Section VII-8: Tender Drawings and Documents

A- Tender Drawings
B- Tender Documents

Section VII-8
A: Tender Drawings

Tenderer shall download Tender drawings from HRIDC website. Tender Drawings are available for downloading under Active Tender Section on HRIDC website (https://hridc.co.in/active-tender.php). Tender drawings uploaded on HRIDC website for Package C-23 shall be deemed to form part of Final Tender Documents. List of Tender Drawings are enclosed hereunder.

List of Tender Drawings

	-Black colour shows Tender drawings which have not been revised
	-Blue colour shows Tender drawings which have been revised
	-Red colour shows New additional Tender drawings

S. No.	TITLE	REVISED/NEW DRAWING NO.
1. ALIGNMENT PLAN & L-SECTION		
1.	Conceptual Plan & longitudinal section (29KM to 33.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-29-33KM_A1
2.	Conceptual Plan & longitudinal section (33.0KM to 35.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A1
3.	Conceptual Plan & longitudinal section (35.0KM to 40.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-35-40KM_A1
4.	Conceptual Plan & longitudinal section (40.0KM to 45.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-40-45KM_A1
5.	Conceptual Plan & longitudinal section (45.0KM to 50.0KM)	GC-HRIDC-ALL-DRW-ALN-P&P-45-50KM_A1
6.	Conceptual Plan & longitudinal section (55.0KM to 61.5KM)	GC-HRIDC-ALL-DRW-ALN-P&P-55-61.5KM_A1
7.	Conceptual Plan & longitudinal section connectivity towards Patli	GC-HRIDC-C2-DRW-ALN-P&P-03001_A2
8.	Conceptual Plan and longitudinal section connectivity towards Sultanpur	GC-HRIDC-C2-DRW-ALN-P&P-04001_A2
9.	Re-grading of Garhi Harsaru-Farukhnagar main line of Sultanpur station yard (conceptual)	GC-HRIDC-C23-DRW-ALN-P&P-06001_A0
2. ESP/YARD PLAN		
1.	Conceptual Engineering scale plan of New Patli Junction CH:58135.513 f/Prithala	GC-HRIDC-C23-DRW-STN-ESP-NPA01_A2
2.	Conceptual Engineering scale plan Sultanpur Kaliawas junction CH: 3674.74m f/Badsa KM:6/375	GC-HRIDC-C23-DRW-STN-ESP-SUL01_A2

S. No.	TITLE	REVISED/NEW DRAWING NO.
3.	Conceptual Engineering scale plan Dhulawat Station CH: 32767m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-DHU01_A0
4.	Conceptual Engineering scale plan Chandla Dungerwas station yard CH:42606.159m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-CDU01_A1
5.	Conceptual Engineering scale plan Pachgaon Station yard Ch:46279.352m F/Prithala	GC-HRIDC-C23-DRW-STN-ESP-PCG01_A1
3. STATION BUILDING AND SUBWAY		
1.	Conceptual Architectural drawing New Patli Station & Subway Br.No 144A	GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 1 of 3)
		GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 2 of 3)
		GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1 (Sheet 3 of 3)
2.	Conceptual Architectural drawing Sultanpur station building	GC-HRIDC-C23-DRW-STN-SAD-SUL01_A1
3.	Conceptual Architectural drawing Dhulawat station & subway Br.No 79	GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1 (Sheet 1 of 2)
		GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1 (Sheet 2 of 2)
4.	Conceptual Architectural drawing Chandla Dungerwas station & subway Br.No 104	GC-HRIDC-C23-DRW-STN-SAD-CDU01_A1
5.	Conceptual Architectural drawing Pachgaon station & subway Br.No 113	GC-HRIDC-C23-DRW-STN-SAD-PCG01_A1
4. BRIDGES		
4.1 MINOR BRIDGES		
4.1.1 MAIN LINE		
1.	Conceptual general arrangement drawing proposed ROB Br. No. 073 Span 1×11.5×11 RCC box (at Ch: 30155.000)	GC-HRIDC-C23-DRW-BRD-GAD-01073_A1
2.	Conceptual general arrangement drawing proposed Br. No. 074 span 2×3.0×2.0 RCC box (syphon) at Ch: 30528.000	GC-HRIDC-C23-DRW-BRD-GAD-01074_A1
3.	Conceptual general arrangement drawing proposed Br. No. 075 span 2×5.0×2.5 RCC box (syphon) at Ch: 30839.000	GC-HRIDC-C23-DRW-BRD-GAD-01075_A1
4.	Conceptual general arrangement drawing proposed RUB no. 076 span 2×6.2×5.650 RCC box at Ch: 31145.000	GC-HRIDC-C23-DRW-BRD-GAD-01076_A1

S. No.	TITLE	REVISED/NEW DRAWING NO.
5.	Conceptual general arrangement drawing proposed RUB no. 077 span 1×6.0×4.0 RCC box at Ch: 31365.000	GC-HRIDC-C23-DRW-BRD-GAD-01077_A1
6.	Conceptual general arrangement drawing proposed RUB no. 078 span 1×6.0×4.0 RCC box at Ch: 32022.000	GC-HRIDC-C23-DRW-BRD-GAD-01078_A1
7.	Conceptual general arrangement drawing proposed RUB no. 080 Span 1×6.0×4.50 RCC box at Ch: 33155.000	GC-HRIDC-C23-DRW-BRD-GAD-01080_A1
8.	Conceptual general arrangement drawing balancing culvert bridge no. 81, 1x2x2 RCC box at CH:33269.230	GC-HRIDC-C23-DRW-BRD-GAD-01081_A1
9.	Conceptual general arrangement drawing bridge no. 82, 90, 96, 99 &122 pipe Culvert 1x1.8 span	GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A1
10.	Conceptual general arrangement drawing for proposed RUB no. 083 span 2×7.0×5.650 RCC box at Ch: 33673.045	GC-HRIDC-C23-DRW-BRD-GAD-01083_A1
11.	Conceptual general arrangement drawing for proposed RUB no. 084 span 1×6.0×5.0 RCC box at Ch: 33976.50	GC-HRIDC-C23-DRW-BRD-GAD-01084_A1
12.	Conceptual general arrangement drawing for proposed RUB no. 085 span 2×5.5×5.650 RCC box at Ch: 34280.218	GC-HRIDC-C23-DRW-BRD-GAD-01085_A1
13.	Conceptual general arrangement drawing for road under bridge no 87 Span 1.0x5.0x3.0 RCC box at Ch: 35371.018m	GC-HRIDC-C23-DRW-BRD-GAD-01087_A1
14.	Conceptual general arrangement drawing for road under bridge no 88 Span 1.0x5.0x3.0 RCC box at Ch: 35916.064m	GC-HRIDC-C23-DRW-BRD-GAD-01088_A1
15.	Conceptual general arrangement drawing for proposed RUB no. 089 span 2×7.0×5.65 RCC box at Ch: 36984.118	GC-HRIDC-C23-DRW-BRD-GAD-01089_A1
16.	Conceptual general arrangement drawing for proposed RUB no. 091 span1×5.0×3.15 RCC box at Ch: 37804.099	GC-HRIDC-C23-DRW-BRD-GAD-01091_A1
17.	Conceptual general arrangement drawing proposed RUB no. 092 span 2×5.5×5.650 RCC box at Ch: 38456.750	GC-HRIDC-C23-DRW-BRD-GAD-01092_A1
18.	Conceptual general arrangement drawing for balancing culvert bridge no.	GC-HRIDC-C23-DRW-BRD-GAD-01093_A1

S. No.	TITLE	REVISED/NEW DRAWING NO.
	093 Span 1×3.0×2.0 RCC box at Ch: 39155.000	
19.	Conceptual general arrangement drawing for road under bridge no. 094 span 1.0x5.0x3.0 RCC box at Ch: 39552.508	GC-HRIDC-C23-DRW-BRD-GAD-01094_A1
20.	Conceptual general arrangement drawing proposed RUB no. 095 span 2×5.5×5.650 RCC box at Ch: 40003.467	GC-HRIDC-C23-DRW-BRD-GAD-01095_A1
21.	Conceptual general arrangement drawing for proposed RUB no. 097 span 1×4.0×2.5 RCC box at Ch: 40671.025	GC-HRIDC-C23-DRW-BRD-GAD-01097_A1
22.	Conceptual general arrangement drawing for road under bridge no. 098 span 1.0x4.0x3.0 RCC box at Ch: 41312.174	GC-HRIDC-C23-DRW-BRD-GAD-01098_A1
23.	Conceptual general arrangement drawing for balancing culvert bridge no. 100 Span 1.0x2.0x2.0 RCC box at Ch: 41925.899	GC-HRIDC-C23-DRW-BRD-GAD-01100_A1
24.	Conceptual general arrangement drawing proposed RUB no. 101 span 2×7.0×5.650 RCC box at Ch: 41962.645	GC-HRIDC-C23-DRW-BRD-GAD-01101_A1
25.	Conceptual general arrangement drawing for balancing culvert bridge no 102 Span 1.0x2.0x2.0 RCC box at Ch: 42238.900	GC-HRIDC-C23-DRW-BRD-GAD-01102_A1
26.	Conceptual general arrangement drawing for proposed RUB no. 103 span 1×5.0×3.0 RCC box at Ch: 42578.906	GC-HRIDC-C23-DRW-BRD-GAD-01103_A1
27.	Conceptual general arrangement drawing proposed RUB no. 105 span 2×7.0×5.650 RCC box at Ch: 43506.883	GC-HRIDC-C23-DRW-BRD-GAD-01105_A1
28.	Conceptual general arrangement drawing for road under bridge no 106 Span 1.0x4.0x3.1 RCC box at Ch: 43758.291	GC-HRIDC-C23-DRW-BRD-GAD-01106_A1
29.	Conceptual general arrangement drawing for balancing culvert bridge no 108 Span 1.0x4.0x5.0 RCC box at Ch: 44281.401	GC-HRIDC-C23-DRW-BRD-GAD-01108_A1
30.	Conceptual general arrangement drawing for balancing culvert bridge no 109 Span 1.0x4.0x5.0 RCC box at Ch: 44401.641m	GC-HRIDC-C23-DRW-BRD-GAD-01109_A1

S. No.	TITLE	REVISED/NEW DRAWING NO.
31.	Conceptual general arrangement drawing proposed RUB no. 110 span 1×6.0×5.0 RCC box at Ch: 44420.238	GC-HRIDC-C3-DRW-BRD-GAD-01110_A1
32.	Conceptual general arrangement drawing for balancing culvert bridge no 114 span 1.0x6.0x6.0 RCC box at Ch: 46635.175	GC-HRIDC-C23-DRW-BRD-GAD-01114_A1
33.	Conceptual general arrangement drawing for road under bridge no 115 Span 1.0x6.0x6.0 RCC box at Ch: 46768.341	GC-HRIDC-C23-DRW-BRD-GAD-01115_A1
34.	Conceptual general arrangement drawing for balancing culvert bridge no 116 span 1.0x5.0x5.0 RCC box at Ch: 46915.023	GC-HRIDC-C23-DRW-BRD-GAD-01116_A1
35.	Conceptual general arrangement drawing for road under bridge no 117 Span 2.0x5.0x5.0 RCC box at Ch: 47300.018	GC-HRIDC-C23-DRW-BRD-GAD-01117_A1
36.	Conceptual general arrangement drawing for balancing culvert no 118 Span 1.0x4.0x4.0 RCC box at Ch: 47500.360	GC-HRIDC-C23-DRW-BRD-GAD-01118_A1
37.	Conceptual general arrangement drawing for balancing culvert bridge no 119 Span 1.0x4.0x3.0 RCC box at Ch: 47824.336	GC-HRIDC-C23-DRW-BRD-GAD-01119_A1
38.	Conceptual general arrangement drawing for balancing culvert bridge no 120 Span 1.0x4.0x4.0 RCC box at Ch: 48093.515	GC-HRIDC-C23-DRW-BRD-GAD-01120_A1
39.	Conceptual general arrangement drawing for road under bridge no 121 Span 1.0x4.0x4.0 RCC box at Ch: 48231.618	GC-HRIDC-C23-DRW-BRD-GAD-01121_A1
40.	Conceptual general arrangement drawing for road under bridge no 124 Span 1.0x4.0x4.0 RCC box at Ch: 48794.629	GC-HRIDC-C23-DRW-BRD-GAD-01124_A1
41.	Conceptual general arrangement drawing for road under bridge no 125 Span 2.0x5.0x3.6 RCC box at Ch: 49167.307	GC-HRIDC-C23-DRW-BRD-GAD-01125_A1
42.	Conceptual general arrangement drawing for bridge no. 126 Pipe culvert 1x1.2 span, at Ch: 49583.348	GC-HRIDC-C23-DRW-BRD-GAD-01126_A1
43.	Conceptual general arrangement drawing for balancing culvert bridge no	GC-HRIDC-C23-DRW-BRD-GAD-01137_A1

S. No.	TITLE	REVISED/NEW DRAWING NO.
	137 Span 1.0x5.0x4.0 RCC box at Ch: 56117.426	
44.	Conceptual general arrangement drawing for road under bridge no 138 Span 1.0x5.0x4.0 RCC box at Ch: 56290.652	GC-HRIDC-C23-DRW-BRD-GAD-01138_A1
45.	Conceptual general arrangement drawing for balancing culvert bridge no 139 Span 1.0x5.0x4.0 RCC box at Ch: 56465.029	GC-HRIDC-C23-DRW-BRD-GAD-01139_A1
46.	Conceptual general arrangement drawing for balancing culvert bridge no 140 Span 1.0x5.0x4.0 RCC box at Ch: 56755.035	GC-HRIDC-C23-DRW-BRD-GAD-01140_A1
47.	Conceptual general arrangement drawing For Road + Balancing culvert bridge no 141/ 141A 1x2x2+1x5x4 RCC box at Ch: 57154.991/57167.991	GC-HRIDC-C23-DRW-BRD-GAD-01141_A1
48.	Conceptual general arrangement drawing for balancing culvert bridge no 142 1x5.0x4.0m RCC box at Ch:57520	GC-HRIDC-C23-DRW-BRD-GAD-01142_A1
49.	Conceptual general arrangement drawing for road under bridge no. 143, 2x7x5.25 RCC box at CH: 57670.809	GC-HRIDC-C23-DRW-BRD-GAD-01143_A1
50.	Conceptual general arrangement drawing for balancing culvert bridge no. 144, 1x2x2 RCC box at CH: 57987.046	GC-HRIDC-C23-DRW-BRD-GAD-01144_A1
51.	Conceptual general arrangement drawing for road under bridge no. 145, 1x5x3 RCC box at CH: 58203.149	GC-HRIDC-C23-DRW-BRD-GAD-01145_A1
52.	Conceptual general arrangement drawing for balancing culvert bridge no. 146, 1x2x2 RCC box at CH: 58564.993	GC-HRIDC-C23-DRW-BRD-GAD-01146_A1
53.	Conceptual general arrangement drawing for bridge no.146A - 5 m clear span inverted U over GAIL pipe line crossing at Ch. 58720.513	GC-HRIDC-C23-DRW-BRD-GAD-01146A_A0
54.	Conceptual general arrangement drawing for balancing culvert bridge no 147A 1x2.0x2.0m RCC box at Ch. 59587.000	GC-HRIDC-C23-DRW-BRD-GAD-01147A_A0
55.	Conceptual general arrangement drawing for road under bridge no. 148, 2x5x5.25 RCC box at CH: 59884.954	GC-HRIDC-C23-DRW-BRD-GAD-01148_A1
56.	Conceptual general arrangement drawing for Road+Balancing culvert bridge no 149/149A 1x5x3 + 1x2x2	GC-HRIDC-C23-DRW-BRD-GAD-01149_A1

S. No.	TITLE	REVISED/NEW DRAWING NO.
	RCC box at Ch. 60161.343m/ 60171.264m	
57.	Conceptual general arrangement drawing for balancing culvert bridge no. 154, 1x2x2 RCC box at CH: 61163.504	GC-HRIDC-C23-DRW-BRD-GAD-01154_A1
4.1.2 CONNECTING LINE		
A. NEW PATLI TO PATLI		
1.	Conceptual general arrangement drawing for road under bridge no. 1, 1x5x3.25 RCC box at CH: 1046.562 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03001_A1
2.	Conceptual general arrangement drawing for balancing culvert bridge no. 2, 1x2x2 RCC box at CH: 1277.958 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03002_A1
3.	Conceptual general arrangement drawing for road under bridge no. 3, 1x4x3.25 RCC box at CH: 1986.847 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03003_A1
4.	Conceptual general arrangement drawing for road under bridge no. 4, 1x5x5.25 RCC box at CH: 2518.489 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03004_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-03004_A1 (Sheet 2 of 2)
5.	Conceptual general arrangement drawing for balancing culvert bridge no. 5, 1x2.5x3 RCC box at CH: 2687.006 (connecting line New Patli to Patli)	GC-HRIDC-C23-DRW-BRD-GAD-03005_A1
B. NEW PATLI TO SULTANPUR		
1.	Conceptual general arrangement drawing for balancing culvert bridge no. 2, 1x2x2 RCC box at CH: 1548.996 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04002_A1
2.	Conceptual general arrangement drawing for bridge no.3A - 5 m clear span inverted U over GAIL pipe line crossing at Ch. 1785m (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04003A_A0
3.	Conceptual general arrangement drawing for balancing culvert bridge no.4, 1x2x2 RCC box at CH: 2189.831 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04004_A1
4.	Conceptual general arrangement drawing for road under bridge no. 5, 1x5x4.25 RCC box at CH: 2823.679 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04005_A1

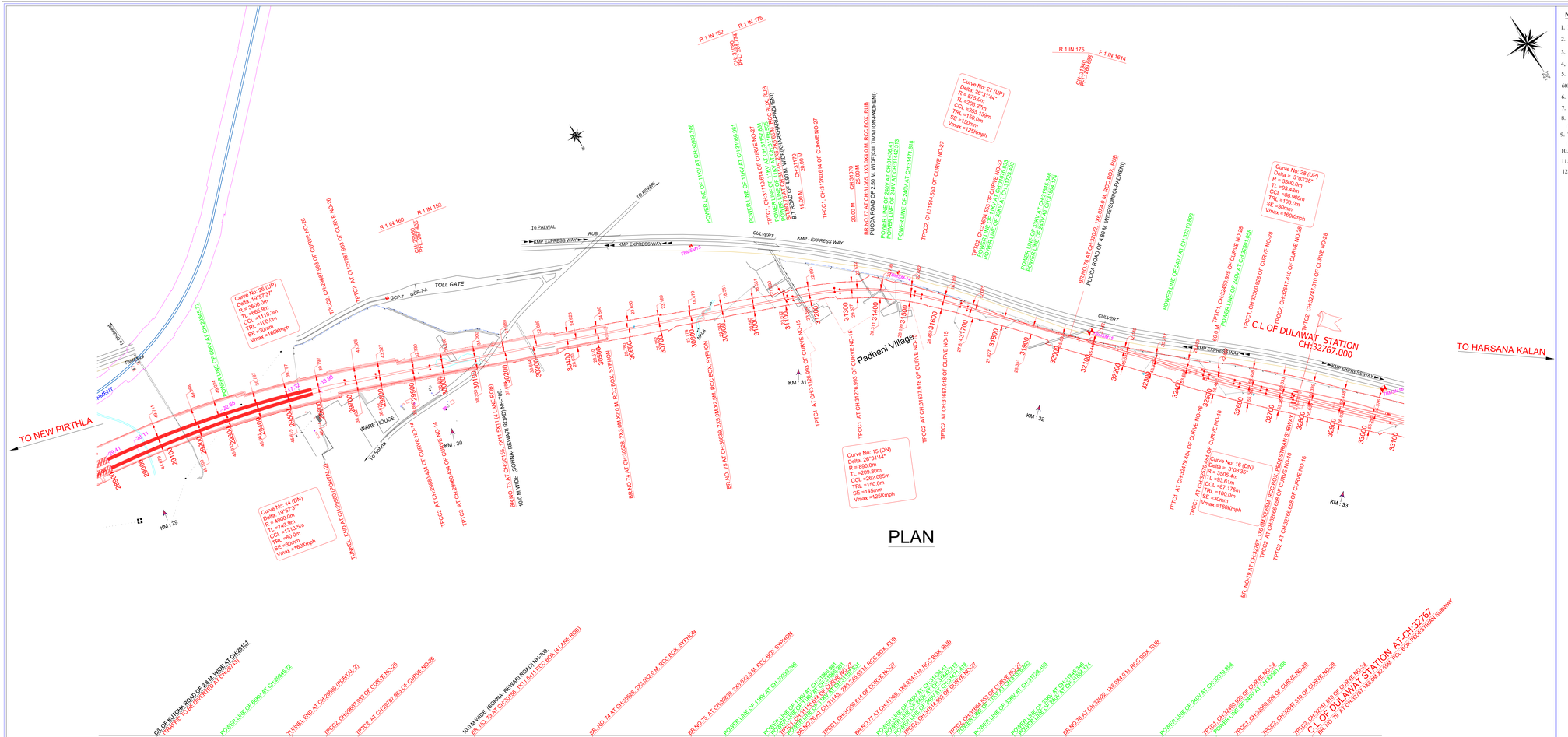
S. No.	TITLE	REVISED/NEW DRAWING NO.
5.	Conceptual general arrangement drawing for bridge no.5A - 5 m clear span inverted U over GAIL pipe line crossing at Ch. 3733m (connecting line new Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04005A_A0
4.2	**MAJOR BRIDGES**	
4.2.1	**MAIN LINE**	
1.	Conceptual general arrangement drawing for PSC U Slab bridge no. 86, 2x12.2 RCC box at CH:34899.045	GC-HRIDC-C23-DRW-BRD-GAD-01086_A1
2.	Conceptual general arrangement drawing for proposed major bridge no.107 at Ch: 44246.344m 1 x 18.3 m Composite girder	GC-HRIDC-C23-DRW-BRD-GAD-01107_A1
3.	Conceptual general arrangement drawing for proposed major RUB no.111 at Ch:44570.310m as 1 x 18.3 m PSC I Girder	GC-HRIDC-C23-DRW-BRD-GAD-01111_A1
4.	Conceptual general arrangement drawing for prop. major RUB no.112, at Ch: 45495.969m 4x18.3(CG) + 1x30.5(CG) + 8x24.4 (CG) + 1x76.2(OWG) + 2x24.4(CG) + 1x61(OWG)	GC-HRIDC-C23-DRW-BRD-GAD-01112_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01112_A1 (Sheet 2 of 2)
5.	Conceptual general arrangement drawing for proposed viaduct br no.123 at Ch: 48663.628m as 1 x 18.3 m PSC I girder	GC-HRIDC-C23-DRW-BRD-GAD-01123_A1
6.	Conceptual general arrangement drawing for proposed major ROR bridge no.136, 18.3(CG) + 76.2(OWG) + 18.3 (CG) at Ch: 55724.752m	GC-HRIDC-C23-DRW-BRD-GAD-01136_A1
7.	Conceptual general arrangement drawing for proposed major RUB no.147 at Ch:59106.085m 1 x 45.7m, Open Web Girder	GC-HRIDC-C23-DRW-BRD-GAD-01147_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01147_A1 (Sheet 2 of 2)
8.	Conceptual general arrangement drawing for proposed major RUB no. 150, 1x30.5 Composite Girder at CH: 60457.614	GC-HRIDC-C23-DRW-BRD-GAD-01150_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01150_A1 (Sheet 2 of 2)
9.	Conceptual general arrangement drawing for proposed major RUB no. 151, 1x24.4 Composite Girder at CH: 60563.367	GC-HRIDC-C23-DRW-BRD-GAD-01151_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01151_A1 (Sheet 2 of 2)
10.	Conceptual general arrangement drawing for proposed major RUB no. 152, 1x24.4 Composite Girder at CH: 60642.669	GC-HRIDC-C23-DRW-BRD-GAD-01152_A1 (Sheet 1 of 2) GC-HRIDC-C23-DRW-BRD-GAD-01152_A1 (Sheet 2 of 2)

S. No.	TITLE	REVISED/NEW DRAWING NO.
11.	Conceptual general arrangement drawing for proposed major RUB no. 153, 1x30.5 Composite Girder at CH: 60754.591	GC-HRIDC-C23-DRW-BRD-GAD-01153_A1 (Sheet 1 of 2)
		GC-HRIDC-C23-DRW-BRD-GAD-01153_A1 (Sheet 2 of 2)
4.2.2 CONNECTING LINE		
A. NEW PATLI TO SULTANPUR		
1.	Conceptual general arrangement drawing for proposed major RUB no. 1 at Ch:951.499 m 1 x 45.7m, Open Web Girder (connecting line new patli to sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD-04001_A1
2.	Conceptual general arrangement drawing for proposed major RUB no. 3, 1x12.2 PSC U Slab at CH: 1767.989 (connecting line New Patli to Sultanpur)	GC-HRIDC-C23-DRW-BRD-GAD_04003_A1
5. MISCELLANEOUS DRAWINGS (CONCEPTUAL PLANS)		
1.	Conceptual Plan Typical embankment/cutting profile	GC-HRIDC-SK-GEN-001_A1
2.	Conceptual Plan S&T hut	GC-HRIDC-SK-GEN-002_A1
3.	Conceptual Plan Mini platform shelter	GC-HRIDC-SK-GEN-003_A1
4.	Conceptual Plan R.C. pre-cast fencing for end platform	GC-HRIDC-SK-GEN-004
5.	Conceptual Plan Station name board	GC-HRIDC-SK-GEN-005_A1
6.	Conceptual Plan Proposed toilet block on island platforms	GC-HRIDC-SK-GEN-006_A1
7.	Conceptual Plan Proposed toilet block on end platforms	GC-HRIDC-SK-GEN-007_A1
8.	Conceptual Plan Drains for Embankment	GC-HRIDC-SK-GEN-008_A1
9.	Conceptual Plan Steel barricade	GC-HRIDC-SK-GEN-009
10.	Conceptual Plan Water booth with one side taps arrangement (end platform)	GC-HRIDC-SK-GEN-010_A1
11.	Conceptual Plan Water booth with both side taps arrangement (island platform)	GC-HRIDC-SK-GEN-011_A1
12.	Conceptual Plan Ticket counter for New Patli station	GC-HRIDC-SK-GEN-013
13.	Conceptual Plan CC Toe wall	GC-HRIDC-SK-GEN-014_A1
14.	Conceptual Plan Typical details of protection work	GC-HRIDC-SK-GEN-015_A1
15.	Conceptual Plan Barbed wire fencing	GC-HRIDC-SK-GEN-016_A1

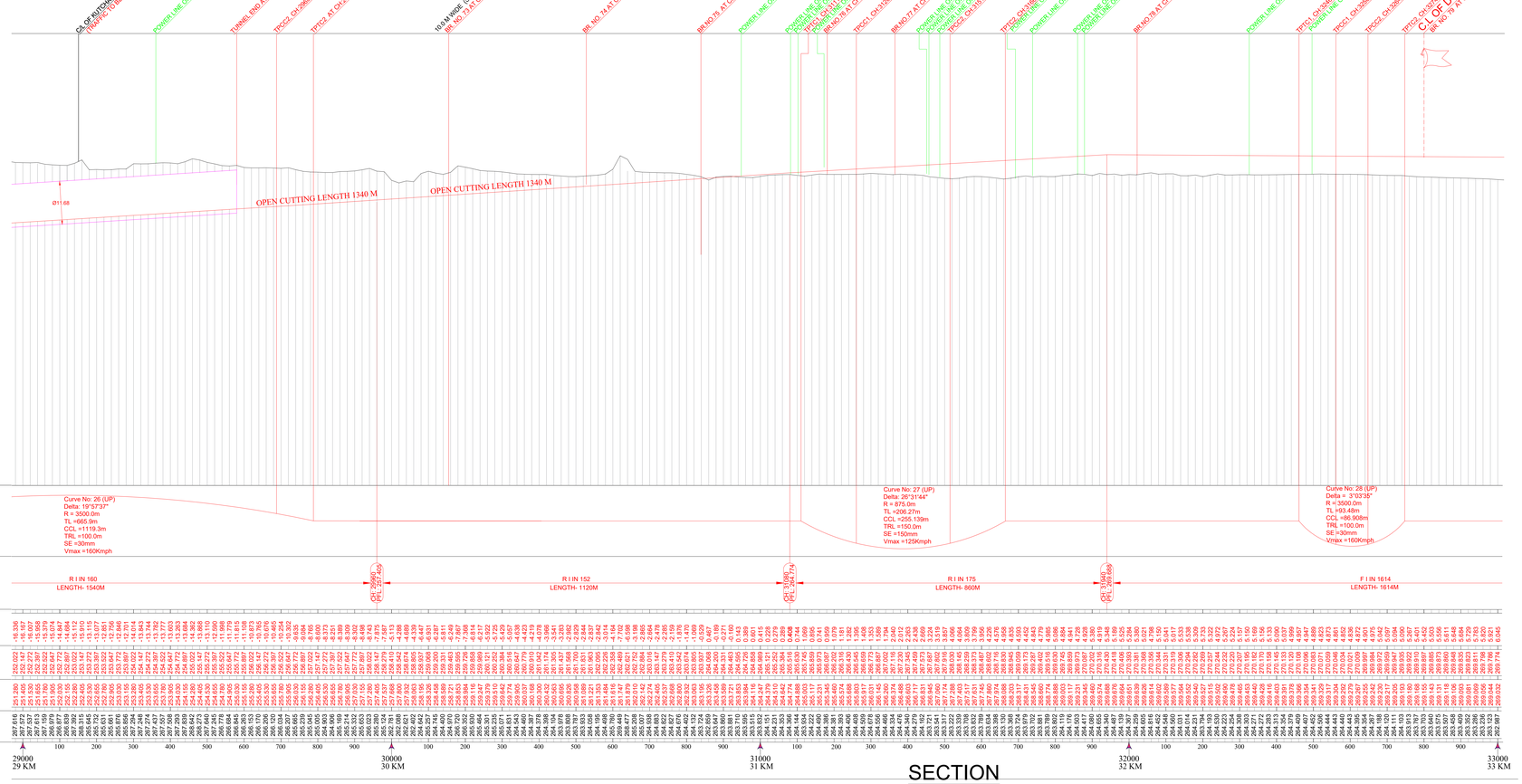
S. No.	TITLE	REVISED/NEW DRAWING NO.
16.	Conceptual Plan Rain –Water Harvesting	GC-HRIDC-SK-GEN-018
17.	Conceptual Plan for Transition system of bridge approaches	GC-HRIDC-SK-GEN-019
18.	Conceptual Plan for Self-Supporting roof covering Shed	GC-HRIDC-SK-GEN-020
19.	Conceptual Plan for formation details below subway, lift well and building	GC-HRIDC-SK-GEN-021
20.	Conceptual plan for Trolley Refuge in embankment	GC-HRIDC-SK-GEN-022
21.	Conceptual plan for Trolley Refuge in cutting	GC-HRIDC-SK-GEN-023
22.	Conceptual sketch for RCC platform wall	GC-HRIDC-SK-GEN-024
23.	Conceptual Plan for single lane and double lane road	GC-HRIDC-SK-GEN-025
24.	Conceptual Plan for reinforced earth wall geogrid reinforcement	GC-HRIDC-SK-GEN-026
25.	Conceptual Plan for sump	GC-HRIDC-SK-GEN-027
26.	Conceptual sketch for NP4 pipe of 450mm Dia	GC-HRIDC-SK-GEN-028
27.	Conceptual sketch for precast RCC box 500 x 500 mm size	GC-HRIDC-SK-GEN-029
28.	Jurisdictional Sketch for civil works C-23 package	GC-HRIDC-C23-SK-CIVIL-001_A1
29.	Conceptual Plan Drainage arrangement (New Patli)	GC-HRIDC-C23-SK-CIVIL-002_A1
30.	Conceptual Plan Drainage arrangement (Sultanpur)	GC-HRIDC-C23-SK-CIVIL-003_A1
31.	Conceptual Plan Drainage arrangement (Dhulawat)	GC-HRIDC-C23-SK-CIVIL-004_A1
32.	Conceptual Plan Drainage arrangement (Chandla Dungerwas)	GC-HRIDC-C23-SK-CIVIL-005_A1
33.	Conceptual Plan Drainage arrangement (Pachgaon)	GC-HRIDC-C23-SK-CIVIL-006_A1
34.	Conceptual Plan Bank/cutting benching at interface locations	GC-HRIDC-C23-SK-CIVIL-009_A1
35.	Type plan powder toilet for divyangs	N.R.H.Q.E PLAN NO. HQ/20/11-2021

1.Alignment Plan & L-Section

PLAN



SECTION



NOTES :-

1. EXISTING WORK SHOWN IN BLACK.
2. PROPOSED WORK SHOWN IN RED.
3. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE SPECIFIED.
4. CHAINAGE IS RECKONED 0.00 FROM C.L. OF NEW PRITHLA STATION BUILDING .
5. RAIL LEVEL SHOULD BE 0.742m ABOVE FORMATION LEVEL FOR TRACK STRUCTURE 60KG NEW RAIL ON PSC SLEEPER (1660/KM) WITH 350mm BALLAST CUSHION.
6. RULLING GRADIENT IS 1 IN 150 OF THIS SECTION.(COMPENSATED)
7. VERTICAL CURVE WILL BE PROVIDED AS PER IRPWM PARA 419.
8. CROSS / LONGITUDINAL DRAINAGE ARRANGEMENT BET.TRACK SHOULD BE PROVIDED WHEREVER REQUIRED .
9. TROLLY REFUDGE IN BANKING / CUTTING SHALL BE PROVIDED AS PER PROVISION OF IRPWM.
10. STANRDARD OF LOADING (FOR PROP. LINE):- 32.5 T LOADING-2008 & HIGH RISE OHE.
11. TELEPHONE CABLE TO BE LAID FOR TELECOMUNICATION.
12. ALL ELECTRICAL X-ING WILL BE AS PER PARA II (I) OF CHAPTER I.GENERAL OF SCHEDULE 1 OF SOD 2004.

LEGEND	
EXISTING CENTRE LINE	
PROPOSED CENTRE LINE	
DFC CENTRE LINE	
EXISTING TPTC	
PROPOSED TPTC	
TBM	
KM-STONE	
PROPOSED BOUNDARY	
EXISTING BRIDGE	
PROPOSED BRIDGE	
NALA,CANAL,DRAIN	
PERMANENT STRUCTURE	
TEMPORARY STRUCTURE	
PROPOSED GATE LODGE	
TOE LINE	
ROAD	
POWER LINE WITH POLE	
PYLON	
EMBANKMENT / BUND	
ROCKY AREA	
COMPOUND WALL	
DITCH / QUARRY	
BARBED WIRE FENCING	
GROUND LEVEL	

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*	
SUDHIR AGRAWAL *DPD/CIVIL*	
KRISHAN CHAND SAINSI *CRE/CIVIL*	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR *GM/ IP&P*	
RAJU SOLANKI *DGM/CIVIL*	

NORTHERN RAILWAY

DELHI DIVISION

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

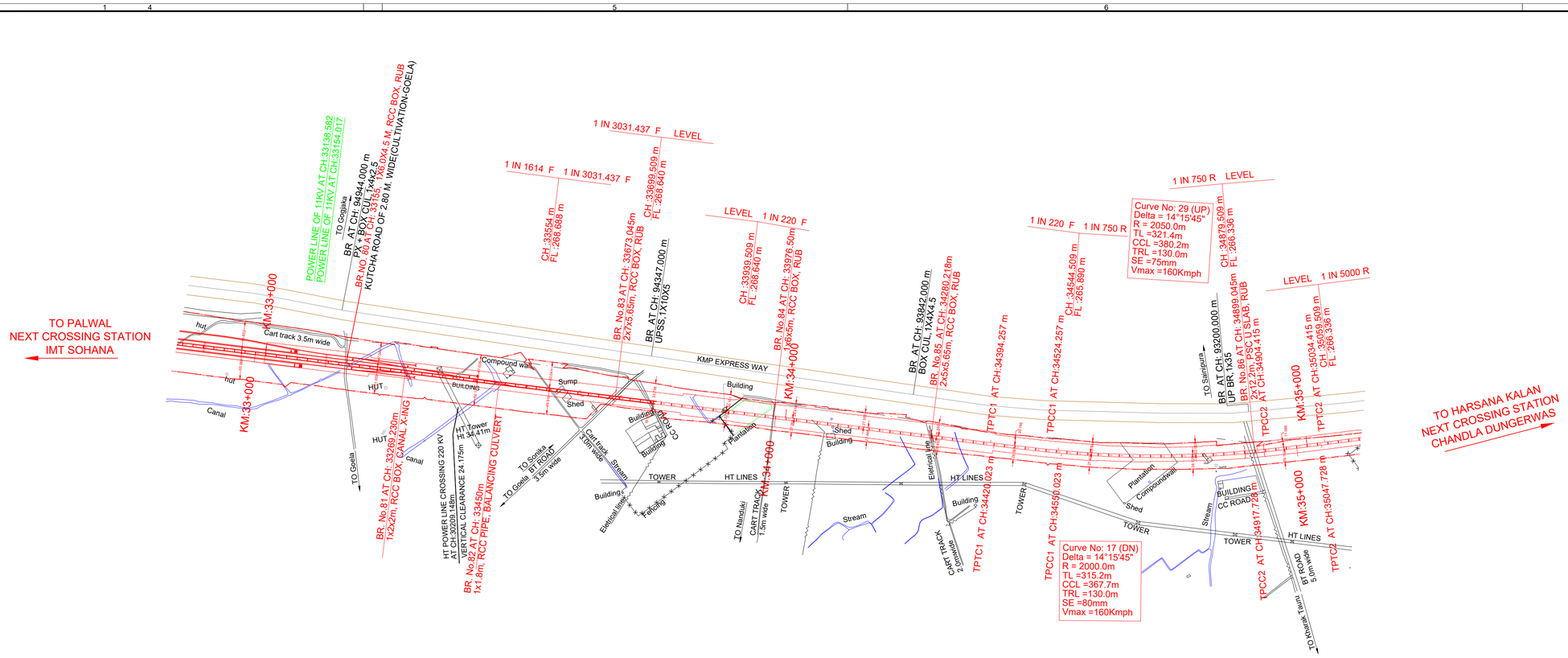
SIGN

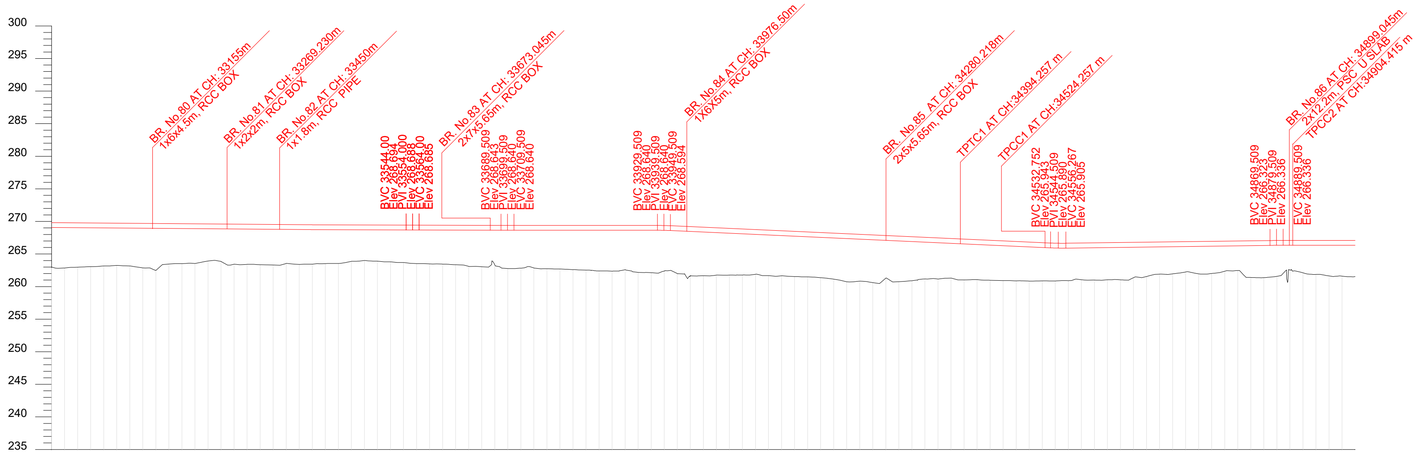
RITES THE INFRASTRUCTURE PEOPLE — SMEC YOUR DELIVERY PARTNER

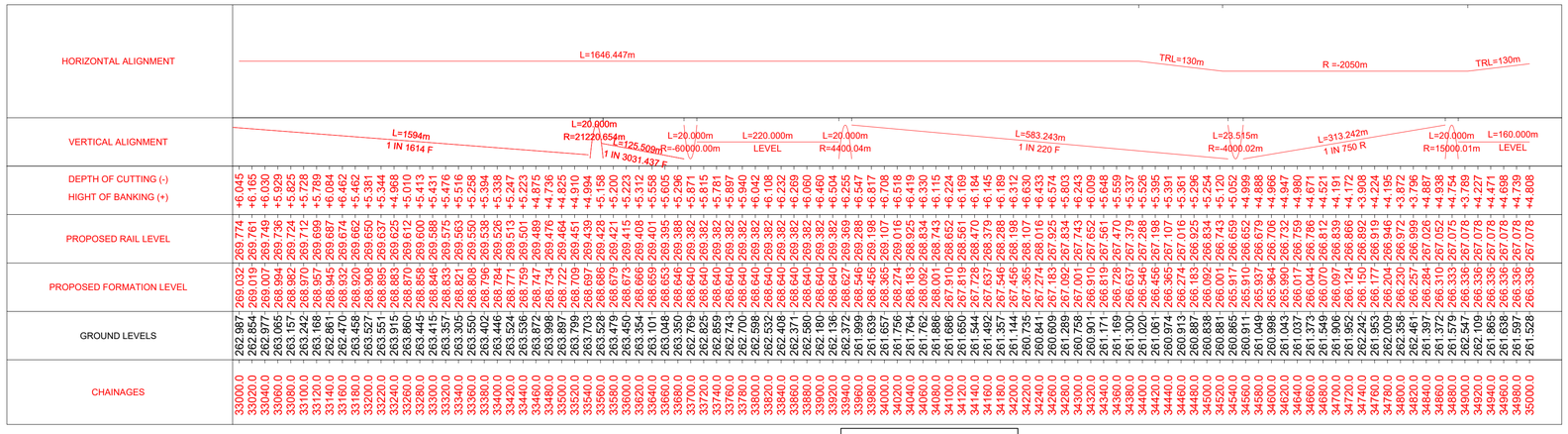
TITLE:	CONCEPTUAL PLAN & LONGITUDINAL SECTION (29 KM TO 33.0 KM)
GC/HORC DRG. NO:-	GC-HRIDC-ALL-DRW-ALN-P&P-29-33KM_A1
ISSUE Dt: 11.11.2022	REVISED Dt: 24.12.2022
SCALE: HORIZONTAL 1: 5000 VERTICAL 1:500	
SMC DRG. NO:-	SMC/HRIDC/TUNNEL/LS- (R-4)
CONSULTANT:	S.M. CONSULTANTS An ISO 9001 Company Bhubaneswar / Balasore / Secunderabad / South Andaman / New Delhi Web: www.smcindia.com, E-Mail: support@smcindia.com
DRAWN BY:- L.MOHANTY	CHECKED BY:- SIVRAM J

A SEKHMET PROJECT ENDORSE

RELEASED FOR	PRELIMINARY FOR APPROVAL	TENDER	CONSTRUCTION
		☑	







LONGITUDINAL PROFILE
HORIZONTAL-1:5000, VERTICAL-1:500

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND
- PRO.TOE LINE

NOTE:-

1. ALL DIMENSIONS ARE IN METRE UNLESS OTHERWISE STATED
2. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
3. TRACK CETRE BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
4. PUBLIC UTILITIES HT/LT LINES OFC CABLES WATER /SEWER LINES ETC INTERFERING WITH DFC TRACKS SHALL BE RELOCATED.
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.
6. VERTICAL CLEARANCE FROM LOWEST CONDUCTOR OF HT POWER LINE TO PROPOSED RAIL LEVEL ARE SHOWN

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD)

I. FOR RAIL CORRIDOR: 160KMPH Speed
- * TRACK = 60KG RAILS
- * SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
- * BALLAST CUSHION : 350mm
- * ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
2. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :

- PROPOSED RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	
SUDHIR AGRAWAL DPD/CIVIL	
KRISHAN CHAND SAINSI CRE/CIVIL	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR GM/ IP&P	
RAJU SOLANKI DGM/CIVIL	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
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GENERAL CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION (33.0 KM TO 35.0 KM)

GC DRG.NO.	GC-HRIDC-ALL-DRW-ALN-P&P-33-35KM_A1		
ISSUE Dt:	11.11.2022	REVISED Dt:	24.12.2022
CONSULTANTS :		AARVEE ASSOCIATES	

aarvee associates
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Tel: 91-40-23737633; Fax: 91-40-23736277
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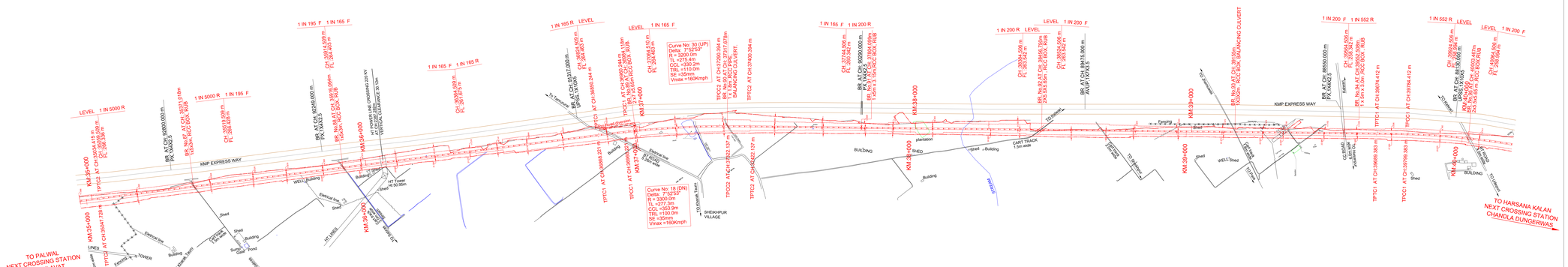
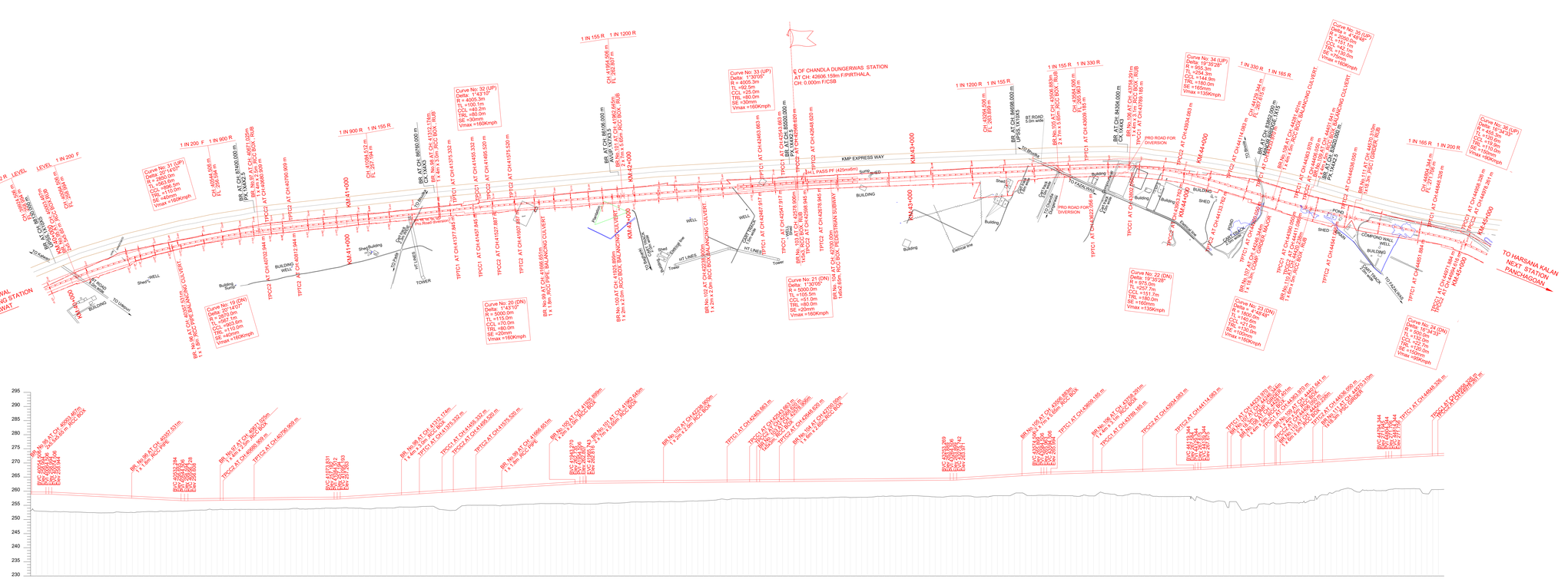
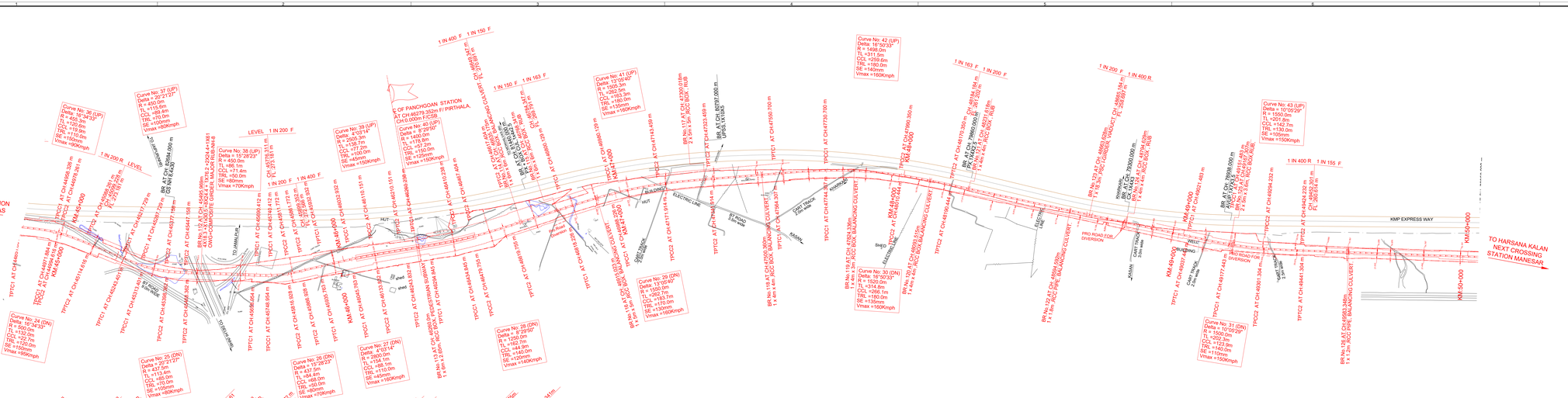
TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO.AA/2245/AL/DR/P&P/R3	SHEET No. 6 OF 24	
SCALE : H = 1:5000 V = 1:500	ISSUED Dt: 26.11.2019	REV Dt: 06-08-2022


TO PALWAL
NEXT CROSSING STATION
NEW DULAVAT
TO HARSANA KALAN
NEXT CROSSING STATION
CHANDLA DUNGERWAS
KMP EXPRESS WAY
KM-35+000
KM-36+000
KM-37+000
KM-38+000
KM-39+000
KM-40+000
Curve No: 30 (UP)
Delta: 7°52'53"
R = 3200.0m
TL =275.4m
CCL =330.2m
TRL =110.0m
SE =95mm
Vmax =160Kmph
Curve No: 18 (DN)
Delta: 7°52'53"
R = 3500.0m
TL =277.3m
CCL =353.9m
TRL =100.0m
SE =95mm
Vmax =160Kmph
SHEIKHPUR VILLAGE
CART TRACK 1.5m wide
plantation
BUILDING
Shed
WELL
Pond
Electrical line
Electrical line TOWER
Drainage
Culvert
Existing Road
TO Palwal
TO Harsana Kalan
KMP EXPRESS WAY
Existing
Proposed
Existing Road
Proposed Road
Existing Culvert
Proposed Culvert
Existing Bridge
Proposed Bridge
Existing Railway Track
Proposed Railway Track
Existing Railway Track
Proposed Railway Track
Existing Railway Track
Proposed Railway Track


TO PALWAL NEXT CROSSING STATION DULAWAT
TO HARSANA KALAN NEXT STATION PANCHGAON
KMP EXPRESS WAY
KM 43+000
KM 42+000
KM 41+000
KM 44+000
KM 45+000
KM 40+000
CHANDLA DUNGERWAS STATION
CH: 0.000m F/CSB
1 IN 200 F
1 IN 900 R
1 IN 155 R
1 IN 1200 R
1 IN 330 R
1 IN 165 R
1 IN 553 R
LEVEL
Curve No: 31 (UP) Delta: 2°45'0" R = 2065.0m TL =99.0m CCL =110.0m SE =81.0mm Vmax =160Kmph
Curve No: 32 (UP) Delta: 1°43'10" R = 4005.3m TL = 100.1m CCL =40.2m TRL =80.0m SE =30mm Vmax =160Kmph
Curve No: 33 (UP) Delta: 1°30'00" R = 4005.3m TL =52.5m CCL =25.0m TRL =80.0m SE =30mm Vmax =160Kmph
Curve No: 34 (UP) Delta: 1°30'28" R = 955.3m TL =254.3m CCL =144.0m TRL =80.0m SE =165mm Vmax =135Kmph
Curve No: 35 (UP) Delta: 1°30'0" R = 3056.0m TL =80.0m CCL =160.0m TRL =80.0m SE =110.0mm Vmax =160Kmph
Curve No: 36 (UP) Delta: 1°30'0" R = 3056.0m TL =80.0m CCL =160.0m TRL =80.0m SE =110.0mm Vmax =160Kmph
Curve No: 18 (DN) Delta: 2°0'14'0" R = 2865.0m TL =100.0m CCL =110.0m TRL =80.0m SE =45mm Vmax =160KmPH
Curve No: 20 (DN) Delta: 1°43'10" R = 5000.0m TL =115.0m CCL =70.0m TRL =80.0m SE =20mm Vmax =160Kmph
Curve No: 21 (DN) Delta: 1°30'05" R = 5000.0m TL =105.0m CCL =70.0m TRL =80.0m SE =20mm Vmax =160Kmph
Curve No: 22 (DN) Delta: 1°30'28" R = 955.3m TL =252.0m CCL =117.0m TRL =80.0m SE =160mm Vmax =135Kmph
Curve No: 23 (DN) Delta: 1°30'0" R = 3056.0m TL =80.0m CCL =160.0m TRL =80.0m SE =110.0mm Vmax =160Kmph
Curve No: 24 (DN) Delta: 1°30'0" R = 3056.0m TL =80.0m CCL =160.0m TRL =80.0m SE =110.0mm Vmax =160Kmph
BR No: 99 AT CH: 42696.650m 1 x 6.4m RCC BOX
BR No: 100 AT CH: 42696.650m 1 x 6.4m RCC BOX
BR No: 101 AT CH: 42696.650m 2 x 7m x 5.65m RCC BOX
BR No: 102 AT CH: 42696.650m 1 x 6.4m RCC BOX
BR No: 103 AT CH: 42696.650m 1 x 6.4m RCC BOX
BR No: 104 AT CH: 42696.650m 1 x 6.4m RCC BOX
BR No: 105 AT CH: 43708.291m 2 x 7m x 5.65m RCC BOX
BR No: 106 AT CH: 43708.291m 1 x 6.4m RCC BOX
BR No: 107 AT CH: 43708.169 m 1 x 6.4m RCC BOX
BR No: 108 AT CH: 43708.169 m 1 x 6.4m RCC BOX
BR No: 109 AT CH: 43708.169 m 1 x 6.4m RCC BOX
BR No: 110 AT CH: 43708.169 m 1 x 6.4m RCC BOX
BR No: 111 AT CH: 44304.000 m 2 x 7m x 5.65m RCC BOX
BR No: 112 AT CH: 44304.000 m 1 x 6.4m RCC BOX
BR No: 113 AT CH: 44304.000 m 1 x 6.4m RCC BOX
BR No: 114 AT CH: 44304.000 m 1 x 6.4m RCC BOX
BR No:


TO PALWAL NEXT CROSSING STATION CHANDLA DUNGERWAS
TO HARSANA KALAN NEXT CROSSING STATION MANESAR
KMP EXPRESS WAY
E OF PANCHGOAN STATION AT CH:48279.352m F/ PIRTHALA CH:0.000m F/CSB
1 IN 400 F
1 IN 150 F
1 IN 163 F
1 IN 200 F
1 IN 400 R
1 IN 155 F
LEVEL
Curve No: 36 (UP) Delta= 16°34'33" R = 400.0m CL =115.6m TL =120.9m CC =110.0m SE =110mm Vmax =80Kmph
Curve No: 37 (UP) Delta= 20°21'27" R = 410.5m CL =145.9m TL =152.7m CC =140.0m SE =110mm Vmax =80Kmph
Curve No: 38 (UP) Delta= 19°28'23" R = 450.0m CL =96.1m TL =50.0m CC =71.4m SE =80mm Vmax =70Kmph
Curve No: 39 (UP) Delta= 9°03'14" R = 1505.3m CL =136.7m TL =137.0m CC =132.0m SE =80mm Vmax =150Kmph
Curve No: 40 (UP) Delta= 9°29'50" R = 1400.0m CL =173.9m TL =174.2m CC =170.0m SE =125mm Vmax =150Kmph
Curve No: 41 (UP) Delta= 13°35'45" R = 1505.3m CL =262.5m TL =263.3m CC =260.0m SE =160mm Vmax =160Kmph
Curve No: 42 (UP) Delta= 10°50'33" R = 1496.0m CL =211.5m TL =259.6m CC =259.0m SE =140mm Vmax =160Kmph
Curve No: 43 (UP) Delta = 10°26'29" R = 1550.0m CL =201.3m TL =142.7m CC =142.7m SE =105mm Vmax =150Kmph
Curve No: 24 (DN) Delta= 16°34'33" R = 500.0m CL =144.6m TL =72.7m CC =72.7m SE =120mm Vmax =90Kmph
Curve No: 25 (DN) Delta= 20°21'27" R = 317.5m CL =113.4m TL =90.5m CC =90.5m SE =70.0m TR =70.0m SE =105mm Vmax =80Kmph
Curve No: 26 (DN) Delta= 19°28'23" R = 437.5m CL =148.6m TL =84.0m CC =50.0m SE =80mm Vmax =70Kmph
Curve No: 27 (DN) Delta= 9°03'14" R = 2850.0m CL =156.1m TL =156.4m CC =150.0m SE =90mm Vmax =160Kmph
Curve No: 28 (DN) Delta= 9°29'50" R = 1250.0m CL =155.1m TL =155.4m CC =140.0m SE =105mm Vmax =140Kmph
Curve No: 29 (DN) Delta= 13°35'45" R = 1505.3m CL =262.5m TL =263.7m CC =260.0m SE =130mm Vmax =160Kmph
Curve No: 30 (DN) Delta= 16°30'32" R = 1500.0m CL =144.8m TL =144.8m CC =144.8m SE =135mm Vmax =160Kmph
Curve No: 31 (DN) Delta = 10°05'09" R = 1800.0m CL =122.3m TL =122.3m CC =140.0m SE =115mm Vmax =150Kmph
BR No:116 AT CH:48166.129 m 1 x 4m SPL ACC BOX
BR No:117 AT CH:48500.350 m 2 x 5.5m & 2 x 4m ACC BOX
BR No:118 AT CH:48500.350 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:119 AT CH:48764.345 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:120 AT CH:48990.341 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:121 AT CH:49216.129 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:122 AT CH:49441.304 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:123 AT CH:49666.129 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:124 AT CH:49890.954 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:125 AT CH:49890.954 m 1 x 4m & 4m ACC BOX BALANCING CULVERT
BR No:126 AT CH:49953.348m 1 x 12m ACC PIPE BALANCING CULVERT
BR No:127 AT CH:49890.954 m 1 x 4m & 4m ACC PIPE BALANCING CULVERT
BR No:122 AT CH:49441.304 m 1 x 4m & 4m ACC PIPE
BR No:123 AT CH:49666.129 m 1 x 4m & 4m ACC PIPE
BR No:124 AT CH:49890.954 m 1 x 4m & 4m ACC PIPE
BR No:125 AT CH:49890.954 m 1 x 4m & 4m ACC PIPE
BR No:126 AT CH:49953.348m 1 x 12m ACC PIPE
BR No:127 AT CH:49890.954 m 1 x 4m & 4m ACC PIPE
BR No:128 AT CH:48279.352 m 1 x 4m & 4m ACC BOX
BR No:129 AT CH:48279.352 m 1 x 4m & 4m ACC BOX
BR No:130 AT CH:48279.352 m 1 x 4m & 4m ACC BOX
BR

