TO 4+500



Chainage	EXISTING DATA		DESIGN DATA	
	NSL	TOP OF BANK LEVEL	Proposed Bed Level	F.S.L.
- 3+000	136.284	137.197	136.580	137.280
- 3+050	136.280	137.083	136.568	137.268
- 3+100	136.144	136.982	136.555	137.255
- 3+150	135.949	135.556	134.713	135.913
- 3+190	135.628	135.404	134.703	135.403
- 3+200	135.307	135.375	133.786	134.436
- 3+250	135.083	135.346	133.774	134.424
- 3+300	134.859	135.317	133.761	134.411
- 3+350	134.635	135.361	133.749	134.399
- 3+400	134.582	135.355	133.736	134.386
- 3+450	134.545	134.783	133.724	134.374
- 3+500	134.429	134.731	133.711	134.361
- 3+550	134.297	134.678	133.699	134.349
- 3+600	134.165	134.625	133.686	134.336
- 3+650	134.033	134.573	133.674	134.324
- 3+700	133.901	134.542	133.661	134.311
- 3+750	133.946	134.488	133.649	134.299
- 3+800	133.964	134.374	133.636	134.286
- 3+850	133.746	134.261	133.624	134.274
- 3+900	133.528	134.275	133.611	134.261
- 3+950	133.424	134.409	133.599	134.249
- 4+000	133.442	134.543	133.586	134.236
- 4+050	133.460	134.676	133.574	134.224
- 4+100	133.478	134.810	133.561	134.211
- 4+150	133.496	134.779	133.549	134.199
- 4+200	133.513	134.833	133.542	134.192
- 4+240	133.532	133.821	133.069	133.719
- 4+300	133.547	133.672	132.307	132.957
- 4+350	133.478	133.522	132.305	132.955
- 4+400	133.410	133.372	132.292	132.942
- 4+450	133.341	133.222	132.280	132.930
- 4+500	133.257	132.397	132.267	132.917

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

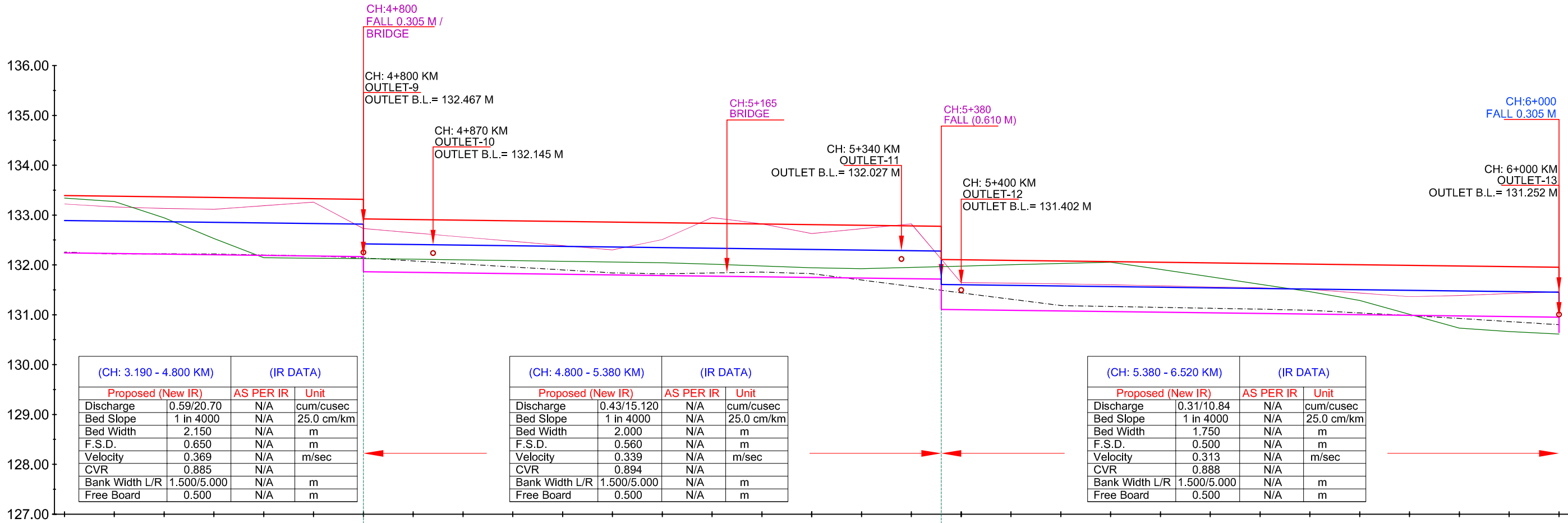
DRAWING TITLE :-

L- SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R),
KARMA DISTRIBUTARY CANAL

DRAWING NO. :-

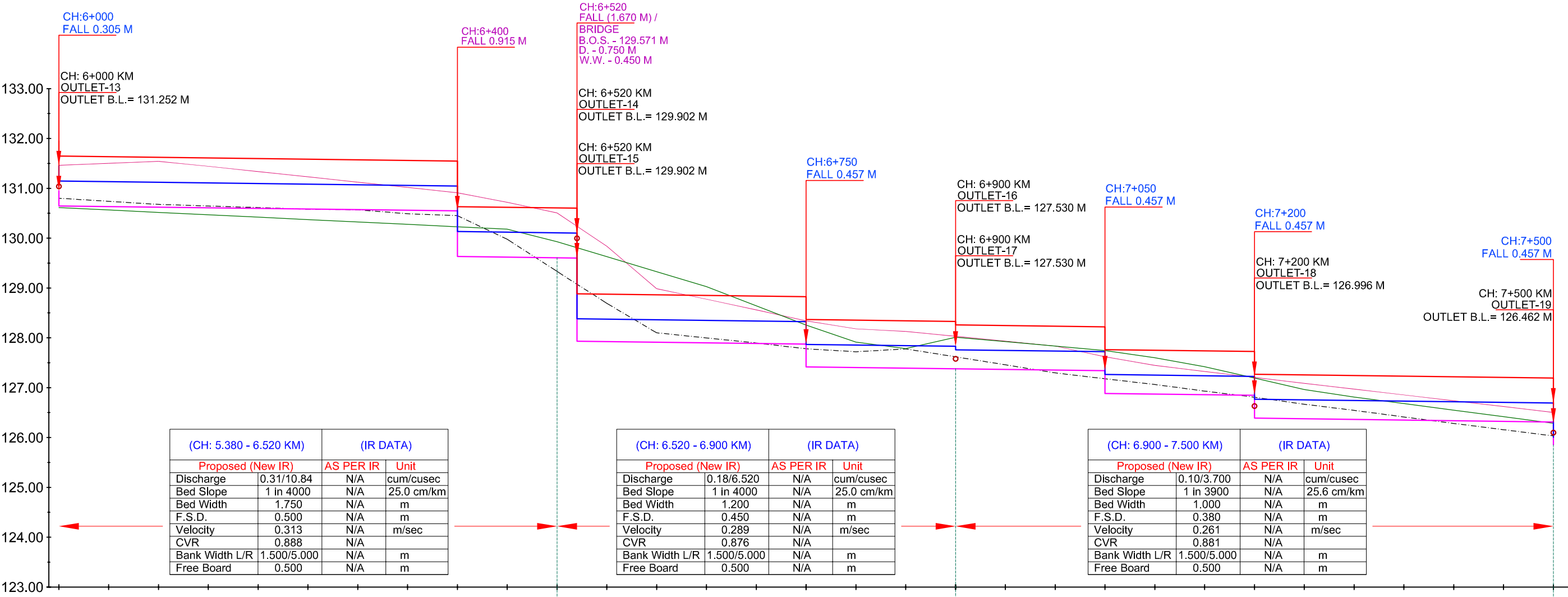
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ LSEC-

L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 4+500 TO 6+000



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage						
+ 4+500	133.341	133.222	132.257	132.242	132.892	133.392
+ 4+550	133.272	133.163	132.219	132.230	132.880	133.380
+ 4+600	132.943	133.135	132.223	132.217	132.867	133.367
+ 4+650	132.529	133.117	132.220	132.205	132.855	133.355
+ 4+700	132.144	133.188	132.200	132.192	132.842	133.342
+ 4+750	132.135	133.259	132.180	132.180	132.830	133.330
+ 4+800	132.127	132.731	132.140	132.167	132.817	133.317
+ 4+850	132.116	132.645	132.080	131.850	132.410	132.910
+ 4+900	132.101	132.559	132.019	131.837	132.397	132.897
+ 4+950	132.087	132.474	131.959	131.825	132.385	132.885
+ 5+000	132.072	132.388	131.901	131.812	132.372	132.872
+ 5+050	132.058	132.303	131.840	131.800	132.360	132.860
+ 5+100	132.043	132.509	131.821	131.787	132.347	132.847
+ 5+150	132.016	132.952	131.839	131.775	132.335	132.835
+ 5+200	131.979	132.824	131.856	131.762	132.322	132.822
+ 5+250	131.942	132.628	131.825	131.750	132.310	132.810
+ 5+300	131.926	132.727	131.697	131.737	132.297	132.797
+ 5+350	131.951	132.826	131.569	131.725	132.285	132.785
+ 5+380				131.717	132.277	132.777
+ 5+400	131.977	131.647	131.440	131.607	131.607	132.167
+ 5+450	132.003	131.635	131.312	131.090	131.590	132.090
+ 5+500	132.029	131.622	131.185	131.077	131.577	132.077
+ 5+550	132.054	131.602	131.166	131.065	131.565	132.065
+ 5+600	131.910	131.581	131.148	131.052	131.552	132.052
+ 5+650	131.761	131.561	131.131	131.040	131.540	132.040
+ 5+700	131.612	131.541	131.113	131.027	131.527	132.027
+ 5+750	131.463	131.510	131.090	131.015	131.515	132.015
+ 5+800	131.288	131.437	131.037	131.002	131.502	132.002
+ 5+850	131.011	131.363	130.985	130.990	131.490	131.990
+ 5+900	130.734	131.388	130.927	130.977	131.477	131.977
+ 5+950	130.662	131.426	130.863	130.965	131.465	131.965
+ 6+000	130.614	131.463	130.801	130.952	131.452	131.952

L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 6+000 TO 7+500



Chainage	EXISTING DATA			DESIGN DATA	
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.
6+000	130.614	131.463	130.801	130.952 130.647	131.452 131.147
6+050	130.565	131.501	130.739	130.635	131.135
6+100	130.517	131.540	130.677	130.622	131.122
6+150	130.468	131.442	130.645	130.610	131.110
6+200	130.421	131.336	130.614	130.597	131.097
6+250	130.373	131.230	130.580	130.585	131.085
6+300	130.325	131.124	130.569	130.572	131.072
6+350	130.277	131.018	130.490	130.560	131.060
6+400	130.229	130.912	130.451	130.547 129.632	131.047 130.132
6+450	130.182	130.720	129.978	129.620	130.120
6+500	129.929	130.506	129.333	129.607 129.602 127.932	130.107 130.102 128.382
6+550	129.630	129.840	128.693	127.925	128.375
6+600	129.328	128.987	128.101	127.912	128.362
6+650	129.028	128.776	127.998	127.900	128.350
6+700	128.643	128.562	127.897	127.887	128.337
6+750	128.256	128.342	127.780	127.875 127.418	128.325 127.868
6+800	127.915	128.181	127.721	127.405	128.355
6+850	127.785	128.130	127.777	127.393	128.343
6+900	128.012	128.032	127.619	127.386 127.760	128.330 128.260
6+950	127.925	127.934	127.459	127.367	128.247
7+000	127.835	127.835	127.297	127.354	128.234
7+050	127.744	127.621	127.179	127.342 126.885	128.222 127.765
7+100	127.602	127.447	127.064	126.872	127.752
7+150	127.421	127.326	126.932	126.859	127.739
7+200	127.192	127.206	126.809	126.846 126.389	127.726 127.269
7+250	126.962	127.088	126.668	126.376	127.256
7+300	126.811	126.971	126.545	126.363	127.243
7+350	126.680	126.855	126.413	126.351	127.231
7+400	126.549	126.738	126.283	126.338	127.218
7+450	126.418	126.621	126.157	126.325	127.205
7+500	126.287	126.505	126.032	126.312 125.855	127.192 126.655

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

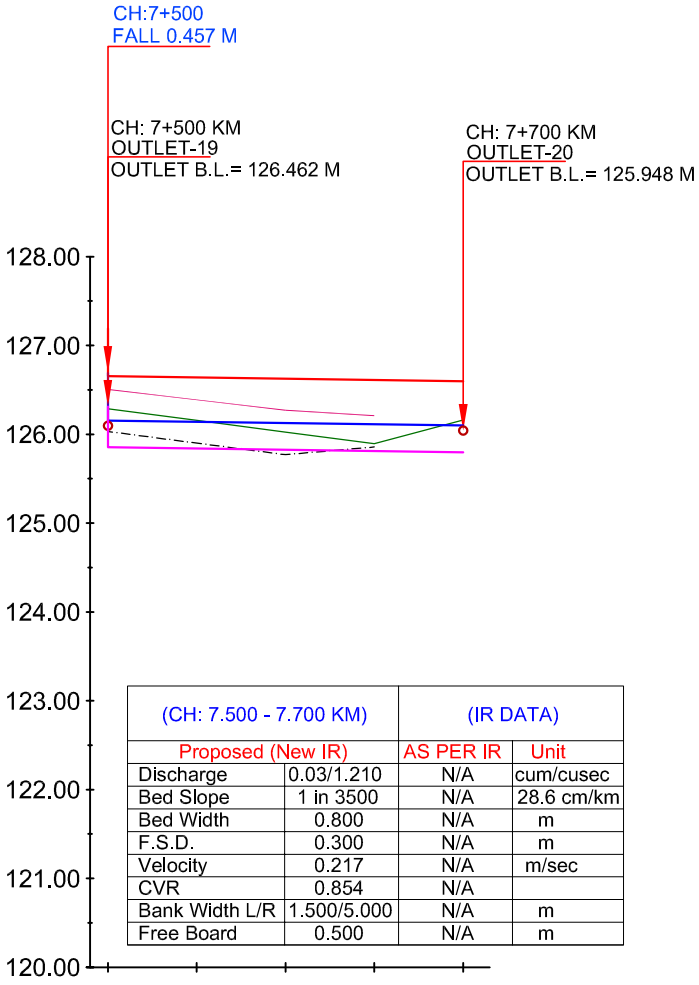
L- SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R),
KARMA DISTRIBUTARY CANAL

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ LSEC-

05 of 06

L- SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
FROM CH 7+500 TO 7+700



DESIGN DATA	TOP OF BANK LEVEL	127.192	126.655	126.641	126.627	126.612	126.598
	F.S.L.	126.692	126.155	126.141	126.127	126.112	126.098
	Proposed Bed Level	126.312	125.855	125.841	125.827	125.812	125.798
EXISTING DATA	Bed Level	126.032	125.900	125.770	125.857		
	TOP OF BANK LEVEL	126.505	126.388	126.272	126.209		
	NSL	126.287	126.156	126.025	125.894	126.161	
Chainage		7+500	7+550	7+600	7+650	7+700	

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

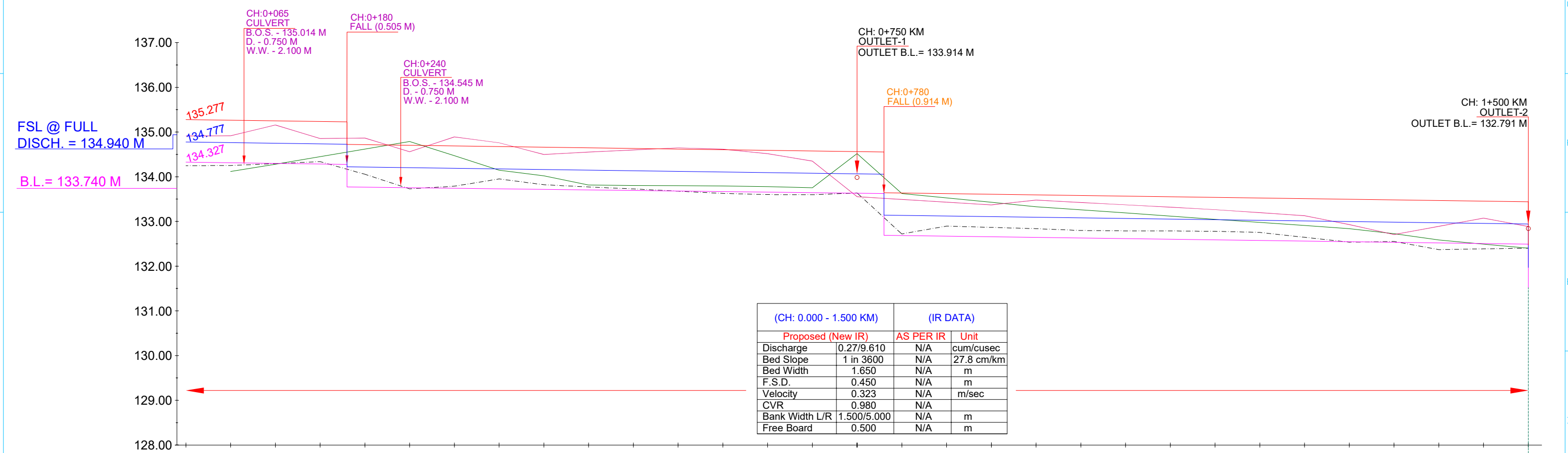
L- SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R),
KARMA DISTRIBUTARY CANAL

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ LSEC-06 of 06

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NEURA SURAJMAL MINOR

L- SECTION OF NEURA SRAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	134.246	134.777	0+000
TOP OF BANK LEVEL	134.913	134.327	0+005
NSL	134.116	134.313	0+010
	134.281	134.299	0+015
	134.450	134.285	0+020
	134.617	134.272	0+025
	134.788	134.253	0+030
	134.469	134.235	0+035
	134.148	134.216	0+040
	134.021	134.203	0+045
	133.816	134.189	0+050
	133.805	134.175	0+055
	133.800	134.161	0+060
	133.794	134.147	0+065
	133.778	134.133	0+070
	133.754	134.119	0+075
	133.516	134.105	0+080
	133.623	134.091	0+085
	133.526	134.078	0+090
	133.428	134.064	0+095
	133.330	134.051	1+000
	133.260	134.037	1+005
	133.190	134.023	1+010
	133.119	134.009	1+015
	133.049	133.995	1+020
	132.979	133.981	1+025
	132.909	133.967	1+030
	132.840	133.953	1+035
	132.725	133.939	1+040
	132.587	133.925	1+045
	132.494	133.911	1+050
	132.401	133.897	

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

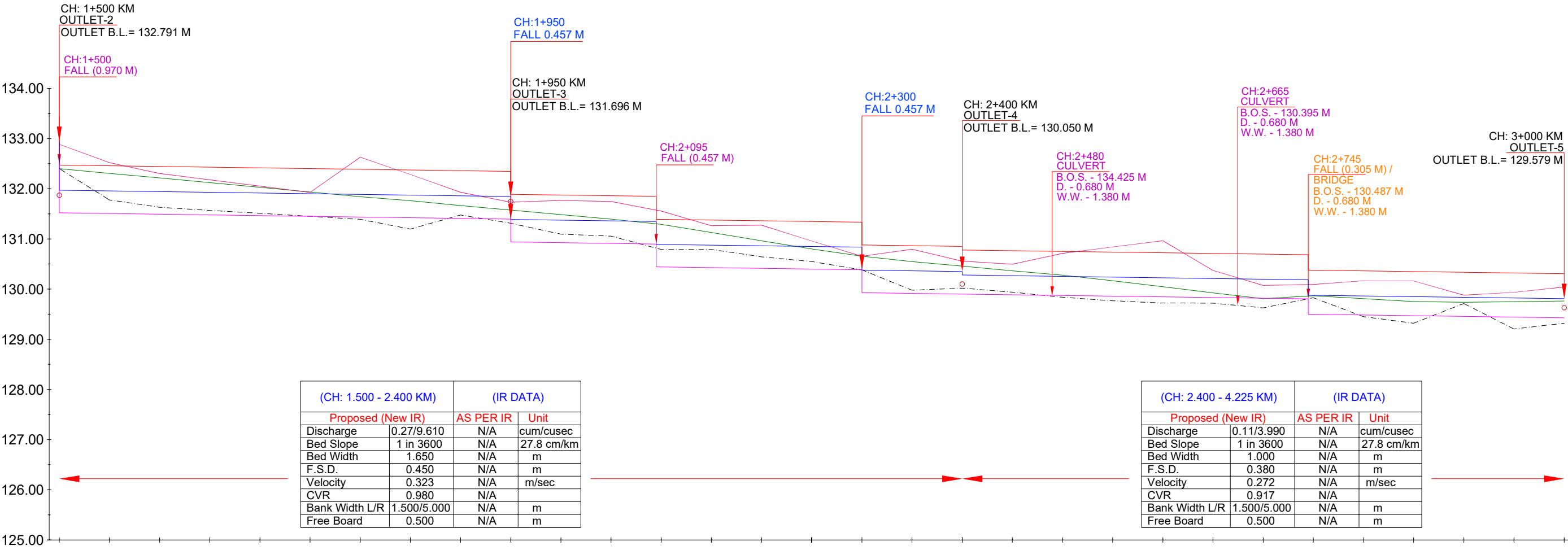
NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

L- SECTION OF NEURA SRAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L),
KARMA DISTRIBUTARY CANAL

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ LSEC-01 of 04

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L- SECTION OF NEURA SRAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000



Chainage IN KM	DESIGN DATA			EXISTING DATA		
	TOP OF BANK LEVEL	F.S.L.	Proposed Bed Level	Bed Level	TOP OF BANK LEVEL	NSL
1+500	132.471 132.441	131.971 132.941	131.521 132.491	132.403	132.888 132.520	132.401 132.308
1+550	132.457	131.957	131.507	131.778	132.520	132.308
1+600	132.444	131.944	131.494	131.631	132.305	132.215
1+650	132.430	131.930	131.480	131.569	132.179	132.124
1+700	132.416	131.916	131.466	131.511	132.052	132.030
1+750	132.402	131.902	131.452	131.451	131.925	131.937
1+800	132.388	131.888	131.438	131.391	132.630	131.843
1+850	132.374	131.874	131.424	131.197	132.285	131.763
1+900	132.360	131.860	131.410	131.477	131.931	131.664
1+950	132.346 131.889	131.846 131.389	131.396 130.939	131.312	131.732	131.575
2+000	131.875	131.375	130.925	131.096	131.769	131.484
2+050	131.862	131.362	130.912	131.056	131.746	131.395
2+100	131.849 131.392 131.391	131.349 130.892 130.891	130.899 130.442 130.441	130.791	131.556	131.292
2+150	131.377	130.877	130.427	130.723	131.263	131.128
2+200	131.363	130.863	130.413	130.643	131.275	130.963
2+250	131.349	130.849	130.399	130.549	130.960	130.799
2+300	131.335 130.878	130.835 130.378	130.385 129.928	130.384	130.655	130.656
2+350	130.864	130.364	129.914	129.978	130.797	130.550
2+400	130.850 130.780	130.350 130.280	129.900	130.019	130.558	130.457
2+450	130.766	130.266	129.886	129.939	130.497	130.366
2+500	130.753	130.253	129.873	129.838	130.713	130.279
2+550	130.739	130.239	129.859	129.768	130.840	130.167
2+600	130.725	130.225	129.845	129.722	130.966	130.047
2+650	130.711	130.211	129.831	129.721	130.372	129.924
2+700	130.697	130.197	129.817	129.626	130.075	129.810
2+750	130.685 130.360 130.378	130.185 129.889 129.878	129.805 129.500 129.498	129.827	130.092	129.868
2+800	130.364	129.864	129.484	129.451	130.167	129.808
2+850	130.350	129.850	129.470	129.320	130.163	129.751
2+900	130.336	129.836	129.456	129.714	129.881	129.738
2+950	130.323	129.823	129.443	129.204	129.936	129.750
3+000	130.309	129.809	129.429	129.321	130.043	129.762

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

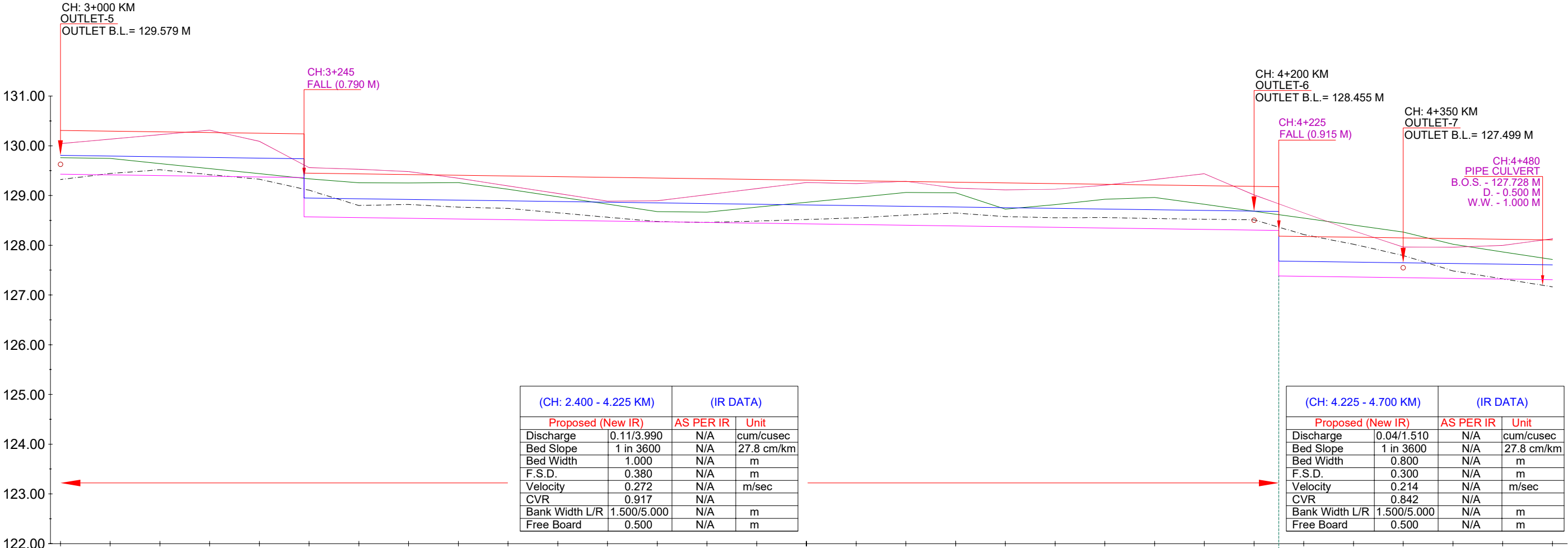
L- SECTION OF NEURA SRAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L),
KARMA DISTRIBUTARY CANAL

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ LSEC-

02 of 04

L- SECTION OF NEURA SRAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)



Chainage IN KM	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
3+000	129.762	130.043	129.321	129.429	129.809	130.309
3+050	129.747	130.133	129.444	129.415	129.795	130.295
3+100	129.642	130.224	129.518	129.401	129.781	130.281
3+150	129.542	130.314	129.420	129.387	129.767	130.267
3+200	129.440	130.092	129.327	129.373	129.753	130.253
3+250	129.337	129.561	129.107	129.361 128.571 128.569	129.741 128.951 128.949	130.241 129.451 129.449
3+300	129.256	129.529	128.800	128.555	129.935	129.435
3+350	129.254	129.483	128.820	128.541	128.921	129.421
3+400	129.261	129.347	128.766	128.528	128.908	129.408
3+450	129.127	129.195	128.741	128.514	128.894	129.394
3+500	128.977	129.041	128.652	128.500	128.880	129.380
3+550	128.827	128.888	128.563	128.486	128.866	129.366
3+600	128.677	128.895	128.477	128.472	128.852	129.352
3+650	128.666	129.018	128.459	128.458	128.838	129.338
3+700	128.765	129.140	128.486	128.444	128.824	129.324
3+750	128.863	129.262	128.518	128.430	128.810	129.310
3+800	128.962	129.240	128.550	128.416	128.796	129.296
3+850	129.060	129.286	128.606	128.403	128.783	129.283
3+900	129.053	129.151	128.648	128.389	128.769	129.269
3+950	128.728	129.114	128.576	128.375	128.755	129.255
4+000	128.815	129.127	128.553	128.361	128.741	129.241
4+050	128.926	129.207	128.557	128.347	128.727	129.227
4+100	128.962	129.323	128.537	128.333	128.713	129.213
4+150	128.823	129.439	128.523	128.319	128.699	129.199
4+200	128.684	129.013	128.511	128.305	128.685	129.185
4+225				128.298 127.583	128.678 127.683	129.178 128.183
4+250	128.546	128.652	128.216	127.376	127.676	128.176
4+300	128.406	128.291	128.019	127.363	127.663	128.163
4+350	128.267	127.964	127.795	127.349	127.649	128.149
4+400	128.020	127.960	127.485	127.335	127.635	128.135
4+450	127.866	127.997	127.324	127.321	127.621	128.121
4+500	127.713	128.132	127.164	127.307	127.607	128.107

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

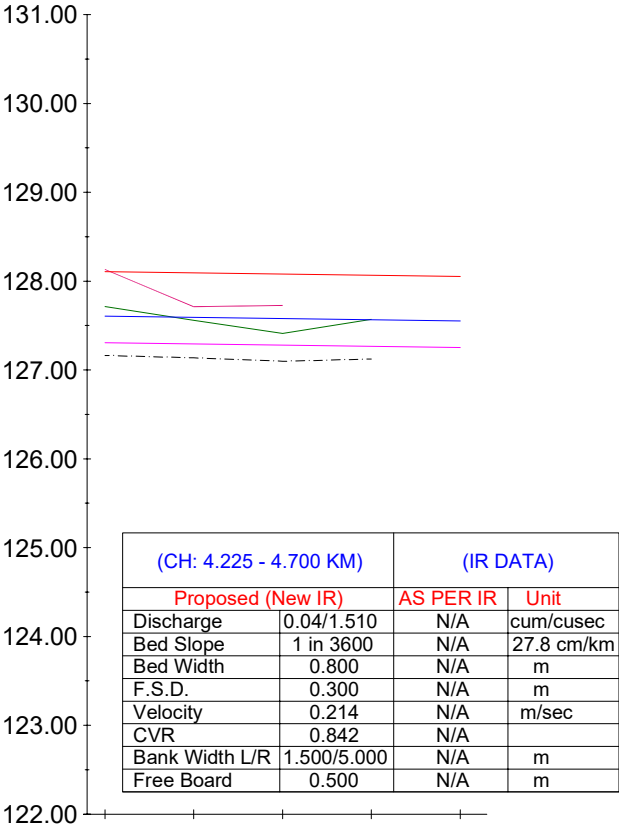
L- SECTION OF NEURA SRAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ LSEC-

03 of 04

L- SECTION OF NEURA SRAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 4+500 TO 4+700



DESIGN DATA	TOP OF BANK LEVEL	128.107	128.093	128.079	128.065	128.051
	F.S.L.	127.607	127.593	127.579	127.565	127.551
	Proposed Bed Level	127.307	127.293	127.279	127.265	127.251
EXISTING DATA	Bed Level	127.164	127.136	127.098	127.123	
	TOP OF BANK LEVEL	128.132	127.712	127.727		
	NSL	127.713	127.560	127.412	127.571	
Chainage IN KM		4+500	4+550	4+600	4+650	4+700

NSL

EXISTING TOP OF BANK

EXISTING STRUCTURE

MODIFIED STRUCTURE

NEW STRUCTURE

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.



PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

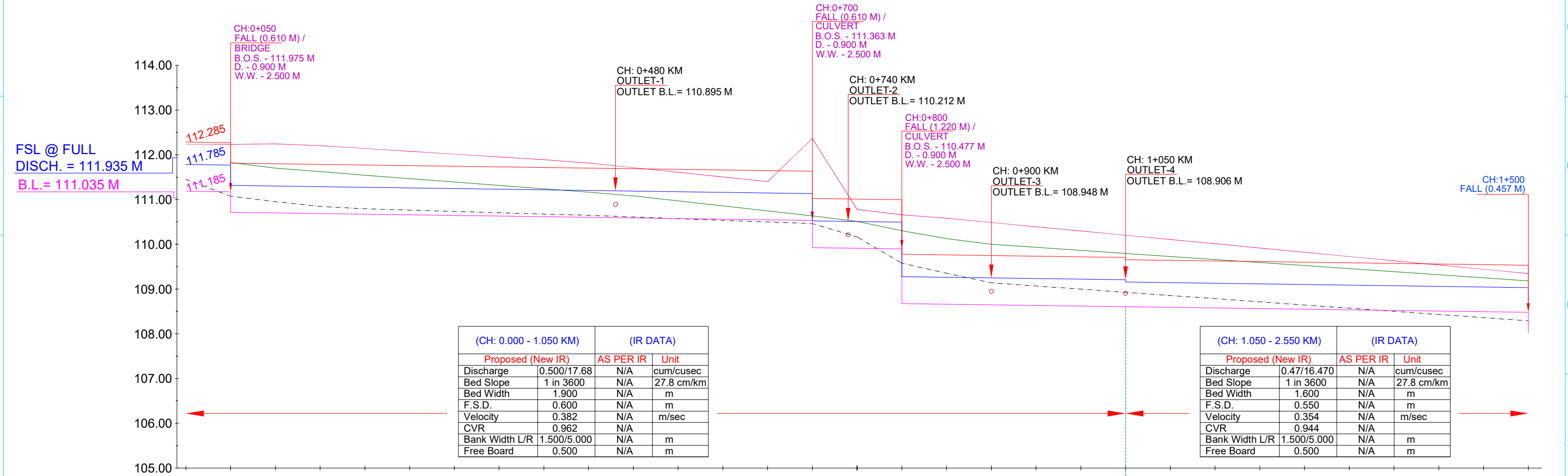
L- SECTION OF NEURA SRAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L),
KARMA DISTRIBUTARY CANAL

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ LSEC-04 of 04

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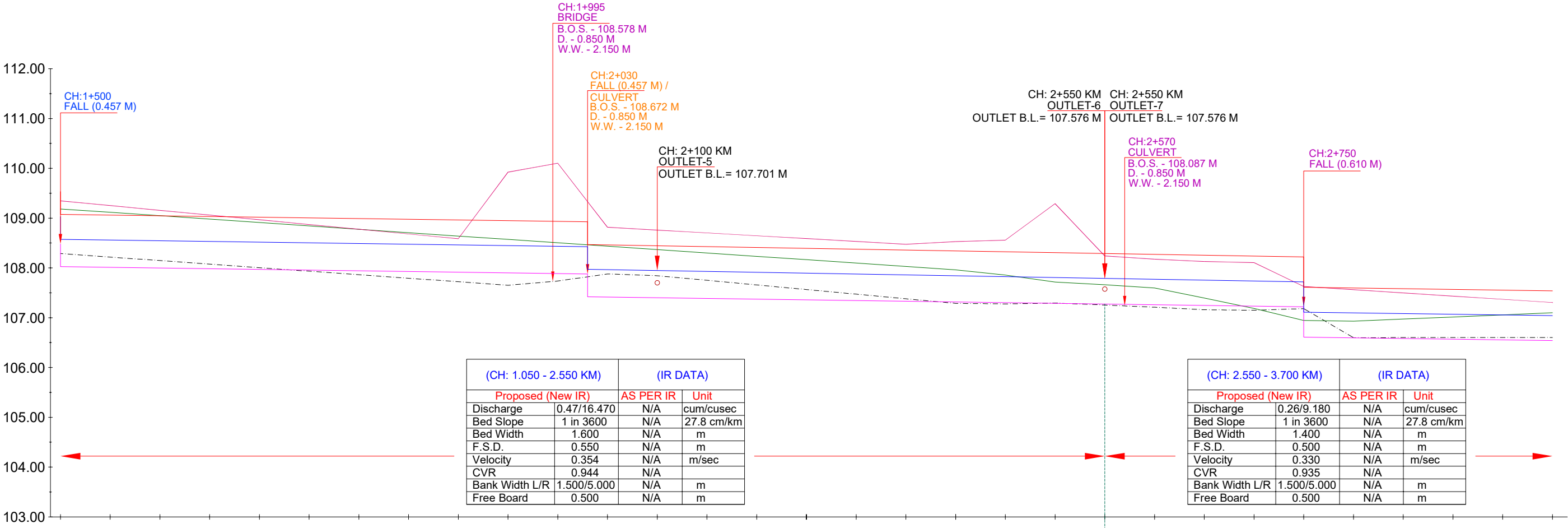
SHUSHNAR MINOR

L- SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 0+000 TO 1+500



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage IN KM						
+ 0+000		112.238	111.451	111.185	111.785	112.285
+ 0+050	111.827	112.233	111.075	110.714	111.771	112.271
+ 0+100	111.700	112.243	110.952	110.700	111.300	111.800
+ 0+150	111.624	112.204	110.846	110.686	111.286	111.786
+ 0+200	111.542	112.141	110.793	110.672	111.272	111.772
+ 0+250	111.467	112.078	110.764	110.659	111.259	111.759
+ 0+300	111.392	112.015	110.734	110.645	111.245	111.745
+ 0+350	111.317	111.953	110.704	110.631	111.231	111.731
+ 0+400	111.241	111.890	110.675	110.617	111.217	111.717
+ 0+450	111.166	111.816	110.648	110.603	111.203	111.703
+ 0+500	111.082	111.742	110.611	110.589	111.189	111.689
+ 0+550	110.970	111.609	110.573	110.575	111.175	111.675
+ 0+600	110.857	111.505	110.535	110.561	111.161	111.661
+ 0+650	110.745	111.402	110.500	110.547	111.147	111.647
+ 0+700	110.633	112.365	110.463	110.534	110.524	111.634
+ 0+750	110.511	110.781	110.165	109.910	110.510	111.010
+ 0+800	110.303	110.658	109.577	109.896	110.496	110.996
+ 0+850	110.126	110.583	109.352	108.676	109.276	109.776
+ 0+900	109.999	110.487	109.139	108.662	109.262	109.762
+ 0+950	109.931	110.392	109.068	108.634	109.234	109.734
+ 1+000	109.864	110.297	108.998	108.620	109.220	109.720
+ 1+050	109.796	110.202	108.927	108.606	109.206	109.706
+ 1+100	109.728	110.107	108.856	108.592	109.142	109.642
+ 1+150	109.660	110.012	108.785	108.579	109.129	109.629
+ 1+200	109.592	109.917	108.714	108.565	109.115	109.615
+ 1+250	109.524	109.822	108.643	108.551	109.101	109.601
+ 1+300	109.456	109.727	108.572	108.537	109.087	109.587
+ 1+350	109.388	109.632	108.501	108.523	109.073	109.573
+ 1+400	109.320	109.537	108.431	108.509	109.059	109.559
+ 1+450	109.252	109.442	108.360	108.495	109.045	109.545
+ 1+500	109.184	109.347	108.289	108.481	109.031	109.531

L- SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 1+500 TO 3+000



EXISTING DATA	DESIGN DATA		Chainage IN KM
	TOP OF BANK LEVEL	F.S.L.	
Bed Level	109.531 109.031 108.574	109.031 108.574	1+500
TOP OF BANK LEVEL	109.531 109.031 108.574	109.031 108.574	1+550
NSL	109.184 109.116 109.048	109.116 109.048	1+600
	109.184 109.116 109.048	109.116 109.048	1+650
	109.184 109.116 109.048	109.116 109.048	1+700
	109.184 109.116 109.048	109.116 109.048	1+750
	109.184 109.116 109.048	109.116 109.048	1+800
	109.184 109.116 109.048	109.116 109.048	1+850
	109.184 109.116 109.048	109.116 109.048	1+900
	109.184 109.116 109.048	109.116 109.048	1+950
	109.184 109.116 109.048	109.116 109.048	2+000
	109.184 109.116 109.048	109.116 109.048	2+050
	109.184 109.116 109.048	109.116 109.048	2+100
	109.184 109.116 109.048	109.116 109.048	2+150
	109.184 109.116 109.048	109.116 109.048	2+200
	109.184 109.116 109.048	109.116 109.048	2+250
	109.184 109.116 109.048	109.116 109.048	2+300
	109.184 109.116 109.048	109.116 109.048	2+350
	109.184 109.116 109.048	109.116 109.048	2+400
	109.184 109.116 109.048	109.116 109.048	2+450
	109.184 109.116 109.048	109.116 109.048	2+500
	109.184 109.116 109.048	109.116 109.048	2+550
	109.184 109.116 109.048	109.116 109.048	2+600
	109.184 109.116 109.048	109.116 109.048	2+650
	109.184 109.116 109.048	109.116 109.048	2+700
	109.184 109.116 109.048	109.116 109.048	2+750
	109.184 109.116 109.048	109.116 109.048	2+800
	109.184 109.116 109.048	109.116 109.048	2+850
	109.184 109.116 109.048	109.116 109.048	2+900
	109.184 109.116 109.048	109.116 109.048	2+950
	109.184 109.116 109.048	109.116 109.048	3+000

LEGEND

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

IMPLEMENTING AGENCY :-

WAPCOS LTD.



PROJECT TITLE :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

DRAWING TITLE :-

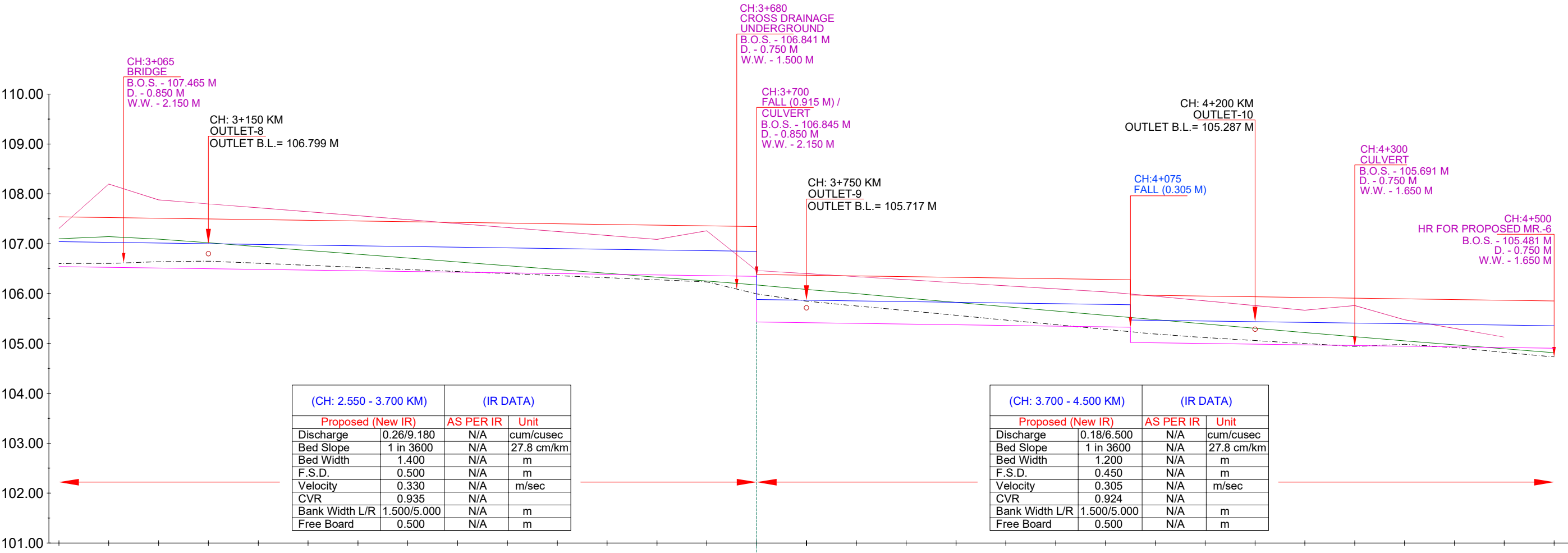
L- SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L),
KARMA DISTRIBUTARY CANAL

DRAWING NO. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ LSEC-

02 of 03

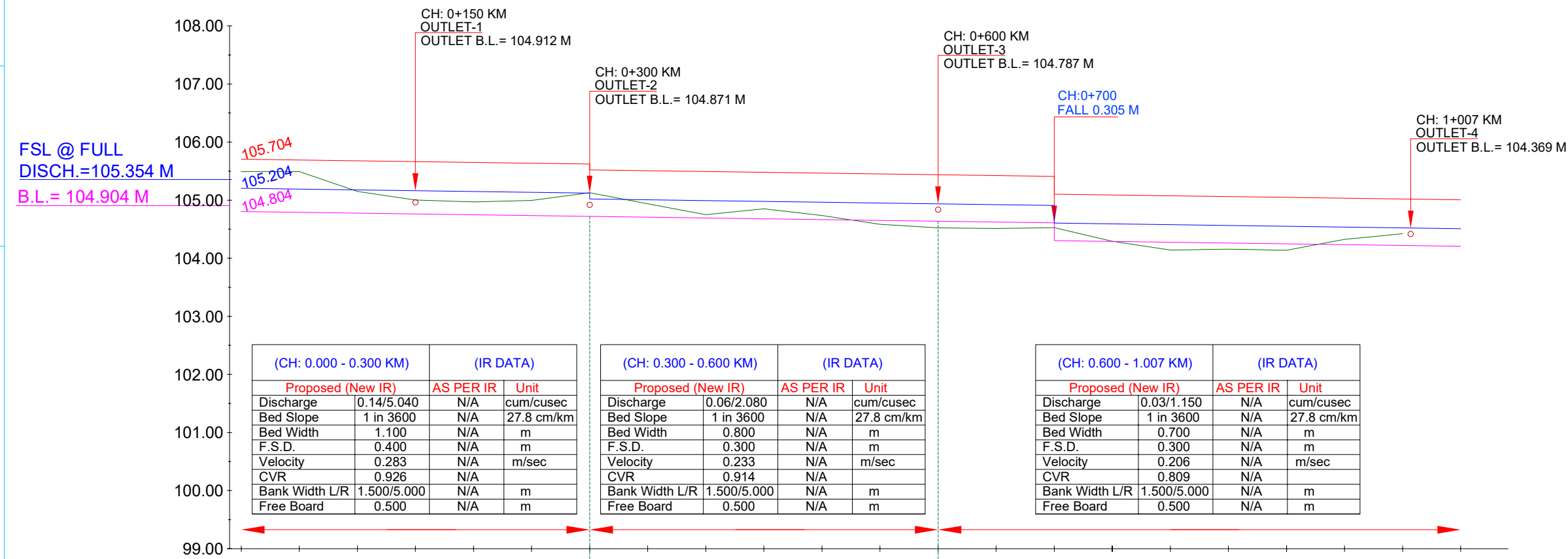
L- SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
FROM CH 3+000 TO 4+500



	EXISTING DATA			DESIGN DATA		
	NSL	TOP OF BANK LEVEL	Bed Level	Proposed Bed Level	F.S.L.	TOP OF BANK LEVEL
Chainage IN KM						
+ 3+000	107.100	107.305	106.604	106.541	107.041	107.541
+ 3+050	107.142	108.198	106.605	106.527	107.027	107.527
+ 3+100	107.093	107.879	106.639	106.513	107.013	107.513
+ 3+150	107.019	107.799	106.651	106.499	106.999	107.499
+ 3+200	106.942	107.720	106.609	106.485	106.985	107.485
+ 3+250	106.866	107.641	106.568	106.471	106.971	107.471
+ 3+300	106.789	107.562	106.526	106.457	106.957	107.457
+ 3+350	106.713	107.483	106.484	106.443	106.943	107.443
+ 3+400	106.636	107.404	106.443	106.430	106.930	107.430
+ 3+450	106.559	107.325	106.402	106.416	106.916	107.416
+ 3+500	106.483	107.246	106.360	106.402	106.902	107.402
+ 3+550	106.406	107.167	106.319	106.388	106.888	107.388
+ 3+600	106.330	107.088	106.277	106.374	106.874	107.374
+ 3+650	106.253	107.261	106.236	106.360	106.860	107.360
+ 3+700	106.173	106.462	105.995	106.346	106.846	107.346
+ 3+750	106.085	106.401	105.849	105.417	105.867	106.367
+ 3+800	105.999	106.340	105.753	105.403	105.853	106.353
+ 3+850	105.912	106.279	105.660	105.390	105.840	106.340
+ 3+900	105.825	106.217	105.566	105.376	105.826	106.326
+ 3+950	105.739	106.156	105.470	105.362	105.812	106.312
+ 4+000	105.652	106.095	105.378	105.348	105.798	106.298
+ 4+050	105.566	106.034	105.283	105.334	105.784	106.284
+ 4+100	105.479	105.948	105.189	105.327	105.777	106.277
+ 4+150	105.393	105.855	105.118	105.001	105.451	105.951
+ 4+200	105.306	105.761	105.059	104.987	105.437	105.937
+ 4+250	105.220	105.668	105.000	104.973	105.423	105.923
+ 4+300	105.134	105.761	104.941	104.960	105.410	105.910
+ 4+350	105.053	105.478	104.984	104.946	105.396	105.896
+ 4+400	104.972	105.304	104.918	104.932	105.382	105.882
+ 4+450	104.893	105.129	104.821	104.918	105.368	105.868
+ 4+500	104.814		104.731	104.904	105.354	105.854

JAGDISHPUR MINOR

L- SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)
FROM CH 0+000 TO 1+007



(CH: 0.000 - 0.300 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.14/5.040	N/A	cum/cusec
Bed Slope	1 in 3600	N/A	27.8 cm/km
Bed Width	1.100	N/A	m
F.S.D.	0.400	N/A	m
Velocity	0.283	N/A	m/sec
CVR	0.926	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

(CH: 0.300 - 0.600 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.06/2.080	N/A	cum/cusec
Bed Slope	1 in 3600	N/A	27.8 cm/km
Bed Width	0.800	N/A	m
F.S.D.	0.300	N/A	m
Velocity	0.233	N/A	m/sec
CVR	0.914	N/A	
Bank Width L/R	1.500/5.000	N/A	m
Free Board	0.500	N/A	m

(CH: 0.600 - 1.007 KM)		(IR DATA)	
Proposed (New IR)		AS PER IR	Unit
Discharge	0.03/1.150	N/A	cum/cusec
Bed Slope	1 in 3600	N/A	27.8 cm/km
Bed Width	0.700	N/A	m
F.S.D.	0.300	N/A	m
Velocity	0.206	N/A	m/sec
CVR	0.809	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	105.704	105.690	105.676	105.662	105.648	105.635	105.621	105.607	105.493	105.479	105.465	105.451	105.437	105.423	105.410	105.395	105.381	105.367	105.353	105.339	105.325	105.311
	F.S.L.	105.204	105.190	105.176	105.162	105.148	105.135	105.121	105.107	104.993	104.979	104.965	104.951	104.937	104.923	104.910	104.895	104.881	104.867	104.853	104.839	104.825	104.811
EXISTING DATA	Proposed Bed Level	104.804	104.790	104.776	104.762	104.748	104.735	104.721	104.707	104.693	104.679	104.665	104.651	104.637	104.623	104.610	104.595	104.581	104.567	104.553	104.539	104.525	104.511
	Bed Level																						
EXISTING DATA	TOP OF BANK LEVEL																						
	NSL	105.493	105.492	105.150	105.002	104.970	104.994	105.127	104.938	104.750	104.851	104.734	104.585	104.522	104.511	104.526	104.293	104.142	104.157	104.137	104.324	104.422	104.422
Chainage		+ 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

LEGEND

NSL

EXISTING TOP OF BANK

EXISTING BED LEVEL

PROPOSED BED LEVEL

PROPOSED FSL

PROPOSED TOP OF BANK LEVEL

IMPLEMENTING AGENCY :-
WAPCOS LTD.

PROJECT TITLE :-
DRAWING TITLE :-
DRAWING NO. :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

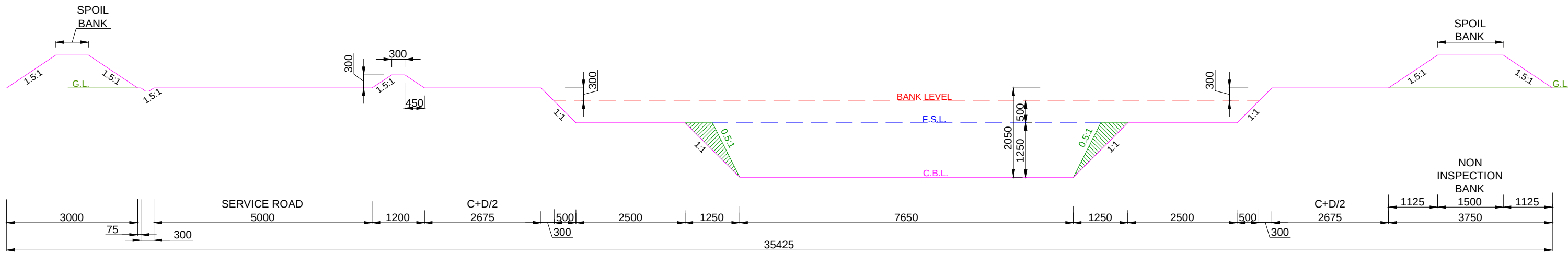
L- SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-01/ LSEC-01 of 01

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TYPICAL X-SECTION

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

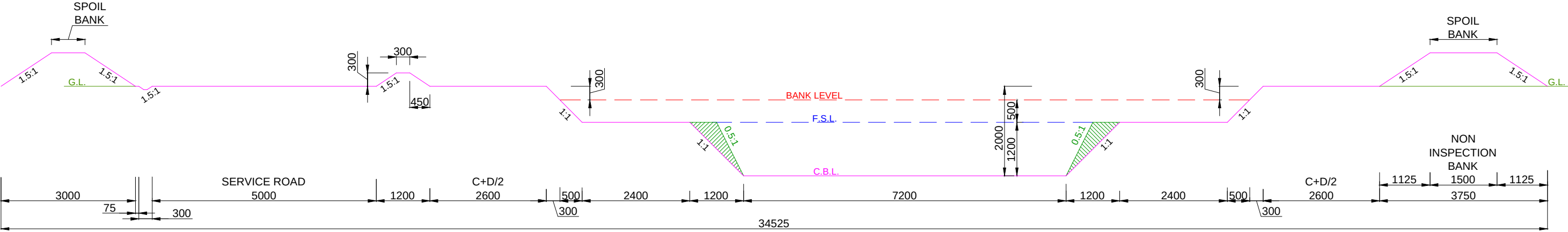


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND					
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)					
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC) 1 of 17					

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

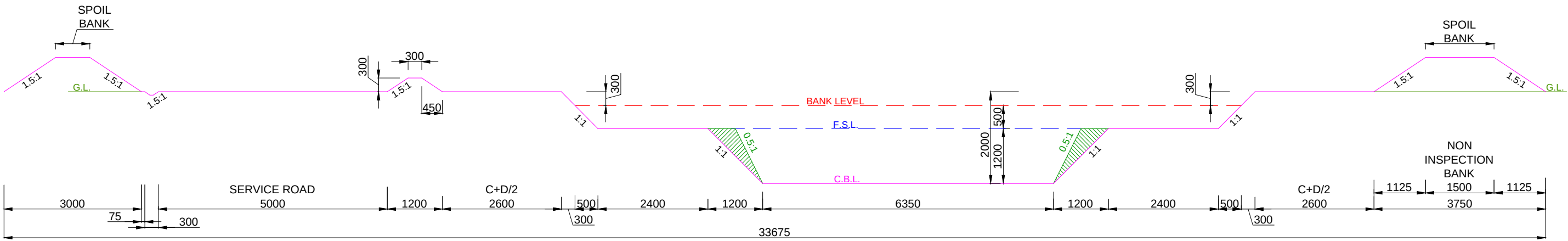


DESIGN SECTION FROM CH: 0.150 KM TO CH: 3.200 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

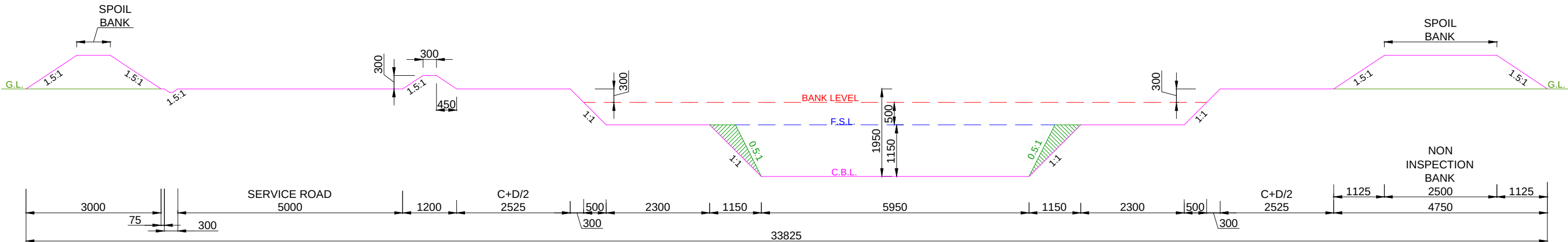


DESIGN SECTION FROM CH: 3.200 KM TO CH: 7.735 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING



DESIGN SECTION FROM CH: 7.735 KM TO CH: 8.700 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.

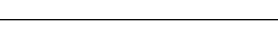
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC) 4 of 17				

The diagram illustrates a cross-section of a road with the following components and dimensions:

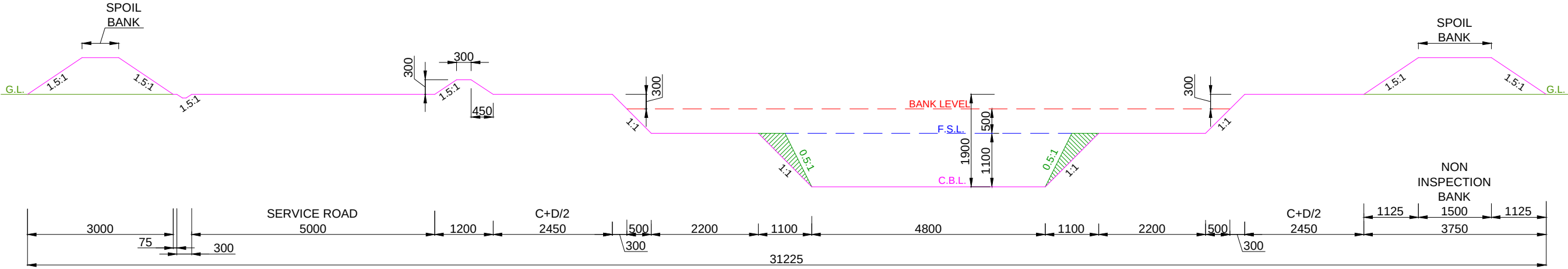
- Left Side:**
 - SPOIL BANK:** A trapezoidal bank with a top width of 3000mm and a base width of 300mm. The side slopes are 1.5:1.
 - Service Road:** A 5000mm wide road with a 75mm shoulder on the left and a 300mm shoulder on the right.
 - C+D/2:** A 2525mm wide section with a 300mm shoulder on the right.
 - 2300mm Section:** A 2300mm wide section with a 1150mm shoulder on the right.
- Central Section:**
 - 5300mm Section:** A 5300mm wide section with a 1150mm shoulder on the left and a 1150mm shoulder on the right.
 - 1150mm Section:** A 1150mm wide section with a 1150mm shoulder on the right.
 - 500mm Section:** A 500mm wide section with a 300mm shoulder on the right.
- Right Side:**
 - NON INSPECTION BANK:** A trapezoidal bank with a top width of 2500mm and a base width of 4750mm. The side slopes are 1.5:1.
- Levels and Slopes:**
 - G.L. (Ground Level):** Indicated by a green line.
 - BANK LEVEL:** Indicated by a red dashed line.
 - F.S.L. (Finished Surface Level):** Indicated by a blue dashed line.
 - C.B.L. (Centerline Level):** Indicated by a magenta line.
 - Slopes:** 1.5:1 for the main banks, 1:1 for the side slopes, and 0.5:1 for the central section.
- Dimensions:**
 - 3000mm:** Top width of the left spoil bank.
 - 5000mm:** Width of the service road.
 - 2525mm:** Width of the C+D/2 section.
 - 2300mm:** Width of the 2300mm section.
 - 1150mm:** Width of the 1150mm section.
 - 5300mm:** Width of the 5300mm section.
 - 1150mm:** Width of the 1150mm section.
 - 500mm:** Width of the 500mm section.
 - 300mm:** Width of the 300mm section.
 - 1125mm:** Width of the 1125mm section.
 - 2500mm:** Top width of the non-inspection bank.
 - 4750mm:** Base width of the non-inspection bank.
 - 33175mm:** Total width of the road.

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 KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC) 5 of 17	

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

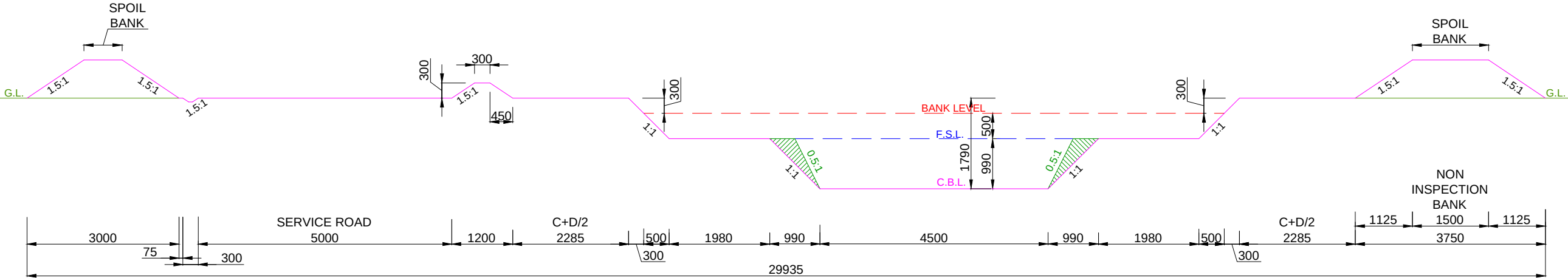


DESIGN SECTION FROM CH: 9.565 KM TO CH: 11.360 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

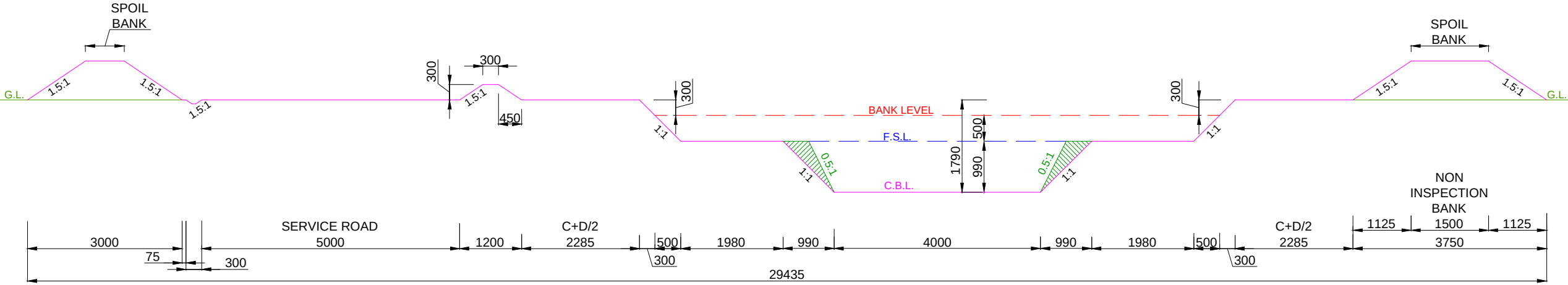


DESIGN SECTION FROM CH: 11.360 KM TO CH: 12.850 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

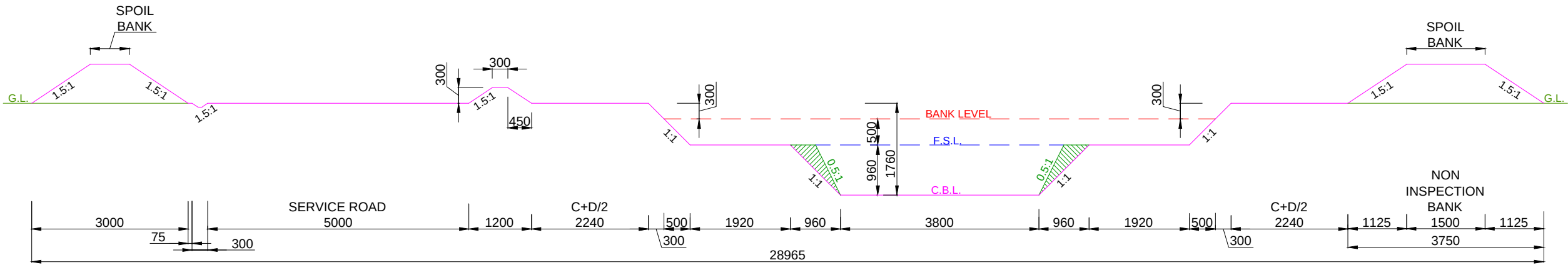


DESIGN SECTION FROM CH: 12.850 KM TO CH: 14.460 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

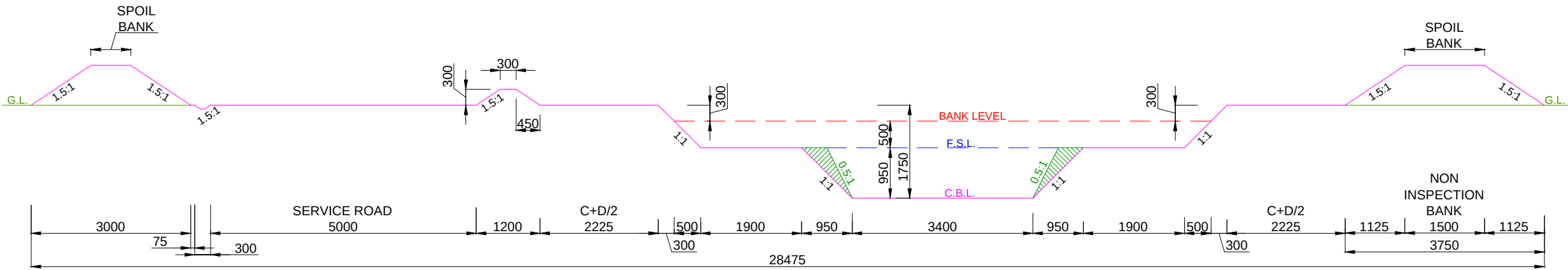


DESIGN SECTION FROM CH: 14.460 KM TO CH: 15.750 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

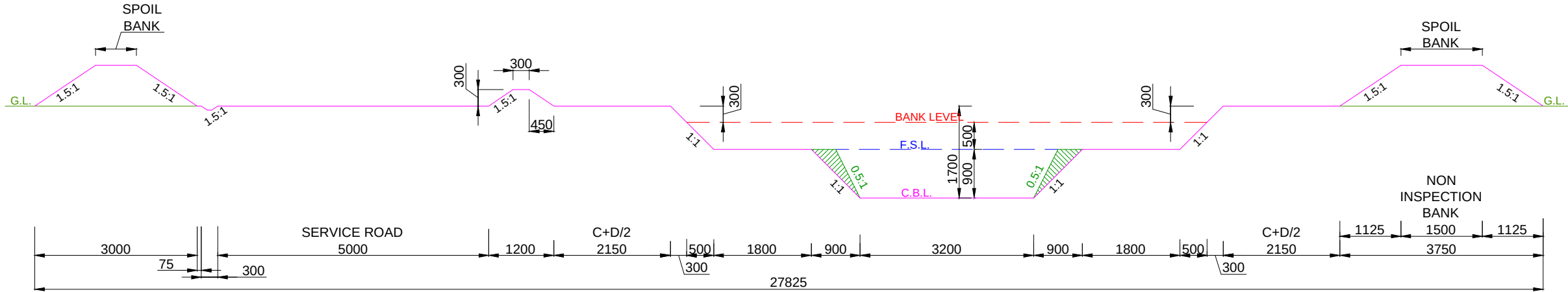


DESIGN SECTION FROM CH: 15.750 KM TO CH: 16.860 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

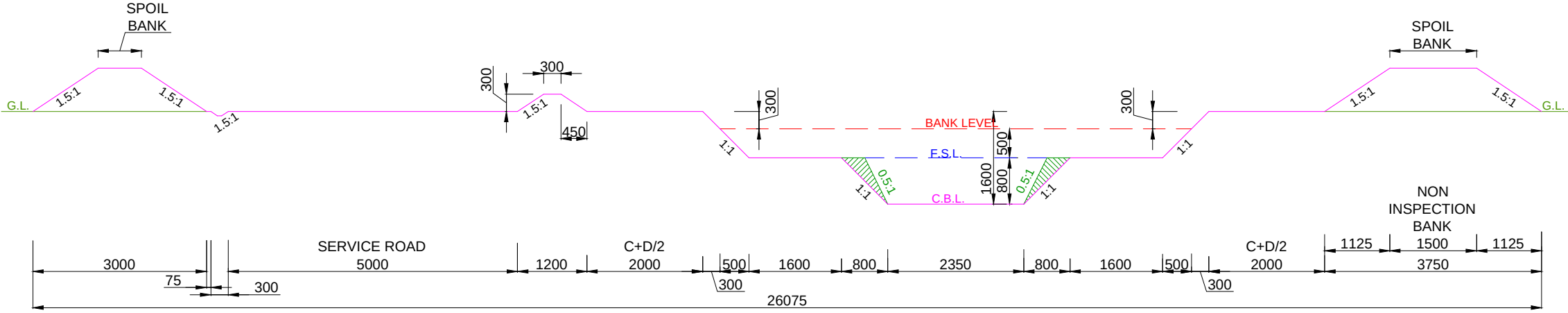


DESIGN SECTION FROM CH: 16.860 KM TO CH: 18.342 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

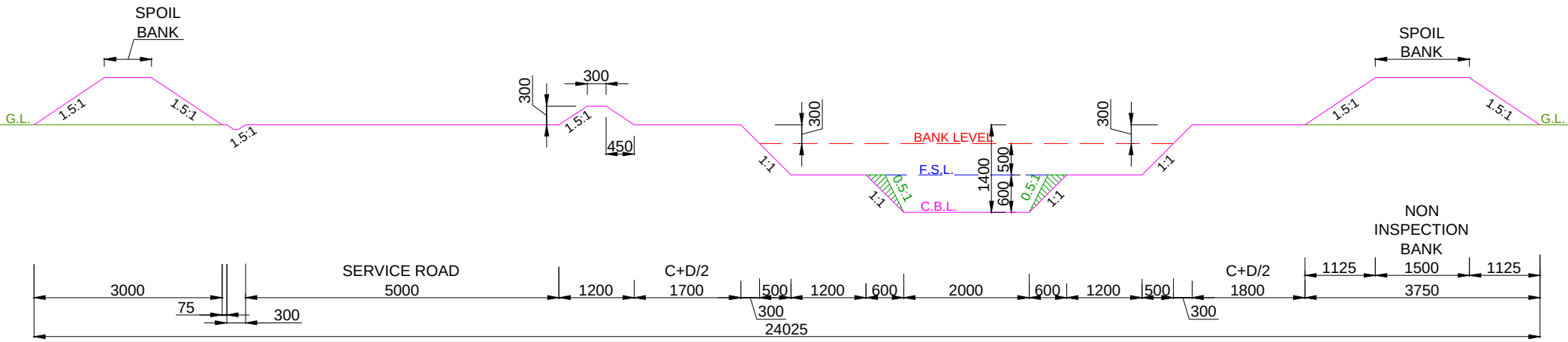


DESIGN SECTION FROM CH: 18.342 KM TO CH: 20.058 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

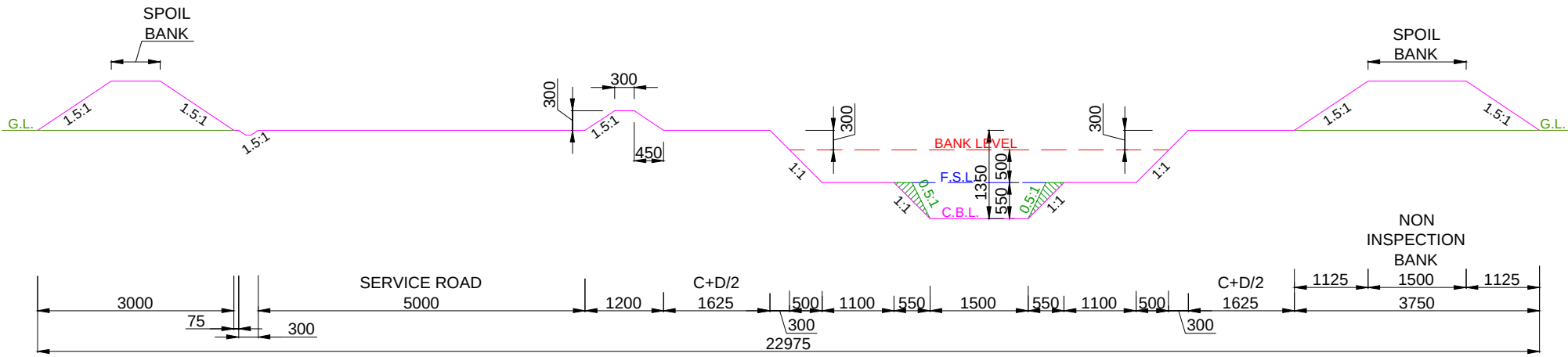


DESIGN SECTION FROM CH: 20.058 KM TO CH: 21.350 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

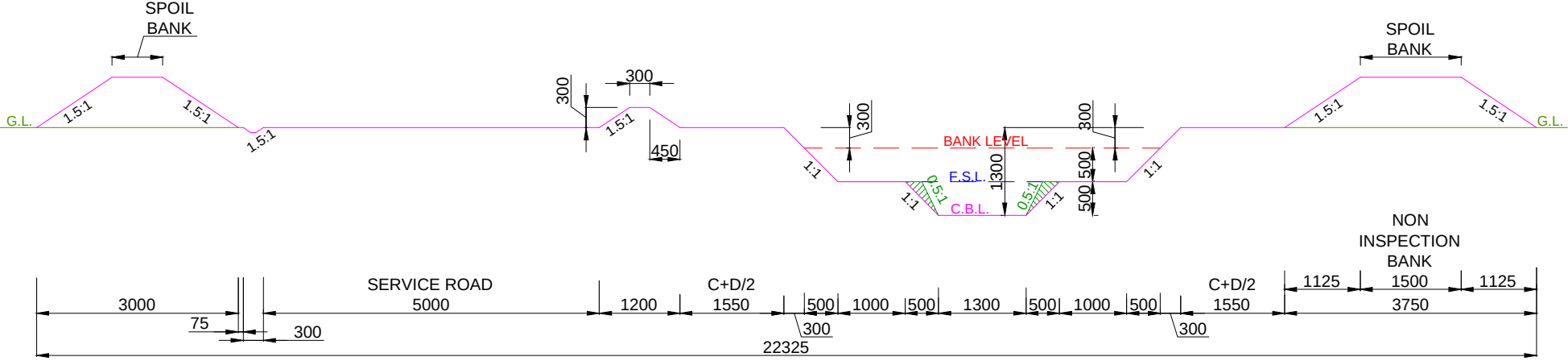


DESIGN SECTION FROM CH: 21.350 KM TO CH: 21.750 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

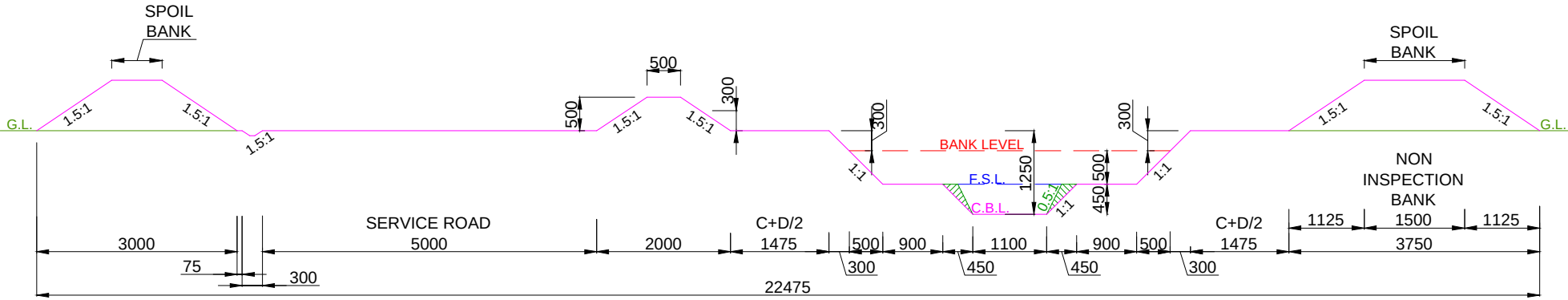


DESIGN SECTION FROM CH: 21.750 KM TO CH: 22.150 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

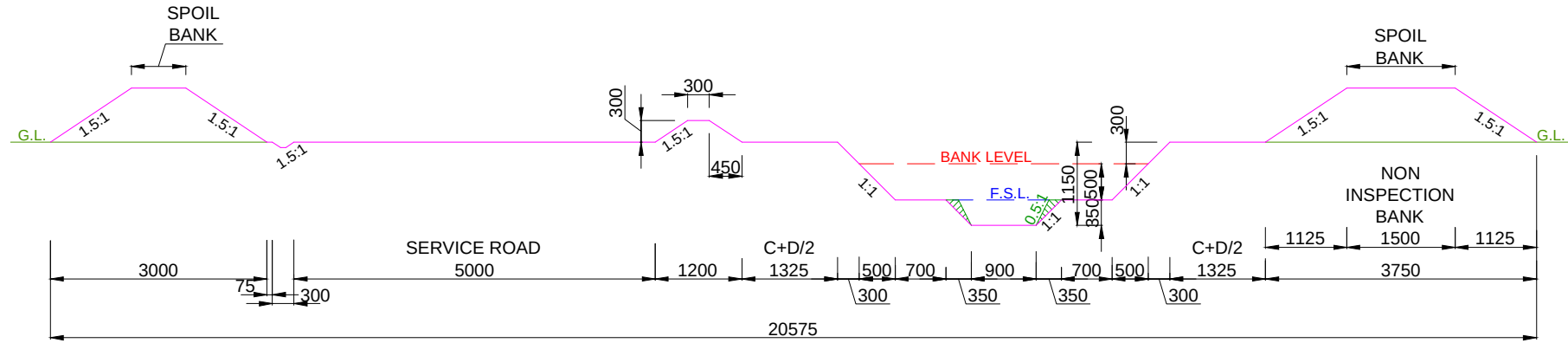


DESIGN SECTION FROM CH: 22.150 KM TO CH: 22.990 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)				

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL CUTTING

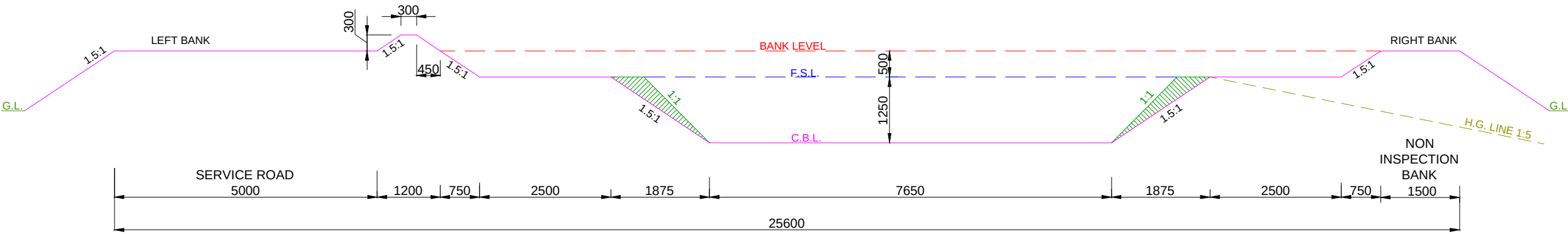


DESIGN SECTION FROM CH: 22.990 KM TO CH: 23.750 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

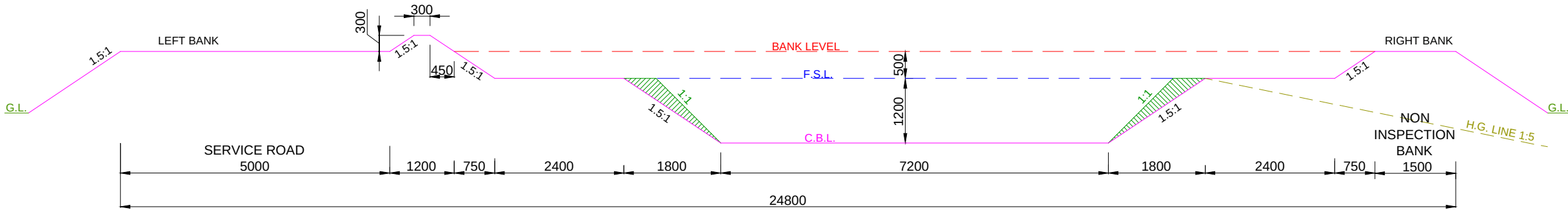


DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

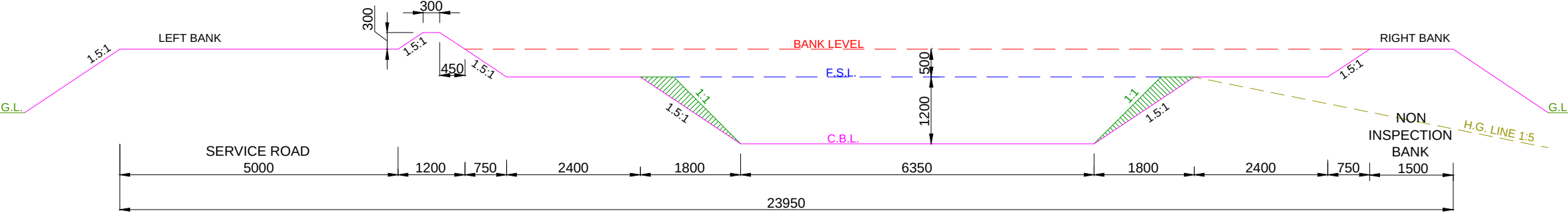


DESIGN SECTION FROM CH: 0.150 KM TO CH: 3.200 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



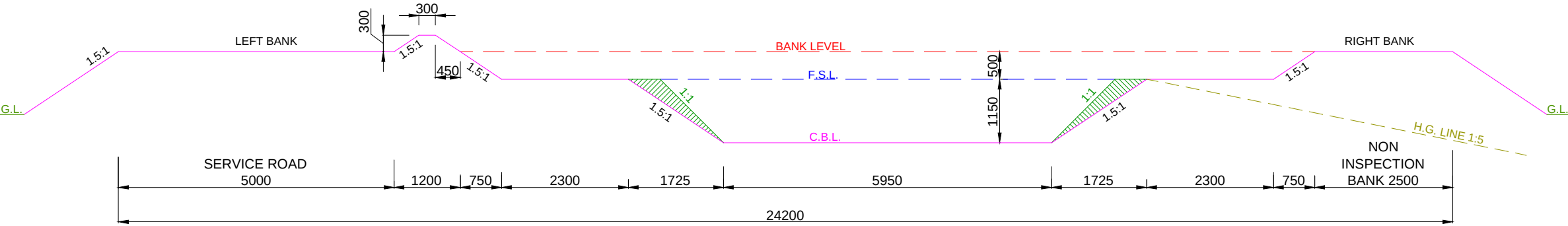
DESIGN SECTION FROM CH: 3.200 KM TO CH: 7.735 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

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TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

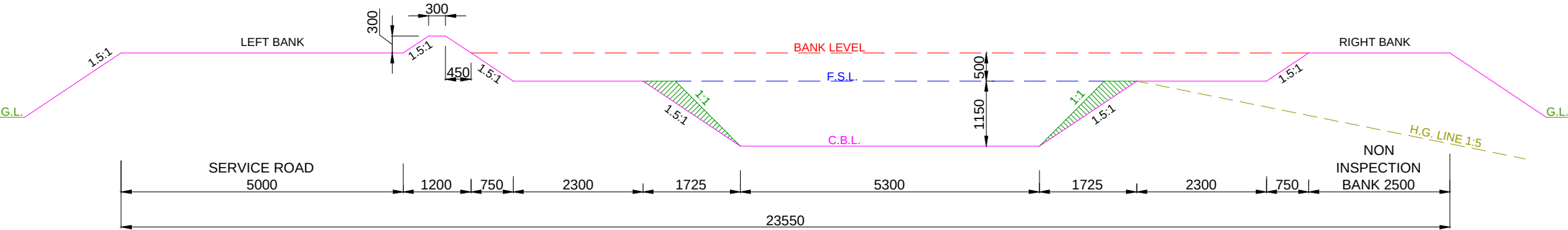


DESIGN SECTION FROM CH: 7.735 KM TO CH: 8.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

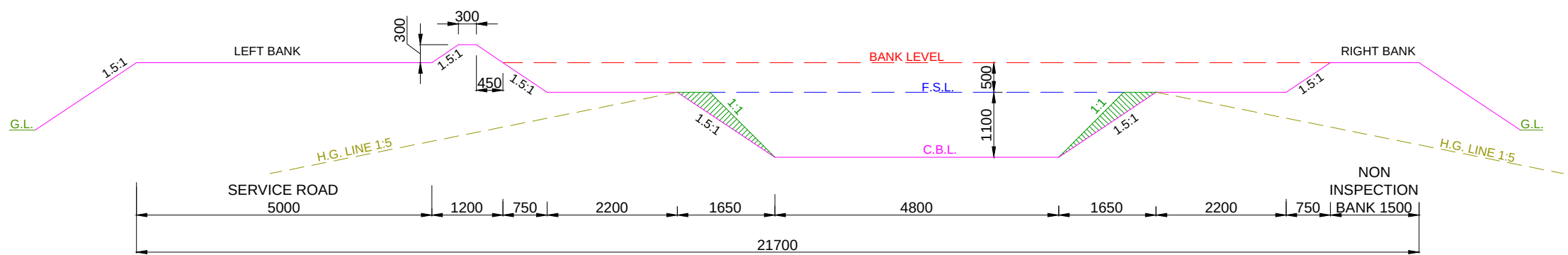


DESIGN SECTION FROM CH: 8.700 KM TO CH: 9.565 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



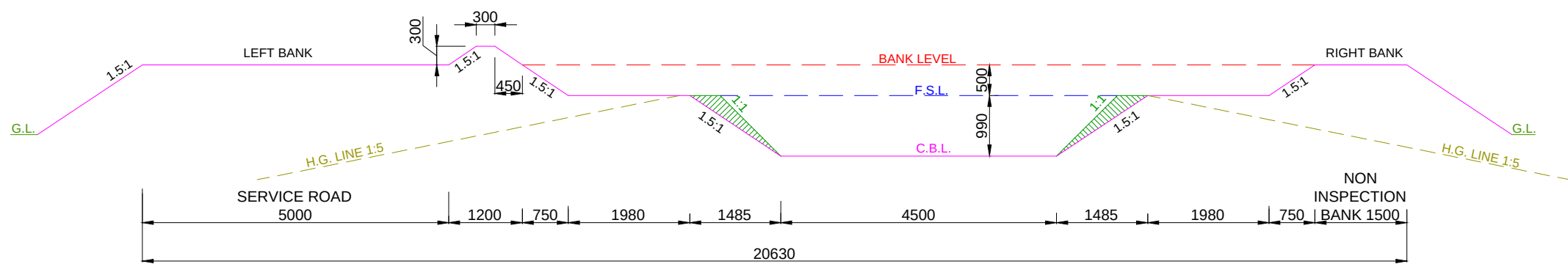
DESIGN SECTION FROM CH: 9.565 KM TO CH: 11.360 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

6 of 17

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

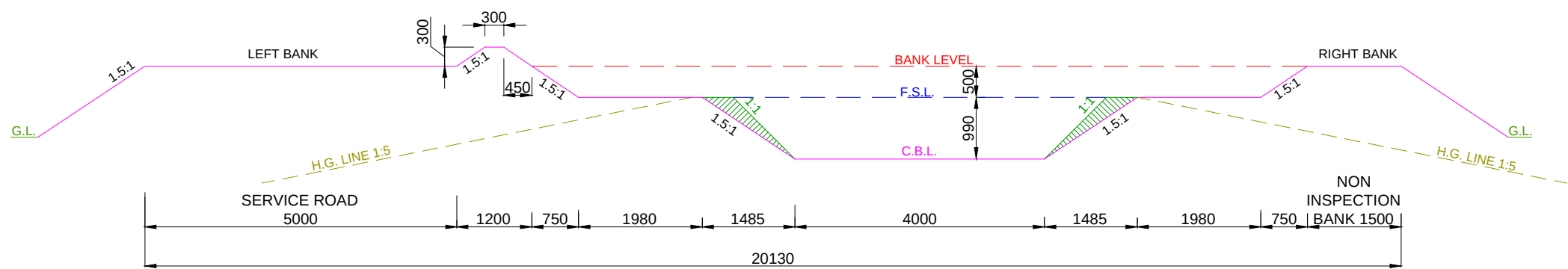


DESIGN SECTION FROM CH: 11.360 KM TO CH: 12.850 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

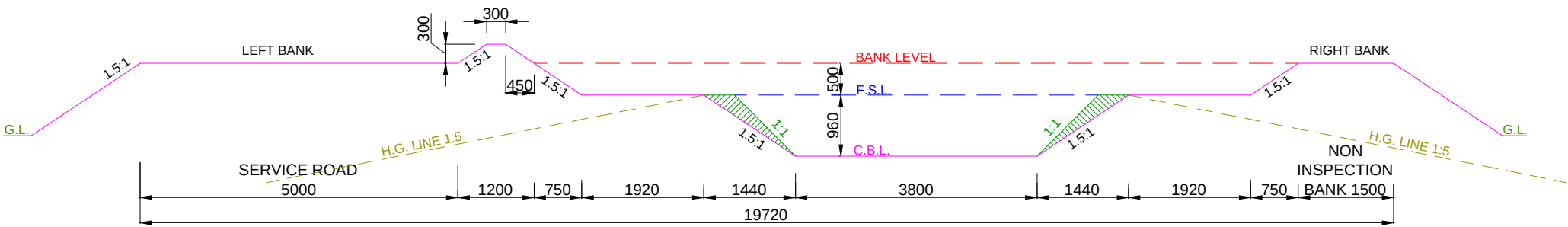


DESIGN SECTION FROM CH: 12.850 KM TO CH: 14.460 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

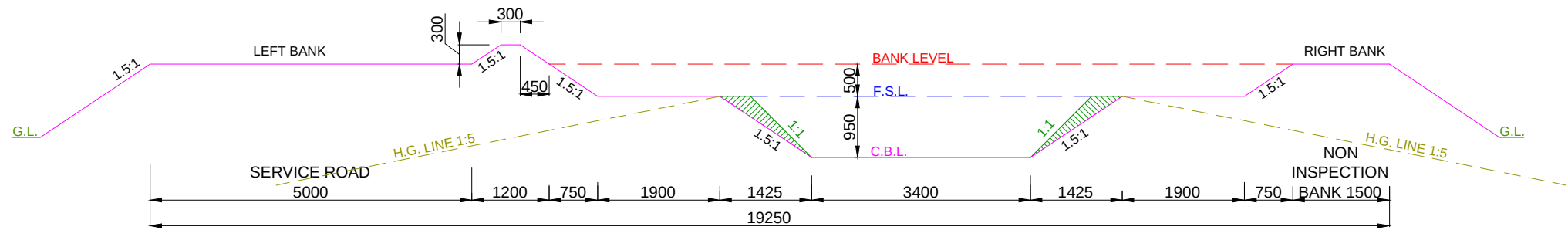


DESIGN SECTION FROM CH: 14.460 KM TO CH: 15.750 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

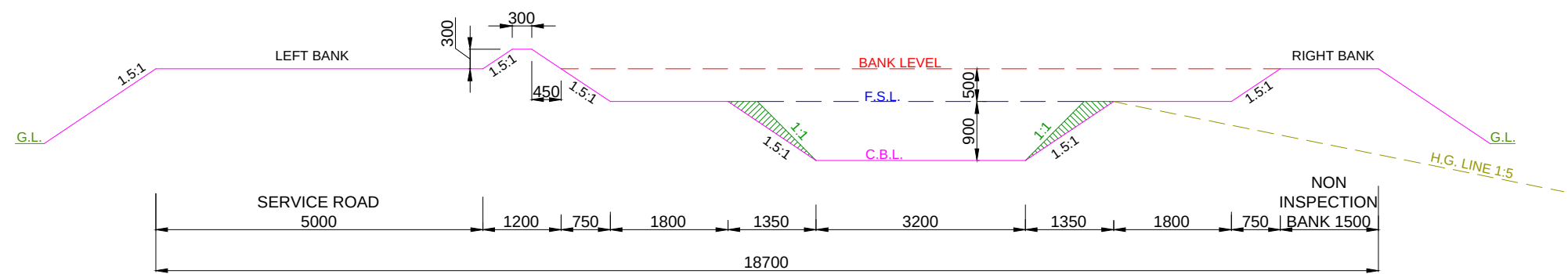


DESIGN SECTION FROM CH: 15.750 KM TO CH: 16.860 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

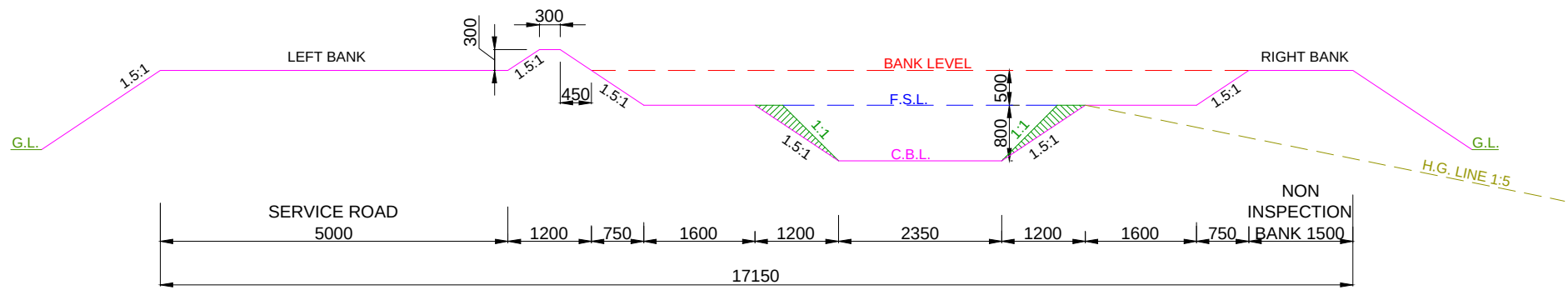


DESIGN SECTION FROM CH: 16.860 KM TO CH: 18.342 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 18.342 KM TO CH: 20.058 KM

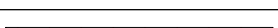
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF) 12 of 17

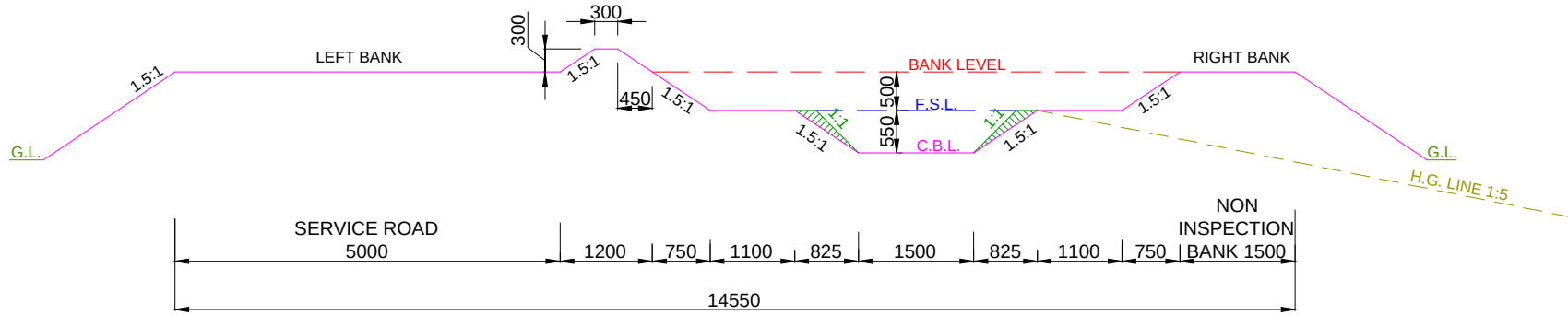
The diagram illustrates a cross-section of a road with a total width of 15400mm. The central section is 2000mm wide, flanked by 1200mm wide sections on both sides. The left side features a 5000mm wide service road and a 15:1 slope. The right side includes a 1500mm wide inspection bank and a 15:1 slope. Key levels marked are G.L. (Ground Level), F.S.L. (Full Surface Level), and C.B.L. (Center Bank Level). Slopes are indicated as 1.5:1 and 1:1. A dashed line represents the H.G. LINE 1:5.

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 KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)	
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)13 of 17	

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

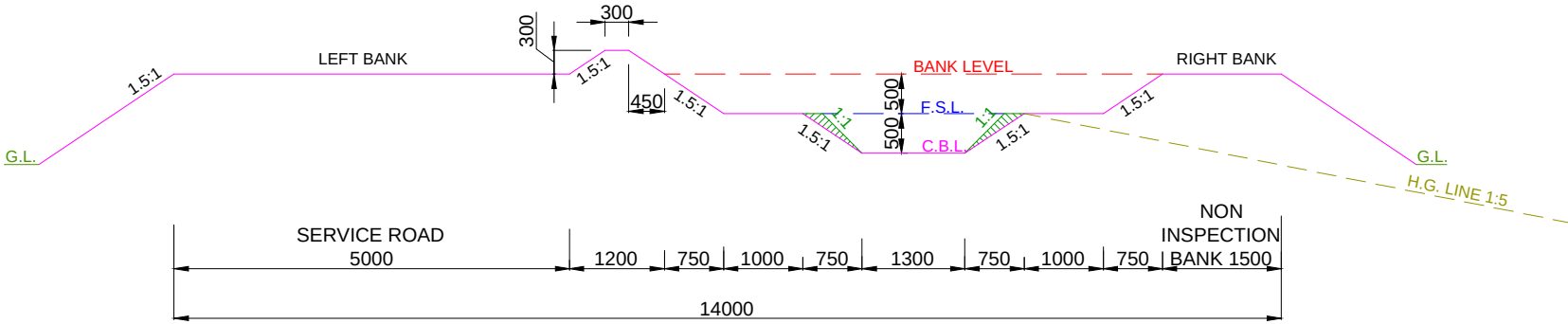


DESIGN SECTION FROM CH: 21.350 KM TO CH: 21.750 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING

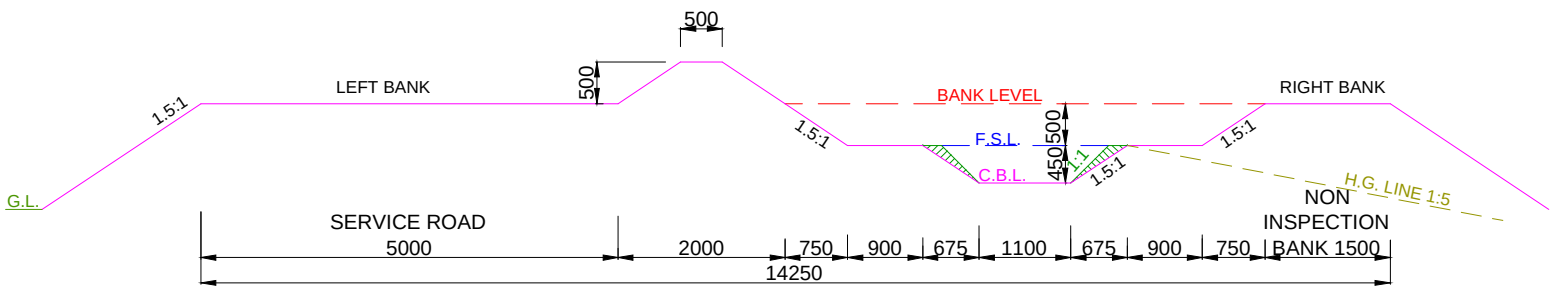


DESIGN SECTION FROM CH: 21.750 KM TO CH: 22.150 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR FULL FILLING



DESIGN SECTION FROM CH: 22.150 KM TO CH: 22.990 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.

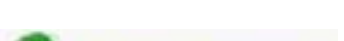
LEGEND CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF)

The diagram illustrates the cross-section of a road with a total width of 12550mm. The components from left to right are:

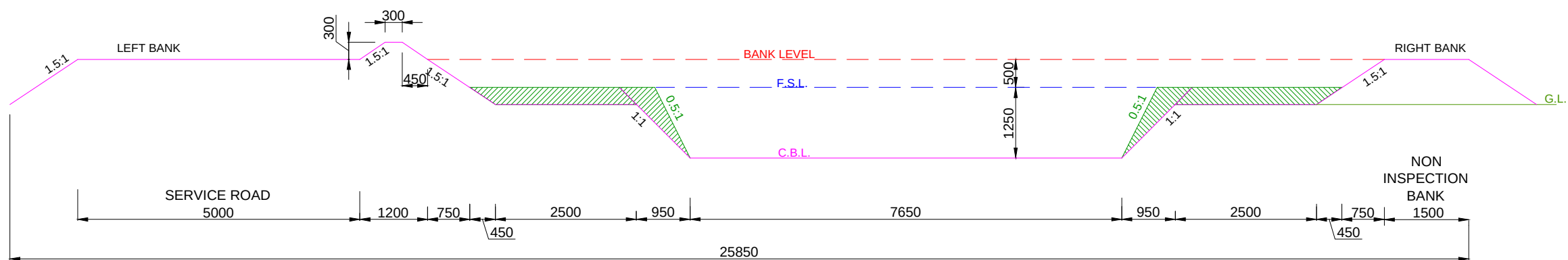
- SERVICE ROAD:** 5000mm wide.
- Shoulder:** 1200mm wide.
- Gutter:** 750mm wide.
- Gutter:** 700mm wide.
- Gutter:** 525mm wide.
- Gutter:** 900mm wide.
- Gutter:** 525mm wide.
- Gutter:** 700mm wide.
- Gutter:** 750mm wide.
- NON INSPECTION BANK:** 1500mm wide.

The vertical profile shows a 300mm high shoulder, a 450mm high gutter, and a 350mm high gutter. The road has a 1:1 slope on the left and a 1:1.5 slope on the right. The ground level (G.L.) is indicated on the left and right sides.

NOTE:-

- | | | | | |
|--|-------------------------|--|-------------------------|--|
| <p>LEGEND</p> | | <p>Prepared by :-</p> <p>WAPCOS LTD.</p>  | <p>Project Title :-</p> | <p>NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND</p> |
|  | <p>CUT AREA</p> | | <p>Drawing Title :-</p> | <p>X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L)
NORTH KOEL RIGHT MAIN CANAL)</p> |
|  | <p>FILL AREA</p> | | <p>Drawing No. :-</p> | <p>WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(FF) 17 of 17</p> |

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



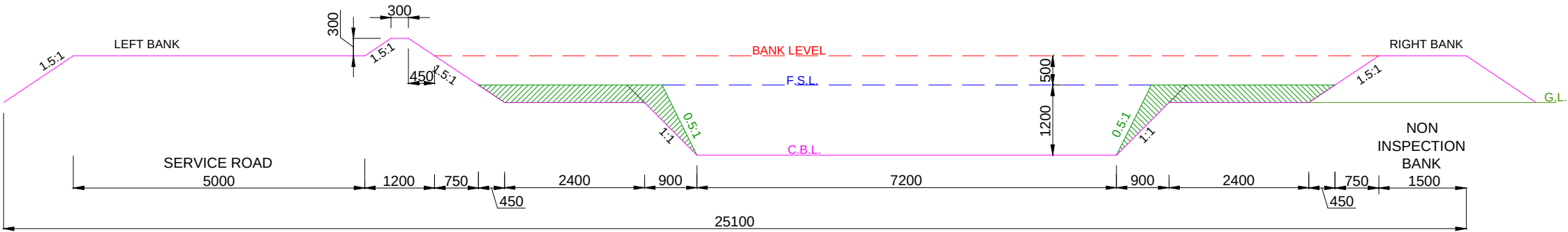
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.150 KM

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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

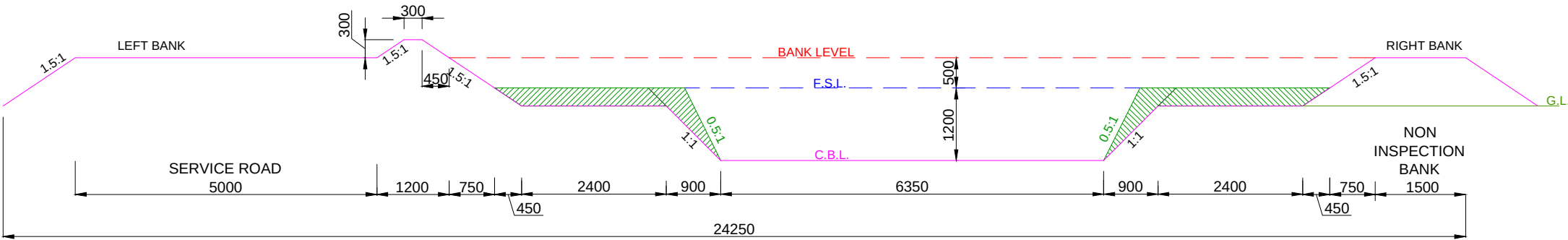


DESIGN SECTION FROM CH: 0.150 KM TO CH: 3.200 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

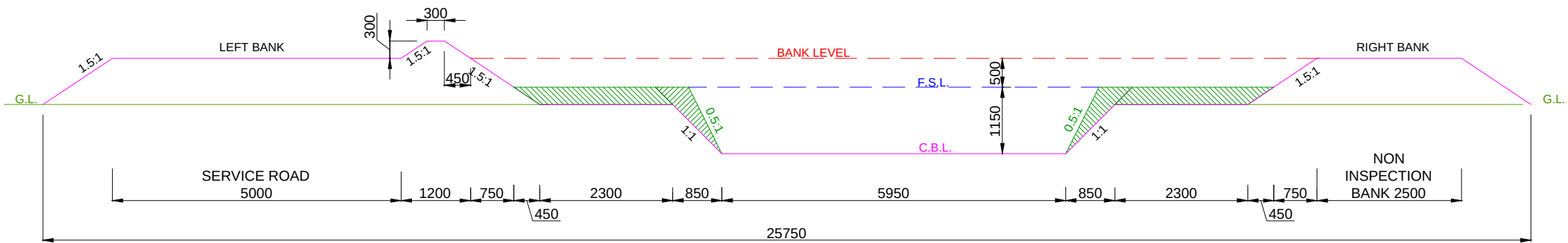


DESIGN SECTION FROM CH: 3.200 KM TO CH: 7.735 KM

- 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.

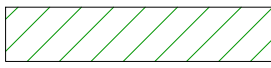
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

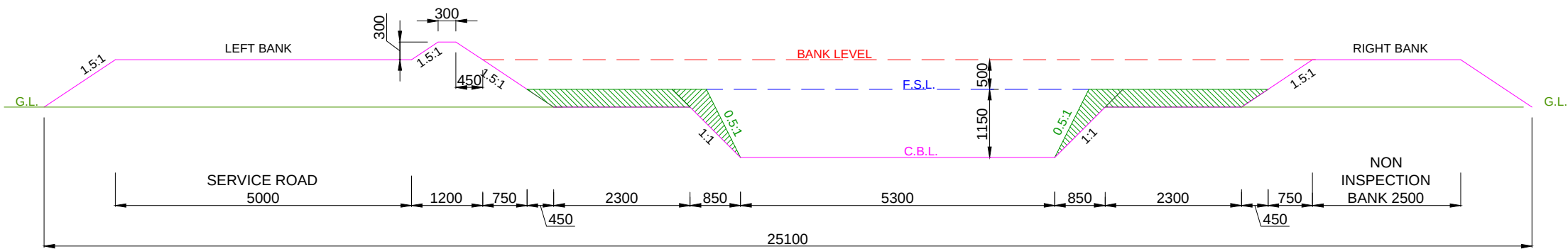


DESIGN SECTION FROM CH: 7.735 KM TO CH: 8.700 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				
	CUT AREA							
	FILL AREA							

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



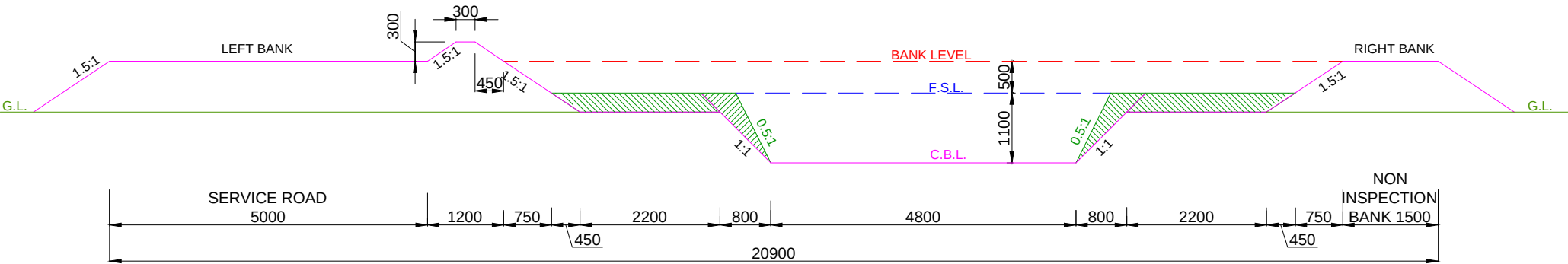
DESIGN SECTION FROM CH: 8.700 KM TO CH: 9.565 KM

- 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 CUT AREA FILL AREA	Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
		Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

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TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

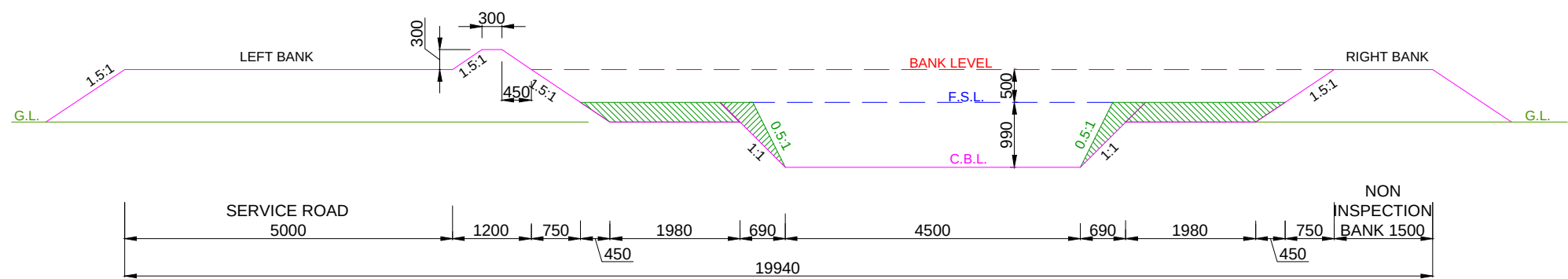


DESIGN SECTION FROM CH: 9.565 KM TO CH: 11.360 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND					
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)					
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)					
	CUT AREA								
	FILL AREA								

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

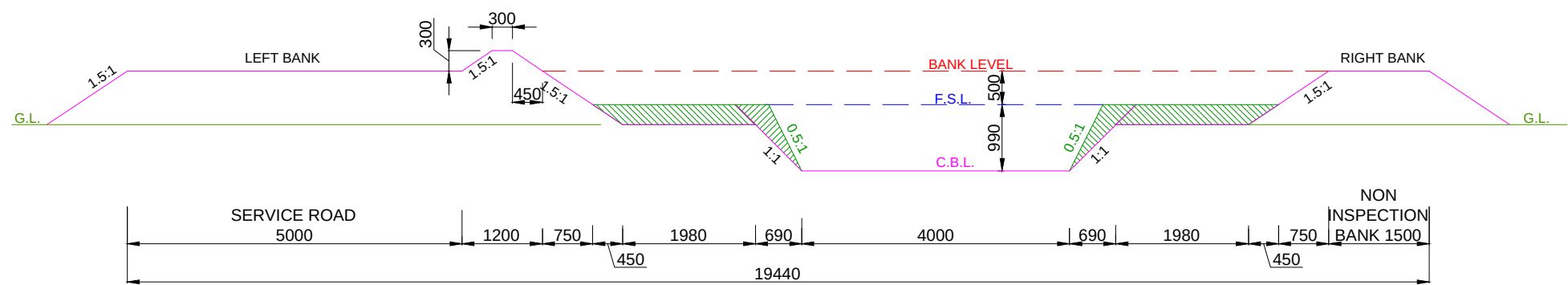


DESIGN SECTION FROM CH: 11.360 KM TO CH: 12.850 KM

- 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.

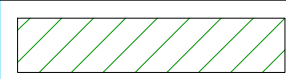
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

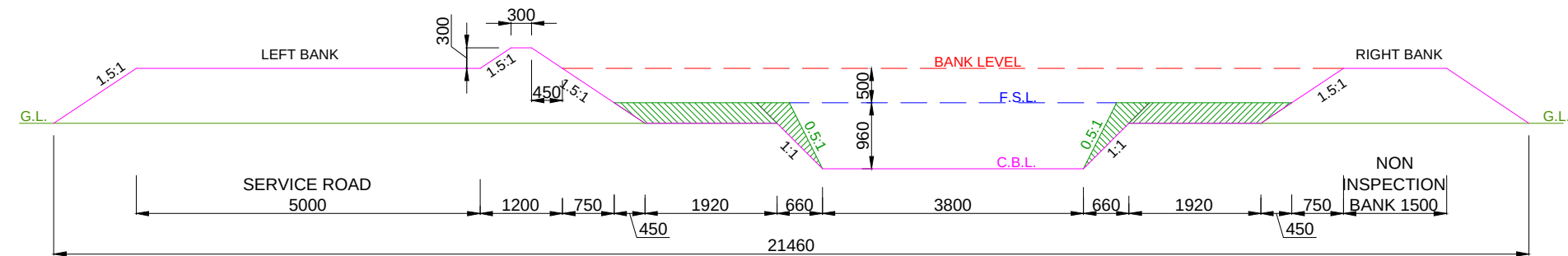


DESIGN SECTION FROM CH: 12.850 KM TO CH: 14.460 KM

- 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				
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				
	CUT AREA							
	FILL AREA							

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



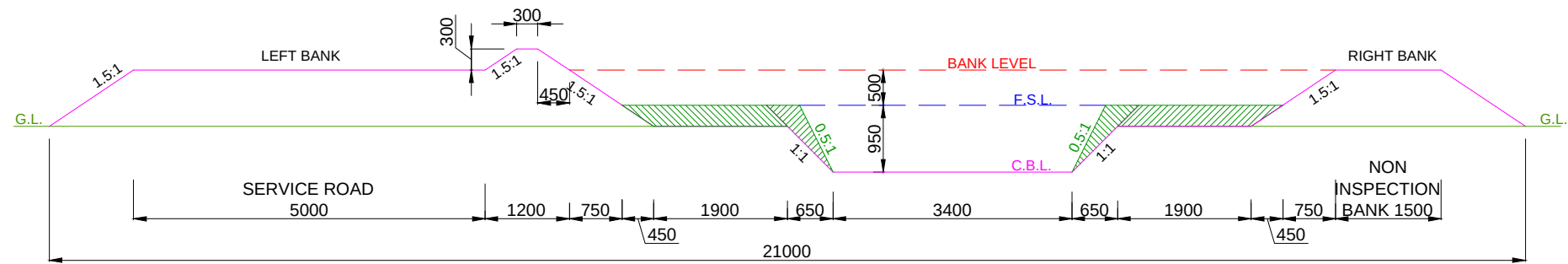
DESIGN SECTION FROM CH: 14.460 KM TO CH: 15.750 KM

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.

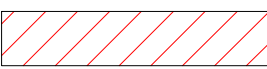
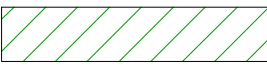
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

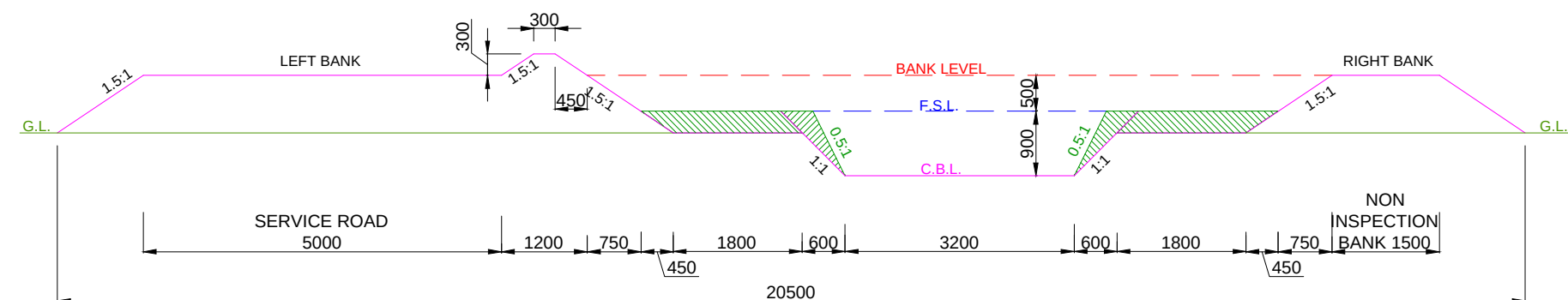


DESIGN SECTION FROM 4.660 KM TO 15.750 KM
DESIGN SECTION FROM 15.750 KM TO 16.860 KM

- 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 KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				

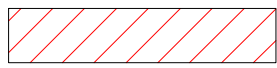
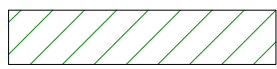
TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



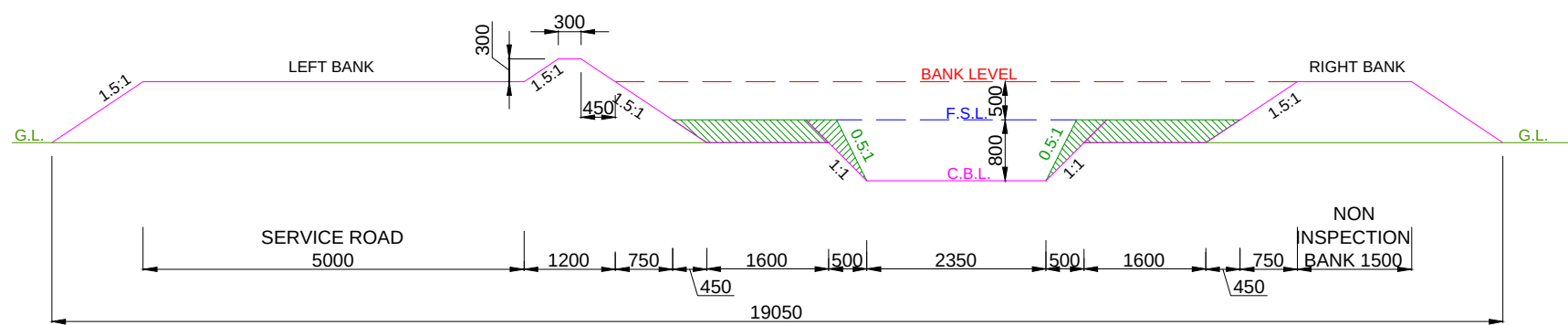
DESIGN SECTION FROM CH: 16.860 KM TO CH: 18.342 KM

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 KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

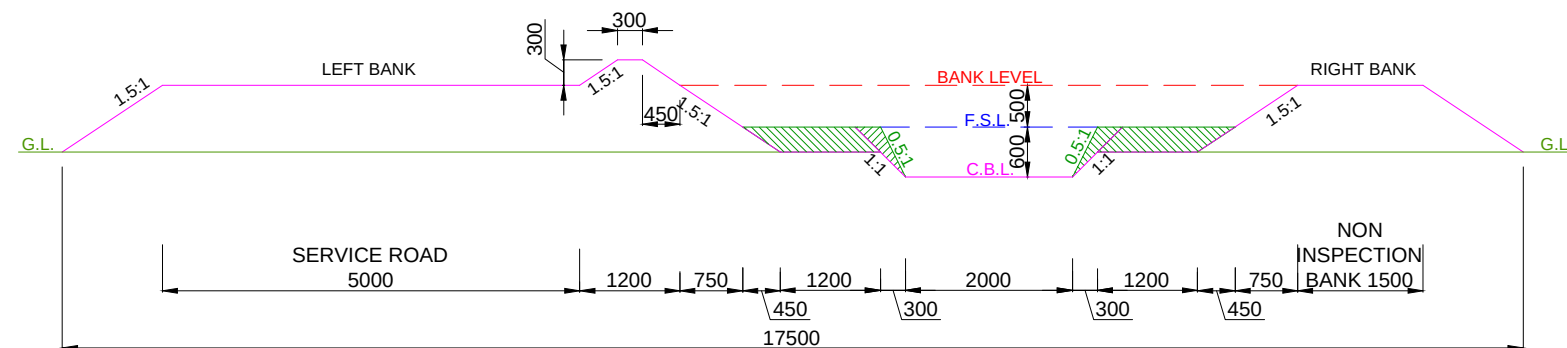


DESIGN SECTION FROM CH: 18.342 KM TO CH: 20.058 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

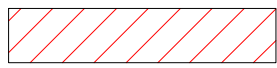
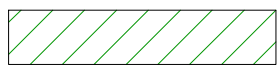
TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



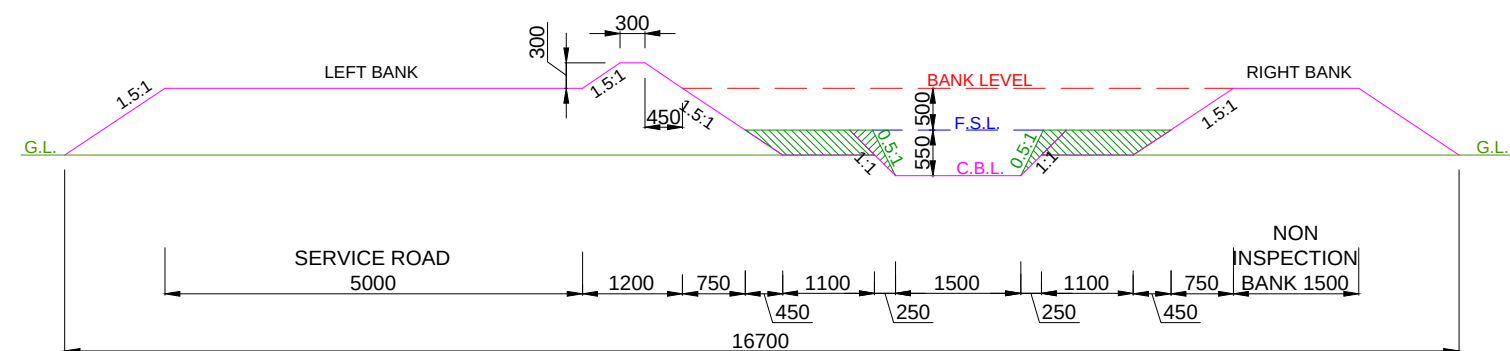
DESIGN SECTION FROM CH: 20.058 KM TO CH: 21.350 KM

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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				

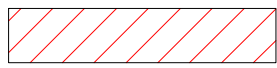
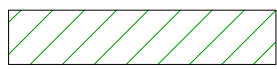
TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



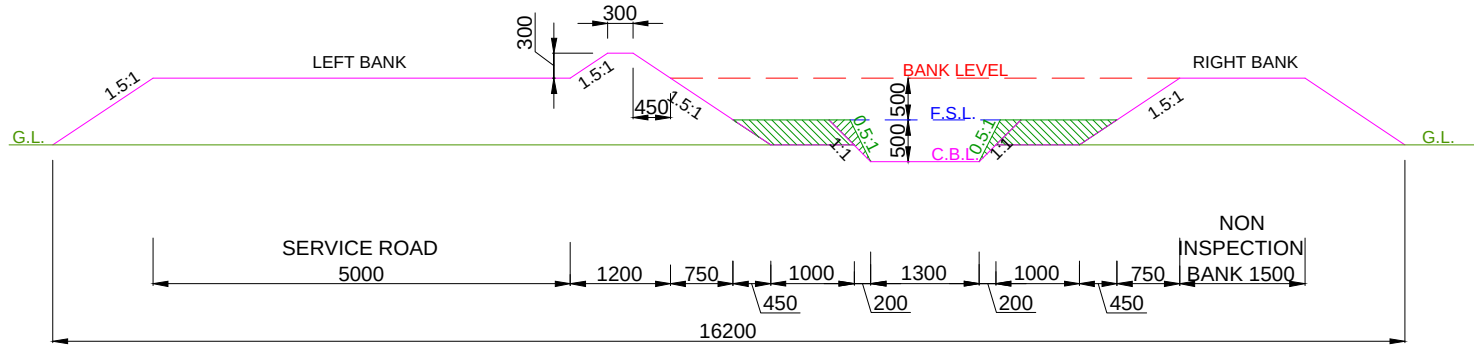
DESIGN SECTION FROM CH: 21.350 KM TO CH: 21.750 KM

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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)				

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

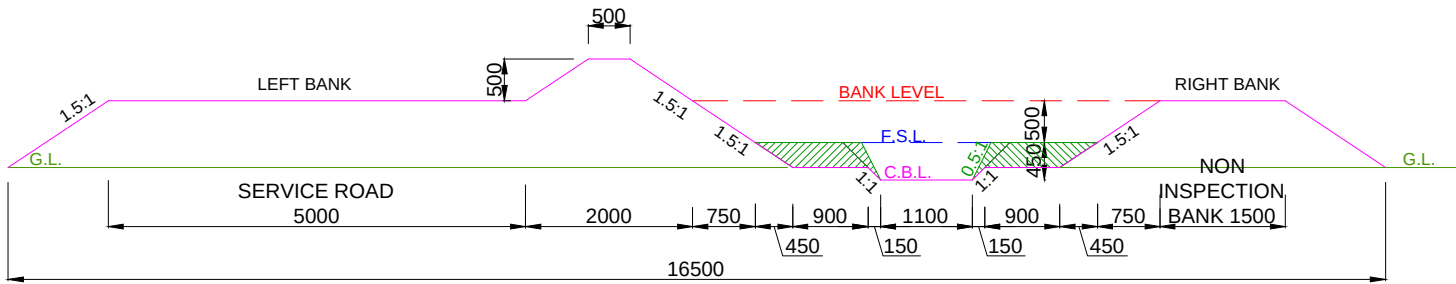


DESIGN SECTION FROM CH: 21.750 KM TO CH: 22.150 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

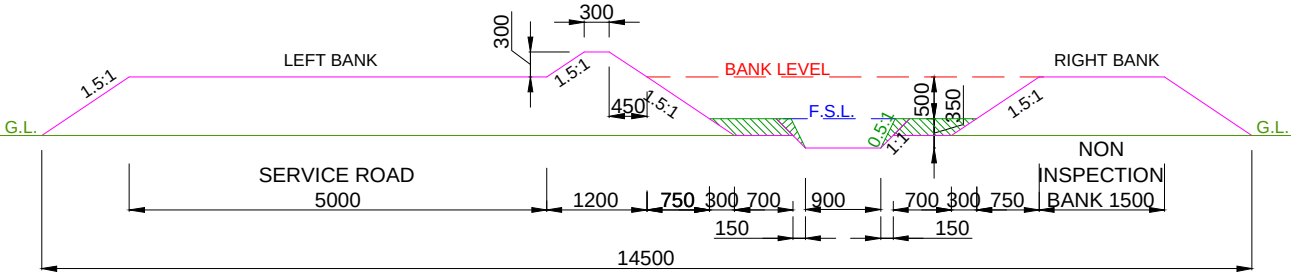


DESIGN SECTION FROM CH: 22.150 KM TO CH: 22.990 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

TYPICAL X - SECTION OF KARMA DISTRIBUTARY
(OFFTAKE FROM RD - 56+857 KM. (LT), NORTH KOEL RIGHT MAIN CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 22.990 KM TO CH: 23.750 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L) NORTH KOEL RIGHT MAIN CANAL)
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC /TYP-(PCF)

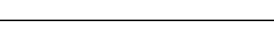
CHAURAH MINOR

The diagram illustrates a cross-section of a road project with the following details:

- G.L.**: Ground Level
- SPOIL BANK**: Located at both ends of the section.
- BANK LEVEL**: Indicated by a red dashed line.
- F.S.L.**: Finished Surface Level, indicated by a blue dashed line.
- C.B.L.**: Centerline Bank Level, indicated by a magenta solid line.
- SLOPES**: Various slopes are shown, including 1.5:1, 0.5:1, and 1:1.
- DIMENSIONS**: Horizontal distances include 3000, 75, 300, 5000, 1200, C+D/2 1805, 500, 700, 2500, 700, 500, C+D/2 1805, 1125, 1500, 1125, and a total width of 22435. Vertical dimensions include 300, 450, 700, 500, 1500, and 300.
- NON INSPECTION BANK**: A label for the right-hand spoil bank area.

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 CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 1 of 7

The diagram illustrates a cross-section of a road with a central ditch. The total width is 21925mm. The components and dimensions are as follows:

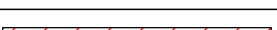
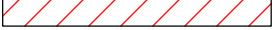
- Left Side:** A 3000mm wide area with a 1.5:1 slope leading to a Spoil Bank. A 75mm wide area is adjacent to the road edge.
- Service Road:** A 5000mm wide road with a 1.5:1 slope on the left side.
- Ditch:** A central ditch with a 2150mm width. The ditch has a 1.5:1 slope on the left and a 1:1 slope on the right. The ditch bottom is 650mm wide. The ditch depth is 1450mm. The ditch is labeled with "BANK LEVEL", "F.S.L.", and "C.B.L.".
- Right Side:** A 3750mm wide area with a 1.5:1 slope leading to a Spoil Bank. The area is labeled "NON INSPECTION BANK".

Dimensions and labels include:

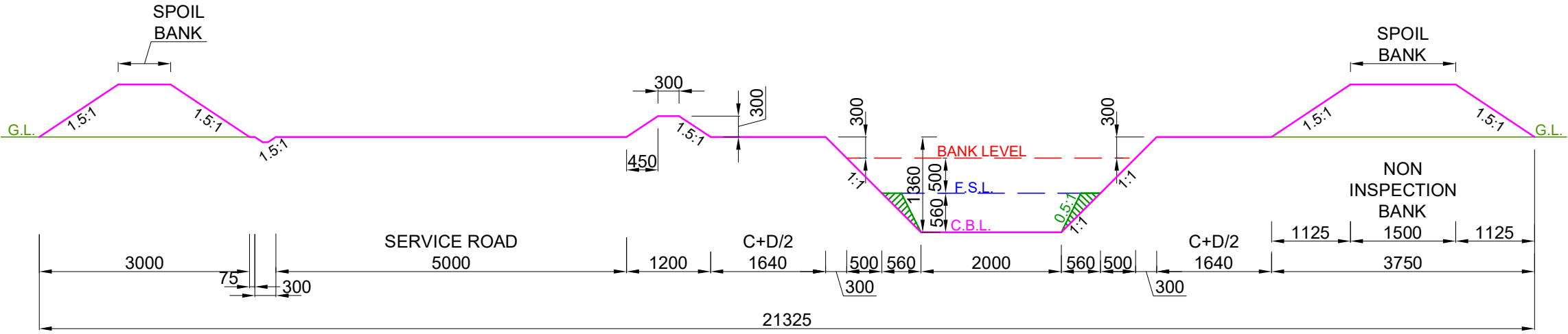
- Dimensions:** 3000, 75, 300, 5000, 1200, 1775, 500, 650, 2150, 650, 500, 300, 1125, 1500, 1125, 3750, 21925.
- Slopes:** 1.5:1, 1:1.
- Labels:** SPOIL BANK, G.L., S.F.L., F.S.L., C.B.L., SERVICE ROAD, C+D/2, NON INSPECTION BANK.

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 CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 2 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

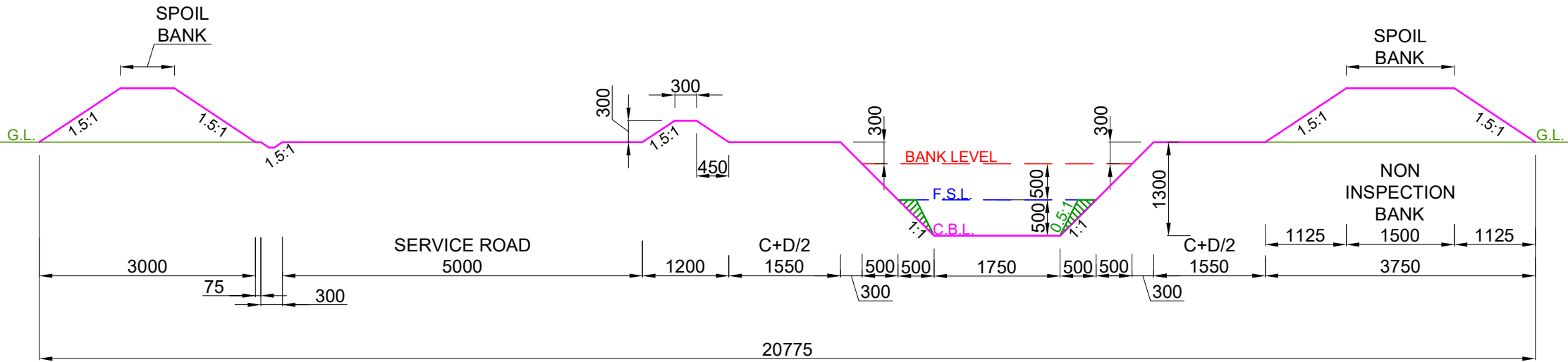


DESIGN SECTION FROM CH: 4.800 KM TO CH: 5.380 KM

- 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.

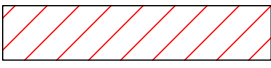
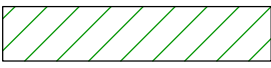
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 3 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

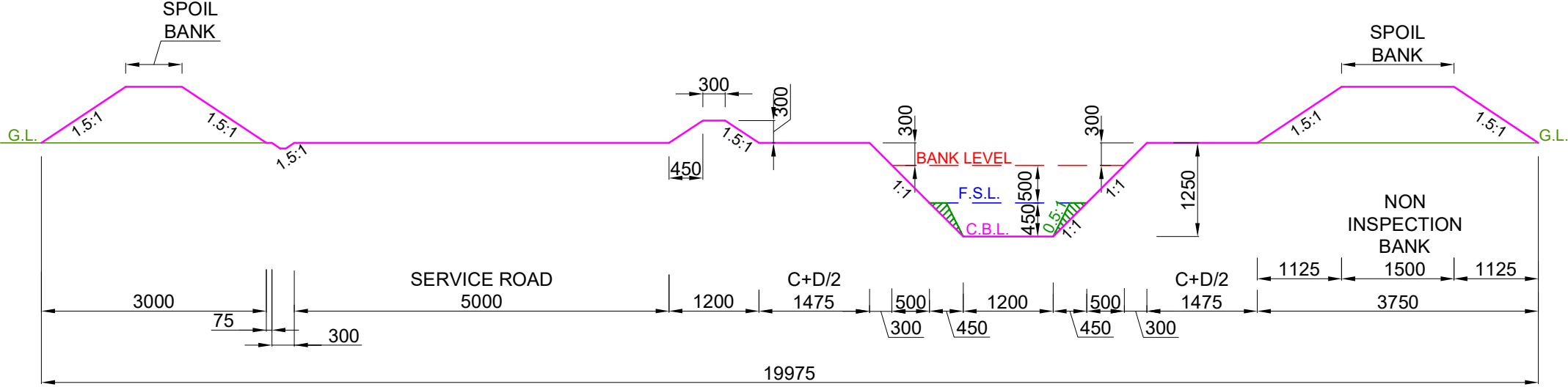


DESIGN SECTION FROM CH: 5.380 KM TO CH: 6.520 KM

- 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.

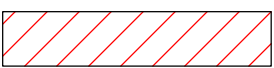
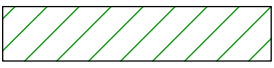
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 4 of 7			

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

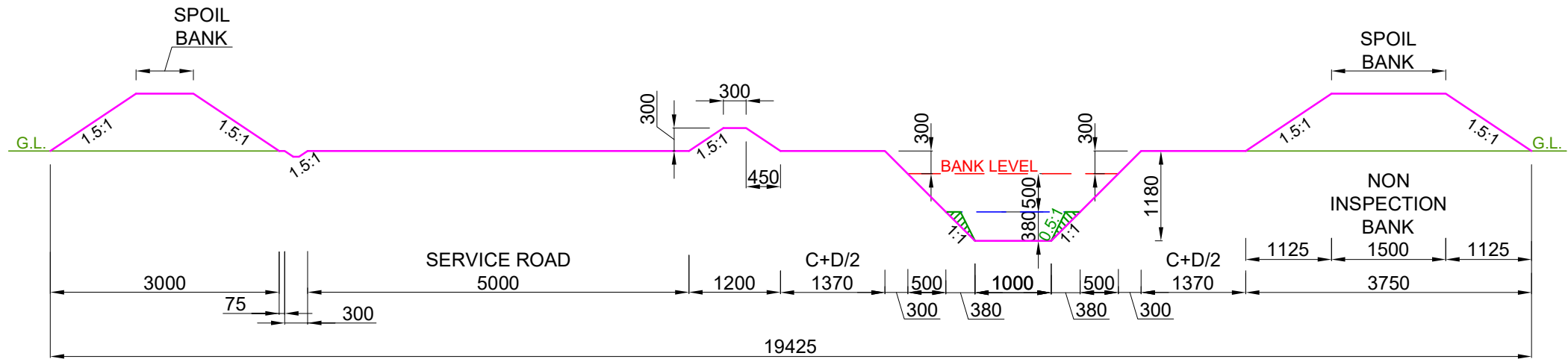


DESIGN SECTION FROM CH: 6.520 KM TO CH: 6.900 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL		
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 5 of 7		

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

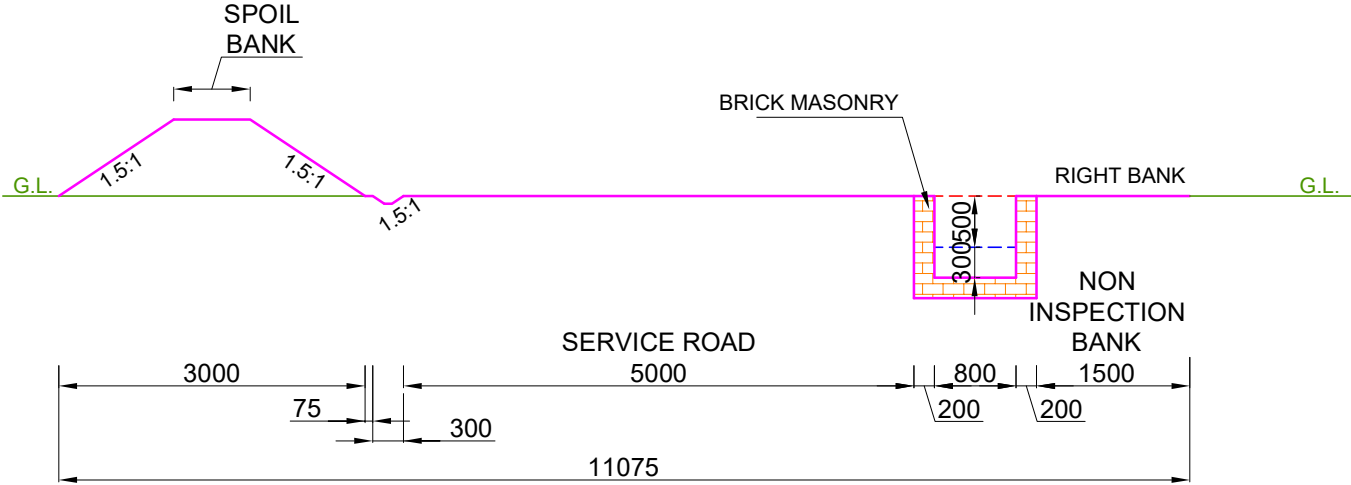


DESIGN SECTION FROM CH: 6.900 KM TO CH: 7.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 6 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

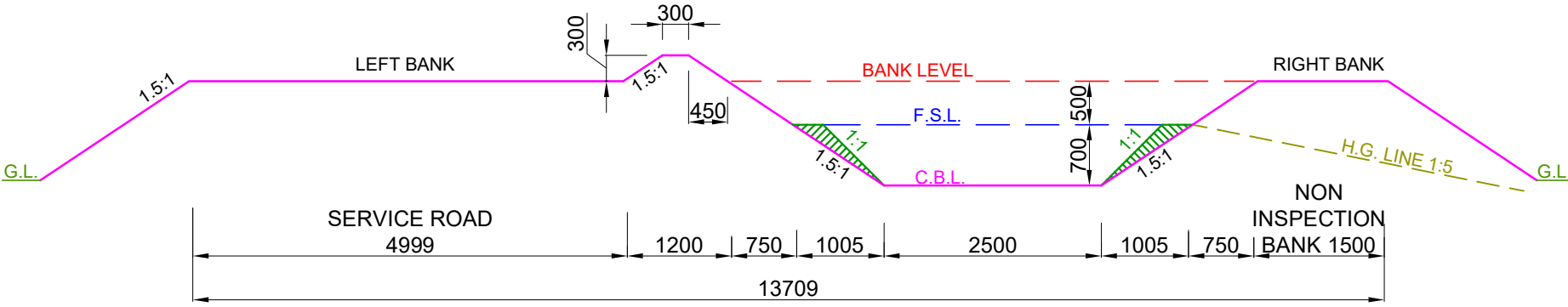


DESIGN SECTION FROM CH: 7.500 KM TO CH: 7.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FC) 7 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

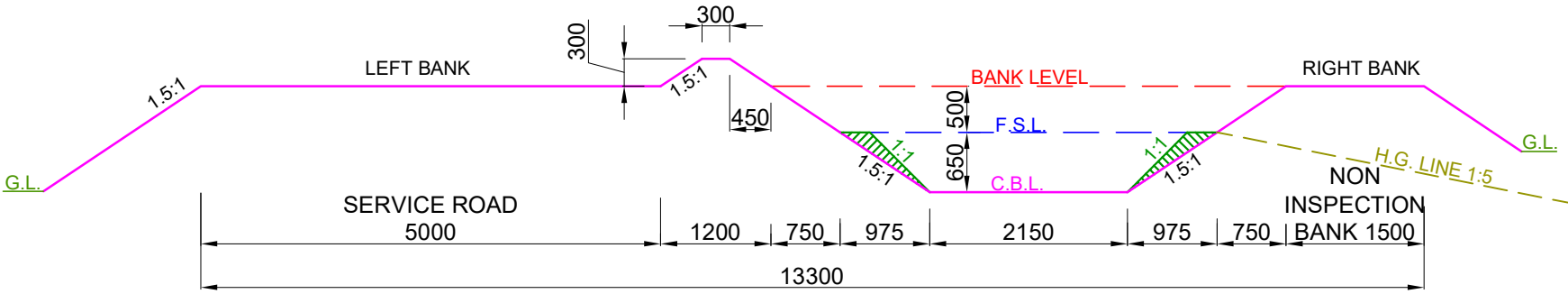


DESIGN SECTION FROM CH: 0.000 KM TO CH: 3.190 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 1 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

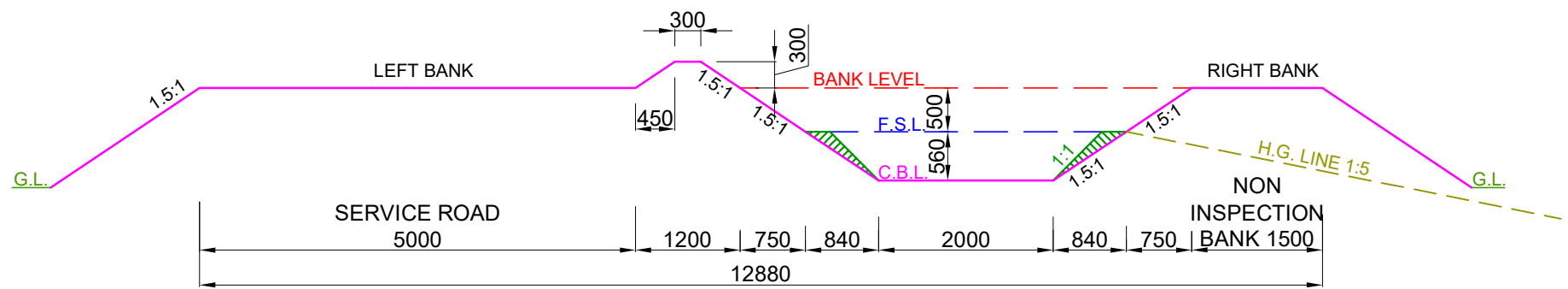


DESIGN SECTION FROM CH: 3.190 KM TO CH: 4.800 KM

- 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.

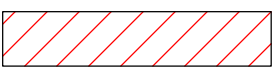
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 2 of 7			

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

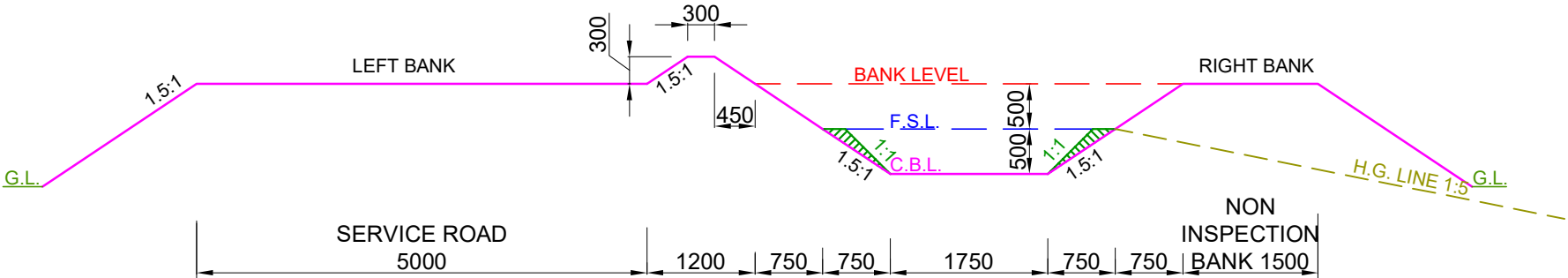


DESIGN SECTION FROM CH: 4.800 KM TO CH: 5.380 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL			
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 3 of 7			

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

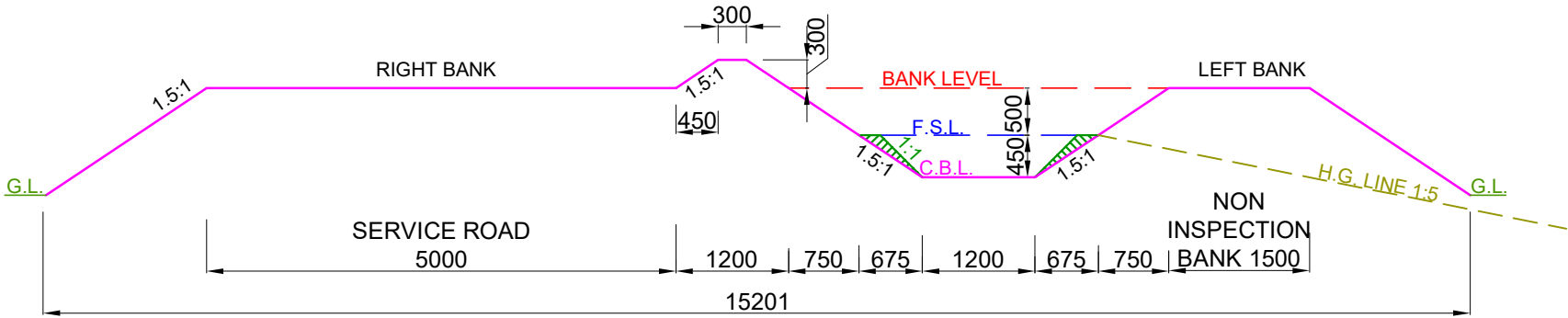


DESIGN SECTION FROM CH: 5.380 KM TO CH: 6.520 KM

- 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.

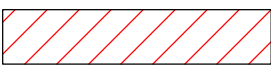
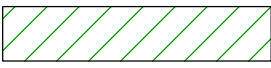
LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
			Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL	
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 4 of 7	

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

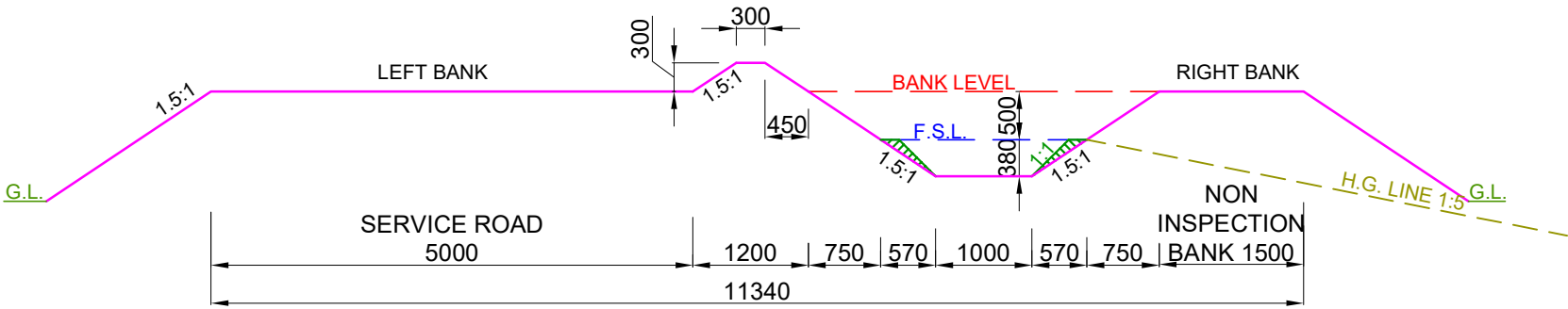


DESIGN SECTION FROM CH: 6.520 KM TO CH: 6.900 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND		
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL		
	FILL AREA		Drawing No. :- 100	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 5 of 7		

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

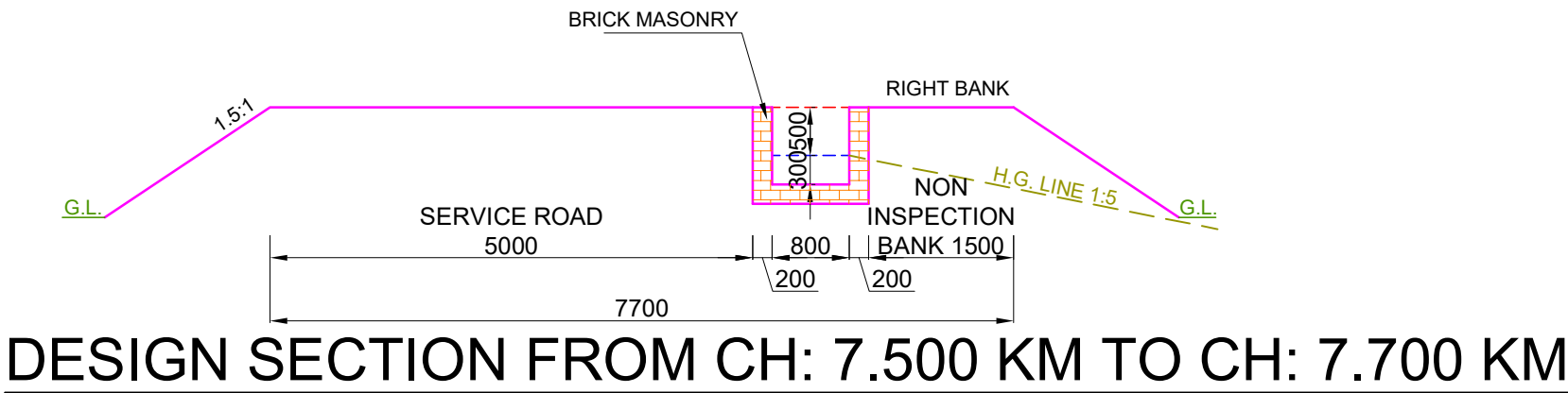


DESIGN SECTION FROM CH: 6.900 KM TO CH: 7.500 KM

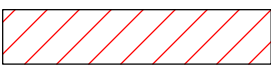
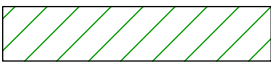
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 6 of 7

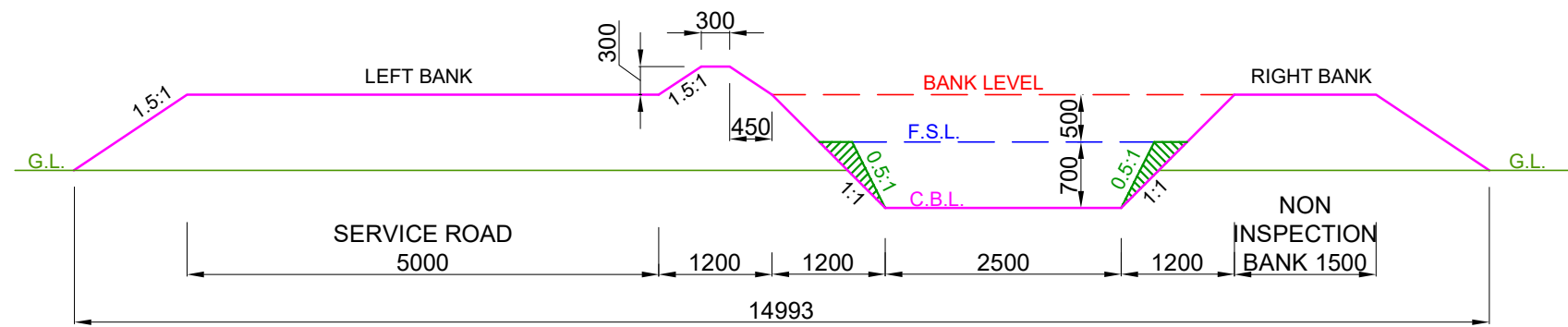
TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



- 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 CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(FF) 7 of 7				

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

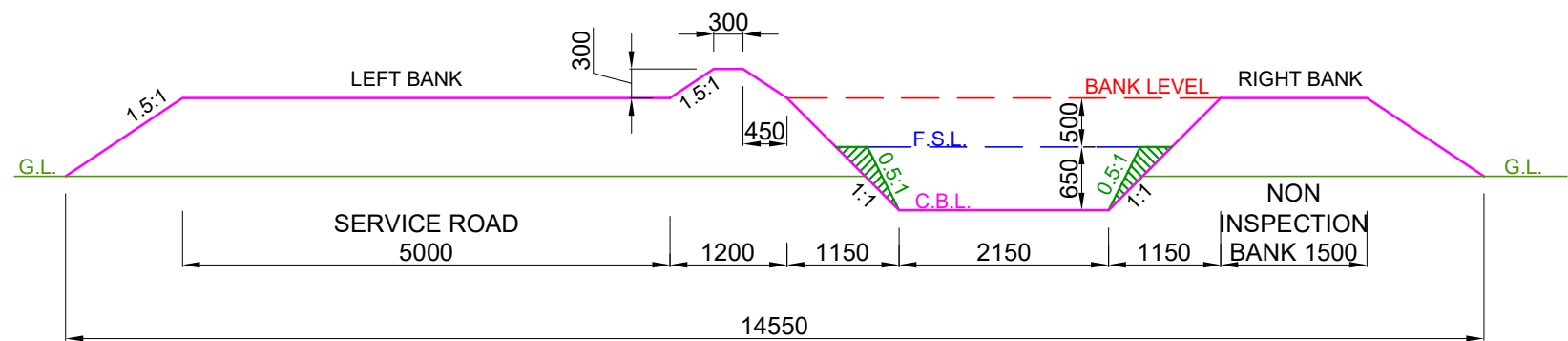


DESIGN SECTION FROM CH: 0.000 KM TO CH: 3.190 KM

- 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.

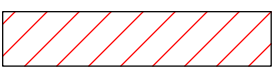
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 1 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

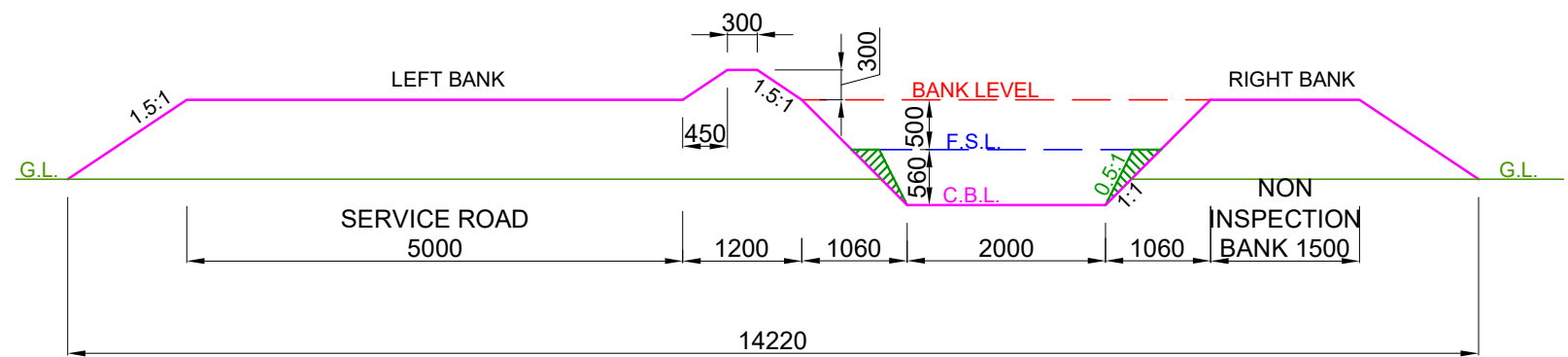


DESIGN SECTION FROM CH: 3.190 KM TO CH: 4.800 KM

- 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.

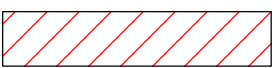
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	CUT AREA		Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 2 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

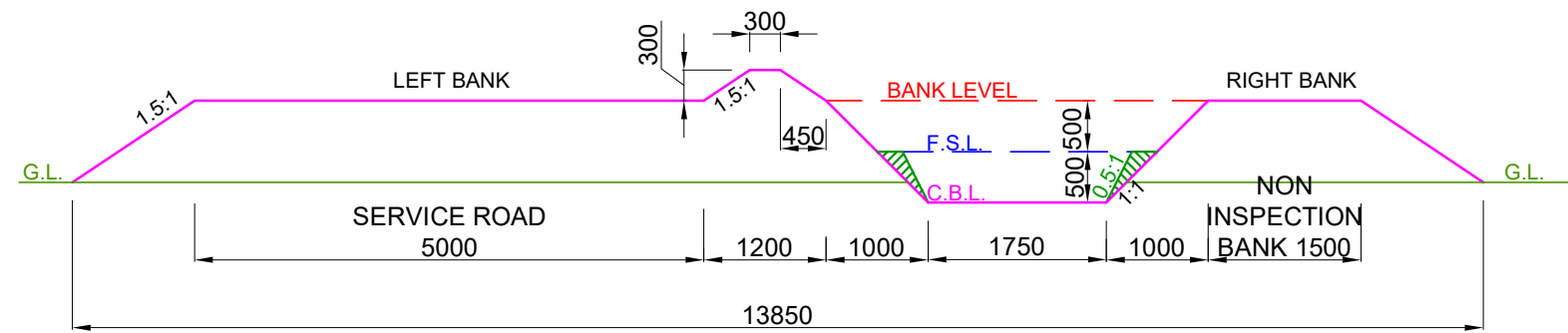


DESIGN SECTION FROM CH: 4.800 KM TO CH: 5.380 KM

- 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.

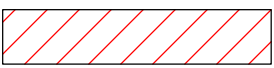
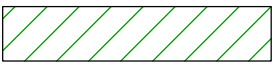
LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- 105	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 3 of 7
	CUT AREA			
	FILL AREA			

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 5.380 KM TO CH: 6.520 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
			Drawing Title :-	X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 4 of 7
	CUT AREA			
	FILL AREA			

A horizontal number line is shown, ranging from 0 to 100. Major tick marks are labeled every 10 units (0, 10, 20, 30, 40, 50, 60, 70, 80, 90, 100). A vertical line is drawn at the 50 mark. The segment of the number line from 0 to 50 is labeled with the number 7. The segment of the number line from 50 to 100 is labeled with the number 6.



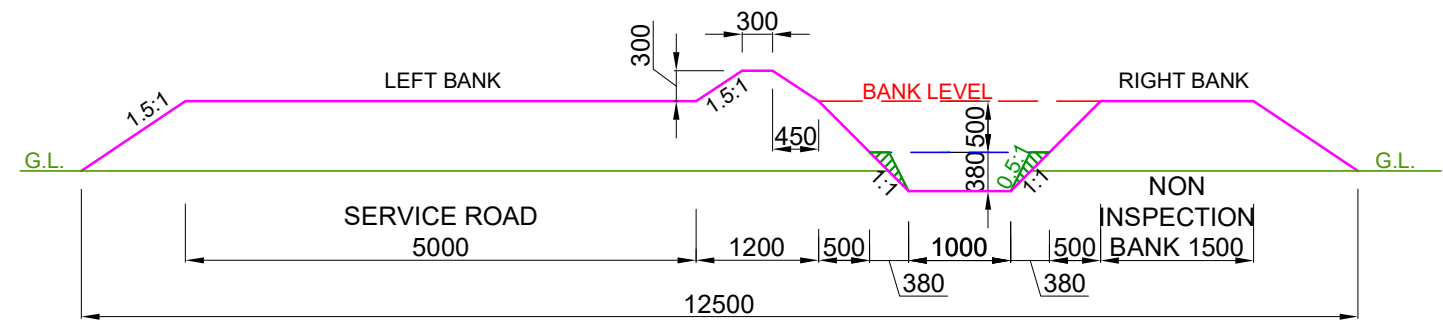
1.