KMP EXPRESS WAY
CART TRACK
KM 54+000
KM 55+000
KM 56+000
KM 57+000
KM 58+000
KM 59+000
KM 60+000
KM 61+000
KM 62+000
KM 63+000
KM 64+000
KM 65+000
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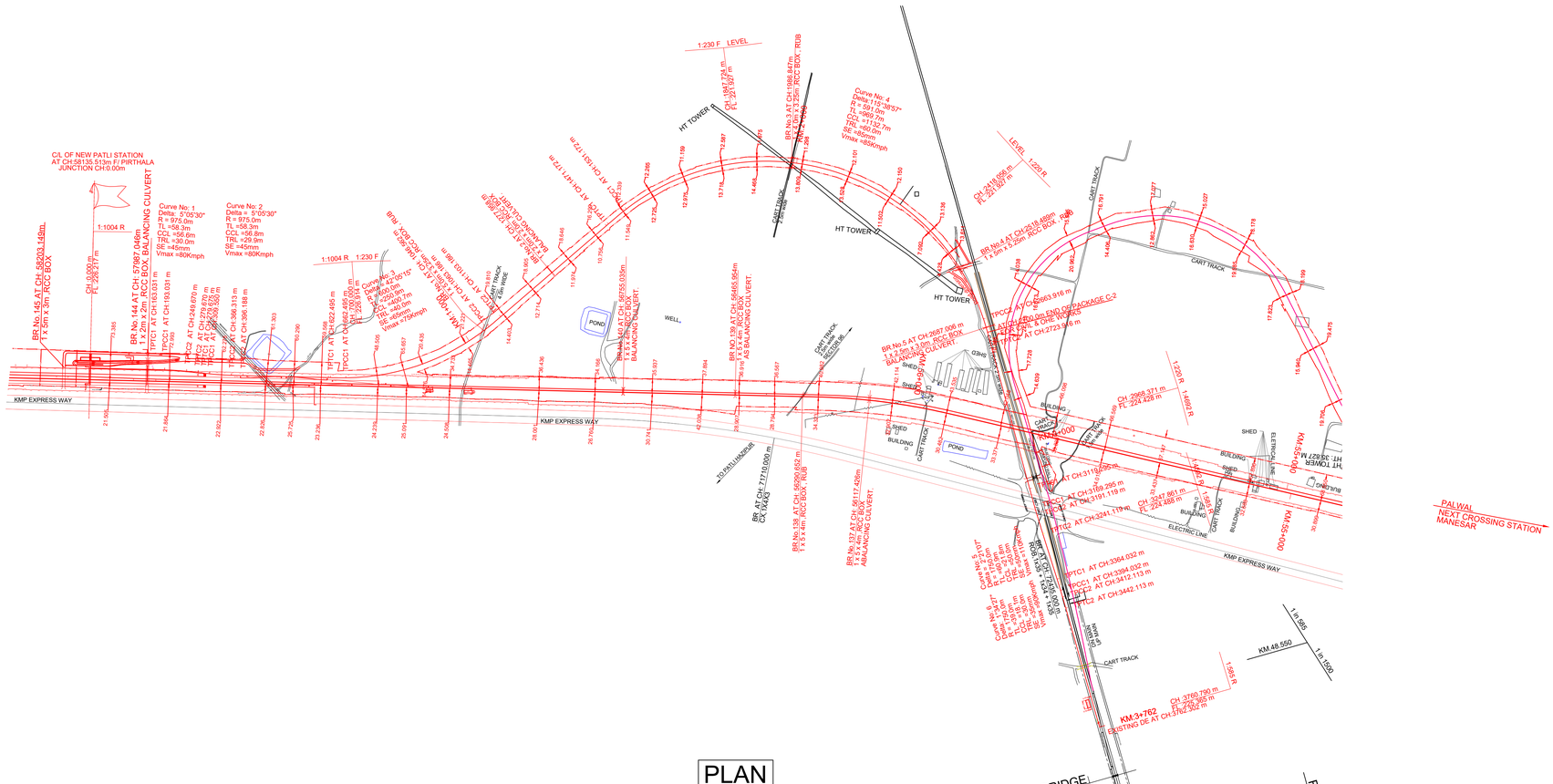
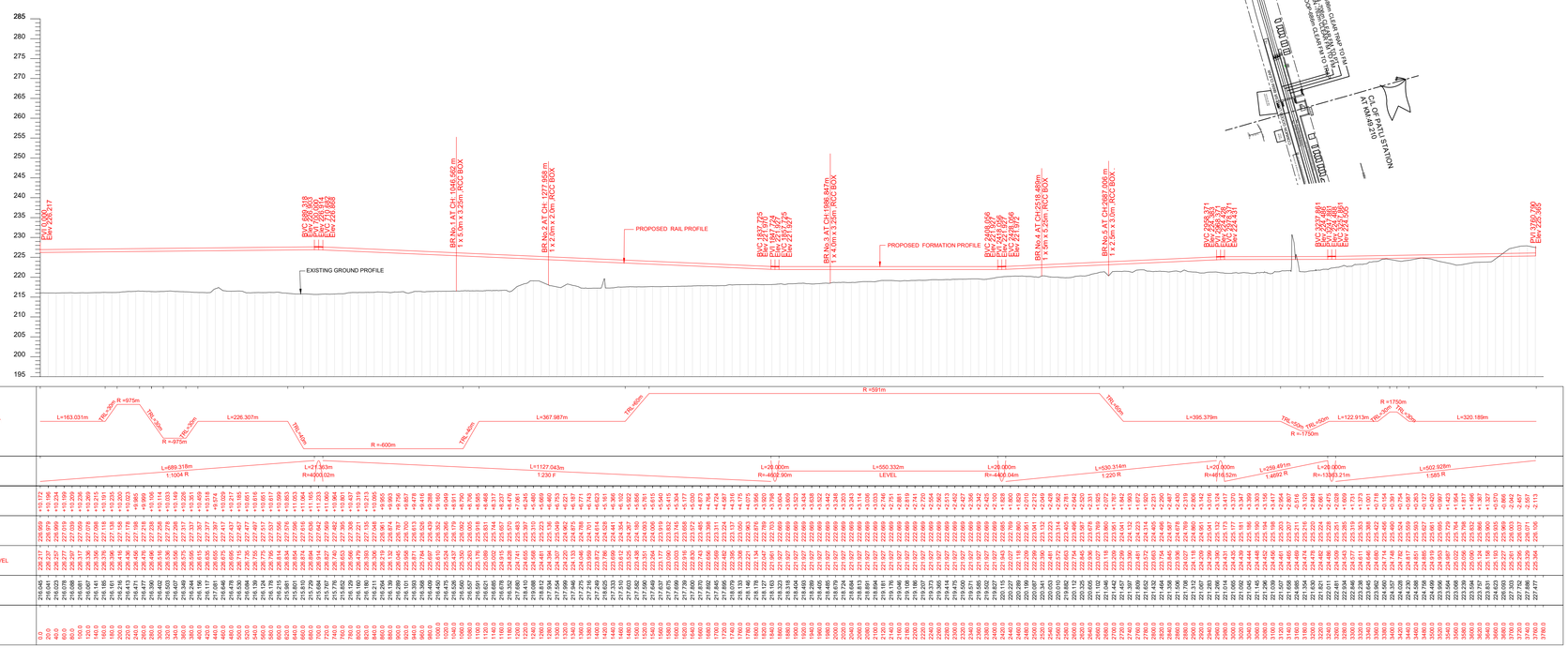
KM 69+000
KM 70+000
KM 71+000
KM 72+000
KM 73+000
KM



PLAN
1:5000



LONGITUDINAL PROFILE
HORIZONTAL:- 1 IN 5000, VERTICAL:- 1 IN 500

LEGEND:
- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- KMP EXPRESSWAY
- KMP EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

NOTE:-
1. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE STATED
2. CH:0.00 FOR CONNECTIVITY LINE IS RECKONED FROM NEW PATLI STATION
3. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
4. TRACK CENTER BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
- * TRACK = 60KG RAILS
- * SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
- * BALLAST CUSHION : 350mm
- * ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-
1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
2. EVC - END OF VERTICAL CURVE

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*	
SUDHIR AGRAWAL *DPD/CIVIL*	
KRISHAN CHAND SAINSI *CRE/CIVIL*	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR *GM/ IP&P*	
UMA. M. RAO *DGM/CIVIL*	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
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GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION CONNECTIVITY TOWARDS PATLI

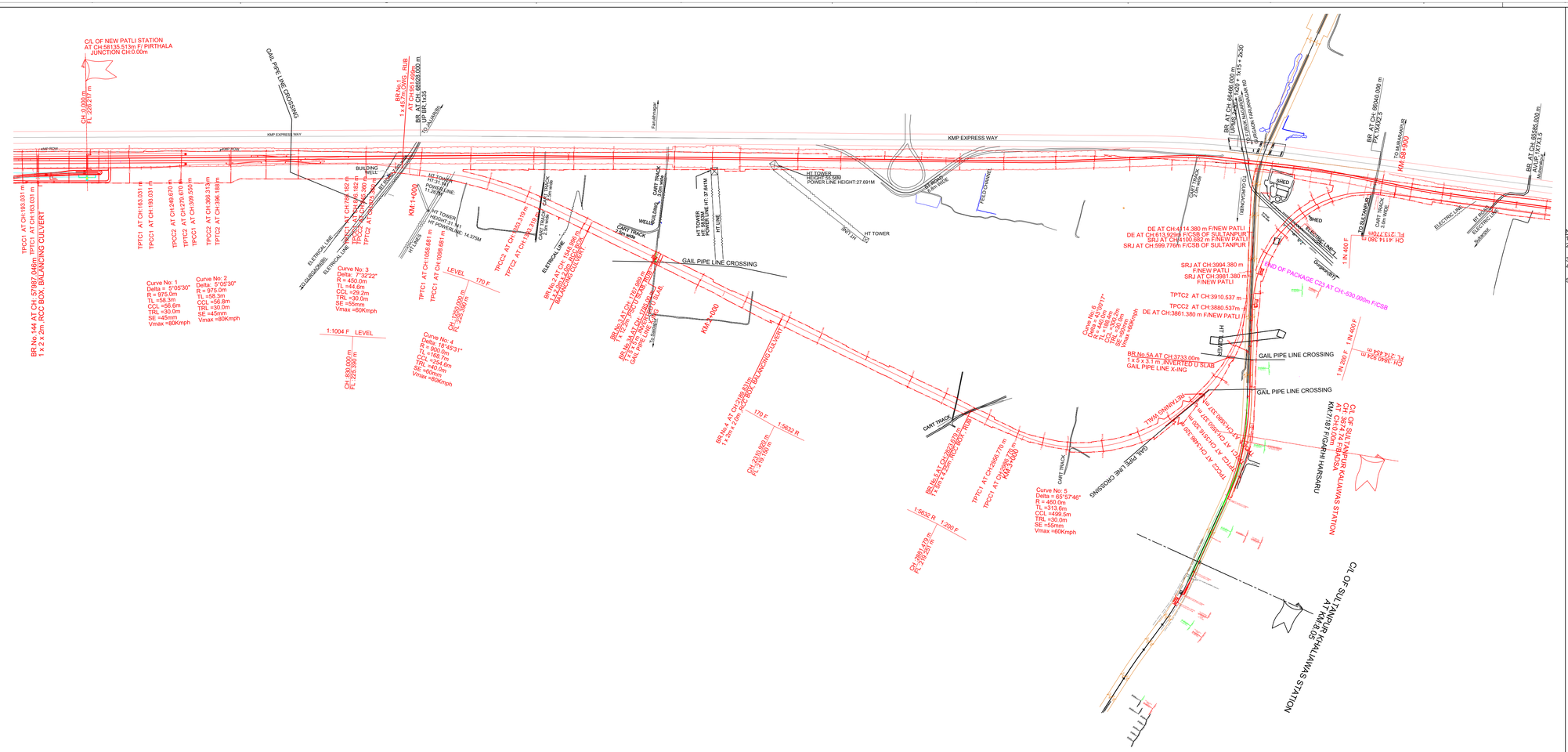
GC DRG.NO.	GC-HRIDC-C2-DRW-ALN-P&P-03001_A2
ISSUE Dt: 11.11.2022	REVISED Dt: 24.12.2022

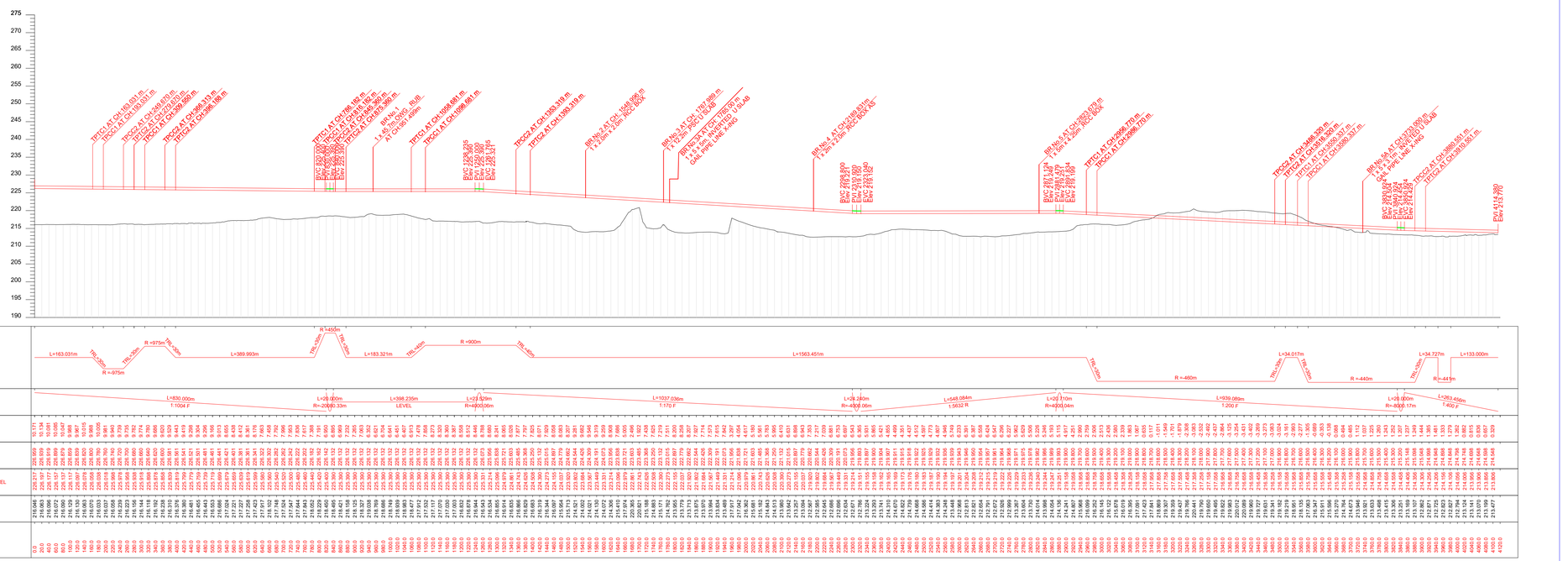
CONSULTANTS : aarvee associates — architects engineers & consultants pvt.ltd. Ravela Residency, Srinagar Colony Main Rd., Hyderabad-82, India. Tel: 91-40-23737633; Fax: 91-40-23736277. e-mail: rshreyas@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

TANMAY (AM CAD) DRAWN	G.PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO. AA/2245/AL/DR/P&P/REV-2	SHEET No. 1
SCALE : 1:1000	ISSUED Dt: 26.11.2019 / REV Dt: 06-08-2022





LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- KMP EXPRESSWAY
- KMP EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

NOTE:-

1. ALL DIMENSIONS ARE IN METER UNLESS OTHERWISE STATED
2. CH:0.00 FOR CONNECTIVITY LINE IS RECKONED FROM NEW PATLI STATION
3. ALL THE LEVELS ARE WITH RESPECT TO MEAN SEA LEVEL.
4. TRACK CENTER BETWEEN MAIN LINES OF HORC HAS BEEN KEPT AS MIN 5.30m
5. ARRANGEMENT & SIZE OF THE BRIDGE SHOWN IN THE DRAWING IS TENTATIVE AND MAY CHANGE AS PER THE APPROVED GAD.

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
- * TRACK = 60KG RAILS
- * SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
- * BALLAST CUSHION : 350mm
- * ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

ABBREVIATIONS:-

1. BVC - BEGIN OF VERTICAL CURVE
2. PVI - POINT OF VERTICAL INTERSECTION
2. EVC - END OF VERTICAL CURVE

LEGEND FOR PROFILE :

- EXISTING RAIL PROFILE
- PROPOSED FORMATION PROFILE
- GROUND PROFILE

GC/HORC	
NAME / DESIGNATION	SIGN
CHAHATEY RAM *PD*	
SUDHIR AGRAWAL *DPD/CIVIL*	
KRISHAN CHAND SAINSI *CRE/CIVIL*	

HRIDC	
NAME / DESIGNATION	SIGN
R. R. KUMAR *GM/ IP&P*	
UMA. M. RAO *DGM/CIVIL*	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ADAOTI-PATLI-SULTANPUR-KADARPUR BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE : CONCEPTUAL PLAN & LONGITUDINAL SECTION CONNECTIVITY TOWARDS SULTANPUR

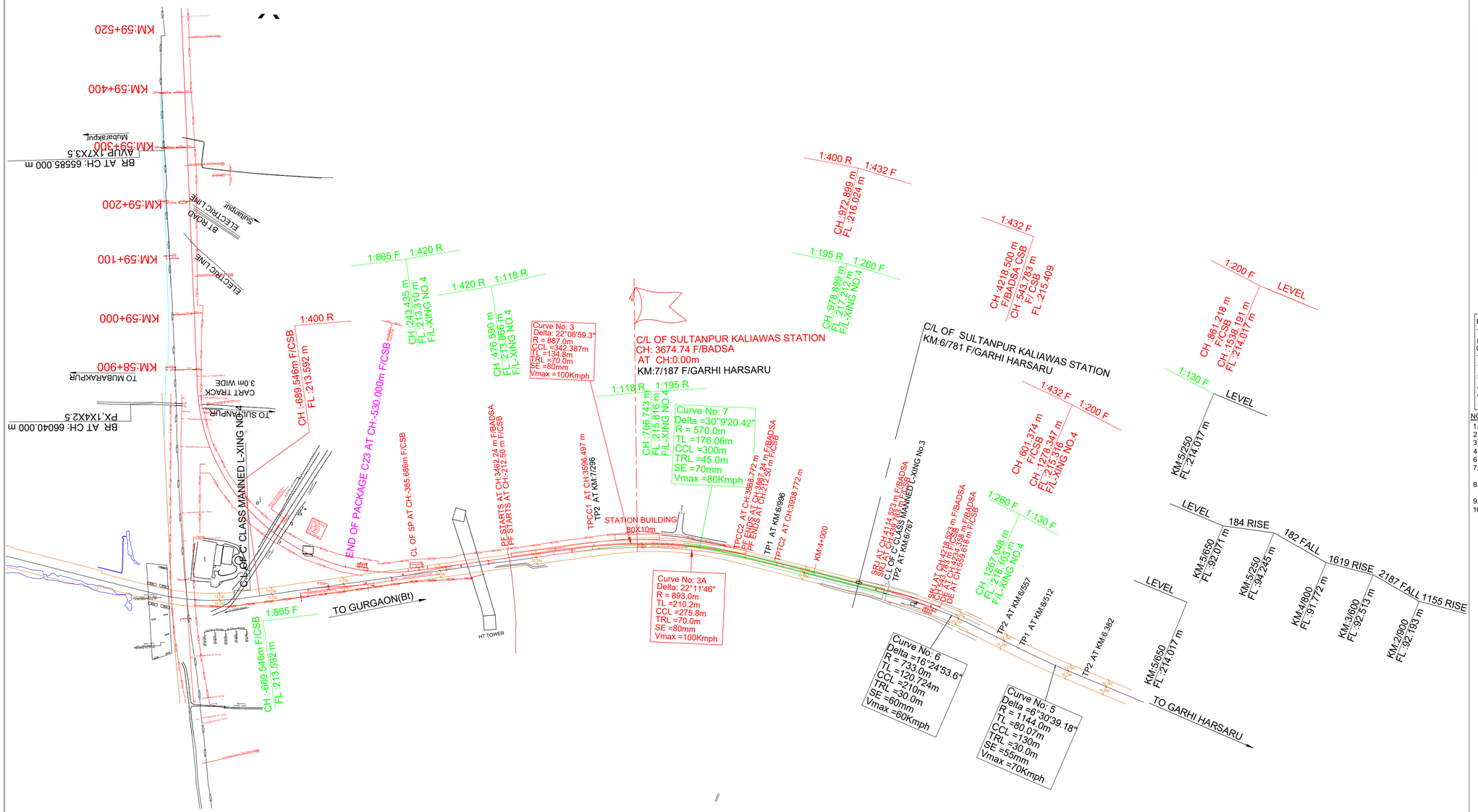
GC DRG.NO.	GC-HRIDC-C2-DRW-ALN-P&P-04001_A2
ISSUE Dt: 11.11.2022	REVISED Dt: 24.12.2022

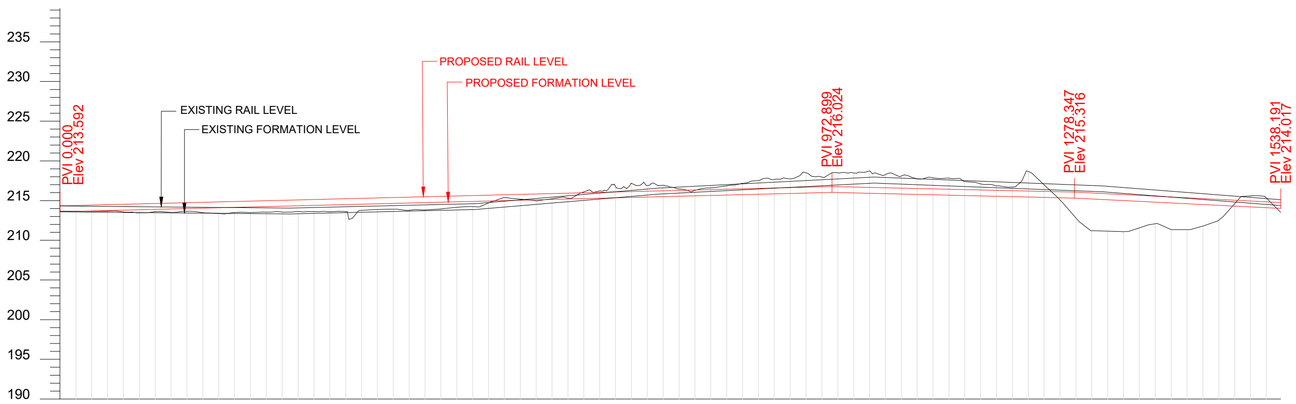
CONSULTANTS :
aarvee associates
architects engineers & consultants pvt ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737630, Fax: 91-40-23736377
e-mail: railways@aarvee.net; web:www.aarvee.net

AARVEE ASSOCIATES

TANMAY (AM DWG) DRAWN	G PRASAD (M) CHECKED	N.J. RAO (VP) APPROVED

DRG.NO. AA/2245/AL/DR/P&P/REV-2	SHEET No. 1
SCALE : H= 1:500/V = 1:500	ISSUED Dt: 26.11.2019 REV Dt: 06-08-2022





HORIZONTAL ALIGNMENT	R =893m; TRL=70m; TRL=70m
VERTICAL ALIGNMENT	L=972.899m 1:400 R; L=305.448m 1:-432 R; L=259.844m 1:-200 R

DIFF. B/W EXIST. RAIL LEVEL & PROP. RAIL LEVEL	PROPOSED RAIL LEVEL	PROPOSED FORMATION LEVEL	EXISITNG RAIL LEVEL	GROUND LEVELS	CHAINAGES
0.000	214.334	213.592	214.334	213.661	680.546
+0.073	214.384	213.642	214.311	213.648	680.0
+0.146	214.434	213.692	214.288	213.657	660.0
+0.220	214.484	213.742	214.264	213.667	640.0
+0.293	214.534	213.792	214.241	213.572	620.0
+0.366	214.584	213.842	214.218	213.452	600.0
+0.439	214.634	213.892	214.195	213.611	580.0
+0.512	214.684	213.942	214.172	213.505	560.0
+0.585	214.734	213.992	214.149	213.655	540.0
+0.658	214.784	214.042	214.126	213.478	520.0
+0.731	214.834	214.092	214.103	213.372	500.0
+0.805	214.884	214.142	214.079	213.496	480.0
+0.878	214.934	214.192	214.056	213.497	460.0
+0.892	214.984	214.242	214.092	213.548	440.0
+0.895	215.034	214.292	214.139	213.559	420.0
+0.897	215.084	214.342	214.187	213.624	400.0
+0.899	215.134	214.392	214.235	213.610	380.0
+0.902	215.184	214.442	214.282	213.611	360.0
+0.904	215.234	214.492	214.330	213.626	340.0
+0.906	215.284	214.542	214.378	213.776	320.0
+0.909	215.334	214.592	214.425	213.883	300.0
+0.911	215.384	214.642	214.473	213.921	280.0
+0.914	215.434	214.692	214.520	213.786	260.0
+0.916	215.484	214.742	214.568	213.827	240.0
+0.898	215.534	214.792	214.636	213.959	220.0
+0.778	215.584	214.842	214.806	214.152	200.0
+0.659	215.634	214.892	214.975	214.236	180.0
+0.539	215.684	214.942	215.145	214.718	160.0
+0.420	215.734	214.992	215.314	215.382	140.0
+0.300	215.784	215.042	215.484	215.178	120.0
+0.181	215.834	215.092	215.653	214.951	100.0
+0.061	215.884	215.142	215.823	215.237	80.0
-0.085	215.934	215.192	215.992	215.302	60.0
-0.178	215.984	215.242	216.162	216.095	40.0
-0.297	216.034	215.292	216.331	216.216	20.0
-0.417	216.084	215.342	216.501	216.794	0.0
-0.492	216.134	215.392	216.626	216.909	40.0
-0.544	216.184	215.442	216.728	216.918	60.0
-0.597	216.234	215.492	216.831	216.458	80.0
-0.650	216.284	215.542	216.934	216.300	100.0
-0.702	216.334	215.592	217.036	216.612	120.0
-0.755	216.384	215.642	217.139	216.855	140.0
-0.807	216.434	215.692	217.241	217.167	160.0
-0.860	216.484	215.742	217.344	217.521	180.0
-0.912	216.534	215.792	217.446	217.669	200.0
-0.965	216.584	215.842	217.549	217.755	220.0
-1.018	216.634	215.892	217.652	218.497	240.0
-1.070	216.684	215.942	217.754	217.966	260.0
-1.123	216.734	215.992	217.857	218.497	280.0
-1.199	216.750	216.007	217.949	218.493	300.0
-1.169	216.703	215.961	217.872	218.726	320.0
-1.139	216.657	215.914	217.796	218.274	340.0
-1.109	216.610	215.868	217.719	218.094	360.0
-1.078	216.564	215.822	217.642	217.750	380.0
-1.047	216.518	215.775	217.565	217.871	400.0
-1.017	216.471	215.729	217.488	217.829	420.0
-0.986	216.425	215.683	217.411	217.407	440.0
-0.955	216.379	215.636	217.334	217.114	460.0
-0.925	216.332	215.590	217.257	216.861	480.0
-0.894	216.286	215.544	217.180	216.709	500.0
-0.863	216.240	215.497	217.103	218.659	520.0
-0.833	216.193	215.451	217.028	216.949	540.0
-0.802	216.147	215.405	216.949	215.086	560.0
-0.771	216.101	215.358	216.872	212.818	580.0
-0.696	216.050	215.307	216.746	211.204	600.0
-0.642	215.950	215.207	216.592	211.150	620.0
-0.588	215.850	215.107	216.438	211.076	640.0
-0.534	215.750	215.007	216.284	211.569	660.0
-0.480	215.650	214.907	216.130	212.076	680.0
-0.426	215.550	214.807	215.976	211.348	700.0
-0.373	215.450	214.707	215.823	211.344	720.0
-0.319	215.350	214.607	215.669	211.793	740.0
-0.265	215.250	214.507	215.515	212.541	760.0
-0.211	215.150	214.407	215.361	214.616	780.0
-0.157	215.050	214.307	215.207	215.584	800.0
-0.102	214.950	214.207	215.053	215.320	820.0
-0.050	214.850	214.107	214.900	214.900	840.0
-0.010	214.750	214.017	214.760	213.514	860.0

LEGEND:

- EXISTING RAILWAY TRACK
- PROPOSED UP & DN LINE
- DISMANTLING WORKS
- PROPOSED DIVERSIONS
- EXISTING ROAD
- PRO.HORC BOUNDARY
- EXPRESSWAY BOUNDARY
- EXISTING RAILWAY BOUNDARY
- HT LINE
- ELECTRICAL LINE(LT)
- STREAM / CANAL / DRAIN
- WELL
- POND

F/CSB-FROM CENTER LINE OF STN BLDG
TP1 & TP2 - TANGENT POINT
R - RADIUS
CCL - CIRCULAR CURVE LENGTH
TL - TANGENT LENGTH
TR - TRANSITION LENGTH
SE - SUPERELEVATION
Δ - DEFLECTION ANGLE
CSR - CLEAR STANDING ROOM
SSP - SUB SECTIONING & PARALLING POST

RH - RIGHT HANDED
LH - LEFT HANDED
FM - FOULING MARK
SRJ - STOCK RAIL JOINT
TS - TRAP SWITCH
DE - DEAD END
Rr - RESULTANT RADIUS
D - DEGREE OF CURVE
RH - RELAY HUT

NOTE:

1. ALL DIMENSIONS ARE SHOWN IN METRES.
2. CH:0.00 IS RECKONED FOR C.L OF STATION BUILDING.
3. EXISTING WORK SHOWN IN BLACK.
4. PROPOSED WORK SHOWN IN RED.
6. ISOLATION WILL BE PROVIDED AS PER STD .IIR.
7. STD IIR ELECTRONIC INTERLOCKING WITH MACL SIGNALLING WILL BE PROVIDED.
8. ALL POINTS AND CROSSINGS ARE TO BE PROVIDED WITH FAN SHAPED CURVED SWITCHES ON CONCRETE SLEEPER .
9. CHAINAGES ARE RECKONED FROM C.L OF PIRTHALA STATION
10. RULING GRADIENT FOR THIS SECTION IS 1 IN 150 COMPENSATED

PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD

I. FOR RAIL CORRIDOR: 160KMPH Speed
* TRACK = 60KG RAILS
* SLEEPER DENSITY : PSC SLEEPERS = 1660 No.S PER KM
* BALLAST CUSHION : 350mm
* ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R.KUMAR GM IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C/WEST	
KRISHAN CHAND SAINSI CRE/CIVIL			

NORTHERN RAILWAY

DRM-DLI	
ADRM-INFRA-DLI	
SRDEN-CO-DLI	
SRDOM- DLI	
SRDSTE-DLI	
SRDEE-TRD-DLI	
SRDEN-5-DLI	
ADEN-DEE	
SSE-PWAY-GGN	
SSE-W-GGN	

NR.DIVL FILE NO.	
NR.DIVL PLAN NO.	
NRHQ CASE NO.	
NRHQ PLAN NO.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE :
RE-GRADING OF GARHI HARSARU-FARUKHNAGAR MAIN LINE OF SULTANPUR STATION YARD (CONCEPTUAL)

GC DRG.NO.	GC-HRID-C23-DRW-ALN-P&P-06001-A0
ISSUE DI: 11.11.2022	REVISED DI: 24.12.2022

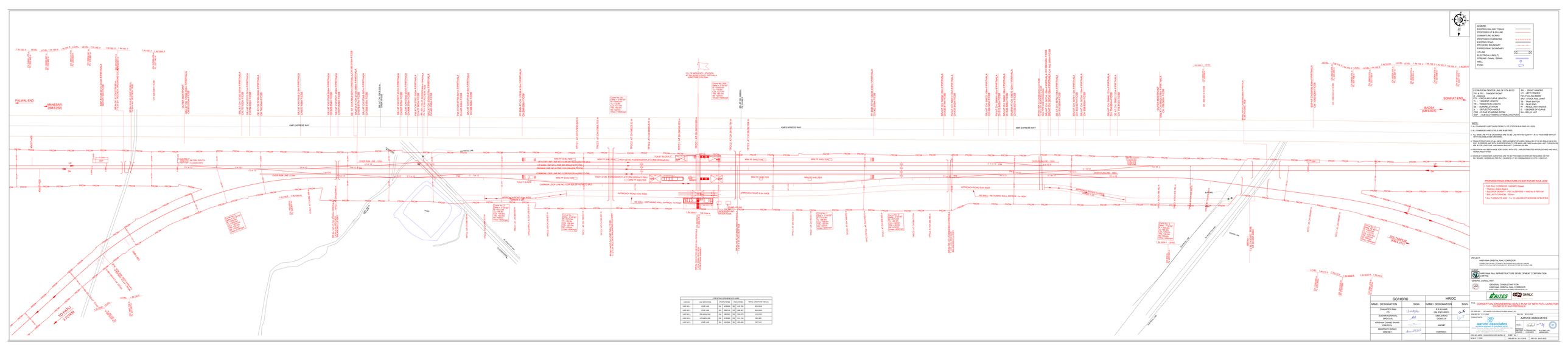
CONSULTANTS : aarvee associates
architects engineers & consultants pvt.ltd.
Ravula Residency, Srinagar Colony Main Rd., Hyderabad-82, India
Tel: 91-40-23737633; Fax: 91-40-23735277
e-mail: railways@aarvee.net; web:www.aarvee.net

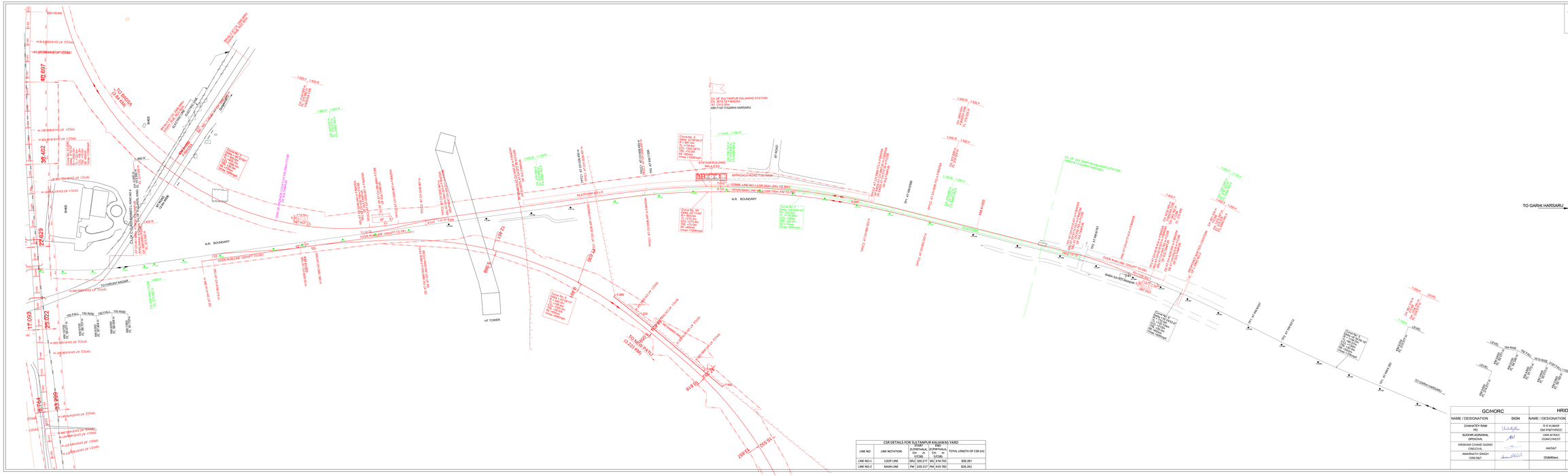
AARVEE ASSOCIATES

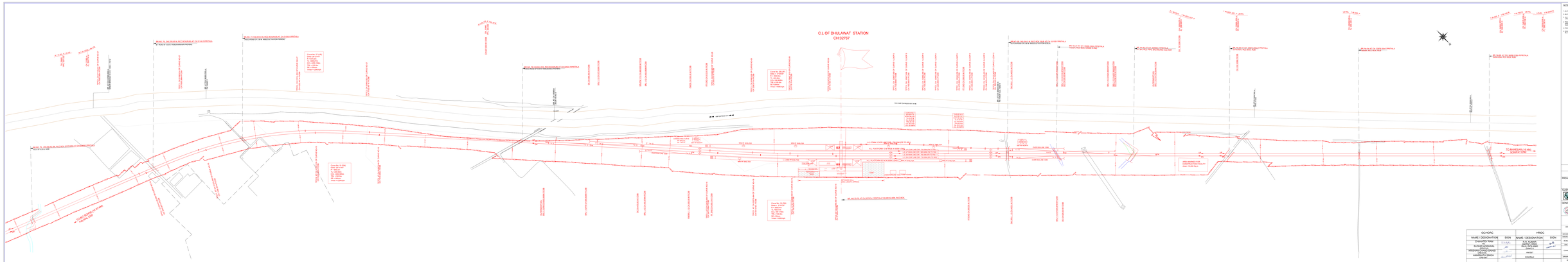
MANISHA (AM CAD) DRAWN | G.PRASAD (M) CHECKED | N.J. RAO (VP) APPROVED

DRG.NO.AA/RLY/2245/HRIDC/ESP-07/REV-3	SHEET No. 1	
SCALE : 1:1000	ISSUED DI: 26.11.2019	REV DI: 18-07-2022

2. ESP/Yard Plan


PALWAL END
MANESAR (KM 8.202)
SONIPAT END
BADSA (KM 0.607)
KMP EXPRESS WAY
OVER RUN LINE - 120m
OVER RUN LINE - 120m
MAIN PF SHELTER
MAIN PF SHELTER
HIGH LEVEL PASSENGER PLATFORM
TOILET BLOCK
COMMON CLOOP LINE NO.1 FOR DFC/DFT/DFTW/DFCW
COMMON CLOOP LINE NO.2 FOR DFC/DFT/DFTW/DFCW
APPROACH ROAD 9.0m WIDE
RE WALL - RETAINING WALL APPROX. 7m HIGH
SUB STATION WALTAIR - 11 KV
BUILDING
PROPOSED TRACK STRUCTURE (TO SUIT FOR 25T AXLE LOAD)
1 TYPE OF RAIL CORRIDOR : 60E1(NP) Tolerant
2 TRACK = 60KG RAIL'S
3 SLEEPER DENSITY = 1667 NOS SLEEPERS + 1660 Nos E PER KM
4 RAILS AT CURVATURE : 260m
* ALL TURNOUTS ARE 1 in 12 UNLESS OTHERWISE SPECIFIED
LEGEND:
EXISTING RAILWAY TRACK
PROPOSED UP & DN LINE
DISMANTLING WORKS
EXISTING BUILDINGS
EXISTING ROAD
PRO.HORC BOUNDARY
EXPRESSWAY BOUNDARY
HT LINE
ELECTRIC POLE & MAST/ TOWER
STREAM, CANAL, DRAIN
WELL
POND
P-OSB-FROM CENTER LINE OF STN BLDG
STA & TOT. - TANGENT POINT
A - RADIUS
CL - LENGTH OF CURVE LENGTH
TL - TANGENT LENGTH
TR - TRANSITION LENGTH
D - DEGREE OF CURVE
S - SUPERELEVATION ANGLE
CDR - CLEAR STANDING ROOM
CDP - CUB SECTIONING & TUNNELING POINT
RH - RIGHT HANDED
LH - LEFT HANDED
PM - FOULING MARK
TP - TURN OUT POINT
TS - TRAP SWITCH
DE - DEAD END
SLIP - SLIP SWITCH ANGLE
D - DEGREES OF CURVE
RH - RELAY HUT
NOTE:
1. ALL CHAINAGES ARE THEIN FROM C.L OF STATION BUILDING AS 0.00 M .
2. ALL CHAINAGES AND LEVELS ARE IN METRES.
3. ALL MAIN LINE PTS & CROSSINGS ARE TO BE LAID WITH 60 KG RAILS WITH 1 IN 12 TACK WISE SWITCH WITH WELDED RAILS AND CROSSING.
4. ALL LOOP LINES ARE TO BE LAID WITH 60 KG RAILS - REPLACEMENT OF LINES - SHALL BE OF 60 KG RAILS ON 60 KG PSC SLEEPERS WITH PLATE SLEEPERS DIRECTLY FOR MAIN LINE AND LOOP LINE. MBC Rail Mills (M) Sdn Bhd, MAS STOCK LOOP LINE TOW RAILWAYS (M) LOOP - CLOSURE ON SIM.
5. ALL TURNOUTS ARE 1 IN 12 UNLESS OTHERWISE SPECIFIED. SEE DETAILED INTERLOCKING AND SIG. DRAWING FOR DETAILS.
6. MINIMUM PASSENGER AMENITIES ARE TO BE PROVIDED WHEREVER REQUIRED AS PER PLANNING NORMS AS PER NO. 5 - BUREELY NO. 550-84/2010/TC (TCT-1169/2010).
LINE WISE DETAILS OF BG TO BG TURNOUTS
LINE NO. | LINE NOTATION | START (CH.KM) | END (CH.KM) | TOTAL LENGTH OF CSR (m)
LINE NO.1 | LOOP LINE | 150 | 1,424.000 | 1,274.000 | 950.000
LINE NO.2 | LOOP LINE | 350 | 1,864.000 | 1,514.000 | 1,064.000
LINE NO.3 | DN MAIN LINE | 150 | 1,424.000 | 1,274.000 | 1,035.000
LINE NO.4 | UP MAIN LINE | 150 | 1,424.000 | 1,274.000 | 950.000
LINE NO.5 | LOOP LINE | 350 | 1,864.000 | 1,514.000 | 1,064.000
PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONSULTANCY FOR PREPARATION OF DETAILED PROJECT REPORT AND ASSISTANCE IN PROCUREMENT WITH EXISTING RAILWAYS
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
CONSULTANCY FOR PREPARATION OF DPR
TITLE: CONCEPTUAL ENGINEERING SCALE PLAN OF NEW PATLI JUNCTION
GC/HORC
NAME / DESIGNATION | SIGN
CHAIRMAN & MD, HRIDC
DIRECTOR (T), HRIDC
DIRECTOR (F), HRIDC
HRIDC
NAME / DESIGNATION | SIGN
R.B.KUMAR
GM PMP/HRIDC
UMA M.RAO
PGM(T),HR
ANITA(T)
SHARMA
DRG NO.AARL/13/GA/HRIDC/EXP-NARNUL-2 | SHEET No.
SCALE: 1:1000 | DRAWN ON: 26.11.2013 | REV.No. 26.01.2022
CONSULTANTS:
aarvee associates
Architects Engineers Consultants
AARVEE ASSOCIATES
Architects Engineers & Consultants


TO PATAUDI (14.84 KMS)
TO FARUKH NAGAR
TO GARHI HARSARU
TO GARHI HARSARU
TO PATAUDI (13.23 KMS)
N.R. BOUNDARY
N.R. BOUNDARY
APPROACH ROAD 7.5m WIDE
COMM. LINE NO-1 CSR 760m (SRJ TO SRJ)
UPDN MAIN LINE CSR 760m (FM TO FM)
STATION BUILDING
PLATFORM 455 x 5
OVER RUN LINE 120m(PT TO DR)
OVER RUN LINE 120m(PT TO DR)
RAIL OVER BRIDGE
HT TOWER
SHED
SHED
SHED



NOTES :

1. ALL DIMENSIONS ARE THEORETICAL C.L. OF RAILWAY SYSTEM & SHARE AS C.M.R.
2. ALL DIMENSIONS ARE GIVEN IN METRES.
3. ALL DIMENSIONS ARE TO BE CHECKED AND VERIFIED AT SITE BY THE CONTRACTOR BEFORE ANY WORK IS STARTED.
4. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE GENERAL NOTES ON THE GENERAL ARRANGEMENT DRAWINGS.
5. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SAFETY OF THE EXISTING STRUCTURES DURING THE EXECUTION OF THE WORKS.
7. ANY DAMAGE TO EXISTING STRUCTURES DUE TO THE EXECUTION OF THE WORKS SHALL BE MADE GOOD BY THE CONTRACTOR AT HIS OWN EXPENSE.

LEGEND		LEGEND	
CENTRE LINE		TRACK MARKER	KM
PROPOSED LINE		1V	
EXISTING LINE		2V	
ROAD OVER BRIDGE		ROAD PHOTO PLATE	
RAILWAY OVER BRIDGE		WORK TRACK	
PROPOSED STRUCTURE		25 KV	
PROPOSED STRUCTURE		LIGHT POLE	
ROAD		LIGHT POLE WITH BOARD	

GCHORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
DHANJYTI RAM		R.K. VERMA	
SUDHIR AGRAWAL		RAJA DULARIA	
KRISHAN CHAND SAINI		ANKUR	
AMARNATH SINGH VERMA		CHHITRA	

NORTHERN RAILWAY

DELHI DIVISION

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO KHARKHI BYPASSING DELHI AREA BY UNDING
PRODUCTIVITY LINKED FINANCE ENHANCEMENT OF NEW ELECTRIFIED MG CHORD LINE

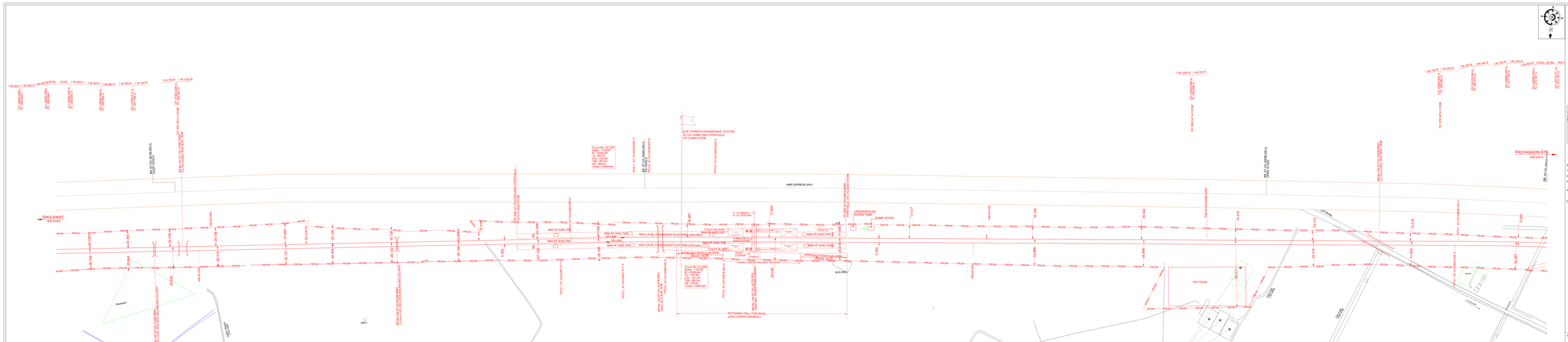
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

GENERAL CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
WITH M/S RITES LTD. & HARYANA RAIL INFRA DEVELOPMENT CO. LTD.

RITES | GAMLC

SIGN. TITLE:
CONCEPTUAL ENGINEERING SCALE PLAN
SHOWING ALIGNMENT OF PROPOSED STATIONS

DRAWING NO.	RITES/GAMLC/CEP/2019/07-01
SCALE	HOR. 1000 MTS. / VER. 1000 MTS.
DATE OF ISSUE	31.07.2019
DRAWN BY	
CHECKED BY	
APPROVED BY	
REVISION NO.	
REVISION DATE	
PLOTTED ON	31.7.2019
PLOTTED BY	
PLOTTED FROM	
PLOTTED TO	
PLOTTED SCALE


DHULAWAT
(KM 0.940)
PACHAGAON STN
(KM 3.373)
KMP EXPRESS WAY
E OF CHANDLA DUNGERWAS STATION
AT CH: 4200/6.150m F/PRITHALA
CH: 0.000m F/CSB
Curve No. 33 (UP)
R = 1000.0m
R = 4000.0m
CEQ = +50.0m
CDq = +50.0m
Vmax =160Km/h
Curve No. 31 (DN)
R = 1000.0m
R = 4000.0m
CEQ = +51.0m
CDq = +51.0m
Vmax =160Km/h
UNDERGROUND WATER TANK
PUMP HOUSE
TOILET BLOCK
MINI PF SHELTER
HIGH LEVEL PASSENGER PLATFORM (420mx6m)
APPROACH ROAD 5.5m WIDE
PROVISION FOR FUTURE FOOT OVER BRIDGE
RETAINING WALL FOR ROAD
(GSH LENGTH APPROX.)
BUILDING
TSS 100x50
WELL
Pond/River
KM 4+000
KM 5+000
KM 6+000
KM 7+000
KM 8+000
KM 9+000
KM 10+000
KM 11+000
KM 12+000
KM 13+000
KM 14+000
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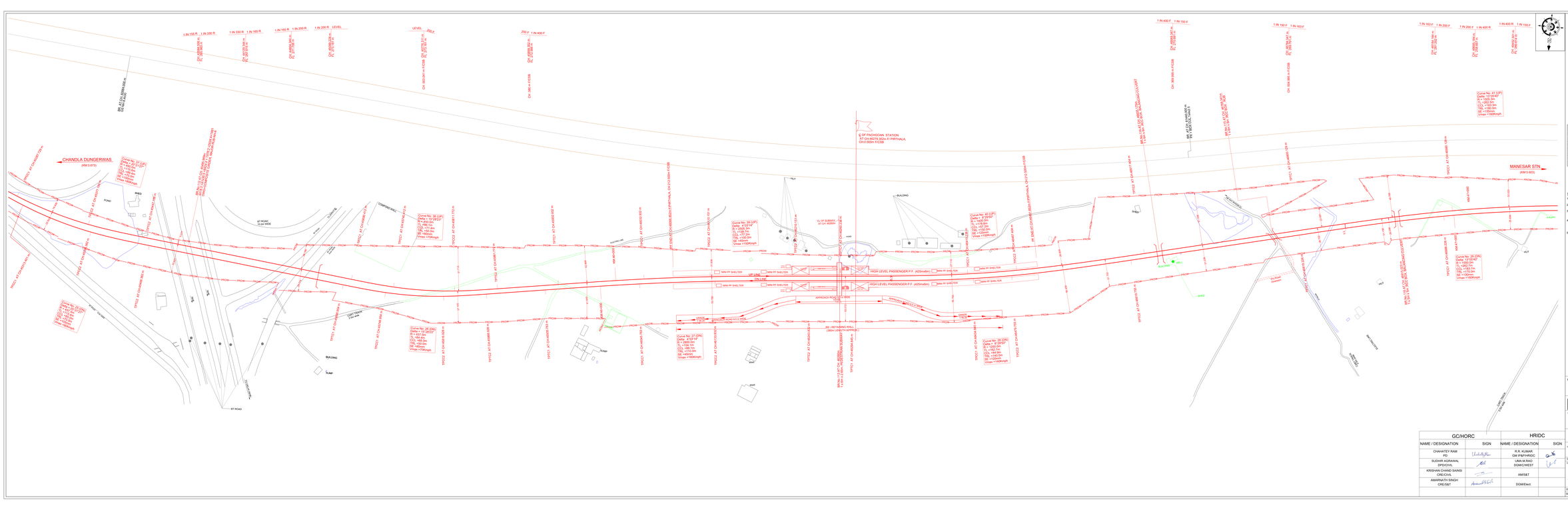
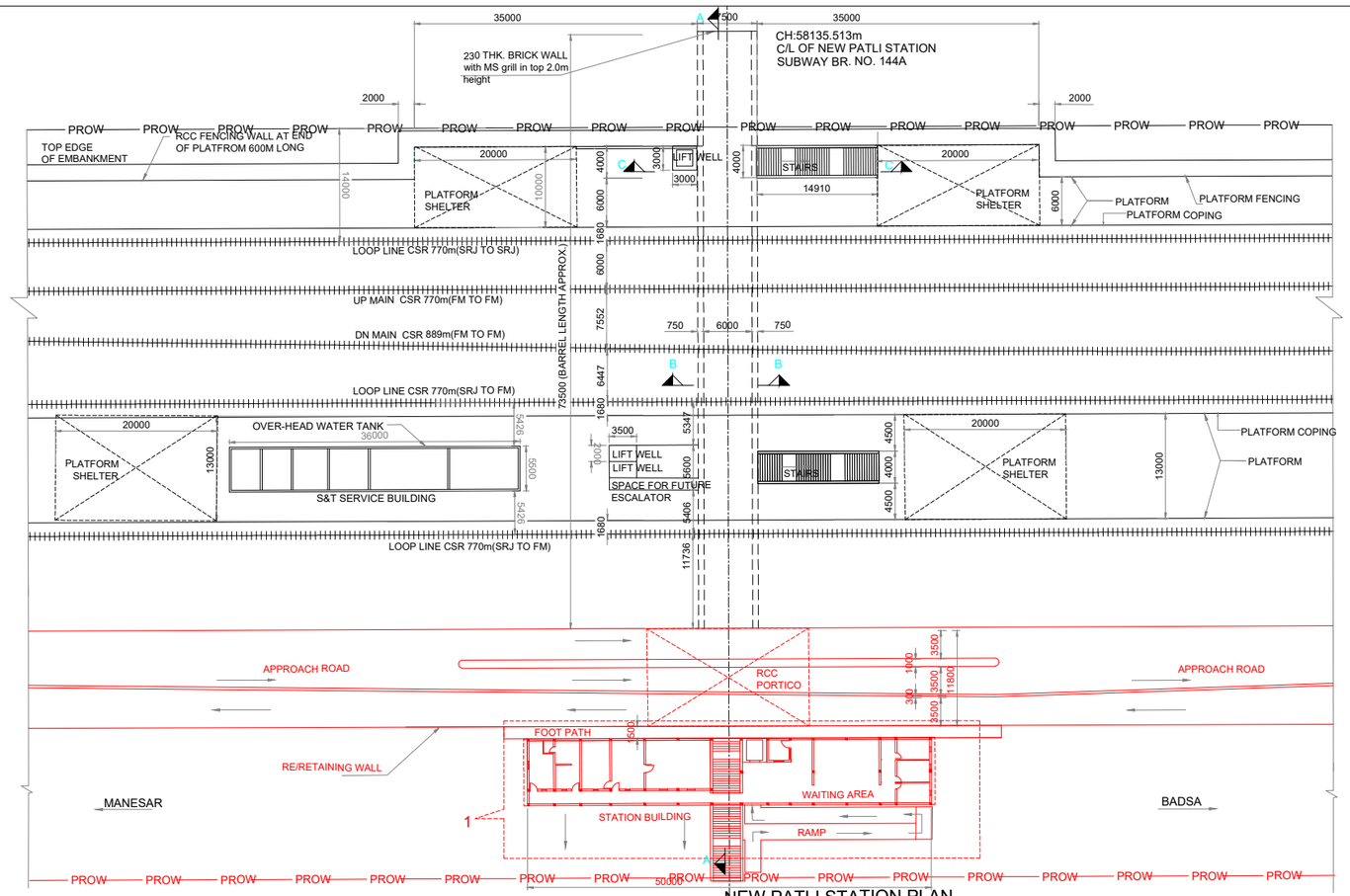
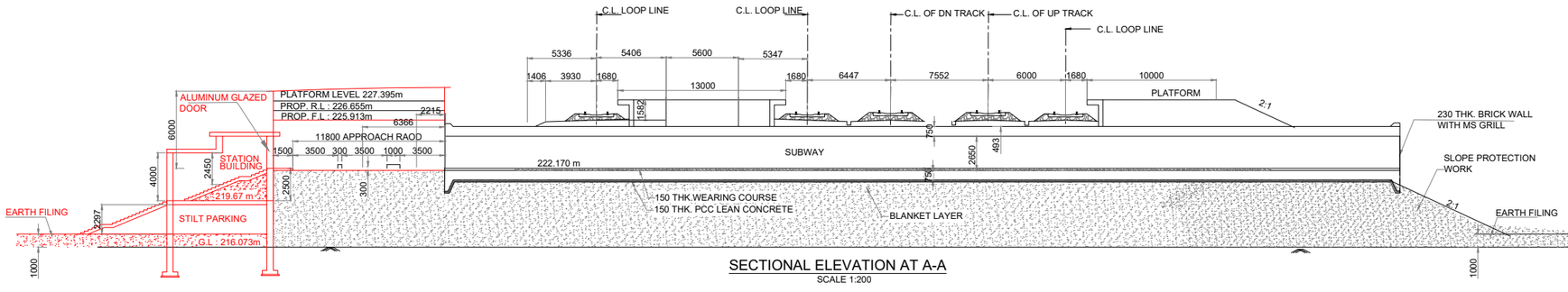
KM 23+000
KM


CHANDLA DUNGERWAS
(KM 5.873)
MANESAR STN.
(KM 5.603)
℄ OF PACHGOAN STATION
AT CH 46279.352m FROM PIRTHALA
CH 0.000m FCSB
℄ OF SURWAY
AT CH 46000
BR.NO.113 A OVER 20MTR WIDE NAJAFGARH DRAIN AT CH 46000 KM
BR.NO.113 OVER 20MTR WIDE NAJAFGARH DRAIN AT CH 46000 KM
BR.NO.113 A OVER 20MTR WIDE NAJAFGARH DRAIN AT CH 46000 KM
97 ROAD
10.0m WIDE
CROSSING RAILWAY
CROSSING RAILWAY
CROSSING RAILWAY

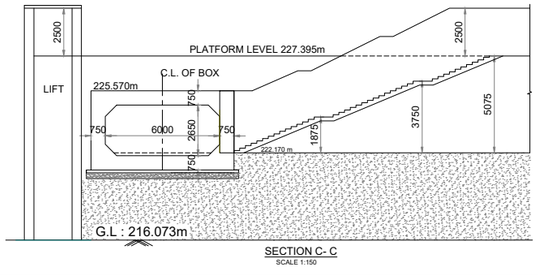
3. Station Building and Subway



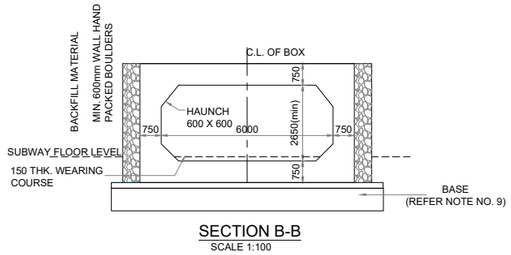
NEW PATLI STATION PLAN
(SCALE 1:350)



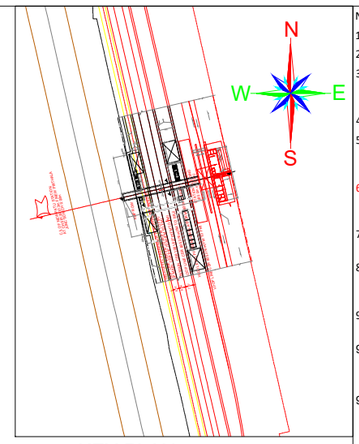
SECTIONAL ELEVATION AT A-A
SCALE 1:200



SECTION C- C
SCALE 1:150



SECTION B-B
SCALE 1:100



KEY PLAN
SCALE 1:NTS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
6. STATION BUILDING SHALL BE DESIGNED FOR G+5 WITH STILT PARKING FOR FUTURE DEVELOPMENT. IN THE PRESENT CONTRACT, STATION BUILDING AS SHOWN IN DRAWING SHALL BE CONSTRUCTED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AS PER SKETCH NO.: GC-HRIDC-SK-GEN-020
8. LOCATION AND LAYOUT OF STATION BUILDING SHOWN IN THE DRAWING IS TENTATIVE. STATION BUILDING CAN BE RELOCATED/ LAYOUT REORGANIZED WITHIN THE GIVEN PLINTH AREA.
9. BASE OF SUBWAY & LIFT WELL SHALL BE SUPPORTED AS PER SKETCH NO.: GC-HRIDC-SK-GEN-021
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

LEGEND

ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'

ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

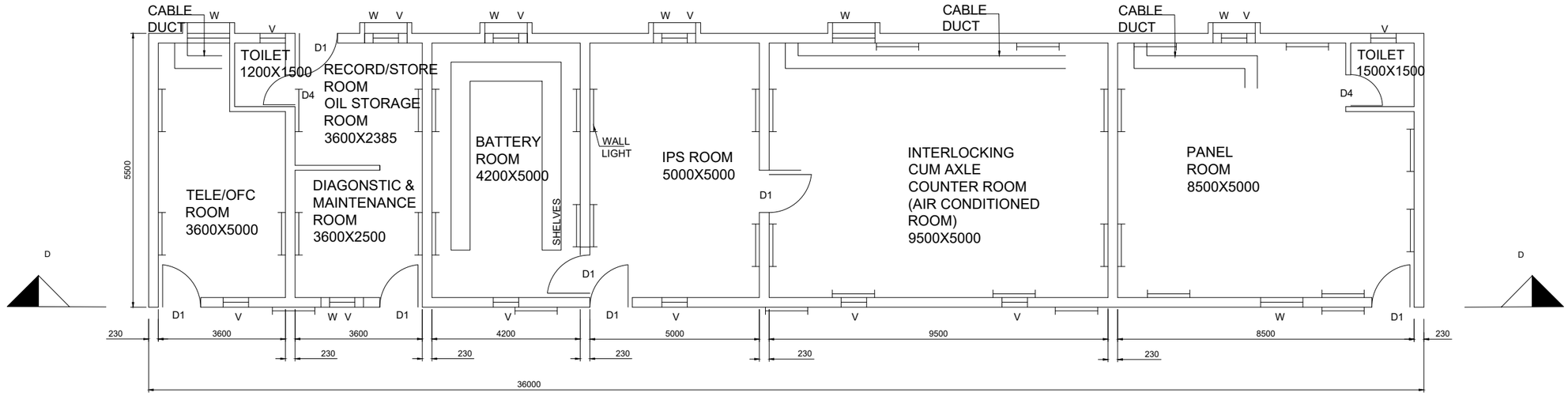
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

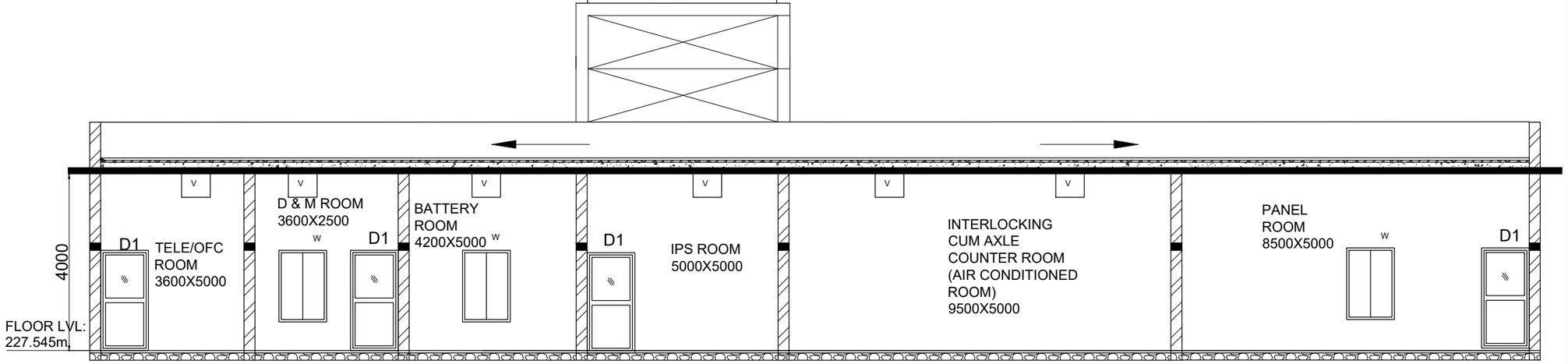
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
NEW PATLI STATION & SUBWAY BR. NO. 144A

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1	1 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



S&T SERVICE BUILDING PLAN



S&T SERVICE BUILDING ELEVATION

SECTION D-D

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. THE FLOOR LEVEL OF PANEL ROOM SHALL BE AT LEAST 300 MM ABOVE PLATFORM LEVEL.
3. FOR ANY FURTHER DETAIL OF S&T SERVICE BUILDING REFER NR TYPE PLAN NO. O-99/2021 SHEET NO. 1 TO 5.

SCHEDULE DOOR

D1	1000x2100	FLUSH DOOR WITH MOSQUITO NET
D2	1000x2100	FLUSH DOOR
D3	1000x2100	HALF GLASS SINGLE DOOR WITH DOUBLE LOCKING ARRANGE MENT
D4	750x2100	FLUSH DOOR

SCHEDULE WINDOW

W	1500x1200	GLAZED WITH MOSQUITO NET
V	600X500	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

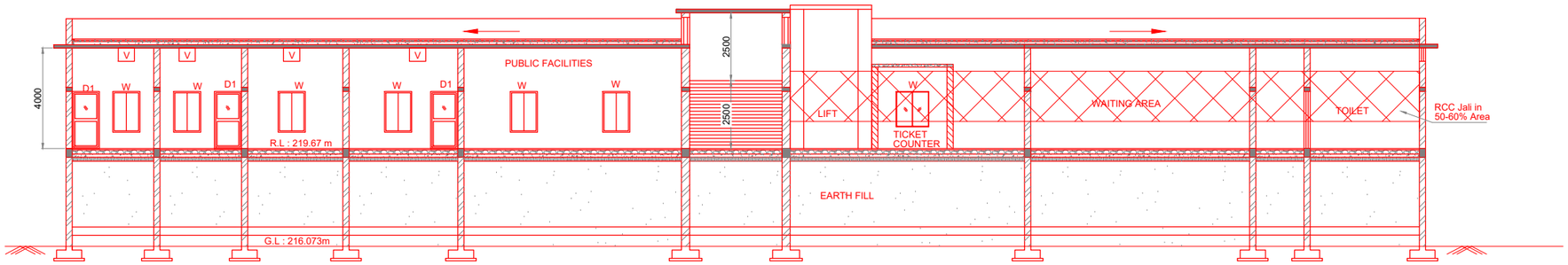
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

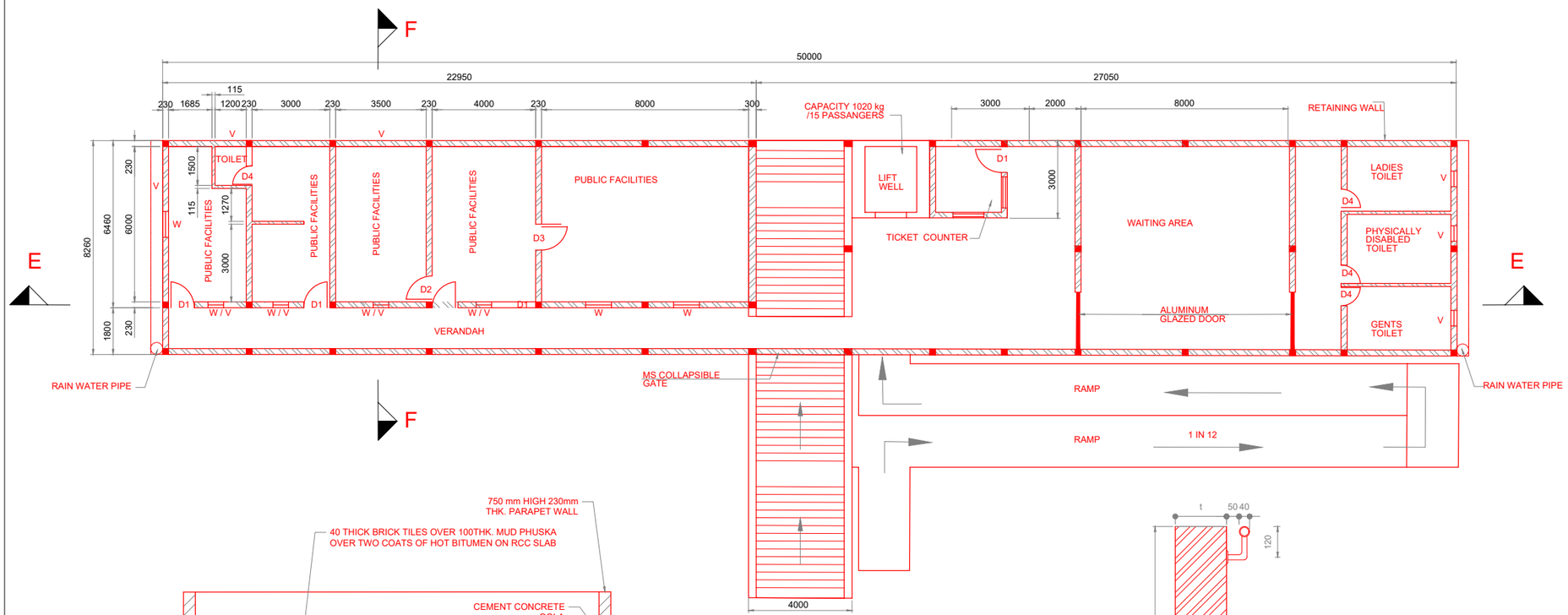
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
NEW PATLI STATION & SUBWAY BR. NO. 144A

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1	2 OF 3

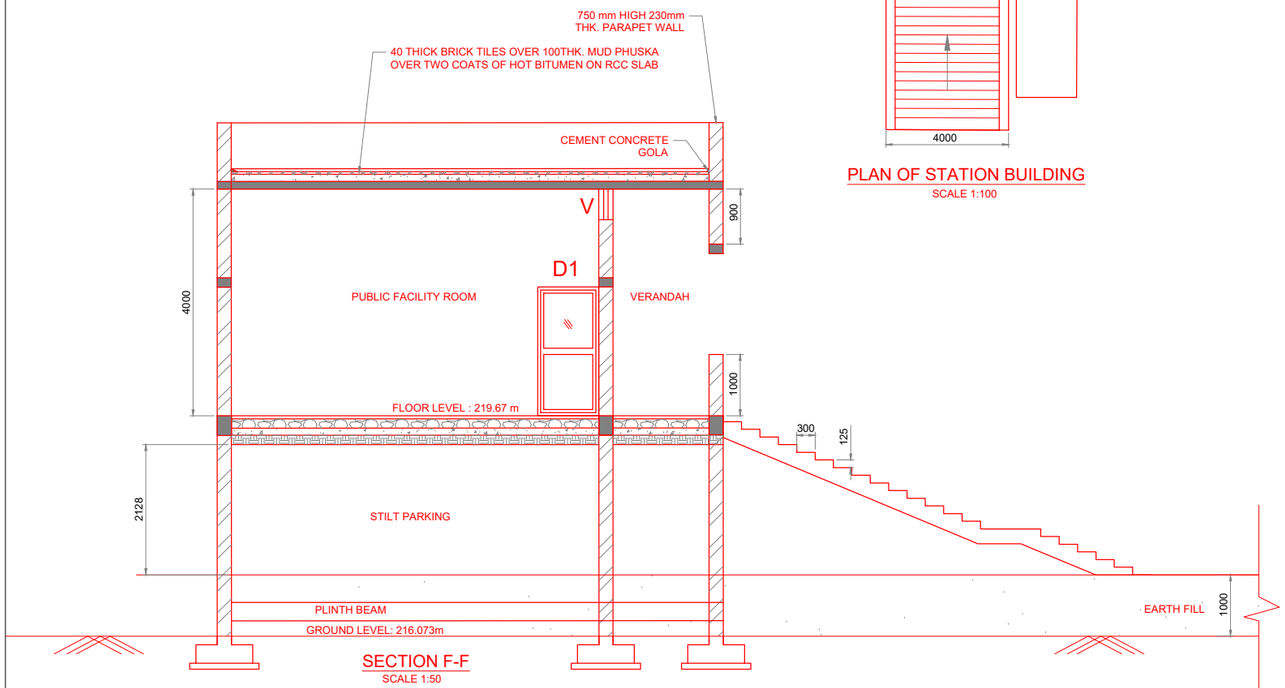
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



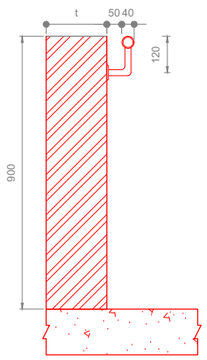
SECTION E-E
SCALE 1:100



PLAN OF STATION BUILDING
SCALE 1:100



SECTION F-F
SCALE 1:50



FIXING DETAIL OF HANDRAIL TO THE WALL

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR PHYSICALLY HANDICAPPED TOILET REFER DRAWING NO. O-104/2021 SHEET 1 OF 1.
3. SUITABLE ARRANGEMENT FOR SEPTIC TANK & SOAK PIT TO BE PROVIDED.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN0-013.
5. STAINLESS STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AS PER SKETCH NO.: GC-HRIDC-SK-GEN-020
7. LOCATION AND LAYOUT OF STATION BUILDING SHOWN IN THE DRAWING IS TENTATIVE. STATION BUILDING CAN BE RELOCATED/ LAYOUT REORGANIZED WITHIN THE GIVEN PLINTH AREA.
8. BASE OF SUBWAY & LIFT WELL SHALL BE PLACED AS PER SKETCH NO.: GC-HRIDC-SK-GEN-021
9. FOR DETAILING OF LADIES AND GENTS TOILETS REFER DRAWING NO. GC-HRIDC-SK-GEN-007.

SCHEDULE DOOR

D1	1000x2100	FLUSH DOOR WITH MOSQUITO NET
D2	1000x2100	FLUSH DOOR
D3	1000x2100	HALF GLASS SINGLE DOOR WITH DOUBLE LOCKING ARRANGE MENT
D4	750x2100	FLUSH DOOR

SCHEDULE WINDOW

W	1500x1200	GLAZED WITH MOSQUITO NET
V	600X500	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

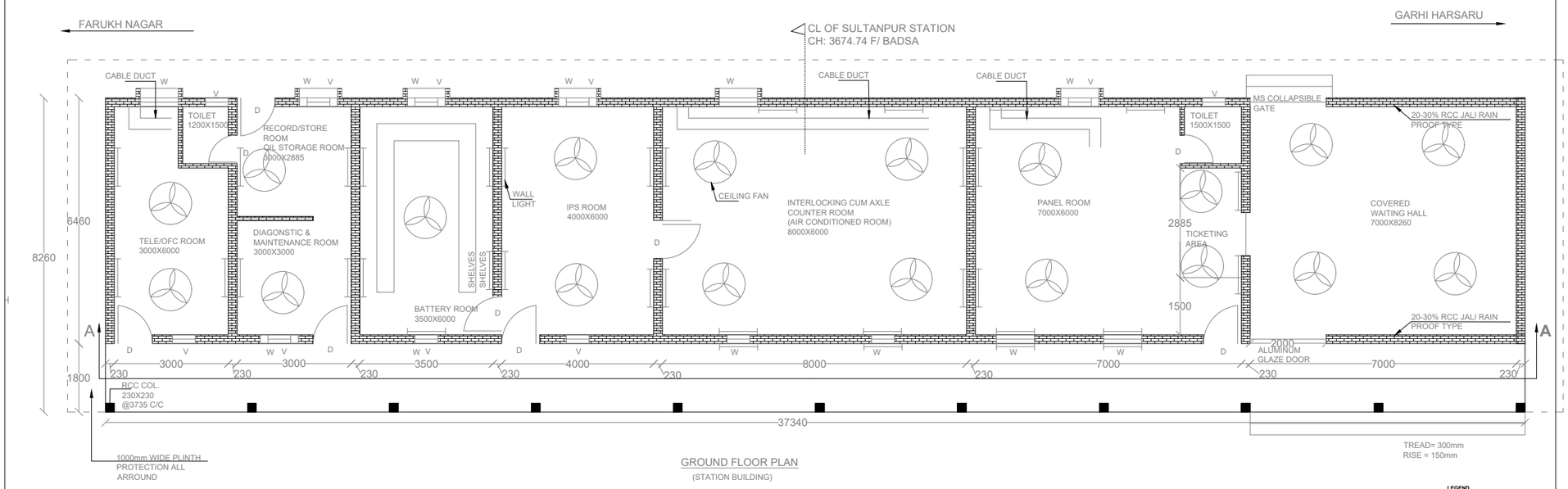
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

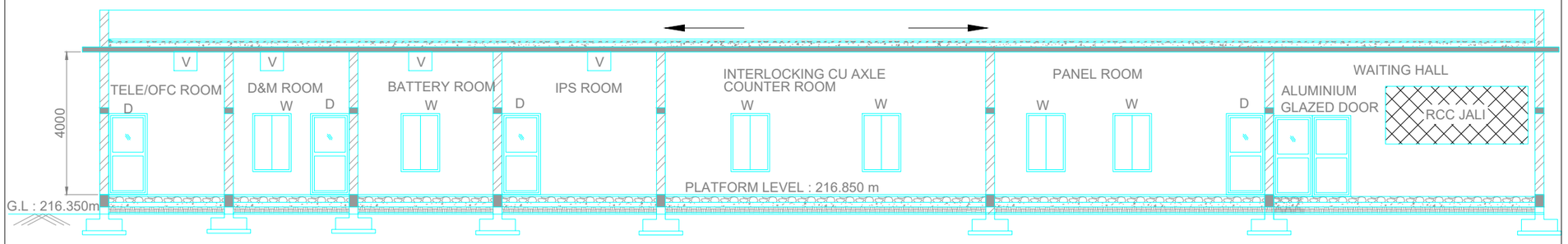
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
NEW PATLI STATION & SUBWAY BR. NO. 144A

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-NPA01_A1	3 OF 3

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



GROUND FLOOR PLAN
(STATION BUILDING)



SECTION A-A

TYPE	OPENING SIZE		DESCRIPTION
D	1000	2100	Panelled Door
D1	750	2100	PVC Framed Door
W	1500	1200	Glazed with MS Grill
V	750	600	Glazed Louvered Ventilator
V1	600	500	Glazed Louvered Ventilator

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAIL REFER NORTHERN RAILWAY DRAWING S & T SERVICE BUILDING DWG.NO N.R.H.Q.E.PLAN NO.HQ/02/02-2021. SH. 1 OF 5 TO 5 OF 5.
3. FLOOR LEVEL OF BUILDING SHALL BE 500mm ABOVE GROUND LEVEL.
4. HEIGHT OF STATION BUILDING SHALL BE MINIMUM 4000mm ABOVE FLOOR LEVEL
5. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

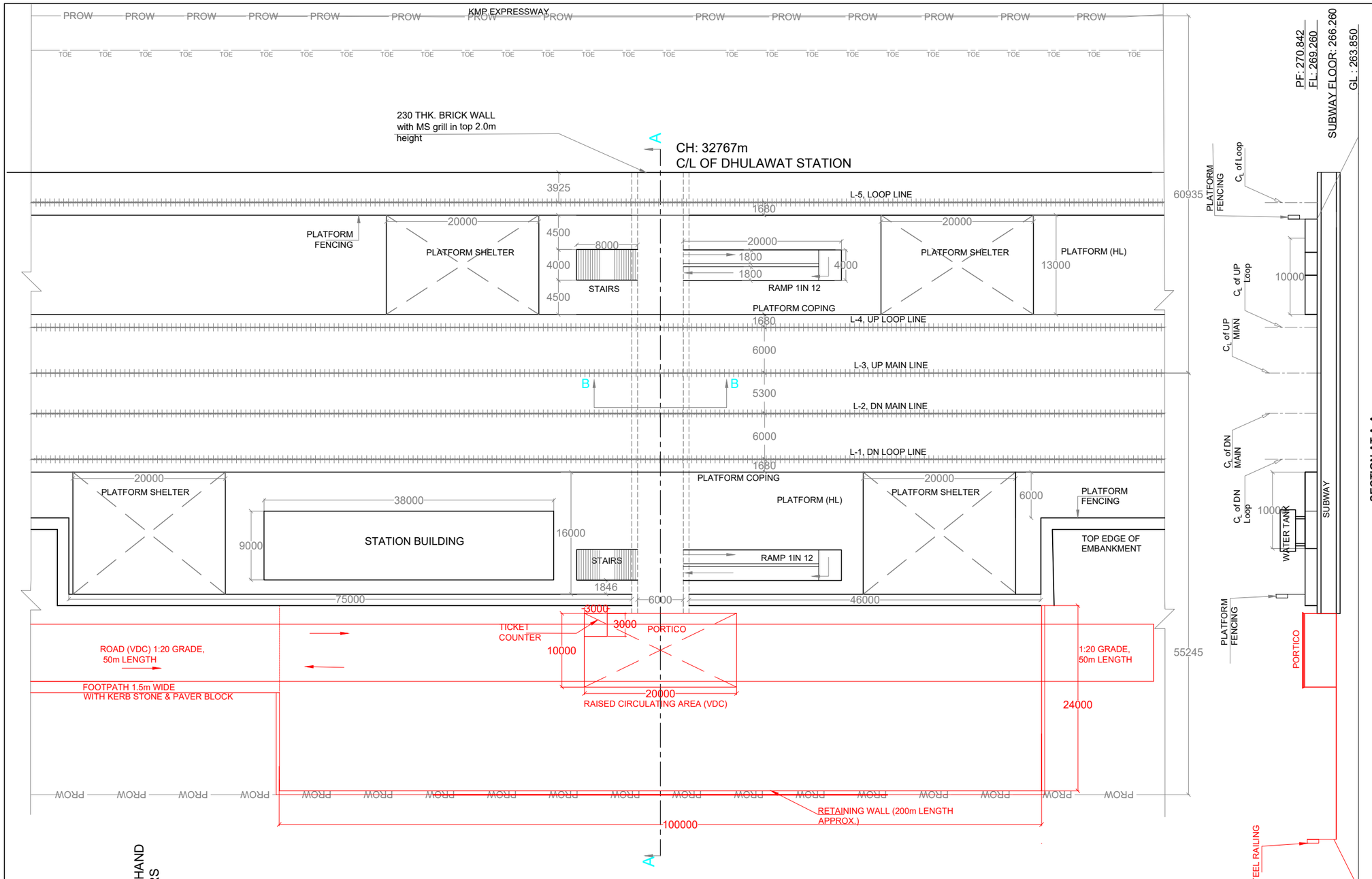
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

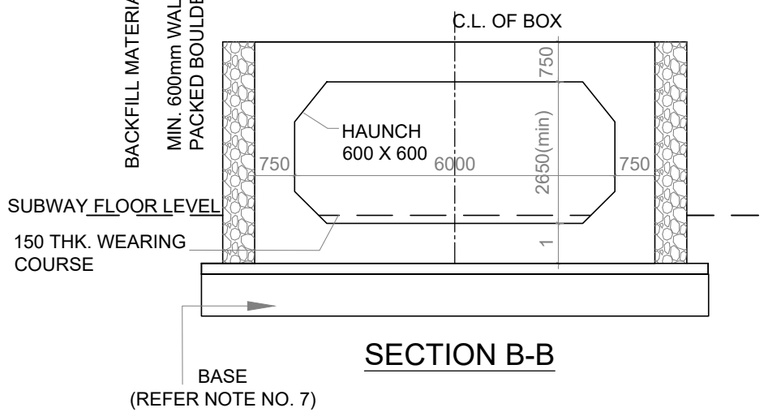
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
SULTANPUR STATION BUILDING

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-SUL01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



SECTION AT A-A



SECTION B-B

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. STAINLESS STEEL HAND RAIL SHALL BE FIXED WITH WALL IN STAIRCASE & RAMP.
5. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
6. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS AND RAMP AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
7. BASE OF SUBWAYS SHALL BE SUPPORTED AS PER SKETCH NO. GC-HRID-SK-GEN-021.
8. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

LEGEND

- ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'
- ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

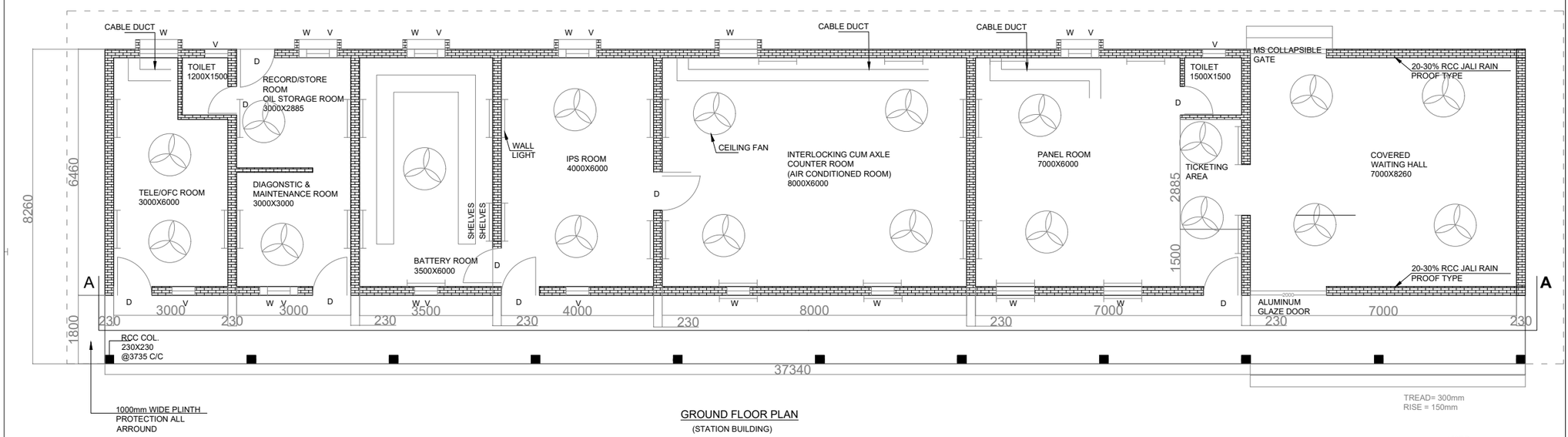
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

TITLE:-

CONCEPTUAL ARCHITECTURAL DRAWING
DHULAWAT STATION & SUBWAY BR. NO. 79

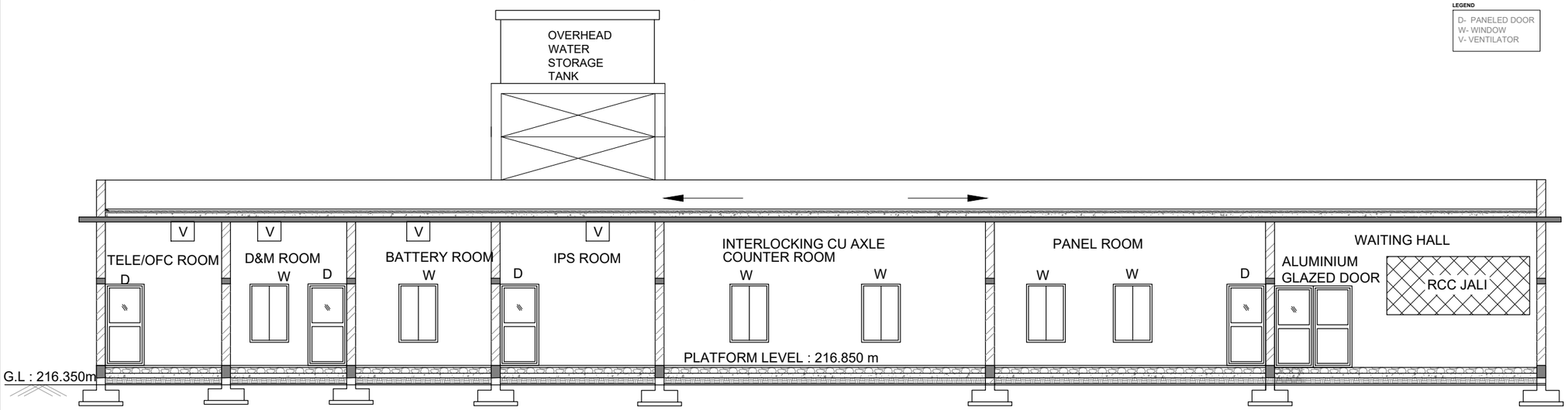
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

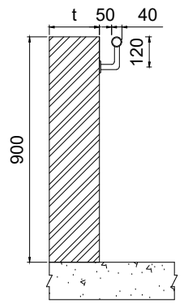


GROUND FLOOR PLAN
(STATION BUILDING)

LEGEND
D- PANELED DOOR
W- WINDOW
V- VENTILATOR



SECTION A-A



FIXING DETAIL OF
HANDRAIL TO THE WALL

TYPE	OPENING SIZE		DESCRIPTION
D	1000	2100	Panelled Door
D1	750	2100	PVC Framed Door
W	1500	1200	Glazed with MS Grill
V	750	600	Glazed Louvered Ventilator
V1	600	500	Glazed Louvered Ventilator

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAIL REFER NORTHERN RAILWAY DRAWING S & T SERVICE BUILDING DWG.NO N.R.H.Q.E.PLAN NO.HQ/02/02-2021. SH. 1 OF 5 TO 5 OF 5.
3. FLOOR LEVEL OF BUILDING SHALL BE 500mm ABOVE GROUND LEVEL.
4. HEIGHT OF STATION BUILDING SHALL BE MINIMUM 4000mm ABOVE FLOOR LEVEL.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

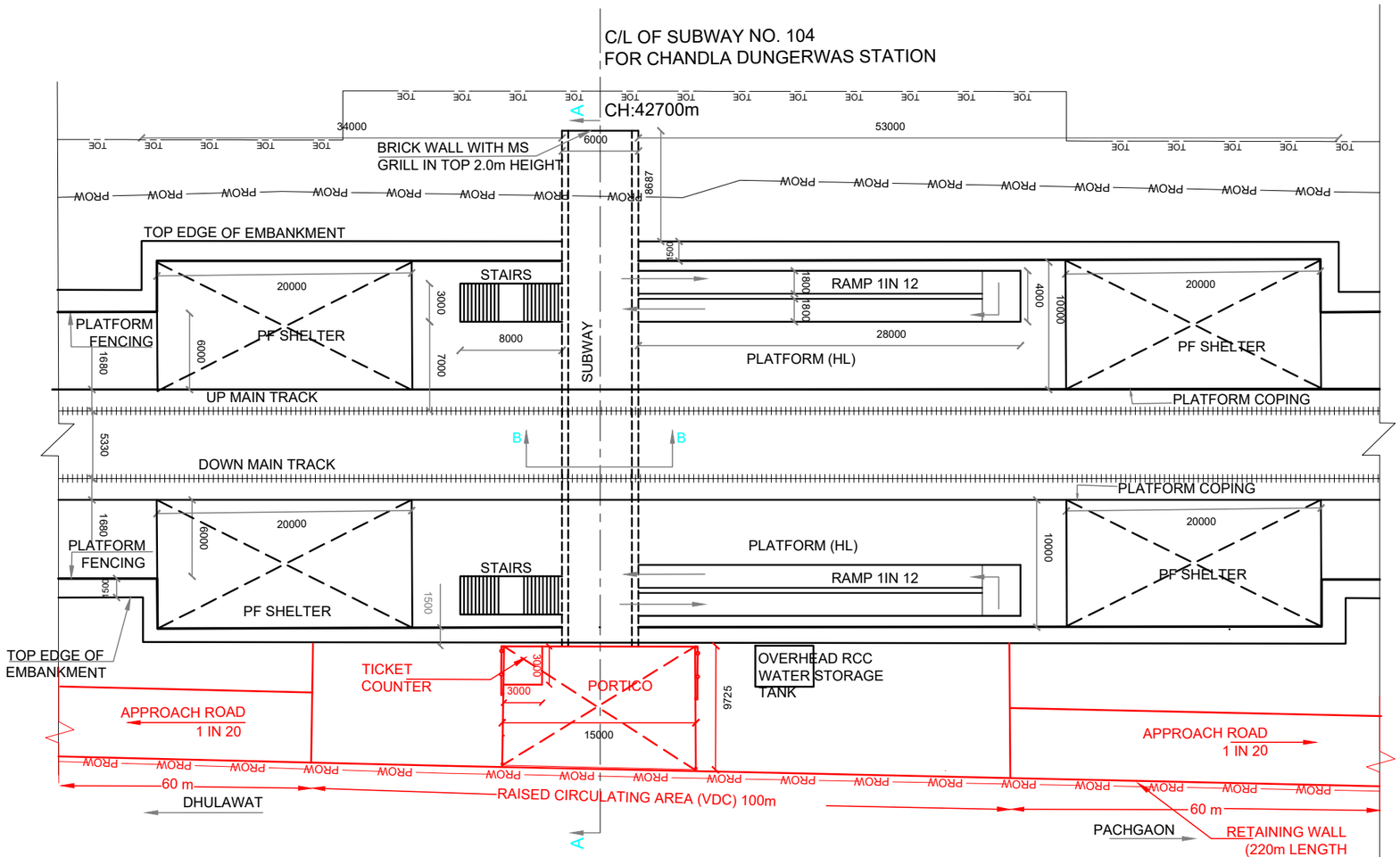
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
DHULAWAT STATION & SUBWAY BR. NO. 79

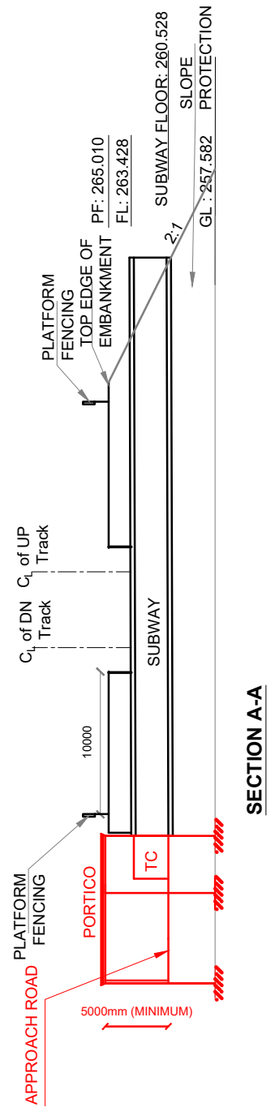
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-DHU01_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

KMP EXPRESSWAY

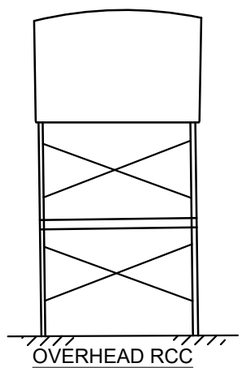
C/L OF SUBWAY NO. 104
FOR CHANDLA DUNGERWAS STATION



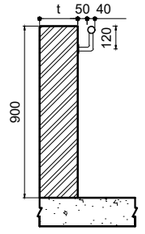


SECTION A-A

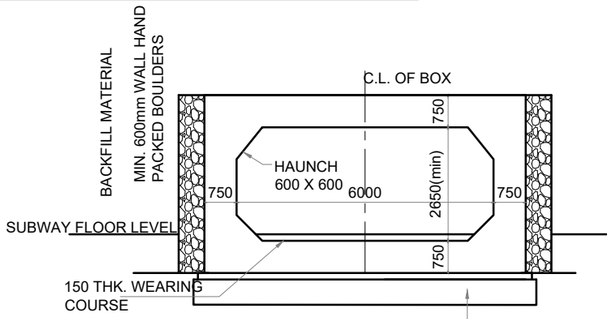
CHANDLA DUNGERWAS STATION PLAN



OVERHEAD RCC
WATER STORAGE TANK



FIXING DETAIL OF
HANDRAIL TO THE WALL



SECTION B-B

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
5. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS & RAMP PROVIDED AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
8. BASE OF SUBWAY SHALL BE SUPPORTED AS PER SKETCH NO. GC-HRIDC-SK-GEN-021.
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

LEGEND

ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'

ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

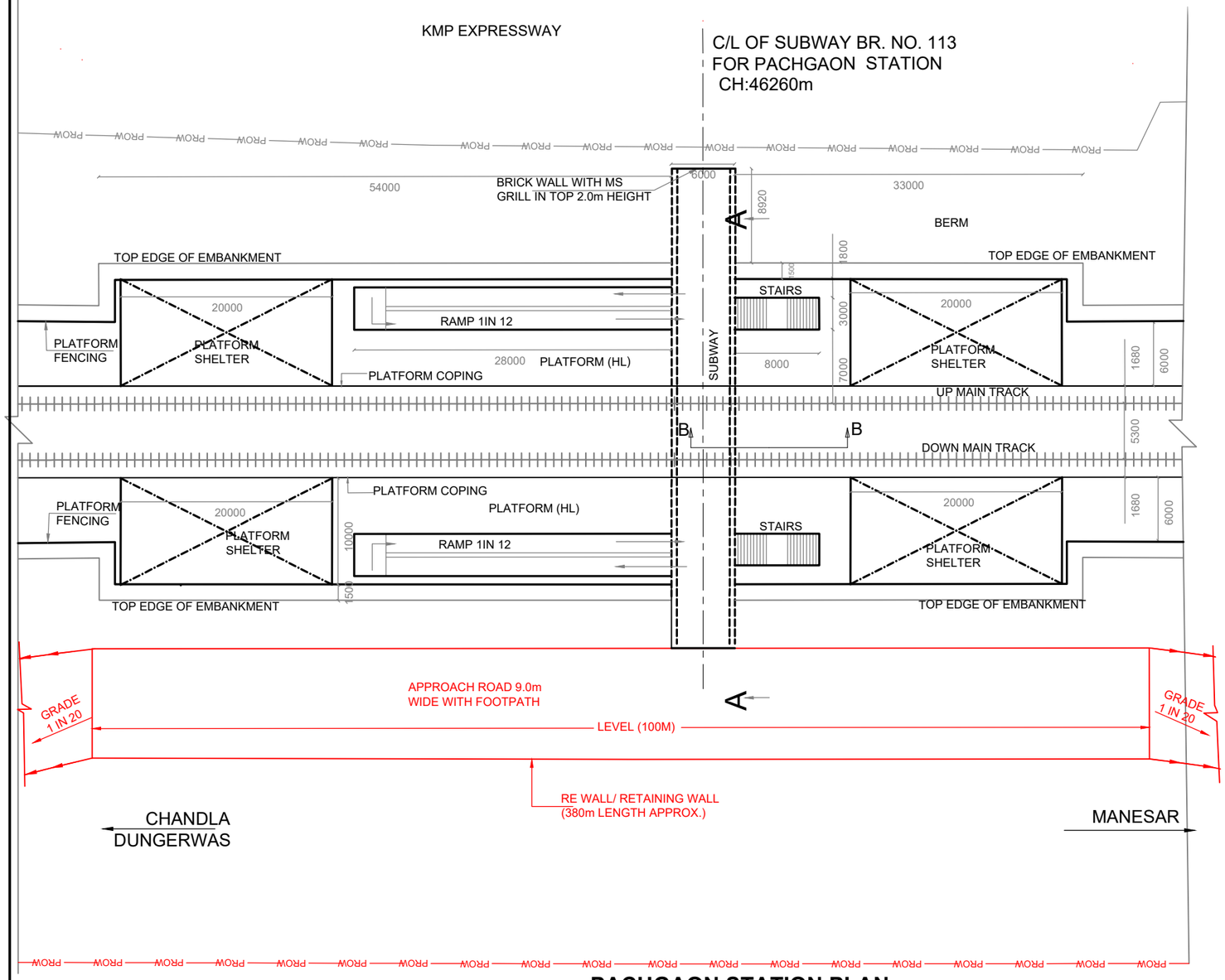
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

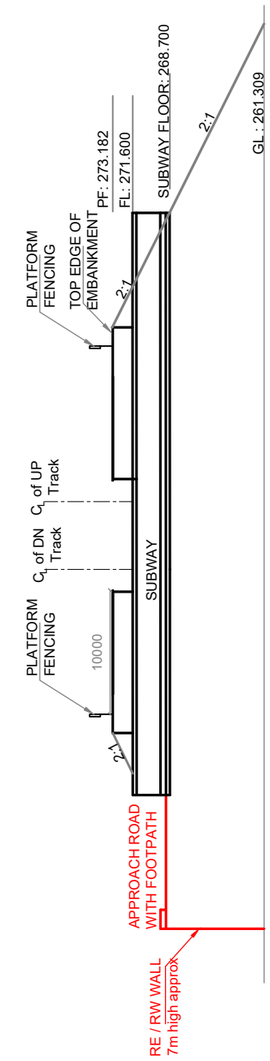
TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING CHANDLA DUNGERWAS STATION & SUBWAY BR. NO. 104

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-CDU01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022



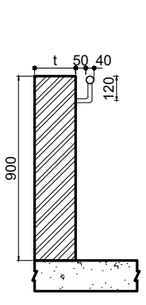
PACHGAON STATION PLAN



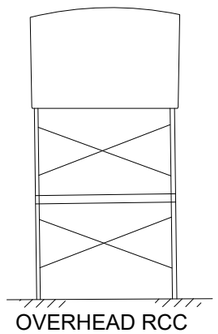
SECTION AT A-A

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ALL LEVEL ARE IN METERS.
3. PROTECTION WORK ON SLOPES OF BANK UP TO 30M, BOTH SIDES ON APPROACHES OF SUBWAY SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
4. DETAILING OF TICKET COUNTER SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-013.
5. STEEL HANDRAIL SHALL BE FIXED WITH WALLS IN STAIRCASE AND RAMP PORTION.
6. SUBWAY SHALL BE DESIGNED FOR 32.5 T LOADING. FOR STRUCTURAL DESIGN DETAILS NEAREST HIGHER SIZE OF STANDARD RDSO DRAWING NO. B-10157/3 SHALL BE FOLLOWED.
7. SELF-SUPPORTING SHED SHALL BE PROVIDED OVER STAIRS & RAMP PROVIDED ON PLATFORM AS PER SKETCH NO. GC-HRIDC-SK-GEN-020.
8. BASE OF SUBWAY SHALL BE AS PER SKETCH NO. GC-HRIDC-SK-GEN-021
9. BARREL LENGTH OF THE SUBWAY ON KMP SIDE SHALL BE EXTENDED UPTO THE LOCATION WHERE BOTTOM SLAB OF SUBWAY CUTS THE 2:1 SLOPE OF THE BANK.
9. PLATFORM FENCING ON END PLATFORMS TO BE PROVIDED AT 1.5m INSIDE OF THE TOP EDGE OF THE EMBANKMENT.

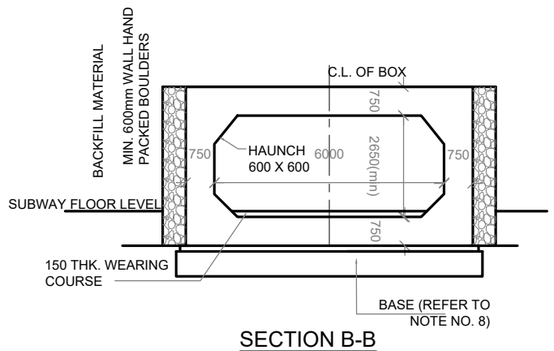
LEGEND
- ALL WORKS SHOWN IN BLACK ARE PAYABLE IN SCHEDULE 'A'
- ALL WORKS SHOWN IN RED ARE PAYABLE IN SCHEDULE 'B'



FIXING DETAIL OF
HANDRAIL TO THE WALL



OVERHEAD RCC
WATER STORAGE TANK



SECTION B-B

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		DGM/CIVIL	
DPD/EST		DGM/S&T	
REETU PATIAL CDE/CIVIL		DGM/Elect.	

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

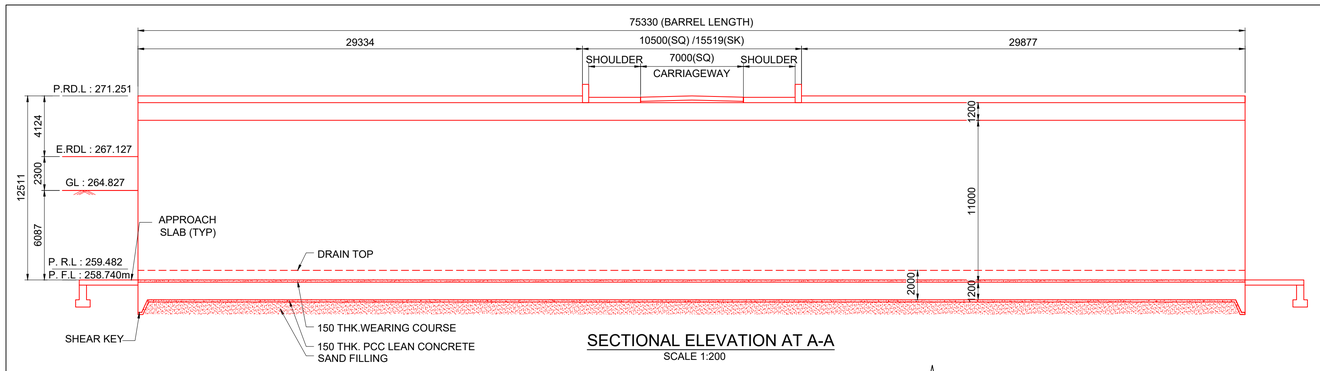
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL ARCHITECTURAL DRAWING
PACHGAON STATION & SUBWAY BR. NO. 113

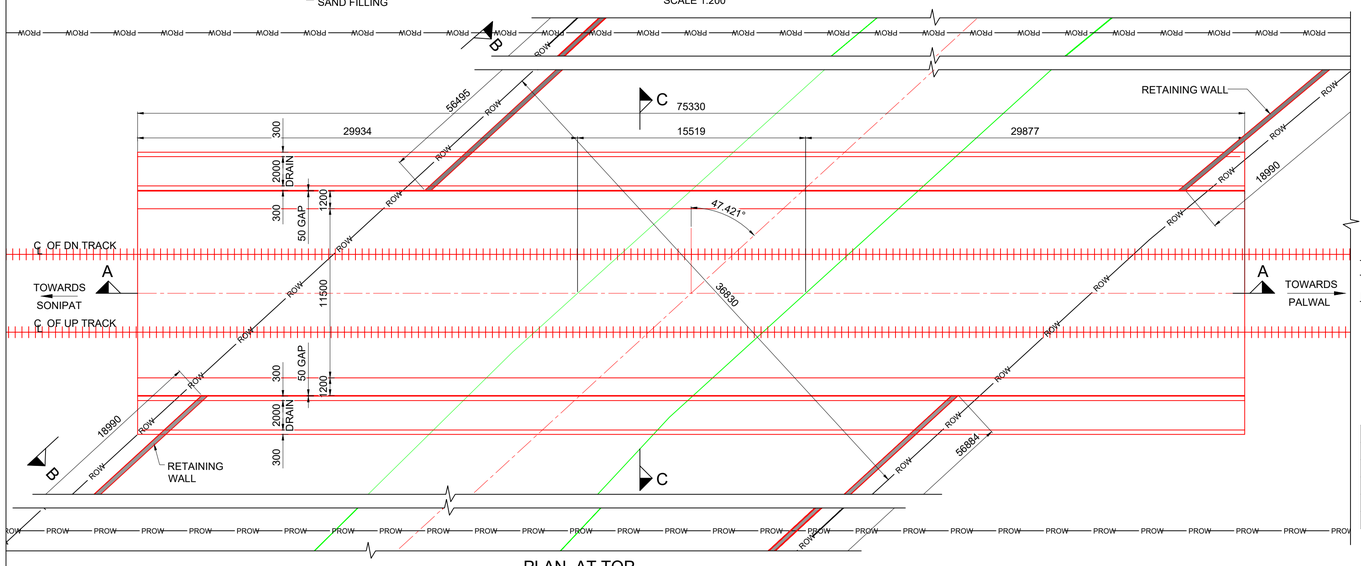
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-STN-SAD-PCG01_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	24-12-2022

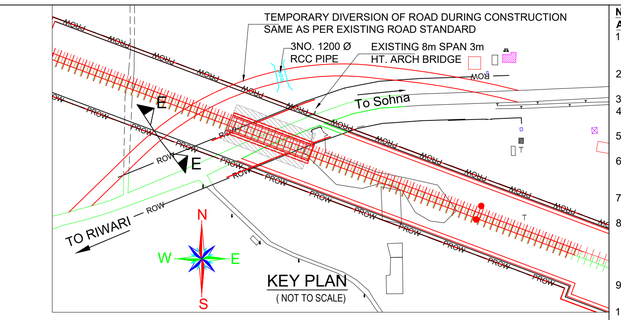
4 Bridges
4.1 Minor Bridges
4.1.1 Main Line



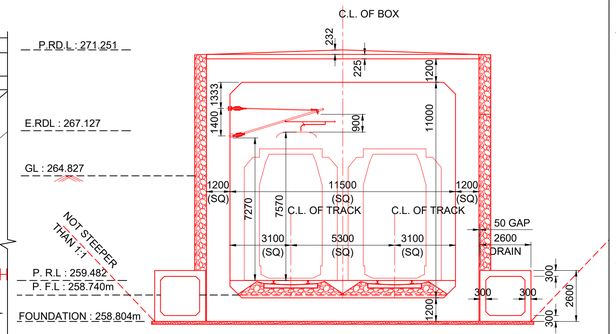
SECTIONAL ELEVATION AT A-A
SCALE 1:200



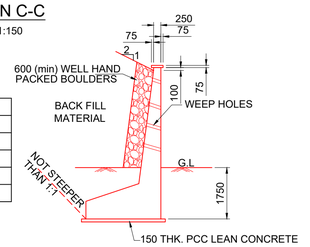
PLAN AT TOP
SCALE 1:200



KEY PLAN
(NOT TO SCALE)



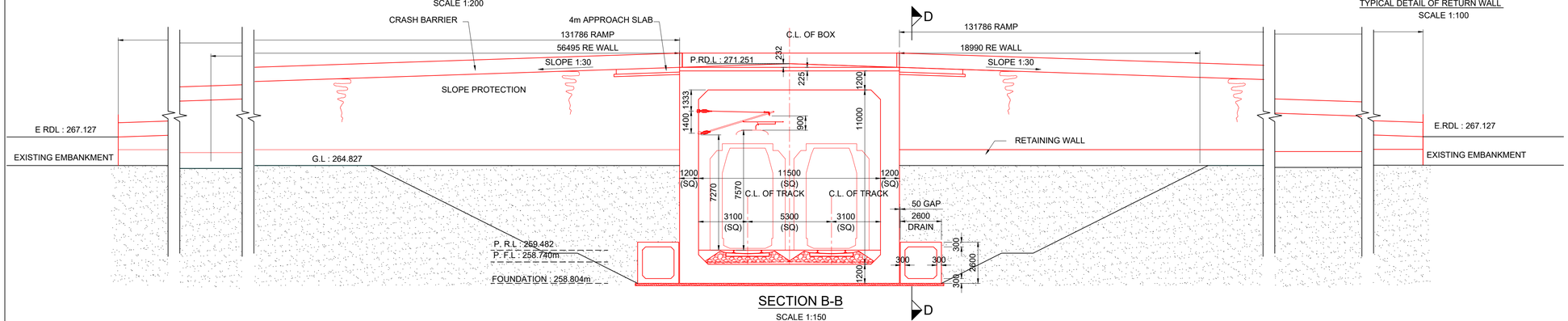
SECTION C-C
SCALE 1:150



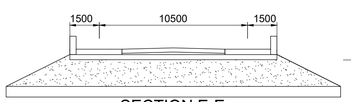
TYPICAL DETAIL OF RETURN WALL
SCALE 1:100

LEGEND

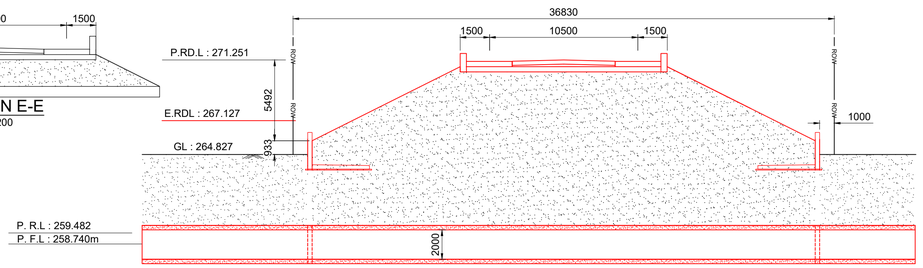
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
P.RD.L	PROPOSED ROAD LEVEL
E.RD.L	EXISTING ROAD LEVEL



SECTION B-B
SCALE 1:150



SECTION E-E
SCALE 1:200



SECTION D-D
SCALE 1:200

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE SHALL BE BE DESIGNED FOR CLASS-A& 70R AS PER IRC-6 AND 32.5 T LOADING AS PER IRS,AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL GAD,
11. SIZE OF STRUCTURAL MEMBERS ARE TENTATIVE AND SHALL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ROAD TO BE TEMPORARY DIVERTED FOR CONSTRUCTION WITH SAME STANDARD AS OF EXISTING ROAD.
15. PERMANENT ROAD INCLUDING RE WALL SHALL BE CONSTRUCTED WITH SAME STANDARDS AS OF EXISTING ROAD. COST OF CONSTRUCTION OF ALL THE ELEMENTS SHOWN IN GAD SHALL BE BEARED BY HRIDC.
16. THE TRACK SHALL BE WITH GUARD RAIL.
17. DRAINAGE ARRANGEMENT SHOWN ARE INDICATIVE, DETAILED ARRANGEMENT SHALL BE SHOWN IN MISCELLANEOUS DRAWING.
18. SOFT AND LOOSE POCKET IN BEARING AREA ARE TO BE REPLACED BY COMPACTED GRANULAR MATERIAL.
19. PROPER DETAILING SHALL BE DONE FOR LIGHTENING AND VENTILATION.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

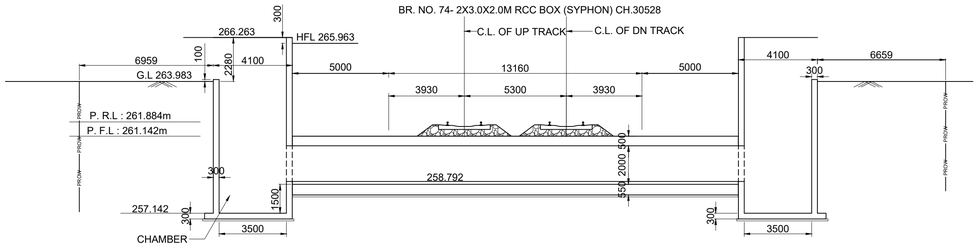
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			
STIPHEN SAHOO SRE/ ELECT.			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED ROB BR. NO. 073
SPAN 1×11.5×11 RCC BOX (AT CH: 30155)

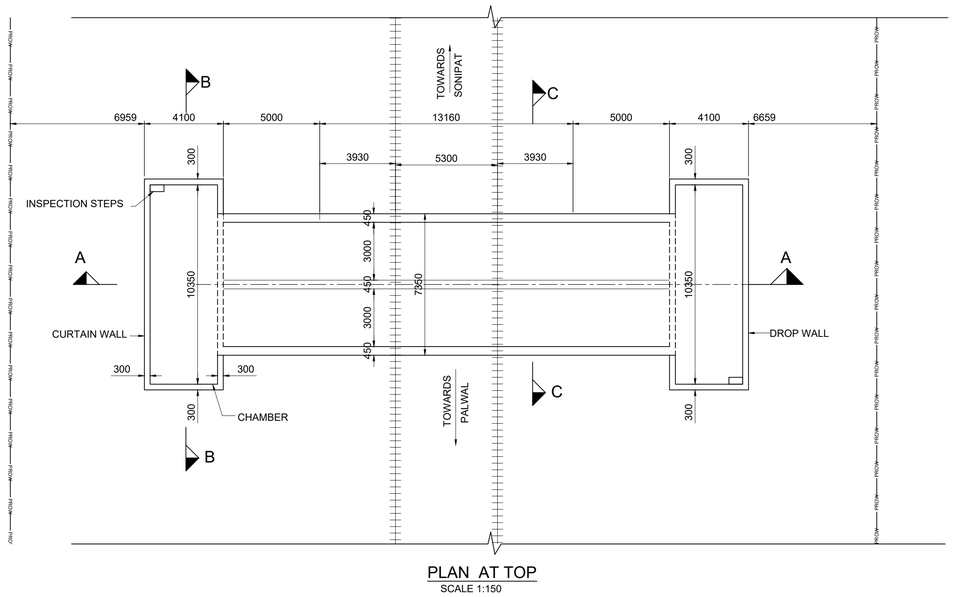
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01073_A1
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



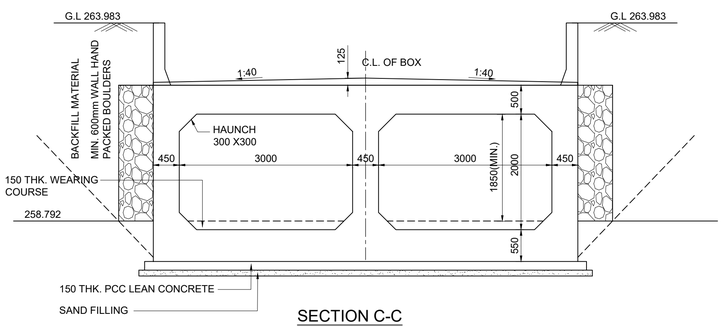
SECTIONAL ELEVATION AT A-A

SCALE 1:150



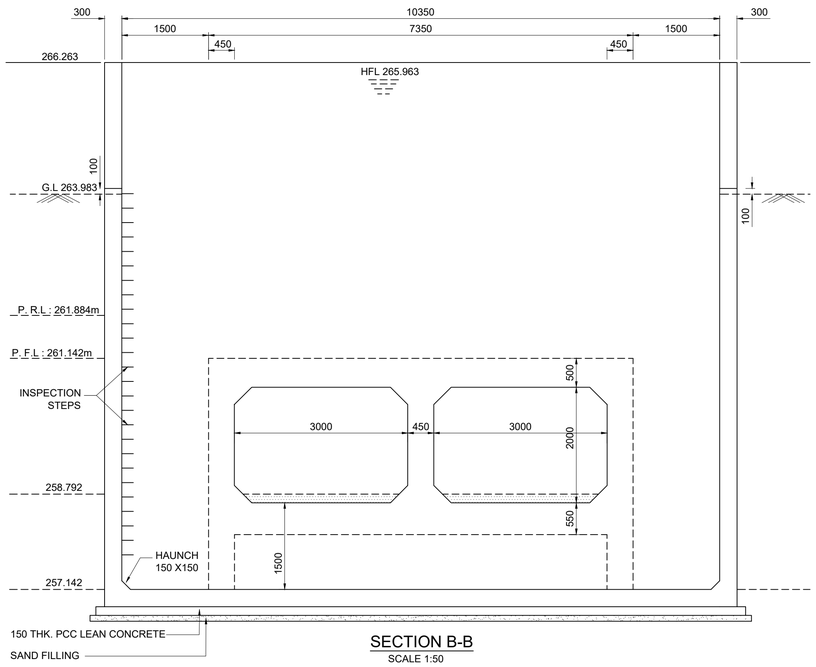
PLAN AT TOP

SCALE 1:150



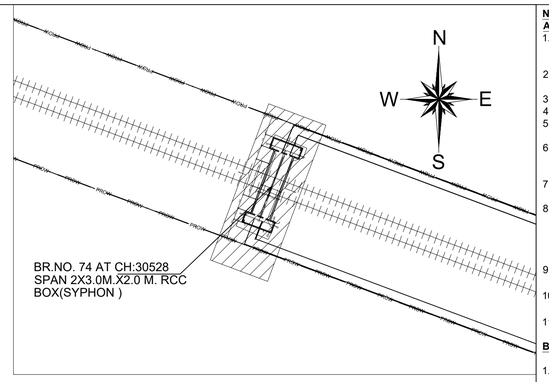
SECTION C-C

SCALE 1:50



SECTION B-B

SCALE 1:50



KEY PLAN

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR
HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

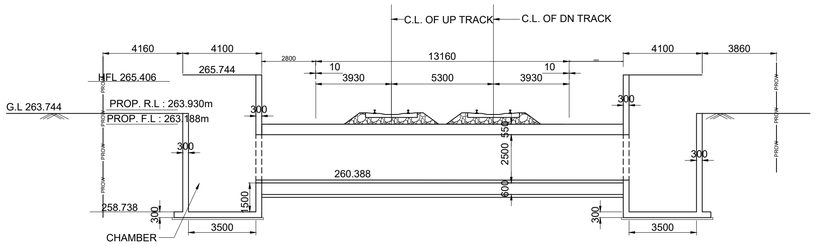
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED BR. NO. 074 SPAN 2×3.0×2.0
RCC BOX (SYPHON) AT CH: 30528

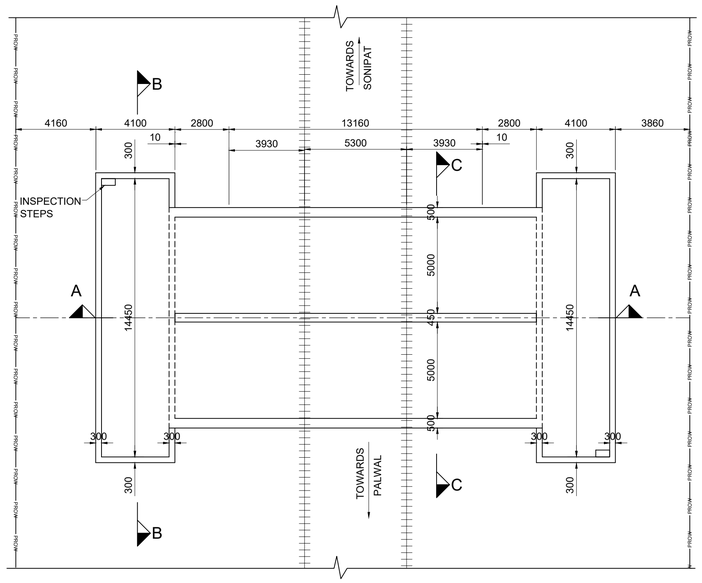
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01074_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



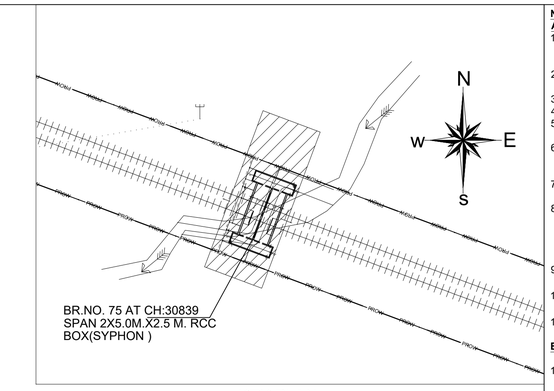
SECTIONAL ELEVATION AT A-A

SCALE 1:150



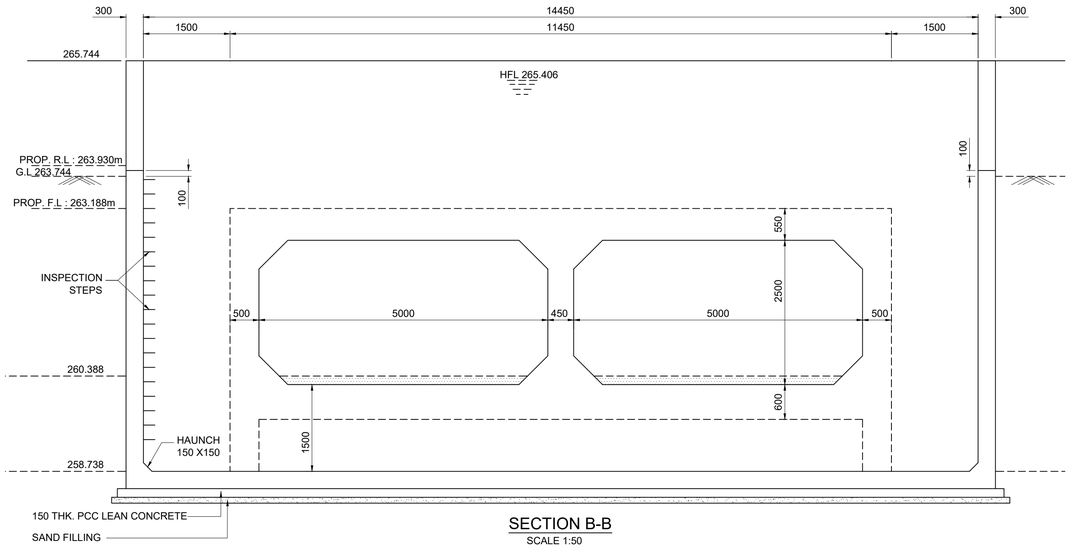
PLAN AT TOP

SCALE 1:150



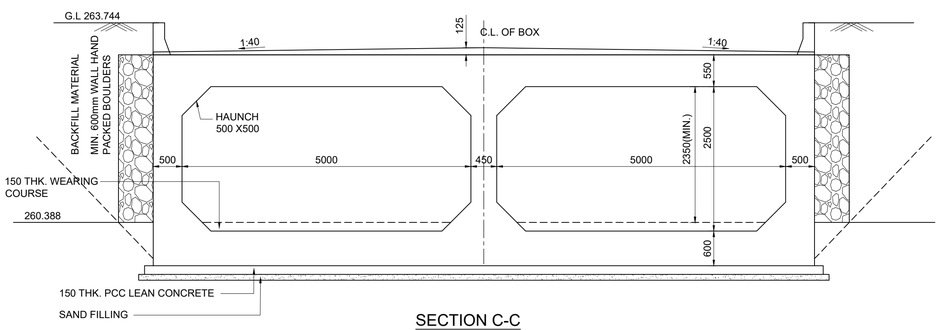
KEY PLAN

(NOT TO SCALE)



SECTION B-B

SCALE 1:50



SECTION C-C

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDE ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. ALL GAPS SHALL BE FILLED WITH POLY-SULPHIDE BASED SEALANT OR EQUIVALENT MATERIAL.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

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CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

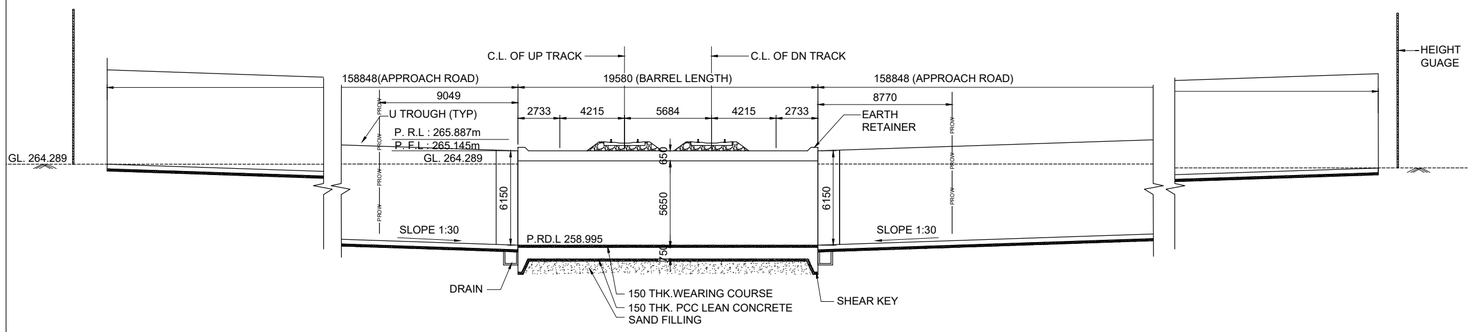
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

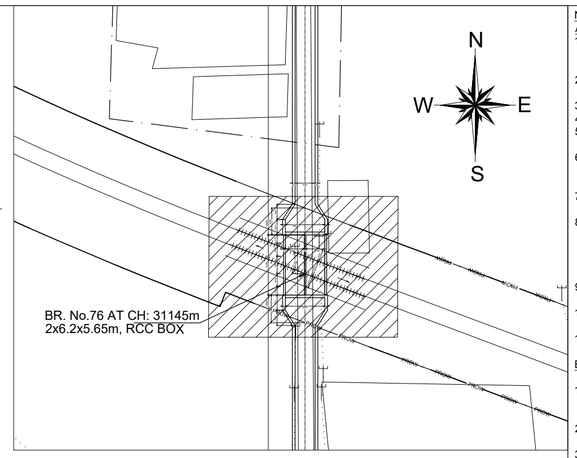
PROPOSED BR. NO. 075 SPAN 2×5.0×2.5 RCC BOX (SYPHON) AT CH: 30839

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01075_A1	1 OF 1

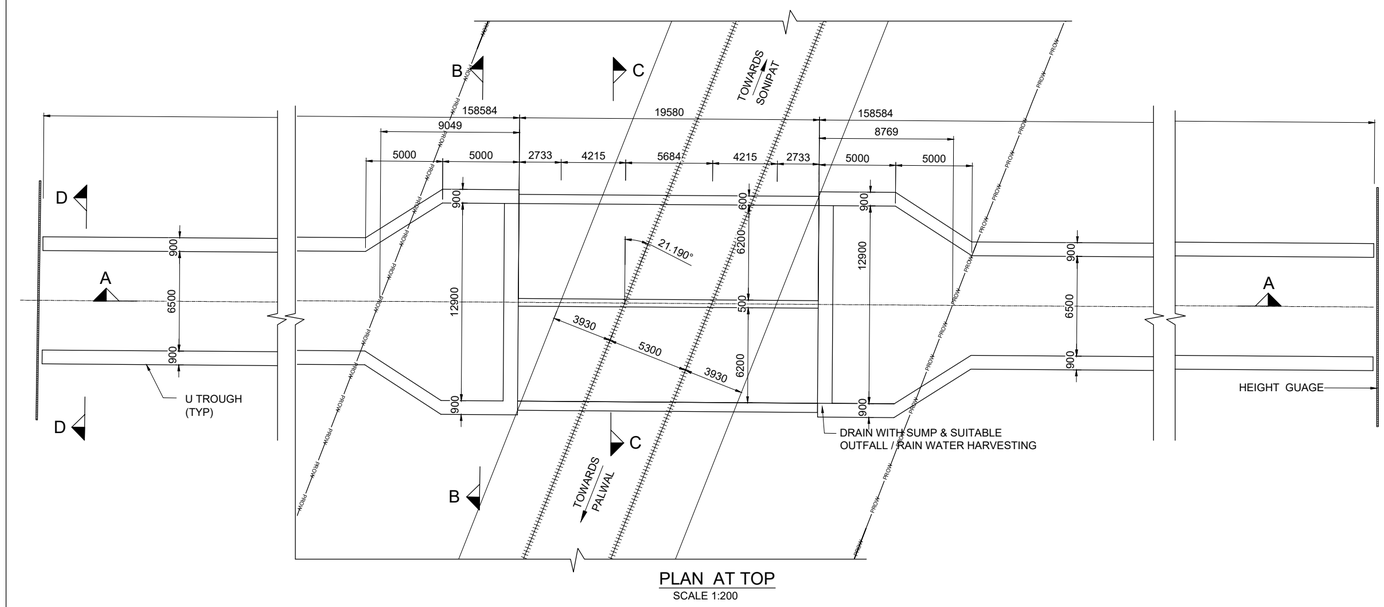
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTIONAL ELEVATION AT A-A
SCALE 1:200



KEY PLAN
(NOT TO SCALE)



PLAN AT TOP
SCALE 1:200

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL

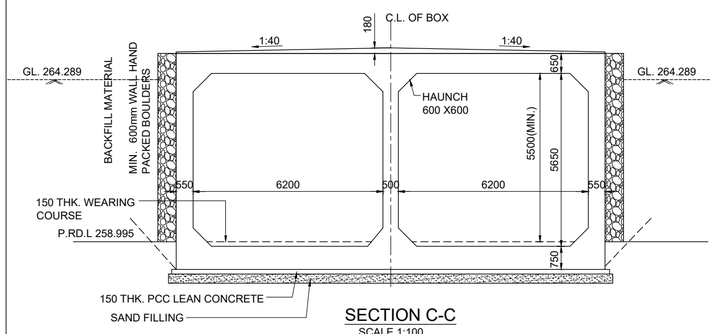
NOTES :

A) GENERAL NOTES

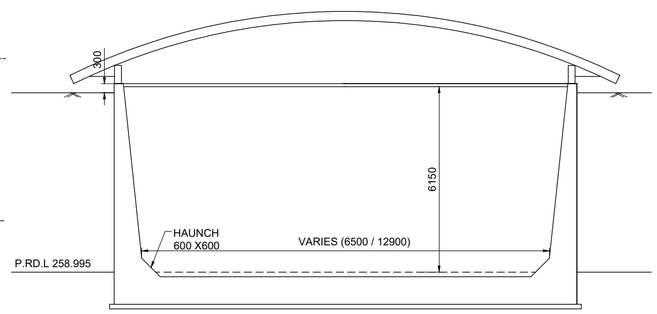
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

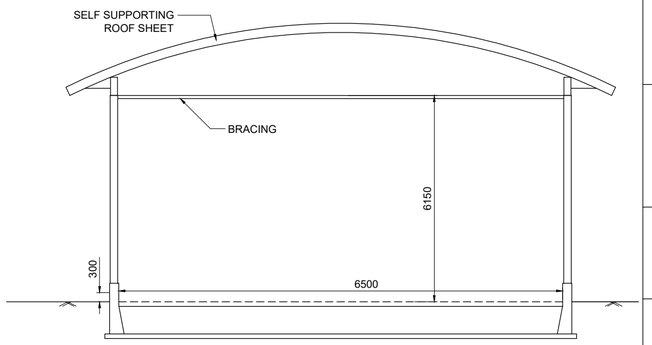
1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL. NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SELF SUPPORTING COVER SHED SHALL BE PROVIDED OVER THE APPROACH ROAD.