B

- 1

A

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

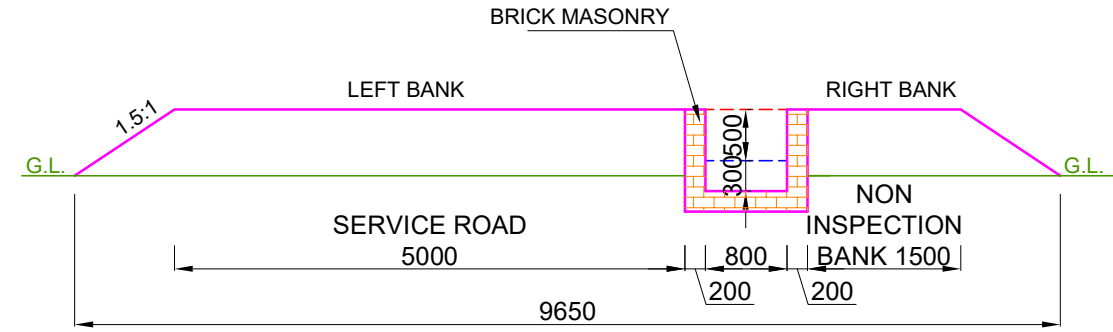


DESIGN SECTION FROM CH: 6.900 KM TO CH: 7.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 6 of 7

TYPICAL X - SECTION OF CHAURAHA MINOR
(OFFTAKE FROM RD - 0+150 KM. (RT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 7.500 KM TO CH: 7.700 KM

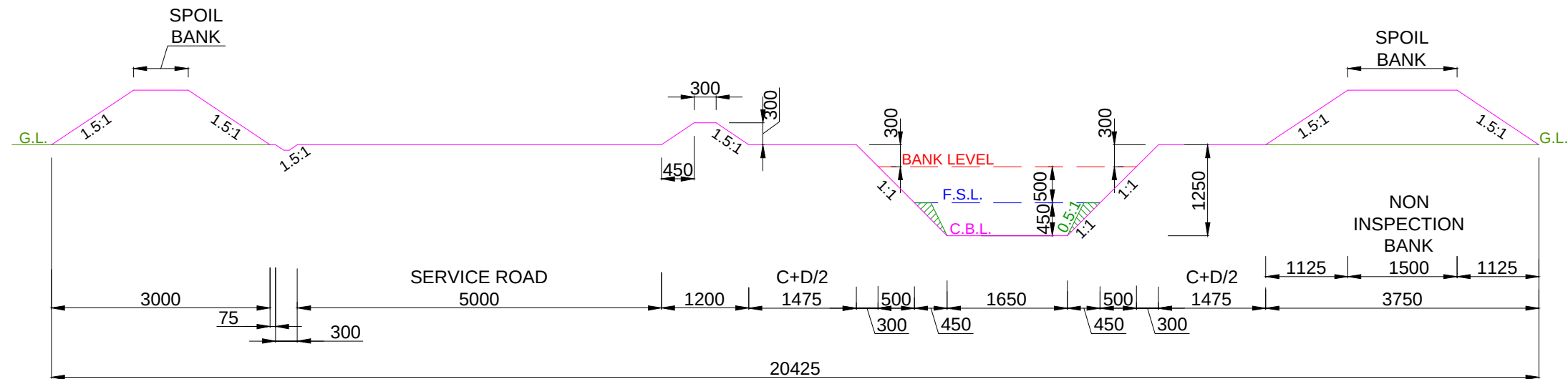
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC /TYP-(PCF) 7 of 7

NEURA SURAJMAL MINOR

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



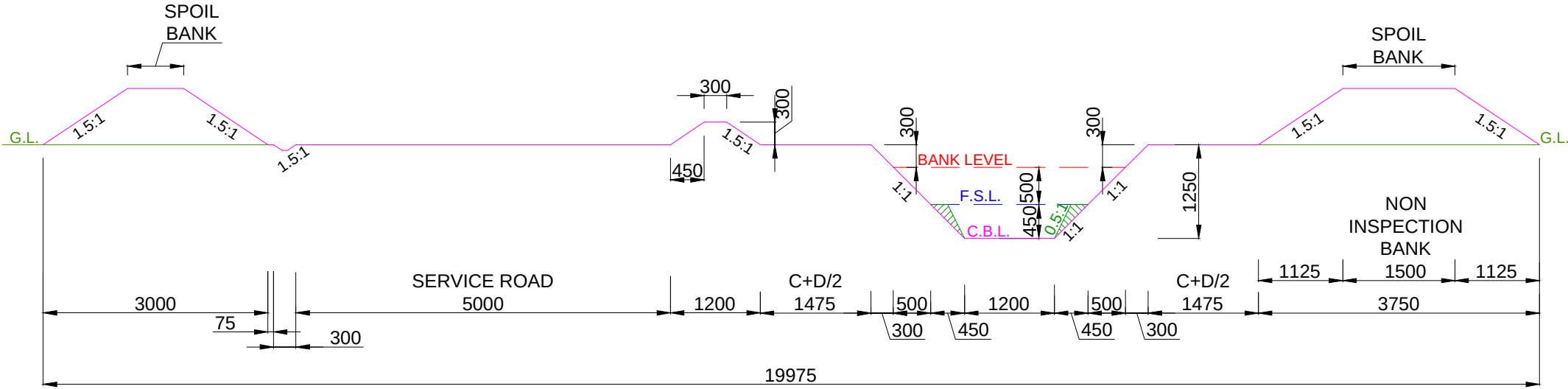
DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FC)1 of 4

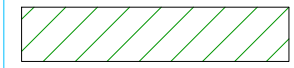
TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



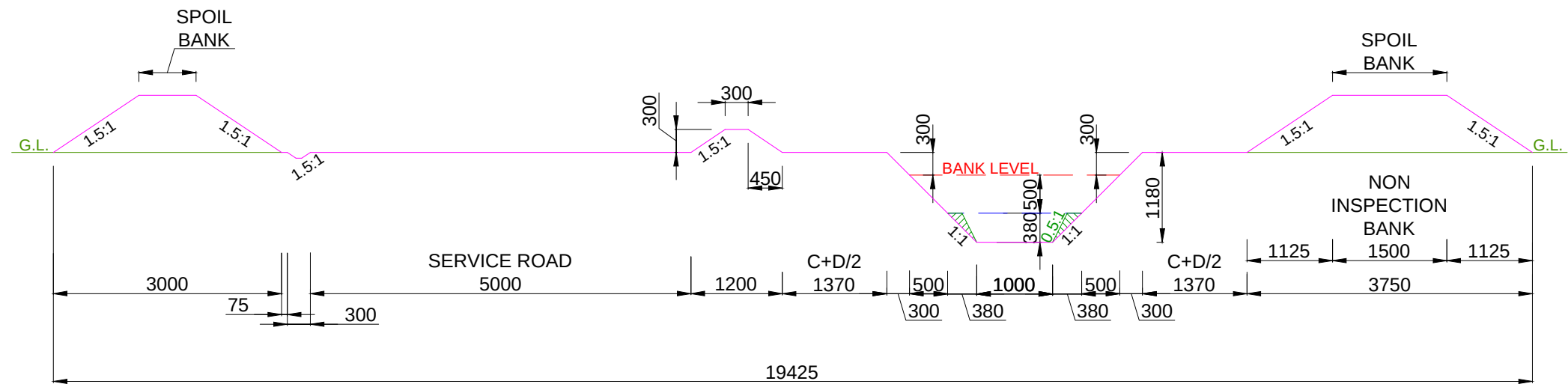
DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.400 KM

- 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 SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FC) 2 of 4				

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



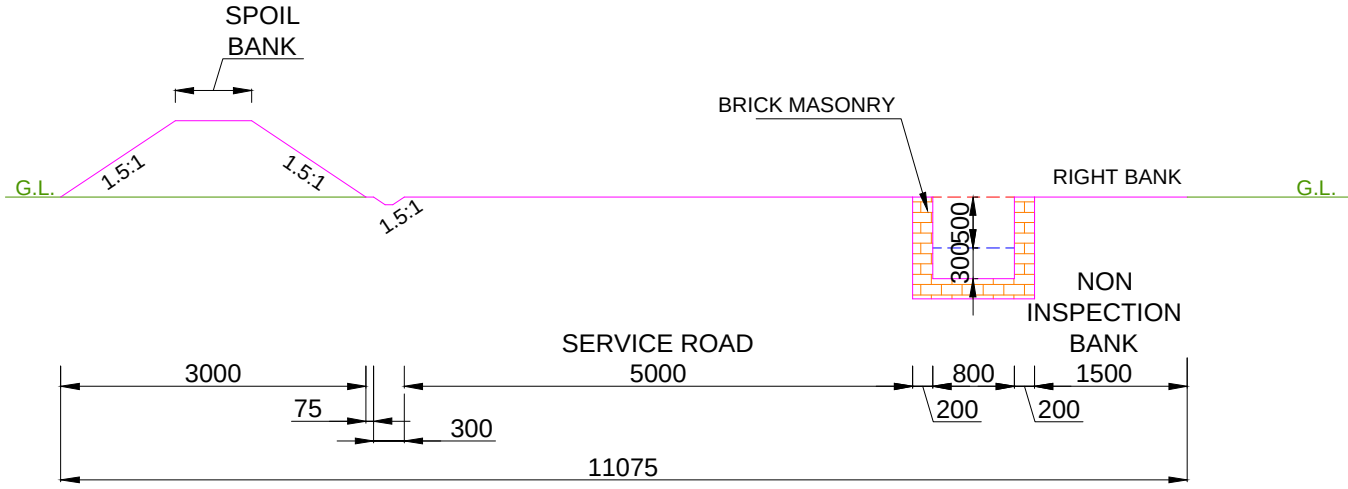
DESIGN SECTION FROM CH: 2.400 KM TO CH: 4.225 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FC) 3 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL CUTTING



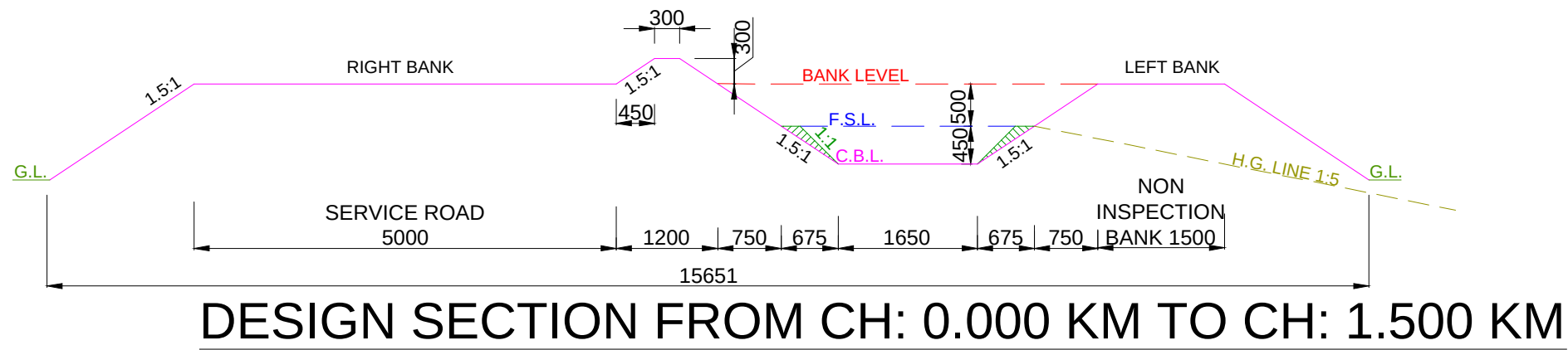
DESIGN SECTION FROM CH: 4.225 KM TO CH: 4.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



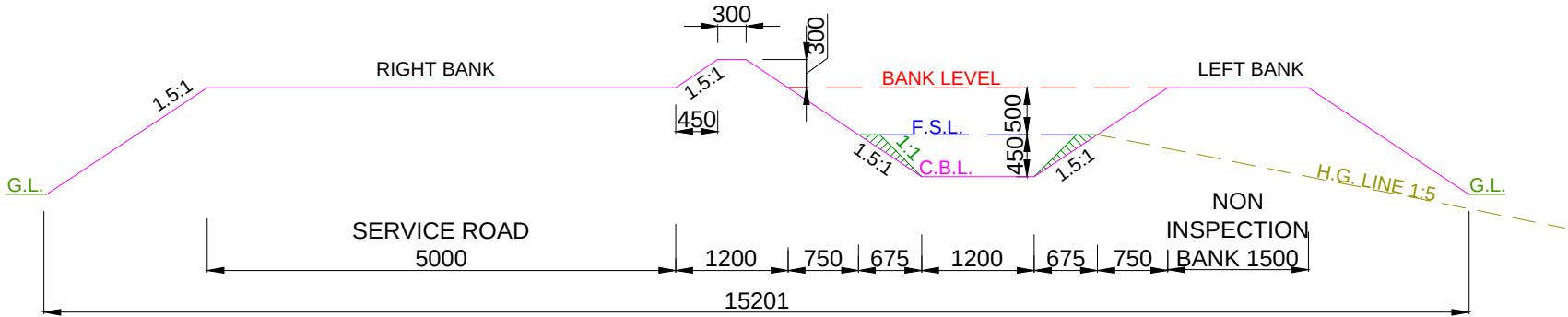
DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FF) 1 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING



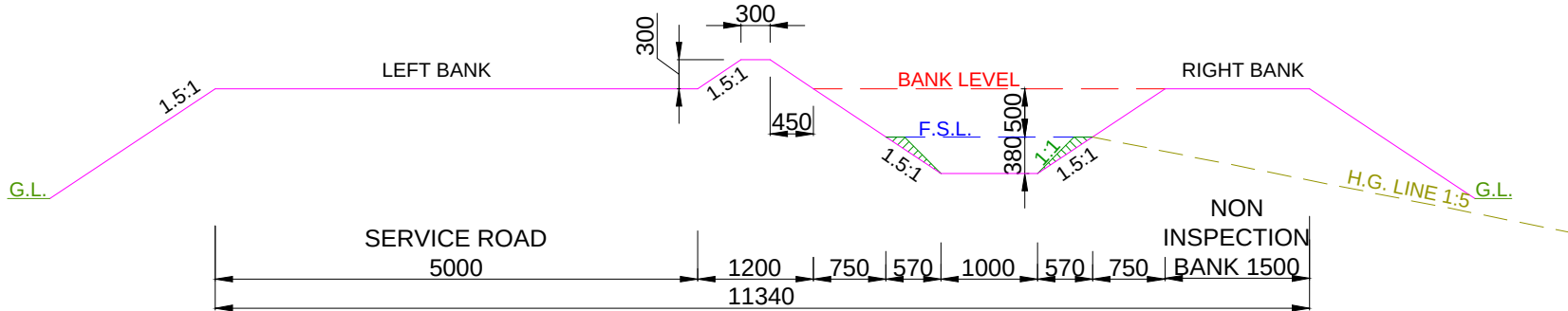
DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.400 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FF) 2 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR FULL FILLING

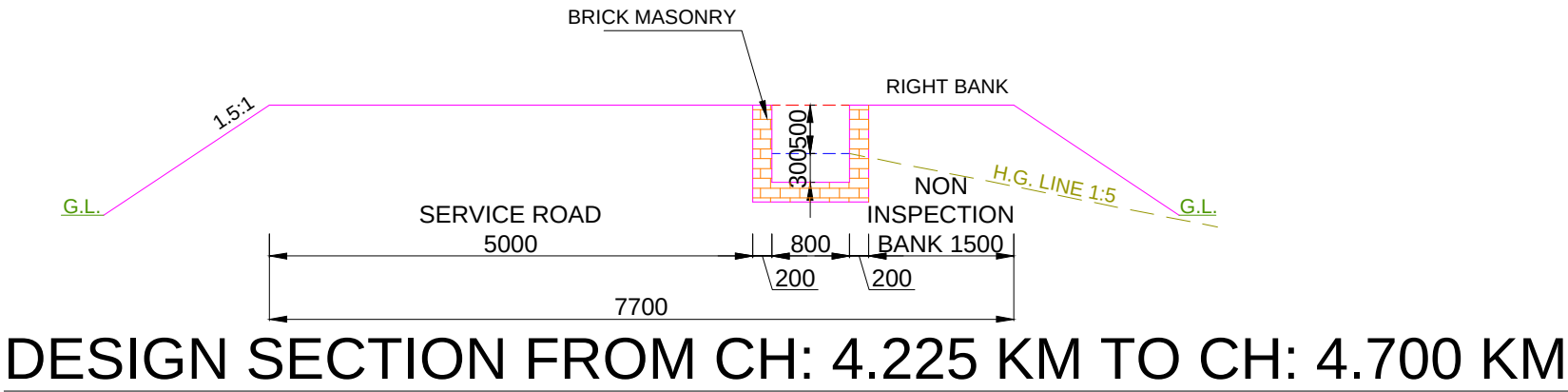


DESIGN SECTION FROM CH: 2.400 KM TO CH: 4.225 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FF) 3 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

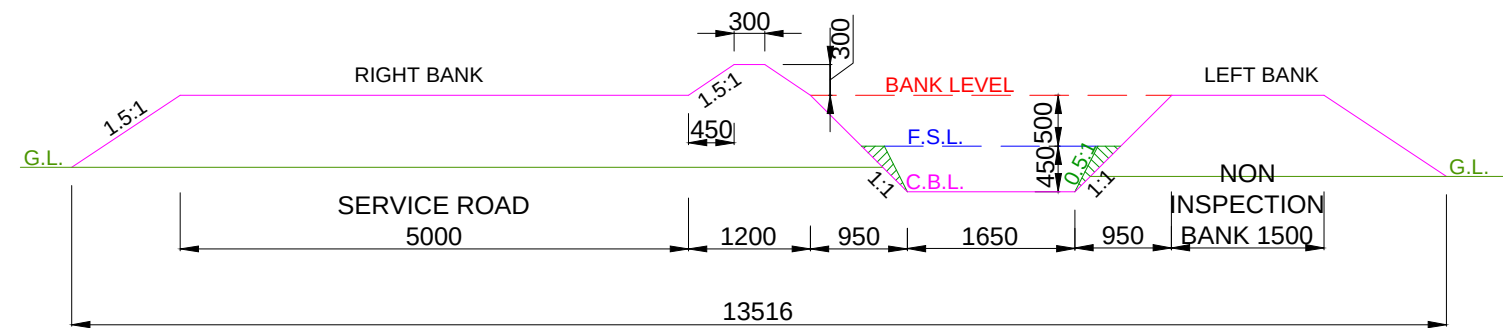


DESIGN SECTION FROM CH: 4.225 KM TO CH: 4.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(FF) 4 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

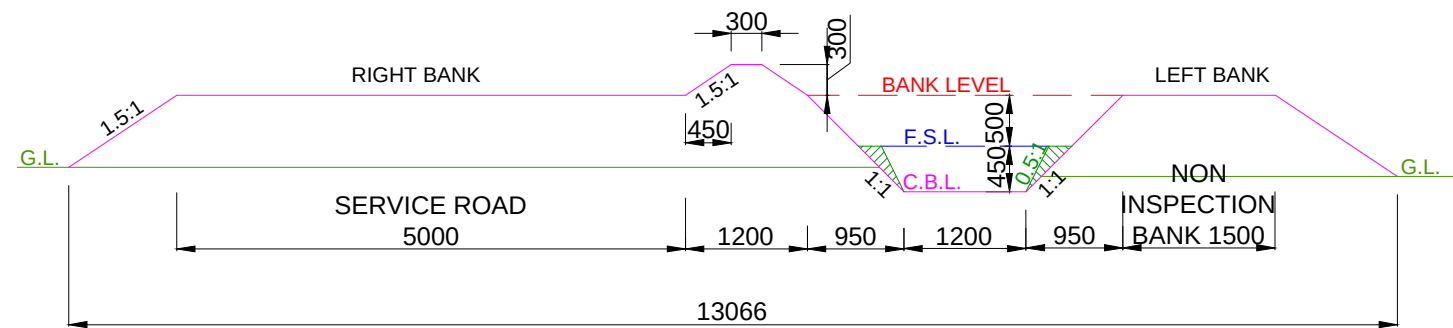


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(PCF) 1 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

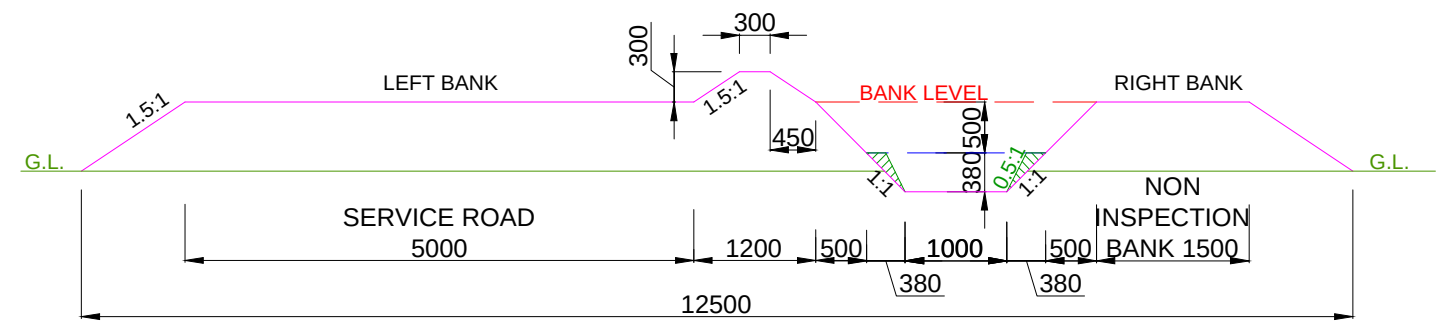


DESIGN SECTION FROM CH: 1.500 KM TO CH: 2.400 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(PCF) 2 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

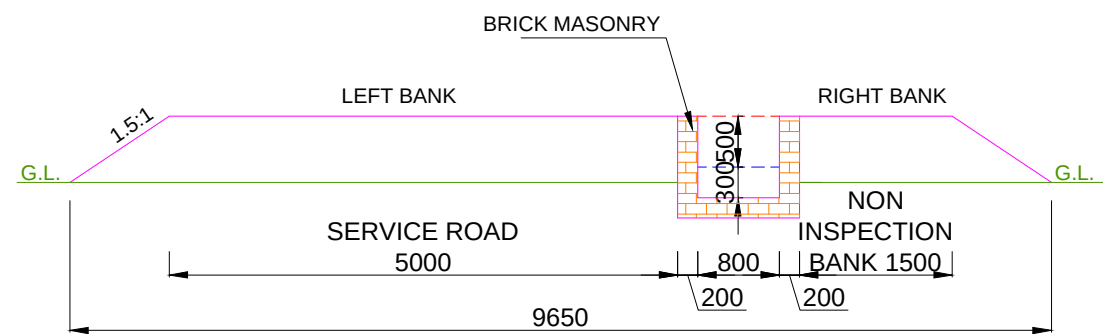


DESIGN SECTION FROM CH: 2.400 KM TO CH: 4.225 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(PCF) 3 of 4

TYPICAL X - SECTION OF NEURA SURAJMAL MINOR
(OFFTAKE FROM RD - 3+150 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



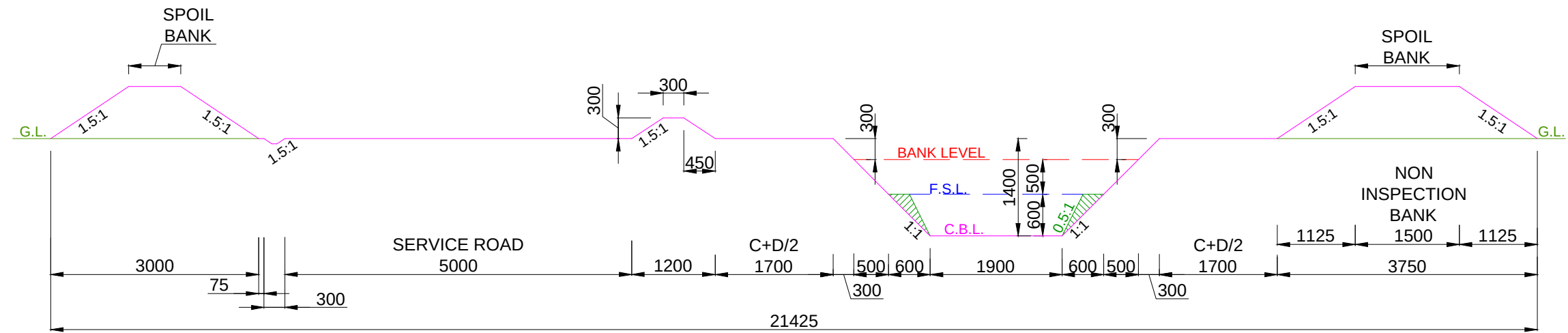
DESIGN SECTION FROM CH: 4.225 KM TO CH: 4.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND			
			Drawing Title :-	X SECTION OF NEURA SURAJMAL MR.(OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL			
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC /TYP-(PCF) 4 of 4			

SHUSHNAR MINOR

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

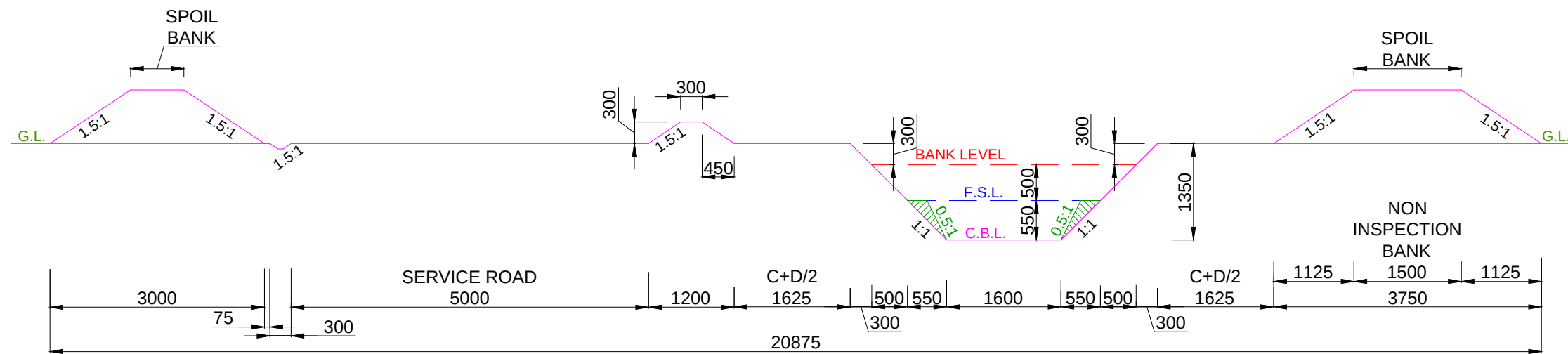


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.050 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FC)1 of 4

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING



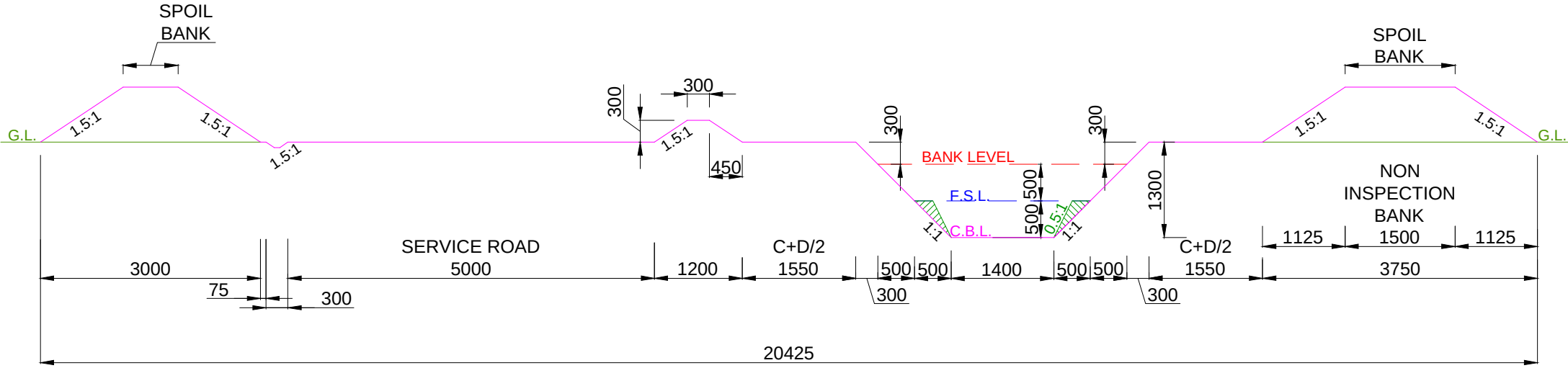
DESIGN SECTION FROM CH: 1.050 KM TO CH: 2.550 KM

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.

A	LEGEND		Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
		CUT AREA		Drawing Title :-	X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL	
		FILL AREA		Drawing No. :- 125	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FC) 2 of 4	

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

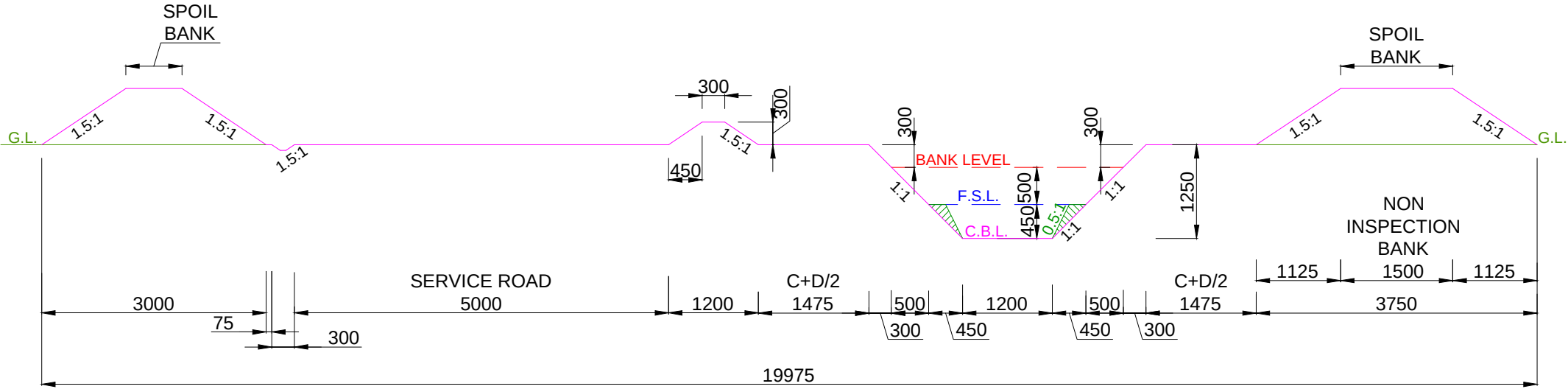


DESIGN SECTION FROM CH: 2.550 KM TO CH: 3.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FC)

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL CUTTING

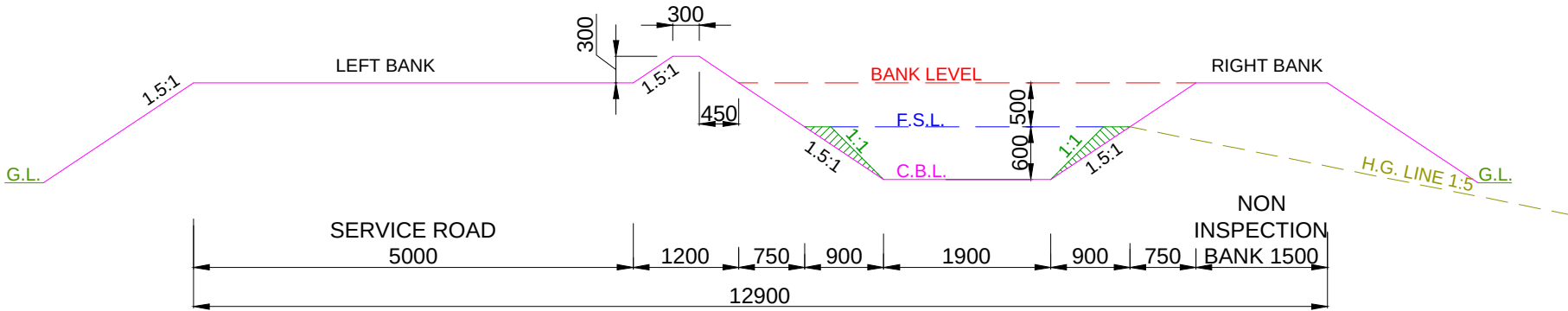


DESIGN SECTION FROM CH: 3.700 KM TO CH: 4.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FC) 4 of 4

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

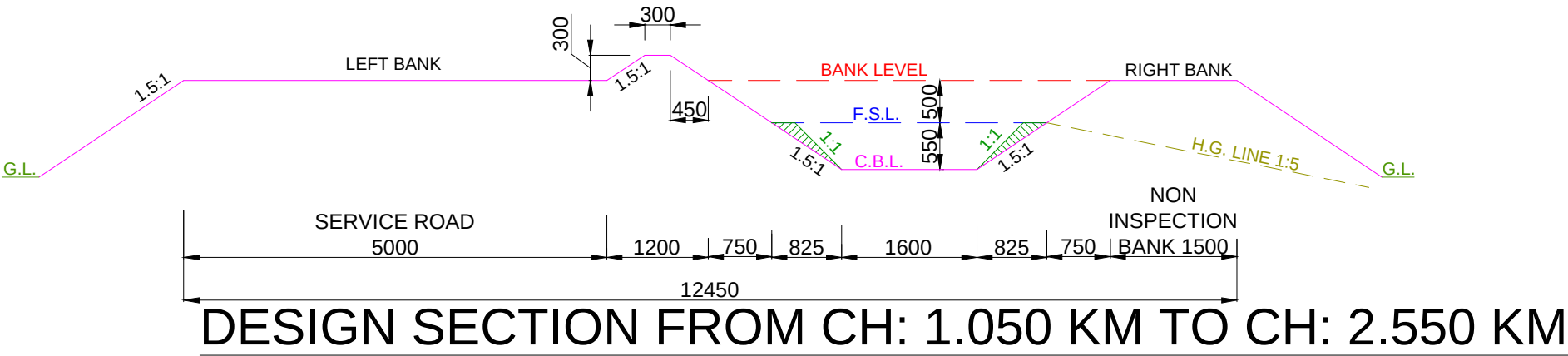


DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.050 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FF)1 of 4

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

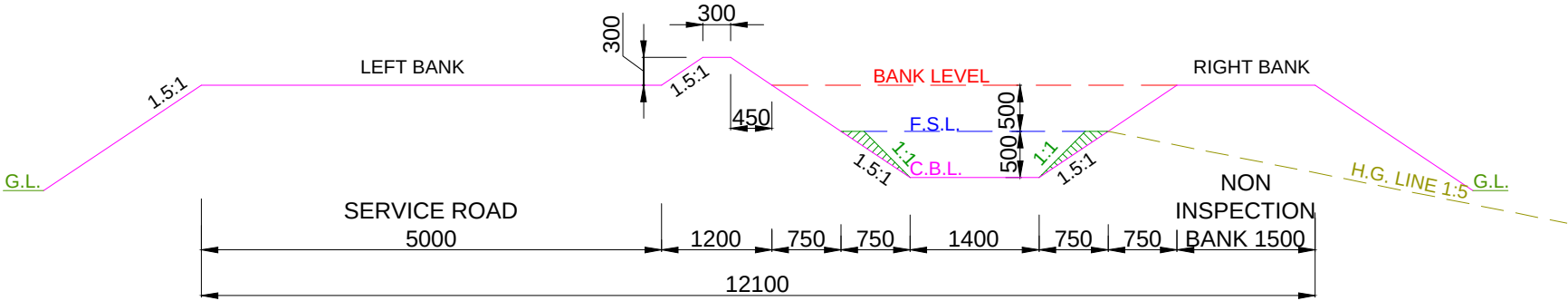


NOTE:-

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FF) 2 of 4

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING

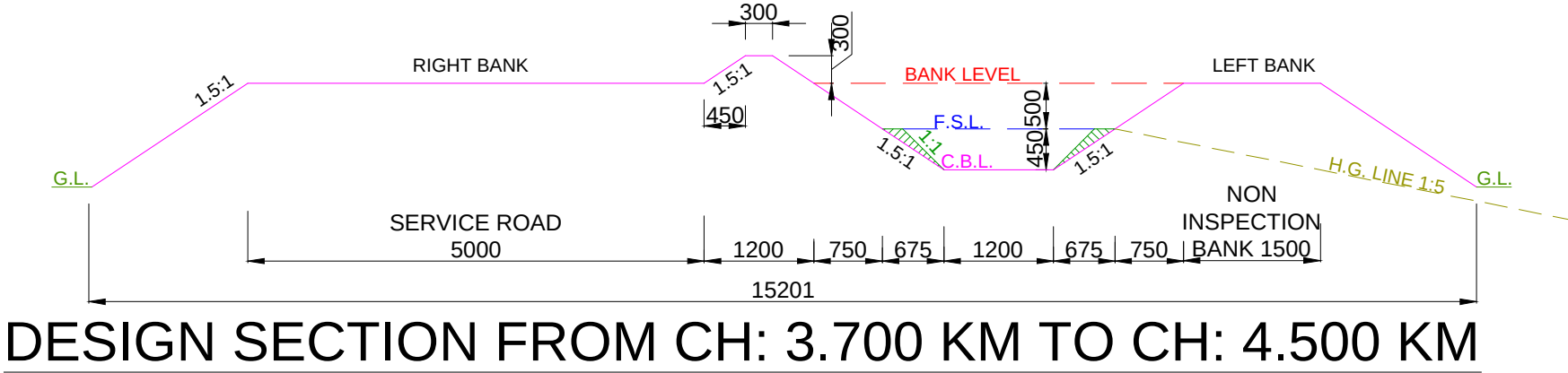


DESIGN SECTION FROM CH: 2.550 KM TO CH: 3.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FF) 3 of 4				

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR FULL FILLING



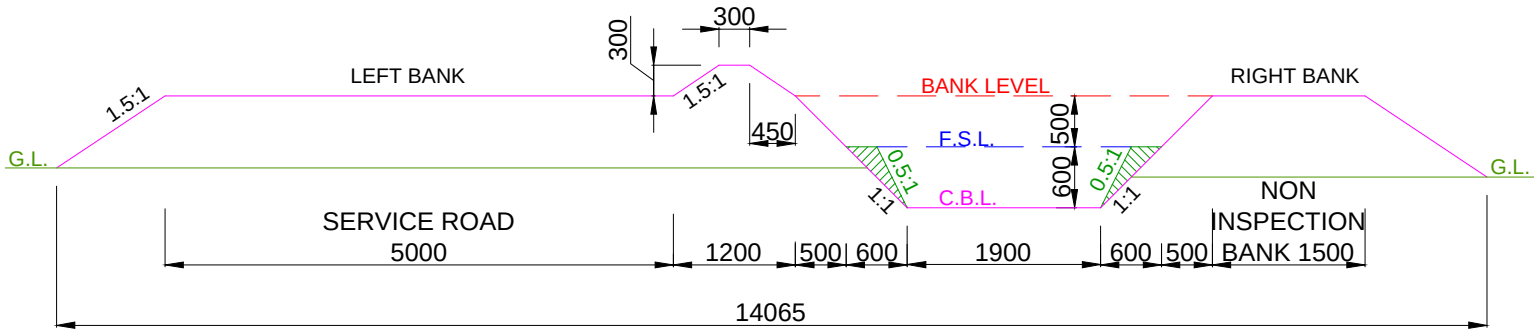
DESIGN SECTION FROM CH: 3.700 KM TO CH: 4.500 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(FF) 4 of 4

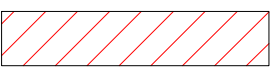
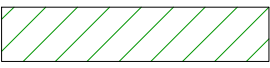
TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



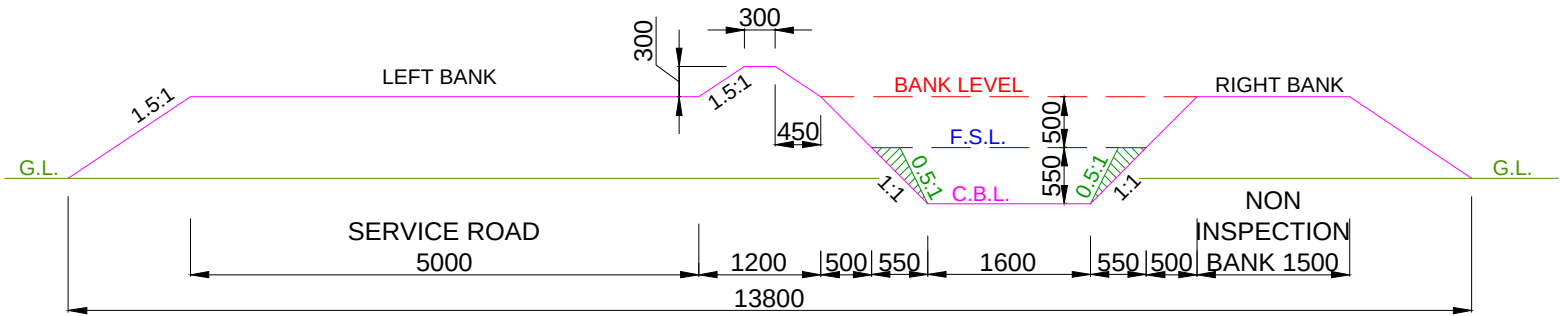
DESIGN SECTION FROM CH: 0.000 KM TO CH: 1.050 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(PCF) 1 of 4				

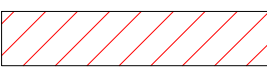
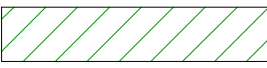
TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

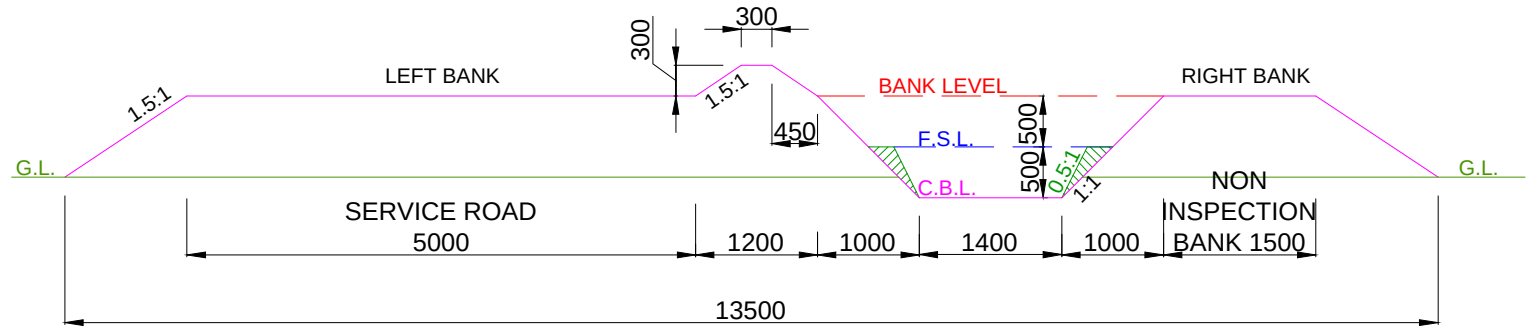


DESIGN SECTION FROM CH: 1.050 KM TO CH: 2.550 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(PCF) 2 of 4				

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

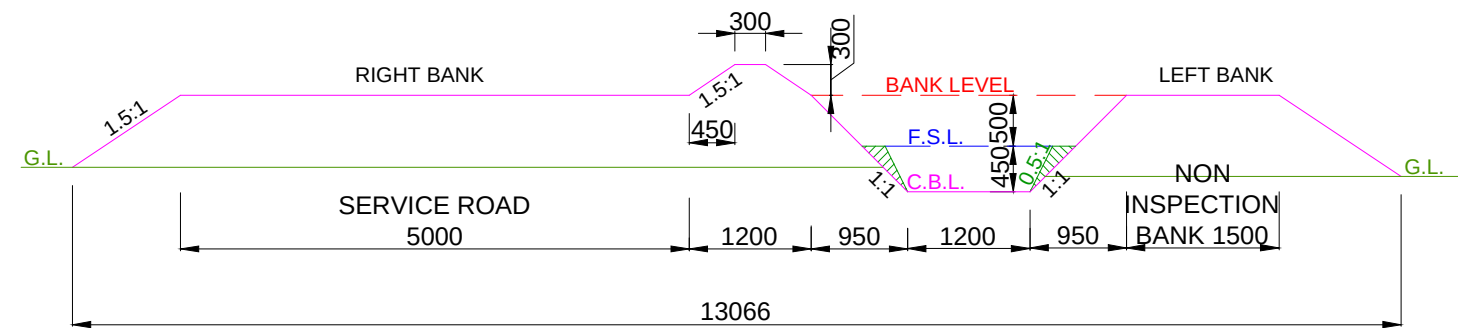


DESIGN SECTION FROM CH: 2.550 KM TO CH: 3.700 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(PCF) 3 of 4				

TYPICAL X - SECTION OF SHUSHNAR MINOR
(OFFTAKE FROM RD - 18+342 KM. (LT), KARMA DISTRIBUTARY CANAL)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 3.700 KM TO CH: 4.500 KM

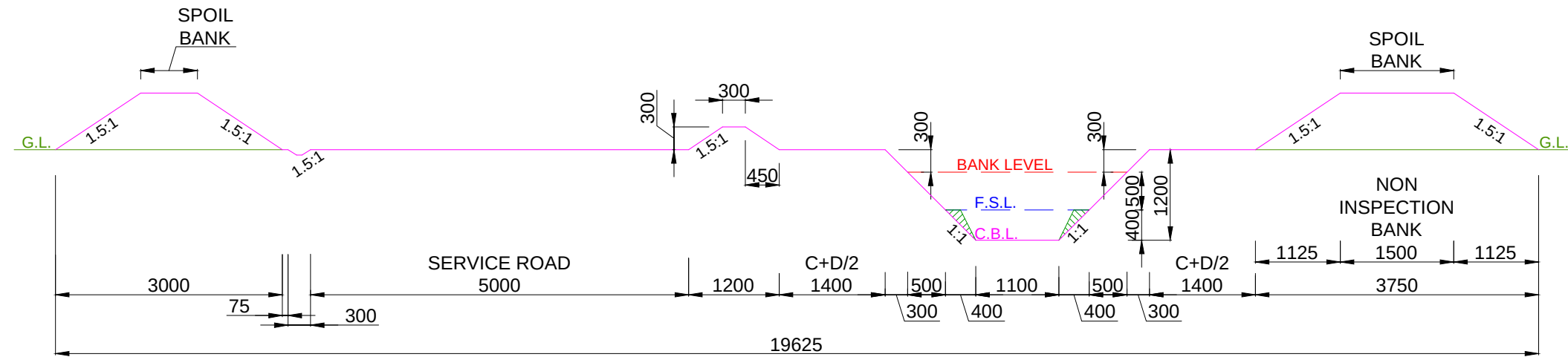
- NOTE:-
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X SECTION OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC /TYP-(PCF) 4 of 4

JAGDISHPUR MINOR

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR FULL CUTTING



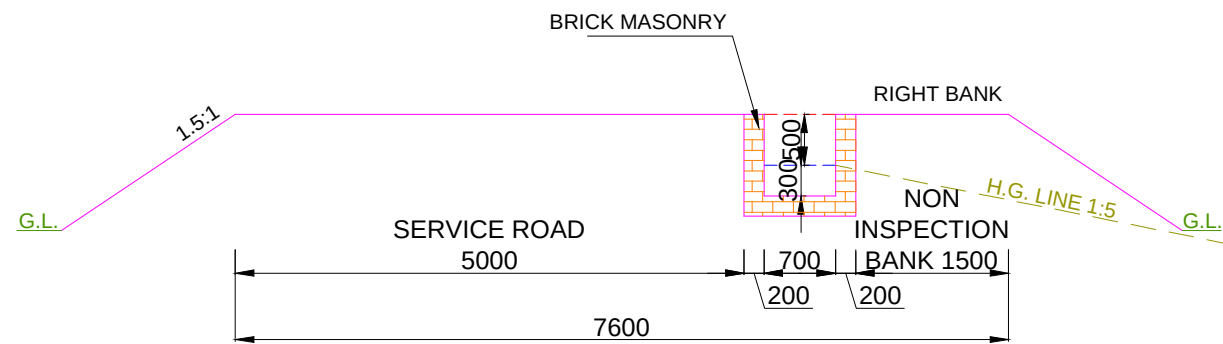
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.300 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
			Drawing Title :-	X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR				
			Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FC) 1 of 3				

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR FULL FILLING



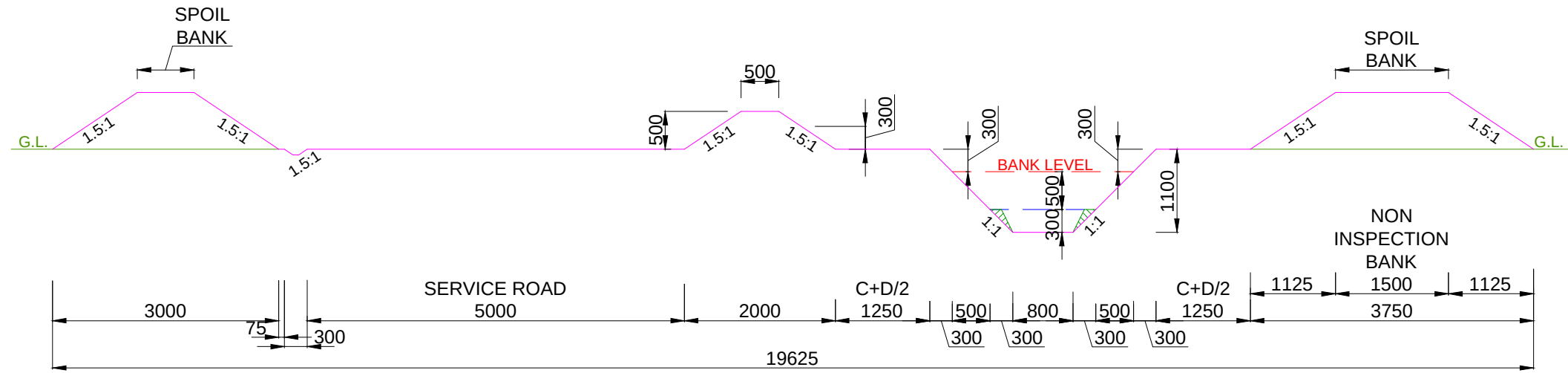
DESIGN SECTION FROM CH: 0.600 KM TO CH: 1.007 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FF) 3 of 3

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR FULL CUTTING



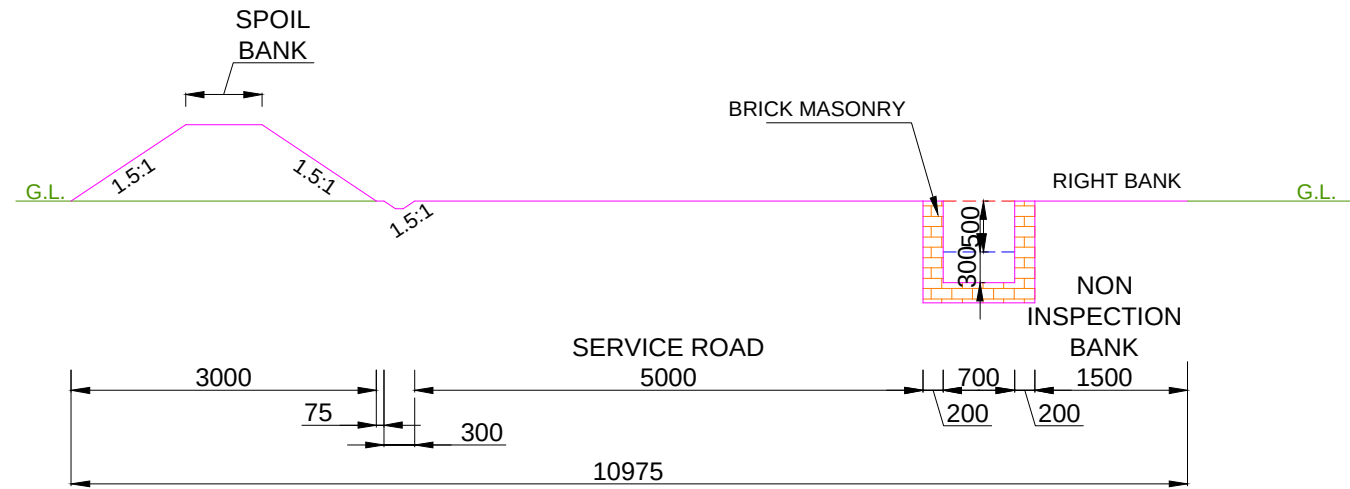
DESIGN SECTION FROM CH: 0.300 KM TO CH: 0.600 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FC) 2 of 3

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR FULL CUTTING



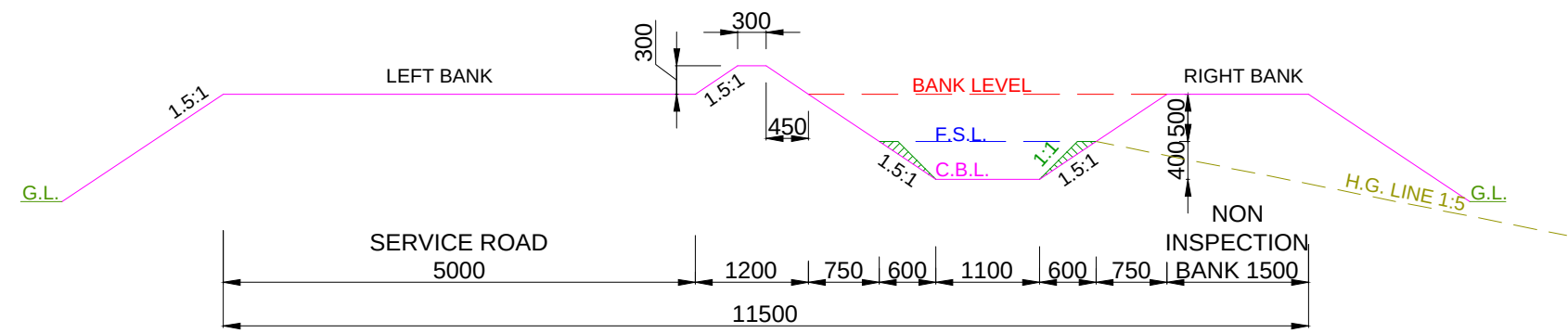
DESIGN SECTION FROM CH: 0.600 KM TO CH: 1.007 KM

- 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 JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FC) 3 of 3				

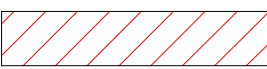
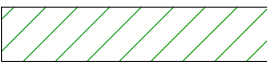
TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR FULL FILLING



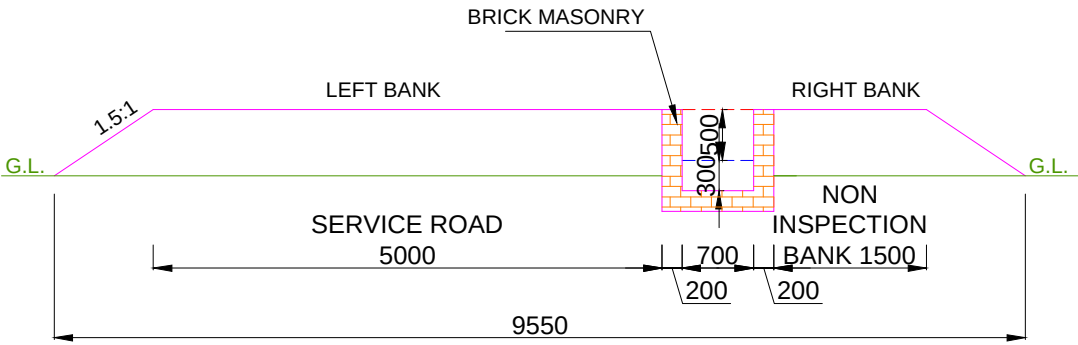
DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.300 KM

- 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. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND				
	CUT AREA		Drawing Title :-	X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR				
	FILL AREA		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FF) 1 of 3				

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

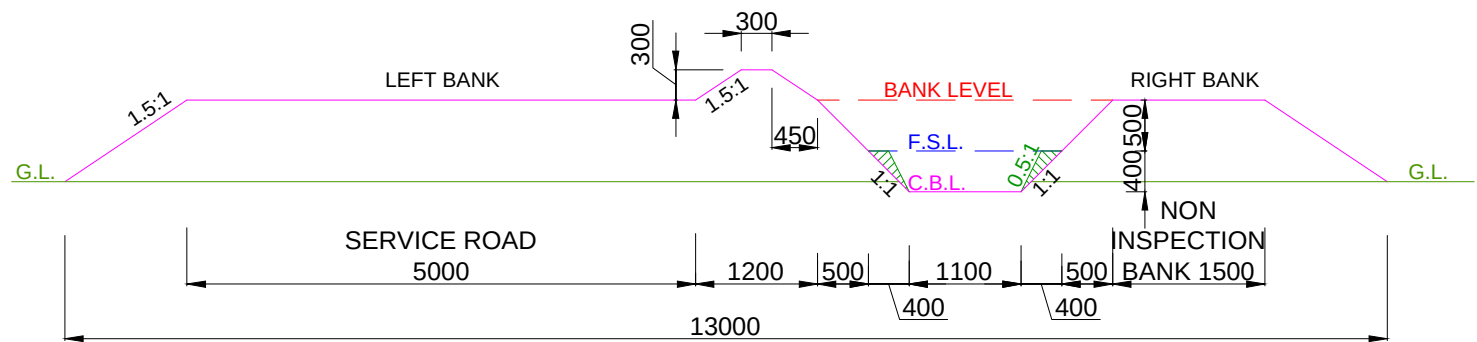


DESIGN SECTION FROM CH: 0.600 KM TO CH: 1.007 KM

- 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 CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(PCF) 3 of 3

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)
DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING



DESIGN SECTION FROM CH: 0.000 KM TO CH: 0.300 KM

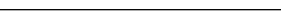
- NOTE:-**
- 1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
 - 2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
 - 3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND CUT AREA FILL AREA		Prepared by :- WAPCOS LTD.	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
			Drawing Title :- X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR
			Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(PCF) 1 of 3

DESIGN SECTION FOR FULL FILLING

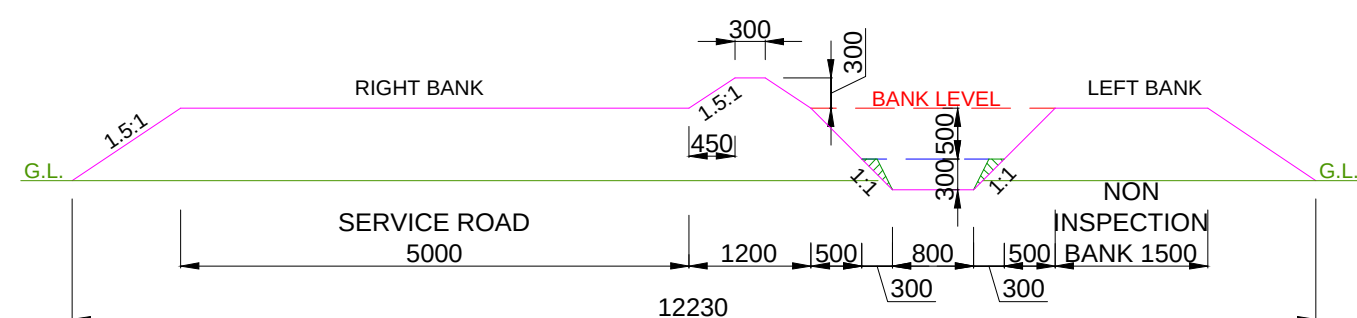


1. THE BANK WIDTH HAS BEEN ADOPTED AS PER IS 7112 : 2002 (TABLE-1).
2. THE OFFTAKING CHAINAGE AND LENGTH OF THE CANAL HAS BEEN TAKEN AS PER ACTUAL SURVEY.
3. THIS IS A TYPICAL DRAWING, INSPECTION & NON-INSPECTION BANK SHALL BE TAKEN AS PER SITE CONDITIONS.

LEGEND  CUT AREA  FILL AREA	Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
		Drawing Title :-	X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR
		Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(FF) 2 of 3

TYPICAL X - SECTION OF JAGDISHPUR MR.
(OFFTAKE FROM RD - 4+500 KM. (RT), SHUSHNAR MINOR)

DESIGN SECTION FOR PARTLY CUTTING/ PARTLY FILLING

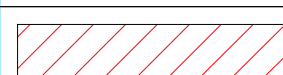


DESIGN SECTION FROM CH: 0.300 KM TO CH: 0.600 KM

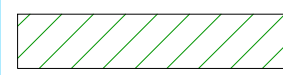
NOTE:-

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



CUT AREA



FILL AREA

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

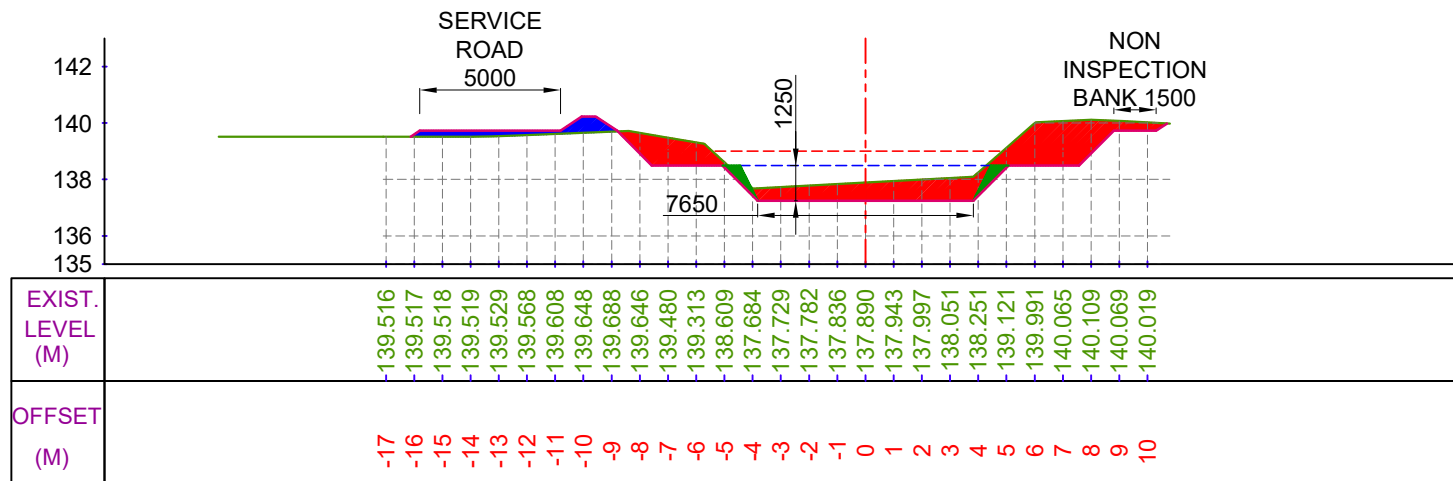
X - SECTION OF JAGDISHPUR MR. (OFFTAKE FROM RD - 4+500 KM. (R), SHUSHNAR MINOR

Drawing No. :-

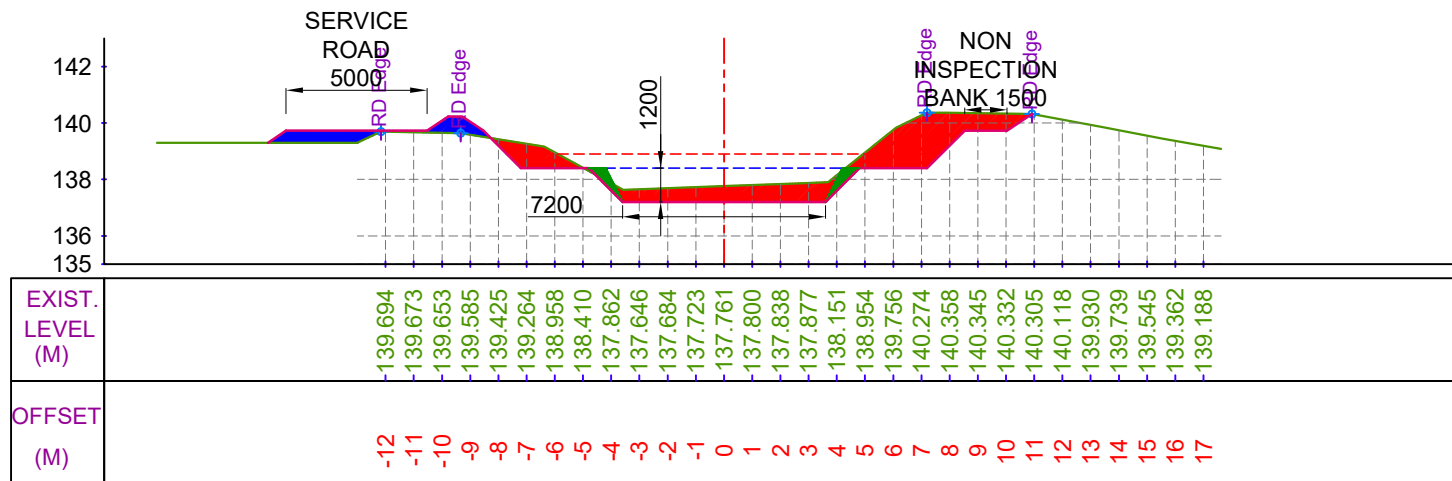
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03-1/ XSEC /TYP-(PCF) 2 of 3

CROSS-SECTION

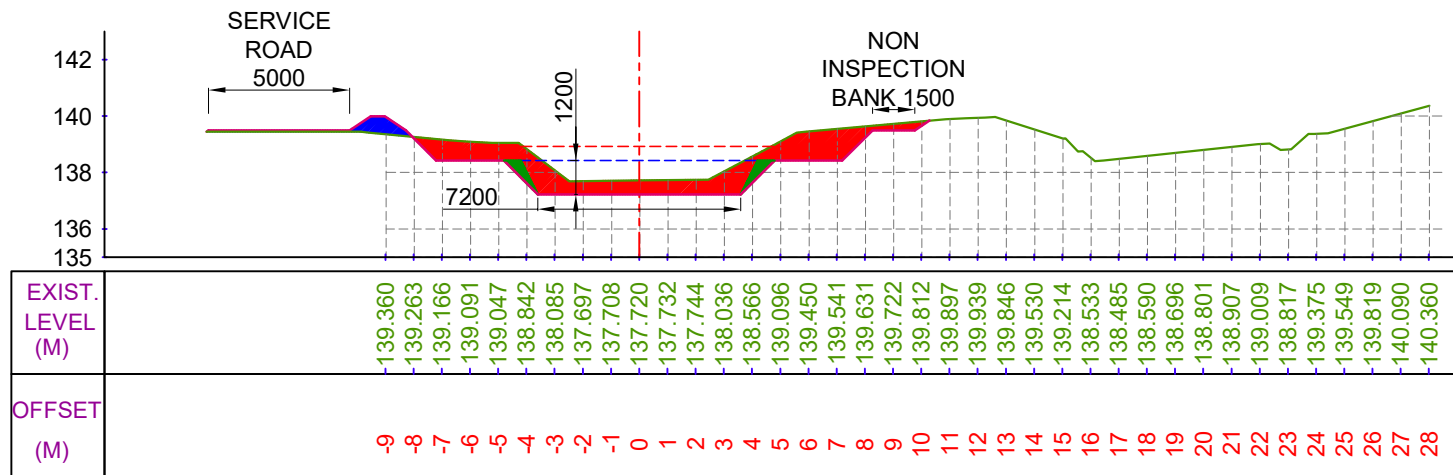
X SECTION OF KARMA DY.



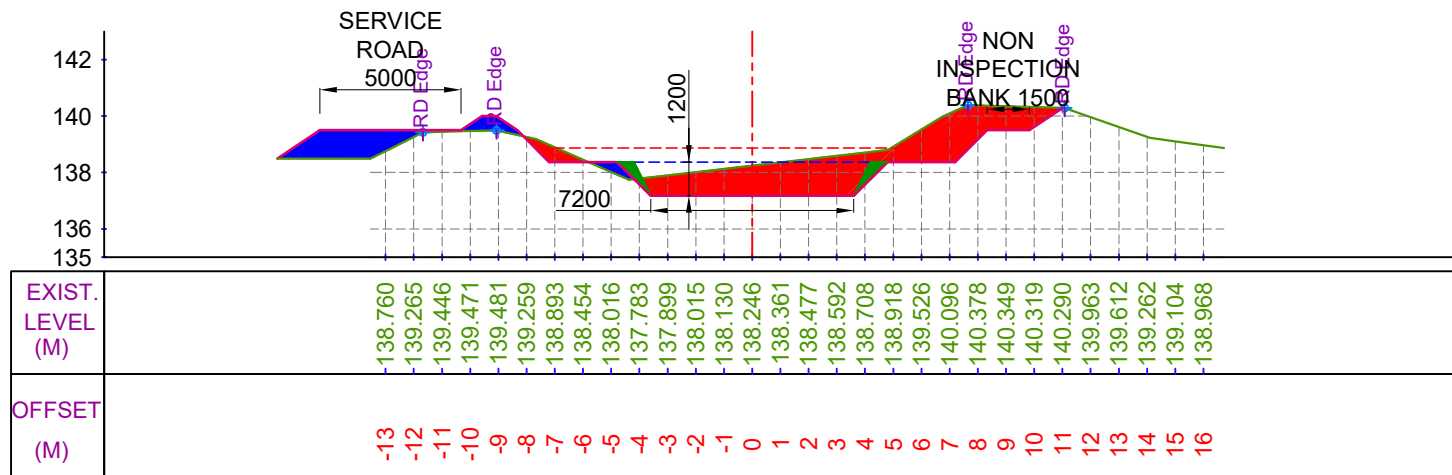
CUTTING AREA (SQ.M) = 13.452 CH. (KM):- 0+100
FILLING AREA (SQ.M) = 1.745 DESIGNED BED LEVEL = 137.247 M



CUTTING AREA (SQ.M) = 12.088 CH. (KM):- 0+300
FILLING AREA (SQ.M) = 2.375 DESIGNED BED LEVEL = 137.197 M



CUTTING AREA (SQ.M) = 11.402 CH. (KM):- 0+200
FILLING AREA (SQ.M) = 1.118 DESIGNED BED LEVEL = 137.222 M

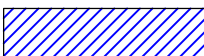


CUTTING AREA (SQ.M) = 15.447 CH. (KM):- 0+400
FILLING AREA (SQ.M) = 4.743 DESIGNED BED LEVEL = 137.172 M

LEGEND



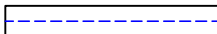
CUT AREA



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 :-

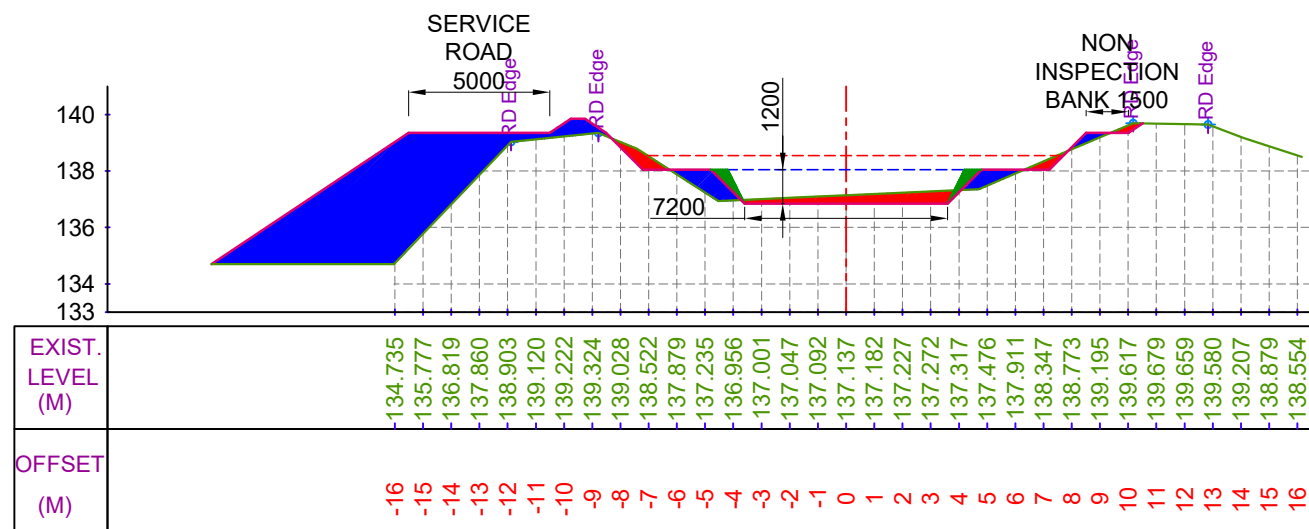
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

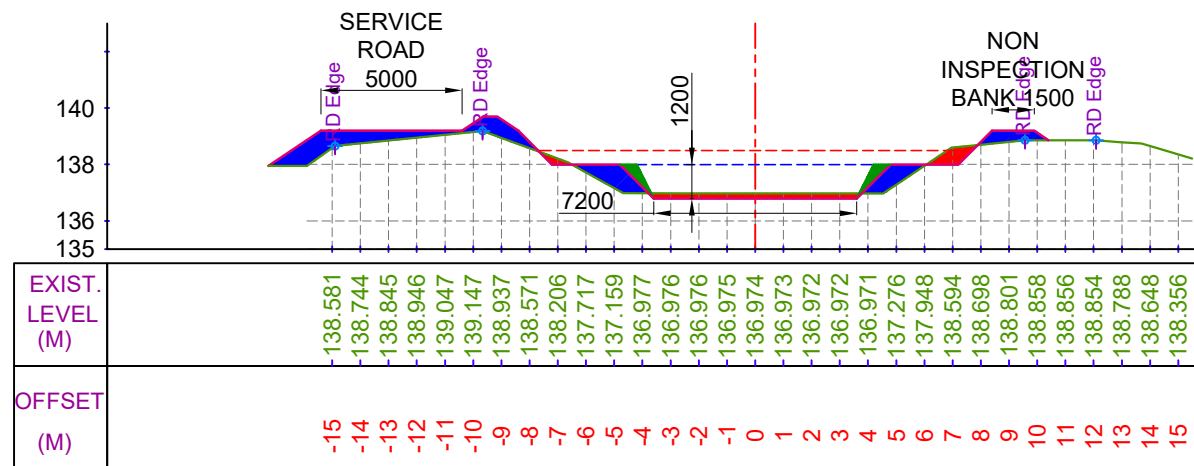
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

1 of 59

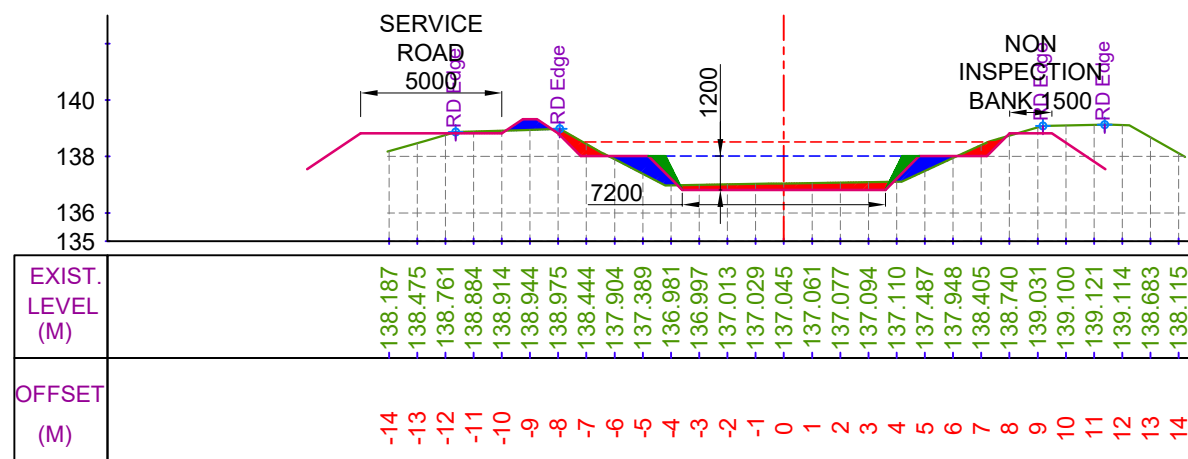
X SECTION OF KARMA DY.



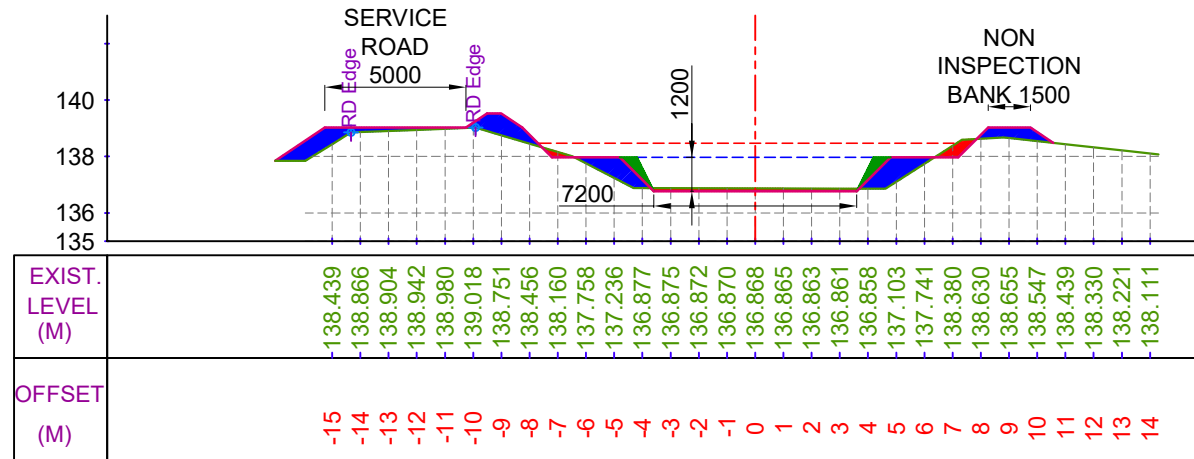
CUTTING AREA (SQ.M) = 3.300 CH. (KM):- 0+500
FILLING AREA (SQ.M) = 27.610 DESIGNED BED LEVEL = 136.842 M



CUTTING AREA (SQ.M) = 2.133 CH. (KM):- 0+700
FILLING AREA (SQ.M) = 7.071 DESIGNED BED LEVEL = 136.792 M



CUTTING AREA (SQ.M) = 2.792 CH. (KM):- 0+600
FILLING AREA (SQ.M) = 2.119 DESIGNED BED LEVEL = 136.817 M



CUTTING AREA (SQ.M) = 1.307 CH. (KM):- 0+800
FILLING AREA (SQ.M) = 6.329 DESIGNED BED LEVEL = 136.767 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

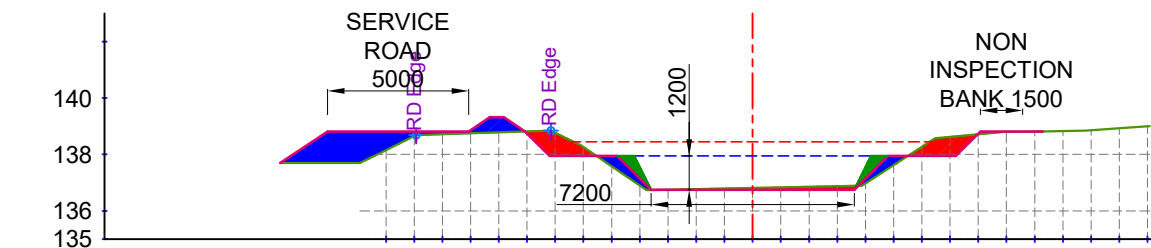
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 2 of 59

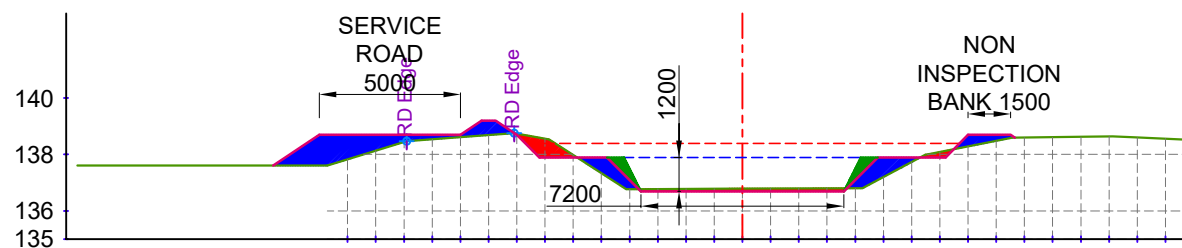
X SECTION OF KARMA DY.



EXIST. LEVEL (M)	-138.153	-138.649	-138.715	-138.747	-138.779	-138.811	-138.764	-138.261	-137.583	-136.904	-136.753	-136.774	-136.795	-136.816	-136.837	-136.858	-136.879	-136.975	-137.624	-138.273	-138.624	-138.714	-138.795	-138.811	-138.826	-138.851	-138.924	-138.994
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) = 2.817
FILLING AREA (SQ.M) = 5.399

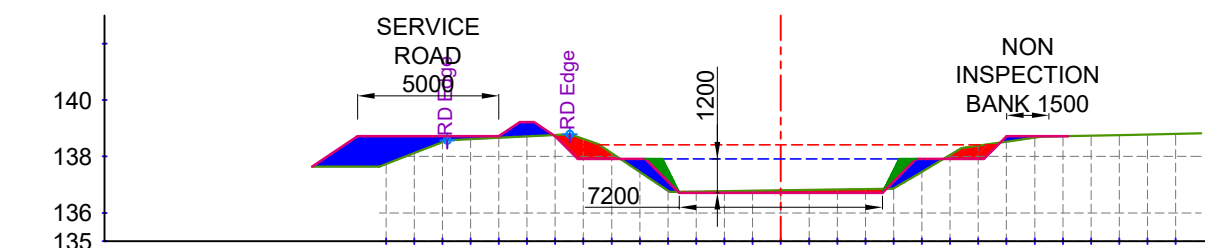
CH. (KM):- 0+900
DESIGNED BED LEVEL = 136.742 M



EXIST. LEVEL (M)	-137.824	-138.133	-138.443	-138.539	-138.613	-138.687	-138.738	-138.557	-138.979	-137.338	-136.771	-136.775	-136.778	-136.782	-136.786	-136.790	-136.794	-136.798	-136.801	-137.197	-137.726	-138.087	-138.283	-138.479	-138.595	-138.608	-138.621	-138.634	-138.599	-138.557
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) = 1.688
FILLING AREA (SQ.M) = 6.435

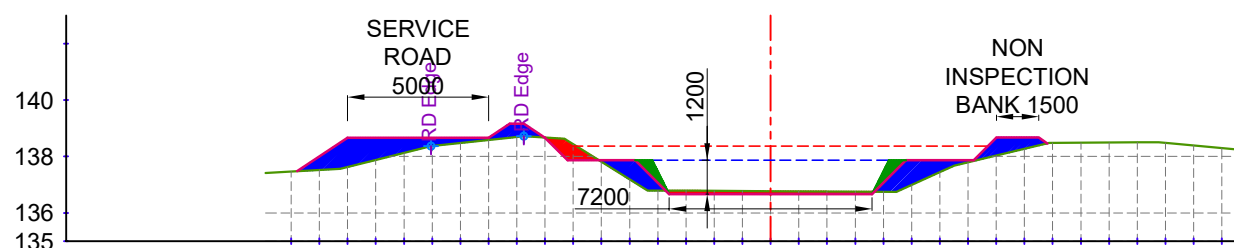
CH. (KM):- 1+100
DESIGNED BED LEVEL = 136.692 M



EXIST. LEVEL (M)	-137.732	-138.121	-138.509	-138.616	-138.665	-138.714	-138.763	-138.619	-138.120	-137.454	-136.788	-136.758	-136.772	-136.786	-136.800	-136.813	-136.827	-136.841	-136.864	-137.459	-138.054	-138.382	-138.528	-138.674	-138.717	-138.736	-138.755	-138.776	-138.798
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

CUTTING AREA (SQ.M) = 2.236
FILLING AREA (SQ.M) = 5.474

CH. (KM):- 1+000
DESIGNED BED LEVEL = 136.717 M



EXIST. LEVEL (M)	-137.467	-137.523	-137.631	-137.880	-138.130	-138.375	-138.481	-138.587	-138.694	-138.672	-138.433	-137.813	-137.193	-136.793	-136.788	-136.783	-136.778	-136.773	-136.768	-136.763	-136.758	-136.753	-136.994	-137.447	-137.795	-138.033	-138.270	-138.479	-138.486	-138.494	-138.502	-138.485	-138.392	-138.299
OFFSET (M)	-17	-16	-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	16

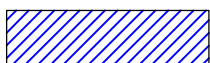
CUTTING AREA (SQ.M) = 1.453
FILLING AREA (SQ.M) = 7.619

CH. (KM):- 1+200
DESIGNED BED LEVEL = 136.667 M

LEGEND



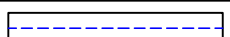
CUT AREA



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 :-

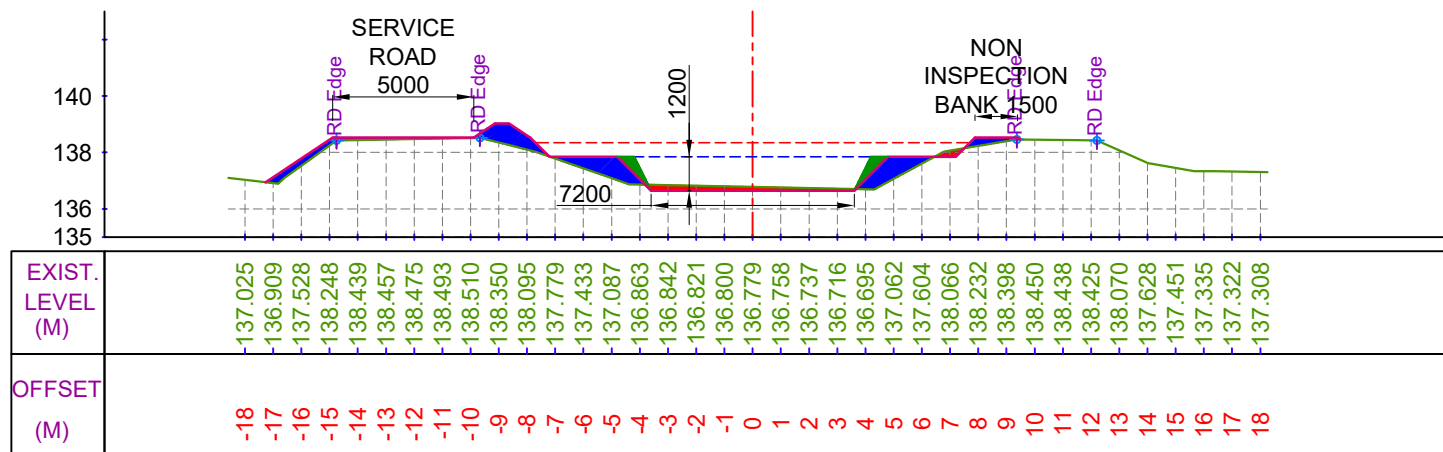
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

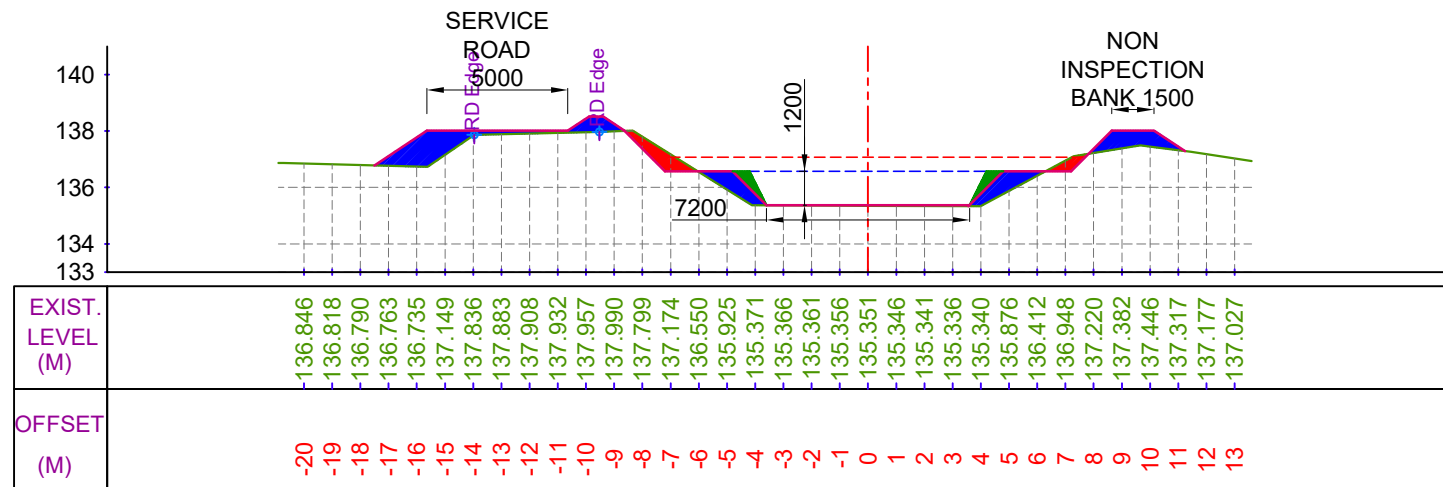
3 of 59

X SECTION OF KARMA DY.



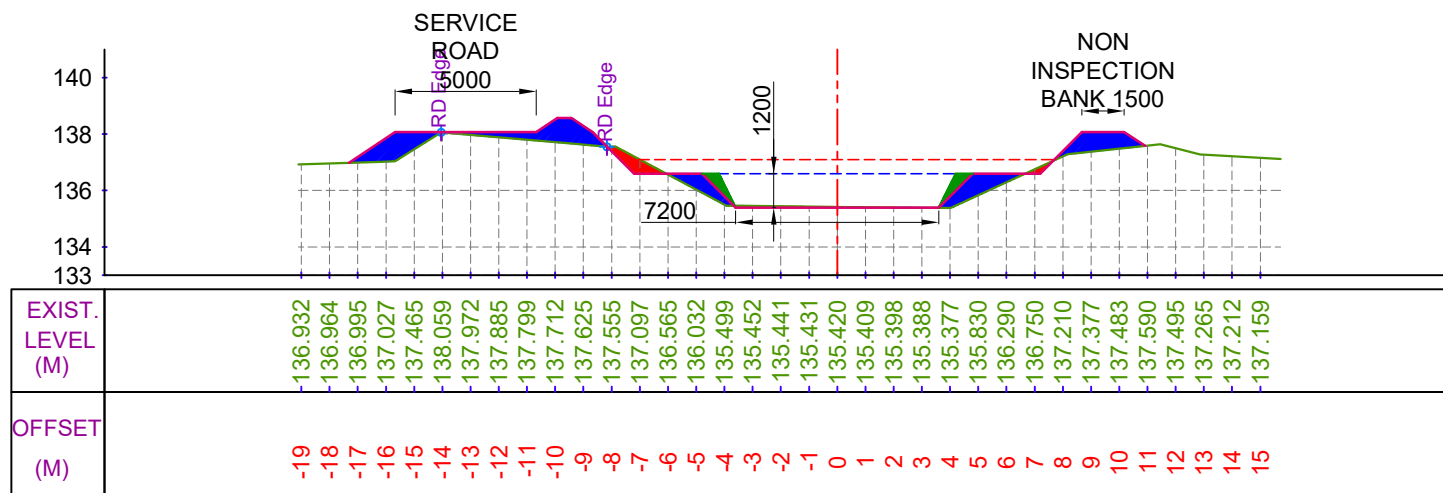
CUTTING AREA (SQ.M) = 1.164
FILLING AREA (SQ.M) = 5.189

CH. (KM):- 1+300
DESIGNED BED LEVEL = 136.642 M



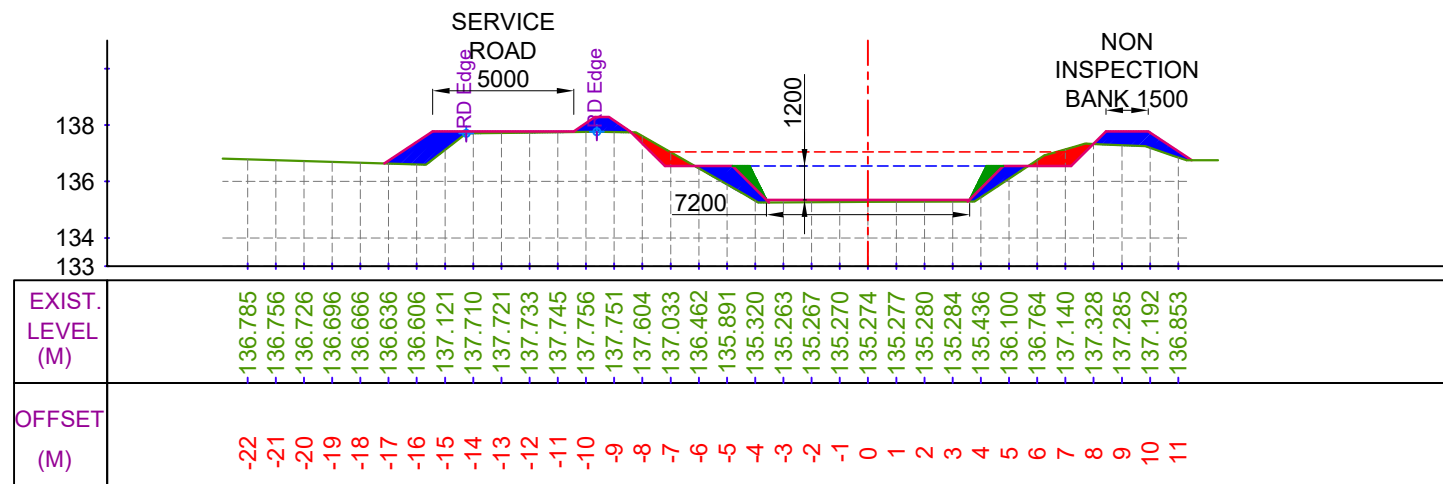
CUTTING AREA (SQ.M) = 1.430
FILLING AREA (SQ.M) = 7.270

CH. (KM):- 1+500
DESIGNED BED LEVEL = 135.372 M



CUTTING AREA (SQ.M) = 0.988
FILLING AREA (SQ.M) = 7.555

CH. (KM):- 1+400
DESIGNED BED LEVEL = 135.397 M



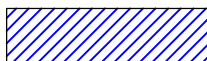
CUTTING AREA (SQ.M) = 1.596
FILLING AREA (SQ.M) = 5.665

CH. (KM):- 1+600
DESIGNED BED LEVEL = 135.347 M

LEGEND



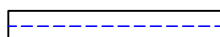
CUT AREA



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 :-

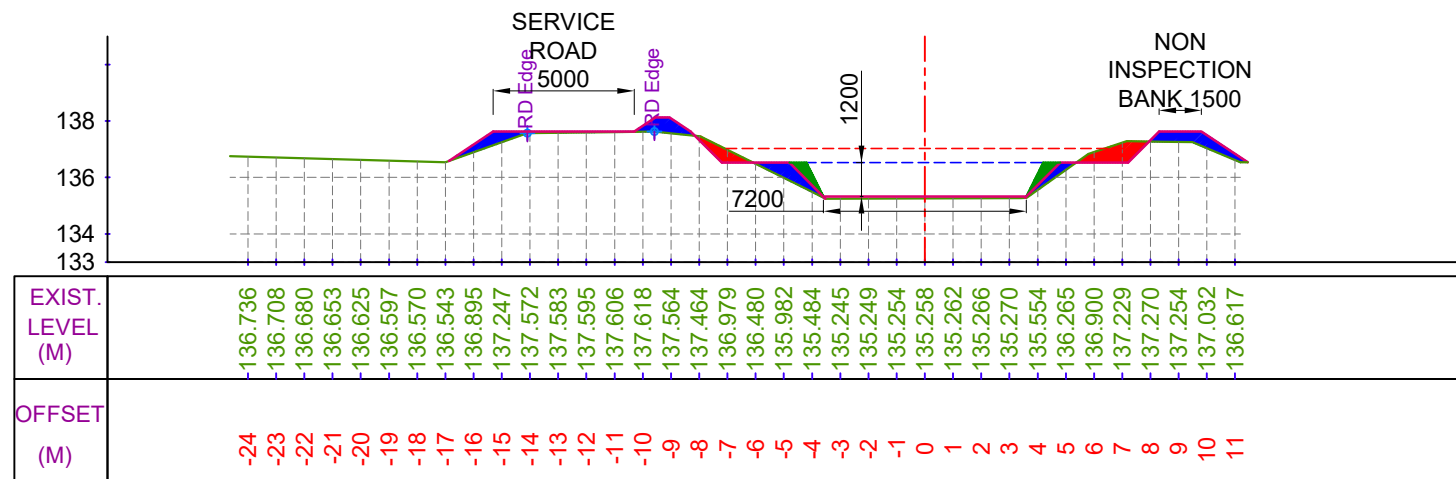
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

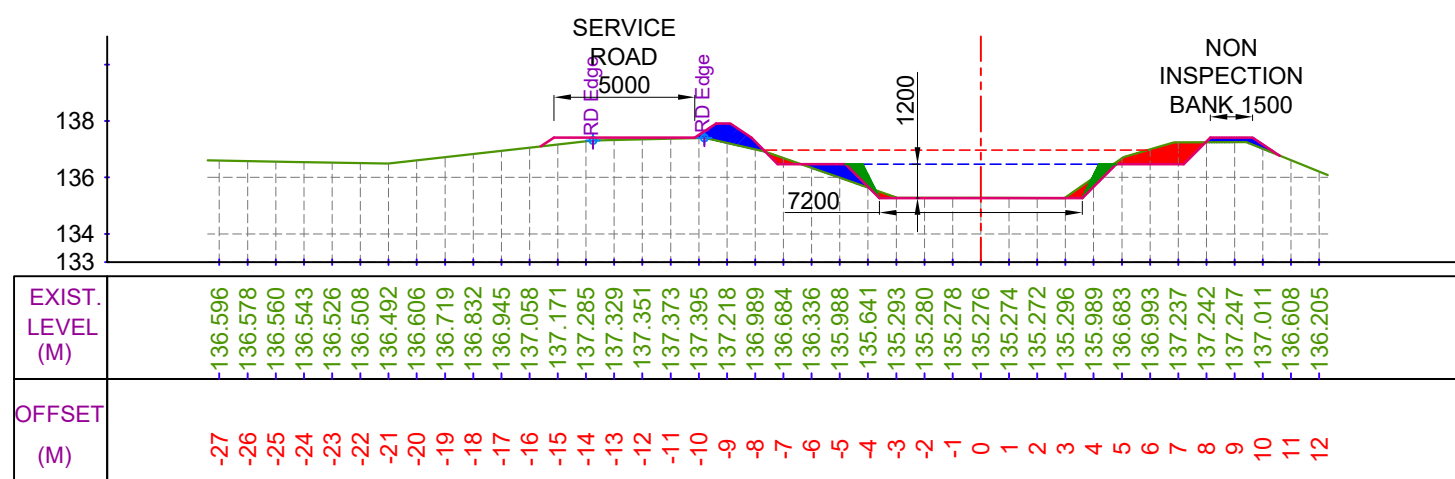
4 of 59

X SECTION OF KARMA DY.



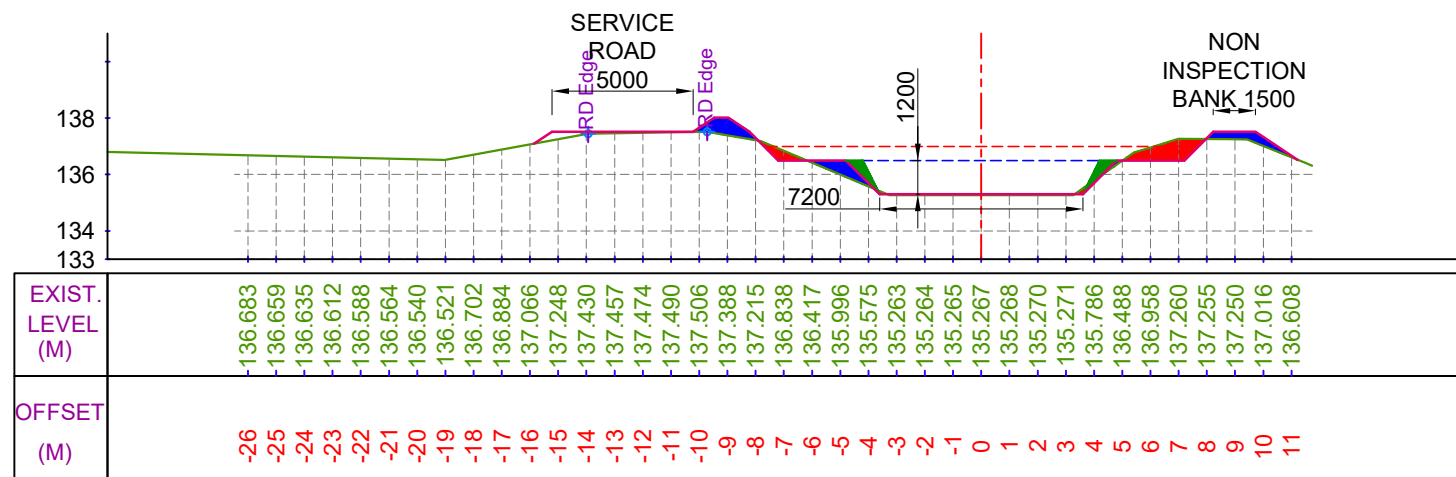
CUTTING AREA (SQ.M) = 1.718
FILLING AREA (SQ.M) = 3.958

CH. (KM):- 1+700
DESIGNED BED LEVEL = 135.322 M



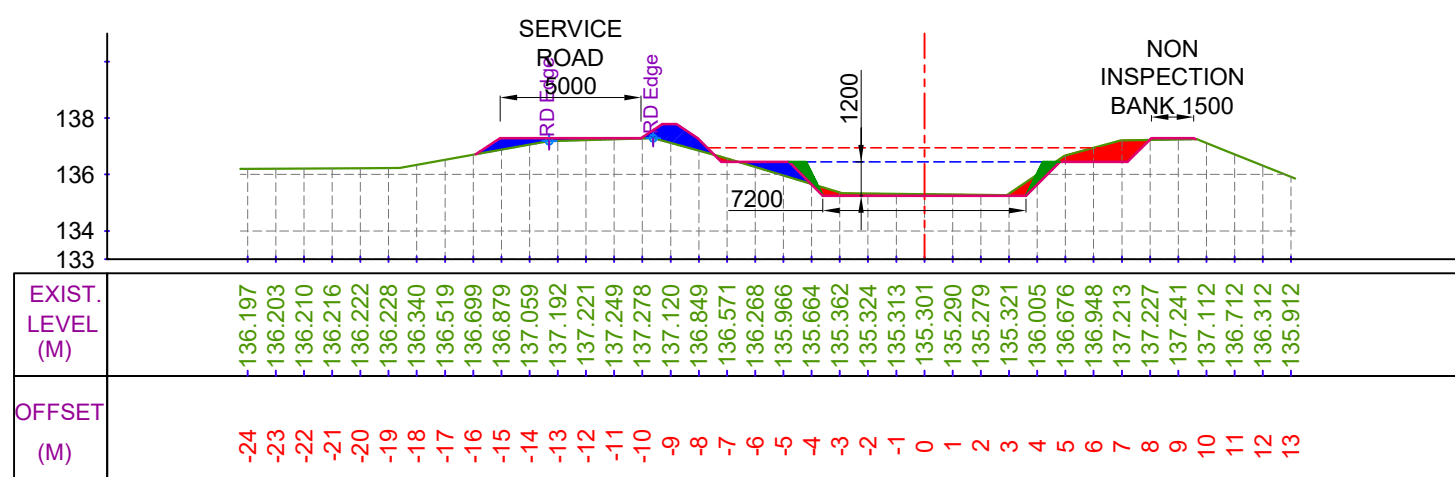
CUTTING AREA (SQ.M) = 2.022
FILLING AREA (SQ.M) = 2.129

CH. (KM):- 1+900
DESIGNED BED LEVEL = 135.272 M



CUTTING AREA (SQ.M) = 1.763
FILLING AREA (SQ.M) = 2.371

CH. (KM):- 1+800
DESIGNED BED LEVEL = 135.297 M



CUTTING AREA (SQ.M) = 2.313
FILLING AREA (SQ.M) = 2.725

CH. (KM):- 2+000
DESIGNED BED LEVEL = 135.247 M

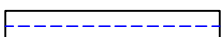
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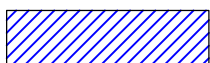
CUT AREA



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 :-

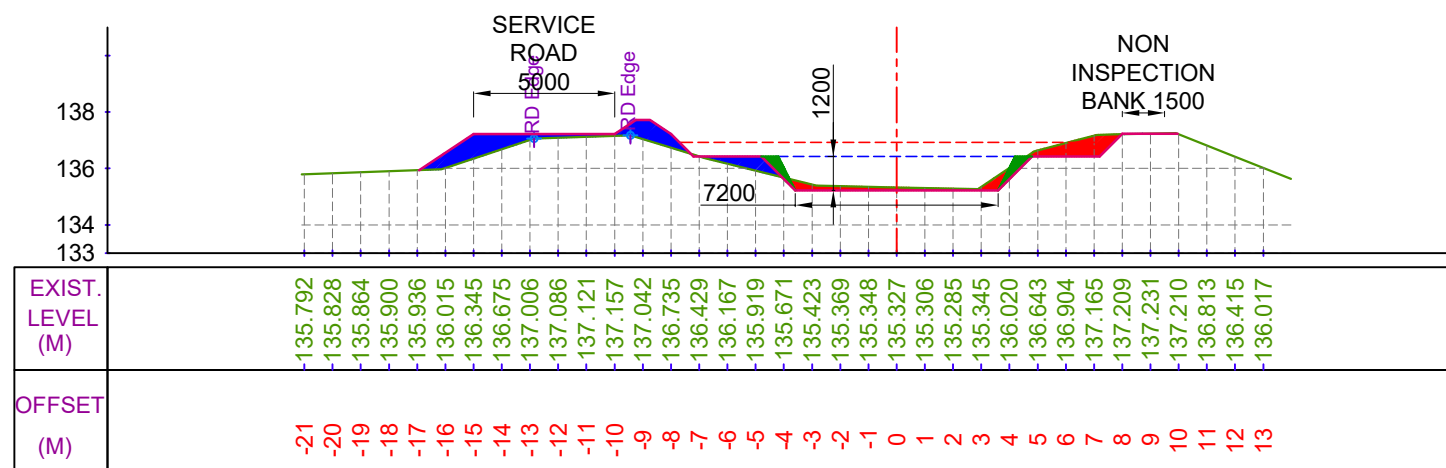
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

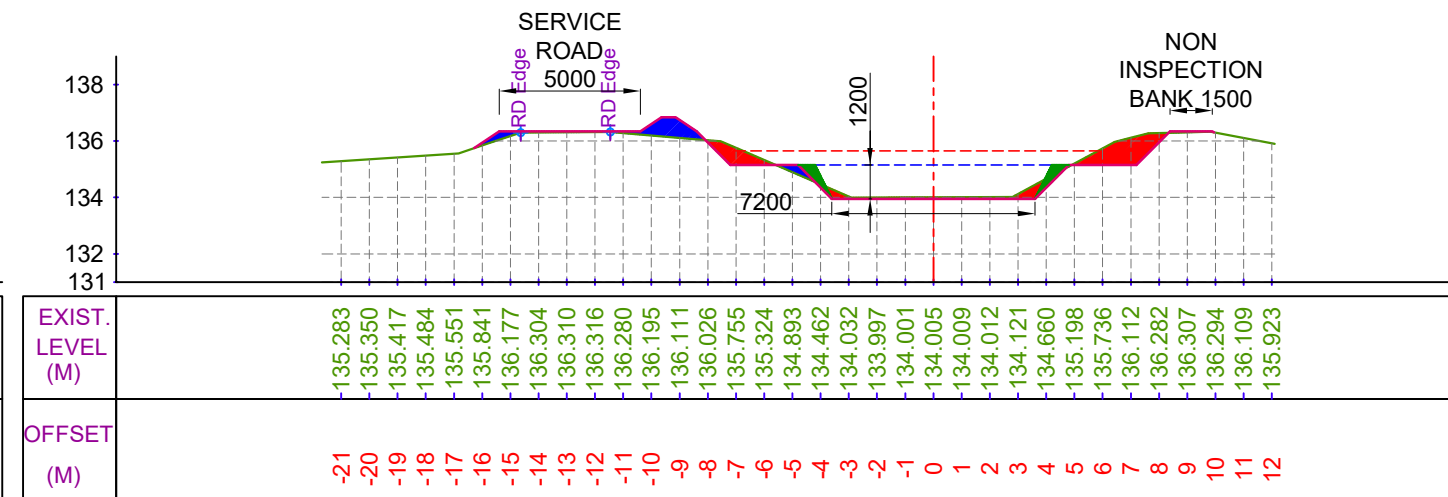
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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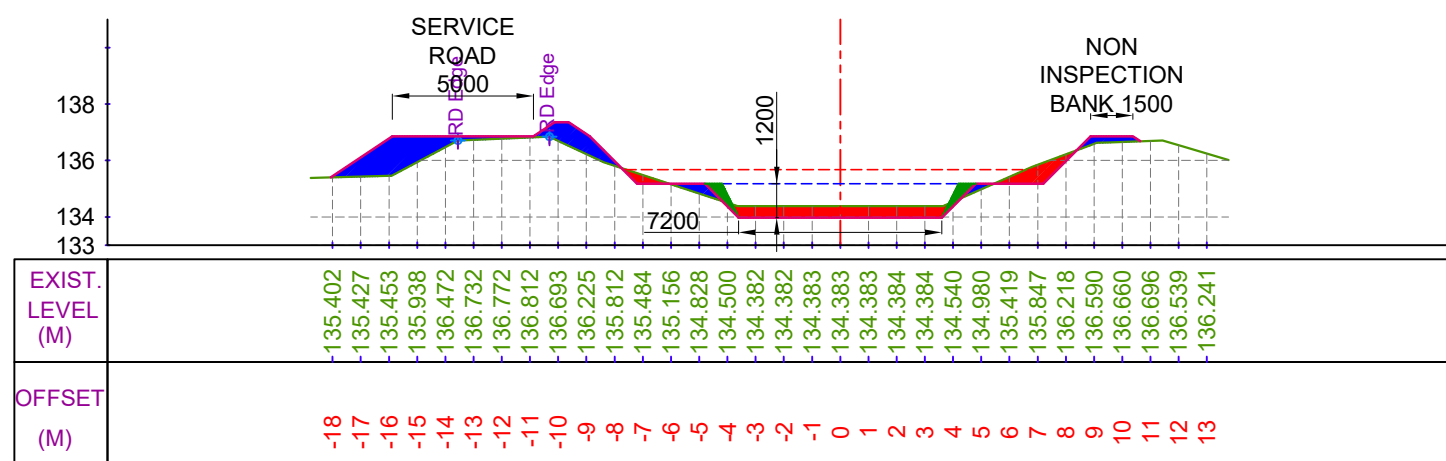
X SECTION OF KARMA DY.



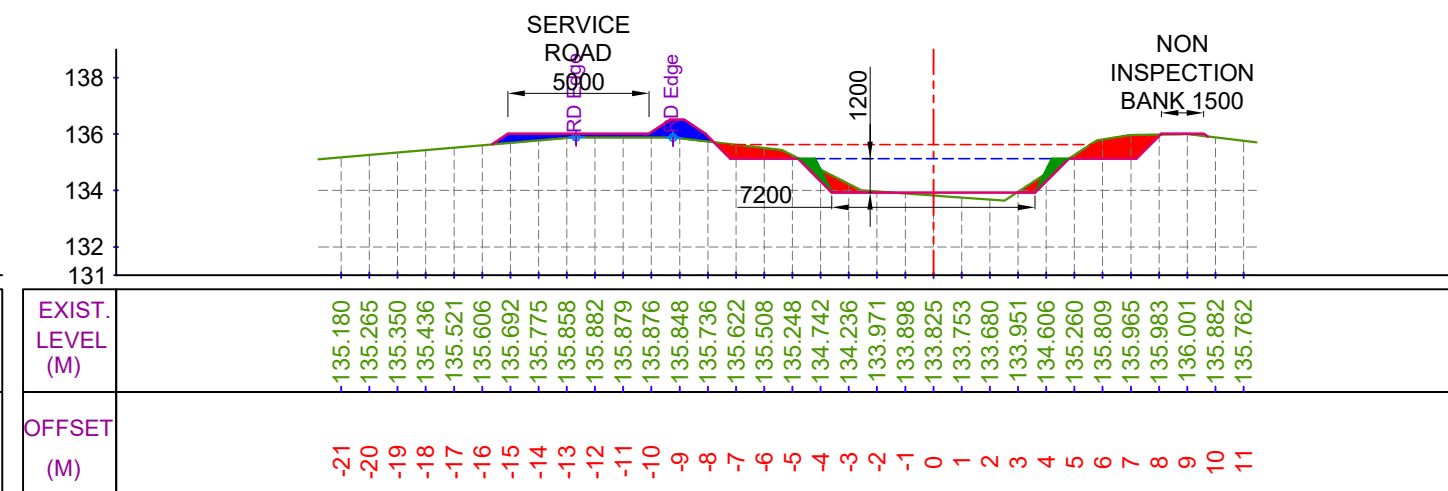
CUTTING AREA (SQ.M) = 2.620 CH. (KM):- 2+100
FILLING AREA (SQ.M) = 4.460 DESIGNED BED LEVEL = 135.222 M



CUTTING AREA (SQ.M) = 3.586 CH. (KM):- 2+300
FILLING AREA (SQ.M) = 1.790 DESIGNED BED LEVEL = 133.952 M



CUTTING AREA (SQ.M) = 4.442 CH. (KM):- 2+200
FILLING AREA (SQ.M) = 6.097 DESIGNED BED LEVEL = 133.977 M



CUTTING AREA (SQ.M) = 3.491 CH. (KM):- 2+400
FILLING AREA (SQ.M) = 2.032 DESIGNED BED LEVEL = 133.927 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

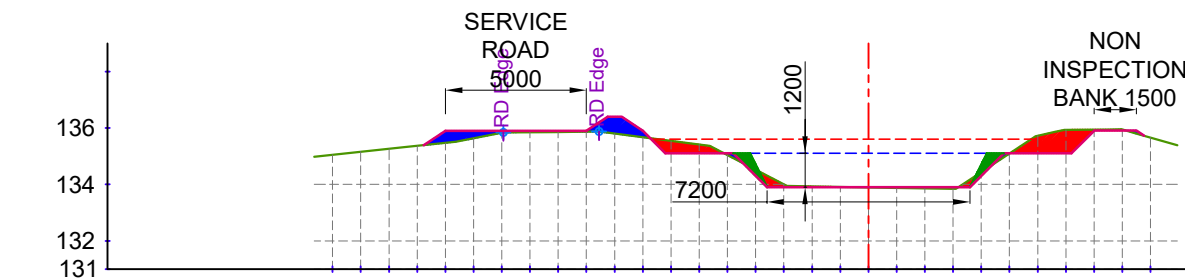
Prepared by :-

WAPCOS LTD.



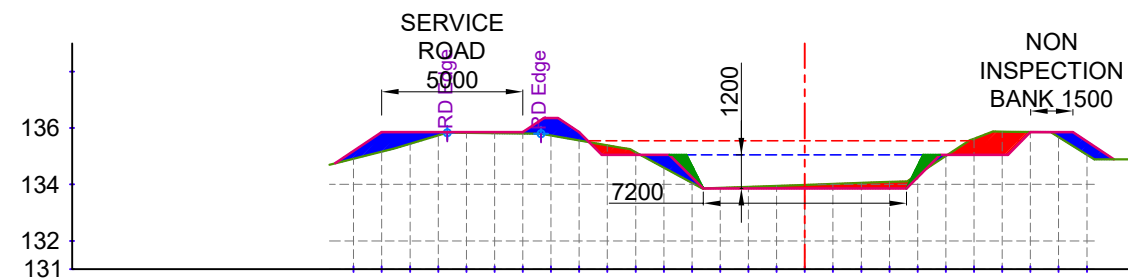
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 6 of 59

X SECTION OF KARMA DY.



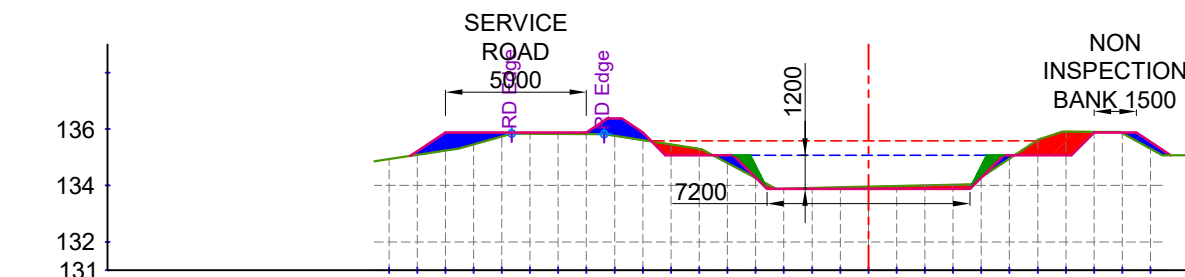
EXIST. LEVEL (M)	-135.051	-135.156	-135.261	-135.366	-135.471	-135.634	-135.832	-135.851	-135.860	-135.868	-135.800	-135.671	-135.541	-135.412	-135.039	-134.520	-134.001	-133.931	-133.913	-133.896	-133.878	-133.861	-133.843	-134.434	-135.093	-135.719	-135.937	-135.944	-135.945	-135.662
OFFSET (M)	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 2.731 CH. (KM):- 2+500
FILLING AREA (SQ.M) = 1.840 DESIGNED BED LEVEL = 133.902 M



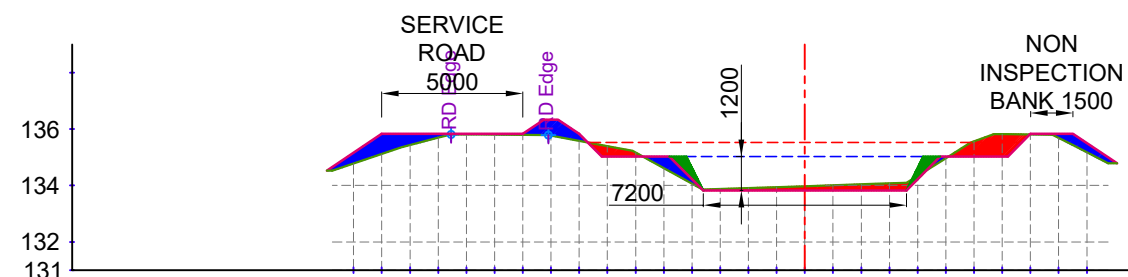
EXIST. LEVEL (M)	134.914	135.164	135.439	135.733	135.823	135.813	135.802	135.734	135.561	135.387	135.140	134.598	134.056	133.878	133.914	133.949	133.984	134.019	134.054	134.089	134.357	135.010	135.623	135.868	135.858	135.676	135.054
OFFSET (M)	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 2.884 CH. (KM):- 2+700
FILLING AREA (SQ.M) = 3.876 DESIGNED BED LEVEL = 133.852 M



EXIST. LEVEL (M)	134.934	135.085	135.236	135.457	135.741	135.836	135.830	135.823	135.762	135.609	135.455	135.302	134.799	134.267	133.888	133.911	133.934	133.957	133.980	134.003	134.027	134.287	134.952	135.616	135.910	135.905	135.855	135.306
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 2.618 CH. (KM):- 2+600
FILLING AREA (SQ.M) = 3.085 DESIGNED BED LEVEL = 133.877 M



EXIST. LEVEL (M)	134.781	135.118	135.433	135.695	135.811	135.804	135.797	135.773	135.584	135.395	135.167	134.617	134.067	133.877	133.910	133.943	133.976	134.009	134.042	134.075	134.341	134.972	135.567	135.822	135.812	135.687	135.173
OFFSET (M)	-16	-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

CUTTING AREA (SQ.M) = 3.005 CH. (KM):- 2+800
FILLING AREA (SQ.M) = 3.695 DESIGNED BED LEVEL = 133.827 M

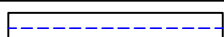
LEGEND



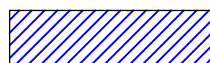
CUT AREA



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 :-

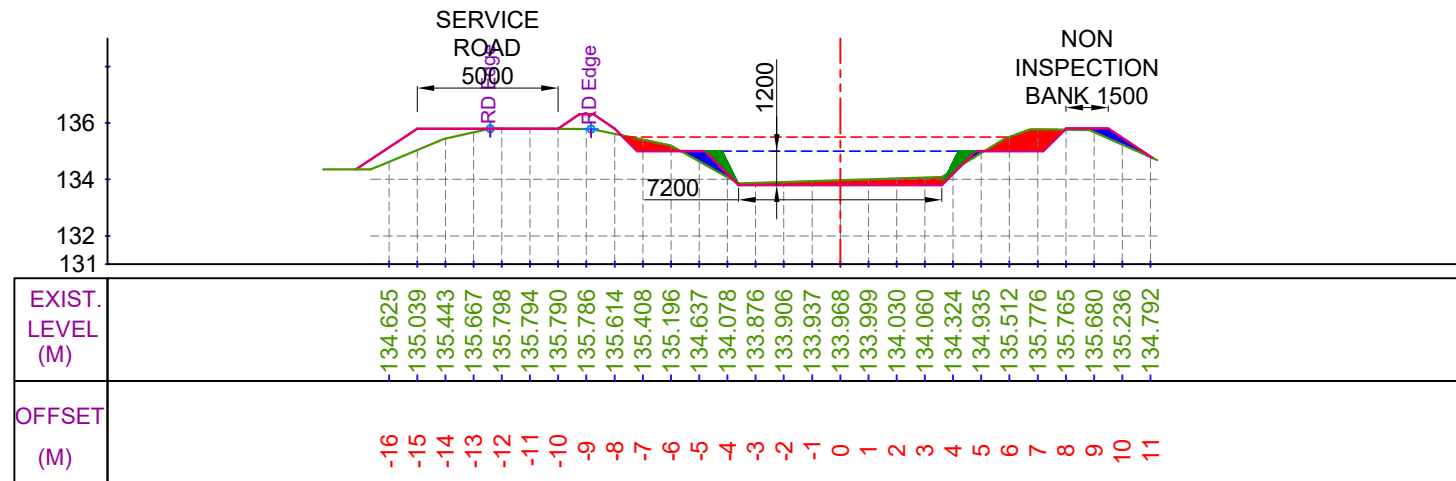
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

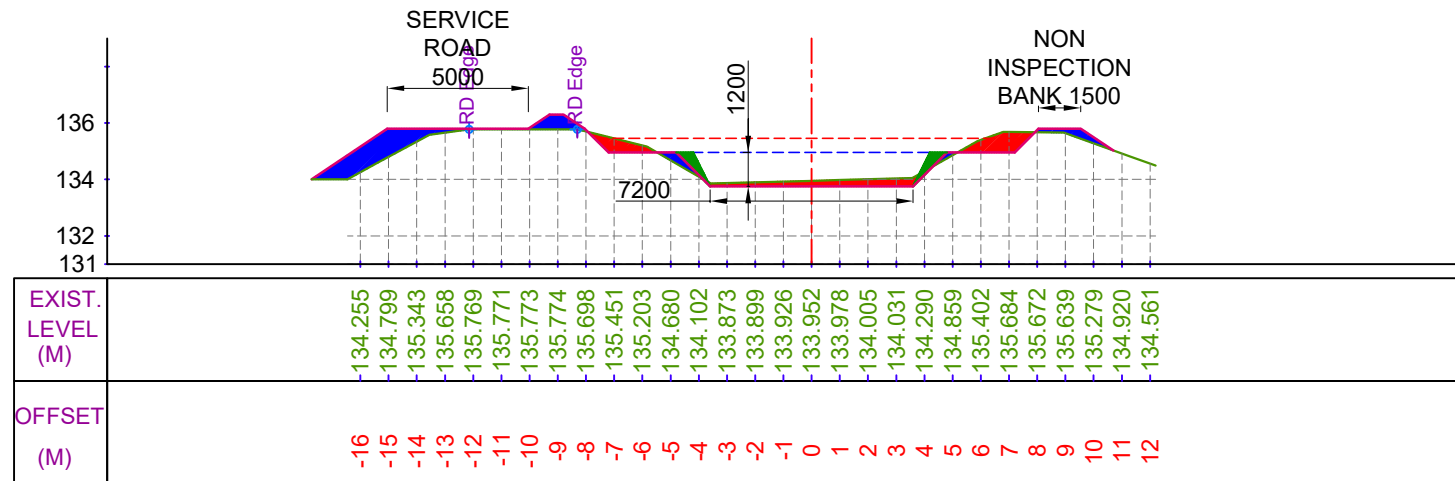
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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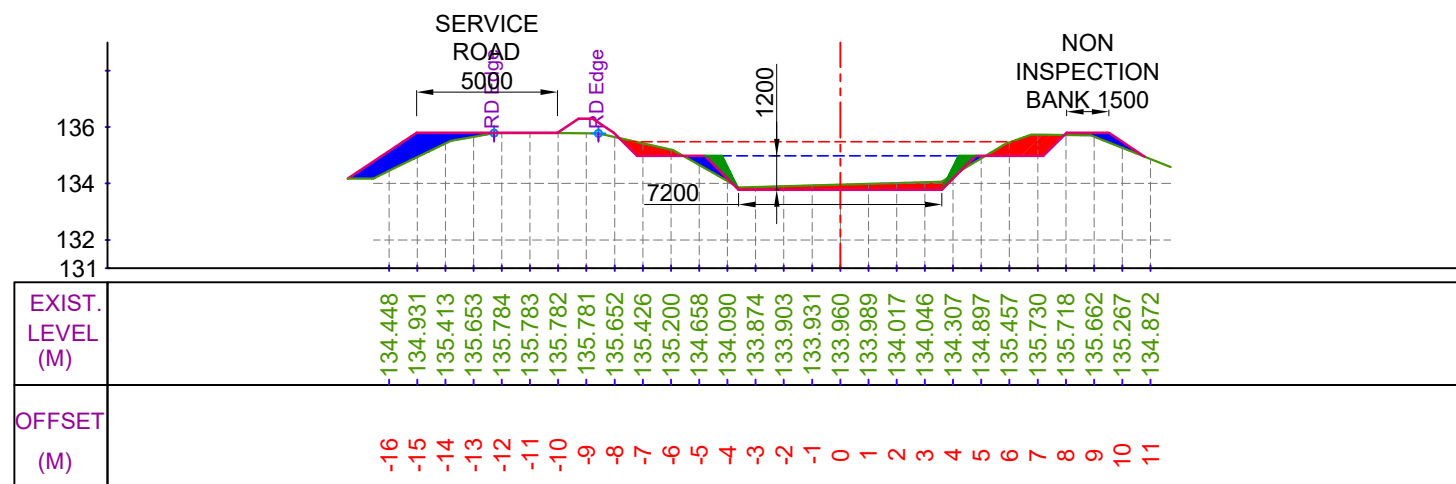
X SECTION OF KARMA DY.



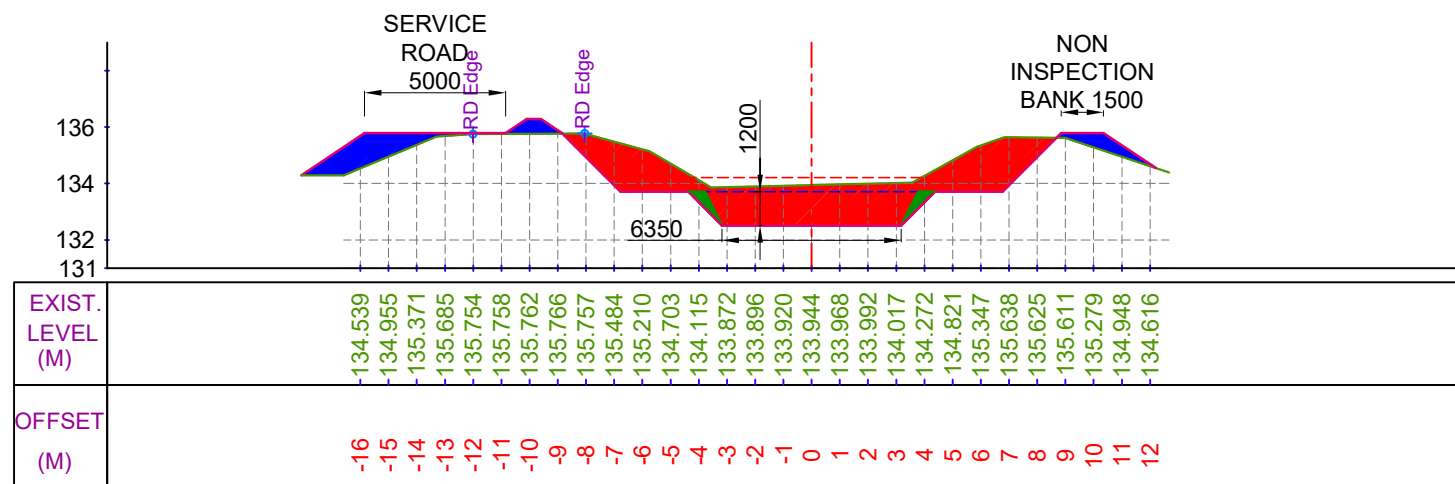
CUTTING AREA (SQ.M) = 3.139 CH. (KM):- 2+900
FILLING AREA (SQ.M) = 1.001 DESIGNED BED LEVEL = 133.802 M



CUTTING AREA (SQ.M) = 3.462 CH. (KM):- 3+100
FILLING AREA (SQ.M) = 4.549 DESIGNED BED LEVEL = 133.752 M



CUTTING AREA (SQ.M) = 3.290 CH. (KM):- 3+000
FILLING AREA (SQ.M) = 3.299 DESIGNED BED LEVEL = 133.777 M



CUTTING AREA (SQ.M) = 20.930 CH. (KM):- 3+200
FILLING AREA (SQ.M) = 5.159 DESIGNED BED LEVEL = 132.507 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

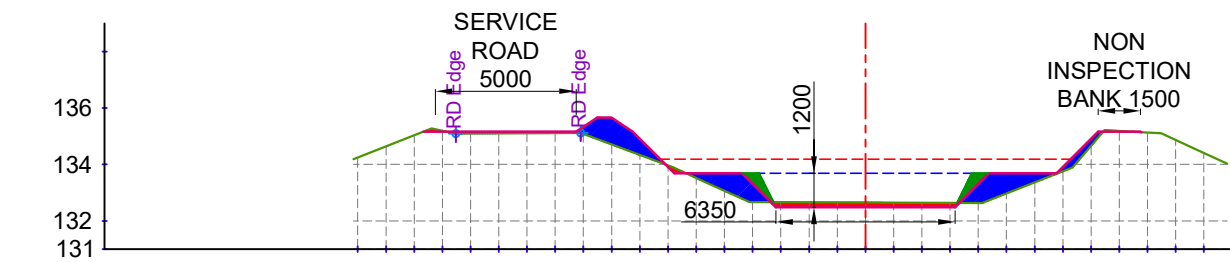


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

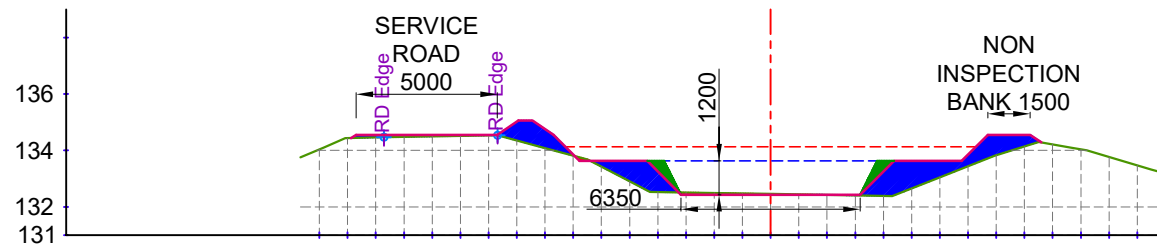
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

X SECTION OF KARMA DY.



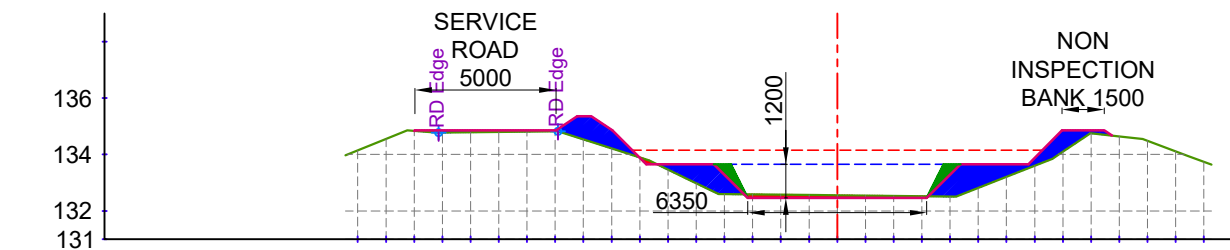
EXIST. LEVEL (M)	134.248	134.639	135.031	135.191	135.093	135.099	135.105	135.111	135.083	134.709	134.335	133.961	133.522	133.070	132.665	132.661	132.657	132.654	132.650	132.647	132.643	132.640	132.636	132.973	133.363	133.754	134.653	135.184	135.128	134.866	134.405
OFFSET (M)	-18	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 1.225 CH. (KM):- 3+300
FILLING AREA (SQ.M) = 5.502 DESIGNED BED LEVEL = 132.482 M



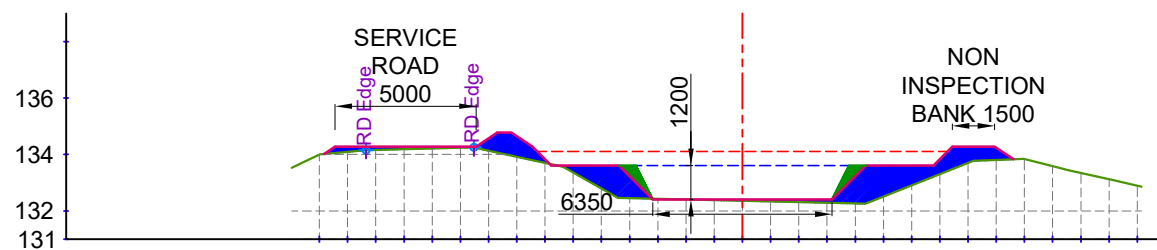
EXIST. LEVEL (M)	134.038	134.432	134.458	134.478	134.497	134.515	134.533	134.356	134.086	133.816	133.426	132.905	132.526	132.509	132.492	132.474	132.457	132.439	132.422	132.404	132.387	132.653	133.048	133.443	133.833	134.143	134.215	134.040	133.769	133.472
OFFSET (M)	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.223 CH. (KM):- 3+500
FILLING AREA (SQ.M) = 7.442 DESIGNED BED LEVEL = 132.432 M



EXIST. LEVEL (M)	134.143	134.547	134.835	134.779	134.791	134.803	134.815	134.827	134.538	134.215	133.893	133.463	132.980	132.596	132.585	132.575	132.564	132.553	132.543	132.532	132.521	132.511	132.820	133.212	133.605	134.101	134.755	134.644	134.490	134.115	133.739
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 0.670 CH. (KM):- 3+400
FILLING AREA (SQ.M) = 6.590 DESIGNED BED LEVEL = 132.457 M



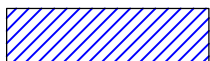
EXIST. LEVEL (M)	133.997	134.095	134.162	134.187	134.212	134.238	134.138	133.922	133.705	133.365	132.796	132.454	132.431	132.407	132.383	132.359	132.335	132.311	132.287	132.263	132.511	132.908	133.305	133.701	133.807	133.840	133.587	133.348	133.123	132.899
OFFSET (M)	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14

CUTTING AREA (SQ.M) = 0.024 CH. (KM):- 3+600
FILLING AREA (SQ.M) = 8.380 DESIGNED BED LEVEL = 132.407 M

LEGEND



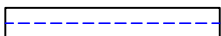
CUT AREA



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 :-

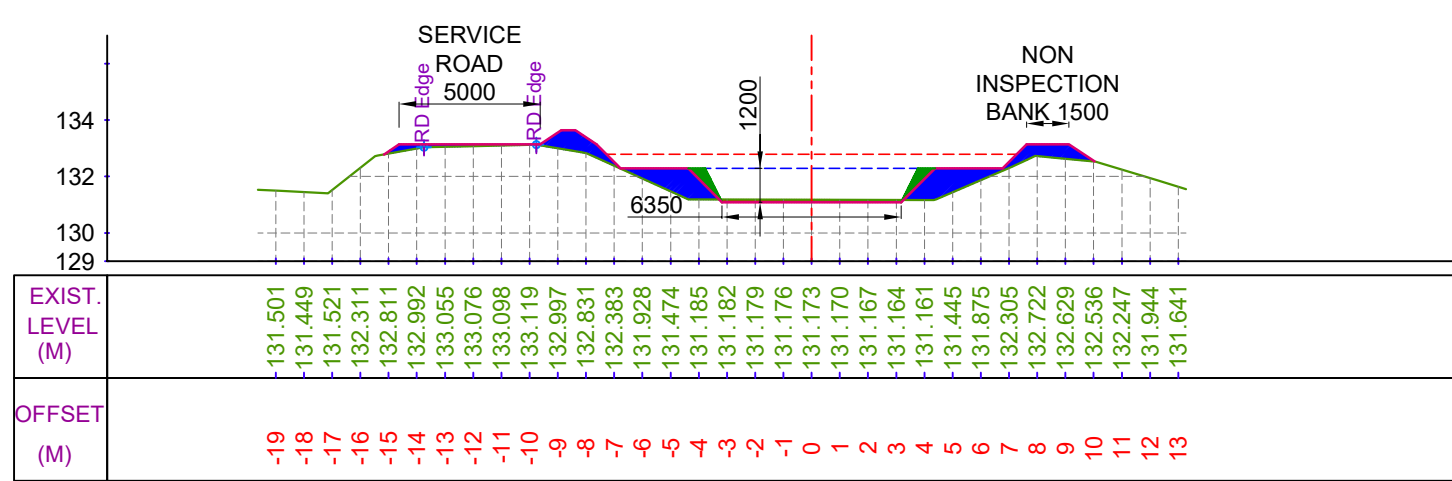
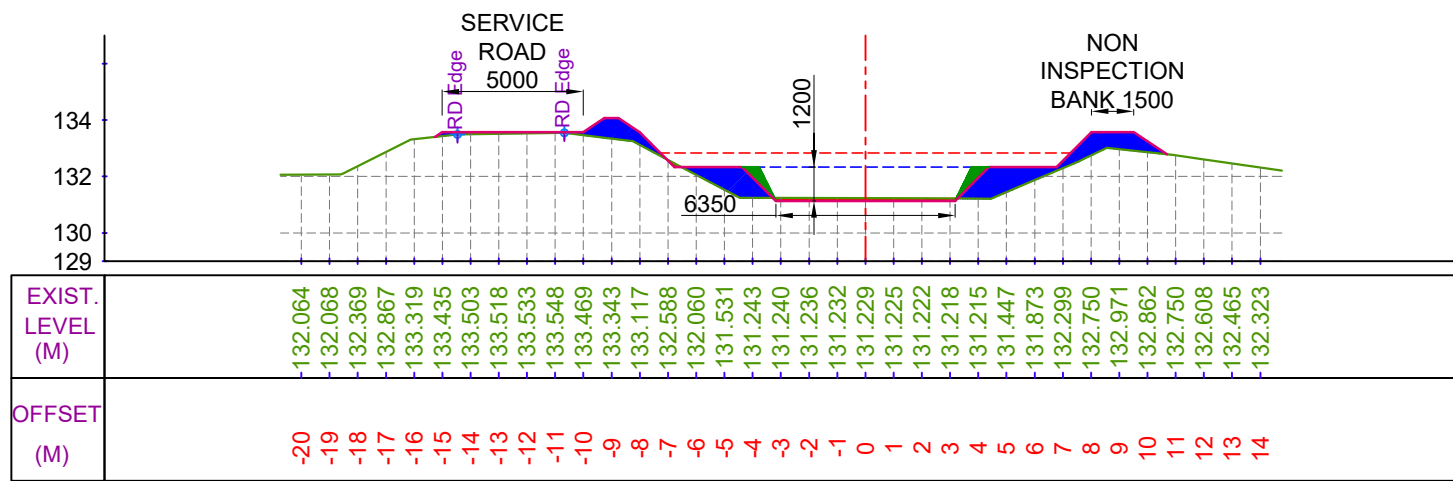
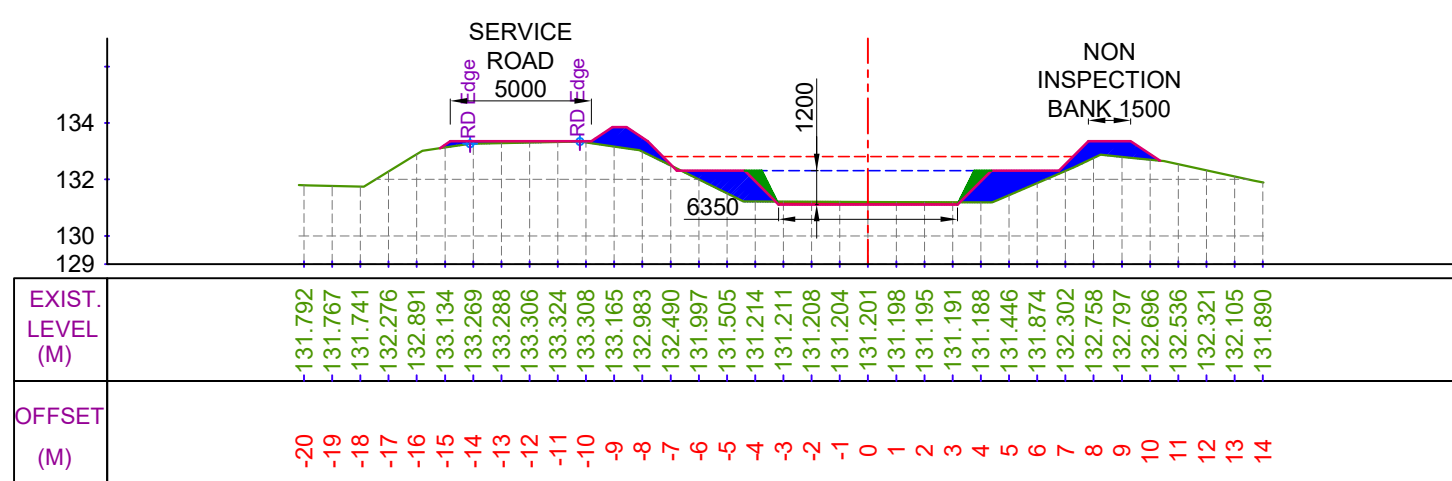
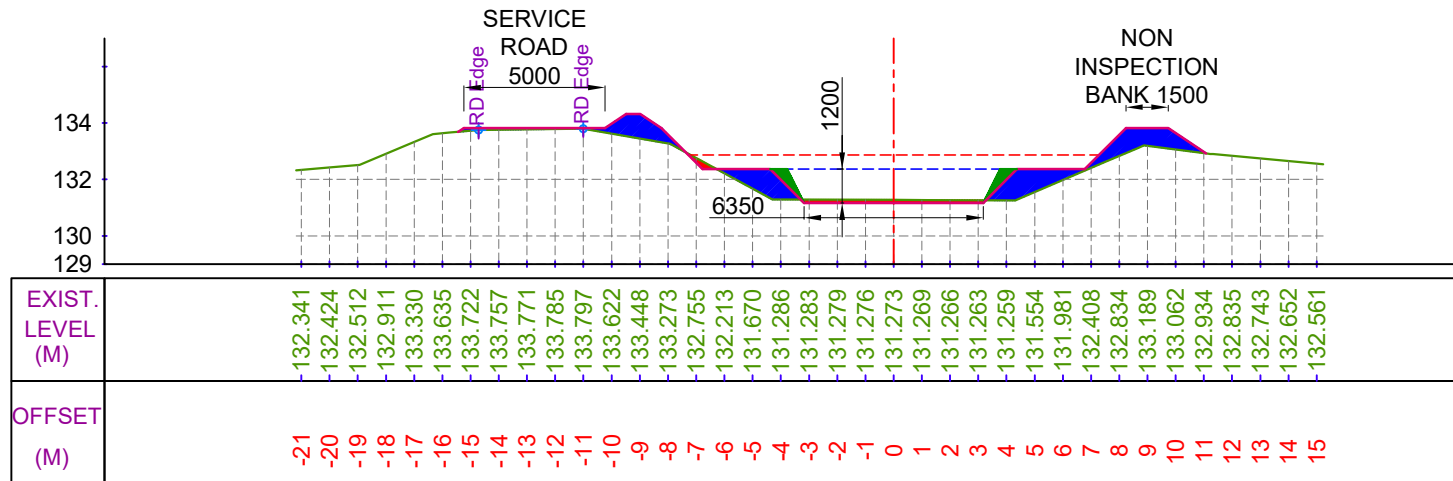
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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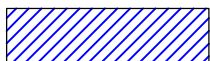
X SECTION OF KARMA DY.



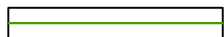
LEGEND



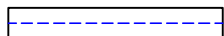
CUT AREA



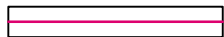
FILL AREA



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 :-

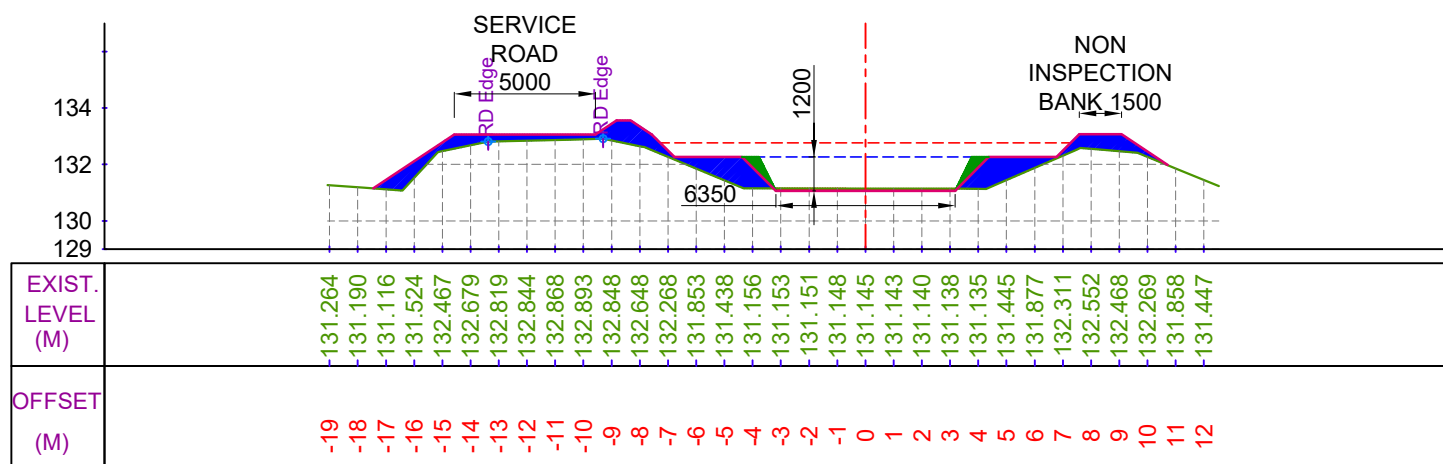
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

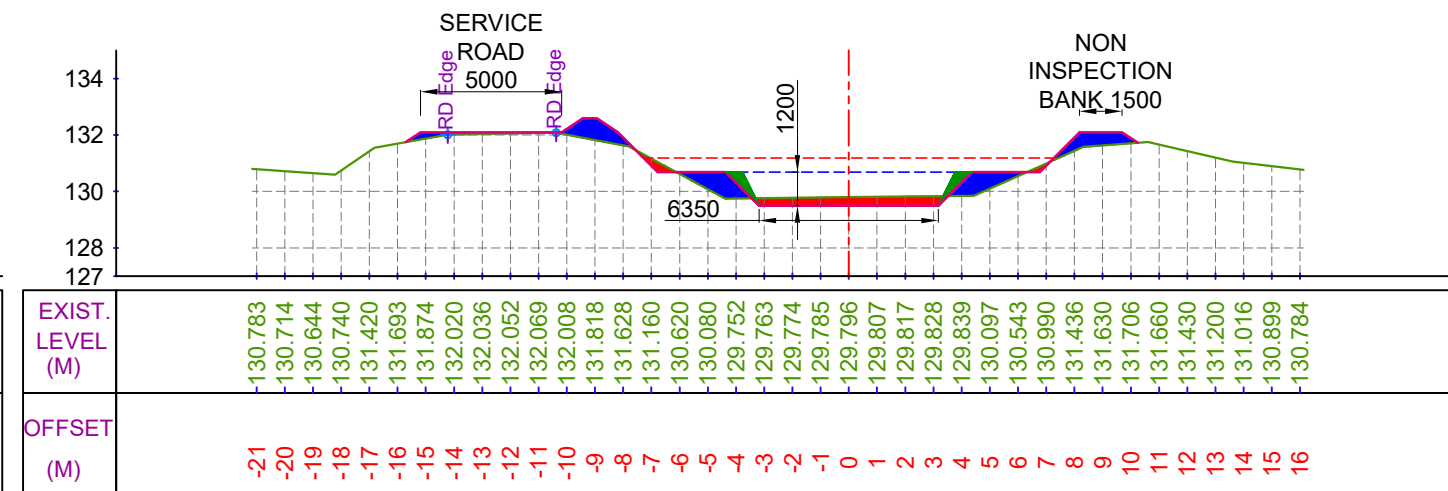
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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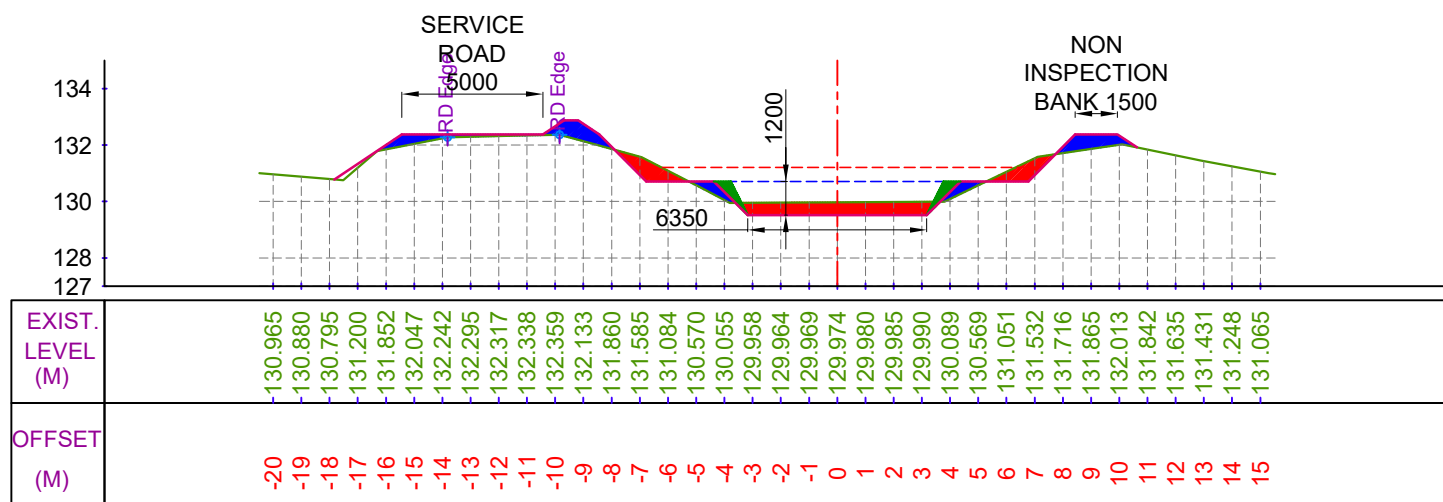
X SECTION OF KARMA DY.



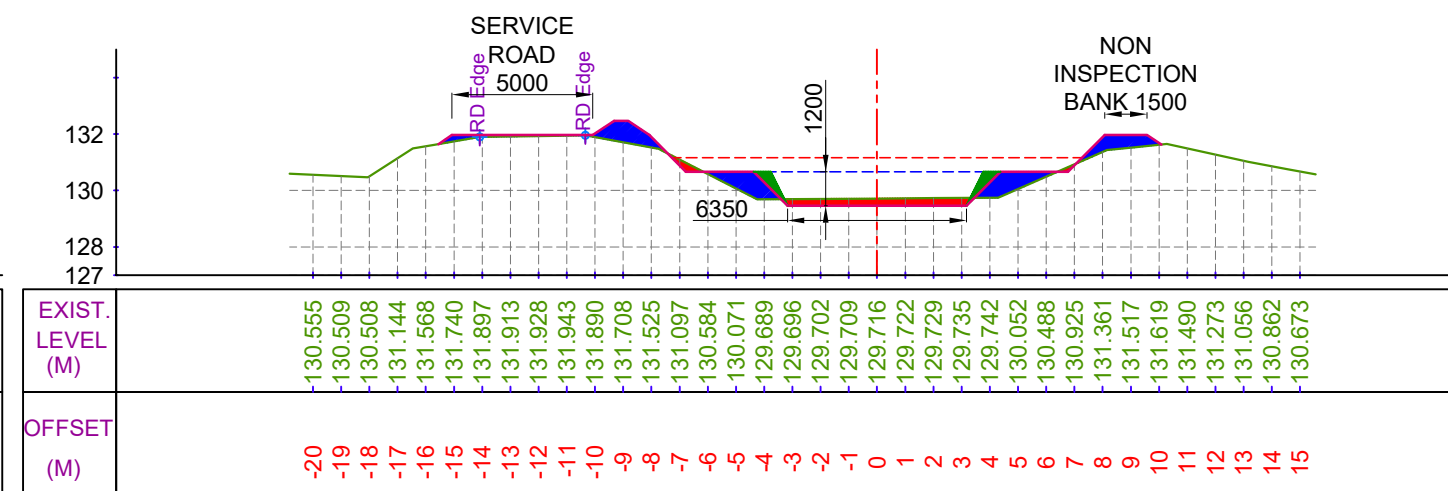
CUTTING AREA (SQ.M) = 0.534
FILLING AREA (SQ.M) = 9.410
CH. (KM):- 4+100
DESIGNED BED LEVEL = 131.062 M



CUTTING AREA (SQ.M) = 2.331
FILLING AREA (SQ.M) = 5.261
CH. (KM):- 4+300
DESIGNED BED LEVEL = 129.488 M



CUTTING AREA (SQ.M) = 4.964
FILLING AREA (SQ.M) = 3.686
CH. (KM):- 4+200
DESIGNED BED LEVEL = 129.513 M



CUTTING AREA (SQ.M) = 1.894
FILLING AREA (SQ.M) = 5.278
CH. (KM):- 4+400
DESIGNED BED LEVEL = 129.463 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

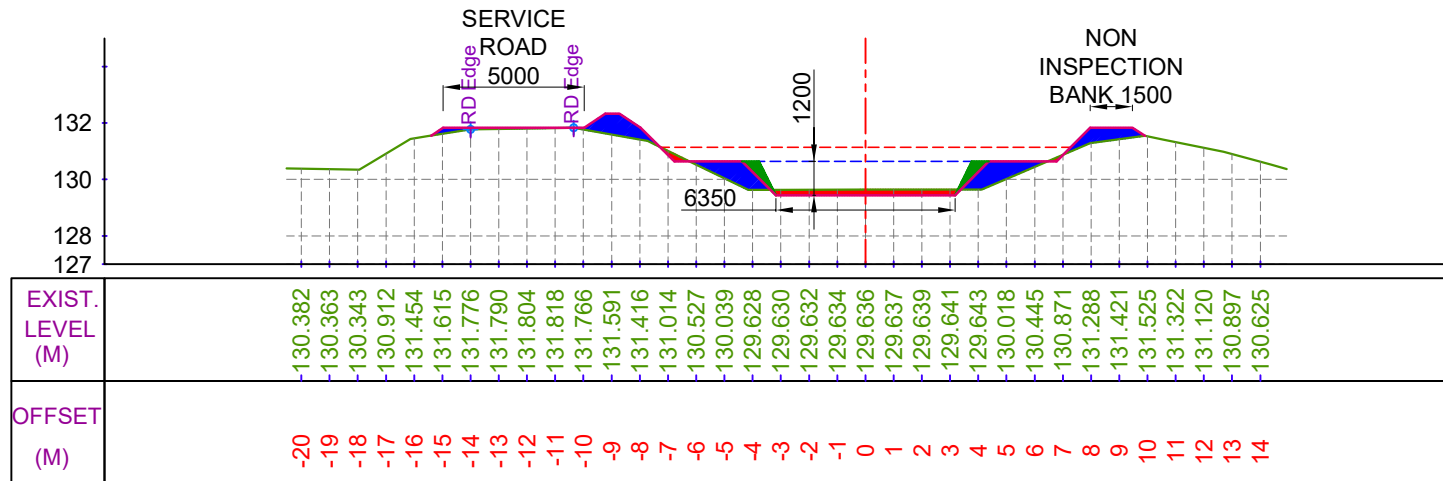
Prepared by :-

WAPCOS LTD.

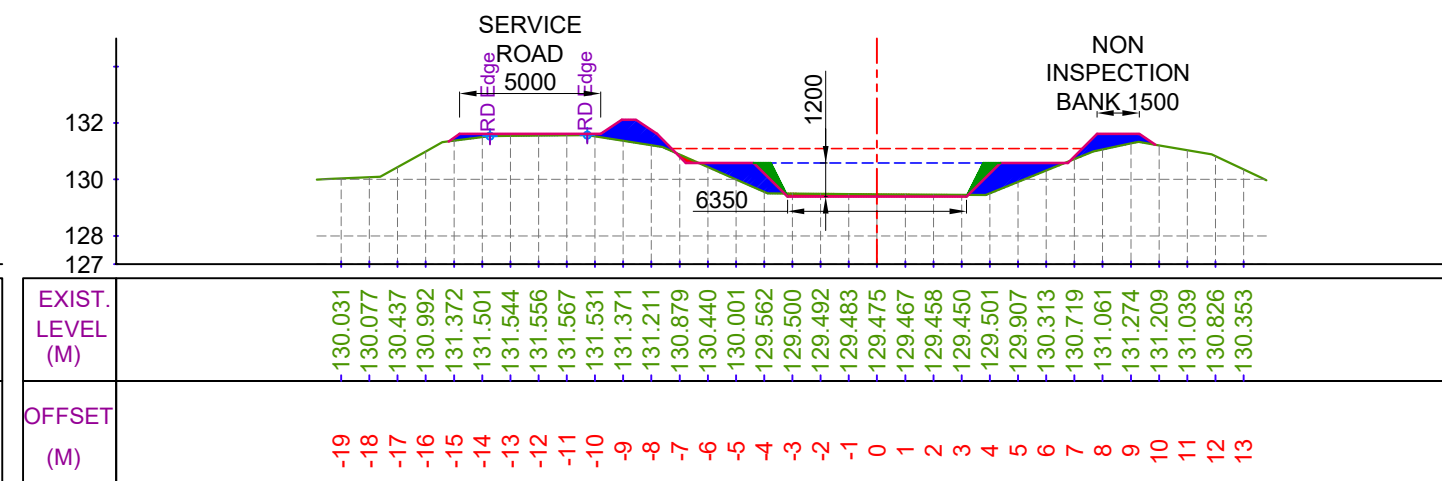


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 11 of 59

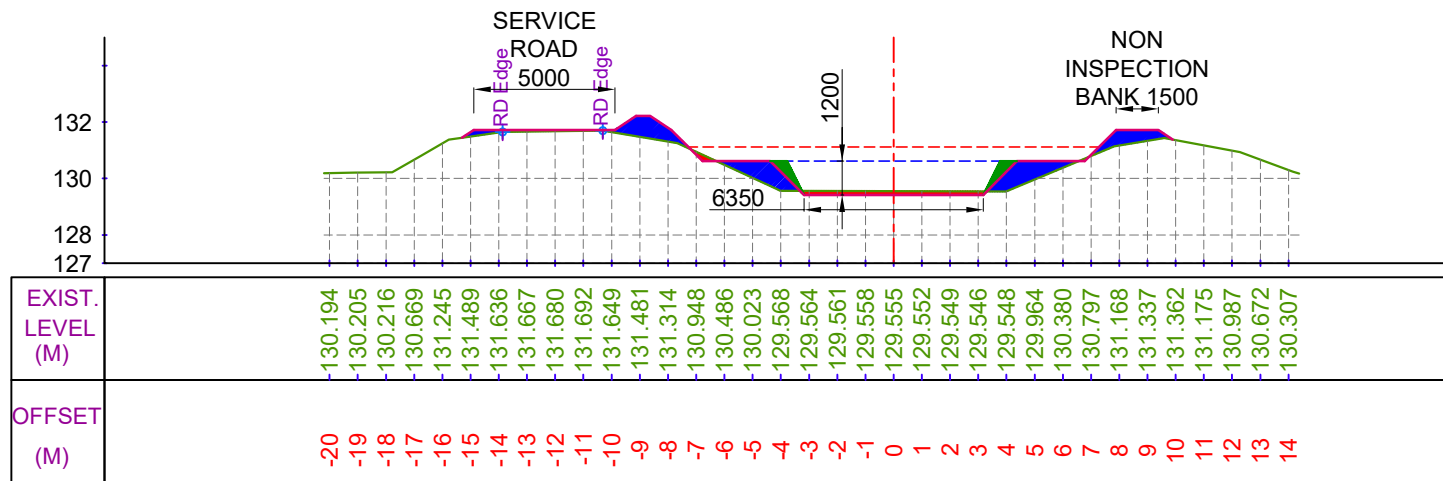
X SECTION OF KARMA DY.



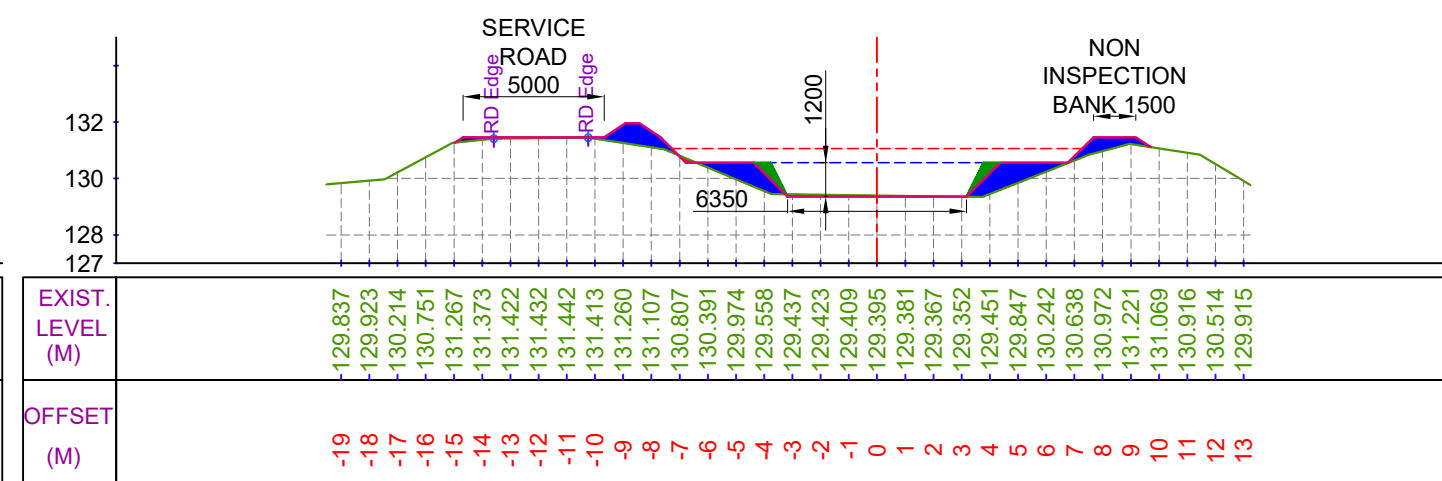
CUTTING AREA (SQ.M) = 1.455 CH. (KM):- 4+500
FILLING AREA (SQ.M) = 5.302 DESIGNED BED LEVEL = 129.438 M



CUTTING AREA (SQ.M) = 0.635 CH. (KM):- 4+700
FILLING AREA (SQ.M) = 5.771 DESIGNED BED LEVEL = 129.388 M



CUTTING AREA (SQ.M) = 1.038 CH. (KM):- 4+600
FILLING AREA (SQ.M) = 5.550 DESIGNED BED LEVEL = 129.413 M



CUTTING AREA (SQ.M) = 0.256 CH. (KM):- 4+800
FILLING AREA (SQ.M) = 5.648 DESIGNED BED LEVEL = 129.363 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

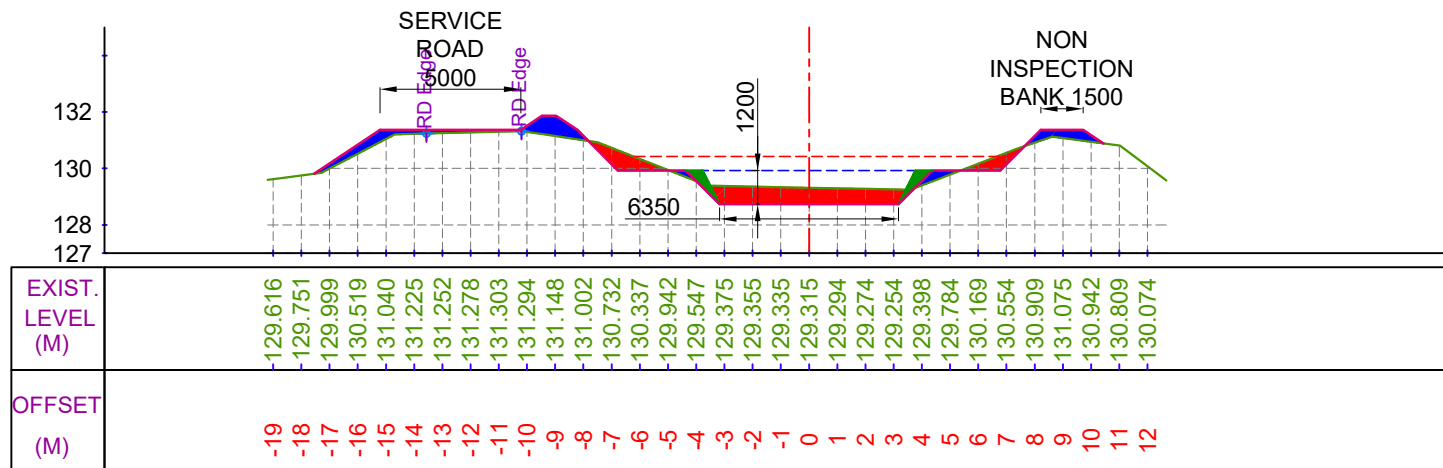
Prepared by :-

WAPCOS LTD.

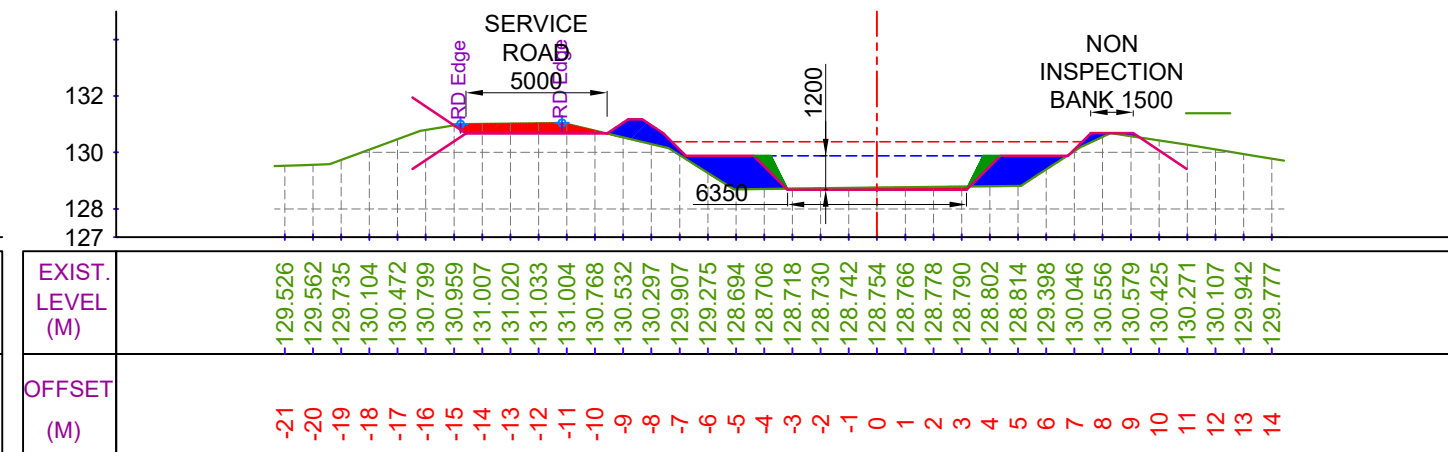


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 12 of 59

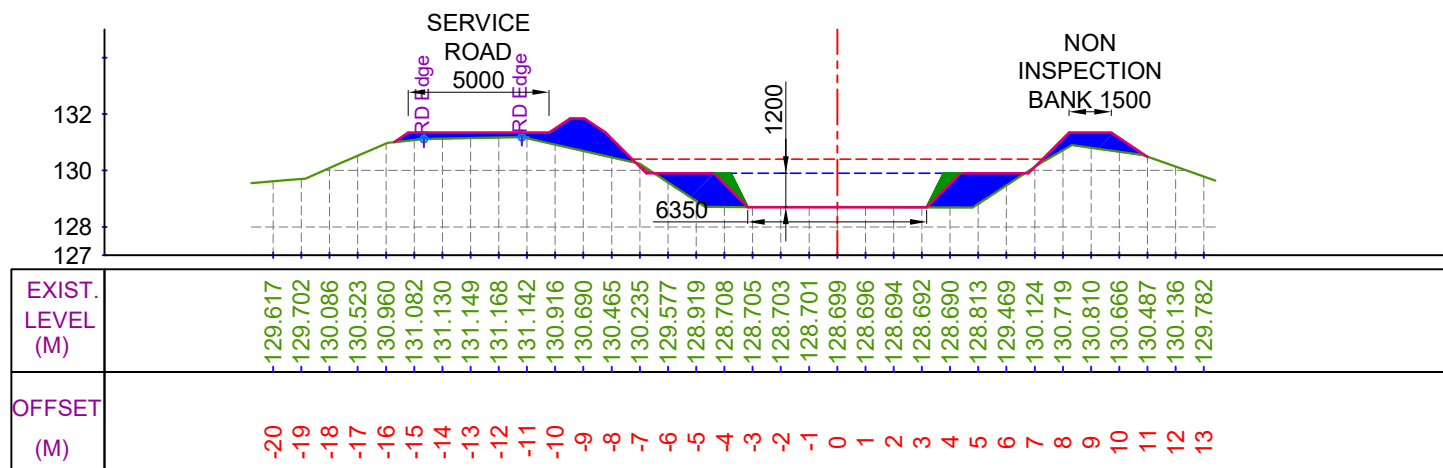
X SECTION OF KARMA DY.