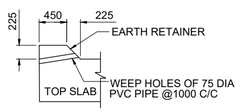
SECTION C-C
SCALE 1:100



SECTION B-B
NTS
DETAIL OF COVER SHED ON APPROACH ROAD



SECTION D-D
NTS
DETAIL OF COVER SHED ON APPROACH ROAD



EARTH RETAINER
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

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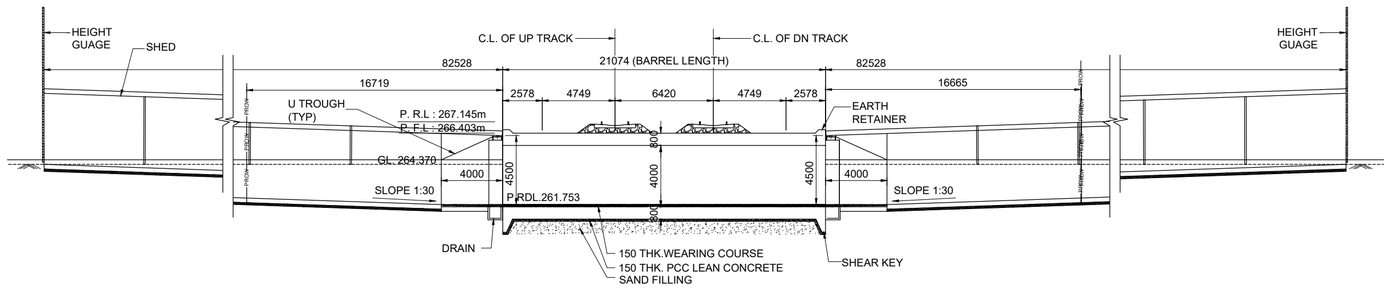
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

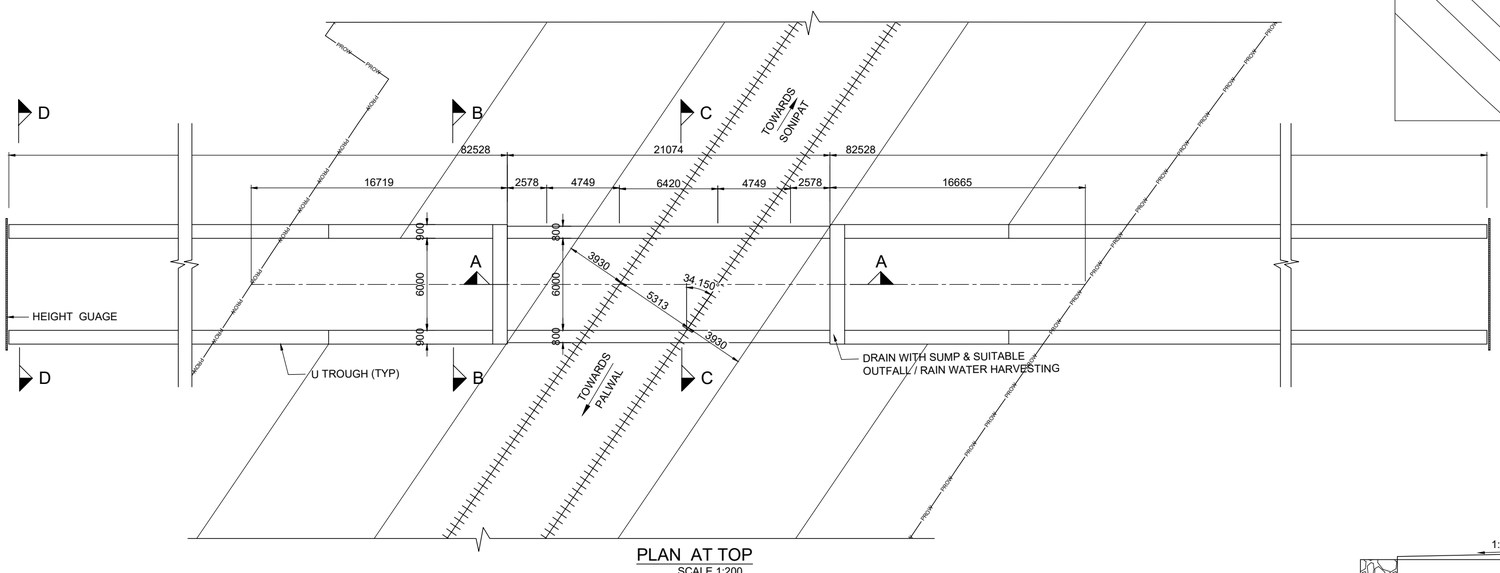
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 076 SPAN
2×6.2×5.650 RCC BOX AT CH: 31145

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01076_A1	1 OF 1

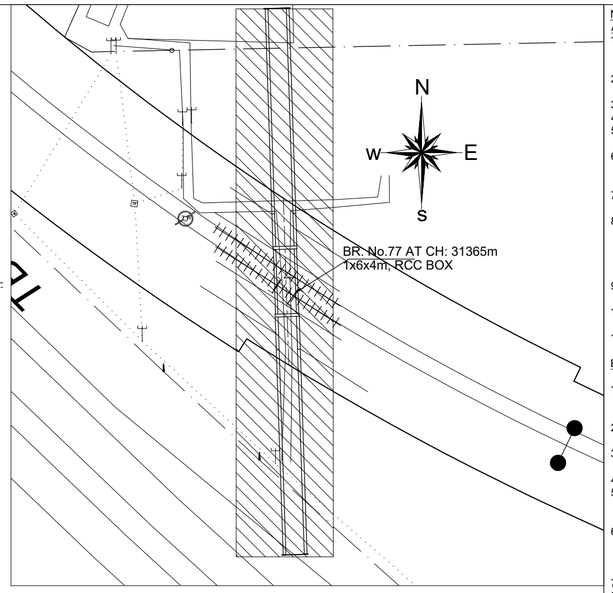
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTIONAL ELEVATION AT A-A
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
(NOT TO SCALE)

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL

NOTES :

A) GENERAL NOTES

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1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
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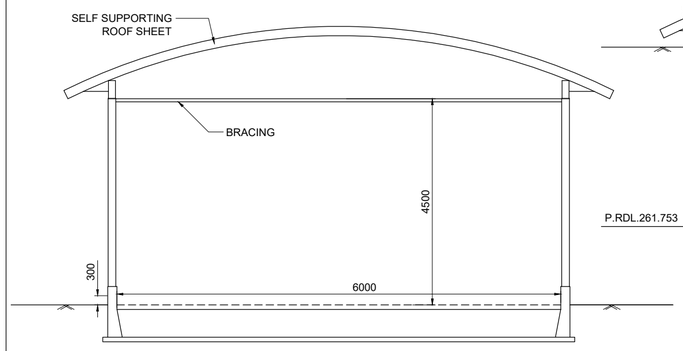
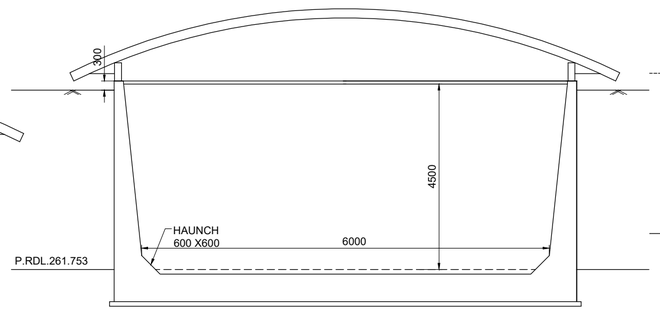
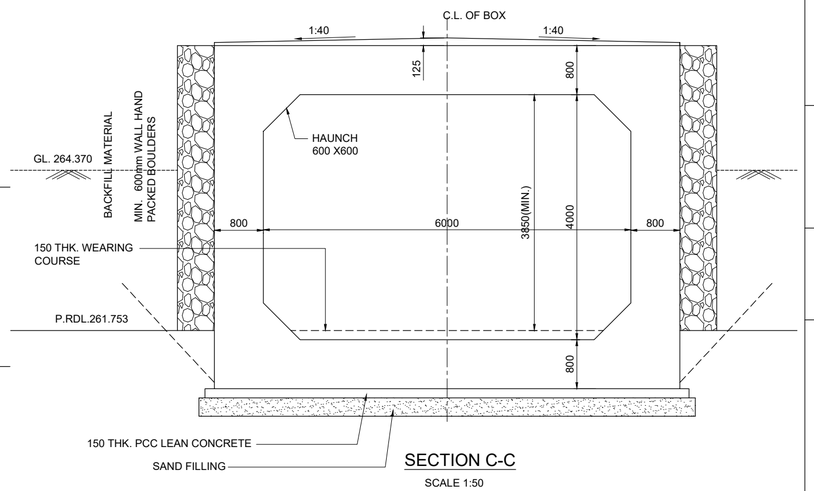
18. SHED SHALL BE PROVIDED OVER THE RAMP.



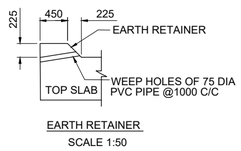
SECTION D-D
NTS
DETAIL OF COVER SHED ON APPROACH ROAD



SECTION B-B
NTS
DETAIL OF COVER SHED ON APPROACH ROAD



SECTION C-C
SCALE 1:50



EARTH RETAINER
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

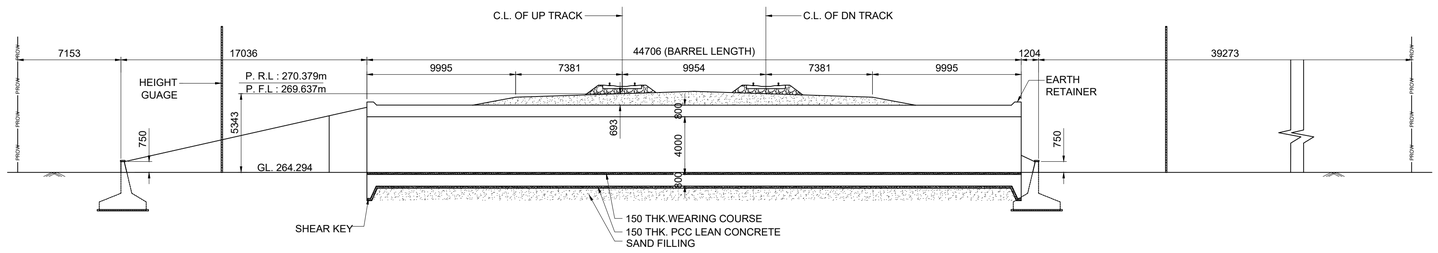
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

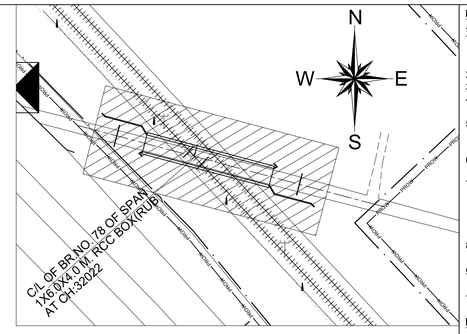
PROPOSED RUB NO. 077 SPAN
1×6.0×4.0 RCC BOX AT CH: 31365

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01077_A1	1 OF 1

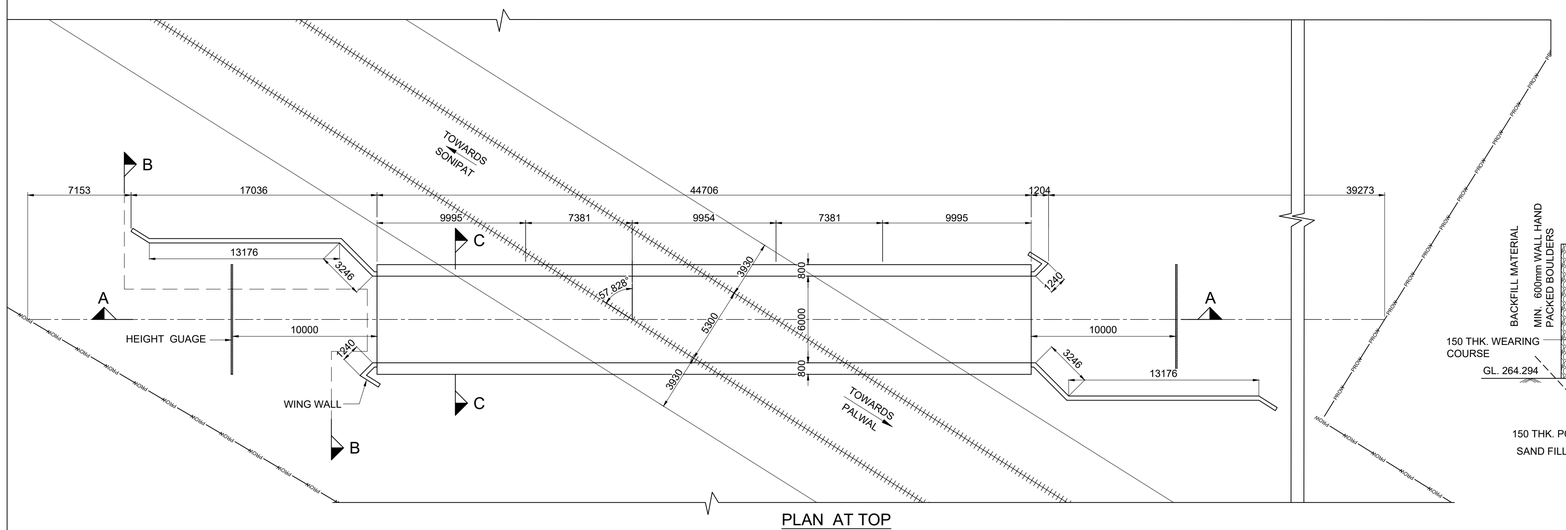
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



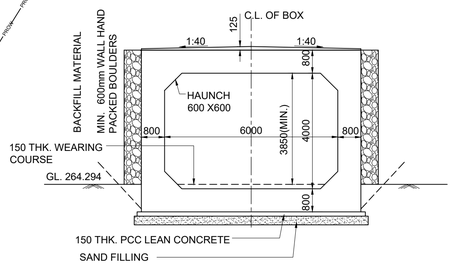
SECTIONAL ELEVATION AT A-A
SCALE 1:200



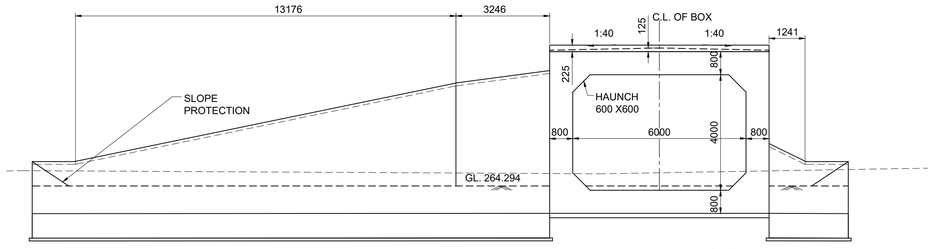
KEY PLAN
(NOT TO SCALE)



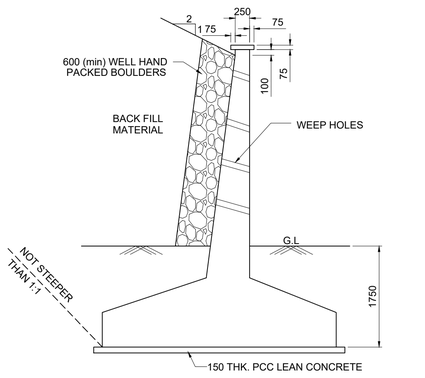
PLAN AT TOP
SCALE 1:200



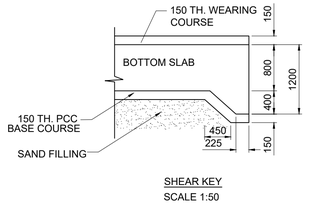
SECTION C-C
SCALE 1:100



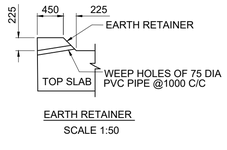
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

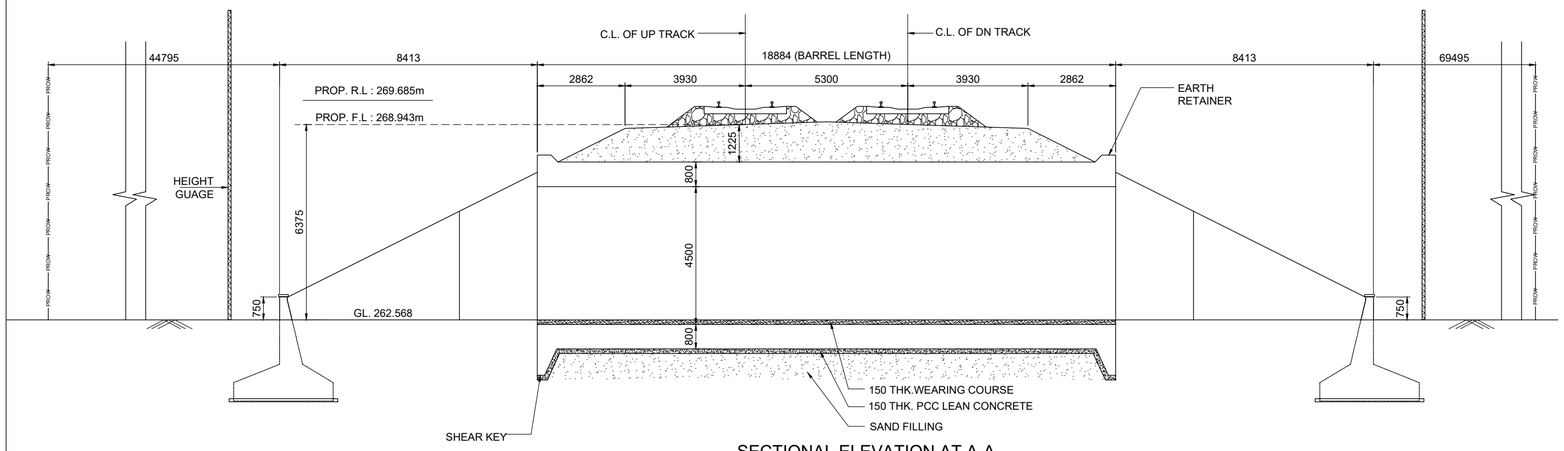
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

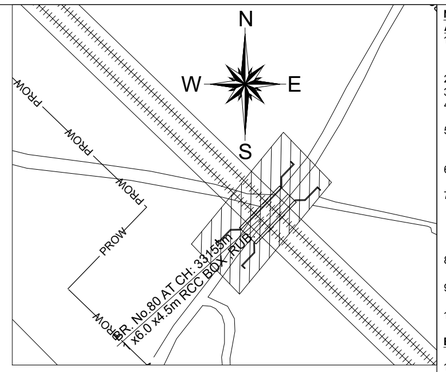
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 078 SPAN
1×6.0×4.0 RCC BOX AT CH: 32022

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01078_A1	1 OF 1

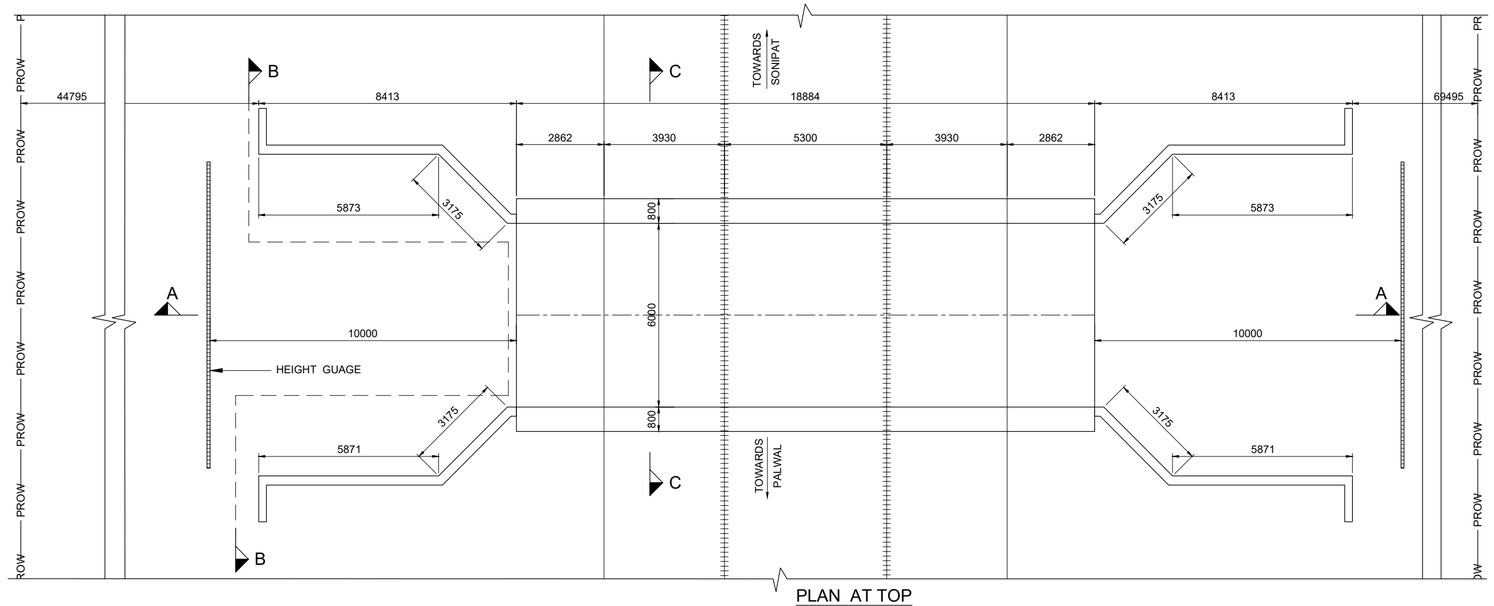
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



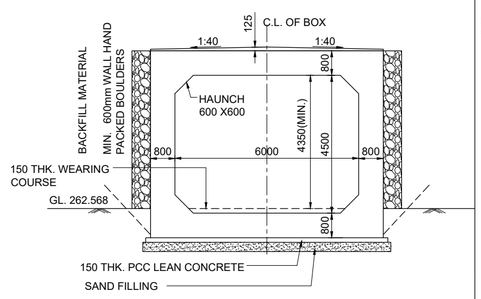
SECTIONAL ELEVATION AT A-A
SCALE 1:100



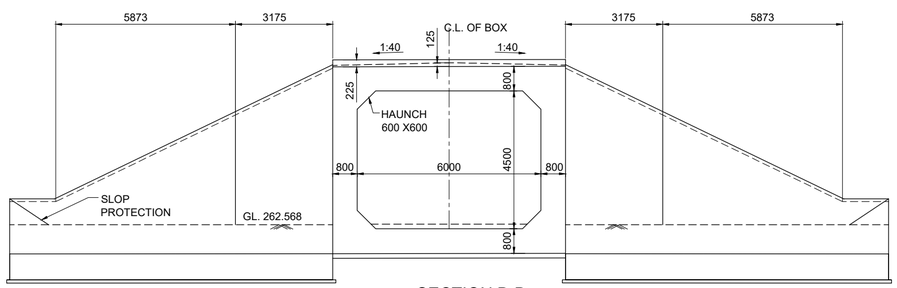
KEY PLAN
(NOT TO SCALE)



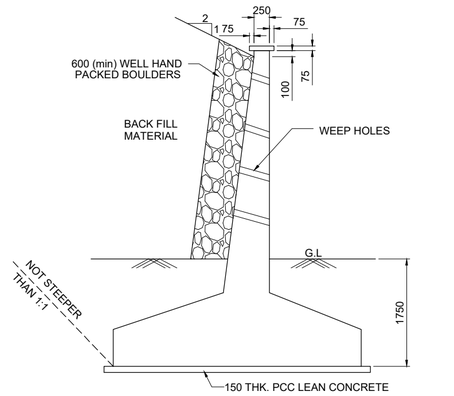
PLAN AT TOP
SCALE 1:100



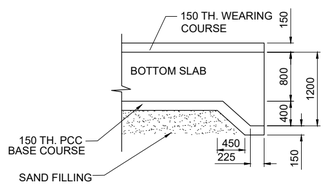
SECTION C-C
SCALE 1:100



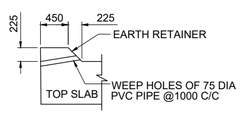
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

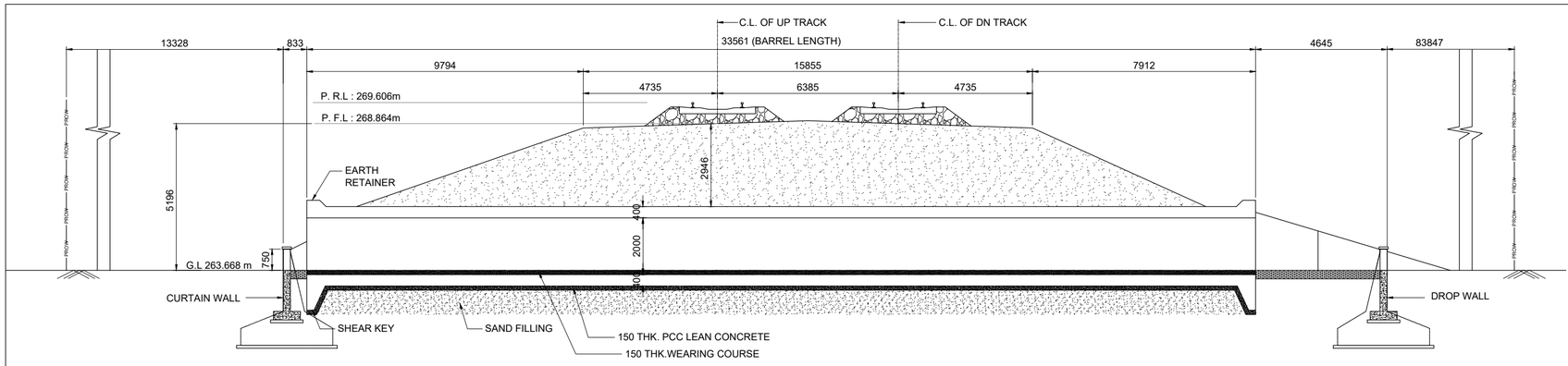
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 080
SPAN 1×6.0×4.50 RCC BOX AT CH: 33155

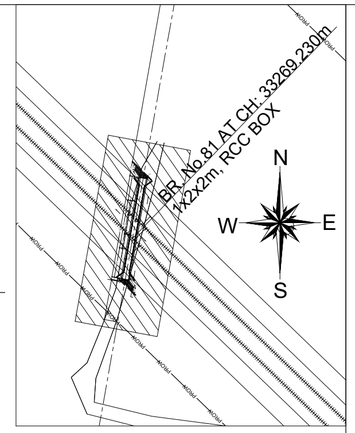
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01080_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



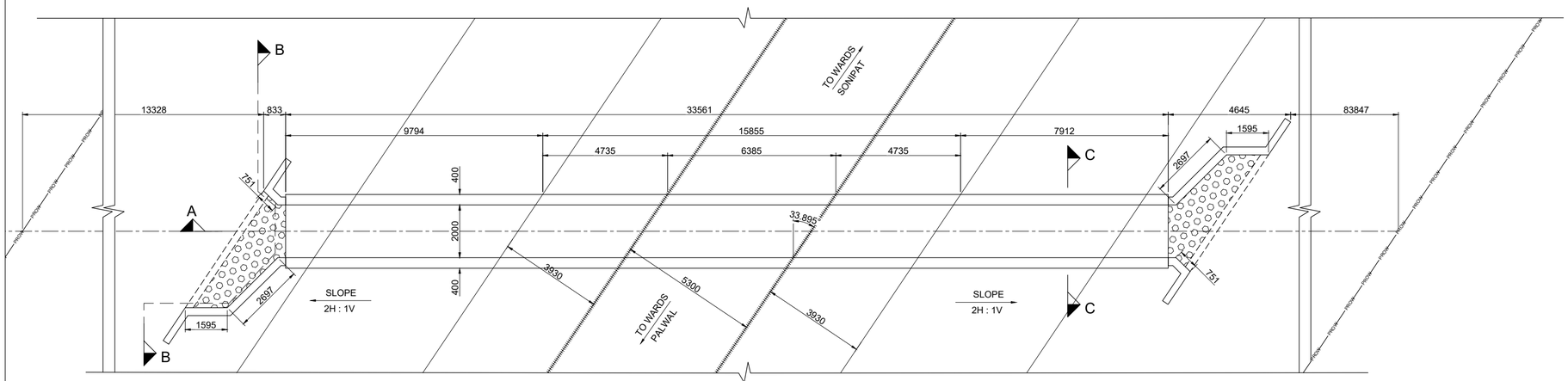
SECTIONAL ELEVATION AT A-A

SCALE 1:100



KEY PLAN

(NOT TO SCALE)

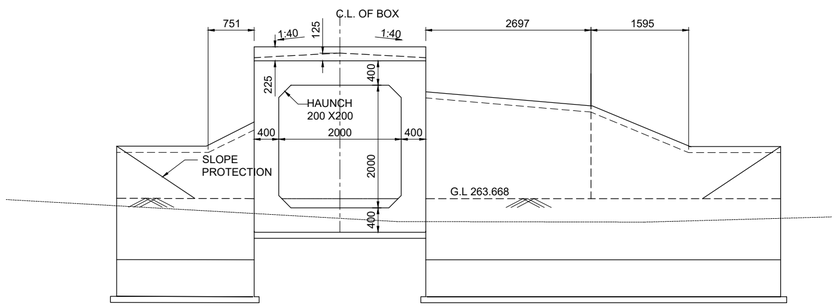


PLAN AT TOP

SCALE 1:100

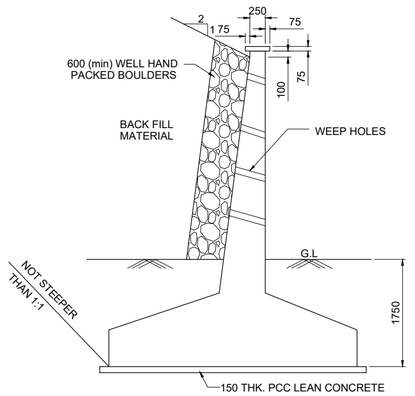
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



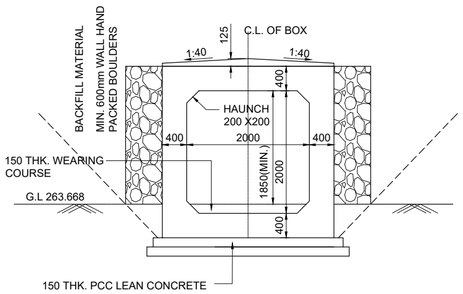
VIEW AT B-B

SCALE 1:50



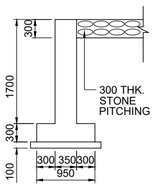
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



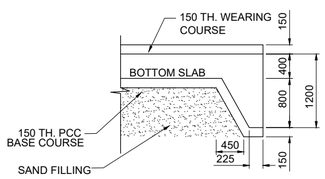
SECTION C-C

SCALE 1:50



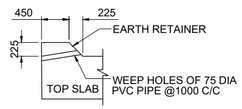
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

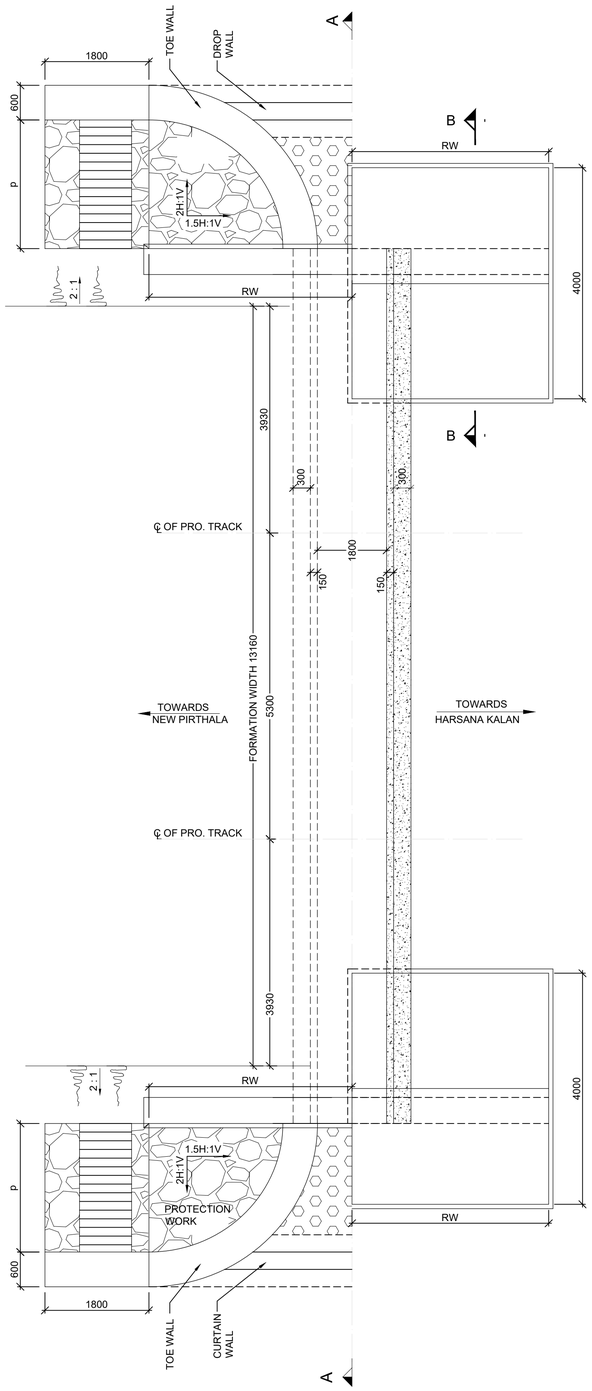
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 081 SPAN 1×2.0×2.0 RCC BOX AT CH: 33269.230

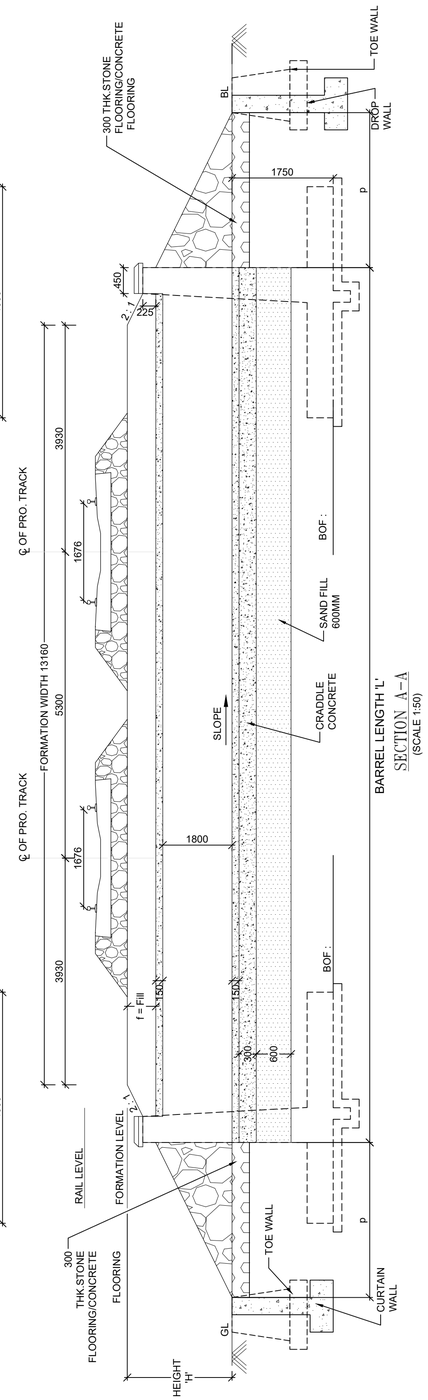
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01081_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



HALF PLAN AT TOP HALF PLAN AT BOTTOM

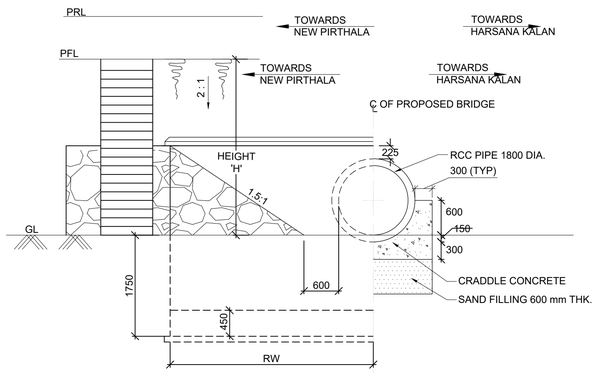
(SCALE 1:50)



BARREL LENGTH 'L'

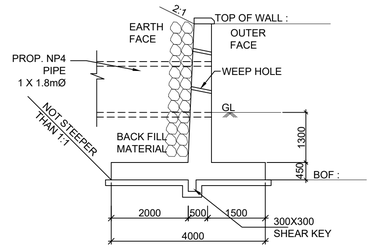
SECTION A–A

(SCALE 1:50)



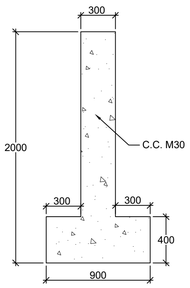
HALF ELEVATION HALF SECTION

(SCALE 1:50)



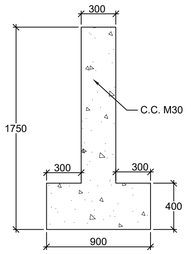
SECTION B-B

(SCALE 1:75)



DROP WALL

(SCALE 1:25)



CURTAIN WALL

(SCALE 1:25)

LEGEND

F.L	FORMATION LEVEL
R.L	RAIL LEVEL
G.L	GROUND LEVEL
BOF	BOTTOM OF FOUNDATION
PROP.	PROPOSED
EXG.	EXISTING
THK.	THICKNESS
CH.	CHAINAGE
PCC	PLAIN CEMENT CONCRETE
RCC	REINFORCED CEMENT CONCRETE
BR.	BRIDGE

CONSTRUCTION DEPTH

1) RAIL (60kg)	172 mm
2) RUBBER PAD	10 mm
3) WIDER PSC SLEEPER HEIGHT AT RAIL SEAT	210 mm
4) MINIMUM BALLAST THK.	350 mm
TOTAL	742 mm

COLOR CODE LEGEND

RED	-	PROPOSED
CONTINUOUS	-	VISIBLE
DOTTED	-	INVISIBLE
BLACK	-	EXISTING

Sr. No.	Chainage (in m)	Br. No.	Span	Prop. RL	Prop. FL	GL	Clear Height	Track on	No. of tracks	T c/c	RW	P	f	H	L	REMARK
1	33450.000	82	1 x 1.8m	269.494	268.752	263.704	1.800	Straight	2	5.3	4.425	3.9	3.098	5.048	45.795	56.1°, SKEW
2	37317.678	90	1 x 1.8m	263.671	262.929	257.025	1.800	Curve	2	5.34	4.425	3.9	3.954	5.904	50.305	55.19°, SKEW
3	40357.531	96	1 x 1.8m	258.271	257.529	252.484	1.800	Curve	2	5.674	4.425	3.9	3.095	5.045	25.616	
4	41666.651	99	1 x 1.8m	261.692	260.950	254.888	1.800	Straight	2	5.3	4.425	3.9	4.112	6.062	29.157	
5	48594.592	122	1 x 1.8m	259.892	259.150	253.423	1.800	Straight	2	5.3	4.425	3.9	3.777	5.727	27.817	

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. STRUCTUIRE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
4. PLACEMENT LEVEL OF PIPE AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF DRAINAGE &NATURAL GROUND PROFILE.
5. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
6. SEISMIC ZONE- IV
7. EXPOSURE CONDITION- MODERATE.
8. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
9. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
10. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
11. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-1	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE — SMEC Member of the Surbana Jurong Group

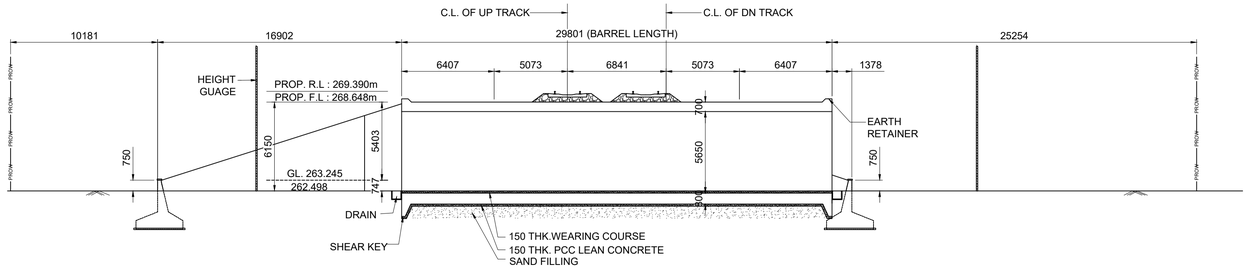
TITLE:-

GENERAL ARRANGEMENT DRAWING
BRIDGE NO. 82,90,96,99,&122 PIPE CULVERT 1X1.8 SPAN

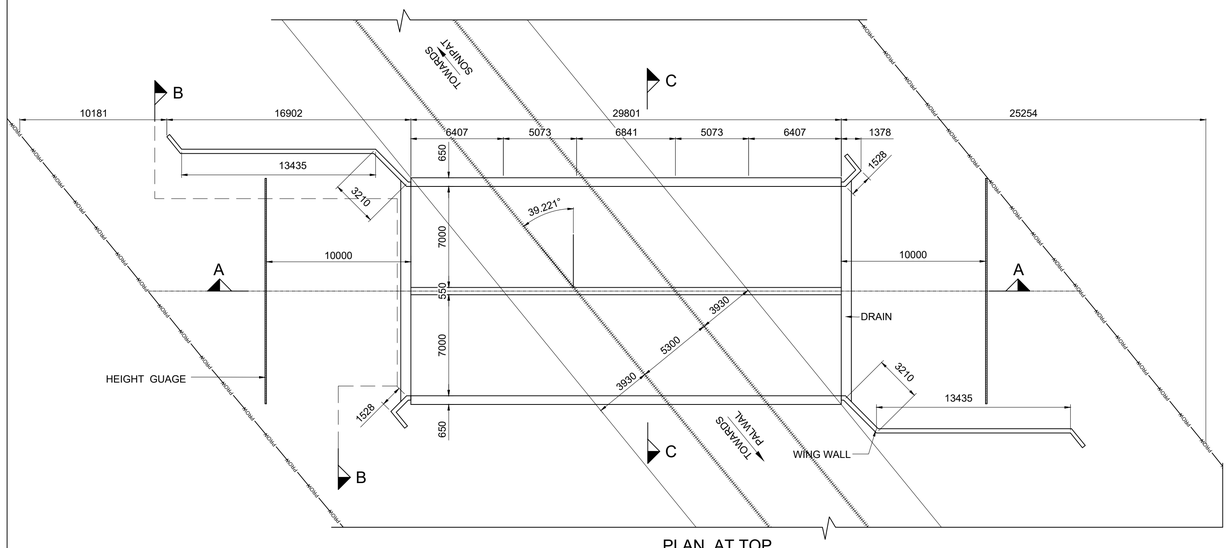
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-PIPE_A1

SHEET NO. 1 OF 1

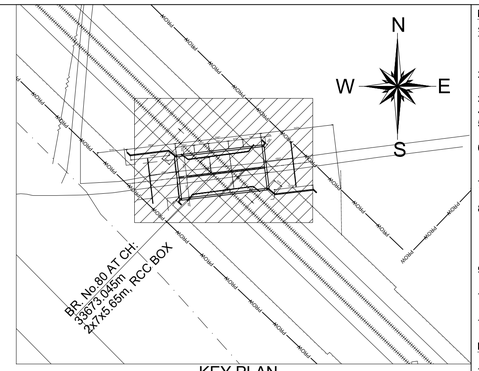
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	08-12-2022



SECTIONAL ELEVATION AT A-A
SCALE 1:200



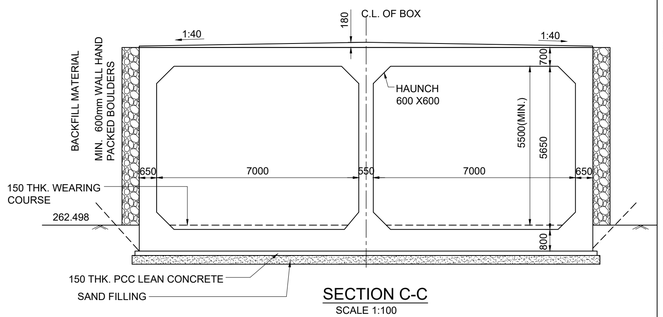
PLAN AT TOP
SCALE 1:200



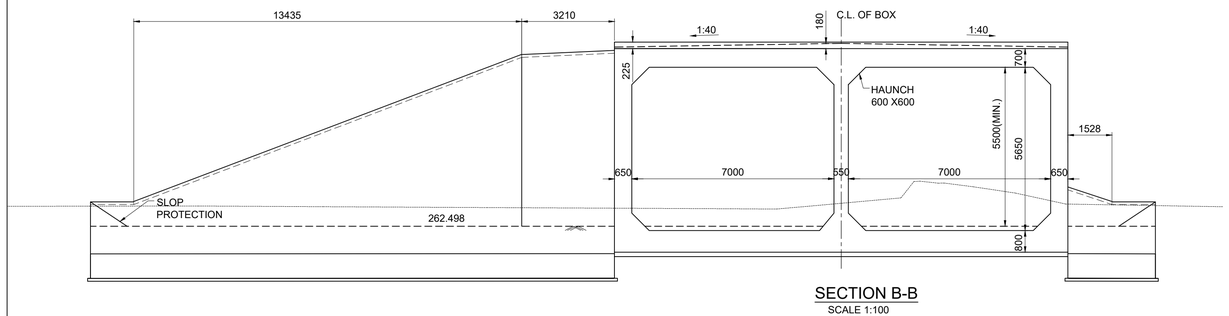
KEY PLAN
(NOT TO SCALE)

LEGEND

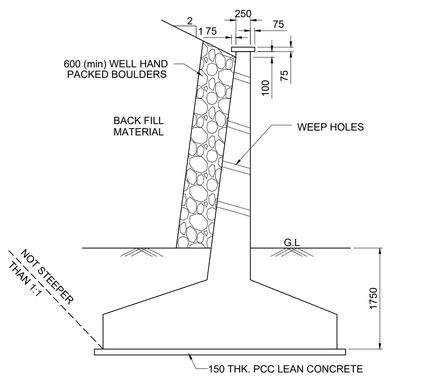
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



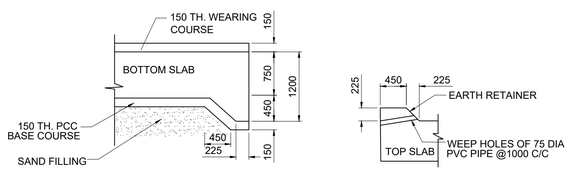
SECTION C-C
SCALE 1:100



SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50

EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

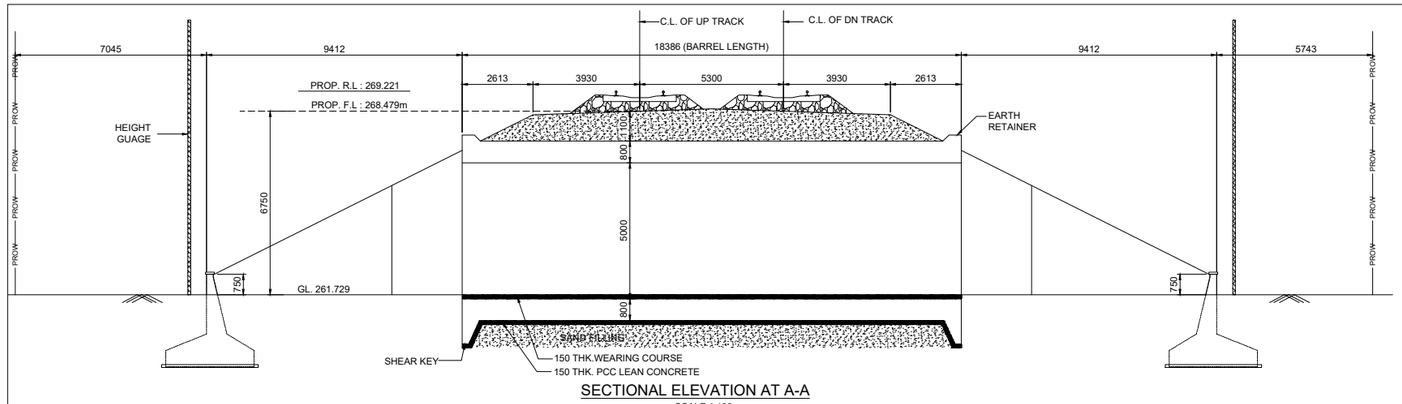
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 083 SPAN
2×7.0×5.650 RCC BOX AT CH: 33673.045

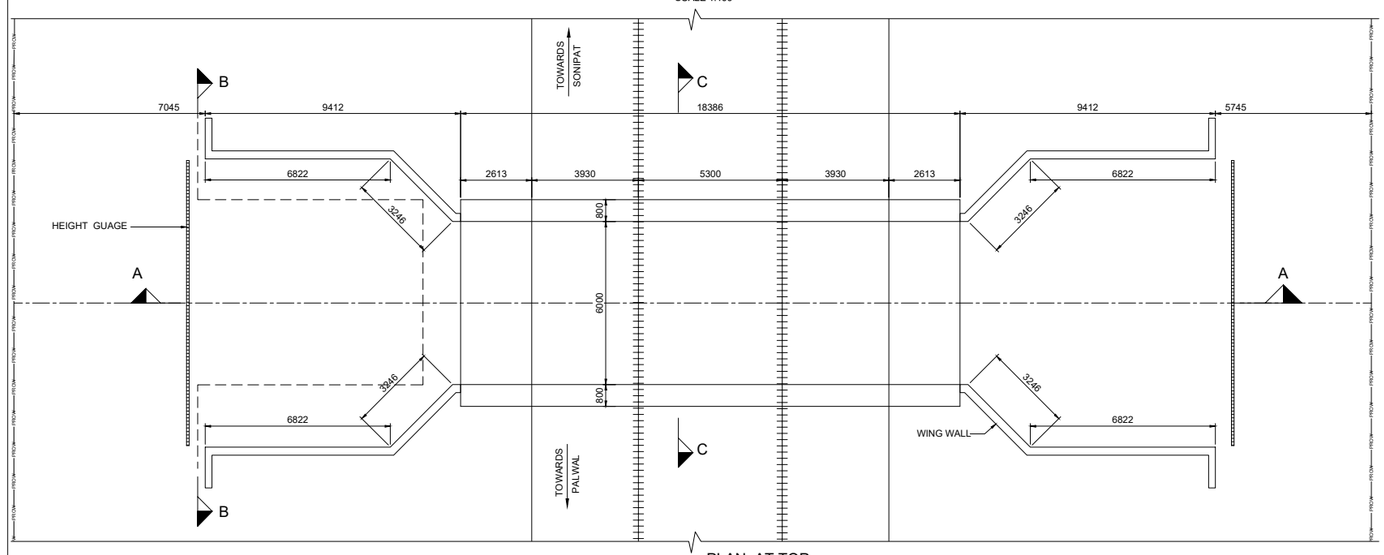
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01083_A1
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



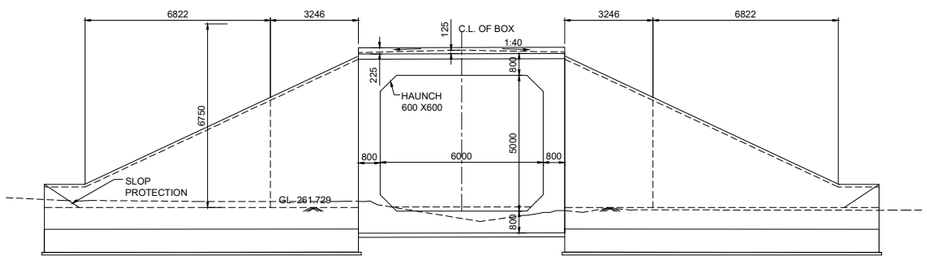
SECTIONAL ELEVATION AT A-A

SCALE 1:100



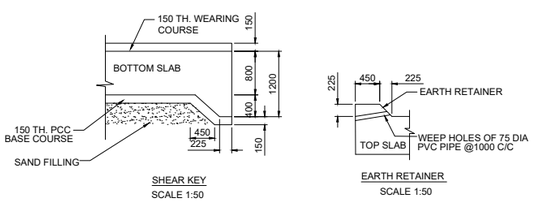
PLAN AT TOP

SCALE 1:100



SECTION B-B

SCALE 1:100

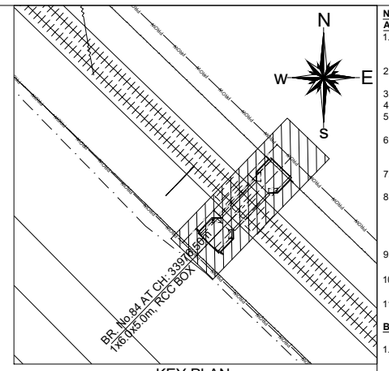


SHEAR KEY

SCALE 1:50

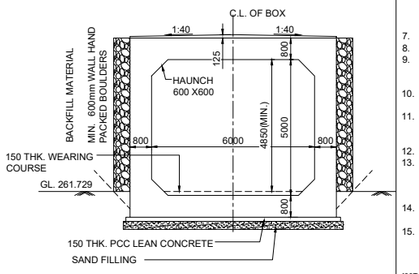
EARTH RETAINER

SCALE 1:50



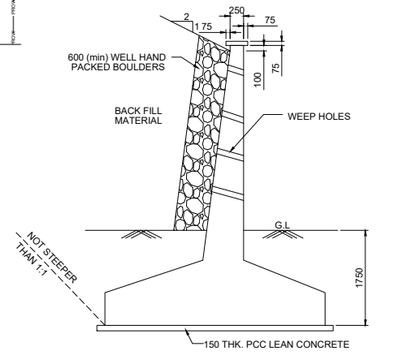
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS WITHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

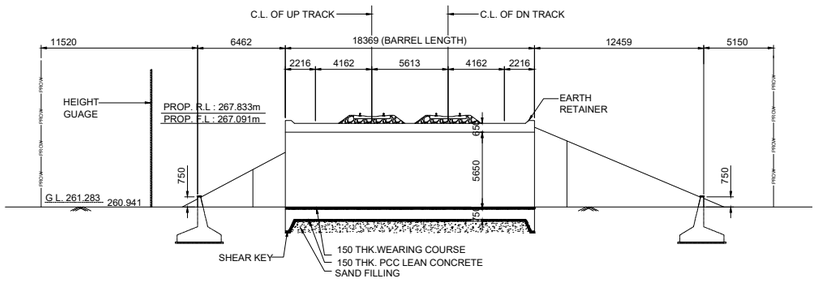
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING

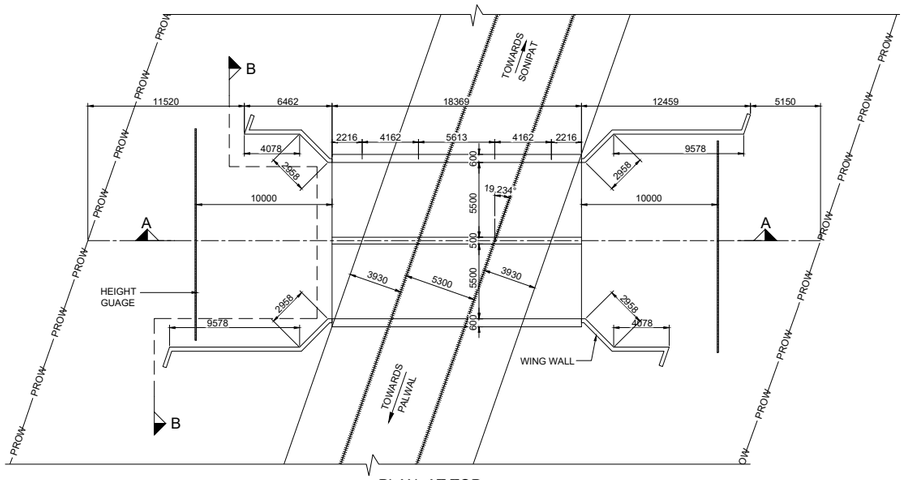
PROPOSED RUB NO. 084 SPAN
1×6.0×5.0 RCC BOX AT CH: 33976.50

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01084_A1	1 OF 1

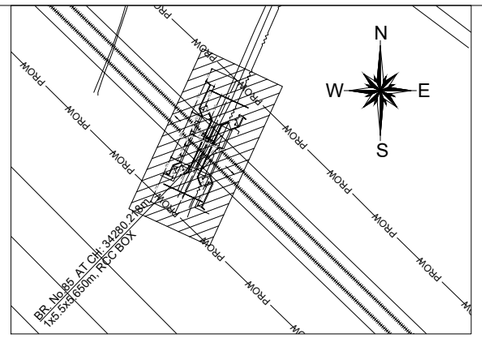
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



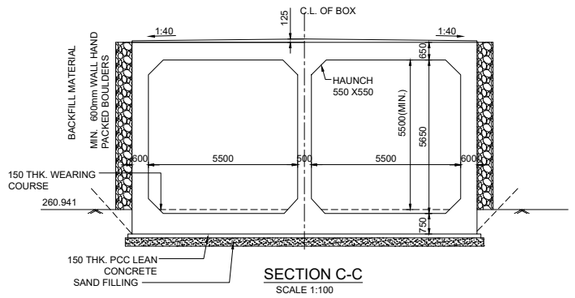
SECTIONAL ELEVATION AT A-A
SCALE 1:200



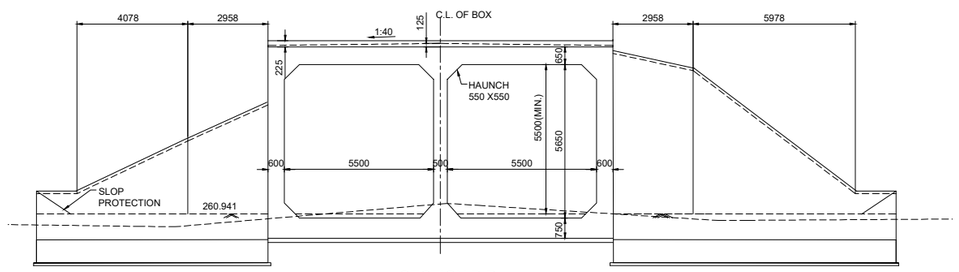
PLAN AT TOP
SCALE 1:200



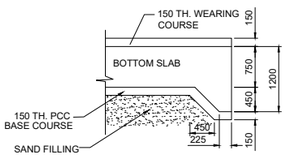
KEY PLAN
(NOT TO SCALE)



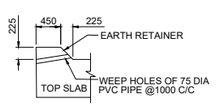
SECTION C-C
SCALE 1:100



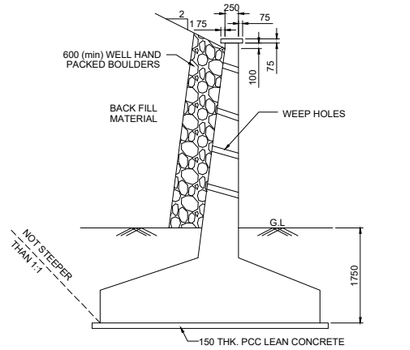
SECTION B-B
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

NOTES :

A) GENERAL NOTES

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7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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B) TECHNICAL NOTES :

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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

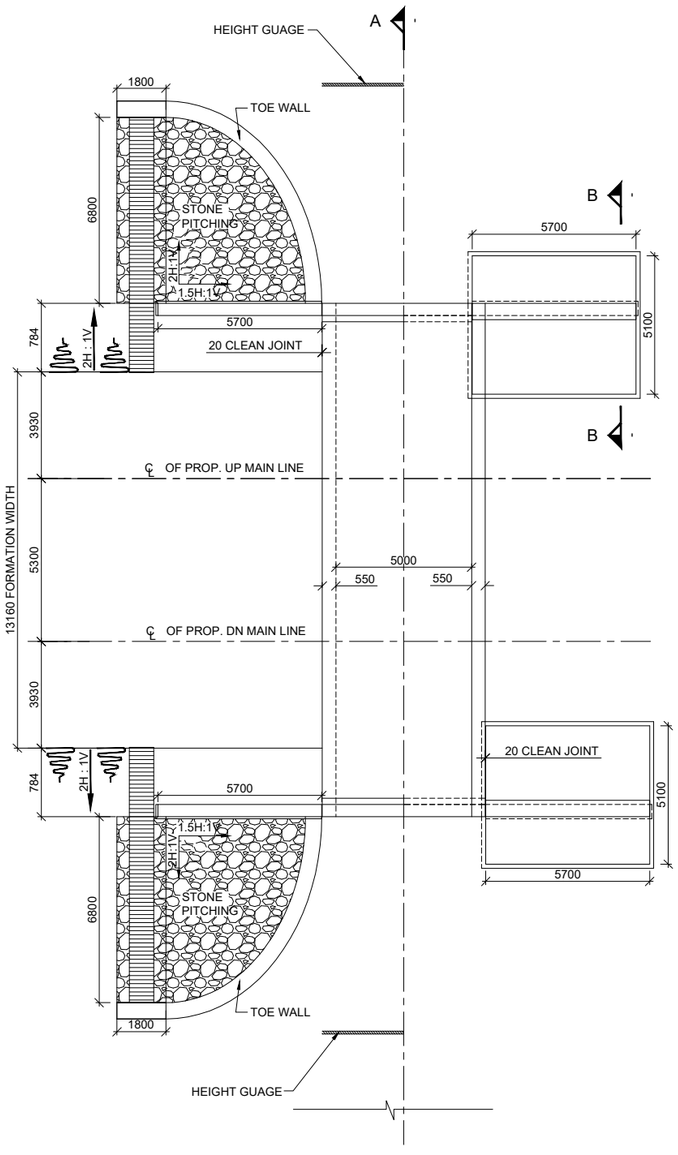
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

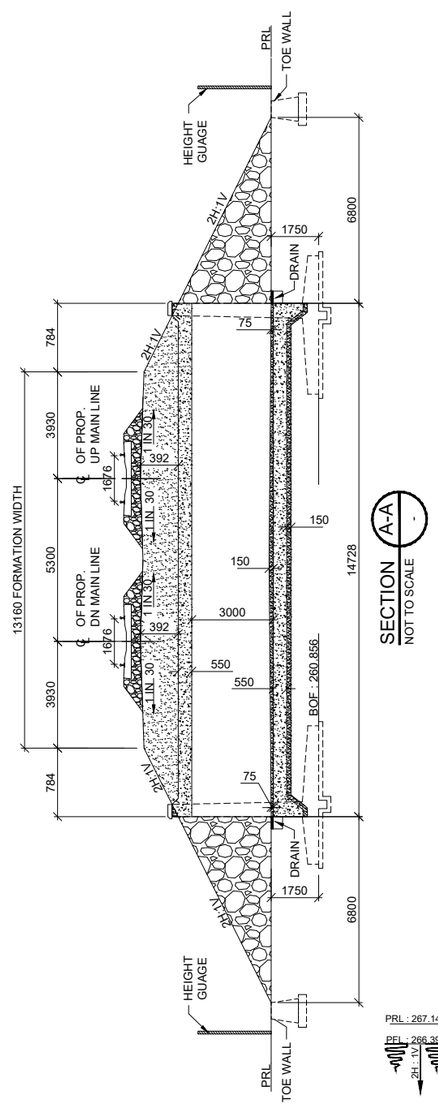
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

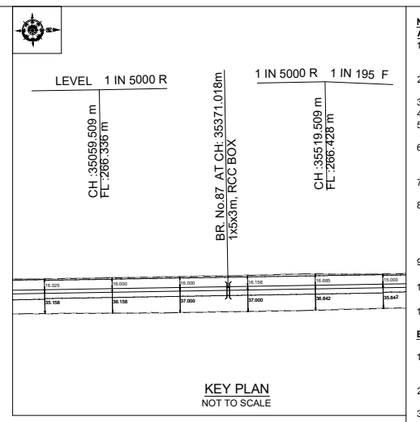
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 085 SPAN
2×5.5×5.650 RCC BOX AT CH: 34280.218

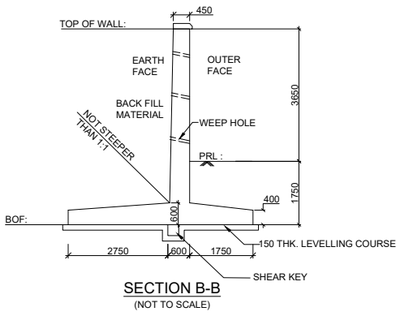
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01085_A1	1 OF 1

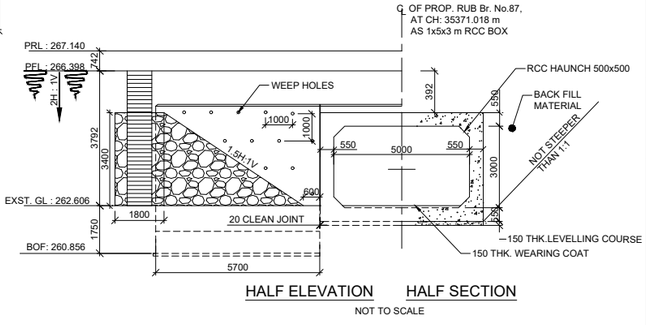
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

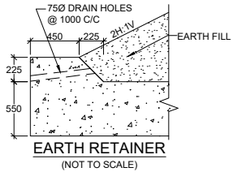


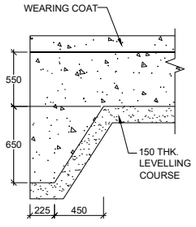












NOTES :

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    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
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CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

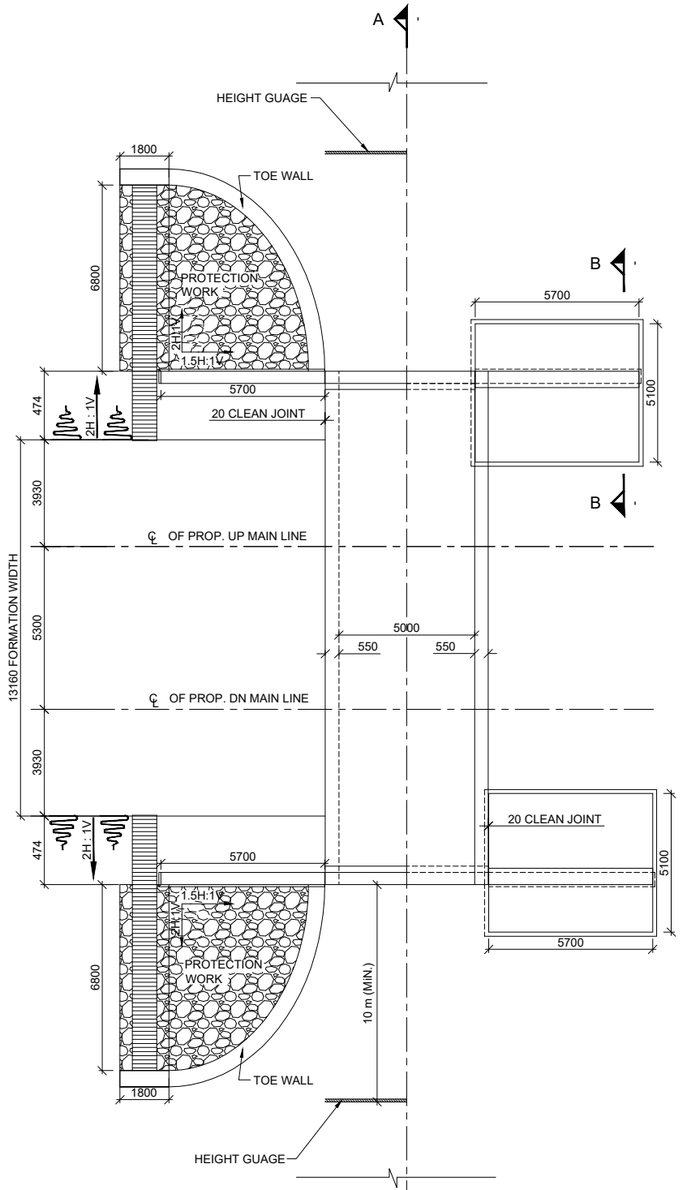
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

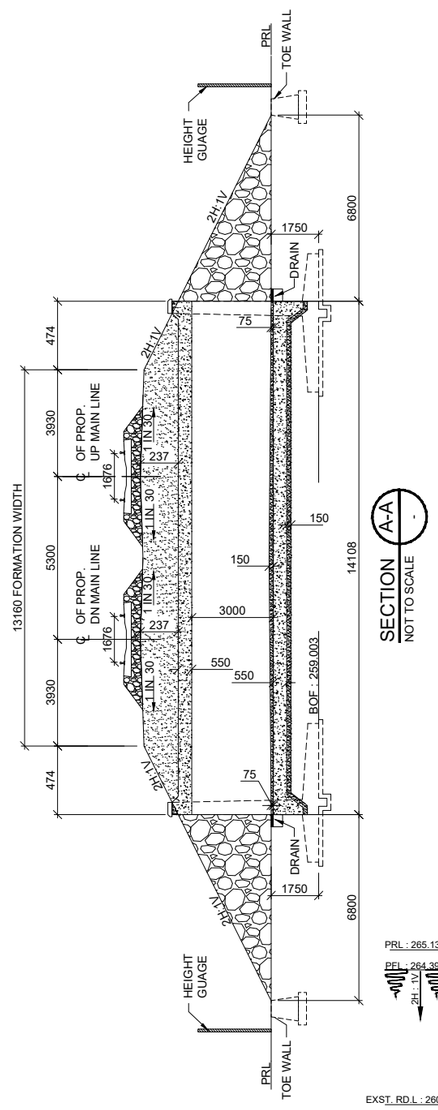
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

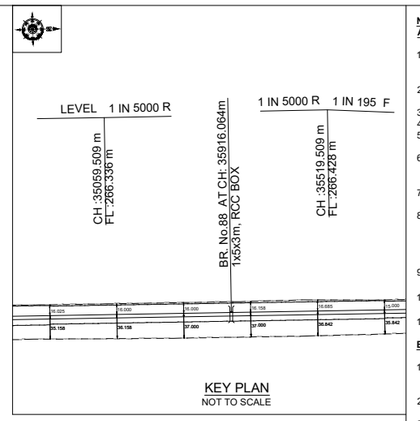
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 87
SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35371.018m

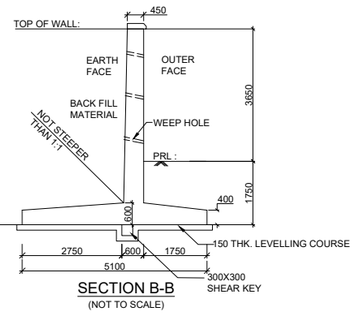
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-0087_A1	1 OF 1

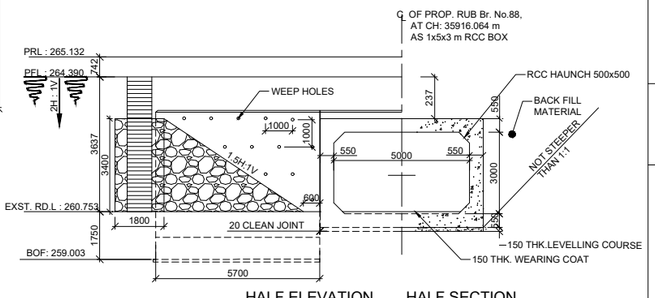
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

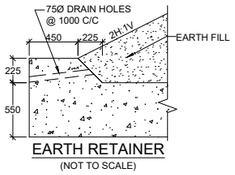


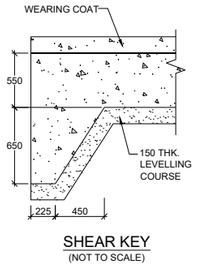












NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

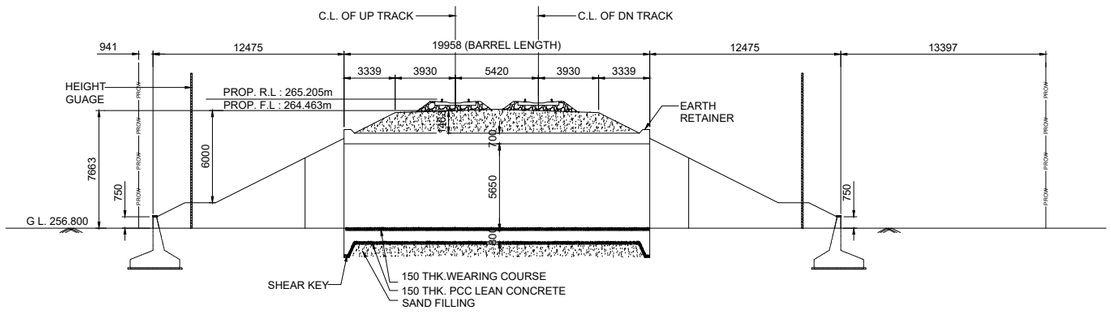
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

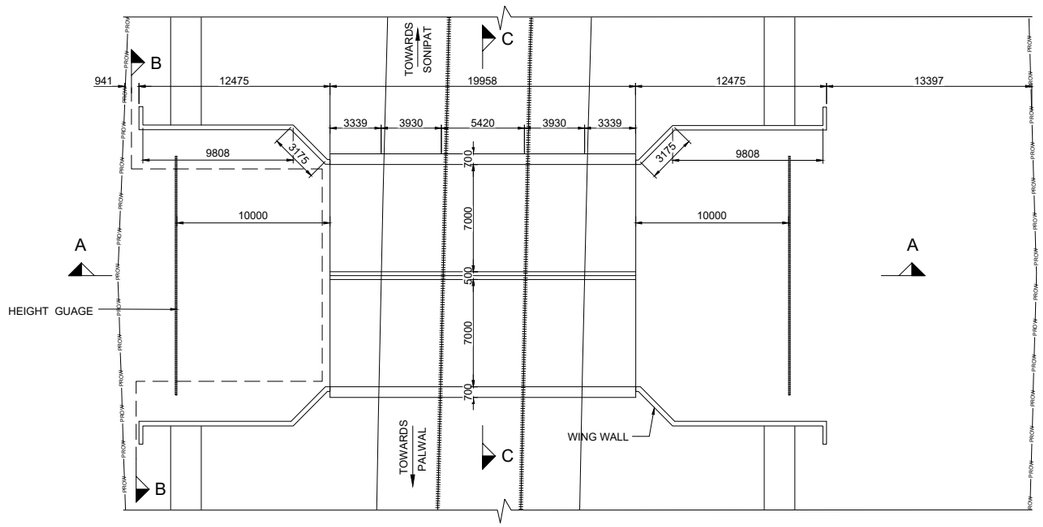
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 88
SPAN 1.0X5.0X3.0 RCC BOX AT CH: 35916.064m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-0088_A1	1 OF 1

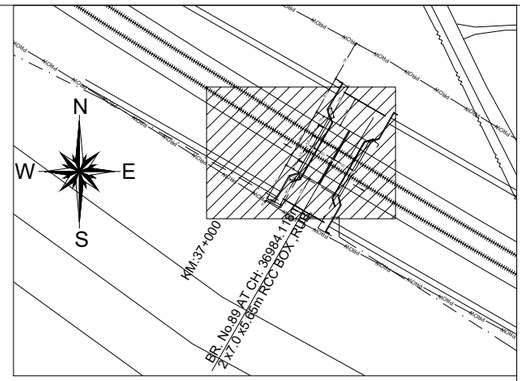
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



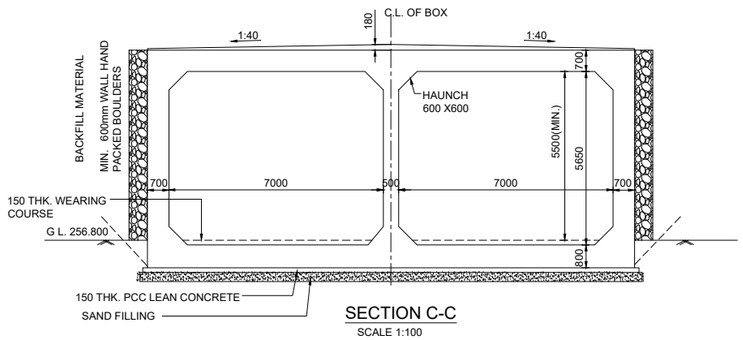
SECTIONAL ELEVATION AT A-A
SCALE 1:200



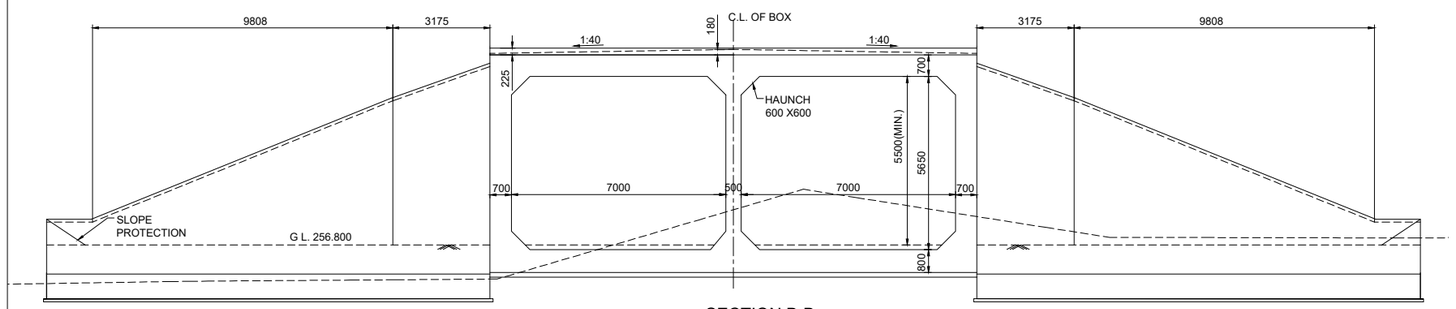
PLAN AT TOP
SCALE 1:200



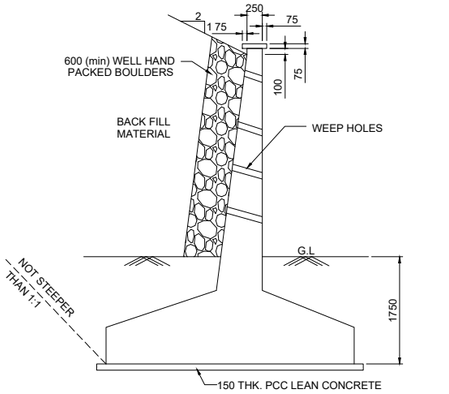
KEY PLAN
(NOT TO SCALE)



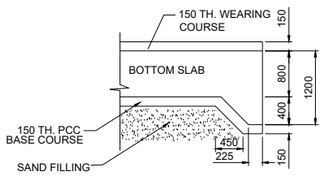
SECTION C-C
SCALE 1:100



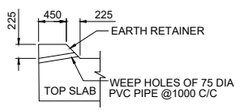
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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IMPORTANT NOTE:
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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
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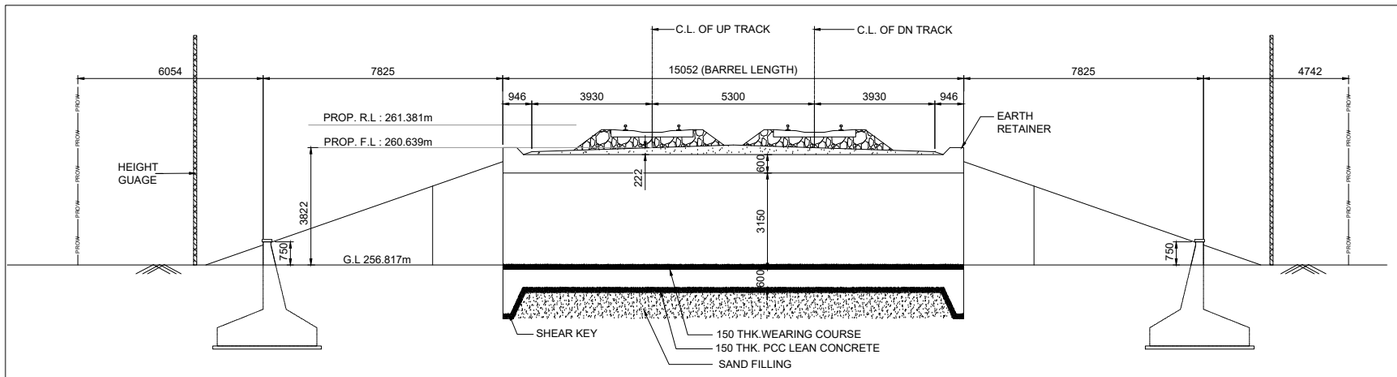
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 089 SPAN 2×7.0×5.65
RCC BOX AT CH: 36984.118

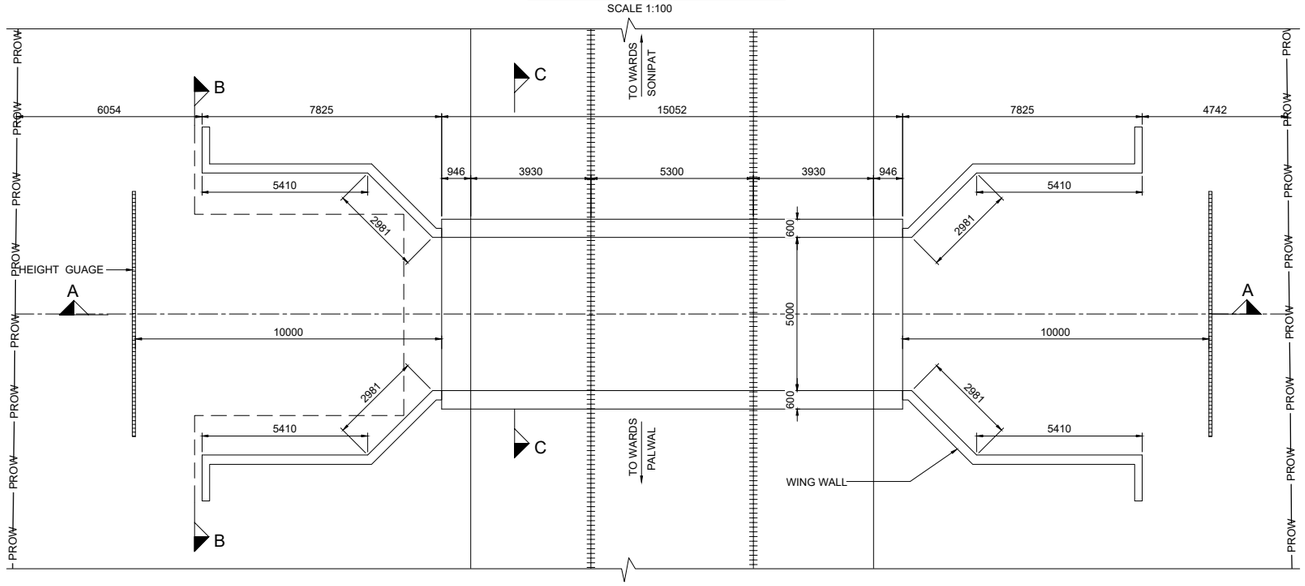
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01089_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



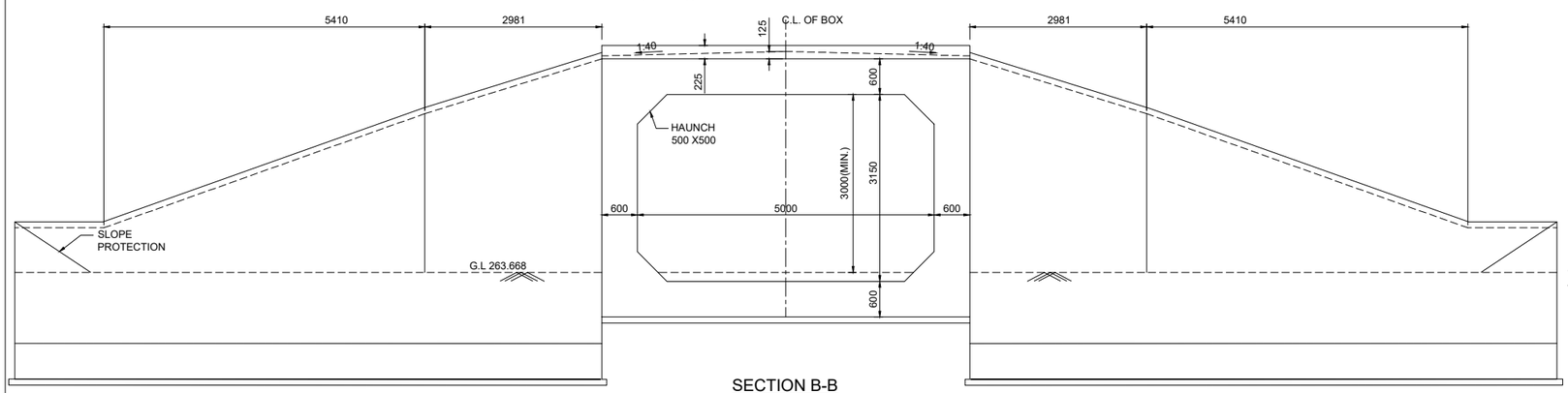
SECTIONAL ELEVATION AT A-A

SCALE 1:100



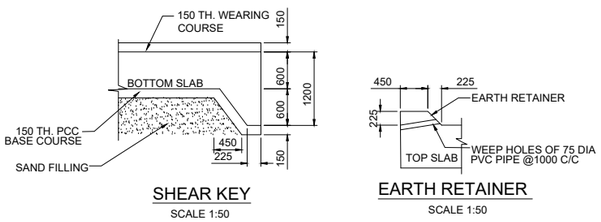
PLAN AT TOP

SCALE 1:100



SECTION B-B

SCALE 1:50

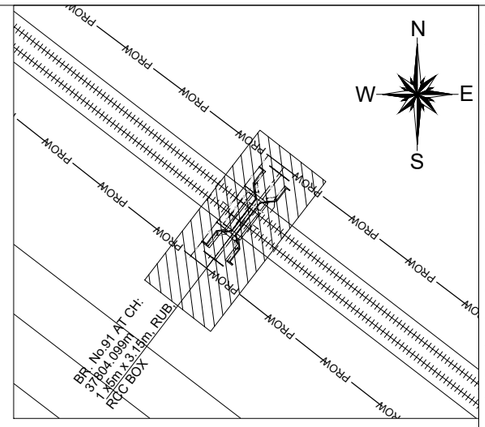


SHEAR KEY

SCALE 1:50

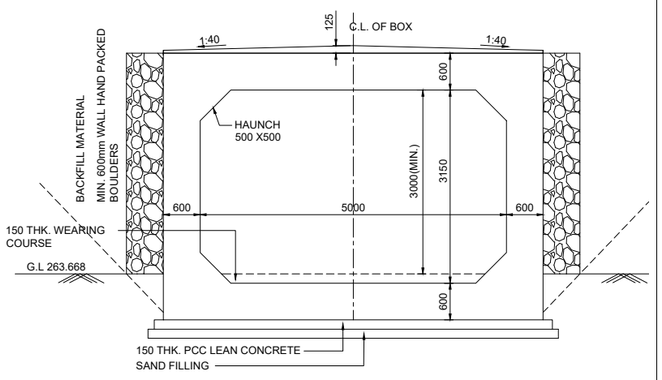
EARTH RETAINER

SCALE 1:50



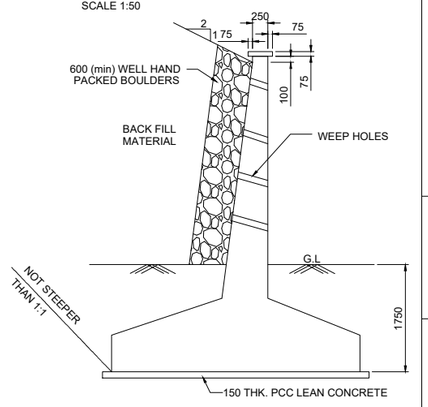
KEY PLAN

(NOT TO SCALE)



SECTION C-C

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

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15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

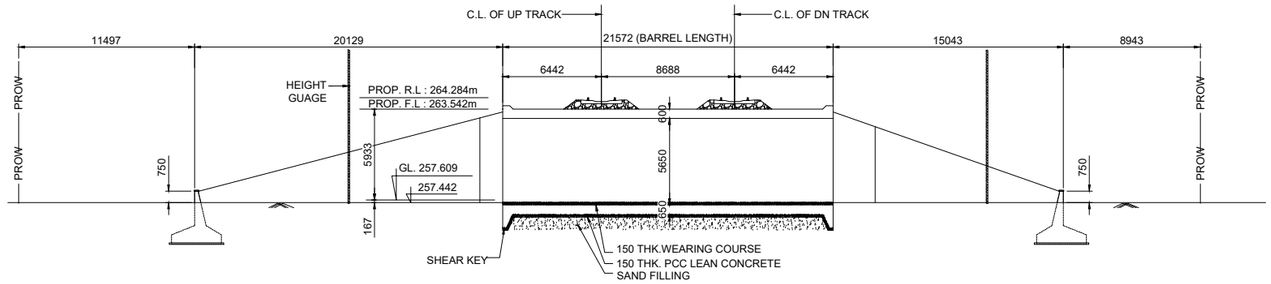
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE: CONCEPTUAL GENERAL ARRANGEMENT DRAWING

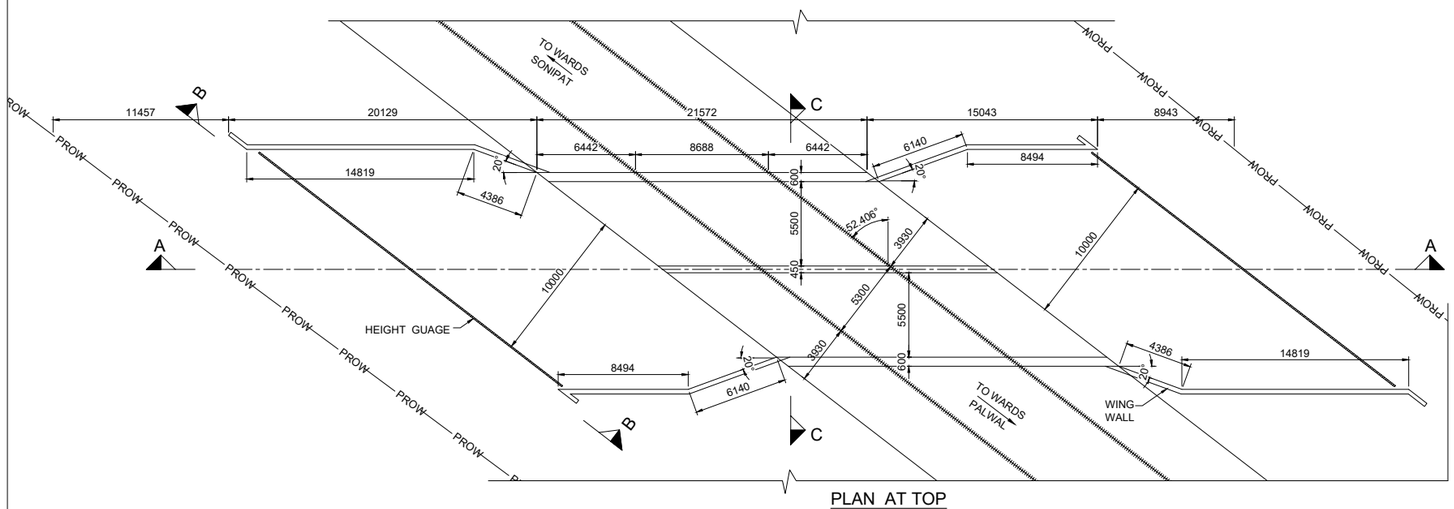
PROPOSED RUB NO. 091 SPAN
1×5.0×3.15 RCC BOX AT CH: 37804.099

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01091_A1	1 OF 1

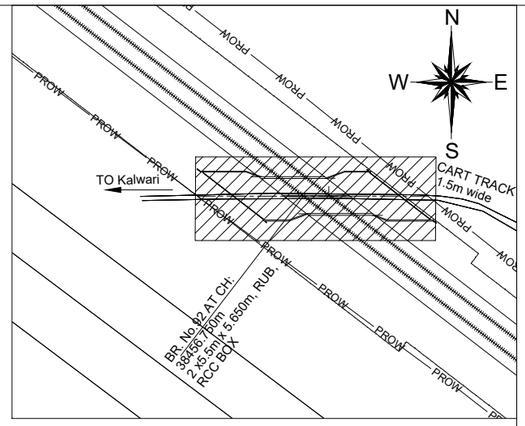
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



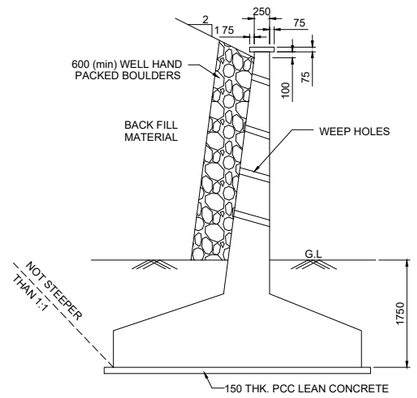
SECTIONAL ELEVATION AT A-A
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
(NOT TO SCALE)



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

NOTES :

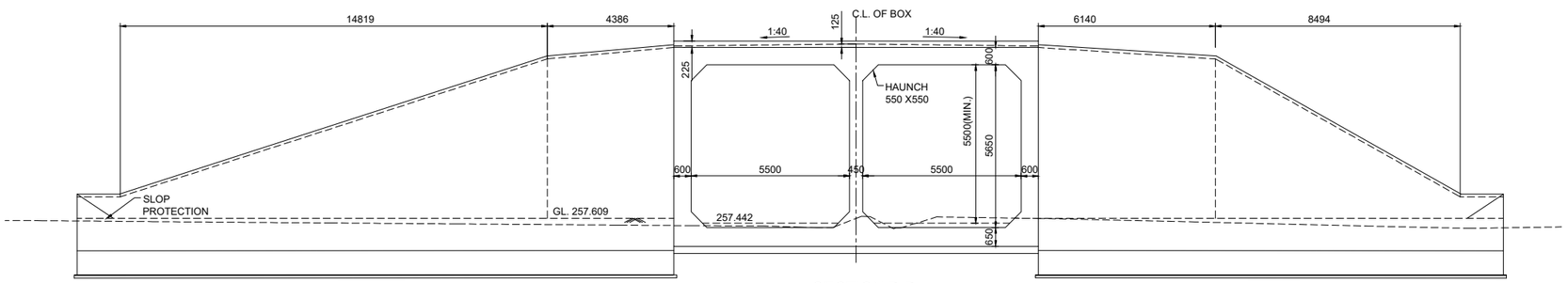
A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

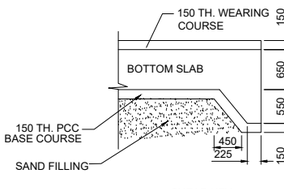
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

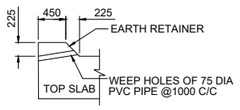
IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY THE HEIGHT OF



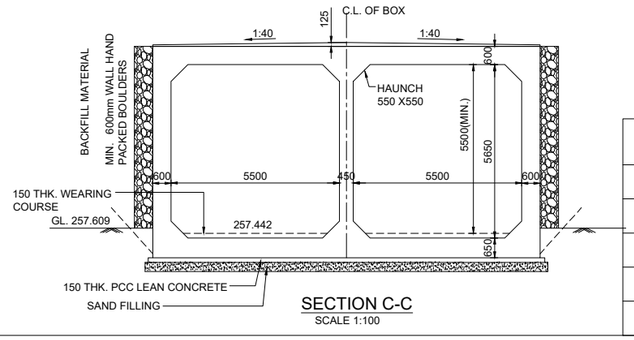
SECTION B-B
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



SECTION C-C
SCALE 1:100

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

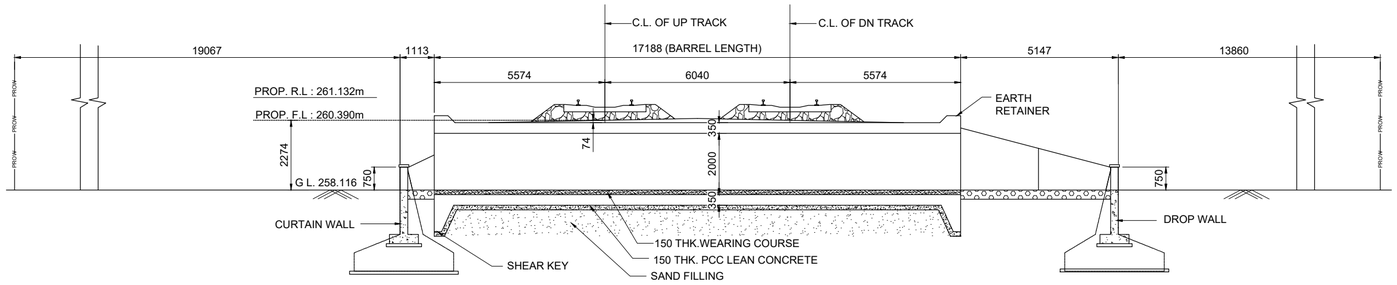
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 092 SPAN
2×5.5×5.650 RCC BOX AT CH: 38456.750

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01092_A1

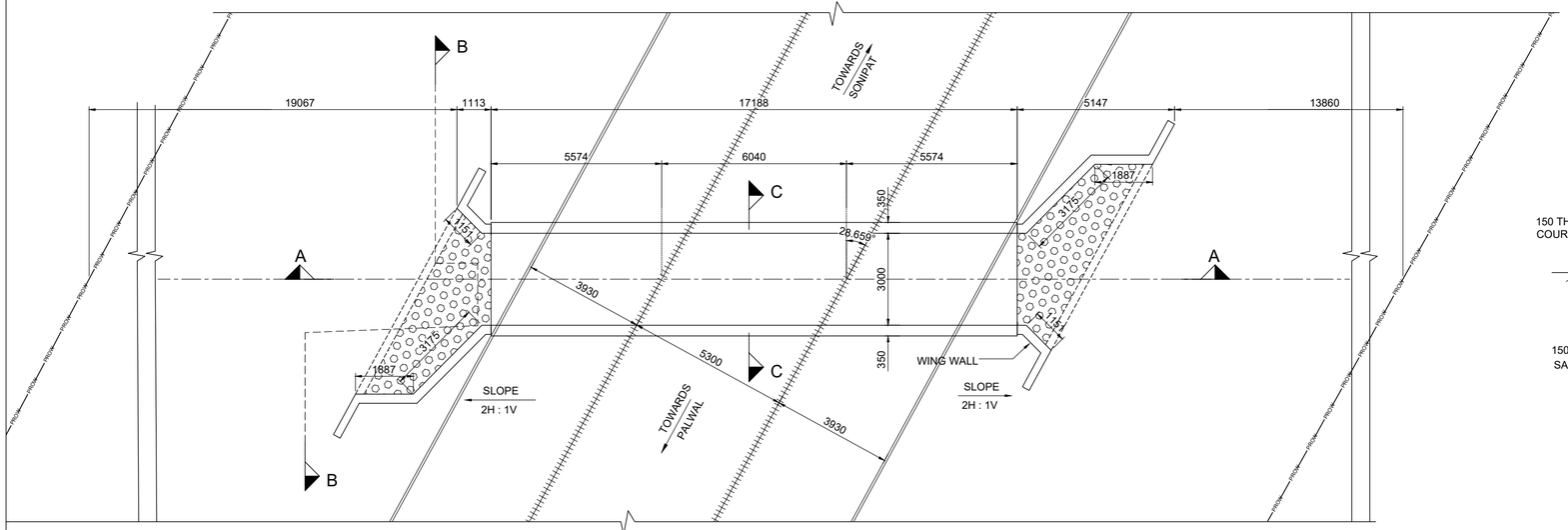
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



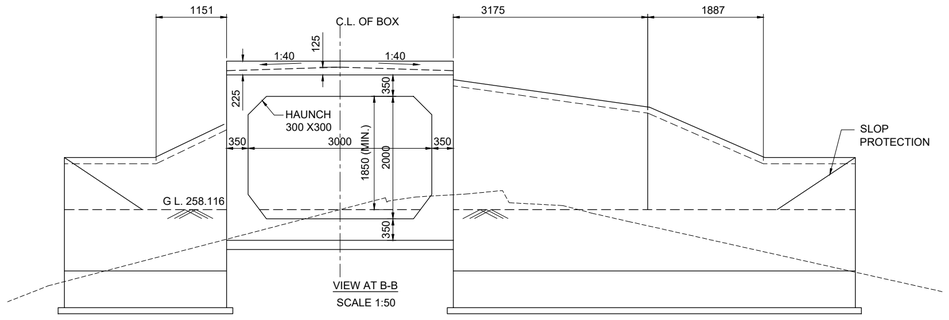
SECTIONAL ELEVATION AT A-A

SCALE 1:100



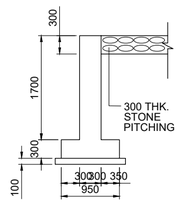
PLAN AT TOP

SCALE 1:100



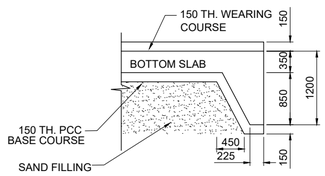
VIEW AT B-B

SCALE 1:50



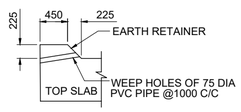
DROP / CURTAIN WALL DETAILS

SCALE 1:50



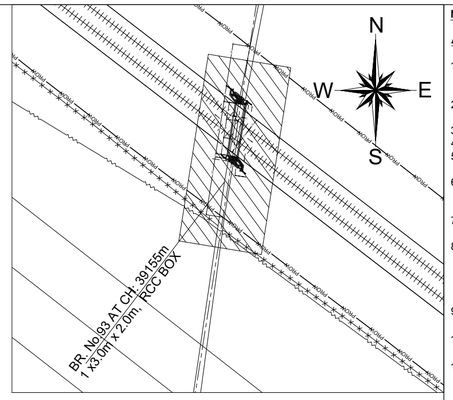
SHEAR KEY

SCALE 1:50



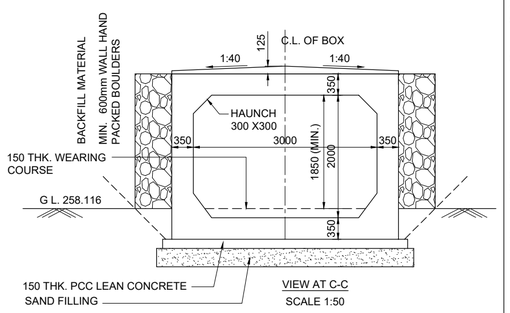
EARTH RETAINER

SCALE 1:50



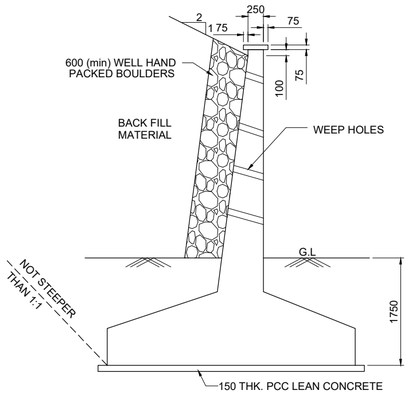
KEY PLAN

(NOT TO SCALE)



VIEW AT C-C

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS.
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

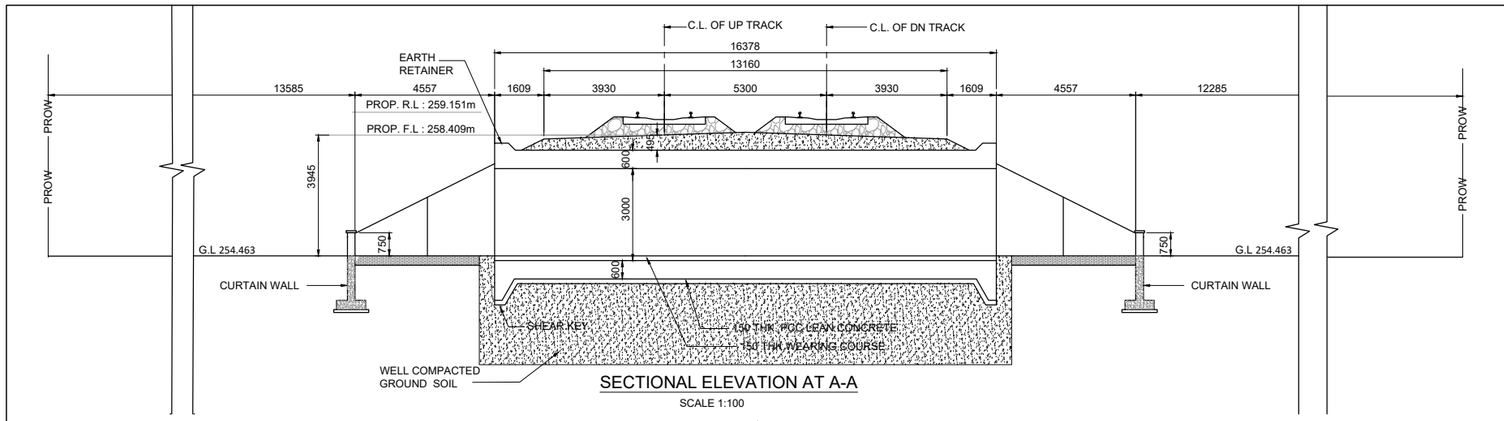
SMEC Powered with Specialised Knowledge

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO. 093 SPAN 1×3.0×2.0 RCC BOX AT CH: 39155

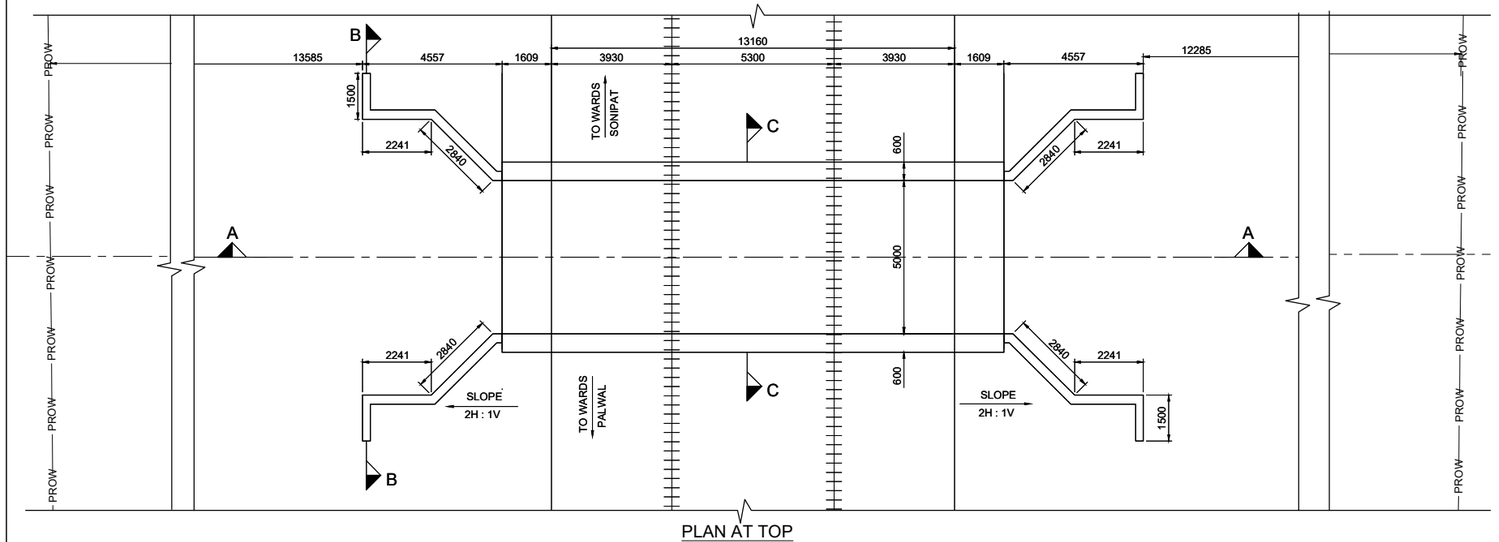
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01093_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



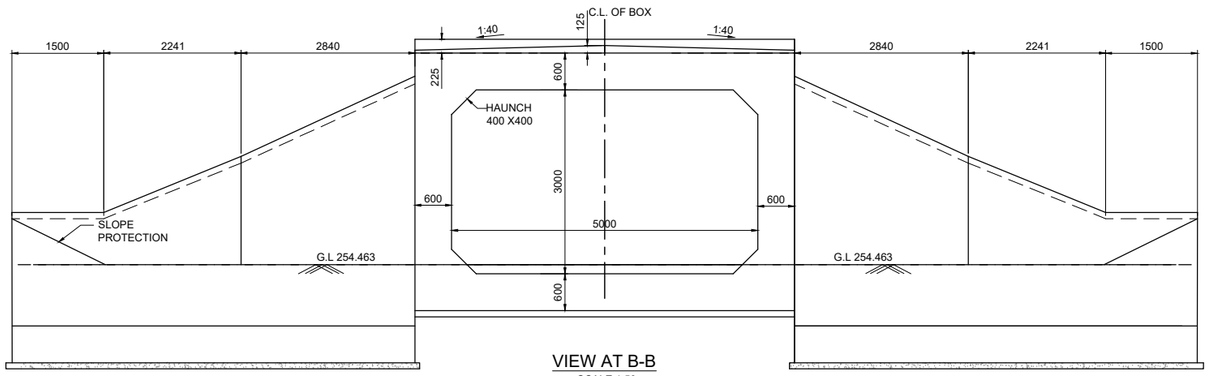
SECTIONAL ELEVATION AT A-A

SCALE 1:100



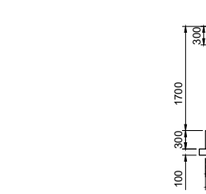
PLAN AT TOP

SCALE 1:100



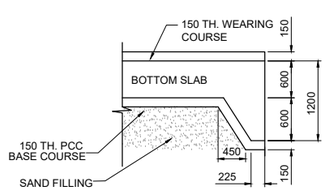
VIEW AT B-B

SCALE 1:50



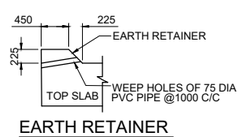
DROP / CURTAIN WALL DETAILS

SCALE 1:50



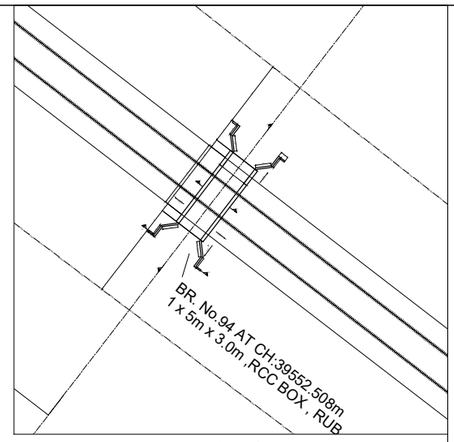
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

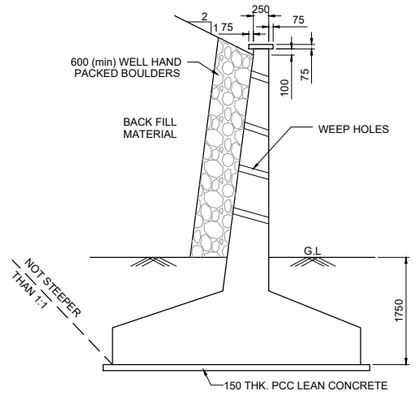


KEY PLAN

(NOT TO SCALE)

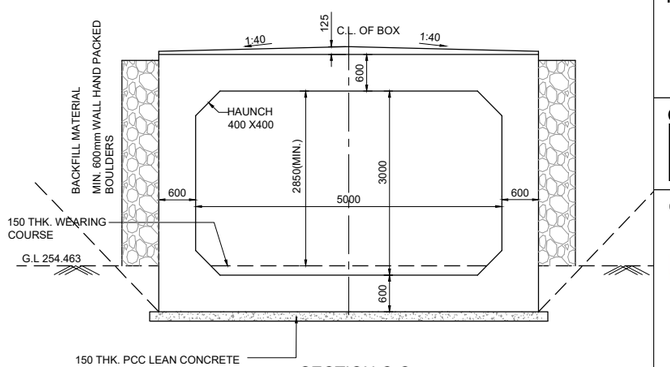
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SECTION C-C

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
18. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
19. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR ROAD UNDER BRIDGE NO. 094 SPAN 1.0X5.0X3.0 RCC BOX AT CH: 39552.508

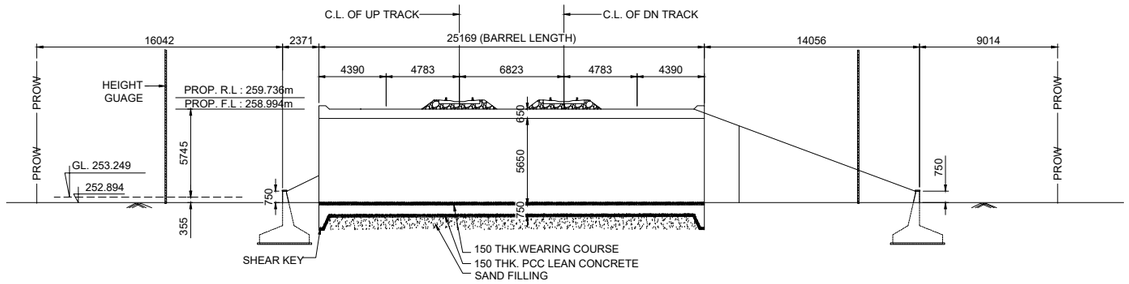
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01094_A1

SHEET NO. 1 OF 1

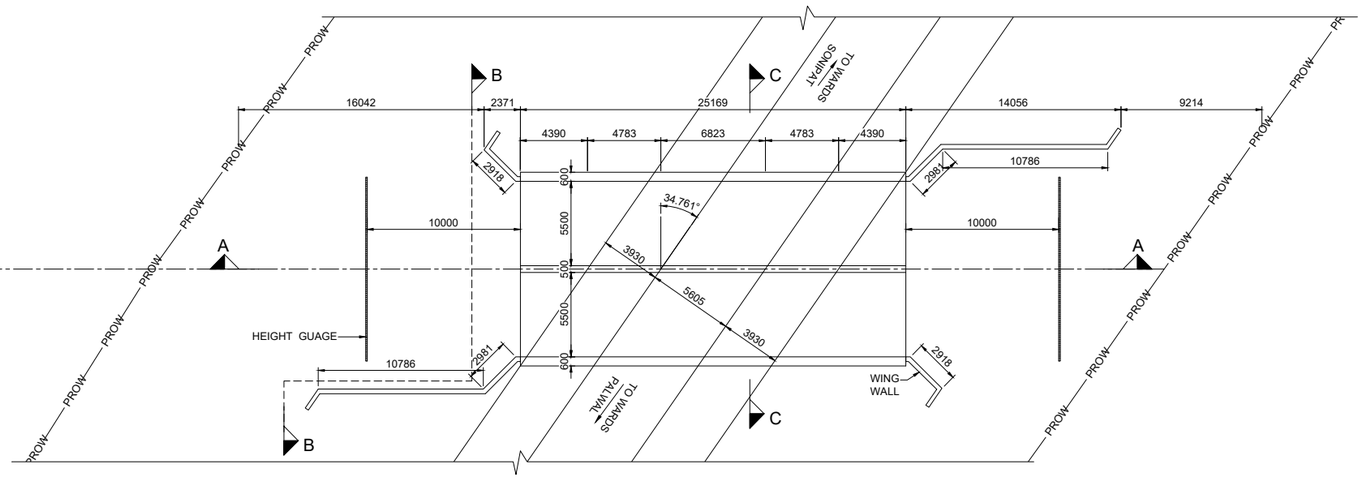
SCALE : AS SHOWN

ISSUE DATE 11-11-2022

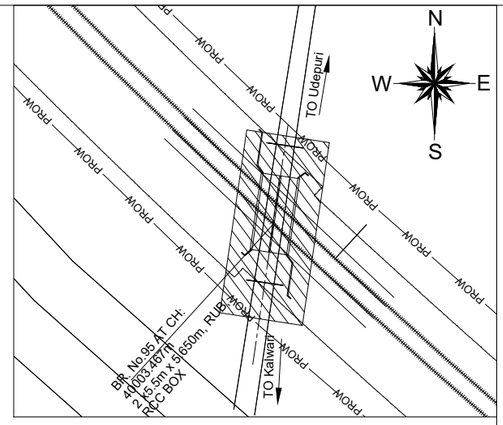
REVISED DATE 16-12-2022



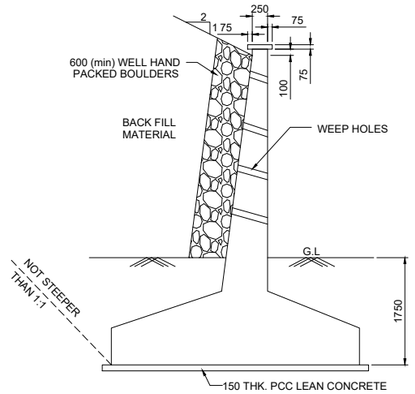
SECTIONAL ELEVATION AT A-A
SCALE 1:200



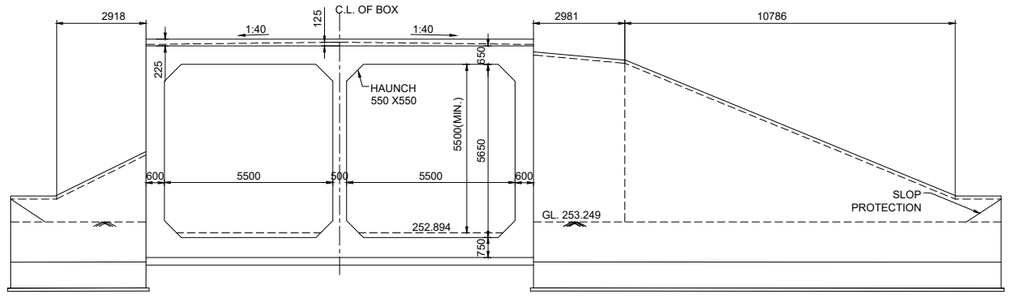
PLAN AT TOP
SCALE 1:200



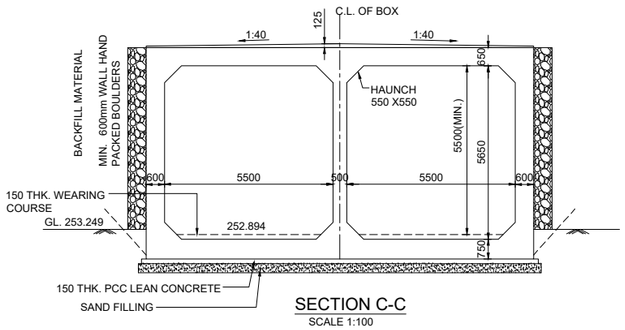
KEY PLAN
(NOT TO SCALE)



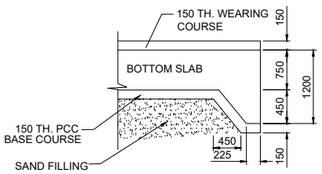
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



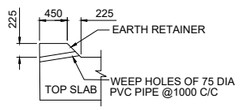
SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
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IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY THE HEIGHT OF