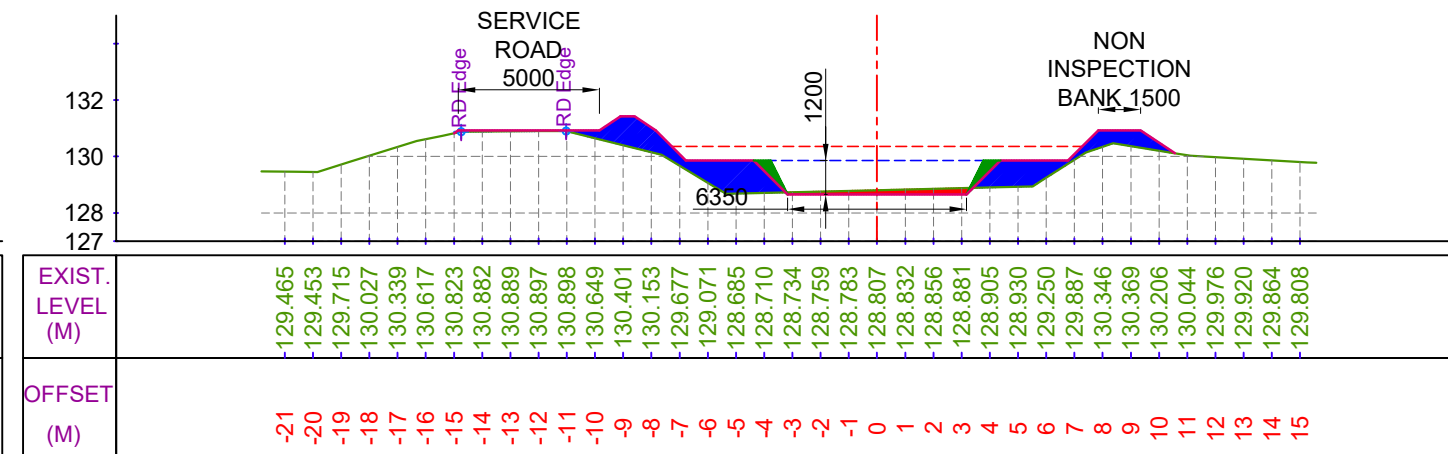
CUTTING AREA (SQ.M) = 5.564
 FILLING AREA (SQ.M) = 3.460
 CH. (KM):- 4+900
 DESIGNED BED LEVEL = 128.728 M



CUTTING AREA (SQ.M) = 2.012
 FILLING AREA (SQ.M) = 6.449
 CH. (KM):- 5+100
 DESIGNED BED LEVEL = 128.678 M



CUTTING AREA (SQ.M) = 0.080
 FILLING AREA (SQ.M) = 9.489
 CH. (KM):- 5+000
 DESIGNED BED LEVEL = 128.703 M



CUTTING AREA (SQ.M) = 0.996
 FILLING AREA (SQ.M) = 9.176
 CH. (KM):- 5+200
 DESIGNED BED LEVEL = 128.653 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

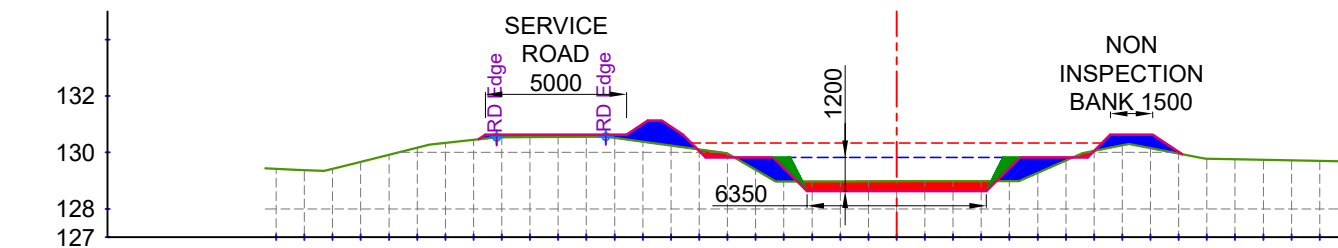
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 13 of 59

X SECTION OF KARMA DY.



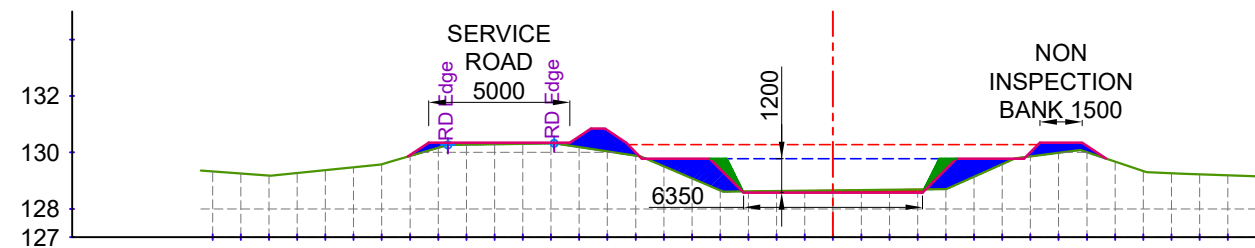
EXIST. LEVEL (M)	-129.419	-129.374	-129.415	-129.665	-129.914	-130.163	-130.334	-130.446	-130.539	-130.545	-130.551	-130.556	-130.518	-130.380	-130.242	-130.105	-129.960	-129.384	-128.975	-128.976	-128.977	-128.977	-128.978	-128.979	-128.980	-128.981	-128.982	-129.275	-129.712	-130.052	-130.255	-130.156	-129.961	-129.774	-129.755	-129.736	-129.717	-129.699
OFFSET (M)	-22	-21	-20	-19	-18	-17	-16	-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) = 2.557

FILLING AREA (SQ.M) = 4.861

CH. (KM):- 5+300

DESIGNED BED LEVEL = 128.628 M



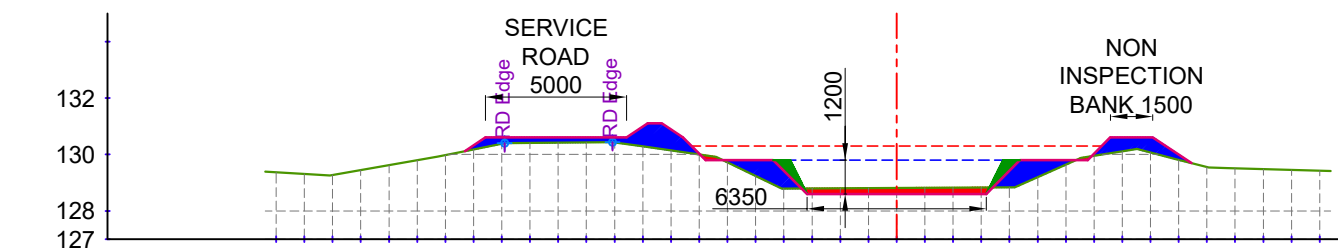
EXIST. LEVEL (M)	-129.329	-129.254	-129.179	-129.270	-129.373	-129.475	-129.581	-129.872	-130.163	-130.272	-130.288	-130.303	-130.319	-130.187	-130.036	-129.885	-129.509	-129.082	-128.655	-128.621	-128.632	-128.643	-128.654	-128.665	-128.676	-128.687	-128.698	-129.140	-129.587	-129.859	-129.986	-130.010	-129.673	-129.335	-129.262	-129.224	-129.186	-129.149
OFFSET (M)	-22	-21	-20	-19	-18	-17	-16	-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) = 0.506

FILLING AREA (SQ.M) = 5.620

CH. (KM):- 5+500

DESIGNED BED LEVEL = 128.578 M



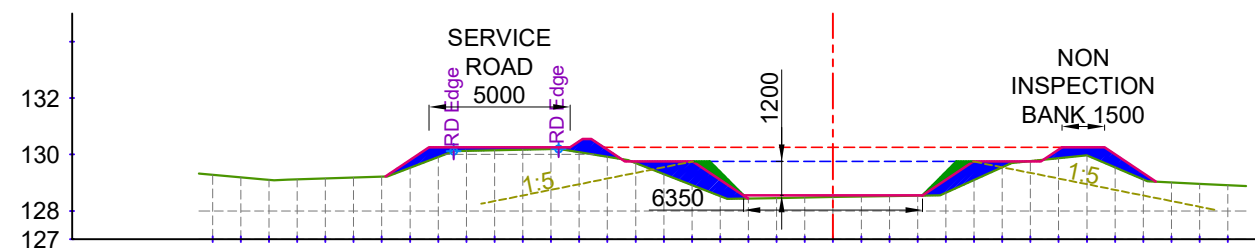
EXIST. LEVEL (M)	-129.375	-129.313	-129.275	-129.449	-129.623	-129.797	-129.978	-130.179	-130.380	-130.410	-130.420	-130.431	-130.429	-130.286	-130.143	-130.000	-129.722	-129.240	-128.793	-128.799	-128.805	-128.810	-128.816	-128.822	-128.828	-128.833	-128.839	-129.198	-129.640	-129.952	-130.111	-130.071	-129.811	-129.550	-129.509	-129.482	-129.454	-129.427
OFFSET (M)	-22	-21	-20	-19	-18	-17	-16	-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) = 1.493

FILLING AREA (SQ.M) = 6.539

CH. (KM):- 5+400

DESIGNED BED LEVEL = 128.603 M



EXIST. LEVEL (M)	-129.280	-129.193	-129.107	-129.118	-129.152	-129.186	-129.220	-129.531	-129.913	-130.133	-130.154	-130.175	-130.195	-130.083	-129.921	-129.698	-129.308	-128.918	-128.527	-128.442	-128.459	-128.476	-128.492	-128.509	-128.526	-128.543	-128.646	-129.097	-129.548	-129.769	-129.873	-129.974	-129.547	-129.119	-129.012	-128.962	-128.911
OFFSET (M)	-22	-21	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.031

FILLING AREA (SQ.M) = 6.027

CH. (KM):- 5+600

DESIGNED BED LEVEL = 128.553 M

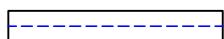
LEGEND



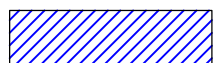
CUT AREA



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 :-

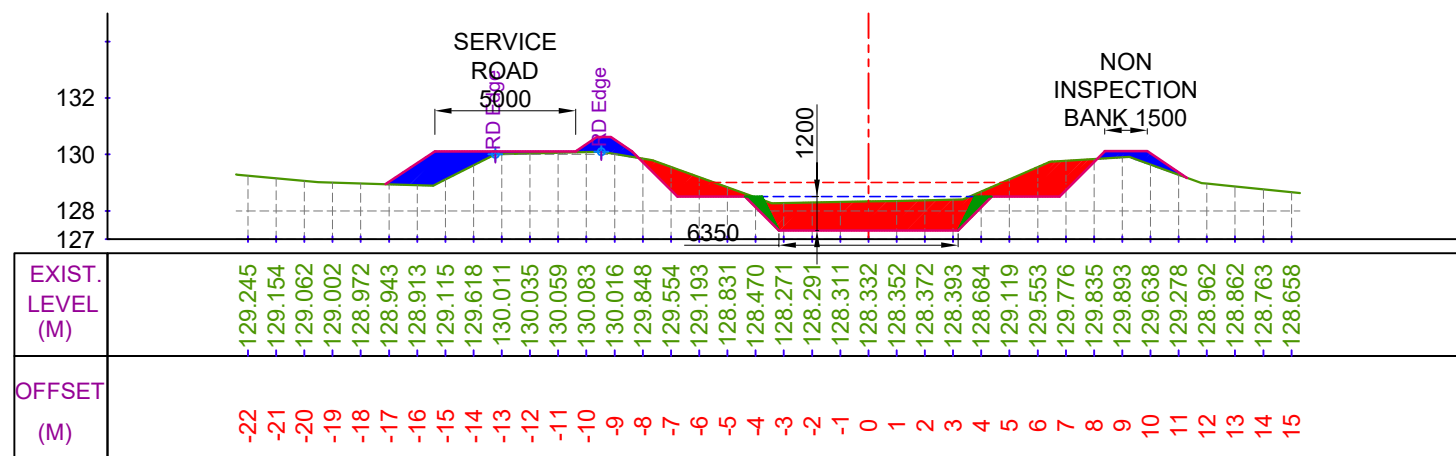
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

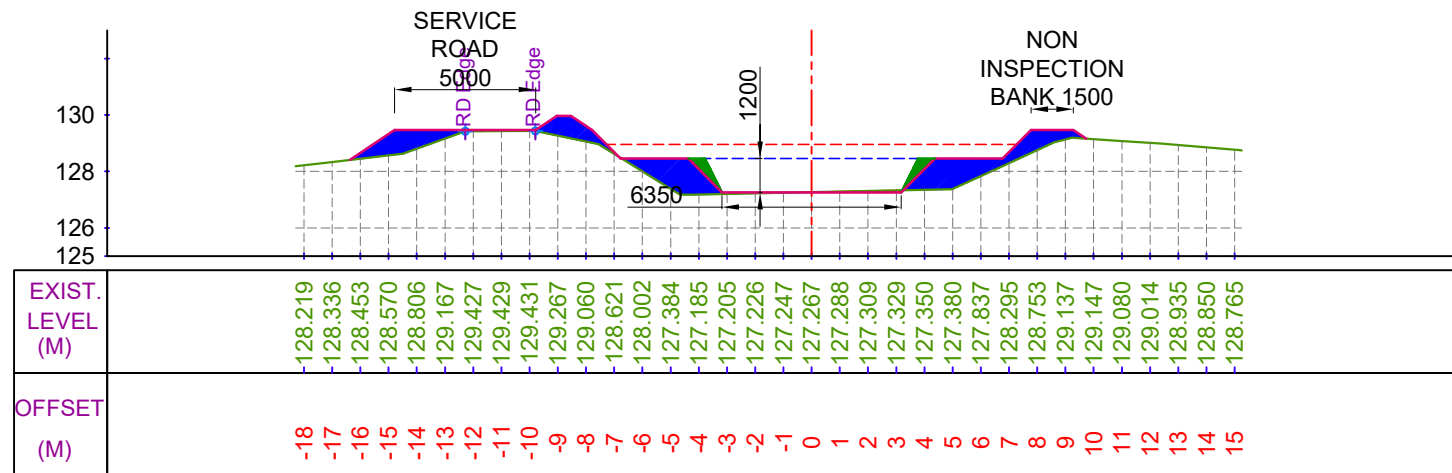
14 of 59

X SECTION OF KARMA DY.



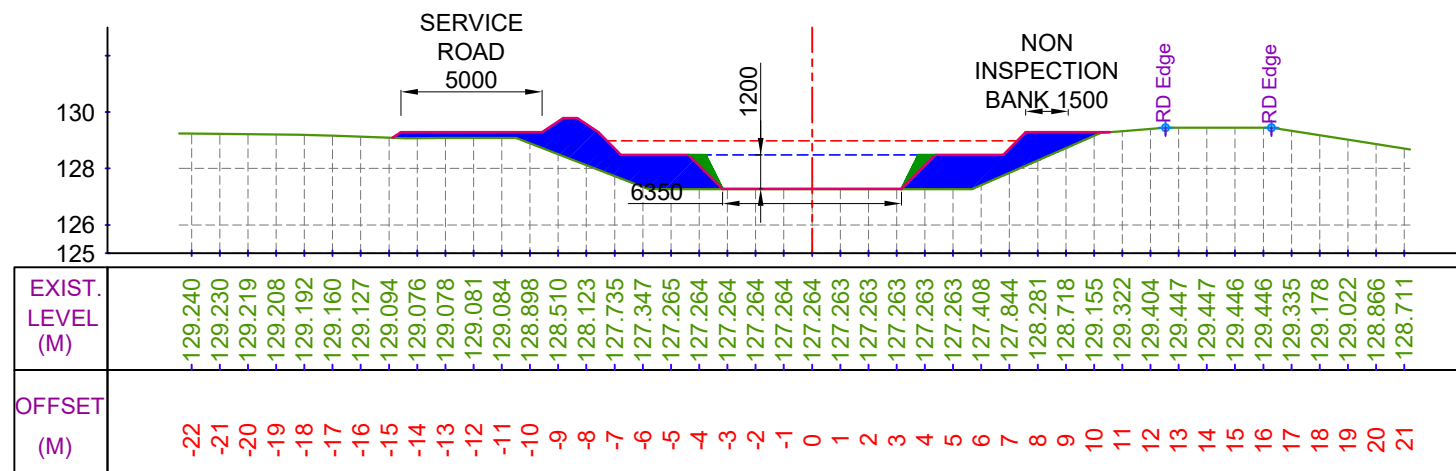
CUTTING AREA (SQ.M) = 12.068
FILLING AREA (SQ.M) = 4.186

CH. (KM):- 5+700
DESIGNED BED LEVEL = 127.308 M



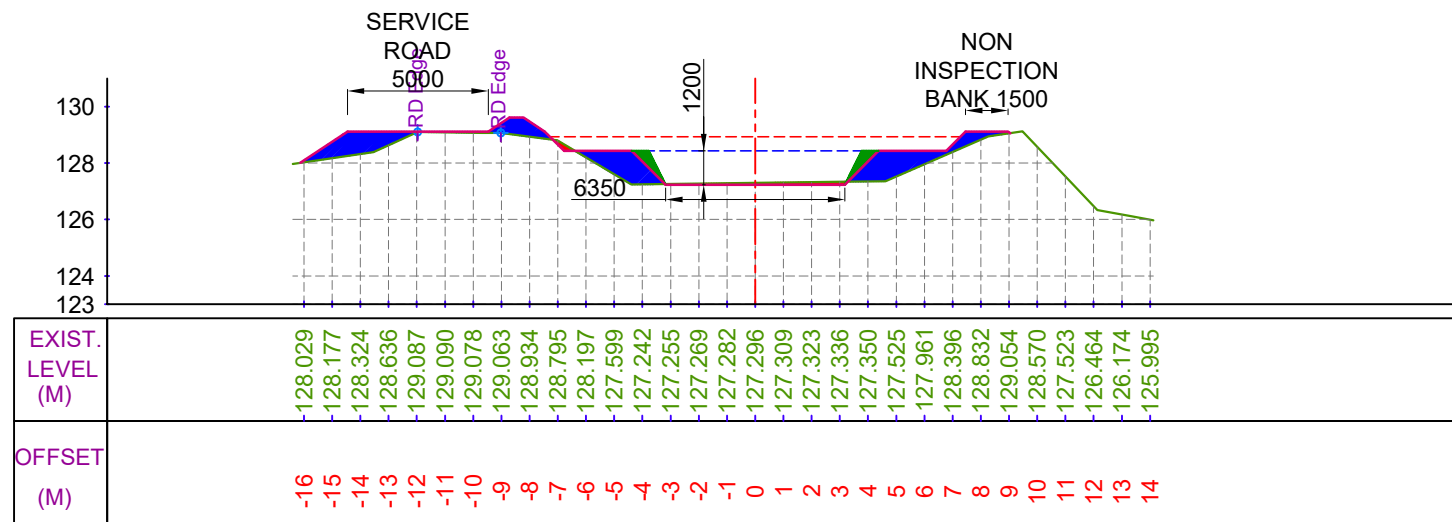
CUTTING AREA (SQ.M) = 0.137
FILLING AREA (SQ.M) = 9.712

CH. (KM):- 5+900
DESIGNED BED LEVEL = 127.258 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 13.844

CH. (KM):- 5+800
DESIGNED BED LEVEL = 127.283 M



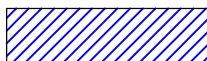
CUTTING AREA (SQ.M) = 0.499
FILLING AREA (SQ.M) = 7.712

CH. (KM):- 6+000
DESIGNED BED LEVEL = 127.233 M

LEGEND



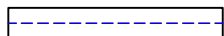
CUT AREA



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 :-

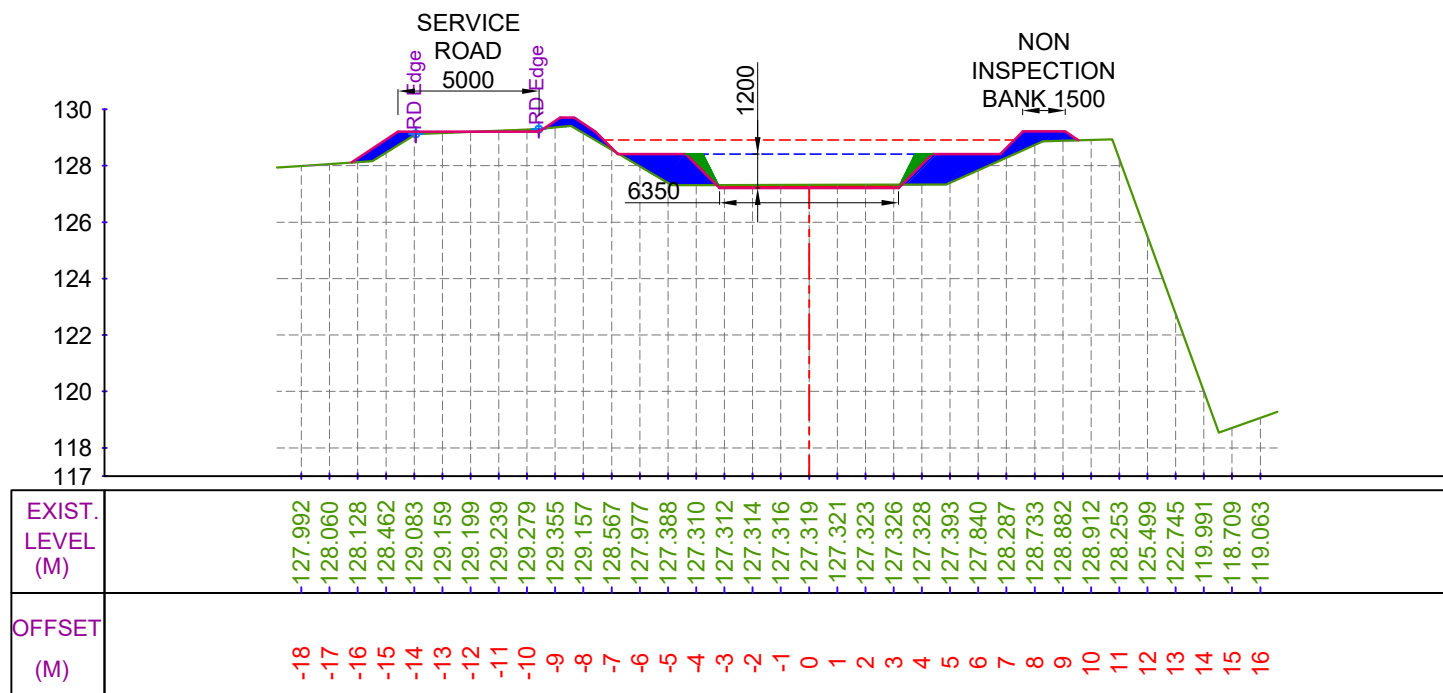
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

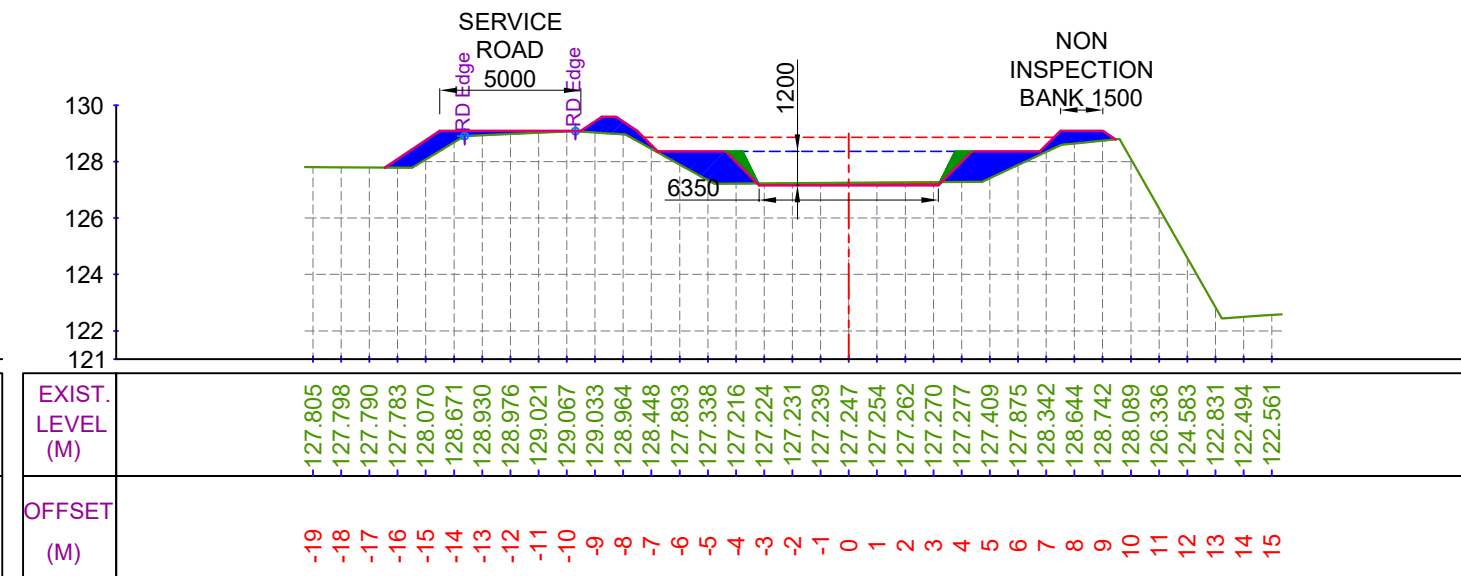
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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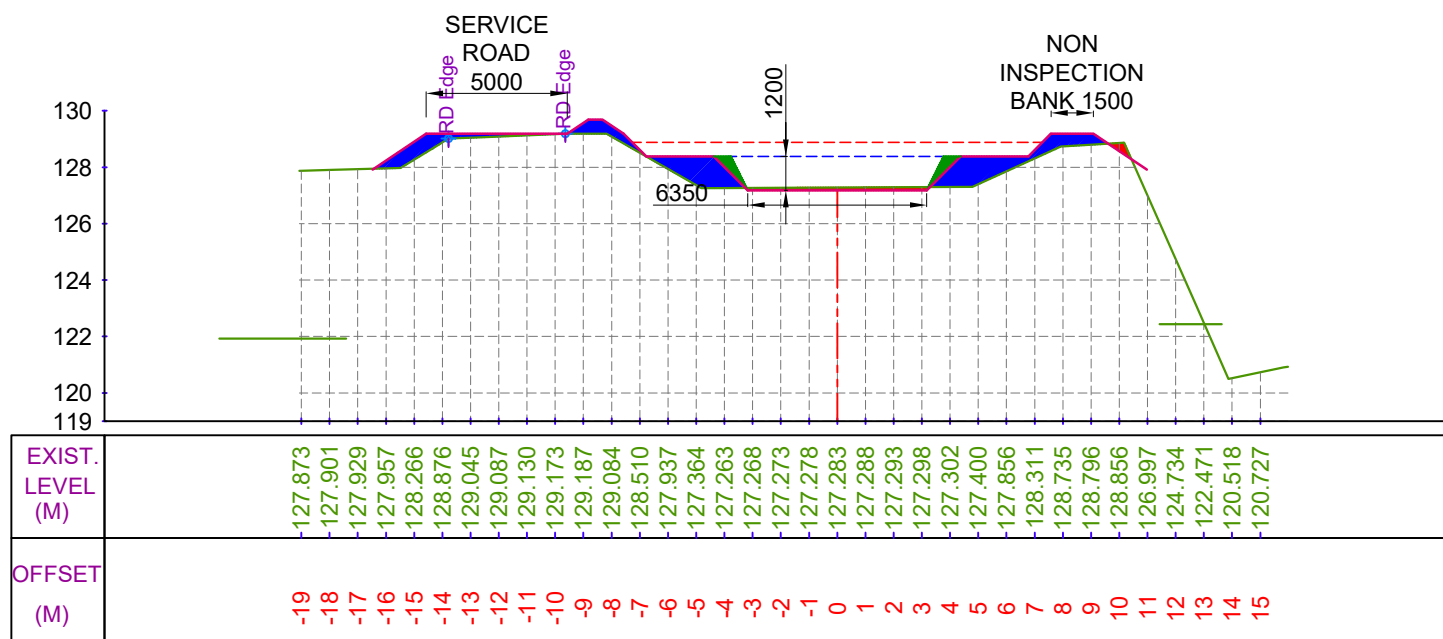
X SECTION OF KARMA DY.



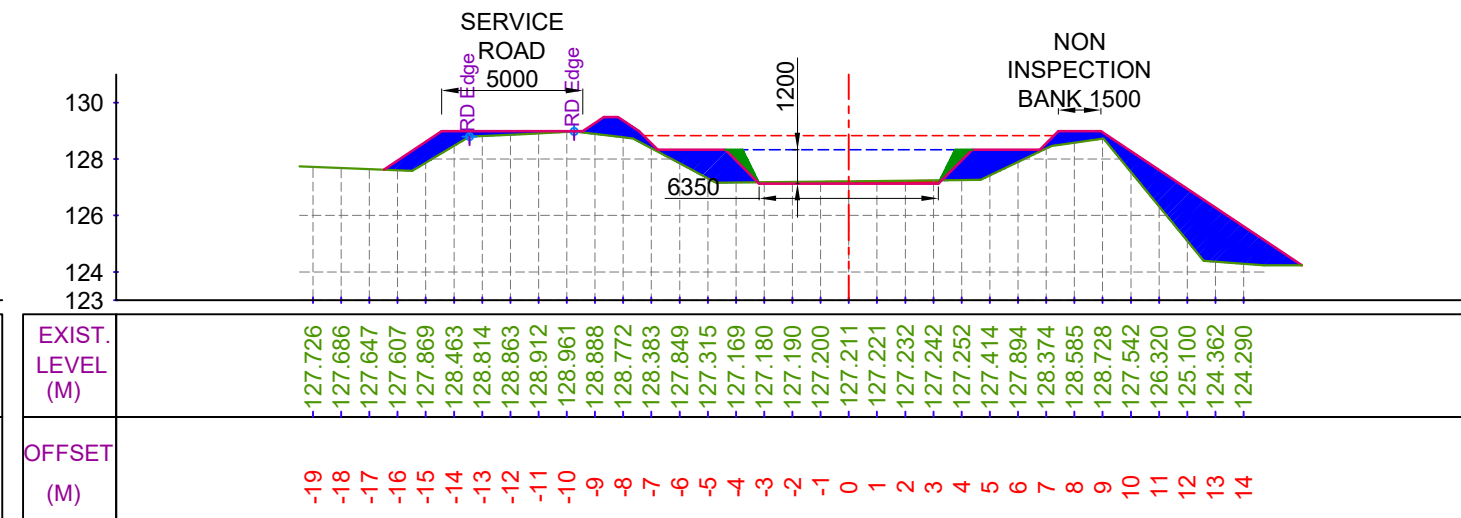
CUTTING AREA (SQ.M) = 0.814
FILLING AREA (SQ.M) = 7.055
CH. (KM):- 6+100
DESIGNED BED LEVEL = 127.208 M



CUTTING AREA (SQ.M) = 0.568
FILLING AREA (SQ.M) = 8.184
CH. (KM):- 6+300
DESIGNED BED LEVEL = 127.158 M



CUTTING AREA (SQ.M) = 0.807
FILLING AREA (SQ.M) = 7.986
CH. (KM):- 6+200
DESIGNED BED LEVEL = 127.183 M



CUTTING AREA (SQ.M) = 0.497
FILLING AREA (SQ.M) = 16.464
CH. (KM):- 6+400
DESIGNED BED LEVEL = 127.133 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

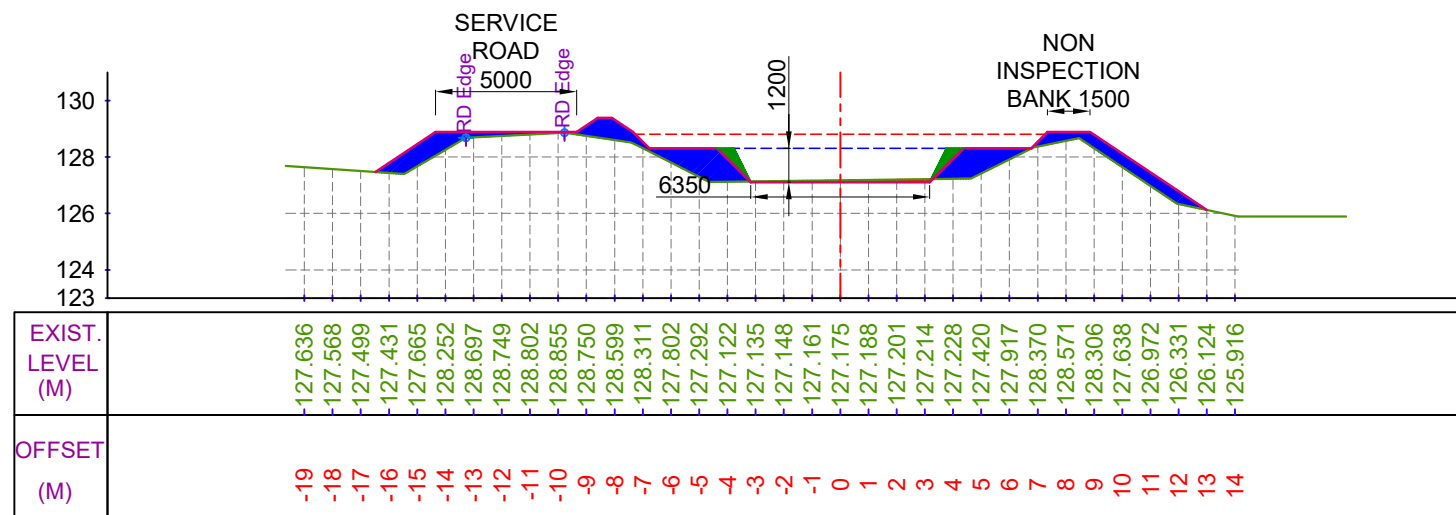
Prepared by :-

WAPCOS LTD.

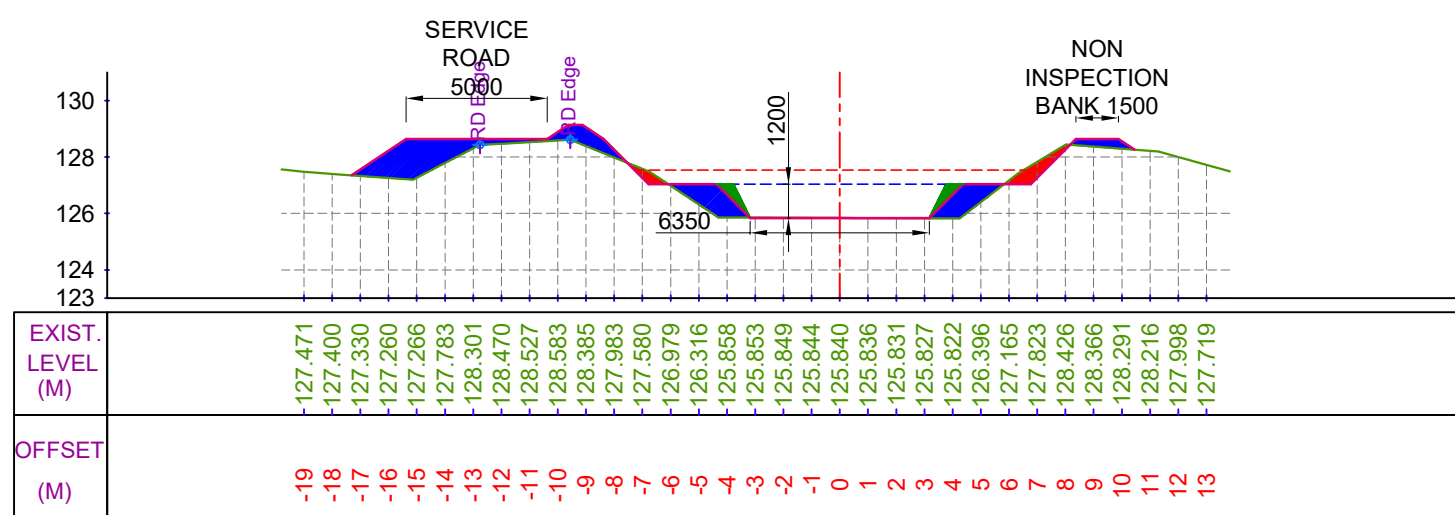


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 16 of 59

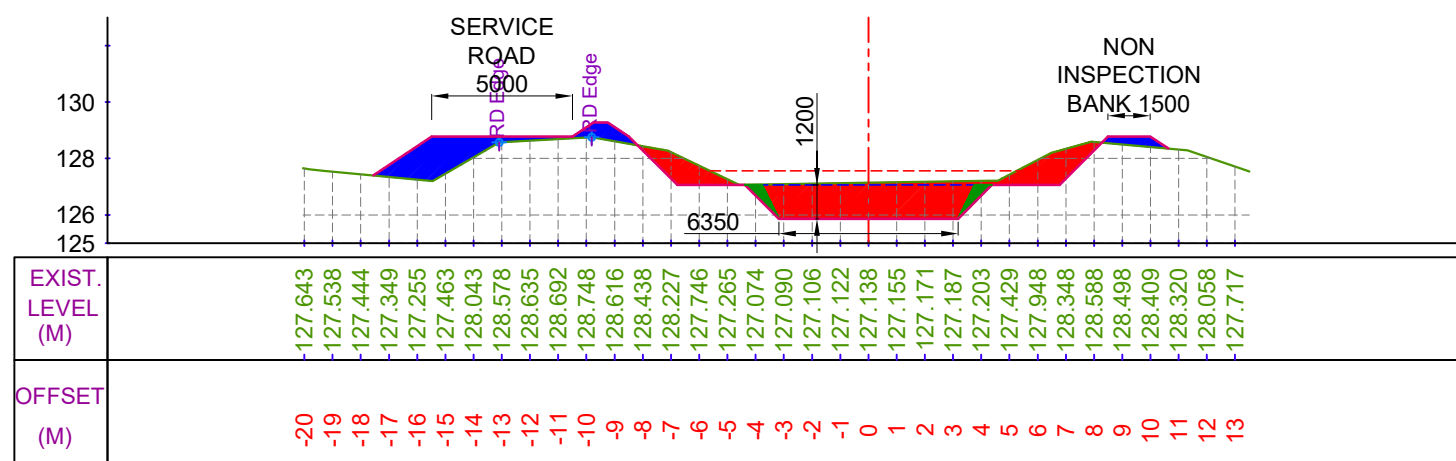
X SECTION OF KARMA DY.



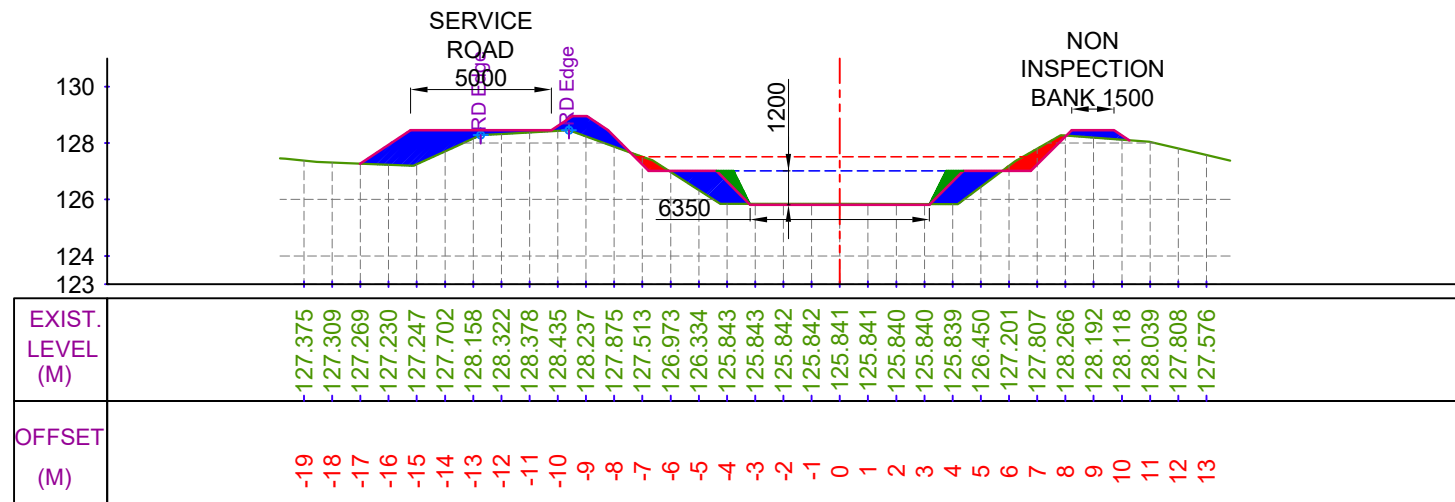
CUTTING AREA (SQ.M) = 0.426 CH. (KM):- 6+500
FILLING AREA (SQ.M) = 10.231 DESIGNED BED LEVEL = 127.108 M



CUTTING AREA (SQ.M) = 1.193 CH. (KM):- 6+700
FILLING AREA (SQ.M) = 8.991 DESIGNED BED LEVEL = 125.838 M



CUTTING AREA (SQ.M) = 13.547 CH. (KM):- 6+600
FILLING AREA (SQ.M) = 5.603 DESIGNED BED LEVEL = 125.863 M



CUTTING AREA (SQ.M) = 1.325 CH. (KM):- 6+800
FILLING AREA (SQ.M) = 7.937 DESIGNED BED LEVEL = 125.813 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

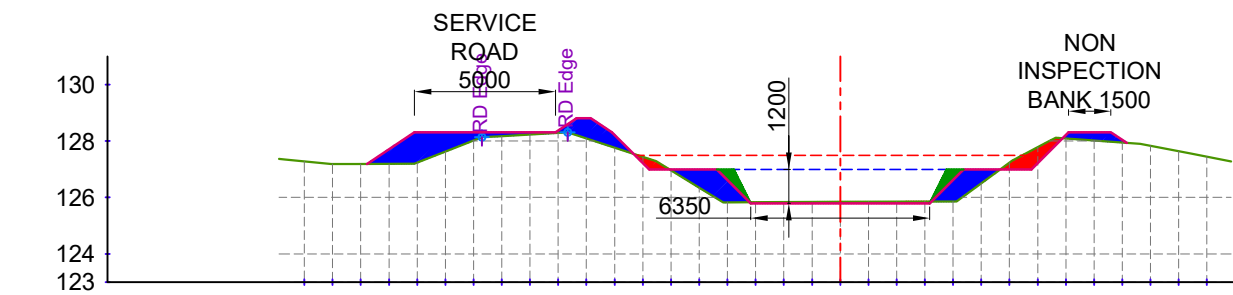
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

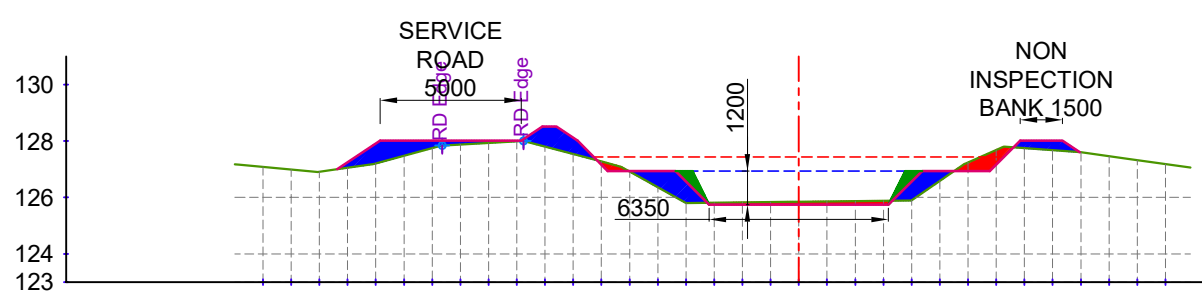
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X SECTION OF KARMA DY.



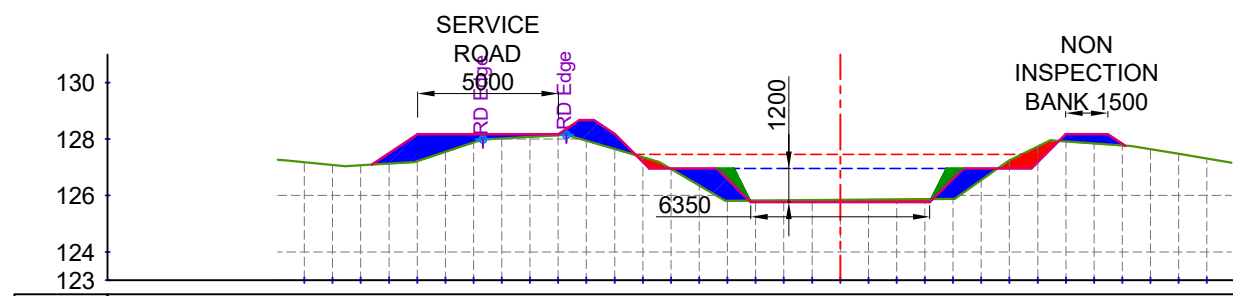
EXIST. LEVEL (M)	-127.278	-127.186	-127.188	-127.189	-127.231	-127.624	-128.018	-128.174	-128.230	-128.286	-128.091	-127.765	-127.439	-126.961	-126.347	-125.828	-125.832	-125.835	-125.839	-125.842	-125.846	-125.850	-125.853	-125.857	-126.500	-127.231	-127.779	-128.092	-128.018	-127.945	-127.828	-127.635	-127.441
OFFSET (M)	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.447 CH. (KM):- 6+900
FILLING AREA (SQ.M) = 7.276 DESIGNED BED LEVEL = 125.788 M



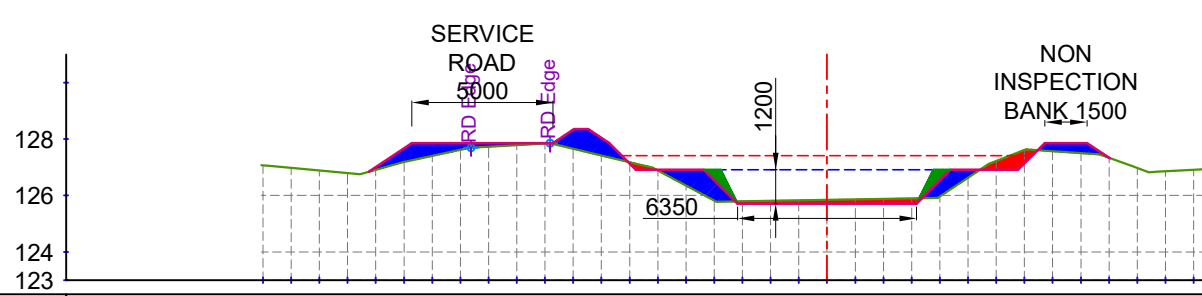
EXIST. LEVEL (M)	-127.080	-126.987	-126.907	-127.050	-127.202	-127.475	-127.747	-127.878	-127.934	-127.989	-127.801	-127.537	-127.273	-126.920	-126.359	-125.799	-125.808	-125.821	-125.833	-125.845	-125.857	-125.869	-125.881	-125.902	-126.590	-127.241	-127.683	-127.744	-127.672	-127.600	-127.461	-127.323	-127.184
OFFSET (M)	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.618 CH. (KM):- 7+100
FILLING AREA (SQ.M) = 6.099 DESIGNED BED LEVEL = 125.738 M



EXIST. LEVEL (M)	-127.179	-127.085	-127.075	-127.133	-127.216	-127.548	-127.881	-128.026	-128.082	-128.138	-127.945	-127.652	-127.358	-126.943	-126.356	-125.813	-125.820	-125.828	-125.836	-125.844	-125.851	-125.859	-125.867	-125.875	-126.547	-127.250	-127.738	-127.918	-127.845	-127.773	-127.638	-127.474	-127.311
OFFSET (M)	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.545 CH. (KM):- 7+000
FILLING AREA (SQ.M) = 6.861 DESIGNED BED LEVEL = 125.763 M



EXIST. LEVEL (M)	-127.072	-126.980	-126.888	-126.795	-126.913	-127.192	-127.404	-127.617	-127.731	-127.786	-127.841	-127.657	-127.419	-127.181	-126.888	-126.356	-125.823	-125.796	-125.813	-125.829	-125.846	-125.863	-125.879	-125.896	-125.966	-126.630	-127.220	-127.611	-127.571	-127.500	-127.332	-126.975	-126.856	-126.908
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.669 CH. (KM):- 7+200
FILLING AREA (SQ.M) = 5.587 DESIGNED BED LEVEL = 125.713 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



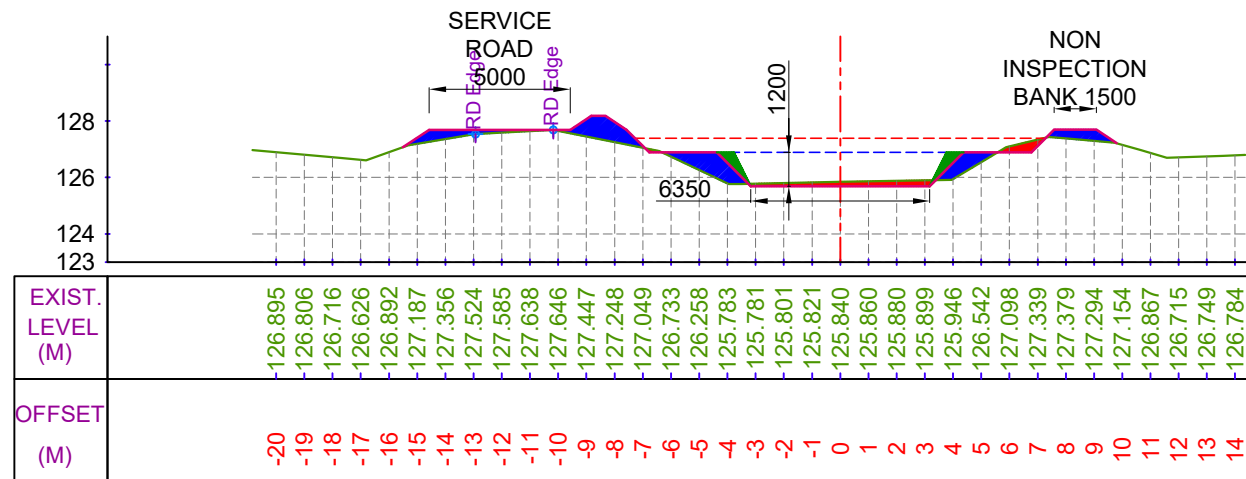
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

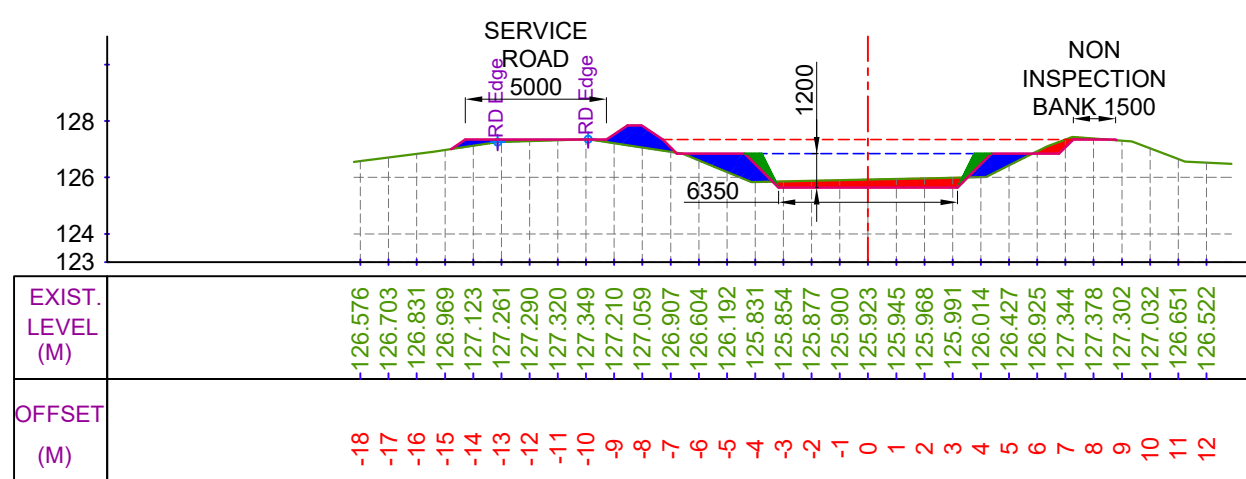
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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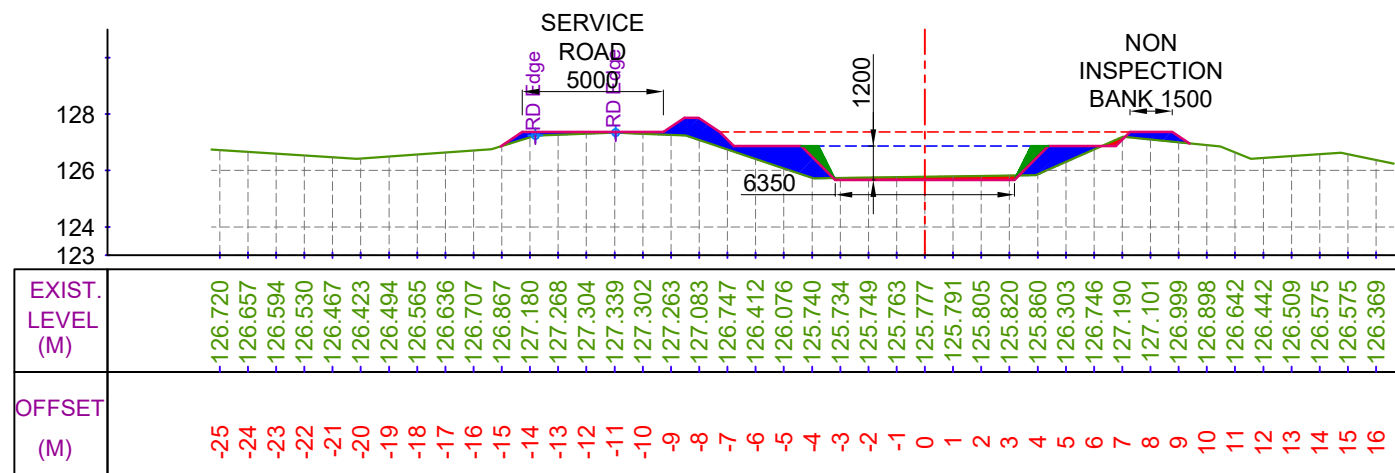
X SECTION OF KARMA DY.



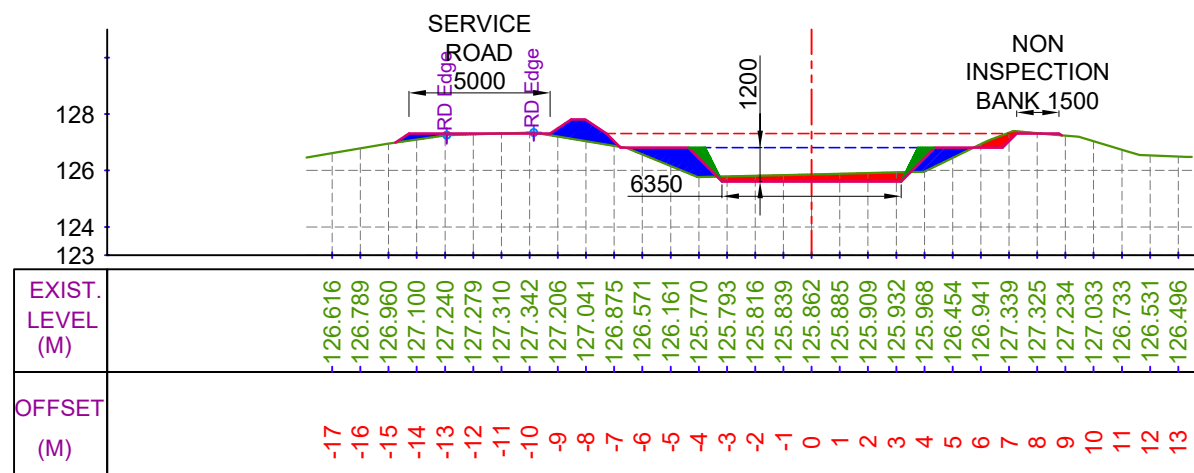
CUTTING AREA (SQ.M) = 1.409
FILLING AREA (SQ.M) = 5.402
CH. (KM):- 7+300
DESIGNED BED LEVEL = 125.688 M



CUTTING AREA (SQ.M) = 2.260
FILLING AREA (SQ.M) = 3.919
CH. (KM):- 7+500
DESIGNED BED LEVEL = 125.638 M



CUTTING AREA (SQ.M) = 0.832
FILLING AREA (SQ.M) = 5.611
CH. (KM):- 7+400
DESIGNED BED LEVEL = 125.663 M



CUTTING AREA (SQ.M) = 2.056
FILLING AREA (SQ.M) = 3.846
CH. (KM):- 7+600
DESIGNED BED LEVEL = 125.613 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

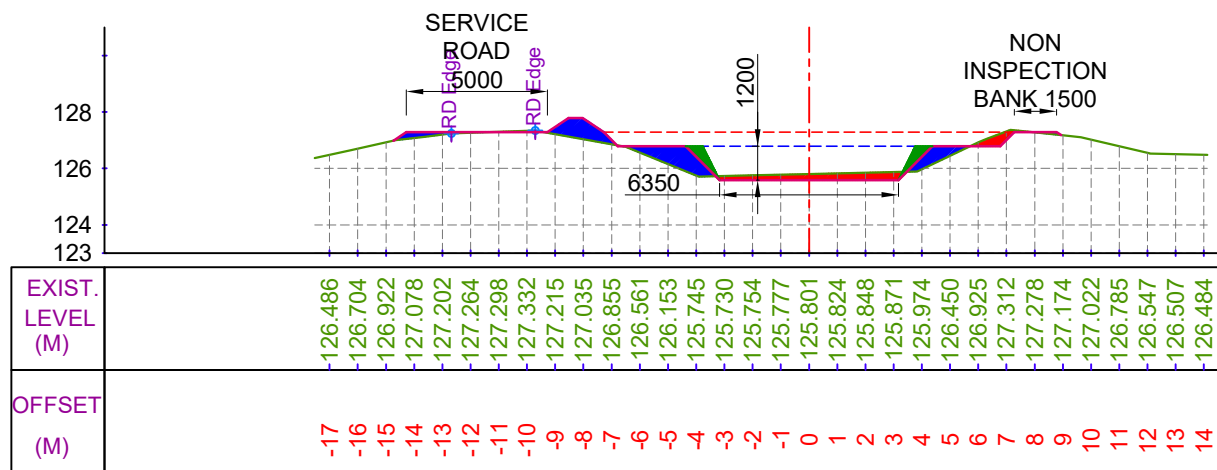
Prepared by :-

WAPCOS LTD.

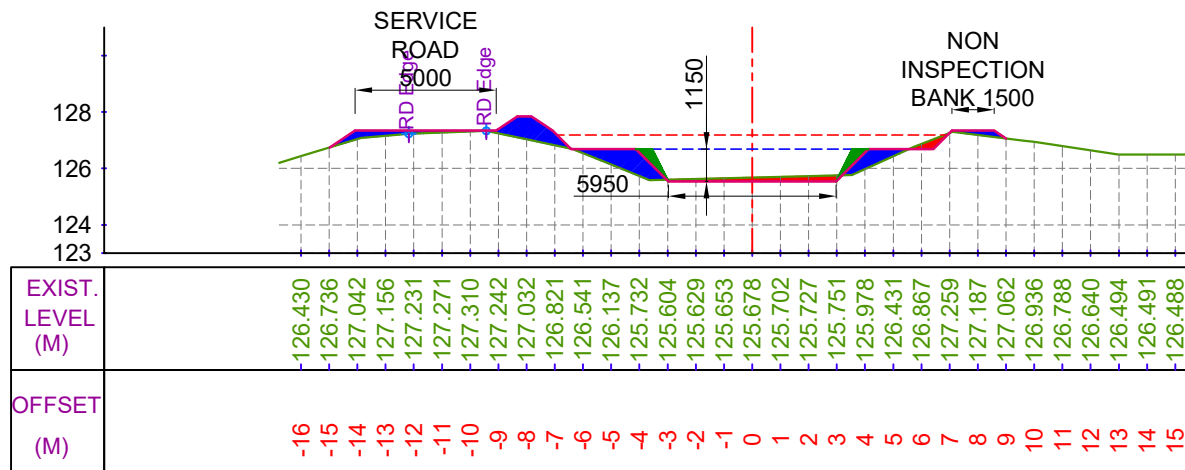


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-19 of 59

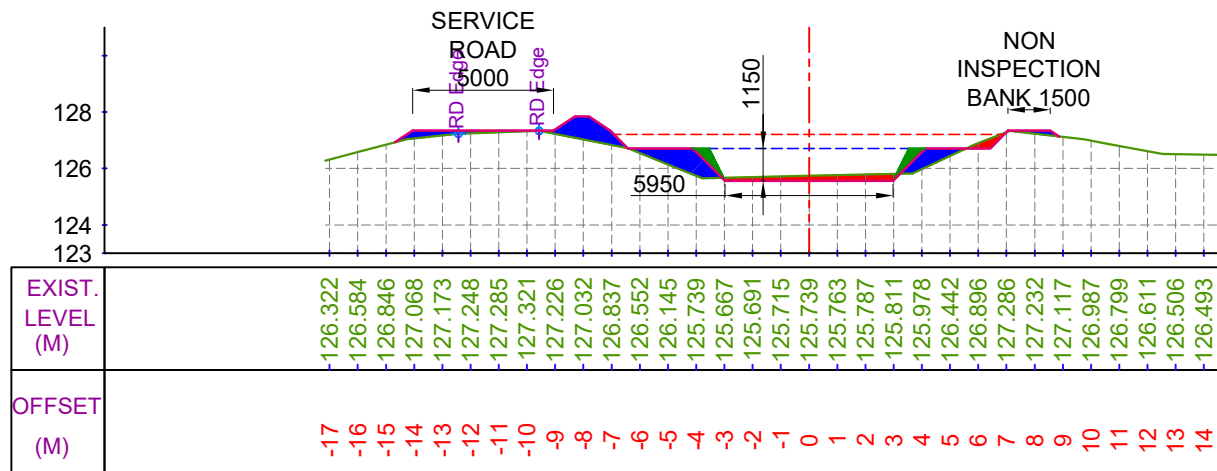
X SECTION OF KARMA DY.



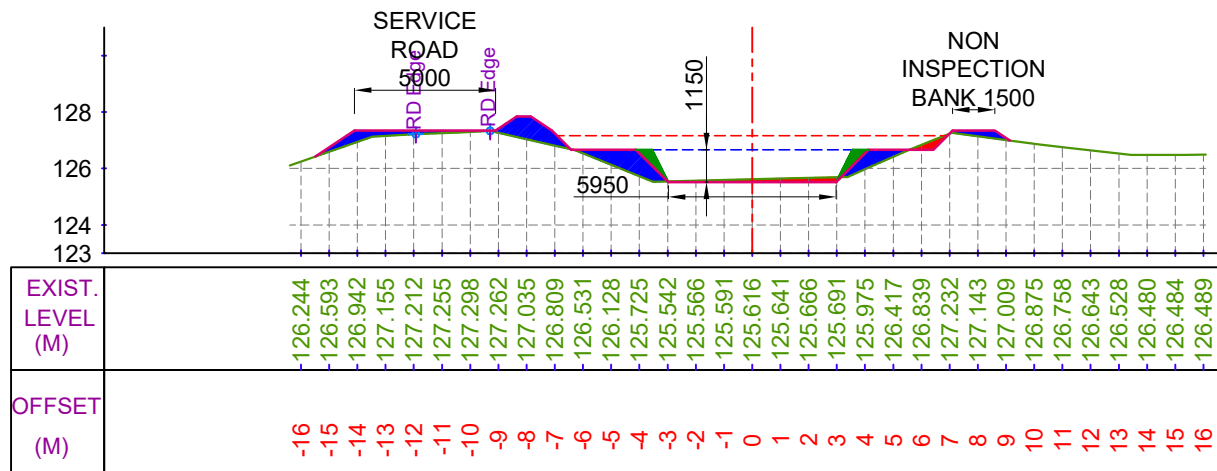
CUTTING AREA (SQ.M) = 1.831
FILLING AREA (SQ.M) = 3.752
CH. (KM):- 7+700
DESIGNED BED LEVEL = 125.588 M



CUTTING AREA (SQ.M) = 1.095
FILLING AREA (SQ.M) = 4.715
CH. (KM):- 7+900
DESIGNED BED LEVEL = 125.538 M



CUTTING AREA (SQ.M) = 1.319
FILLING AREA (SQ.M) = 4.563
CH. (KM):- 7+800
DESIGNED BED LEVEL = 125.563 M



CUTTING AREA (SQ.M) = 0.870
FILLING AREA (SQ.M) = 5.013
CH. (KM):- 8+000
DESIGNED BED LEVEL = 125.513 M

LEGEND



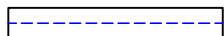
CUT AREA



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 :-

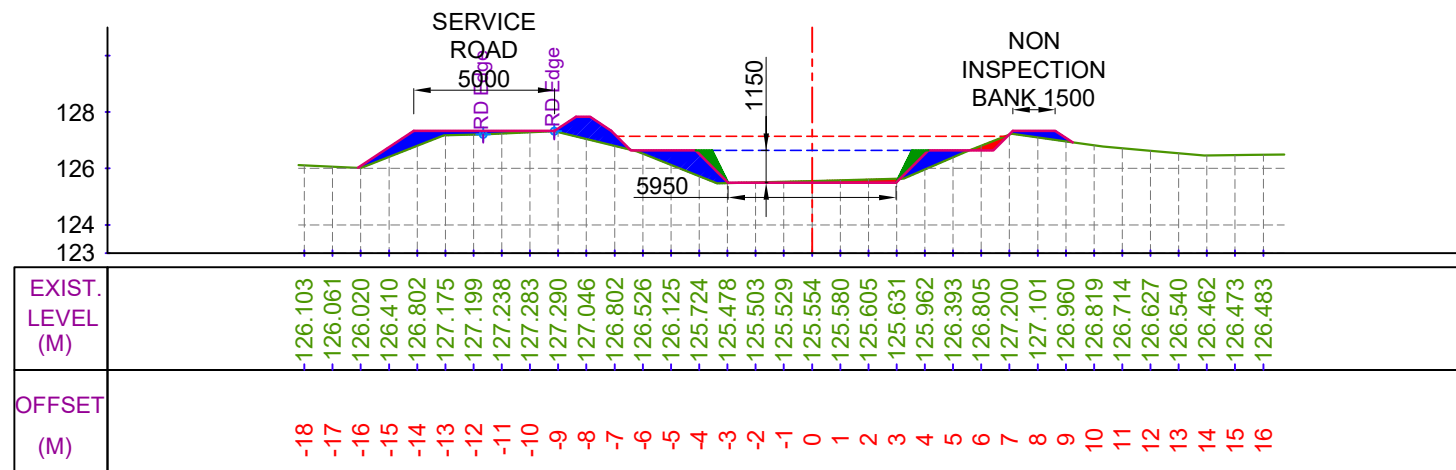
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

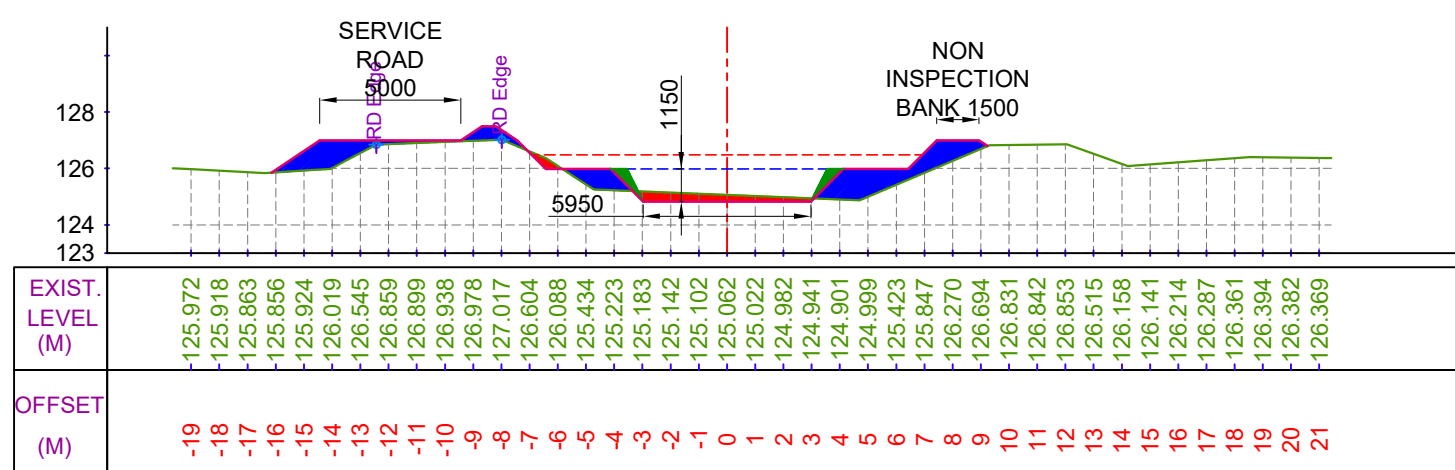
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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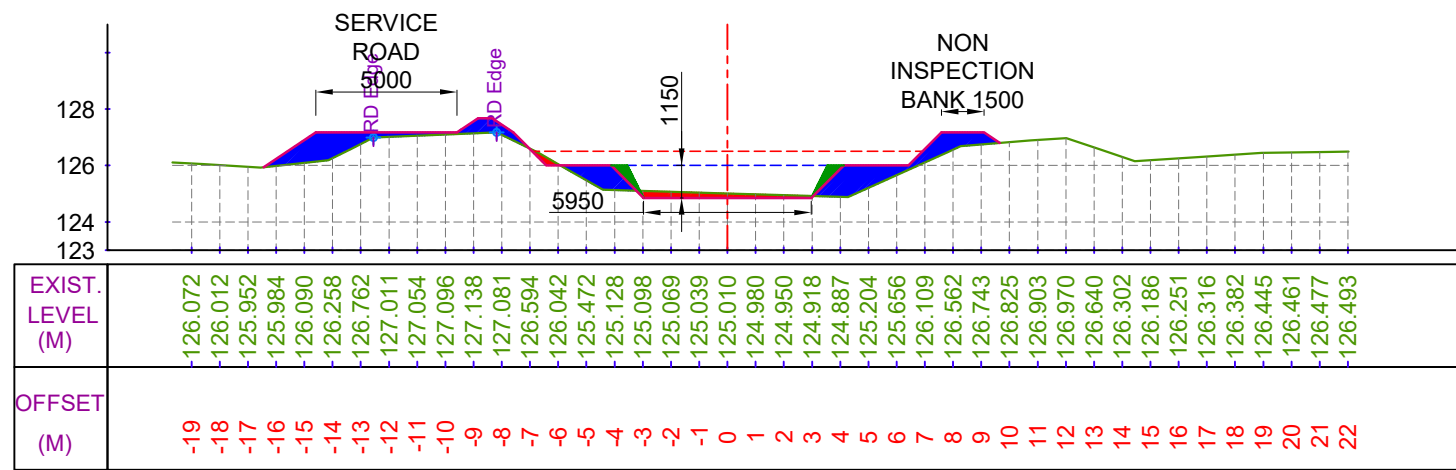
X SECTION OF KARMA DY.



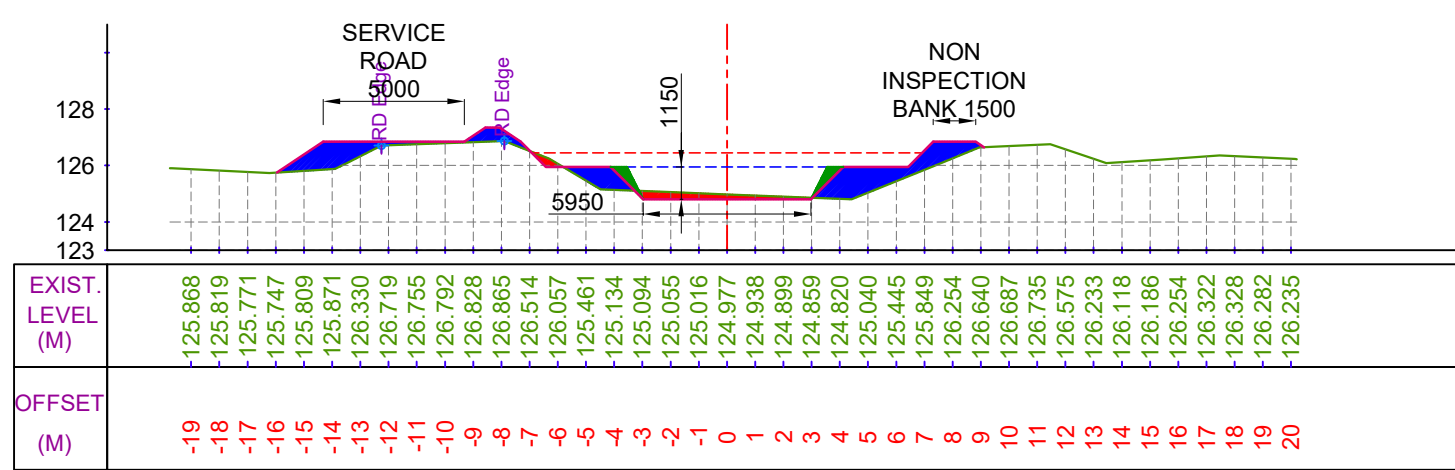
CUTTING AREA (SQ.M) = 0.638 CH. (KM):- 8+100
FILLING AREA (SQ.M) = 5.420 DESIGNED BED LEVEL = 125.488 M



CUTTING AREA (SQ.M) = 1.669 CH. (KM):- 8+300
FILLING AREA (SQ.M) = 8.474 DESIGNED BED LEVEL = 124.828 M



CUTTING AREA (SQ.M) = 1.108 CH. (KM):- 8+200
FILLING AREA (SQ.M) = 8.487 DESIGNED BED LEVEL = 124.853 M



CUTTING AREA (SQ.M) = 1.255 CH. (KM):- 8+400
FILLING AREA (SQ.M) = 8.096 DESIGNED BED LEVEL = 124.803 M

LEGEND



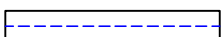
CUT AREA



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 :-

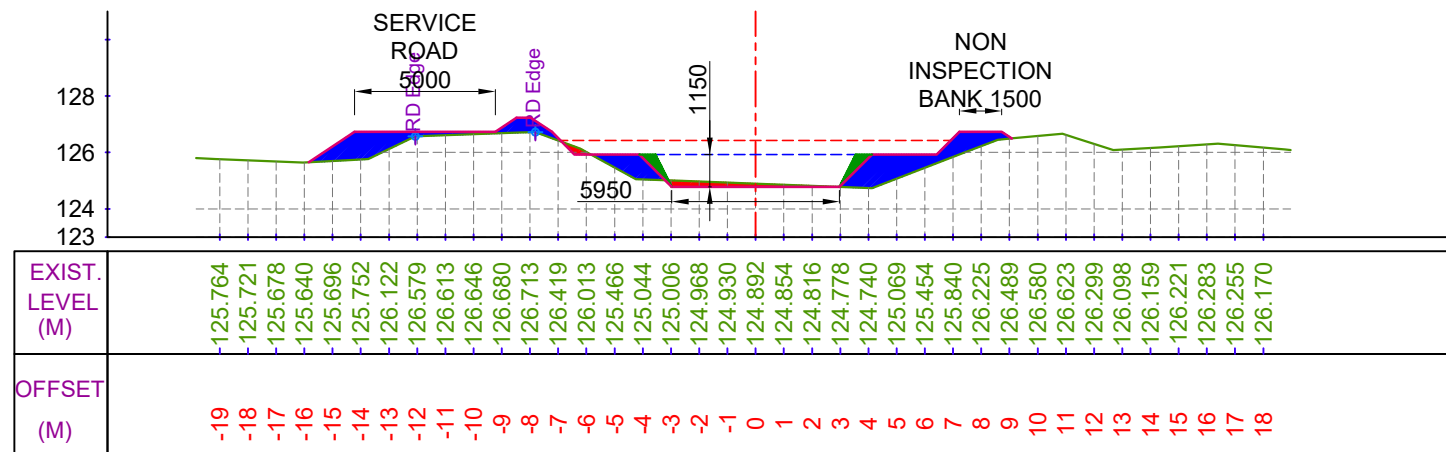
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

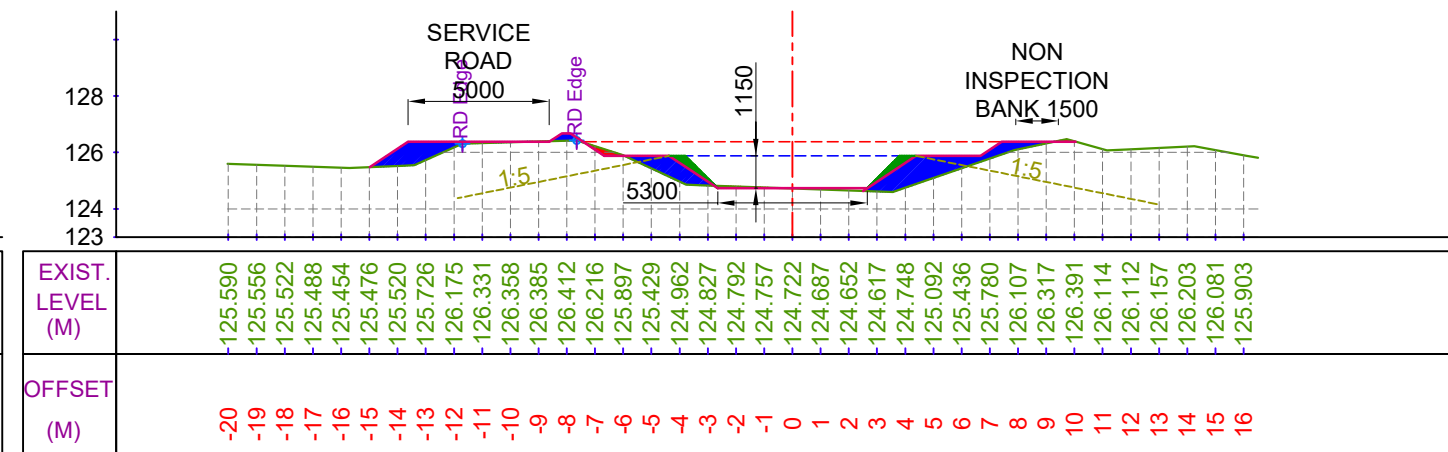
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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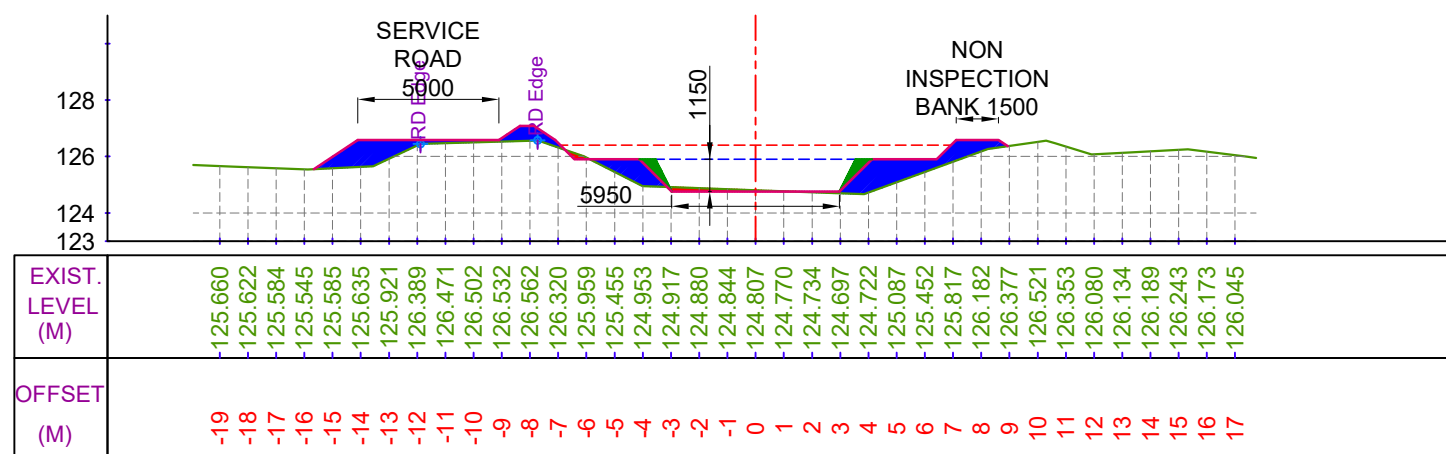
X SECTION OF KARMA DY.



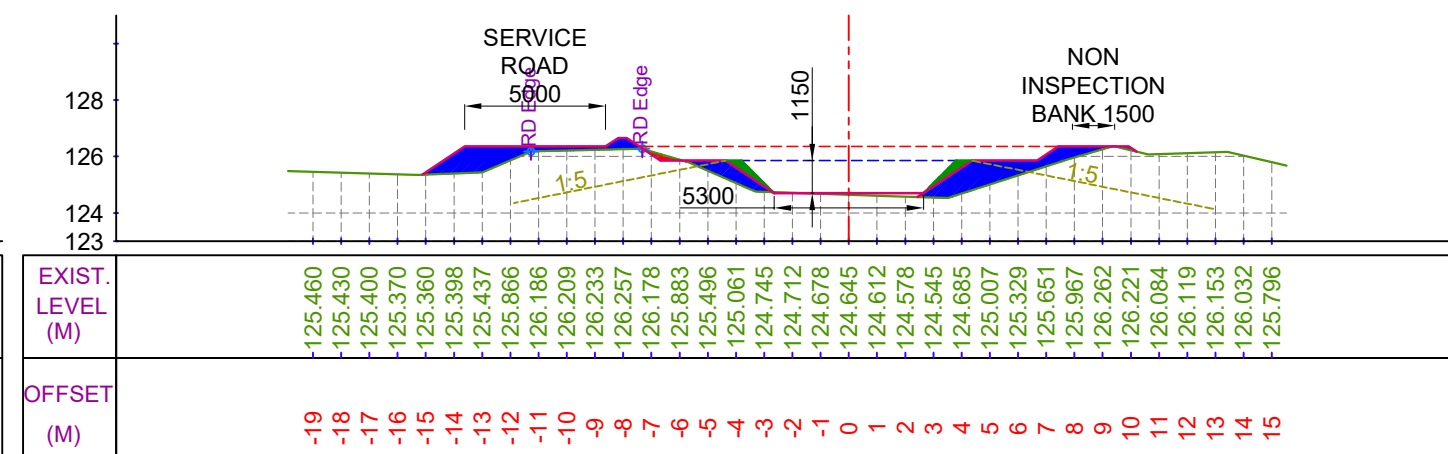
CUTTING AREA (SQ.M) = 0.840
FILLING AREA (SQ.M) = 8.175
CH. (KM):- 8+500
DESIGNED BED LEVEL = 124.778 M



CUTTING AREA (SQ.M) = 0.317
FILLING AREA (SQ.M) = 6.216
CH. (KM):- 8+700
DESIGNED BED LEVEL = 124.728 M



CUTTING AREA (SQ.M) = 0.470
FILLING AREA (SQ.M) = 7.984
CH. (KM):- 8+600
DESIGNED BED LEVEL = 124.753 M



CUTTING AREA (SQ.M) = 0.175
FILLING AREA (SQ.M) = 7.690
CH. (KM):- 8+800
DESIGNED BED LEVEL = 124.703 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

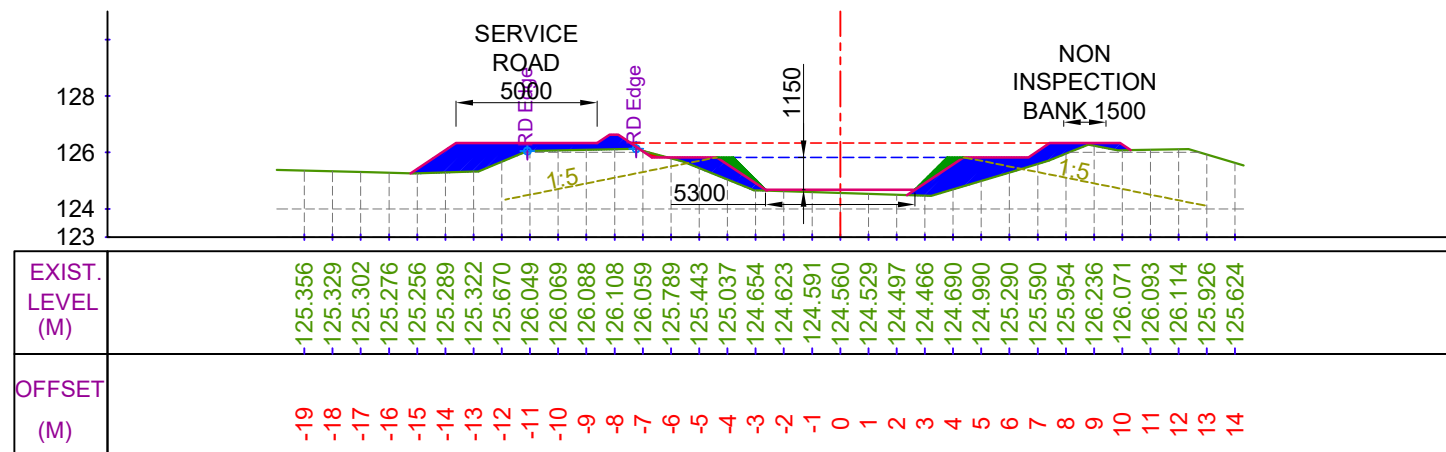
Prepared by :-

WAPCOS LTD.



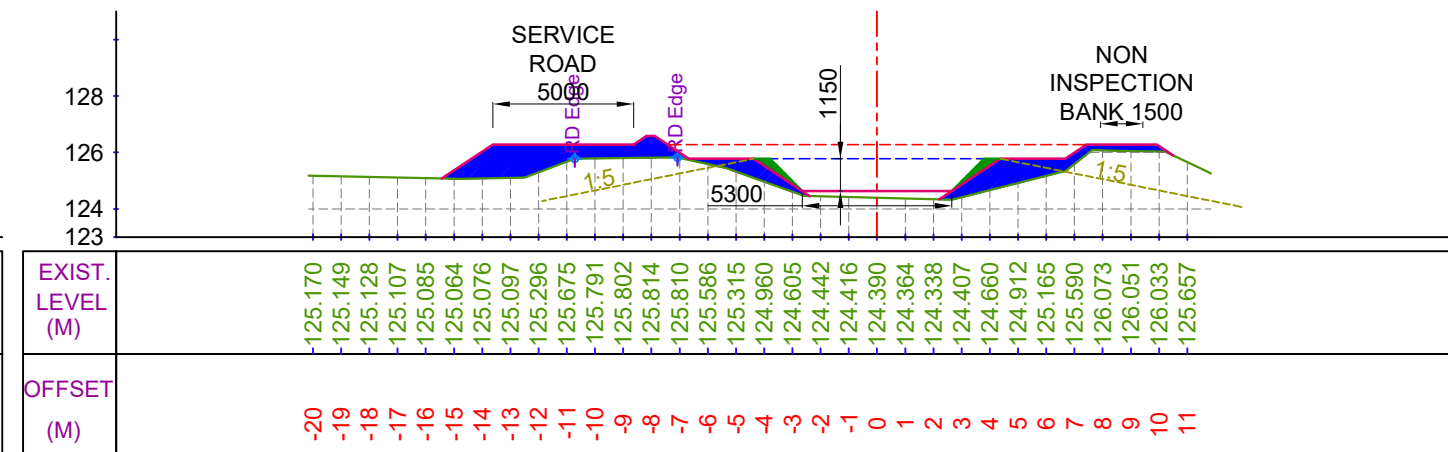
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 22 of 59

X SECTION OF KARMA DY.



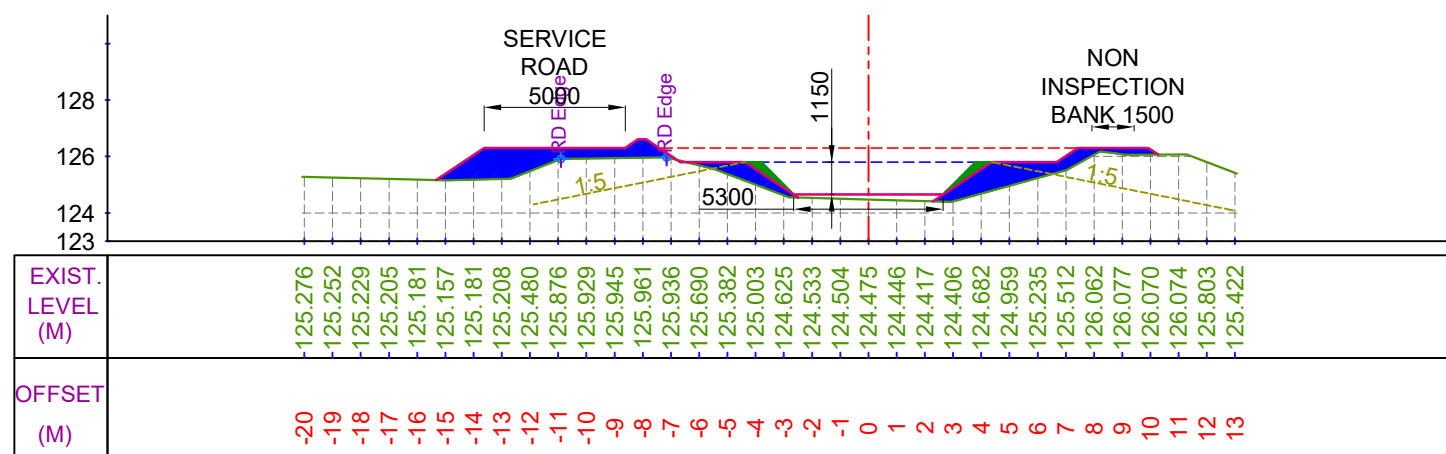
CUTTING AREA (SQ.M) = 0.064
FILLING AREA (SQ.M) = 8.910

CH. (KM):- 8+900
DESIGNED BED LEVEL = 124.678 M



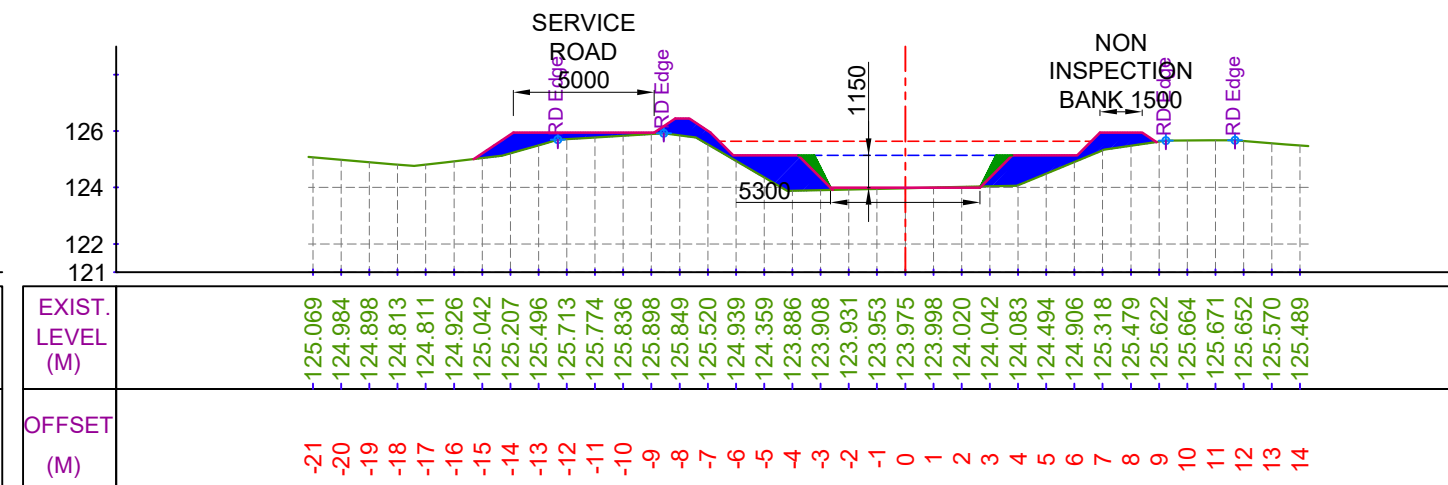
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 11.182

CH. (KM):- 9+100
DESIGNED BED LEVEL = 124.628 M



CUTTING AREA (SQ.M) = 0.009
FILLING AREA (SQ.M) = 10.063

CH. (KM):- 9+000
DESIGNED BED LEVEL = 124.653 M



CUTTING AREA (SQ.M) = 0.039
FILLING AREA (SQ.M) = 8.908

CH. (KM):- 9+200
DESIGNED BED LEVEL = 123.993 M

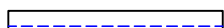
LEGEND



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 :-

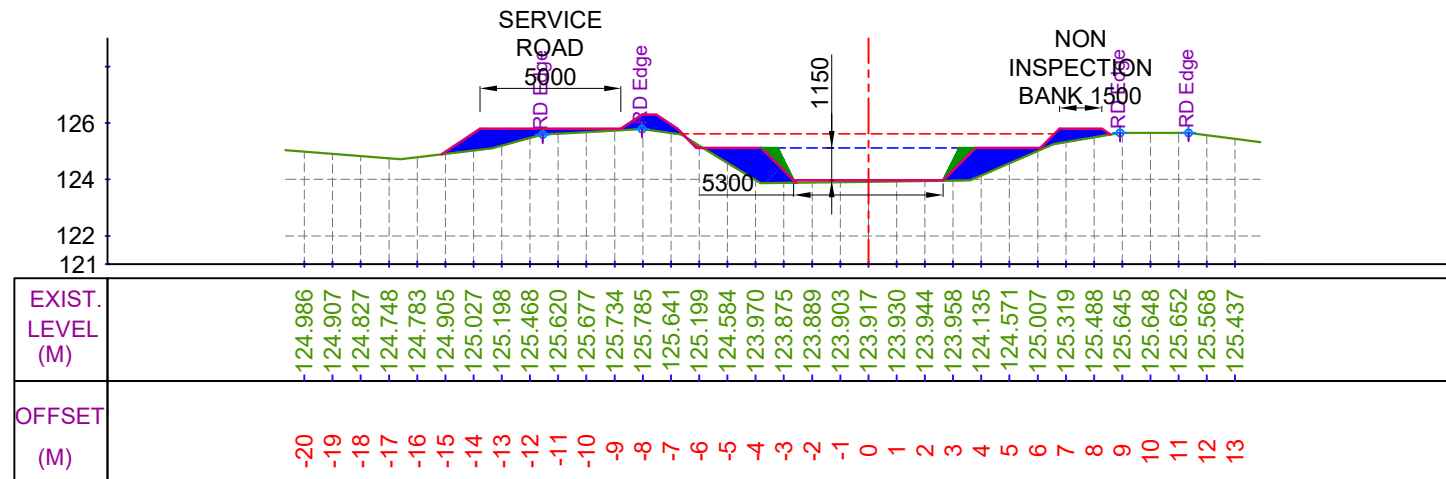
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

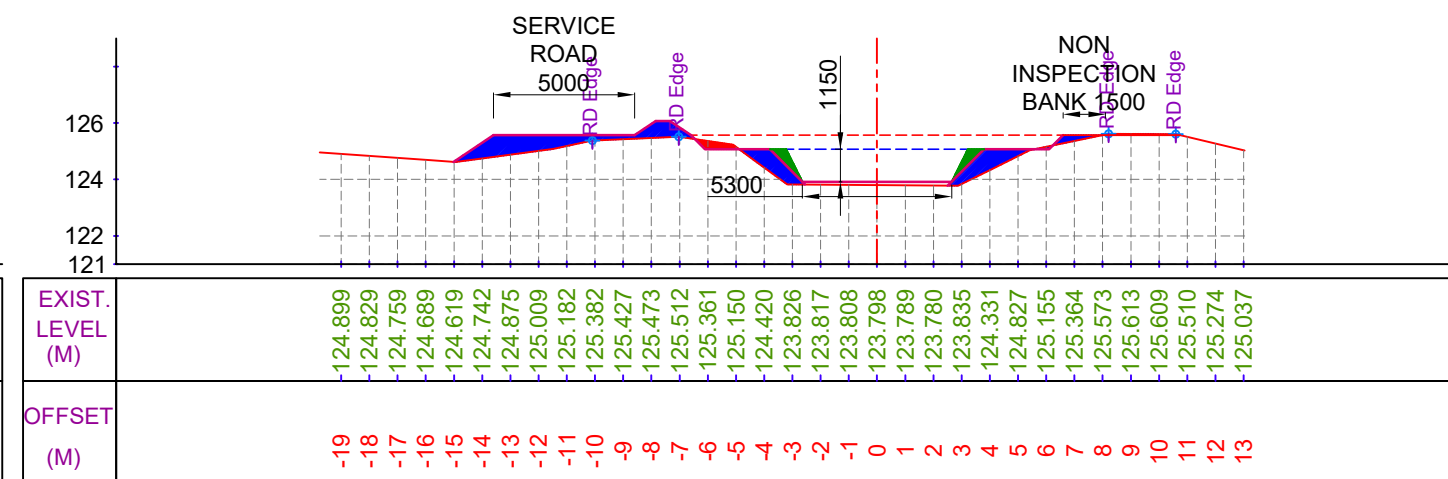
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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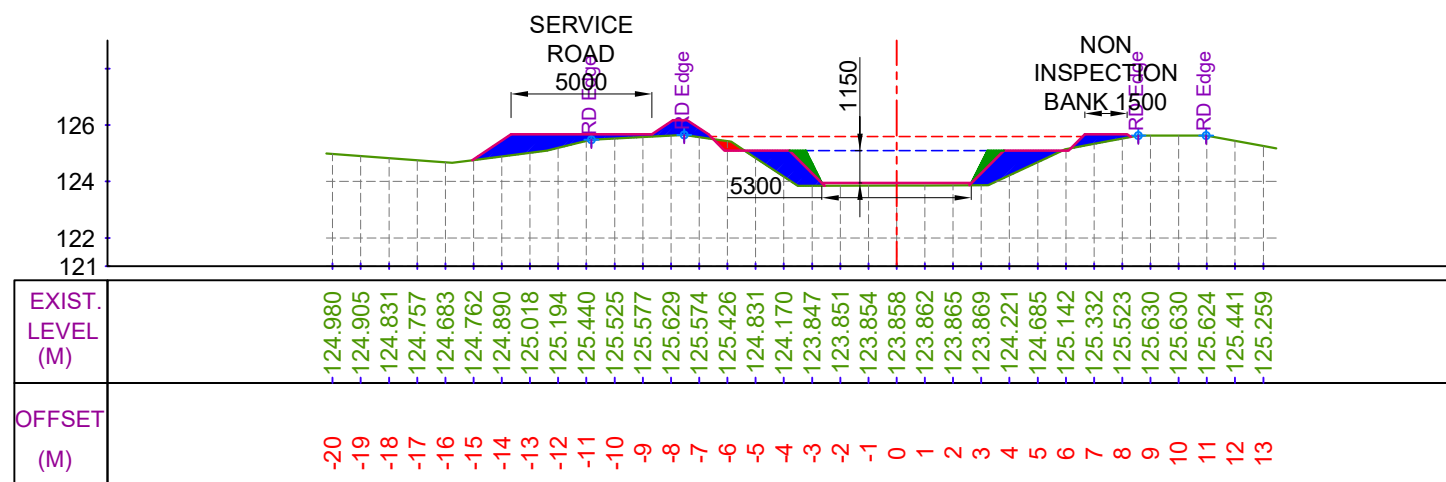
X SECTION OF KARMA DY.



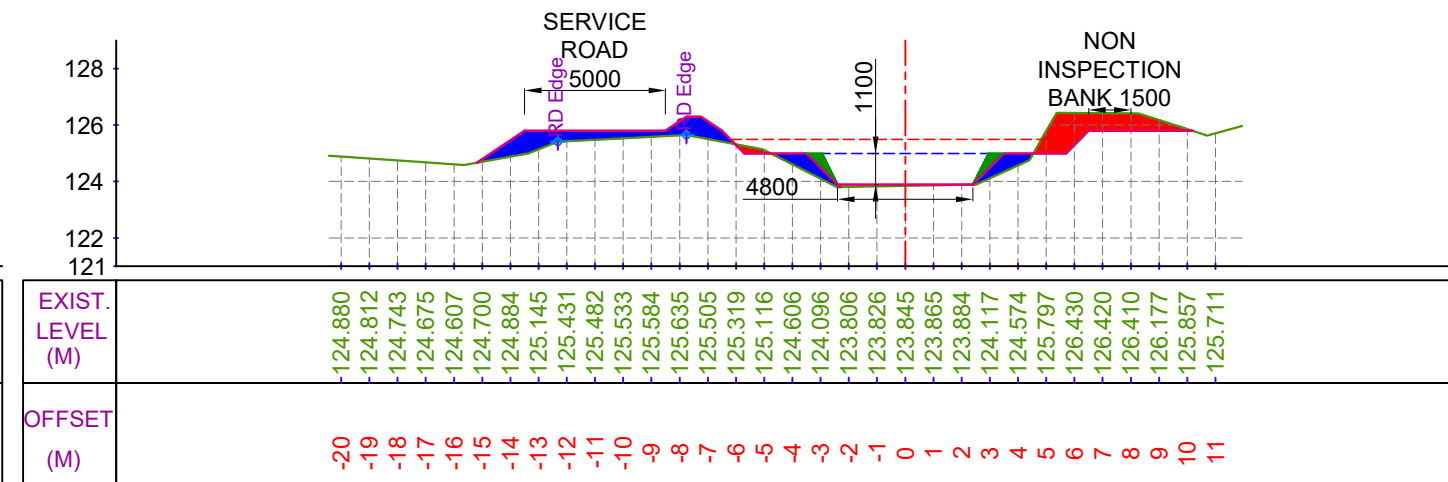
CUTTING AREA (SQ.M) = 0.043
FILLING AREA (SQ.M) = 7.608
CH. (KM):- 9+300
DESIGNED BED LEVEL = 123.968 M



CUTTING AREA (SQ.M) = 0.304
FILLING AREA (SQ.M) = 6.058
CH. (KM):- 9+500
DESIGNED BED LEVEL = 123.918 M



CUTTING AREA (SQ.M) = 0.233
FILLING AREA (SQ.M) = 6.735
CH. (KM):- 9+400
DESIGNED BED LEVEL = 123.943 M



CUTTING AREA (SQ.M) = 3.794
FILLING AREA (SQ.M) = 5.267
CH. (KM):- 9+600
DESIGNED BED LEVEL = 123.893 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

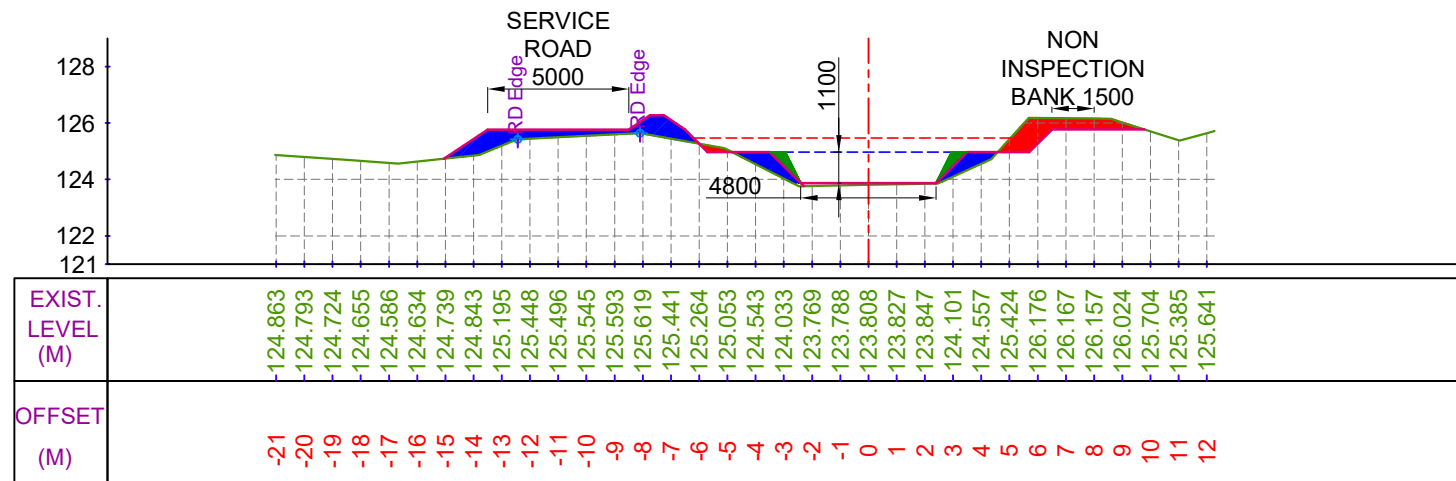
Prepared by :-

WAPCOS LTD.



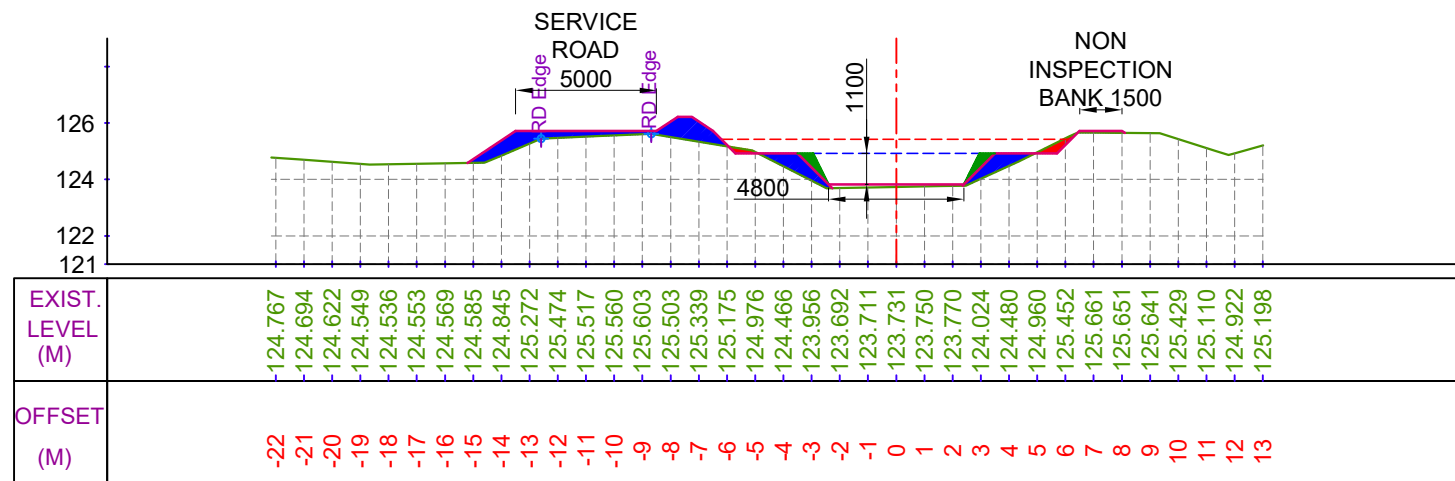
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 24 of 59

X SECTION OF KARMA DY.



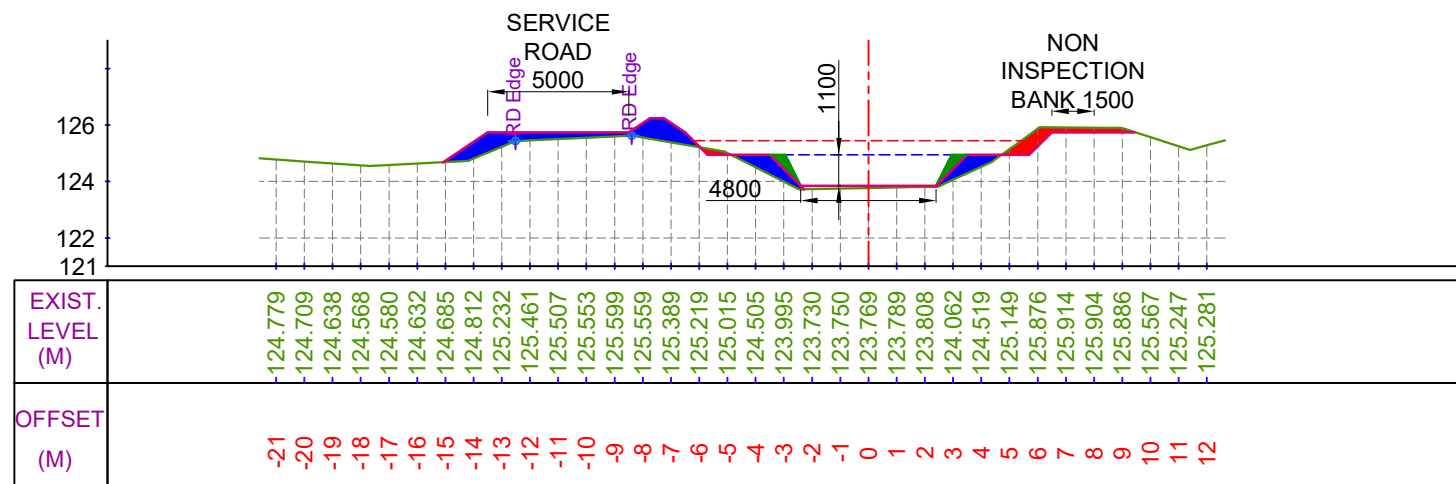
CUTTING AREA (SQ.M) = 2.539
FILLING AREA (SQ.M) = 5.115

CH. (KM):- 9+700
DESIGNED BED LEVEL = 123.868 M



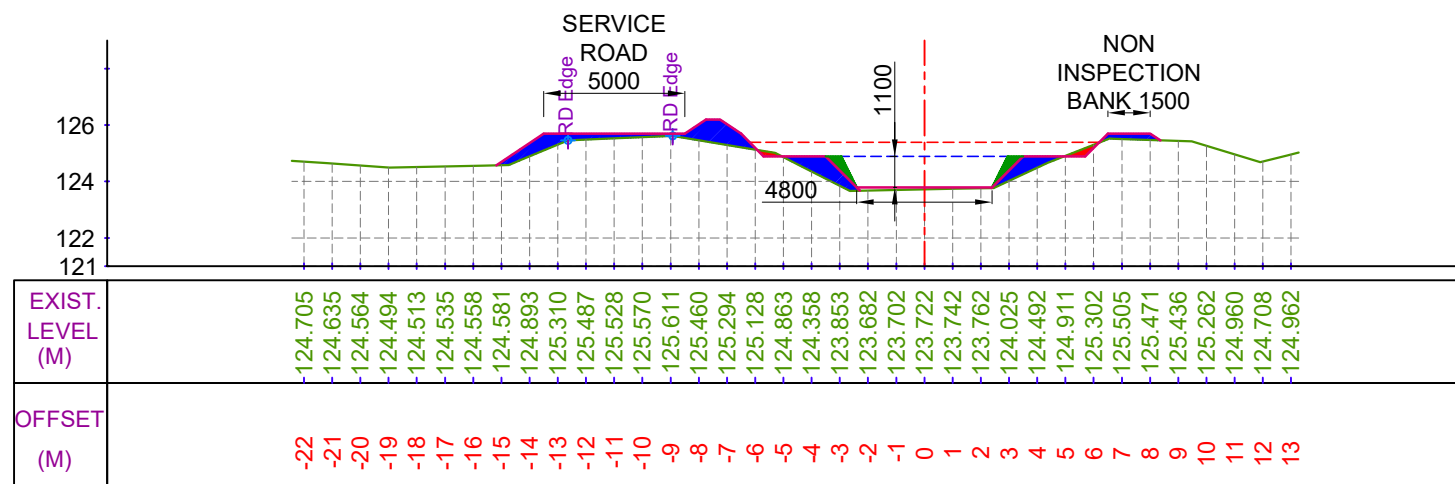
CUTTING AREA (SQ.M) = 0.430
FILLING AREA (SQ.M) = 5.176

CH. (KM):- 9+900
DESIGNED BED LEVEL = 123.818 M



CUTTING AREA (SQ.M) = 1.344
FILLING AREA (SQ.M) = 5.102

CH. (KM):- 9+800
DESIGNED BED LEVEL = 123.843 M



CUTTING AREA (SQ.M) = 0.275
FILLING AREA (SQ.M) = 5.344

CH. (KM):- 10+000
DESIGNED BED LEVEL = 123.793 M

LEGEND



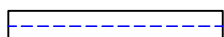
CUT AREA



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 :-

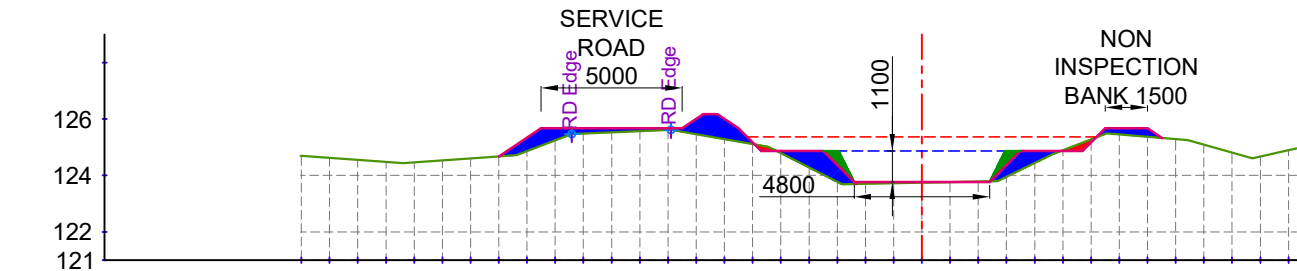
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

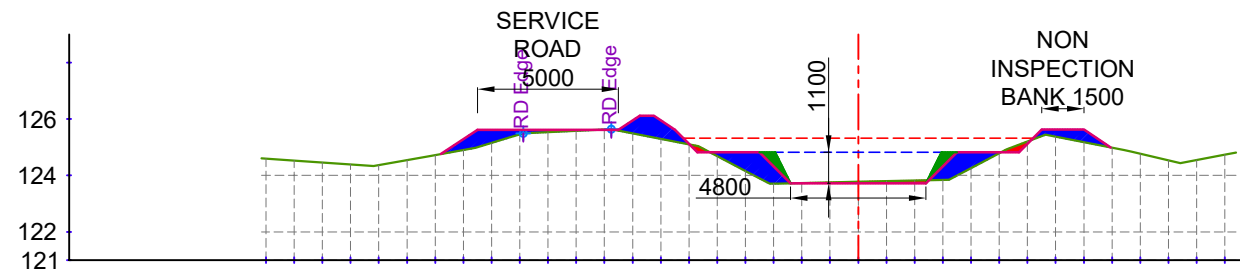
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X SECTION OF KARMA DY.



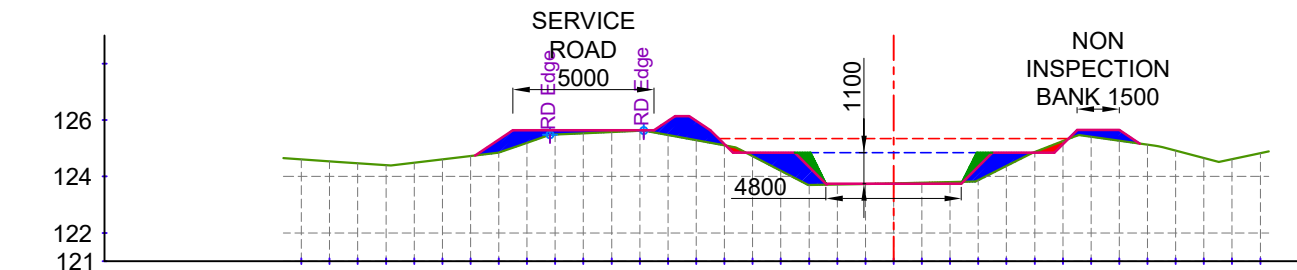
EXIST. LEVEL (M)	-124.690	-124.620	-124.550	-124.481	-124.466	-124.535	-124.604	-124.673	-124.860	-125.245	-125.488	-125.531	-125.573	-125.616	-125.464	-125.290	-125.116	-124.792	-124.280	-123.769	-123.699	-123.719	-123.740	-123.760	-123.781	-123.949	-124.438	-124.890	-125.277	-125.458	-125.371	-125.284	-125.087	-124.806	-124.666	-124.893
OFFSET (M)	-22	-21	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.282
FILLING AREA (SQ.M) = 5.417
CH. (KM):- 10+100
DESIGNED BED LEVEL = 123.768 M



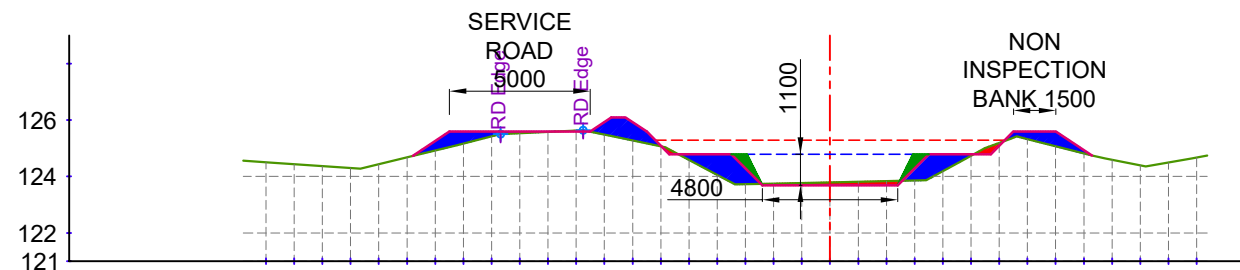
EXIST. LEVEL (M)	-124.594	-124.526	-124.458	-124.389	-124.366	-124.544	-124.722	-124.900	-125.150	-125.455	-125.532	-125.577	-125.622	-125.487	-125.293	-125.099	-124.684	-124.159	-123.710	-123.731	-123.753	-123.774	-123.795	-123.817	-123.838	-124.256	-124.785	-125.201	-125.376	-125.180	-124.983	-124.767	-124.535	-124.548	-124.738
OFFSET (M)	-21	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.508
FILLING AREA (SQ.M) = 5.571
CH. (KM):- 10+300
DESIGNED BED LEVEL = 123.718 M



EXIST. LEVEL (M)	-124.605	-124.536	-124.467	-124.398	-124.486	-124.607	-124.727	-124.850	-125.198	-125.490	-125.533	-125.577	-125.621	-125.468	-125.284	-125.101	-124.719	-124.200	-123.695	-123.716	-123.737	-123.758	-123.779	-123.800	-123.864	-124.373	-124.870	-125.253	-125.409	-125.269	-125.128	-124.916	-124.657	-124.617	-124.823
OFFSET (M)	-21	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.365
FILLING AREA (SQ.M) = 5.489
CH. (KM):- 10+200
DESIGNED BED LEVEL = 123.743 M



EXIST. LEVEL (M)	-124.508	-124.440	-124.372	-124.305	-124.438	-124.680	-124.923	-125.168	-125.423	-125.535	-125.581	-125.627	-125.484	-125.278	-125.073	-124.589	-124.056	-123.728	-123.749	-123.771	-123.793	-123.814	-123.836	-123.858	-124.189	-124.737	-125.193	-125.322	-125.068	-124.815	-124.595	-124.394	-124.497	-124.674
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.725
FILLING AREA (SQ.M) = 5.717
CH. (KM):- 10+400
DESIGNED BED LEVEL = 123.693 M

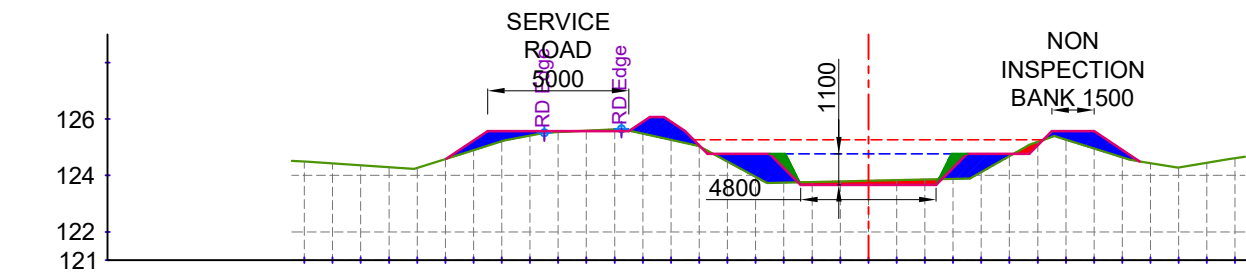
LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-
WAPCOS LTD.

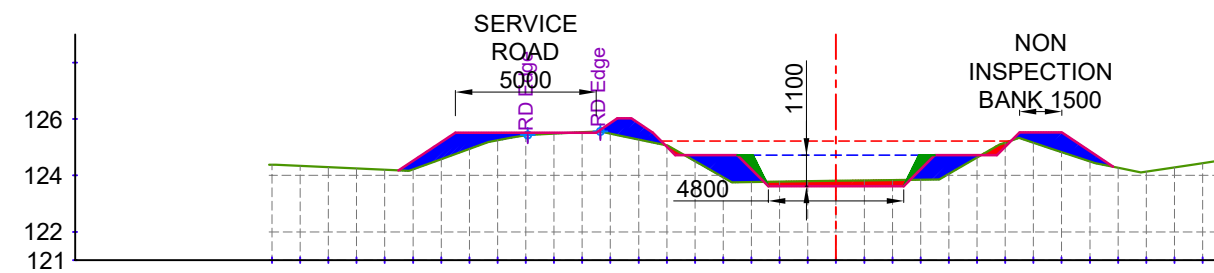
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 26 of 59

X SECTION OF KARMA DY.



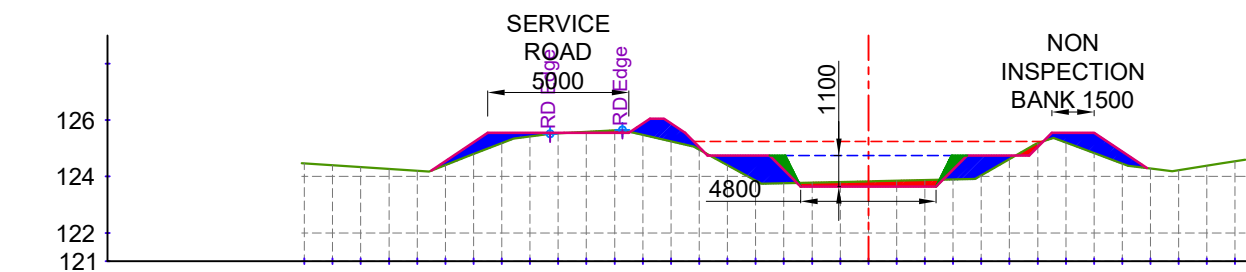
EXIST. LEVEL (M)	-124.489	-124.422	-124.355	-124.288	-124.265	-124.579	-124.894	-125.209	-125.415	-125.537	-125.585	-125.633	-125.480	-125.261	-125.030	-124.950	-123.950	-123.745	-123.767	-123.789	-123.811	-123.833	-123.855	-123.877	-124.114	-124.680	-125.188	-125.264	-124.951	-124.637	-124.433	-124.277	-124.443	-124.609
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.954
FILLING AREA (SQ.M) = 5.999
CH. (KM):- 10+500
DESIGNED BED LEVEL = 123.668 M



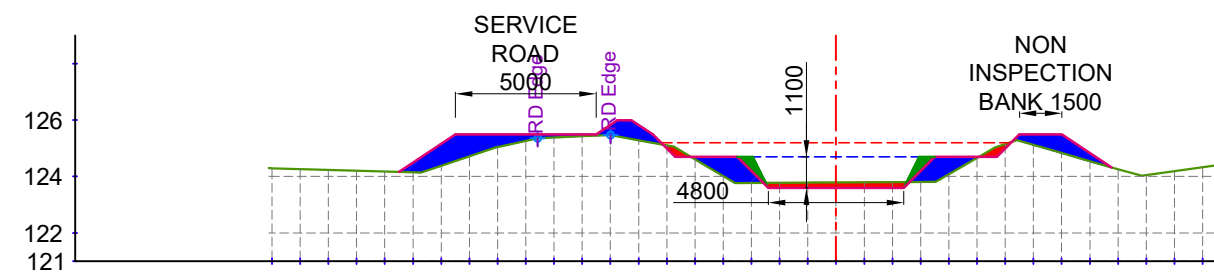
EXIST. LEVEL (M)	-124.379	-124.334	-124.289	-124.244	-124.199	-124.213	-124.579	-124.945	-125.248	-125.427	-125.482	-125.527	-125.482	-125.273	-125.063	-124.503	-123.933	-123.766	-123.780	-123.795	-123.809	-123.824	-123.838	-123.852	-124.059	-124.639	-125.168	-125.160	-124.829	-124.497	-124.271	-124.136	-124.285	-124.433
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.198
FILLING AREA (SQ.M) = 6.826
CH. (KM):- 10+700
DESIGNED BED LEVEL = 123.618 M



EXIST. LEVEL (M)	-124.466	-124.401	-124.336	-124.271	-124.205	-124.405	-124.795	-125.185	-125.425	-125.533	-125.583	-125.632	-125.477	-125.245	-124.952	-124.404	-123.855	-123.762	-123.784	-123.806	-123.828	-123.849	-123.871	-123.893	-124.035	-124.617	-125.186	-125.205	-124.832	-124.460	-124.286	-124.226	-124.383	-124.539
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.182
FILLING AREA (SQ.M) = 6.494
CH. (KM):- 10+600
DESIGNED BED LEVEL = 123.643 M



EXIST. LEVEL (M)	-124.292	-124.264	-124.236	-124.208	-124.180	-124.151	-124.382	-124.720	-125.048	-125.266	-125.383	-125.425	-125.468	-125.287	-125.103	-124.610	-124.016	-123.771	-123.777	-123.784	-123.790	-123.797	-123.804	-123.810	-124.082	-124.661	-125.153	-125.121	-124.829	-124.536	-124.258	-124.047	-124.188	-124.330
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.354
FILLING AREA (SQ.M) = 7.289
CH. (KM):- 10+800
DESIGNED BED LEVEL = 123.593 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

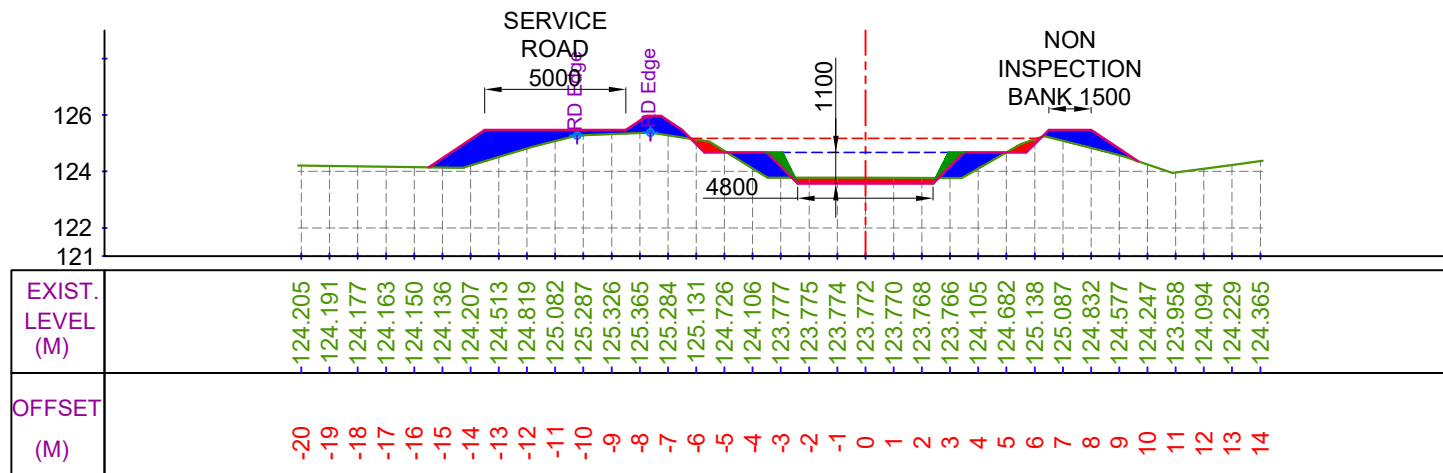


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

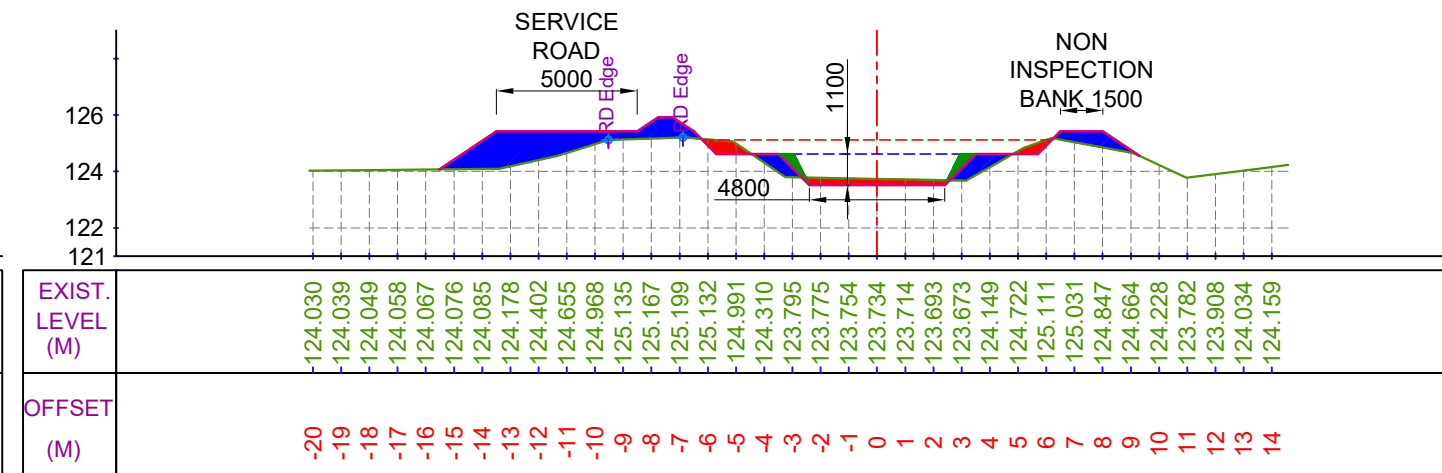
Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

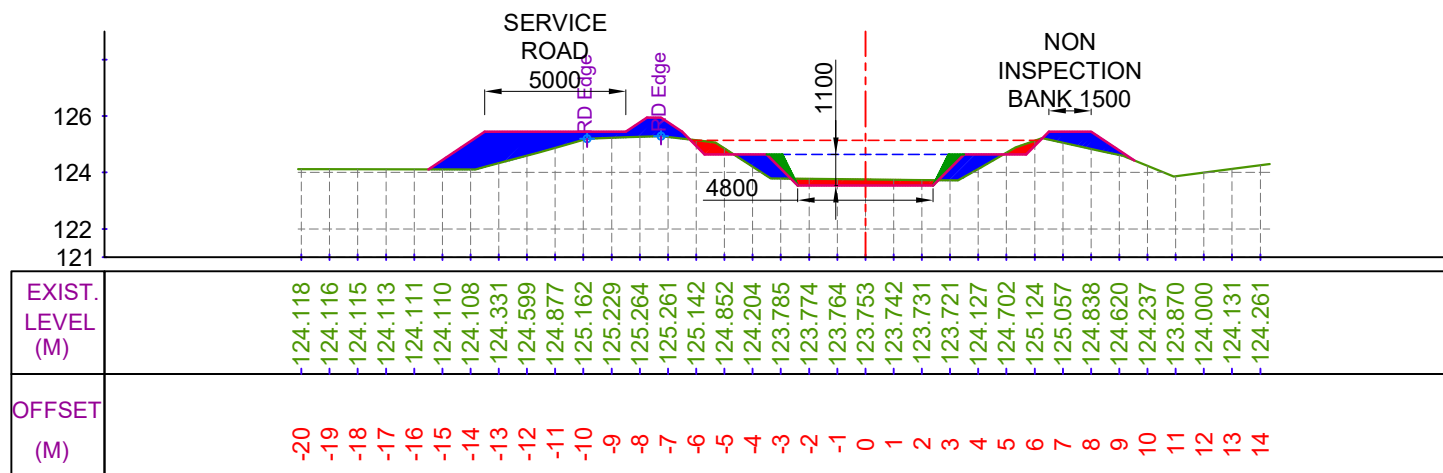
X SECTION OF KARMA DY.



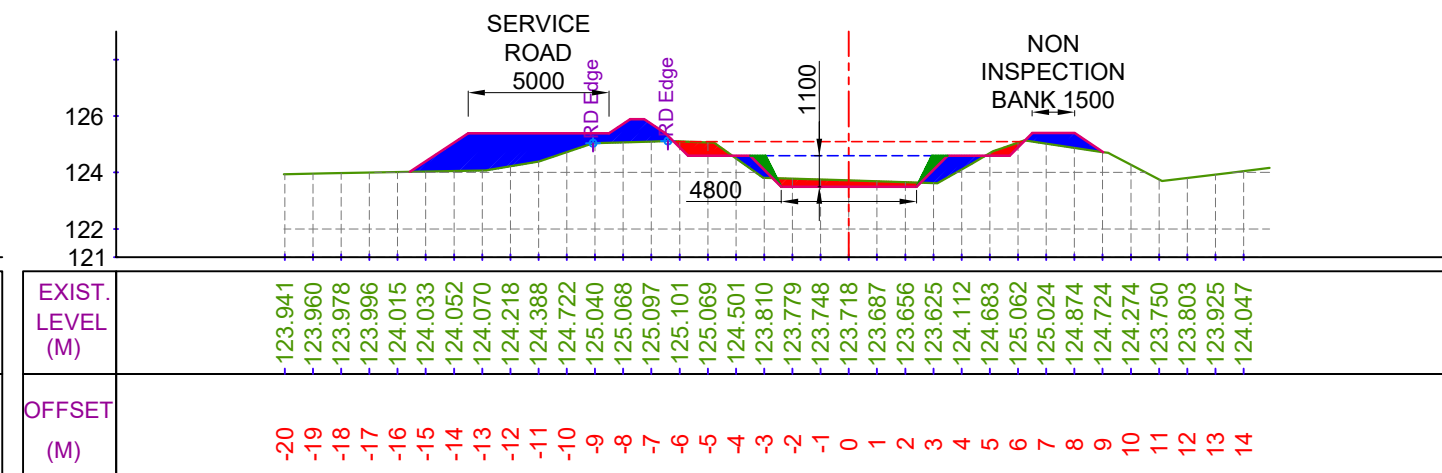
CUTTING AREA (SQ.M) = 1.538
FILLING AREA (SQ.M) = 7.781
CH. (KM):- 10+900
DESIGNED BED LEVEL = 123.568 M



CUTTING AREA (SQ.M) = 1.920
FILLING AREA (SQ.M) = 8.805
CH. (KM):- 11+100
DESIGNED BED LEVEL = 123.518 M



CUTTING AREA (SQ.M) = 1.731
FILLING AREA (SQ.M) = 8.287
CH. (KM):- 11+000
DESIGNED BED LEVEL = 123.543 M



CUTTING AREA (SQ.M) = 2.106
FILLING AREA (SQ.M) = 9.418
CH. (KM):- 11+200
DESIGNED BED LEVEL = 123.493 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

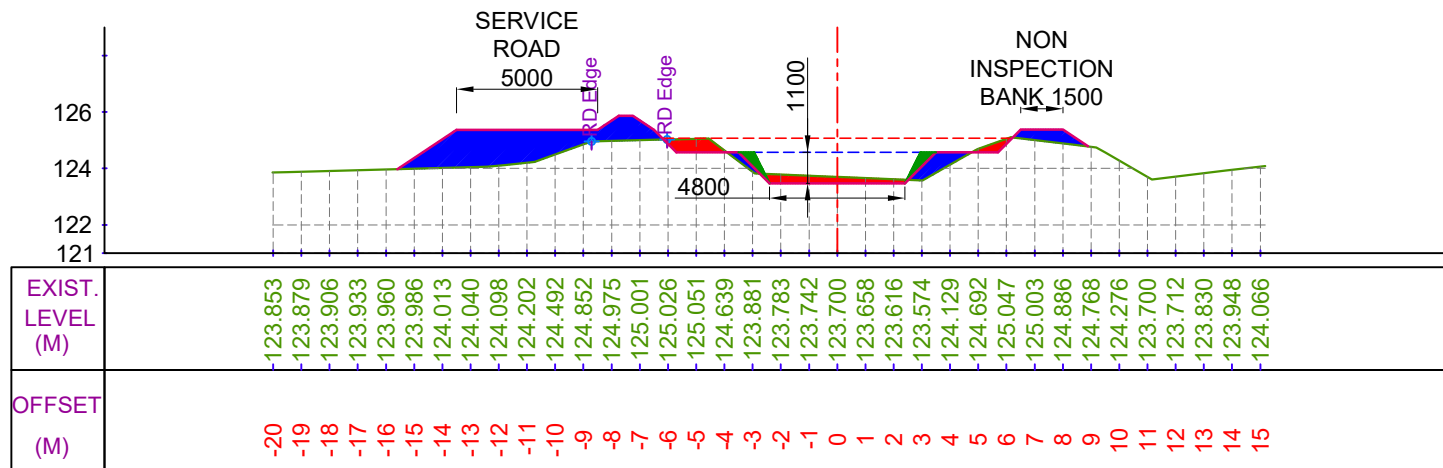


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

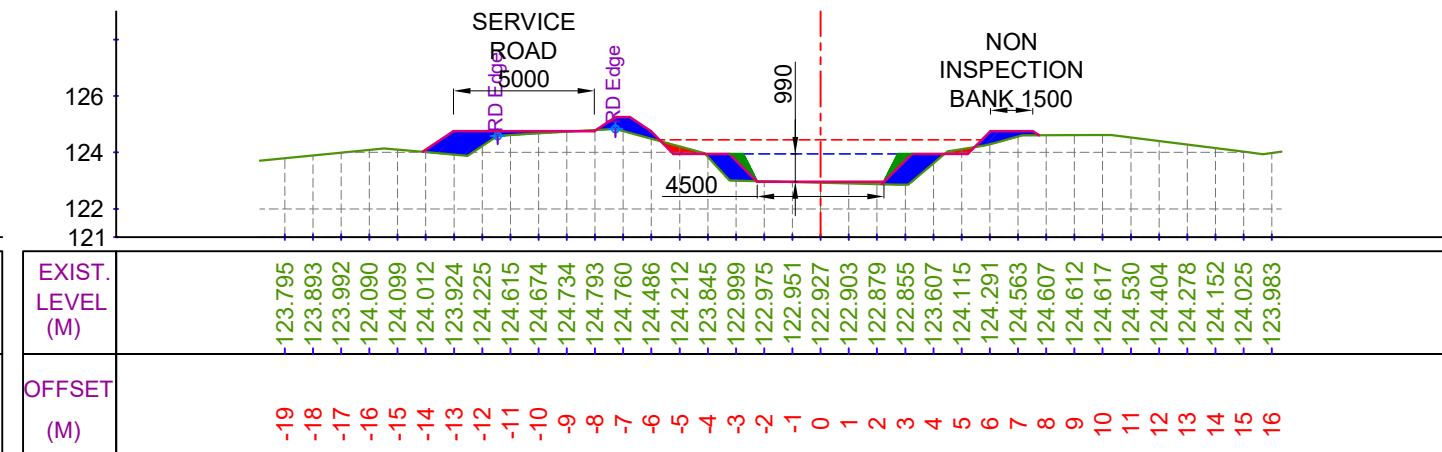
Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

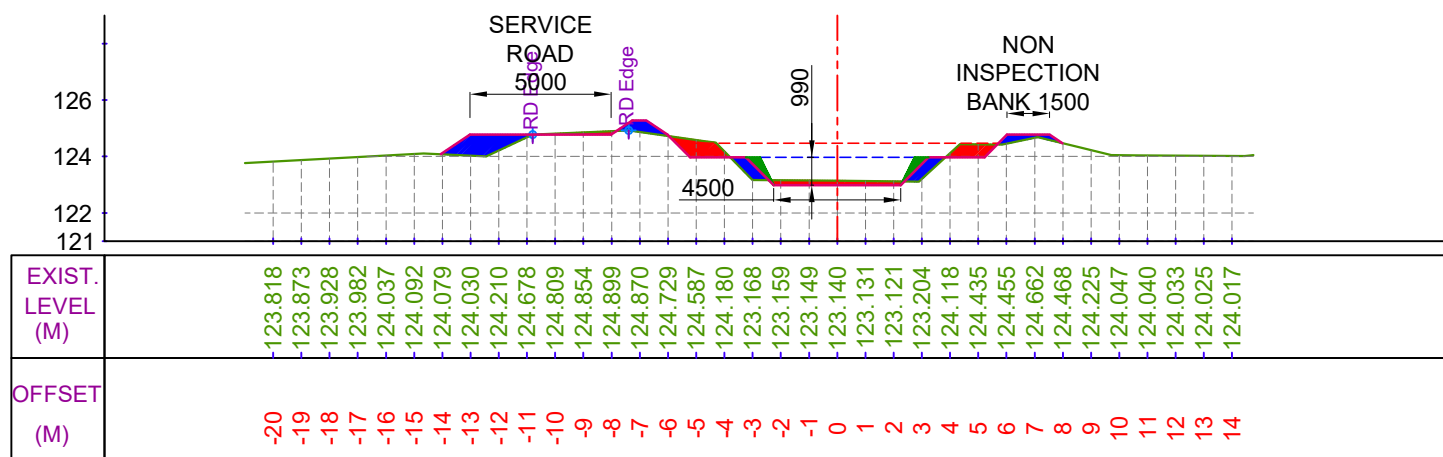
X SECTION OF KARMA DY.



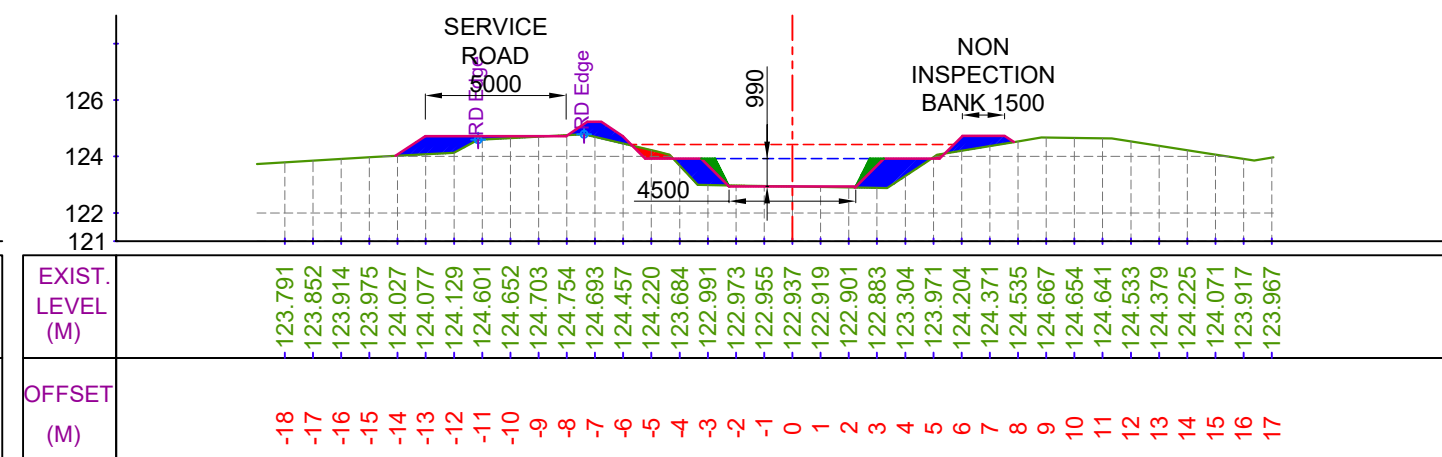
CUTTING AREA (SQ.M) = 2.253
 FILLING AREA (SQ.M) = 9.964
 CH. (KM):- 11+300
 DESIGNED BED LEVEL = 123.468 M



CUTTING AREA (SQ.M) = 0.416
 FILLING AREA (SQ.M) = 4.942
 CH. (KM):- 11+500
 DESIGNED BED LEVEL = 122.961 M



CUTTING AREA (SQ.M) = 2.408
 FILLING AREA (SQ.M) = 3.272
 CH. (KM):- 11+400
 DESIGNED BED LEVEL = 122.986 M



CUTTING AREA (SQ.M) = 0.395
 FILLING AREA (SQ.M) = 5.485
 CH. (KM):- 11+600
 DESIGNED BED LEVEL = 122.936 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

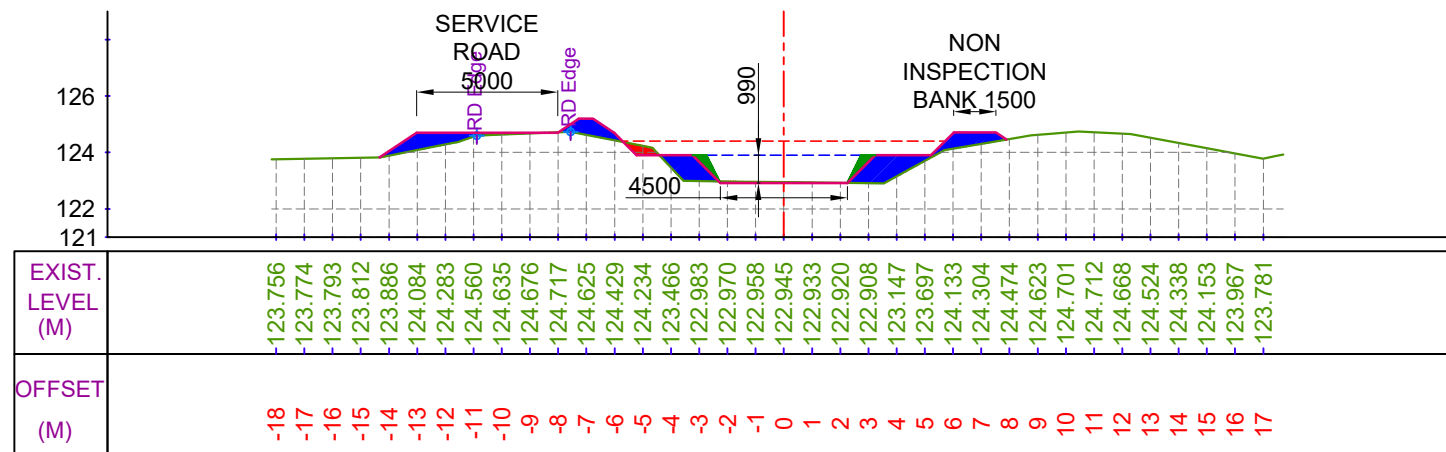
Prepared by :-

WAPCOS LTD.

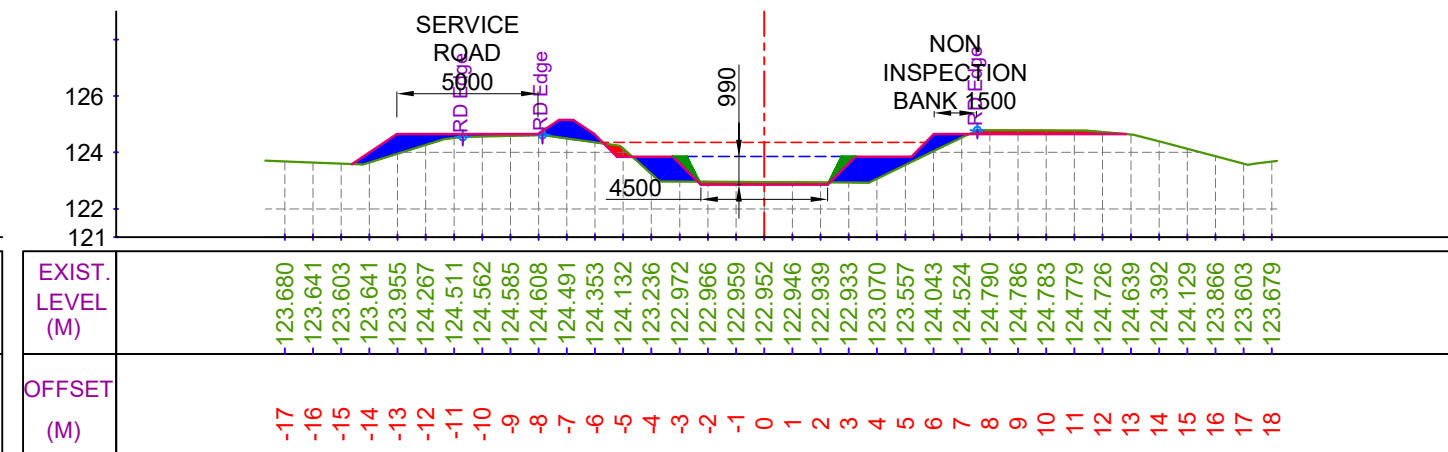


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 29 of 59

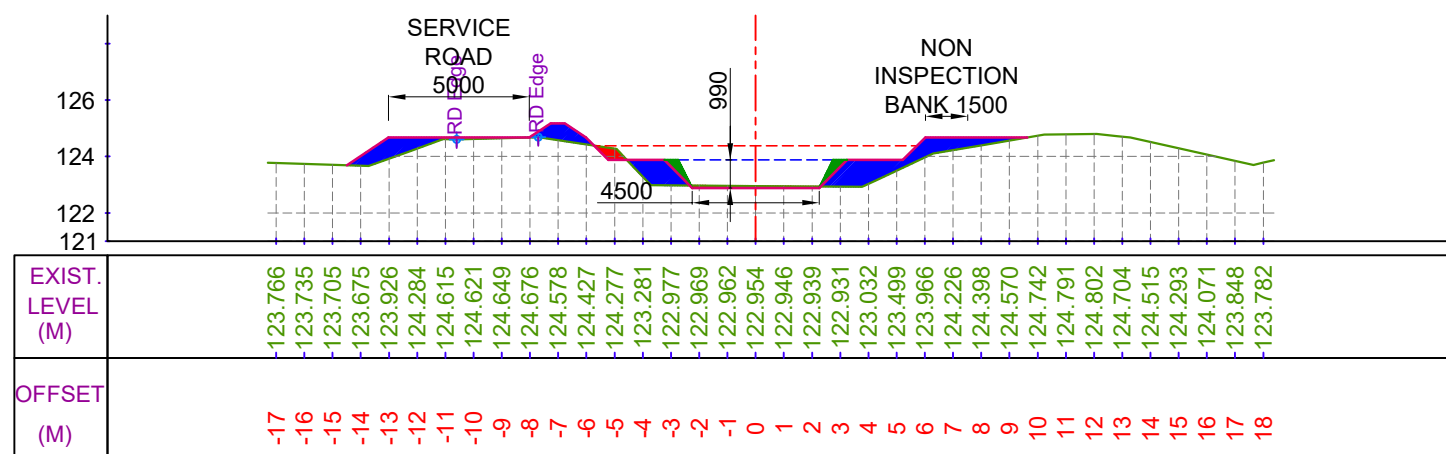
X SECTION OF KARMA DY.



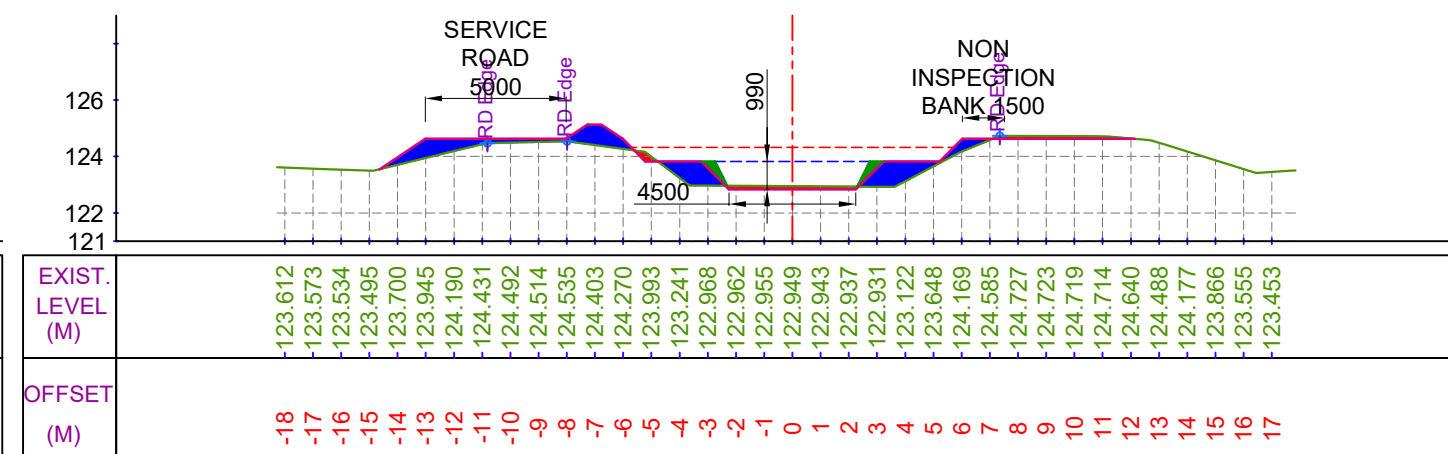
CUTTING AREA (SQ.M) = 0.461 CH. (KM):- 11+700
FILLING AREA (SQ.M) = 5.959 DESIGNED BED LEVEL = 122.911 M



CUTTING AREA (SQ.M) = 1.239 CH. (KM):- 11+900
FILLING AREA (SQ.M) = 6.259 DESIGNED BED LEVEL = 122.861 M



CUTTING AREA (SQ.M) = 0.611 CH. (KM):- 11+800
FILLING AREA (SQ.M) = 7.002 DESIGNED BED LEVEL = 122.886 M



CUTTING AREA (SQ.M) = 1.066 CH. (KM):- 12+000
FILLING AREA (SQ.M) = 6.101 DESIGNED BED LEVEL = 122.836 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

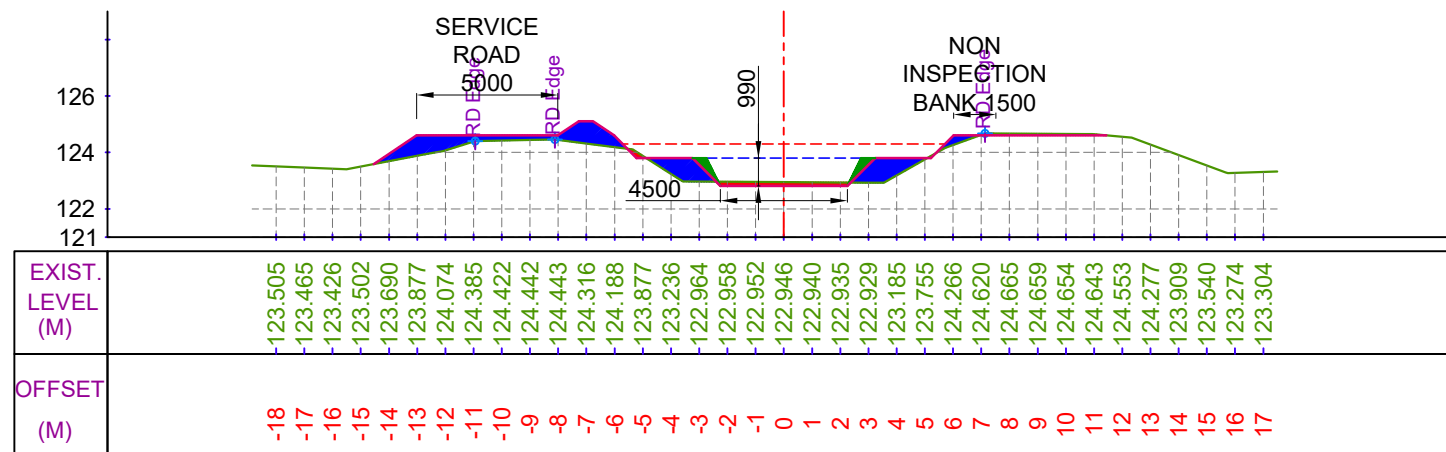
Prepared by :-

WAPCOS LTD.

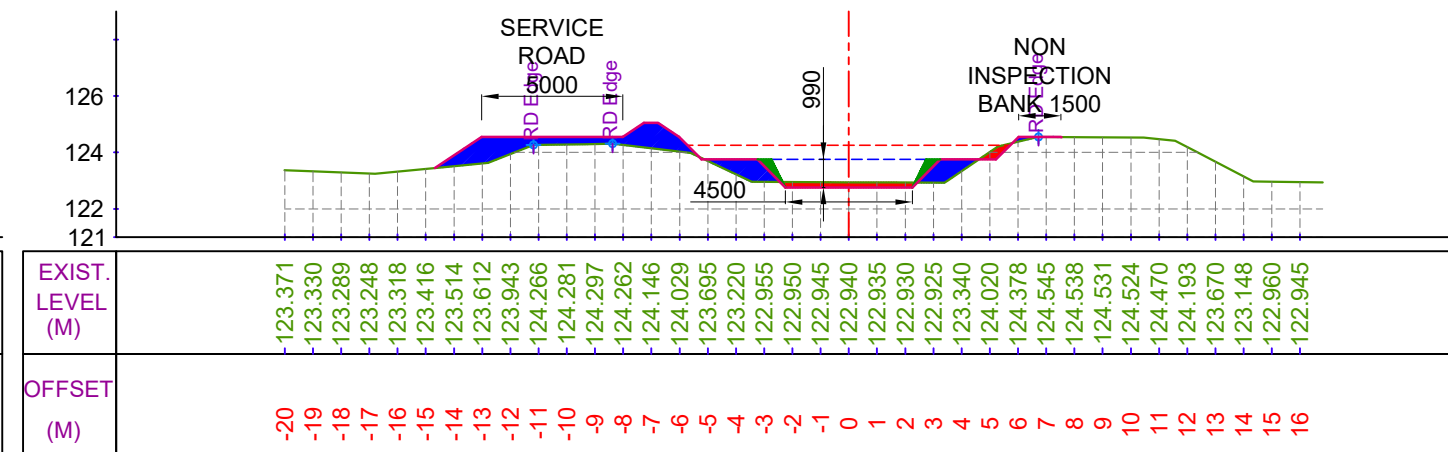


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 30 of 59

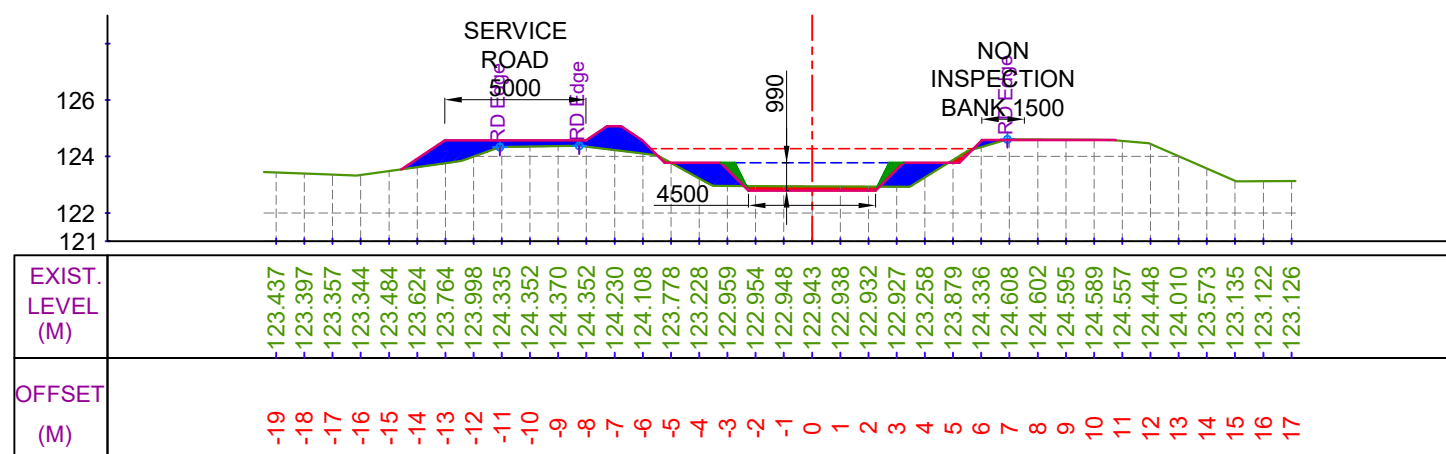
X SECTION OF KARMA DY.



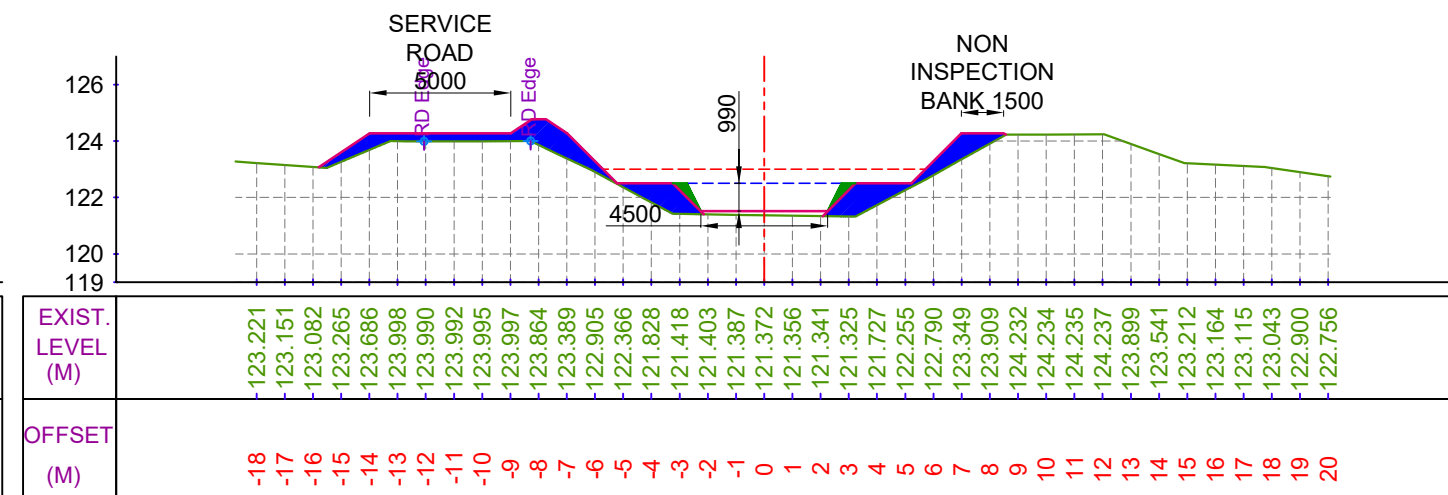
CUTTING AREA (SQ.M) = 0.938
FILLING AREA (SQ.M) = 6.090
CH. (KM):- 12+100
DESIGNED BED LEVEL = 122.811 M



CUTTING AREA (SQ.M) = 1.085
FILLING AREA (SQ.M) = 6.582
CH. (KM):- 12+300
DESIGNED BED LEVEL = 122.761 M



CUTTING AREA (SQ.M) = 0.931
FILLING AREA (SQ.M) = 6.268
CH. (KM):- 12+200
DESIGNED BED LEVEL = 122.786 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.901
CH. (KM):- 12+400
DESIGNED BED LEVEL = 121.516 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

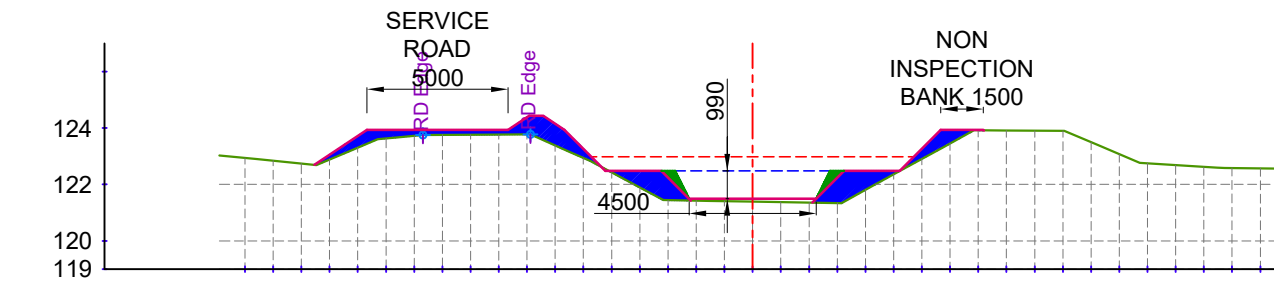
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 31 of 59

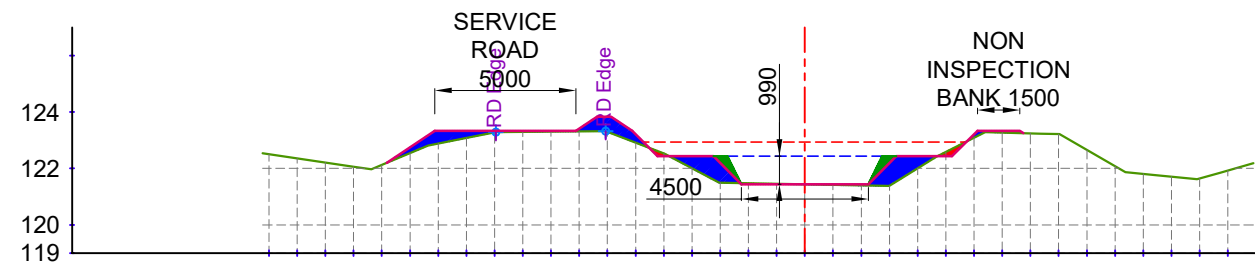
X SECTION OF KARMA DY.