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

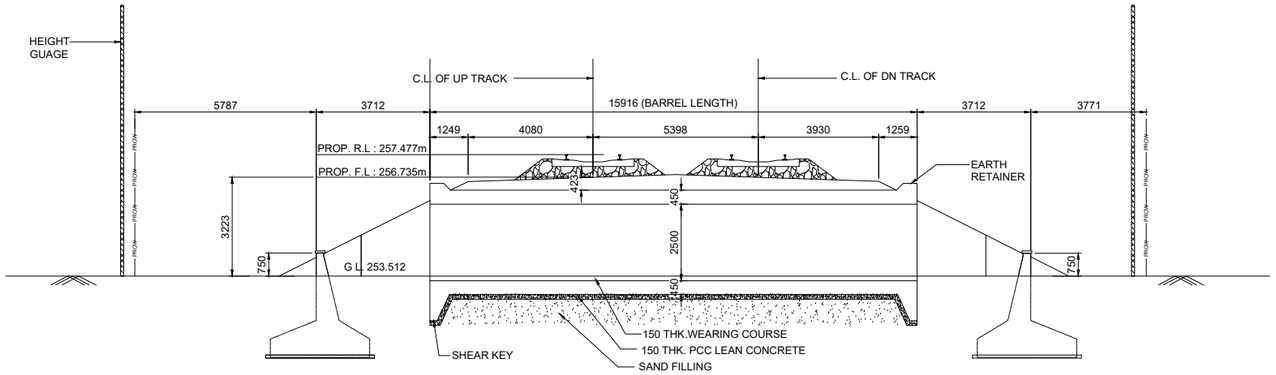
CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

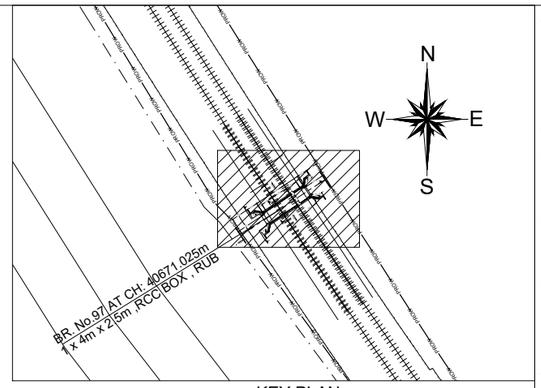
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 095 SPAN
2×5.5×5.650 RCC BOX AT CH: 40003.467

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01095_A1	1 OF 1

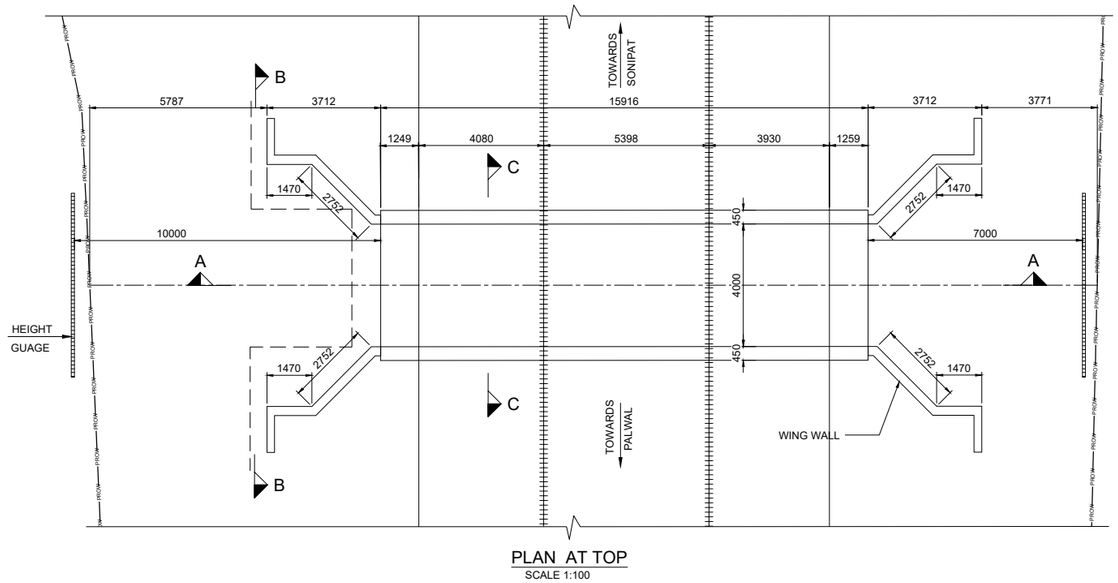
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



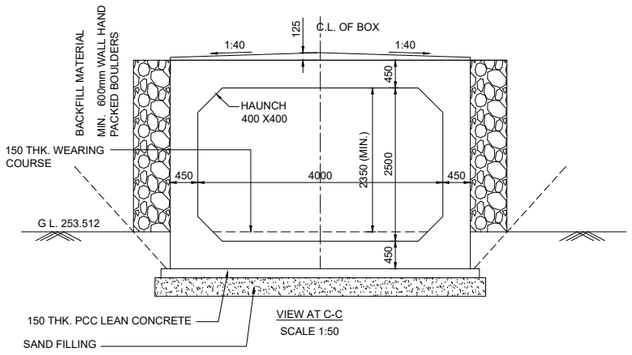
SECTIONAL ELEVATION AT A-A
SCALE 1:100



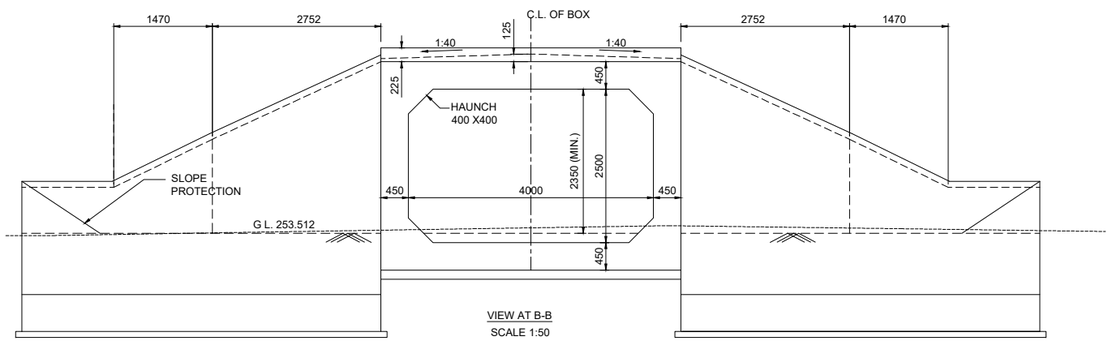
KEY PLAN
(NOT TO SCALE)



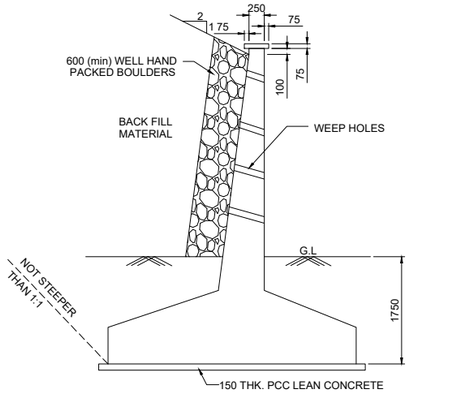
PLAN AT TOP
SCALE 1:100



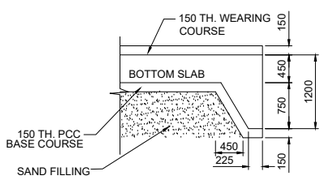
VIEW AT C-C
SCALE 1:50



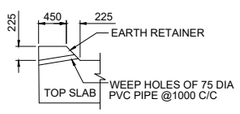
VIEW AT B-B
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
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5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
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IMPORTANT NOTE:
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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

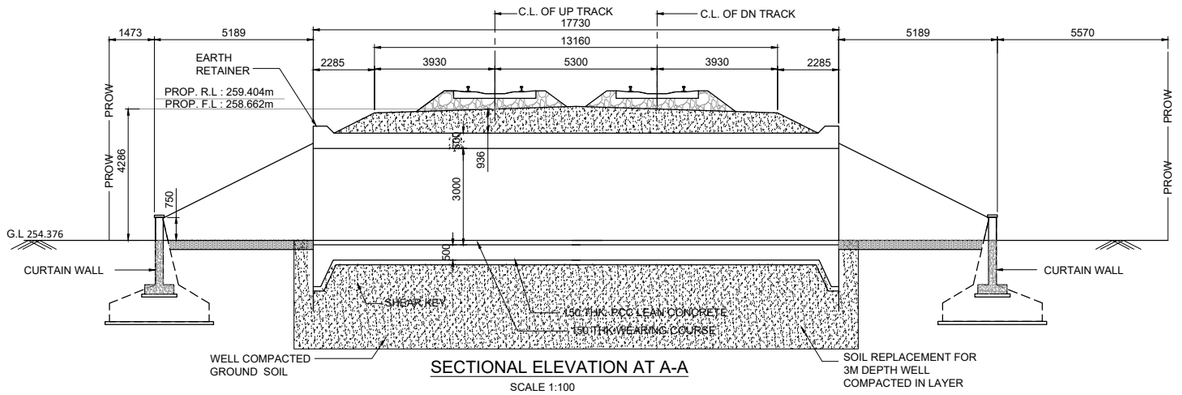
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 097 SPAN
1×4.0×2.5 RCC BOX AT CH: 40671.025

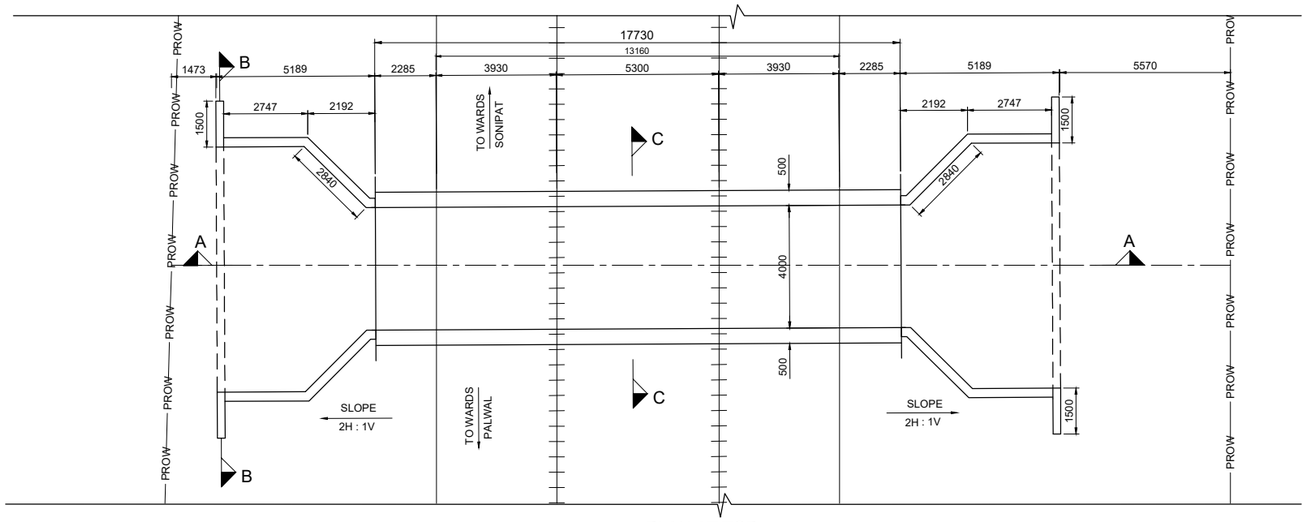
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01097_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



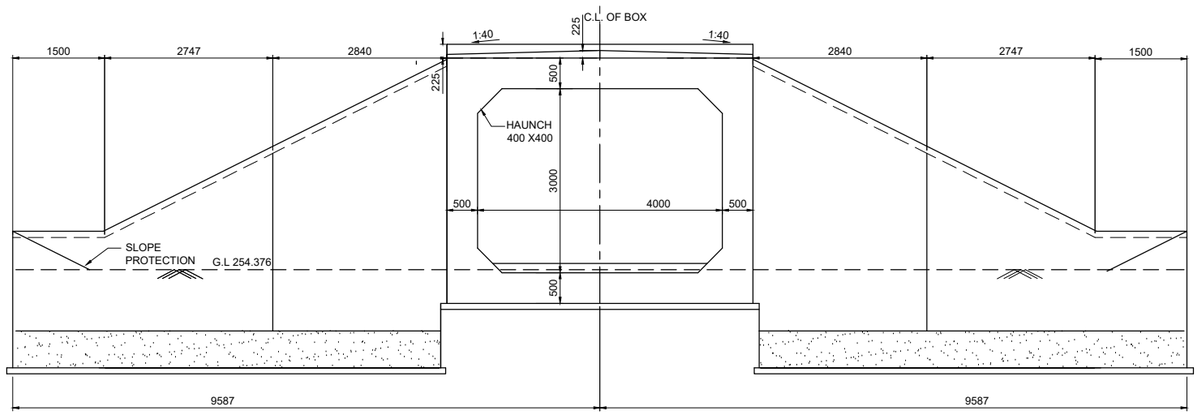
SECTIONAL ELEVATION AT A-A

SCALE 1:100



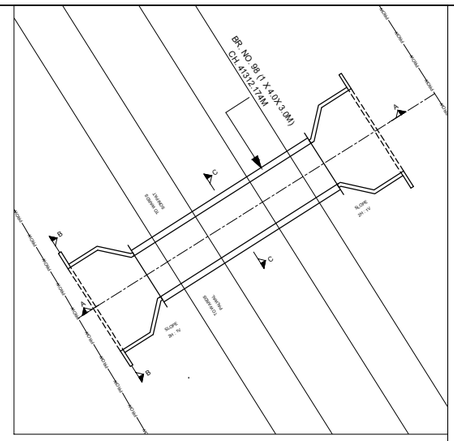
PLAN AT TOP

SCALE 1:100



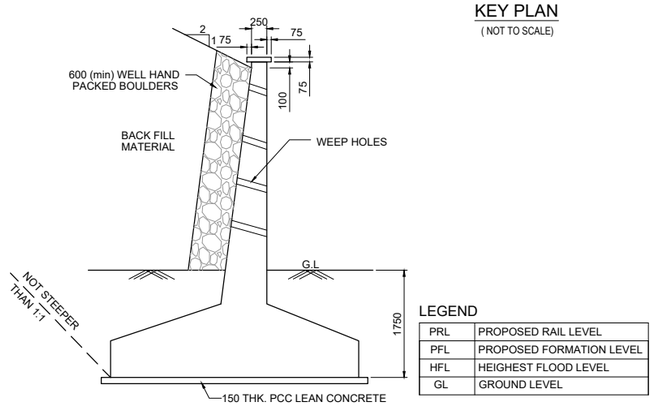
VIEW AT B-B

SCALE 1:50



KEY PLAN

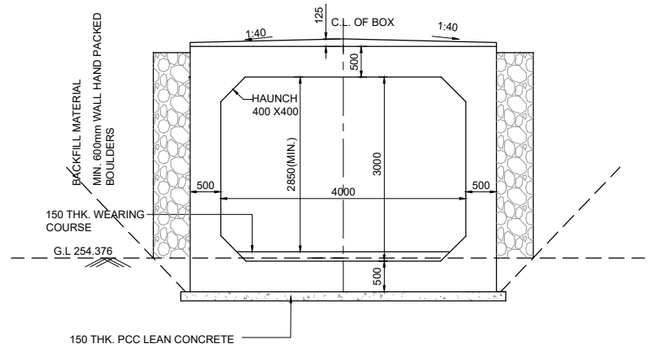
(NOT TO SCALE)



TYPICAL DETAIL OF RETURN WALL / WING WALL

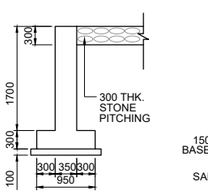
SCALE 1:50

LEGEND	
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



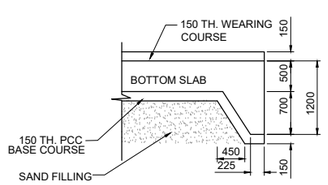
SECTION C-C

SCALE 1:50



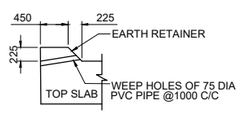
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. GROUND IMPROVEMENT SHALL BE CARRIED OUT AS PER GT REPORT AND CONFIRMED THROUGH FIELD TESTING.
16. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
17. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.
18. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
19. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

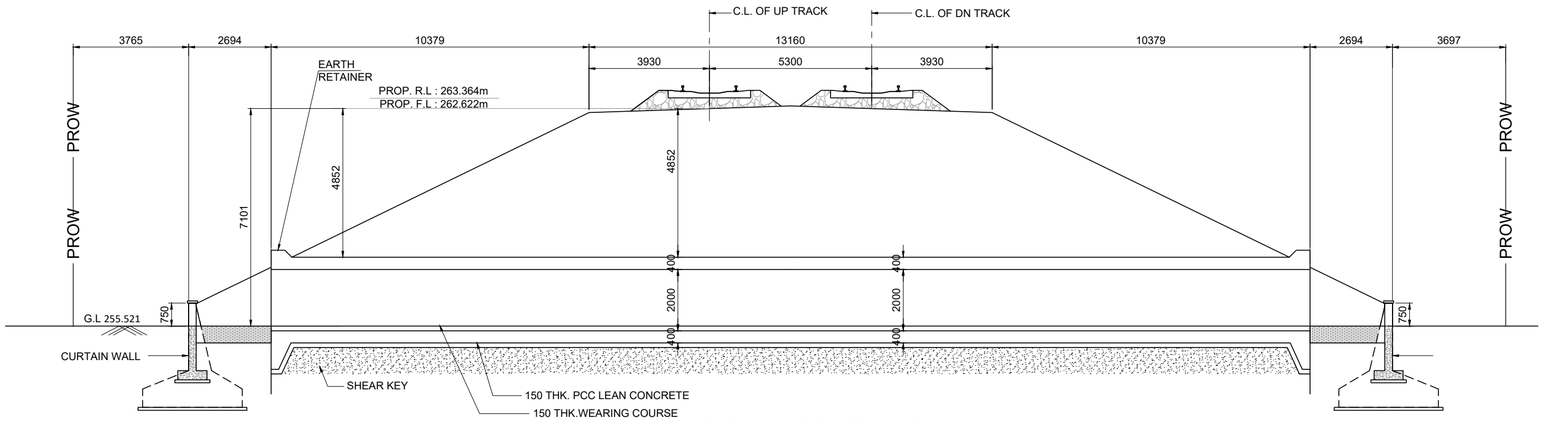
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR ROAD UNDER BRIDGE NO. 098 SPAN 1.0X4.0X3.0 RCC BOX AT CH: 41312.174

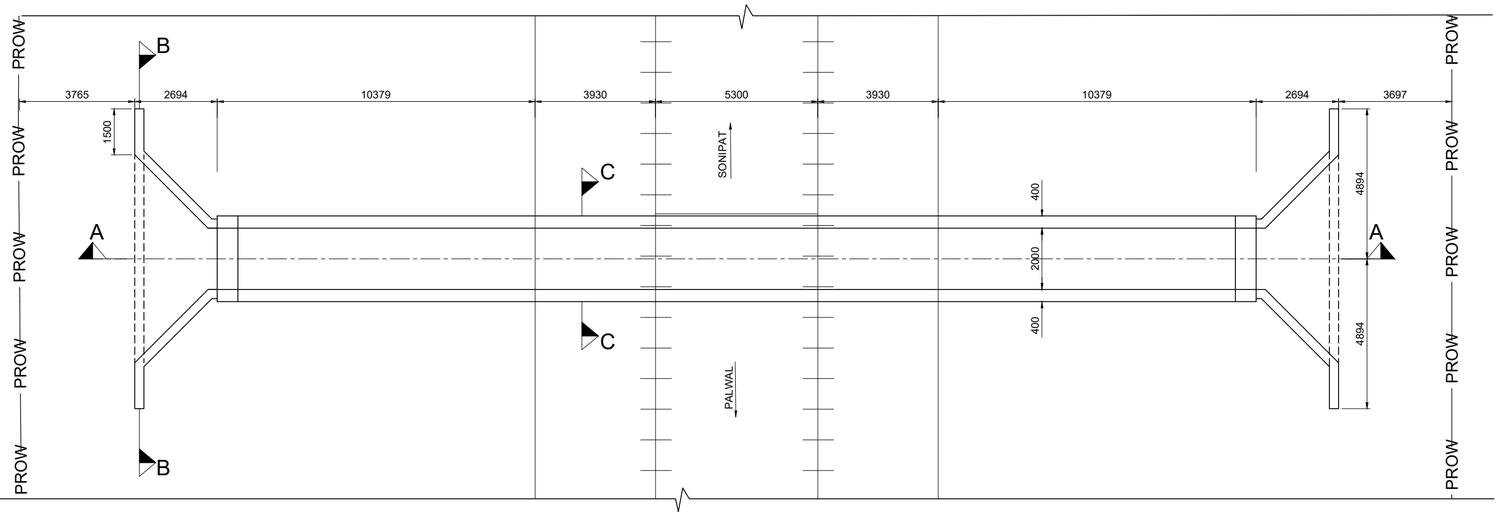
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01098_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



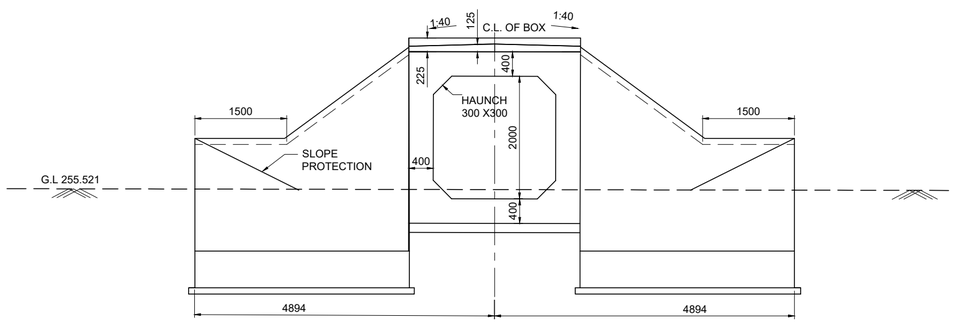
SECTIONAL ELEVATION AT A-A

SCALE 1:100



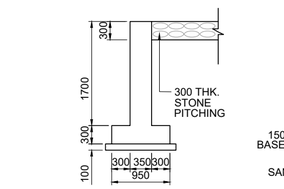
PLAN AT TOP

SCALE 1:100



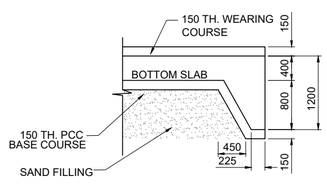
VIEW AT B-B

SCALE 1:50



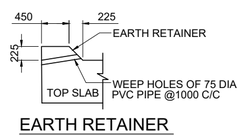
DROP / CURTAIN WALL DETAILS

SCALE 1:50



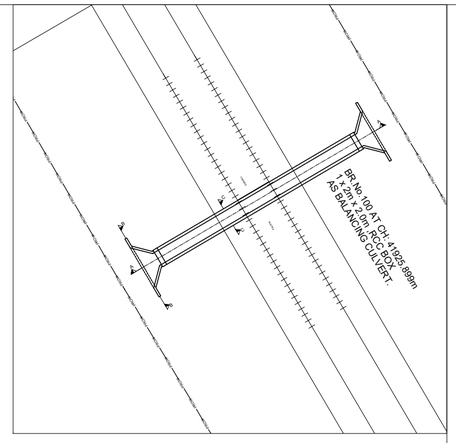
SHEAR KEY

SCALE 1:50



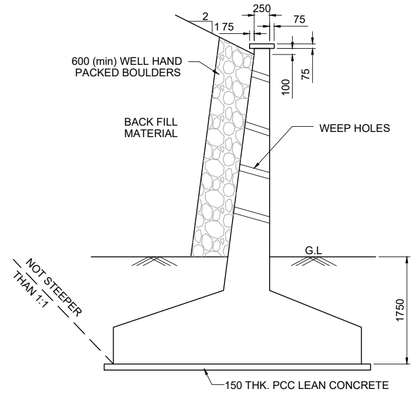
EARTH RETAINER

SCALE 1:50



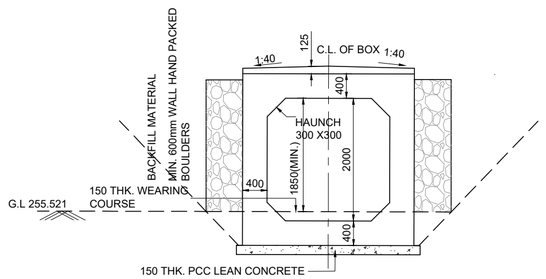
KEY PLAN

(NOT TO SCALE)



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SECTION C-C

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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B) TECHNICAL NOTES :

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2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

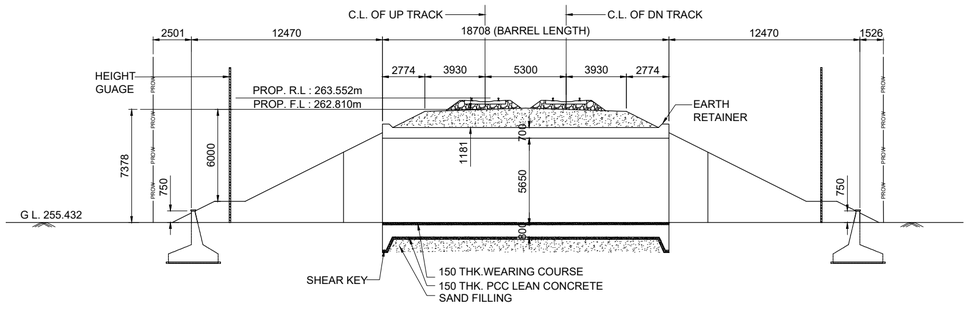
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO. 100
SPAN 1.0X2.0X2.0 RCC BOX AT CH: 41925.899

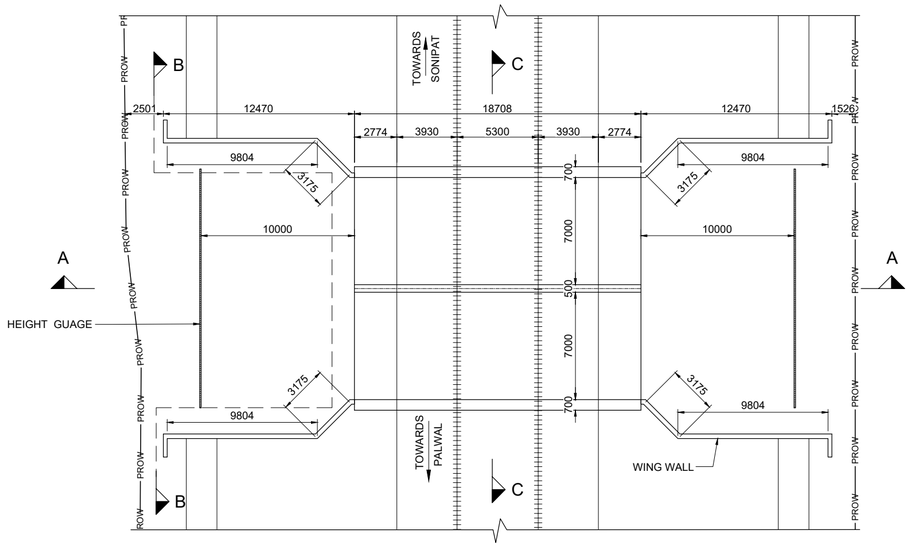
DRG. NO. GC-HRIDC-C2-3-DRW-BRD-GAD-01100_A1

SHEET NO.

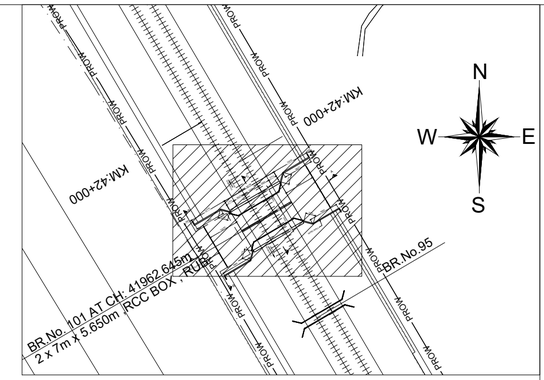
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



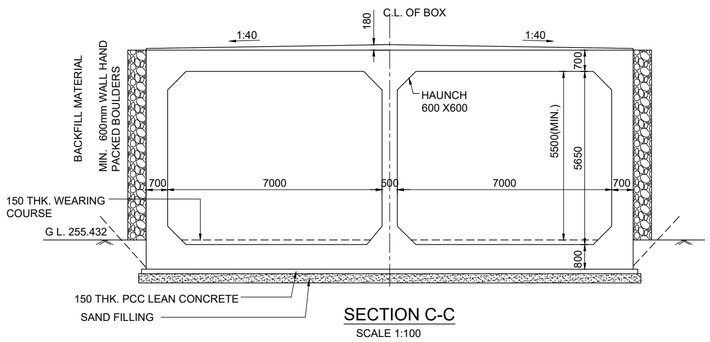
SECTIONAL ELEVATION AT A-A
SCALE 1:200



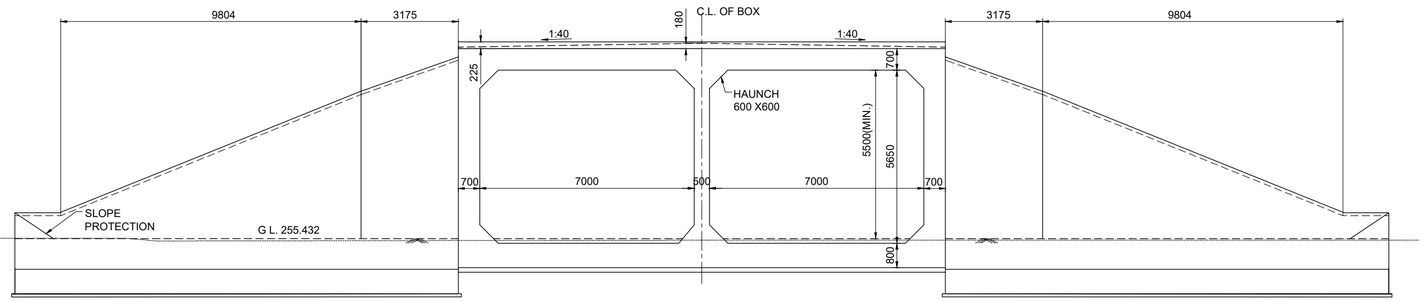
PLAN AT TOP
SCALE 1:200



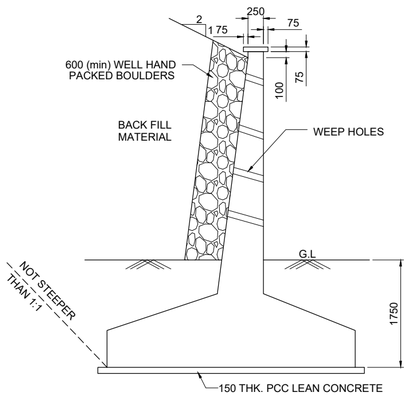
KEY PLAN
(NOT TO SCALE)



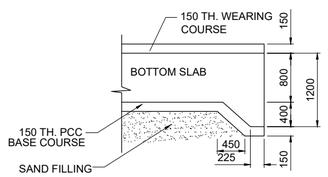
SECTION C-C
SCALE 1:100



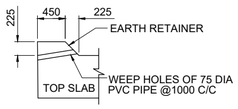
SECTION B-B
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

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11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

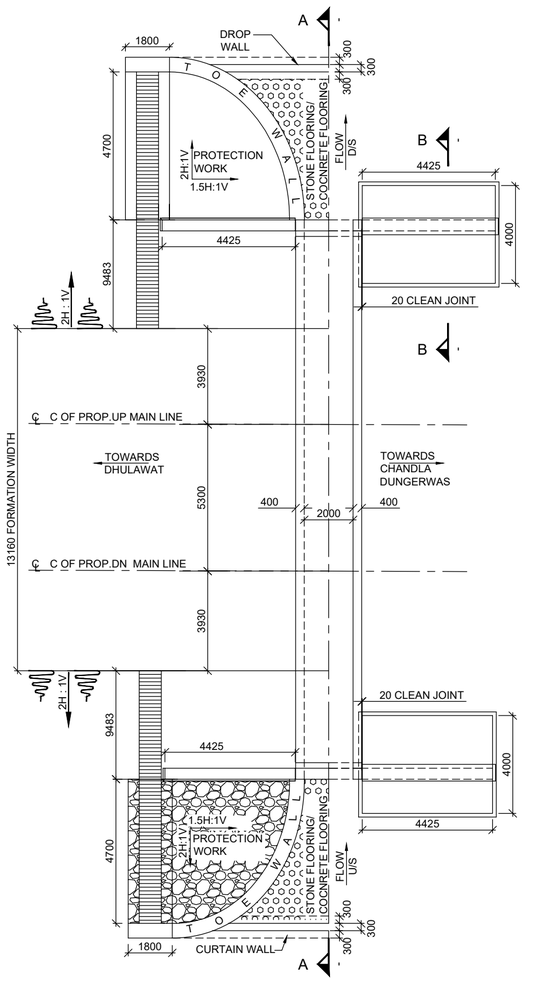
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 101 SPAN
2×7.0×5.650 RCC BOX AT CH: 41962.645

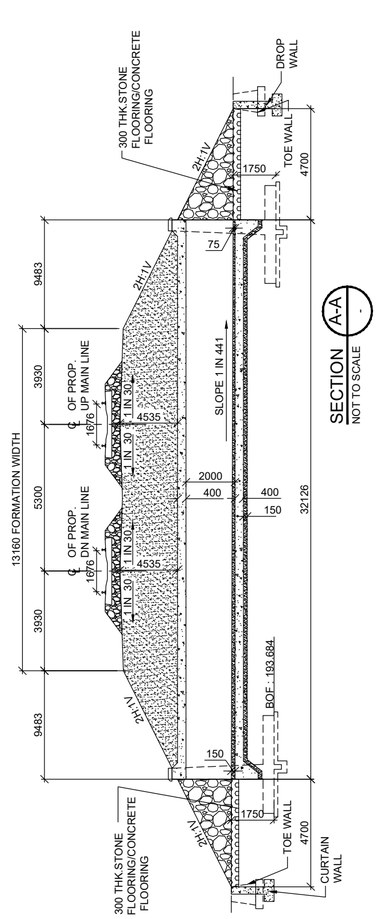
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01101_A1
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



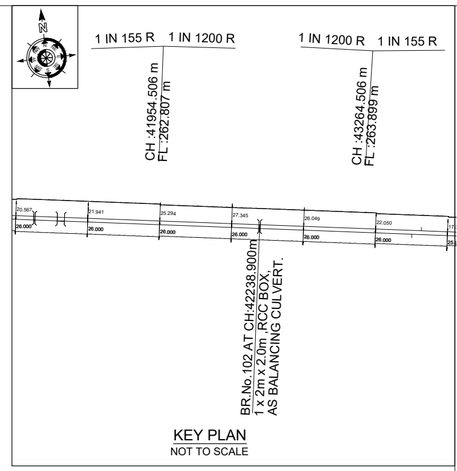
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



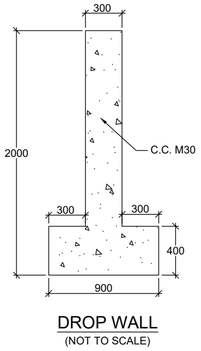
SECTION A-A

NOT TO SCALE



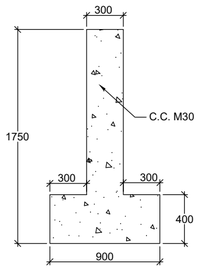
KEY PLAN

NOT TO SCALE



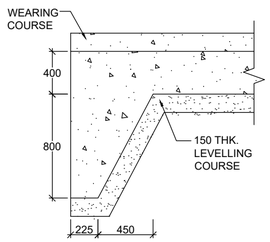
DROP WALL

(NOT TO SCALE)



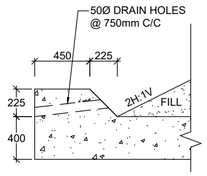
CURTAIN WALL

(NOT TO SCALE)



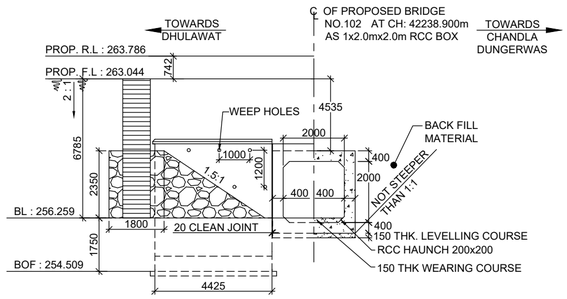
SHEAR KEY

(NOT TO SCALE)



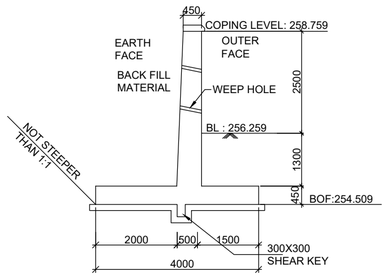
BALLAST RETAINER

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE



SECTION B-B

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER. UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

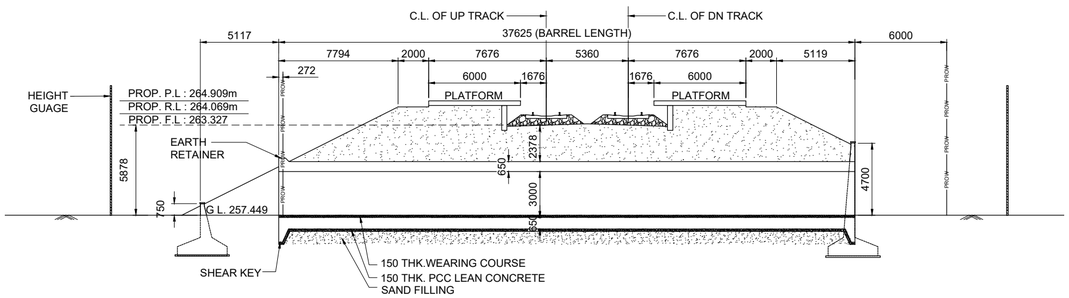
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 102 SPAN 1.0X2.0X2.0 RCC BOX AT CH: 42238.900m

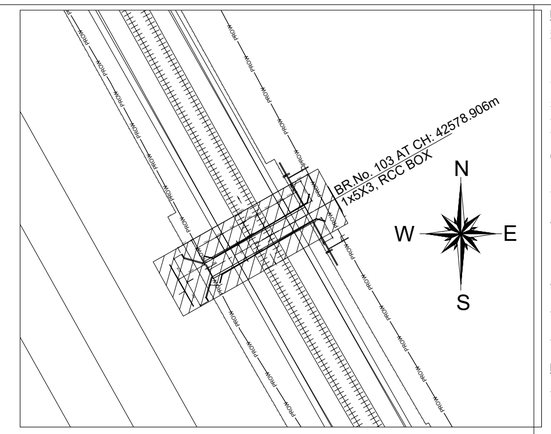
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01102_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



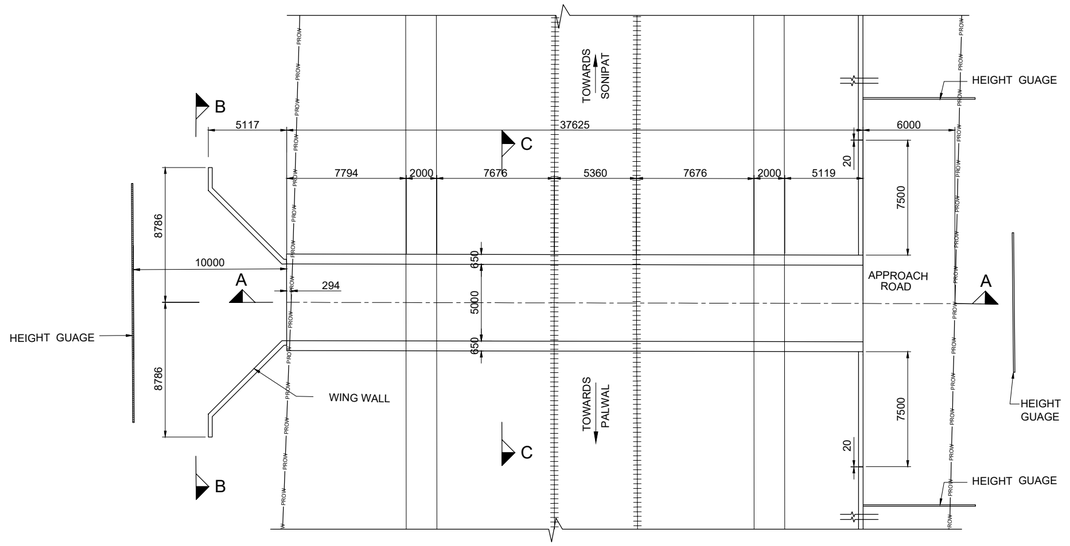
SECTIONAL ELEVATION AT A-A

SCALE 1:200



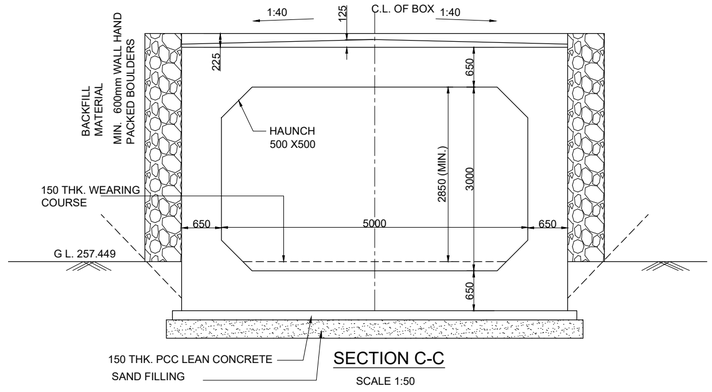
KEY PLAN

(NOT TO SCALE)



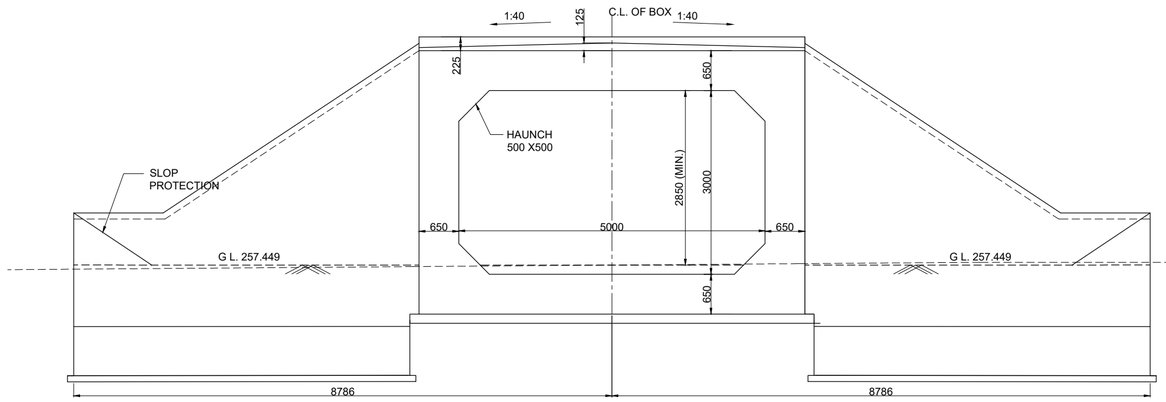
PLAN AT TOP

SCALE 1:200



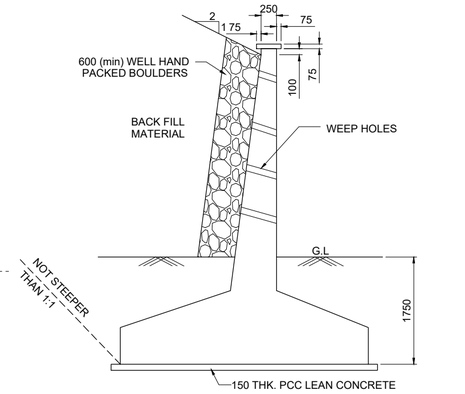
SECTION C-C

SCALE 1:50



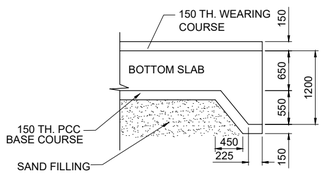
SECTION B-B

SCALE 1:50



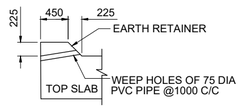
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

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2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
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    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
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IMPORTANT NOTE:

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LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

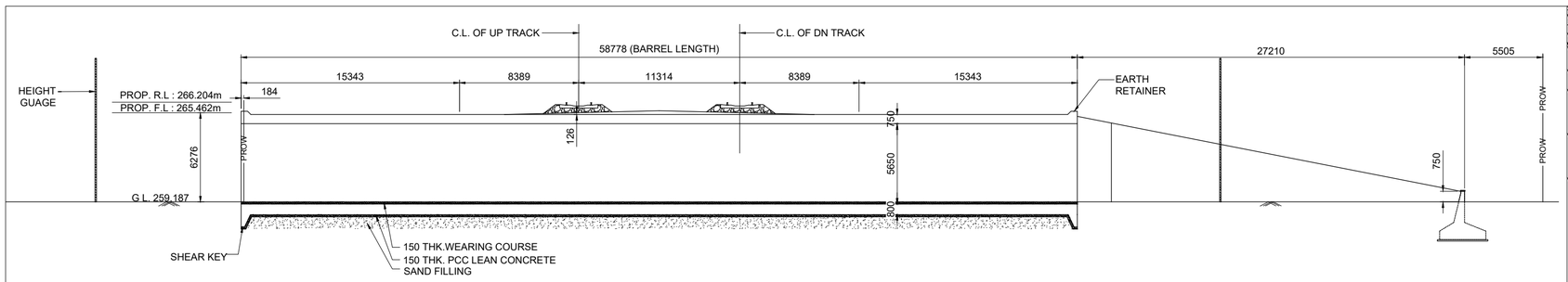
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

PROPOSED RUB NO. 103 SPAN

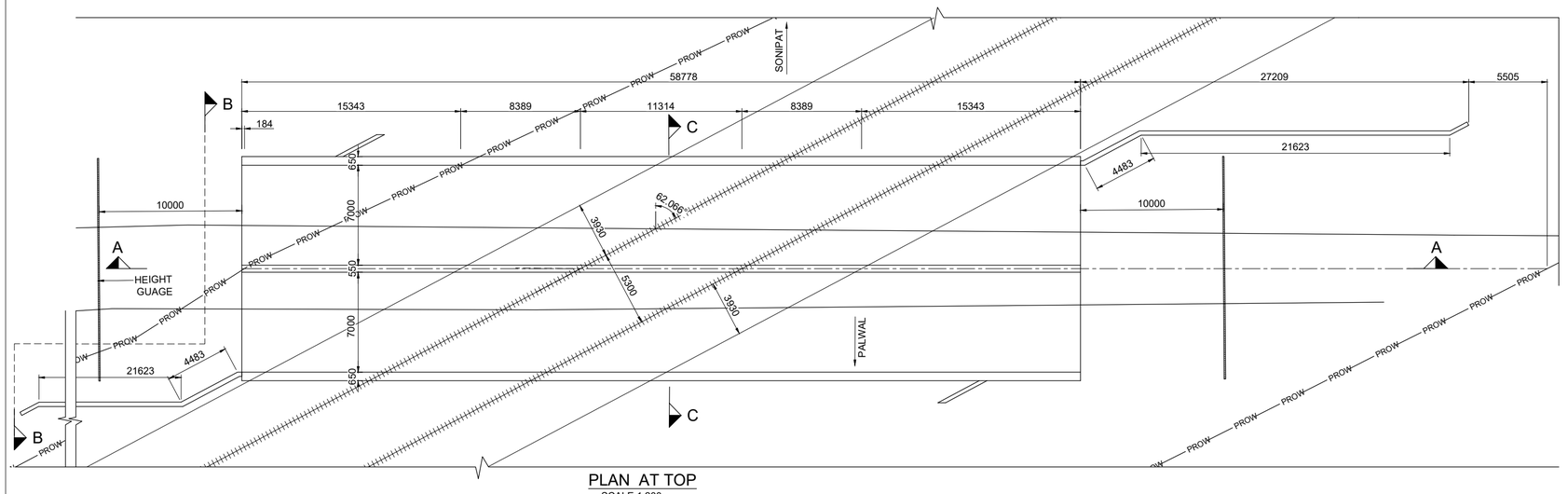
1×5.0×3.0 RCC BOX AT CH: 42578.906

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01103_A1	1 OF 1

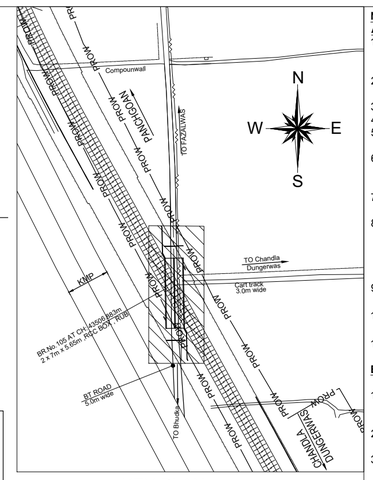
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTIONAL ELEVATION AT A-A
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
(NOT TO SCALE)

NOTES :

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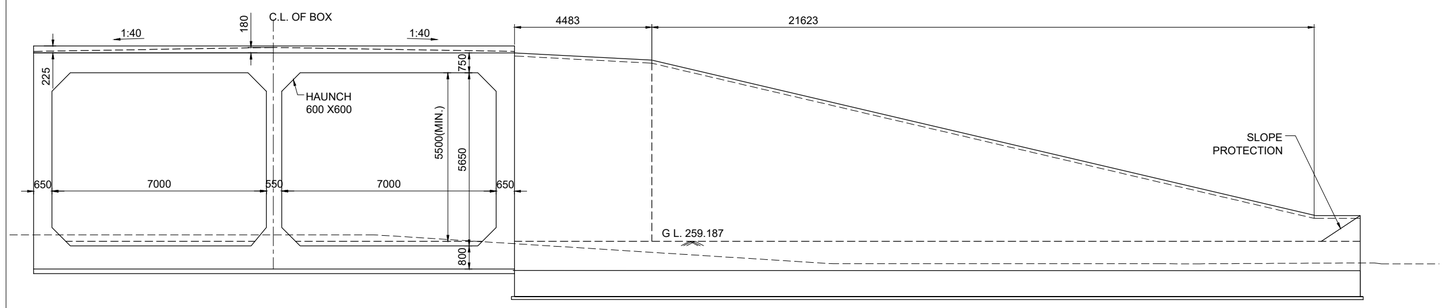
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

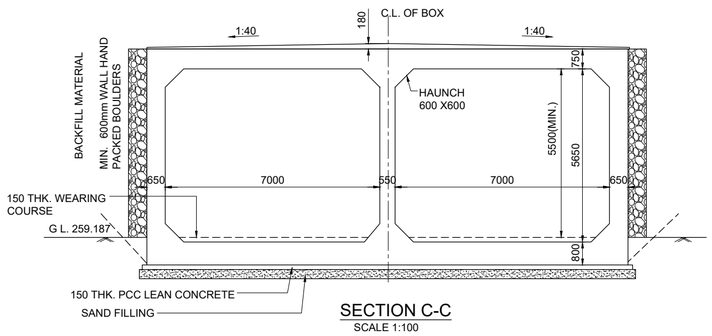
B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

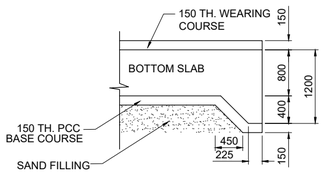
IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.



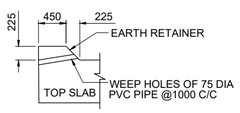
SECTION B-B
SCALE 1:100



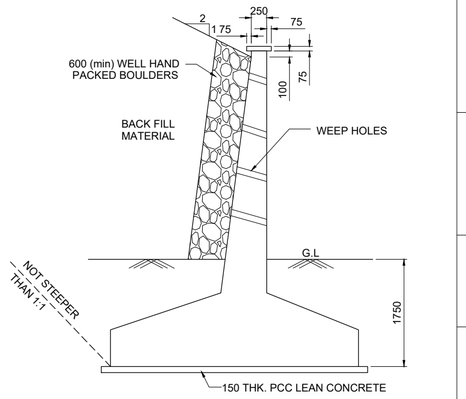
SECTION C-C
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

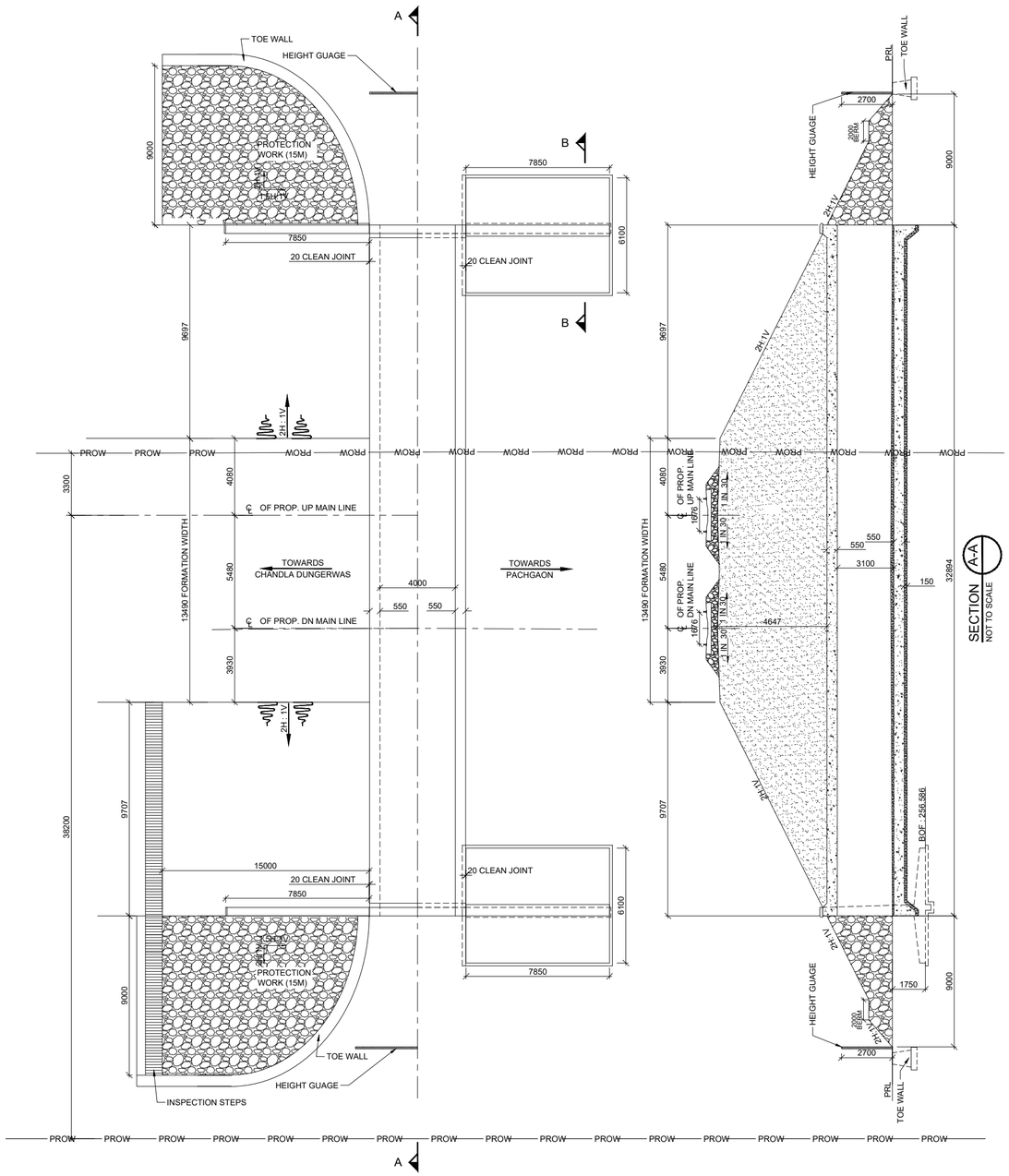
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Smarter Solutions for a Better World

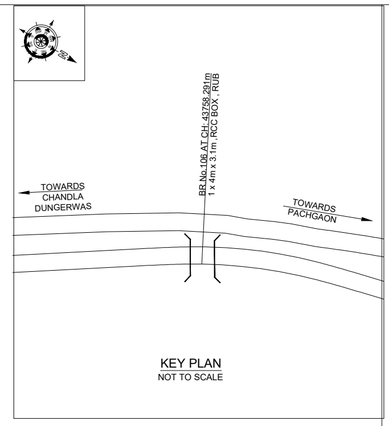
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 105 SPAN
2×7.0×5.650 RCC BOX AT CH: 43506.883

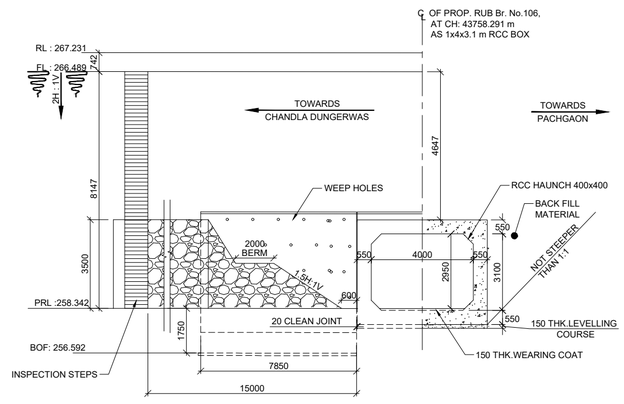
DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01105_A1
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

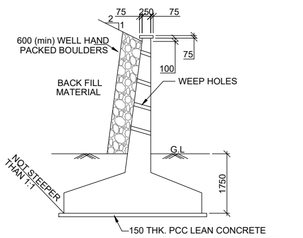




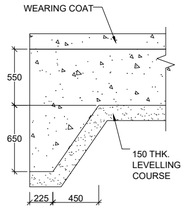
KEY PLAN
NOT TO SCALE



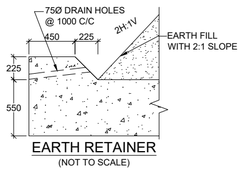
HALF ELEVATION HALF SECTION
NOT TO SCALE



SECTION B-B
(NOT TO SCALE)



SHEAR KEY
(NOT TO SCALE)



EARTH RETAINER
(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
   (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
   (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

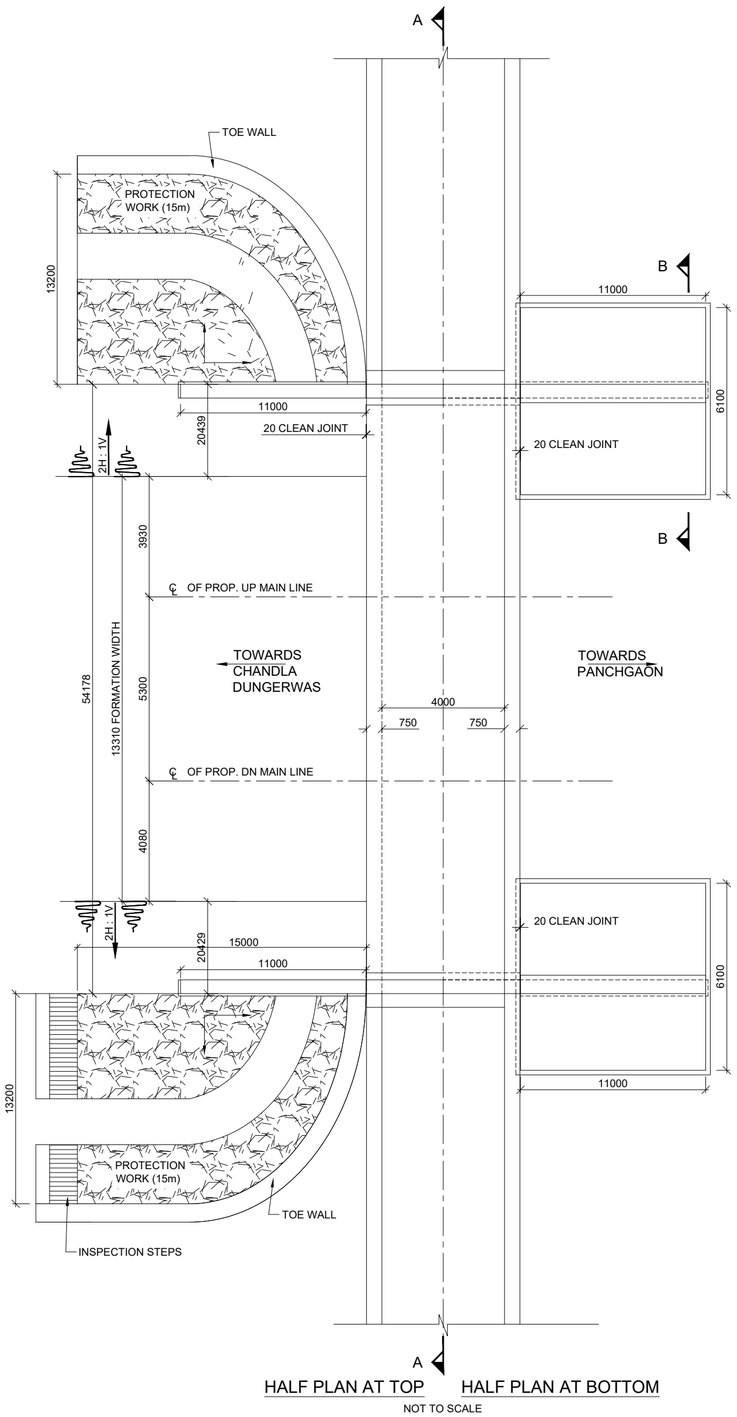
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 106 SPAN 1.0X4.0X3.1 RCC BOX AT CH: 43758.291m

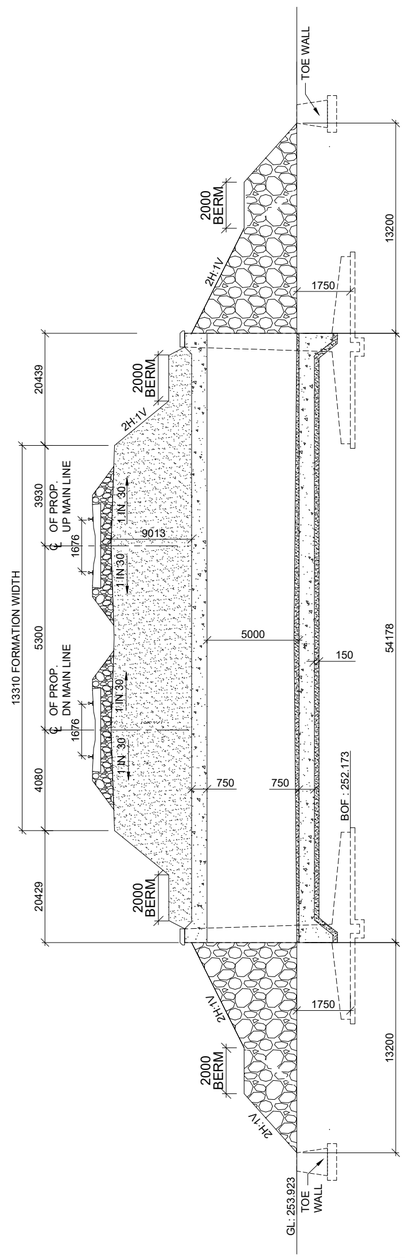
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01106_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



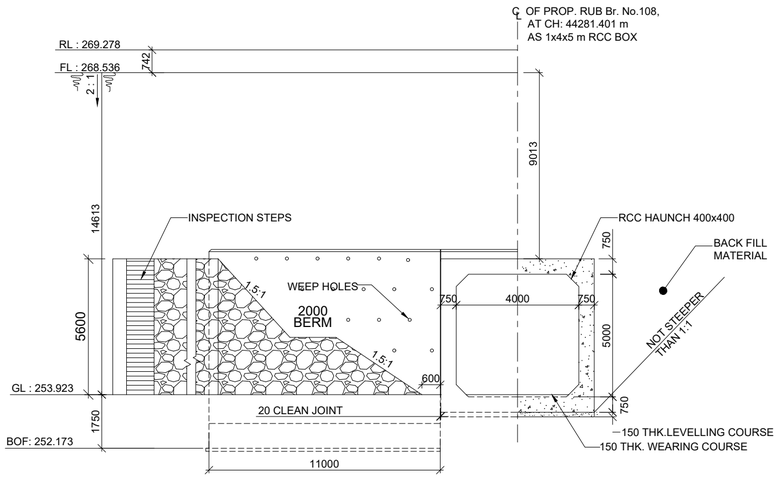
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



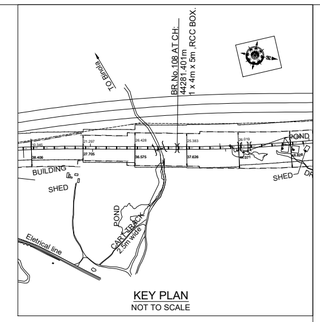
SECTION A-A

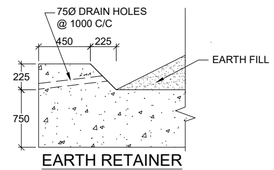
NOT TO SCALE



HALF ELEVATION HALF SECTION

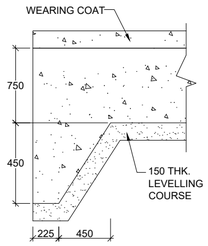
NOT TO SCALE





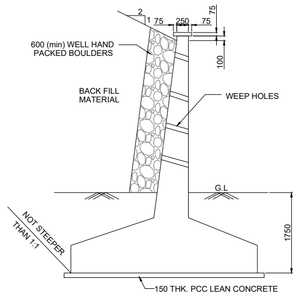
EARTH RETAINER

(NOT TO SCALE)



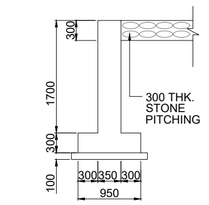
SHEAR KEY

(NOT TO SCALE)



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



DROP / CURTAIN WALL DETAILS

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M. WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

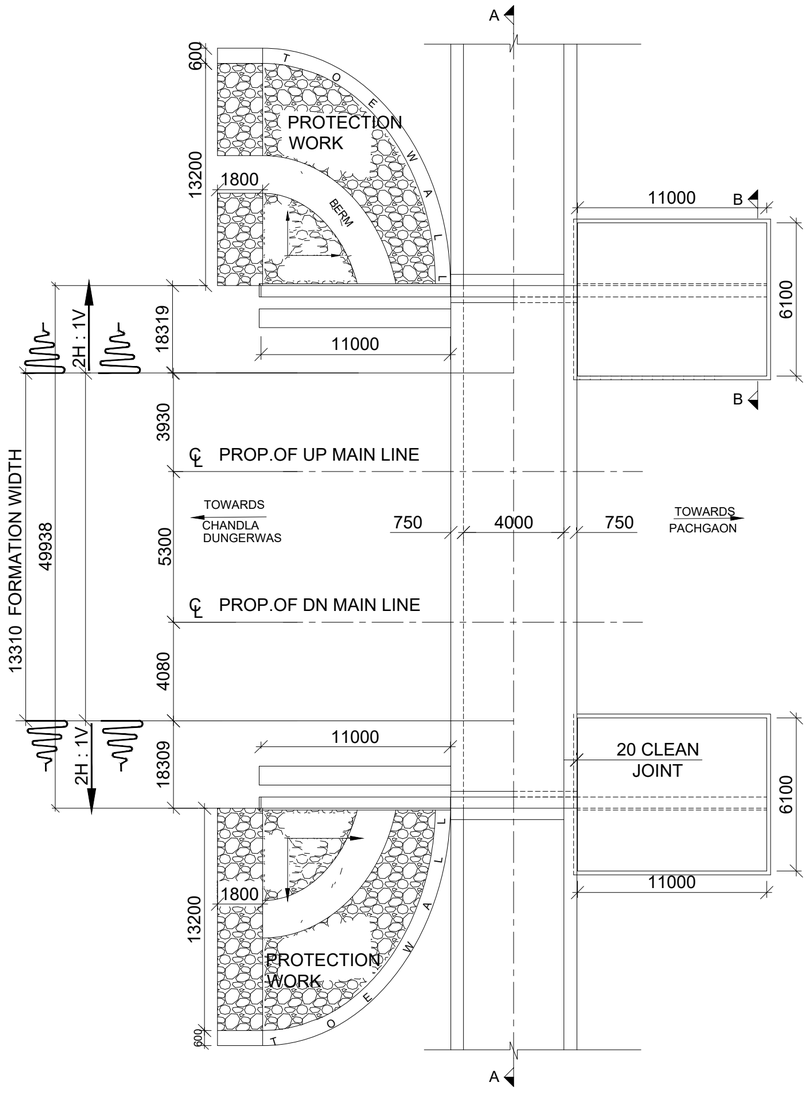
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 108 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44281.401m

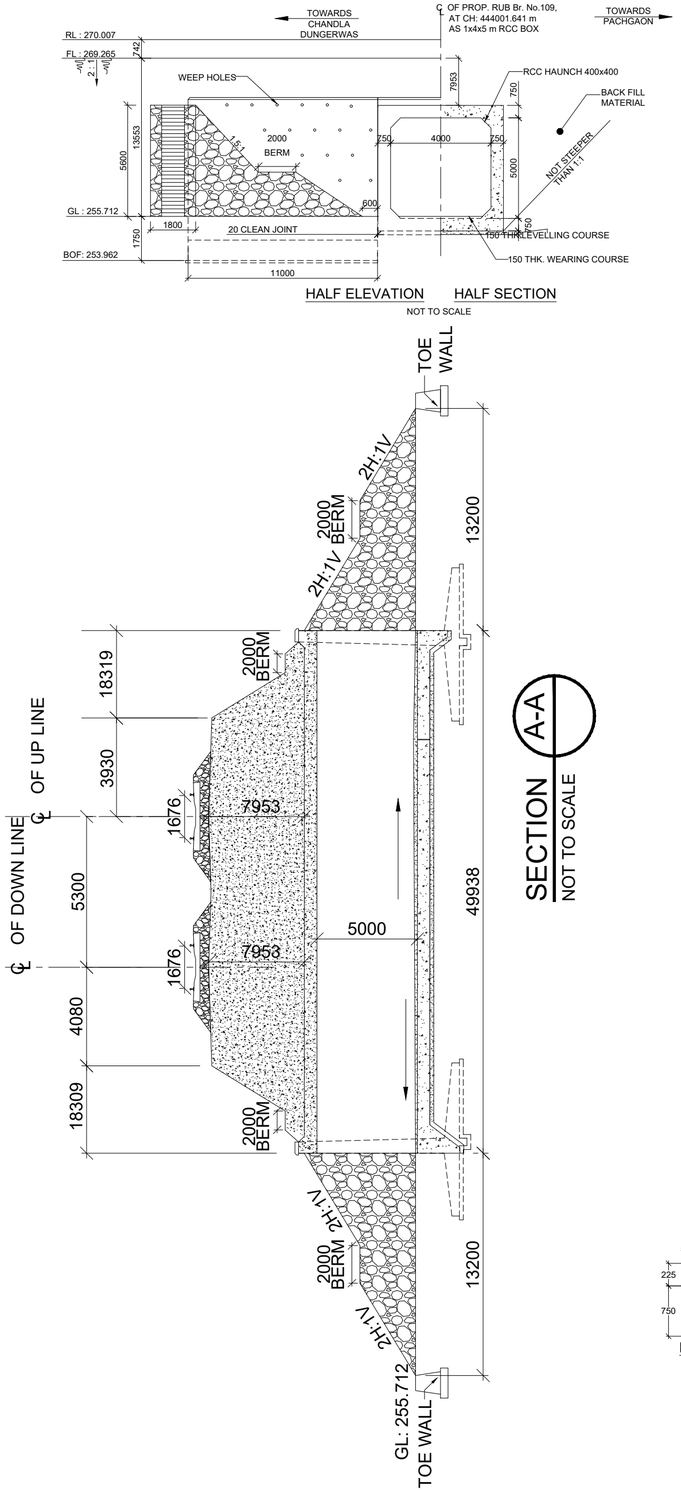
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01108_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE

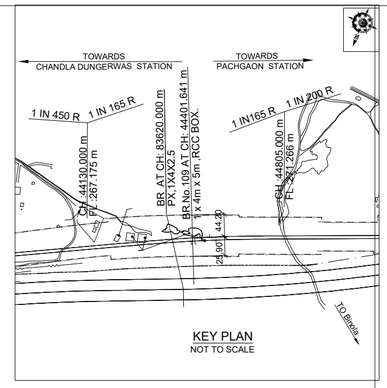


SECTION A-A

NOT TO SCALE

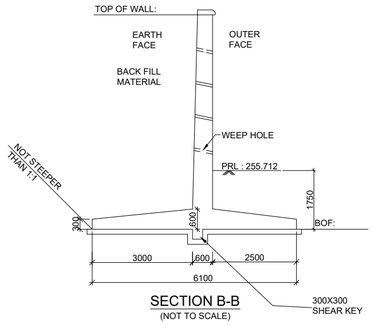
HALF ELEVATION HALF SECTION

NOT TO SCALE



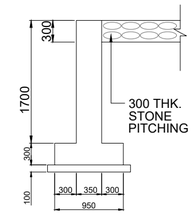
KEY PLAN

NOT TO SCALE



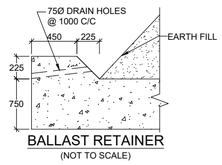
SECTION B-B

(NOT TO SCALE)



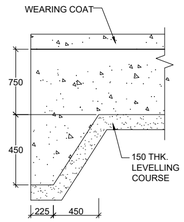
DROP / CURTAIN WALL DETAILS

SCALE 1:50



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

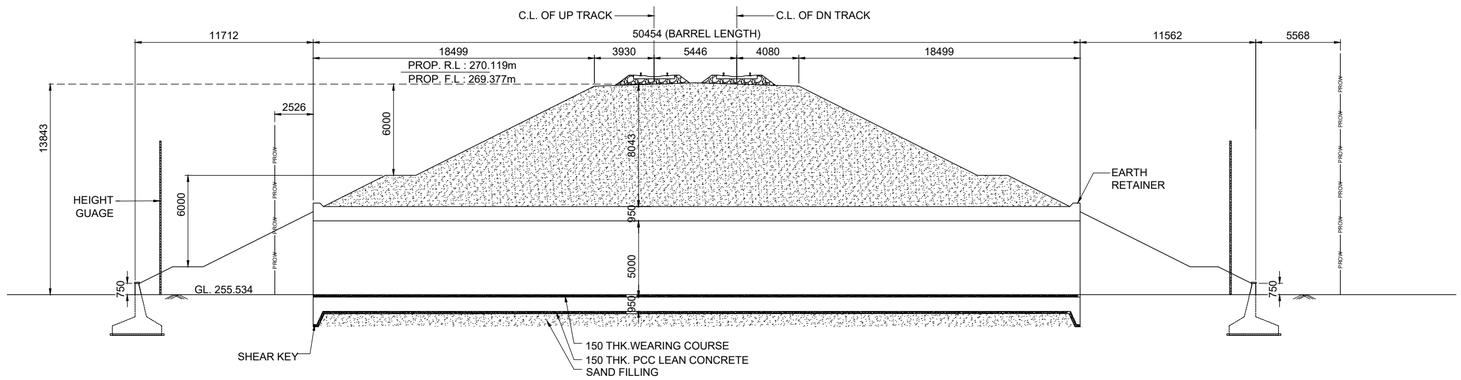
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

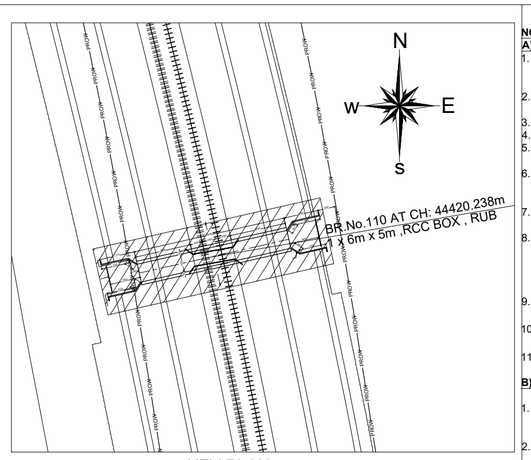
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 109 SPAN 1.0X4.0X5.0 RCC BOX AT CH: 44401.641m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01109_A1	1 OF 1

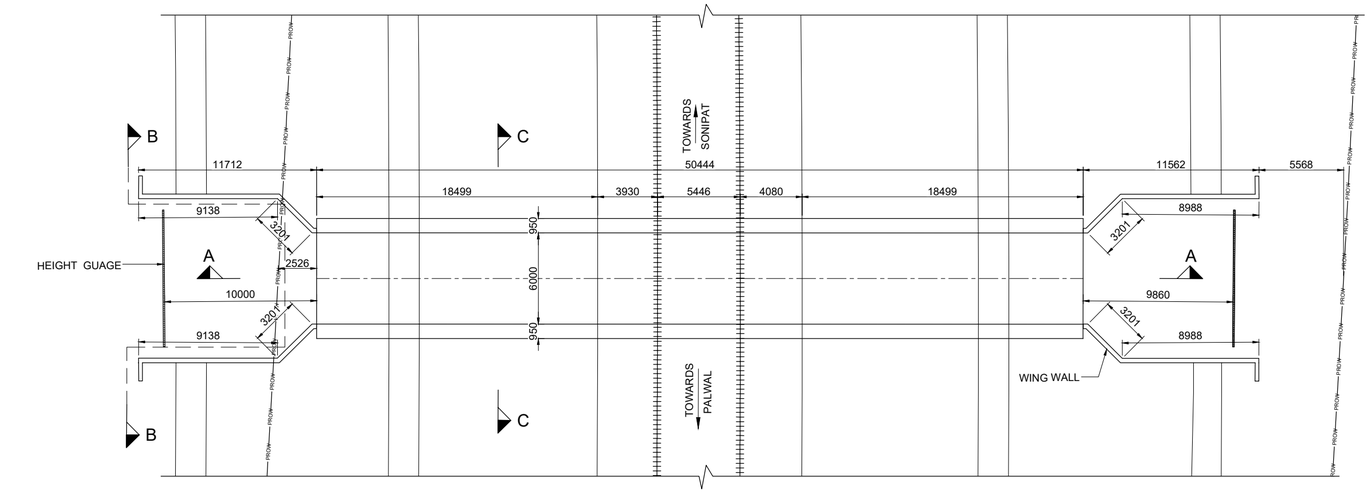
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



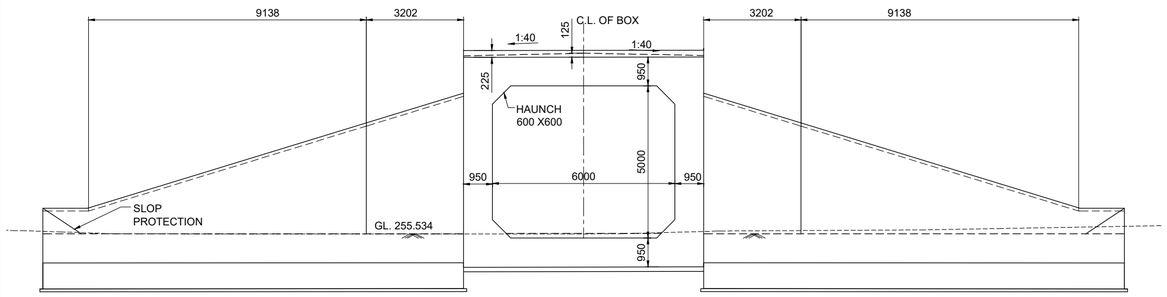
SECTIONAL ELEVATION AT A-A
SCALE 1:200



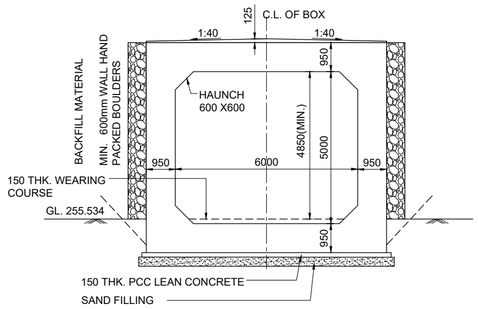
KEY PLAN
(NOT TO SCALE)



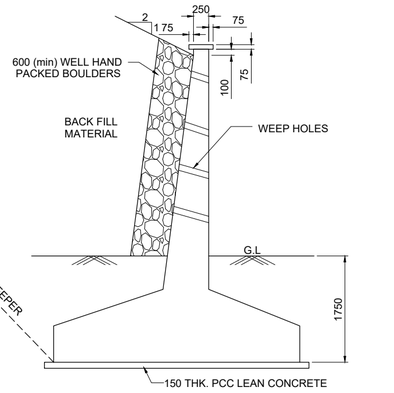
PLAN AT TOP
SCALE 1:200



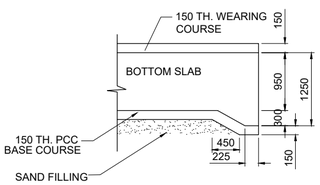
SECTION B-B
SCALE 1:100



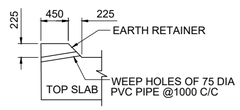
SECTION C-C
SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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B) TECHNICAL NOTES :

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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
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10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

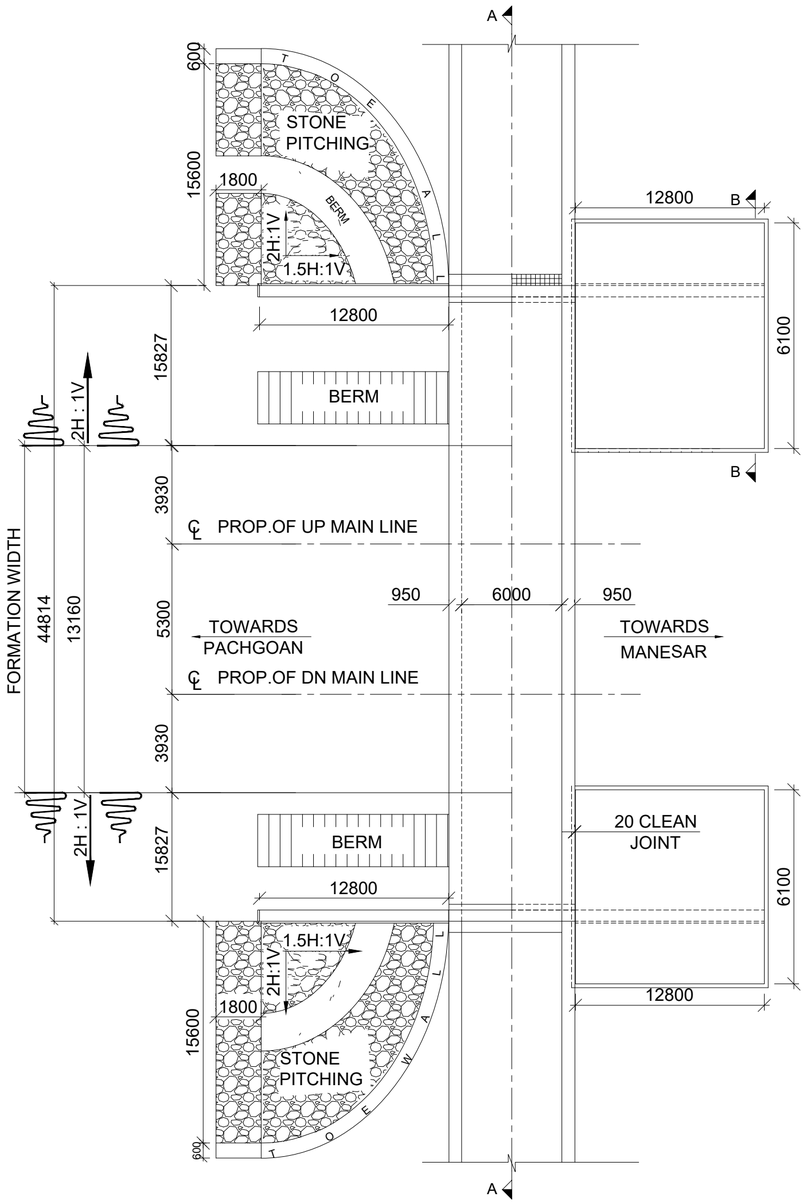
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC

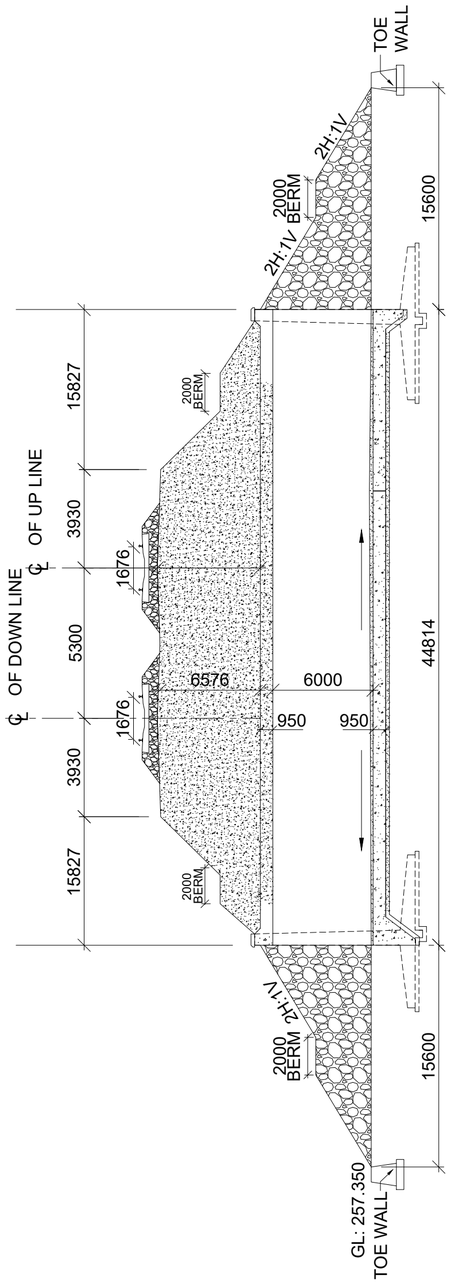
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
PROPOSED RUB NO. 110 SPAN
1×6.0×5.0RCC BOX AT CH: 44420.238

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01110_A1	1 OF 1

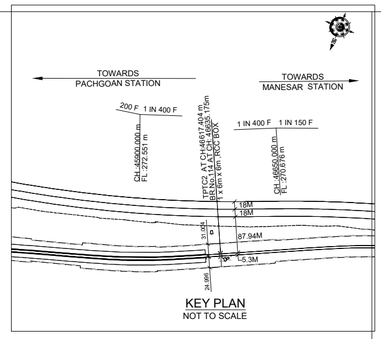
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

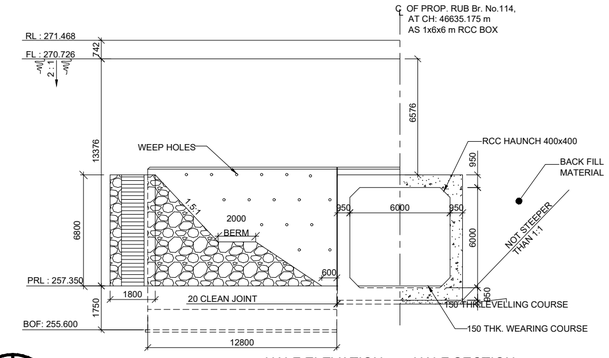


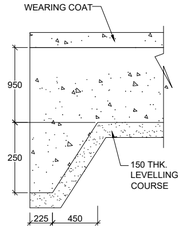


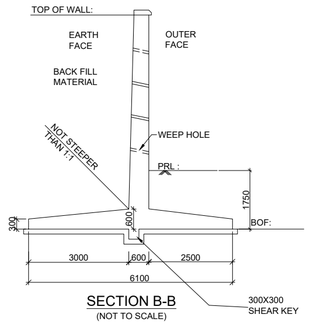
HALF PLAN AT TOP HALF PLAN AT BOTTOM

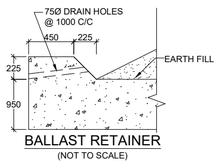
NOT TO SCALE

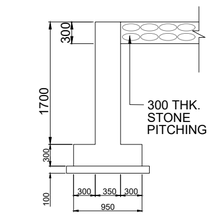












NOTES :

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14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

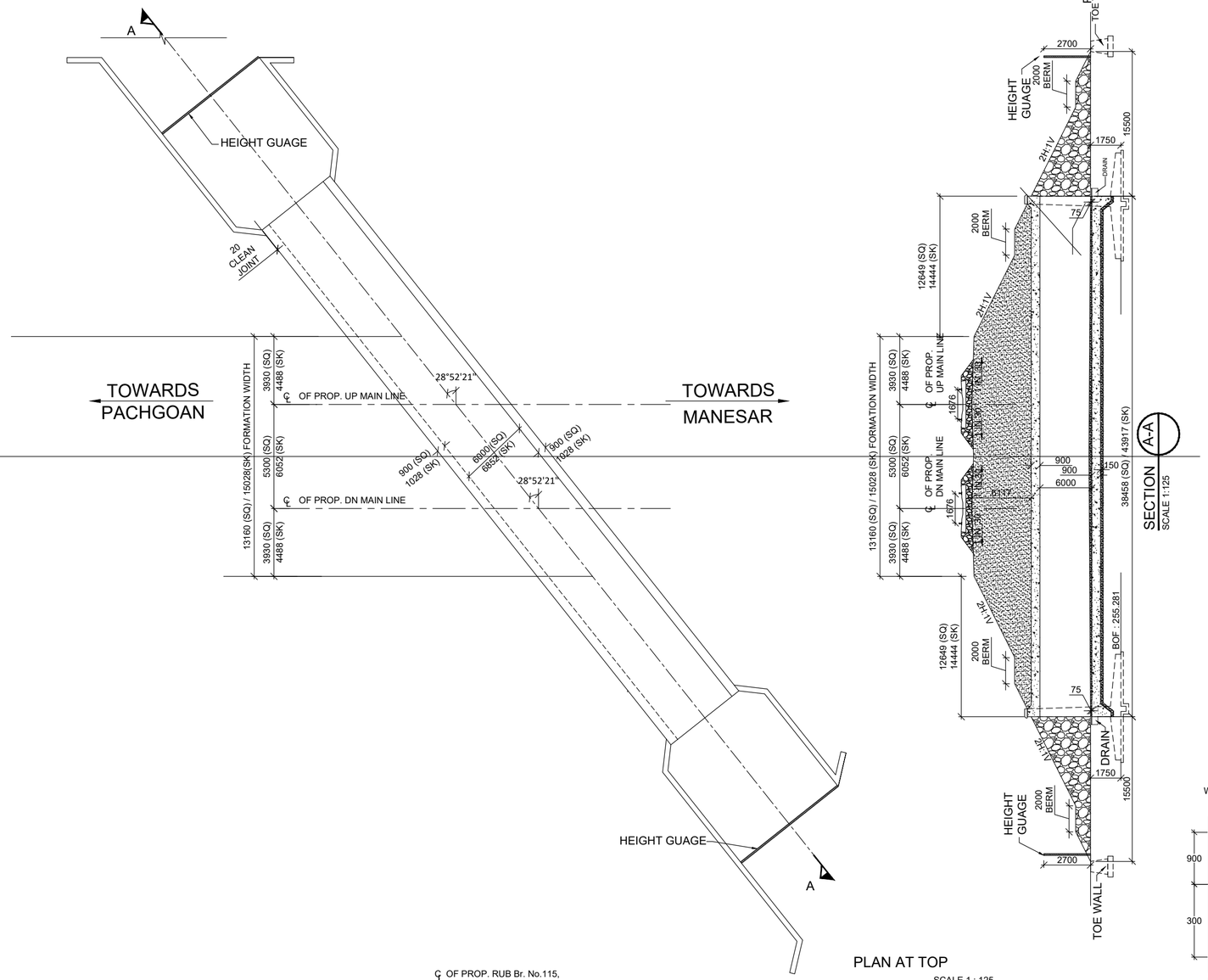
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 114 SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46635.175m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01114_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

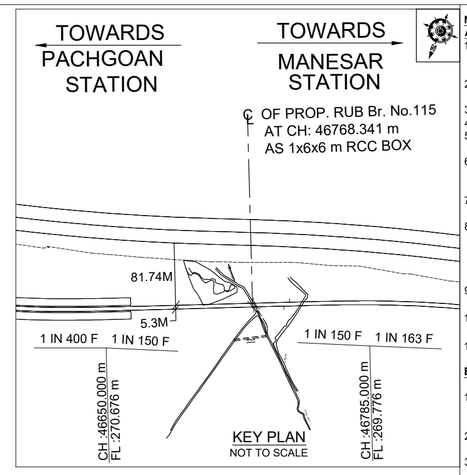


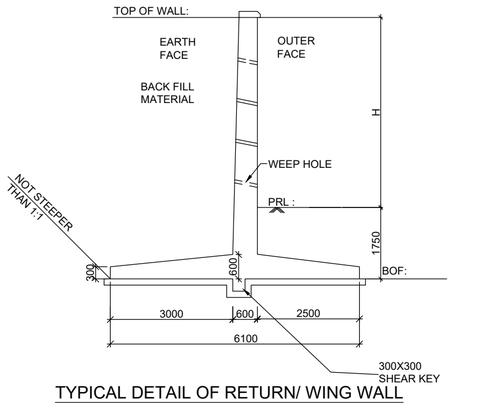
PLAN AT TOP

SCALE 1 : 125

SECTION

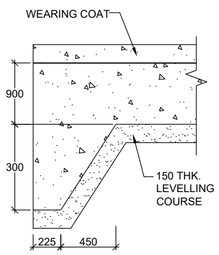
SCALE 1:125





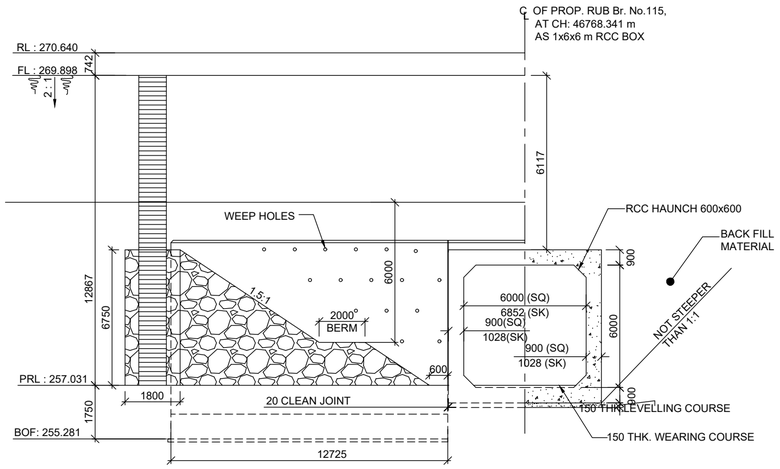
TYPICAL DETAIL OF RETURN/ WING WALL

(NOT TO SCALE)



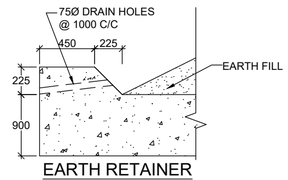
SHEAR KEY

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR

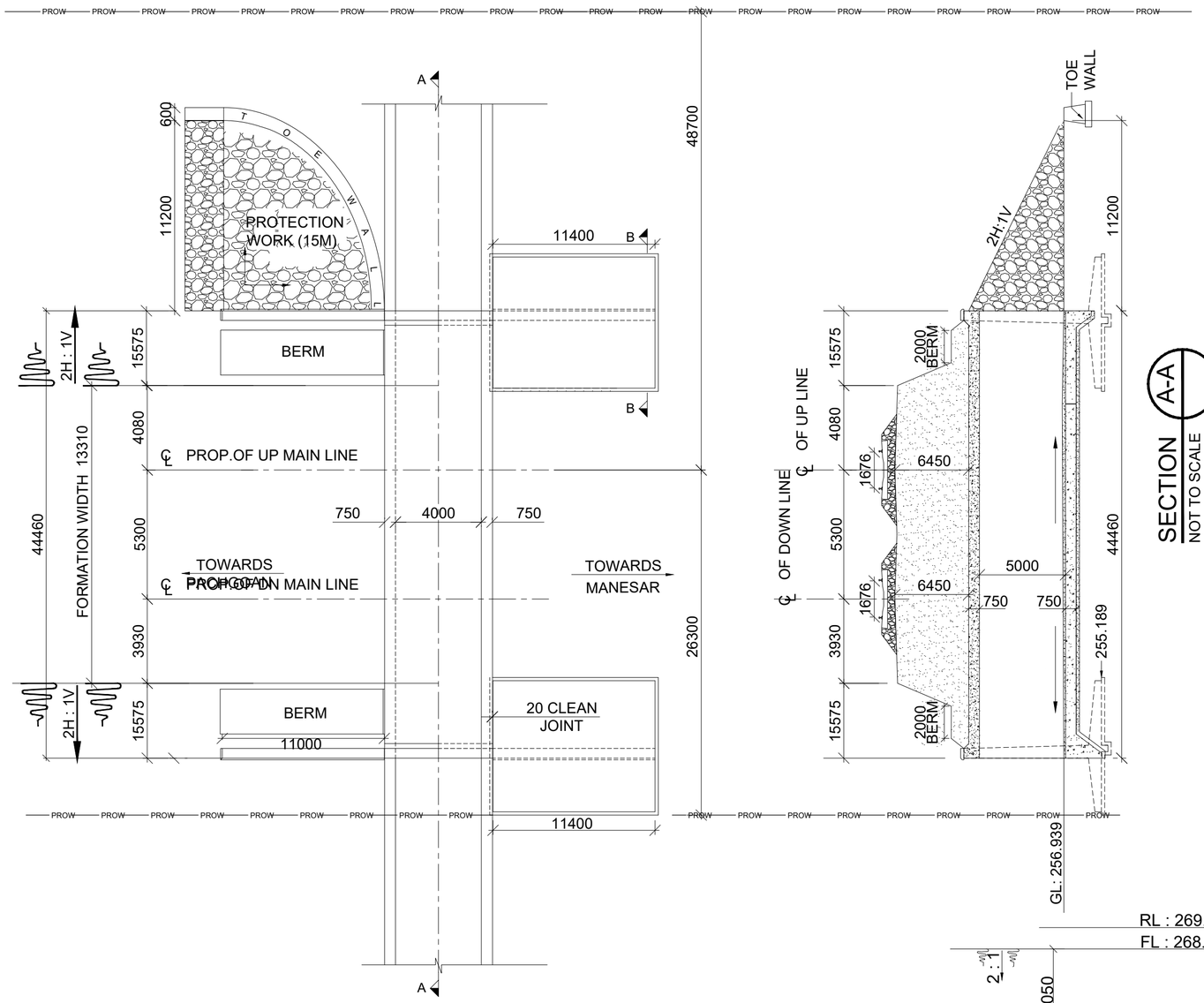
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 115
SPAN 1.0X6.0X6.0 RCC BOX AT CH: 46768.341m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01115_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

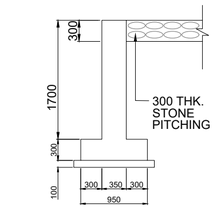


HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE

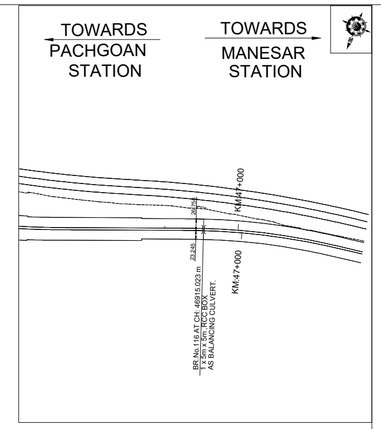
SECTION A-A

NOT TO SCALE



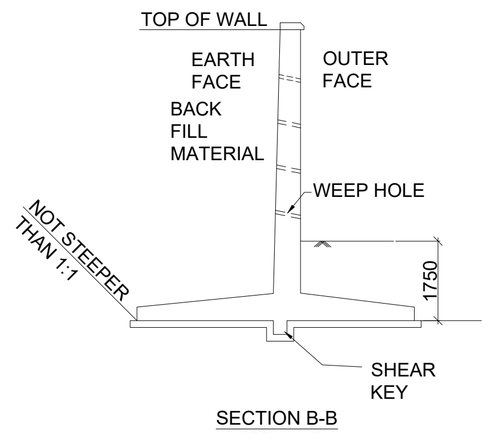
DROP / CURTAIN WALL DETAILS

SCALE 1:50



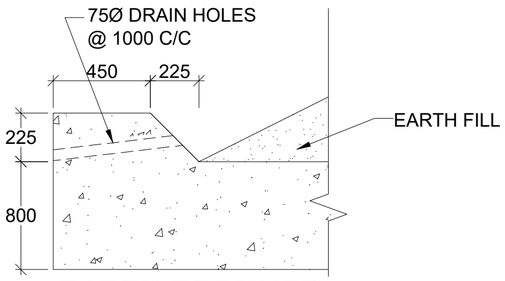
KEY PLAN

NOT TO SCALE



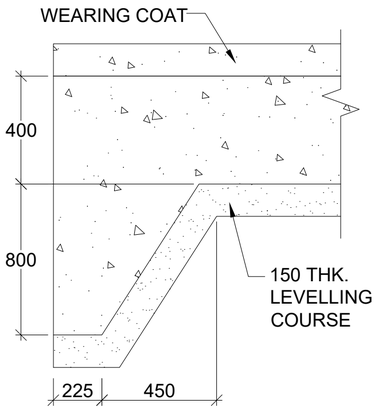
SECTION B-B

(NOT TO SCALE)



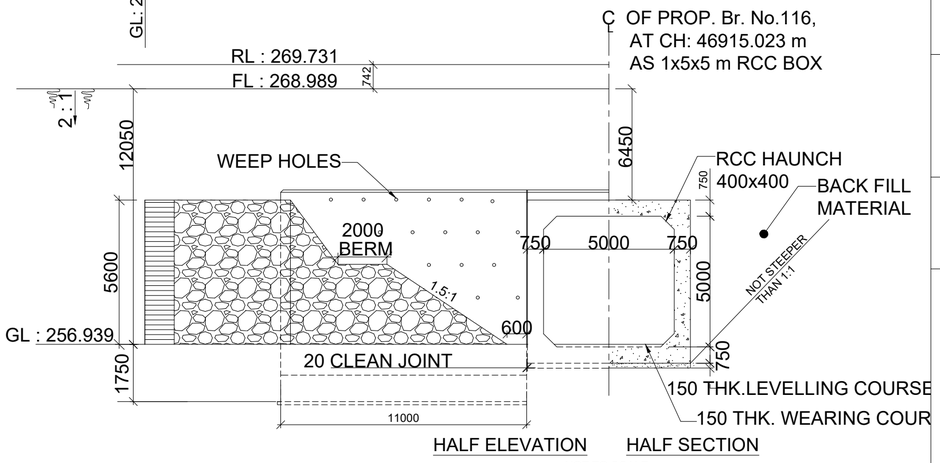
EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



HALF ELEVATION HALF SECTION

NOT TO SCALE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
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16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

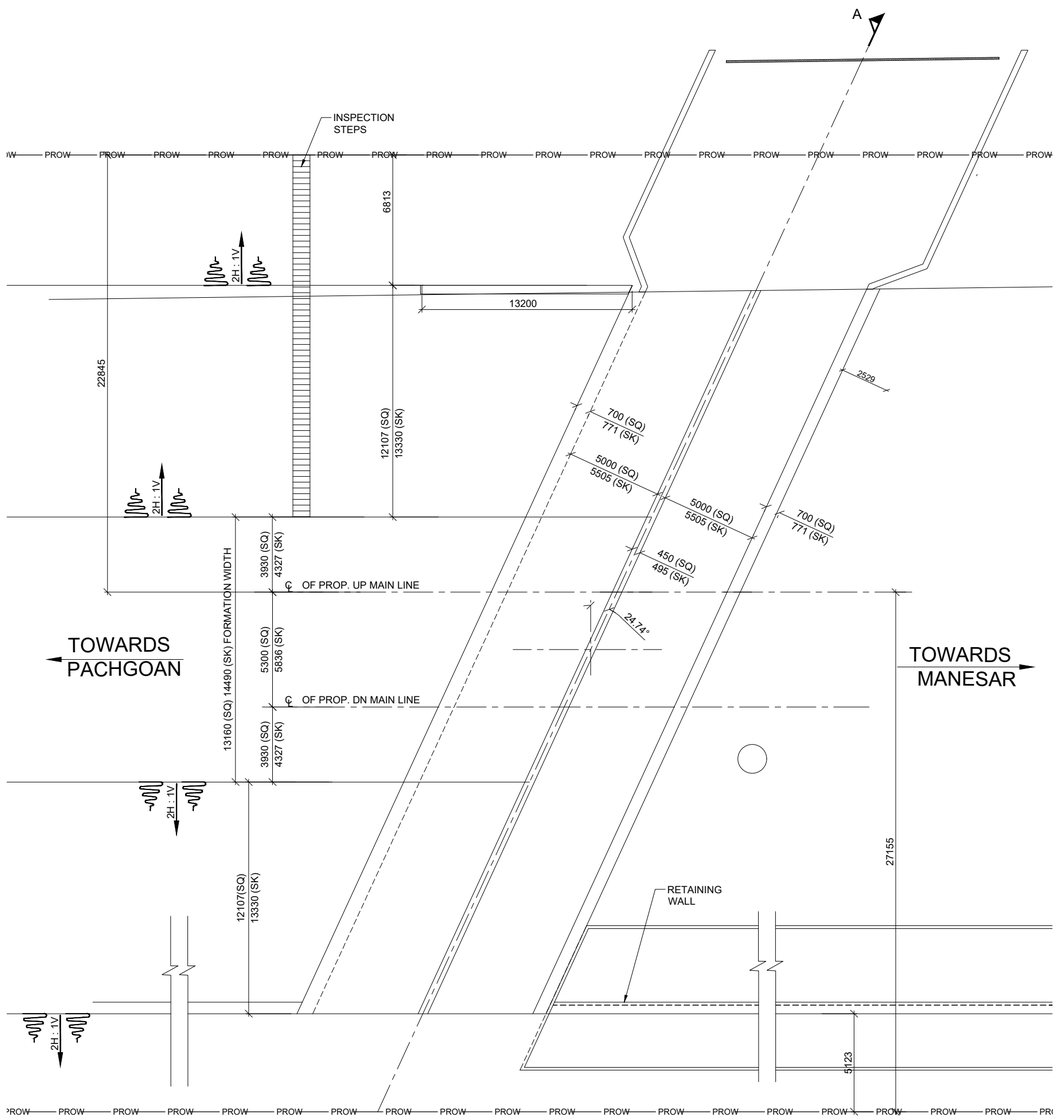
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 116 SPAN 1.0X5.0X5.0 RCC BOX AT CH: 46915.023m

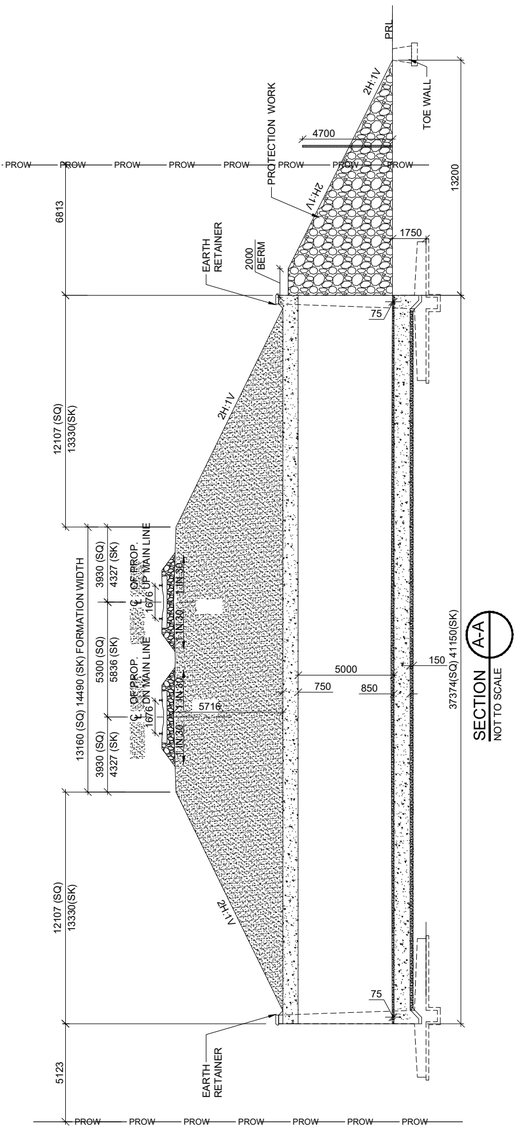
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01116_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



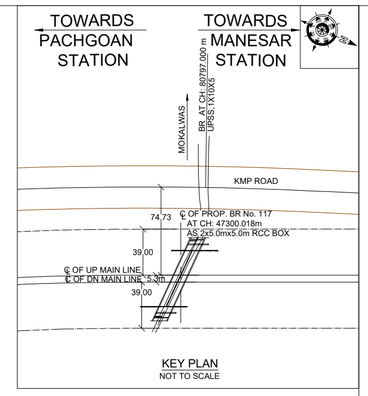
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



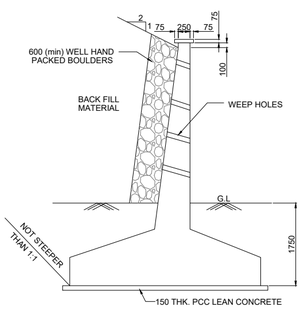
SECTION A-A

NOT TO SCALE



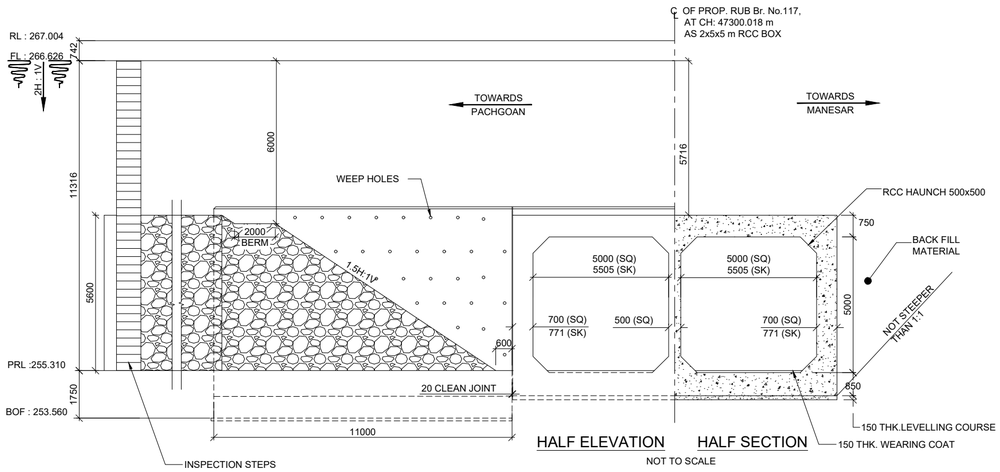
KEY PLAN

NOT TO SCALE



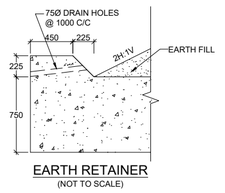
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



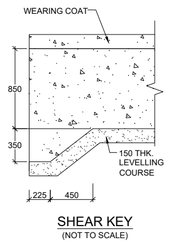
HALF ELEVATION HALF SECTION

NOT TO SCALE



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

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3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE / OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
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5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

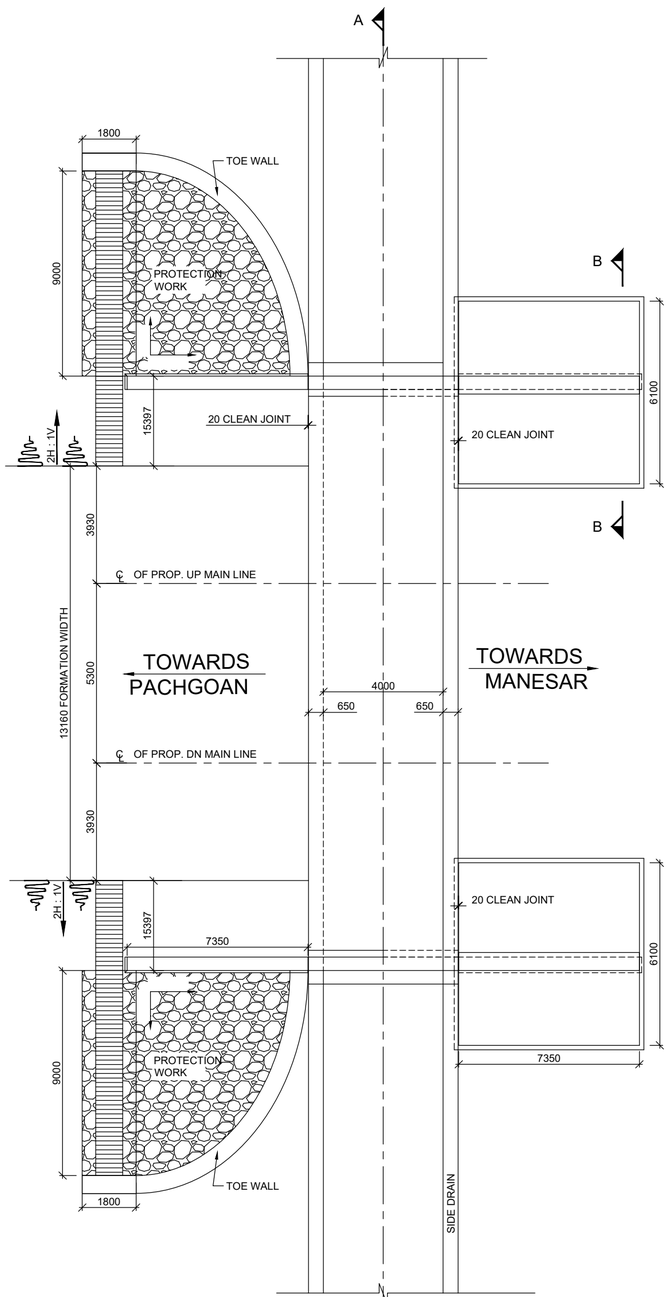
RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 117 SPAN 2.0X5.0X5.0 RCC BOX AT CH: 47300.018m

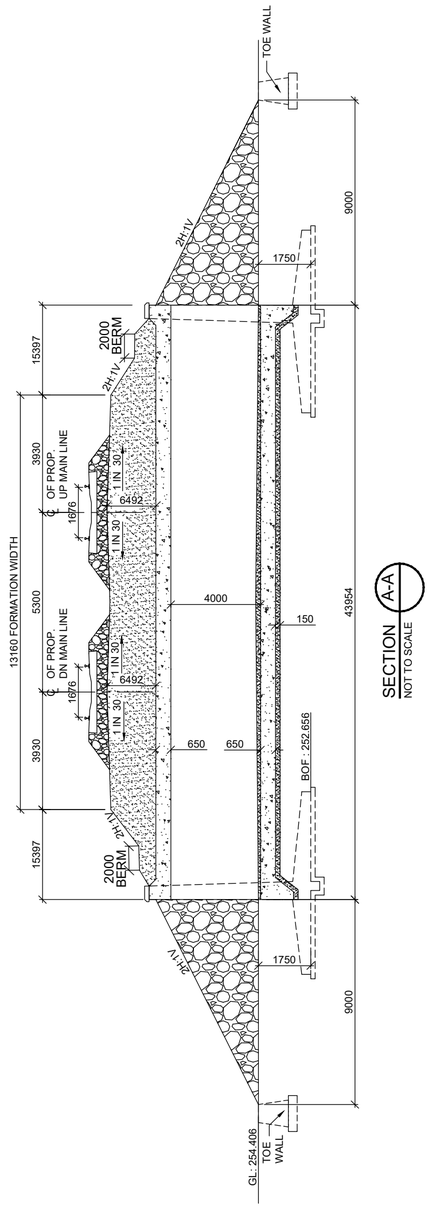
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01117_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



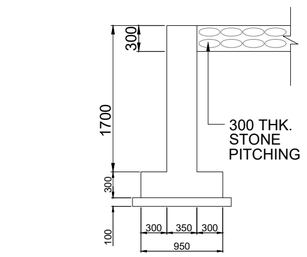
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



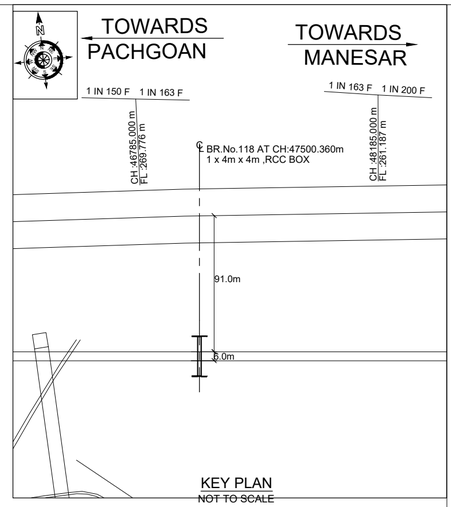
SECTION A-A

NOT TO SCALE



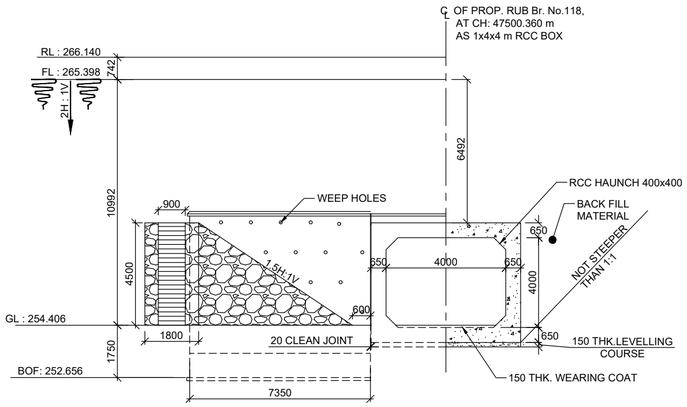
DROP / CURTAIN WALL DETAILS

SCALE 1:50



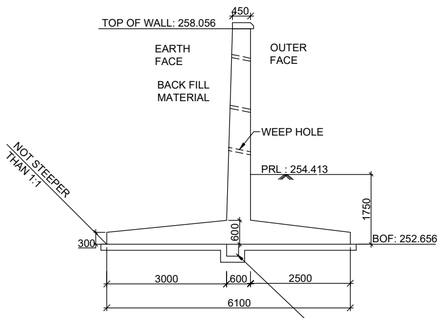
KEY PLAN

NOT TO SCALE



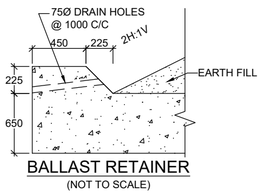
HALF ELEVATION HALF SECTION

NOT TO SCALE



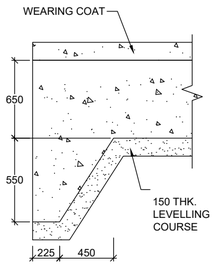
SECTION B-B

(NOT TO SCALE)



BALLAST RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT,HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
    FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

SMEC

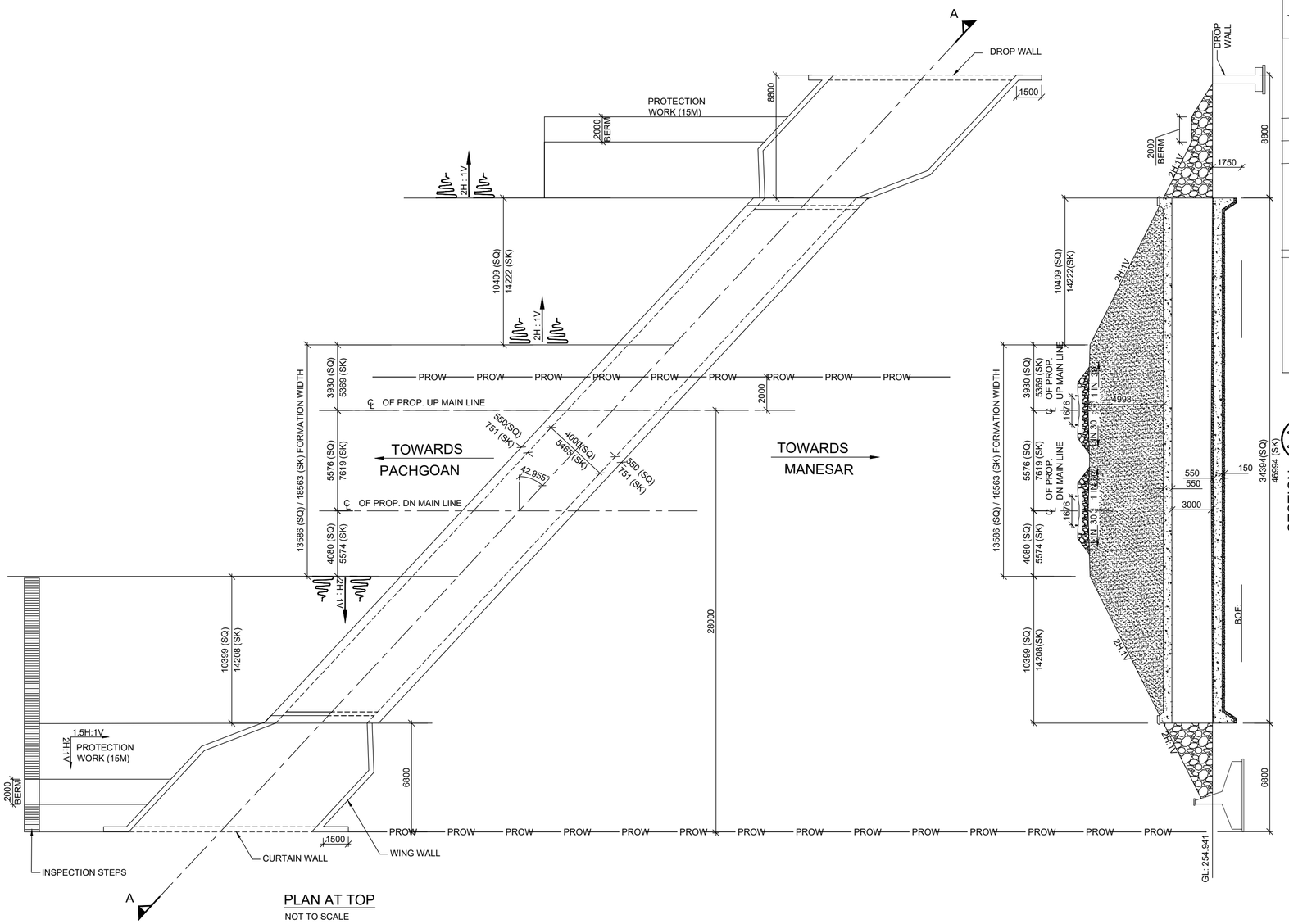
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:-

CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT NO 118 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 47500.360m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01118_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

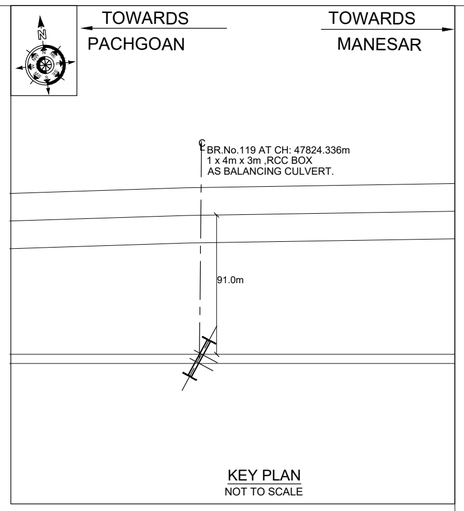


PLAN AT TOP

NOT TO SCALE

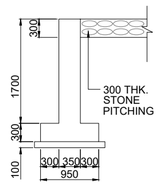
SECTION A-A

NOT TO SCALE



KEY PLAN

NOT TO SCALE



DROP/ CURTAIN WALL DETAILS

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
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9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
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B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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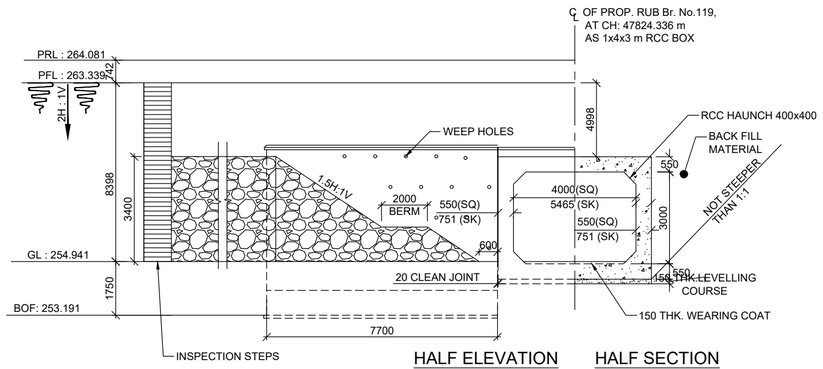
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

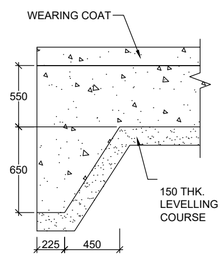
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
BOF	BOTTOM OF FOUNDATION