EXIST. LEVEL (M)	122.936	122.838	122.740	122.884	123.305	123.632	123.727	123.759	123.764	123.768	123.773	123.384	122.938	122.424	121.888	121.442	121.425	121.409	121.392	121.375	121.359	121.342	121.808	122.359	122.907	123.453	123.916	123.910	123.903	123.897	123.494	123.073	122.750	122.686	122.621	122.583	122.569
OFFSET (M)	-18	-17	-16	-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	16	17	18

CUTTING AREA (SQ.M) = 0.008
FILLING AREA (SQ.M) = 7.352

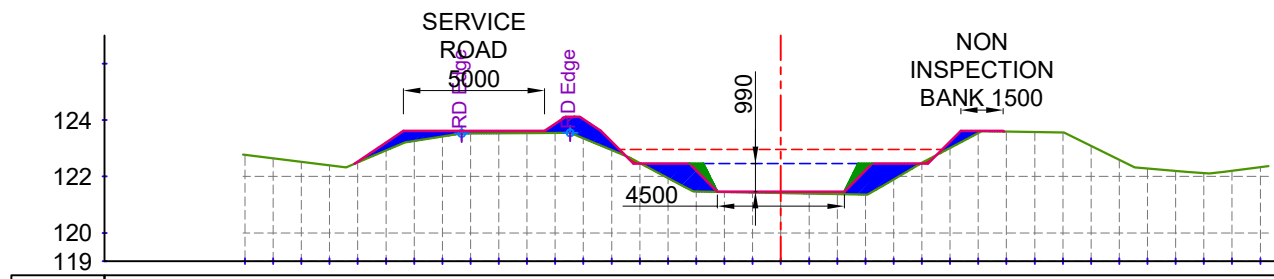
CH. (KM):- 12+500
DESIGNED BED LEVEL = 121.491 M



EXIST. LEVEL (M)	122.499	122.352	122.205	122.058	122.123	122.543	122.884	123.082	123.279	123.297	123.306	123.314	123.301	122.916	122.531	122.004	121.489	121.470	121.451	121.432	121.413	121.394	121.383	122.004	122.586	123.091	123.272	123.243	123.215	122.655	122.080	121.807	121.706	121.640	121.926
OFFSET (M)	-19	-18	-17	-16	-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) = 0.242
FILLING AREA (SQ.M) = 4.405

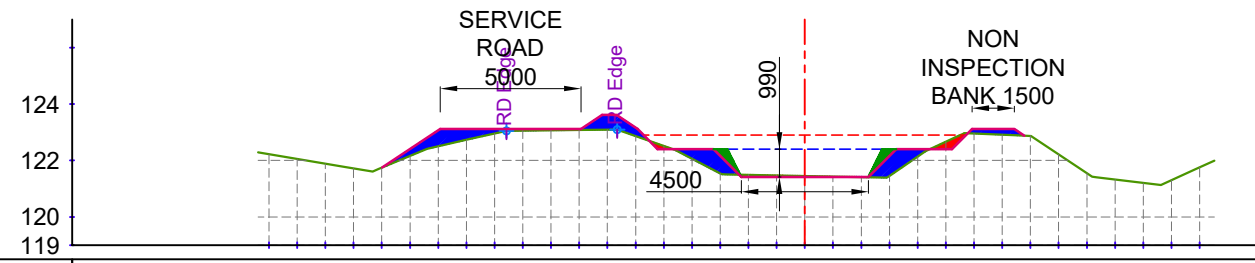
CH. (KM):- 12+700
DESIGNED BED LEVEL = 121.441 M



EXIST. LEVEL (M)	122.771	122.647	122.523	122.399	122.503	122.924	123.260	123.416	123.524	123.531	123.538	123.544	123.355	122.939	122.480	121.946	121.465	121.448	121.430	121.412	121.394	121.376	121.359	121.898	122.479	123.010	123.539	123.589	123.572	123.556	123.080	122.587	122.282	122.200	122.118	122.207	122.334
OFFSET (M)	-19	-18	-17	-16	-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	16	17

CUTTING AREA (SQ.M) = 0.080
FILLING AREA (SQ.M) = 5.670

CH. (KM):- 12+600
DESIGNED BED LEVEL = 121.466 M



EXIST. LEVEL (M)	122.221	122.053	121.886	121.719	121.742	122.162	122.507	122.734	122.960	123.061	123.072	123.083	123.094	122.869	122.516	122.059	121.535	121.493	121.472	121.452	121.432	121.411	121.457	122.135	122.664	122.961	122.917	122.874	122.216	121.546	121.323	121.202	121.297	121.760
OFFSET (M)	-19	-18	-17	-16	-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

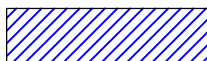
CUTTING AREA (SQ.M) = 0.499
FILLING AREA (SQ.M) = 4.418

CH. (KM):- 12+800
DESIGNED BED LEVEL = 121.416 M

LEGEND



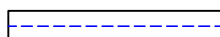
CUT AREA



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 :-

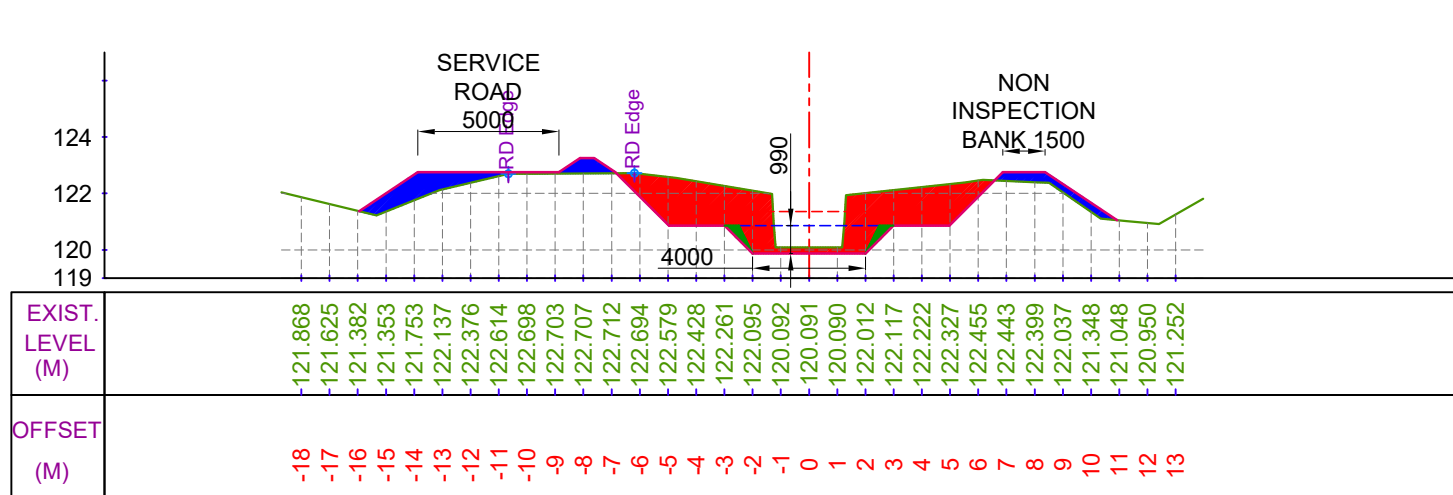
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

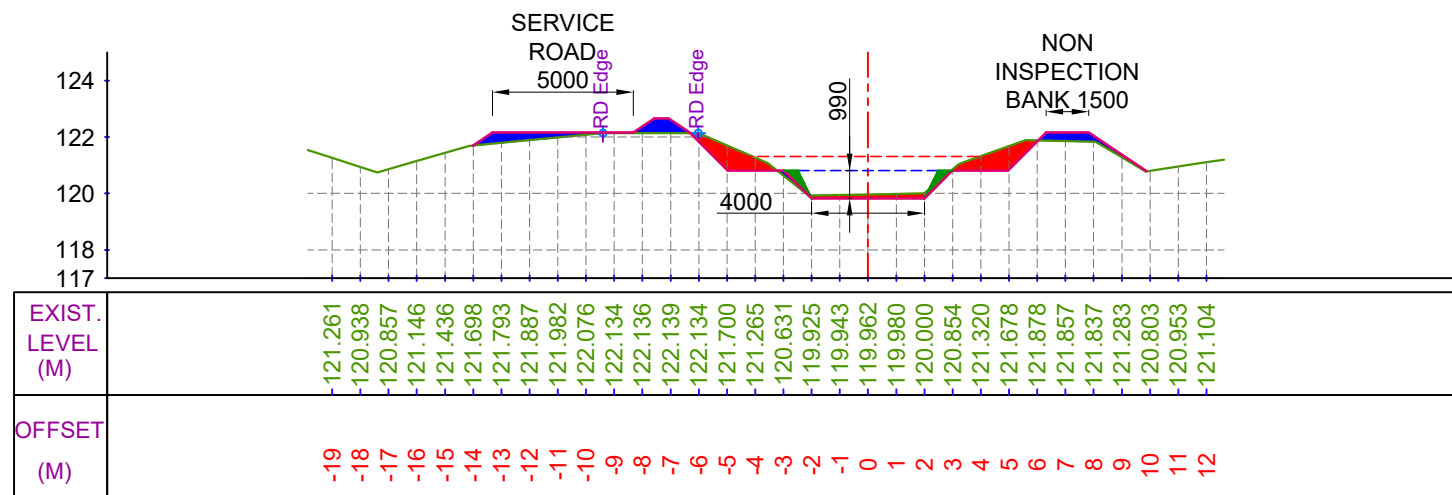
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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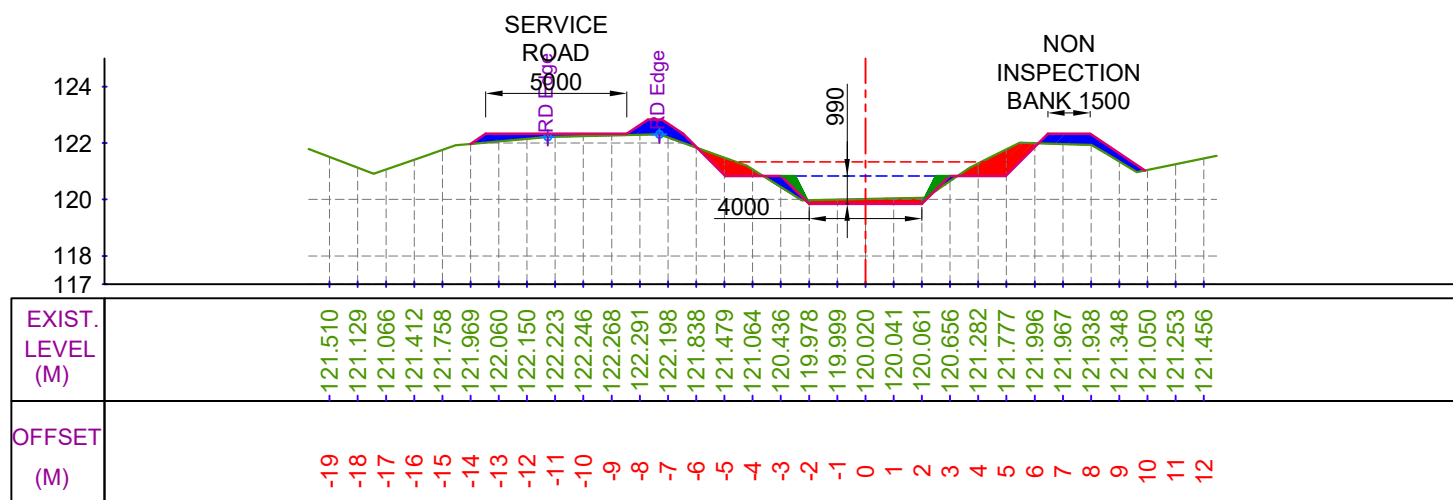
X SECTION OF KARMA DY.



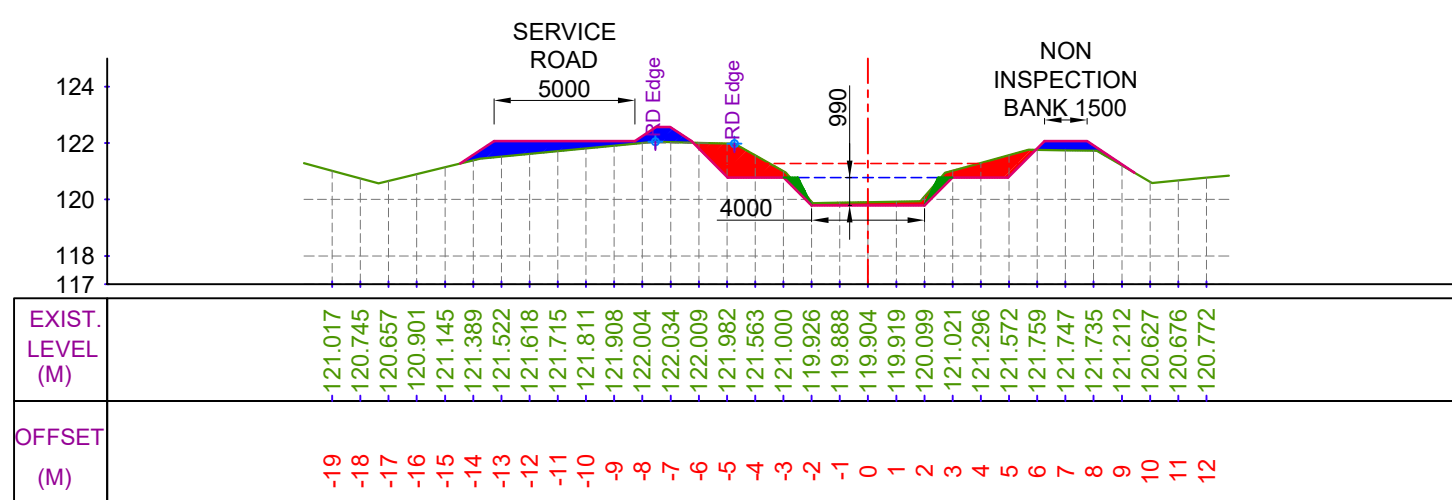
CUTTING AREA (SQ.M) = 15.408
FILLING AREA (SQ.M) = 4.819
CH. (KM):- 12+900
DESIGNED BED LEVEL = 119.867 M



CUTTING AREA (SQ.M) = 3.609
FILLING AREA (SQ.M) = 2.450
CH. (KM):- 13+100
DESIGNED BED LEVEL = 119.817 M



CUTTING AREA (SQ.M) = 3.007
FILLING AREA (SQ.M) = 3.197
CH. (KM):- 13+000
DESIGNED BED LEVEL = 119.842 M



CUTTING AREA (SQ.M) = 4.285
FILLING AREA (SQ.M) = 3.414
CH. (KM):- 13+200
DESIGNED BED LEVEL = 119.792 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

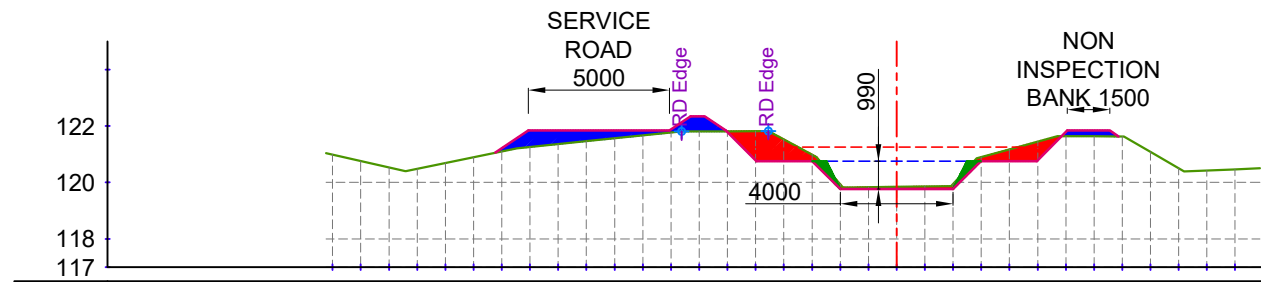
Prepared by :-

WAPCOS LTD.



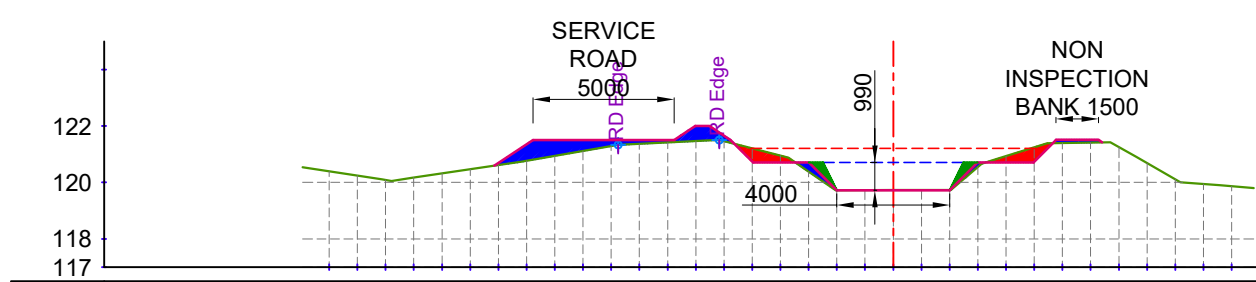
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 33 of 59

X SECTION OF KARMA DY.



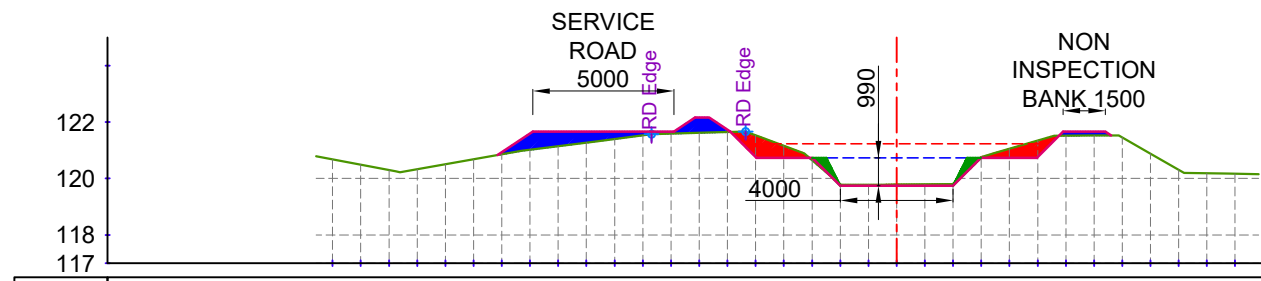
EXIST. LEVEL (M)	-120.986	-120.758	-120.530	-120.484	-120.691	-120.897	-121.103	-121.260	-121.361	-121.463	-121.564	-121.666	-121.767	-121.809	-121.814	-121.819	-121.528	-120.989	-119.937	-119.833	-119.845	-119.856	-119.943	-120.895	-121.171	-121.447	-121.638	-121.634	-121.631	-121.083	-120.503	-120.425	-120.465
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 3.559
FILLING AREA (SQ.M) = 3.044
CH. (KM):- 13+300
DESIGNED BED LEVEL = 119.767 M



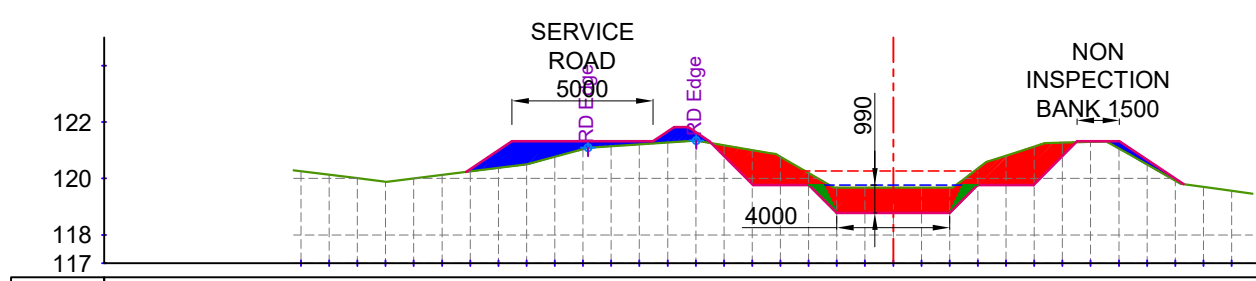
EXIST. LEVEL (M)	-120.394	-120.240	-120.086	-120.170	-120.317	-120.465	-120.613	-120.765	-120.939	-121.113	-121.287	-121.366	-121.415	-121.464	-121.461	-121.204	-120.947	-120.381	-119.724	-119.726	-119.729	-119.732	-119.735	-120.544	-120.932	-121.245	-121.399	-121.415	-121.256	-120.685	-120.113	-119.942	-119.864
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 1.239
FILLING AREA (SQ.M) = 3.319
CH. (KM):- 13+500
DESIGNED BED LEVEL = 119.717 M



EXIST. LEVEL (M)	-120.678	-120.489	-120.489	-120.331	-120.506	-120.680	-120.855	-121.015	-121.143	-121.272	-121.400	-121.528	-121.587	-121.616	-121.645	-121.530	-121.157	-120.650	-119.798	-119.780	-119.787	-119.794	-119.794	-120.760	-121.053	-121.345	-121.517	-121.523	-121.459	-120.883	-120.308	-120.185	-120.166
OFFSET (M)	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 2.277
FILLING AREA (SQ.M) = 2.974
CH. (KM):- 13+400
DESIGNED BED LEVEL = 119.742 M



EXIST. LEVEL (M)	-120.256	-120.133	-120.009	-119.883	-120.000	-120.126	-120.251	-120.376	-120.501	-120.771	-121.042	-121.146	-121.212	-121.278	-121.344	-121.176	-121.005	-120.770	-120.194	-119.677	-119.676	-119.675	-119.673	-119.672	-120.361	-120.804	-121.134	-121.274	-121.299	-121.065	-120.495	-119.926	-119.700	-119.562
OFFSET (M)	-21	-20	-19	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 10.307
FILLING AREA (SQ.M) = 3.728
CH. (KM):- 13+600
DESIGNED BED LEVEL = 118.777 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

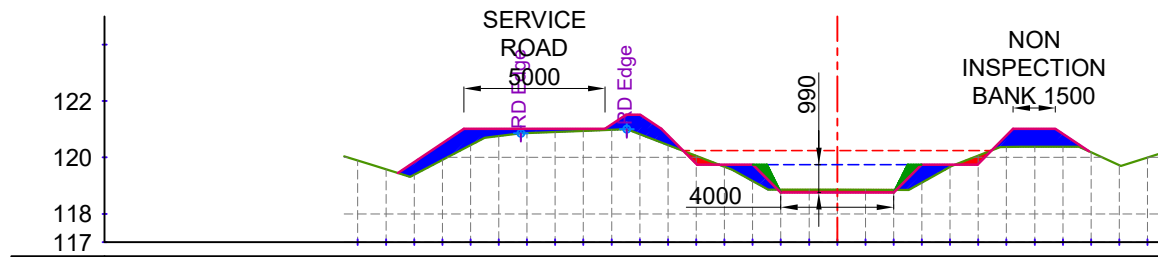
Prepared by :-

WAPCOS LTD.



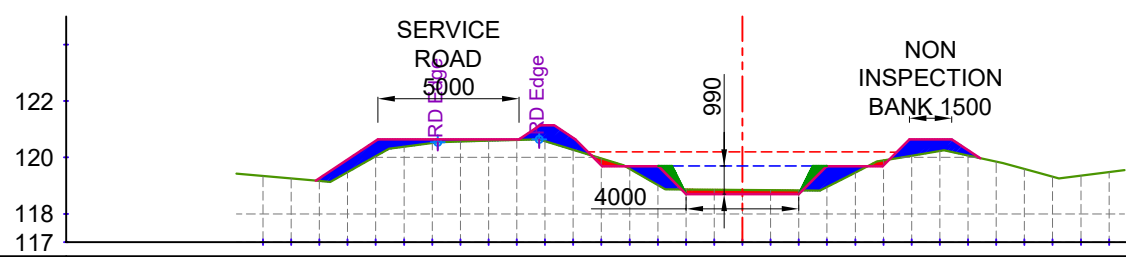
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 34 of 59

X SECTION OF KARMA DY.



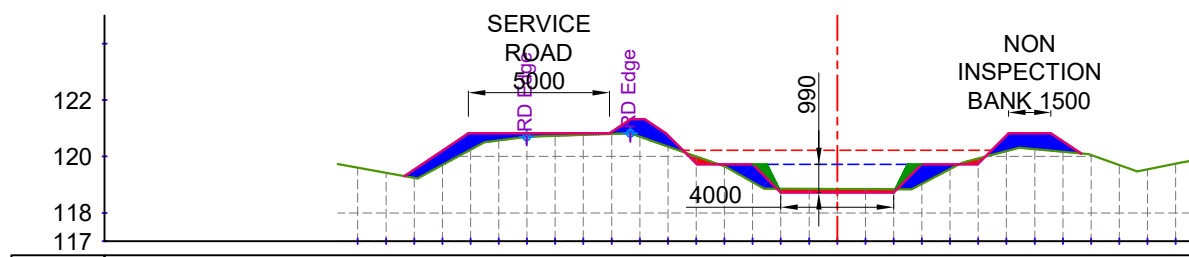
EXIST. LEVEL (M)	-119.887	-119.578	-119.386	-119.911	-120.437	-120.762	-120.866	-120.903	-120.940	-120.977	-120.820	-120.436	-120.052	-119.668	-119.160	-118.854	-118.854	-118.853	-118.852	-119.110	-119.663	-120.064	-120.372	-120.373	-120.375	-120.182	-119.726	-119.999	
OFFSET (M)	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.801
FILLING AREA (SQ.M) = 6.059
CH. (KM):- 13+700
DESIGNED BED LEVEL = 118.752 M



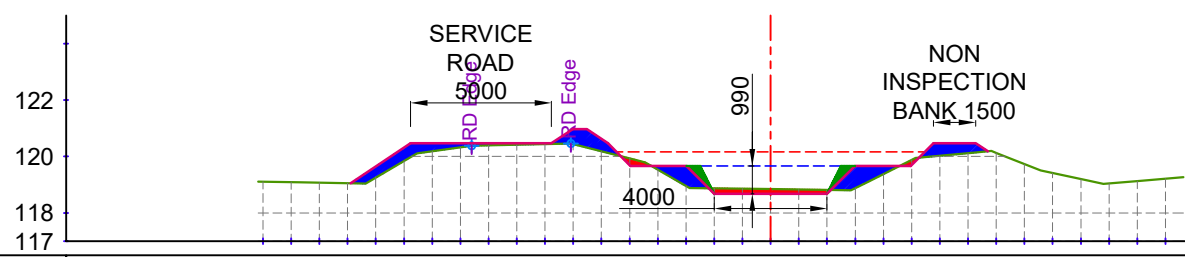
EXIST. LEVEL (M)	-119.340	-119.253	-119.167	-119.480	-120.042	-120.378	-120.514	-120.563	-120.590	-120.617	-120.574	-120.267	-119.960	-119.598	-119.027	-118.867	-118.857	-118.847	-118.837	-118.828	-118.953	-119.463	-119.895	-120.062	-120.229	-120.068	-119.850	-119.589	-119.314	-119.352	-119.479
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 0.836
FILLING AREA (SQ.M) = 5.420
CH. (KM):- 13+900
DESIGNED BED LEVEL = 118.702 M



EXIST. LEVEL (M)	-119.601	-119.423	-119.244	-119.699	-120.240	-120.570	-120.700	-120.732	-120.764	-120.796	-120.700	-120.351	-120.001	-119.651	-119.095	-118.861	-118.855	-118.850	-118.845	-118.840	-119.028	-119.557	-119.927	-120.191	-120.263	-120.171	-120.054	-119.702	-119.546	-119.744
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 0.769
FILLING AREA (SQ.M) = 5.827
CH. (KM):- 13+800
DESIGNED BED LEVEL = 118.727 M



EXIST. LEVEL (M)	-119.111	-119.092	-119.074	-119.056	-119.254	-119.841	-120.185	-120.325	-120.395	-120.417	-120.439	-120.439	-120.186	-119.933	-119.535	-119.956	-118.872	-118.858	-118.844	-118.830	-118.816	-118.882	-119.379	-119.876	-120.024	-120.116	-120.125	-119.734	-119.418	-119.203	-119.046	-119.129	-119.211
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.912
FILLING AREA (SQ.M) = 4.915
CH. (KM):- 14+000
DESIGNED BED LEVEL = 118.677 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

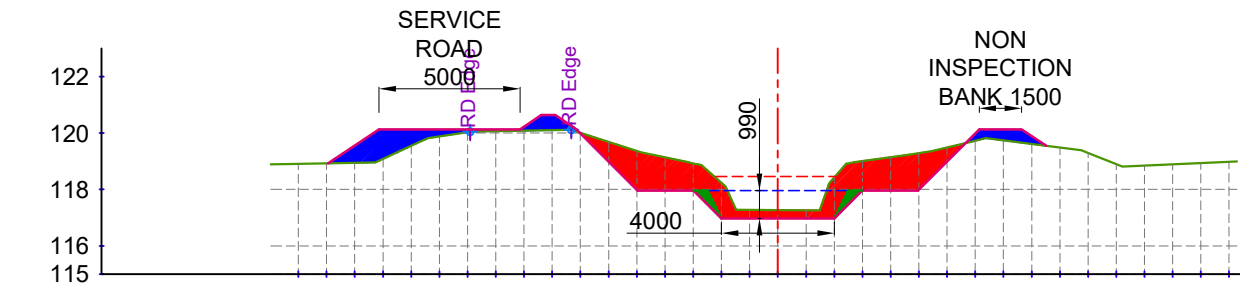
Prepared by :-

WAPCOS LTD.



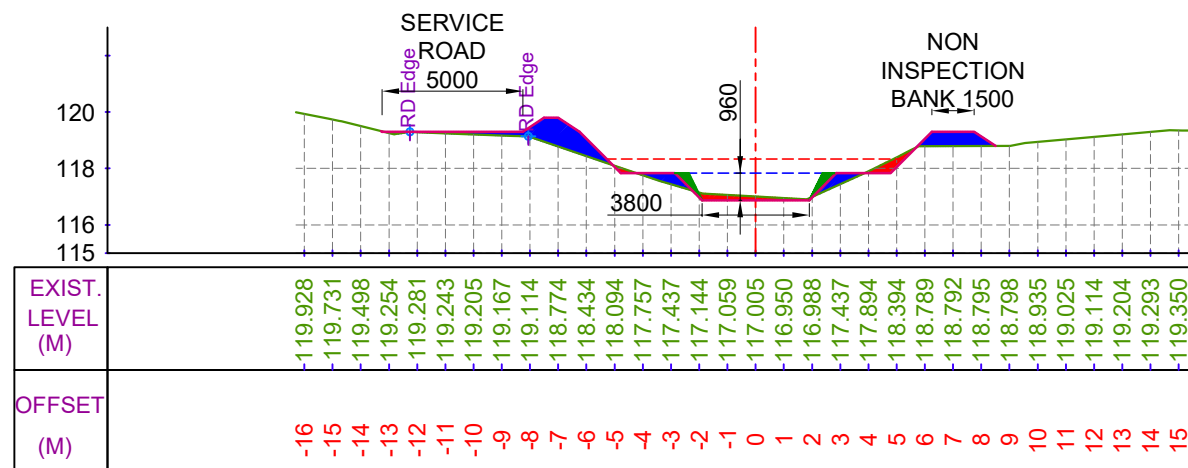
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 35 of 59

X SECTION OF KARMA DY.

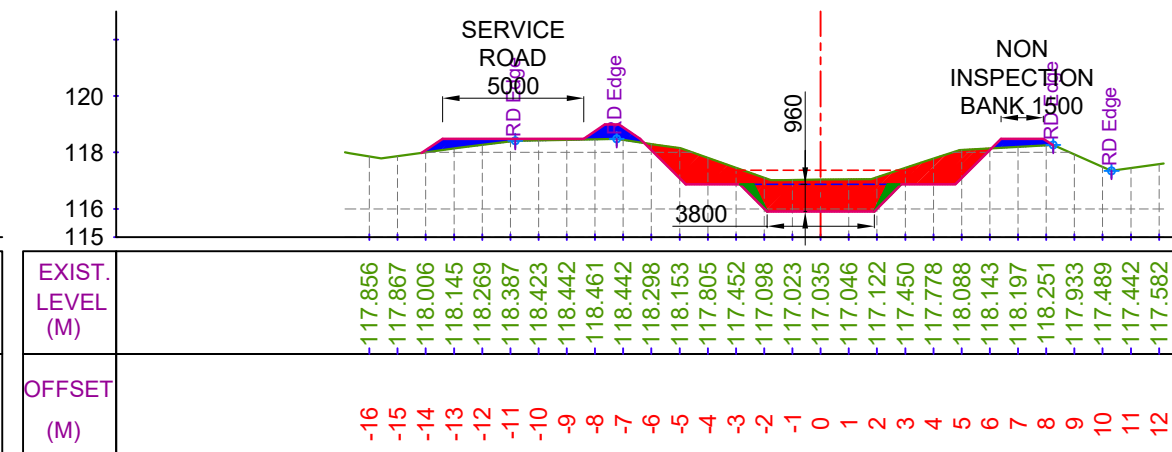


EXIST. LEVEL (M)	-118.905	-118.924	-118.942	-118.960	-118.978	-118.996	-119.014	-119.032	-119.050	-119.068	-119.086	-119.104	-119.122	-119.140	-119.158	-119.176	-119.194	-119.212	-119.230	-119.248	-119.266	-119.284	-119.302	-119.320	-119.338	-119.356	-119.374	-119.392	-119.410	-119.428	-119.446	-119.464	-119.482	-119.500	-119.518	-119.536	-119.554	-119.572	-119.590	-119.608	-119.626	-119.644	-119.662	-119.680	-119.698	-119.716	-119.734	-119.752	-119.770	-119.788	-119.806	-119.824	-119.842	-119.860	-119.878	-119.896	-119.914	-119.932	-119.950	-119.968	-119.986	-120.004	-120.022	-120.040	-120.058	-120.076	-120.094	-120.112	-120.130	-120.148	-120.166	-120.184	-120.202	-120.220	-120.238	-120.256	-120.274	-120.292	-120.310	-120.328	-120.346	-120.364	-120.382	-120.400	-120.418	-120.436	-120.454	-120.472	-120.490	-120.508	-120.526	-120.544	-120.562	-120.580	-120.598	-120.616	-120.634	-120.652	-120.670	-120.688	-120.706	-120.724	-120.742	-120.760	-120.778	-120.796	-120.814	-120.832	-120.850	-120.868	-120.886	-120.904	-120.922	-120.940	-120.958	-120.976	-120.994	-121.012	-121.030	-121.048	-121.066	-121.084	-121.102	-121.120	-121.138	-121.156	-121.174	-121.192	-121.210	-121.228	-121.246	-121.264	-121.282	-121.300	-121.318	-121.336	-121.354	-121.372	-121.390	-121.408	-121.426	-121.444	-121.462	-121.480	-121.498	-121.516	-121.534	-121.552	-121.570	-121.588	-121.606	-121.624	-121.642	-121.660	-121.678	-121.696	-121.714	-121.732	-121.750	-121.768	-121.786	-121.804	-121.822	-121.840	-121.858	-121.876	-121.894	-121.912	-121.930	-121.948	-121.966	-121.984	-122.002	-122.020	-122.038	-122.056	-122.074	-122.092	-122.110	-122.128	-122.146	-122.164	-122.182	-122.200	-122.218	-122.236	-122.254	-122.272	-122.290	-122.308	-122.326	-122.344	-122.362	-122.380	-122.398	-122.416	-122.434	-122.452	-122.470	-122.488	-122.506	-122.524	-122.542	-122.560	-122.578	-122.596	-122.614	-122.632	-122.650	-122.668	-122.686	-122.704	-122.722	-122.740	-122.758	-122.776	-122.794	-122.812	-122.830	-122.848	-122.866	-122.884	-122.902	-122.920	-122.938	-122.956	-122.974	-122.992	-123.010	-123.028	-123.046	-123.064	-123.082	-123.100	-123.118	-123.136	-123.154	-123.172	-123.190	-123.208	-123.226	-123.244	-123.262	-123.280	-123.298	-123.316	-123.334	-123.352	-123.370	-123.388	-123.406	-123.424	-123.442	-123.460	-123.478	-123.496	-123.514	-123.532	-123.550	-123.568	-123.586	-123.604	-123.622	-123.640	-123.658	-123.676	-123.694	-123.712	-123.730	-123.748	-123.766	-123.784	-123.802	-123.820	-123.838	-123.856	-123.874	-123.892	-123.910	-123.928	-123.946	-123.964	-123.982	-124.000	-124.018	-124.036	-124.054	-124.072	-124.090	-124.108	-124.126	-124.144	-124.162	-124.180	-124.198	-124.216	-124.234	-124.252	-124.270	-124.288	-124.306	-124.324	-124.342	-124.360	-124.378	-124.396	-124.414	-124.432	-124.450	-124.468	-124.486	-124.504	-124.522	-124.540	-124.558	-124.576	-124.594	-124.612	-124.630	-124.648	-124.666	-124.684	-124.702	-124.720	-124.738	-124.756	-124.774	-124.792	-124.810	-124.828	-124.846	-124.864	-124.882	-124.900	-124.918	-124.936	-124.954	-124.972	-124.990	-125.008	-125.026	-125.044	-125.062	-125.080	-125.098	-125.116	-125.134	-125.152	-125.170	-125.188	-125.206	-125.224	-125.242	-125.260	-125.278	-125.296	-125.314	-125.332	-125.350	-125.368	-125.386	-125.404	-125.422	-125.440	-125.458	-125.476	-125.494	-125.512	-125.530	-125.548	-125.566	-125.584	-125.602	-125.620	-125.638	-125.656	-125.674	-125.692	-125.710	-125.728	-125.746	-125.764	-125.782	-125.800	-125.818	-125.836	-125.854	-125.872	-125.890	-125.908	-125.926	-125.944	-125.962	-125.980	-125.998	-126.016	-126.034	-126.052	-126.070	-126.088	-126.106	-126.124	-126.142	-126.160	-126.178	-126.196	-126.214	-126.232	-126.250	-126.268	-126.286	-126.304	-126.322	-126.340	-126.358	-126.376	-126.394	-126.412	-126.430	-126.448	-126.466	-126.484	-126.502	-126.520	-126.538	-126.556	-126.574	-126.592	-126.610	-126.628	-126.646	-126.664	-126.682	-126.700	-126.718	-126.736	-126.754	-126.772	-126.790	-126.808	-126.826	-126.844	-126.862	-126.880	-126.898	-126.916	-126.934	-126.952	-126.970	-126.988	-127.006	-127.024	-127.042	-127.060	-127.078	-127.096	-127.114	-127.132	-127.150	-127.168	-127.186	-127.204	-127.222	-127.240	-127.258	-127.276	-127.294	-127.312	-127.330	-127.348	-127.366	-127.384	-127.402	-127.420	-127.438	-127.456	-127.474	-127.492	-127.510	-127.528	-127.546	-127.564	-127.582	-127.600	-127.618	-127.636	-127.654	-127.672	-127.690	-127.708	-127.726	-127.744	-127.762	-127.780	-127.798	-127.816	-127.834	-127.852	-127.870	-127.888	-127.906	-127.924	-127.942	-127.960	-127.978	-127.996	-128.014	-128.032	-128.050	-128.068	-128.086	-128.104	-128.122	-128.140	-128.158	-128.176	-128.194	-128.212	-128.230	-128.248	-128.266	-128.284	-128.302	-128.320	-128.338	-128.356	-128.374	-128.392	-128.410	-128.428	-128.446	-128.464	-128.482	-128.500	-128.518	-128.536	-128.554	-128.572	-128.590	-128.608	-128.626	-128.644	-128.662	-128.680	-128.698	-128.716	-128.734	-128.752	-128.770	-128.788	-128.806	-128.824	-128.842	-128.860	-128.878	-128.896	-128.914	-128.932	-128.950	-128.968	-128.986	-129.004	-129.022	-129.040	-129.058	-129.076	-129.094	-129.112	-129.130	-129.148	-129.166	-129.184	-129.202	-129.220	-129.238	-129.256	-129.274	-129.292	-129.310	-129.328	-129.346	-129.364	-129.382	-129.400	-129.418	-129.436	-129.454	-129.472	-129.490	-129.508	-129.526	-129.544	-129.562	-129.580	-129.598	-129.616	-129.634	-129.652	-129.670	-129.688	-129.706	-129.724	-129.742	-129.760	-129.778	-129.796	-129.814	-129.832	-129.850	-129.868	-129.886	-129.904	-129.922	-129.940	-129.958	-129.976	-129.994	-130.012	-130.030	-130.048	-130.066	-130.084	-130.102	-130.120	-130.138	-130.156	-130.174	-130.192	-130.210	-130.228	-130.246	-130.264	-130.282	-130.300	-130.318	-130.336	-130.354	-130.372	-130.390	-130.408	-130.426	-130.444	-130.462	-130.480	-130.498	-130.516	-130.534	-130.552	-130.570	-130.588	-130.606	-130.624	-130.642	-130.660	-130.678	-130.696	-130.714	-130.732	-130.750	-130.768	-130.786	-130.804	-130.822	-130.840	-130.858	-130.876	-130.894	-130.912	-130.930	-130.948	-130.966	-130.984	-131.002	-131.020	-131.038	-131.056	-131.074	-131.092	-131.110	-131.128	-131.146	-131.164	-131.182	-131.200	-131.218	-131.236	-131.254	-131.272	-131.290	-131.308	-131.326	-131.344	-131.362	-131.380	-131.398	-131.416	-131.434	-131.452	-131.470	-131.488	-131.506	-131.524	-131.542	-131.560	-131.578	-131.596	-131.614	-131.632	-131.650	-131.668	-131.686	-131.704	-131.722	-131.740	-131.758	-131.776	-131.794	-131.812	-131.830	-131.848	-131.866	-131.884	-131.902	-131.920	-131.938	-131.956	-131.974	-131.992	-132.010	-132.028	-132.046	-132.064	-132.082	-132.100	-132.118	-132.136	-132.154	-132.172	-132.190	-132.208	-132.226	-132.244	-132.262	-132.280	-132.298	-132.316	-132.334	-132.352	-132.370	-132.388	-132.406	-132.424	-132.442	-132.460	-132.478	-132.496	-132.514	-132.532	-132.550	-132.568	-132.586	-132.604	-132.622	-132.640	-132.658	-132.676	-132.694	-132.712	-132.730	-132.748	-132.766	-132.784	-132.802	-132.820	-132.838	-132.856	-132.874	-132.892	-132.910	-132.928	-132.946	-132.964	-132.982	-133.000	-133.018	-133.036	-133.054	-133.072	-133.090	-133.108	-133.126	-133.144	-133.162	-133.180	-133.198	-133.216	-133.234	-133.252	-133.270	-133.288	-133.306	-133.324	-133.342	-133.360	-133.378	-133.396	-133.414	-133.432	-133.450	-133.468	-133.486	-133.504	-133.522	-133.540	-133.558	-133.576	-133.594	-133.612	-133.630	-133.648	-133.666	-133.684	-133.702	-133.720	-133.738	-133.756	-133.774	-133.792	-133.810	-133.828	-133.846	-133.864	-133.882	-133.900	-133.918	-133.936	-133.954	-133.972	-133.990	-134.008	-134.026	-134.044	-134.062	-134.080	-134.098	-134.116	-134.134	-134.152	-134.170	-134.188	-134.206	-134.224	-134.242	-134.260	-134.278	-134.296	-134.314	-134.332	-134.350	-134.368	-134.386	-134.404	-134.422	-134.440	-134.458	-134.476	-134.494	-134.512	-134.530	-134.548	-134.566	-134.584	-134.602	-134.620	-134.638	-134.656	-134.674	-134.692	-134.710	-134.728	-134.746	-134.764	-134.782	-134.800	-134.818	-134.836	-134.854	-134.872	-134.890	-134.908	-134.926	-134.944	-134.962	-134.980	-135.000	-135.018	-135.036	-135.054	-135.072	-135.090	-135.108	-135.126	-135.144	-135.162	-135.180	-135.198	-135.216	-135.234	-135.252	-135.270	-135.288	-135.306	-135.324	-135.342	-135.360	-135.378	-135.396	-135.414	-135.432	-135.450	-135.468	-135.486	-135.504	-135.522	-135.540	-135.558	-135.576	-135.594	-135.612	-135.630	-135.648	-135.666	-135.684	-135.702	-135.720	-135.738	-135.756	-135.774	-135.792	-135.810	-135.828	-135.846	-135.864	-135.882	-135.900	-135.918	-135.936	-135.954	-135.972	-135.990	-136.008	-136.026	-136.044	-136.062	-136.080	-136.098	-136.116	-136.134	-136.152	-136.170	-136.188	-136.206	-136.224	-136.242	-136.260	-136.278	-136.296	-136.314	-136.332	-136.350	-136.368	-136.386	-136.404	-136.422	-136.440	-136.458	-136.476	-136.494	-136.512	-136.530	-136.548	-136.566	-136.584	-136.602	-136.620	-136.638	-136.656	-136.674	-136.692	-136.710	-136.728	-136.746	-136.764	-136.782	-136.800	-136.818	-136.836	-136.854	-136.872	-136.890	-136.908	-136.926	-136.944	-136.962	-136.980	-137.000	-137.018	-137.036	-137.054	-137.072	-137.090	-137.
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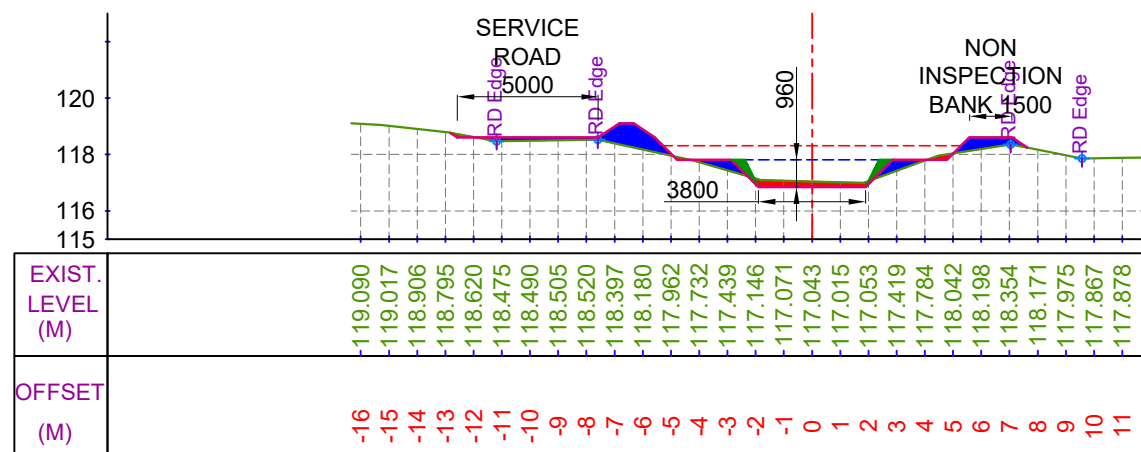
X SECTION OF KARMA DY.



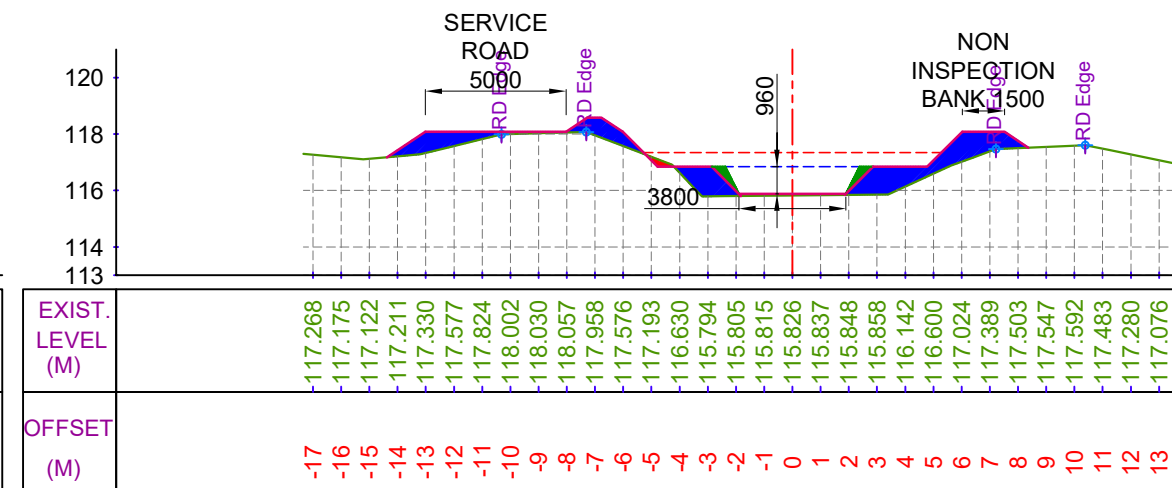
CUTTING AREA (SQ.M) = 1.013
FILLING AREA (SQ.M) = 4.317
CH. (KM):- 14+500
DESIGNED BED LEVEL = 116.872 M



CUTTING AREA (SQ.M) = 10.454
FILLING AREA (SQ.M) = 2.112
CH. (KM):- 14+700
DESIGNED BED LEVEL = 115.908 M



CUTTING AREA (SQ.M) = 0.972
FILLING AREA (SQ.M) = 3.407
CH. (KM):- 14+600
DESIGNED BED LEVEL = 116.847 M



CUTTING AREA (SQ.M) = 0.145
FILLING AREA (SQ.M) = 8.621
CH. (KM):- 14+800
DESIGNED BED LEVEL = 115.883 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

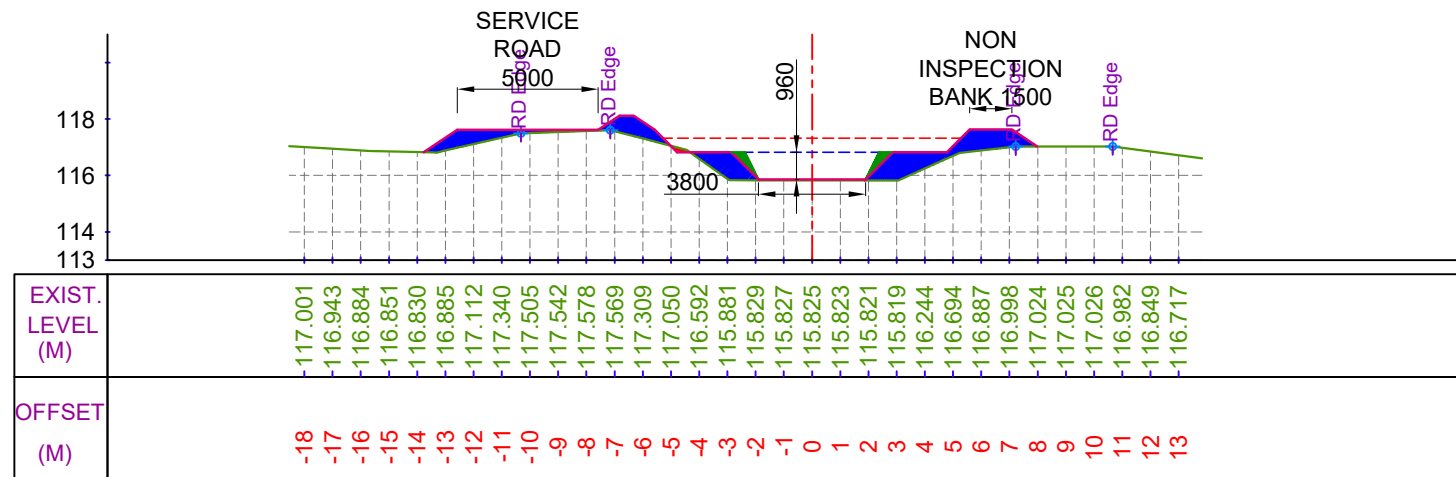
Prepared by :-

WAPCOS LTD.

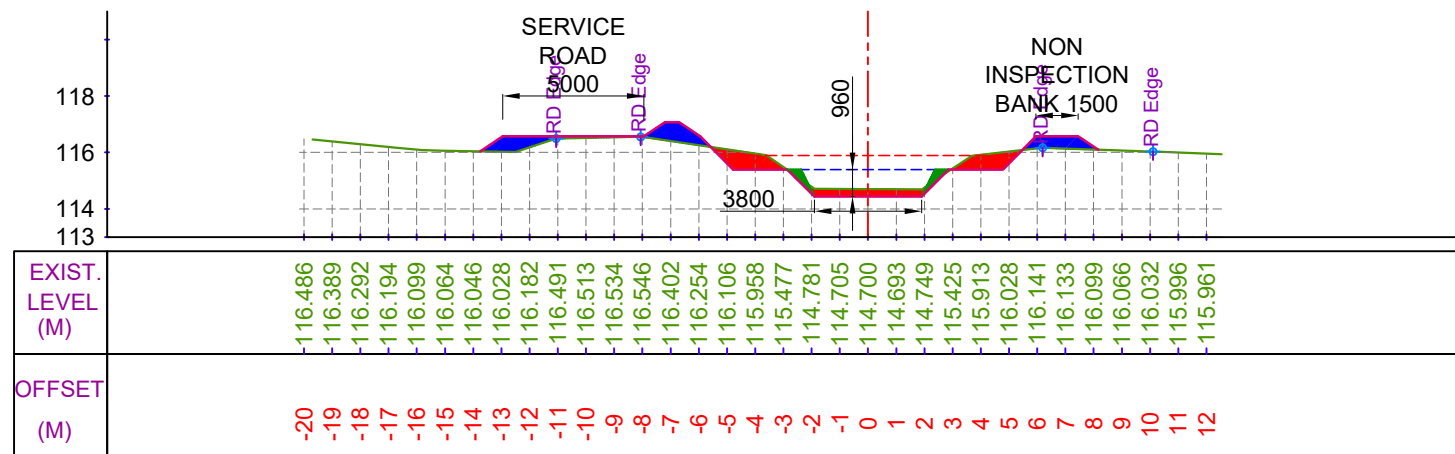


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 37 of 59

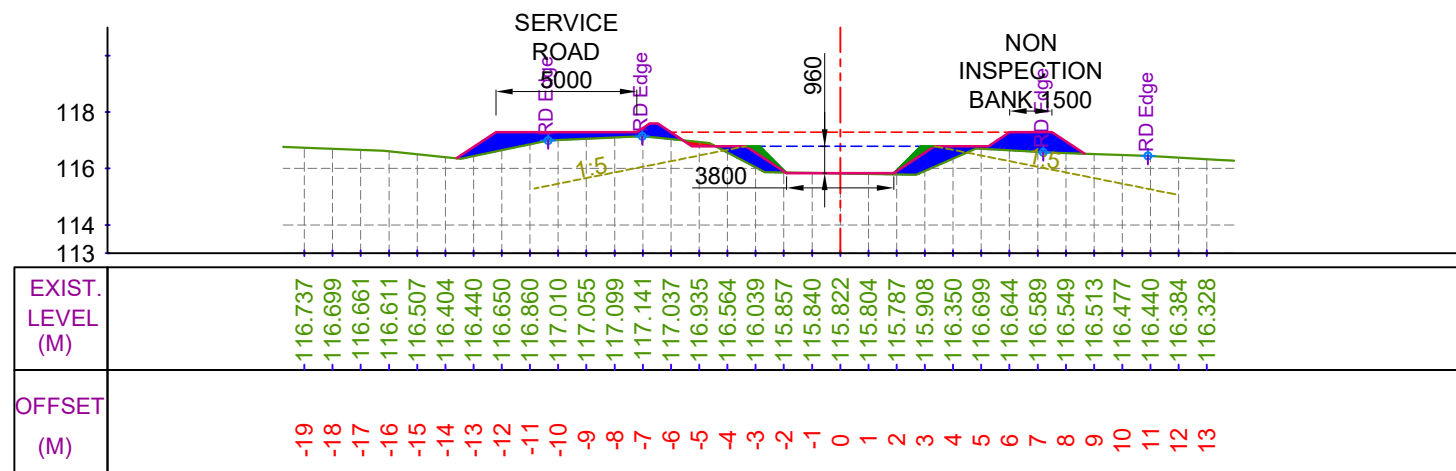
X SECTION OF KARMA DY.



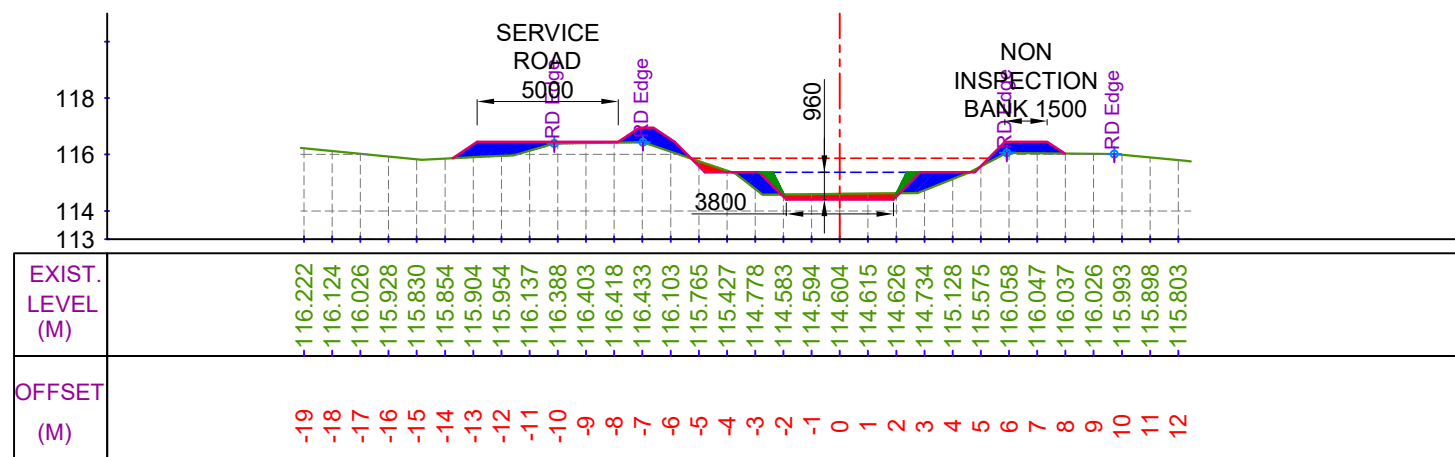
CUTTING AREA (SQ.M) = 0.070 CH. (KM):- 14+900
FILLING AREA (SQ.M) = 7.254 DESIGNED BED LEVEL = 115.858 M



CUTTING AREA (SQ.M) = 3.174 CH. (KM):- 15+100
FILLING AREA (SQ.M) = 2.986 DESIGNED BED LEVEL = 114.436 M



CUTTING AREA (SQ.M) = 0.135 CH. (KM):- 15+000
FILLING AREA (SQ.M) = 6.623 DESIGNED BED LEVEL = 115.833 M

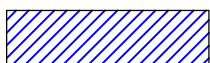


CUTTING AREA (SQ.M) = 0.998 CH. (KM):- 15+200
FILLING AREA (SQ.M) = 4.753 DESIGNED BED LEVEL = 114.411 M

LEGEND



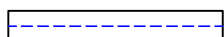
CUT AREA



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 :-

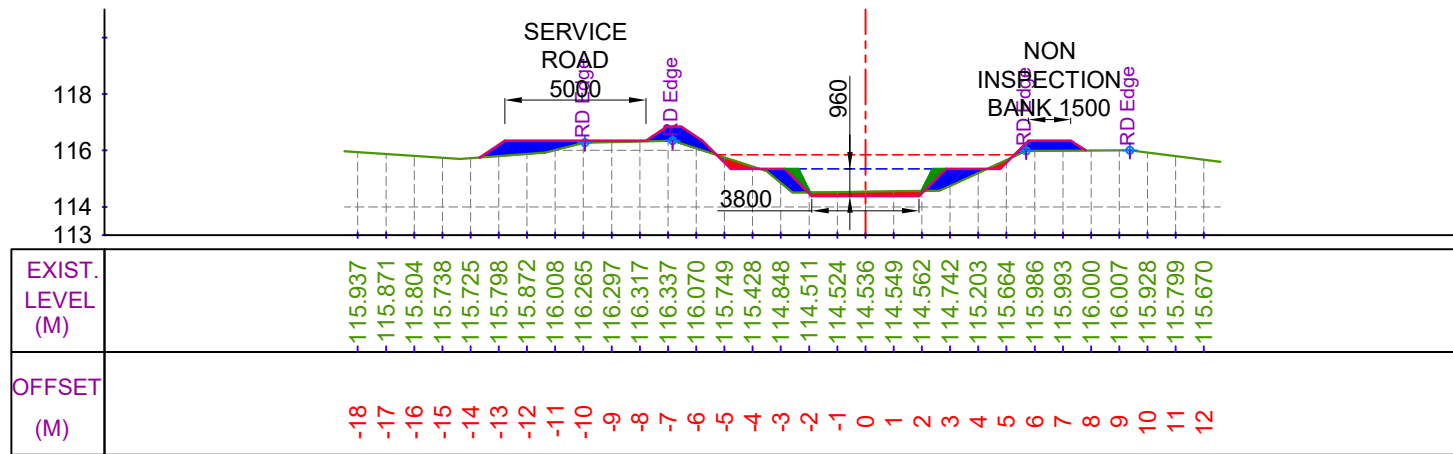
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

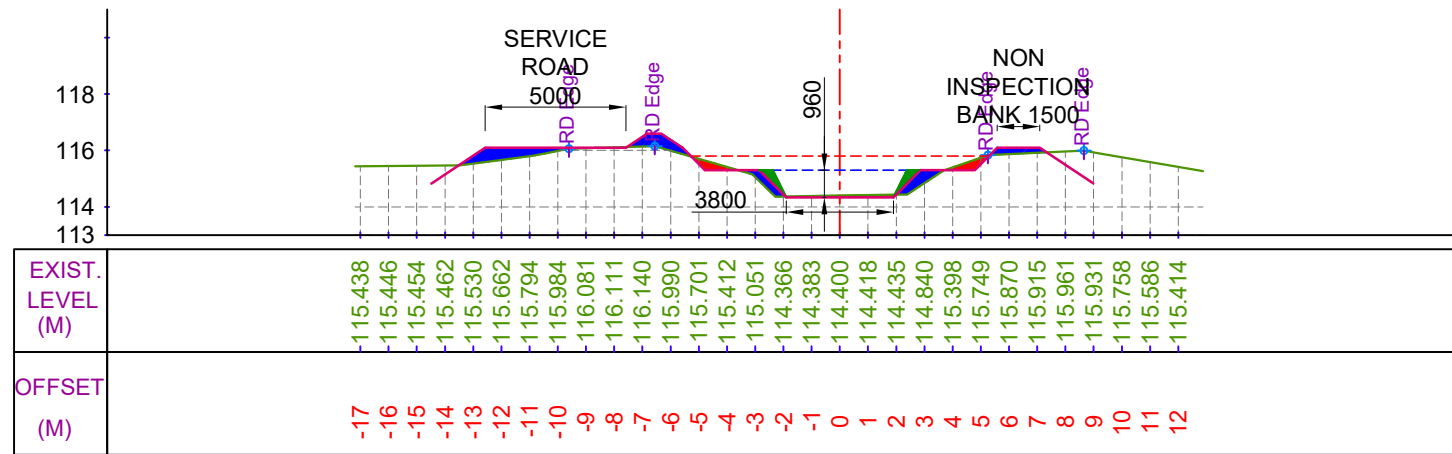
38 of 59

X SECTION OF KARMA DY.



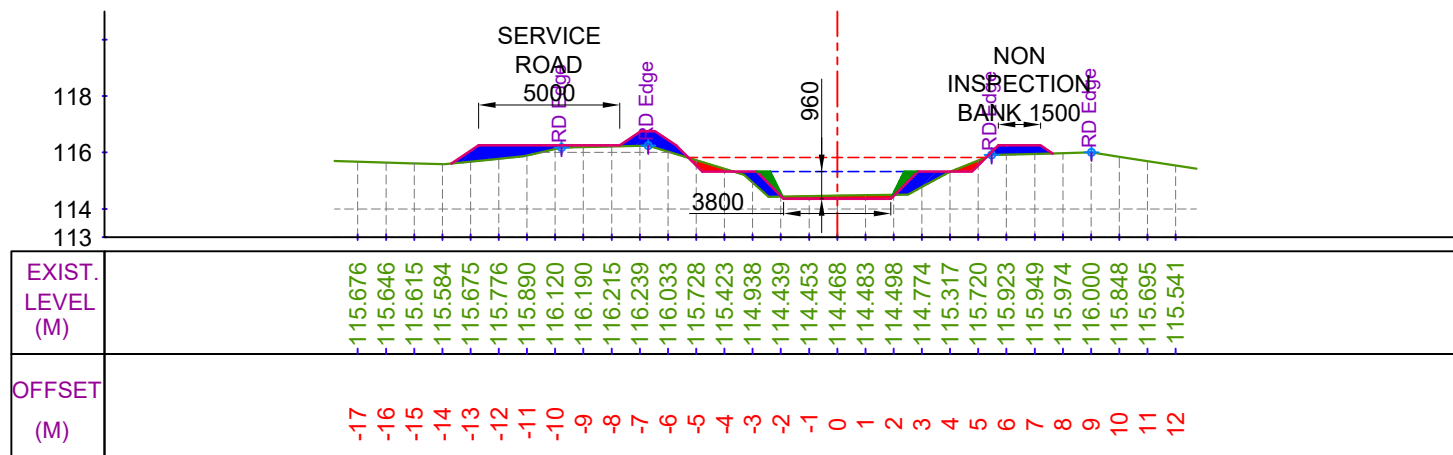
CUTTING AREA (SQ.M) = 0.931
FILLING AREA (SQ.M) = 4.352

CH. (KM):- 15+300
DESIGNED BED LEVEL = 114.386 M



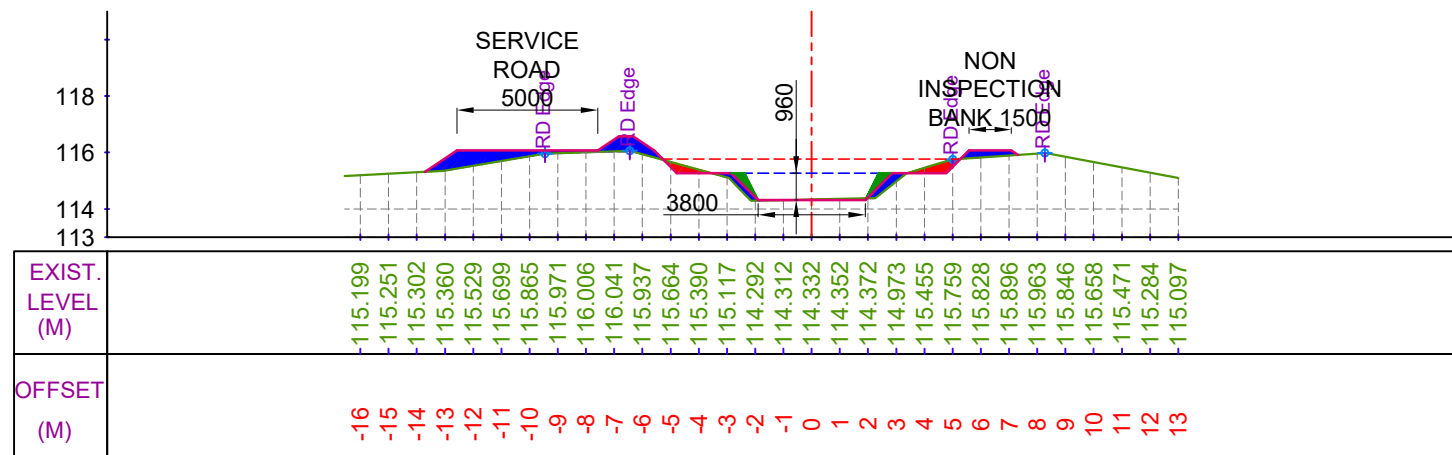
CUTTING AREA (SQ.M) = 0.838
FILLING AREA (SQ.M) = 3.123

CH. (KM):- 15+500
DESIGNED BED LEVEL = 114.336 M



CUTTING AREA (SQ.M) = 0.887
FILLING AREA (SQ.M) = 4.039

CH. (KM):- 15+400
DESIGNED BED LEVEL = 114.361 M



CUTTING AREA (SQ.M) = 0.774
FILLING AREA (SQ.M) = 3.580

CH. (KM):- 15+600
DESIGNED BED LEVEL = 114.311 M

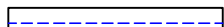
LEGEND



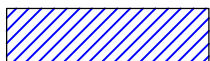
CUT AREA



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 :-

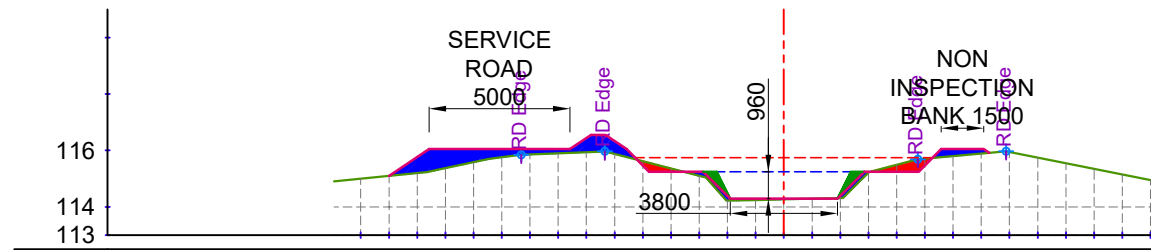
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

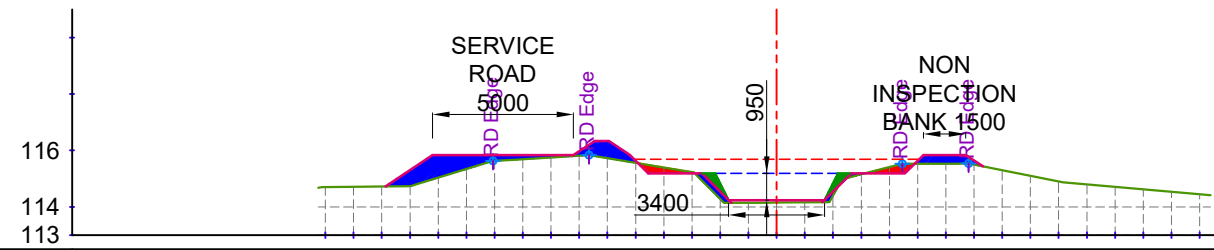
39 of 59

X SECTION OF KARMA DY.



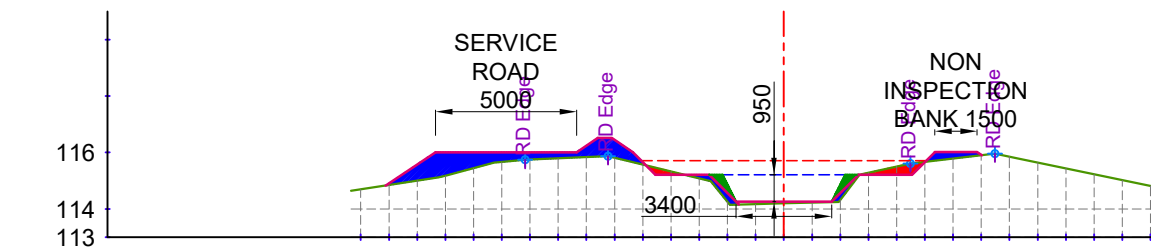
EXIST. LEVEL (M)	-115.000	-115.100	-115.200	-115.373	-115.586	-115.759	-115.860	-115.900	-115.940	-115.878	-115.619	-115.360	-115.101	-114.219	-114.242	-114.265	-114.288	-114.311	-115.211	-115.491	-115.709	-115.800	-115.892	-115.948	-115.749	-115.550	-115.351	-115.152	-114.953
OFFSET (M)	-15	-14	-13	-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

CUTTING AREA (SQ.M) = 0.764 CH. (KM):- 15+700
FILLING AREA (SQ.M) = 4.169 DESIGNED BED LEVEL = 114.286 M



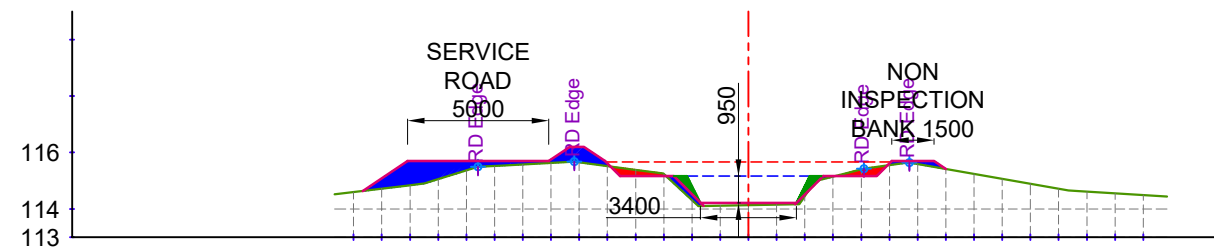
EXIST. LEVEL (M)	-114.705	-114.715	-114.725	-114.736	-115.035	-115.338	-115.628	-115.688	-115.749	-115.810	-115.724	-115.561	-115.398	-115.235	-114.277	-114.145	-114.151	-114.157	-114.405	-115.152	-115.412	-115.532	-115.533	-115.495	-115.295	-115.095	-114.896	-114.792	-114.706	-114.619	-114.533	-114.446
OFFSET (M)	-16	-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) = 0.650 CH. (KM):- 15+900
FILLING AREA (SQ.M) = 4.165 DESIGNED BED LEVEL = 114.236 M



EXIST. LEVEL (M)	-114.692	-114.847	-115.001	-115.182	-115.450	-115.668	-115.747	-115.793	-115.838	-115.815	-115.570	-115.325	-115.081	-114.252	-114.171	-114.197	-114.224	-114.317	-115.279	-115.502	-115.671	-115.789	-115.906	-115.856	-115.647	-115.438	-115.229	-115.021	-114.812
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

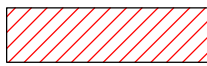
CUTTING AREA (SQ.M) = 0.645 CH. (KM):- 15+800
FILLING AREA (SQ.M) = 4.882 DESIGNED BED LEVEL = 114.261 M



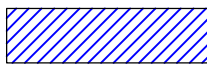
EXIST. LEVEL (M)	-114.596	-114.717	-114.838	-115.053	-115.364	-115.523	-115.577	-115.631	-115.653	-115.520	-115.387	-115.236	-114.311	-114.116	-114.135	-114.155	-114.455	-115.146	-115.405	-115.551	-115.593	-115.418	-115.242	-115.067	-114.891	-114.715	-114.615	-114.554	-114.494
OFFSET (M)	-14	-13	-12	-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

CUTTING AREA (SQ.M) = 0.697 CH. (KM):- 16+000
FILLING AREA (SQ.M) = 3.759 DESIGNED BED LEVEL = 114.211 M

LEGEND



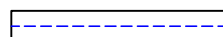
CUT AREA



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 :-

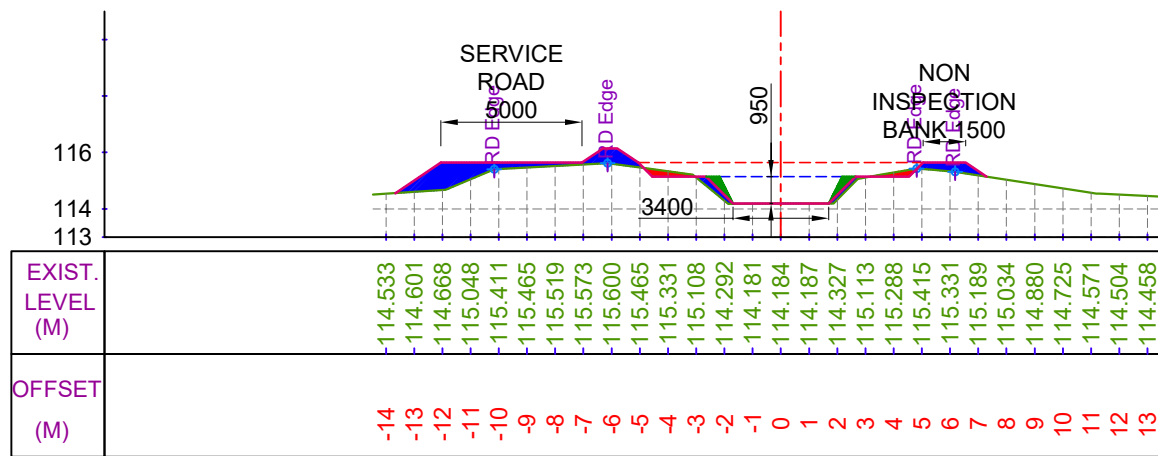
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

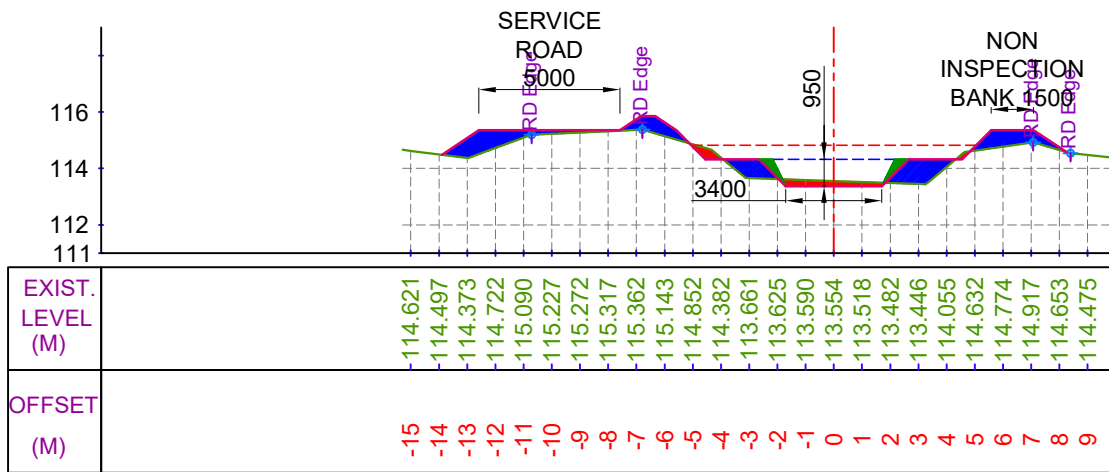
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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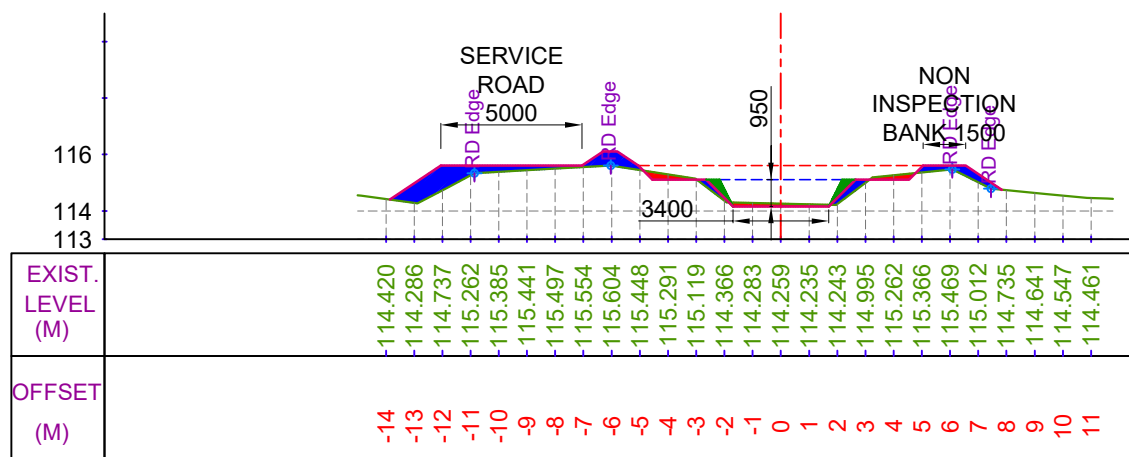
X SECTION OF KARMA DY.



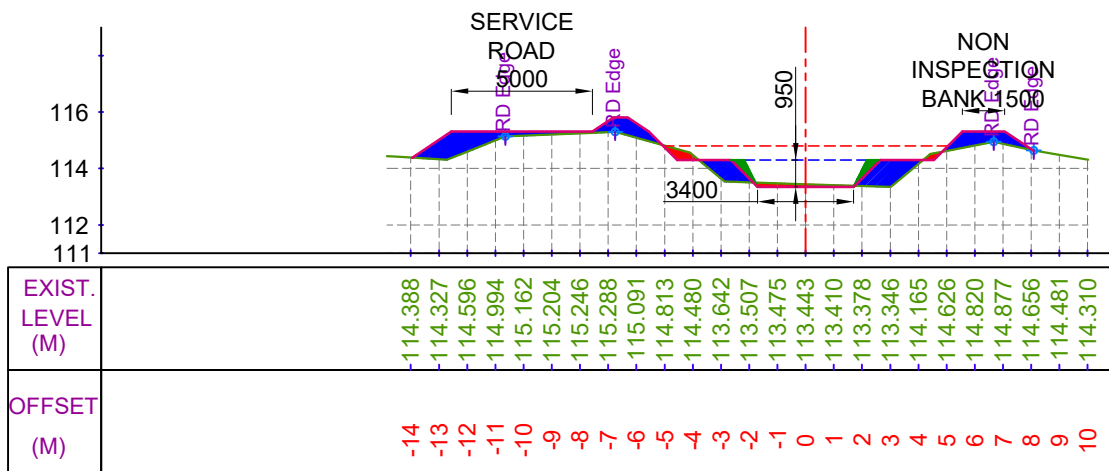
CUTTING AREA (SQ.M) = 0.507
FILLING AREA (SQ.M) = 4.252
CH. (KM):- 16+100
DESIGNED BED LEVEL = 114.186 M



CUTTING AREA (SQ.M) = 0.940
FILLING AREA (SQ.M) = 6.237
CH. (KM):- 16+300
DESIGNED BED LEVEL = 113.374 M



CUTTING AREA (SQ.M) = 0.817
FILLING AREA (SQ.M) = 4.316
CH. (KM):- 16+200
DESIGNED BED LEVEL = 114.161 M

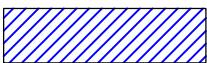


CUTTING AREA (SQ.M) = 0.711
FILLING AREA (SQ.M) = 6.285
CH. (KM):- 16+400
DESIGNED BED LEVEL = 113.349 M

LEGEND



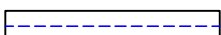
CUT AREA



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 :-

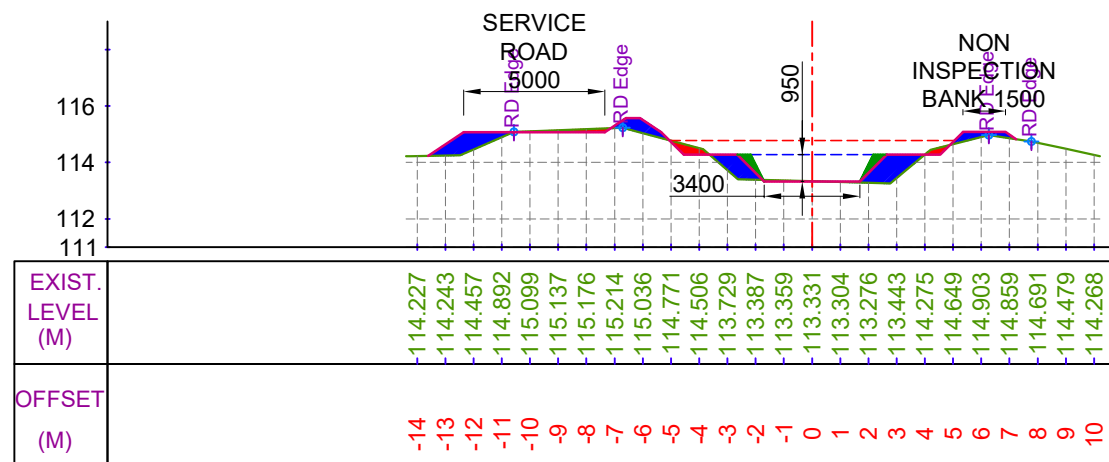
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

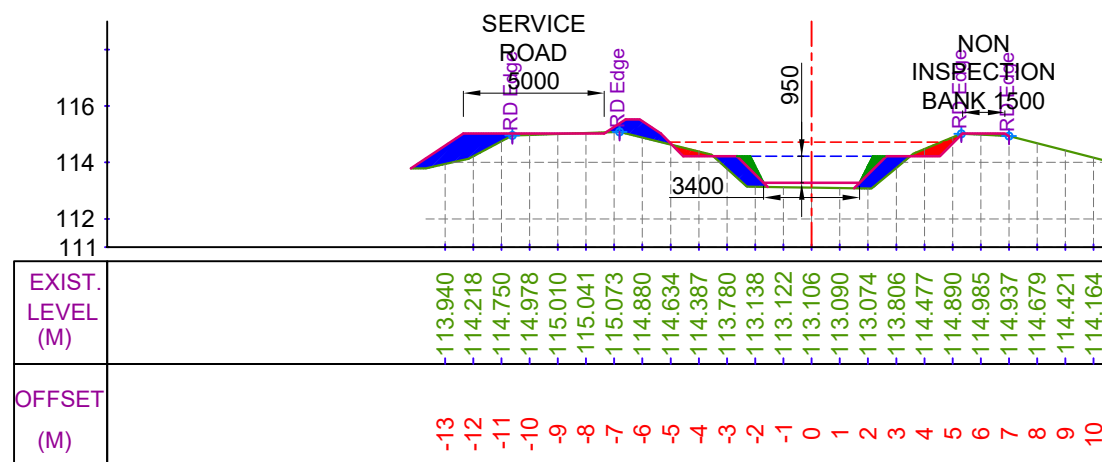
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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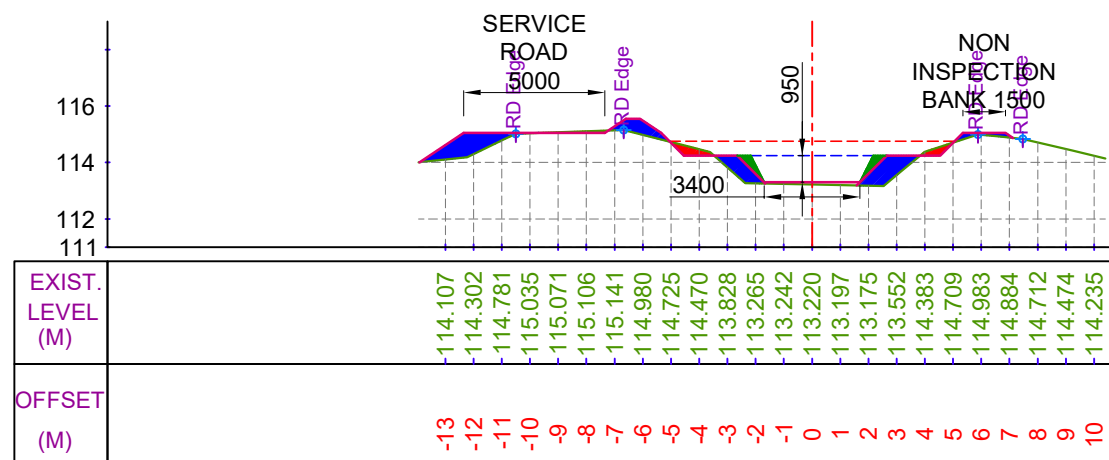
X SECTION OF KARMA DY.



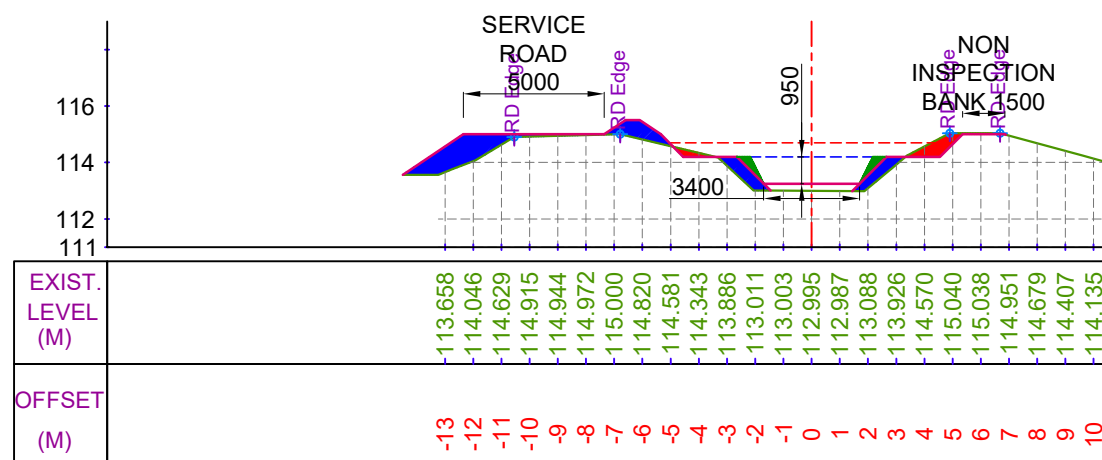
CUTTING AREA (SQ.M) = 0.730 CH. (KM):- 16+500
FILLING AREA (SQ.M) = 4.305 DESIGNED BED LEVEL = 113.324 M



CUTTING AREA (SQ.M) = 0.730 CH. (KM):- 16+700
FILLING AREA (SQ.M) = 4.553 DESIGNED BED LEVEL = 113.274 M



CUTTING AREA (SQ.M) = 0.624 CH. (KM):- 16+600
FILLING AREA (SQ.M) = 4.404 DESIGNED BED LEVEL = 113.299 M



CUTTING AREA (SQ.M) = 0.991 CH. (KM):- 16+800
FILLING AREA (SQ.M) = 5.066 DESIGNED BED LEVEL = 113.249 M

LEGEND



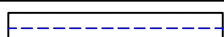
CUT AREA



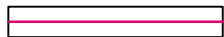
FILL AREA



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 :-

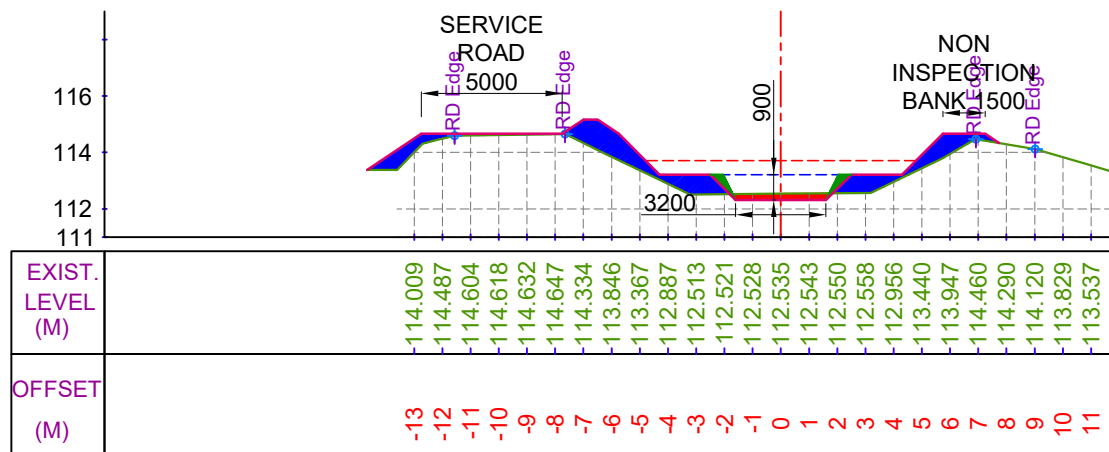
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

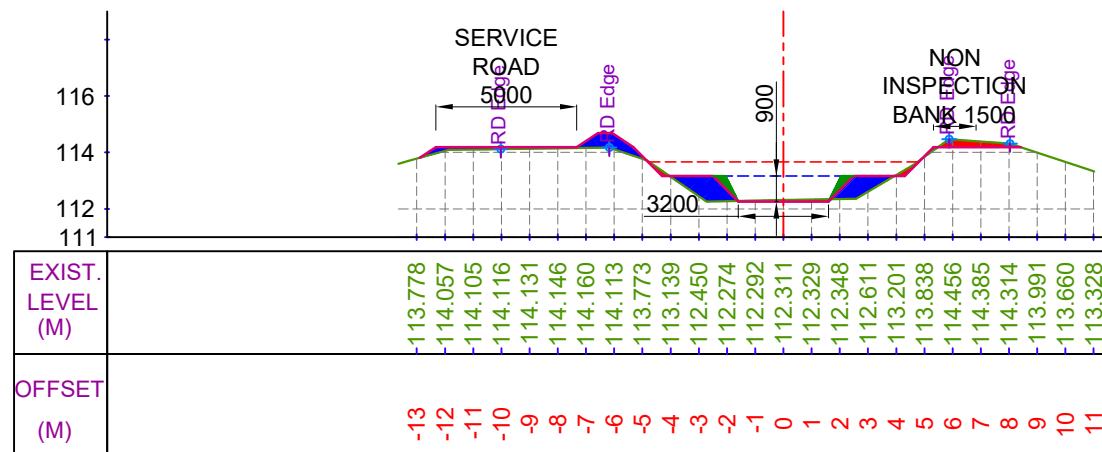
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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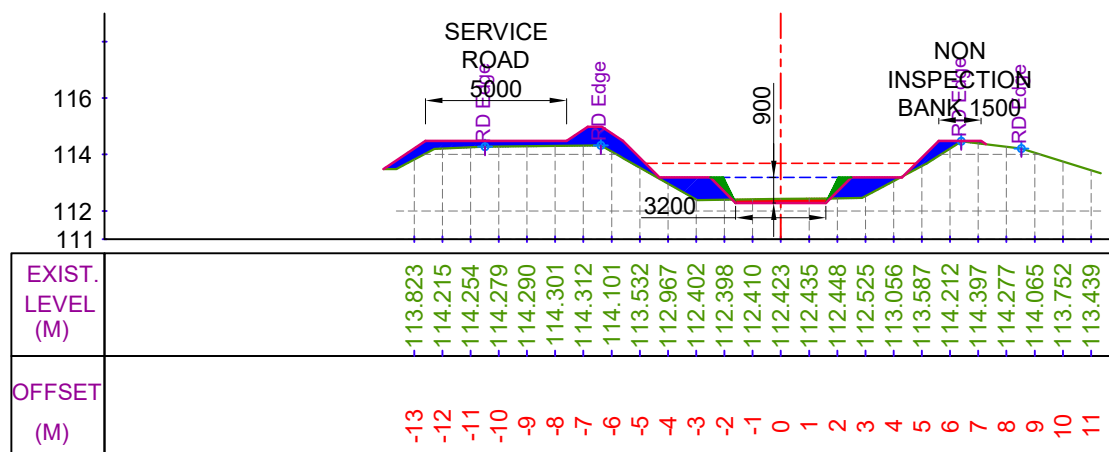
X SECTION OF KARMA DY.



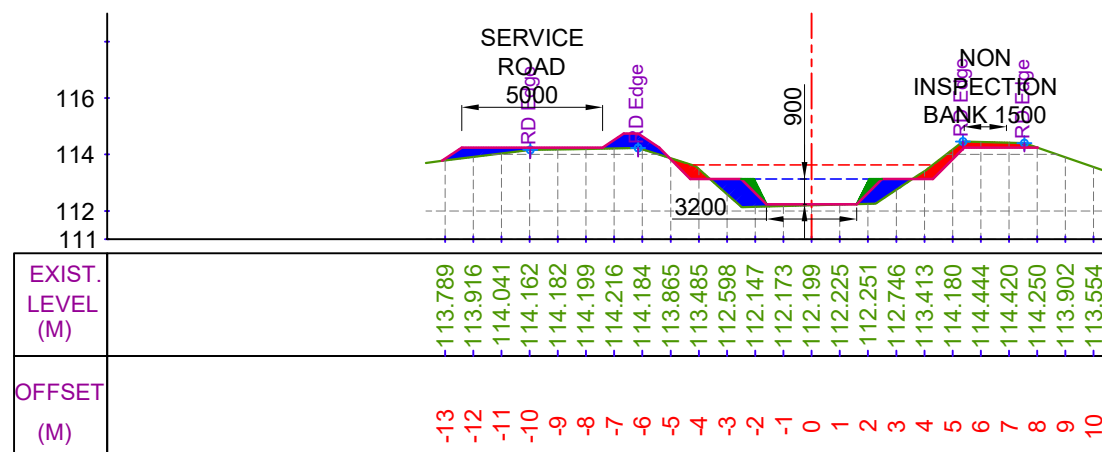
CUTTING AREA (SQ.M) = 0.750 CH. (KM):- 16+900
FILLING AREA (SQ.M) = 7.288 DESIGNED BED LEVEL = 112.309 M



CUTTING AREA (SQ.M) = 0.869 CH. (KM):- 17+100
FILLING AREA (SQ.M) = 3.396 DESIGNED BED LEVEL = 112.259 M



CUTTING AREA (SQ.M) = 0.456 CH. (KM):- 17+000
FILLING AREA (SQ.M) = 6.012 DESIGNED BED LEVEL = 112.284 M

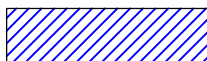


CUTTING AREA (SQ.M) = 1.439 CH. (KM):- 17+200
FILLING AREA (SQ.M) = 3.511 DESIGNED BED LEVEL = 112.234 M

LEGEND



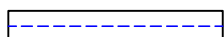
CUT AREA



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 :-

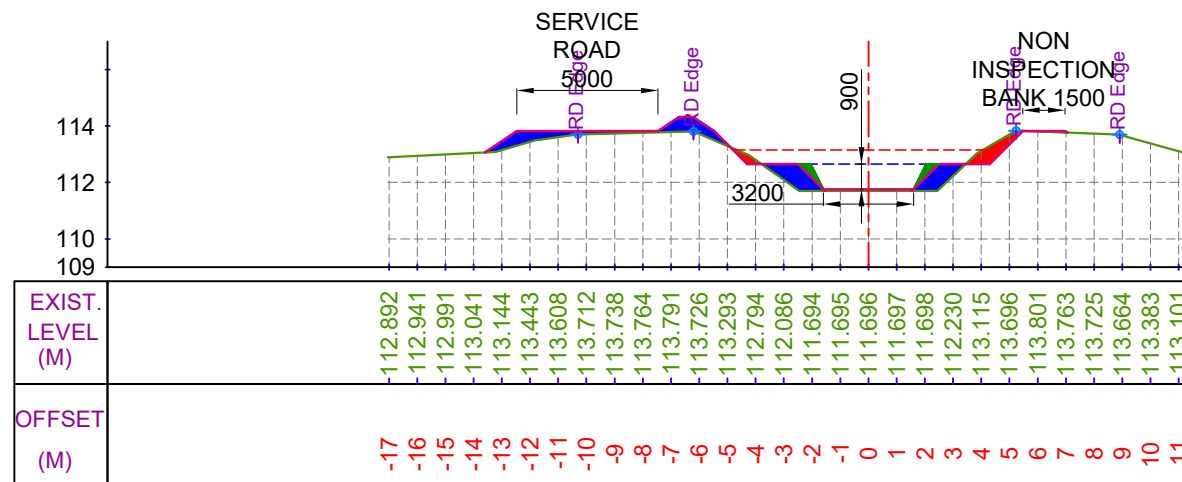
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

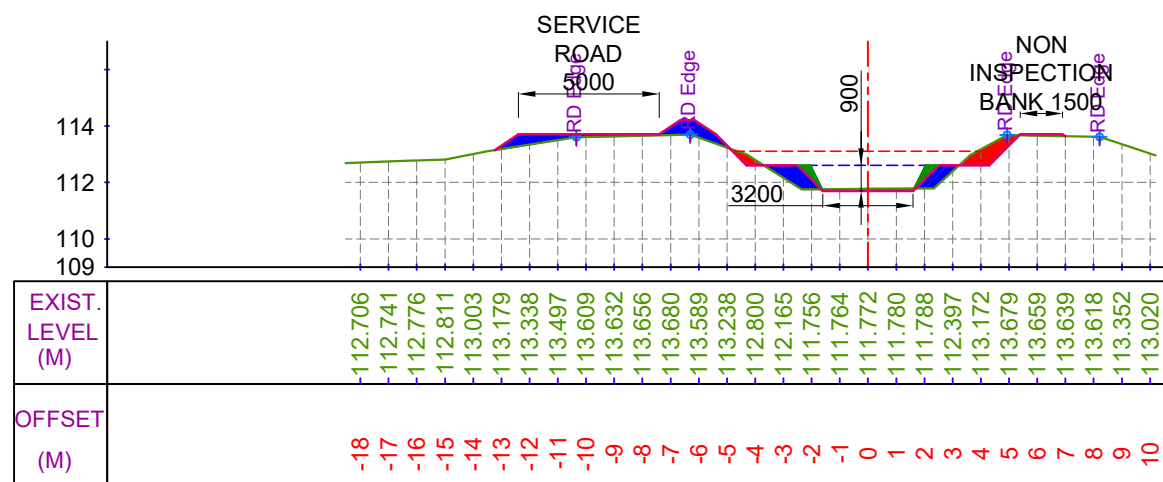
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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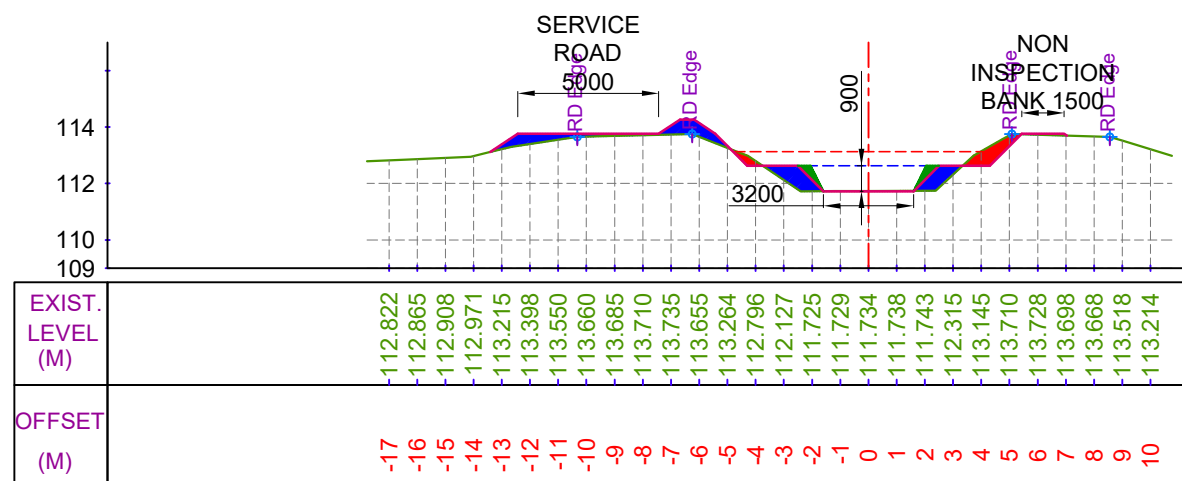
X SECTION OF KARMA DY.



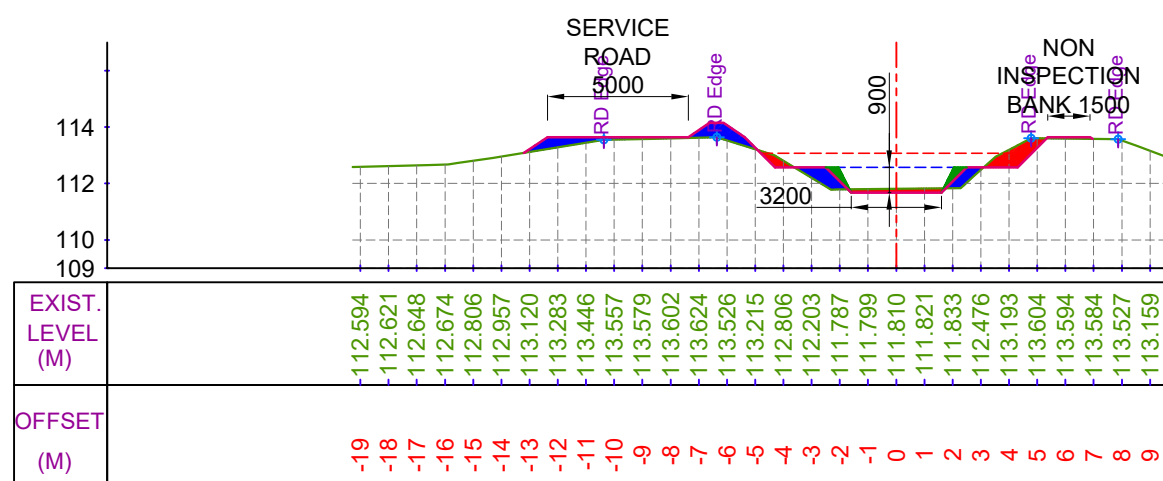
CUTTING AREA (SQ.M) = 0.935
FILLING AREA (SQ.M) = 4.005
CH. (KM):- 17+300
DESIGNED BED LEVEL = 111.752 M



CUTTING AREA (SQ.M) = 1.377
FILLING AREA (SQ.M) = 3.220
CH. (KM):- 17+500
DESIGNED BED LEVEL = 111.702 M



CUTTING AREA (SQ.M) = 1.068
FILLING AREA (SQ.M) = 3.569
CH. (KM):- 17+400
DESIGNED BED LEVEL = 111.727 M



CUTTING AREA (SQ.M) = 1.685
FILLING AREA (SQ.M) = 2.941
CH. (KM):- 17+600
DESIGNED BED LEVEL = 111.677 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

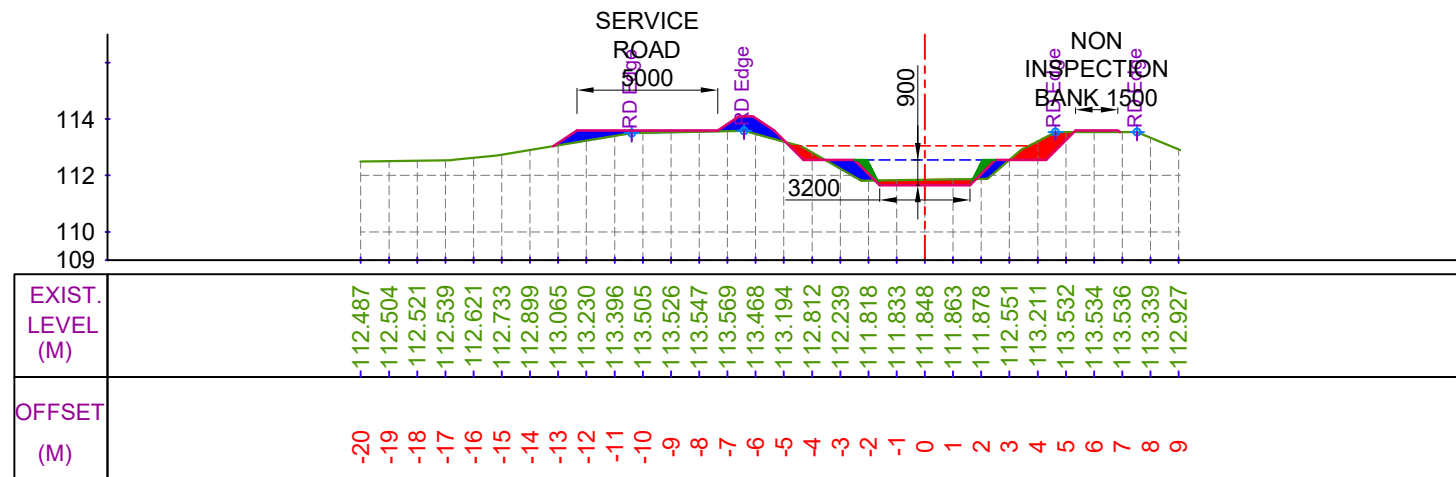
Prepared by :-

WAPCOS LTD.



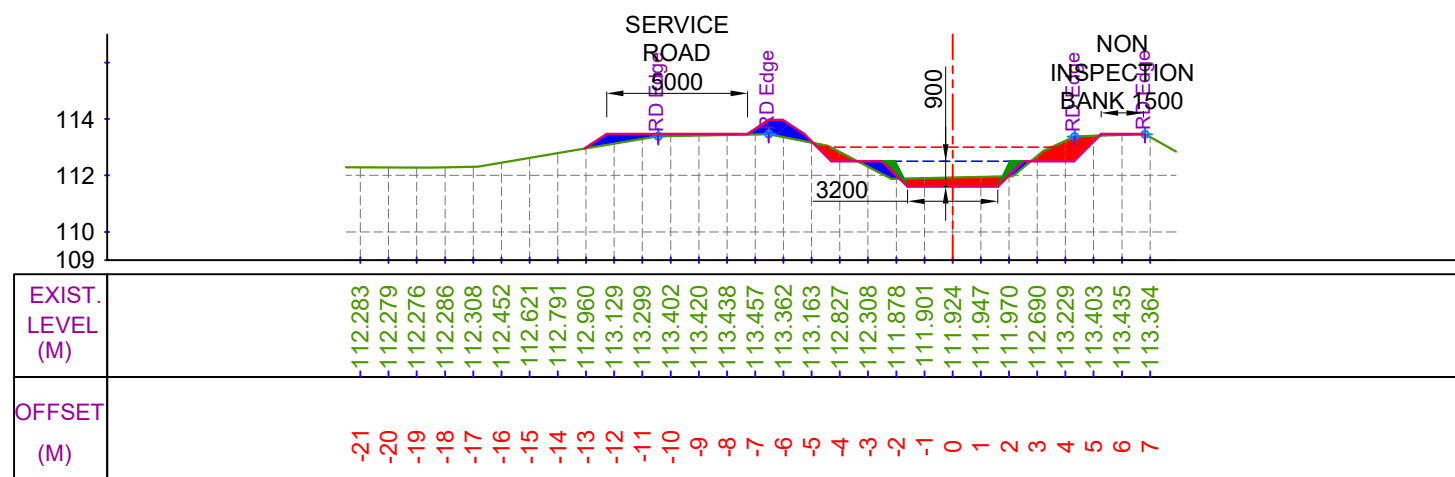
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 44 of 59

X SECTION OF KARMA DY.



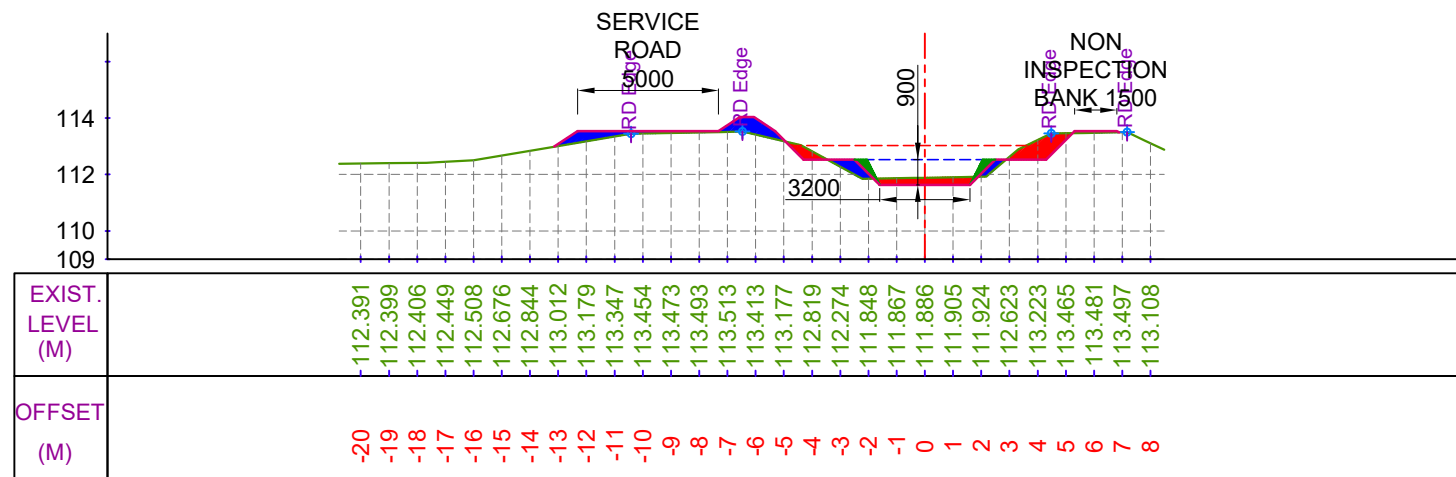
CUTTING AREA (SQ.M) = 1.994
FILLING AREA (SQ.M) = 2.705

CH. (KM):- 17+700
DESIGNED BED LEVEL = 111.652 M



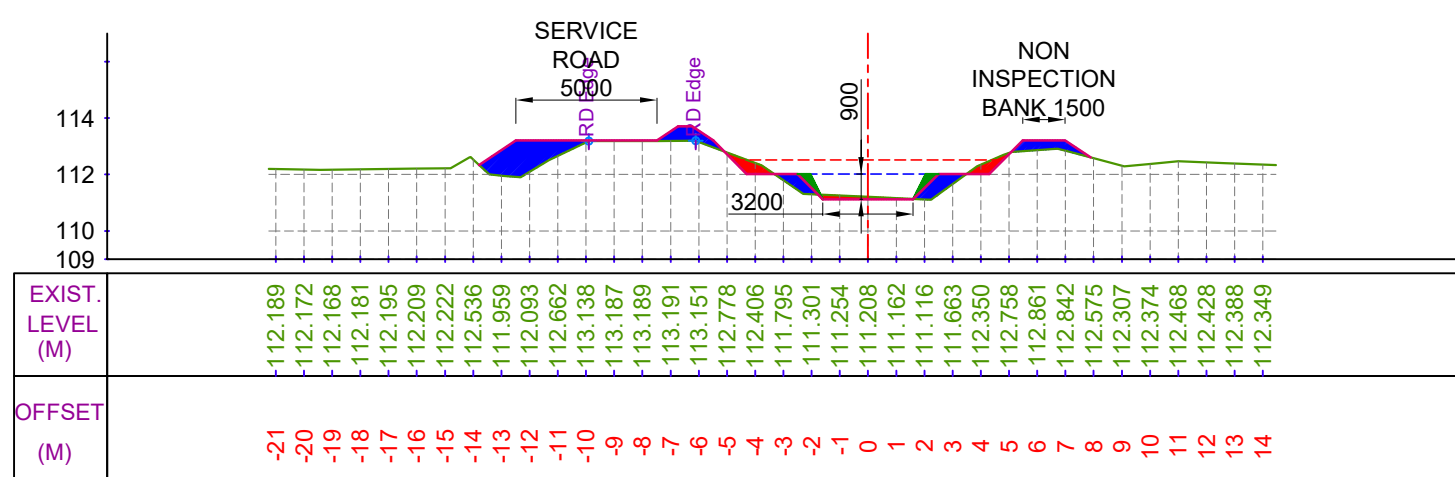
CUTTING AREA (SQ.M) = 2.619
FILLING AREA (SQ.M) = 2.096

CH. (KM):- 17+900
DESIGNED BED LEVEL = 111.602 M



CUTTING AREA (SQ.M) = 2.305
FILLING AREA (SQ.M) = 2.490

CH. (KM):- 17+800
DESIGNED BED LEVEL = 111.627 M



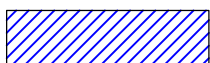
CUTTING AREA (SQ.M) = 1.152
FILLING AREA (SQ.M) = 5.503

CH. (KM):- 18+000
DESIGNED BED LEVEL = 111.120 M

LEGEND



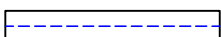
CUT AREA



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 :-

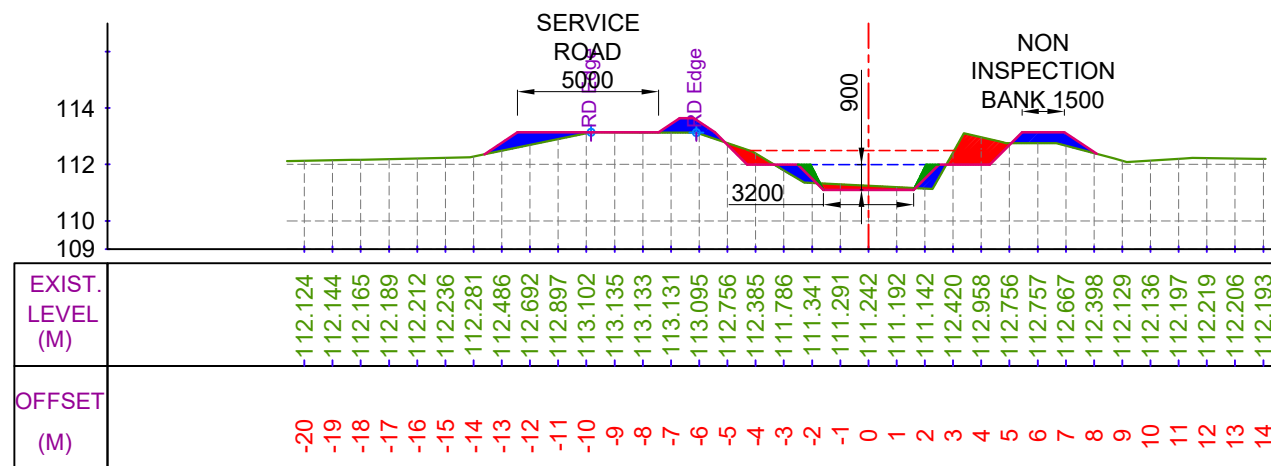
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

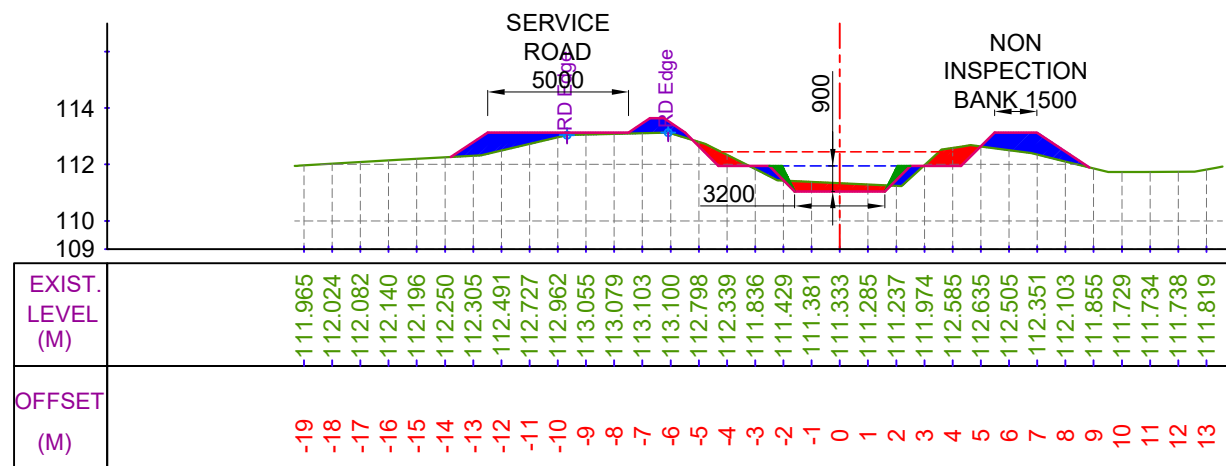
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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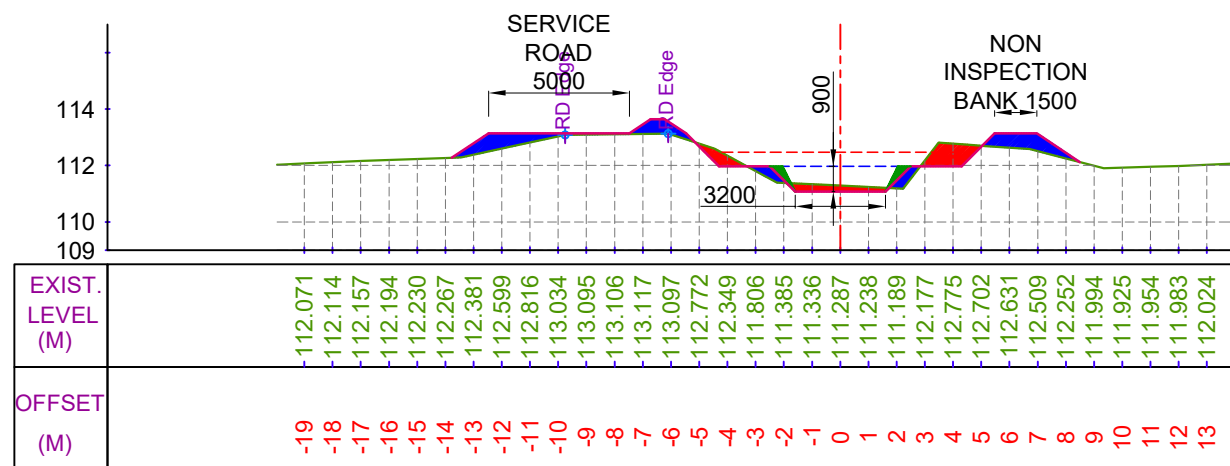
X SECTION OF KARMA DY.



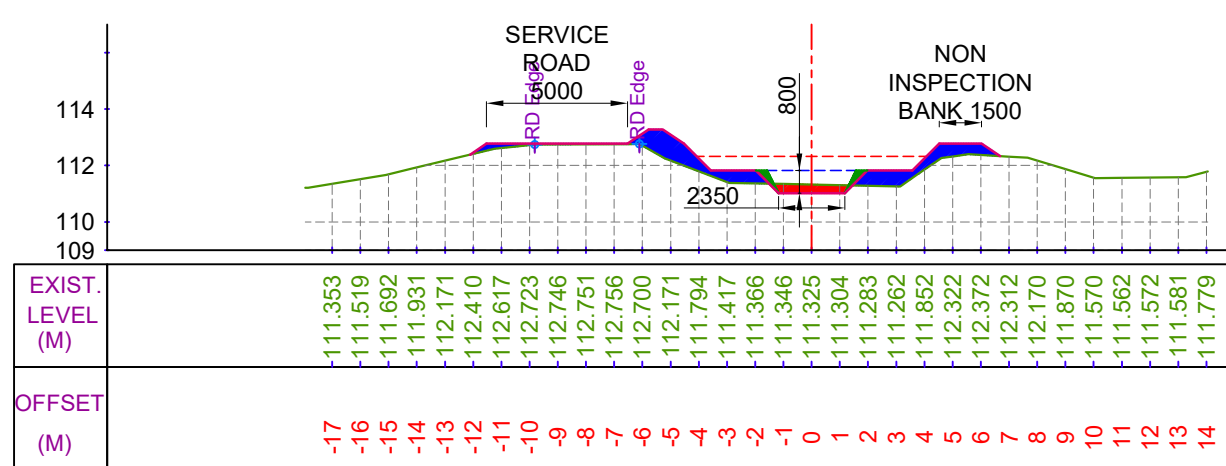
CUTTING AREA (SQ.M) = 2.546
FILLING AREA (SQ.M) = 3.504
CH. (KM):- 18+100
DESIGNED BED LEVEL = 111.095 M



CUTTING AREA (SQ.M) = 2.413
FILLING AREA (SQ.M) = 5.003
CH. (KM):- 18+300
DESIGNED BED LEVEL = 111.045 M



CUTTING AREA (SQ.M) = 2.452
FILLING AREA (SQ.M) = 4.272
CH. (KM):- 18+200
DESIGNED BED LEVEL = 111.070 M



CUTTING AREA (SQ.M) = 0.763
FILLING AREA (SQ.M) = 4.970
CH. (KM):- 18+400
DESIGNED BED LEVEL = 111.020 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

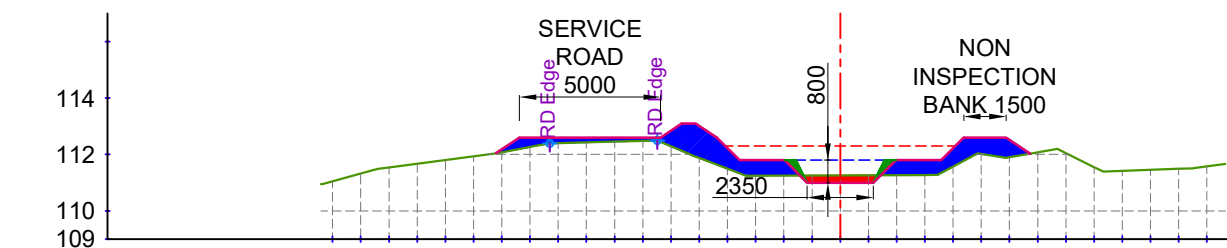
Prepared by :-

WAPCOS LTD.



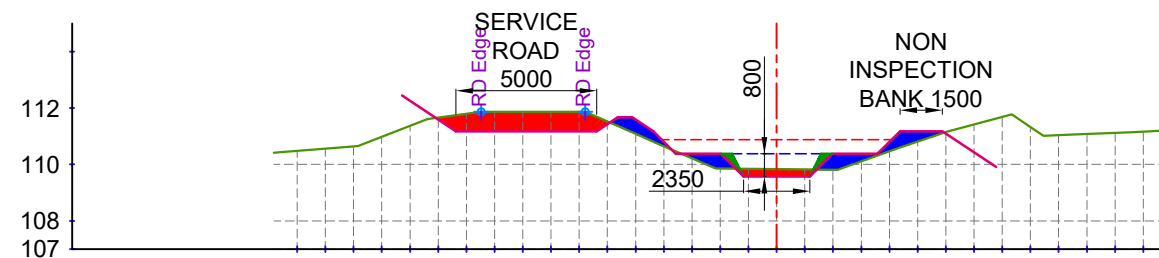
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 46 of 59

X SECTION OF KARMA DY.



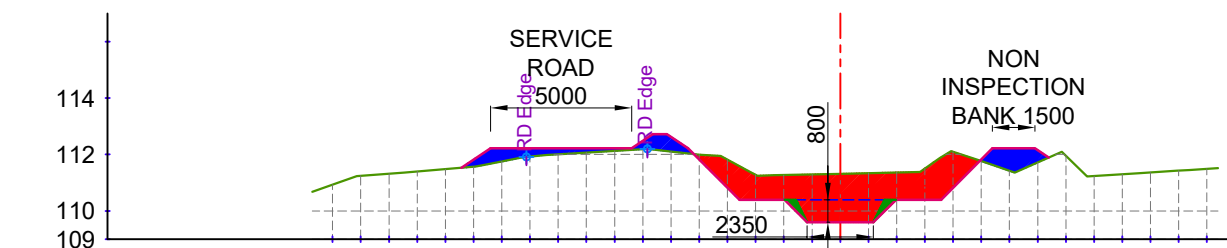
EXIST. LEVEL (M)	-111.045	-111.319	-111.542	-111.674	-111.806	-111.939	-112.077	-112.264	-112.402	-112.427	-112.452	-112.477	-112.285	-111.874	-111.495	-111.248	-111.252	-111.255	-111.259	-111.263	-111.267	-111.271	-111.570	-112.016	-111.904	-112.073	-112.043	-111.551	-111.413	-111.451	-111.490	-111.573
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.656 CH. (KM):- 18+500
FILLING AREA (SQ.M) = 7.207 DESIGNED BED LEVEL = 110.995 M



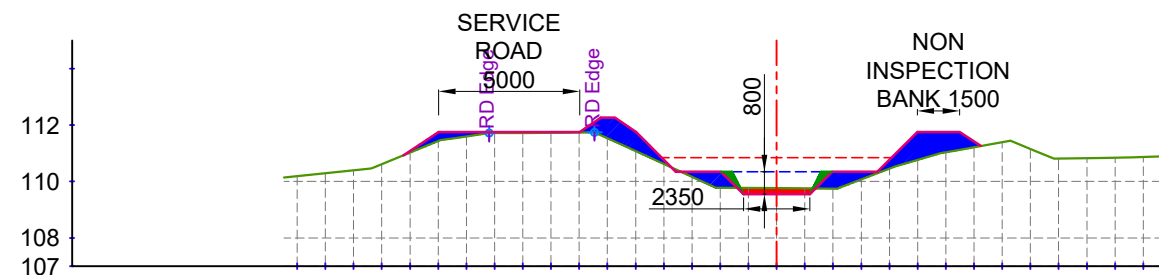
EXIST. LEVEL (M)	-110.479	-110.560	-110.640	-110.982	-111.372	-111.655	-111.792	-111.865	-111.867	-111.868	-111.870	-111.524	-111.082	-110.644	-110.220	-109.859	-109.846	-109.834	-109.822	-109.810	-110.111	-110.469	-110.813	-111.148	-111.417	-111.686	-111.326	-111.040	-111.079	-111.119	-111.164
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 4.363 CH. (KM):- 18+700
FILLING AREA (SQ.M) = 2.682 DESIGNED BED LEVEL = 109.573 M



EXIST. LEVEL (M)	-110.927	-111.243	-111.321	-111.401	-111.483	-111.566	-111.751	-111.927	-112.009	-112.068	-112.127	-112.186	-112.102	-111.992	-111.816	-111.280	-111.271	-111.295	-111.318	-111.342	-111.365	-111.505	-112.092	-111.763	-111.425	-111.720	-111.960	-111.236	-111.300	-111.364	-111.428	-111.491
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 11.391 CH. (KM):- 18+600
FILLING AREA (SQ.M) = 3.626 DESIGNED BED LEVEL = 109.598 M



EXIST. LEVEL (M)	-110.194	-110.297	-110.400	-110.613	-111.022	-111.432	-111.597	-111.715	-111.722	-111.730	-111.738	-111.535	-111.079	-110.623	-110.163	-109.778	-109.771	-109.764	-109.758	-109.751	-110.071	-110.456	-110.767	-111.036	-111.217	-111.398	-111.157	-110.809	-110.827	-110.844	-110.869
OFFSET (M)	-17	-16	-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

CUTTING AREA (SQ.M) = 0.545 CH. (KM):- 18+800
FILLING AREA (SQ.M) = 5.724 DESIGNED BED LEVEL = 109.548 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



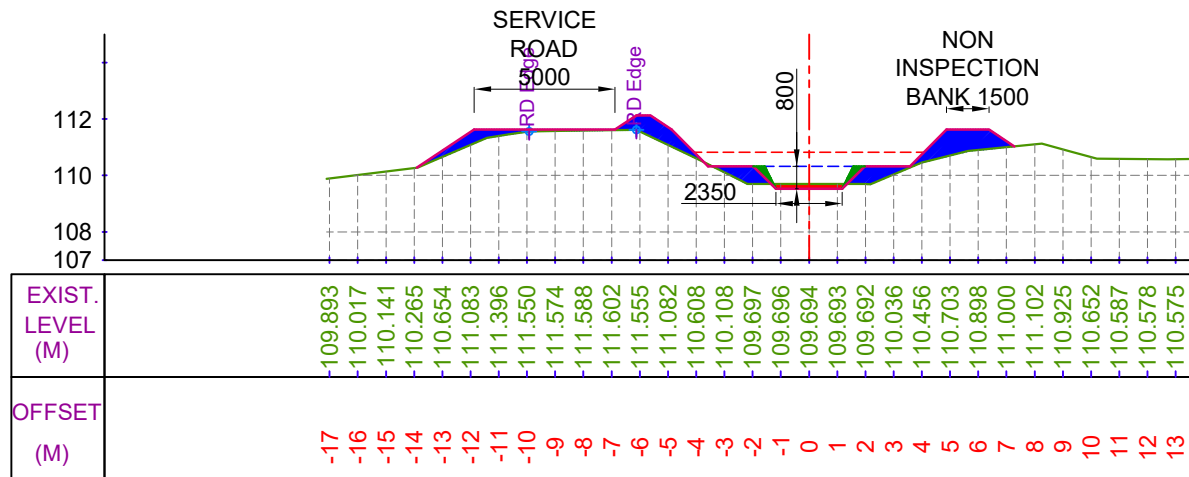
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

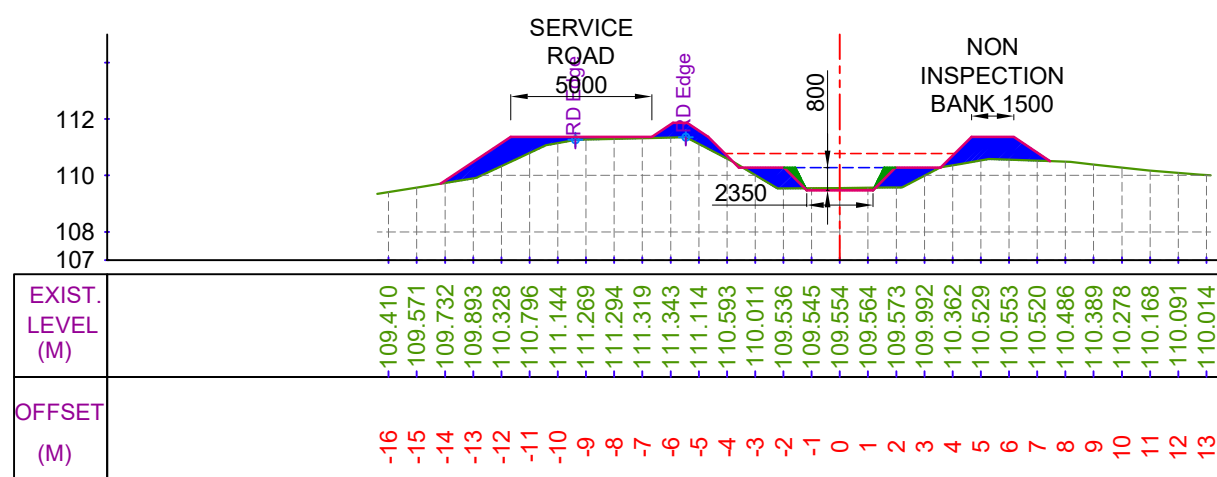
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

47 of 59

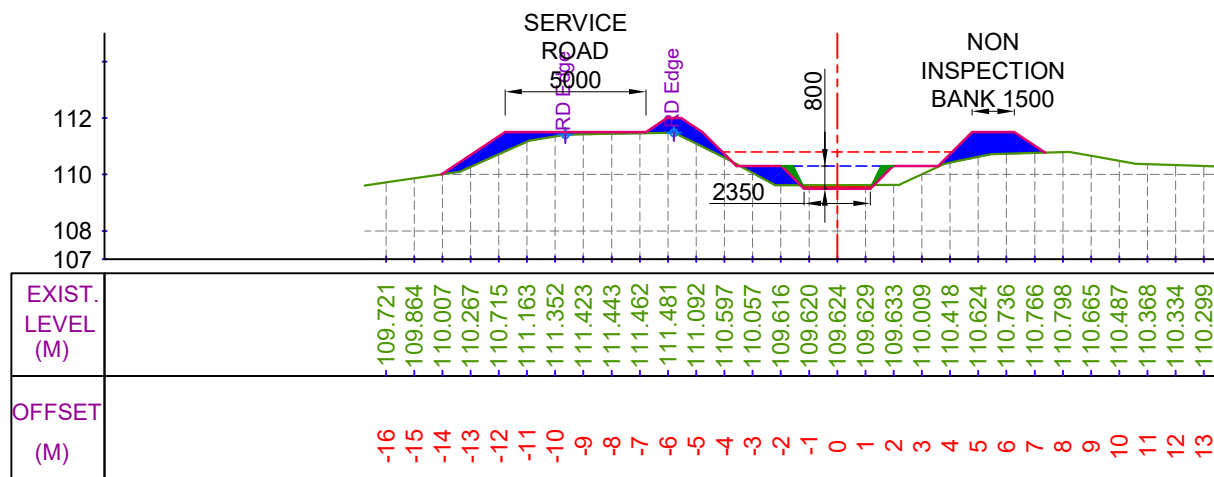
X SECTION OF KARMA DY.



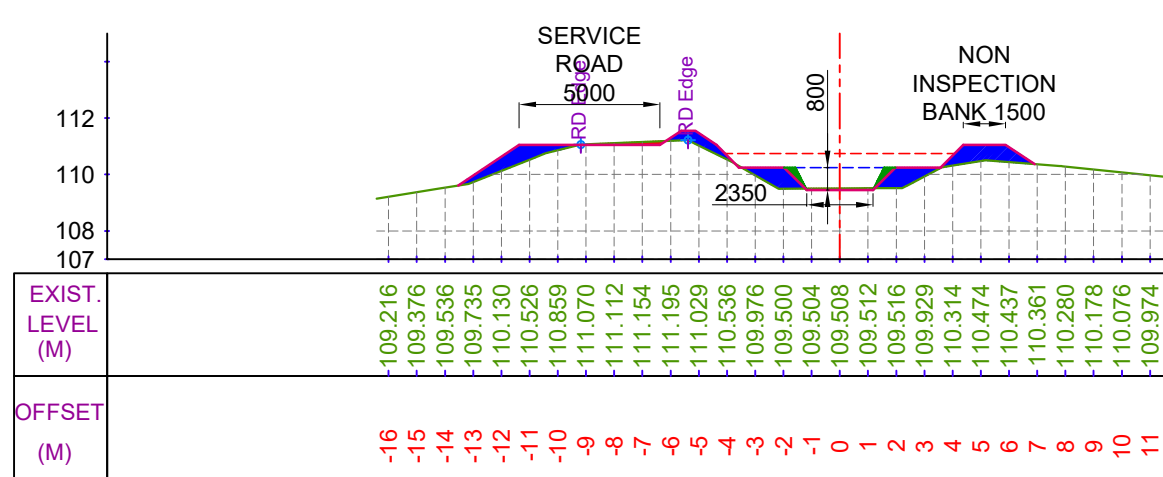
CUTTING AREA (SQ.M) = 0.428
FILLING AREA (SQ.M) = 6.081
CH. (KM):- 18+900
DESIGNED BED LEVEL = 109.523 M



CUTTING AREA (SQ.M) = 0.210
FILLING AREA (SQ.M) = 7.472
CH. (KM):- 19+100
DESIGNED BED LEVEL = 109.473 M



CUTTING AREA (SQ.M) = 0.316
FILLING AREA (SQ.M) = 5.962
CH. (KM):- 19+000
DESIGNED BED LEVEL = 109.498 M



CUTTING AREA (SQ.M) = 0.363
FILLING AREA (SQ.M) = 5.449
CH. (KM):- 19+200
DESIGNED BED LEVEL = 109.448 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



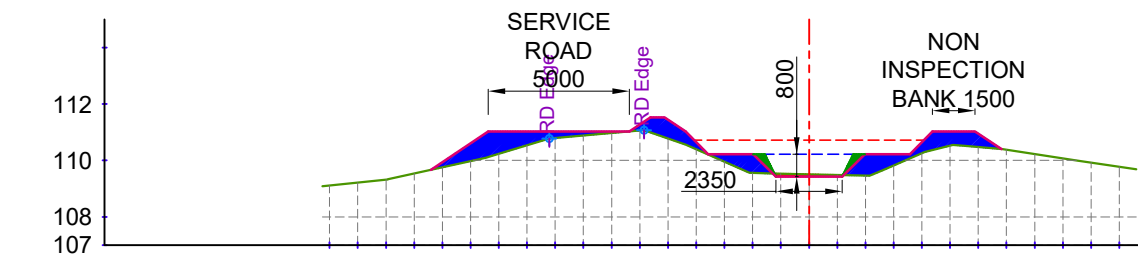
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

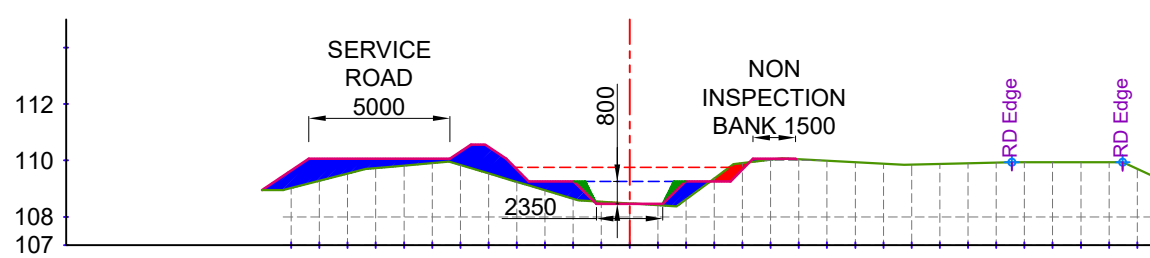
48 of 59

X SECTION OF KARMA DY.



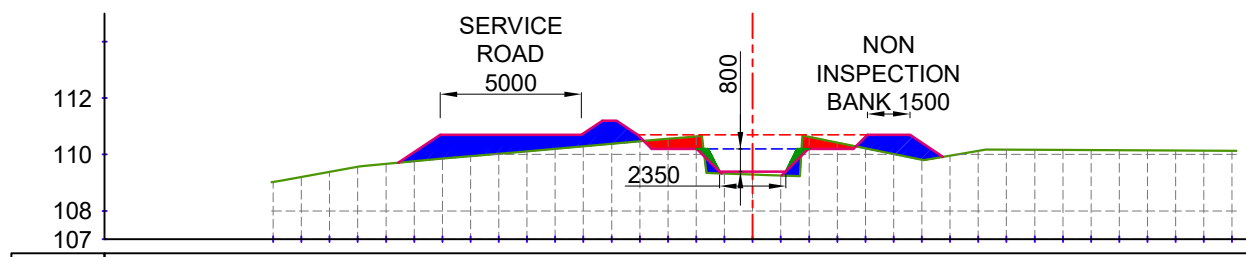
EXIST. LEVEL (M)	109.110	109.215	109.320	109.535	109.758	109.980	110.239	110.541	110.798	110.885	110.972	111.058	110.780	110.400	109.956	109.554	109.531	109.508	109.485	109.462	109.824	110.257	110.529	110.473	110.374	110.223	110.073	109.922	109.771
OFFSET (M)	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.204 CH. (KM):- 19+300
FILLING AREA (SQ.M) = 6.845 DESIGNED BED LEVEL = 109.423 M



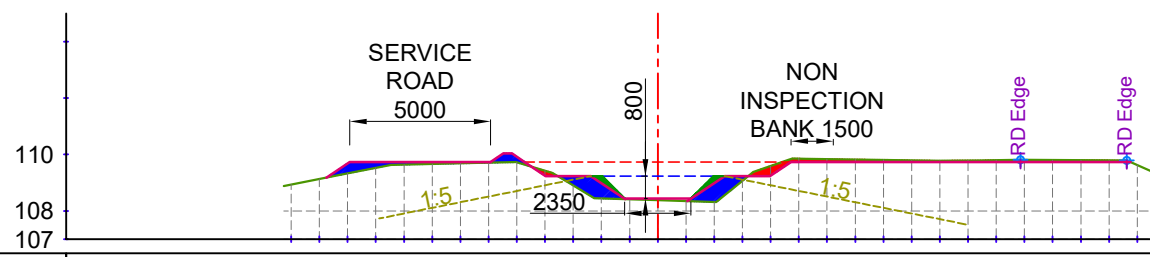
EXIST. LEVEL (M)	109.023	109.278	109.533	109.728	109.817	109.907	109.839	109.539	109.239	108.941	108.642	108.537	108.476	108.414	108.620	109.360	109.905	110.024	110.040	109.989	109.938	109.887	109.856	109.880	109.903	109.927	109.939	109.938	109.936	109.935	109.698
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18

CUTTING AREA (SQ.M) = 0.452 CH. (KM):- 19+500
FILLING AREA (SQ.M) = 6.107 DESIGNED BED LEVEL = 108.459 M



EXIST. LEVEL (M)	109.028	109.207	109.387	109.567	109.666	109.761	109.857	109.942	110.027	110.114	110.202	110.290	110.378	110.466	110.554	110.642	109.325	109.289	109.254	110.627	110.421	110.218	110.015	109.812	109.959	110.131	110.174	110.167	110.161	110.155	110.150	110.145	110.140	110.134	110.129
OFFSET (M)	-17	-16	-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	16	17

CUTTING AREA (SQ.M) = 1.276 CH. (KM):- 19+400
FILLING AREA (SQ.M) = 7.089 DESIGNED BED LEVEL = 109.398 M



EXIST. LEVEL (M)	108.937	109.134	109.330	109.527	109.644	109.665	109.686	109.708	109.723	109.426	108.904	108.446	108.415	108.383	108.352	108.320	109.069	109.591	109.854	109.839	109.824	109.809	109.794	109.781	109.790	109.800	109.807	109.803	109.799	109.795	109.627
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	15	16	17

CUTTING AREA (SQ.M) = 1.293 CH. (KM):- 19+600
FILLING AREA (SQ.M) = 2.740 DESIGNED BED LEVEL = 108.434 M

LEGEND



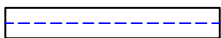
CUT AREA



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 :-

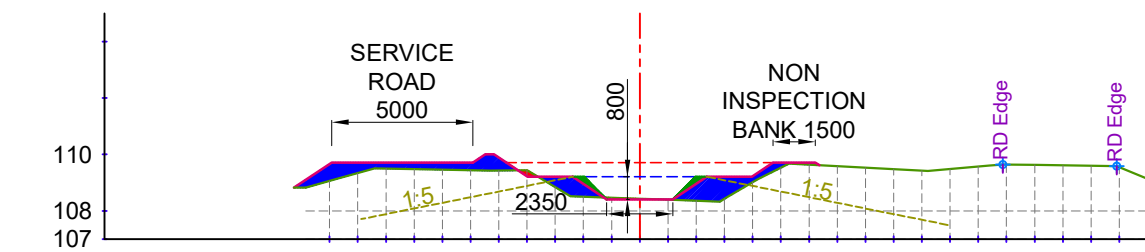
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

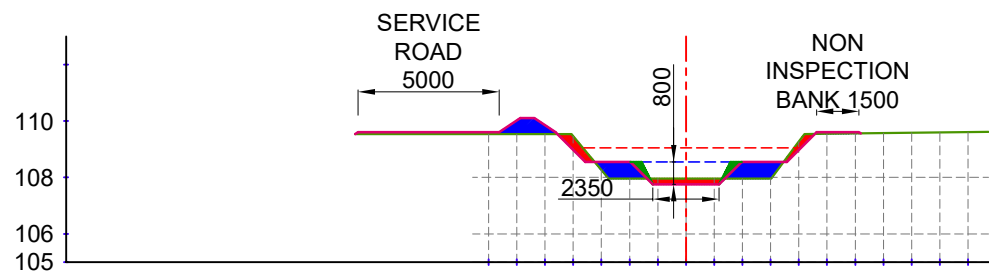
49 of 59

X SECTION OF KARMA DY.



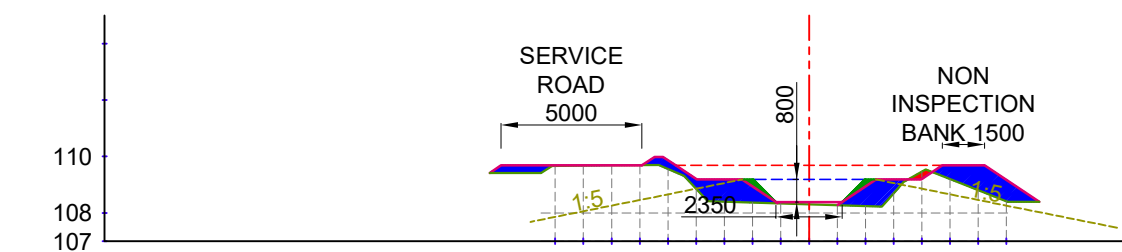
EXIST. LEVEL (M)	109.058	109.340	109.500	109.480	109.459	109.439	109.427	109.436	108.841	108.501	108.466	108.430	108.395	108.359	108.424	109.012	109.527	109.636	109.583	109.530	109.477	109.426	109.482	109.568	109.640	109.626	109.612	109.598	109.549
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17

CUTTING AREA (SQ.M) = 0.136 CH. (KM):- 19+700
FILLING AREA (SQ.M) = 5.302 DESIGNED BED LEVEL = 108.409 M



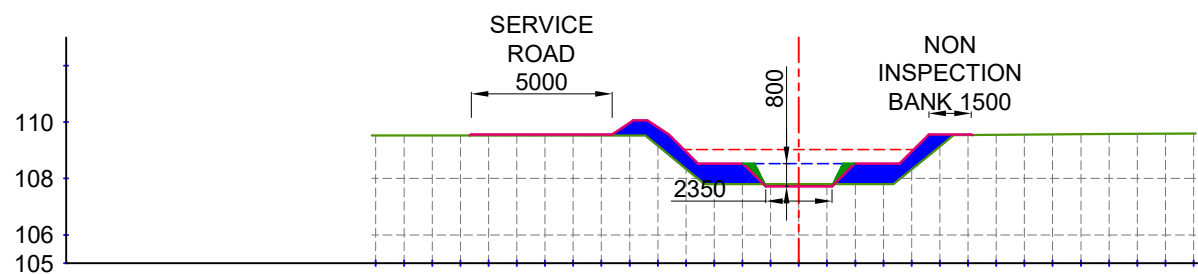
EXIST. LEVEL (M)																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																		
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CUTTING AREA (SQ.M) = 1.149 CH. (KM):- 19+900
FILLING AREA (SQ.M) = 2.893 DESIGNED BED LEVEL = 107.749 M



EXIST. LEVEL (M)	109.670	109.677	109.685	109.693	109.557	108.854	108.403	108.372	108.340	108.308	108.277	108.245	108.694	109.470	109.203	108.808	108.412
OFFSET (M)	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7

CUTTING AREA (SQ.M) = 0.142 CH. (KM):- 19+800
FILLING AREA (SQ.M) = 6.078 DESIGNED BED LEVEL = 108.384 M



EXIST. LEVEL (M)	-109.528	-109.527	-109.527	-109.527	-109.527	-109.526	-109.526	-109.526	-109.526	-109.525	-109.161	-108.340	-107.801	-107.800	-107.800	-107.799	-107.799	-107.798	-107.798	-108.325	-109.139	-109.538	-109.545	-109.553	-109.560	-109.568	-109.575	-109.583	-109.590	-109.598
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

CUTTING AREA (SQ.M) = 0.179 CH. (KM):- 20+000
FILLING AREA (SQ.M) = 5.653 DESIGNED BED LEVEL = 107.724 M

LEGEND



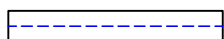
CUT AREA



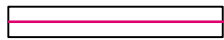
FILL AREA



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 :-

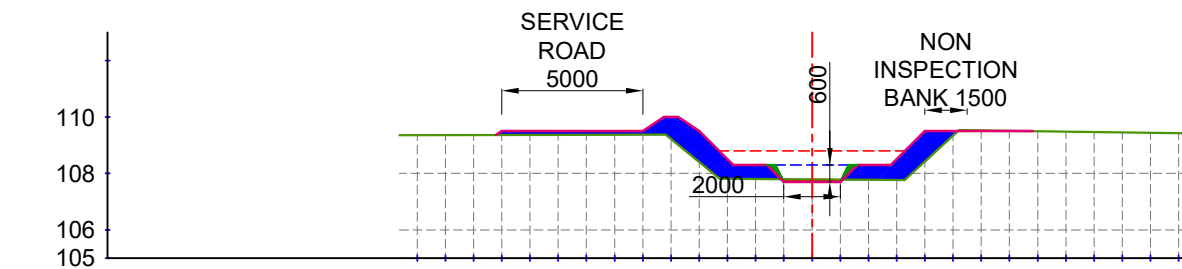
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

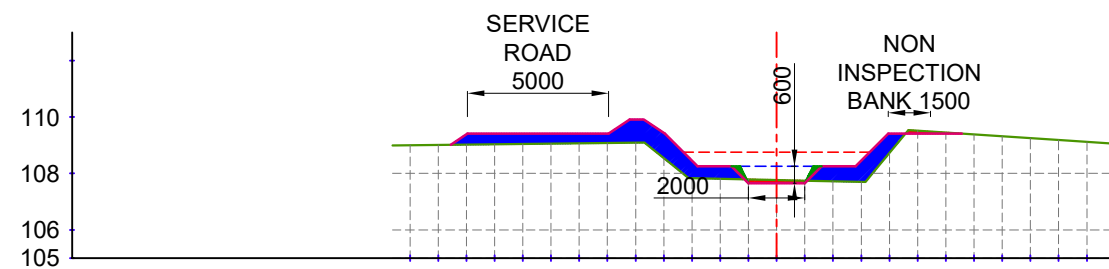
50 of 59

X SECTION OF KARMA DY.



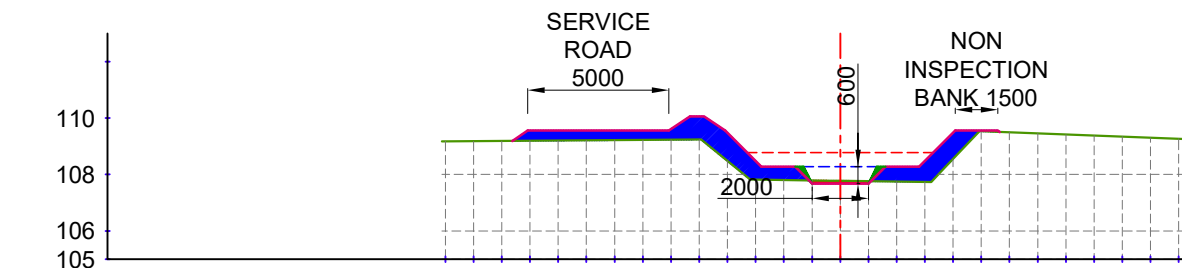
EXIST. LEVEL (M)	109.351	109.355	109.358	109.361	109.365	109.368	109.372	109.375	109.379	109.226	108.410	107.811	107.803	107.796	107.788	107.781	107.774	107.766	108.418	109.337	109.523	109.509	109.495	109.480	109.466	109.452	109.438	109.423
OFFSET (M)	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13

CUTTING AREA (SQ.M) = 0.232 CH. (KM):- 20+100
FILLING AREA (SQ.M) = 6.417 DESIGNED BED LEVEL = 107.699 M



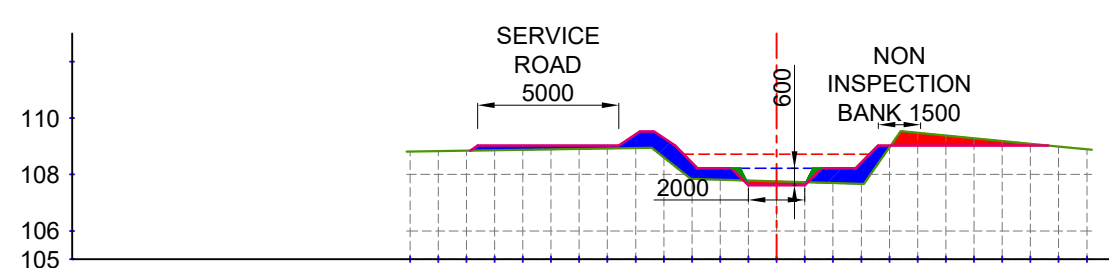
EXIST. LEVEL (M)	108.998	109.010	109.022	109.033	109.045	109.056	109.068	109.080	109.091	108.545	107.833	107.811	107.789	107.767	107.745	107.723	107.701	108.720	109.512	109.446	109.381	109.315	109.249	109.183	109.117
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 0.369 CH. (KM):- 20+300
FILLING AREA (SQ.M) = 6.777 DESIGNED BED LEVEL = 107.649 M



EXIST. LEVEL (M)	109.171	109.178	109.186	109.193	109.201	109.208	109.216	109.223	109.231	109.238	108.478	107.821	107.807	107.792	107.778	107.763	107.749	107.734	108.546	109.532	109.493	109.455	109.417	109.378	109.339	109.301	109.262
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

CUTTING AREA (SQ.M) = 0.213 CH. (KM):- 20+200
FILLING AREA (SQ.M) = 7.460 DESIGNED BED LEVEL = 107.674 M



EXIST. LEVEL (M)	108.814	108.830	108.846	108.862	108.878	108.894	108.910	108.927	108.943	108.609	107.846	107.816	107.786	107.756	107.727	107.697	107.667	108.963	109.476	109.379	109.282	109.186	109.089	108.992	108.895
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) = 1.688 CH. (KM):- 20+400
FILLING AREA (SQ.M) = 4.298 DESIGNED BED LEVEL = 107.624 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

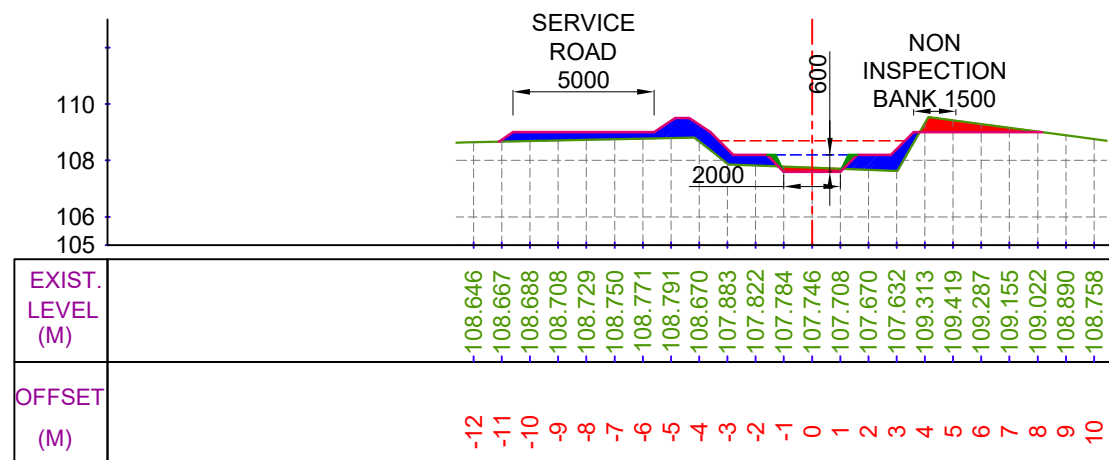


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

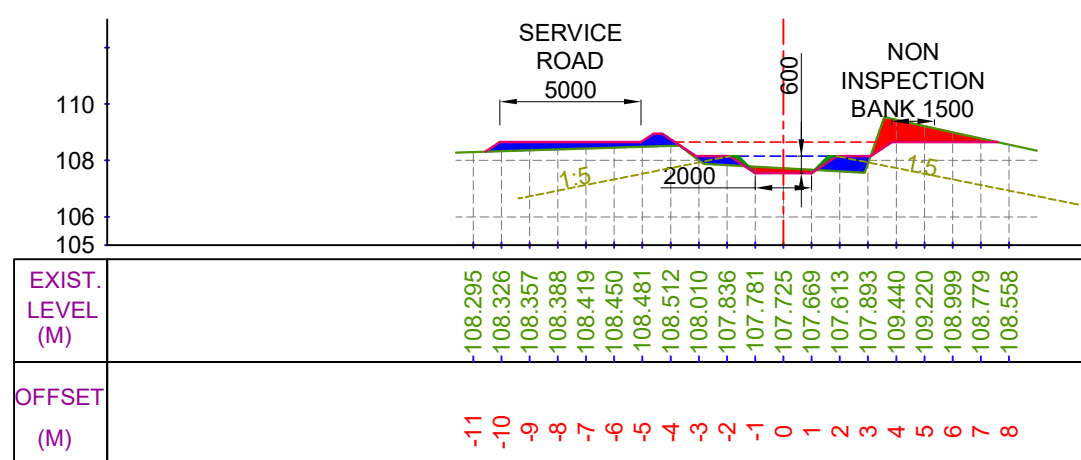
Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

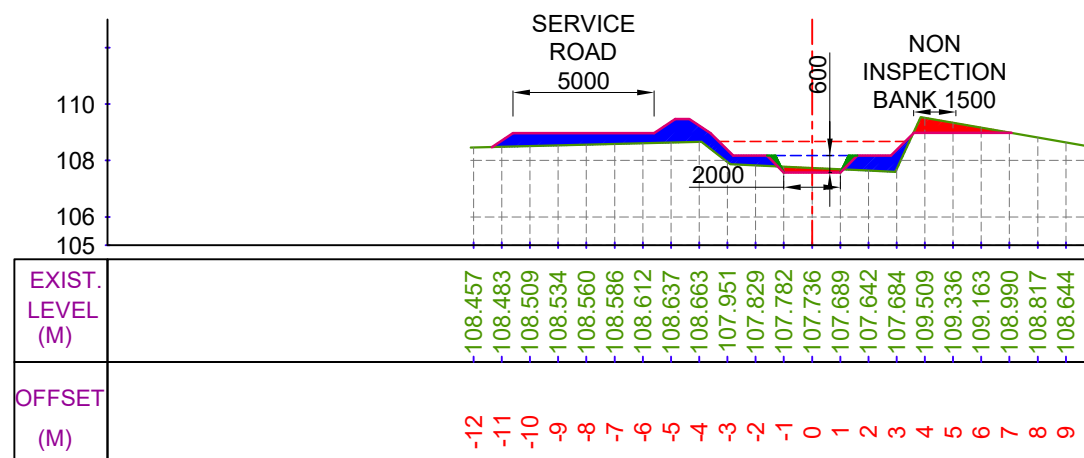
X SECTION OF KARMA DY.



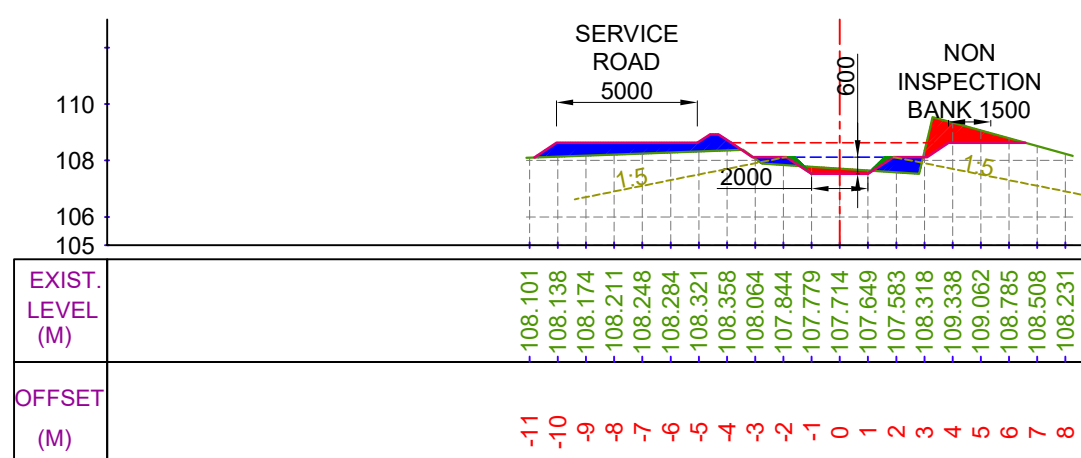
CUTTING AREA (SQ.M) = 1.456 CH. (KM):- 20+500
FILLING AREA (SQ.M) = 4.861 DESIGNED BED LEVEL = 107.599 M



CUTTING AREA (SQ.M) = 2.449 CH. (KM):- 20+700
FILLING AREA (SQ.M) = 2.964 DESIGNED BED LEVEL = 107.549 M



CUTTING AREA (SQ.M) = 1.304 CH. (KM):- 20+600
FILLING AREA (SQ.M) = 5.538 DESIGNED BED LEVEL = 107.574 M



CUTTING AREA (SQ.M) = 2.257 CH. (KM):- 20+800
FILLING AREA (SQ.M) = 3.863 DESIGNED BED LEVEL = 107.524 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			H.G. LINE
			F.S.L.

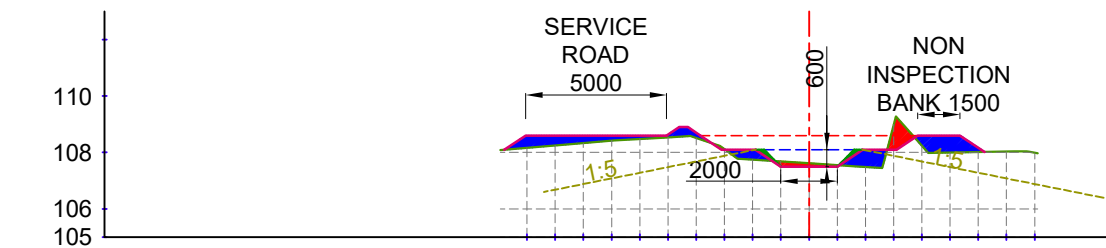
Prepared by :-

WAPCOS LTD.



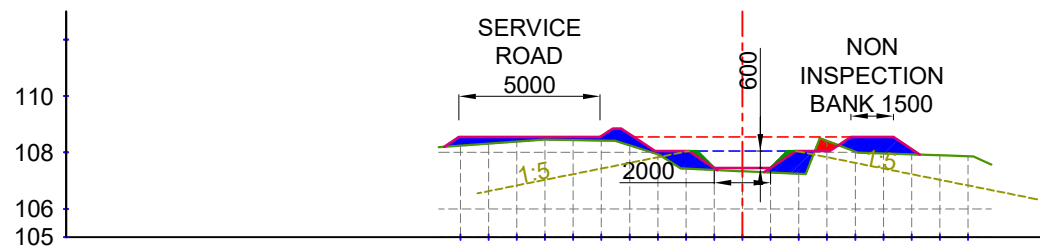
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC- 52 of 59

X SECTION OF KARMA DY.



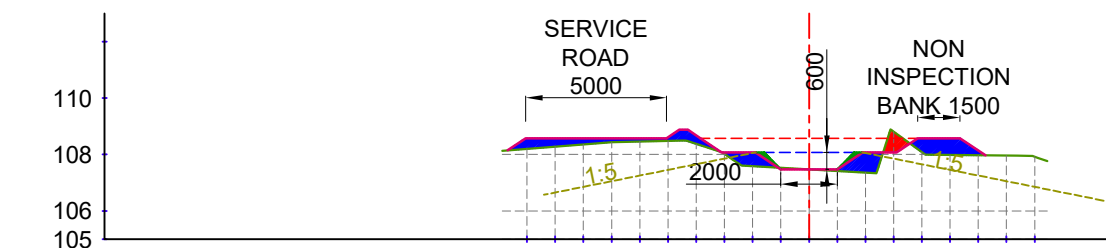
EXIST. LEVEL (M)	108.161	108.248	108.335	108.422	108.480	108.535	108.510	108.113	107.746	107.681	107.615	107.550	107.485	108.987	108.234	107.997	108.013	108.029	107.987
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.851
FILLING AREA (SQ.M) = 3.911
CH. (KM):- 20+900
DESIGNED BED LEVEL = 107.499 M



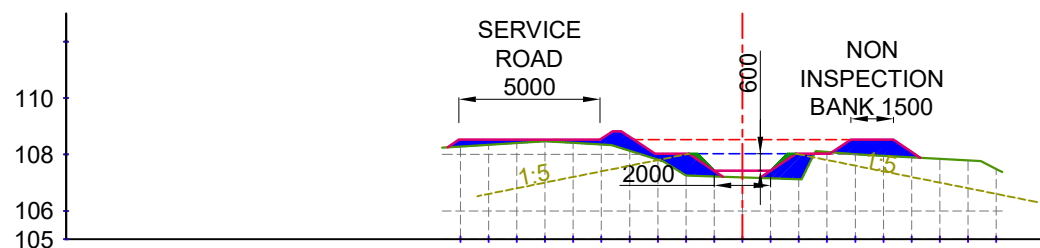
EXIST. LEVEL (M)	108.242	108.313	108.384	108.454	108.439	108.424	108.253	107.934	107.425	107.379	107.334	107.288	107.243	108.408	108.029	107.966	107.933	107.900	107.867
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.230
FILLING AREA (SQ.M) = 4.407
CH. (KM):- 21+100
DESIGNED BED LEVEL = 107.449 M



EXIST. LEVEL (M)	108.203	108.282	108.361	108.440	108.463	108.484	108.373	108.021	107.585	107.529	107.473	107.417	107.361	108.805	108.084	107.981	107.971	107.961	107.925
OFFSET (M)	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.450
FILLING AREA (SQ.M) = 4.161
CH. (KM):- 21+000
DESIGNED BED LEVEL = 107.474 M



EXIST. LEVEL (M)	108.282	108.344	108.406	108.467	108.412	108.356	108.135	107.821	107.263	107.227	107.194	107.161	107.128	108.089	108.005	107.952	107.899	107.847	107.795	107.486
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) = 0.043
FILLING AREA (SQ.M) = 4.745
CH. (KM):- 21+200
DESIGNED BED LEVEL = 107.424 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



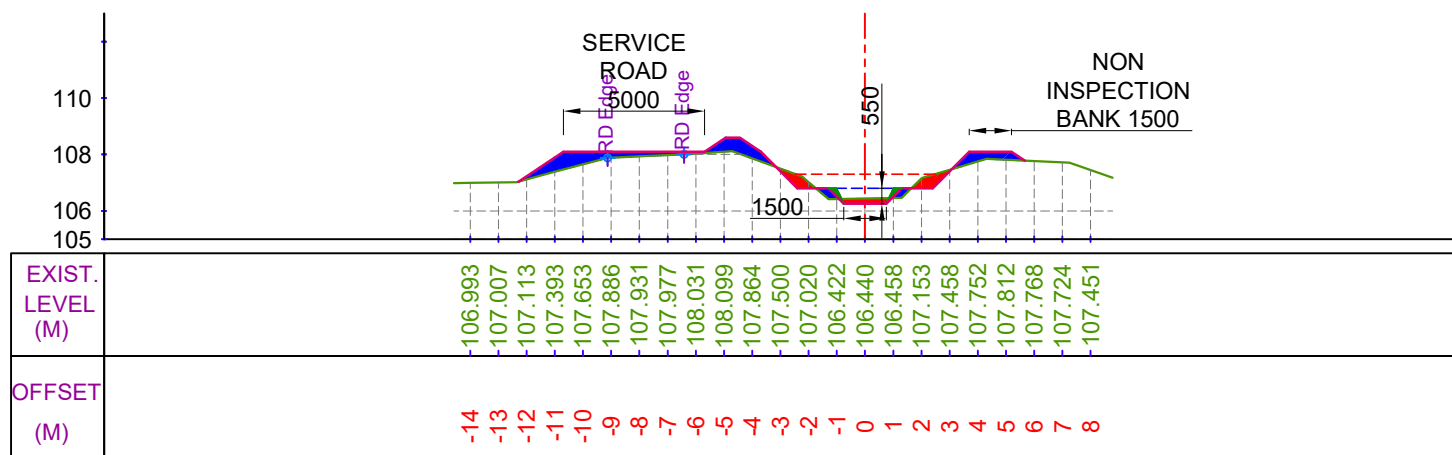
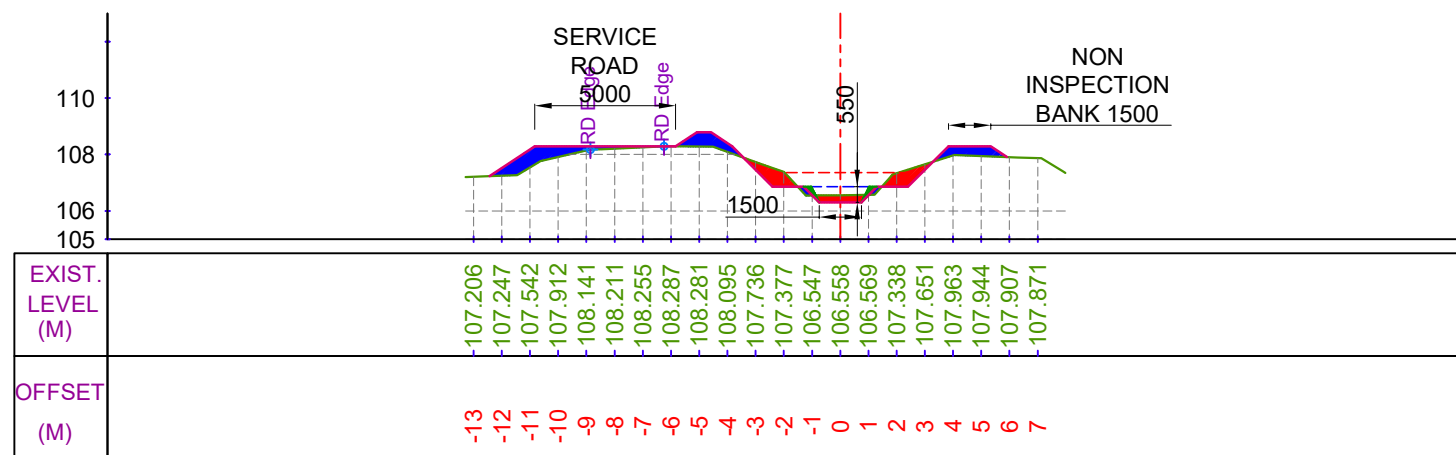
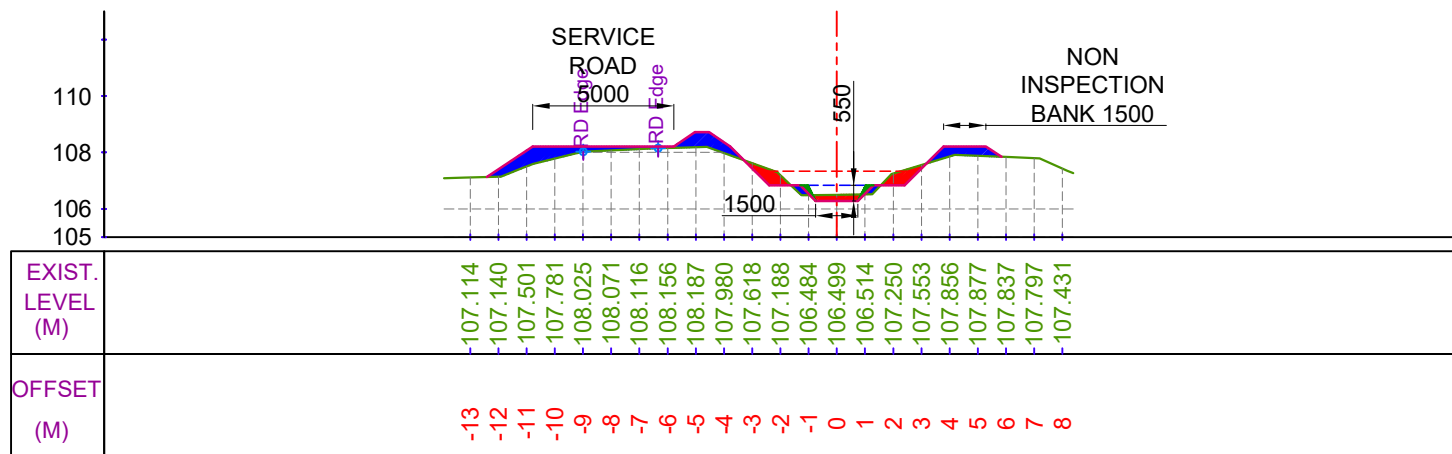
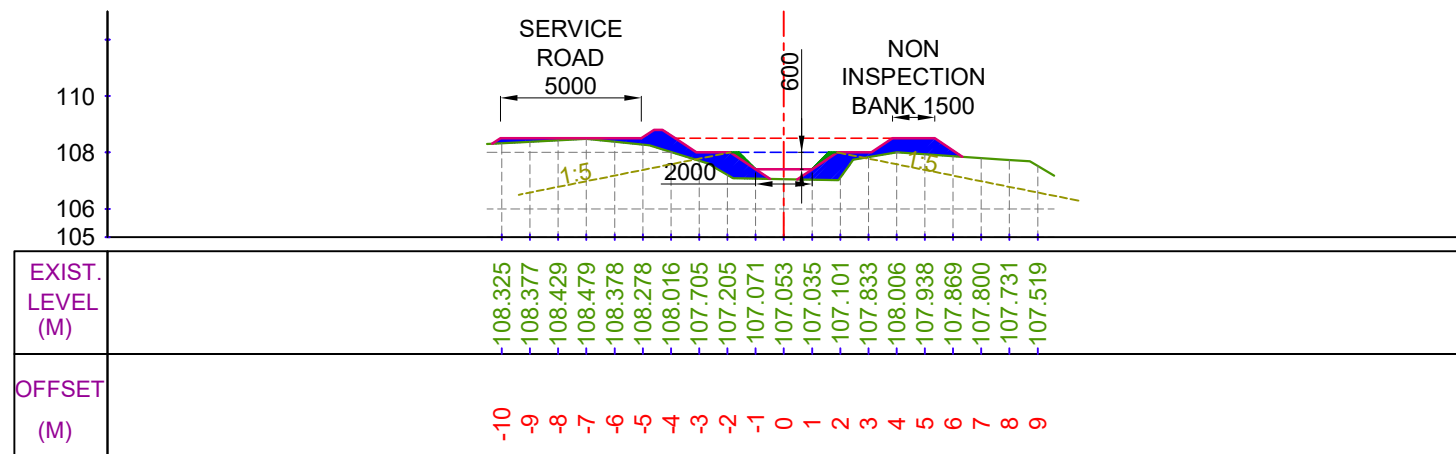
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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X SECTION OF KARMA DY.



LEGEND



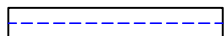
CUT AREA



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 :-

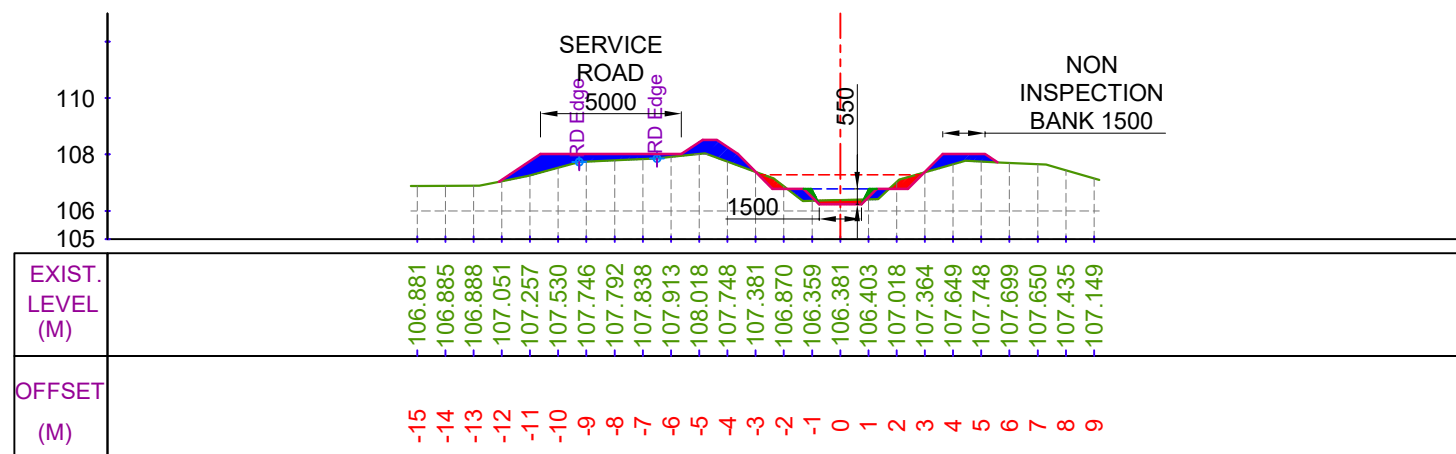
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

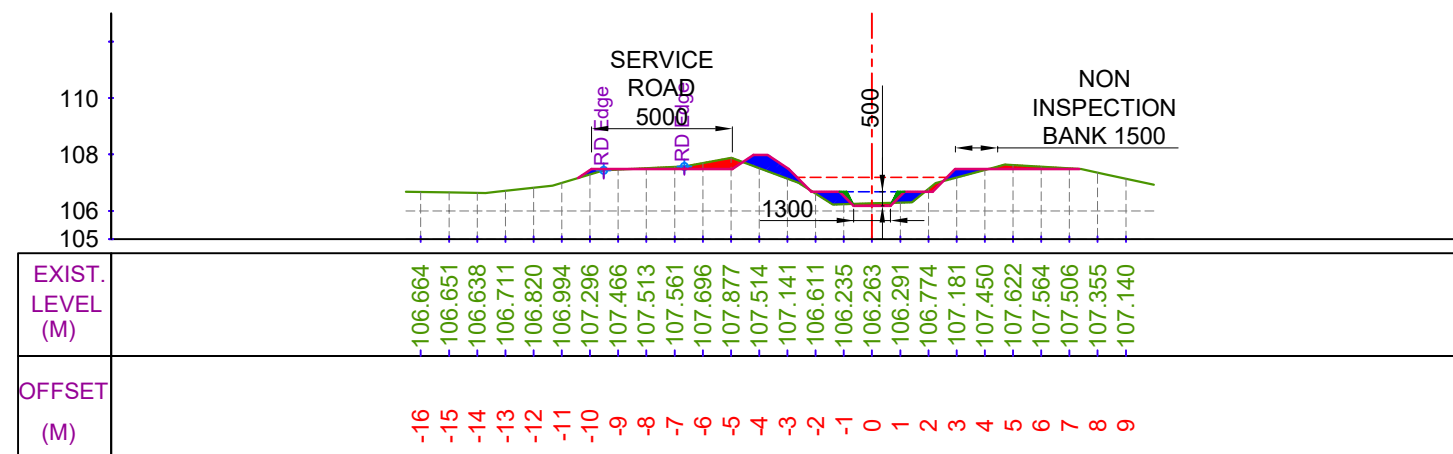
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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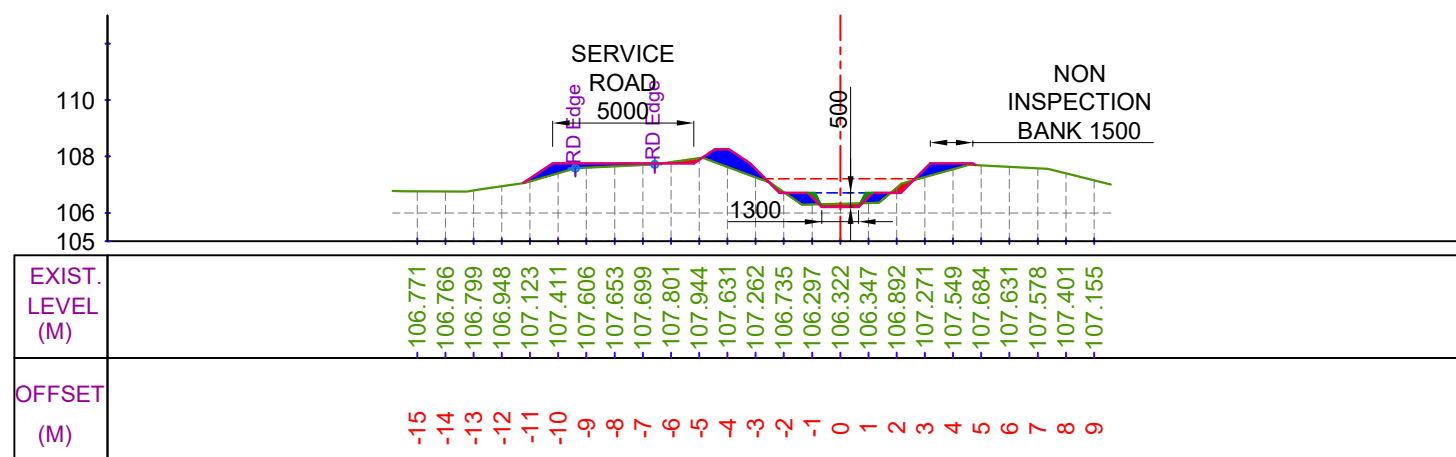
X SECTION OF KARMA DY.



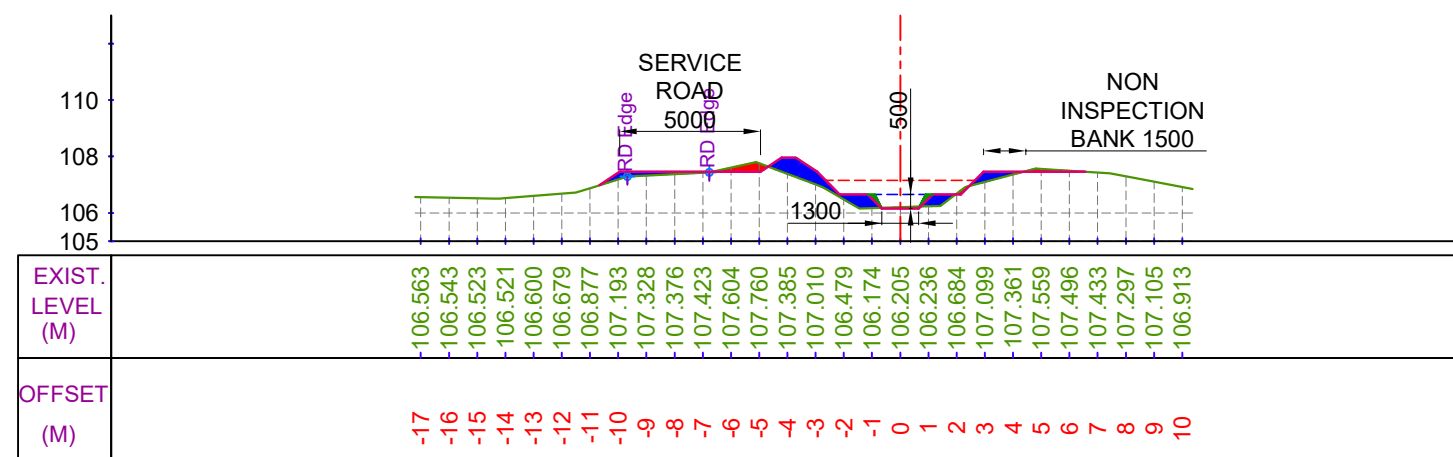
CUTTING AREA (SQ.M) = 0.736
FILLING AREA (SQ.M) = 3.866
CH. (KM):- 21+700
DESIGNED BED LEVEL = 106.232 M



CUTTING AREA (SQ.M) = 1.024
FILLING AREA (SQ.M) = 1.785
CH. (KM):- 21+900
DESIGNED BED LEVEL = 106.182 M



CUTTING AREA (SQ.M) = 0.444
FILLING AREA (SQ.M) = 2.625
CH. (KM):- 21+800
DESIGNED BED LEVEL = 106.207 M



CUTTING AREA (SQ.M) = 0.579
FILLING AREA (SQ.M) = 2.612
CH. (KM):- 22+000
DESIGNED BED LEVEL = 106.157 M

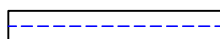
LEGEND



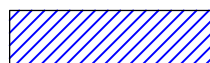
CUT AREA



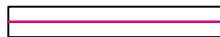
EXISTING BED LINE



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 :-

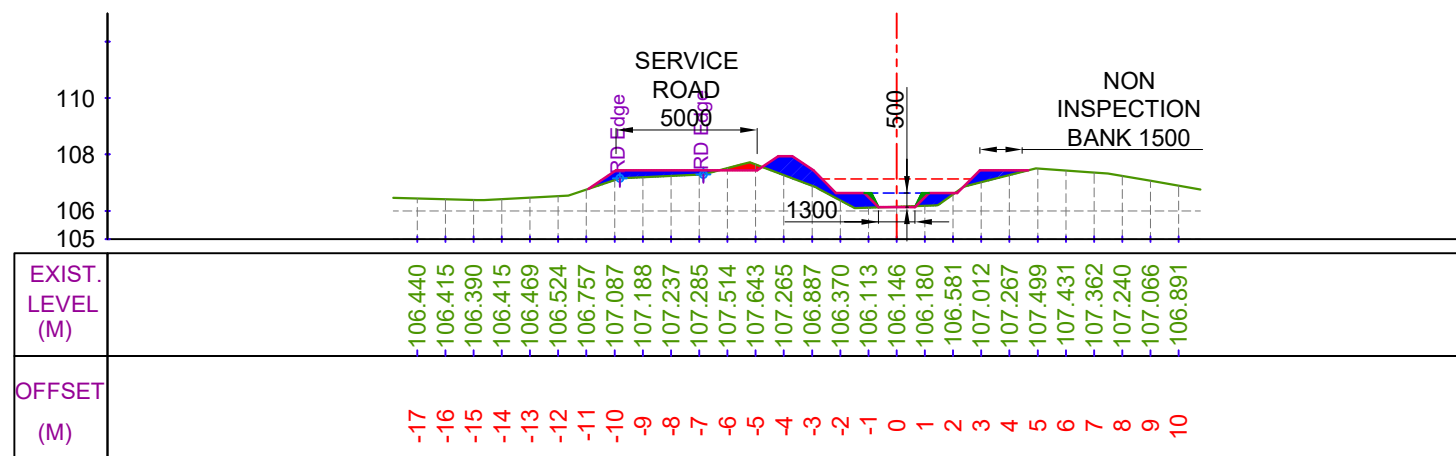
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

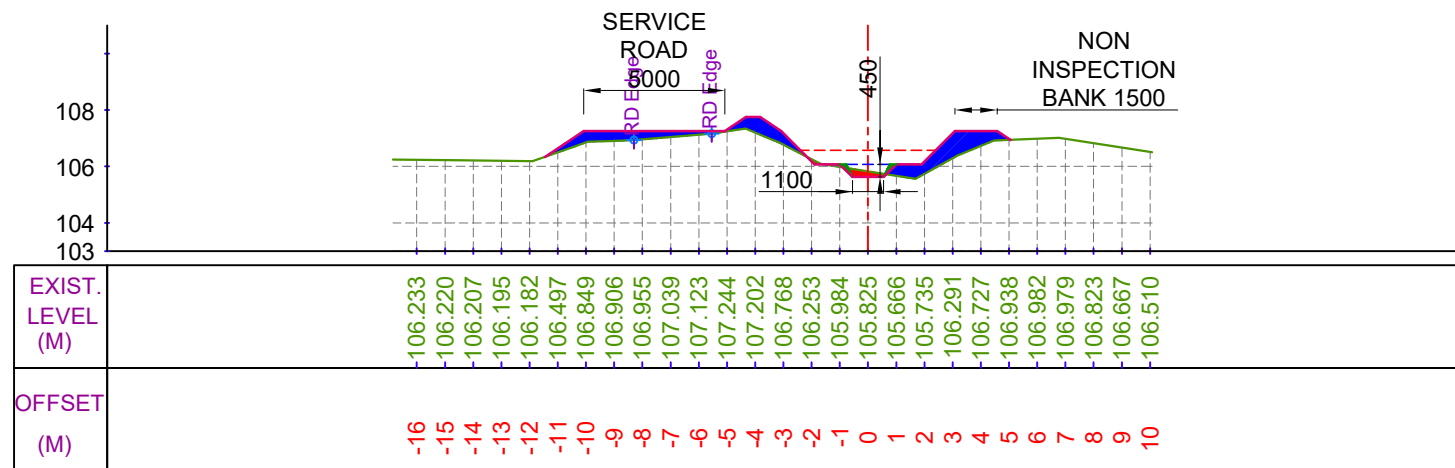
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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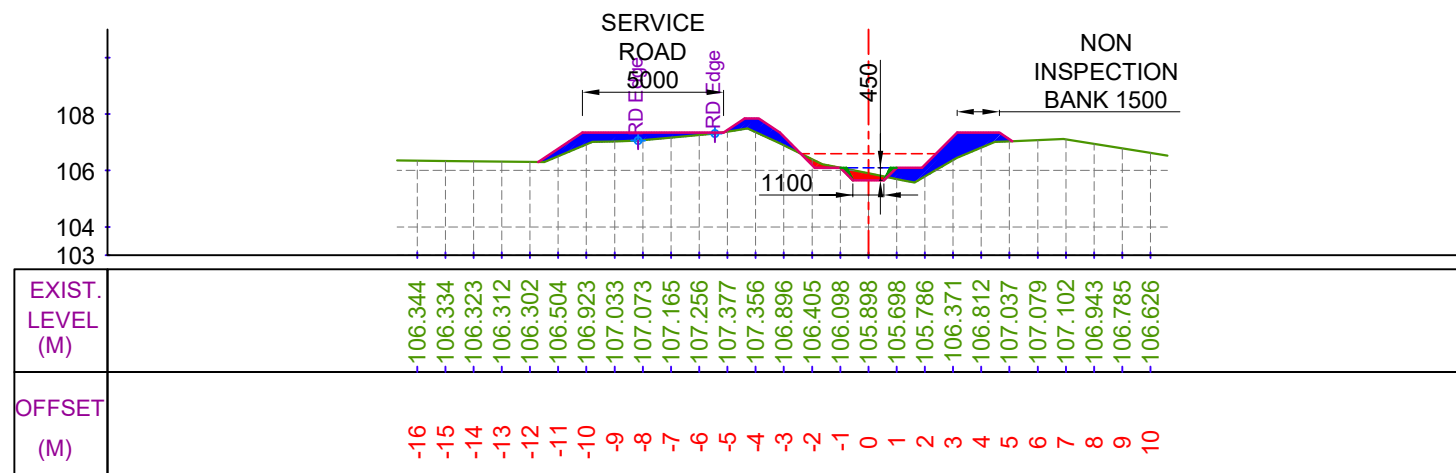
X SECTION OF KARMA DY.



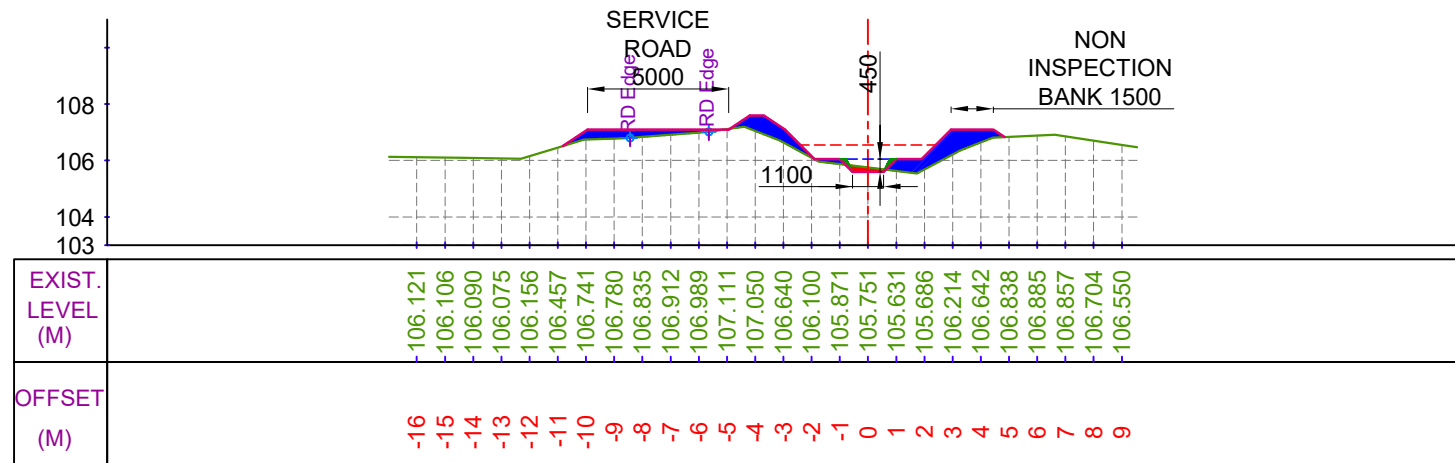
CUTTING AREA (SQ.M) = 0.266
FILLING AREA (SQ.M) = 3.599
CH. (KM):- 22+100
DESIGNED BED LEVEL = 106.132 M



CUTTING AREA (SQ.M) = 0.278
FILLING AREA (SQ.M) = 4.831
CH. (KM):- 22+300
DESIGNED BED LEVEL = 105.625 M



CUTTING AREA (SQ.M) = 0.467
FILLING AREA (SQ.M) = 4.544
CH. (KM):- 22+200
DESIGNED BED LEVEL = 105.650 M

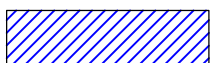


CUTTING AREA (SQ.M) = 0.183
FILLING AREA (SQ.M) = 4.512
CH. (KM):- 22+400
DESIGNED BED LEVEL = 105.600 M

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 :-

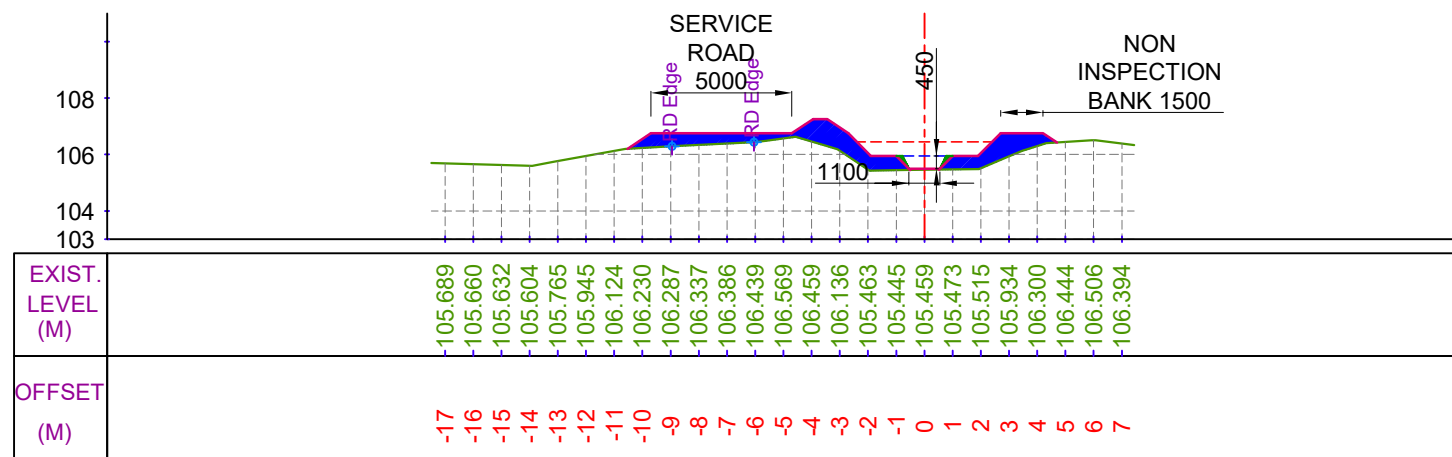
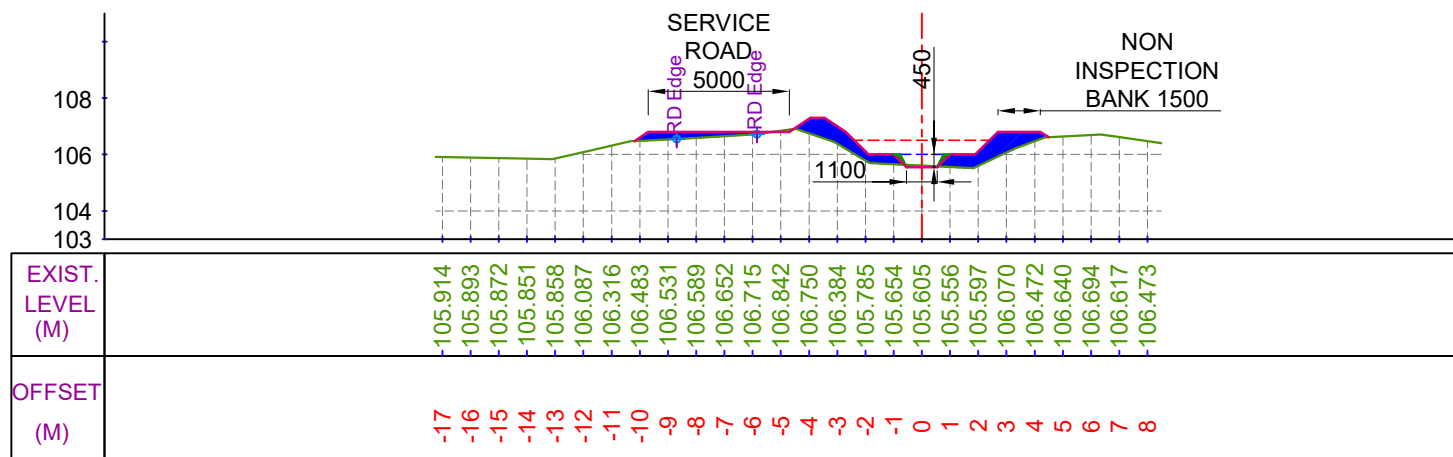
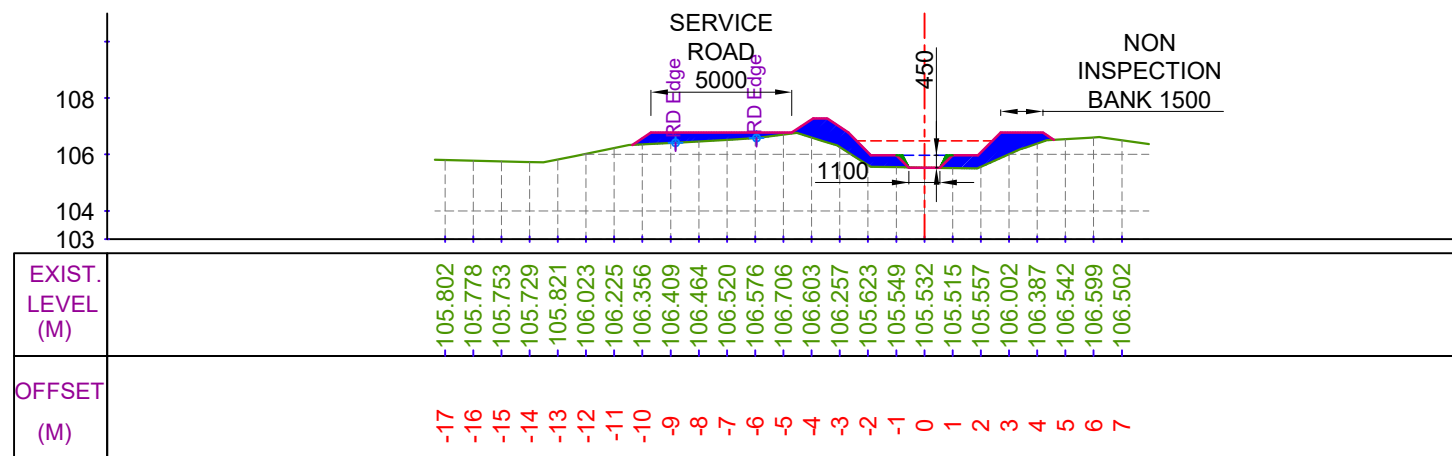
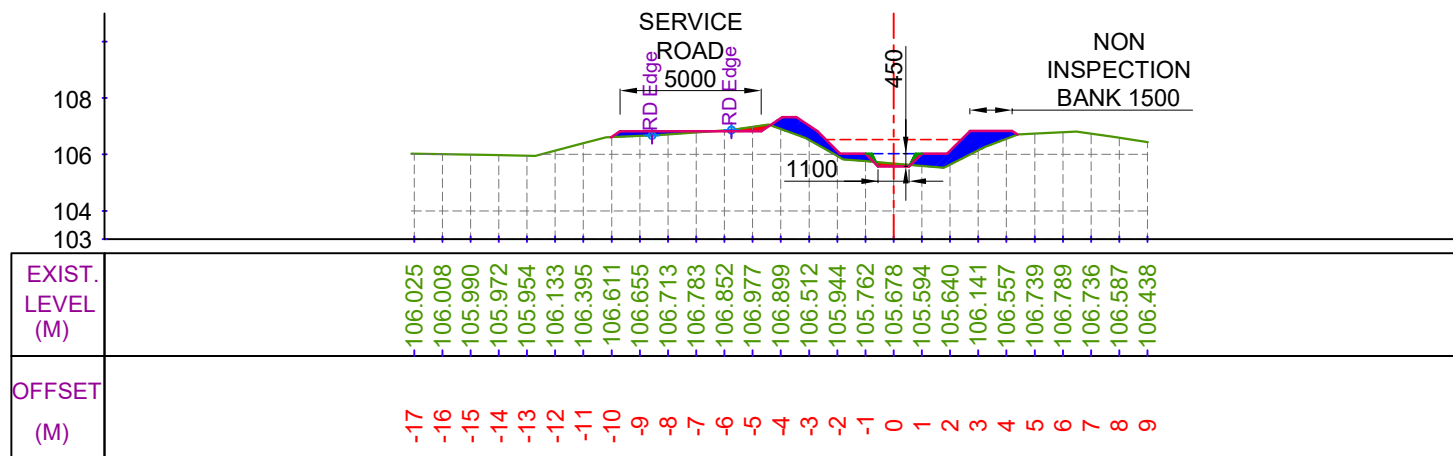
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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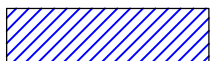
X SECTION OF KARMA DY.



LEGEND



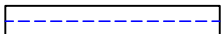
CUT AREA



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 :-

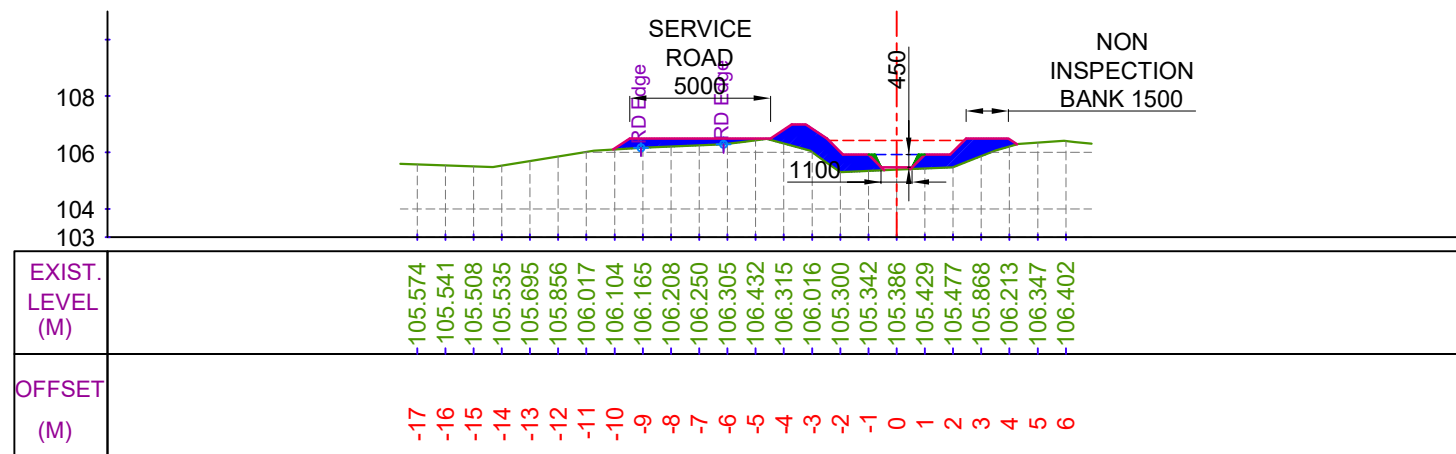
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

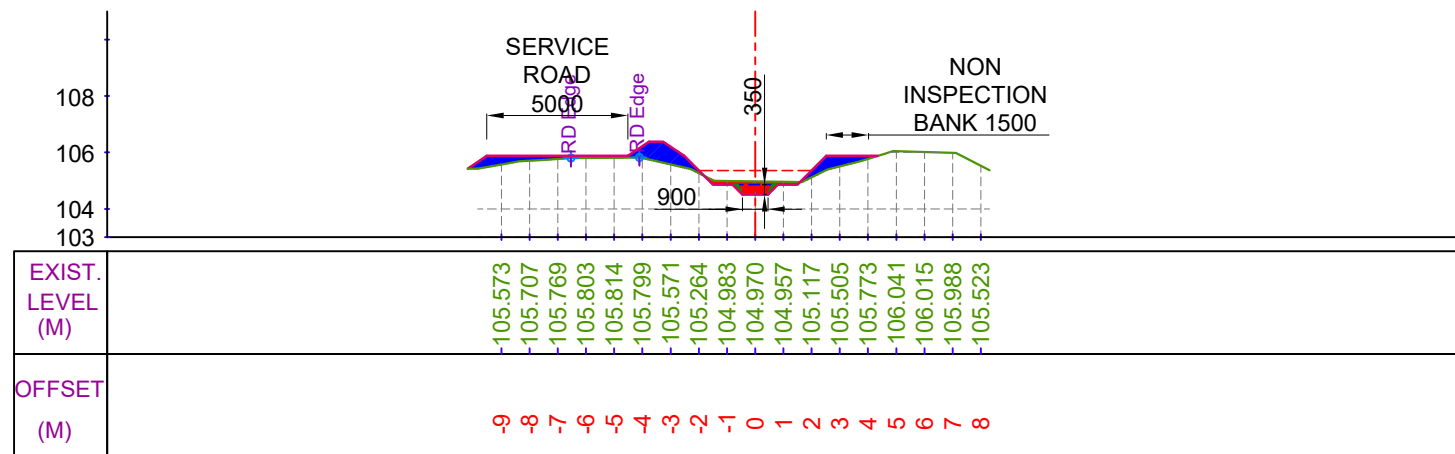
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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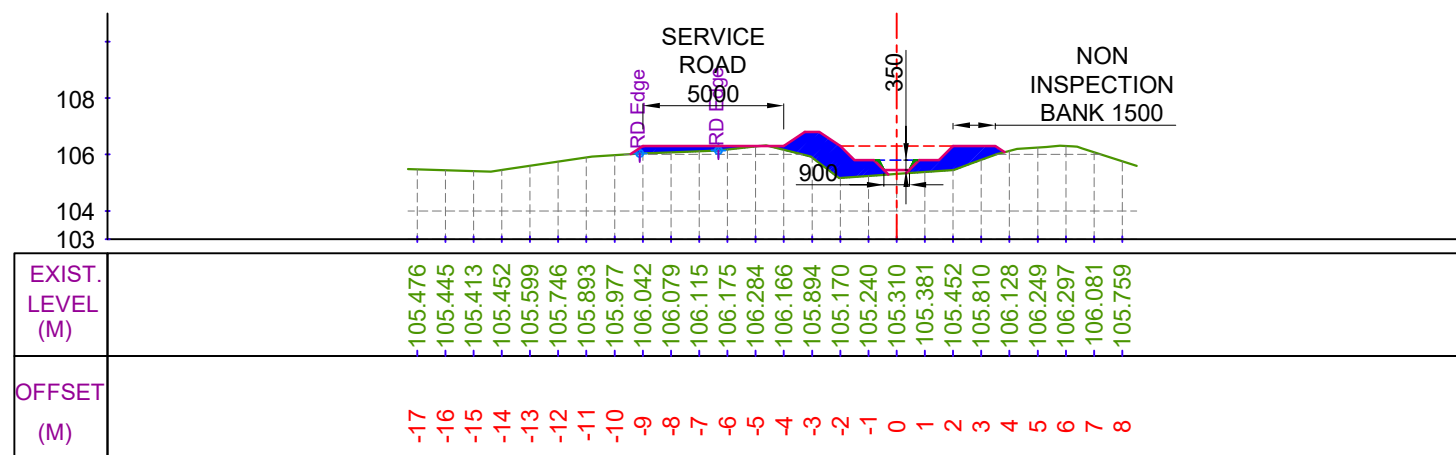
X SECTION OF KARMA DY.



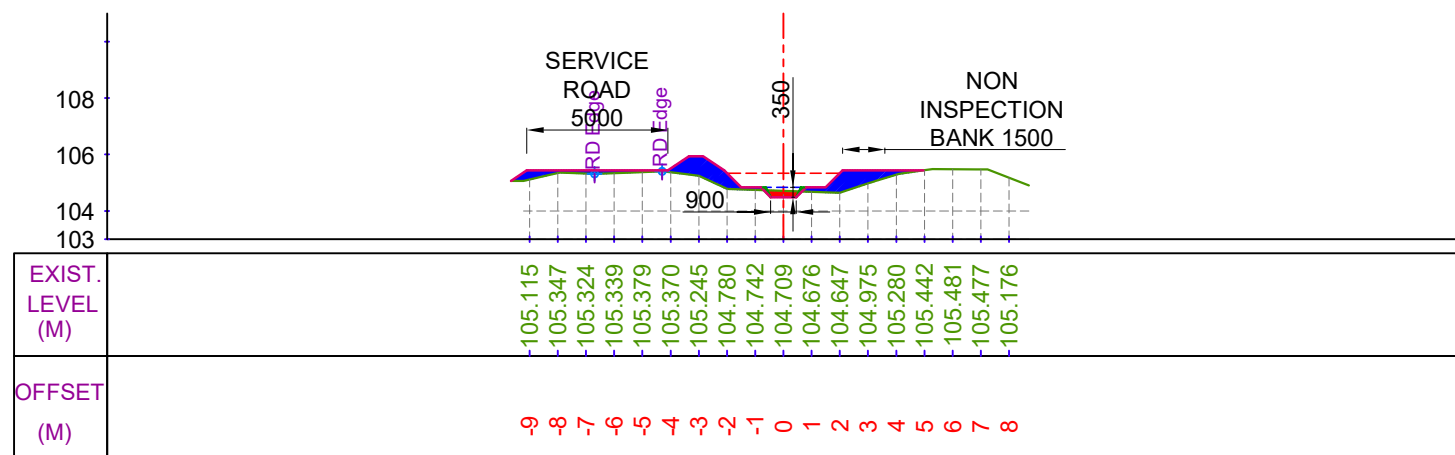
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.472
CH. (KM):- 22+900
DESIGNED BED LEVEL = 105.475 M



CUTTING AREA (SQ.M) = 0.738
FILLING AREA (SQ.M) = 2.714
CH. (KM):- 23+100
DESIGNED BED LEVEL = 104.509 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.026
CH. (KM):- 23+000
DESIGNED BED LEVEL = 105.450 M



CUTTING AREA (SQ.M) = 0.228
FILLING AREA (SQ.M) = 3.393
CH. (KM):- 23+200
DESIGNED BED LEVEL = 104.484 M

LEGEND



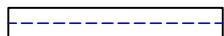
CUT AREA



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 :-

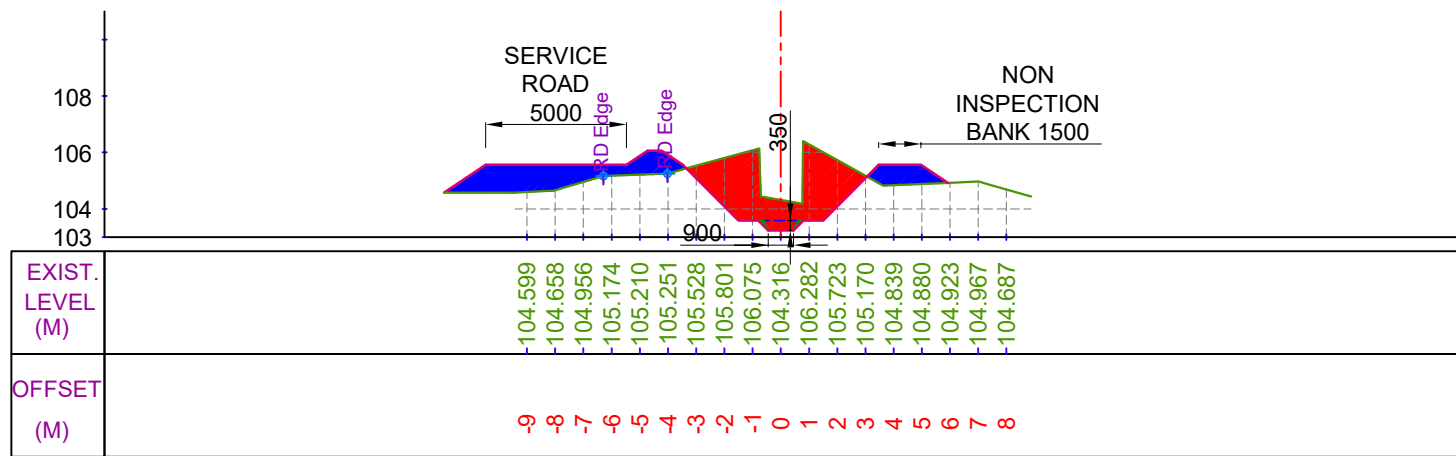
X SEC OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

Drawing No. :-

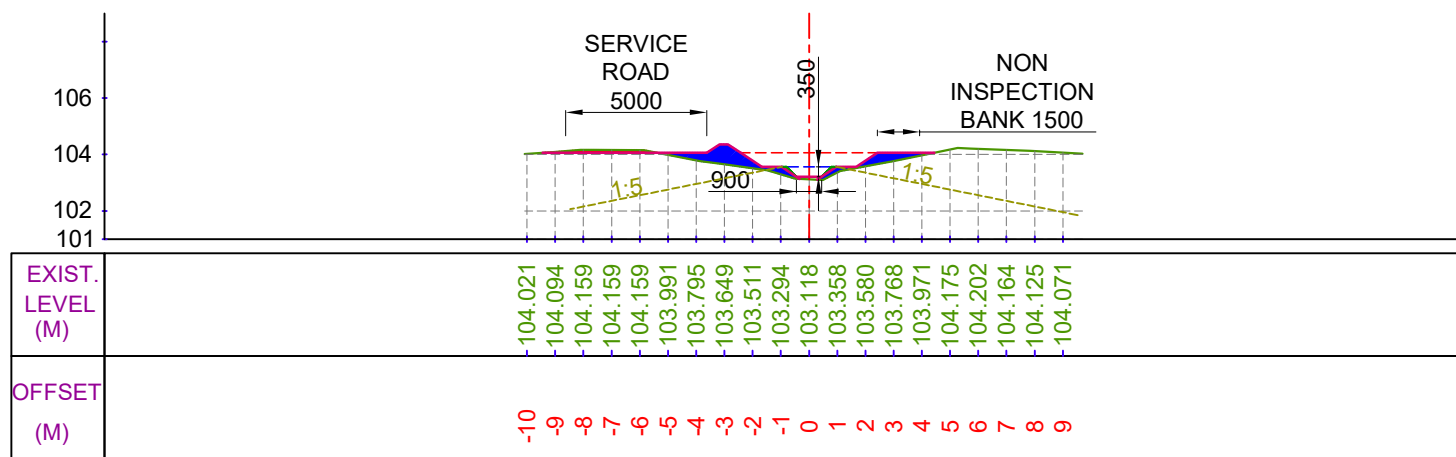
WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

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X SECTION OF KARMA DY.



CUTTING AREA (SQ.M) = 9.277
FILLING AREA (SQ.M) = 7.294
CH. (KM):- 23+300
DESIGNED BED LEVEL = 103.238 M

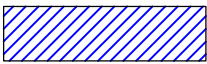


CUTTING AREA (SQ.M) = 0.306
FILLING AREA (SQ.M) = 2.212
CH. (KM):- 23+400
DESIGNED BED LEVEL = 103.212 M

LEGEND



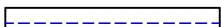
CUT AREA



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 KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)

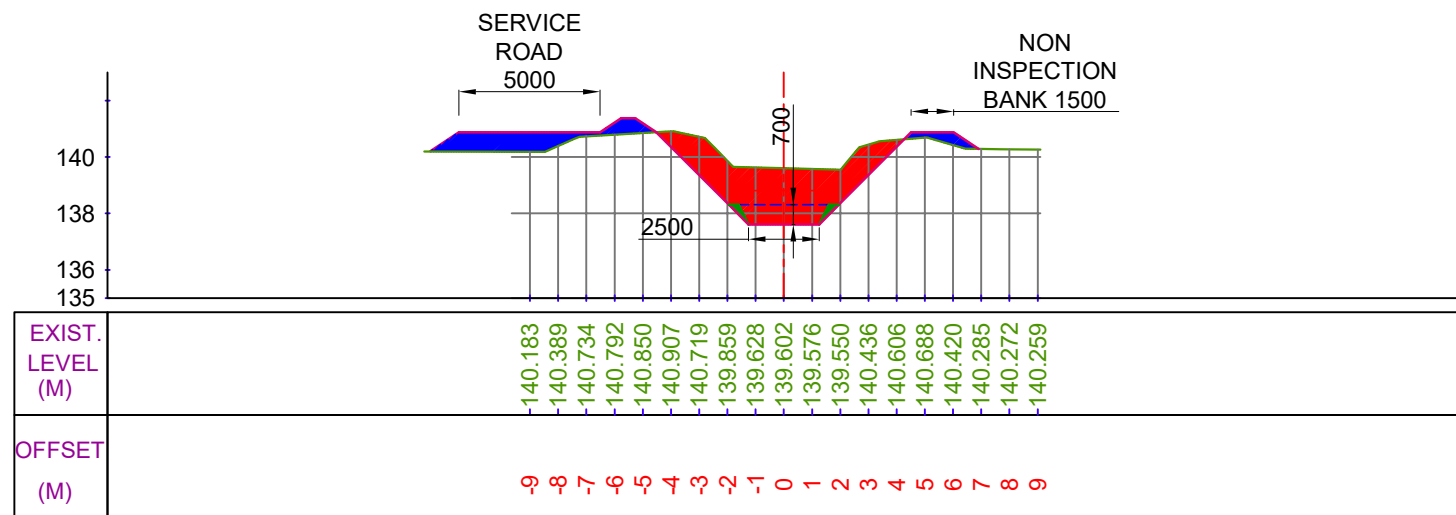
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ XSEC-

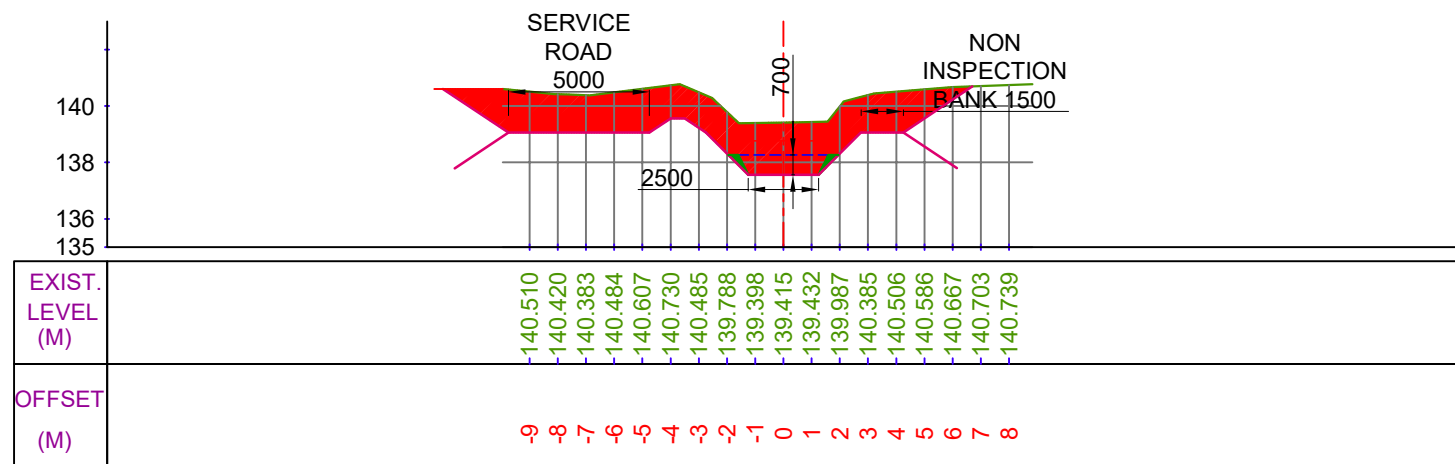
59 of 59

CHAURAHA MINOR

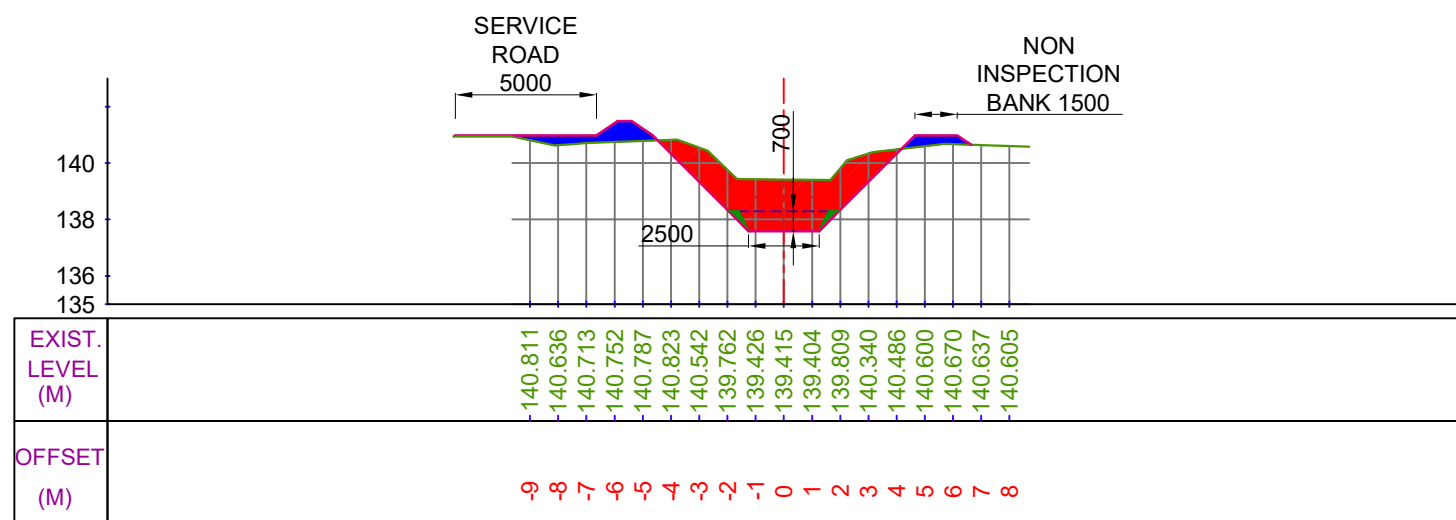
X SECTION OF CHAURAHA MINOR



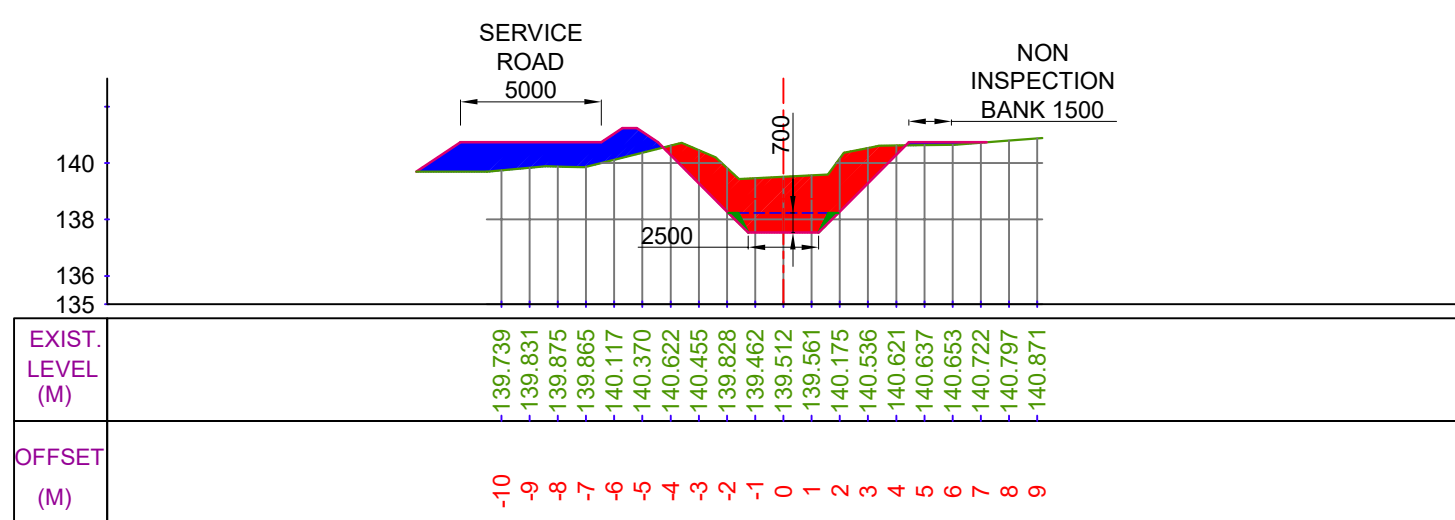
CUTTING AREA (SQ.M) = 11.723
FILLING AREA (SQ.M) = 4.482
CH. (KM):- 0+100
DESIGNED BED LEVEL = 137.610 M



CUTTING AREA (SQ.M) = 24.369
FILLING AREA (SQ.M) = 0.000
CH. (KM):- 0+300
DESIGNED BED LEVEL = 137.560 M



CUTTING AREA (SQ.M) = 10.939
FILLING AREA (SQ.M) = 2.603
CH. (KM):- 0+200
DESIGNED BED LEVEL = 137.585 M

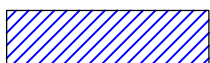


CUTTING AREA (SQ.M) = 12.116
FILLING AREA (SQ.M) = 7.286
CH. (KM):- 0+400
DESIGNED BED LEVEL = 137.535 M

LEGEND



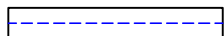
CUT AREA



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

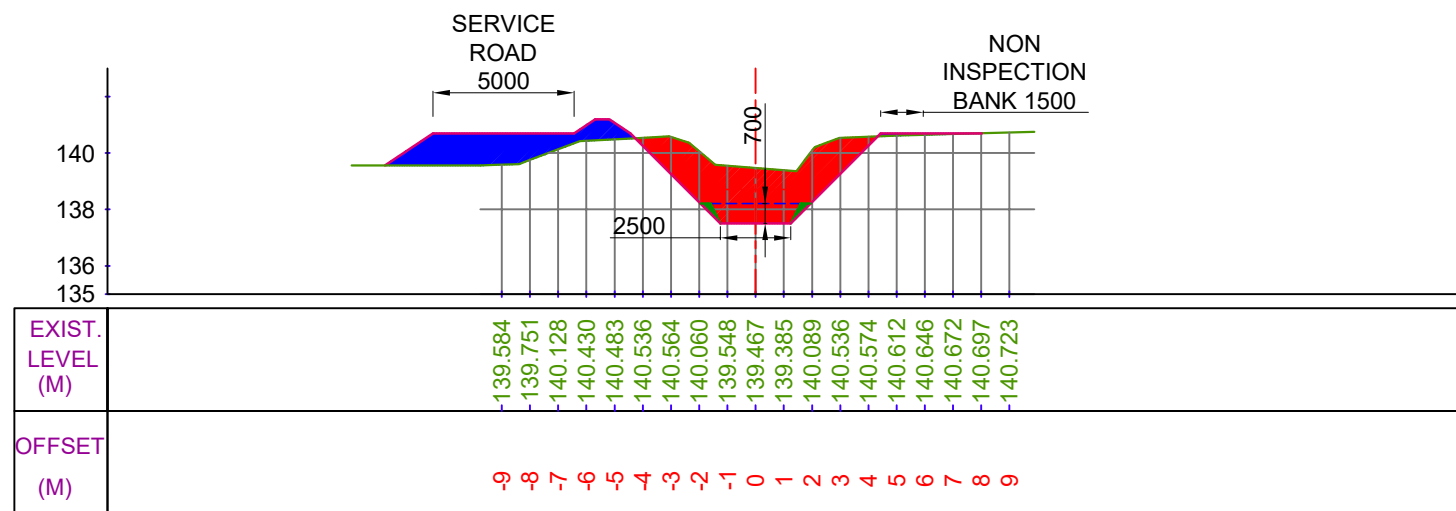
Drawing Title :-

X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

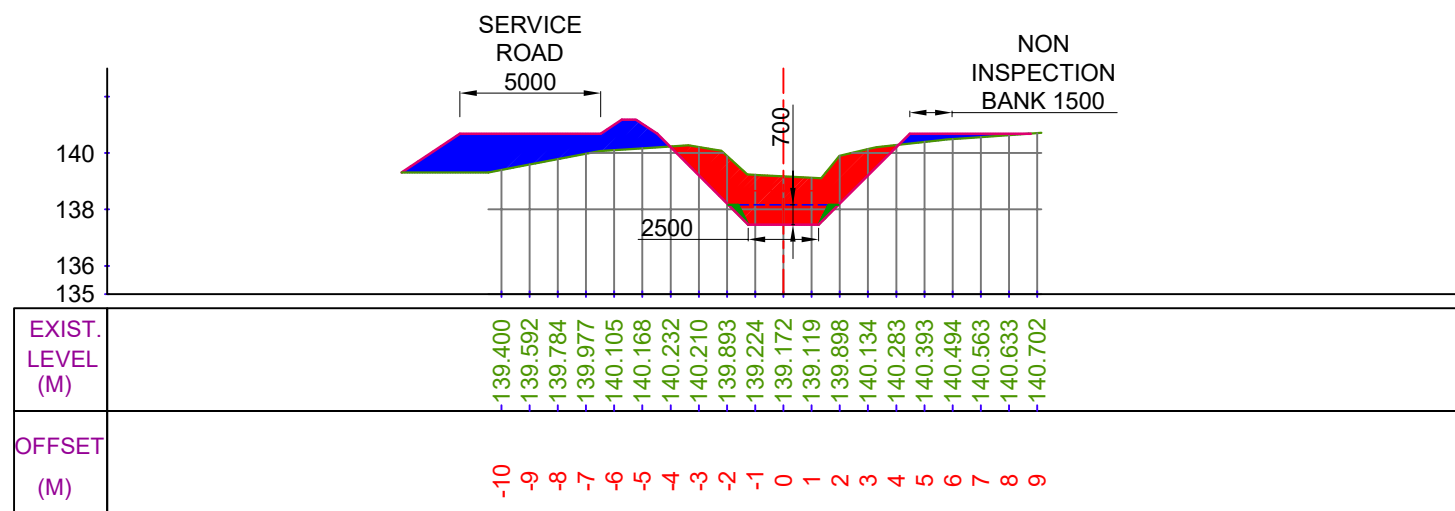
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

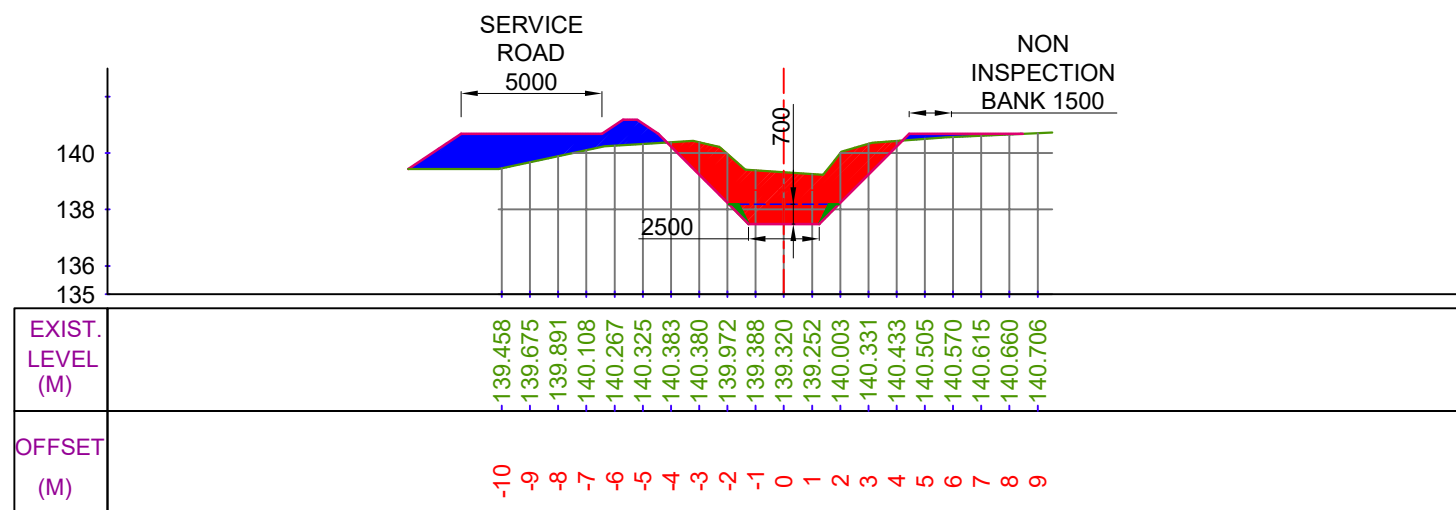
X SECTION OF CHAURAHA MINOR



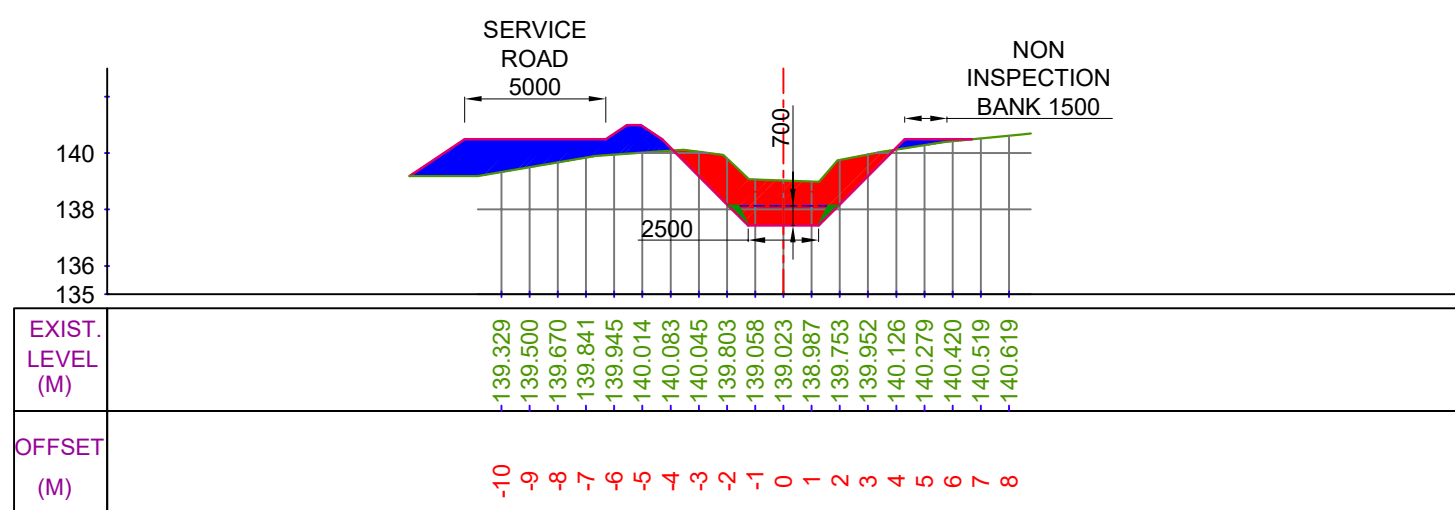
CUTTING AREA (SQ.M) = 12.253 CH. (KM):- 0+500
FILLING AREA (SQ.M) = 7.136 DESIGNED BED LEVEL = 137.510 M



CUTTING AREA (SQ.M) = 10.299 CH. (KM):- 0+700
FILLING AREA (SQ.M) = 9.340 DESIGNED BED LEVEL = 137.460 M



CUTTING AREA (SQ.M) = 11.264 CH. (KM):- 0+600
FILLING AREA (SQ.M) = 7.805 DESIGNED BED LEVEL = 137.485 M



CUTTING AREA (SQ.M) = 9.363 CH. (KM):- 0+800
FILLING AREA (SQ.M) = 8.134 DESIGNED BED LEVEL = 137.435 M

LEGEND

	CUT AREA		EXISTING BED LINE
			F.S.L.
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

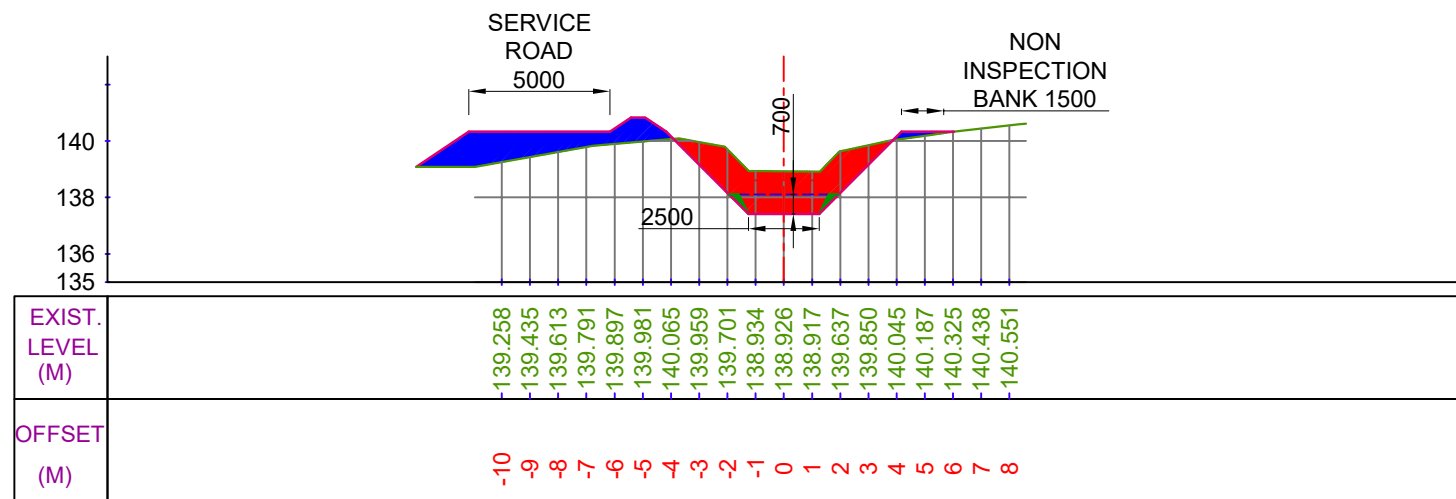
Prepared by :-

WAPCOS LTD.

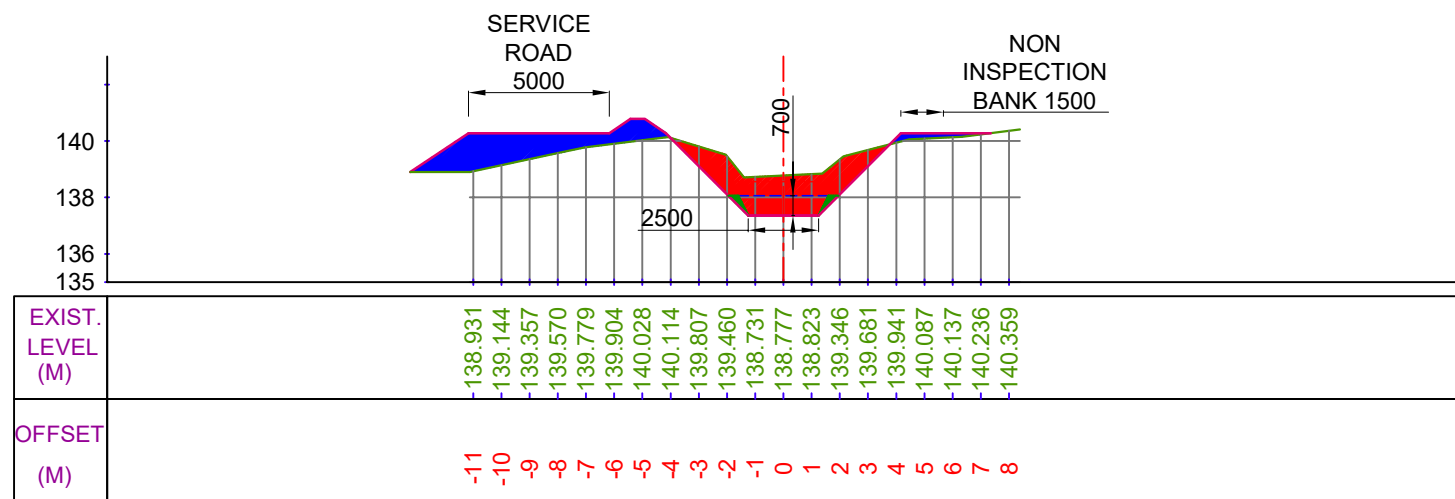


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC- 2 of 19

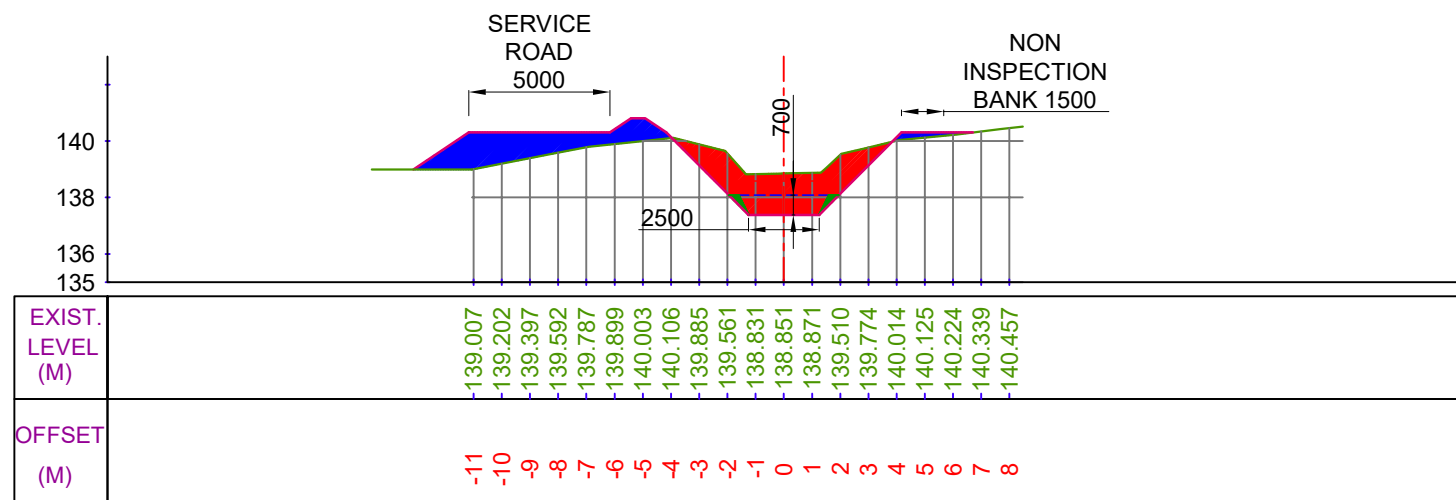
X SECTION OF CHAURAHA MINOR



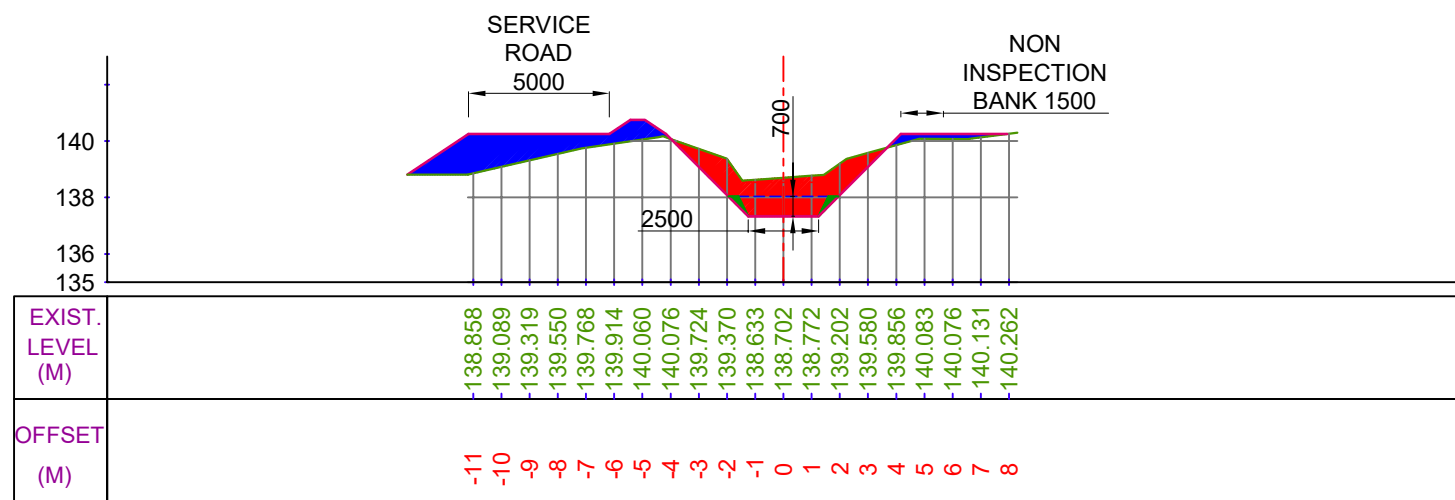
CUTTING AREA (SQ.M) = 8.785
FILLING AREA (SQ.M) = 7.006
CH. (KM):- 0+900
DESIGNED BED LEVEL = 137.410 M



CUTTING AREA (SQ.M) = 7.792
FILLING AREA (SQ.M) = 7.405
CH. (KM):- 1+100
DESIGNED BED LEVEL = 137.360 M



CUTTING AREA (SQ.M) = 8.301
FILLING AREA (SQ.M) = 7.182
CH. (KM):- 1+000
DESIGNED BED LEVEL = 137.385 M



CUTTING AREA (SQ.M) = 7.276
FILLING AREA (SQ.M) = 7.645
CH. (KM):- 1+200
DESIGNED BED LEVEL = 137.335 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

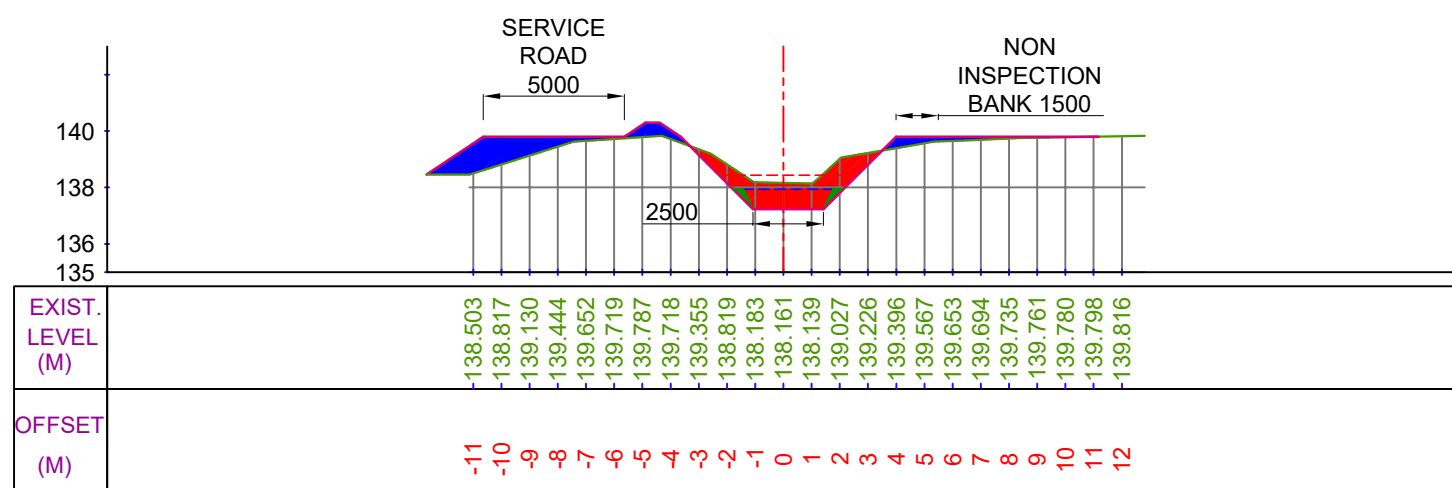
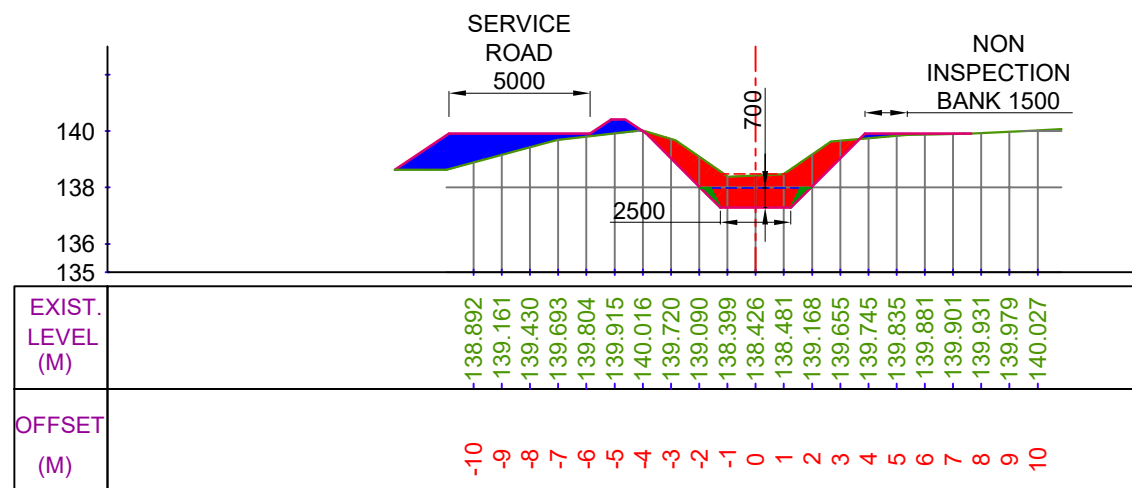
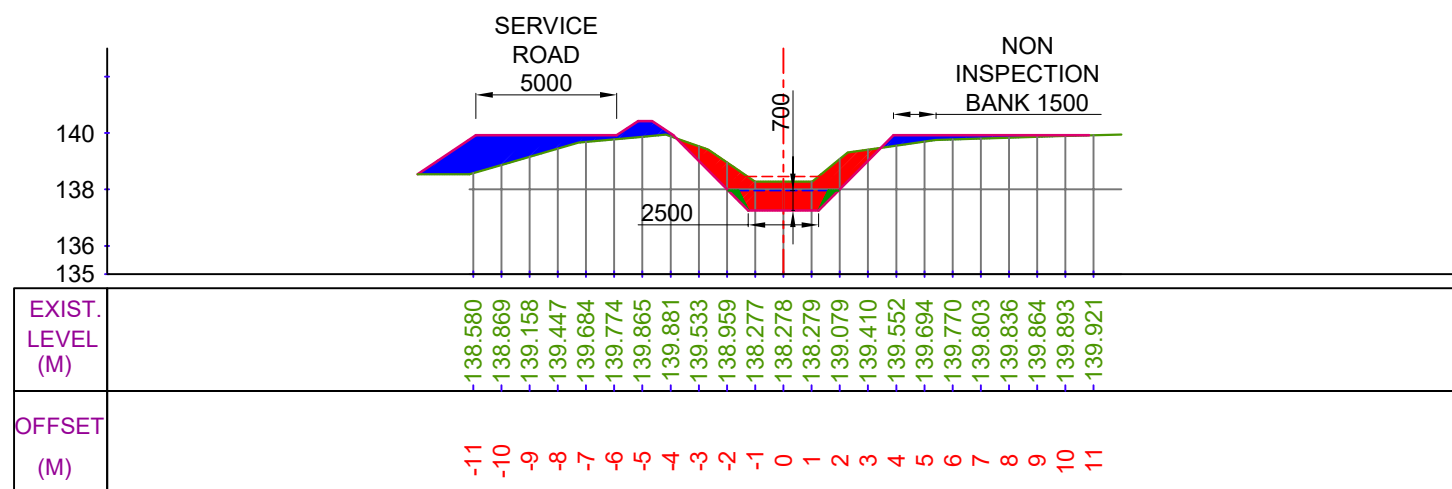
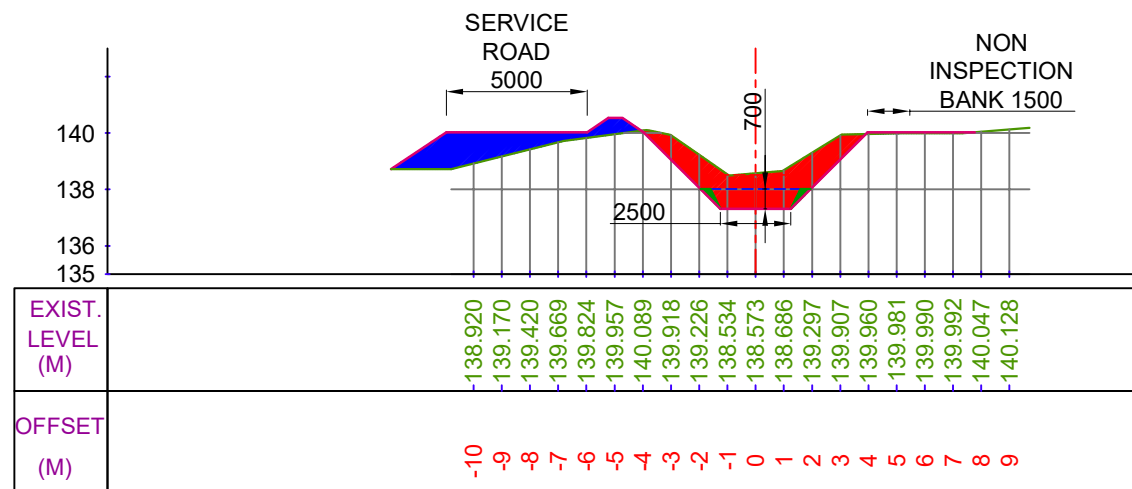
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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X SECTION OF CHAURAHA MINOR



LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

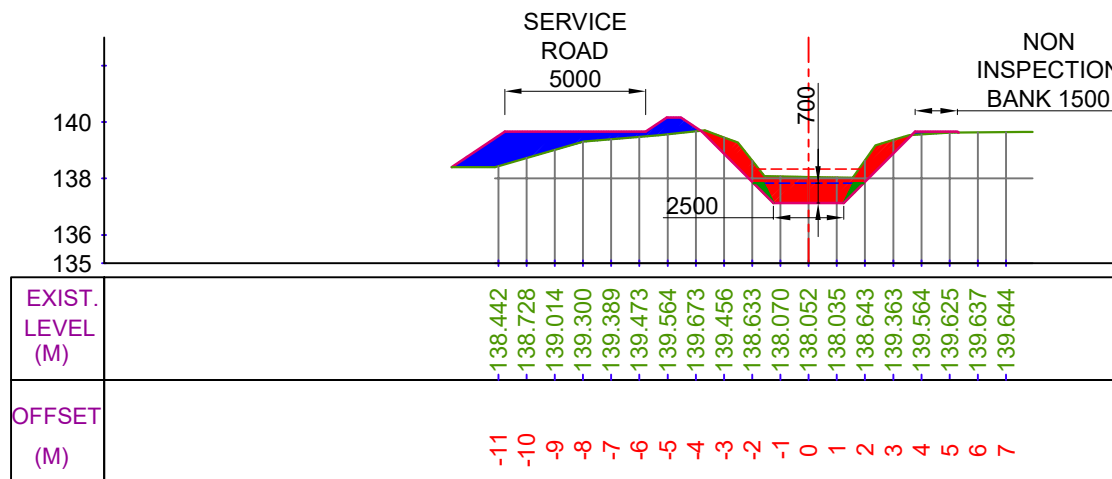
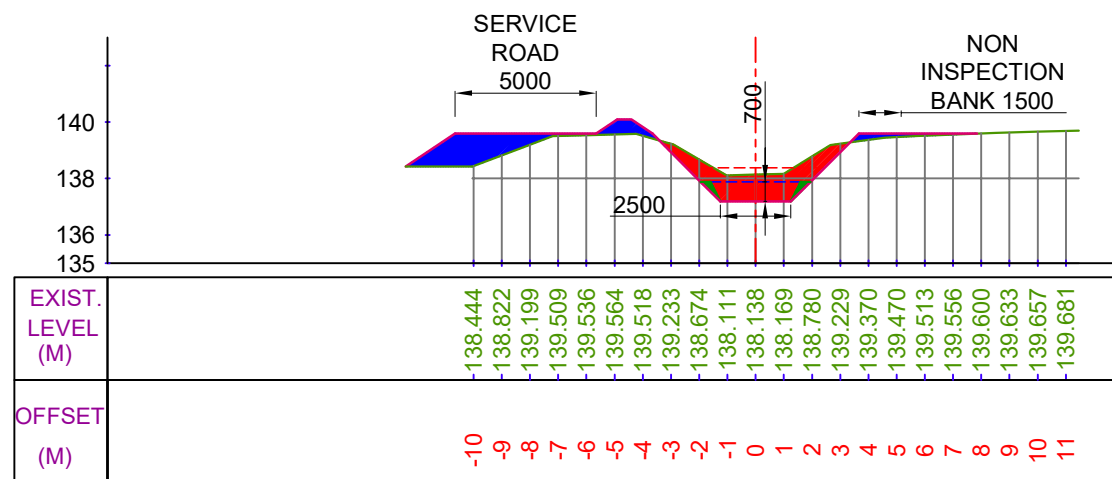
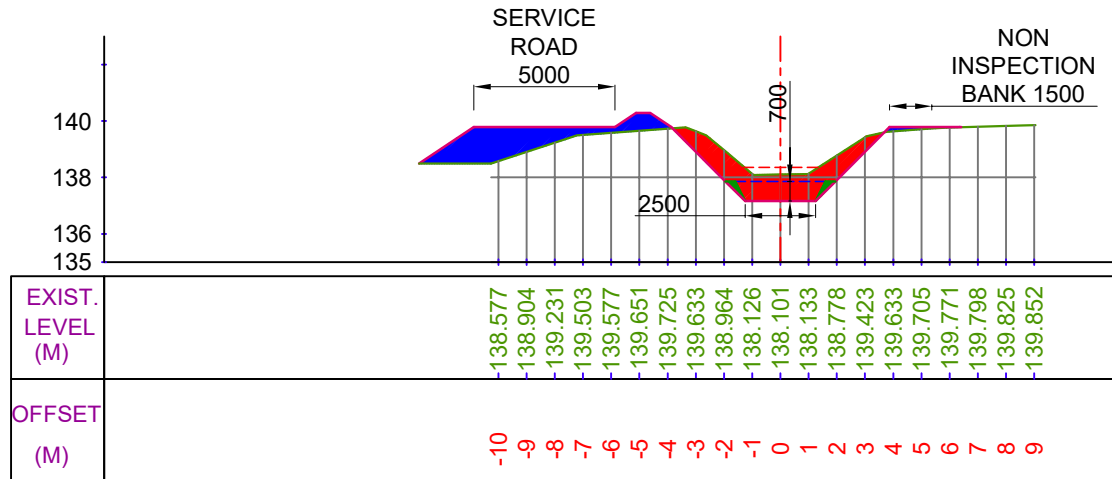
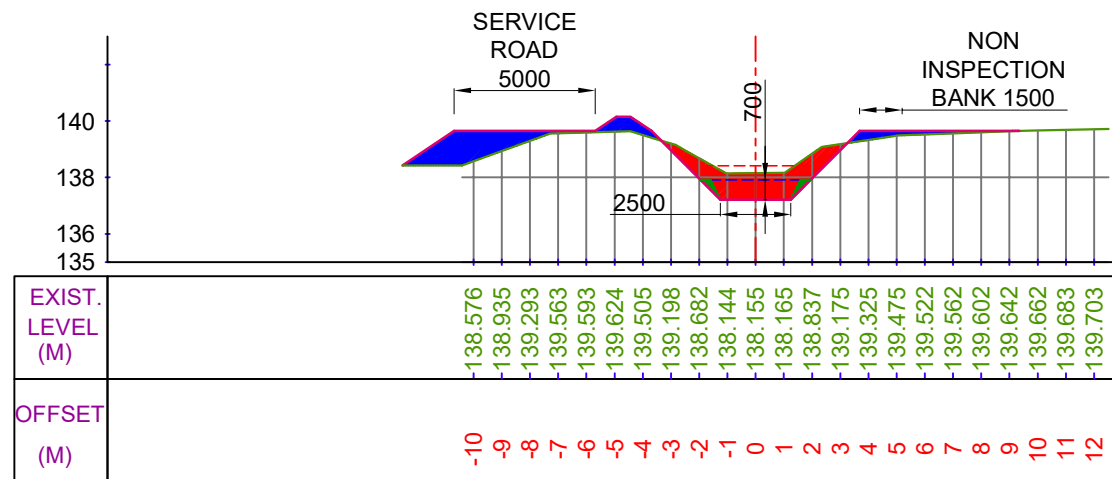
Prepared by :-

WAPCOS LTD.

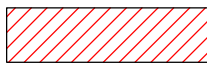


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC- 4 of 19

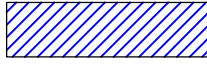
X SECTION OF CHAURAHA MINOR



LEGEND



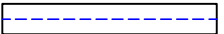
CUT AREA



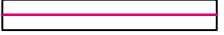
FILL AREA



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 :-

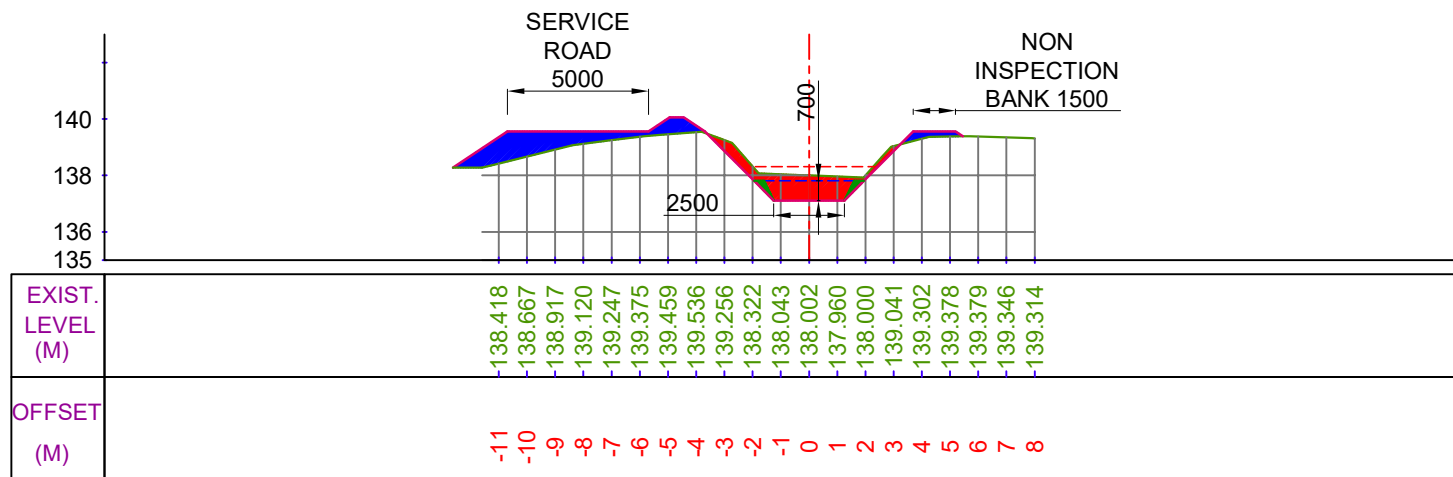
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

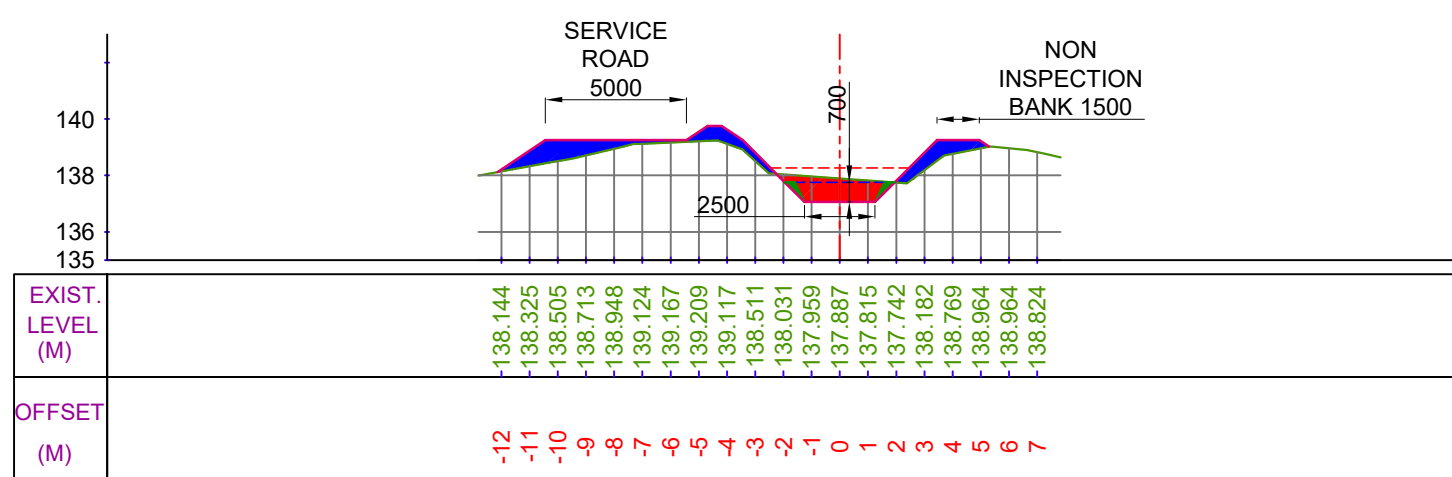
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

5 of 19

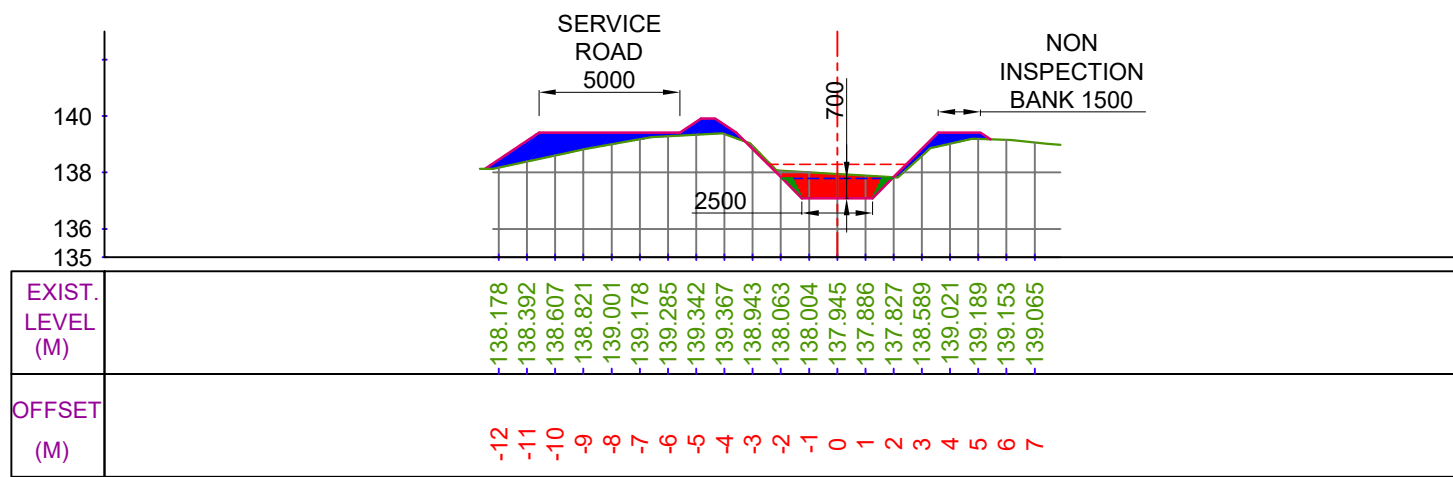
X SECTION OF CHAURAHA MINOR



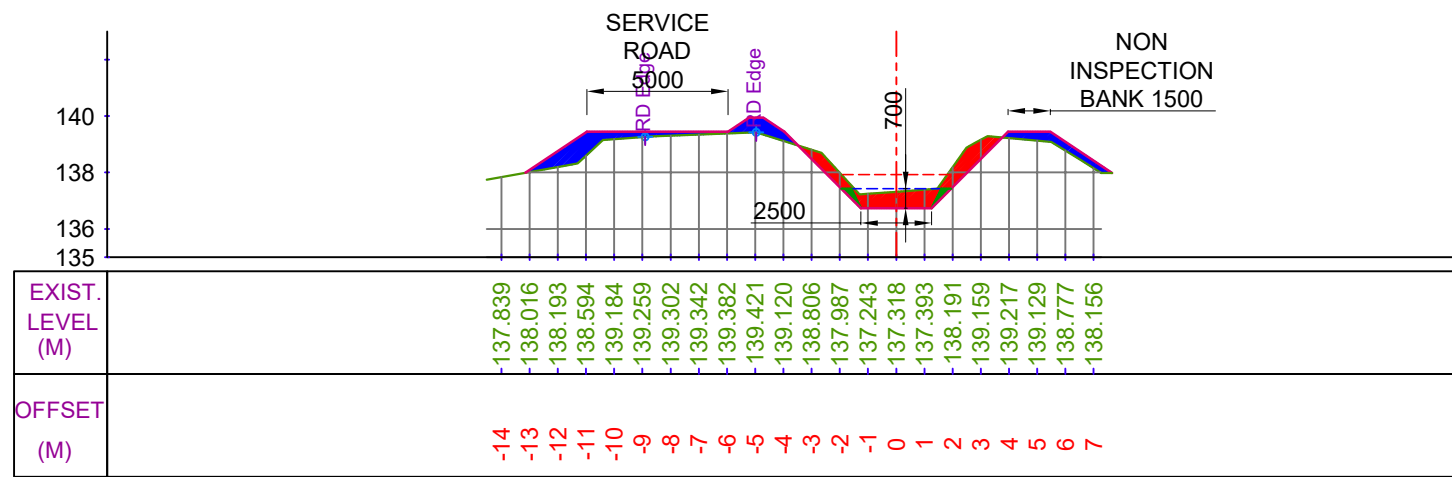
CUTTING AREA (SQ.M) = 3.636 CH. (KM):- 2+100
FILLING AREA (SQ.M) = 4.962 DESIGNED BED LEVEL = 137.110 M



CUTTING AREA (SQ.M) = 2.529 CH. (KM):- 2+300
FILLING AREA (SQ.M) = 5.075 DESIGNED BED LEVEL = 137.060 M



CUTTING AREA (SQ.M) = 2.758 CH. (KM):- 2+200
FILLING AREA (SQ.M) = 4.873 DESIGNED BED LEVEL = 137.085 M



CUTTING AREA (SQ.M) = 3.711 CH. (KM):- 2+400
FILLING AREA (SQ.M) = 4.090 DESIGNED BED LEVEL = 136.730 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

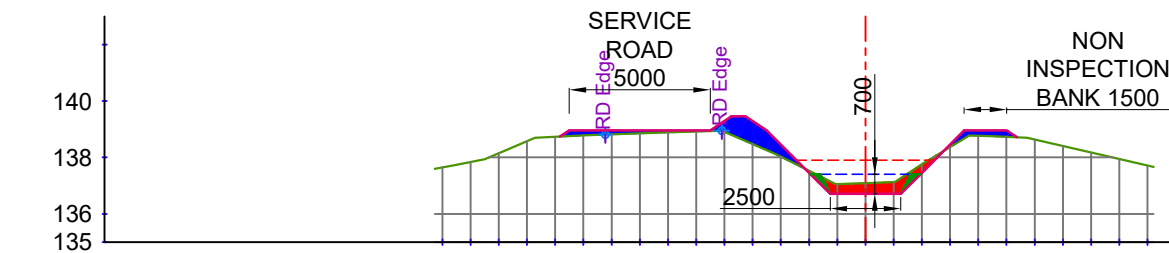
Prepared by :-

WAPCOS LTD.



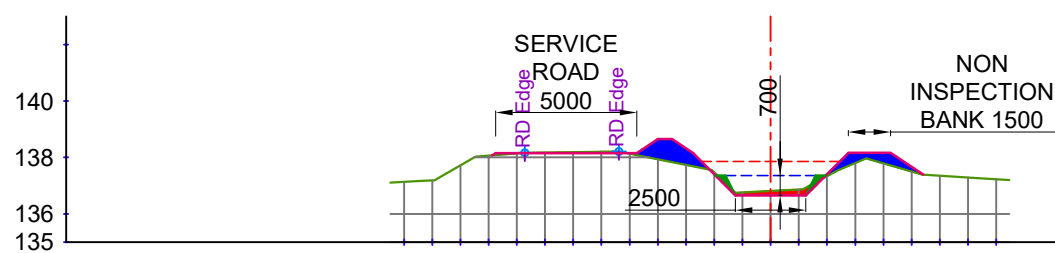
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC- 6 of 19

X SECTION OF CHAURAHA MINOR



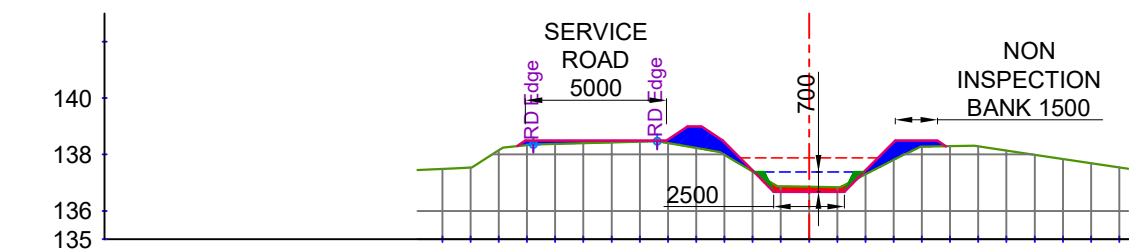
EXIST. LEVEL (M)	137.648	137.837	138.148	138.578	138.732	138.778	138.821	138.854	138.886	138.919	138.910	138.476	138.026	137.521	137.049	137.089	137.129	137.759	138.369	138.767	138.728	138.637	138.407	138.176	137.946	137.715
OFFSET (M)	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10

CUTTING AREA (SQ.M) = 1.366 CH. (KM):- 2+500
FILLING AREA (SQ.M) = 2.674 DESIGNED BED LEVEL = 136.705 M



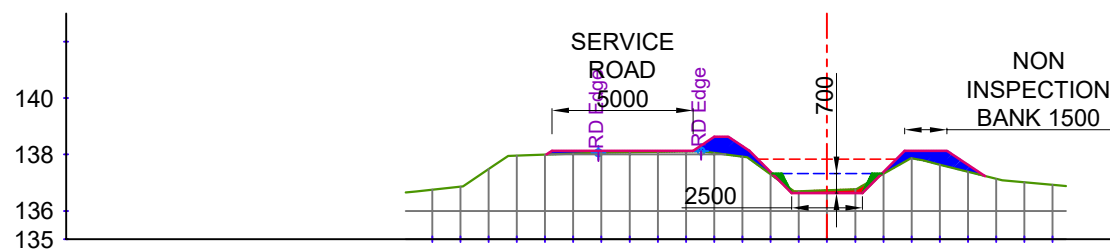
EXIST. LEVEL (M)	137.135	137.187	137.721	138.064	138.142	138.175	138.189	138.203	138.135	137.936	137.736	137.478	136.758	136.811	136.864	137.335	137.805	137.791	137.501	137.352	137.291	137.230
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.543 CH. (KM):- 2+700
FILLING AREA (SQ.M) = 2.284 DESIGNED BED LEVEL = 136.655 M



EXIST. LEVEL (M)	137.490	137.540	138.147	138.333	138.378	138.404	138.430	138.456	138.406	138.235	137.993	137.398	136.870	136.854	136.838	137.296	137.807	138.277	138.296	138.293	138.142	137.991	137.840	137.690	137.539
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) = 0.490 CH. (KM):- 2+600
FILLING AREA (SQ.M) = 2.746 DESIGNED BED LEVEL = 136.680 M



EXIST. LEVEL (M)	136.756	136.864	137.486	137.964	137.998	138.032	138.063	138.078	138.093	138.107	138.053	137.921	137.300	136.700	136.735	136.770	137.318	137.867	137.640	137.389	137.137	137.015	136.926
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

CUTTING AREA (SQ.M) = 0.308 CH. (KM):- 2+800
FILLING AREA (SQ.M) = 2.451 DESIGNED BED LEVEL = 136.630 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

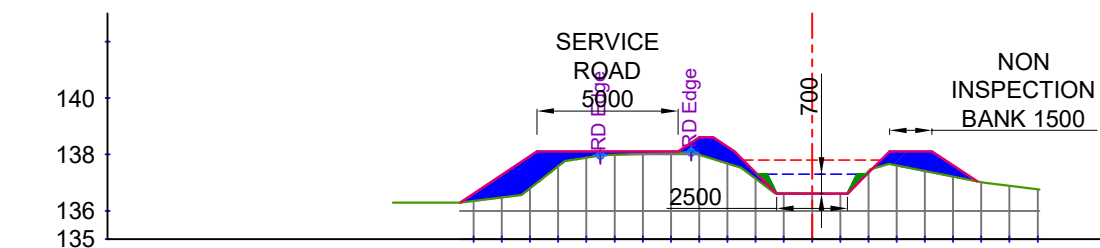


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

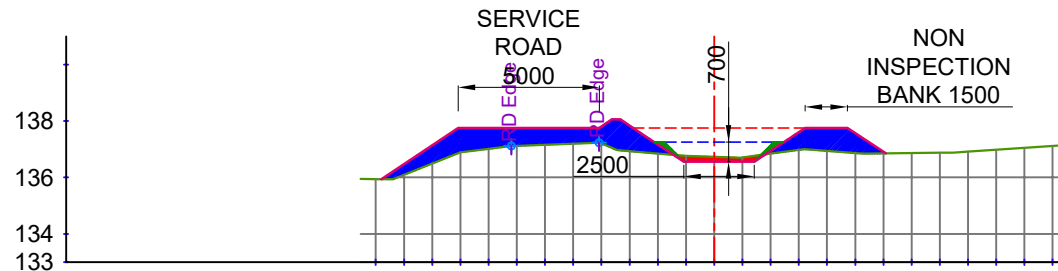
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

X SECTION OF CHAURAHA MINOR



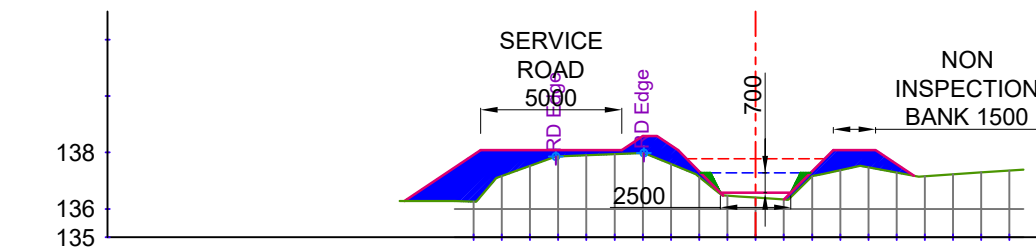
EXIST. LEVEL (M)	-136.348	-136.473	-136.793	-137.579	-137.886	-137.983	-138.017	-138.050	-137.988	-137.677	-137.140	-136.631	-136.620	-136.609	-137.405	-137.606	-137.410	-137.214	-137.018	-136.884	-136.760
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.046 CH. (KM):- 2+900
FILLING AREA (SQ.M) = 6.207 DESIGNED BED LEVEL = 136.605 M



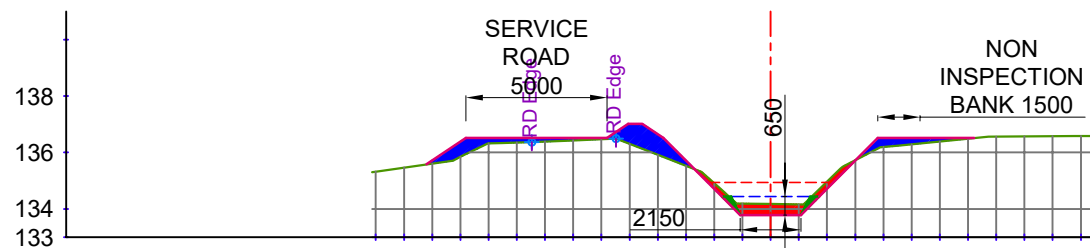
EXIST. LEVEL (M)	-135.941	-136.090	-136.491	-136.892	-137.013	-137.118	-137.158	-137.198	-137.201	-136.929	-136.847	-136.763	-136.728	-136.705	-136.840	-136.975	-136.940	-136.866	-136.849	-136.863	-136.876	-136.917	-136.984	-137.051	-137.118
OFFSET (M)	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.489 CH. (KM):- 3+100
FILLING AREA (SQ.M) = 8.714 DESIGNED BED LEVEL = 136.555 M



EXIST. LEVEL (M)	-136.257	-137.165	-137.528	-137.865	-137.903	-137.941	-137.979	-137.591	-137.136	-136.467	-136.402	-136.336	-137.155	-137.376	-137.474	-137.291	-137.163	-137.230	-137.297	-137.364
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) = 0.000 CH. (KM):- 3+000
FILLING AREA (SQ.M) = 8.252 DESIGNED BED LEVEL = 136.580 M



EXIST. LEVEL (M)	-135.325	-135.467	-135.609	-135.844	-136.325	-136.354	-136.389	-136.431	-136.474	-136.308	-135.919	-135.530	-134.908	-134.188	-134.174	-134.160	-134.966	-135.727	-136.194	-136.293	-136.393	-136.492	-136.566	-136.572	-136.579	-136.586
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) = 1.406 CH. (KM):- 3+200
FILLING AREA (SQ.M) = 3.564 DESIGNED BED LEVEL = 133.786 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

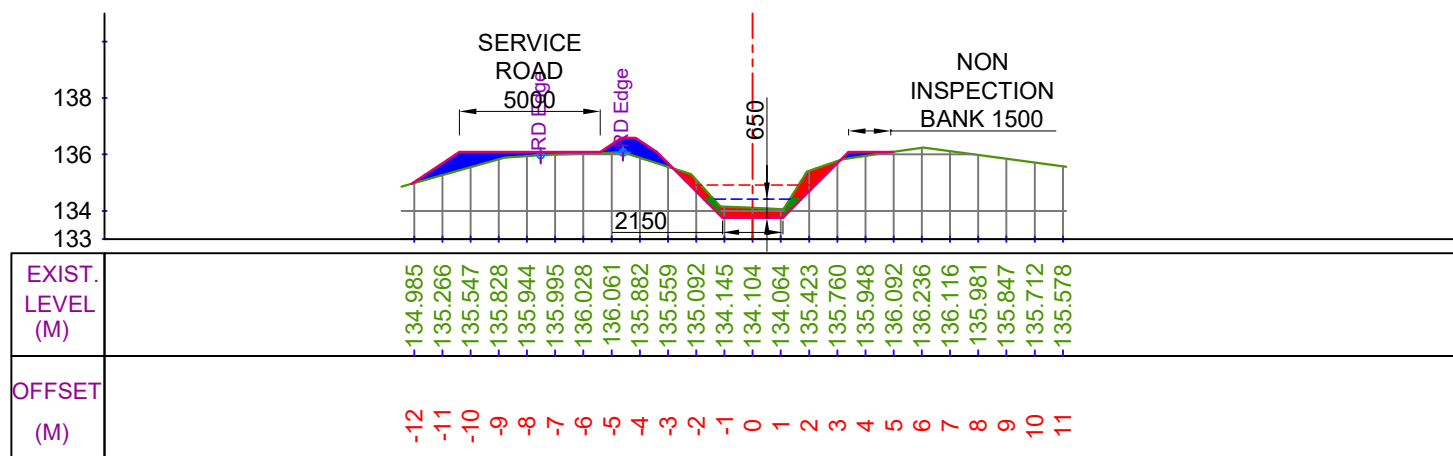
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

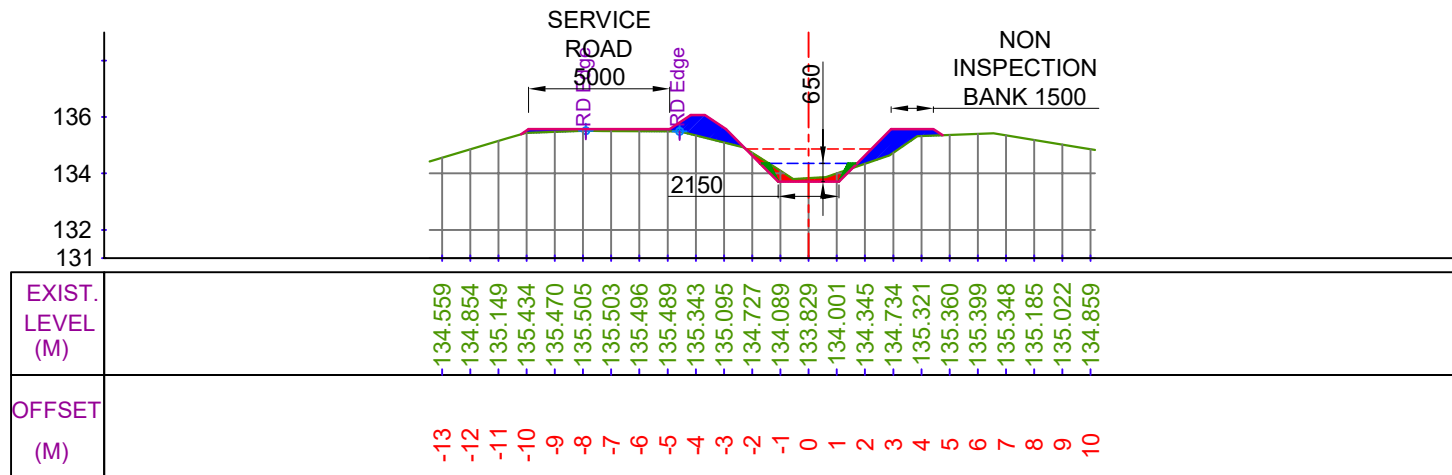
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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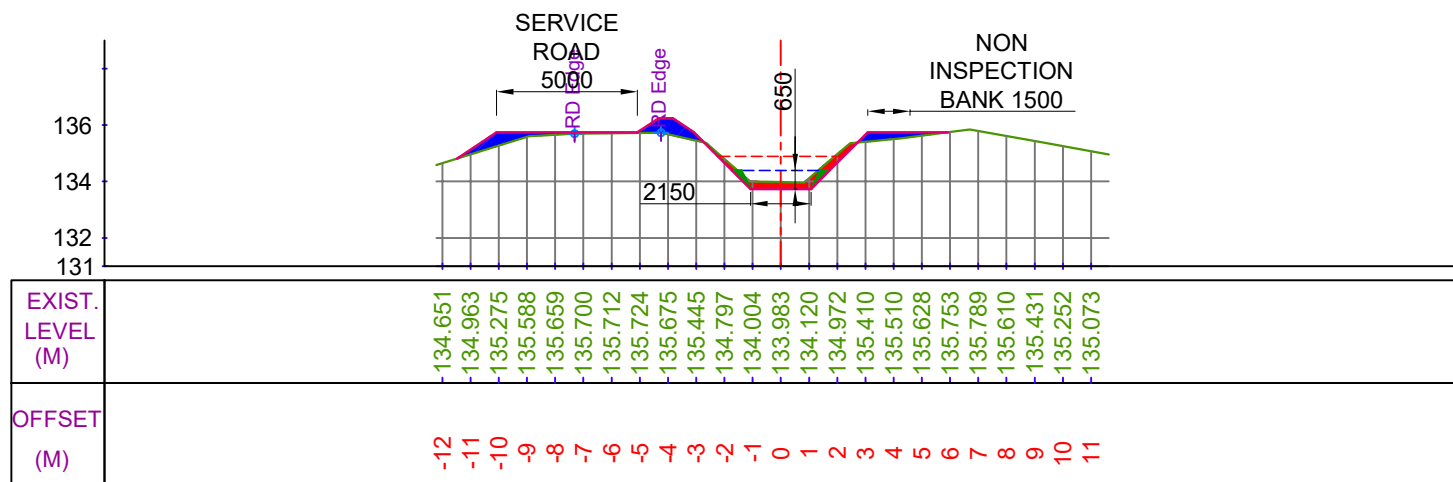
X SECTION OF CHAURAHA MINOR



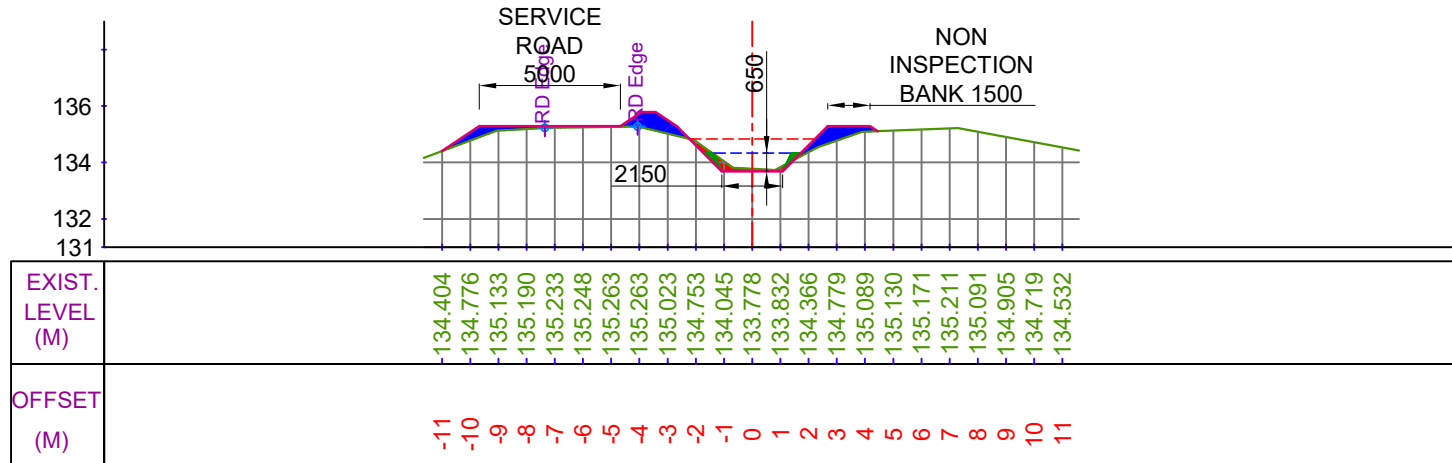
CUTTING AREA (SQ.M) = 1.989
FILLING AREA (SQ.M) = 2.803
CH. (KM):- 3+300
DESIGNED BED LEVEL = 133.761 M



CUTTING AREA (SQ.M) = 0.560
FILLING AREA (SQ.M) = 2.985
CH. (KM):- 3+500
DESIGNED BED LEVEL = 133.711 M



CUTTING AREA (SQ.M) = 1.114
FILLING AREA (SQ.M) = 2.341
CH. (KM):- 3+400
DESIGNED BED LEVEL = 133.736 M



CUTTING AREA (SQ.M) = 0.449
FILLING AREA (SQ.M) = 2.611
CH. (KM):- 3+600
DESIGNED BED LEVEL = 133.686 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

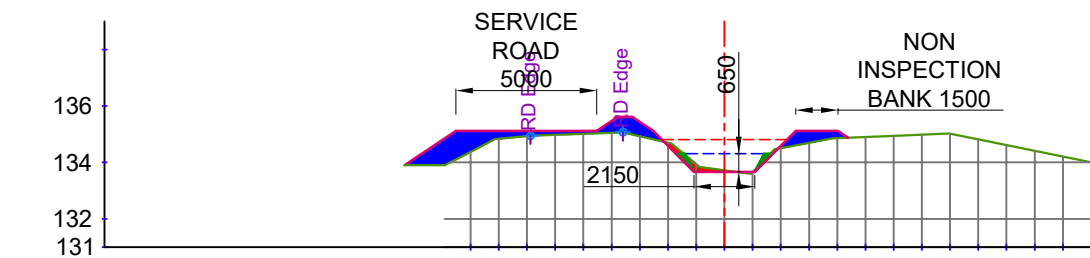
Prepared by :-

WAPCOS LTD.



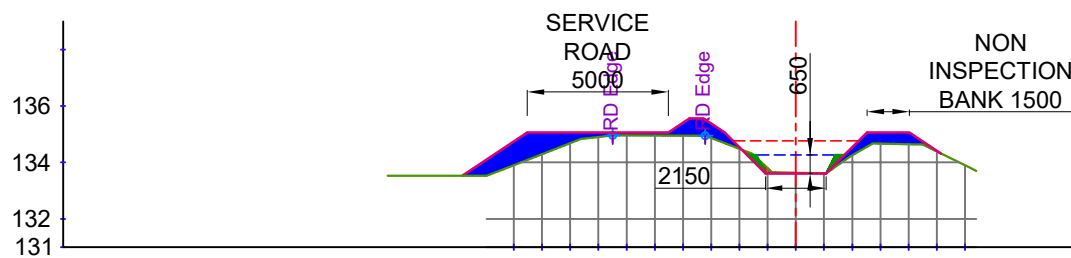
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC- 9 of 19

X SECTION OF CHAURAHA MINOR



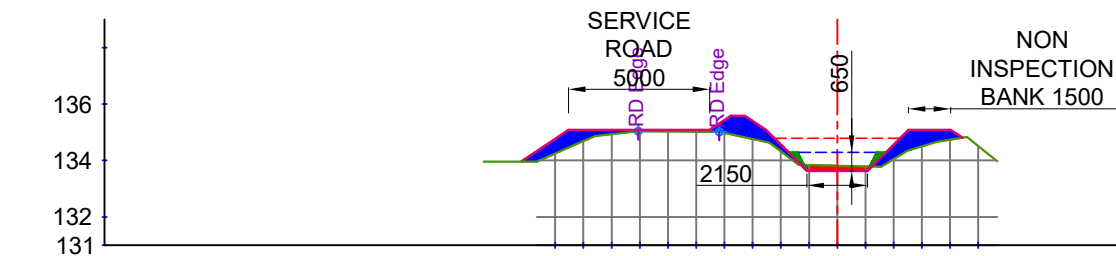
EXIST. LEVEL (M)	134.376	134.839	134.934	134.978	135.015	135.052	134.930	134.700	133.937	133.720	133.653	134.511	134.696	134.859	134.902	134.944	134.986	135.019	134.816	134.612	134.409	134.205
OFFSET (M)	9	8	7	6	5	4	3	2	1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.325
FILLING AREA (SQ.M) = 4.191
CH. (KM):- 3+700
DESIGNED BED LEVEL = 133.661 M



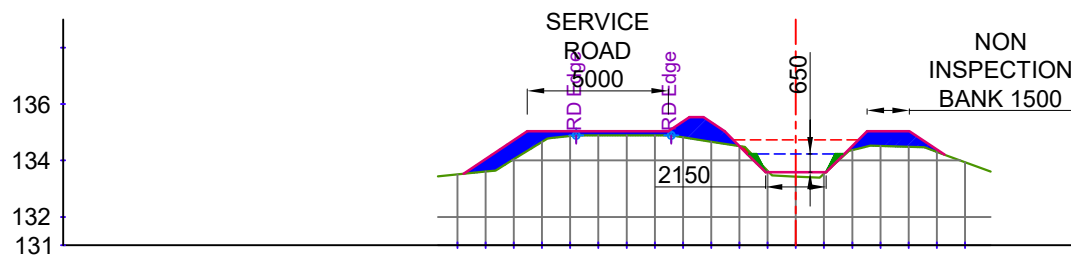
EXIST. LEVEL (M)	133.902	134.291	134.679	134.898	134.953	134.952	134.950	134.865	134.483	133.799	133.634	133.615	134.253	134.665	134.645	134.384	133.894
OFFSET (M)	10	9	8	7	6	5	4	3	2	1	0	1	2	3	4	5	6

CUTTING AREA (SQ.M) = 0.133
FILLING AREA (SQ.M) = 5.084
CH. (KM):- 3+900
DESIGNED BED LEVEL = 133.611 M



EXIST. LEVEL (M)	134.249	134.687	134.933	135.034	135.027	135.020	134.974	134.761	134.329	133.842	133.818	133.794	134.049	134.501	134.737	134.510
OFFSET (M)	10	9	8	7	6	5	4	3	2	1	0	1	2	3	4	5

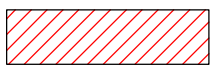
CUTTING AREA (SQ.M) = 0.408
FILLING AREA (SQ.M) = 4.156
CH. (KM):- 3+800
DESIGNED BED LEVEL = 133.636 M



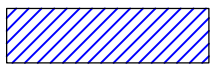
EXIST. LEVEL (M)	-133.510 -133.609 -134.045 -134.663 -134.868 -134.891 -134.891 -134.890 -134.824 -134.667 -134.508 -133.628 -133.432 -133.536 -134.368 -134.514 -134.484 -134.305 -133.937
OFFSET (M)	-12 -11 -10 -9 -8 -7 -6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6

CUTTING AREA (SQ.M) = 0.055
FILLING AREA (SQ.M) = 4.740
CH. (KM):- 4+000
DESIGNED BED LEVEL = 133.586 M

LEGEND



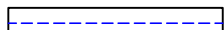
CUT AREA



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 :-

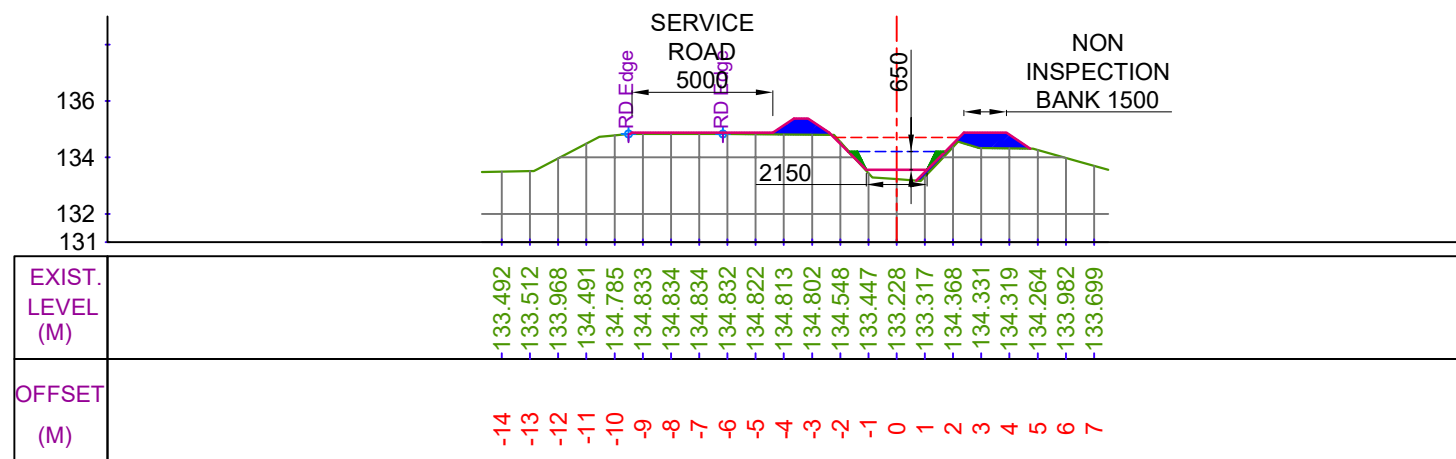
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

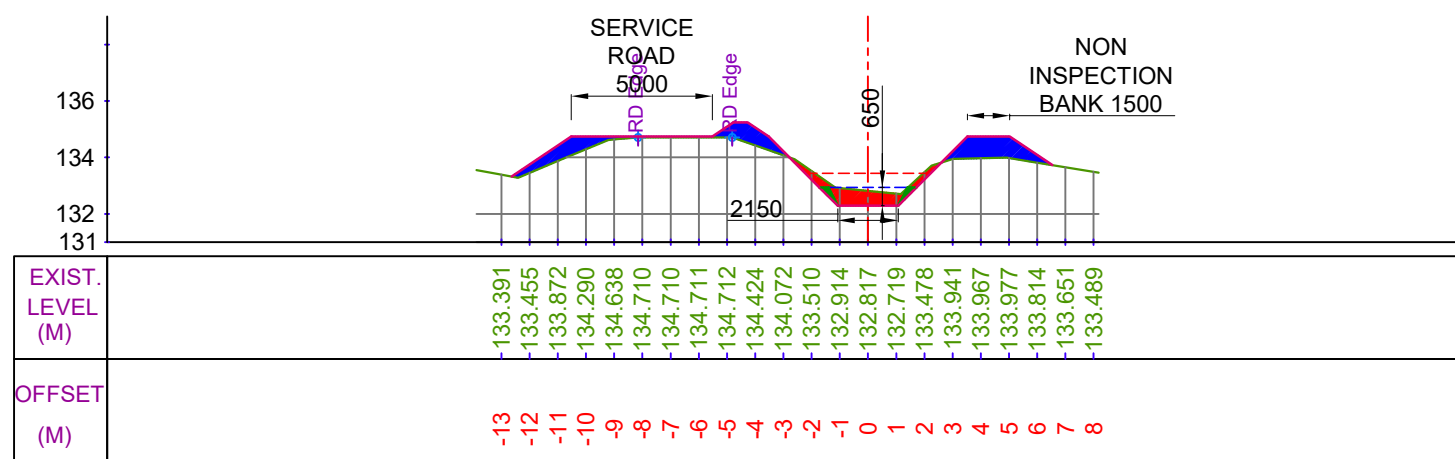
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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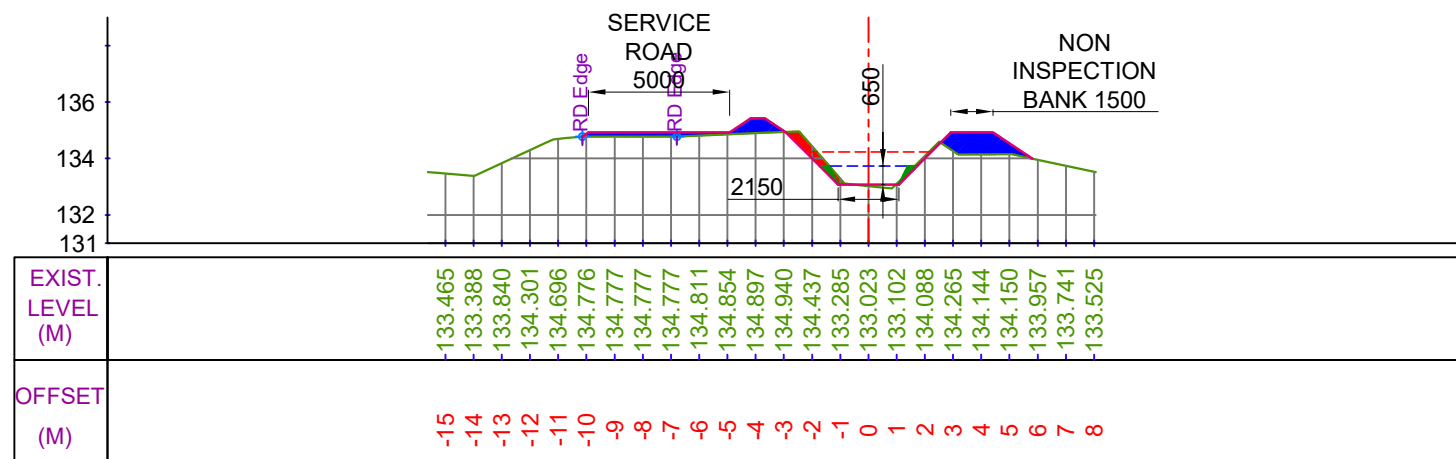
X SECTION OF CHAURAHA MINOR



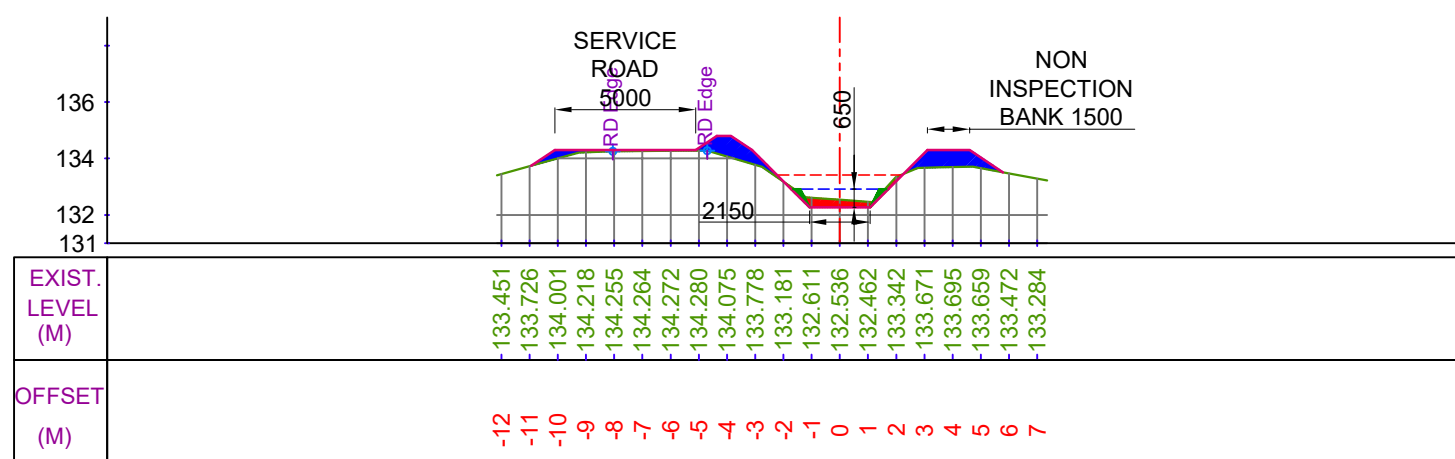
CUTTING AREA (SQ.M) = 0.034
FILLING AREA (SQ.M) = 2.241
CH. (KM):- 4+100
DESIGNED BED LEVEL = 133.561 M



CUTTING AREA (SQ.M) = 1.831
FILLING AREA (SQ.M) = 4.689
CH. (KM):- 4+300
DESIGNED BED LEVEL = 132.292 M



CUTTING AREA (SQ.M) = 0.678
FILLING AREA (SQ.M) = 3.098
CH. (KM):- 4+200
DESIGNED BED LEVEL = 133.079 M



CUTTING AREA (SQ.M) = 0.702
FILLING AREA (SQ.M) = 3.226
CH. (KM):- 4+400
DESIGNED BED LEVEL = 132.267 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

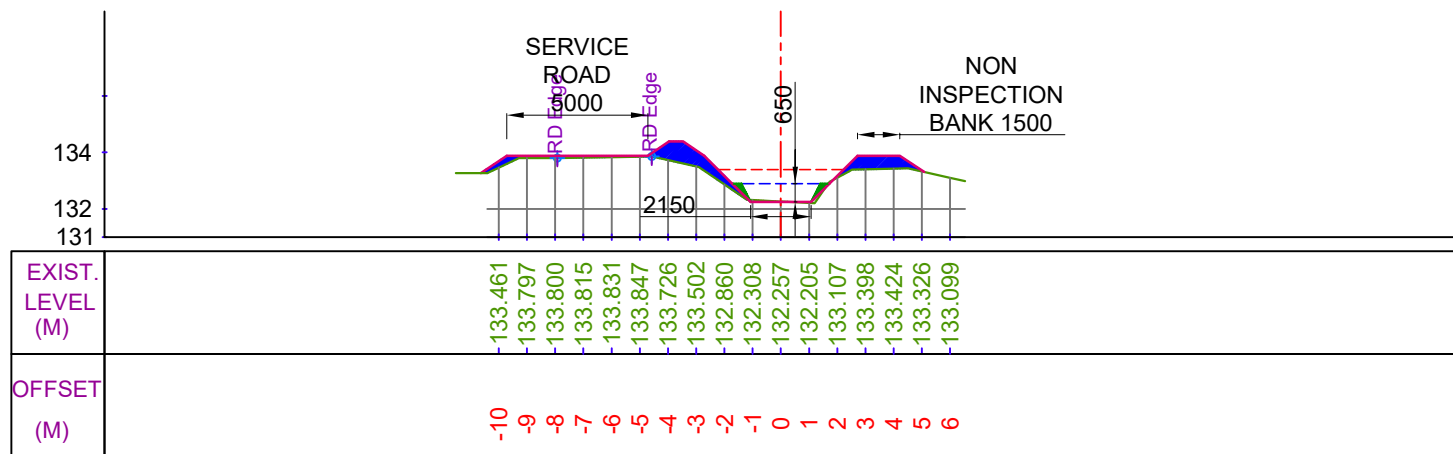
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

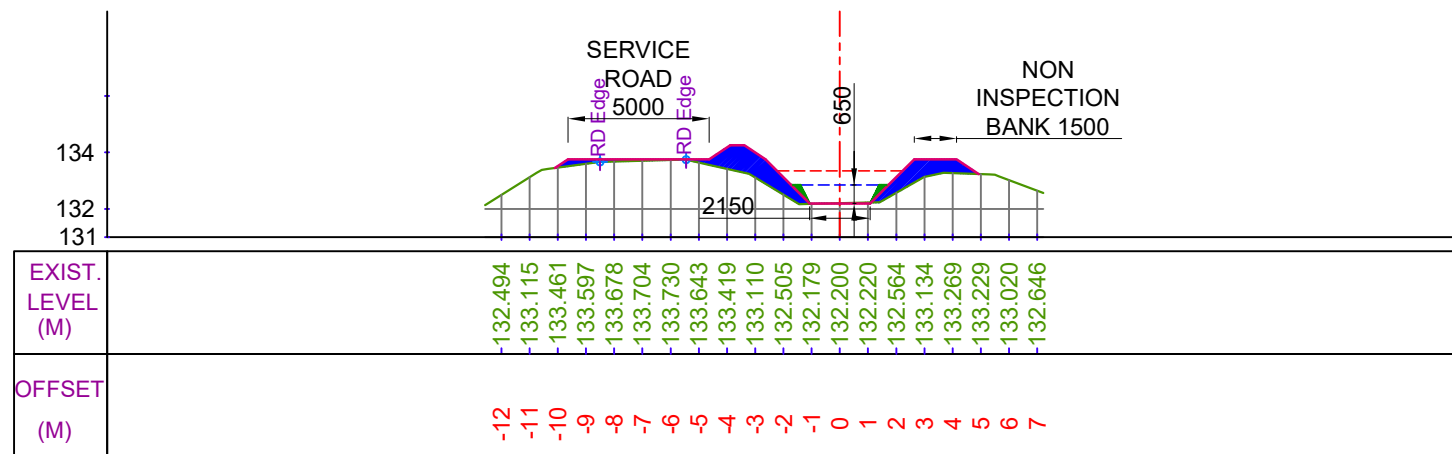
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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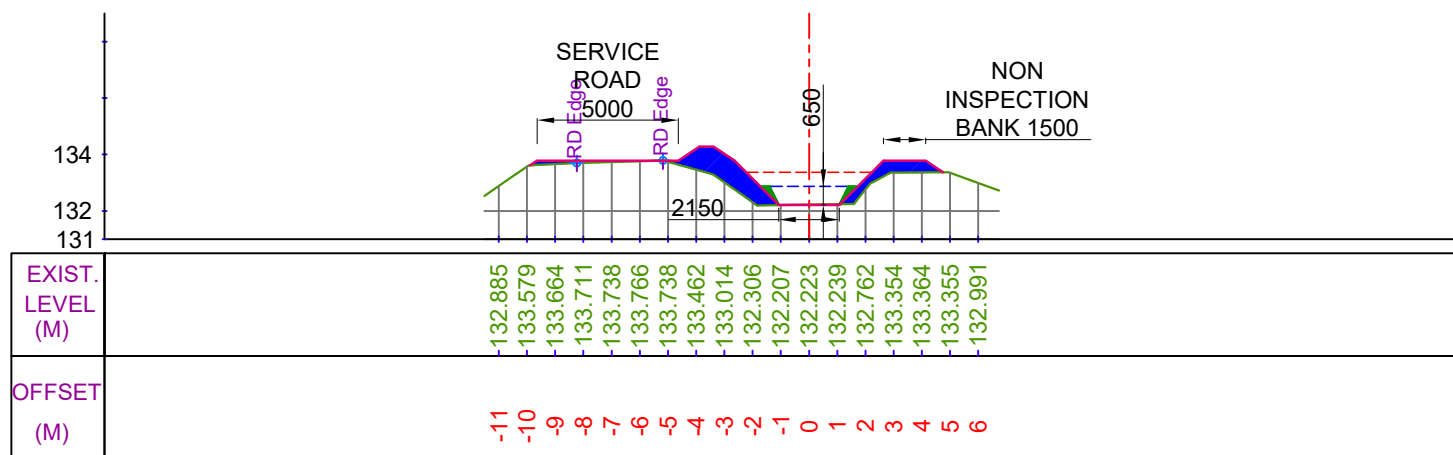
X SECTION OF CHAURAHA MINOR



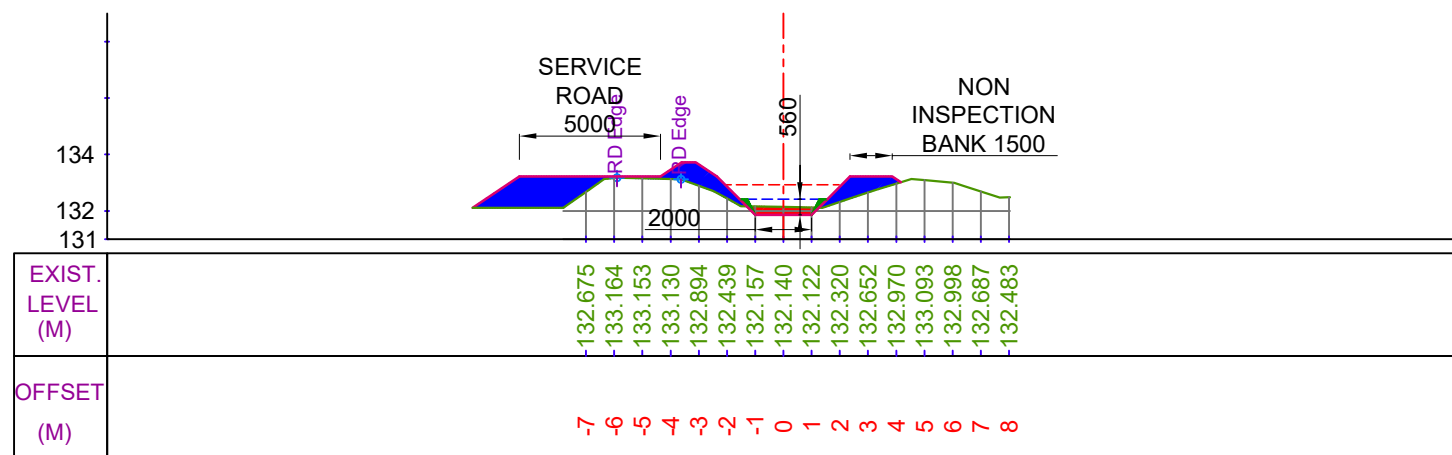
CUTTING AREA (SQ.M) = 0.049
FILLING AREA (SQ.M) = 3.154
CH. (KM):- 4+500
DESIGNED BED LEVEL = 132.242 M



CUTTING AREA (SQ.M) = 0.022
FILLING AREA (SQ.M) = 4.628
CH. (KM):- 4+700
DESIGNED BED LEVEL = 132.192 M



CUTTING AREA (SQ.M) = 0.017
FILLING AREA (SQ.M) = 4.283
CH. (KM):- 4+600
DESIGNED BED LEVEL = 132.217 M



CUTTING AREA (SQ.M) = 0.594
FILLING AREA (SQ.M) = 6.417
CH. (KM):- 4+800
DESIGNED BED LEVEL = 131.862 M

LEGEND



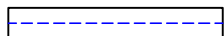
CUT AREA



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 :-

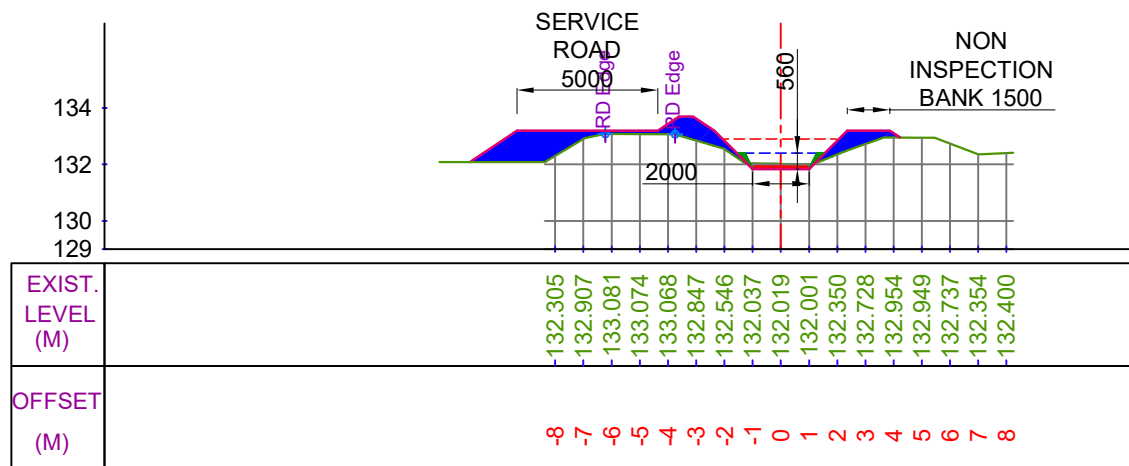
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

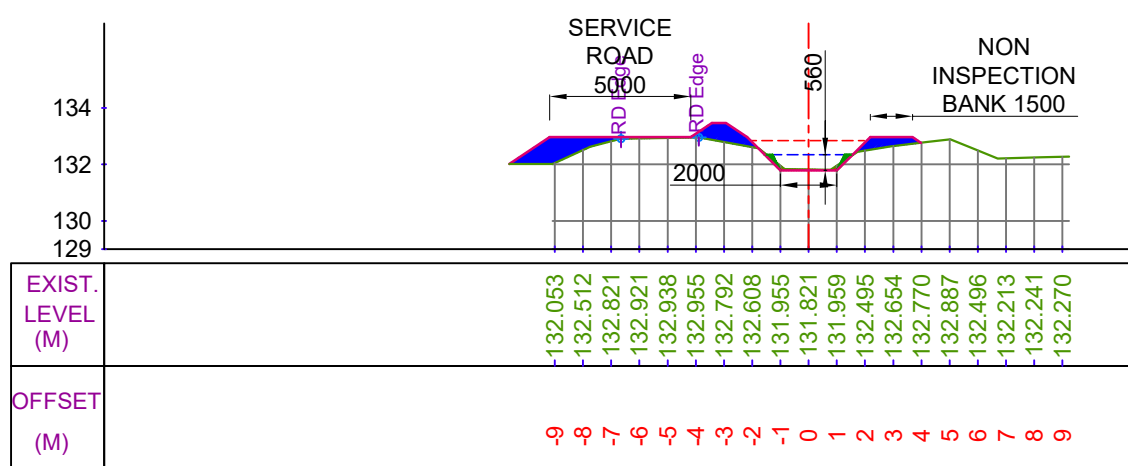
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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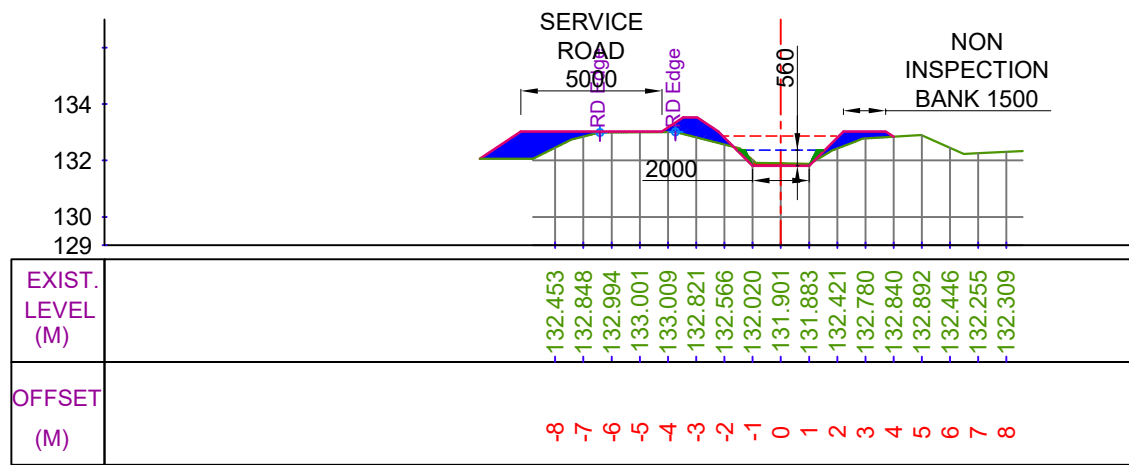
X SECTION OF CHAURAHA MINOR



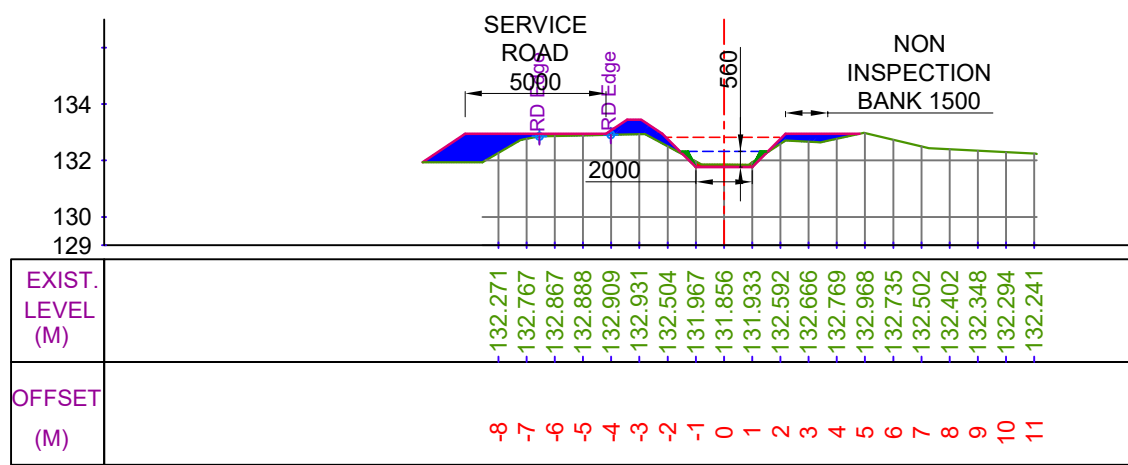
CUTTING AREA (SQ.M) = 0.381
FILLING AREA (SQ.M) = 5.919
CH. (KM):- 4+900
DESIGNED BED LEVEL = 131.837 M



CUTTING AREA (SQ.M) = 0.126
FILLING AREA (SQ.M) = 3.603
CH. (KM):- 5+100
DESIGNED BED LEVEL = 131.787 M



CUTTING AREA (SQ.M) = 0.218
FILLING AREA (SQ.M) = 3.998
CH. (KM):- 5+000
DESIGNED BED LEVEL = 131.812 M



CUTTING AREA (SQ.M) = 0.229
FILLING AREA (SQ.M) = 3.967
CH. (KM):- 5+200
DESIGNED BED LEVEL = 131.762 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

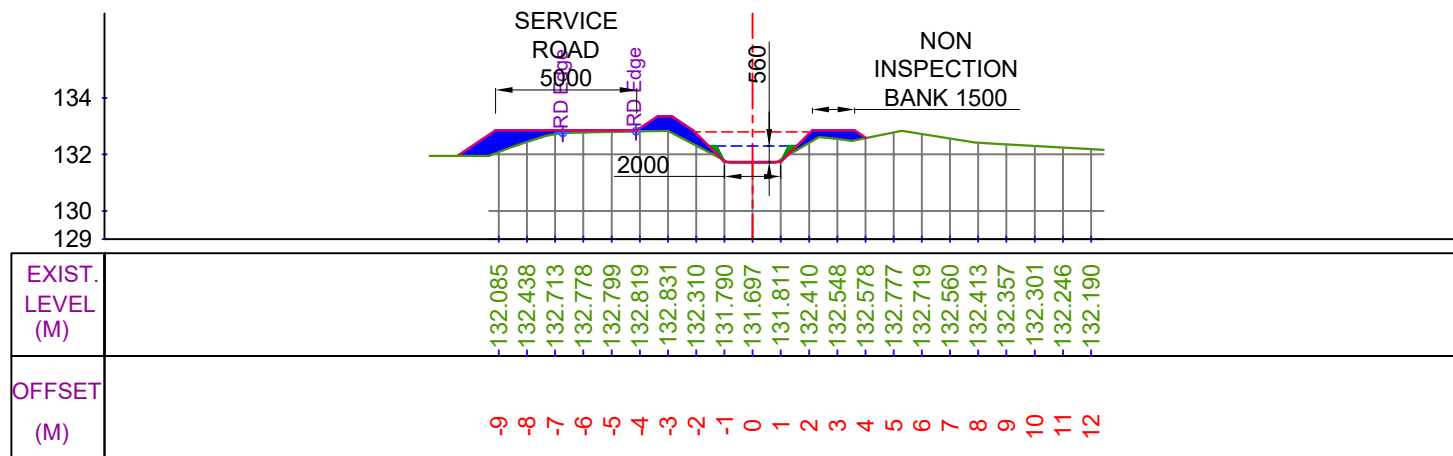
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

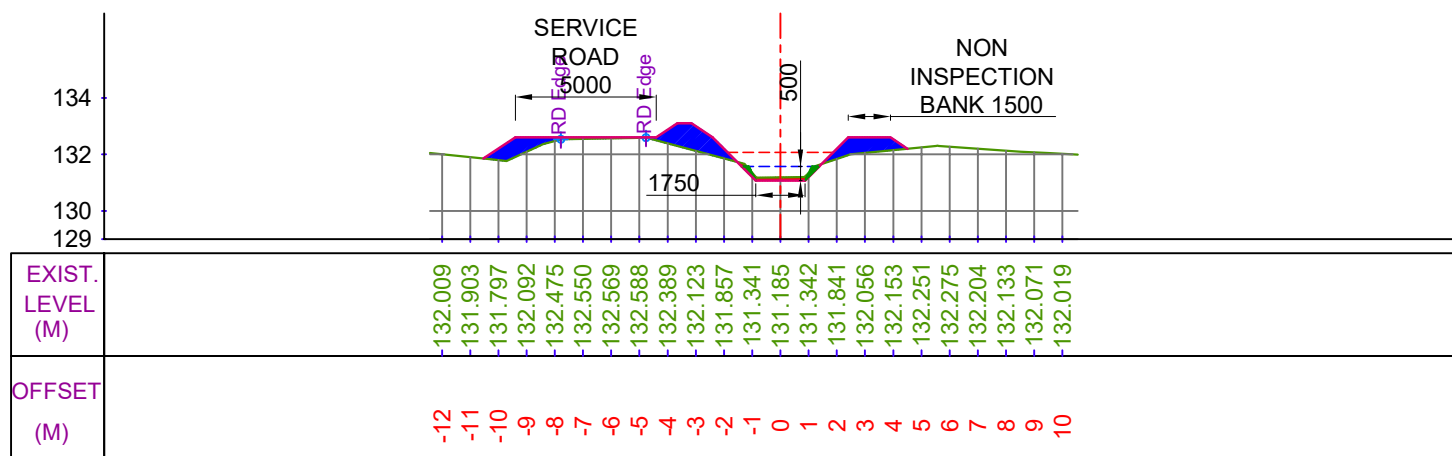
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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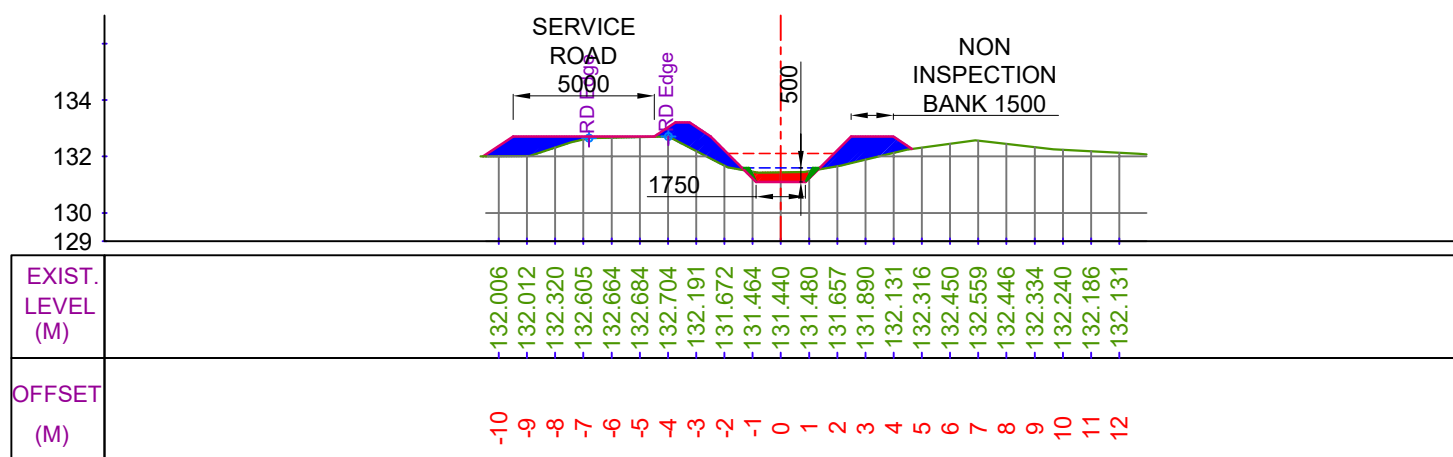
X SECTION OF CHAURAHA MINOR



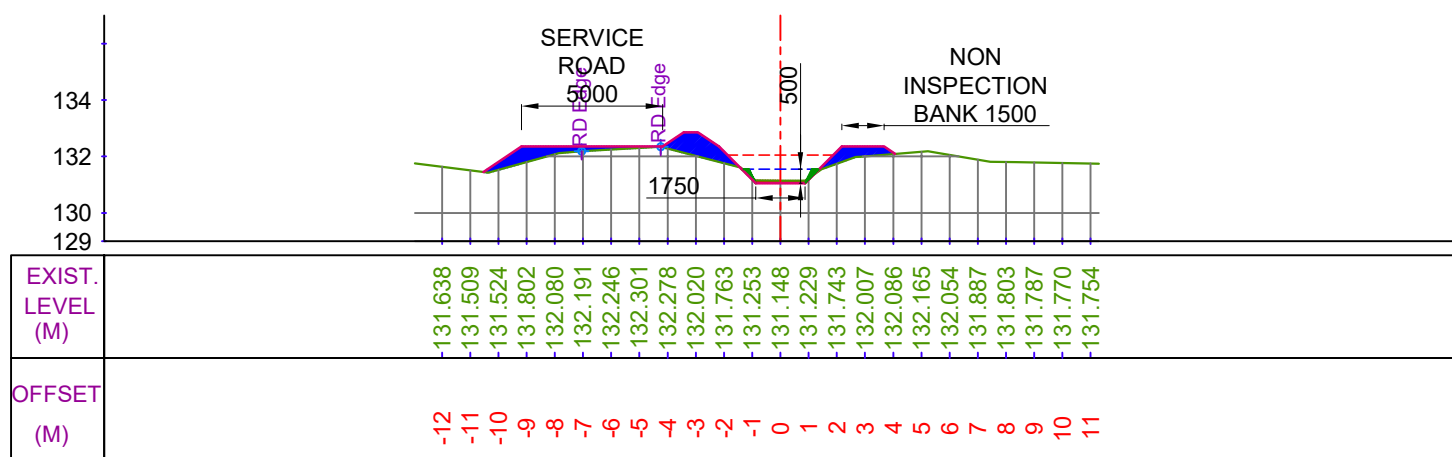
CUTTING AREA (SQ.M) = 0.010
FILLING AREA (SQ.M) = 3.530
CH. (KM):- 5+300
DESIGNED BED LEVEL = 131.737 M



CUTTING AREA (SQ.M) = 0.235
FILLING AREA (SQ.M) = 4.049
CH. (KM):- 5+500
DESIGNED BED LEVEL = 131.077 M



CUTTING AREA (SQ.M) = 0.659
FILLING AREA (SQ.M) = 5.305
CH. (KM):- 5+400
DESIGNED BED LEVEL = 131.102 M



CUTTING AREA (SQ.M) = 0.177
FILLING AREA (SQ.M) = 3.655
CH. (KM):- 5+600
DESIGNED BED LEVEL = 131.052 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

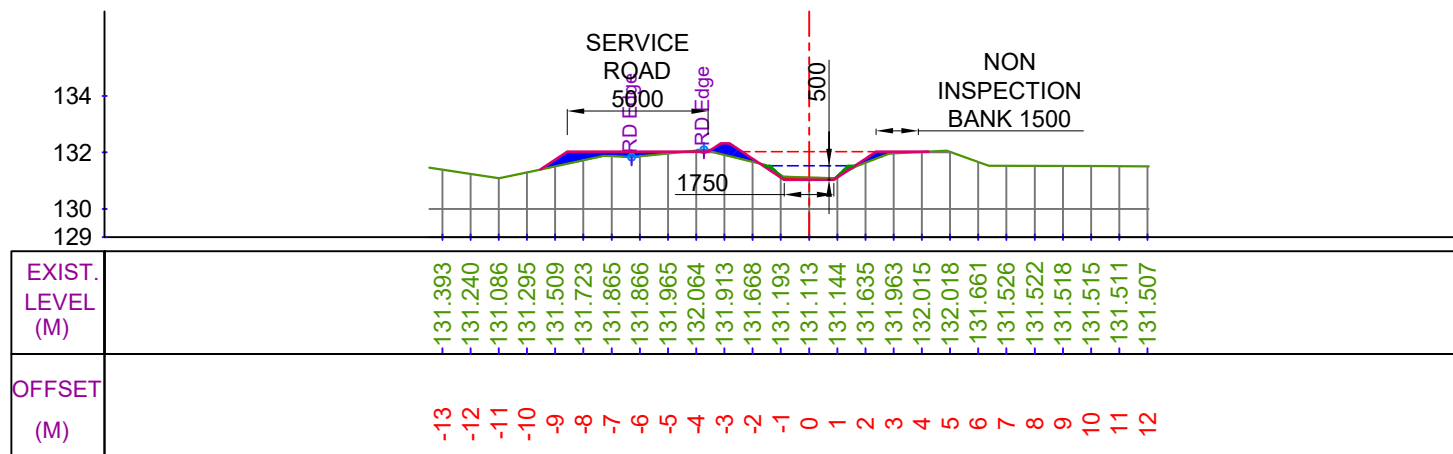
Prepared by :-

WAPCOS LTD.

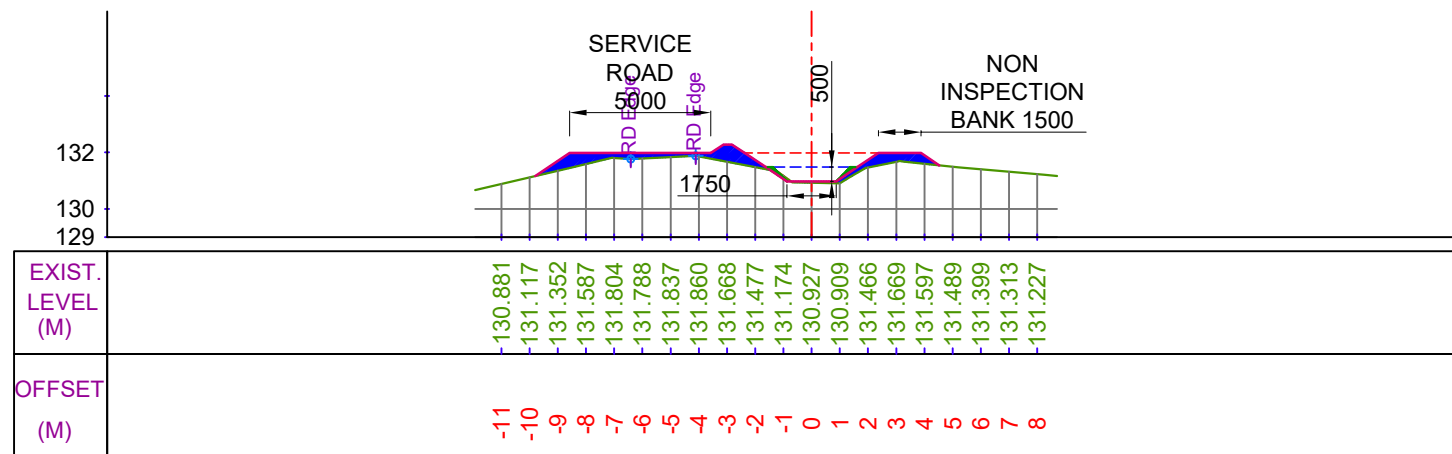


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-14 of 19

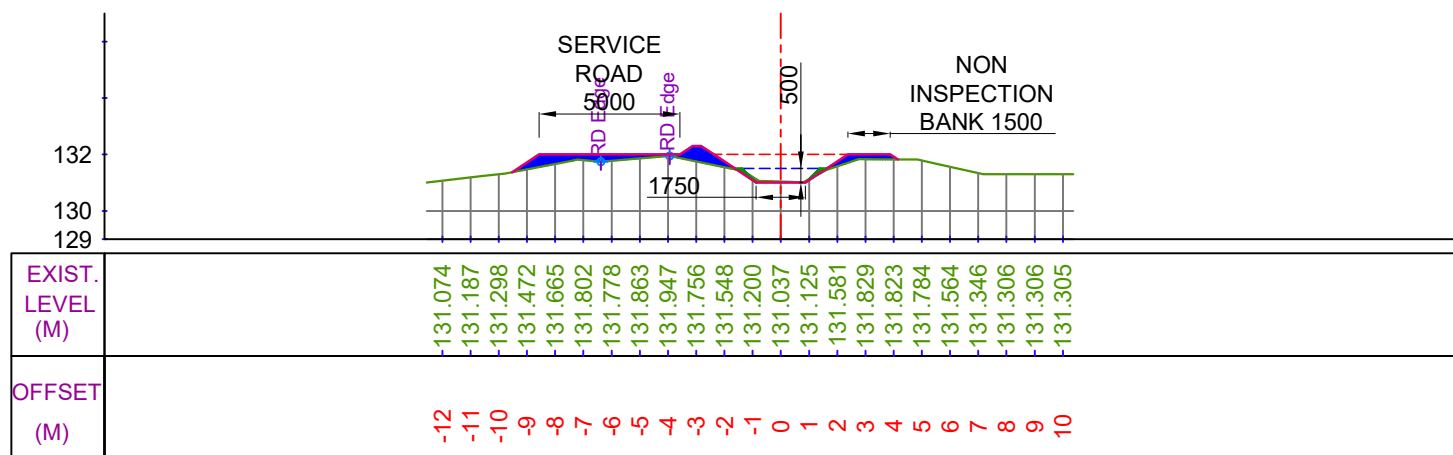
X SECTION OF CHAURAHA MINOR



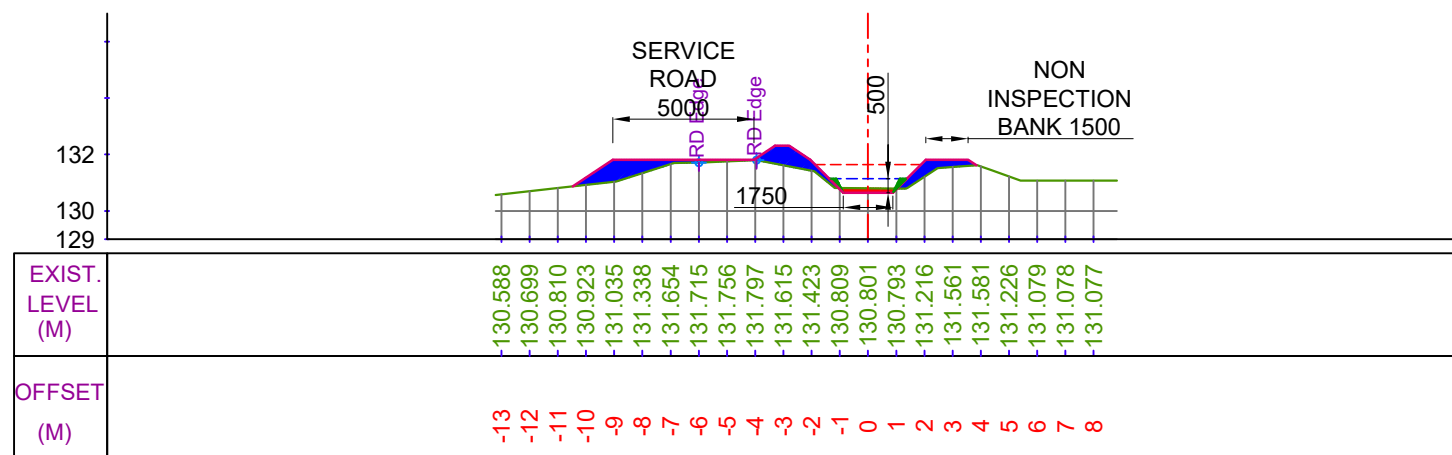
CUTTING AREA (SQ.M) = 0.198
FILLING AREA (SQ.M) = 1.618
CH. (KM):- 5+700
DESIGNED BED LEVEL = 131.027 M



CUTTING AREA (SQ.M) = 0.028
FILLING AREA (SQ.M) = 3.242
CH. (KM):- 5+900
DESIGNED BED LEVEL = 130.977 M



CUTTING AREA (SQ.M) = 0.089
FILLING AREA (SQ.M) = 2.356
CH. (KM):- 5+800
DESIGNED BED LEVEL = 131.002 M



CUTTING AREA (SQ.M) = 0.282
FILLING AREA (SQ.M) = 3.855
CH. (KM):- 6+000
DESIGNED BED LEVEL = 130.647 M

LEGEND



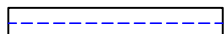
CUT AREA



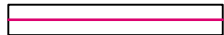
FILL AREA



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 :-

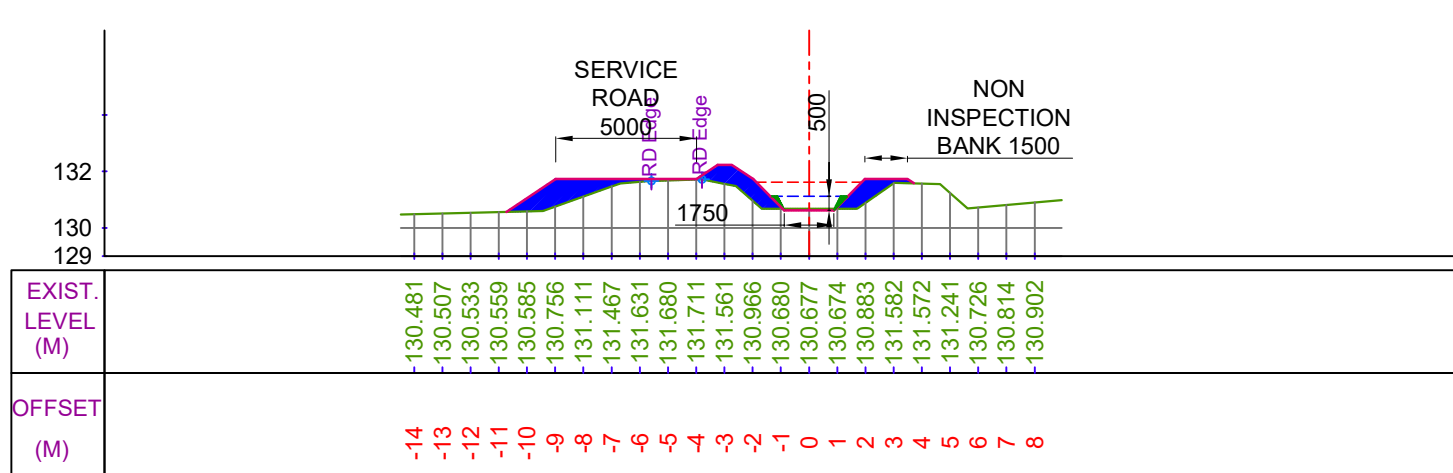
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

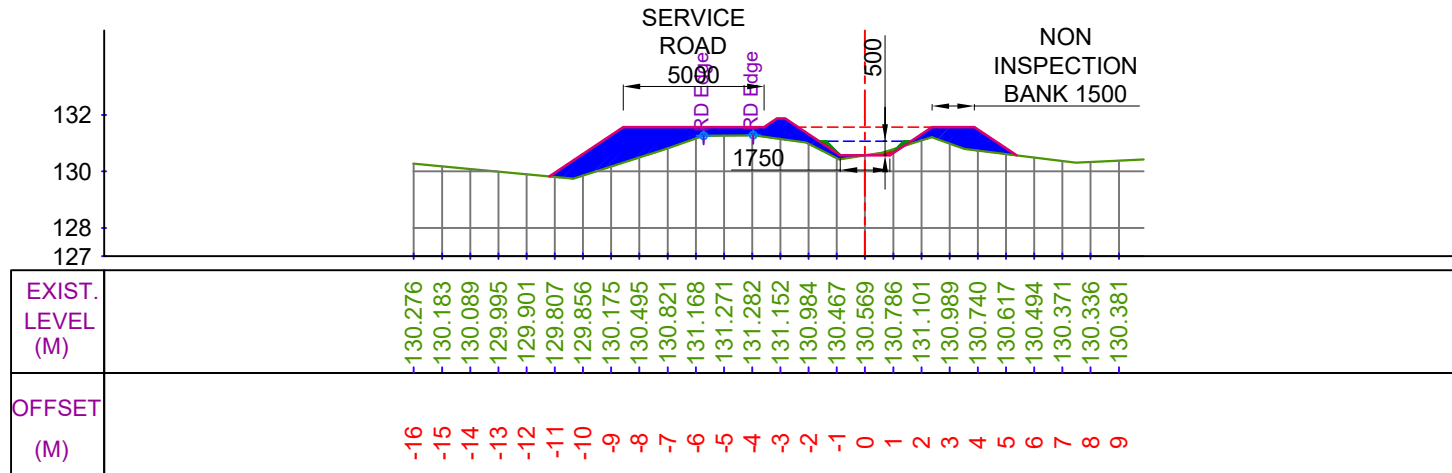
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

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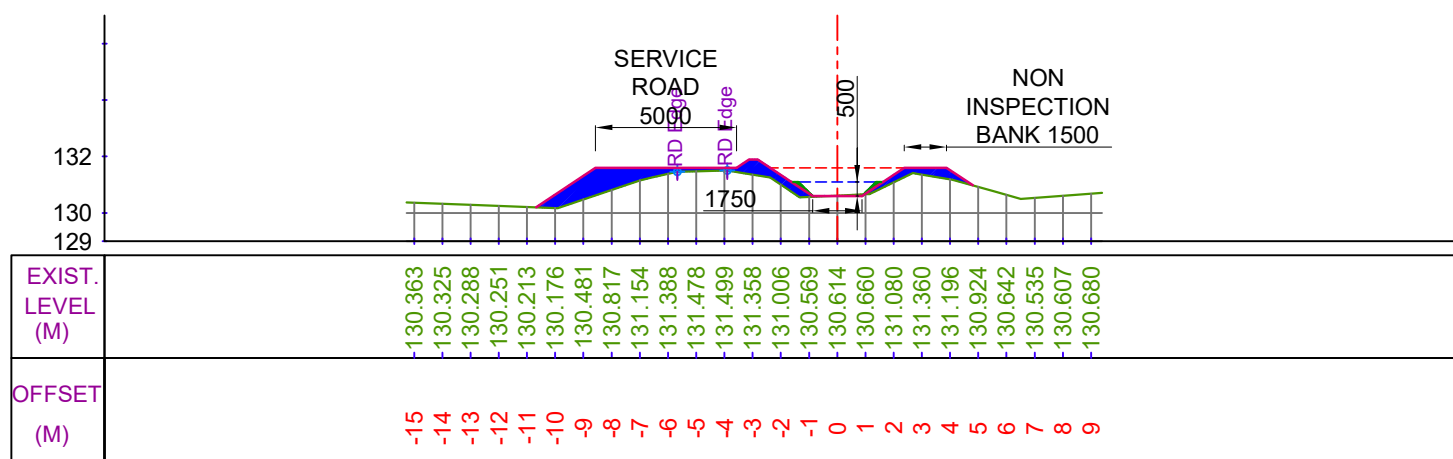
X SECTION OF CHAURAHA MINOR



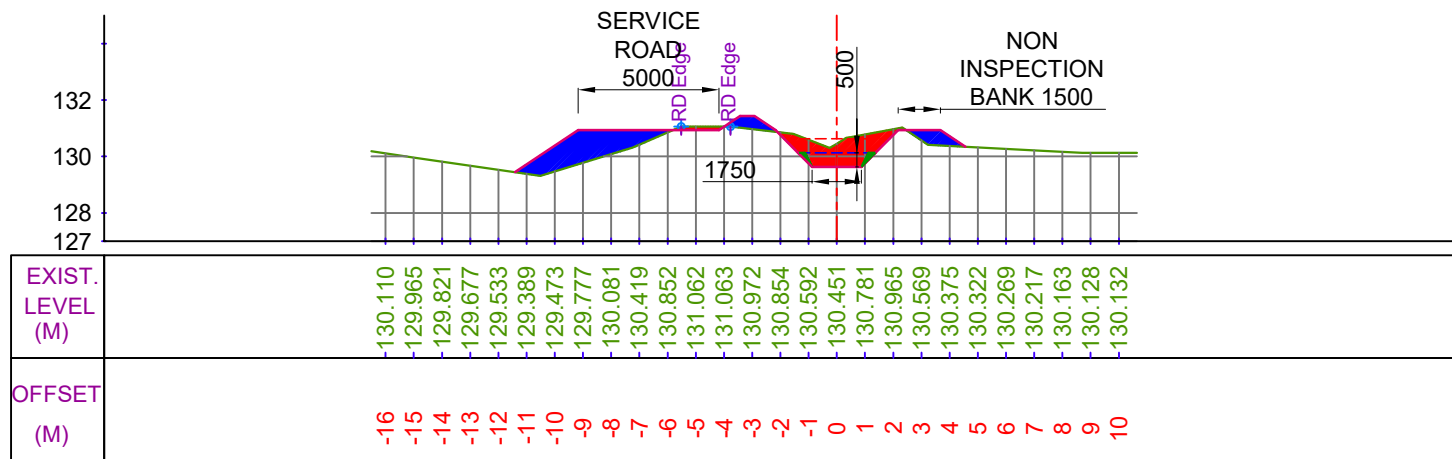
CUTTING AREA (SQ.M) = 0.098
FILLING AREA (SQ.M) = 5.172
CH. (KM):- 6+100
DESIGNED BED LEVEL = 130.622 M



CUTTING AREA (SQ.M) = 0.084
FILLING AREA (SQ.M) = 7.828
CH. (KM):- 6+300
DESIGNED BED LEVEL = 130.572 M



CUTTING AREA (SQ.M) = 0.038
FILLING AREA (SQ.M) = 4.780
CH. (KM):- 6+200
DESIGNED BED LEVEL = 130.597 M



CUTTING AREA (SQ.M) = 3.057
FILLING AREA (SQ.M) = 5.021
CH. (KM):- 6+400
DESIGNED BED LEVEL = 129.632 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 :-

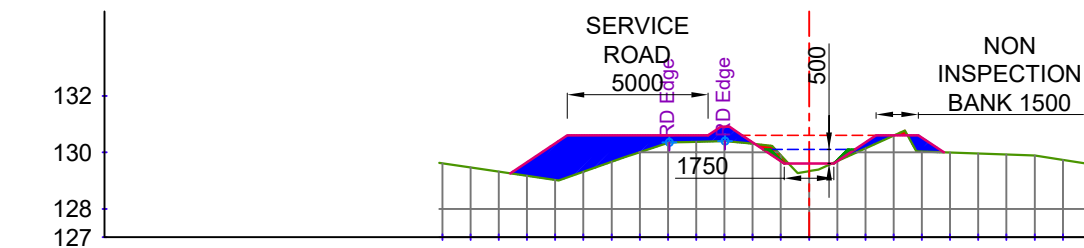
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

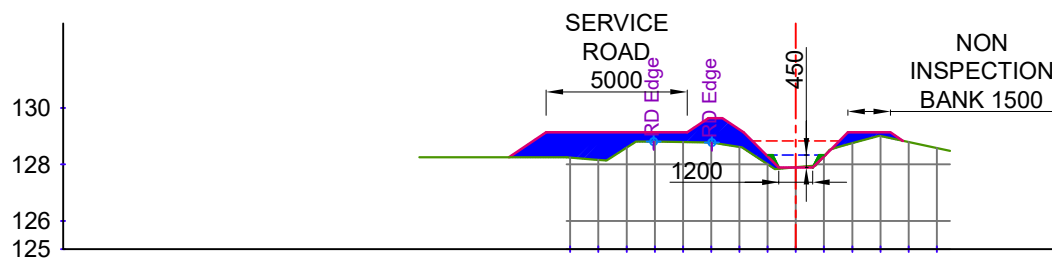
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X SECTION OF CHAURAHA MINOR



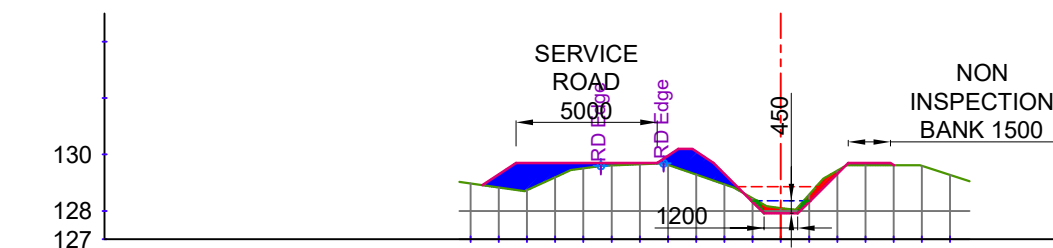
EXIST. LEVEL (M)	-129.612	-129.466	-129.319	-129.172	-129.025	-129.315	-129.666	-130.010	-130.340	-130.379	-130.405	-130.305	-129.896	-129.333	-129.692	-130.145	-130.599	-130.026	-129.991	-129.956	-129.922	-129.887	-129.735
OFFSET (M)	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9

CUTTING AREA (SQ.M) = 0.197
FILLING AREA (SQ.M) = 6.328
CH. (KM):- 6+500
DESIGNED BED LEVEL = 129.607 M



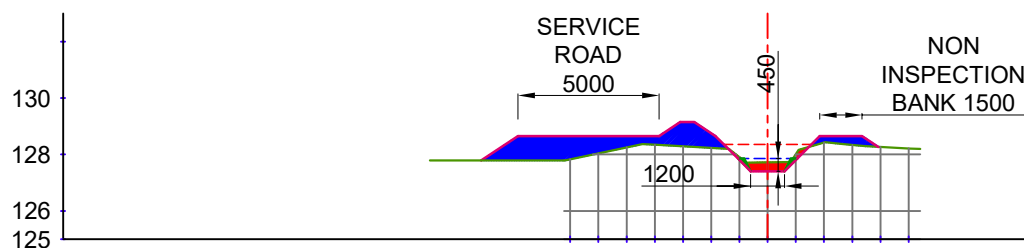
EXIST. LEVEL (M)	-128.245	-128.162	-128.598	-128.811	-128.794	-128.778	-128.620	-128.004	-127.897	-128.298	-128.757	-129.005	-128.793	-128.582
OFFSET (M)	8	7	6	5	4	3	2	1	0	1	2	3	4	5

CUTTING AREA (SQ.M) = 0.029
FILLING AREA (SQ.M) = 6.271
CH. (KM):- 6+700
DESIGNED BED LEVEL = 127.887 M



EXIST. LEVEL (M)	-128.971	-128.829	-128.739	-129.197	-129.510	-129.612	-129.655	-129.635	-129.289	-128.943	-128.445	-128.101	-128.577	-129.428	-129.620	-129.622	-129.601	-129.279
OFFSET (M)	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6

CUTTING AREA (SQ.M) = 0.612
FILLING AREA (SQ.M) = 3.839
CH. (KM):- 6+600
DESIGNED BED LEVEL = 127.912 M



EXIST. LEVEL (M)	-127.831	-128.040	-128.250	-128.343	-128.289	-128.234	-127.907	-127.721	-128.008	-128.422	-128.337	-128.266	-128.217
OFFSET (M)	7	6	5	4	3	2	1	0	1	2	3	4	5

CUTTING AREA (SQ.M) = 0.529
FILLING AREA (SQ.M) = 5.825
CH. (KM):- 6+800
DESIGNED BED LEVEL = 127.405 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.

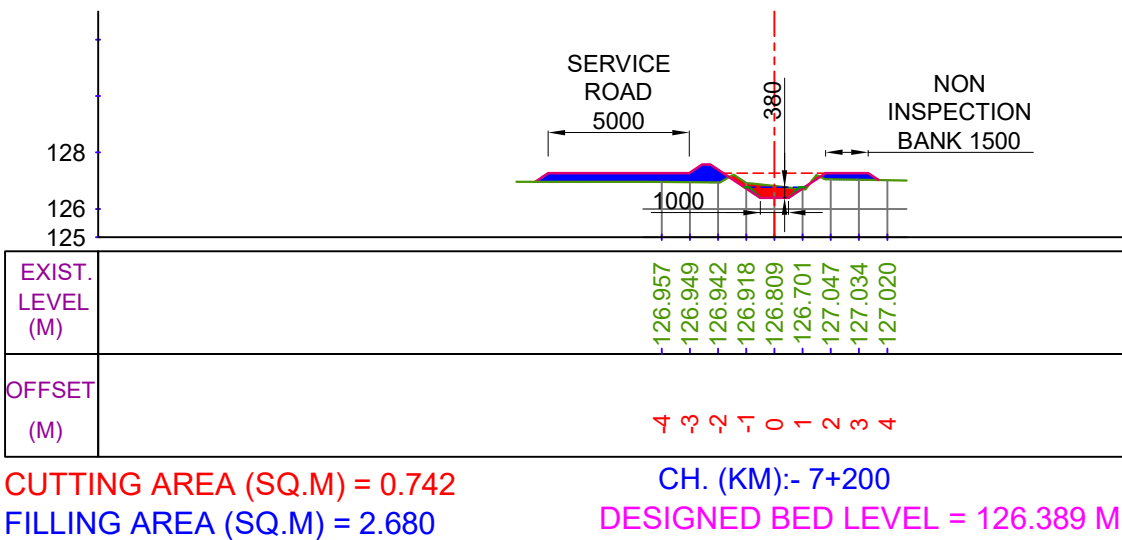
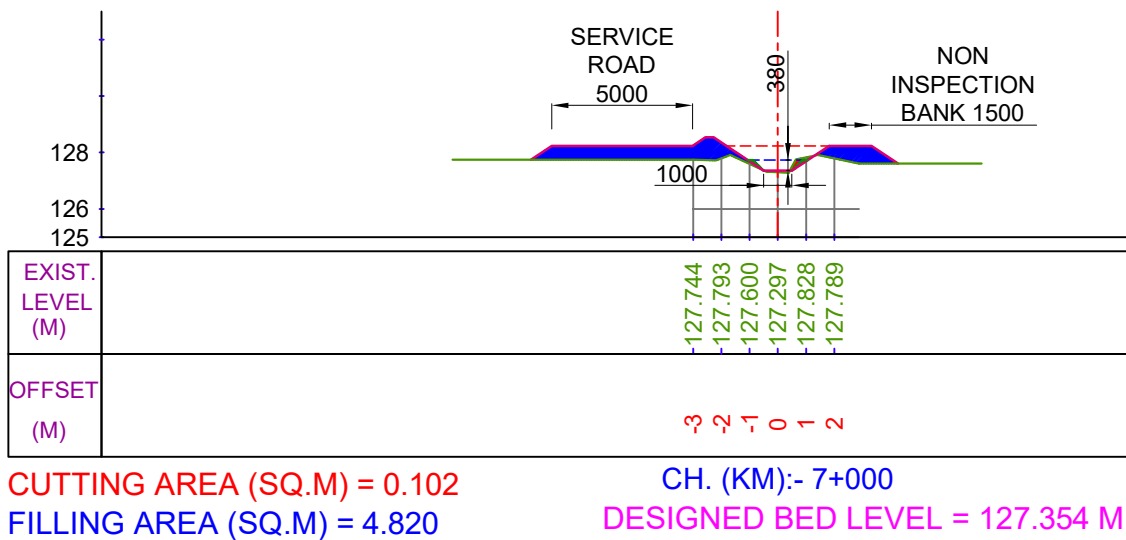
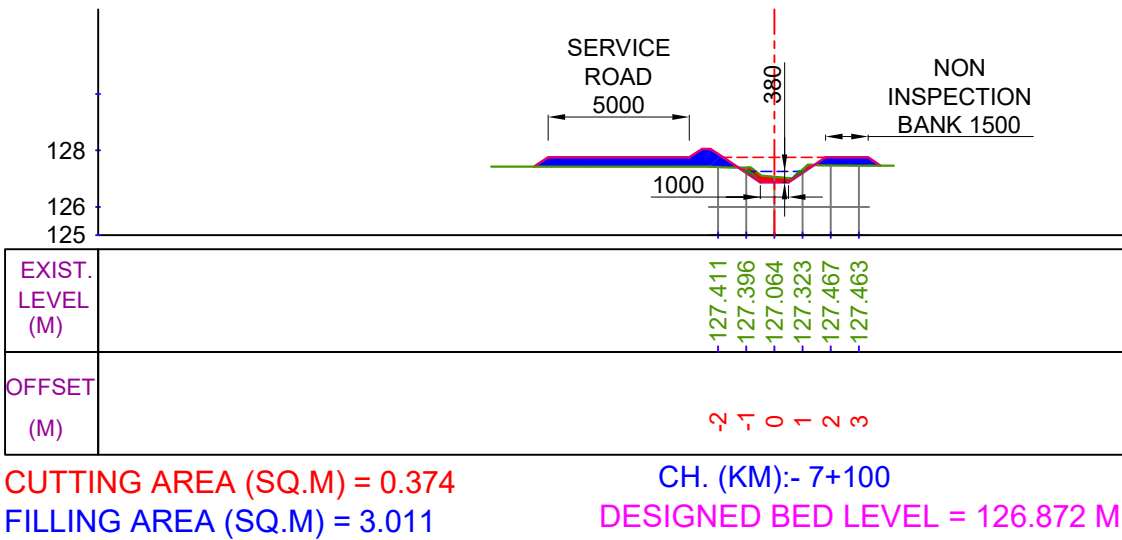
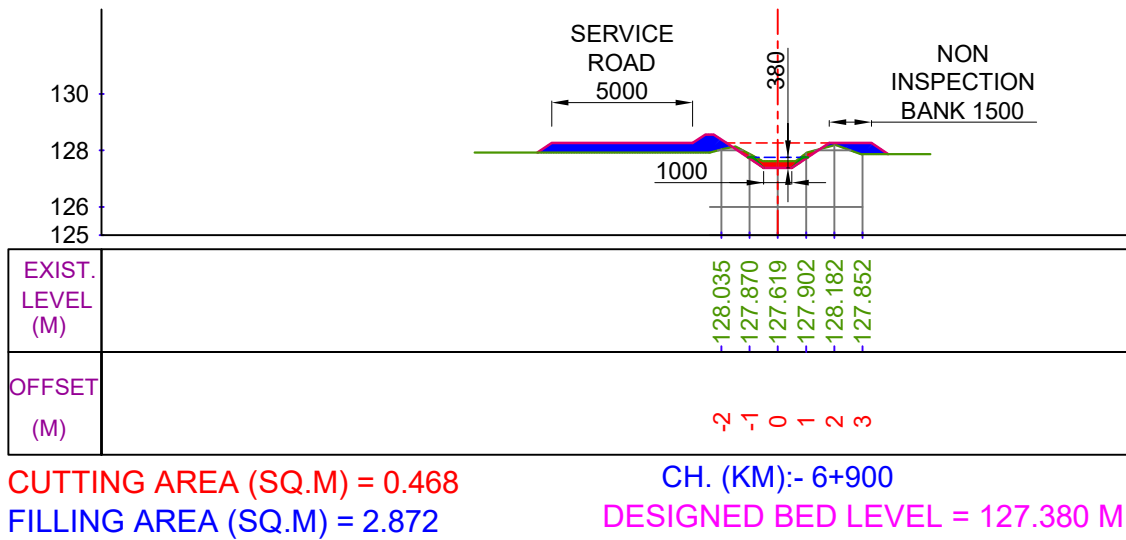


Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

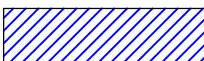
X SECTION OF CHAURAHA MINOR



LEGEND



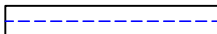
CUT AREA



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 :-

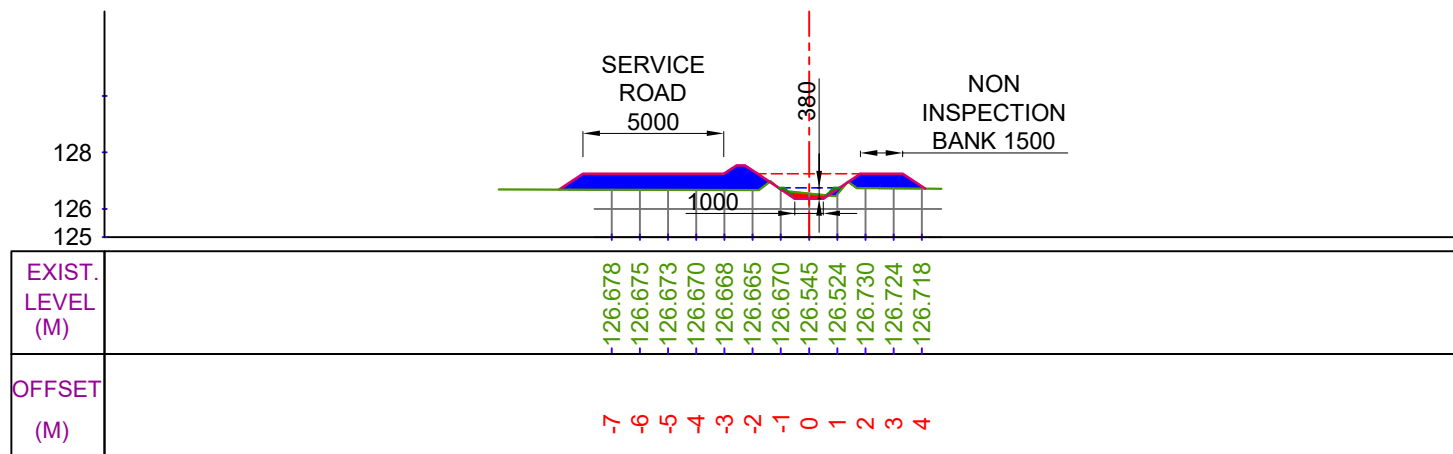
X SECTION OF CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

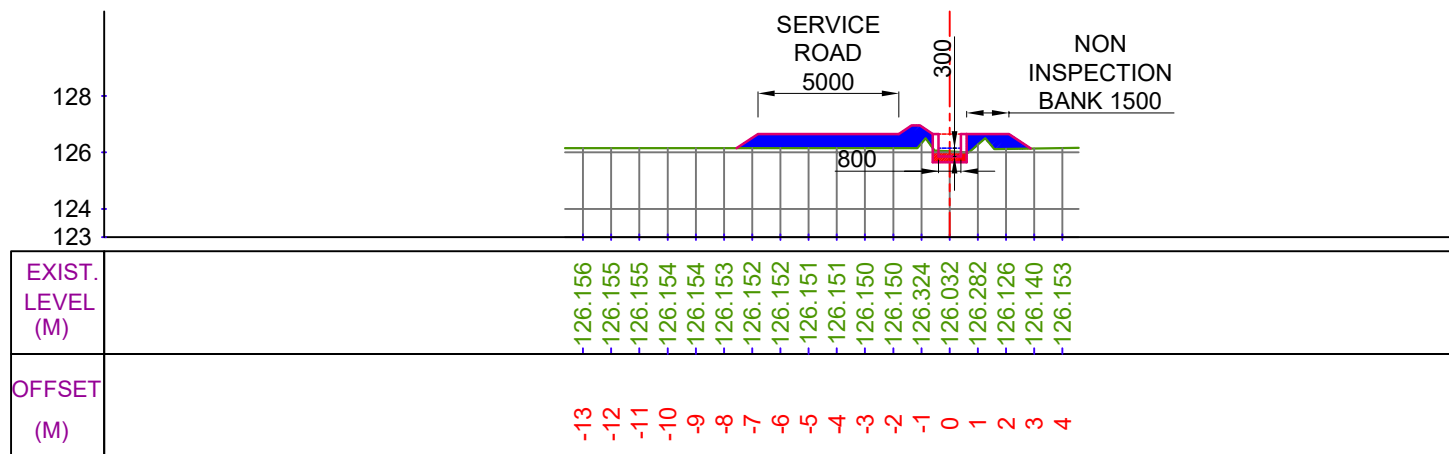
18 of 19

X SECTION OF CHAURAHA MINOR



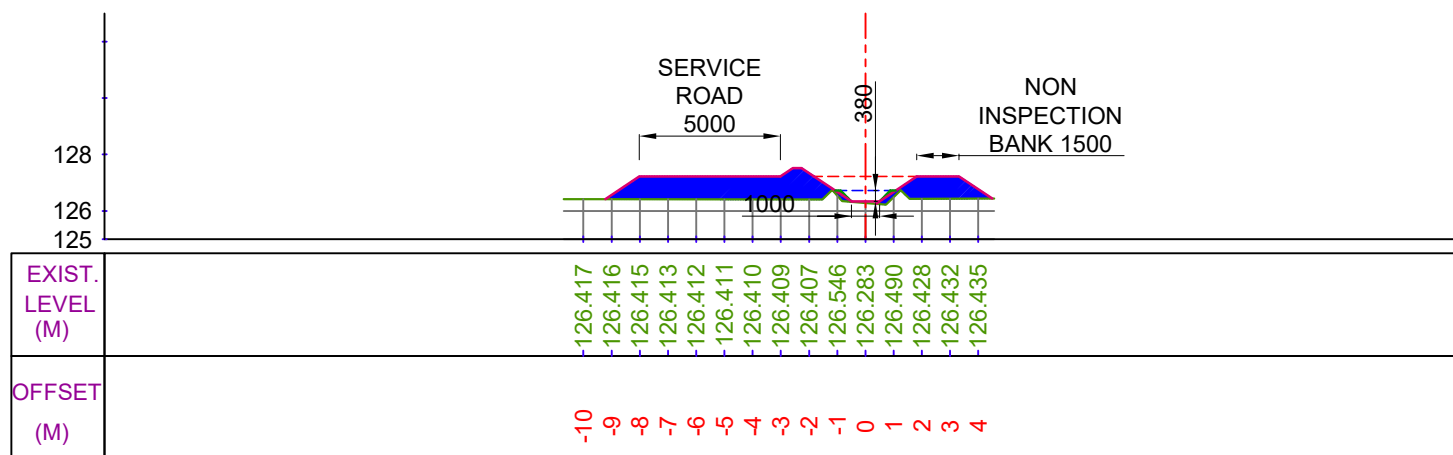
CUTTING AREA (SQ.M) = 0.224
FILLING AREA (SQ.M) = 5.304

CH. (KM):- 7+300
DESIGNED BED LEVEL = 126.363 M



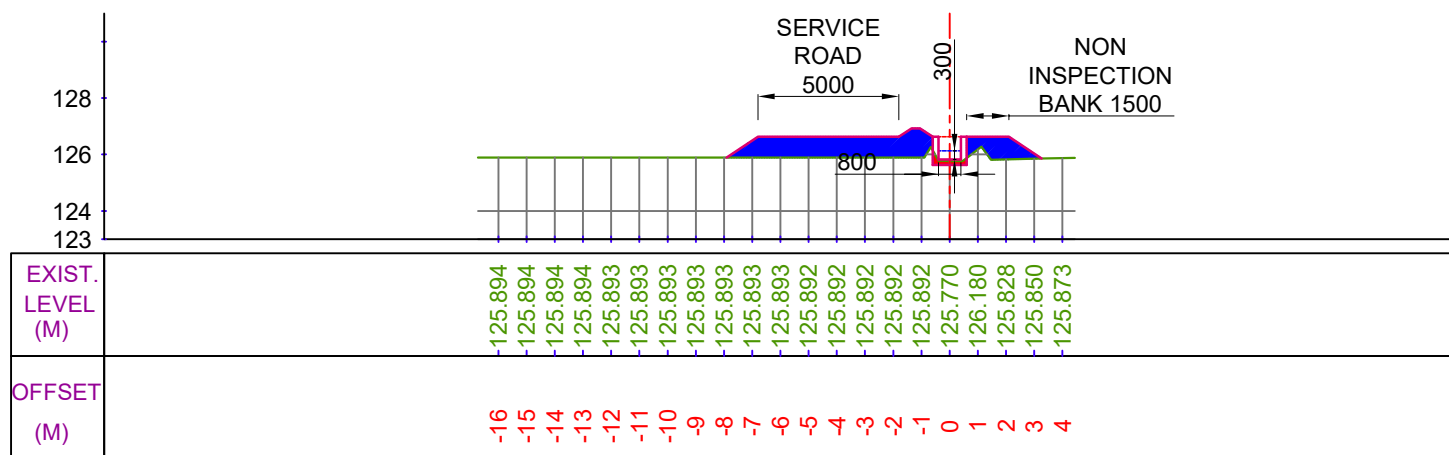
CUTTING AREA (SQ.M) = 0.456
FILLING AREA (SQ.M) = 4.317

CH. (KM):- 7+500
DESIGNED BED LEVEL = 125.855 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.195

CH. (KM):- 7+400
DESIGNED BED LEVEL = 126.338 M



CUTTING AREA (SQ.M) = 0.219
FILLING AREA (SQ.M) = 6.581

CH. (KM):- 7+600
DESIGNED BED LEVEL = 125.827 M

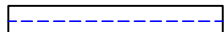
LEGEND



CUT AREA



EXISTING BED LINE



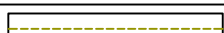
F.S.L.



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 CHAURAHA MINOR (OFFTAKE FROM RD - 0+140 KM. (R), KARMA DY.)

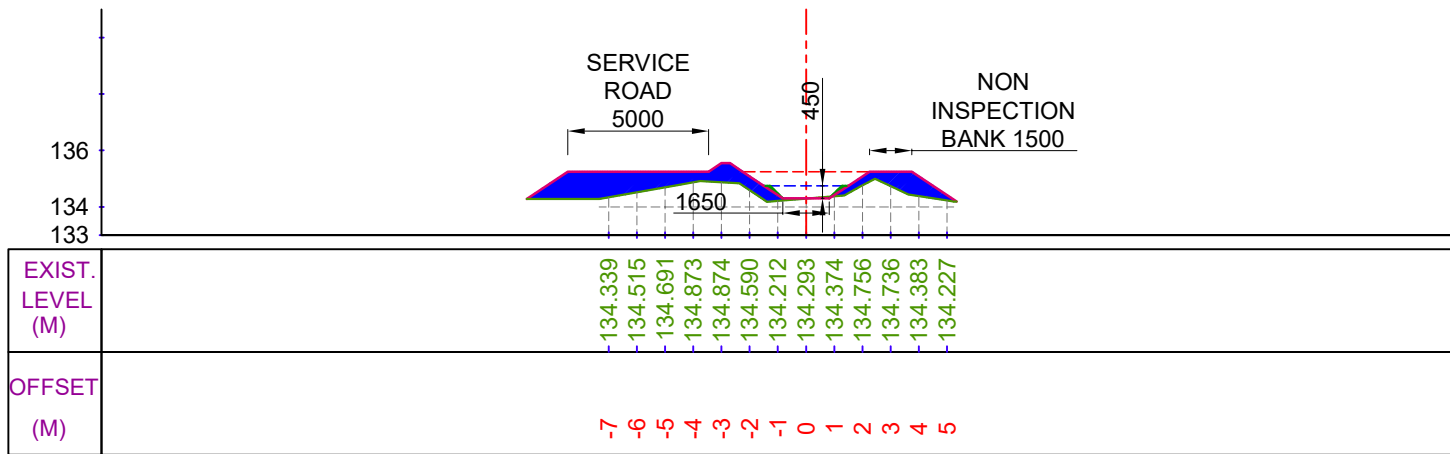
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ XSEC-

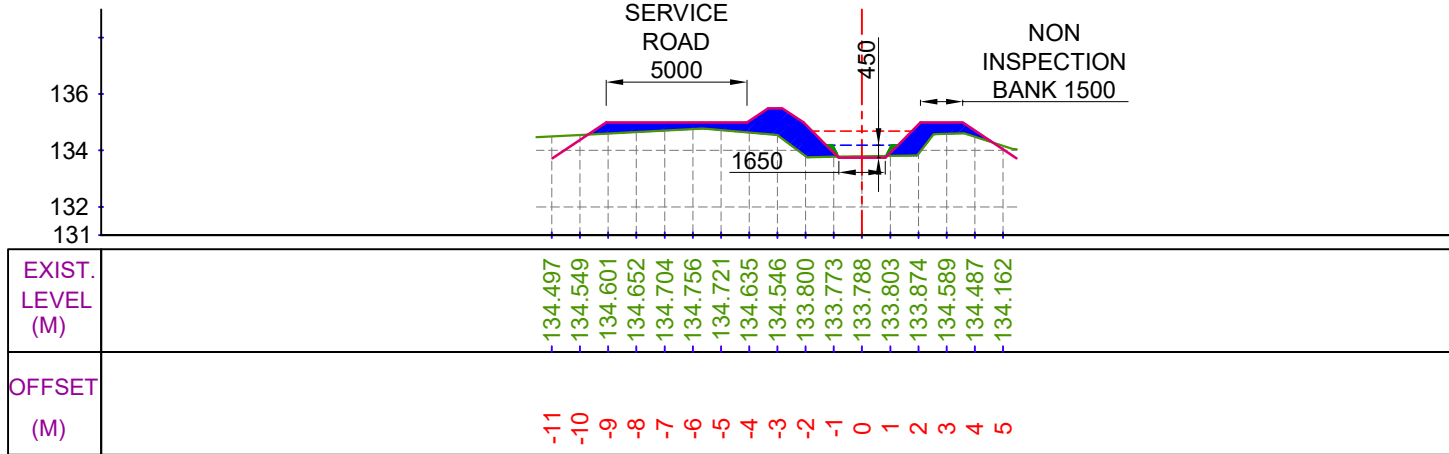
19 of 19

NEURA SURAJMAL MINOR

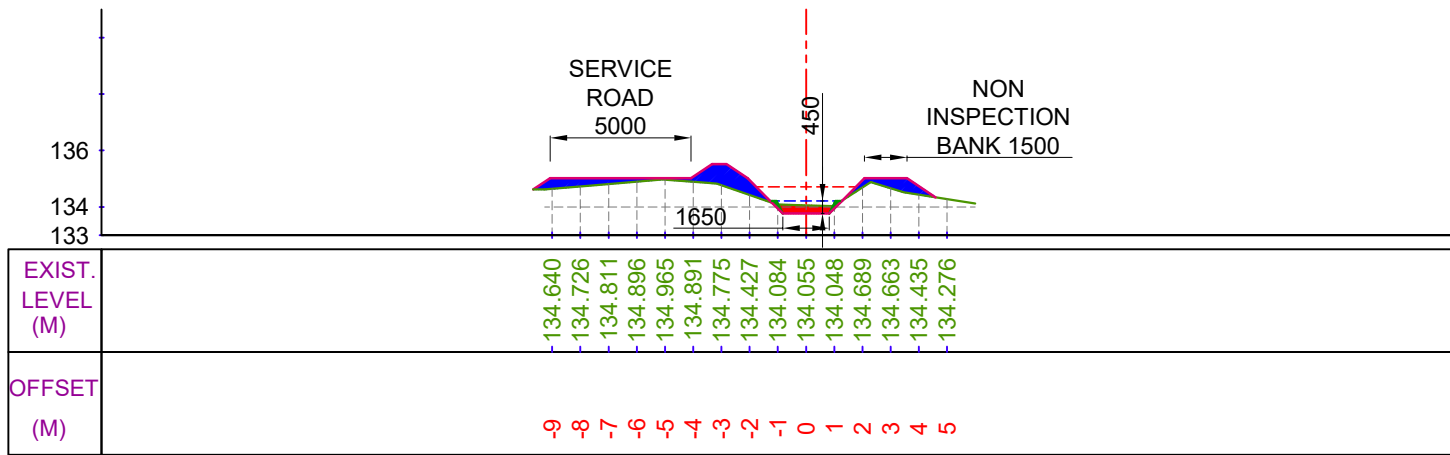
X SECTION OF NEURA SURAJMAL MINOR



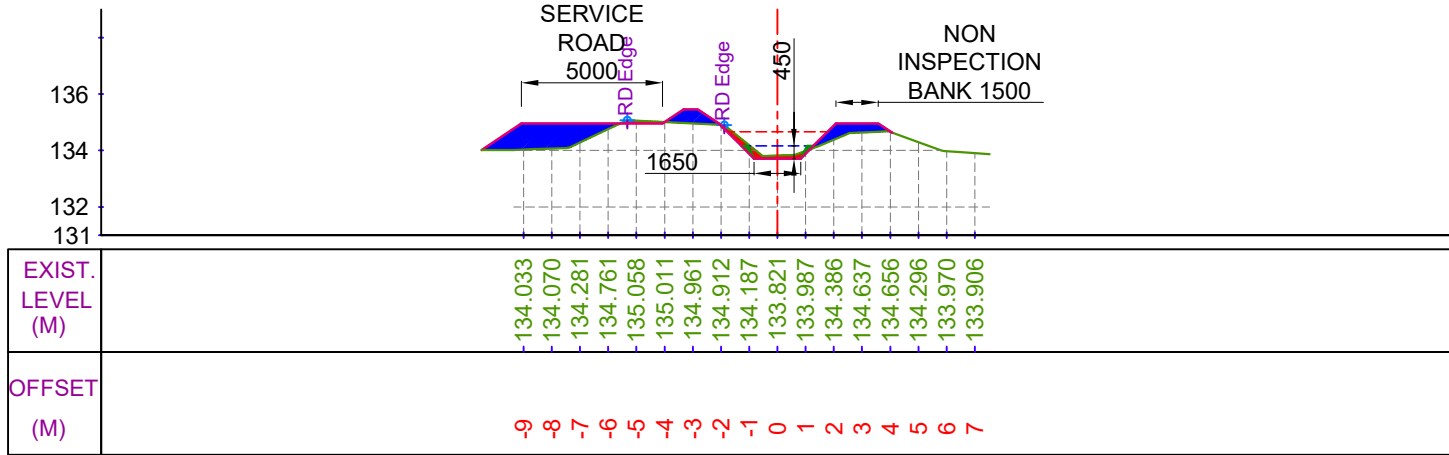
CUTTING AREA (SQ.M) = 0.025
FILLING AREA (SQ.M) = 7.312
CH. (KM):- 0+100
DESIGNED BED LEVEL = 134.299 M



CUTTING AREA (SQ.M) = 0.082
FILLING AREA (SQ.M) = 5.750
CH. (KM):- 0+300
DESIGNED BED LEVEL = 133.739 M

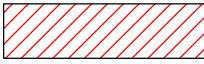


CUTTING AREA (SQ.M) = 0.520
FILLING AREA (SQ.M) = 3.299
CH. (KM):- 0+200
DESIGNED BED LEVEL = 133.766 M

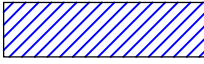


CUTTING AREA (SQ.M) = 0.567
FILLING AREA (SQ.M) = 4.439
CH. (KM):- 0+400
DESIGNED BED LEVEL = 133.711 M

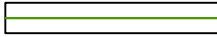
LEGEND



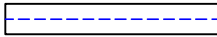
CUT AREA



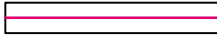
FILL AREA



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 :-

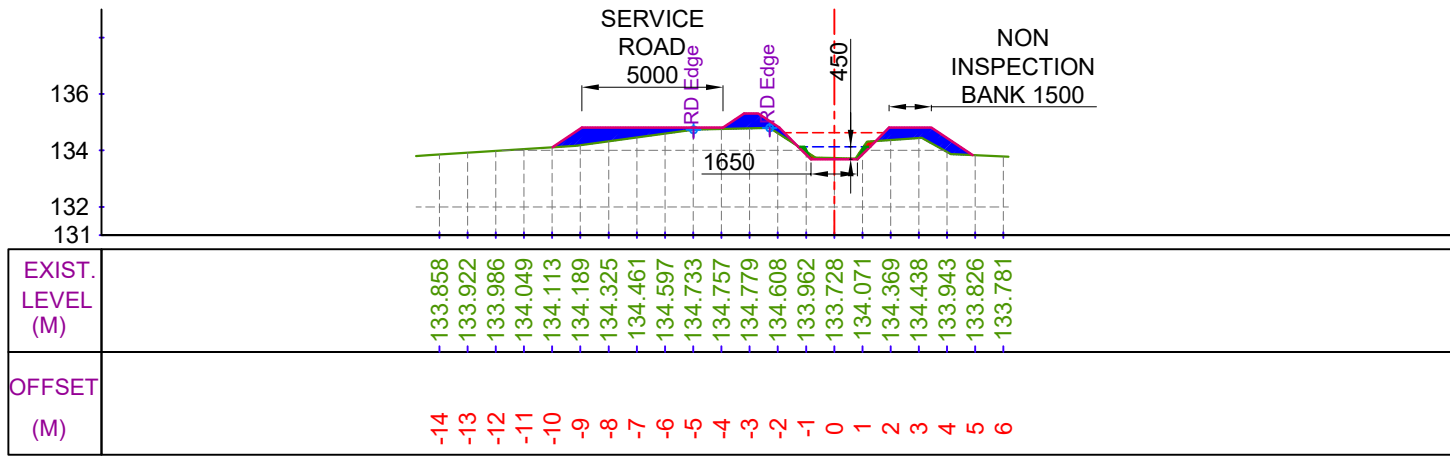
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

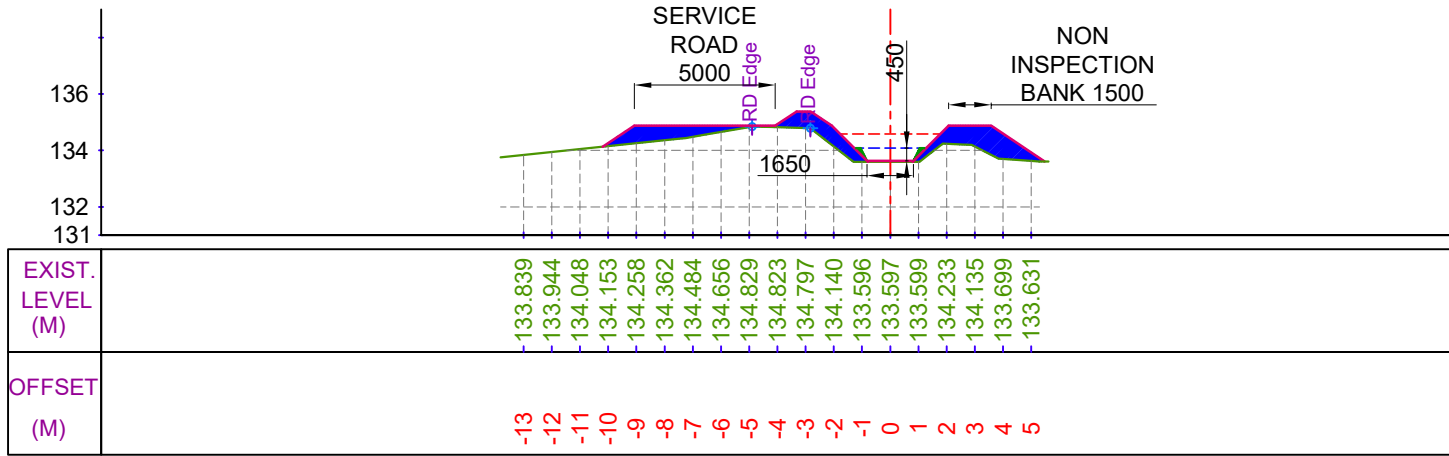
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

1 of 12

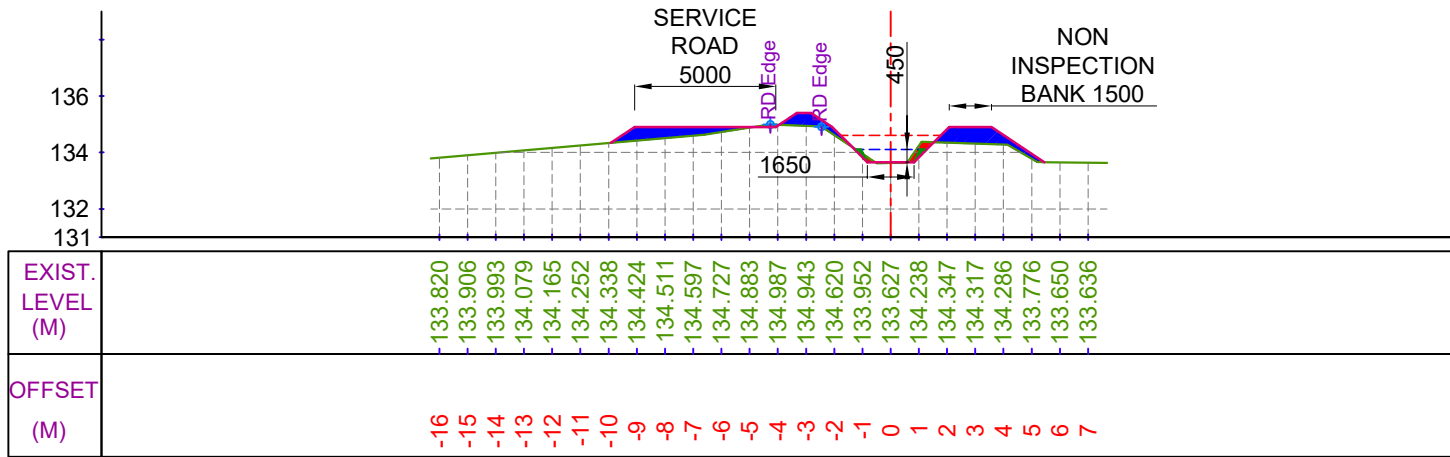
X SECTION OF NEURA SURAJMAL MINOR



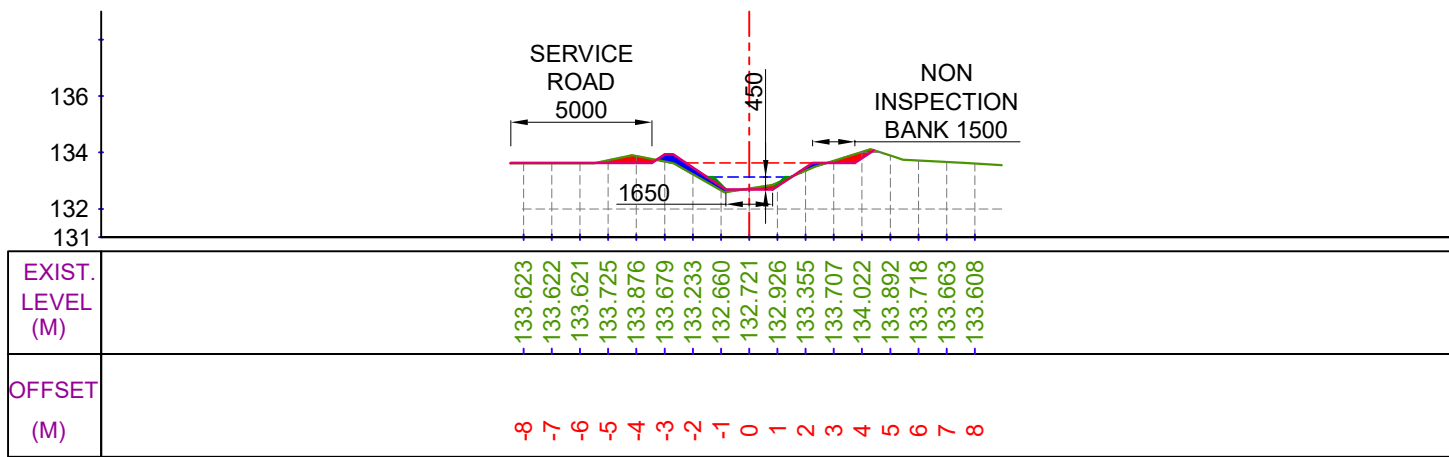
CUTTING AREA (SQ.M) = 0.162 CH. (KM):- 0+500
FILLING AREA (SQ.M) = 3.781 DESIGNED BED LEVEL = 133.683 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 0+700
FILLING AREA (SQ.M) = 6.141 DESIGNED BED LEVEL = 133.628 M



CUTTING AREA (SQ.M) = 0.280 CH. (KM):- 0+600
FILLING AREA (SQ.M) = 3.561 DESIGNED BED LEVEL = 133.655 M

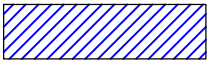


CUTTING AREA (SQ.M) = 0.704 CH. (KM):- 0+800
FILLING AREA (SQ.M) = 0.702 DESIGNED BED LEVEL = 132.686 M

LEGEND



CUT AREA



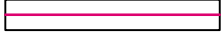
FILL AREA



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 :-

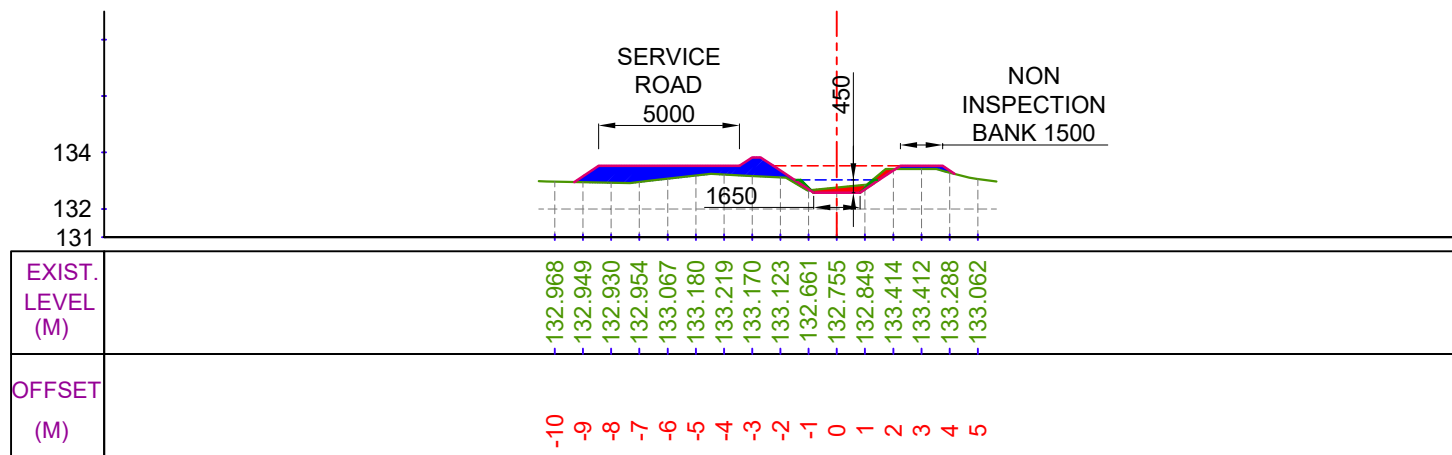
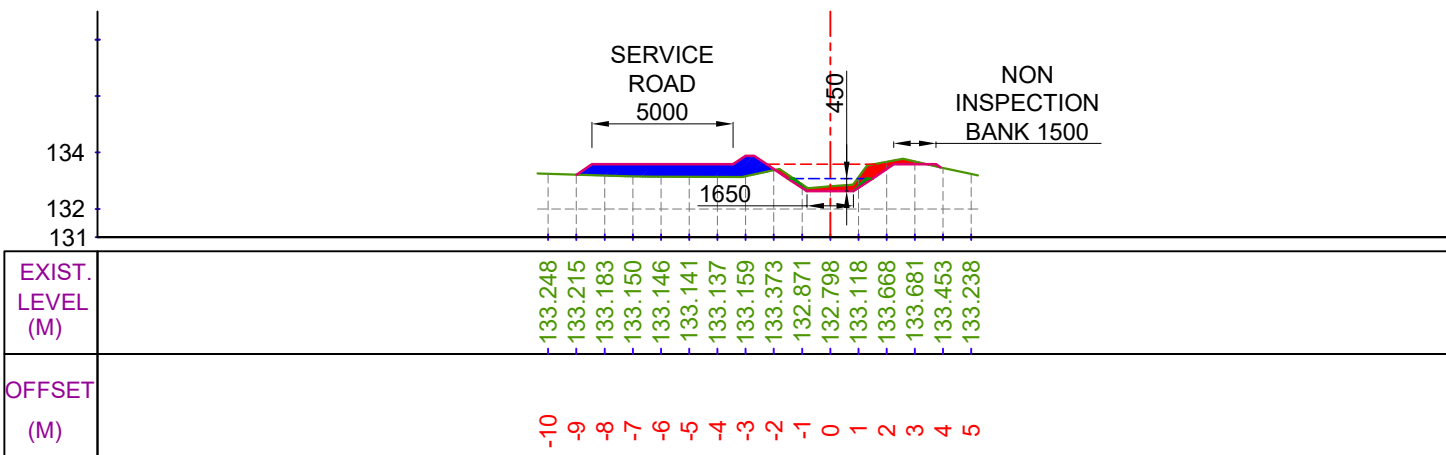
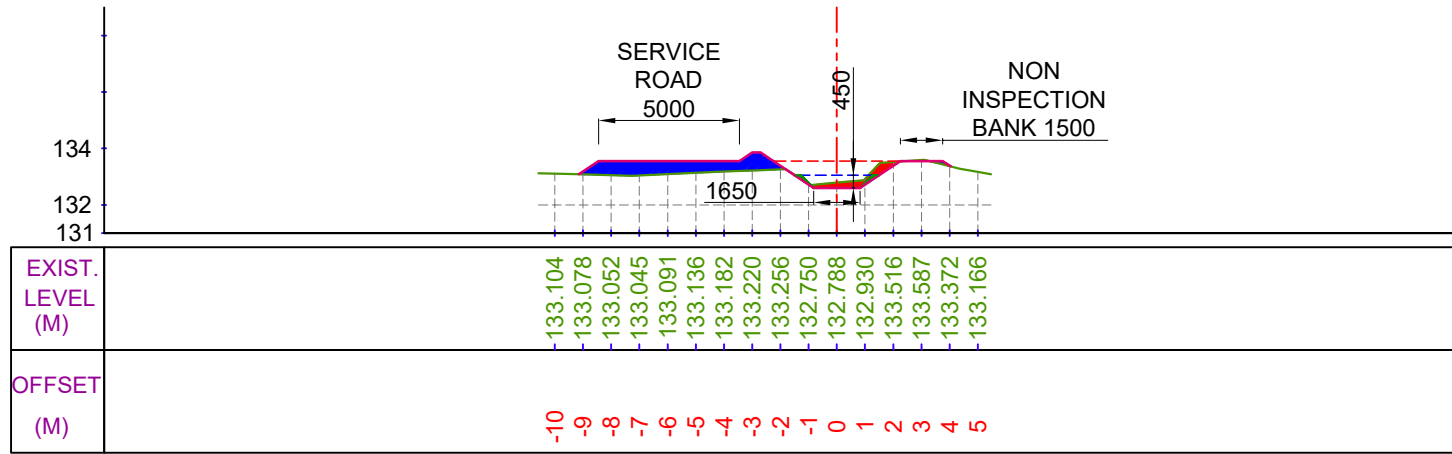
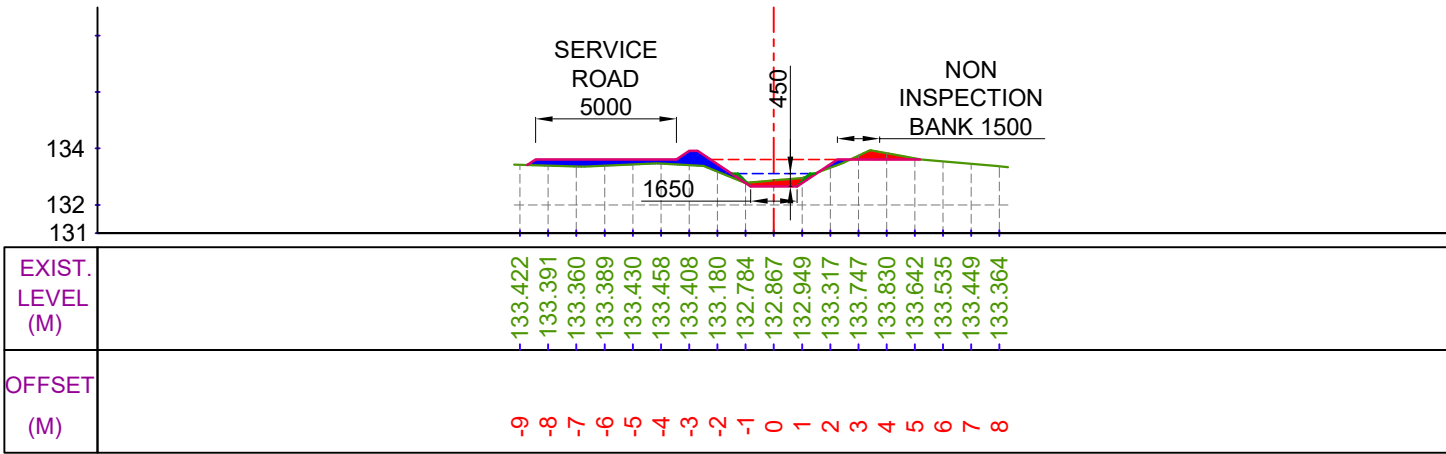
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

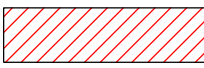
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

2 of 12

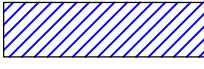
X SECTION OF NEURA SURAJMAL MINOR



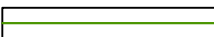
LEGEND



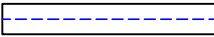
CUT AREA



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 :-

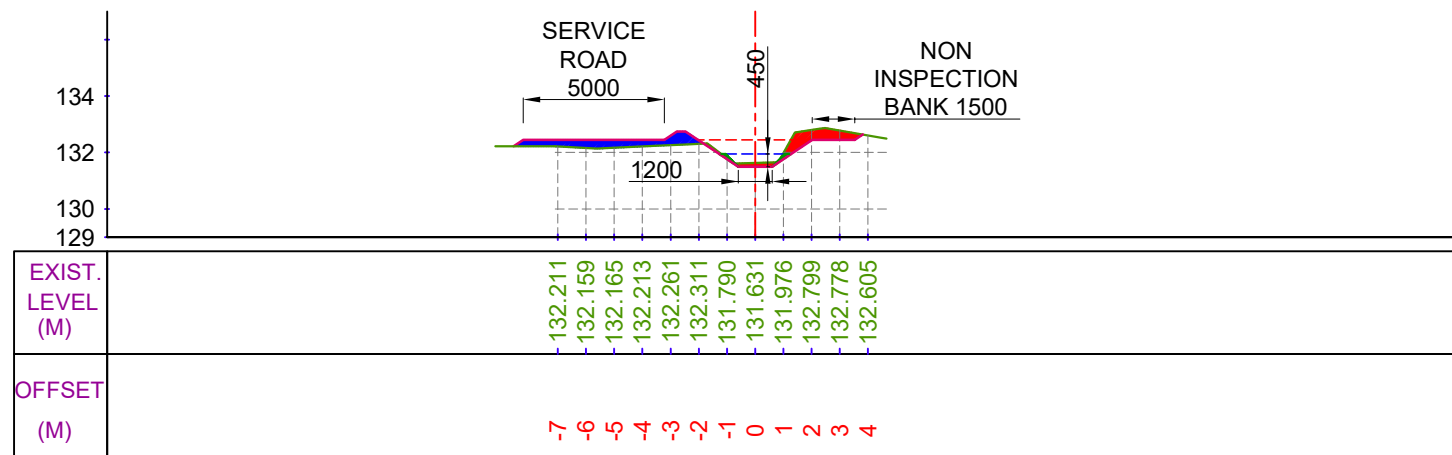
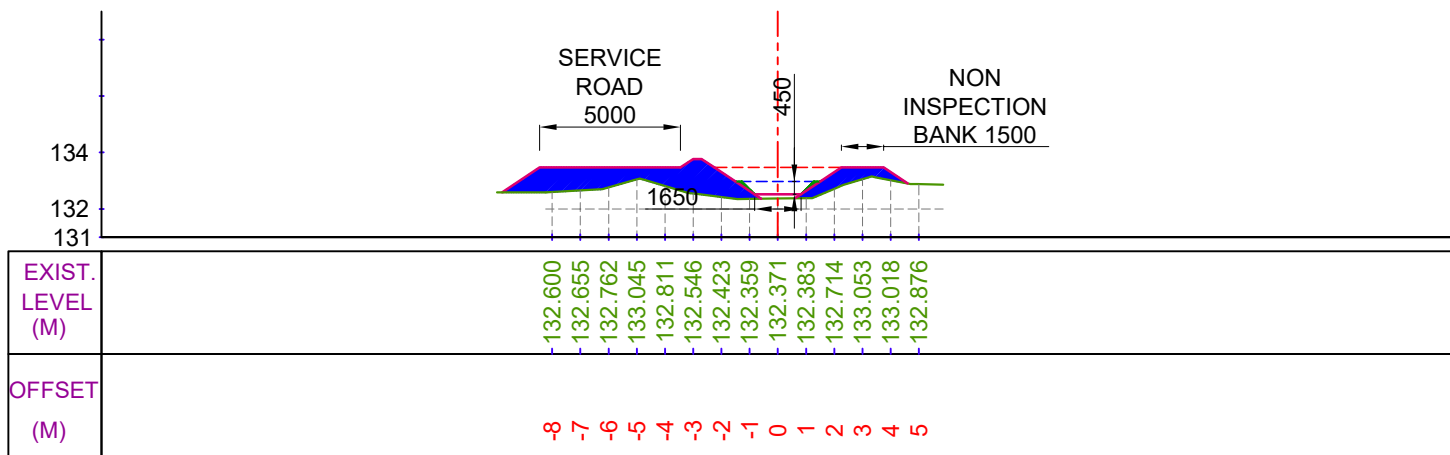
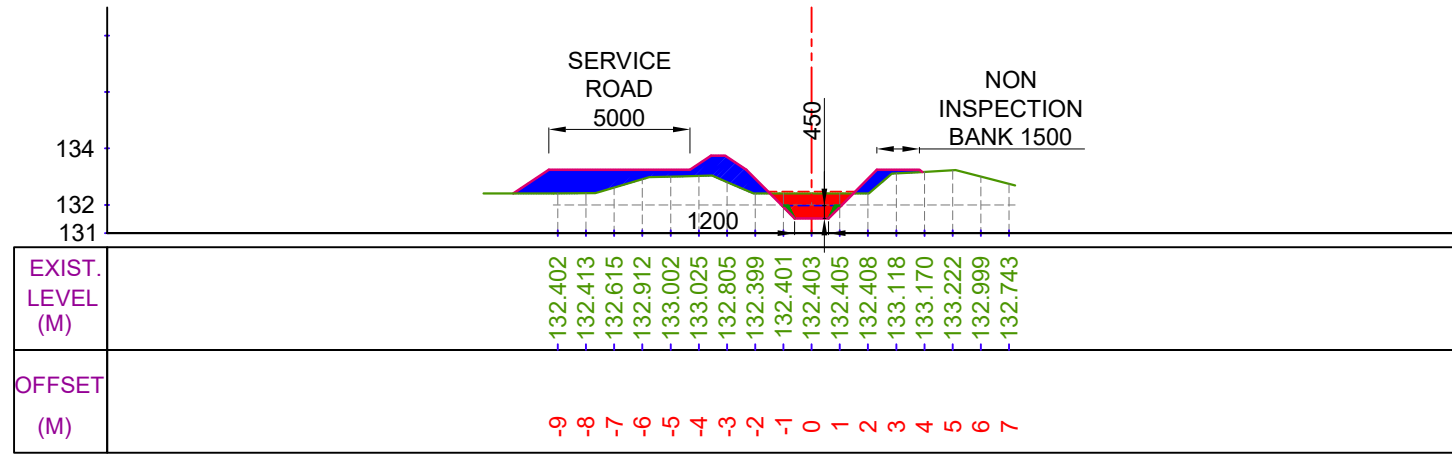
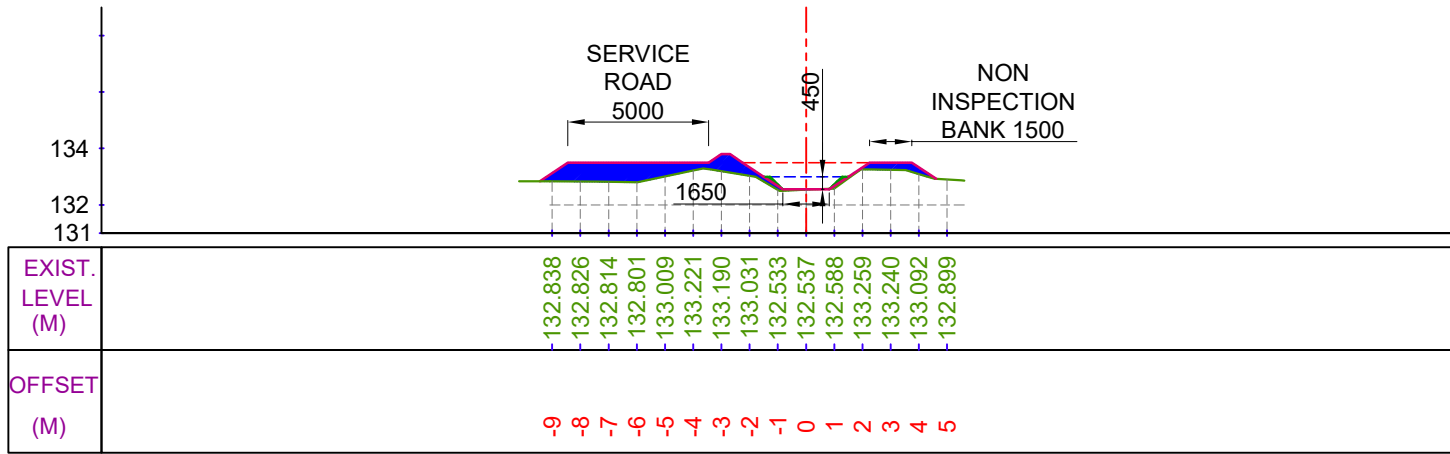
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

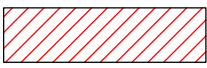
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

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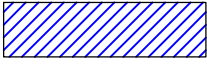
X SECTION OF NEURA SURAJMAL MINOR



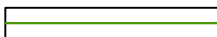
LEGEND



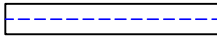
CUT AREA



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 :-

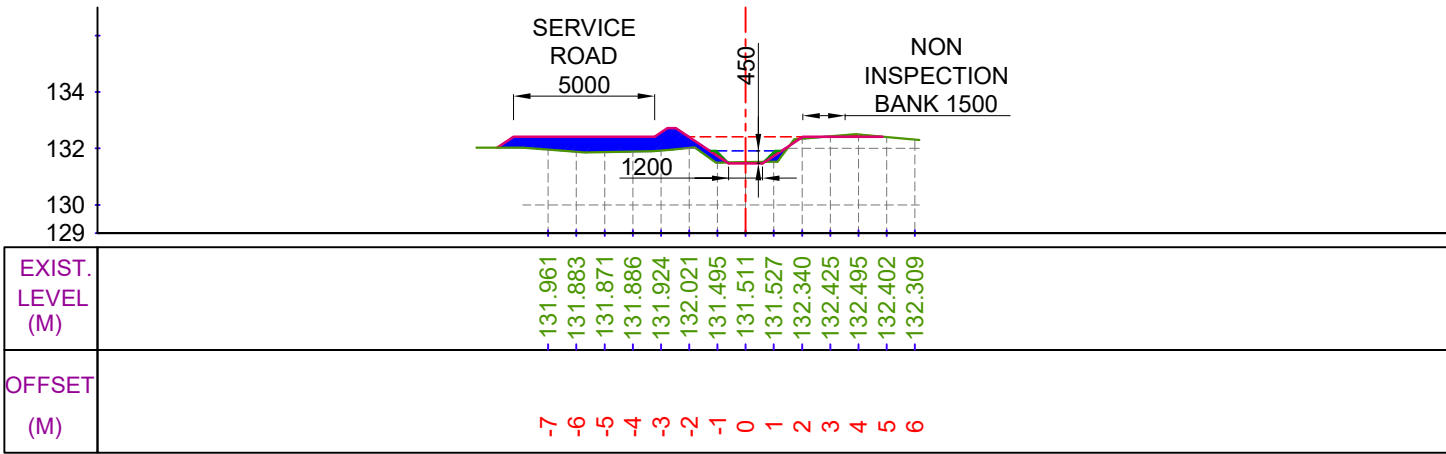
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

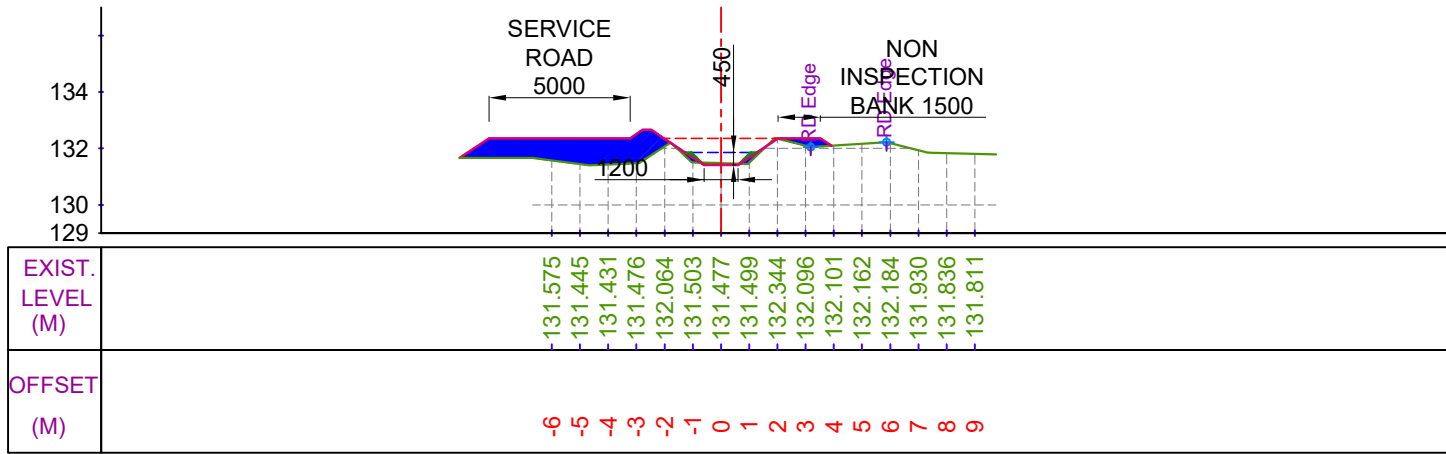
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

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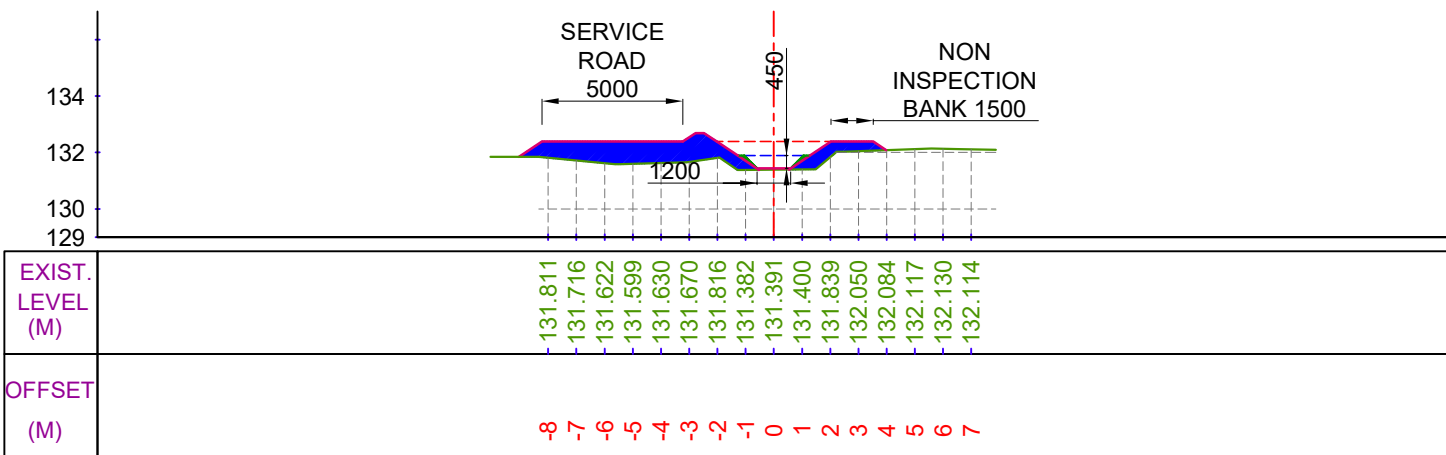
X SECTION OF NEURA SURAJMAL MINOR



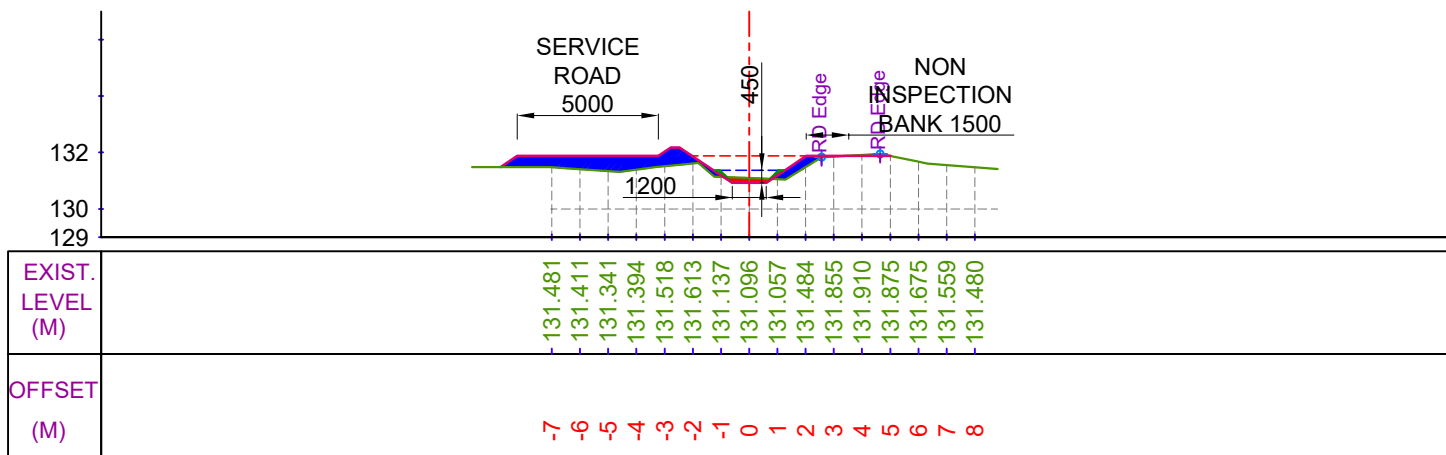
CUTTING AREA (SQ.M) = 0.157
FILLING AREA (SQ.M) = 3.851
CH. (KM):- 1+700
DESIGNED BED LEVEL = 131.466 M



CUTTING AREA (SQ.M) = 0.101
FILLING AREA (SQ.M) = 6.054
CH. (KM):- 1+900
DESIGNED BED LEVEL = 131.410 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.643
CH. (KM):- 1+800
DESIGNED BED LEVEL = 131.438 M



CUTTING AREA (SQ.M) = 0.294
FILLING AREA (SQ.M) = 3.626
CH. (KM):- 2+000
DESIGNED BED LEVEL = 130.925 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			H.G. LINE

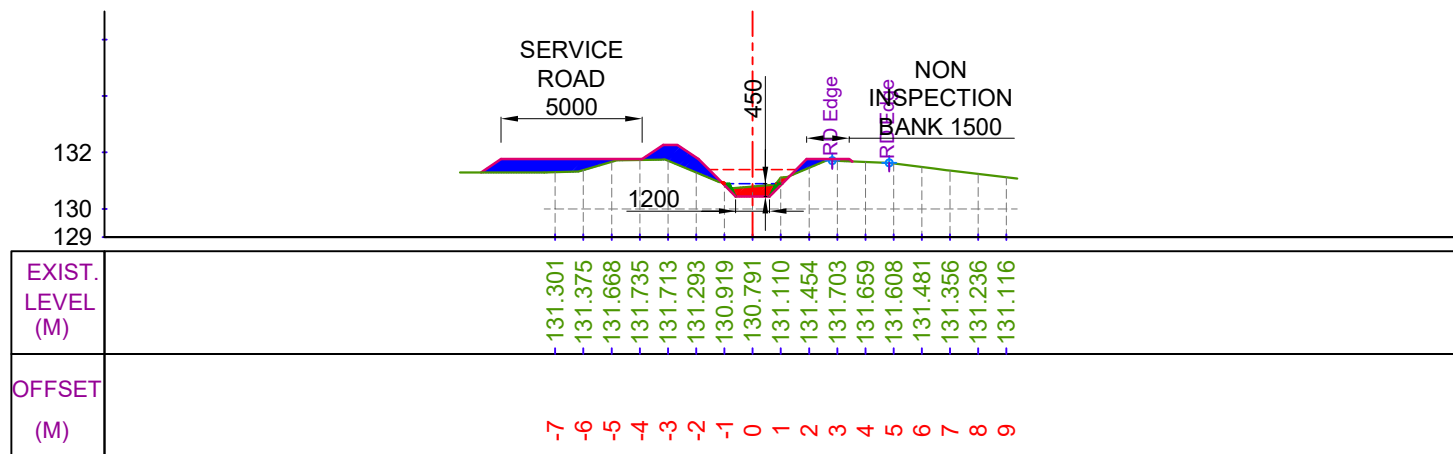
Prepared by :-

WAPCOS LTD.



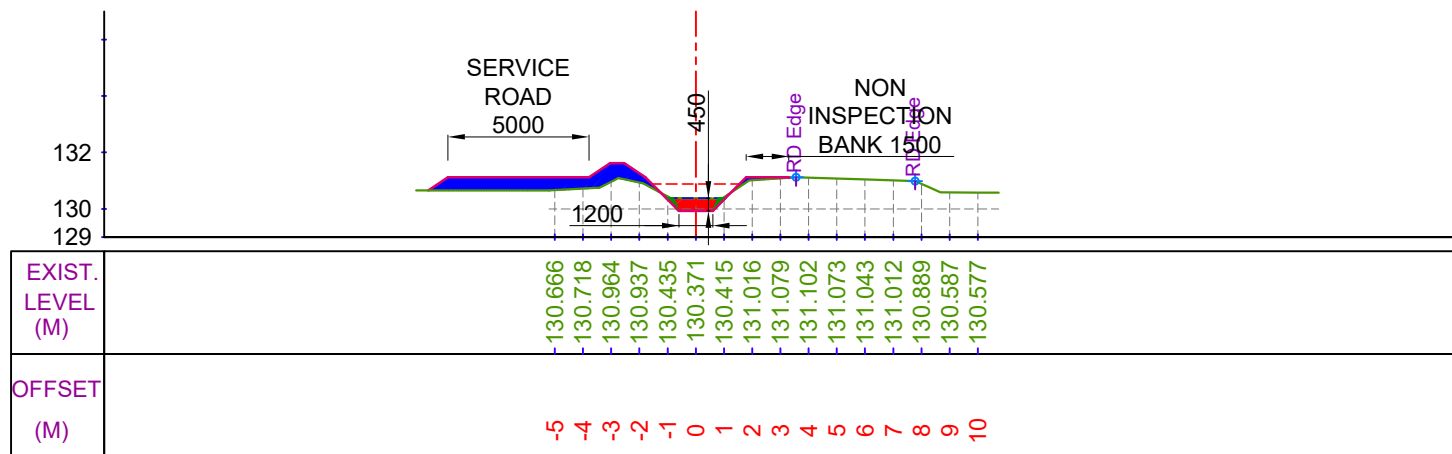
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC- 5 of 12

X SECTION OF NEURA SURAJMAL MINOR



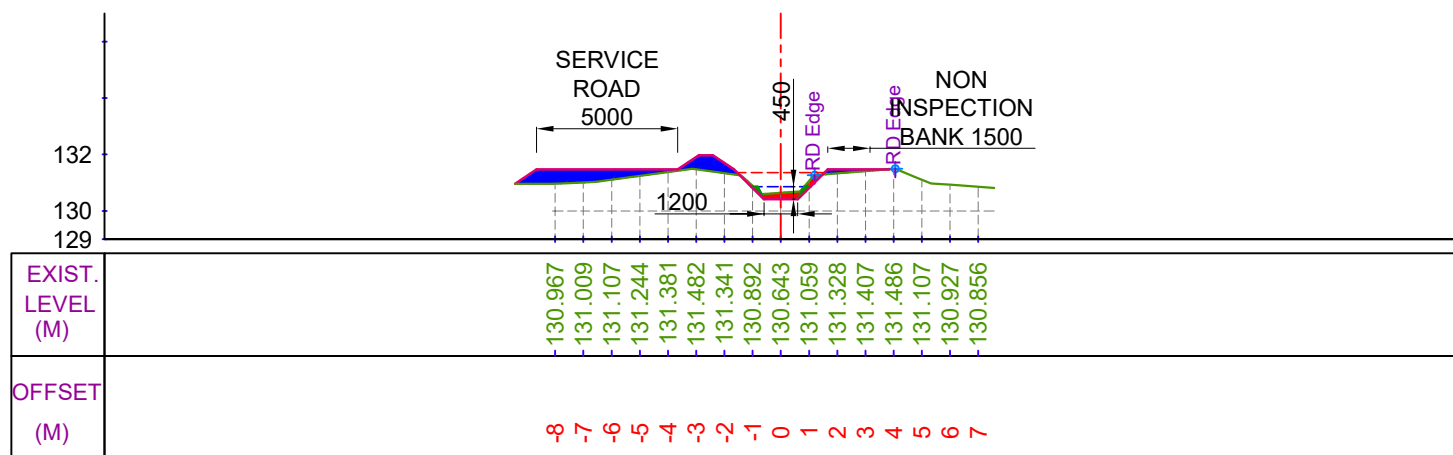
CUTTING AREA (SQ.M) = 0.548
FILLING AREA (SQ.M) = 3.215

CH. (KM):- 2+100
DESIGNED BED LEVEL = 130.441 M



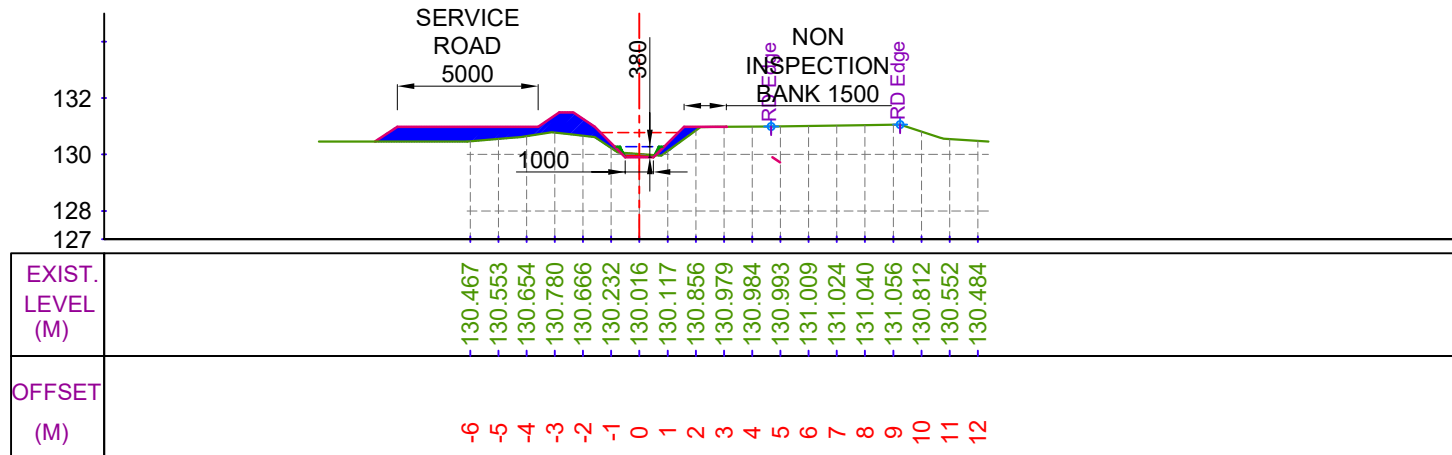
CUTTING AREA (SQ.M) = 0.656
FILLING AREA (SQ.M) = 3.664

CH. (KM):- 2+300
DESIGNED BED LEVEL = 129.928 M



CUTTING AREA (SQ.M) = 0.434
FILLING AREA (SQ.M) = 2.902

CH. (KM):- 2+200
DESIGNED BED LEVEL = 130.413 M



CUTTING AREA (SQ.M) = 0.124
FILLING AREA (SQ.M) = 4.348

CH. (KM):- 2+400
DESIGNED BED LEVEL = 129.900 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

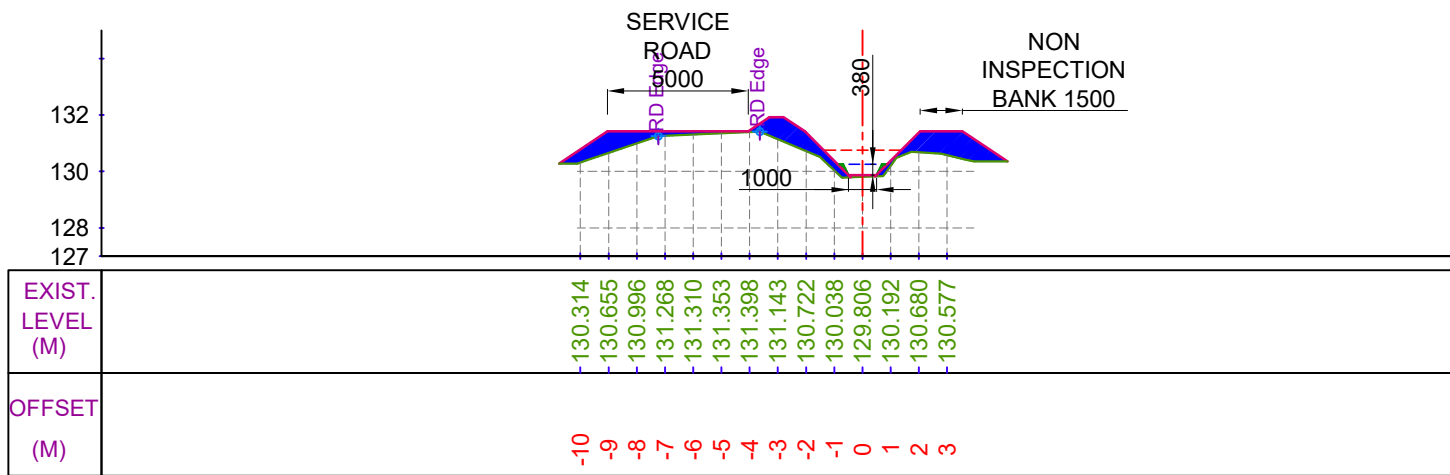
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

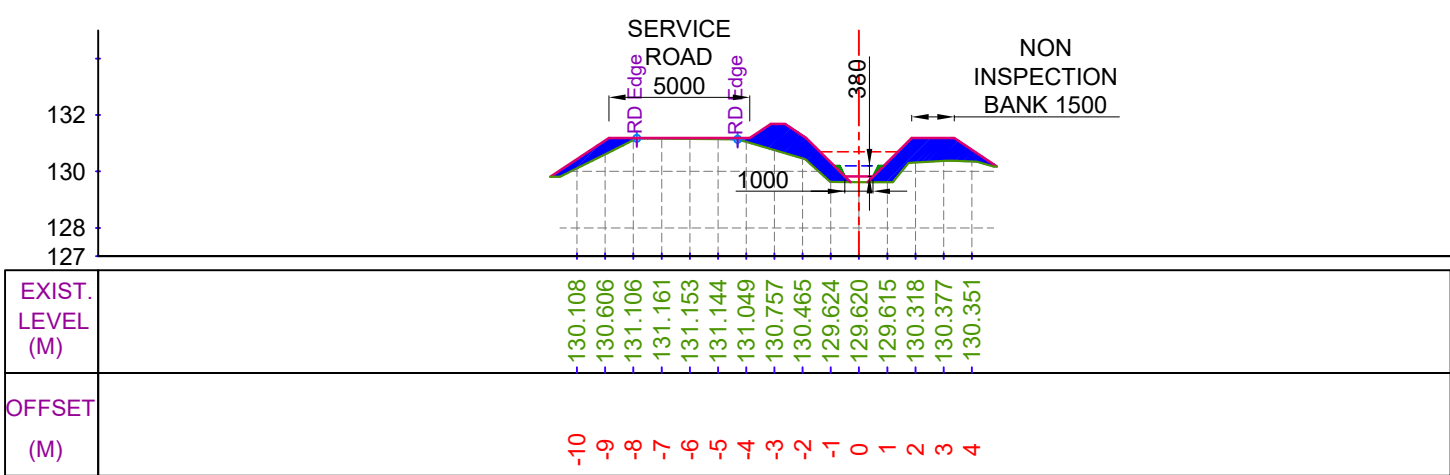
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

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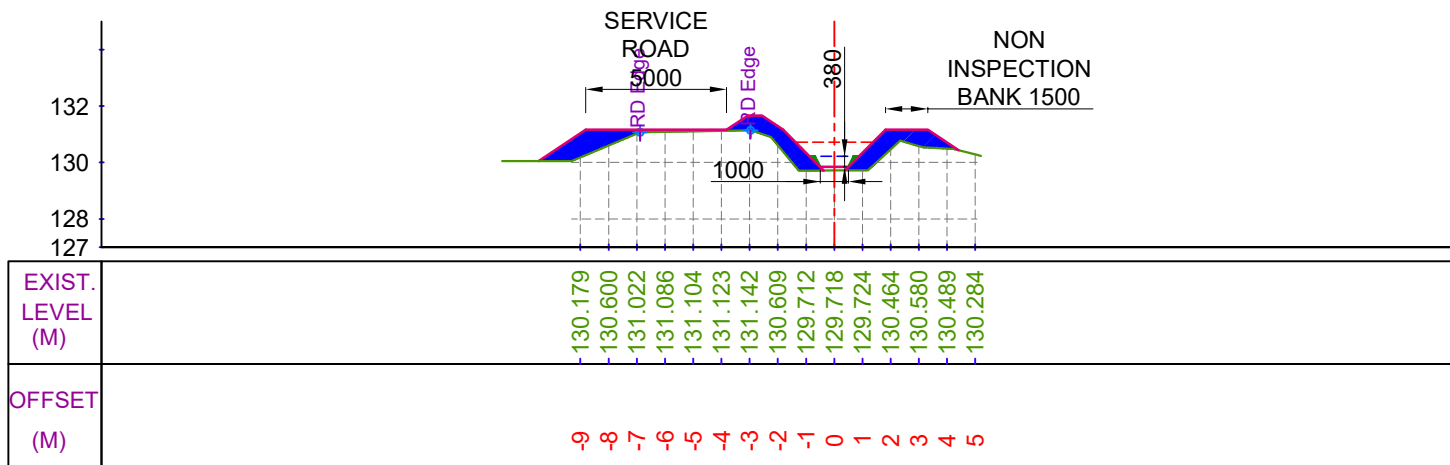
X SECTION OF NEURA SURAJMAL MINOR



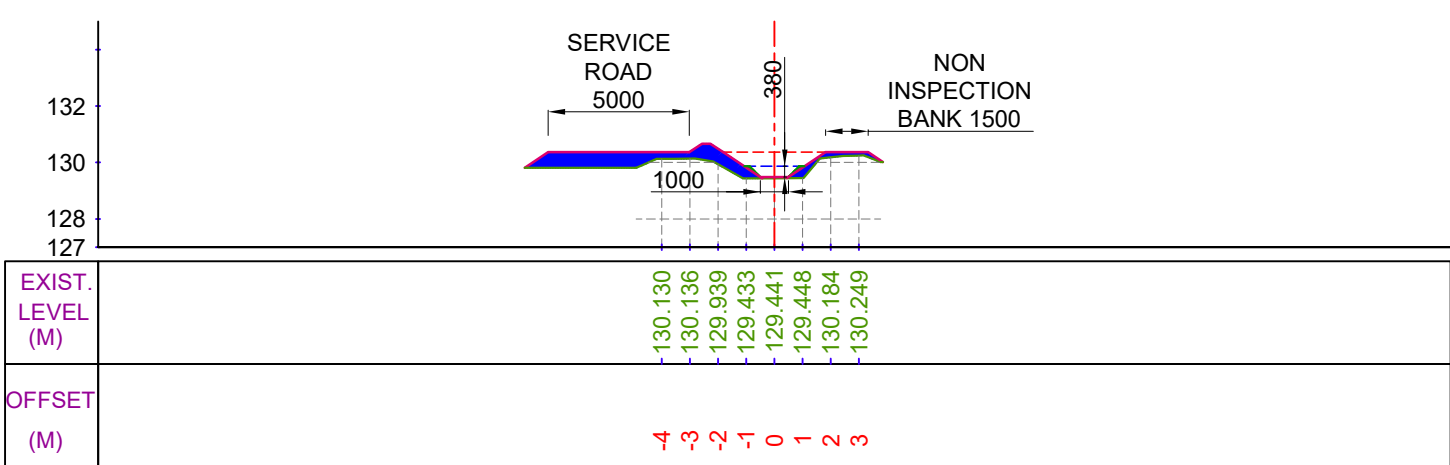
CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+500
FILLING AREA (SQ.M) = 6.212 DESIGNED BED LEVEL = 129.873 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+700
FILLING AREA (SQ.M) = 6.377 DESIGNED BED LEVEL = 129.817 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+600
FILLING AREA (SQ.M) = 5.875 DESIGNED BED LEVEL = 129.845 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 2+800
FILLING AREA (SQ.M) = 4.174 DESIGNED BED LEVEL = 129.484 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

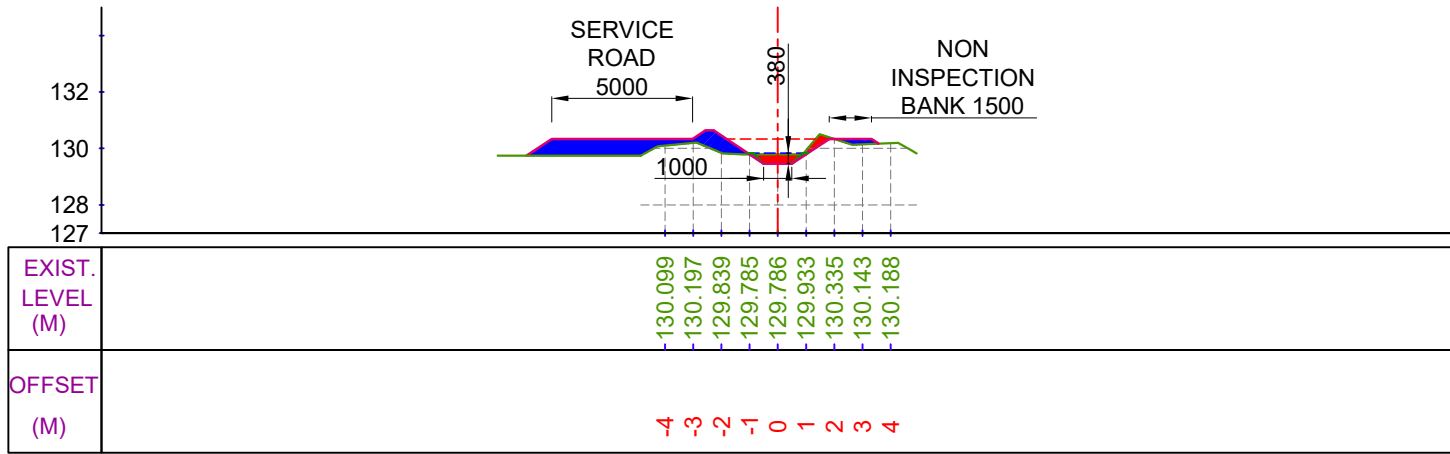
Prepared by :-

WAPCOS LTD.

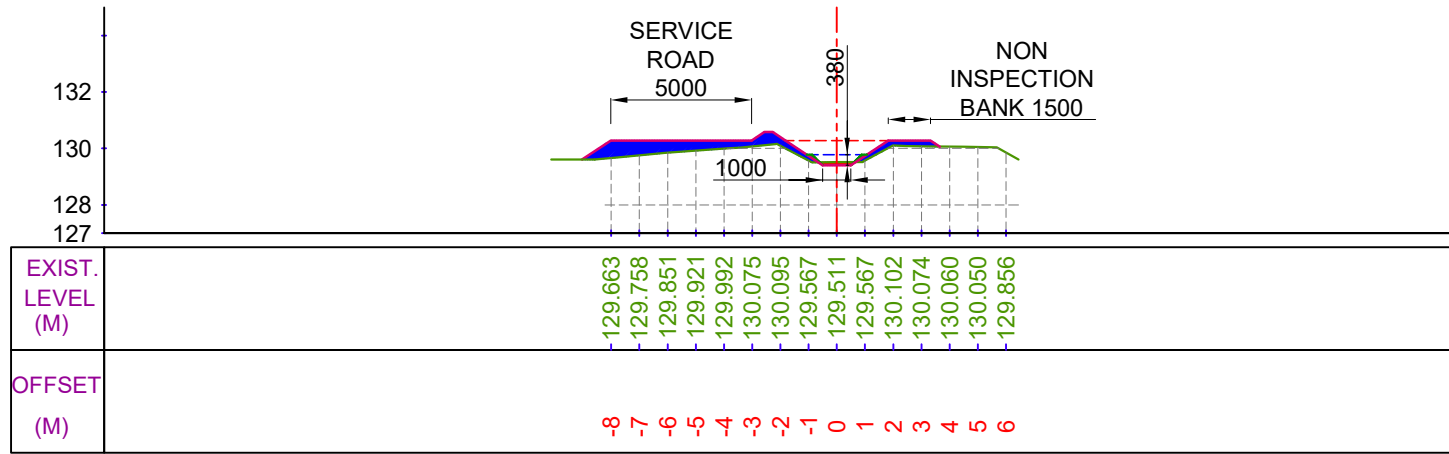


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC- 7 of 12

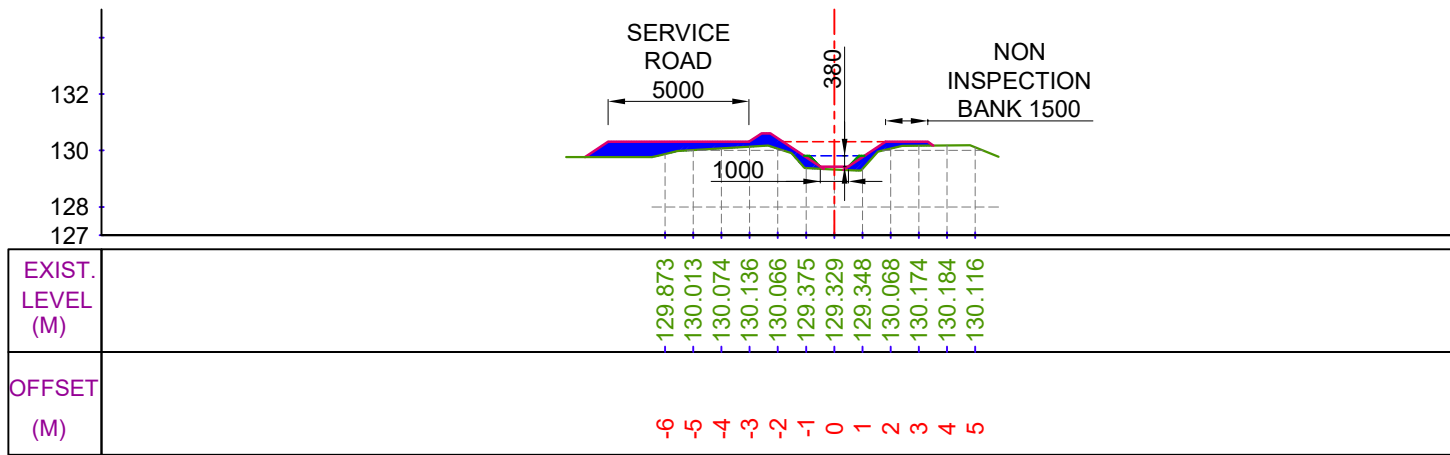
X SECTION OF NEURA SURAJMAL MINOR



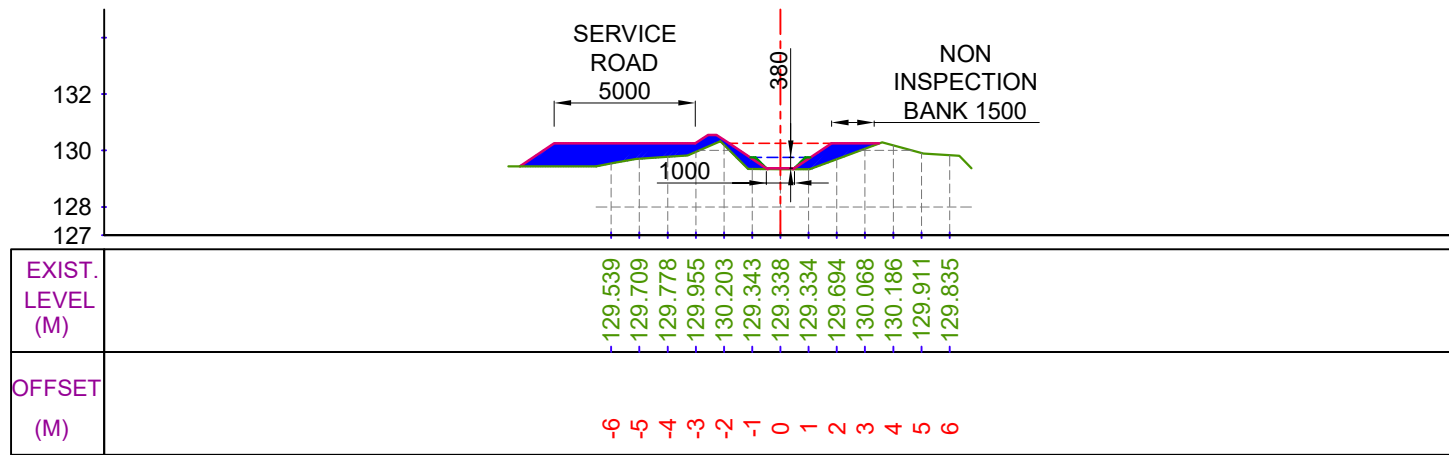
CUTTING AREA (SQ.M) = 0.649
FILLING AREA (SQ.M) = 3.718
CH. (KM):- 2+900
DESIGNED BED LEVEL = 129.456 M



CUTTING AREA (SQ.M) = 0.123
FILLING AREA (SQ.M) = 3.550
CH. (KM):- 3+100
DESIGNED BED LEVEL = 129.401 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.560
CH. (KM):- 3+000
DESIGNED BED LEVEL = 129.429 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.447
CH. (KM):- 3+200
DESIGNED BED LEVEL = 129.373 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			F.S.L.
			H.G. LINE

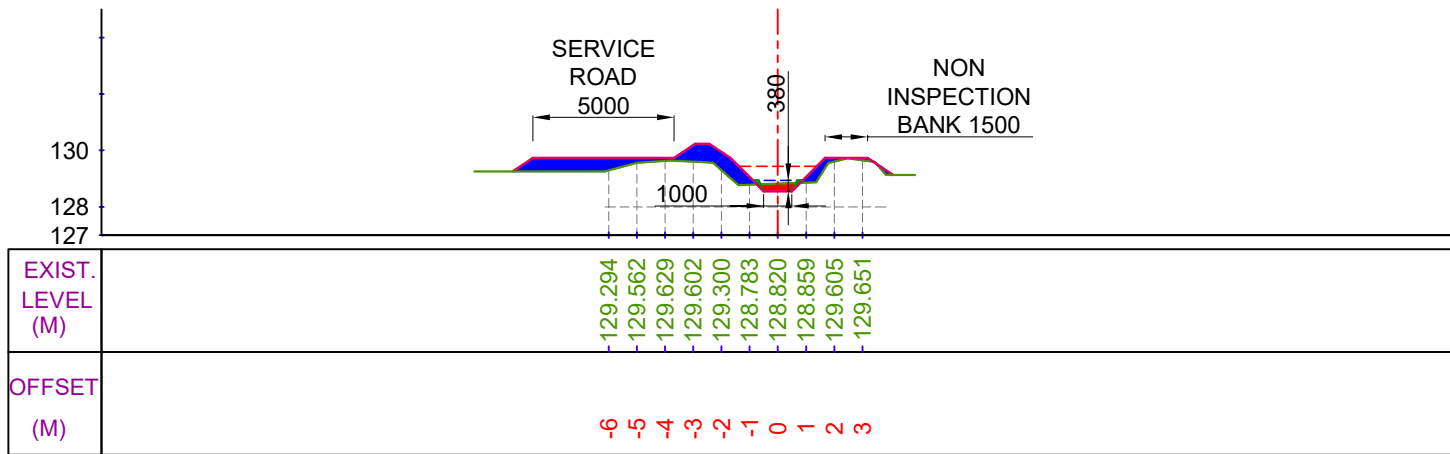
Prepared by :-

WAPCOS LTD.



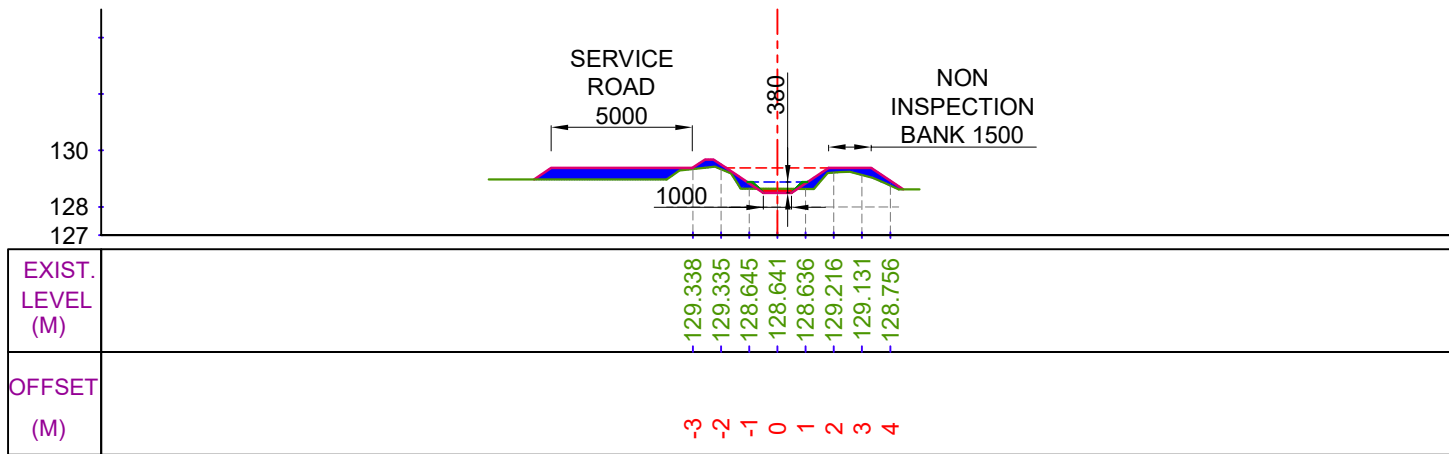
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC- 8 of 12

X SECTION OF NEURA SURAJMAL MINOR



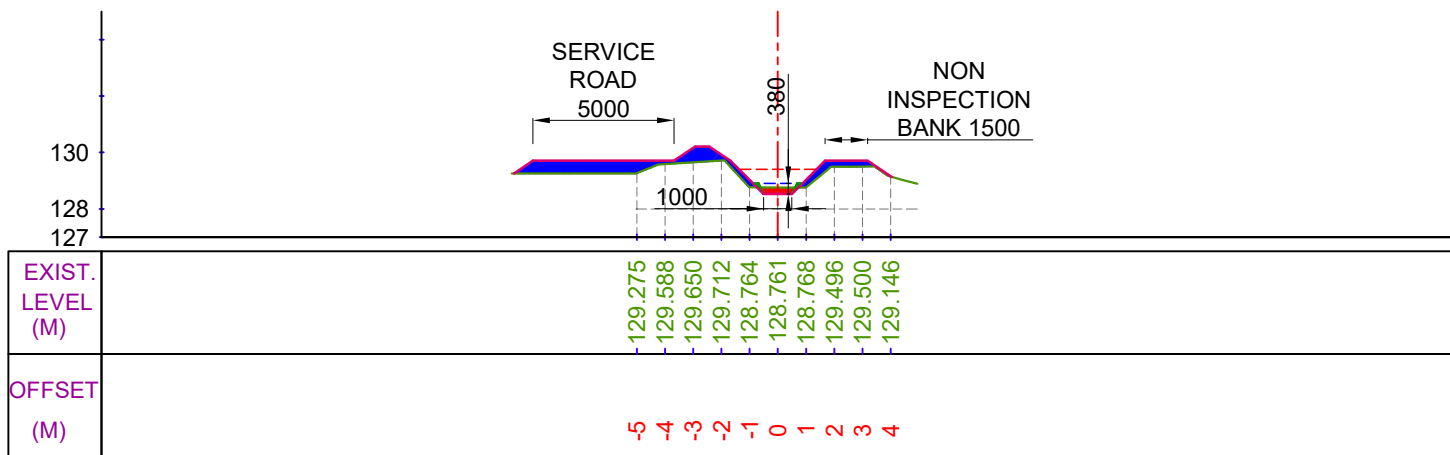
CUTTING AREA (SQ.M) = 0.300

FILLING AREA (SQ.M) = 3.932



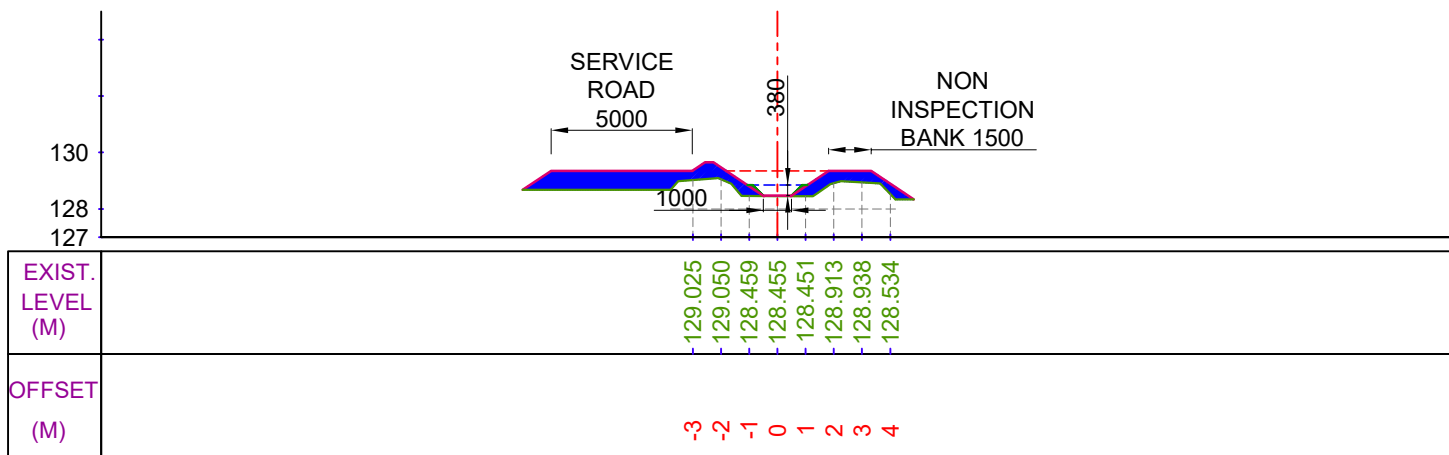
CUTTING AREA (SQ.M) = 0.160

FILLING AREA (SQ.M) = 3.131



CUTTING AREA (SQ.M) = 0.261

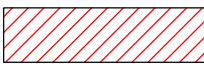
FILLING AREA (SQ.M) = 3.655



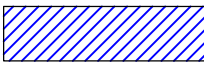
CUTTING AREA (SQ.M) = 0.000

FILLING AREA (SQ.M) = 6.070

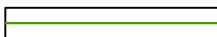
LEGEND



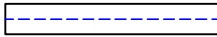
CUT AREA



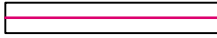
FILL AREA



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 :-

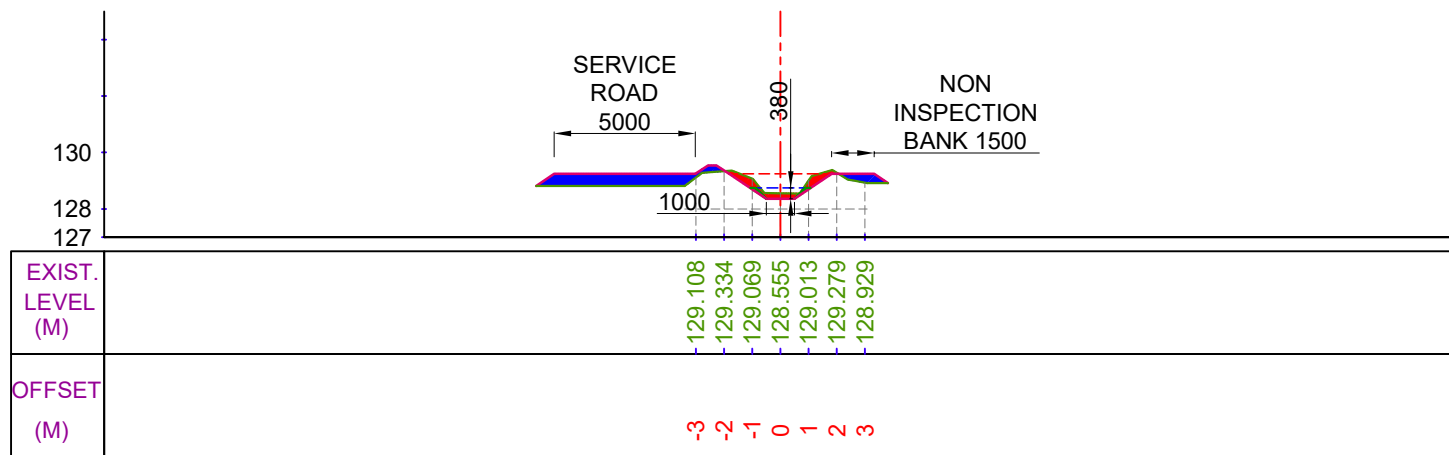
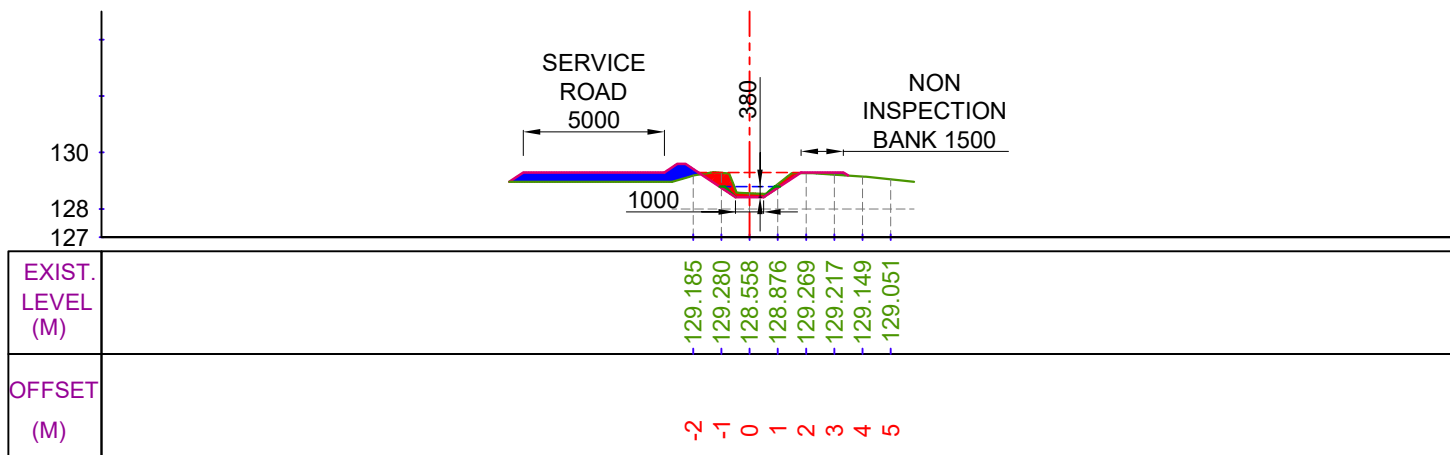
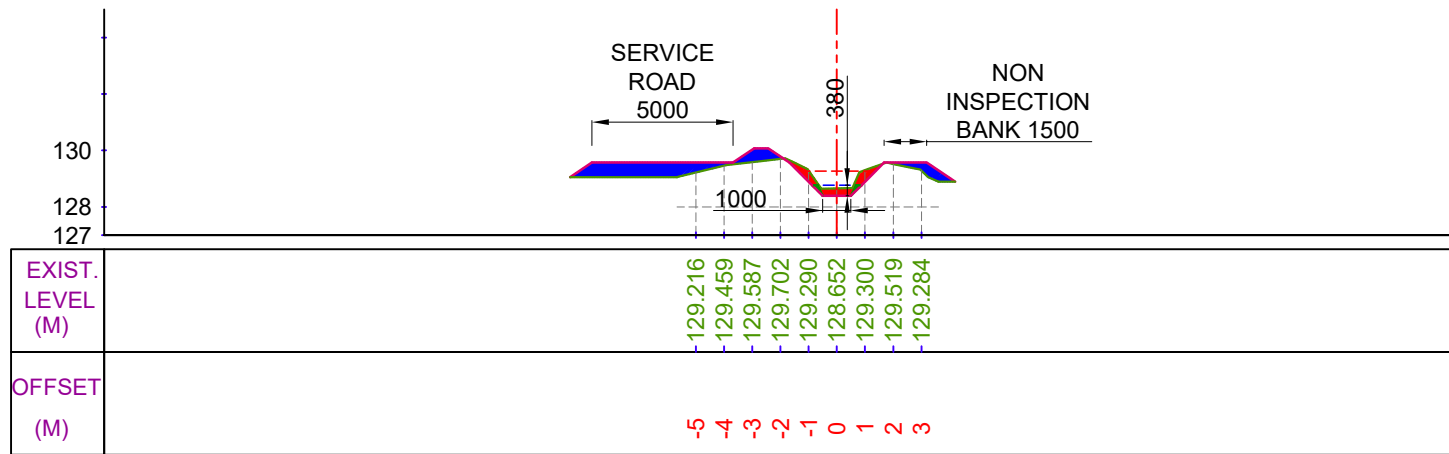
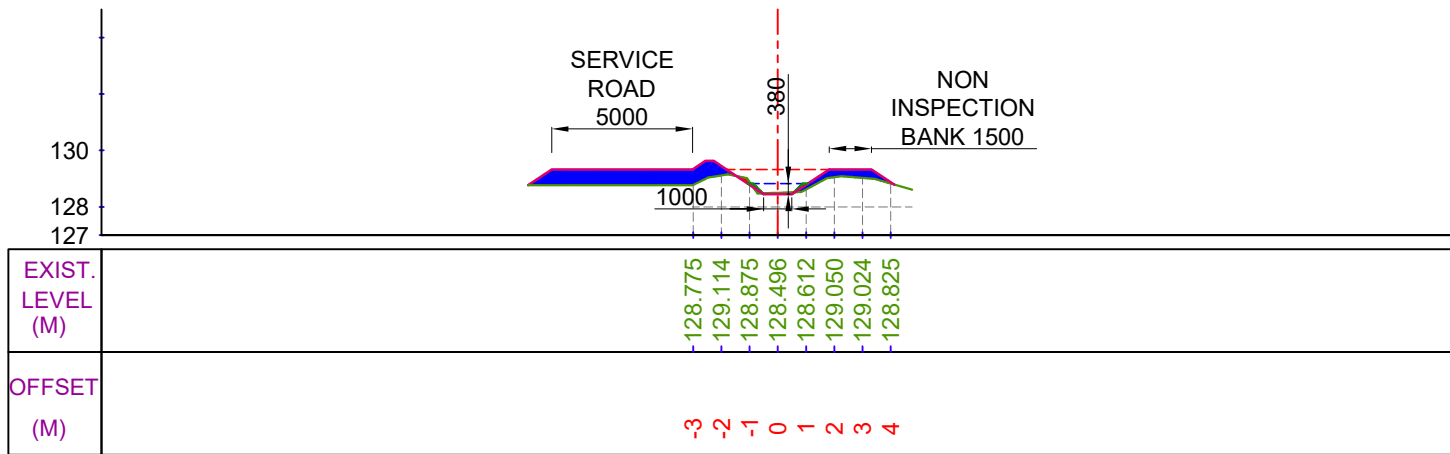
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

9 of 12

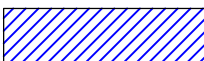
X SECTION OF NEURA SURAJMAL MINOR



LEGEND



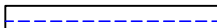
CUT AREA



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 :-

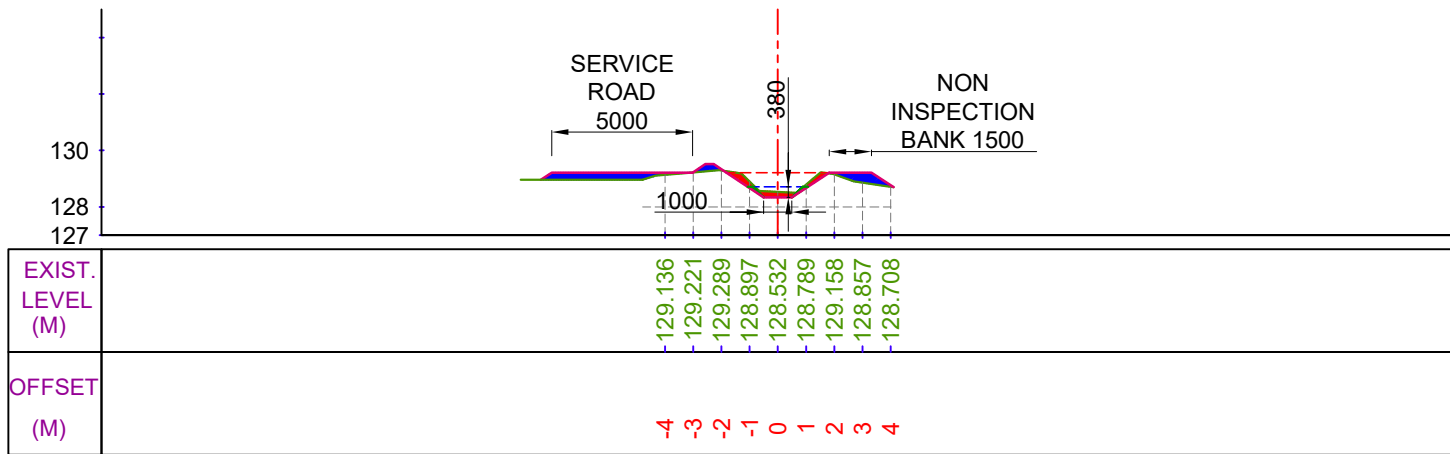
X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

Drawing No. :-

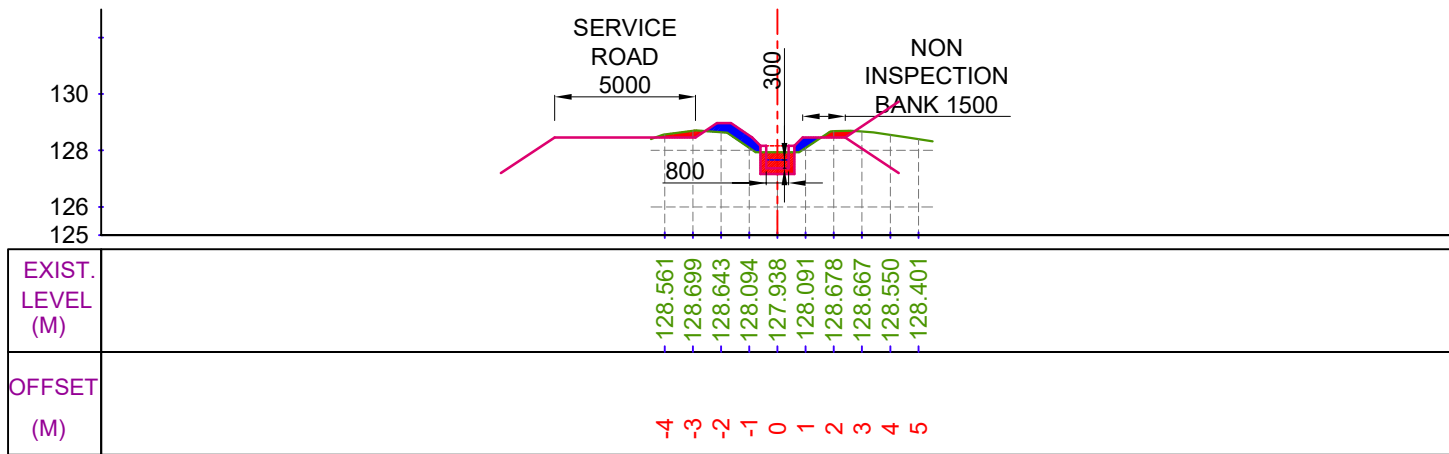
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

10 of 12

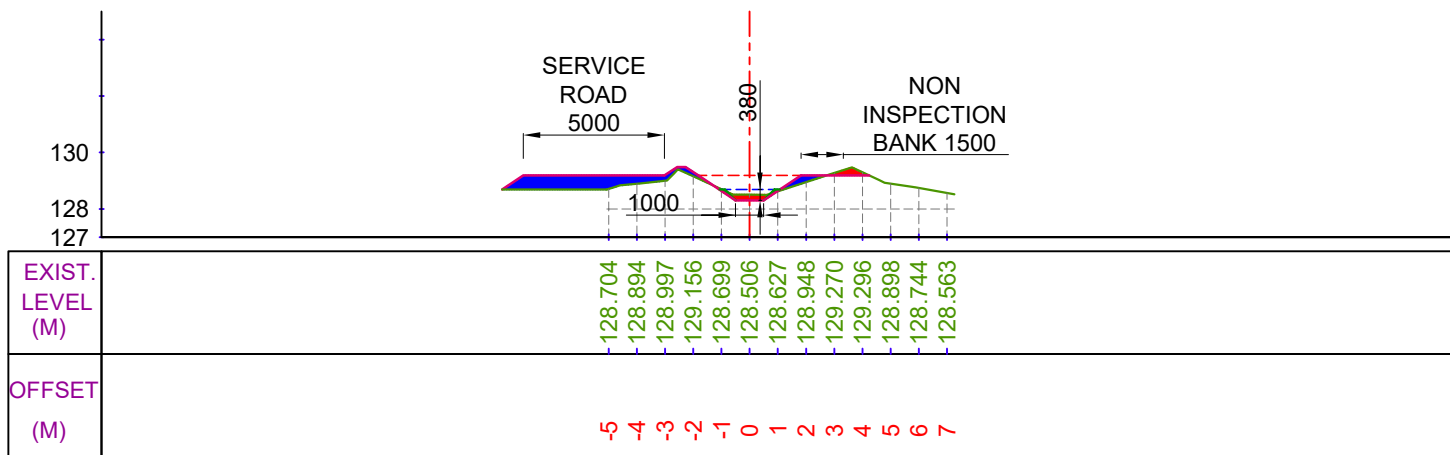
X SECTION OF NEURA SURAJMAL MINOR



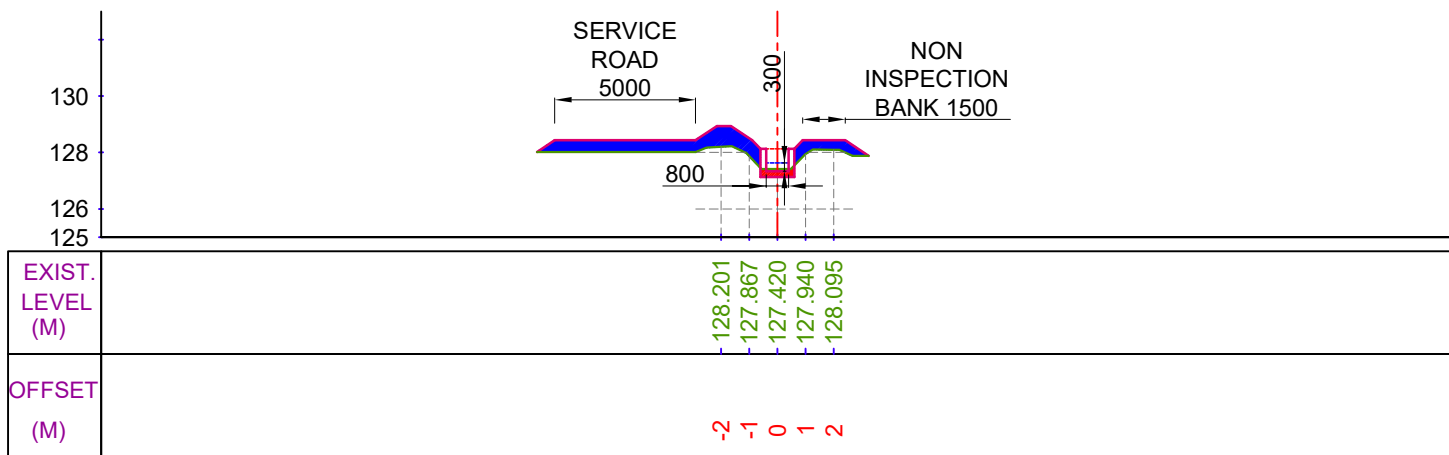
CUTTING AREA (SQ.M) = 0.567
FILLING AREA (SQ.M) = 1.683
CH. (KM):- 4+100
DESIGNED BED LEVEL = 128.333 M



CUTTING AREA (SQ.M) = 1.364
FILLING AREA (SQ.M) = 0.917
CH. (KM):- 4+300
DESIGNED BED LEVEL = 127.363 M



CUTTING AREA (SQ.M) = 0.472
FILLING AREA (SQ.M) = 2.780
CH. (KM):- 4+200
DESIGNED BED LEVEL = 128.305 M



CUTTING AREA (SQ.M) = 0.350
FILLING AREA (SQ.M) = 4.608
CH. (KM):- 4+400
DESIGNED BED LEVEL = 127.335 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			H.G. LINE
			F.S.L.

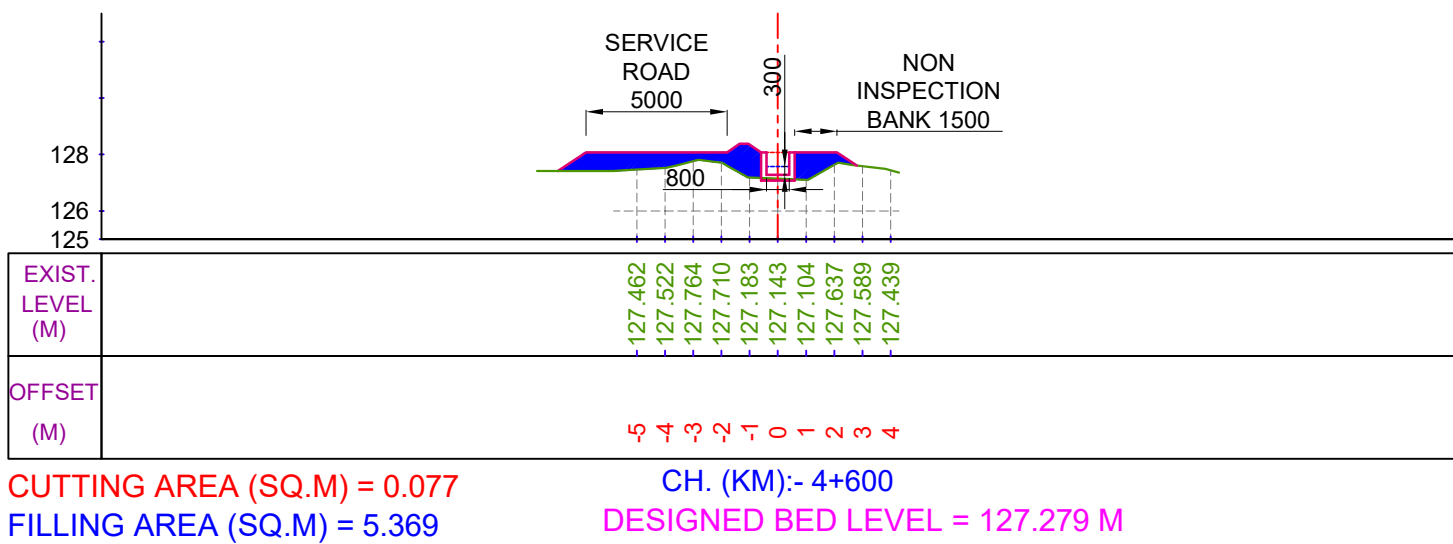
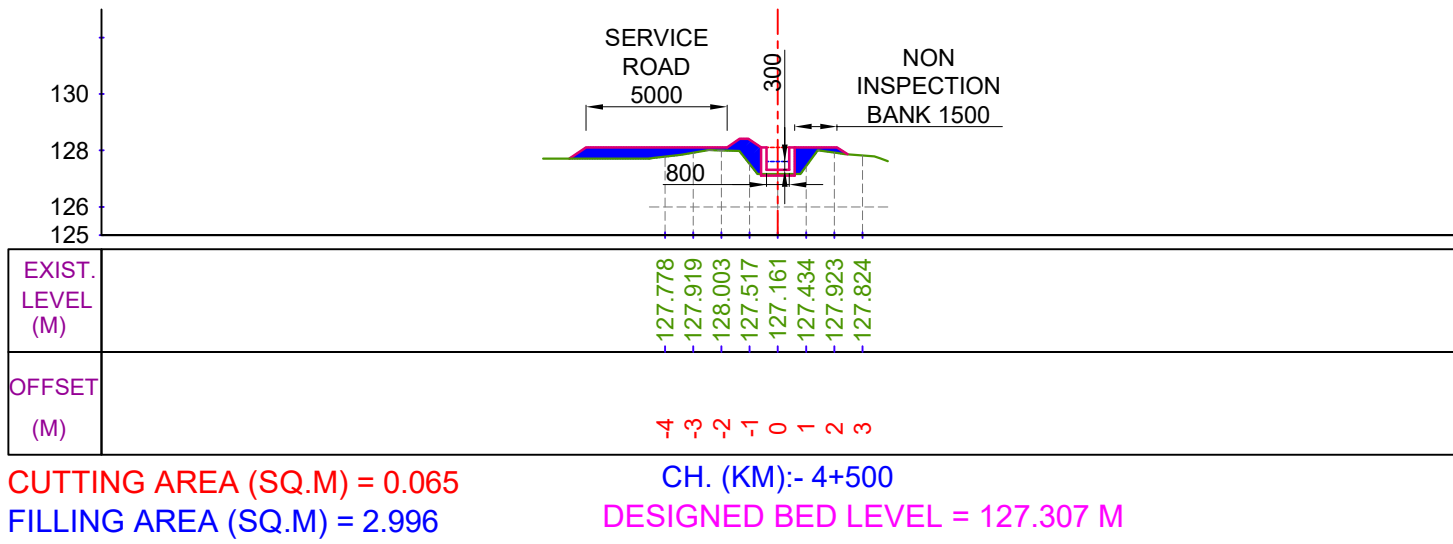
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC- 11 of 12

X SECTION OF NEURA SURAJMAL MINOR



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 SRAJMAL MINOR (OFFTAKE FROM RD - 3+160 KM. (L), KARMA DY.)

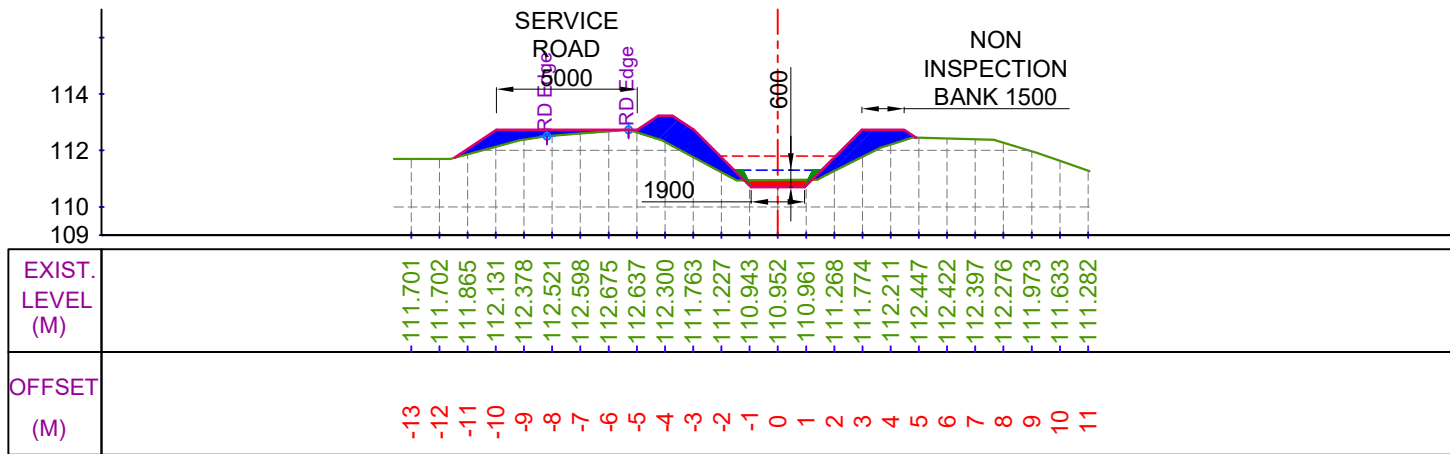
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ XSEC-

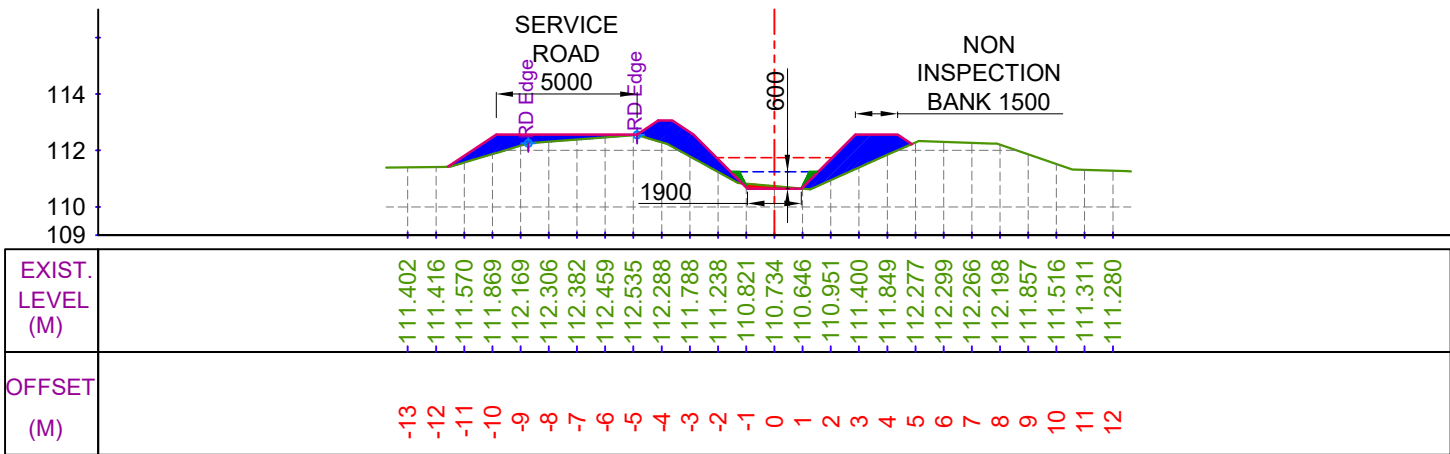
12 of 12

SHUSHNAR MINOR

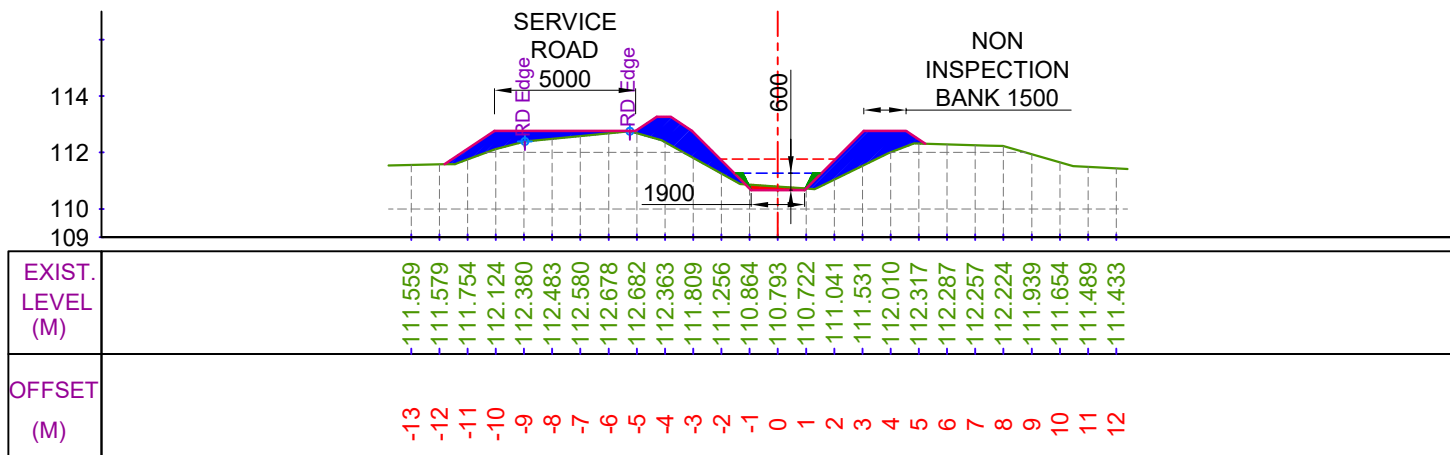
X SECTION OF SHUSHNAR MINOR



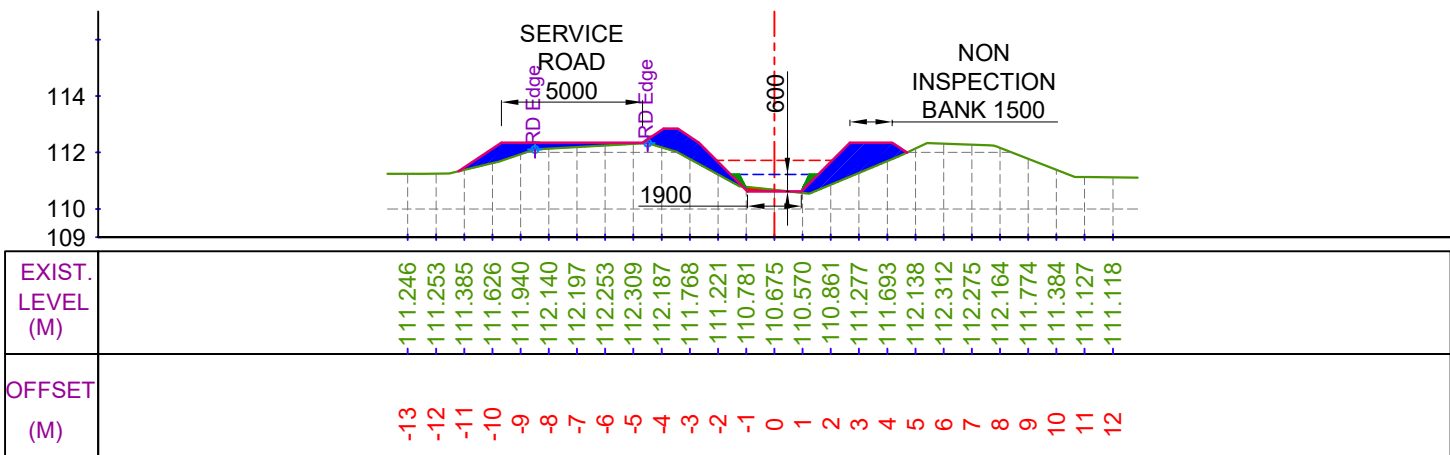
CUTTING AREA (SQ.M) = 0.510
FILLING AREA (SQ.M) = 6.016
CH. (KM):- 0+100
DESIGNED BED LEVEL = 110.700 M



CUTTING AREA (SQ.M) = 0.177
FILLING AREA (SQ.M) = 6.680
CH. (KM):- 0+300
DESIGNED BED LEVEL = 110.645 M



CUTTING AREA (SQ.M) = 0.240
FILLING AREA (SQ.M) = 7.277
CH. (KM):- 0+200
DESIGNED BED LEVEL = 110.672 M

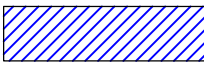


CUTTING AREA (SQ.M) = 0.126
FILLING AREA (SQ.M) = 6.022
CH. (KM):- 0+400
DESIGNED BED LEVEL = 110.617 M

LEGEND



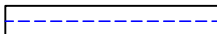
CUT AREA



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 :-

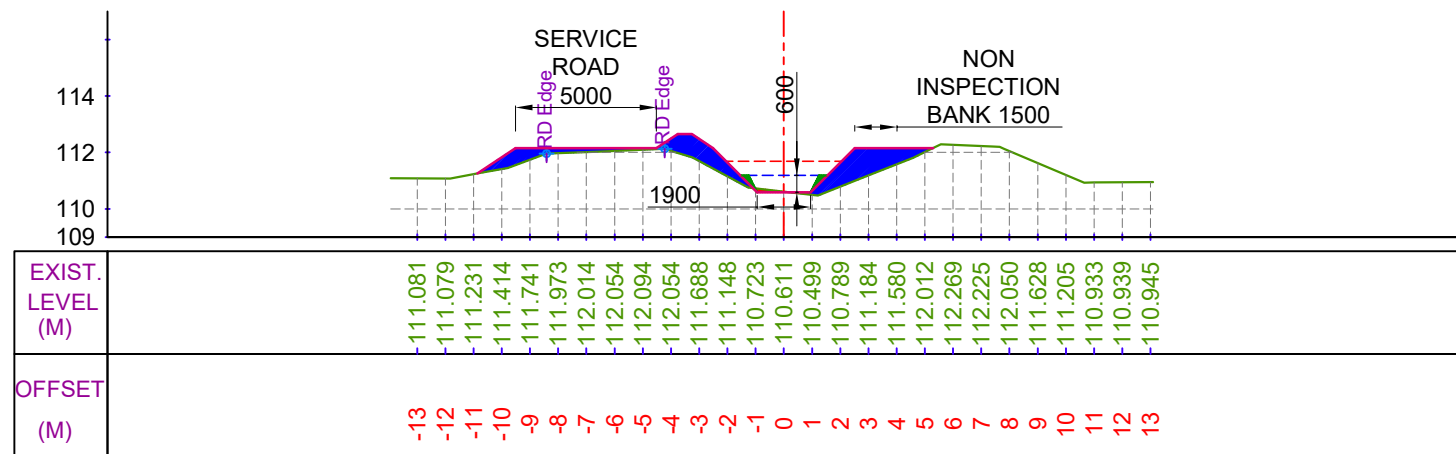
X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :-

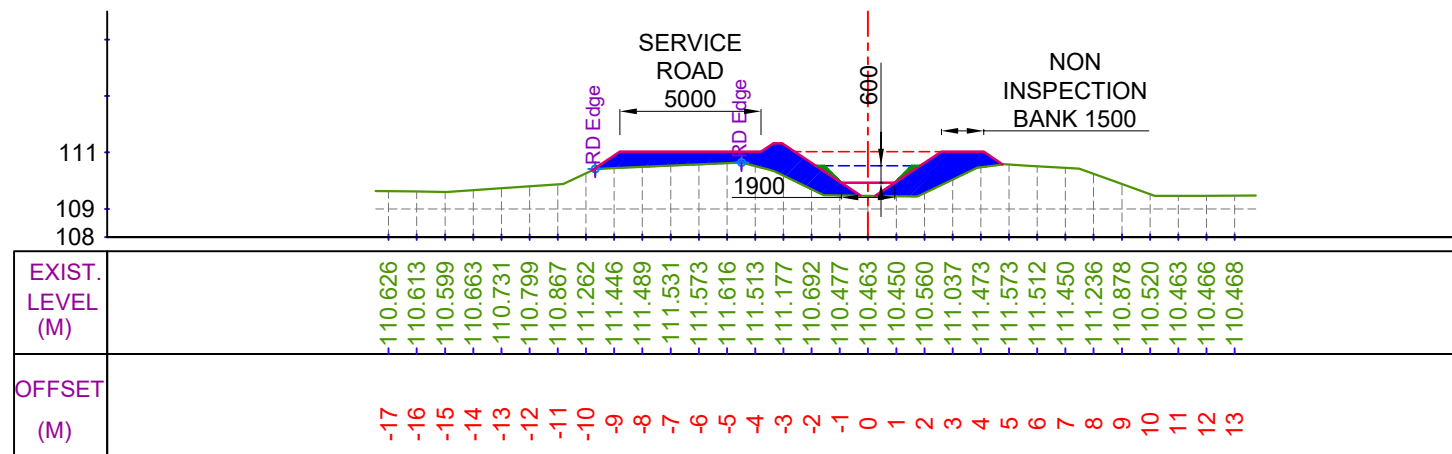
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

1 of 12

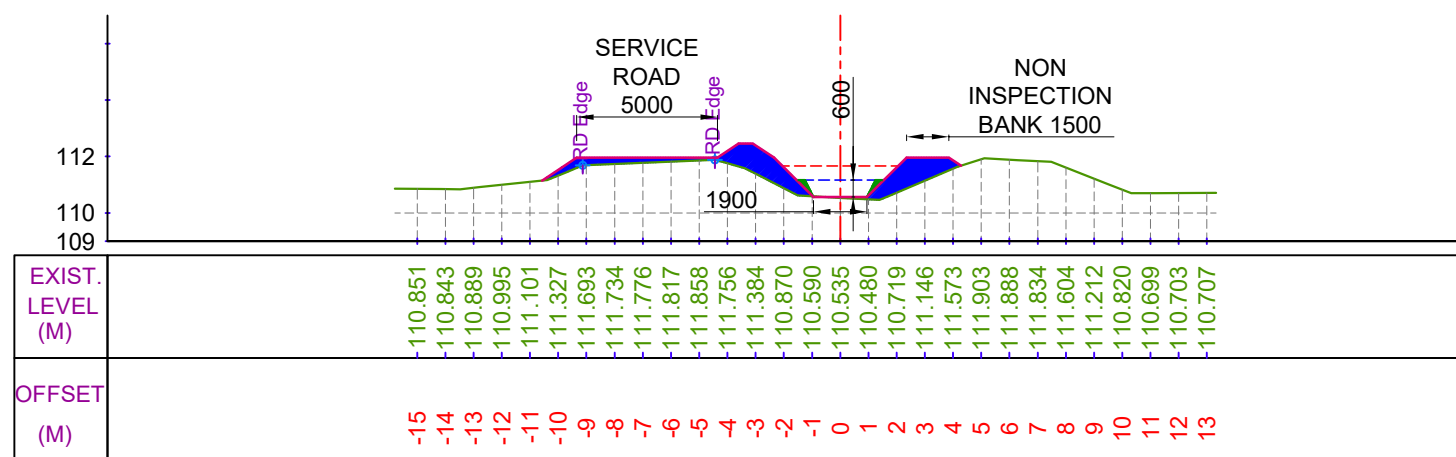
X SECTION OF SHUSHNAR MINOR



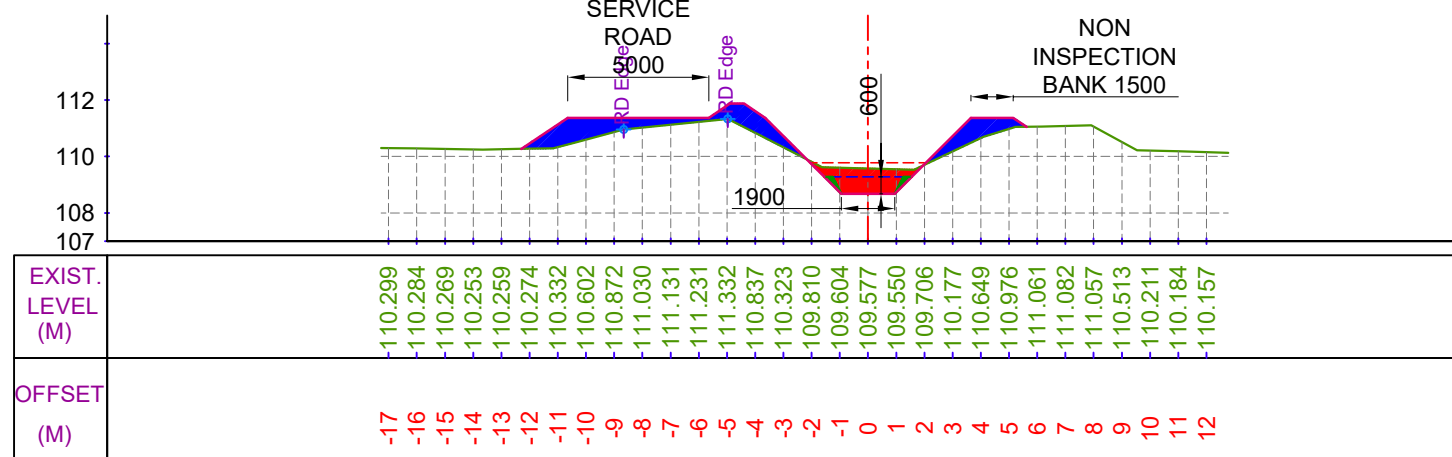
CUTTING AREA (SQ.M) = 0.078
FILLING AREA (SQ.M) = 5.871
CH. (KM):- 0+500
DESIGNED BED LEVEL = 110.589 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 8.440
CH. (KM):- 0+700
DESIGNED BED LEVEL = 109.924 M



CUTTING AREA (SQ.M) = 0.007
FILLING AREA (SQ.M) = 5.642
CH. (KM):- 0+600
DESIGNED BED LEVEL = 110.561 M



CUTTING AREA (SQ.M) = 2.396
FILLING AREA (SQ.M) = 6.397
CH. (KM):- 0+800
DESIGNED BED LEVEL = 108.676 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

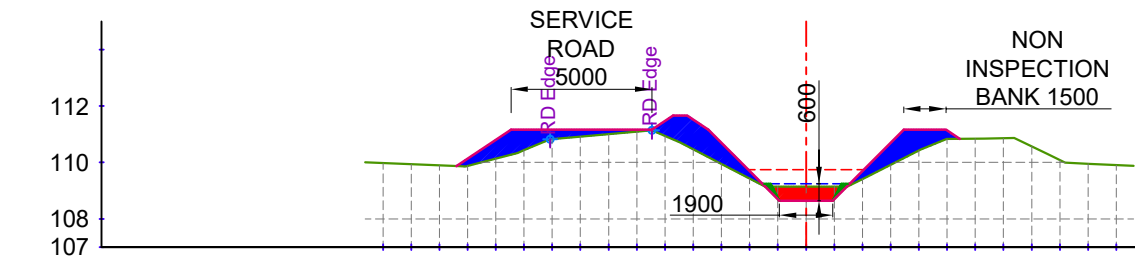
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC- 2 of 12

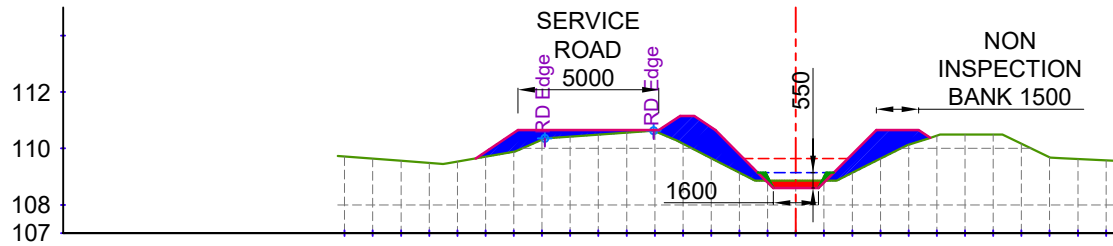
X SECTION OF SHUSHNAR MINOR



EXIST. LEVEL (M)	-109.975	-109.935	-109.895	-109.875	-110.136	-110.434	-110.831	-110.917	-111.004	-111.090	-110.937	-110.466	-109.946	-109.426	-109.141	-109.139	-109.138	-109.413	-109.917	-110.420	-110.831	-110.844	-110.858	-110.567	-110.087	-109.956	-109.905
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

CUTTING AREA (SQ.M) = 1.054
FILLING AREA (SQ.M) = 7.110

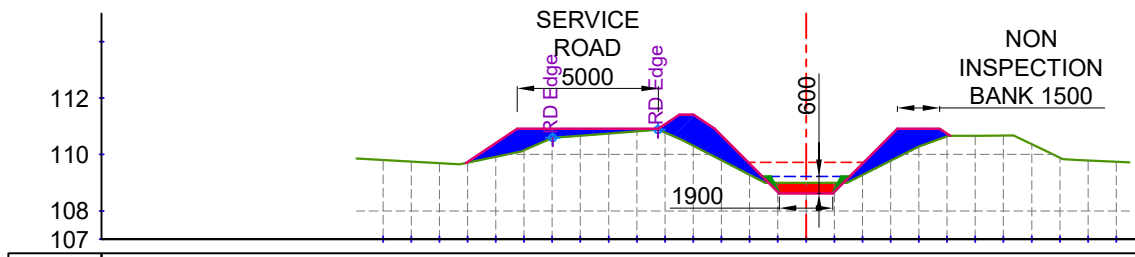
CH. (KM):- 0+900
DESIGNED BED LEVEL = 108.648 M



EXIST. LEVEL (M)	-109.709	-109.634	-109.559	-109.484	-109.535	-109.708	-109.881	-110.312	-110.421	-110.492	-110.563	-110.612	-110.164	-109.652	-109.139	-108.855	-108.856	-108.856	-109.134	-109.637	-110.133	-110.452	-110.489	-110.166	-109.682	-109.624	-109.575	
OFFSET (M)	-16	-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

CUTTING AREA (SQ.M) = 0.457
FILLING AREA (SQ.M) = 6.746

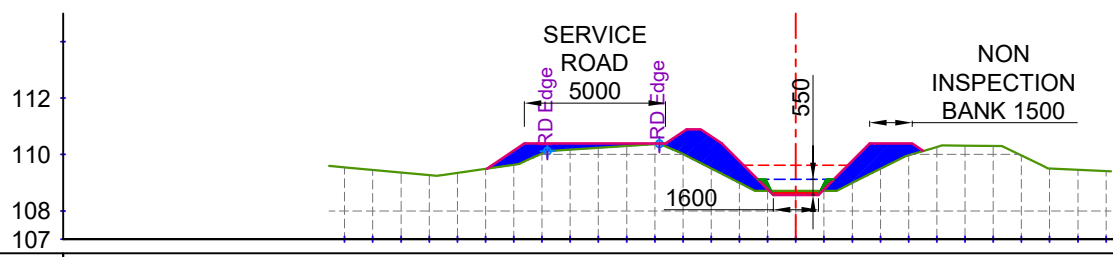
CH. (KM):- 1+100
DESIGNED BED LEVEL = 108.592 M



EXIST. LEVEL (M)	-109.809	-109.752	-109.694	-109.713	-109.922	-110.153	-110.584	-110.668	-110.747	-110.825	-110.775	-110.316	-109.799	-109.283	-108.998	-108.998	-108.997	-109.274	-109.777	-110.280	-110.641	-110.666	-110.673	-110.366	-109.885	-109.790	-109.740
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

CUTTING AREA (SQ.M) = 0.789
FILLING AREA (SQ.M) = 6.814

CH. (KM):- 1+000
DESIGNED BED LEVEL = 108.620 M



EXIST. LEVEL (M)	-109.541	-109.450	-109.358	-109.266	-109.347	-109.493	-109.638	-110.037	-110.176	-110.239	-110.303	-110.367	-110.012	-109.504	-108.995	-108.713	-108.714	-108.715	-108.995	-109.498	-109.980	-110.267	-110.311	-110.304	-109.965	-109.506	-109.458	-109.411
OFFSET (M)	-16	-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

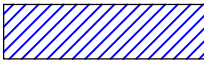
CUTTING AREA (SQ.M) = 0.250
FILLING AREA (SQ.M) = 6.375

CH. (KM):- 1+200
DESIGNED BED LEVEL = 108.565 M

LEGEND



CUT AREA



FILL AREA



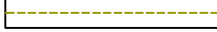
EXISTING BED LINE



F.S.L.



DESIGNED BED LINE



H.G. LINE

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :-

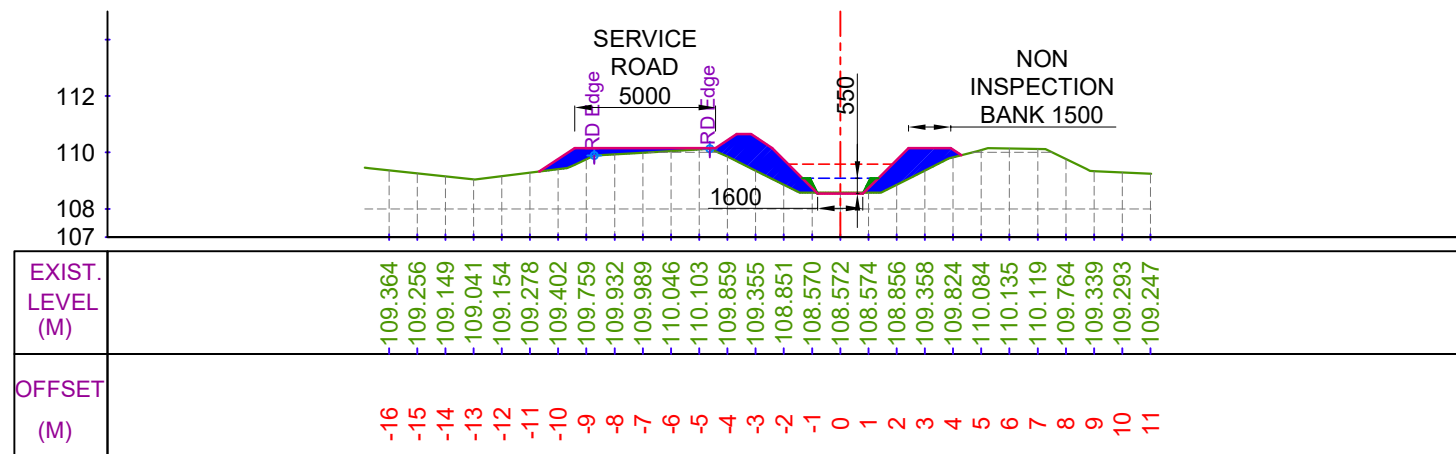
X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

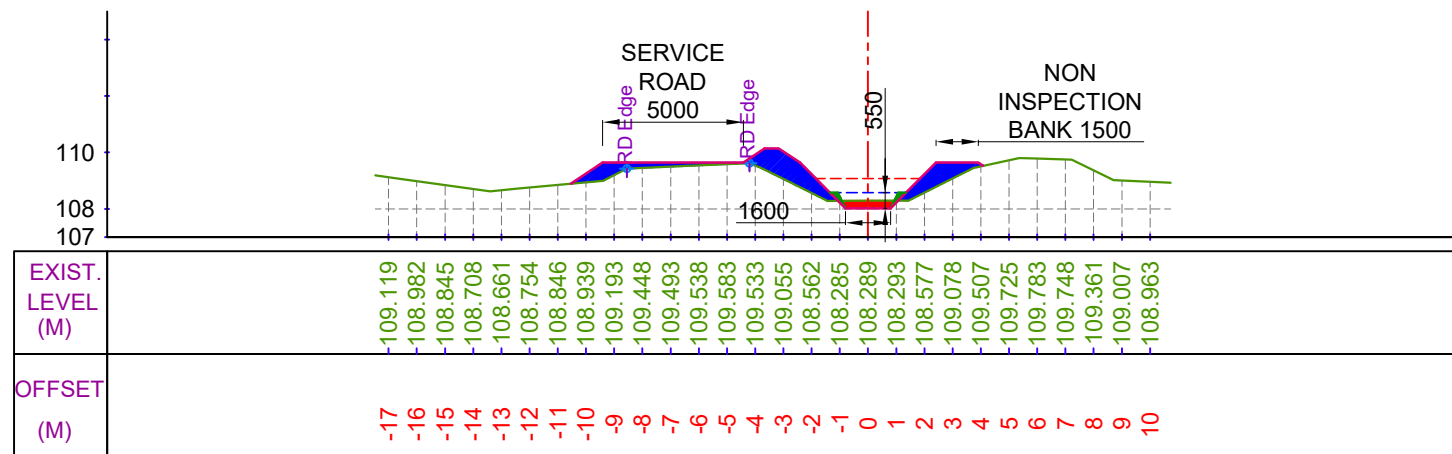
3 of 12

X SECTION OF SHUSHNAR MINOR



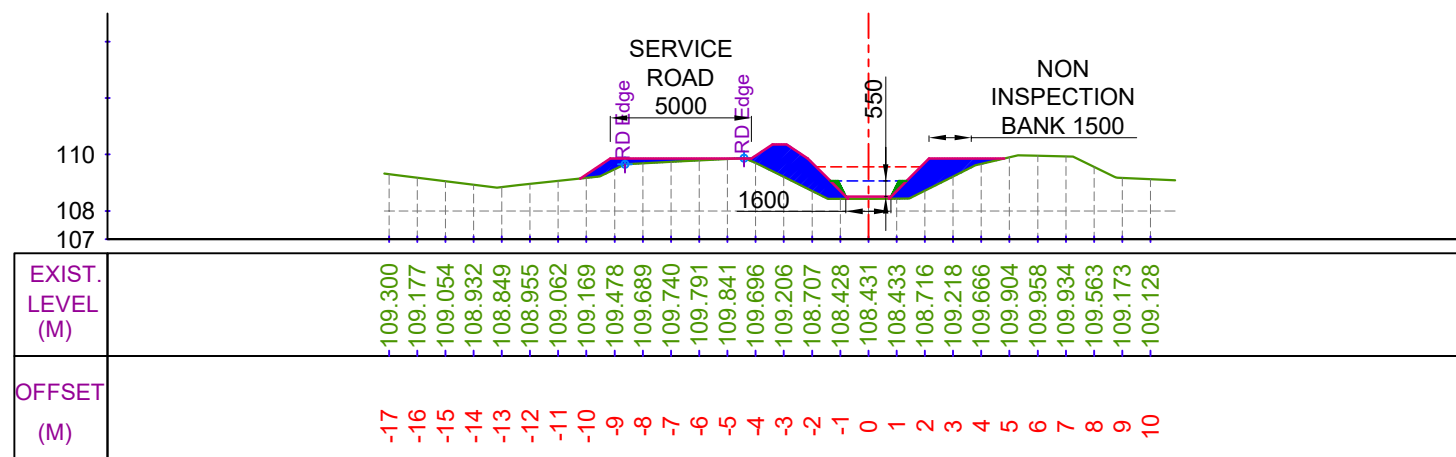
CUTTING AREA (SQ.M) = 0.057
FILLING AREA (SQ.M) = 6.298

CH. (KM):- 1+300
DESIGNED BED LEVEL = 108.537 M



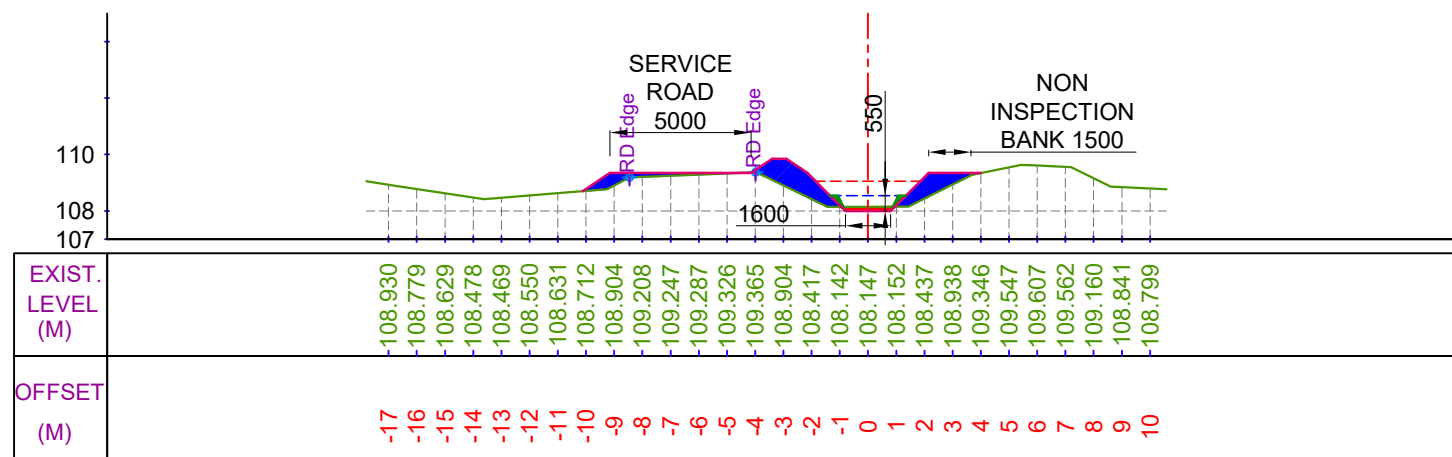
CUTTING AREA (SQ.M) = 0.459
FILLING AREA (SQ.M) = 4.739

CH. (KM):- 1+500
DESIGNED BED LEVEL = 108.024 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 5.648

CH. (KM):- 1+400
DESIGNED BED LEVEL = 108.509 M



CUTTING AREA (SQ.M) = 0.251
FILLING AREA (SQ.M) = 4.086

CH. (KM):- 1+600
DESIGNED BED LEVEL = 107.997 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 :-

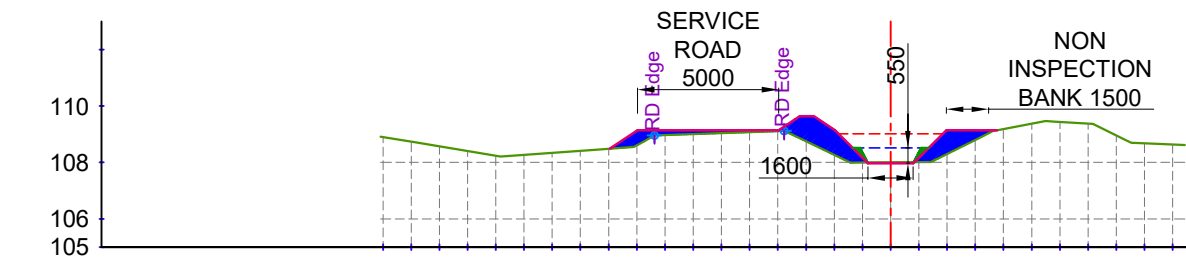
X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

4 of 12

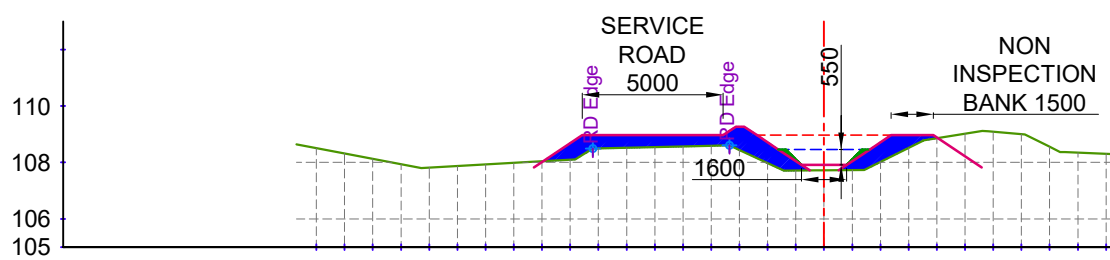
X SECTION OF SHUSHNAR MINOR



EXIST. LEVEL (M)	108.898	108.733	108.569	108.405	108.241	108.273	108.344	108.415	108.486	108.608	108.969	109.003	109.037	109.071	109.105	108.752	108.272	108.000	108.005	108.011	108.298	108.798	109.184	109.371	109.433	109.376	108.958	108.676	108.635
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.059
FILLING AREA (SQ.M) = 4.304

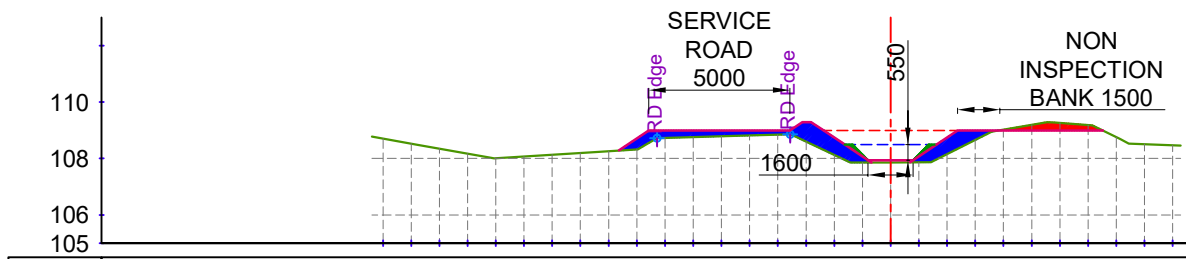
CH. (KM):- 1+700
DESIGNED BED LEVEL = 107.969 M



EXIST. LEVEL (M)	108.507	108.318	108.129	107.940	107.818	107.873	107.928	107.983	108.038	108.093	108.494	108.518	108.543	108.567	108.591	108.444	107.979	107.715	107.722	107.729	108.019	108.519	108.858	109.020	109.087	109.002	108.553	108.346	108.308
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.076

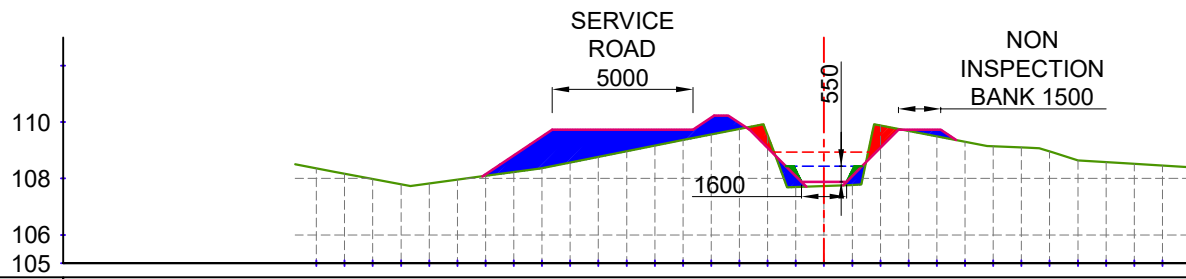
CH. (KM):- 1+900
DESIGNED BED LEVEL = 107.913 M



EXIST. LEVEL (M)	108.706	108.529	108.352	108.175	108.011	108.074	108.136	108.199	108.261	108.324	108.731	108.760	108.789	108.818	108.847	108.599	108.126	107.857	107.863	107.870	108.158	108.659	109.022	109.195	109.260	109.189	108.756	108.510	108.471
OFFSET (M)	-18	-17	-16	-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

CUTTING AREA (SQ.M) = 0.685
FILLING AREA (SQ.M) = 3.944

CH. (KM):- 1+800
DESIGNED BED LEVEL = 107.941 M



EXIST. LEVEL (M)	108.362	108.172	107.982	107.792	107.820	107.957	108.094	108.228	108.365	108.565	108.765	108.964	109.164	109.363	109.561	109.758	109.537	107.699	107.736	107.773	109.878	109.687	109.496	109.305	109.146	109.104	108.959	108.639	108.579	108.518	108.458
OFFSET (M)	-18	-17	-16	-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

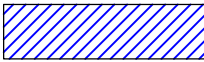
CUTTING AREA (SQ.M) = 0.978
FILLING AREA (SQ.M) = 7.285

CH. (KM):- 2+000
DESIGNED BED LEVEL = 107.885 M

LEGEND



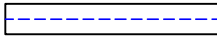
CUT AREA



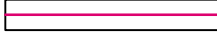
FILL AREA



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 :-

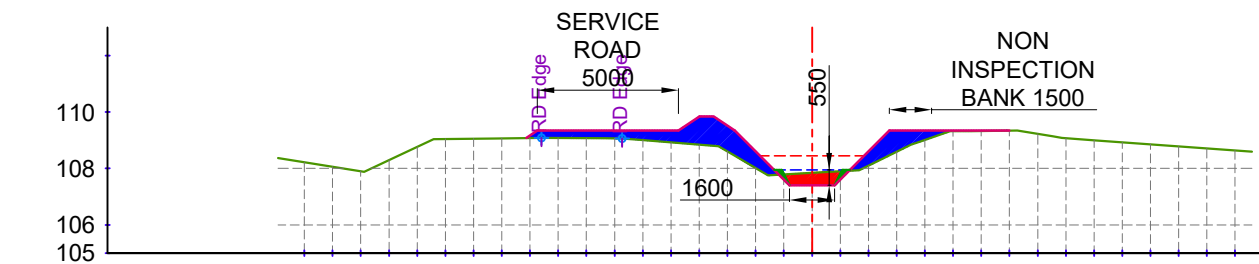
X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

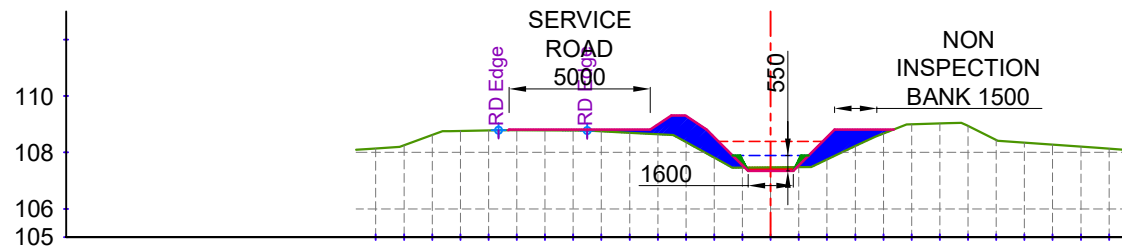
5 of 12

X SECTION OF SHUSHNAR MINOR



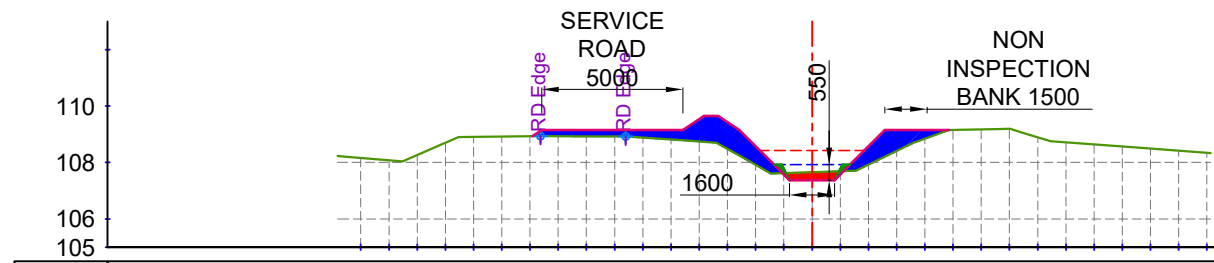
EXIST. LEVEL (M)	-108.220	-108.060	-107.901	-108.299	-108.769	-109.045	-109.056	-109.068	-109.079	-109.072	-109.065	-109.005	-108.925	-108.846	-108.605	-108.013	-107.784	-107.842	-107.900	-108.098	-108.590	-109.010	-109.319	-109.329	-109.339	-109.224	-109.073	-109.000	-108.926	-108.853	-108.780	-108.707	-108.634	
OFFSET (M)	-18	-17	-16	-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) = 0.805 CH. (KM):- 2+100
 FILLING AREA (SQ.M) = 5.756 DESIGNED BED LEVEL = 107.401 M



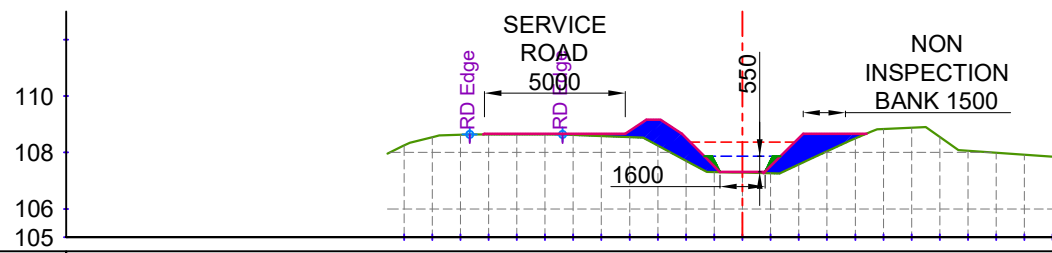
EXIST. LEVEL (M)	-108.140	-108.250	-108.618	-108.764	-108.781	-108.785	-108.783	-108.780	-108.752	-108.697	-108.643	-108.365	-107.814	-107.466	-107.473	-107.481	-107.752	-108.226	-108.674	-108.993	-109.027	-108.935	-108.443	-108.348	-108.277	-108.206	-108.135
OFFSET (M)	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12

CUTTING AREA (SQ.M) = 0.213 CH. (KM):- 2+300
 FILLING AREA (SQ.M) = 4.039 DESIGNED BED LEVEL = 107.345 M



EXIST. LEVEL (M)	-108.163	-108.078	-108.262	-108.693	-108.903	-108.917	-108.930	-108.932	-108.928	-108.923	-108.879	-108.811	-108.744	-108.484	-107.914	-107.623	-107.658	-107.692	-107.926	-108.408	-108.843	-109.155	-109.176	-109.197	-108.892	-108.710	-108.637	-108.565	-108.493	-108.421	-108.348
OFFSET (M)	-16	-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

CUTTING AREA (SQ.M) = 0.497 CH. (KM):- 2+200
 FILLING AREA (SQ.M) = 5.598 DESIGNED BED LEVEL = 107.373 M



EXIST. LEVEL (M)	-108.246	-108.545	-108.630	-108.638	-108.638	-108.637	-108.621	-108.582	-108.543	-108.247	-107.712	-107.312	-107.288	-107.264	-107.577	-108.044	-108.502	-108.833	-108.882	-108.552	-108.057	-107.988	-107.919	-107.850
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) = 0.000 CH. (KM):- 2+400
 FILLING AREA (SQ.M) = 4.303 DESIGNED BED LEVEL = 107.317 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



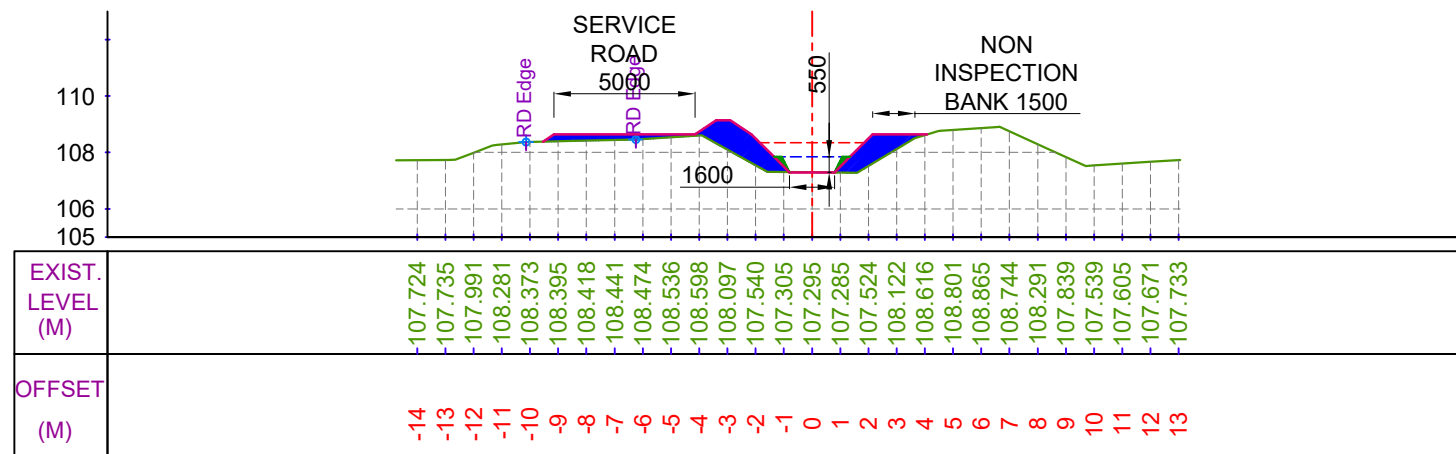
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

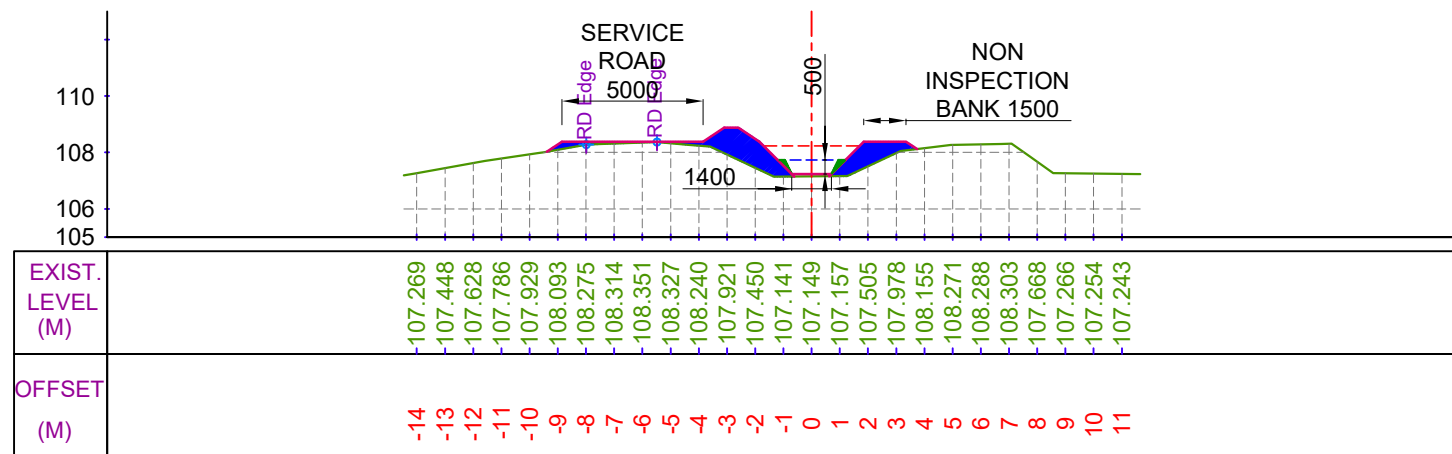
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

6 of 12

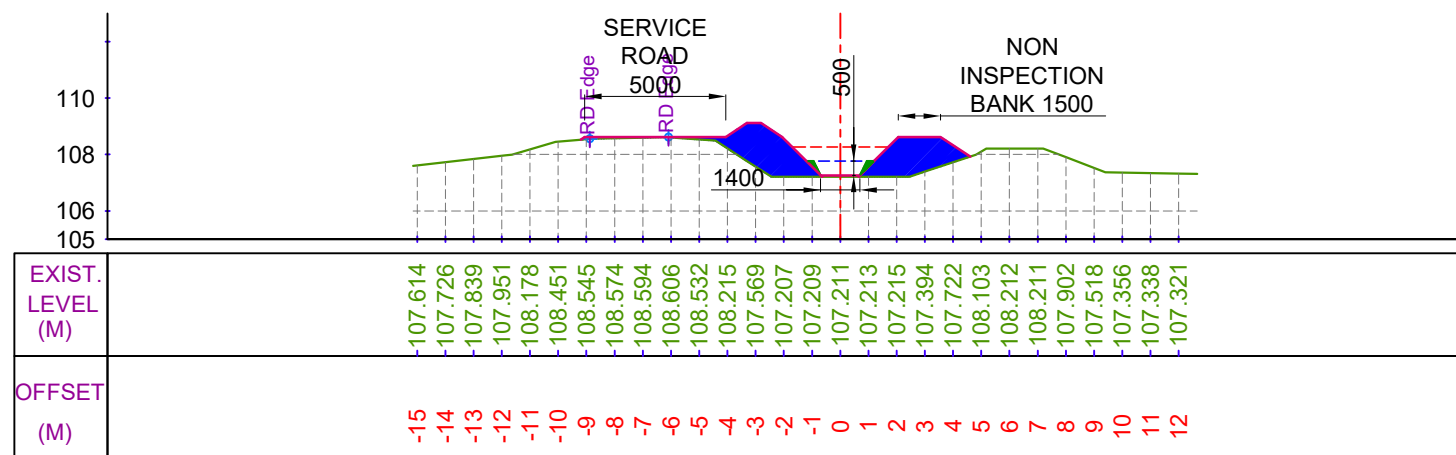
X SECTION OF SHUSHNAR MINOR



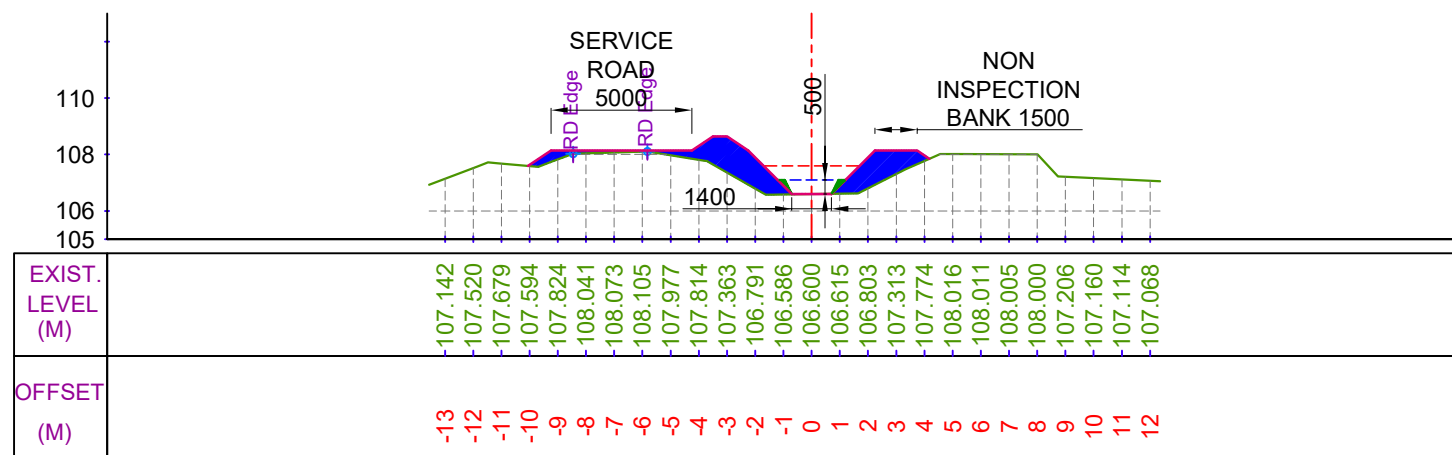
CUTTING AREA (SQ.M) = 0.008
FILLING AREA (SQ.M) = 4.998
CH. (KM):- 2+500
DESIGNED BED LEVEL = 107.290 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 4.555
CH. (KM):- 2+700
DESIGNED BED LEVEL = 107.234 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 7.379
CH. (KM):- 2+600
DESIGNED BED LEVEL = 107.262 M



CUTTING AREA (SQ.M) = 0.007
FILLING AREA (SQ.M) = 6.328
CH. (KM):- 2+800
DESIGNED BED LEVEL = 106.596 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



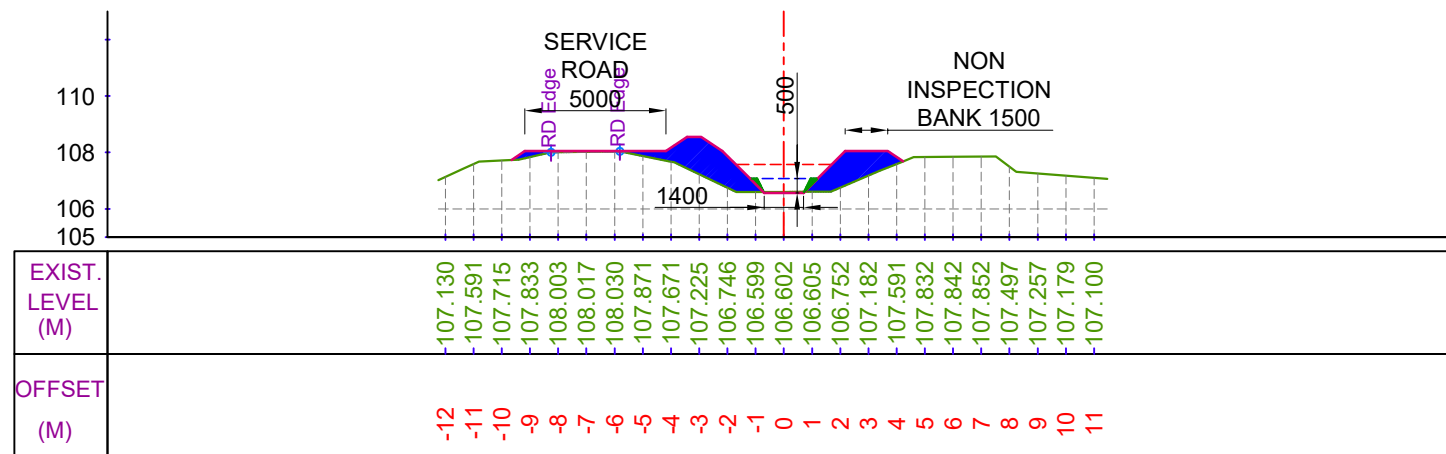
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

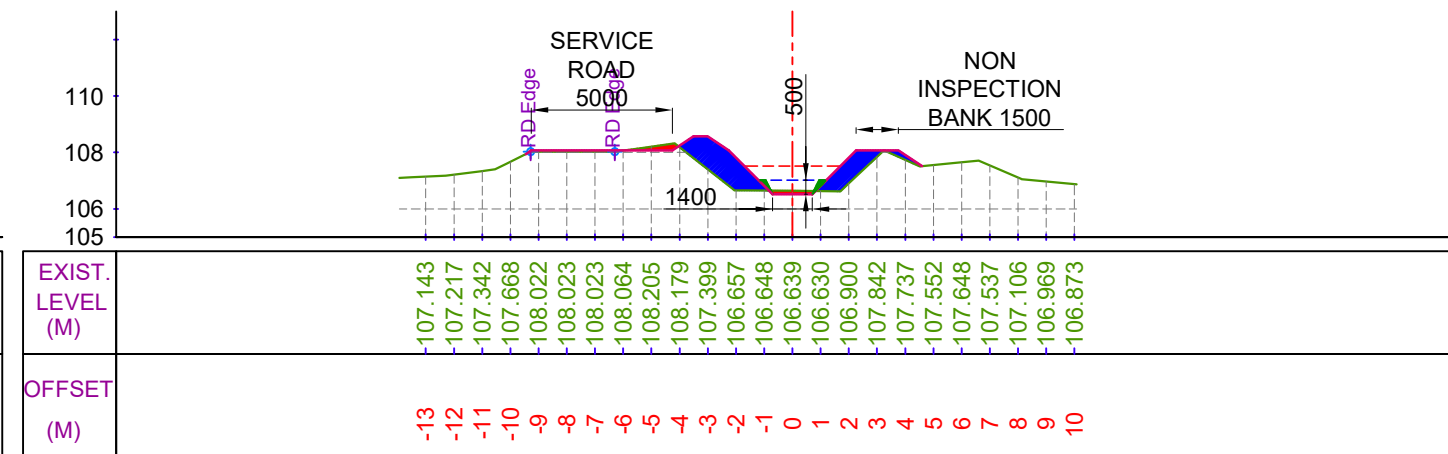
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

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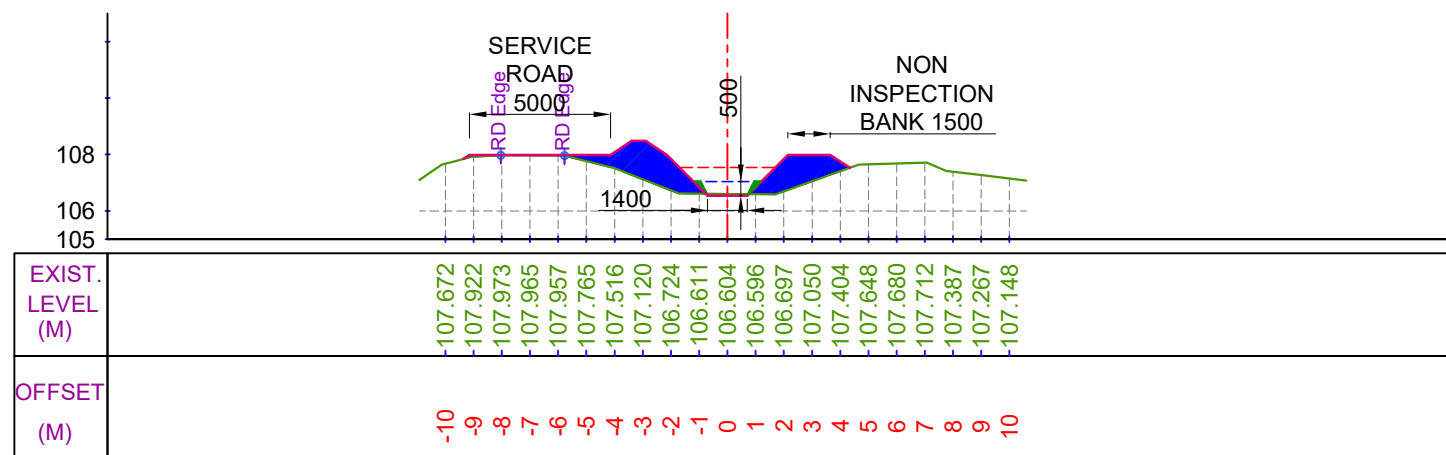
X SECTION OF SHUSHNAR MINOR



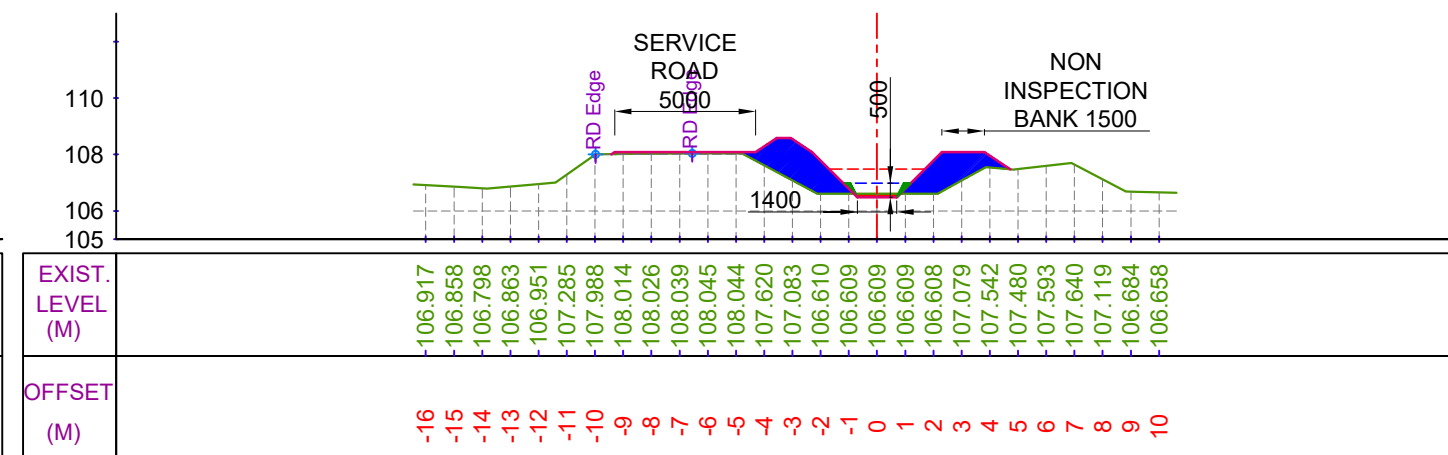
CUTTING AREA (SQ.M) = 0.049
FILLING AREA (SQ.M) = 6.160
CH. (KM):- 2+900
DESIGNED BED LEVEL = 106.568 M



CUTTING AREA (SQ.M) = 0.418
FILLING AREA (SQ.M) = 4.266
CH. (KM):- 3+100
DESIGNED BED LEVEL = 106.513 M



CUTTING AREA (SQ.M) = 0.090
FILLING AREA (SQ.M) = 6.280
CH. (KM):- 3+000
DESIGNED BED LEVEL = 106.541 M



CUTTING AREA (SQ.M) = 0.181
FILLING AREA (SQ.M) = 6.533
CH. (KM):- 3+200
DESIGNED BED LEVEL = 106.485 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

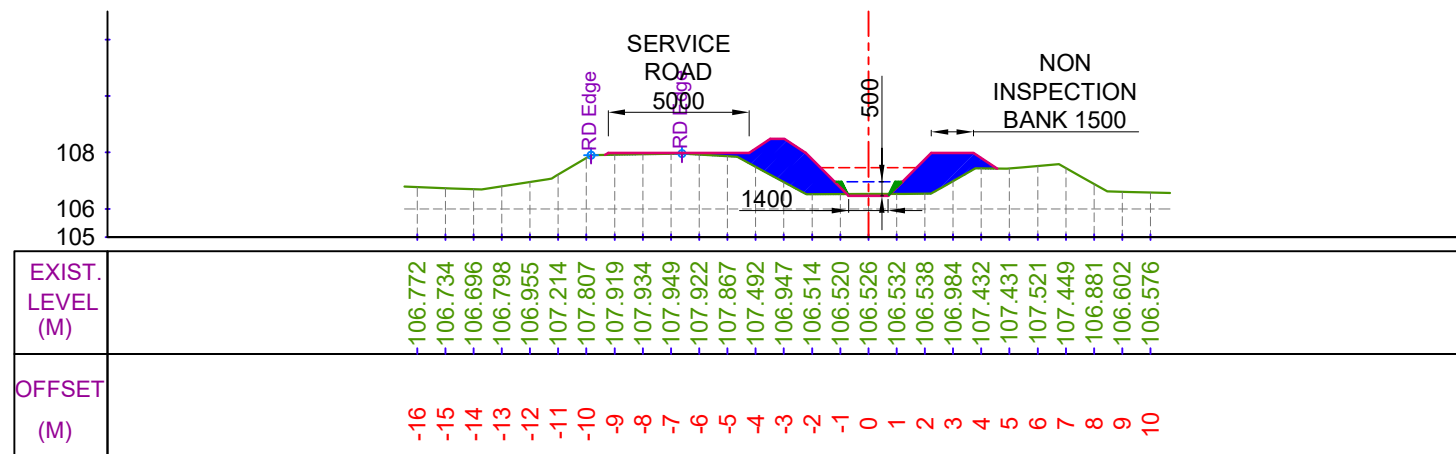
Prepared by :-

WAPCOS LTD.

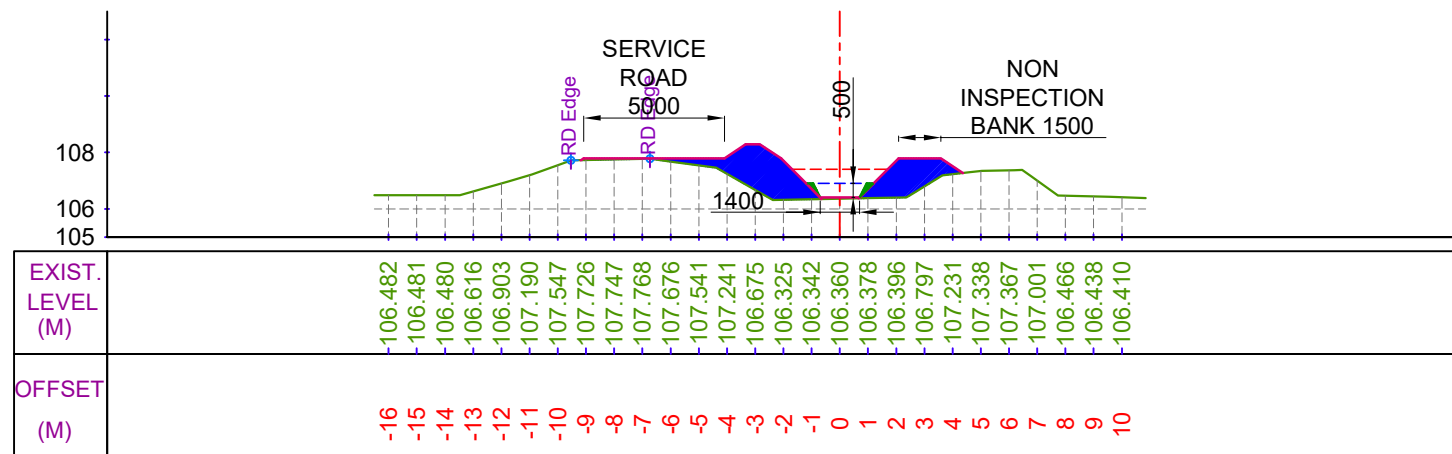


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC- 8 of 12

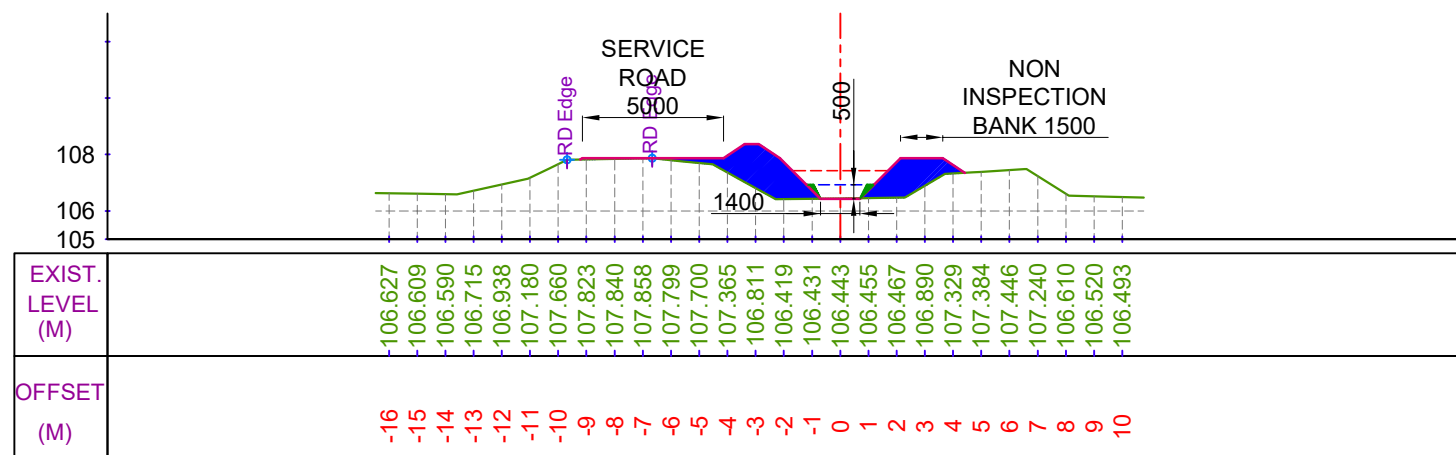
X SECTION OF SHUSHNAR MINOR



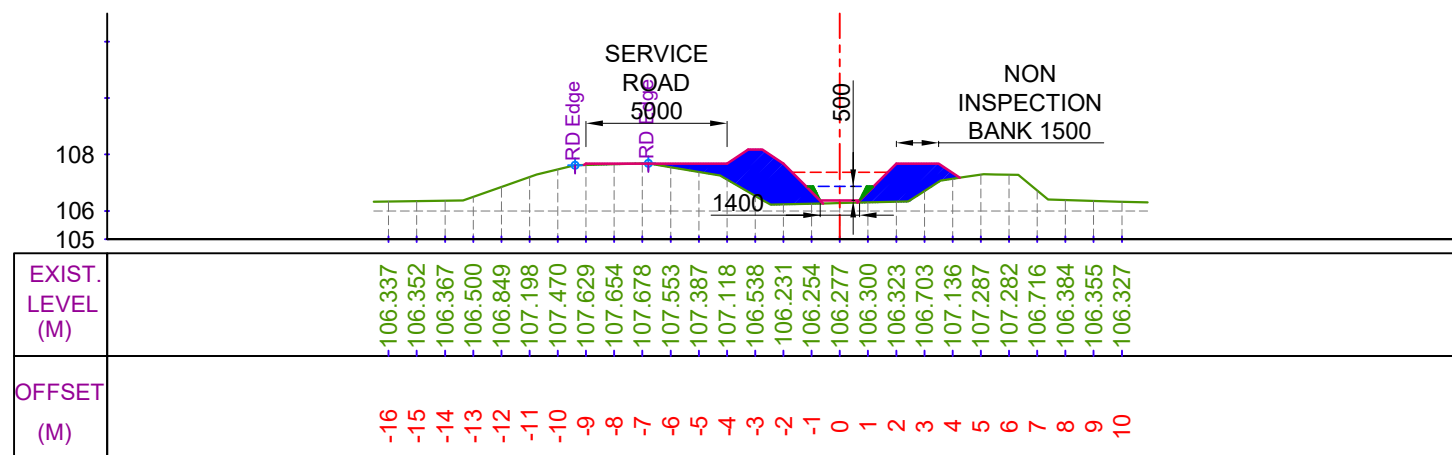
CUTTING AREA (SQ.M) = 0.099 CH. (KM):- 3+300
 FILLING AREA (SQ.M) = 6.728 DESIGNED BED LEVEL = 106.457 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 3+500
 FILLING AREA (SQ.M) = 7.230 DESIGNED BED LEVEL = 106.402 M



CUTTING AREA (SQ.M) = 0.018 CH. (KM):- 3+400
 FILLING AREA (SQ.M) = 6.836 DESIGNED BED LEVEL = 106.430 M



CUTTING AREA (SQ.M) = 0.000 CH. (KM):- 3+600
 FILLING AREA (SQ.M) = 7.332 DESIGNED BED LEVEL = 106.374 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

Prepared by :-

WAPCOS LTD.



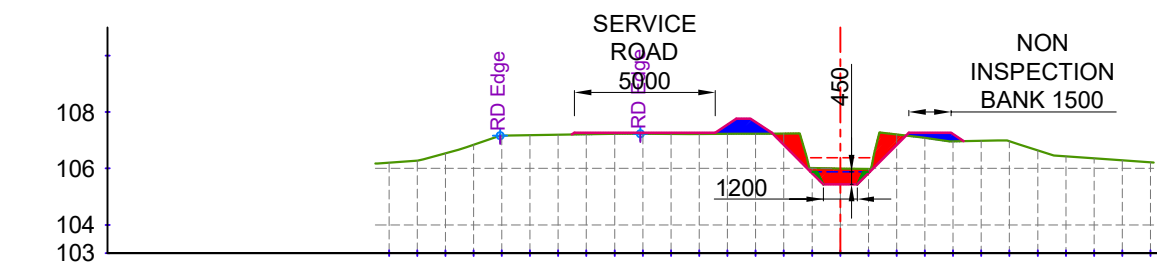
Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

Drawing Title :- X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

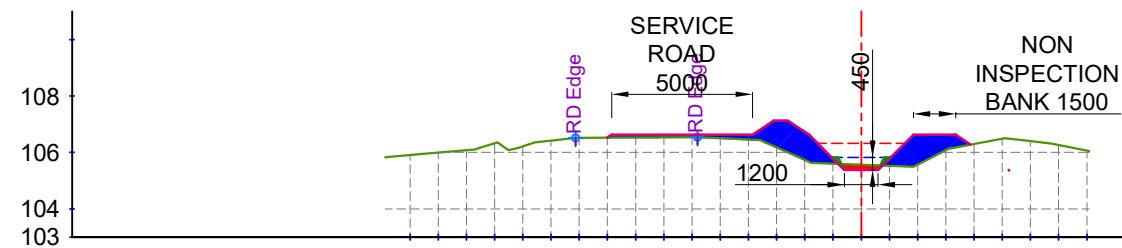
9 of 12

X SECTION OF SHUSHNAR MINOR



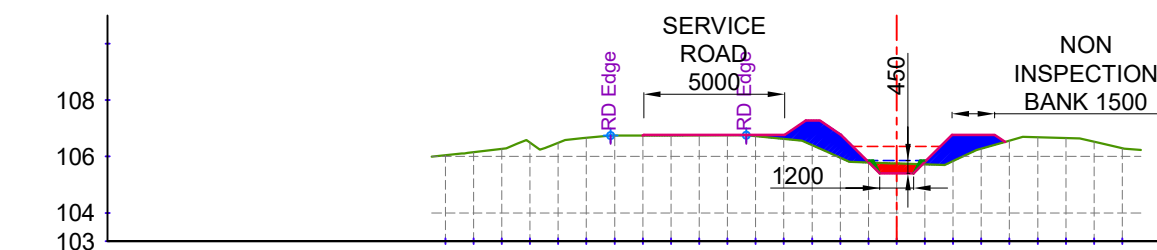
EXIST. LEVEL (M)	-106.205	-106.271	-106.533	-106.843	-107.164	-107.179	-107.194	-107.209	-107.224	-107.231	-107.222	-107.218	-107.225	-107.226	-107.235	-106.013	-105.995	-105.980	-107.205	-107.082	-106.958	-106.977	-106.966	-106.640	-106.425	-106.354	-106.283	-106.213
OFFSET (M)	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11

CUTTING AREA (SQ.M) = 2.226 CH. (KM):- 3+700
FILLING AREA (SQ.M) = 1.276 DESIGNED BED LEVEL = 105.431 M



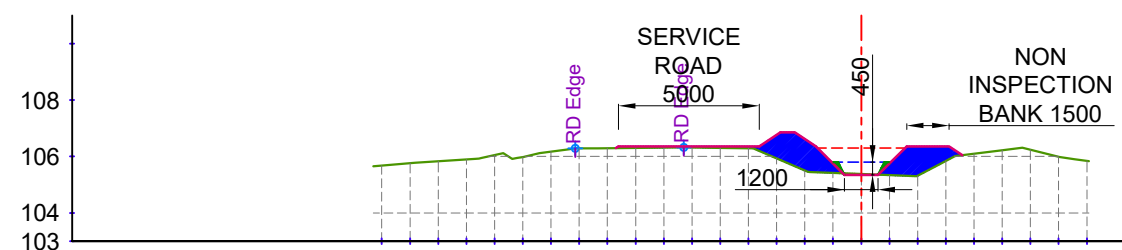
EXIST. LEVEL (M)	-105.907	-105.995	-106.081	-106.321	-106.215	-106.418	-106.515	-106.521	-106.526	-106.532	-106.538	-106.500	-106.451	-106.174	-106.732	-105.604	-105.566	-105.528	-105.572	-106.078	-106.297	-106.485	-106.401	-106.266	-106.070
OFFSET (M)	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.246 CH. (KM):- 3+900
FILLING AREA (SQ.M) = 4.617 DESIGNED BED LEVEL = 105.376 M



EXIST. LEVEL (M)	-106.046	-106.152	-106.274	-106.496	-106.489	-106.661	-106.744	-106.746	-106.748	-106.750	-106.752	-106.721	-106.627	-106.406	-105.956	-105.787	-105.753	-105.720	-105.838	-106.282	-106.561	-106.679	-106.653	-106.522	-106.291
OFFSET (M)	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.482 CH. (KM):- 3+800
FILLING AREA (SQ.M) = 3.636 DESIGNED BED LEVEL = 105.403 M



EXIST. LEVEL (M)	-105.679	-105.767	-105.833	-105.895	-106.049	-105.983	-106.175	-106.286	-106.297	-106.307	-106.318	-106.322	-106.309	-106.296	-105.933	-105.500	-105.419	-105.378	-105.337	-105.311	-105.841	-106.102	-106.227	-106.244	-105.991	-105.842
OFFSET (M)	-17	-16	-15	-14	-13	-12	-11	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0	1	2	3	4	5	6	7	8

CUTTING AREA (SQ.M) = 0.037 CH. (KM):- 4+000
FILLING AREA (SQ.M) = 4.356 DESIGNED BED LEVEL = 105.348 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		F.S.L.
			DESIGNED BED LINE
			H.G. LINE

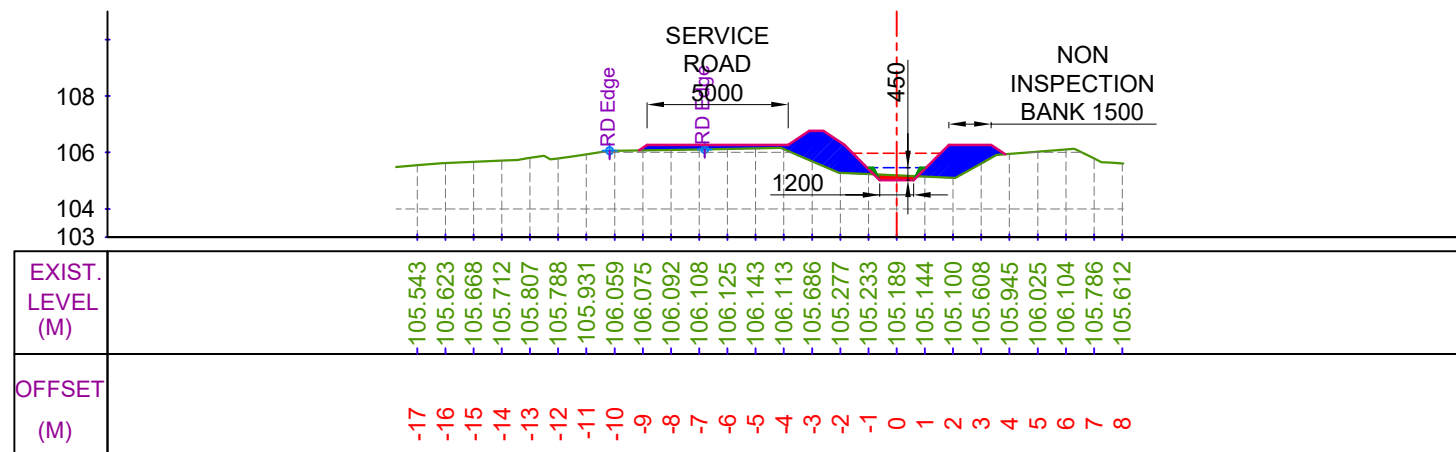
Prepared by :-

WAPCOS LTD.

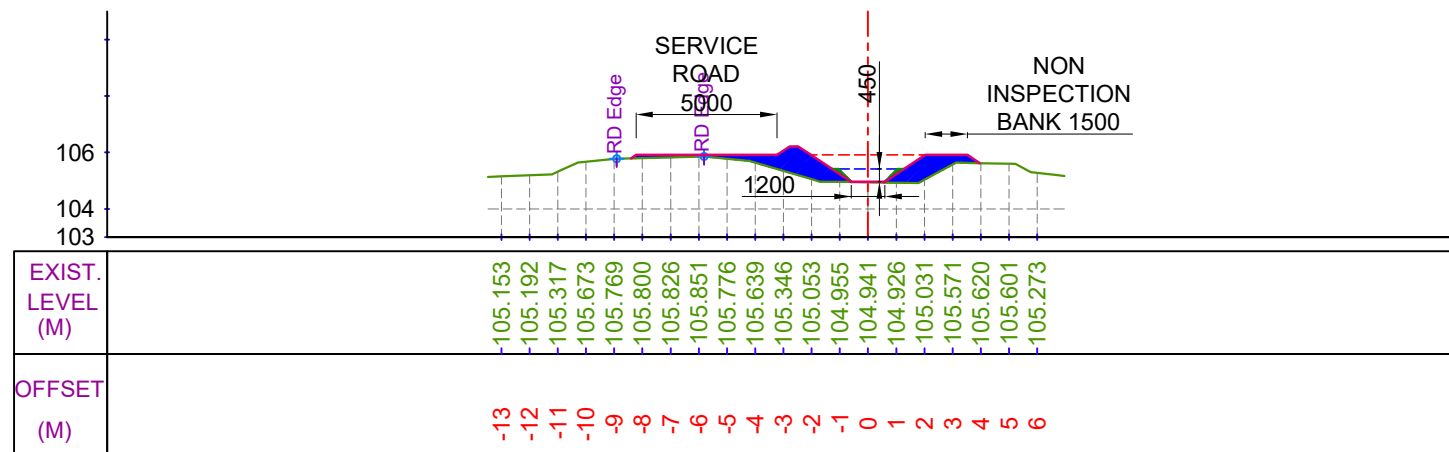


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC- 10 of 12

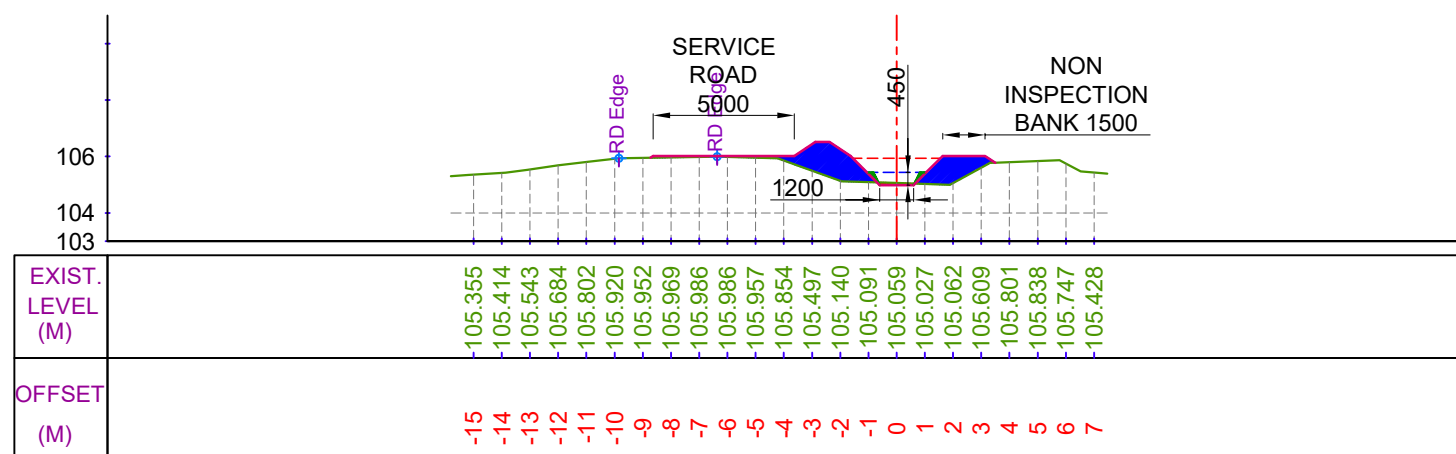
X SECTION OF SHUSHNAR MINOR



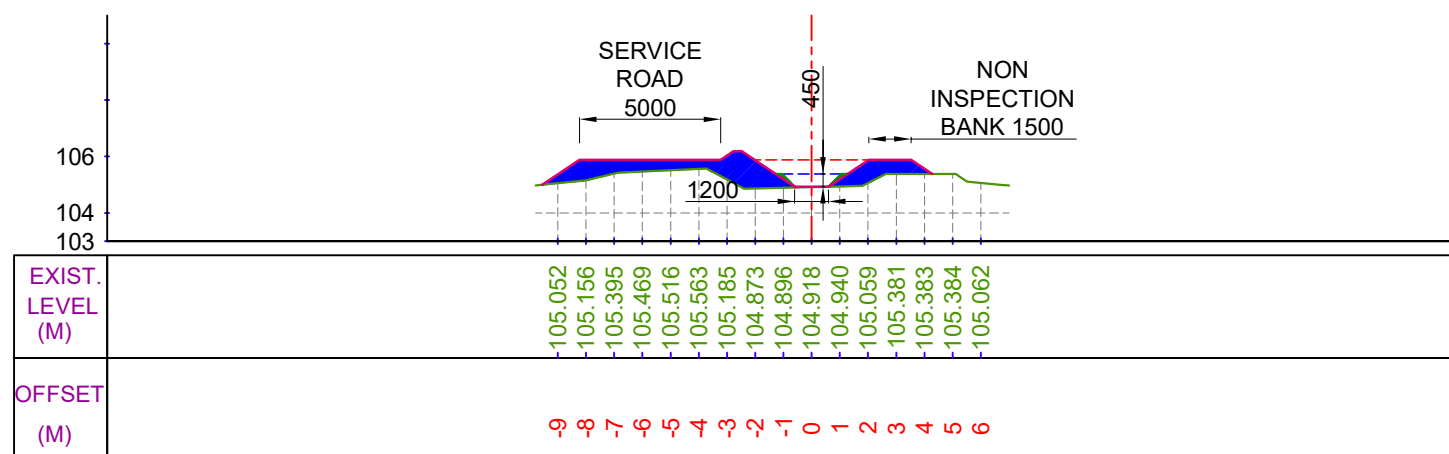
CUTTING AREA (SQ.M) = 0.224
FILLING AREA (SQ.M) = 5.235
CH. (KM):- 4+100
DESIGNED BED LEVEL = 105.015 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 3.986
CH. (KM):- 4+300
DESIGNED BED LEVEL = 104.960 M



CUTTING AREA (SQ.M) = 0.089
FILLING AREA (SQ.M) = 4.332
CH. (KM):- 4+200
DESIGNED BED LEVEL = 104.987 M



CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 6.427
CH. (KM):- 4+400
DESIGNED BED LEVEL = 104.932 M

LEGEND

	CUT AREA		EXISTING BED LINE
	FILL AREA		DESIGNED BED LINE
			F.S.L.
			H.G. LINE

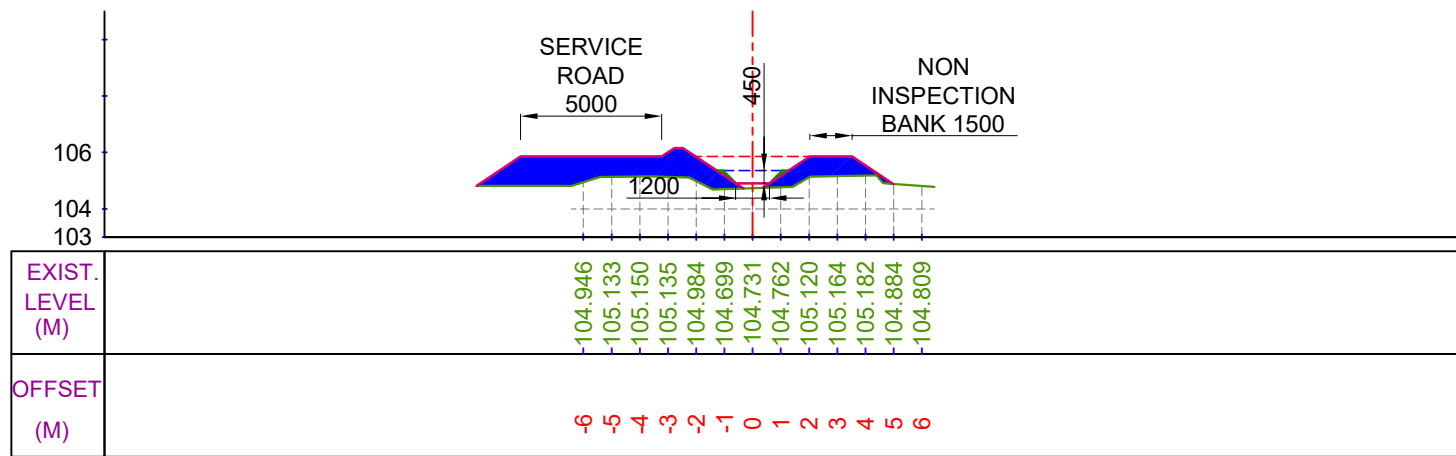
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC- 11 of 12

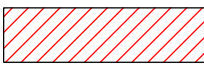
X SECTION OF SHUSHNAR MINOR



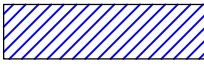
CUTTING AREA (SQ.M) = 0.000
FILLING AREA (SQ.M) = 9.379

CH. (KM):- 4+500
DESIGNED BED LEVEL = 104.904 M

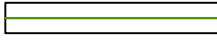
LEGEND



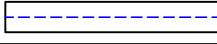
CUT AREA



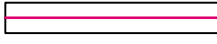
FILL AREA



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 :-

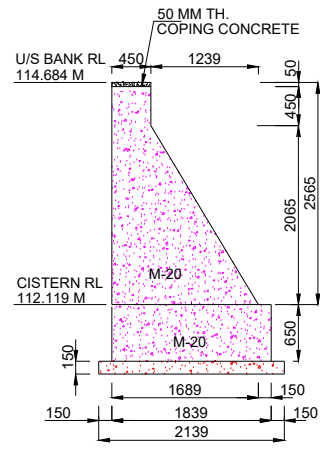
X SEC OF SHUSHNAR MINOR (OFFTAKE FROM RD - 18+340 KM. (L), KARMA DY.)

Drawing No. :-

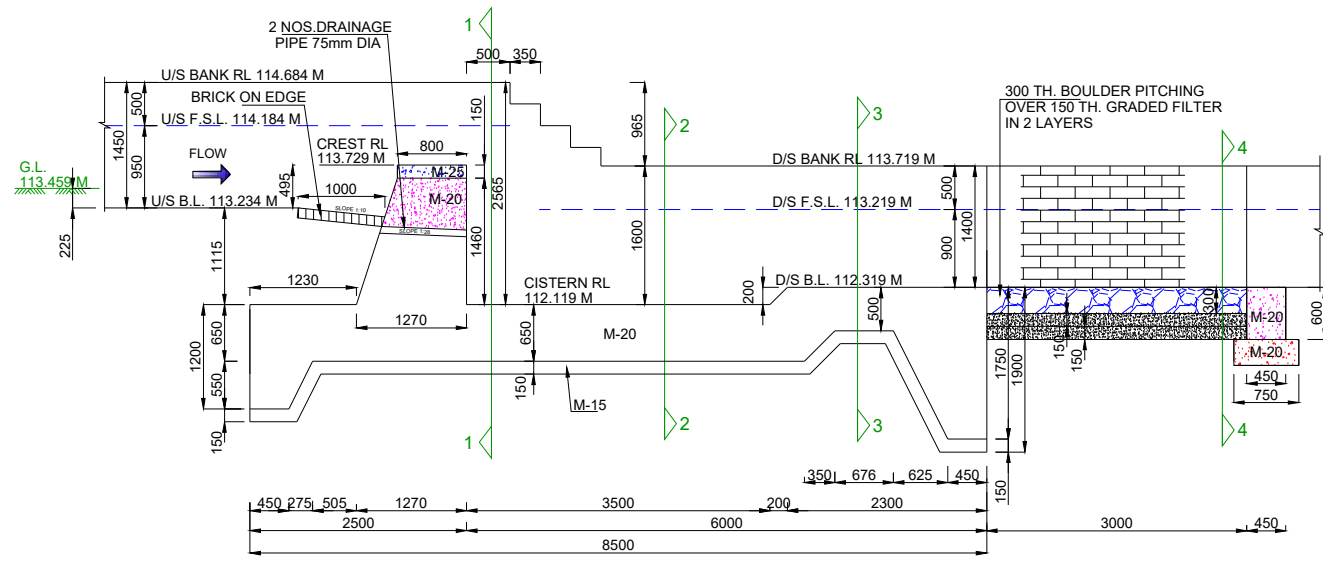
WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ XSEC-

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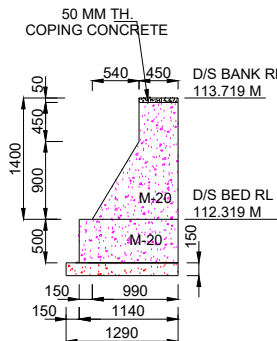
DRAWING OF STRUCTURES



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

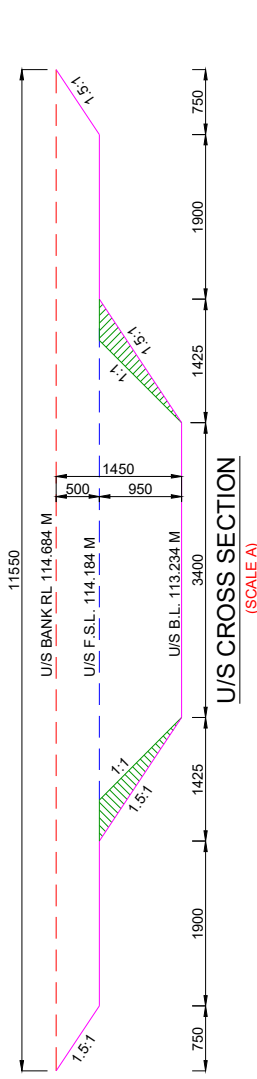
NOTES:-

- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
- THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

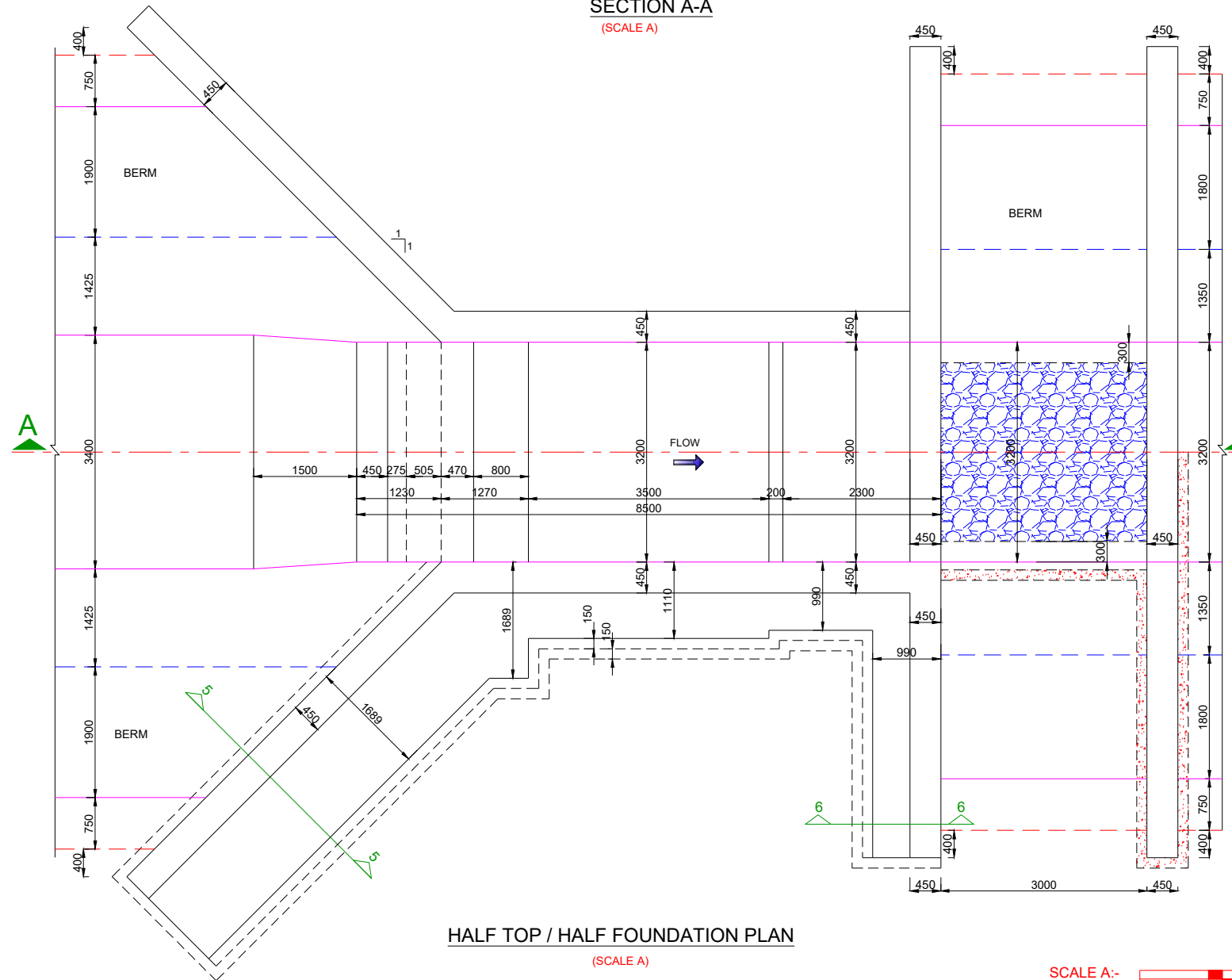
COMPONENT	GRADE
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
- ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
- SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

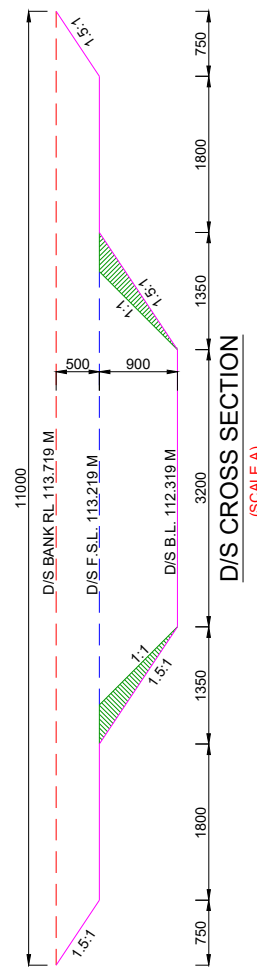
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	1.780	1.780	CUMEC
VERTICAL DROP	0.915	0.915	METRE
FULL SUPPLY DEPTH	0.950	0.900	METRE
BED WIDTH	3.400	3.200	METRE
BED SLOPE	1 : 4000	1 : 4000	



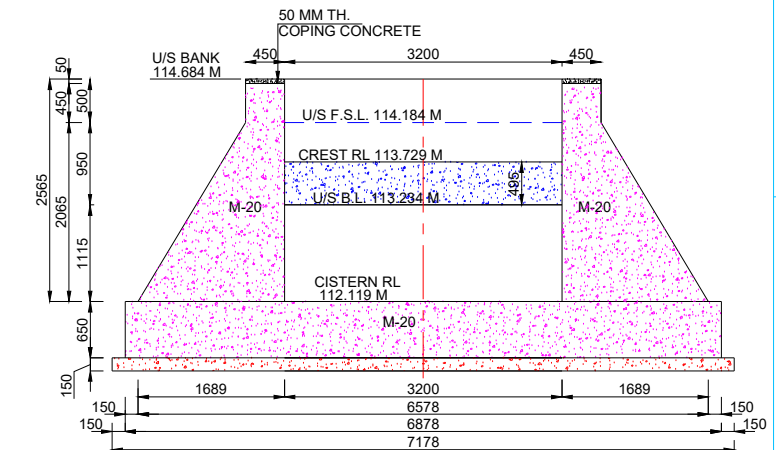
U/S CROSS SECTION
(SCALE A)



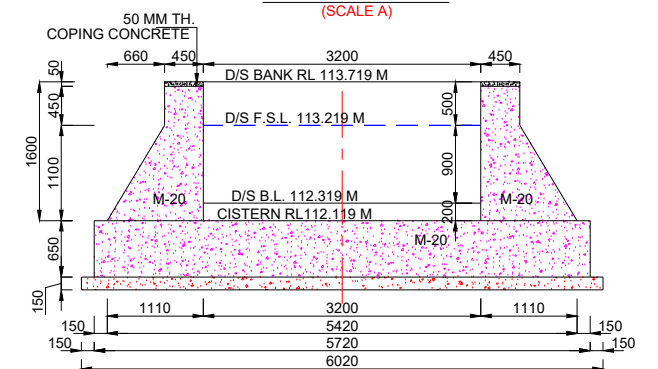
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



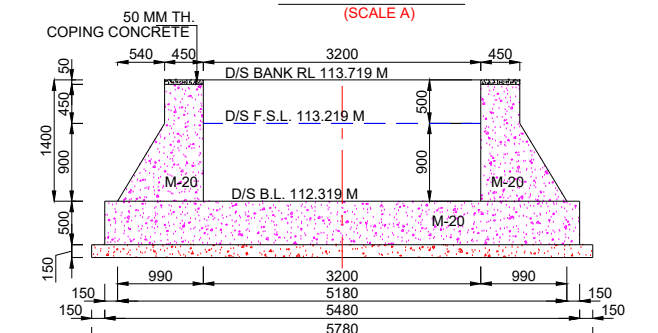
D/S CROSS SECTION
(SCALE A)



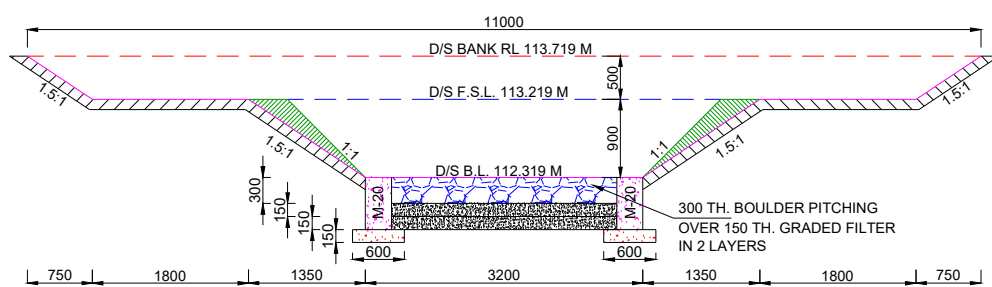
SECTION AT 1-1
(SCALE A)



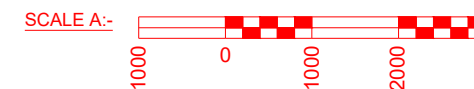
SECTION AT 2-2
(SCALE A)



SECTION AT 3-3
(SCALE A)



SECTION AT 4-4
(SCALE A)



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

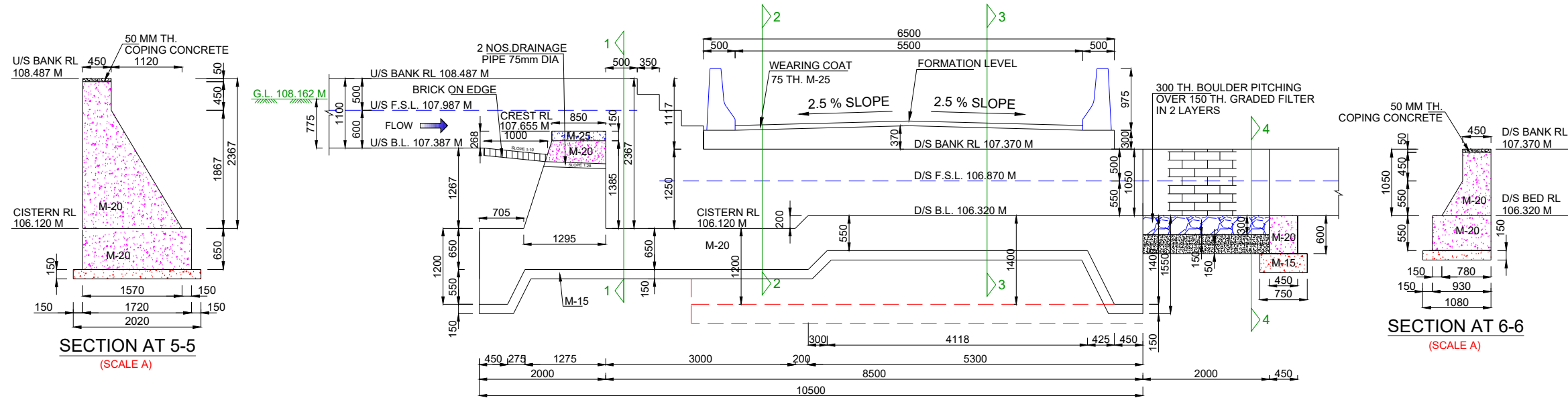
Drawing Title :-

SHARDA TYPE 0.915 M HT. FALL AT KM. 16.860 OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RMC)

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-016/ FALL

1 of 1



NOTES:-

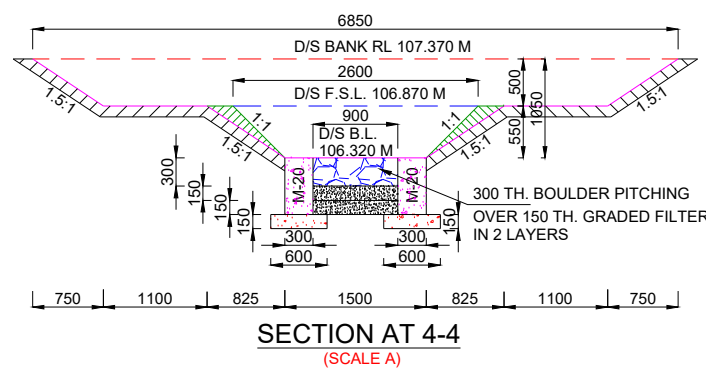
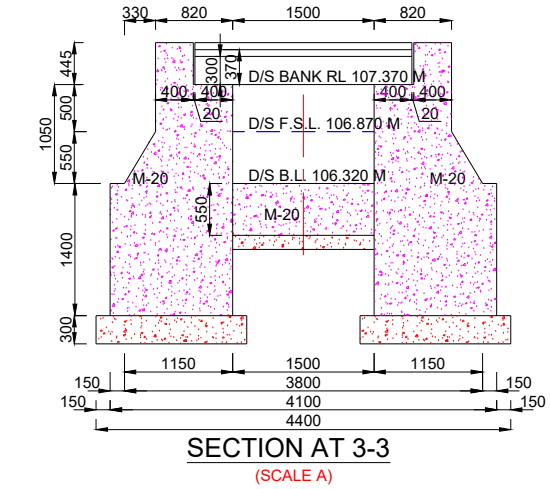
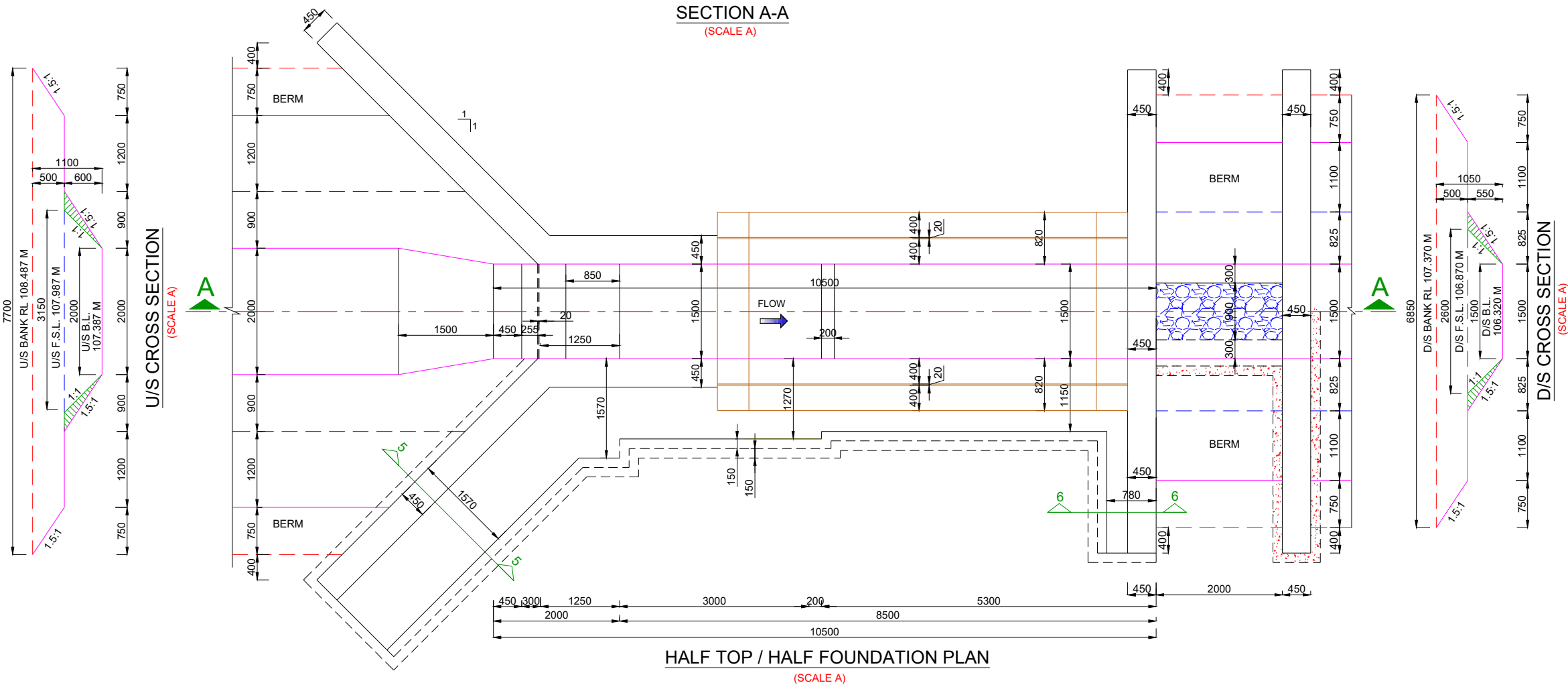
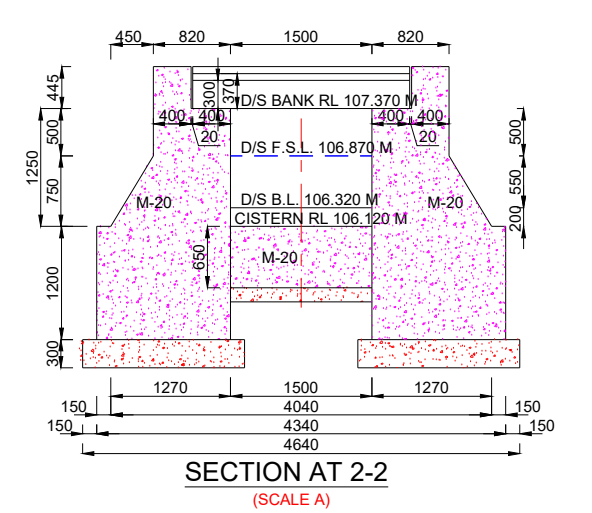
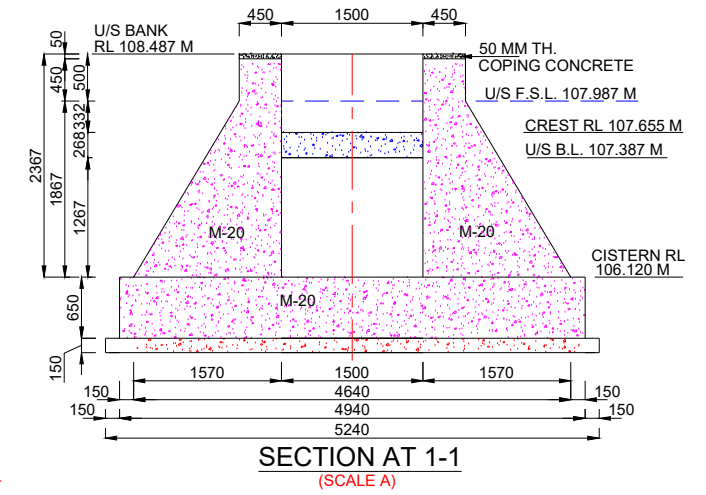
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456-2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

COMPONENT	GRADE
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	0.480	0.480	CUMEC
VERTICAL DROP	1.067	1.067	METRE
FULL SUPPLY DEPTH	0.600	0.550	METRE
BED WIDTH	2.000	1.500	METRE
BED SLOPE	1 : 4000	1 : 4000	

SECTION AT 6-6
(SCALE A)



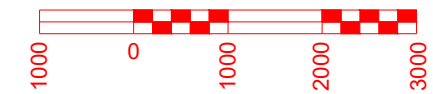
Prepared by :-

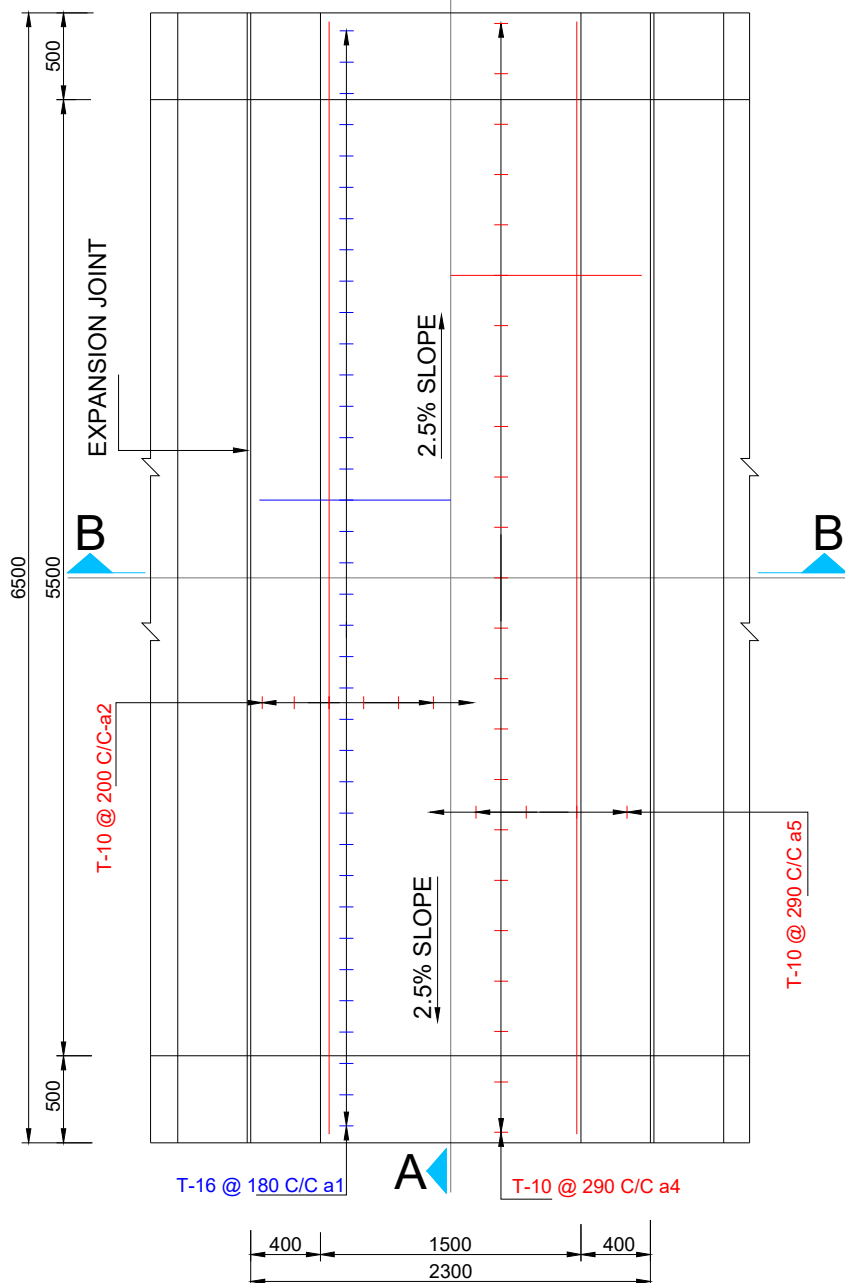
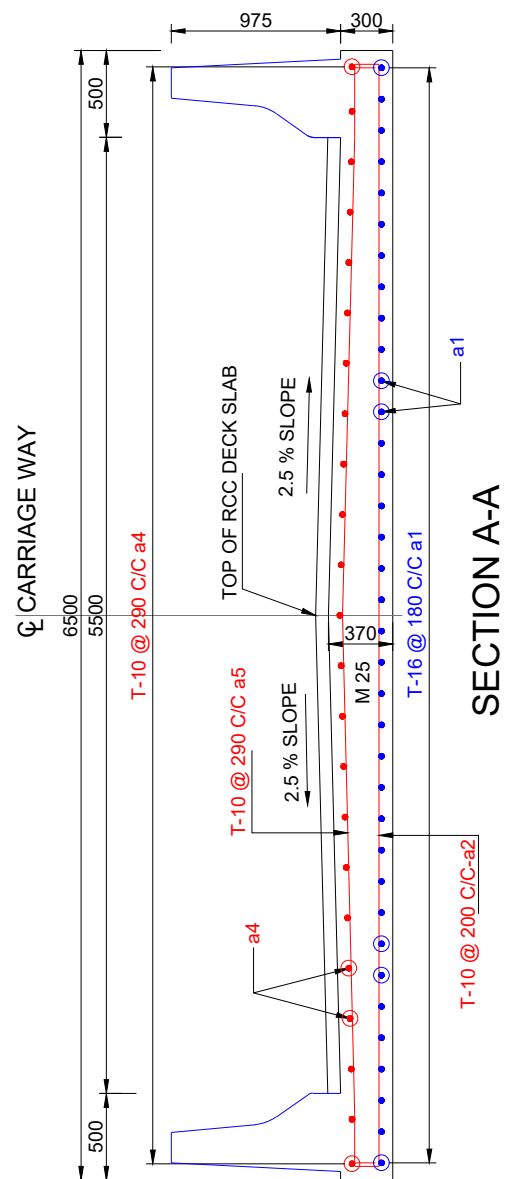
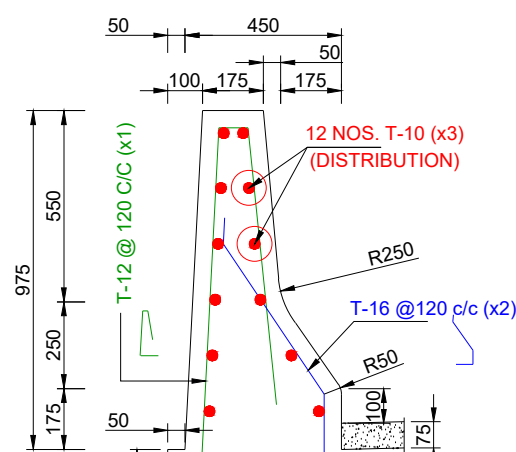
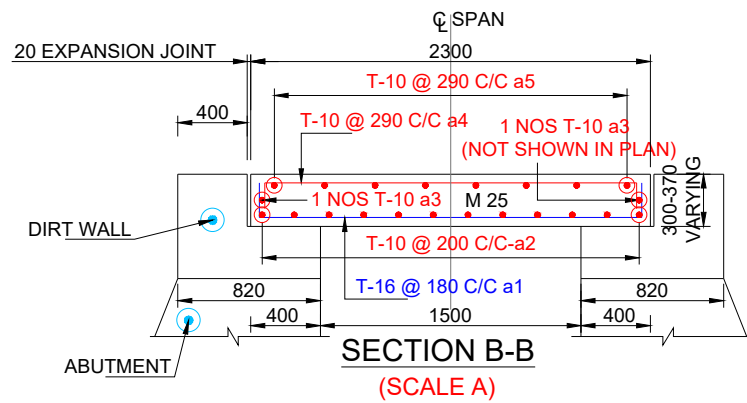
WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 1.067 M HT. FALL AT KM. 21.350 OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RMC)
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-016/ FALL 1 of 2

SCALE A:-





SECTION A-A

SECTION B-B (SCALE A)

REINF. DETAILS OF CRASH BARRIER IN MAIN SLAB (SCALE B)

BAR BENDING SCHEDULE

SLAB PER SPAN

CRASH BARRIER

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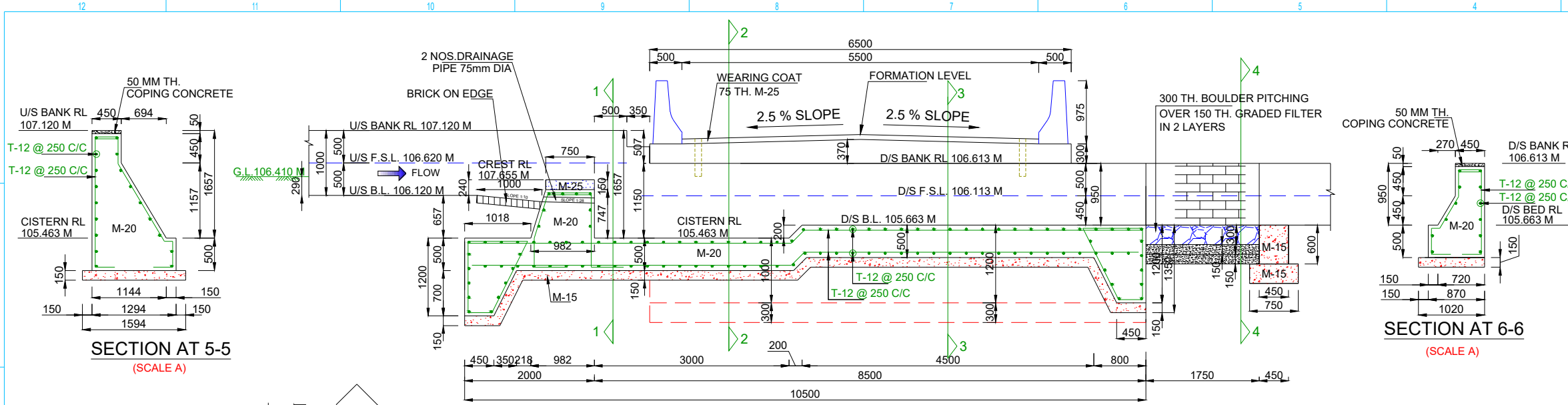
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NOTES:-

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 - THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
 - ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 415) COMFORMING I.S. 1786.
 - MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
 - 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.
 - BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
 - REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
 - 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
 - APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
 - TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
 - THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
 - 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
 - WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
 - 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 | | | | COMPRESSION BARS | | | |
|-------------------|--------|--------|--------|-------------------|--------|--------|--------|
| GRADE OF CONCRETE | | | | 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 |
- THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF 0.87 fy IN THE BAR
 - THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.
 - 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 FOLLOWS WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = $\alpha_1 \cdot l_{bnet}$
WHERE, α_1 = 1.0 for $p \leq 25\%$
 α_1 = 1.15 for $25\% \leq p \leq 33\%$
 α_1 = 1.4 for $33\% \leq p \leq 50\%$
 - THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
 - 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.
 - 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.
 - WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.

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. 21.350 OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RMC)	
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ FALL	
			2 of 2



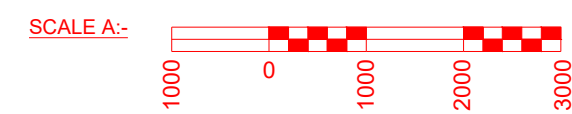
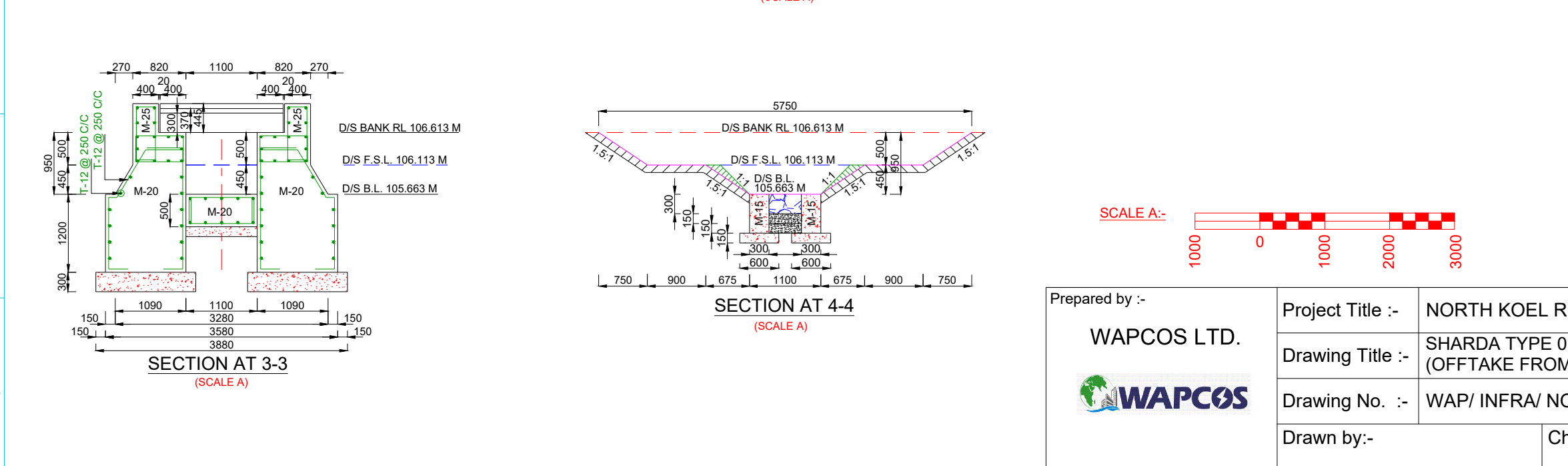
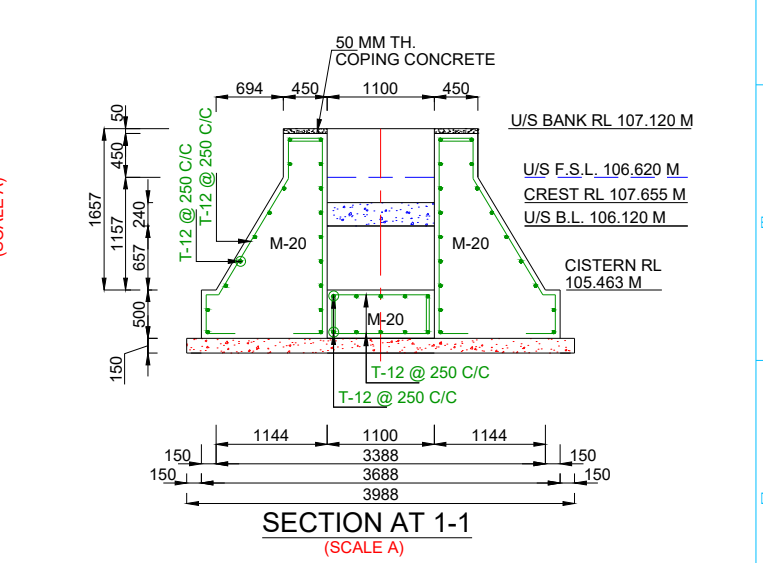
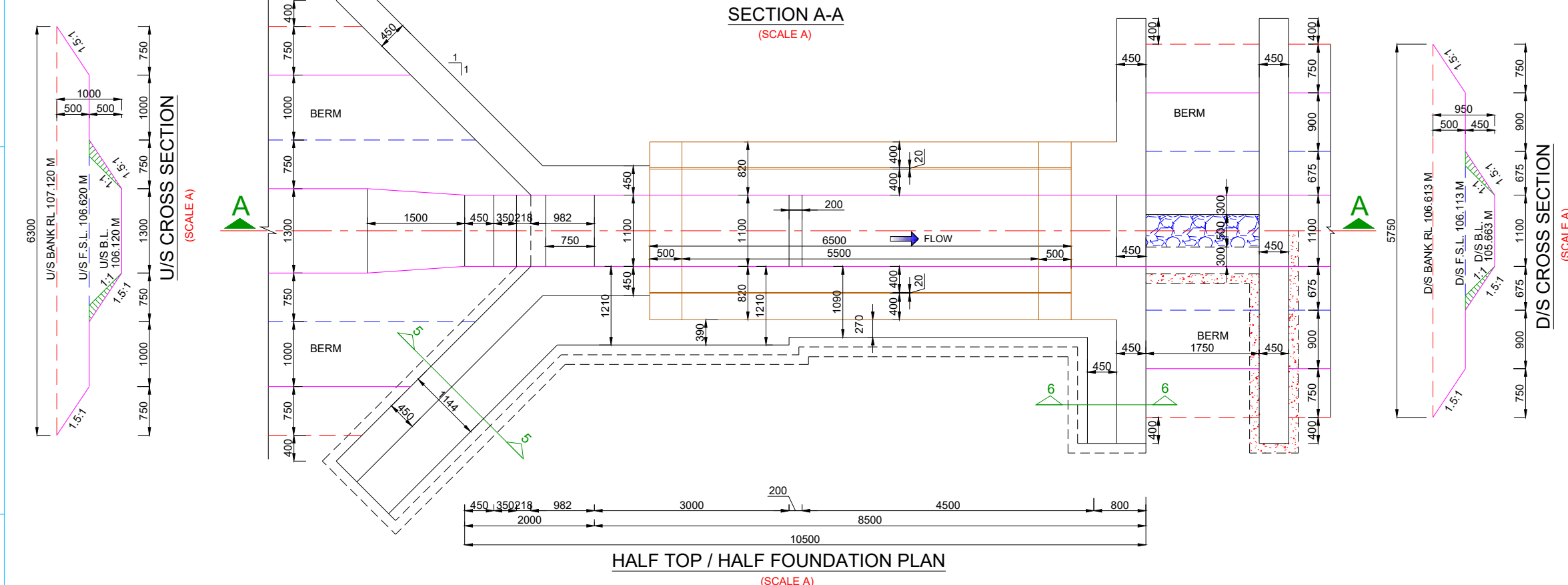
NOTES:-

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2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
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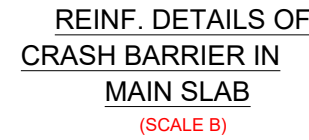
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.240	0.240	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.500	0.450	METRE
BED WIDTH	1.300	1.100	METRE
BED SLOPE	1 : 4000	1 : 4000	



Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :- SHARDA TYPE 0.457 M HT. FALL AT KM. 22.150 OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RMC)
Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-016/ FALL	1 of 2
Drawn by:-	Checked by:-
	Approved by:-



16. LAPPING OF REINFORCEMENT SHALL BE AVOIDED AS FAR AS 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 = $\alpha 1 \cdot l_{bn\text{et}}$
WHERE, $\alpha 1$ = 1.0 for $p \leq 25\%$
 $\alpha 1$ = 1.15 for $25\% \leq p \leq 33\%$
 $\alpha 1$ = 1.4 for $33\% \leq p \leq 50\%$
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.

1	x1		12	120	16X2
2	x2		16	120	16X2
3	x3		10	-	12X2



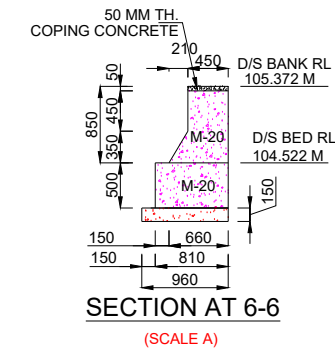
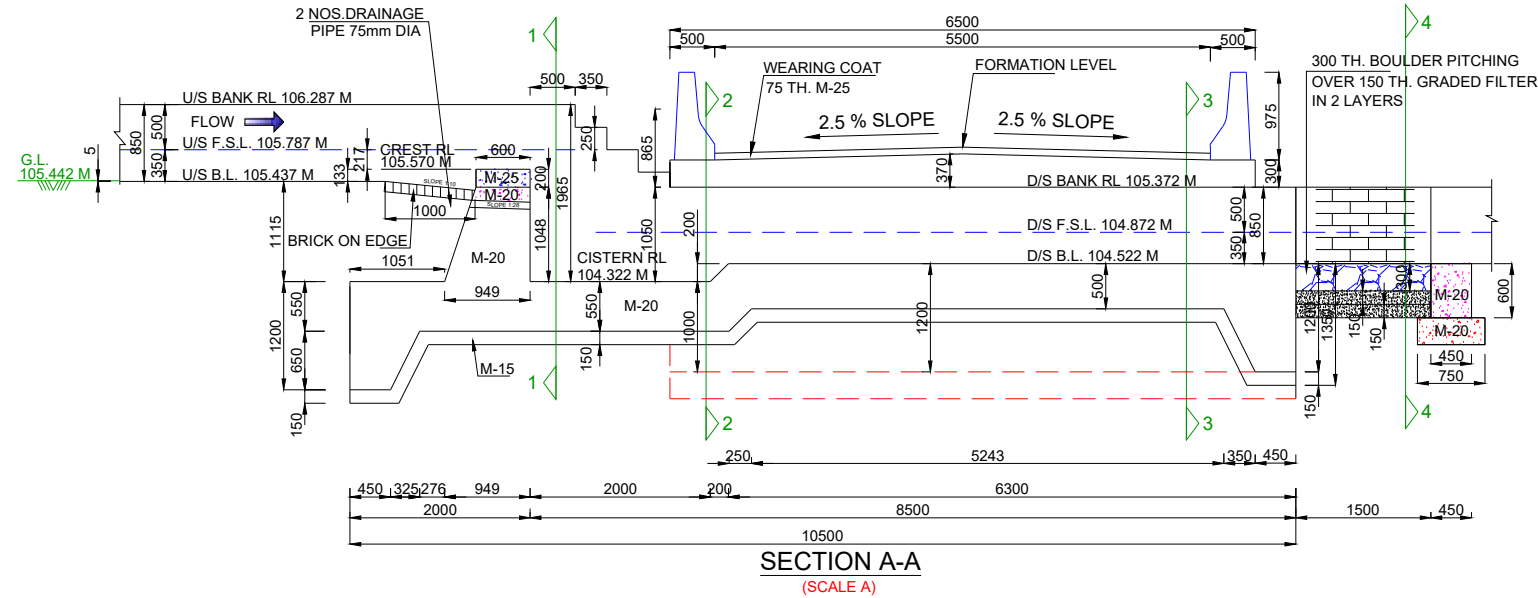
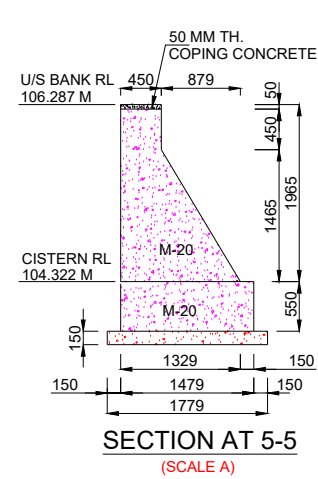
BOTTOM REINFORCEMENT TOP REINFORCEMENT

PLAN SHOWING REINFORCEMENT DETAILS OF DECK SLAB

(SCALE A)



Approved by:-



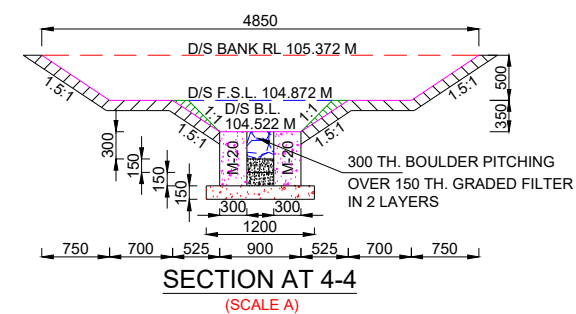
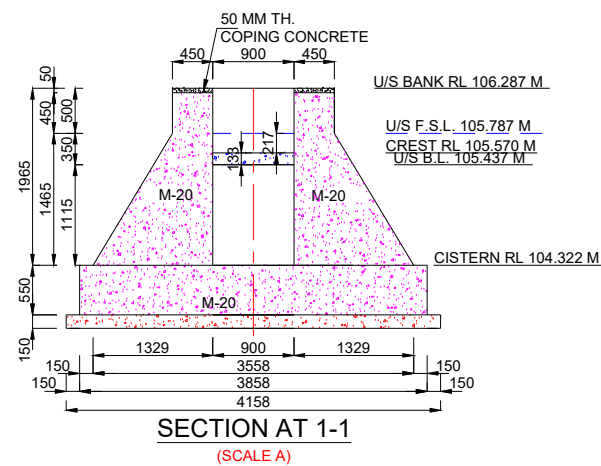
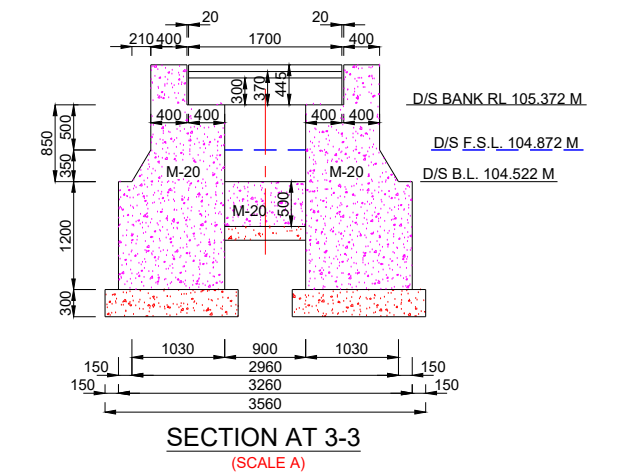
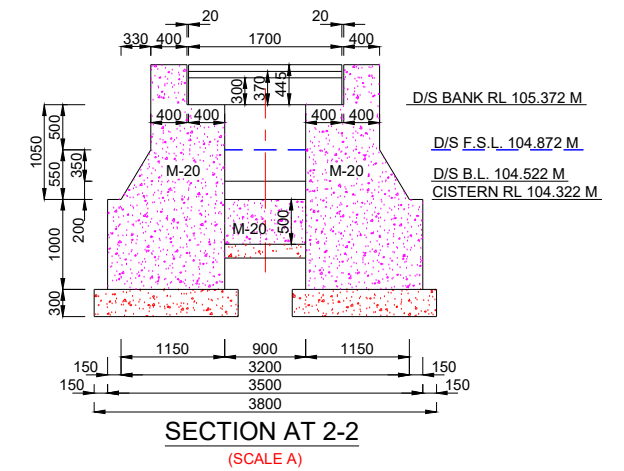
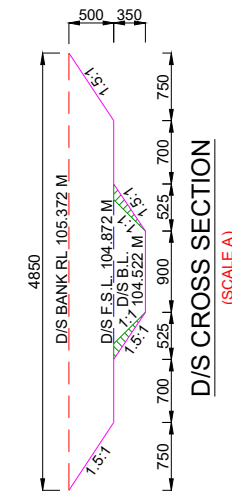
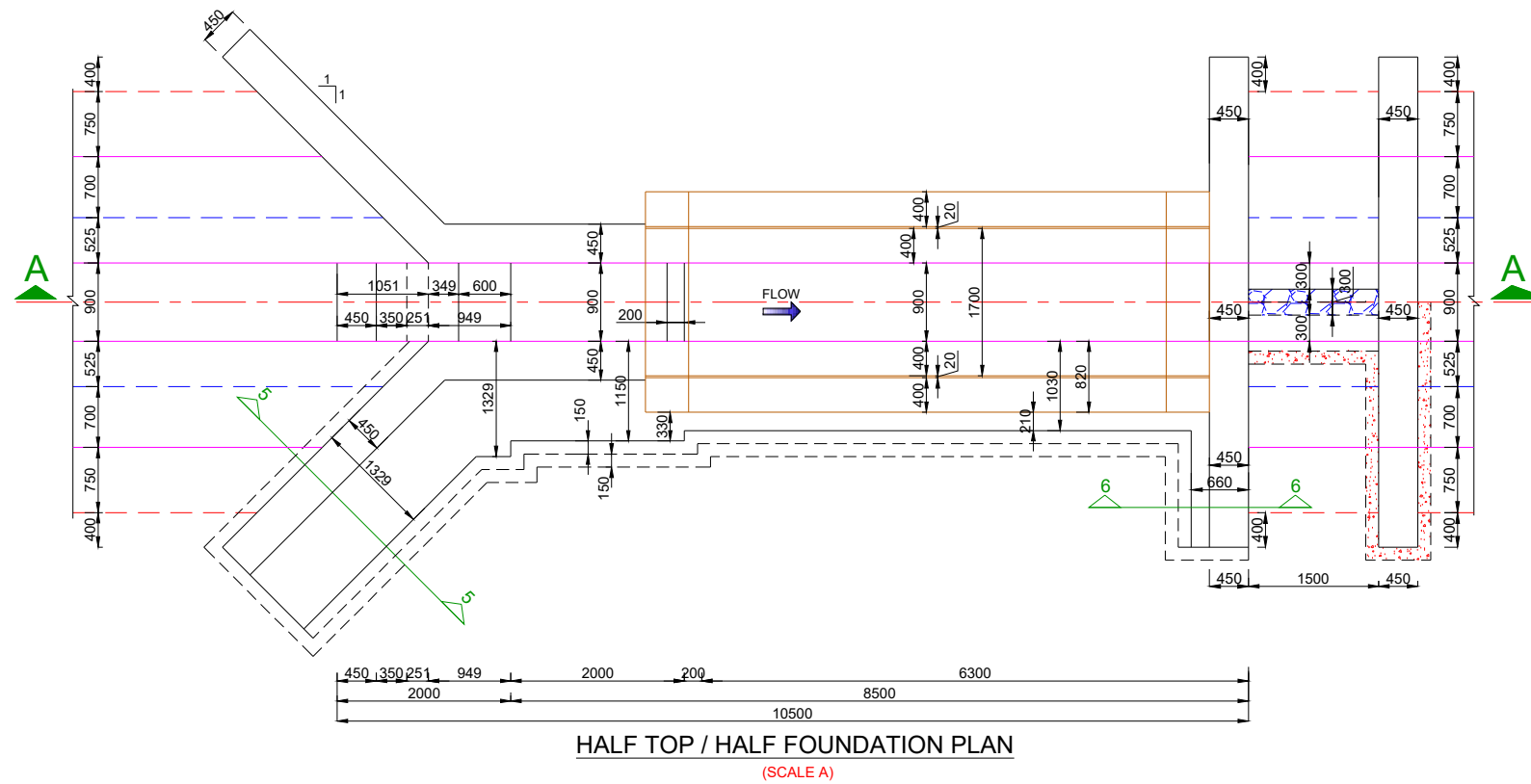
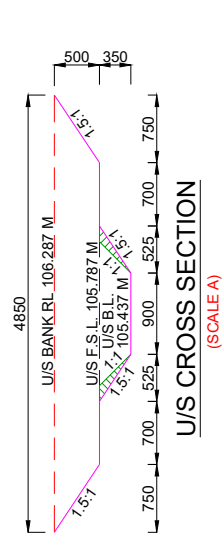
NOTES:-

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	0.900	0.900	CUMEC
VERTICAL DROP	0.915	0.915	METRE
FULL SUPPLY DEPTH	0.350	0.350	METRE
BED WIDTH	0.900	0.900	METRE
BED SLOPE	1 : 4000	1 : 4000	



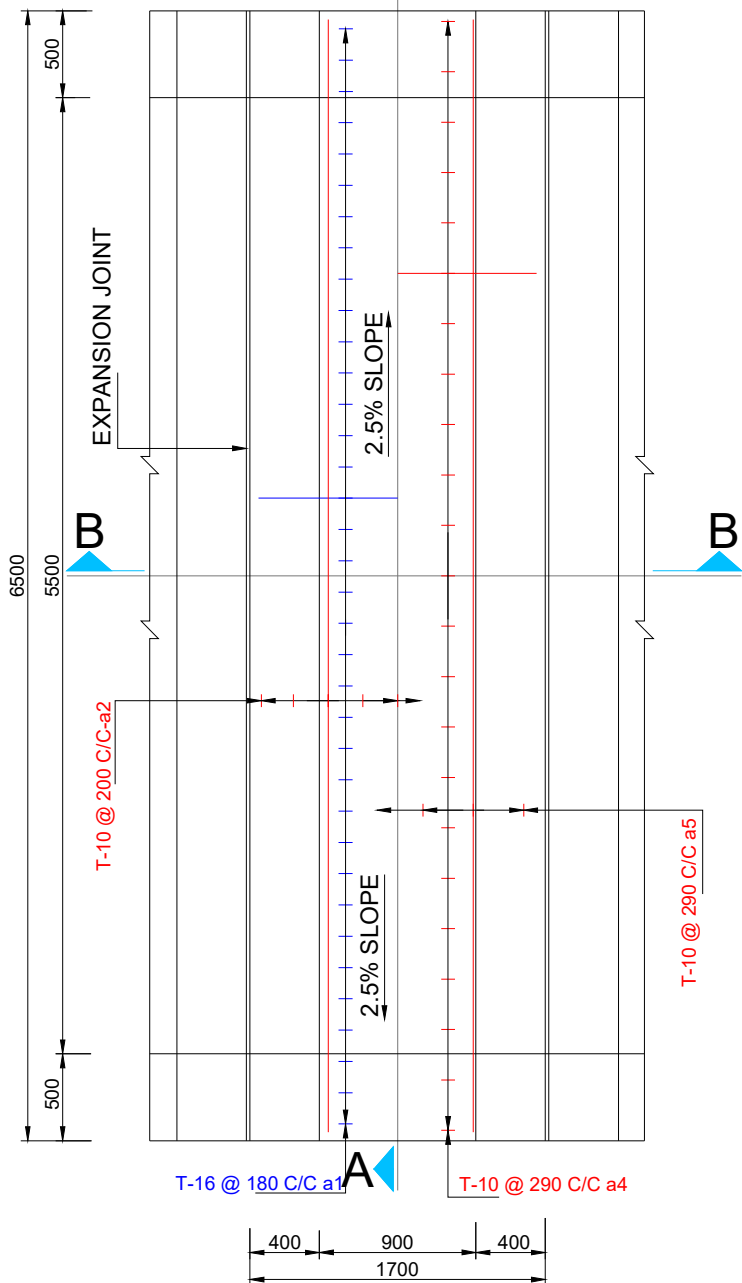
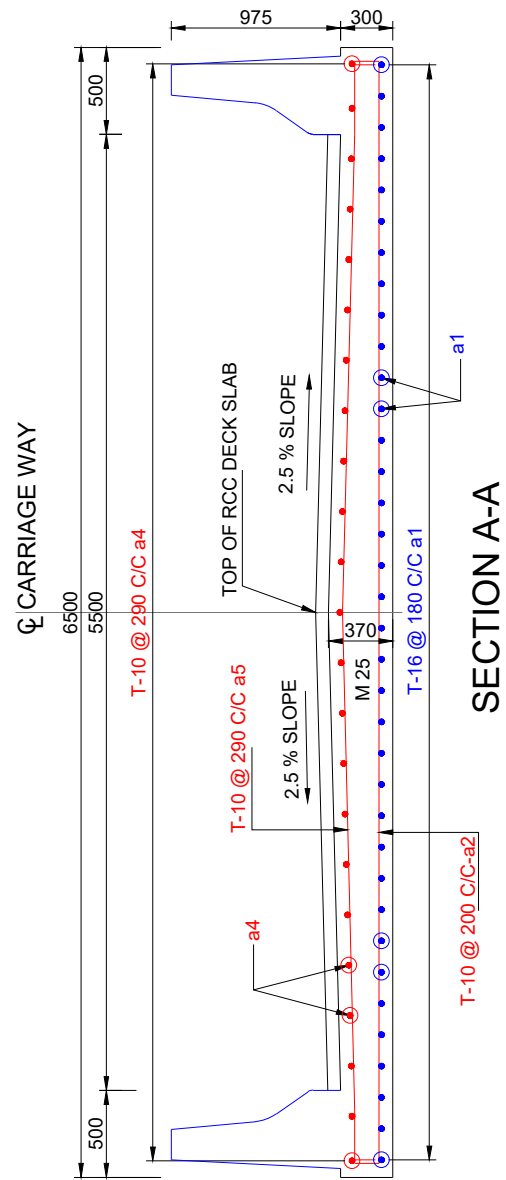
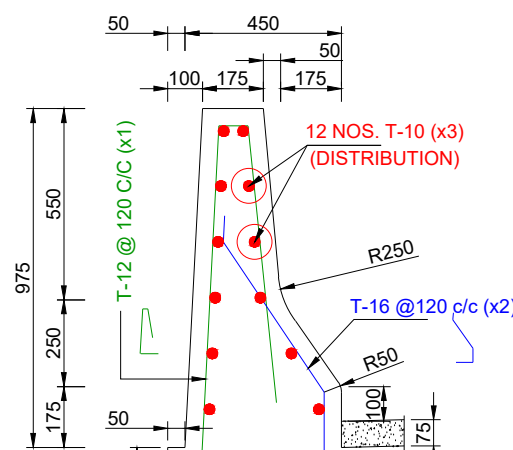
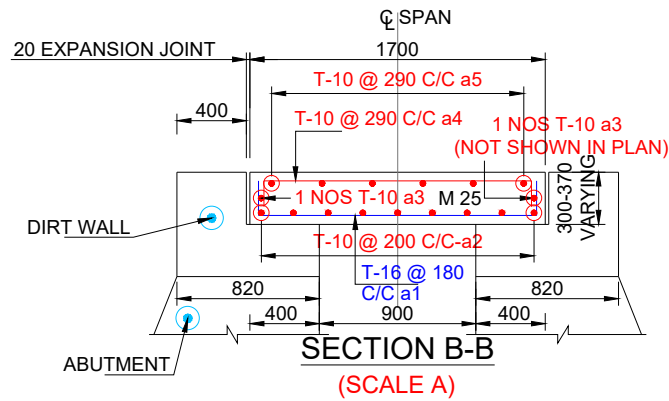
Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	SHARDA TYPE 0.915 M HT. FALL AT KM. 23.050 OF KARMA DY. (OFFTAKE FROM RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ FALL	1 of 2

1 of 2



SECTION A-A
SECTION B-B
REIN. DETAILS OF CRASH BARRIER IN MAIN SLAB
BAR BENDING SCHEDULE
TENSION BARS
GRADE OF CONCRETE
COMPRESSION BARS
GRADE OF CONCRETE
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 = $\alpha_1 \cdot l_{bnet}$
WHERE, α_1 = 1.0 for $p \leq 25\%$
 α_1 = 1.15 for $25\% \leq p \leq 33\%$
 α_1 = 1.4 for $33\% \leq p \leq 50\%$
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

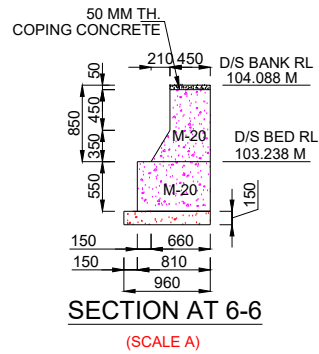
S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres))	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1		16	180	36
2	a2		10	200	9
3	a3		10	-	2
4	a4		10	290	23
5	a5		10	290	6
CRASH BARRIER					
1	x1		12	120	14X2
2	x2		16	120	14X2
3	x3		10	-	12X2

Prepared by :-

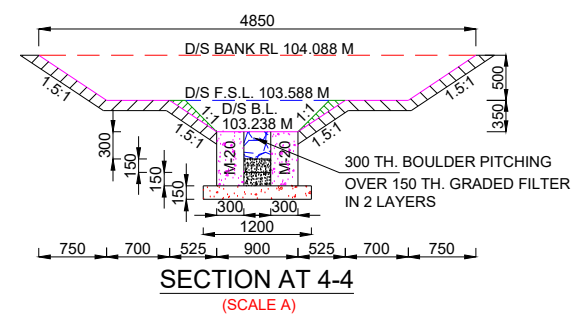
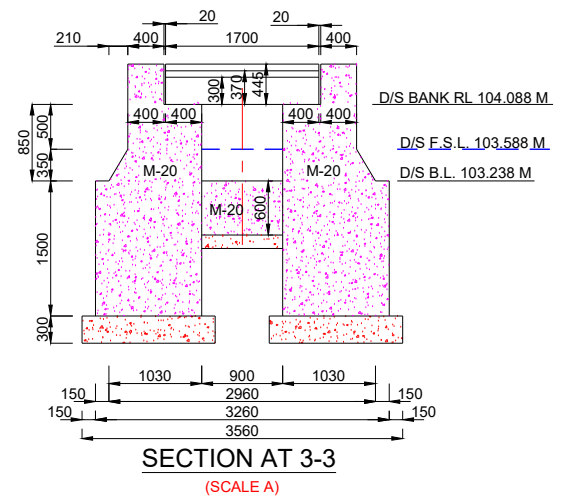
WAPCOS LTD.



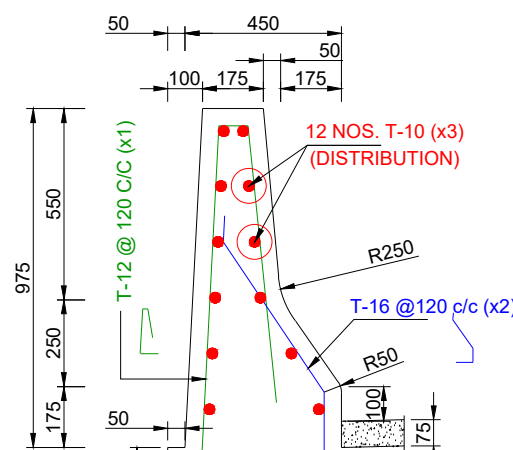
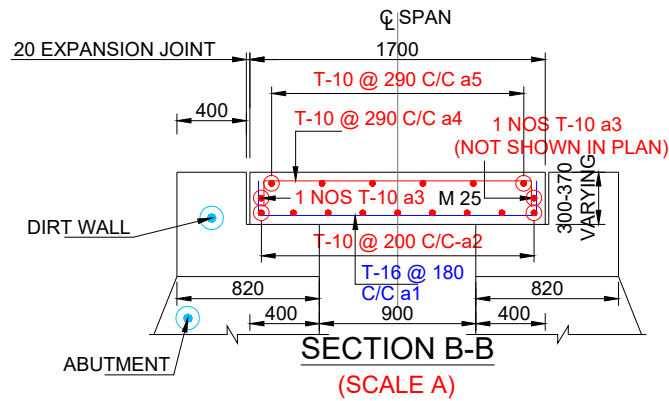
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 23.050 OF KARMA DY. (OFFTAKE RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ FALL	2 of 2



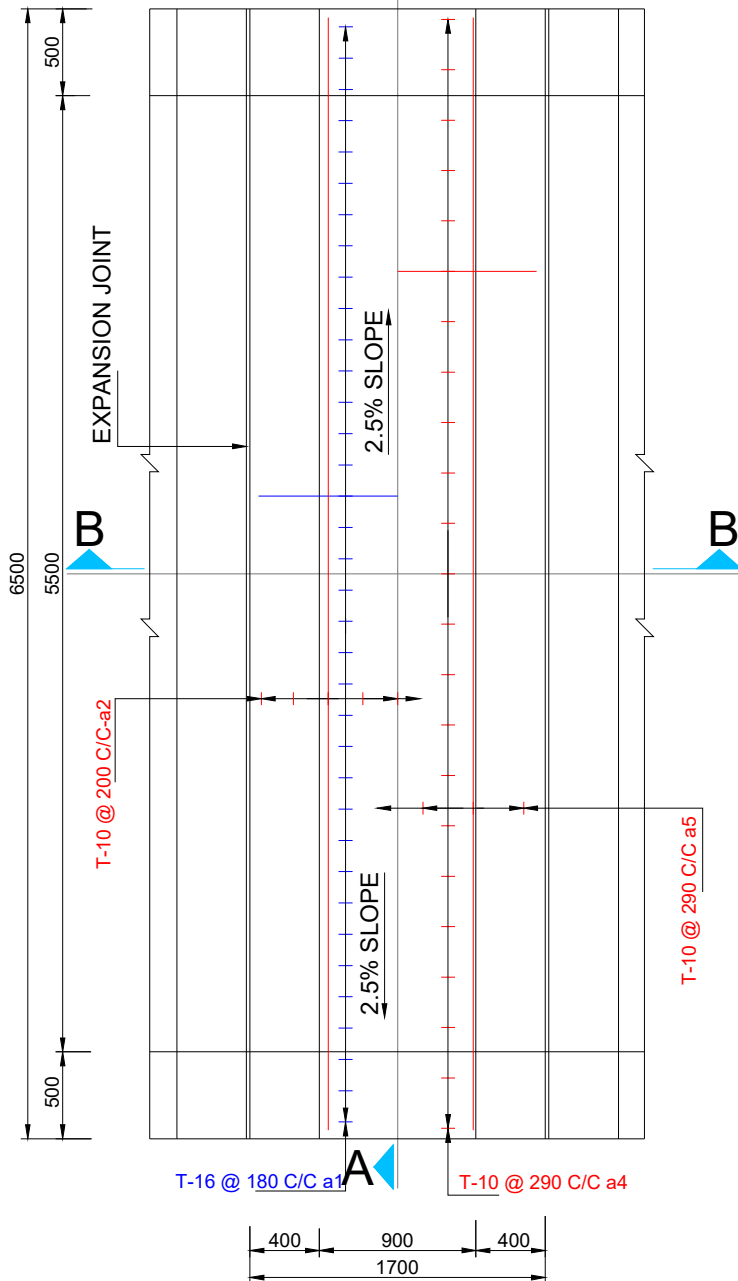
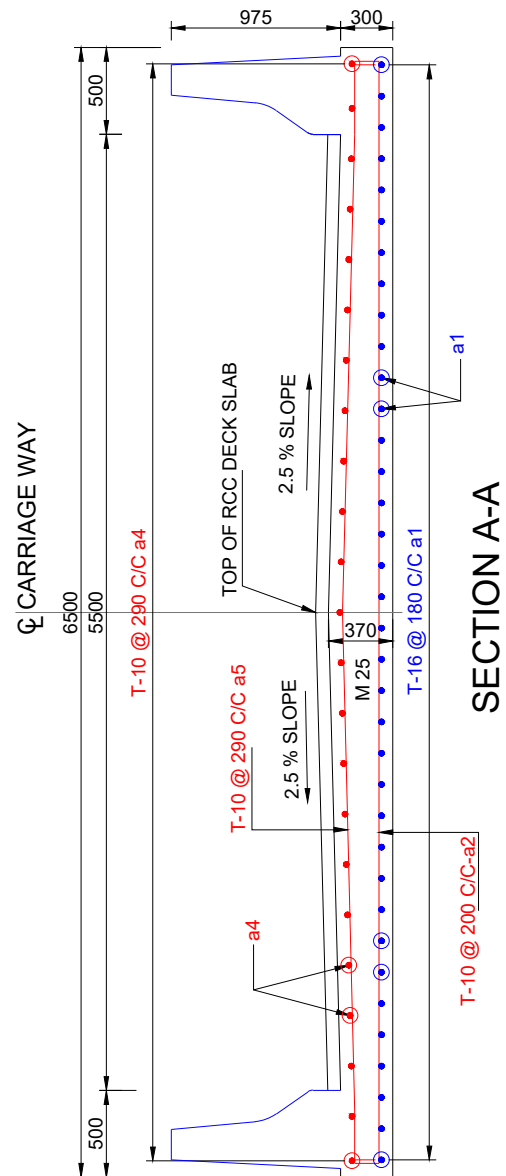
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.900	0.900	CUMEC
VERTICAL DROP	1.220	1.220	METRE
FULL SUPPLY DEPTH	0.350	0.350	METRE
BED WIDTH	0.900	0.900	METRE
BED SLOPE	1 : 4000	1 : 4000	



1 of 2



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

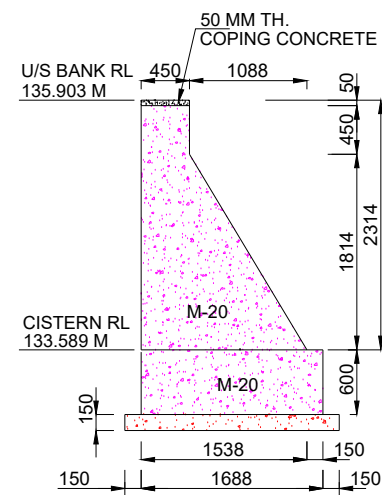
S. No.	Type of bars	Shape of bars (not to scale (Dimensions are in millimetres))	Dia of Bars (mm)	Spacing (mm)	Nos. of Bars
SLAB PER SPAN					
1	a1		16	180	36
2	a2		10	200	9
3	a3		10	-	2
4	a4		10	290	23
5	a5		10	290	6
CRASH BARRIER					
1	x1		12	120	14X2
2	x2		16	120	14X2
3	x3		10	-	12X2

NOTES:-

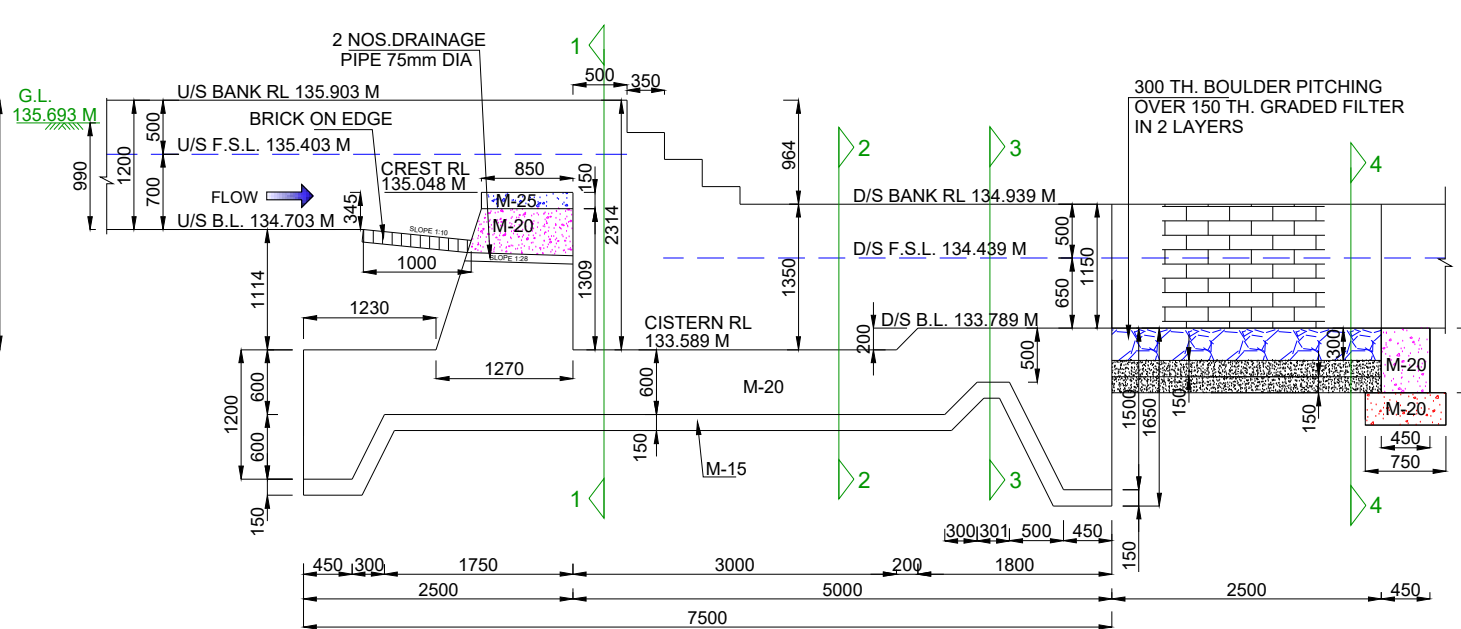
- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
 - THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - ALL CONCRETE WORK SHALL CONFORM TO IS:456 - 2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,
BRIDGE SLAB & PARAPET M-25
 - ALL REINFORCEMENT BARS SHALL BE OF HIGH YIELD STRENGTH DEFORMED BARS (Fe 415) COMFORMING I.S. 1786.
 - MIN. CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 40 MM OR UNLESS OTHERWISE SPECIFIED.
 - 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.
 - BENDING OF REINF. BARS SHALL CONFORM TO I.S. 2502.
 - REINF. BARS SHALL BE CUT AND ADJUSTED TO ACCOMODATE DRAINAGE SPOUT.
 - 75 MM THK. WEARING COAT IN M-25 CC SHALL BE PROVIDED.
 - APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
 - TARFELT BEARING SHALL BE PROVIDED UNDER SLAB AT SUPPORT.
 - THE REINFORCEMENT OF CRASH BARRIER SHALL BE INCORPORATED BEFORE CASTING OF THE DECK SLAB.
 - 8 MM DIA BAR @ 200 C/C IN BOTH DIRECTION SHALL BE PROVIDED IN WEARING COAT AT MIDDLE DEPTH.
 - WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.
 - THE DEVELOPMENT LENGTH OF BARS ARE GIVEN BELOW:
DEVELOPMENT LENGTH FULLY STRESSED DEFORMED BARS ($f_y=500\text{N/mm}^2$) (IS 456 CLAUSE 26.2.1)
- | TENSION BARS | | | | COMPRESSION BARS | | | |
|-------------------|--------|--------|--------|-------------------|--------|--------|--------|
| GRADE OF CONCRETE | | | | 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 |
- THE DEVELOPMENT LENGTHS GIVEN ABOVE ARE FOR A STRESS OF $0.87 f_y$ IN THE BAR
 - THE DEVELOPMENT LENGTH INCLUDES ANCHORAGE VALUES OF HOOKS IN TENSION REINFORCEMENT.
 - 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 FOLLOWS WITH MAXIMUM ALLOWABLE LAPPING (p) OF 50 % ONLY (IRC:112 - 2011) CLAUSE: 15.2.5.1)
LAP LENGTH = $\alpha_1 \cdot l_{bnet}$
WHERE, α_1 = 1.0 for $p \leq 25\%$
 α_1 = 1.15 for $25\% \leq p \leq 33\%$
 α_1 = 1.4 for $33\% \leq p \leq 50\%$
 - THE STRAIGHT LENGTH OF THE LAP SHOULD NOT BE LESS THAN 15Ø OR 200 MM (WHICH EVER IS MORE)
 - 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.
 - 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.
 - WHEN BARS OF TWO DIFFERENT DIAMETERS ARE TO BE SPLICED, THE LAP LENGTH SHALL BE CALCULATED ON THE BASIS OF DIAMETER OF SMALLER BAR.



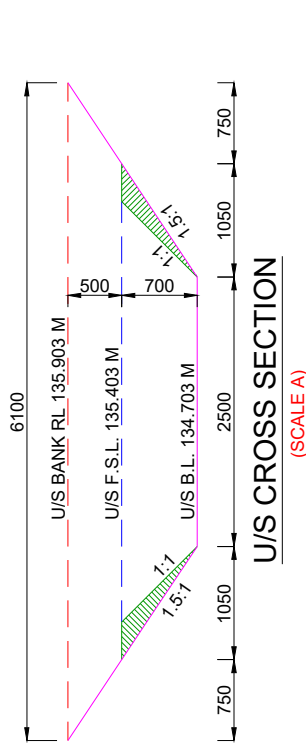
Prepared by :- WAPCOS LTD. 	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
	Drawing Title :-	REINFORCEMENT DETAILS OF SLAB FOR FALL CUM BRG. AT KM. 23.300 OF KARMA DY. (OFFTAKE RD - 56+857 KM. (L), NORTH KOEL RIGHT MAIN CANAL)	
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16/ FALL	
			2 of 2



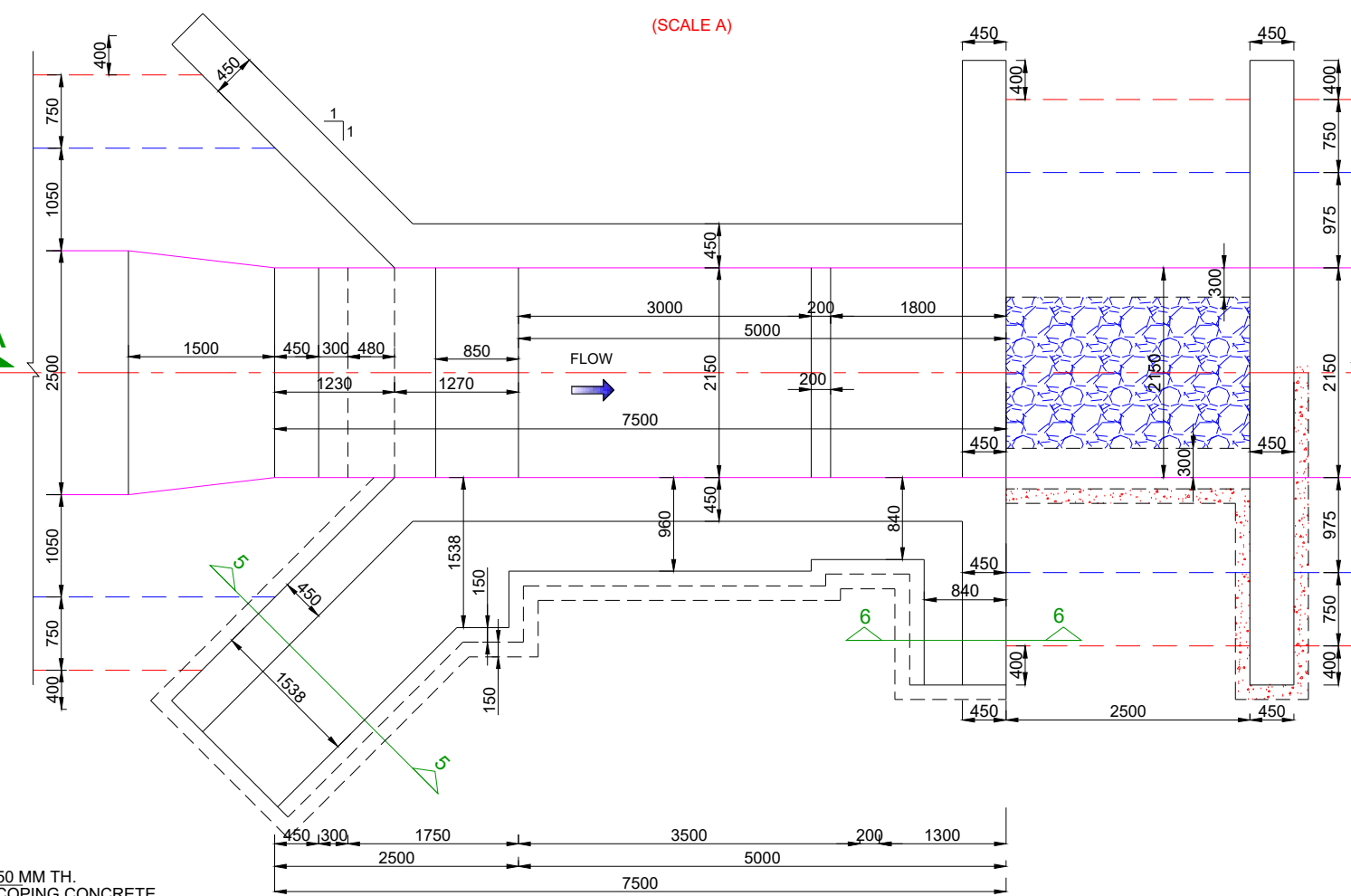
SECTION AT 5-5
(SCALE A)



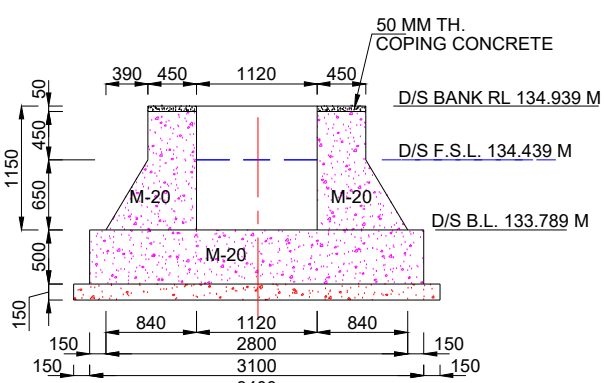
SECTION A-A
(SCALE A)



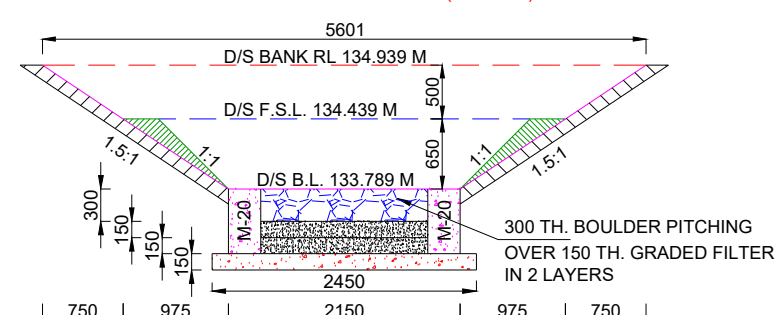
U/S CROSS SECTION
(SCALE A)



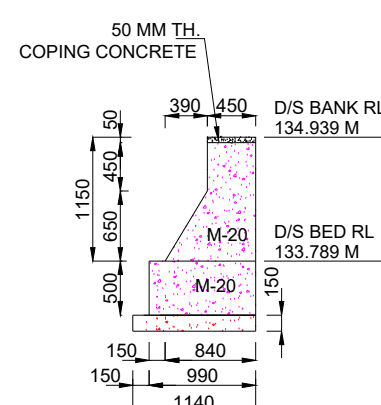
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



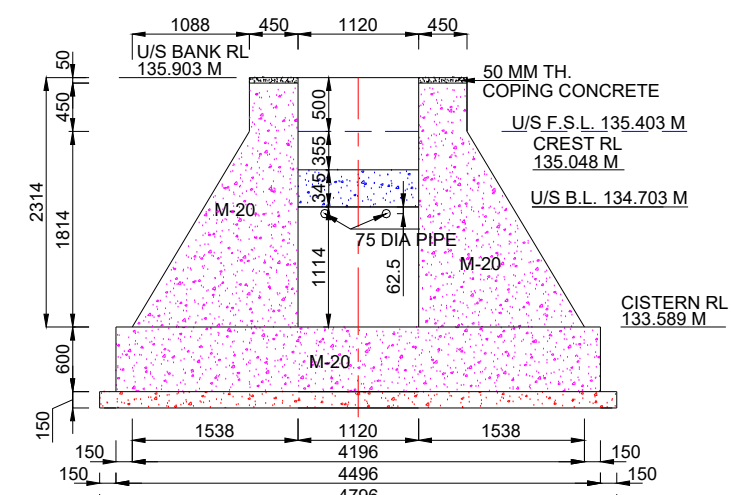
SECTION AT 3-3
(SCALE A)



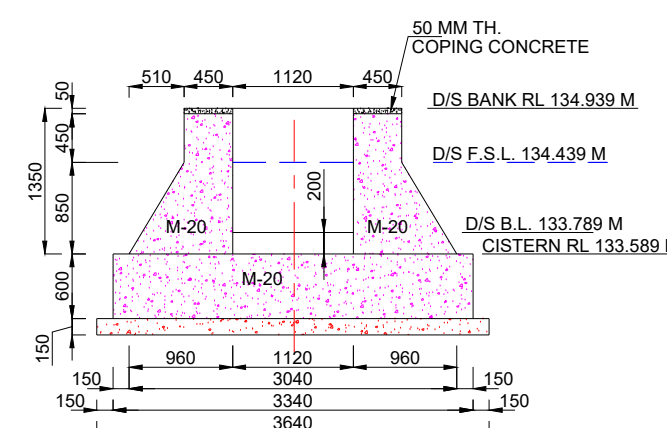
SECTION AT 4-4
(SCALE A)



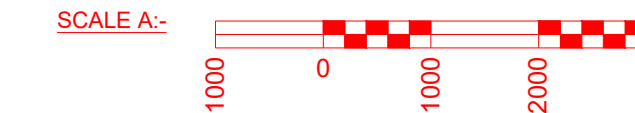
SECTION AT 6-6
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(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

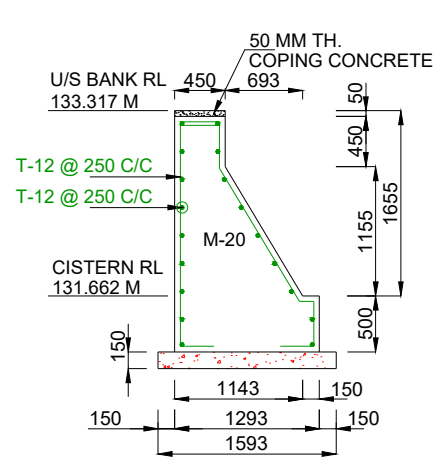
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.770	0.770	CUMEC
VERTICAL DROP	0.914	0.914	METRE
FULL SUPPLY DEPTH	0.700	0.650	METRE
BED WIDTH	2.500	2.150	METRE
BED SLOPE	1 : 4000	1 : 4000	

Prepared by :-

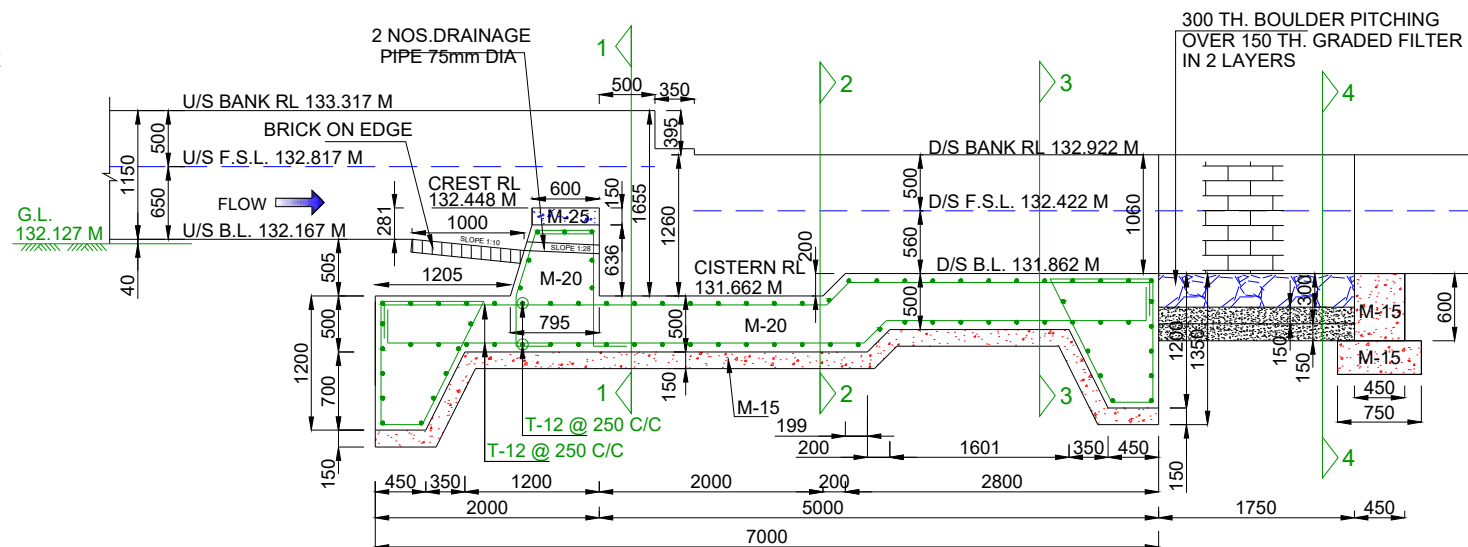
WAPCOS LTD.



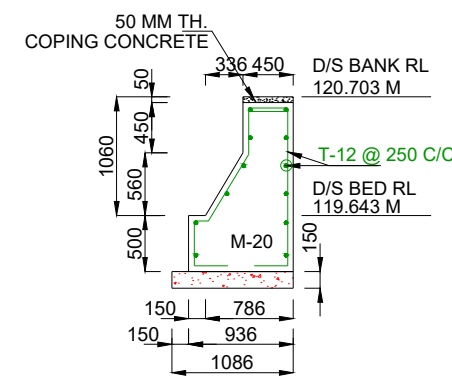
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	SHARDA TYPE 0.914 M HT. FALL AT KM. 3.190 OF CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL 1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

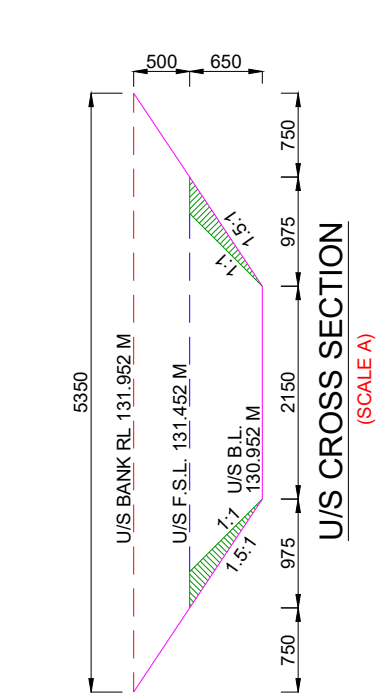
NOTES:-

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,

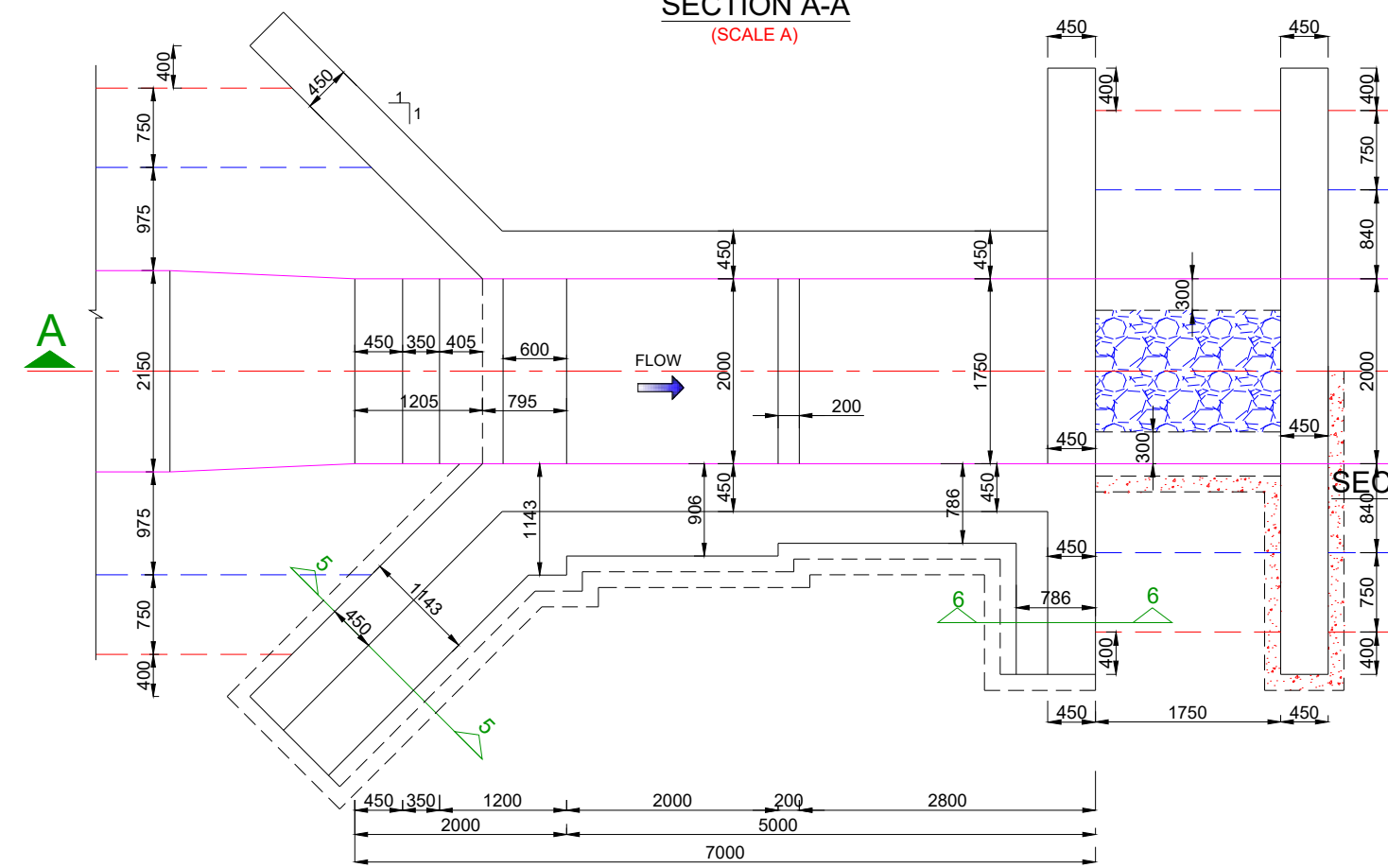
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

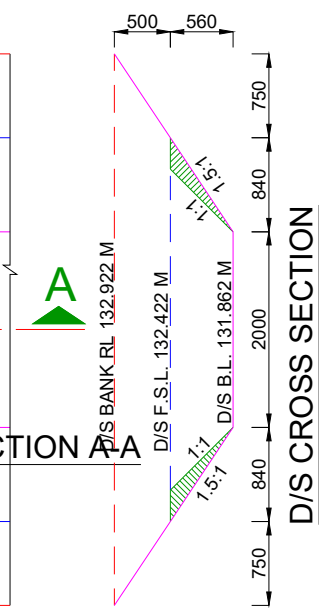
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.430	0.260	CUMEC
VERTICAL DROP	0.305	0.305	METRE
FULL SUPPLY DEPTH	0.650	0.560	METRE
BED WIDTH	2.150	2.000	METRE
BED SLOPE	1 : 4000	1 : 4000	



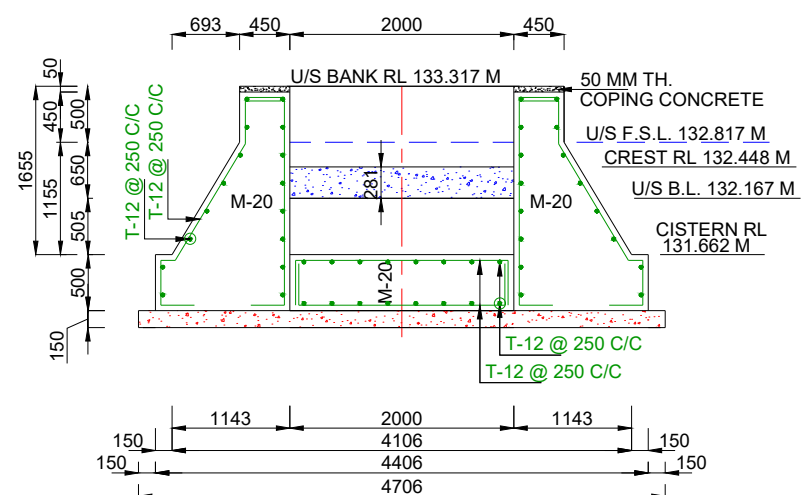
U/S CROSS SECTION
(SCALE A)



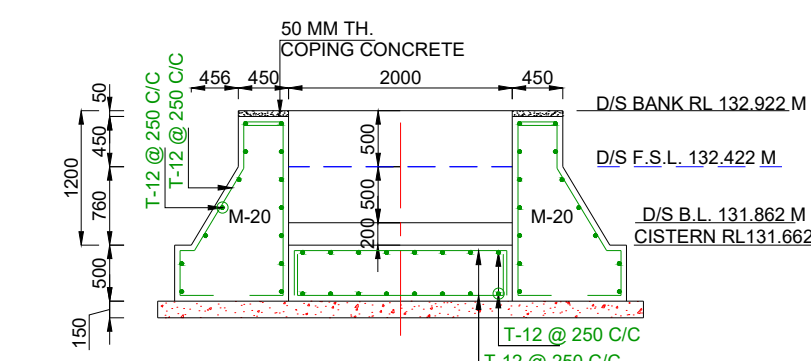
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



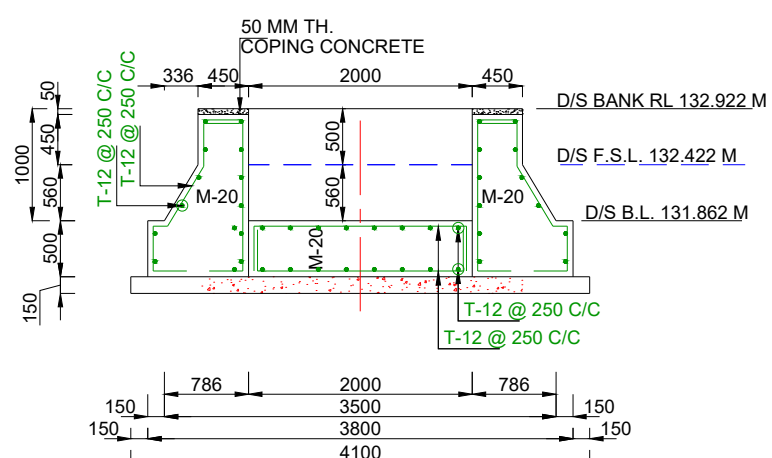
D/S CROSS SECTION
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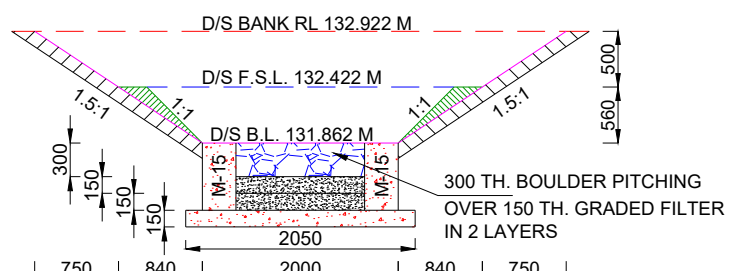
SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)

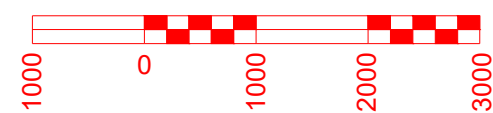


SECTION AT 3-3
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-

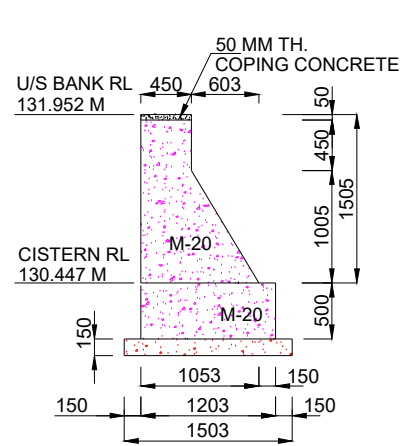


Prepared by :-

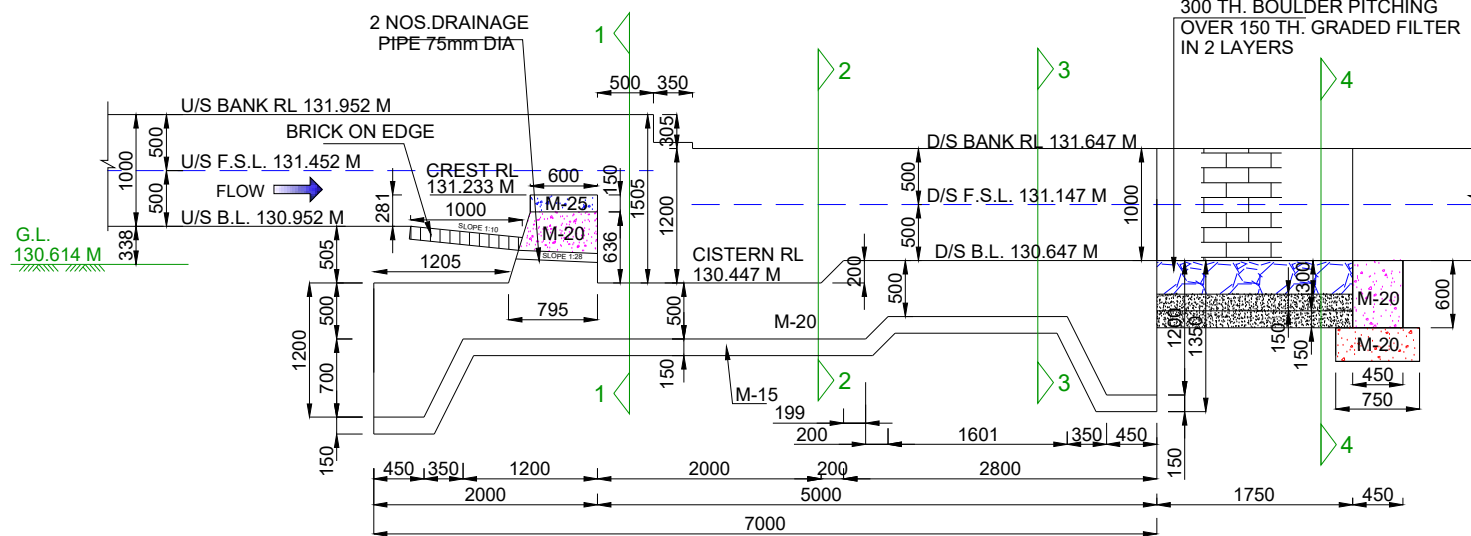
WAPCOS LTD.



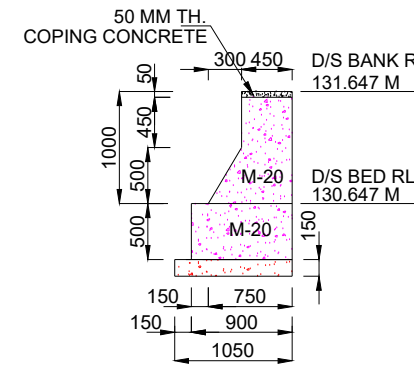
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	SHARDA TYPE 0.305 M HT. FALL AT KM. 4.800 OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL	1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

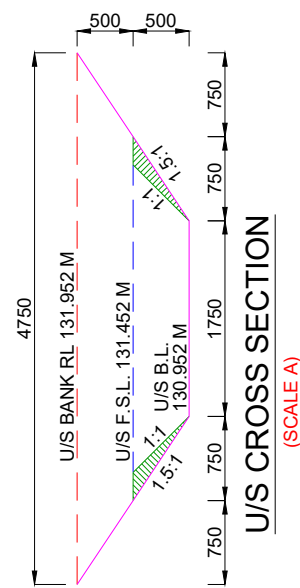
NOTES:-

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,

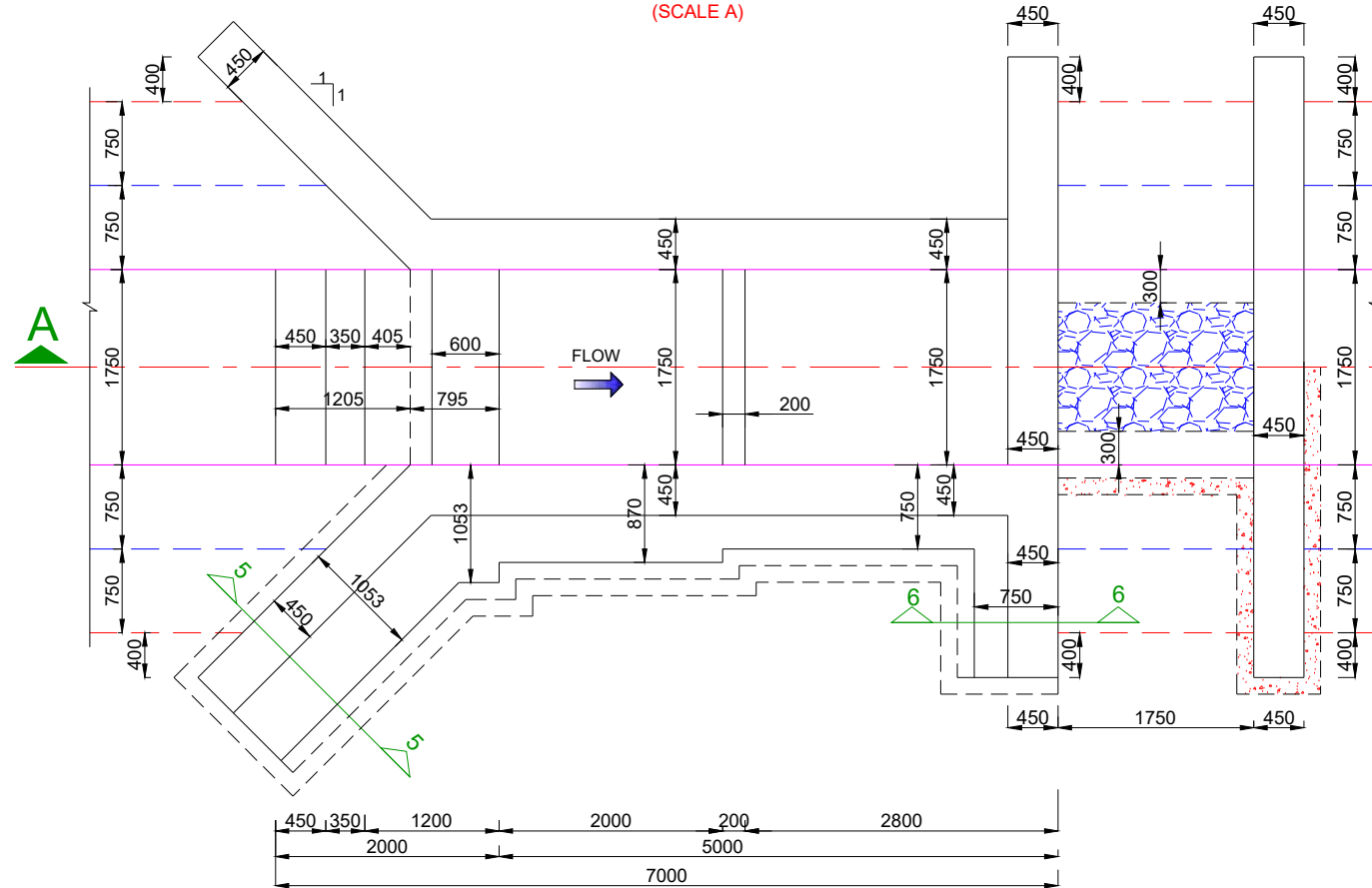
COMPONENT	GRADE
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

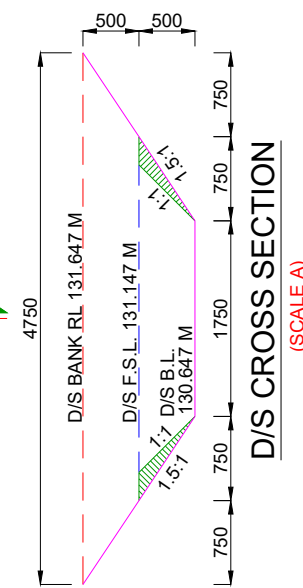
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.310	0.310	CUMEC
VERTICAL DROP	0.305	0.305	METRE
FULL SUPPLY DEPTH	0.500	0.500	METRE
BED WIDTH	1.750	1.750	METRE
BED SLOPE	1 : 4000	1 : 4000	



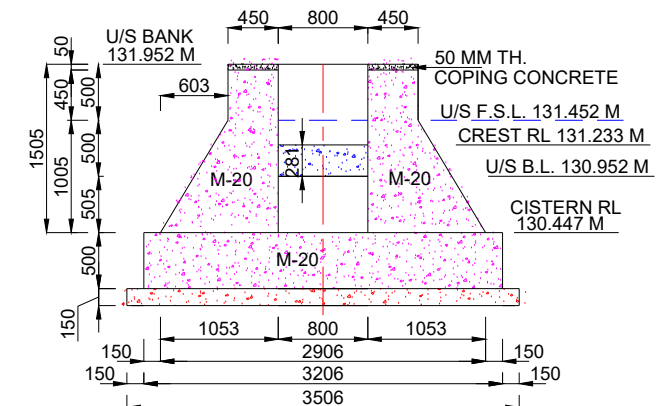
U/S CROSS SECTION
(SCALE A)



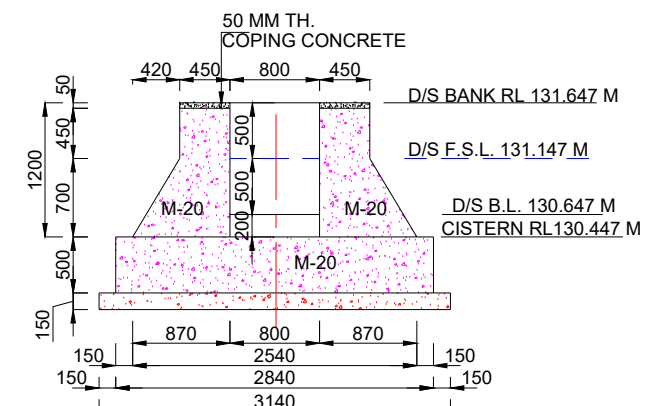
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



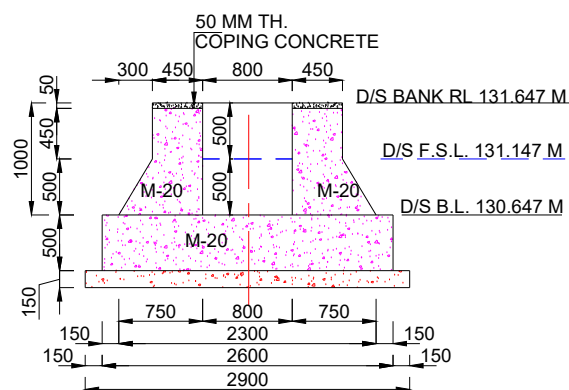
D/S CROSS SECTION
(SCALE A)



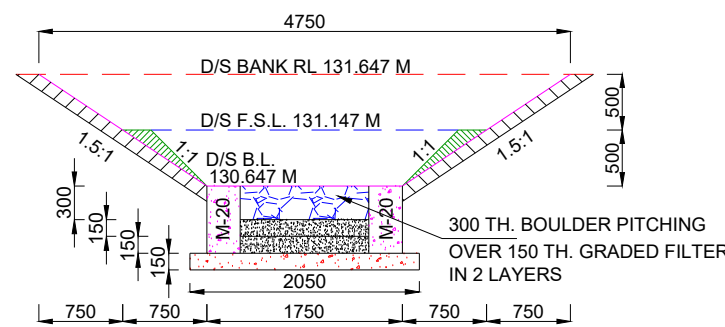
SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)

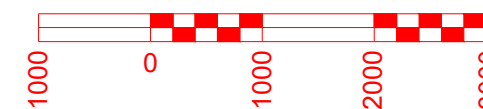


SECTION AT 3-3
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

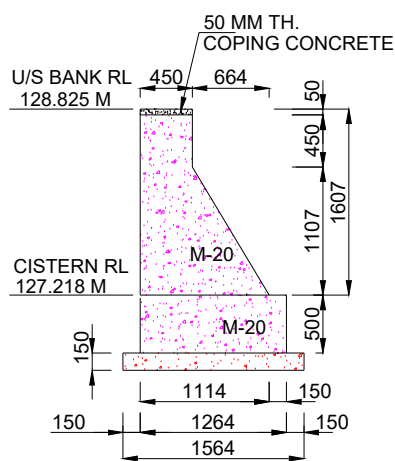
Drawing Title :-

SHARDA TYPE 0.305 M HT. FALL AT KM. 6.000 OF CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL

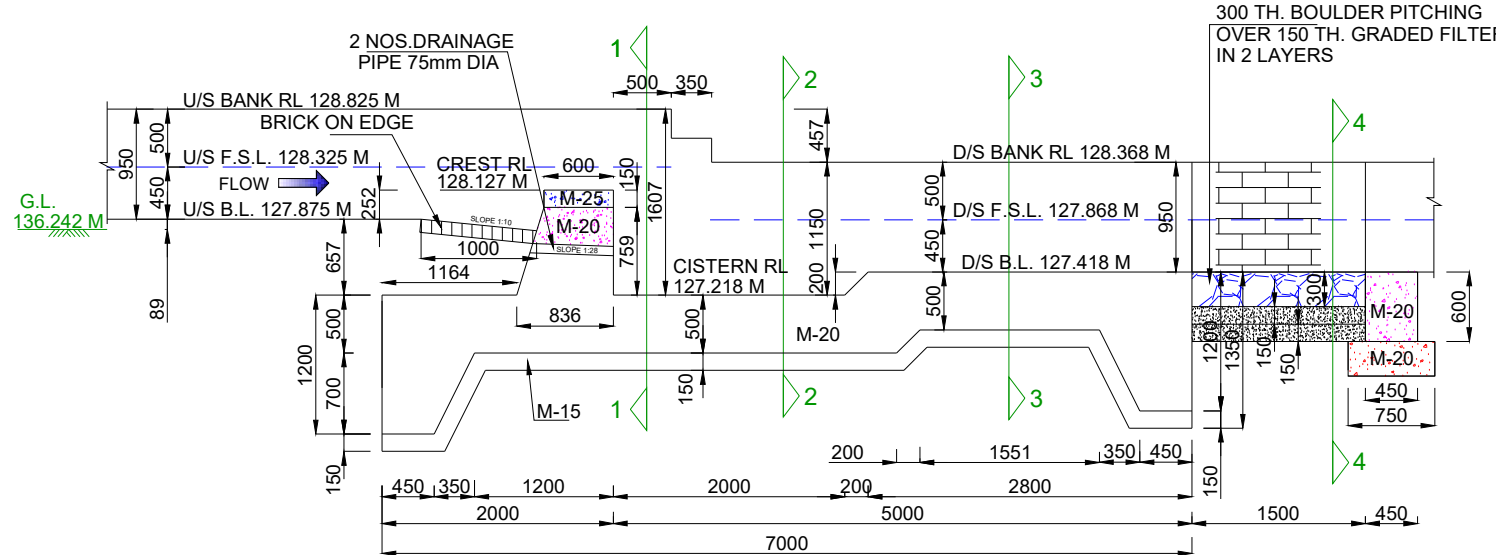
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL

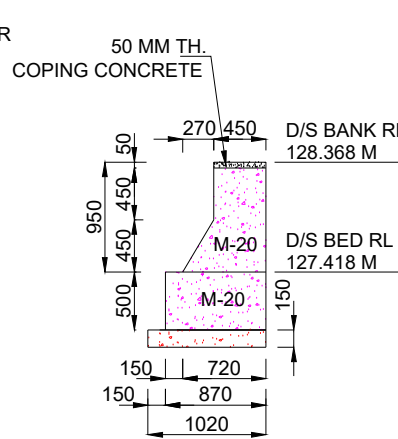
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

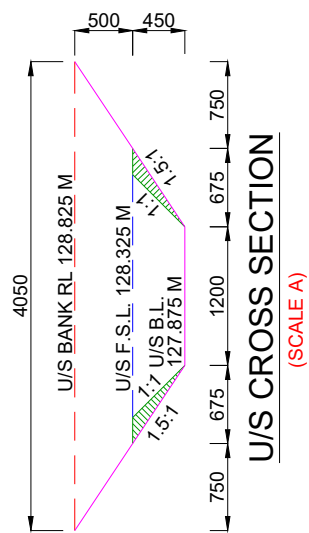
NOTES:-

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,

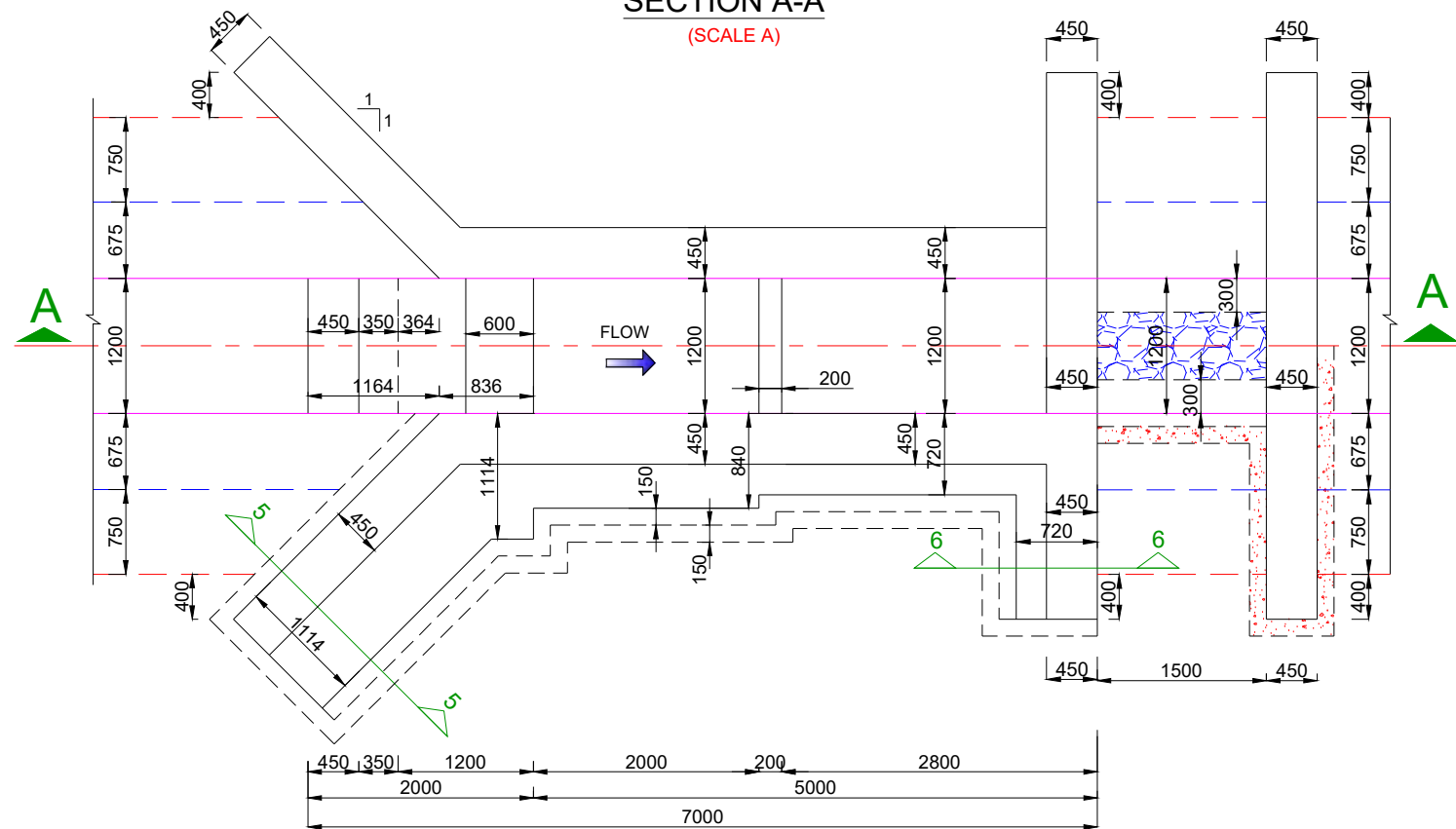
COMPONENT	GRADE
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

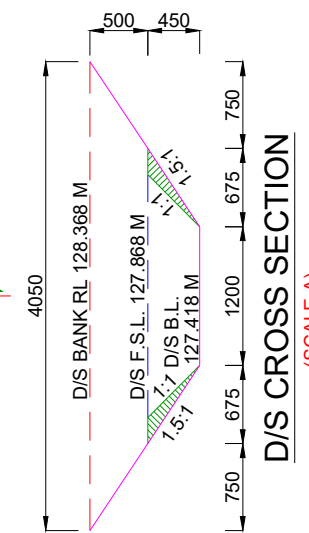
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.180	0.180	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.450	0.450	METRE
BED WIDTH	1.200	1.200	METRE
BED SLOPE	1 : 4000	1 : 4000	



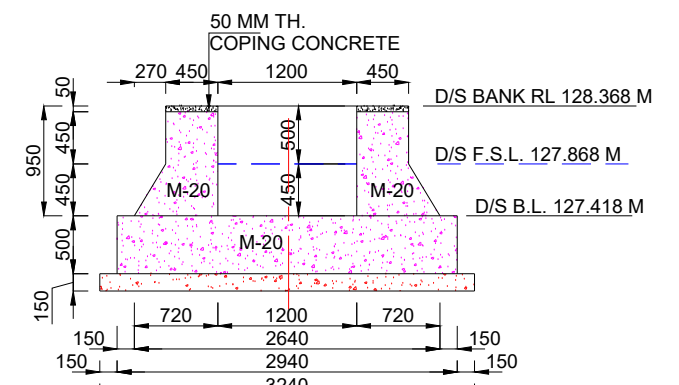
U/S CROSS SECTION
(SCALE A)



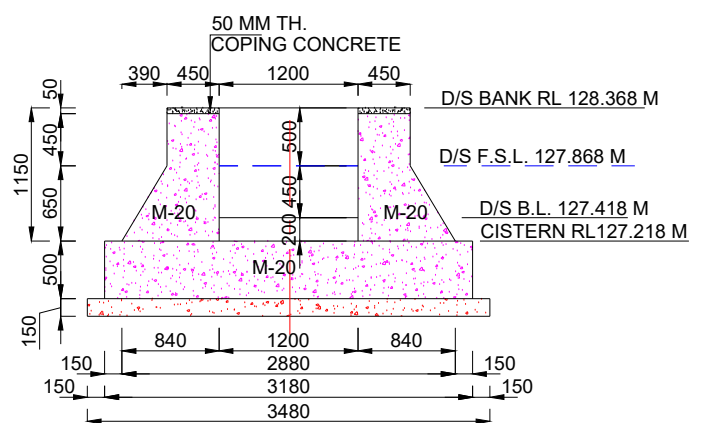
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



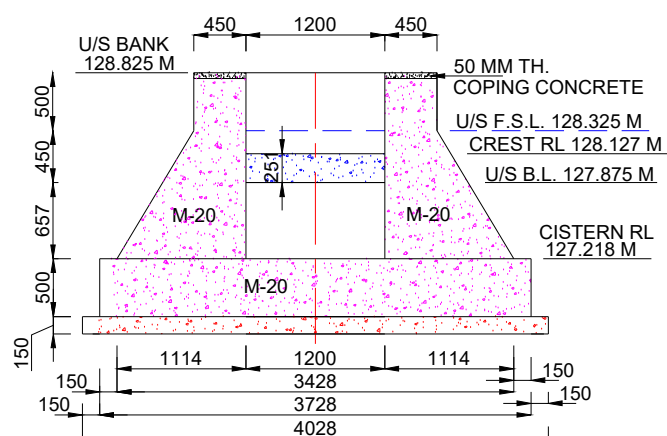
D/S CROSS SECTION
(SCALE A)



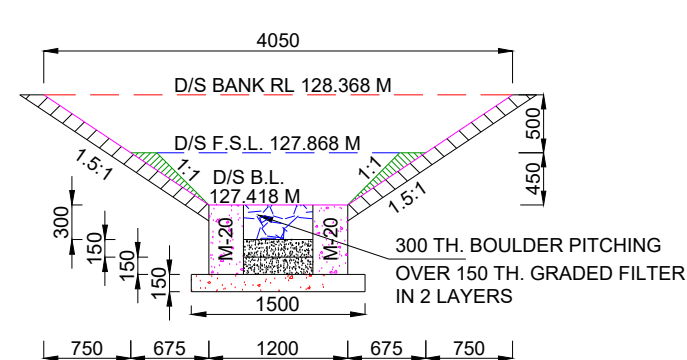
SECTION AT 3-3
(SCALE A)



SECTION AT 2-2
(SCALE A)

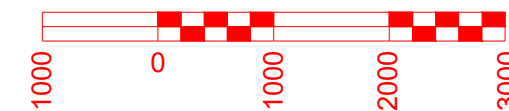


SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

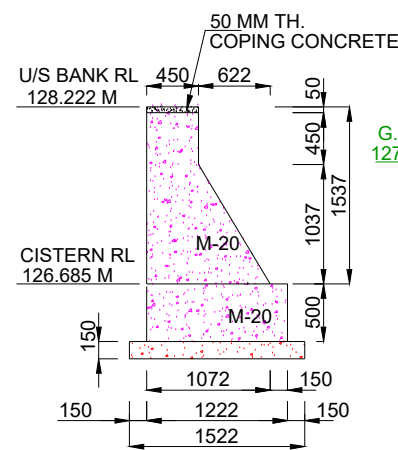
Drawing Title :-

SHARDA TYPE 0.457 M HT. FALL AT KM. 6.750 OF CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL

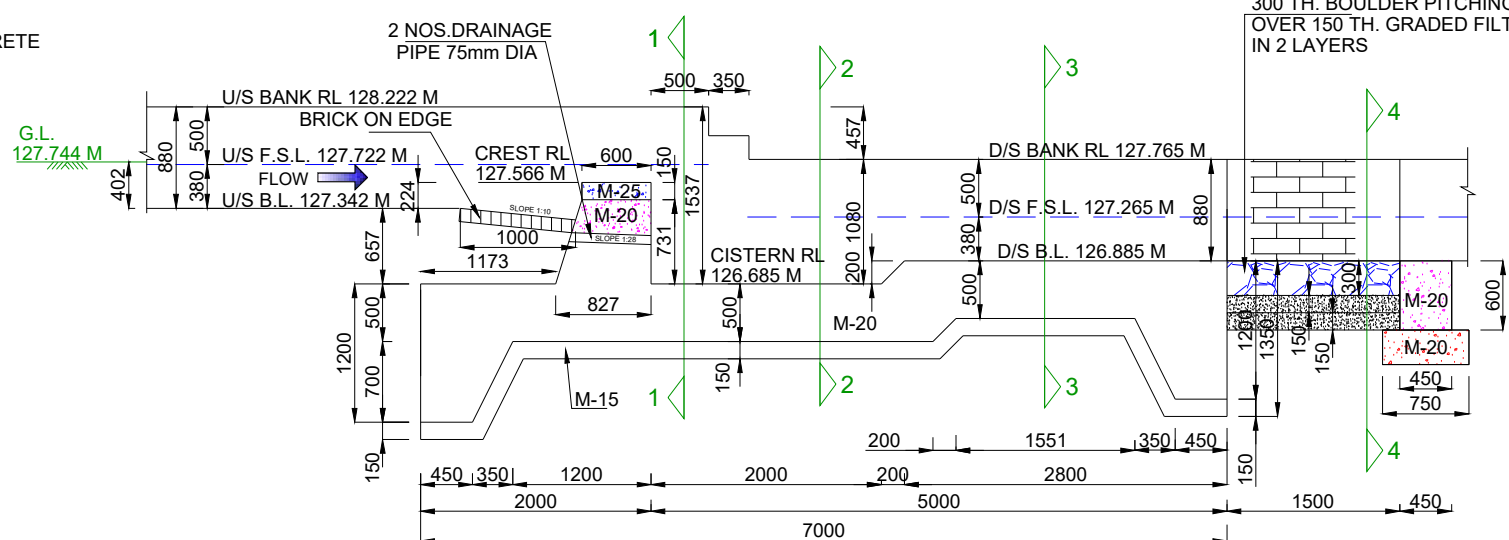
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL

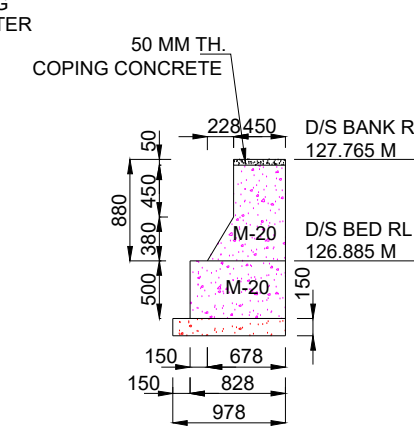
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

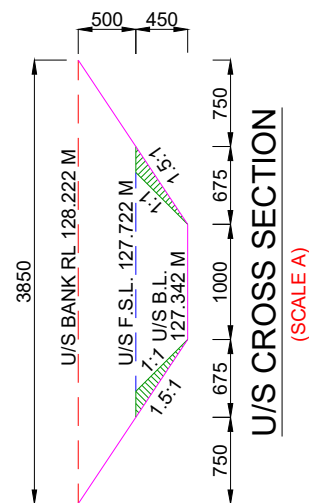
NOTES:-

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,

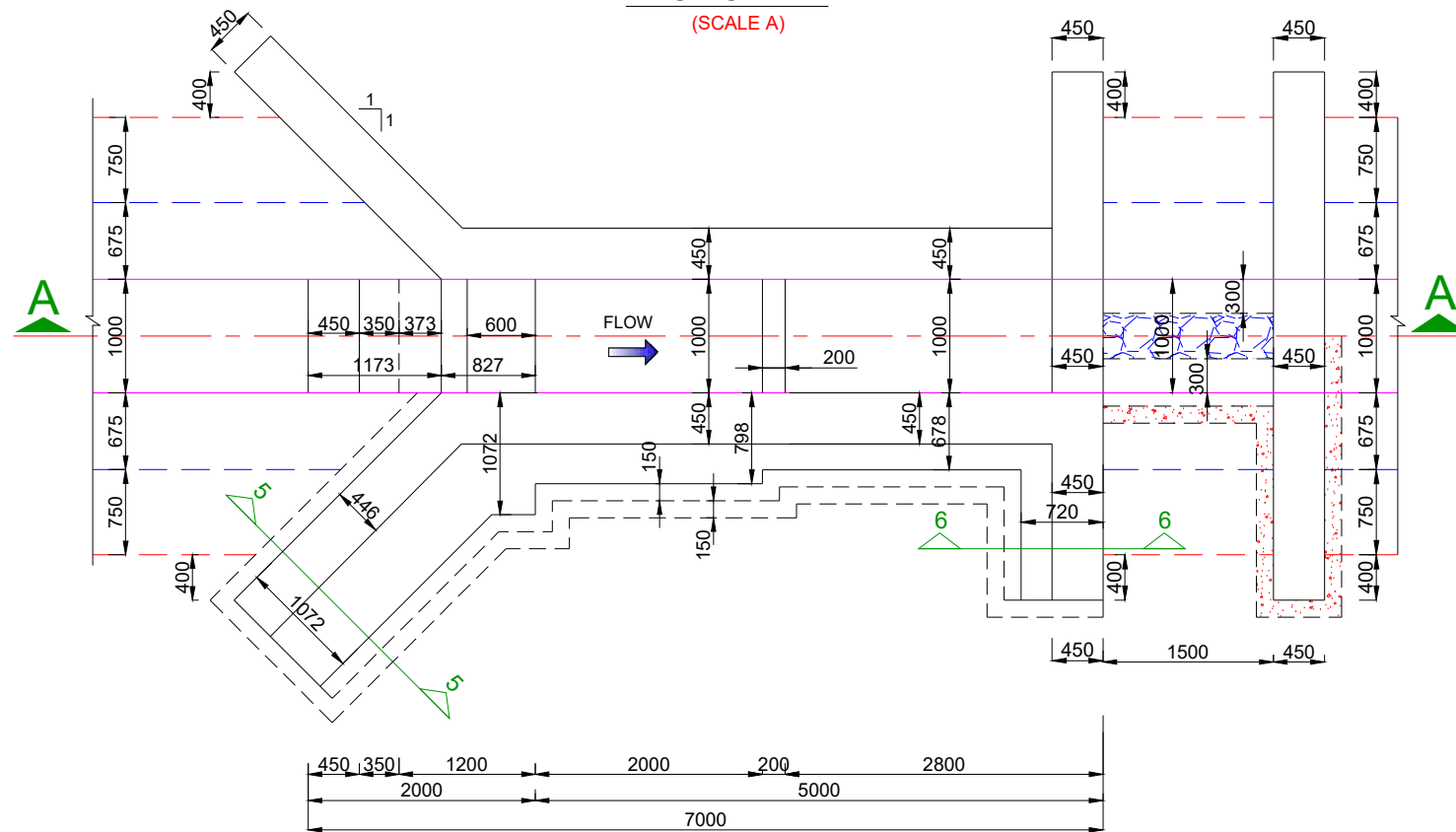
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

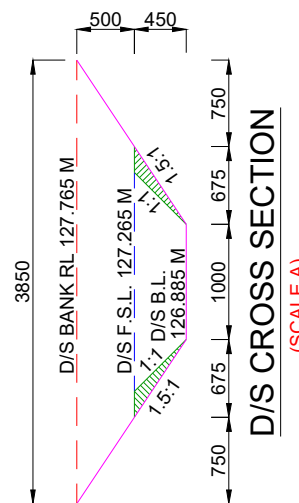
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.100	0.100	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.380	0.380	METRE
BED WIDTH	1.000	1.000	METRE
BED SLOPE	1: 3900	1: 3900	



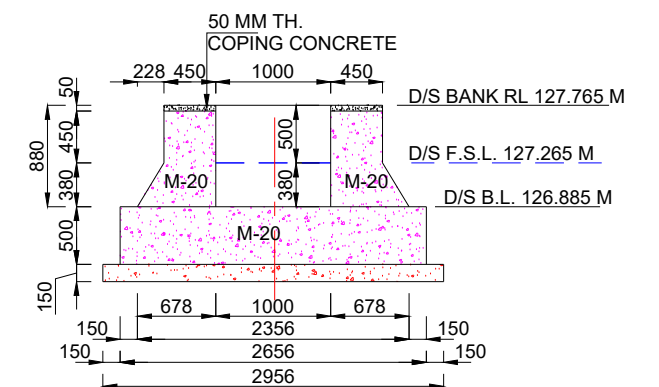
U/S CROSS SECTION
(SCALE A)



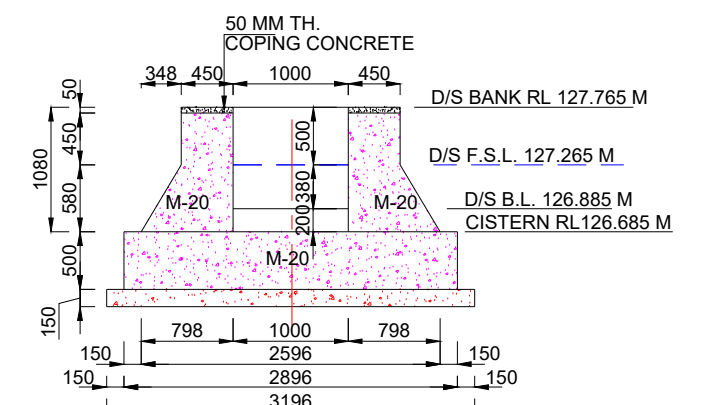
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



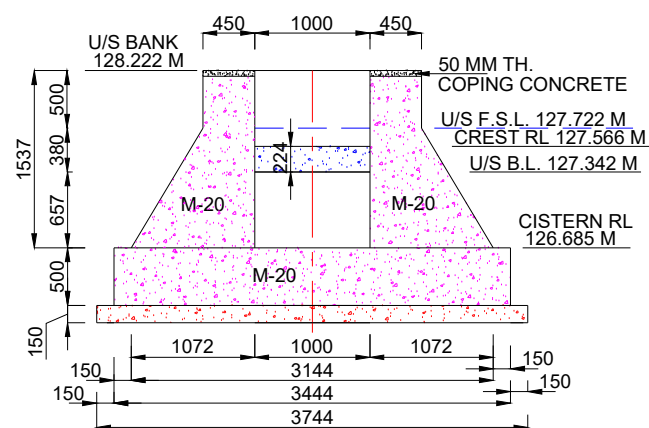
D/S CROSS SECTION
(SCALE A)



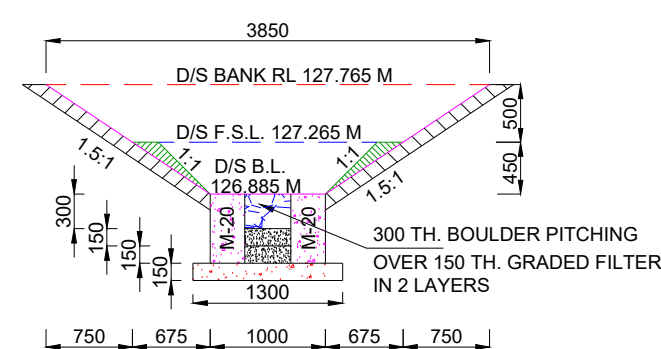
SECTION AT 3-3
(SCALE A)



SECTION AT 2-2
(SCALE A)

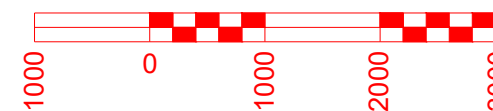


SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-

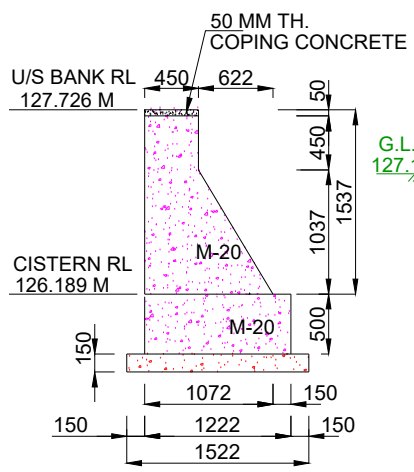


Prepared by :-

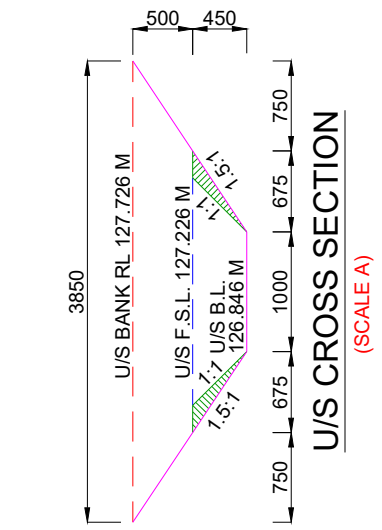
WAPCOS LTD.



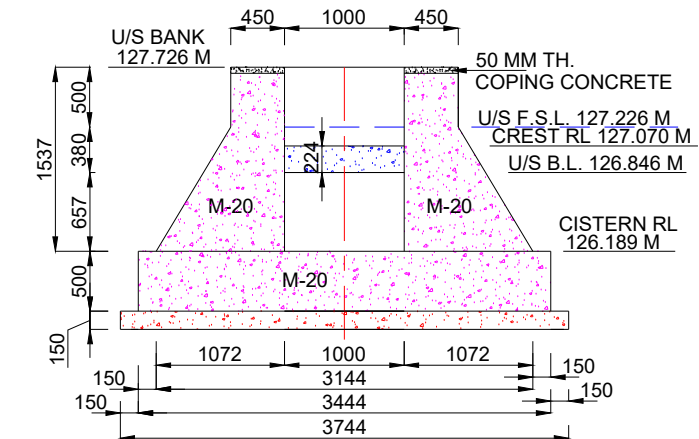
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 7.050 OF CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL	1 of 1



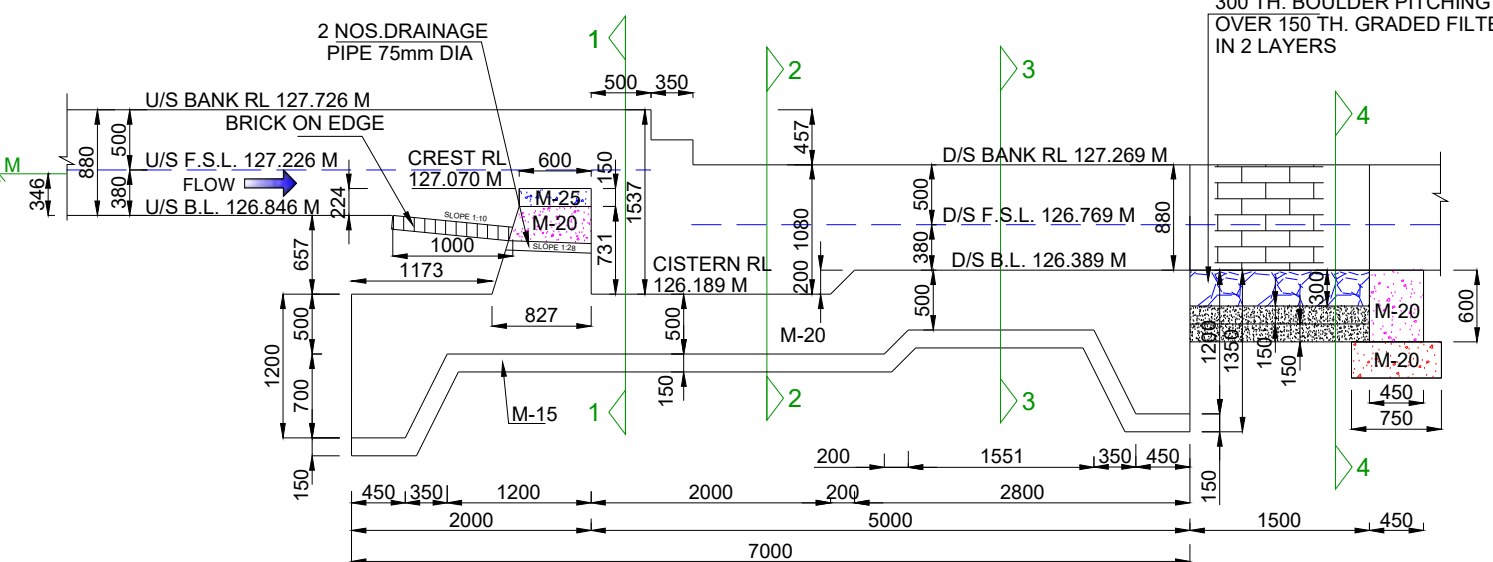
SECTION AT 5-5
(SCALE A)



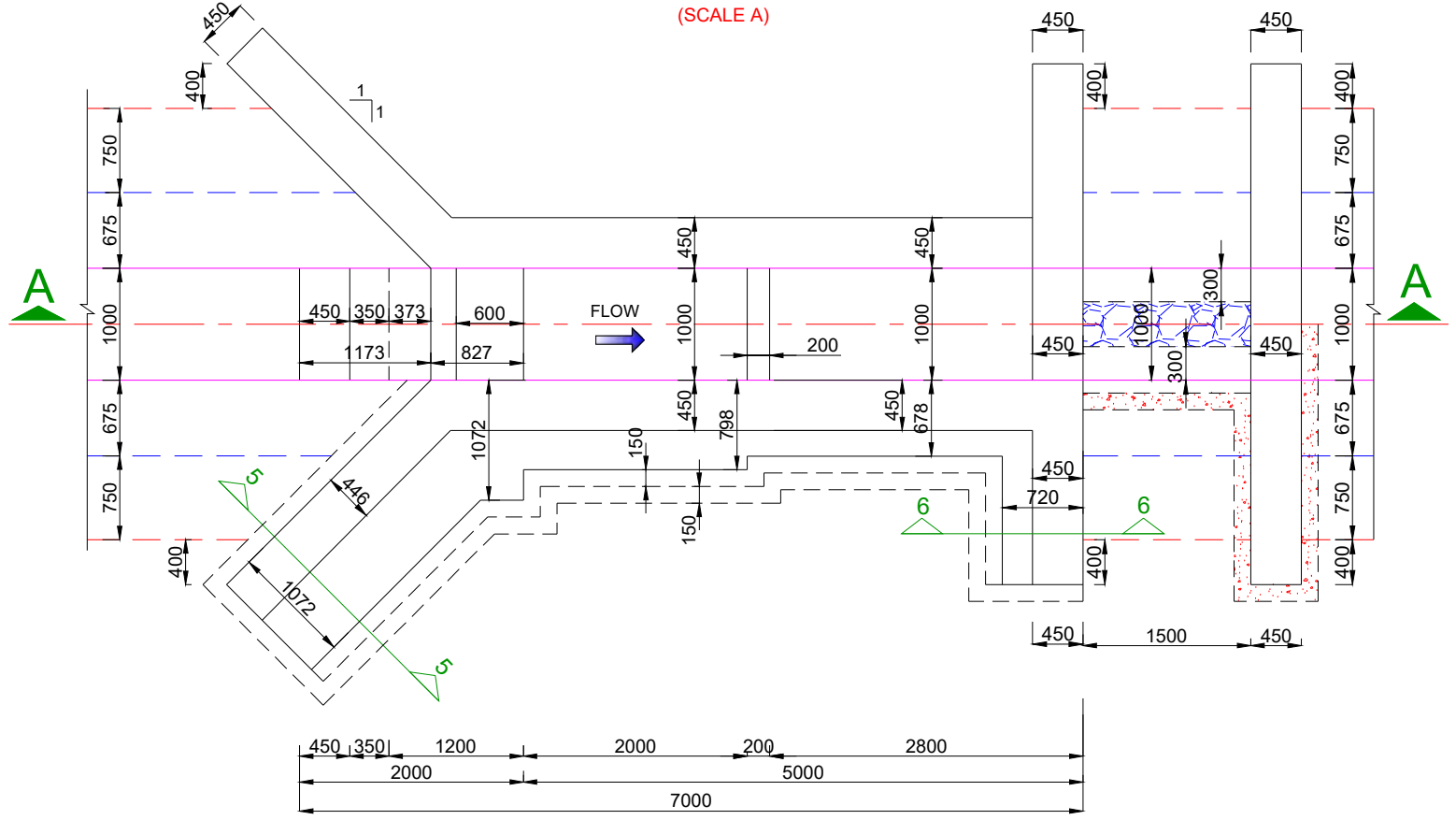
U/S CROSS SECTION
(SCALE A)



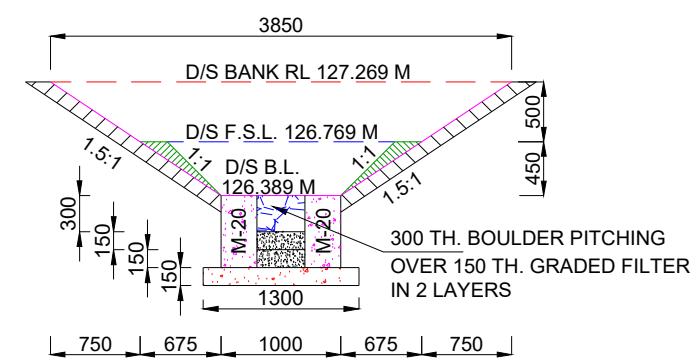
SECTION AT 1-1
(SCALE A)



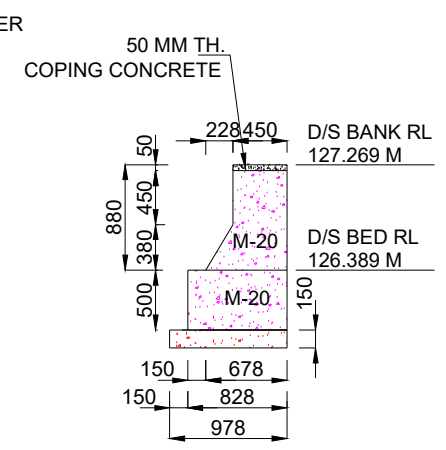
SECTION A-A
(SCALE A)



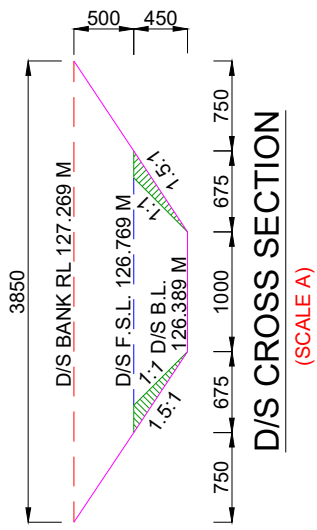
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



SECTION AT 4-4
(SCALE A)



SECTION AT 6-6
(SCALE A)



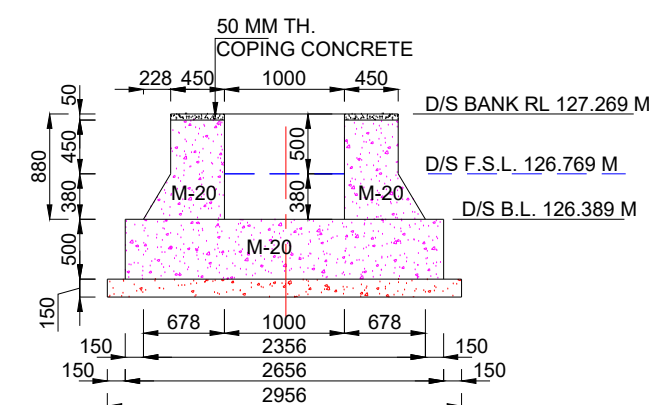
D/S CROSS SECTION
(SCALE A)

- 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,

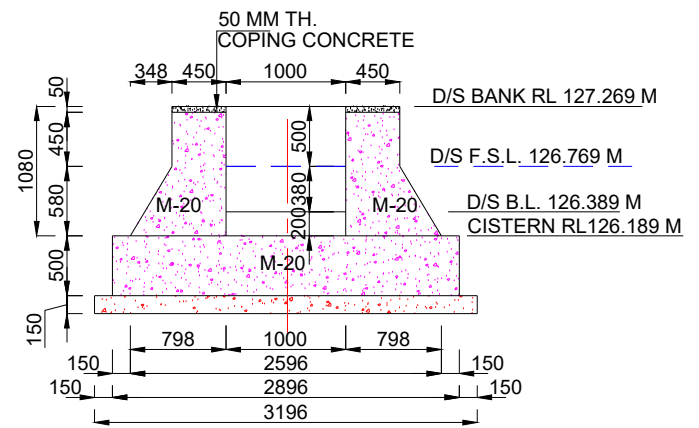
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
 4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
 5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

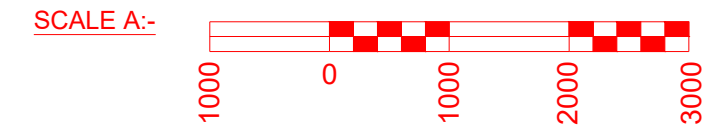
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.100	0.100	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.380	0.380	METRE
BED WIDTH	1.000	1.000	METRE
BED SLOPE	1: 3900	1: 3900	



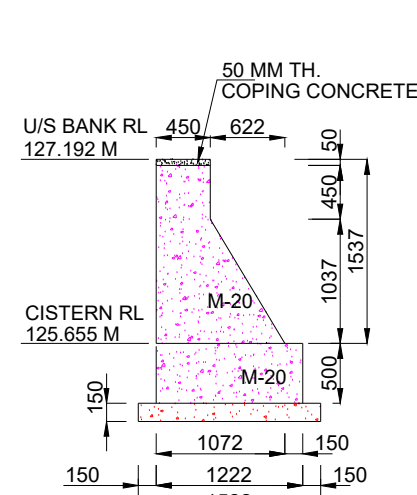
SECTION AT 3-3
(SCALE A)



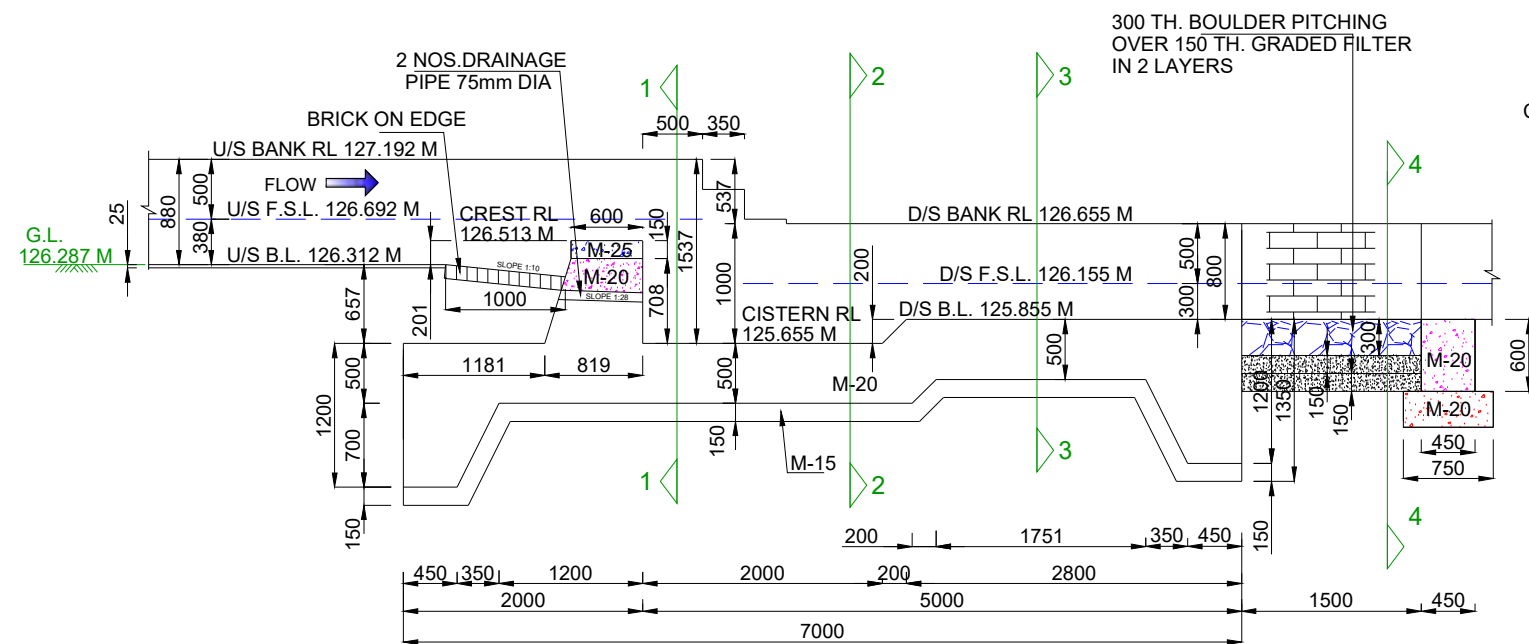
SECTION AT 2-2
(SCALE A)



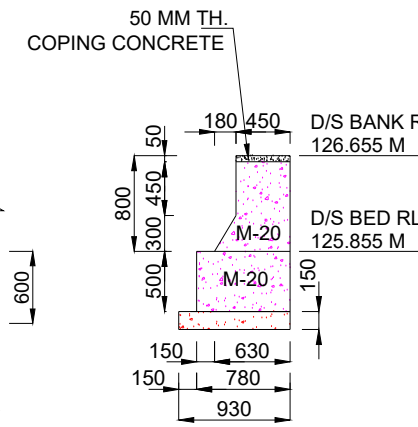
Prepared by :- WAPCOS LTD. 	Project Title :- NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :- SHARDA TYPE 0.457 M HT. FALL AT KM. 7.200 OF CHAURAH MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL
	Drawing No. :- WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL 1 of 1



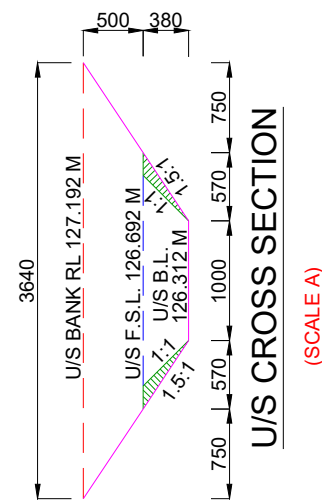
SECTION AT 5-5
(SCALE A)



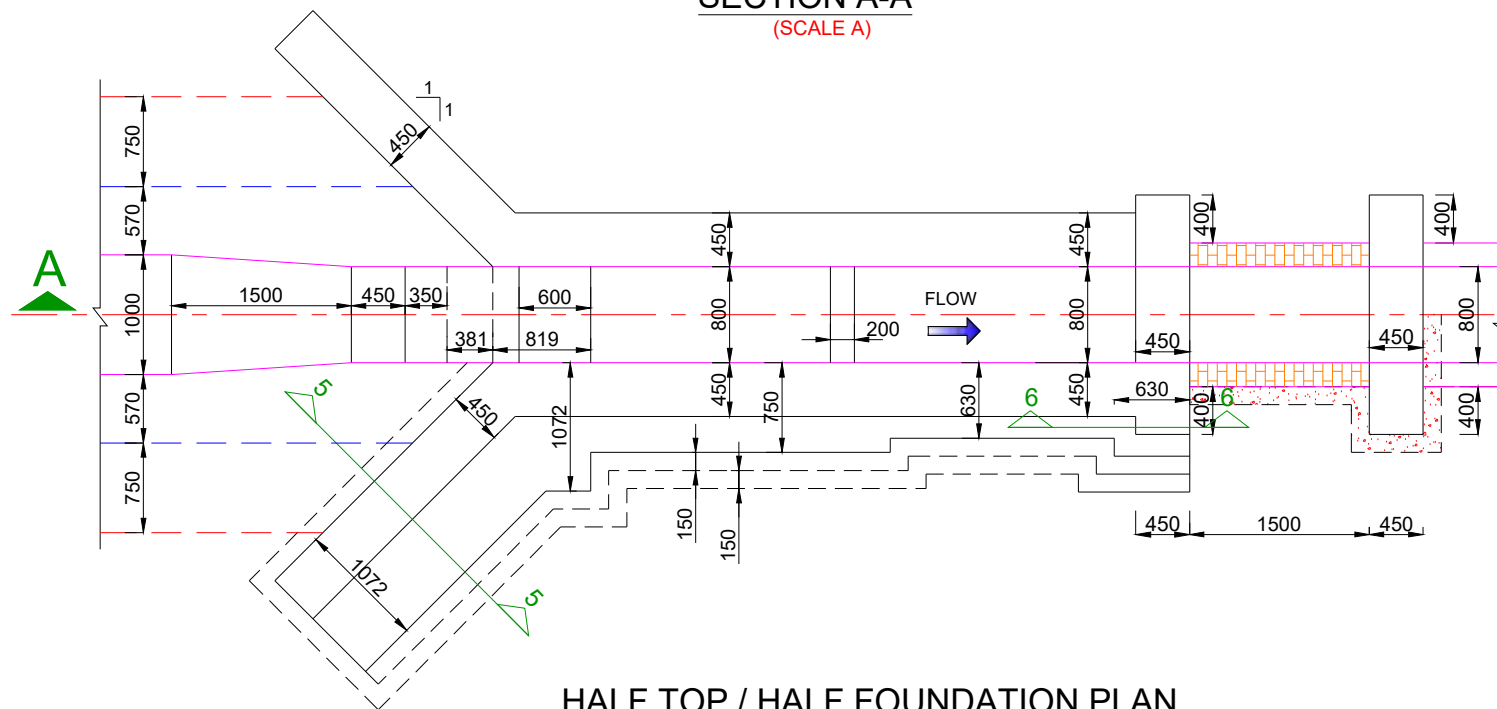
SECTION A-A
(SCALE A)



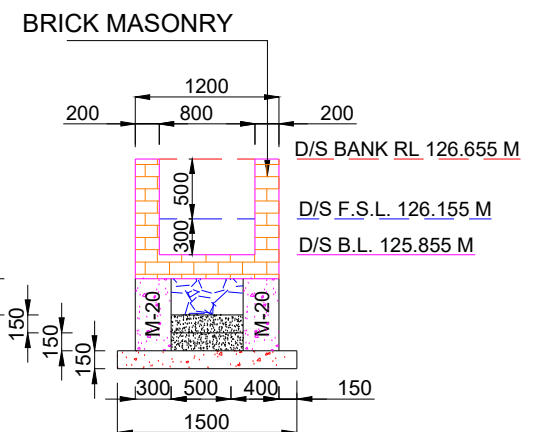
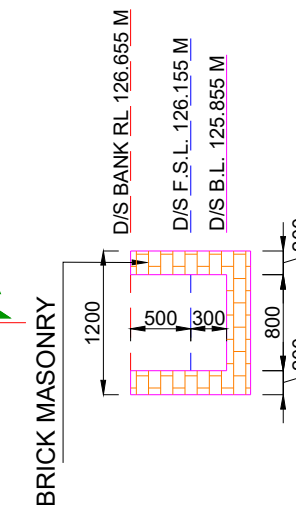
SECTION AT 6-6
(SCALE A)



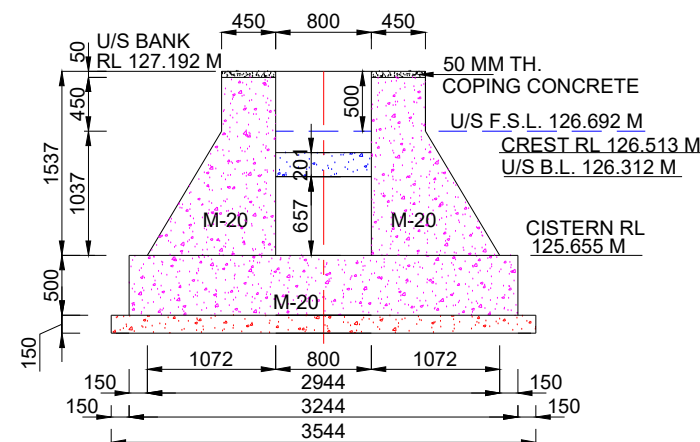
U/S CROSS SECTION
(SCALE A)



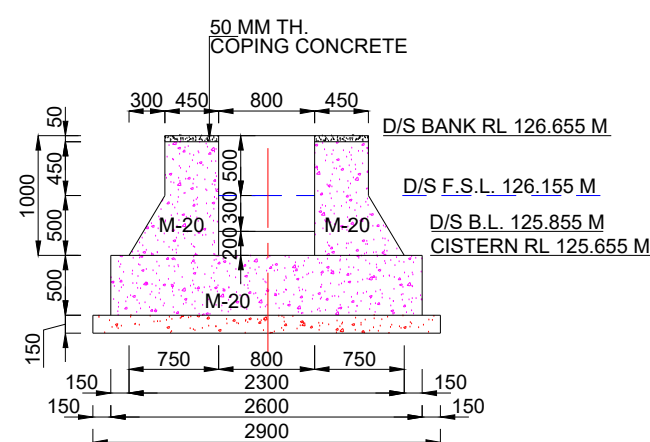
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



SECTION AT 4-4
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 2-2
(SCALE A)

SCALE A:-



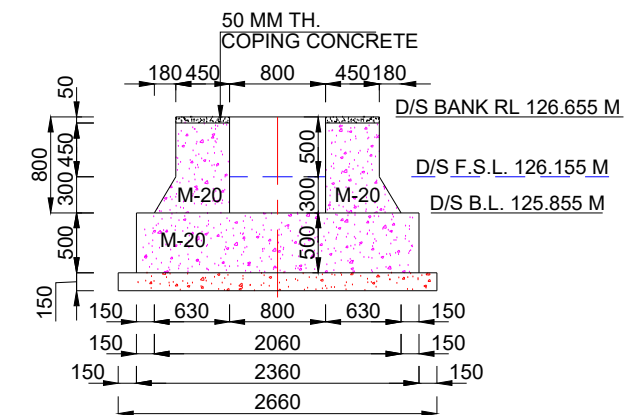
NOTES:-

- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
- THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

COMPONENT	GRADE
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
- ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
- 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	0.100	0.100	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.380	0.300	METRE
BED WIDTH	1.000	0.800	METRE
BED SLOPE	1: 3900	1: 3500	



SECTION AT 3-3
(SCALE A)

Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

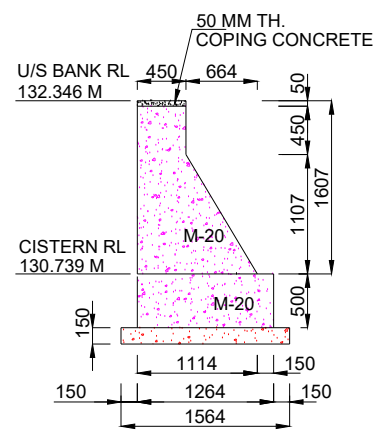
Drawing Title :-

SHARDA TYPE 0.457 M HT. FALL AT KM. 7.500 OF CHAURAHA MR. (OFFTAKE FROM RD - 0+150 KM. (R), KARMA DISTRIBUTARY CANAL

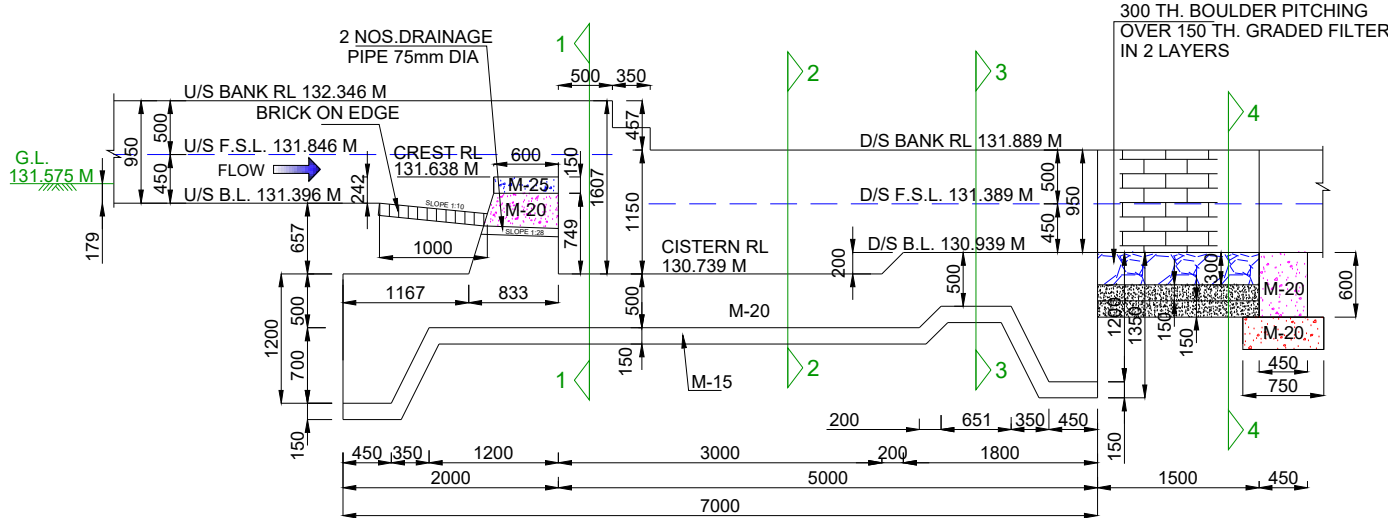
Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-01/ FALL

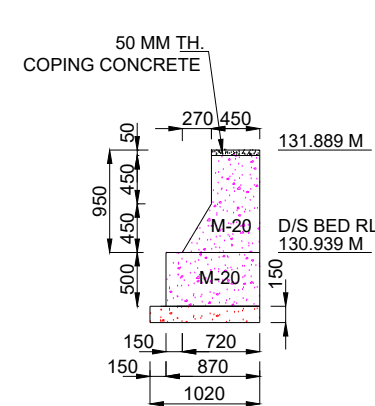
1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

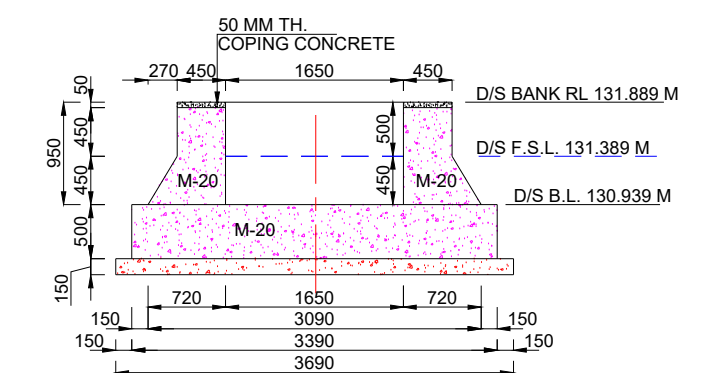
NOTES:-

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,

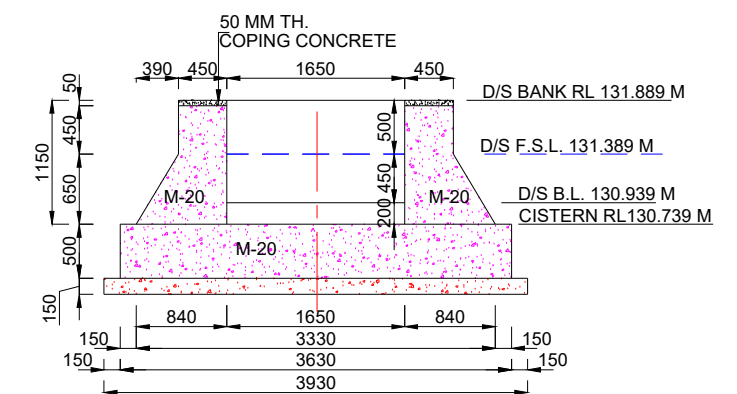
	UNIT
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.270	0.270	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.450	0.450	METRE
BED WIDTH	1.650	1.650	METRE
BED SLOPE	1 : 4000	1 : 4000	

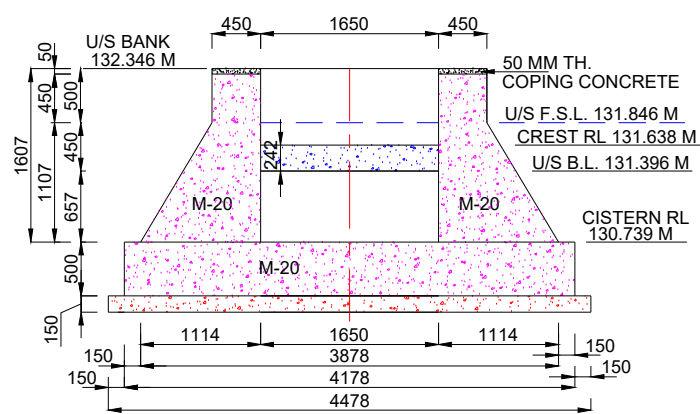


SECTION AT 3-3
(SCALE A)

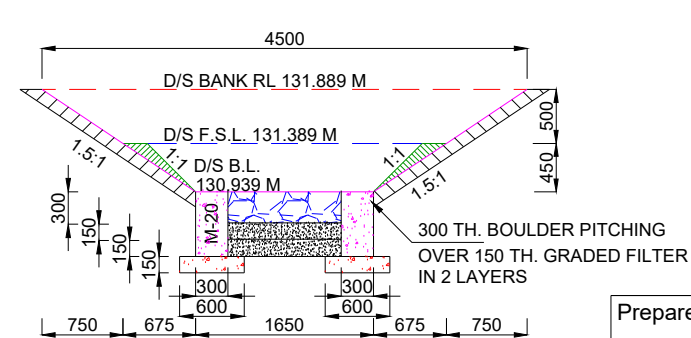


SECTION AT 2-2
(SCALE A)

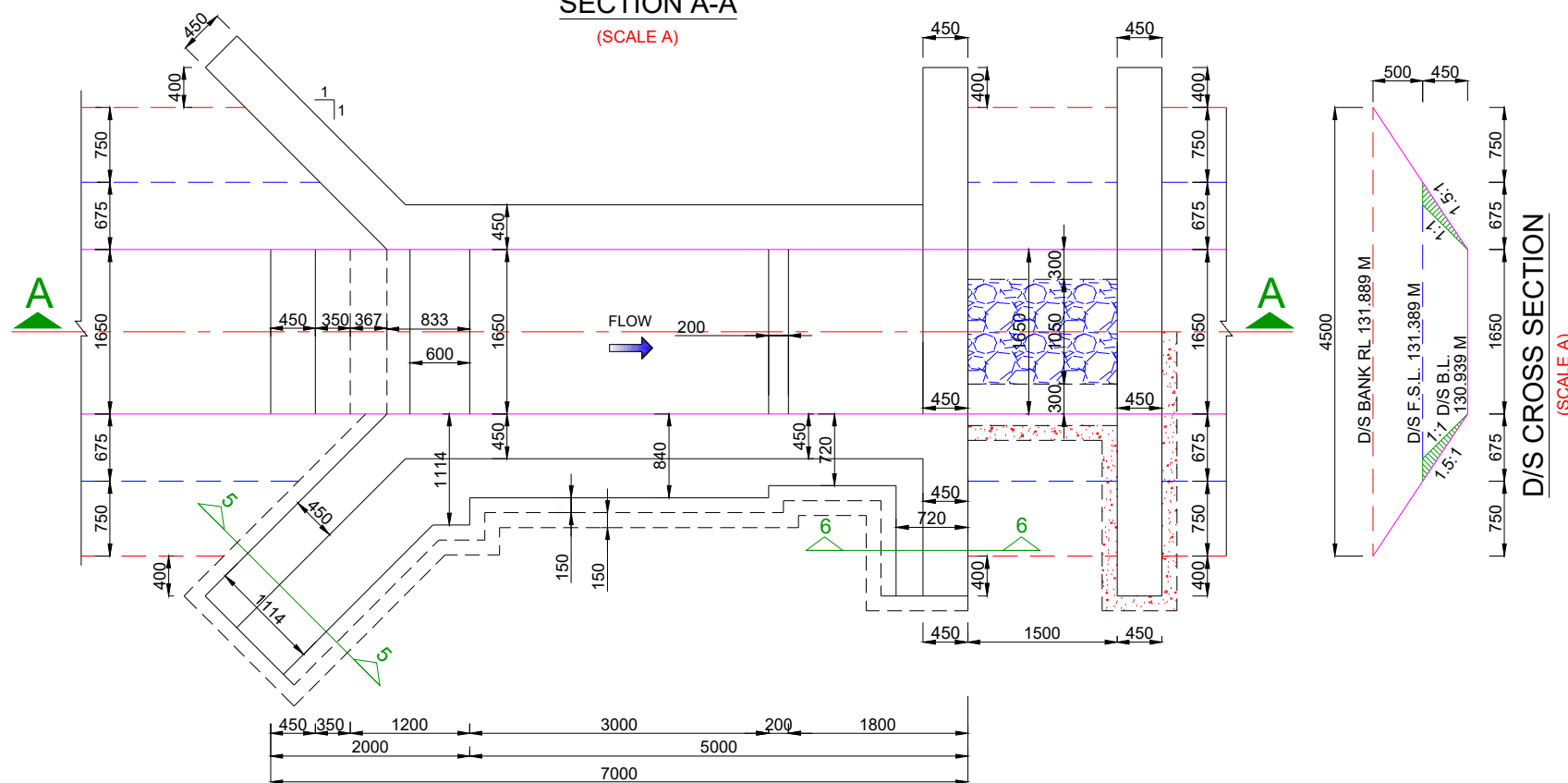
SCALE A:-



SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)



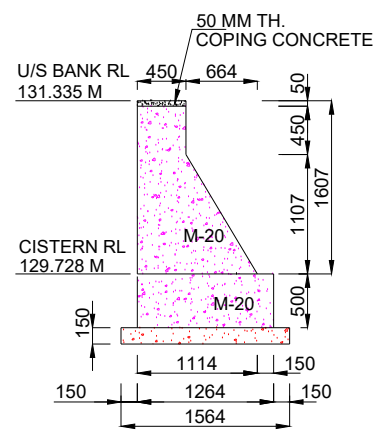
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)

Prepared by :-

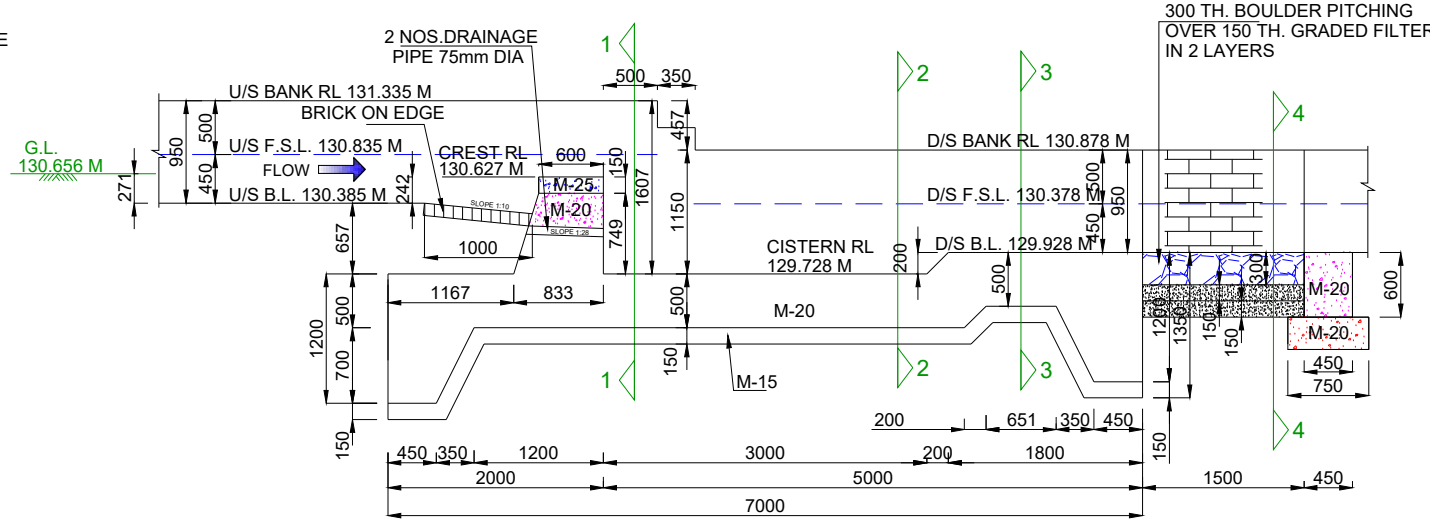
WAPCOS LTD.



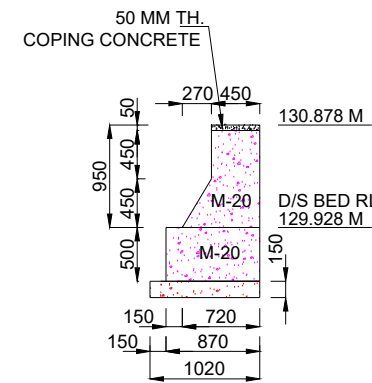
Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 1.950 OF NEURA SURAJMAL MR. (OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ FALL	1 of 1



SECTION AT 5-5
(SCALE A)



SECTION A-A
(SCALE A)



SECTION AT 6-6
(SCALE A)

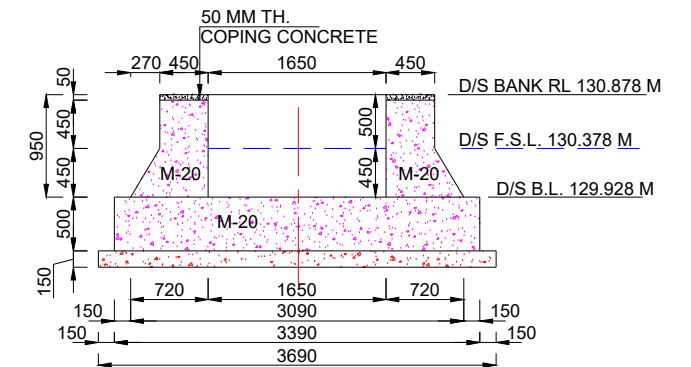
NOTES:-

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,

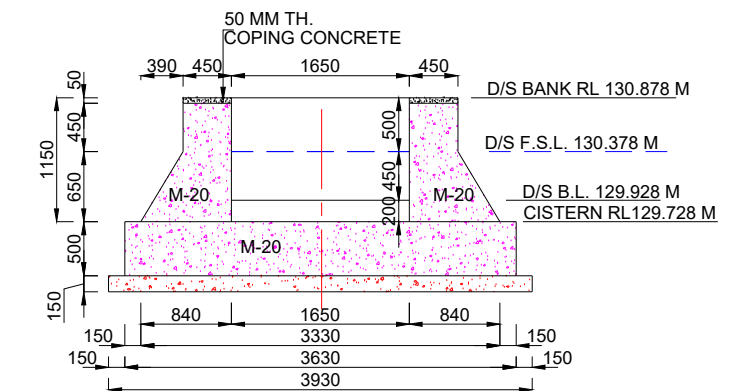
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

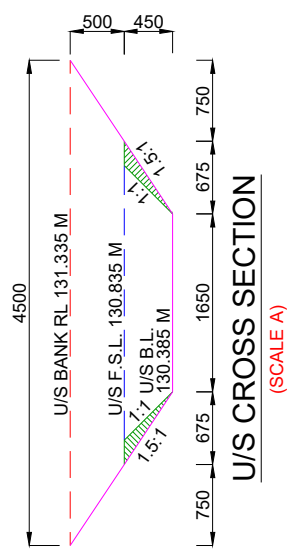
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.270	0.270	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.450	0.450	METRE
BED WIDTH	1.650	1.650	METRE
BED SLOPE	1 : 4000	1 : 4000	



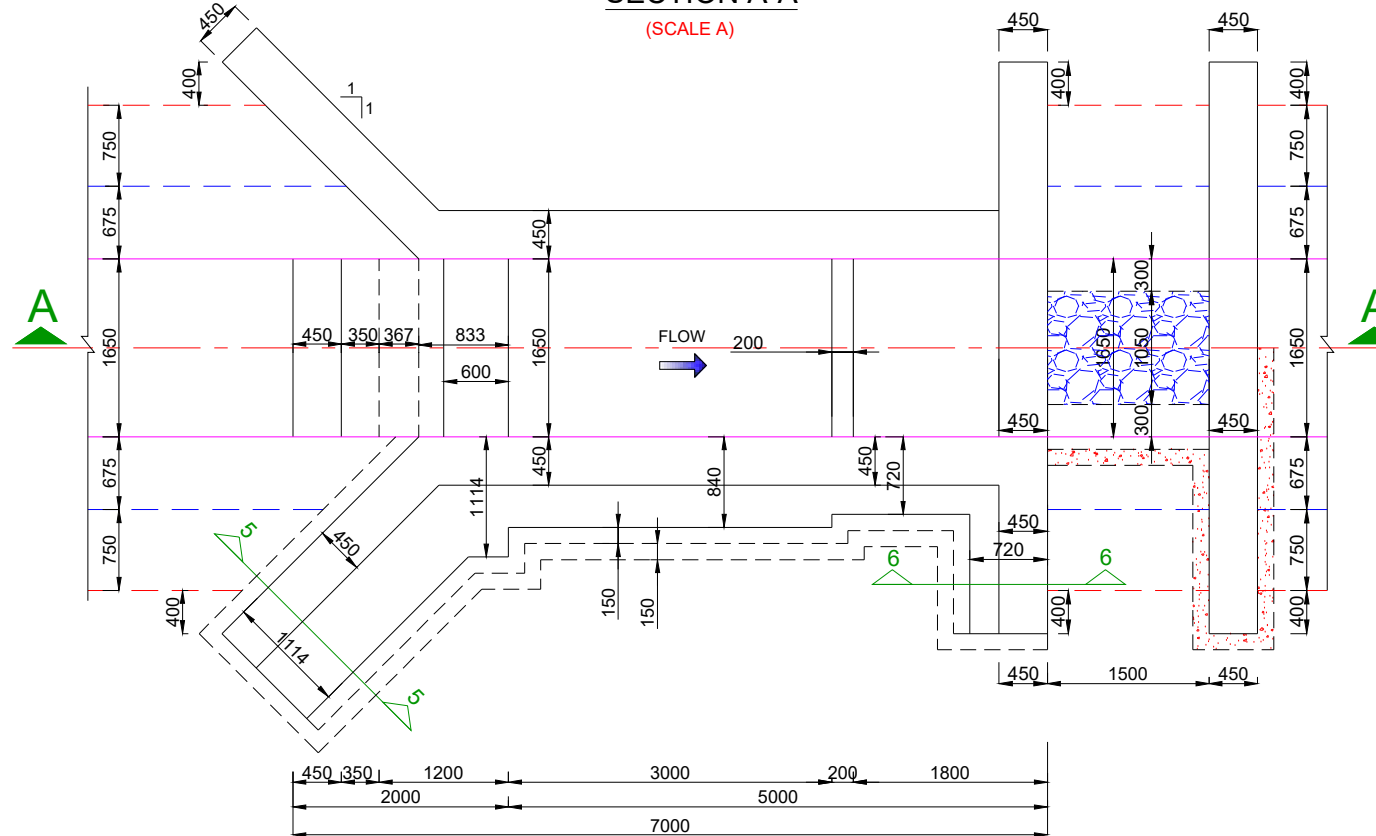
SECTION AT 3-3
(SCALE A)



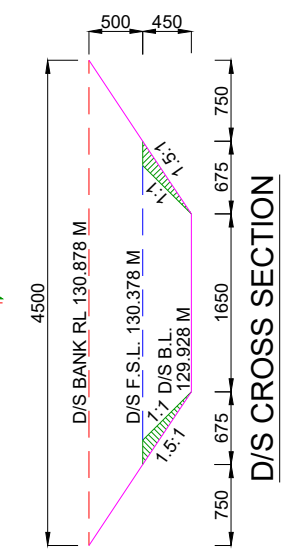
SECTION AT 2-2
(SCALE A)



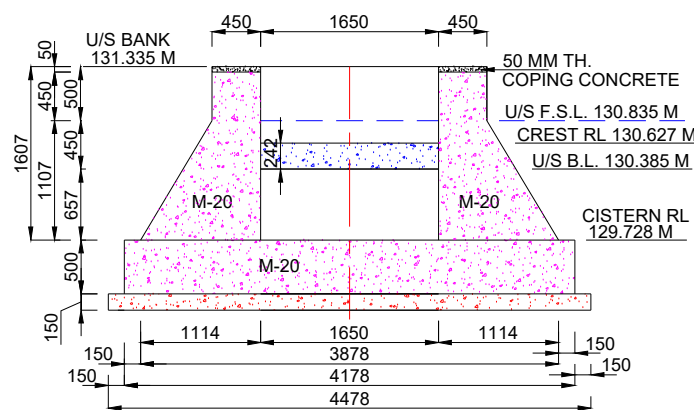
U/S CROSS SECTION
(SCALE A)



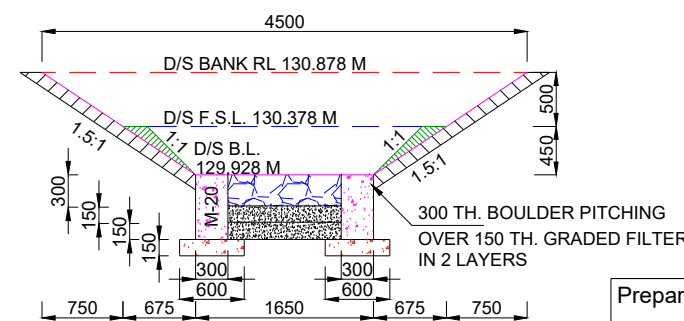
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



D/S CROSS SECTION
(SCALE A)



SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)

SCALE A:-

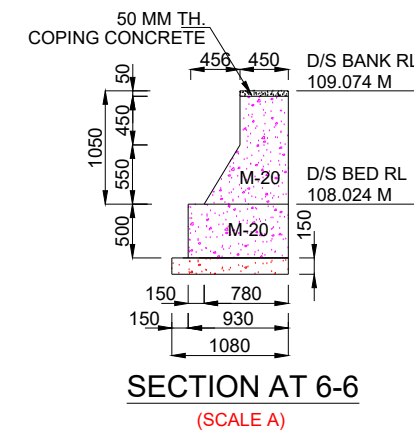
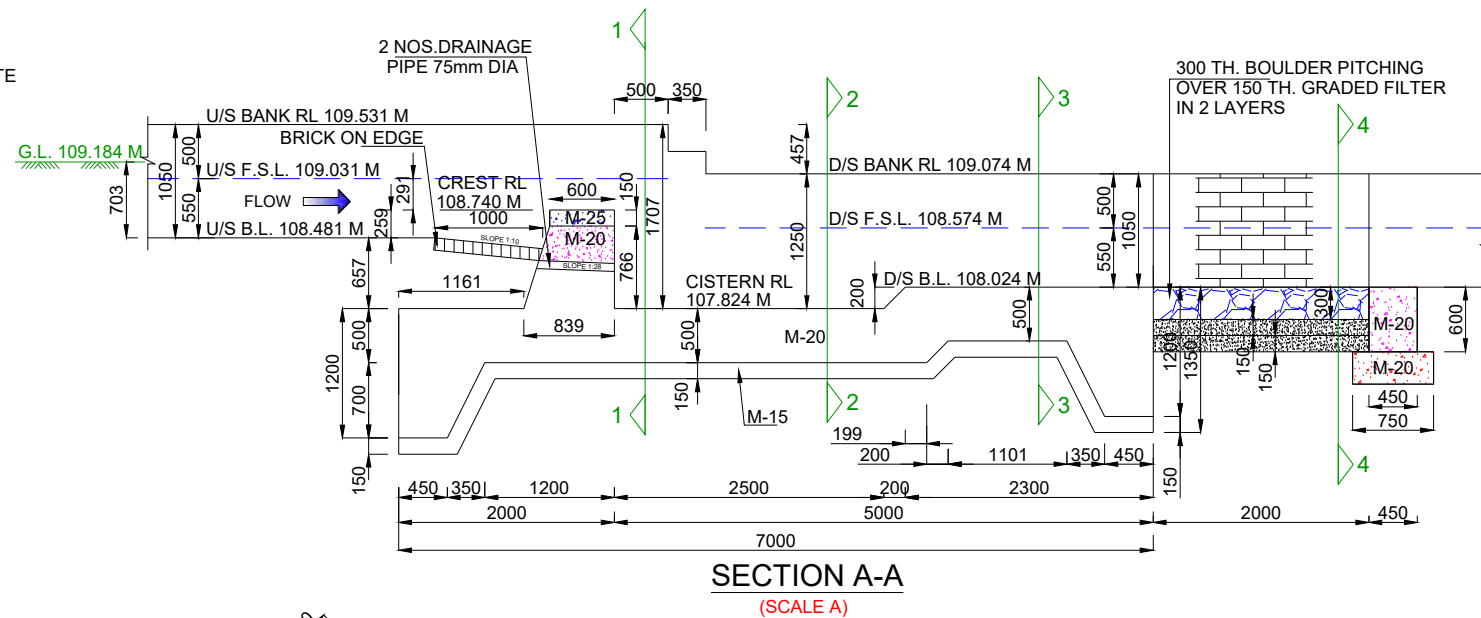
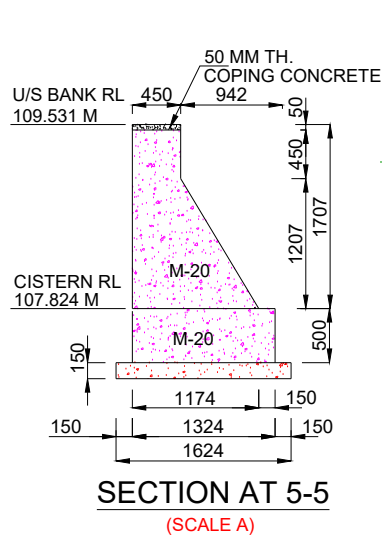


Prepared by :-

WAPCOS LTD.



Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND	
Drawing Title :-	SHARDA TYPE 0.457 M HT. FALL AT KM. 2.300 OF NEURA SURAJMAL MR. (OFFTAKE FROM RD-3+150 KM. (L), KARMA DISTRIBUTARY CANAL	
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-02/ FALL	1 of 1



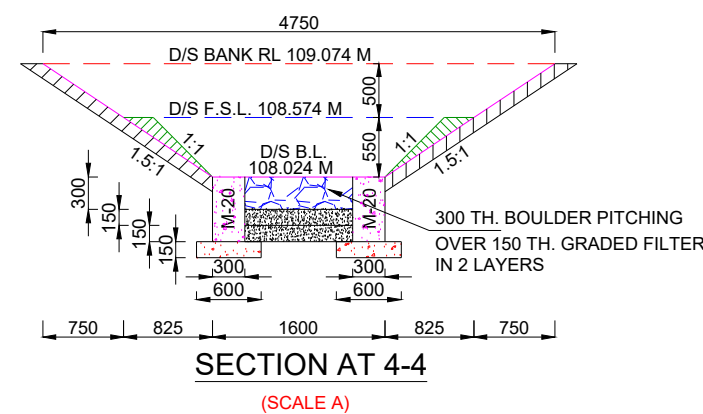
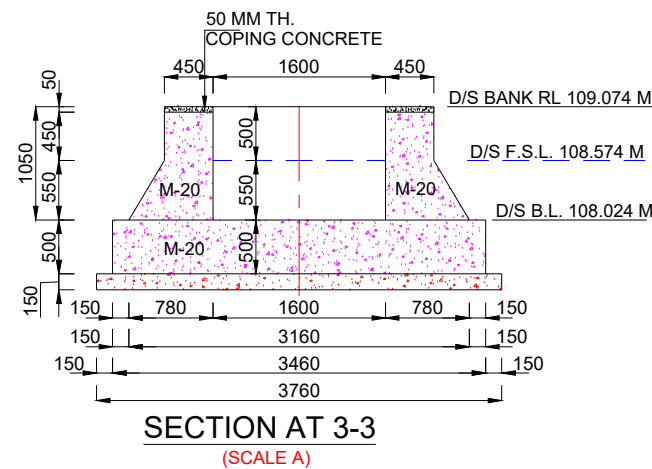
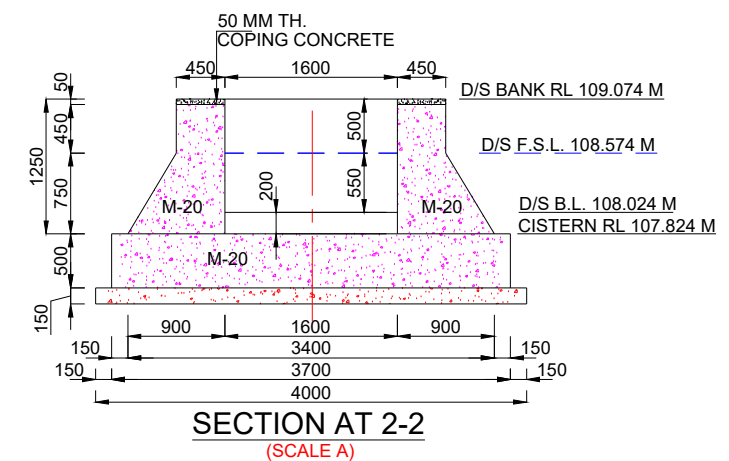
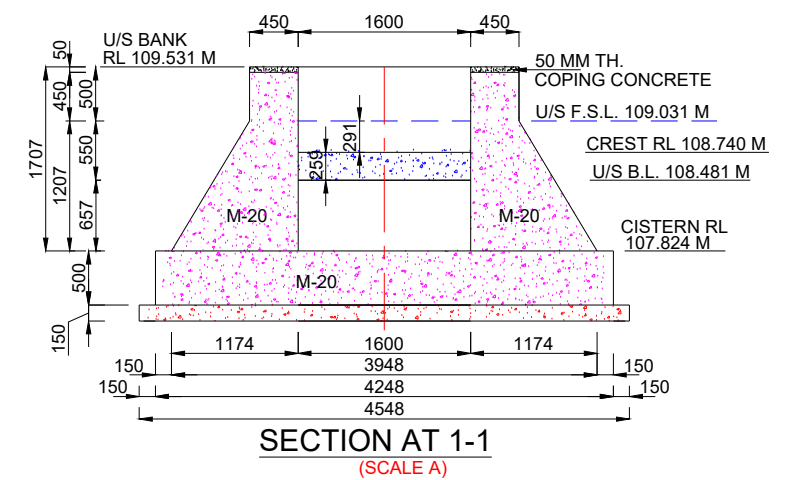
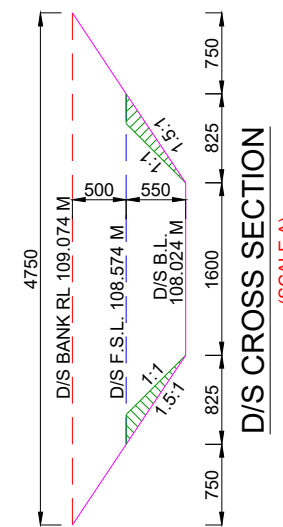
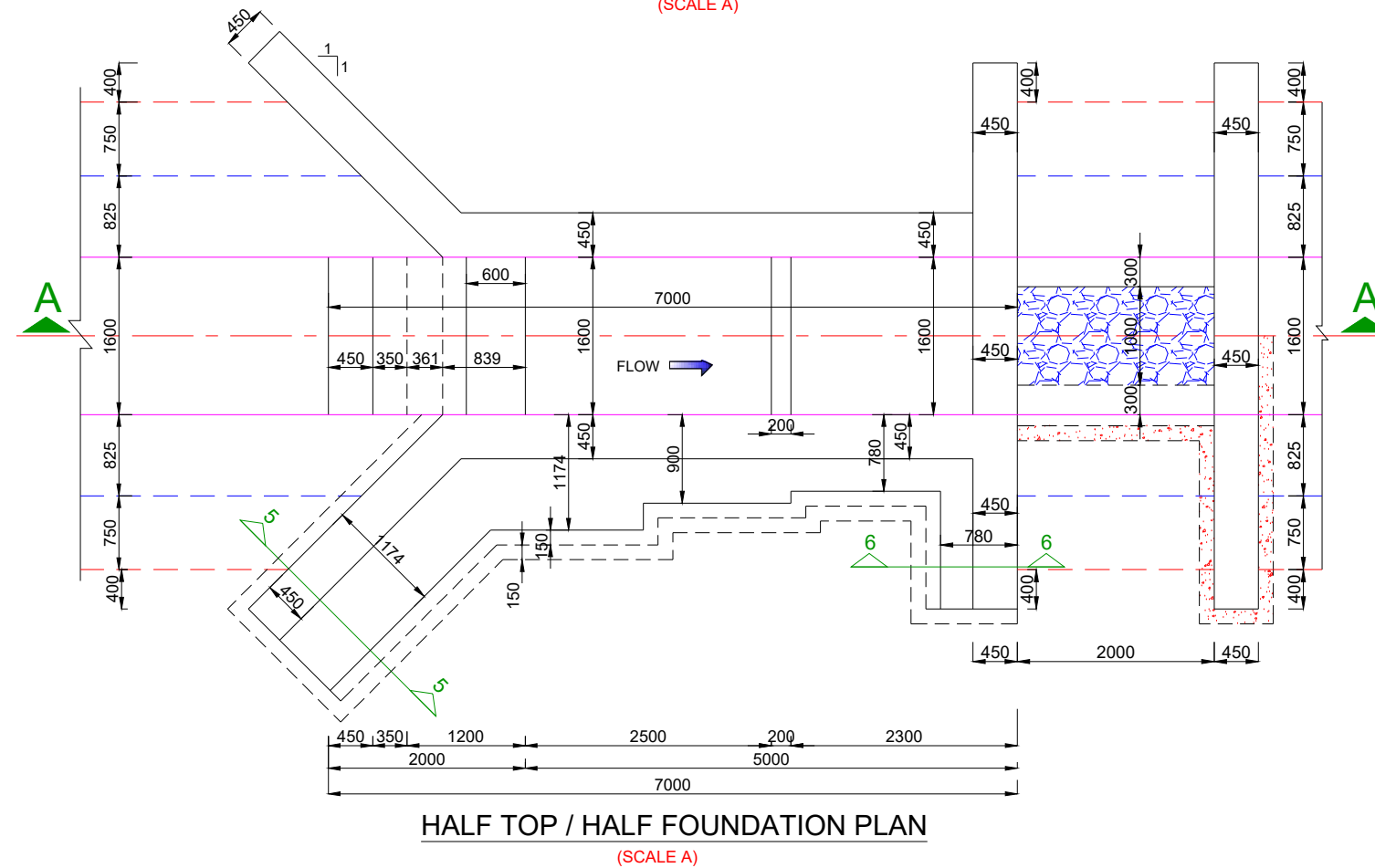
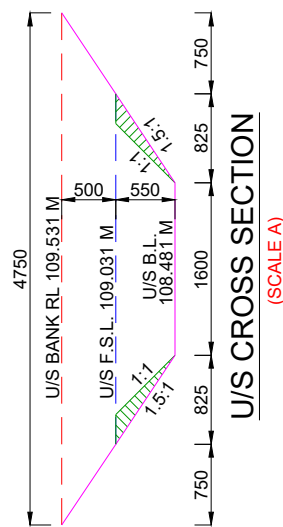
NOTES:-

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,

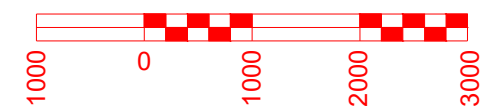
COMPONENT	GRADE
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.470	0.470	CUMEC
VERTICAL DROP	0.457	0.457	METRE
FULL SUPPLY DEPTH	0.550	0.550	METRE
BED WIDTH	1.600	1.600	METRE
BED SLOPE	1 : 4000	1 : 4000	



SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

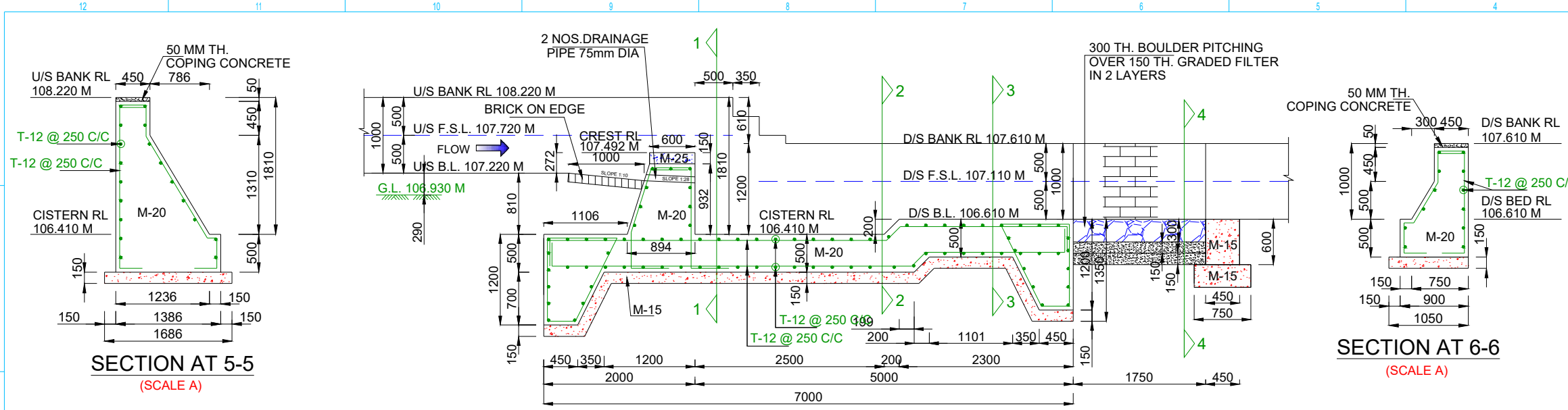
Drawing Title :-

SHARDA TYPE 0.457 M HT. FALL AT KM. 1.500 OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ FALL

1 of 1

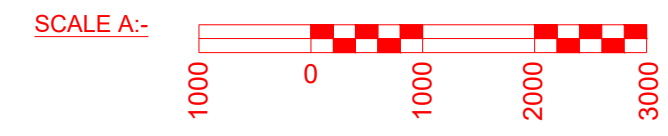
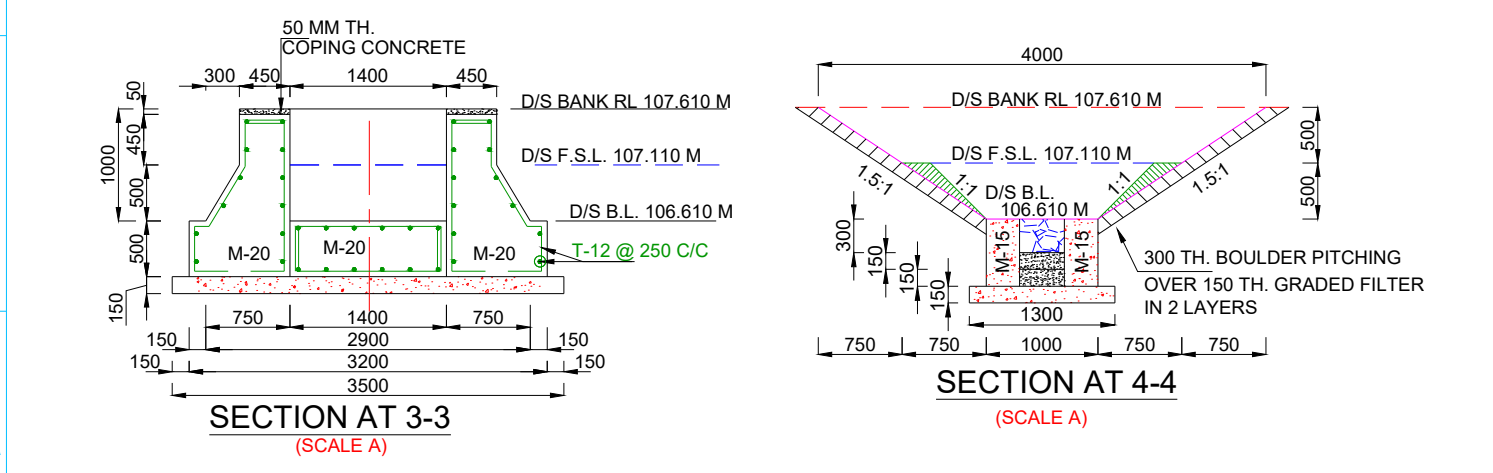
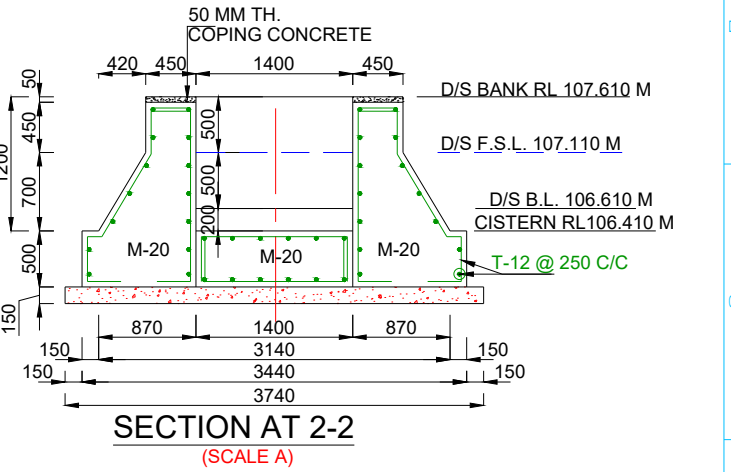
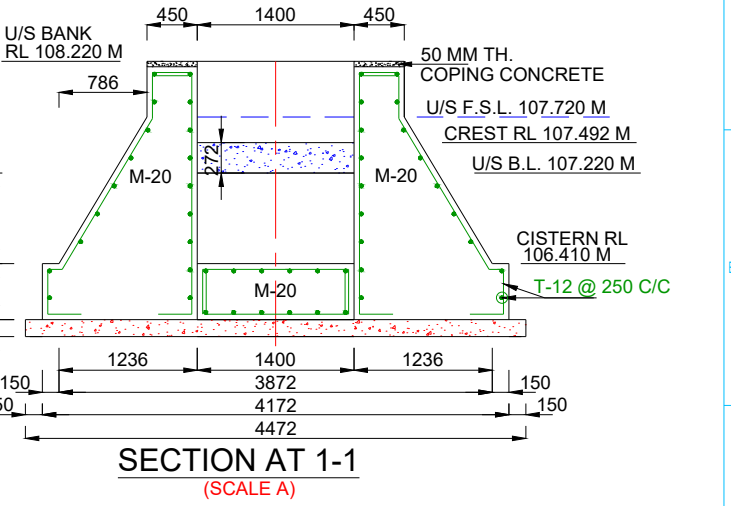
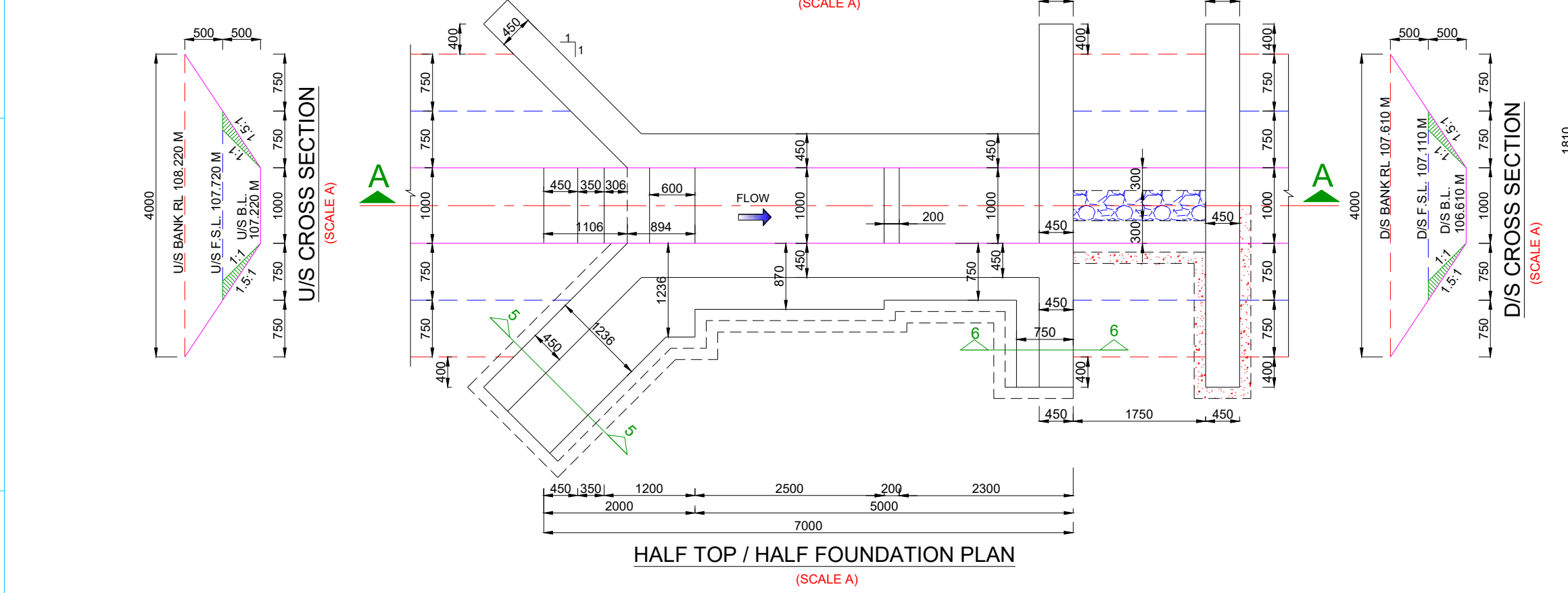


- NOTES:-**
1. ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
 2. THE DRAWING SHALL NOT BE SCALED OFF, ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 3. ALL CONCRETE WORK SHALL CONFORM TO IS: 456 -2000. GRADE OF CONCRETE IN DIFFERENT COMPONENTS SHALL BE AS FOLLOWS,

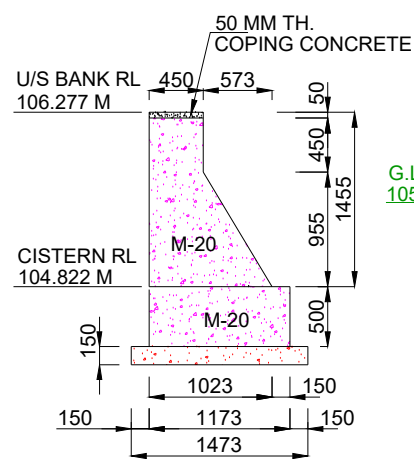
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
 4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
 5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

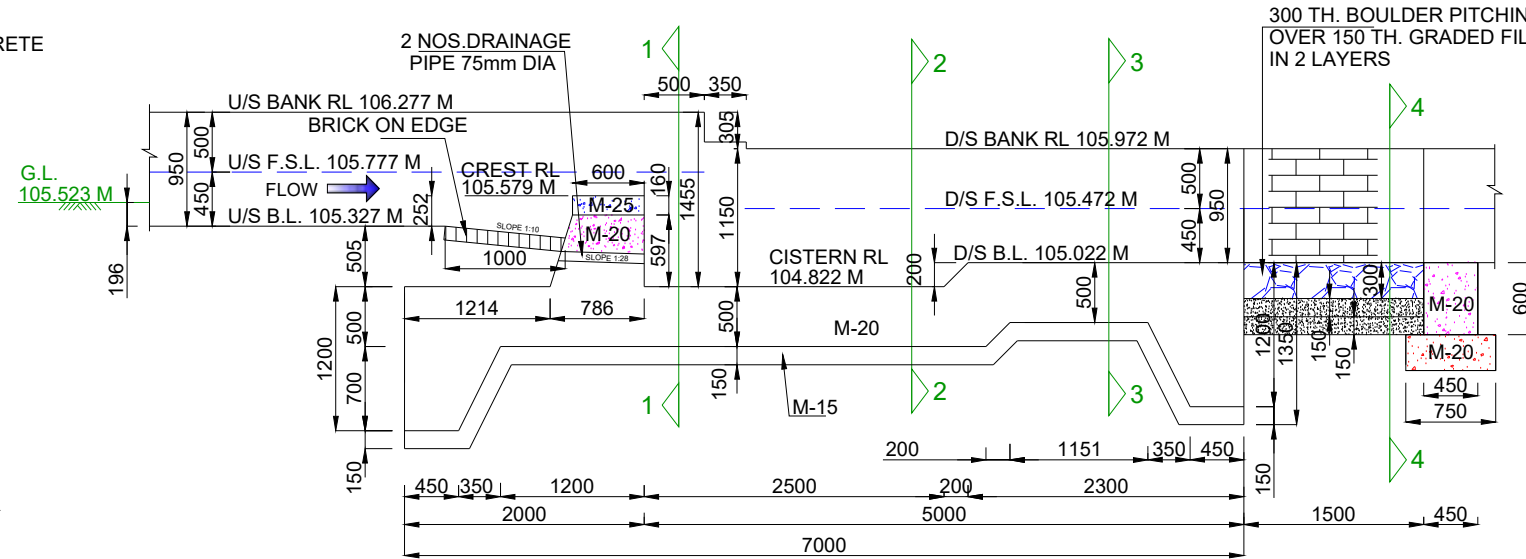
	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.190	0.190	CUMEC
VERTICAL DROP	0.610	0.610	METRE
FULL SUPPLY DEPTH	0.500	0.500	METRE
BED WIDTH	1.000	1.000	METRE
BED SLOPE	1 : 3500	1 : 3500	



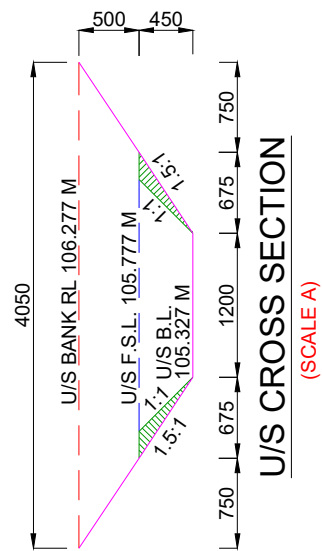
Prepared by :-	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
WAPCOS LTD.	Drawing Title :-	SHARDA TYPE 0.610 M HT. FALL AT KM. 2.750 OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ FALL 1 of 1



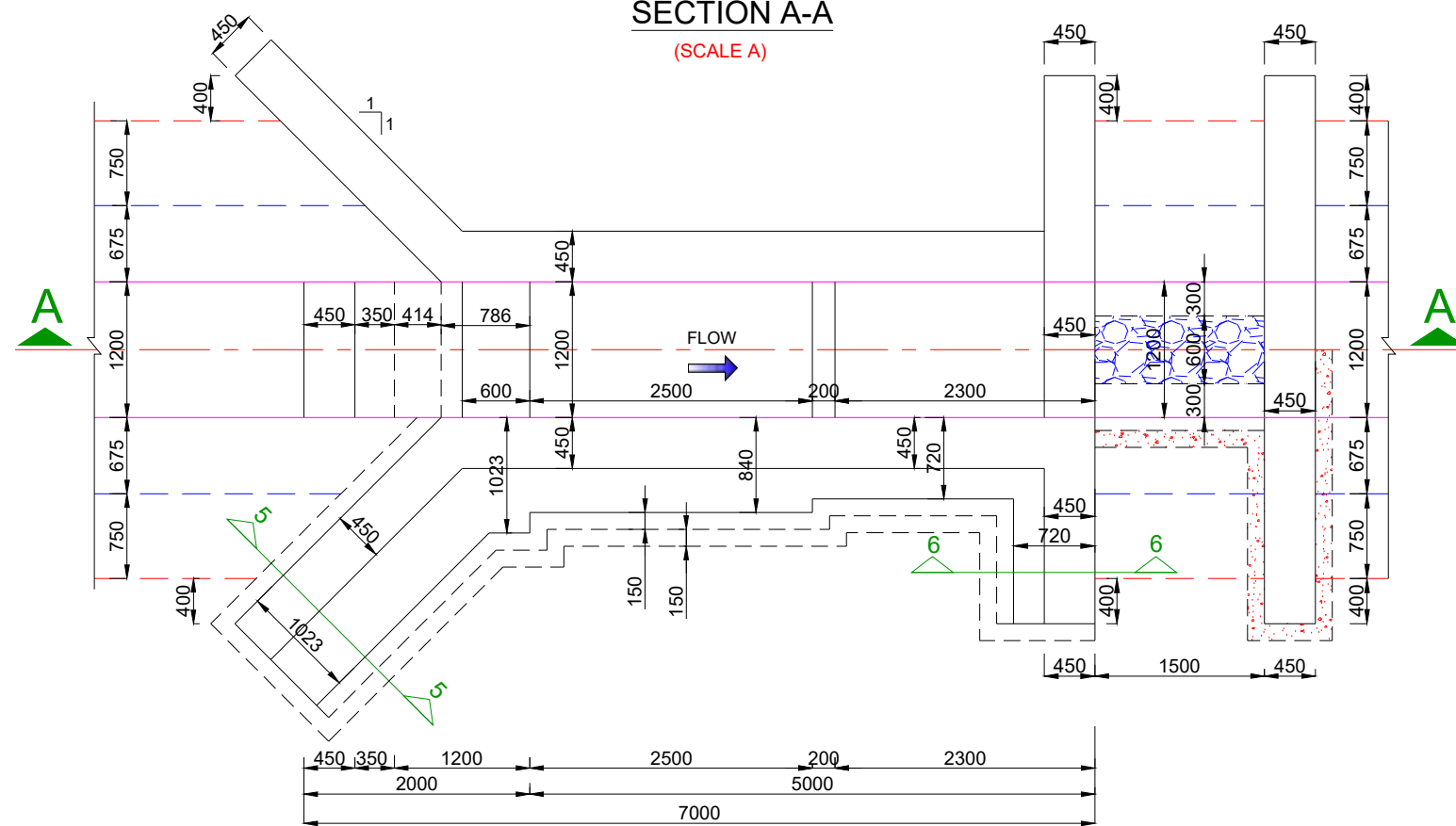
SECTION AT 5-5
(SCALE A)



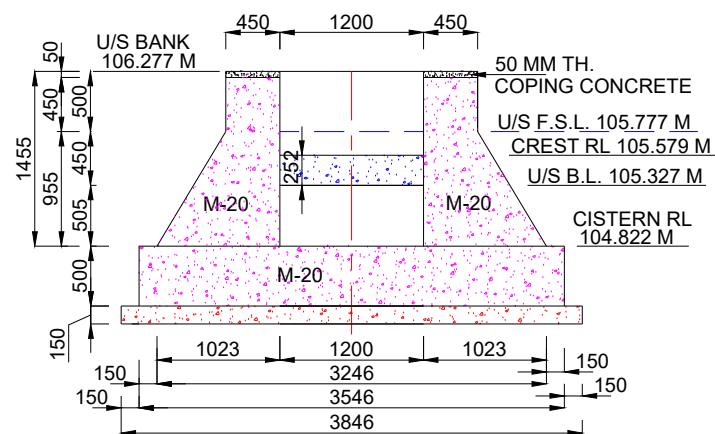
SECTION A-A
(SCALE A)



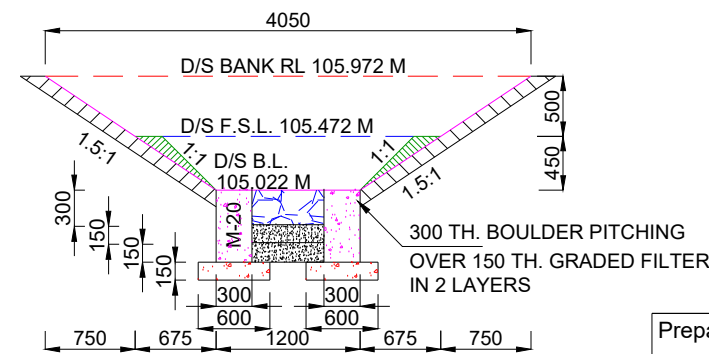
U/S CROSS SECTION
(SCALE A)



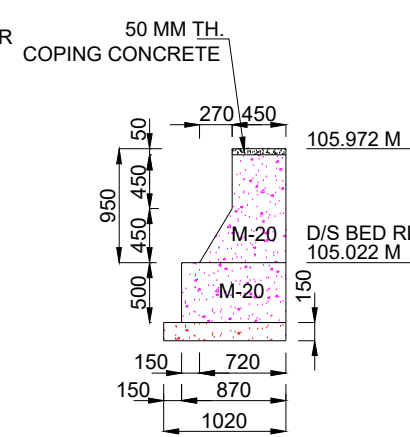
HALF TOP / HALF FOUNDATION PLAN
(SCALE A)



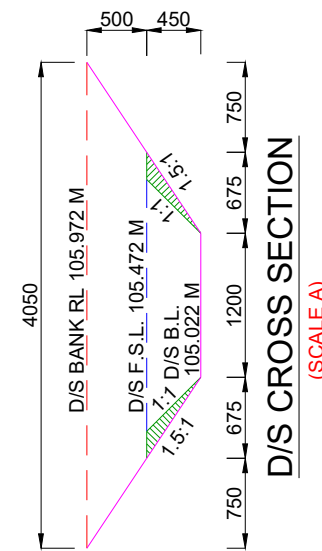
SECTION AT 1-1
(SCALE A)



SECTION AT 4-4
(SCALE A)



SECTION AT 6-6
(SCALE A)



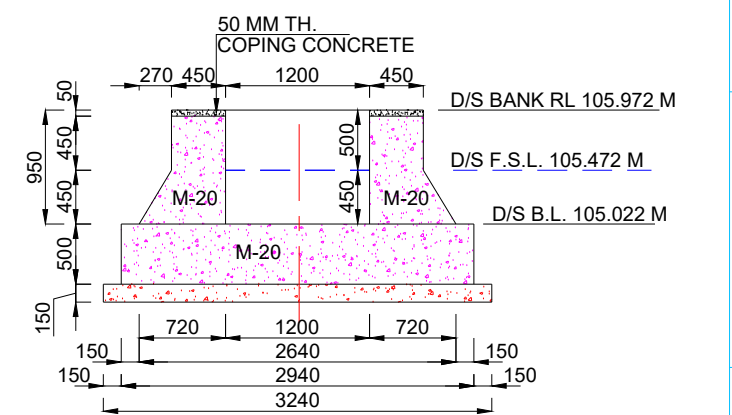
D/S CROSS SECTION
(SCALE A)

- 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,

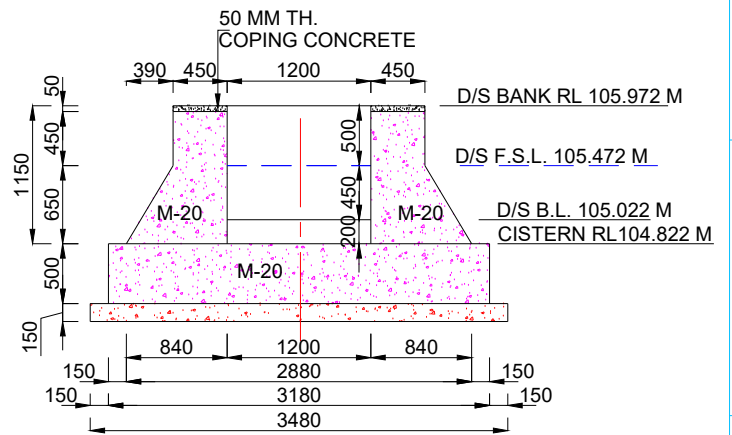
FLOOR	M 20
FOUNDATION OF ABUTMENTS & WING WALL	M 20
PCC UNDER FLOOR	M 15
ABUTMENTS / WING WALLS	M 20
 4. ANY OVER DIGGING SHALL BE FILLED BY CONCRETE 1:3:6 GRADE.
 5. SKIN REINFORCEMENT SHALL BE PROVIDED IN FLOOR AND ABUTMENT OF 12 MM DIA BARS @ 250 MM.

HYDRAULIC:- DATA

	U/S	D/S	UNIT
FULL SUPPLY DISCHARGE	0.180	0.180	CUMEC
VERTICAL DROP	0.305	0.305	METRE
FULL SUPPLY DEPTH	0.450	0.450	METRE
BED WIDTH	1.200	1.200	METRE
BED SLOPE	1 : 4000	1 : 4000	

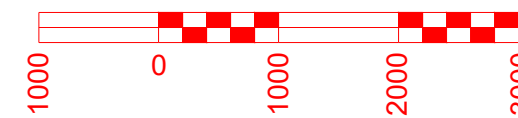


SECTION AT 3-3
(SCALE A)



SECTION AT 2-2
(SCALE A)

SCALE A:-



Prepared by :-

WAPCOS LTD.



Project Title :-

NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND

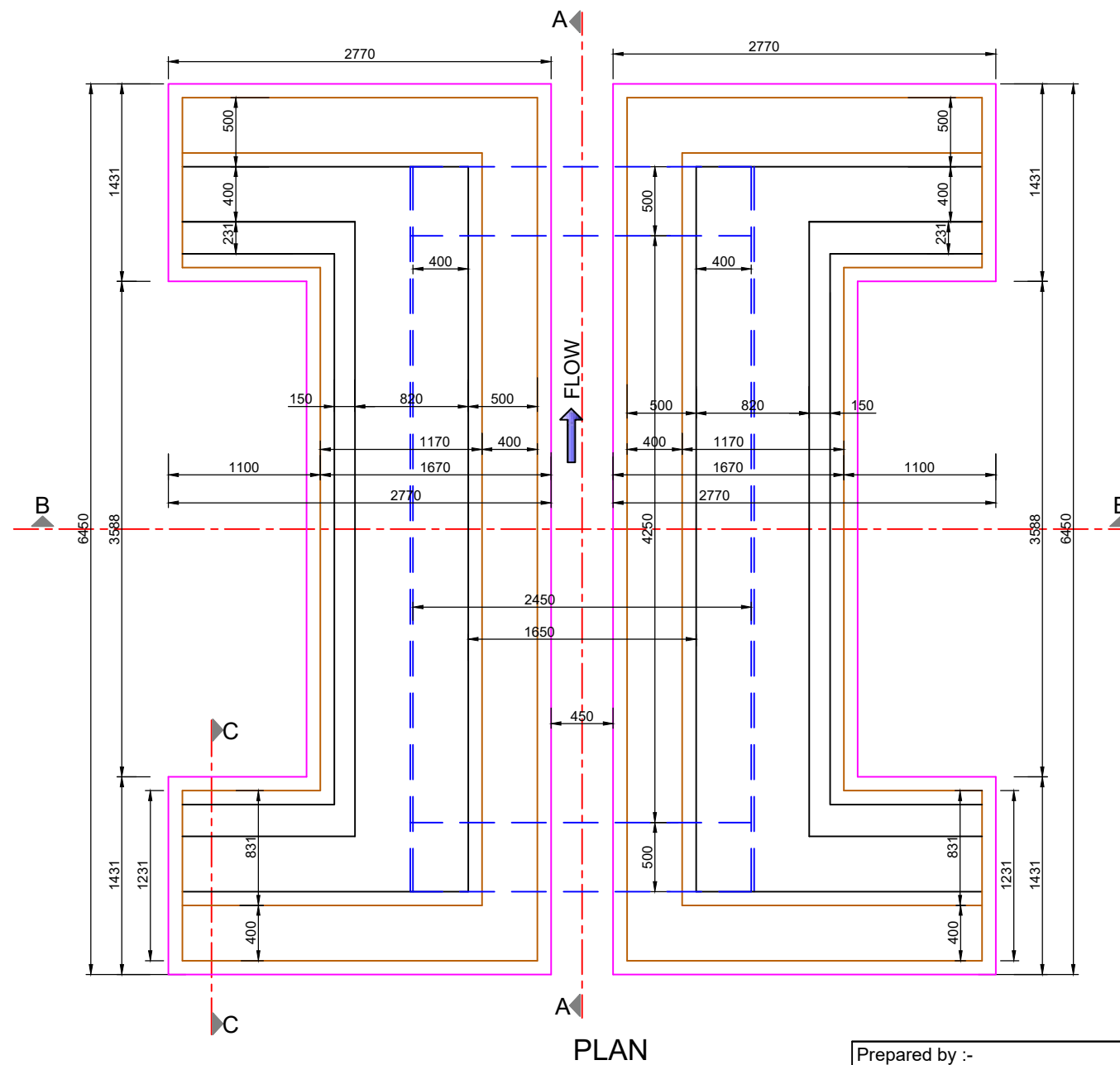
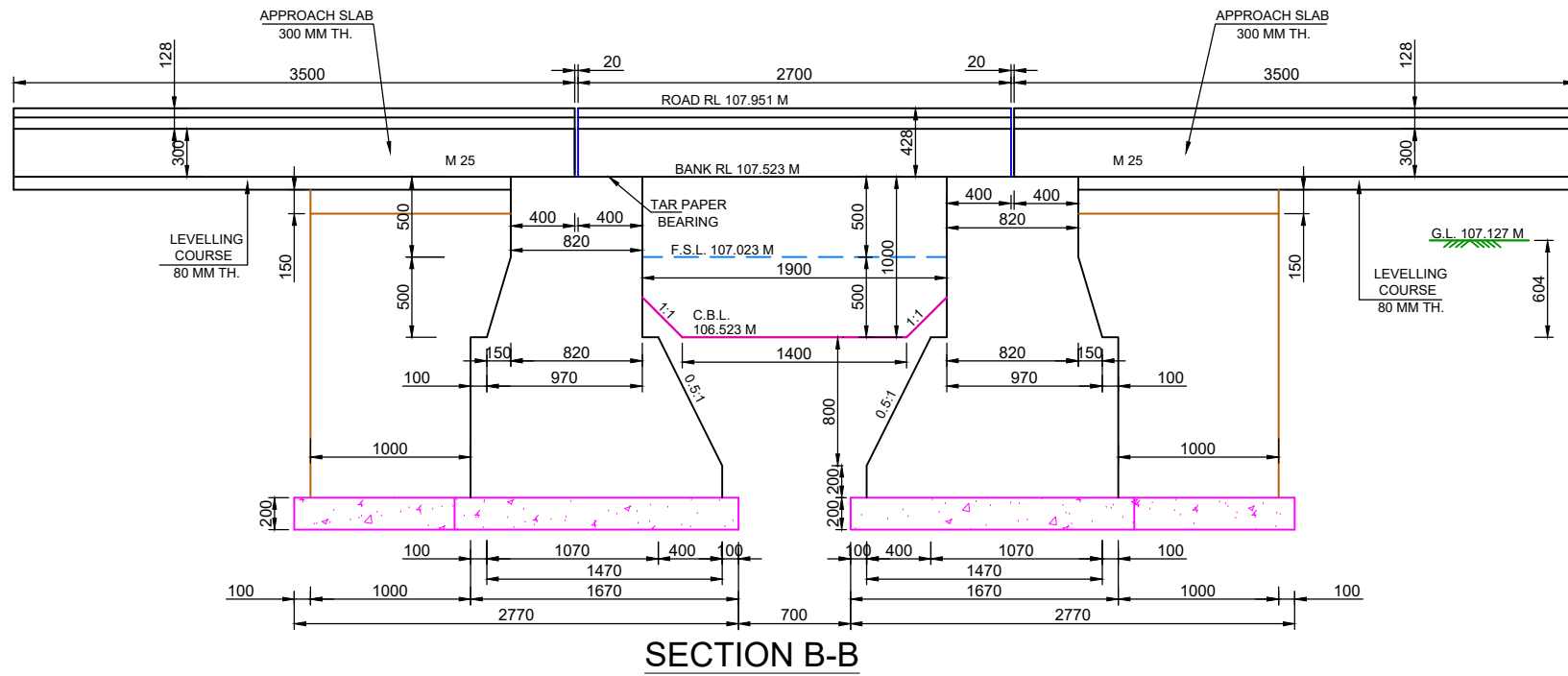
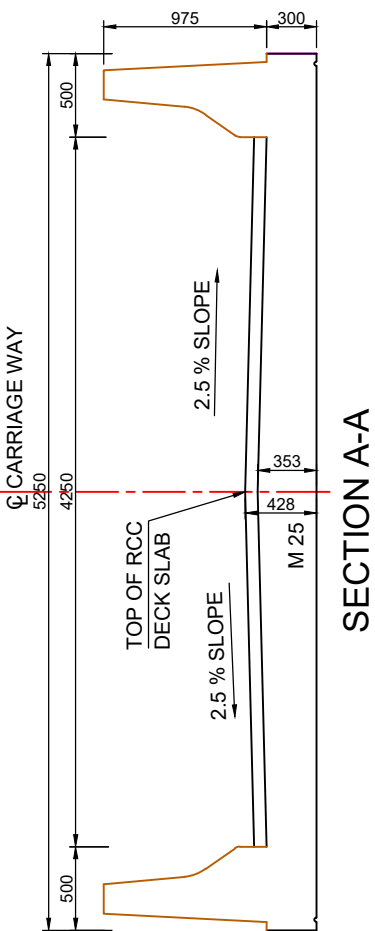
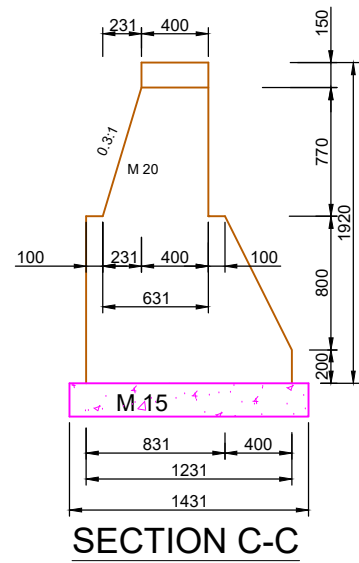
Drawing Title :-

SHARDA TYPE 0.305 M HT. FALL AT KM. 4.075 OF SHUSHNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL

Drawing No. :-

WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/ FALL

1 of 1



DESIGN DATA:-

DESIGN DISCHARGE	0.260 CUMECs
BED WIDTH	1.400 M
WATER DEPTH	0.500 M
FREE BOARD	0.500 M
BED LEVEL	106.523 M
F.S.L.	107.023 M
BANK R.L.	107.523 M
CARRIAGE WAY	4.250 M
ROAD LEVEL	107.427 M
GROUND LEVEL	107.127 M

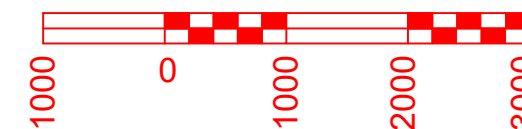
NOTES:-

- ALL DIMENSIONS ARE IN mm AND LEVELS IN METRES EXCEPT OTHERWISE MENTIONED.
- THE DRAWING SHALL NOT TO BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- ALL CONCRETE WORK SHALL CONFORM TO IS: 456, GRADE OF CONCRETE IN DIFFERENT COMPONENT SHALL BE

BRIDGE	M 20 (1:1.5:3)
WING WALL	M 20 (1:1.5:3)
PARAPETS	M 20 (1:1.5:3)
BASE CONCRETE UNDER BRIDGE	M 15 (1:2:4)
SLAB	M 25 (1:1:2)
APPROACH SLAB	M 25 (1:1:2)
- MINIMUM CLEAR COVER TO ANY REINF. INCLUDING STIRRUPS SHALL BE 50 MM OR UNLESS OTHERWISE SPECIFIED.
- THE COVER INDICATED IN THIS DRAWINGS IS CLEAR COVER TO MAIN REINFORCEMENT BARS NEAREST TO THE CONCRETE SURFACE INCLUDING STIRRUPS AND BINDERS UNLESS MENTIONED OTHER WISE.
- BENDING OF REINF. BAR SHALL CONFORM TO I.S. 2502
- THE BRIDGE HAS BEEN DESIGNED FOR THE FOLLOWING ASSUMED PROPERTIES OF SOIL AT FOUNDING LEVEL AND

a) C = 0 KG/SQCM.
b) $\phi = 30^\circ$
c) ASSUMED BEARING CAPACITY 20 T/SQM
- ANY OVER DIGGING SHALL BE FILLED BY CONCRETE M-10
- THE DRAWING SHALL NOT BE SCALED OFF ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
- THE DESIGN IS APPLICABLE FOR 'MODERATE CONDITION OF EXPOSURE FOR C.C. M 20 (1:1.5:3).
- TYPE OF RAILING SHALL BE DECIDED BY FIELD ENGINEERS.
- 75 MM THK. WEARING COAT IN M-25 CC WITH MAX. W.C.RATIO AS 0.4 SHALL BE PROVIDED.
- APPROACH SLAB & APPROACH SLAB SUPPORT SHALL BE DECIDED BY FIELD ENGINEERS ACCORDING TO THE SITE CONDITIONS.
- TAR PAPER BEARING SHOULD BE PROVIDED ON ALL SUPPORTS OF DECK SLAB.
- 20 MM TH. BITUMINOUS EXPANSION PAD SHALL BE PROVIDED AS EXPANSION JOINT.

SCALE A:-

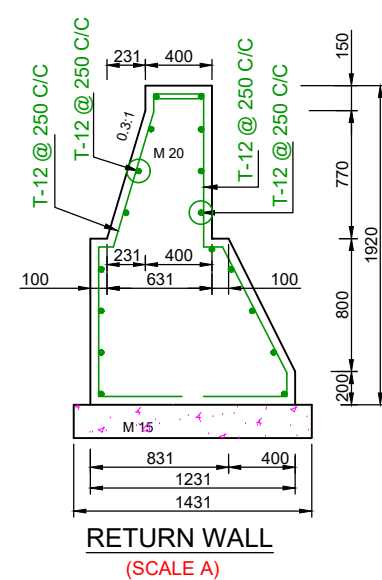
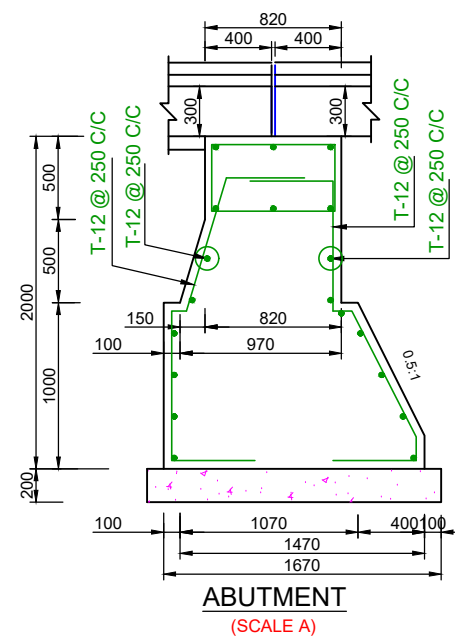
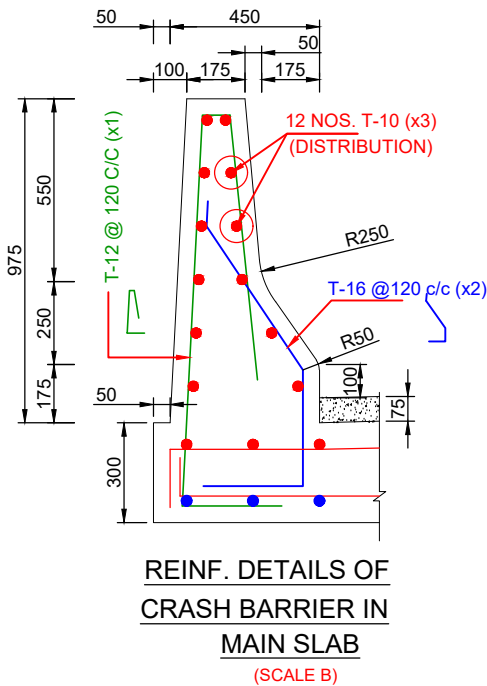
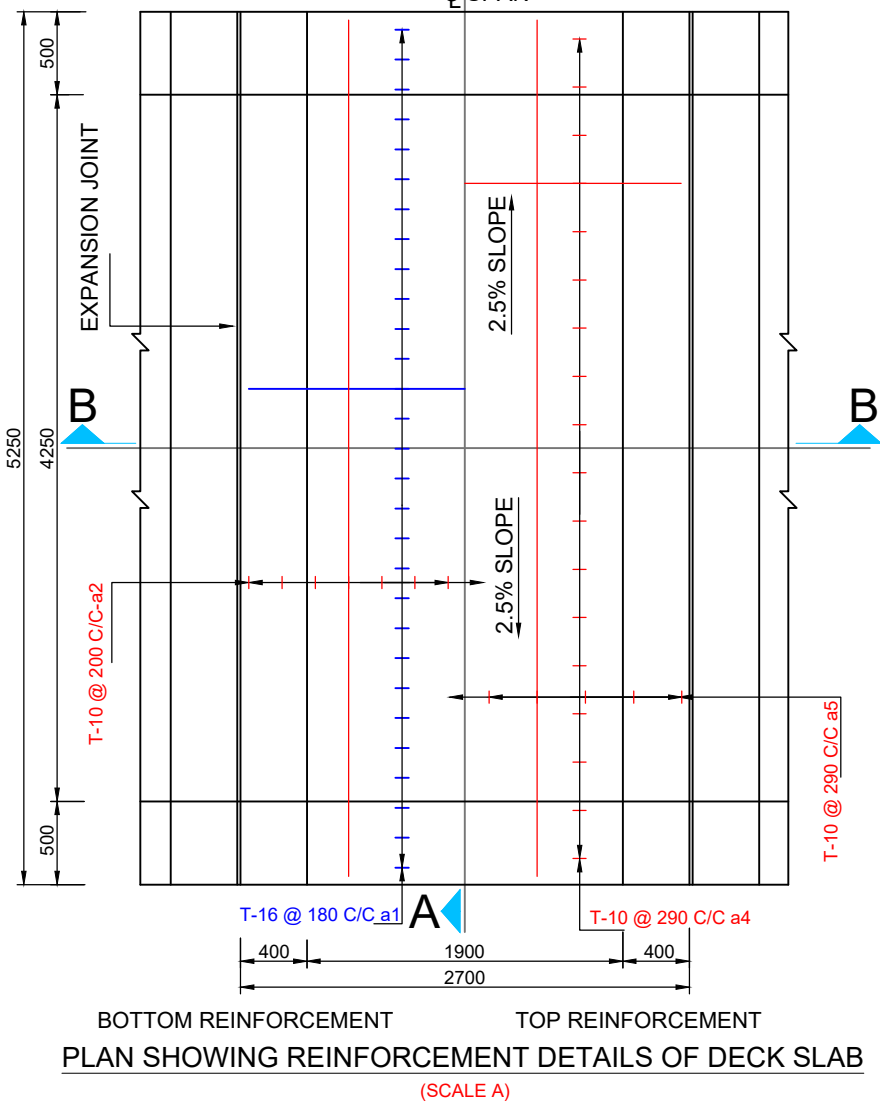
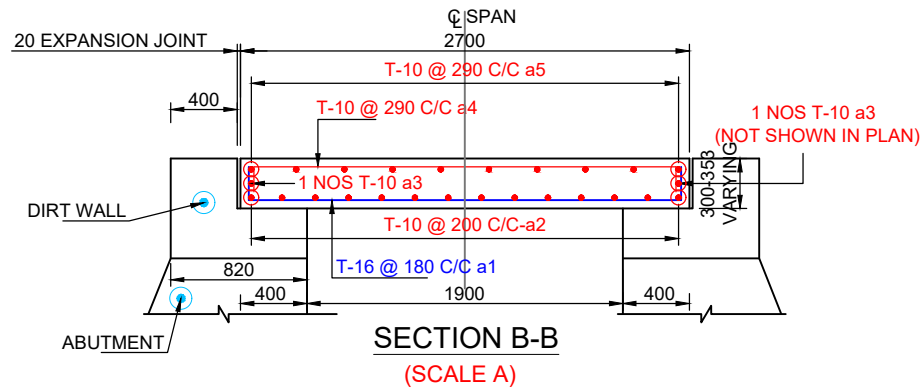


Prepared by :-

WAPCOS LTD.

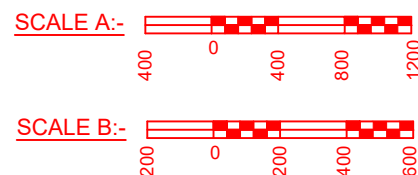
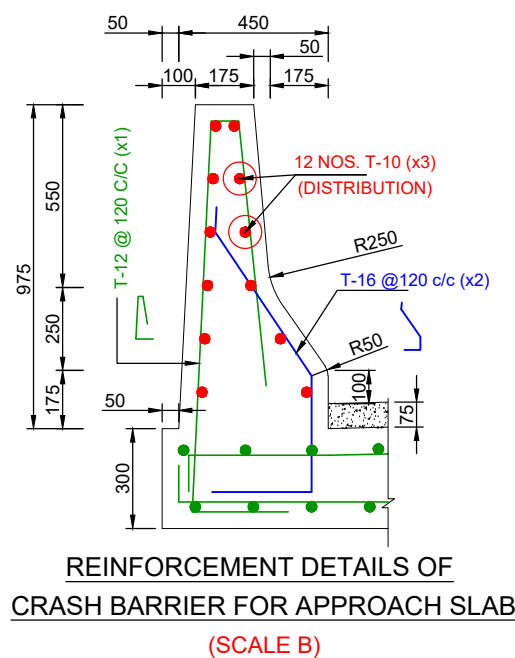
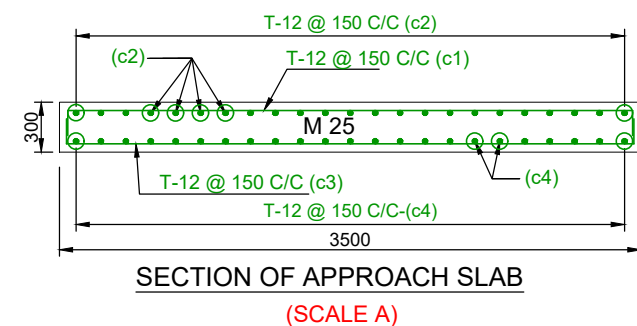


Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
Drawing Title :-	G.A.D. OF BRIDGE AT KM. 3.065 OF SHUSNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/SLR/BRG. 1 of 2



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		16	180	29
2	a2		10	200	14
3	a3		10	-	2
4	a4		10	290	18
5	a5		10	290	10
APPROACH SLAB					
1	c1		12	150	35X2
2	c2		12	150	23X2
3	c3		12	150	35X2
4	c4		12	150	23X2
CRASH BARRIER FOR MAIN SLAB					
1	x1		12	120	22X2
2	x2		16	120	22X2
3	x3		10	-	12X2
CRASH BARRIER FOR APPROACH SLAB					
1	y1		12	120	29X2X2
2	y2		16	120	29X2X2
3	y3		10	-	12X2X2



Prepared by :- WAPCOS LTD.	Project Title :-	NORTH KOEL RESERVOIR PROJECT, BIHAR AND JHARKHAND
	Drawing Title :-	REINFORCEMENT DETAILS OF SLAB AT KM. 3.065 OF SHUSNAR MR. (OFFTAKE FROM RD - 18+342 KM. (L), KARMA DISTRIBUTARY CANAL
	Drawing No. :-	WAP/ INFRA/ NORTHKOEL/ BC/ R-16-03/SLR/BRG. 2 of 2