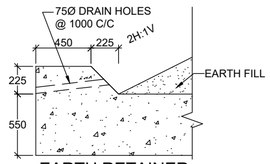
HALF ELEVATION HALF SECTION

NOT TO SCALE



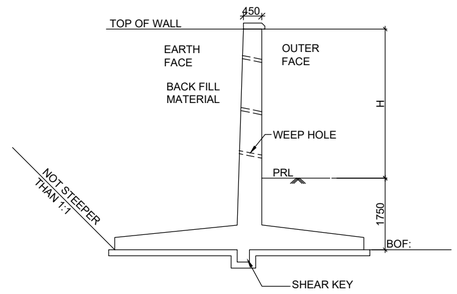
SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)



TYPICAL DETAIL OF RETURN / WING WALL

(NOT TO SCALE)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

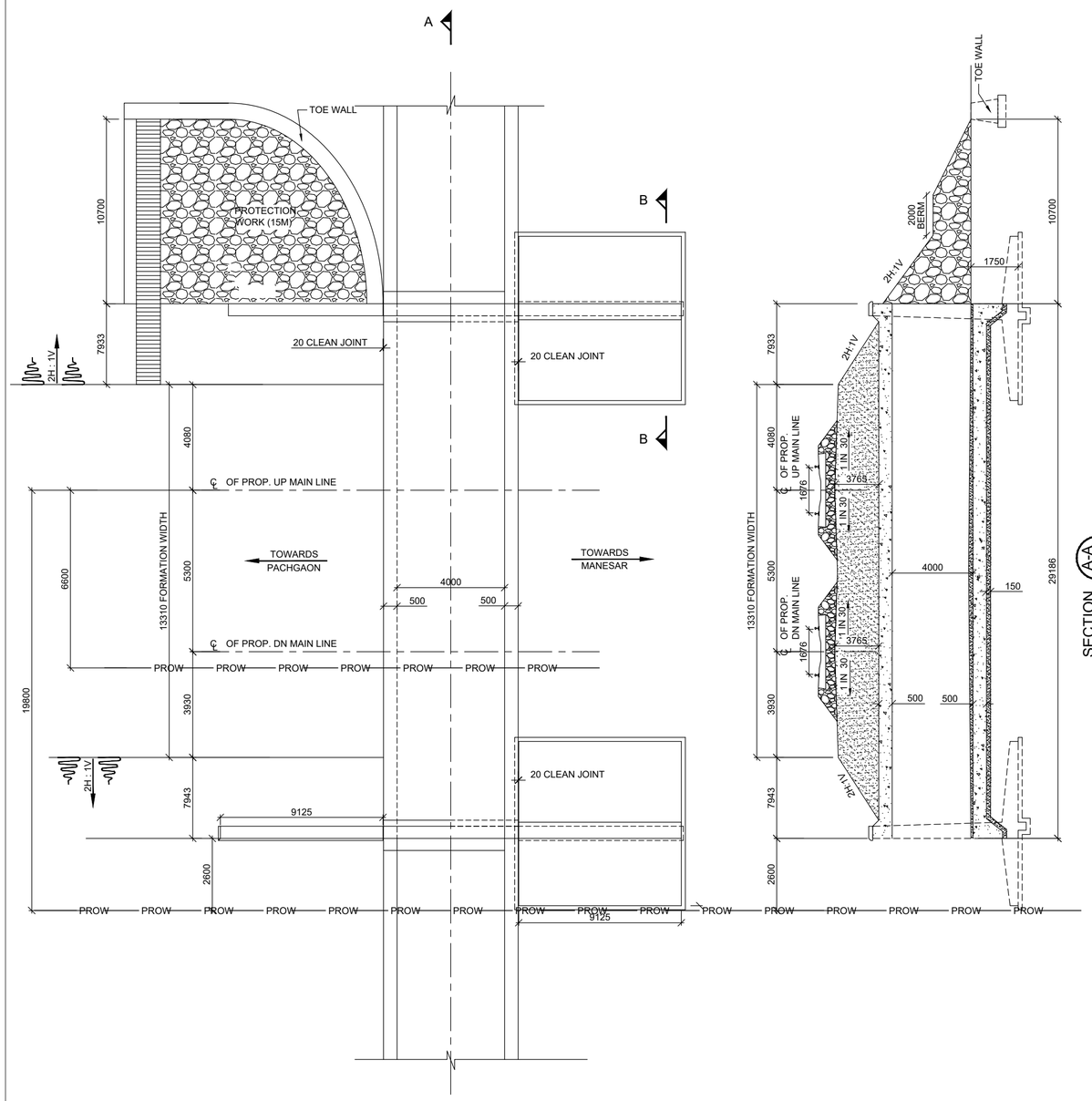
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 119 SPAN 1.0X4.0X3.0 RCC BOX AT CH: 47824.336m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01119_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

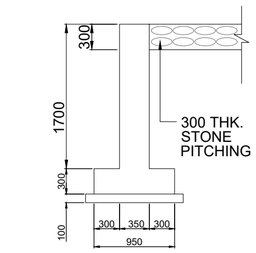


HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE

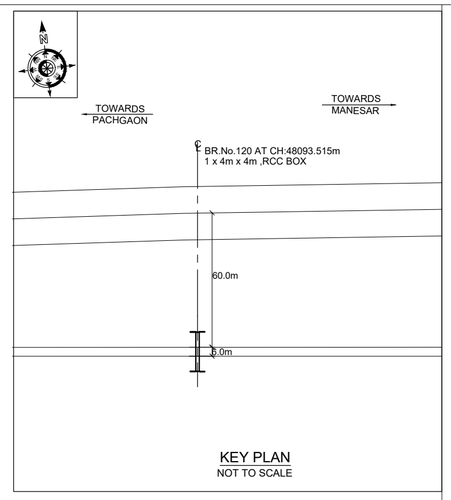
SECTION A-A

NOT TO SCALE



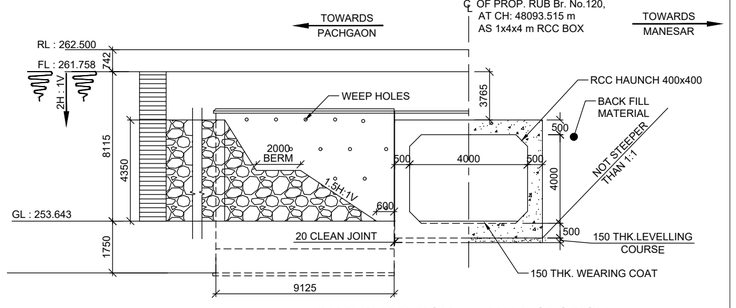
DROP / CURTAIN WALL DETAILS

SCALE 1:50



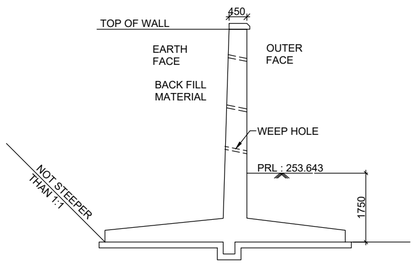
KEY PLAN

NOT TO SCALE



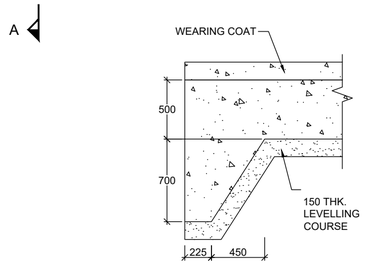
HALF ELEVATION HALF SECTION

NOT TO SCALE



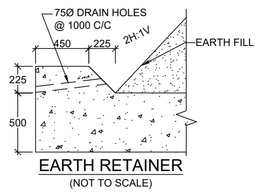
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)

NOTES :

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5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

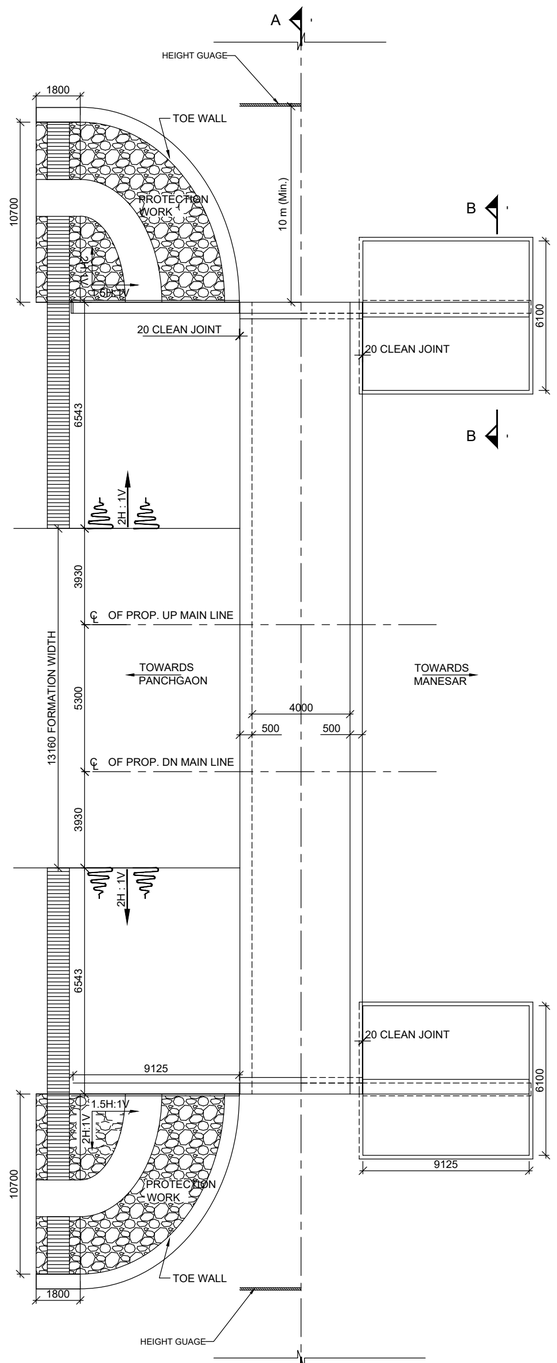
RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 120 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48093.515m

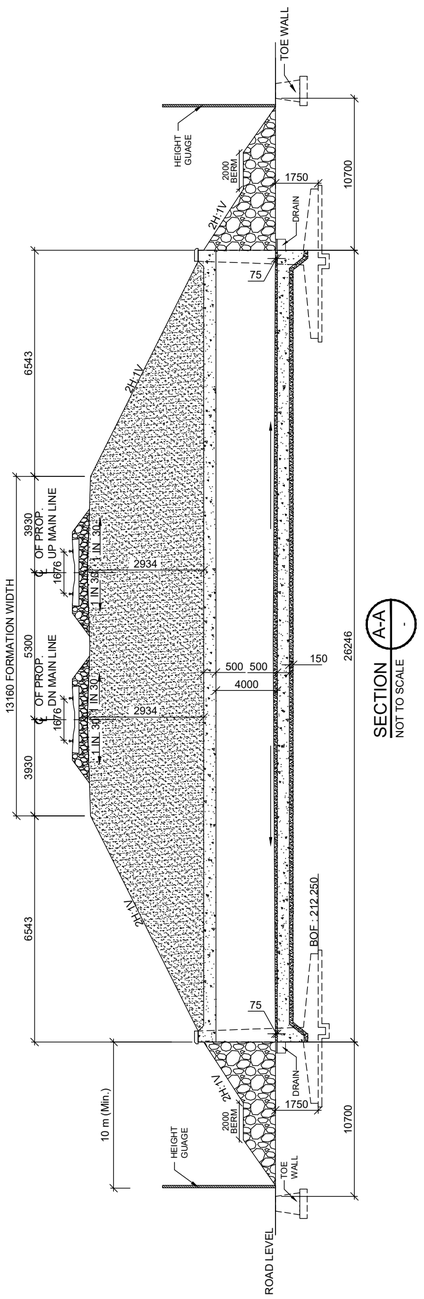
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01120_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



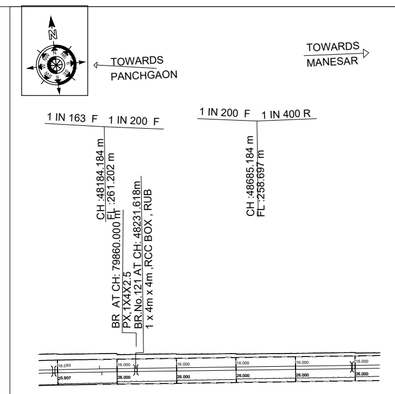
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



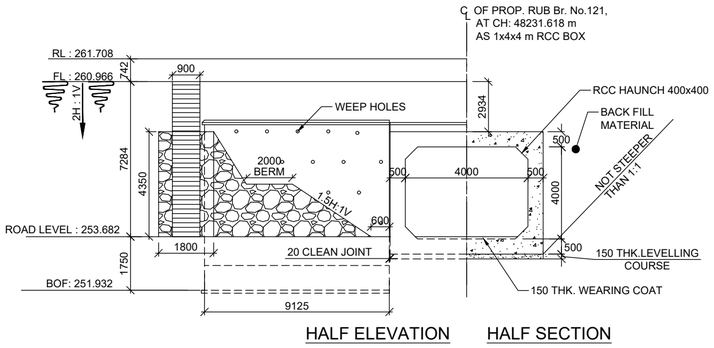
SECTION A-A

NOT TO SCALE



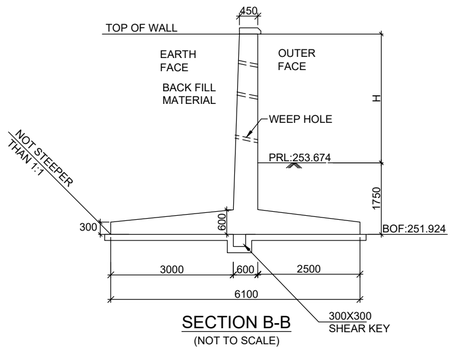
KEY PLAN

NOT TO SCALE



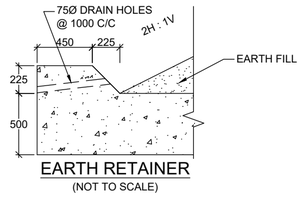
HALF ELEVATION HALF SECTION

NOT TO SCALE



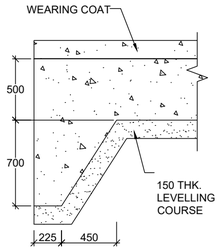
SECTION B-B

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
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14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

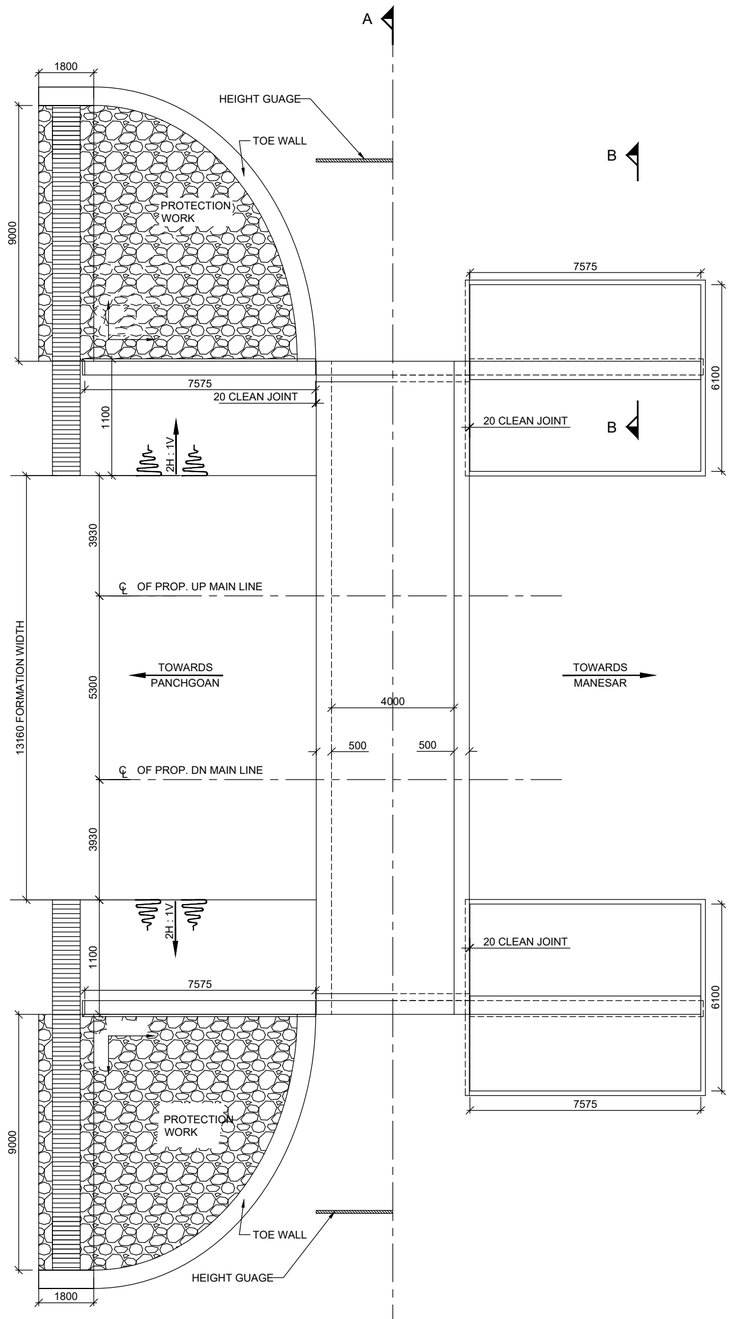
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 121 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48231.618m

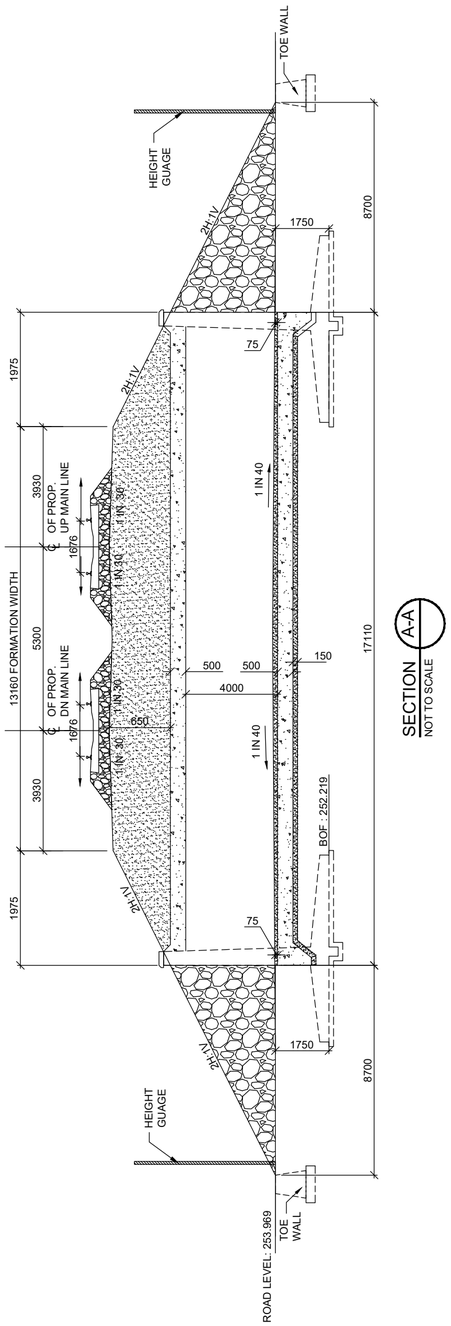
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01121_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



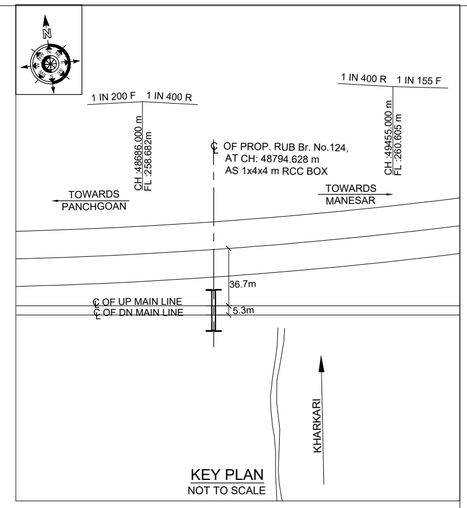
HALF PLAN AT TOP HALF PLAN AT BOTTOM

NOT TO SCALE



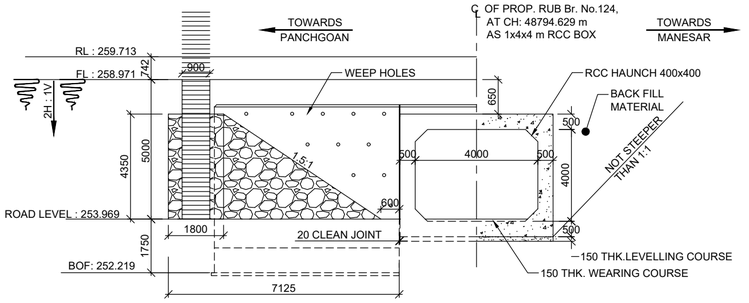
SECTION A-A

NOT TO SCALE



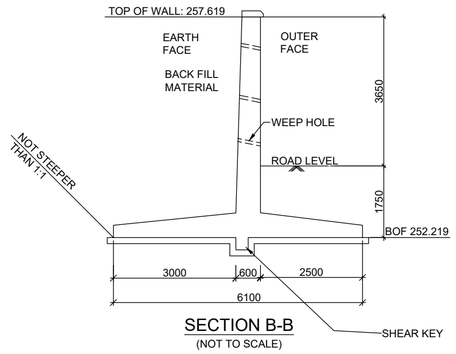
KEY PLAN

NOT TO SCALE



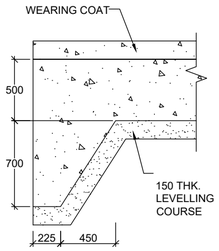
HALF ELEVATION HALF SECTION

NOT TO SCALE



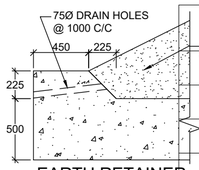
SECTION B-B

(NOT TO SCALE)



SHEAR KEY

(NOT TO SCALE)



EARTH RETAINER

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
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11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
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    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
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IMPORTANT NOTE:

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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

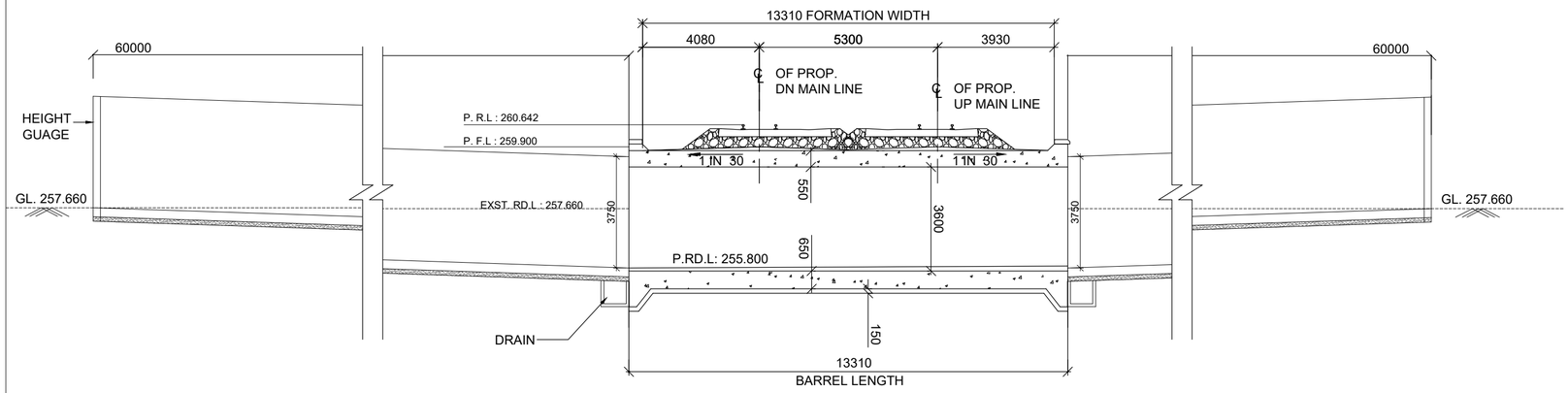
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 124 SPAN 1.0X4.0X4.0 RCC BOX AT CH: 48794.629m

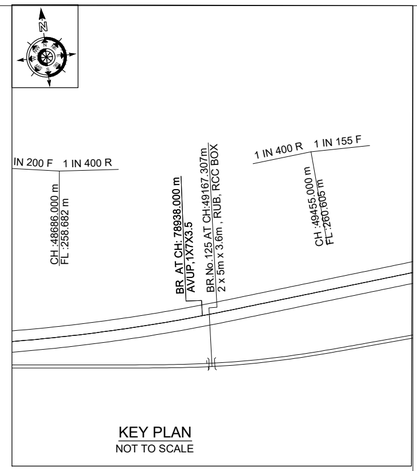
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01124_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



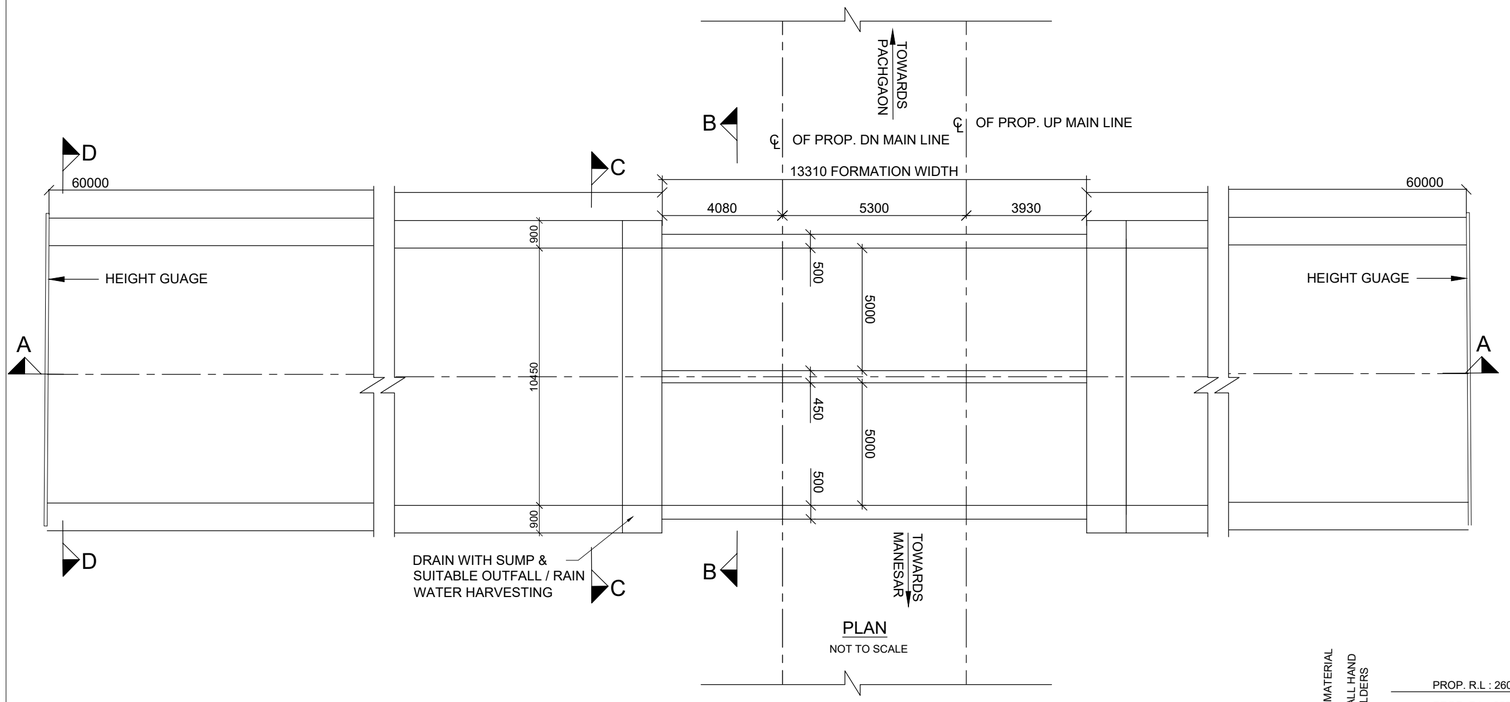
SECTION A-A

NOT TO SCALE



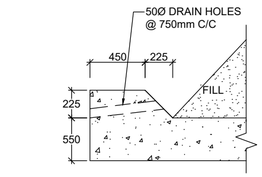
KEY PLAN

NOT TO SCALE



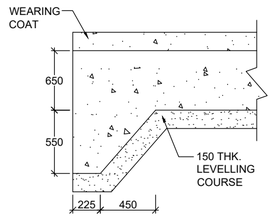
PLAN

NOT TO SCALE



EARTH RETAINER

(SCALE 1:25)

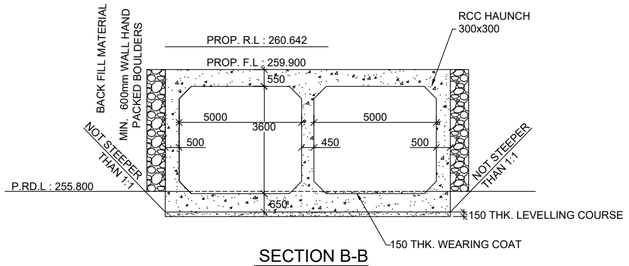


SHEAR KEY

(SCALE 1:25)

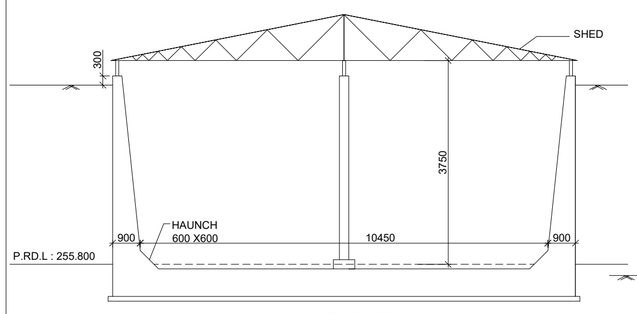
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL



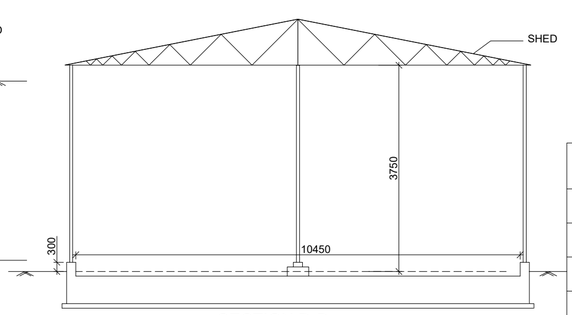
SECTION B-B

NOT TO SCALE



SECTION C-C

NOT TO SCALE



SECTION D-D

NOT TO SCALE

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK .
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS-3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE(WC) =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIG DRG.
14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SHED SHALL BE PROVIDED OVER THE RAMP.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

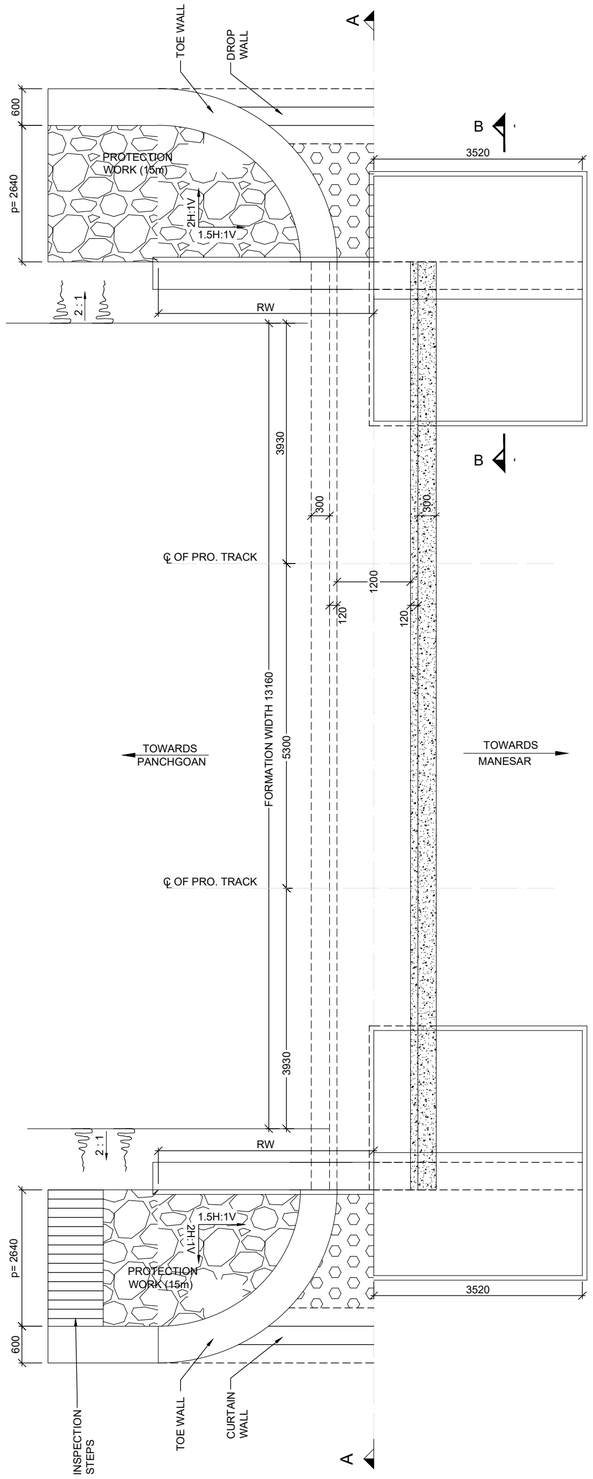
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 125
SPAN 2.0X5.0X3.6 RCC BOX AT CH: 49167.307m

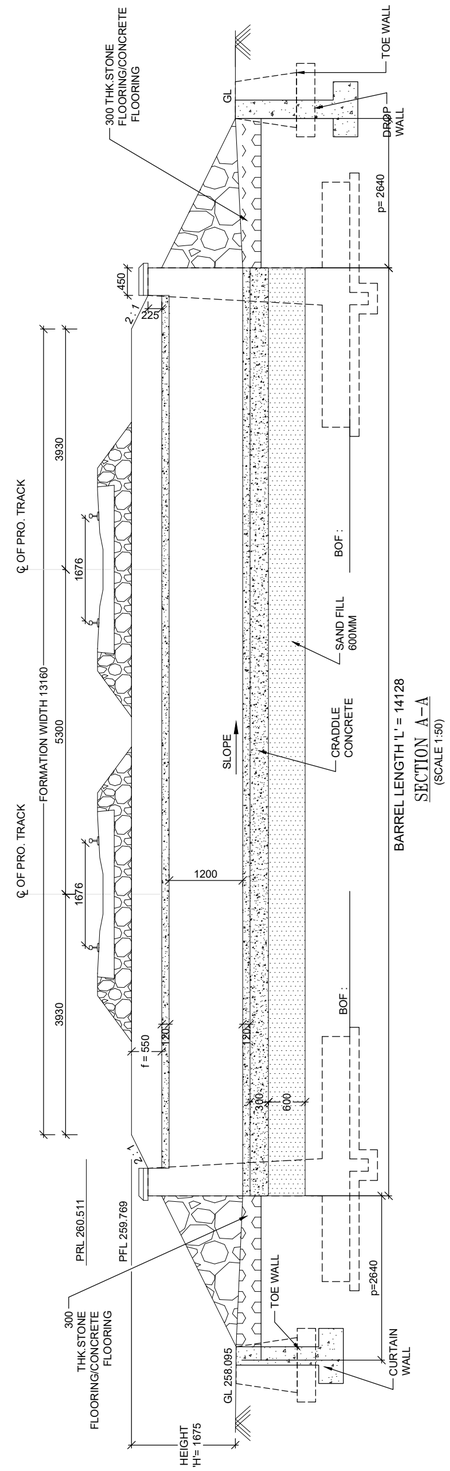
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01125_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



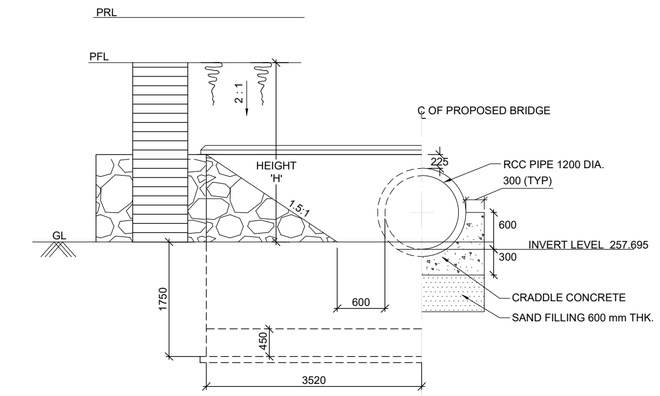
HALF PLAN AT TOP HALF PLAN AT BOTTOM

(SCALE 1:50)



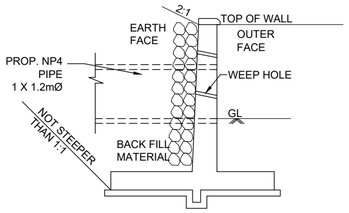
SECTION A–A

(SCALE 1:50)



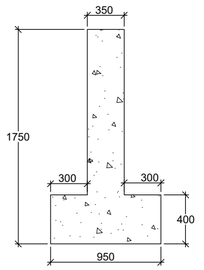
HALF ELEVATION HALF SECTION

(SCALE 1:50)



SECTION B-B

(SCALE 1:75)



CURTAIN / DROP WALL

(SCALE 1:25)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. STRUCTUIRE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
4. PLACEMENT LEVEL OF PIPE AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF DRAINAGE &NATURAL GROUND PROFILE.
5. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
6. SEISMIC ZONE- IV
7. EXPOSURE CONDITION- MODERATE.
8. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
9. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
10. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
11. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
12. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

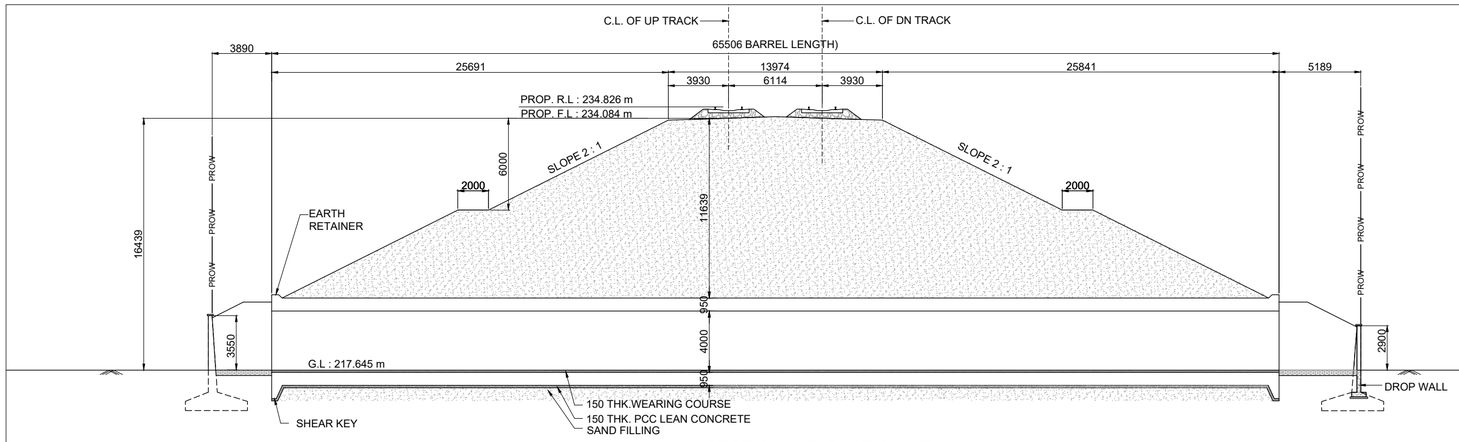
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT FOR BRIDGE NO. 126 PIPE CULVERT 1X1.2 SPAN, AT CH: 49583.348m

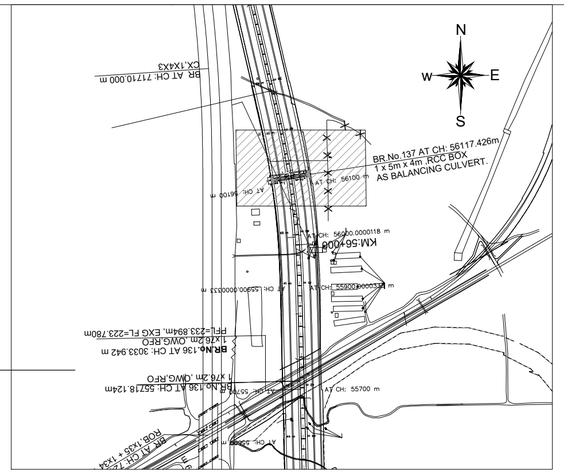
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01126_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



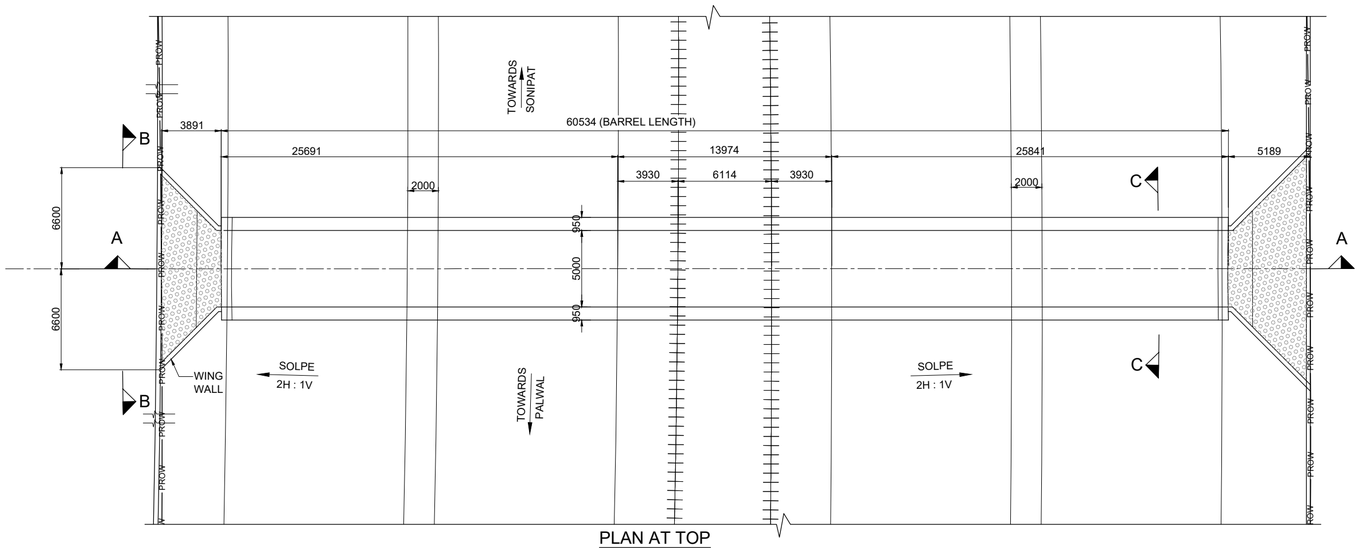
SECTIONAL ELEVATION AT A-A

SCALE 1:200



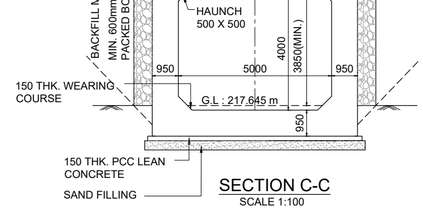
KEY PLAN

SCALE 1:NTS



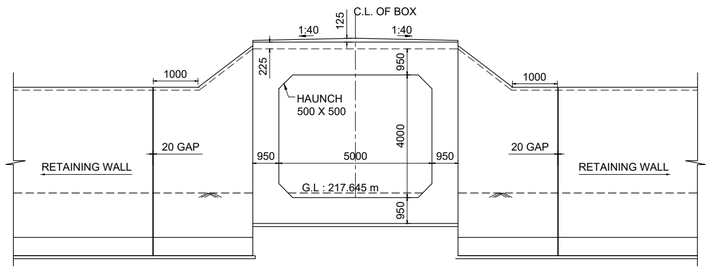
PLAN AT TOP

SCALE 1:200



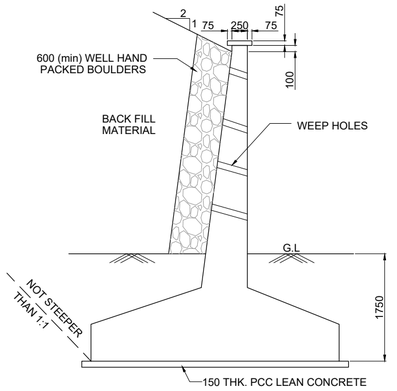
SECTION C-C

SCALE 1:100



VIEW AT B-B

SCALE 1:100

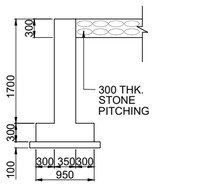


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

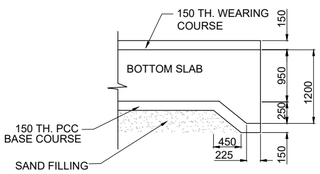
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



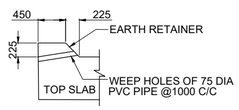
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

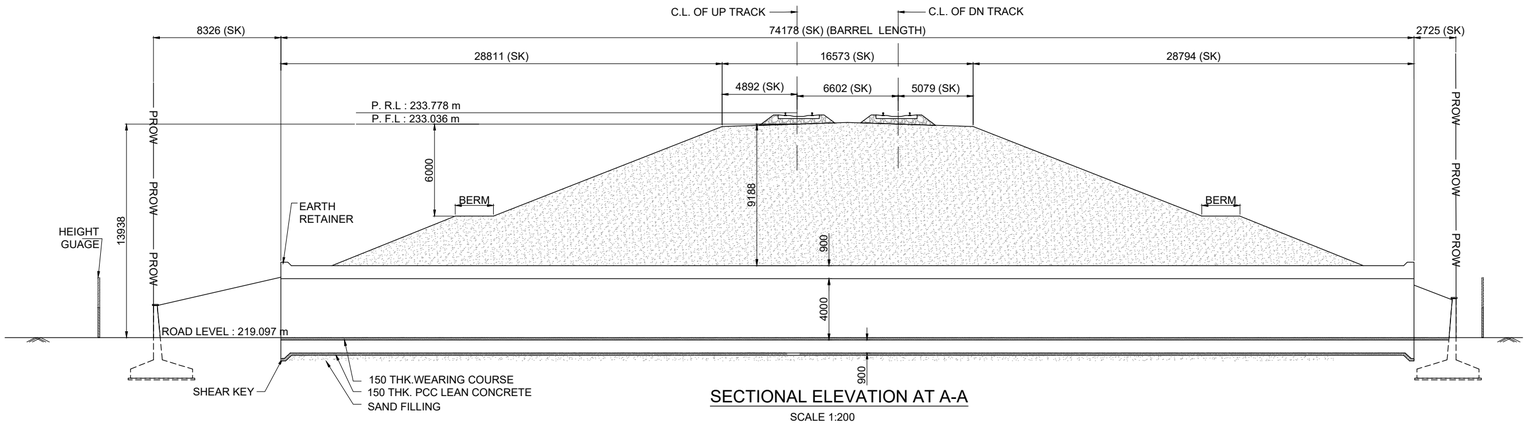
RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 137 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56117.426

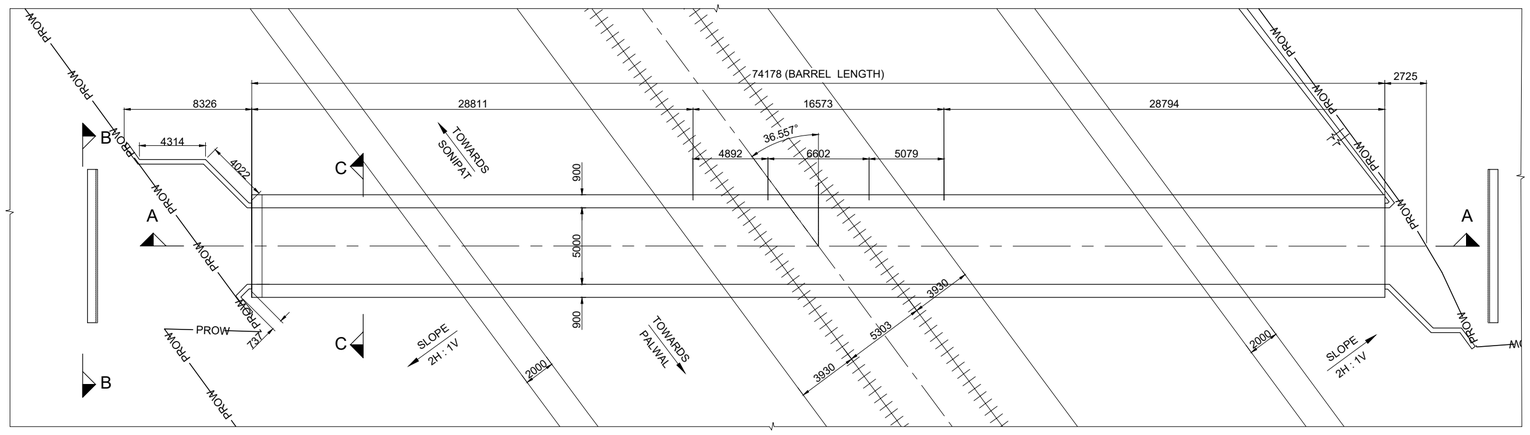
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01137_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



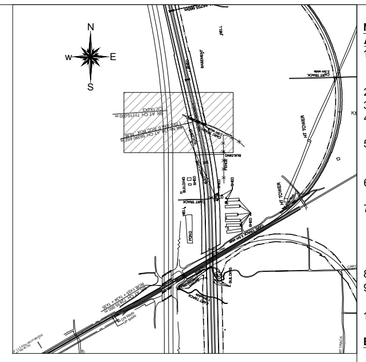
SECTIONAL ELEVATION AT A-A

SCALE 1:200



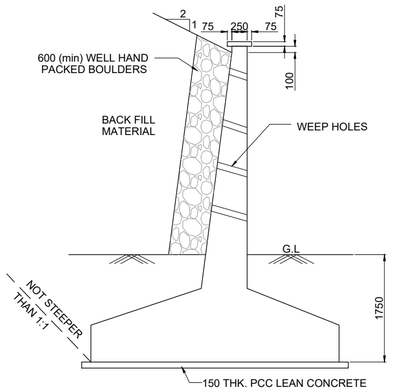
PLAN AT TOP

SCALE 1:200



KEY PLAN

SCALE 1:NTS



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

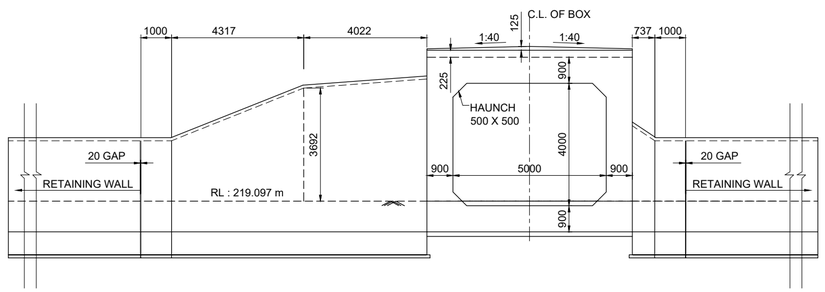
A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

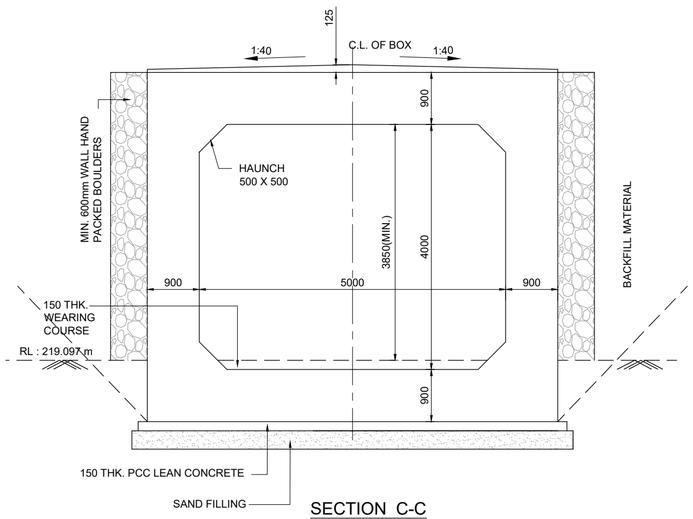
1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.



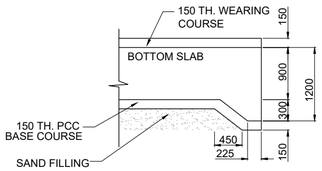
VIEW AT B-B

SCALE 1:50



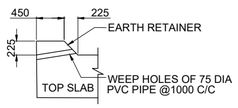
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

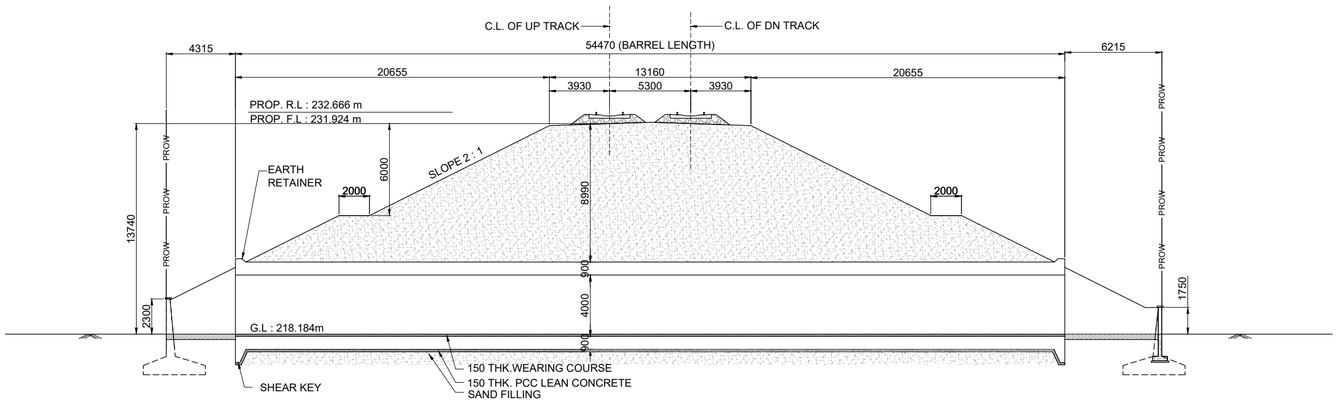
RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 138 SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56290.652

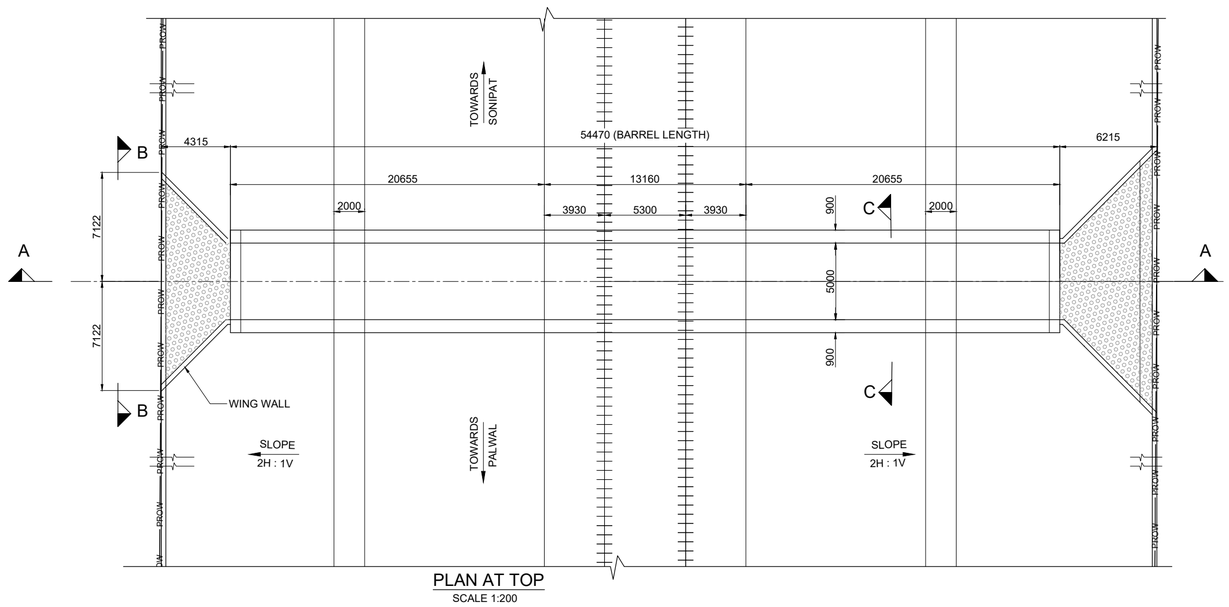
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01138_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



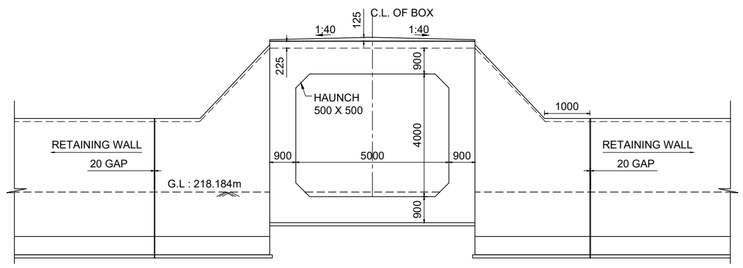
SECTIONAL ELEVATION AT A-A

SCALE 1:200



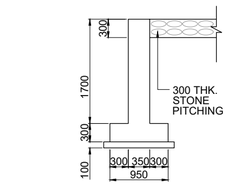
PLAN AT TOP

SCALE 1:200



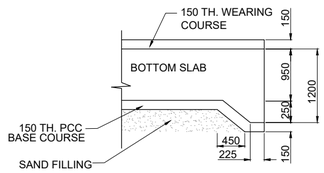
VIEW AT B-B

SCALE 1:100



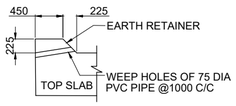
DROP / CURTAIN WALL DETAILS

SCALE 1:50



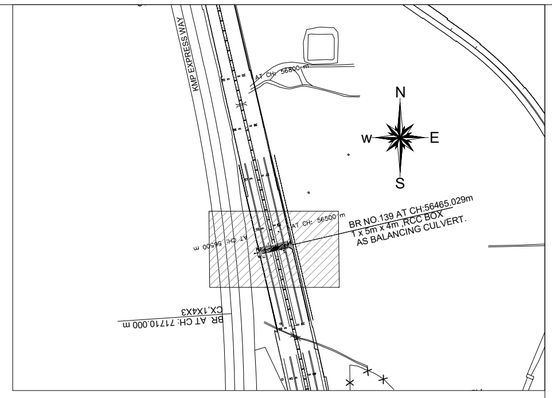
SHEAR KEY

SCALE 1:50



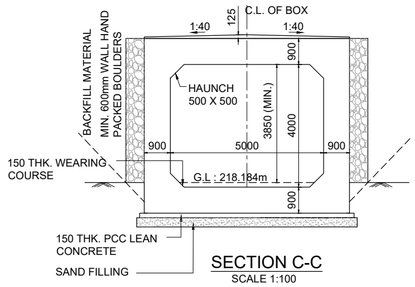
EARTH RETAINER

SCALE 1:50



KEY PLAN

SCALE 1:NTS

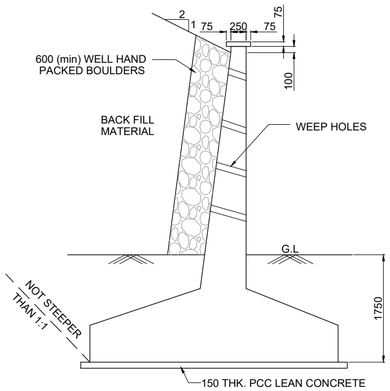


SECTION C-C

SCALE 1:100

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

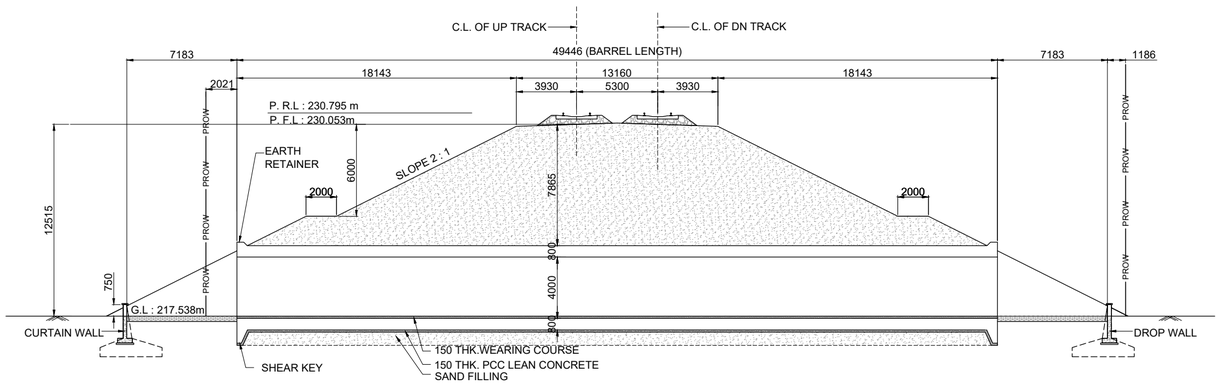
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 139
SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56465.029

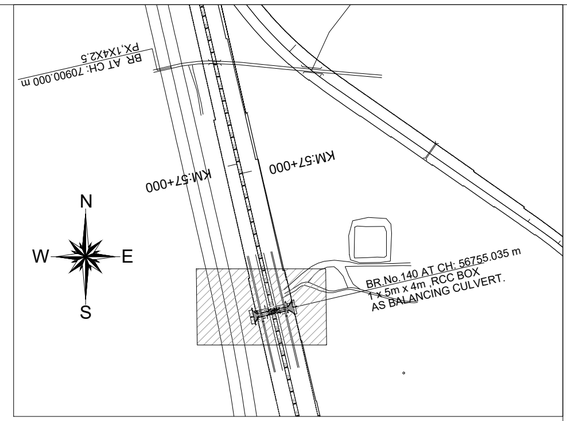
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01139_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



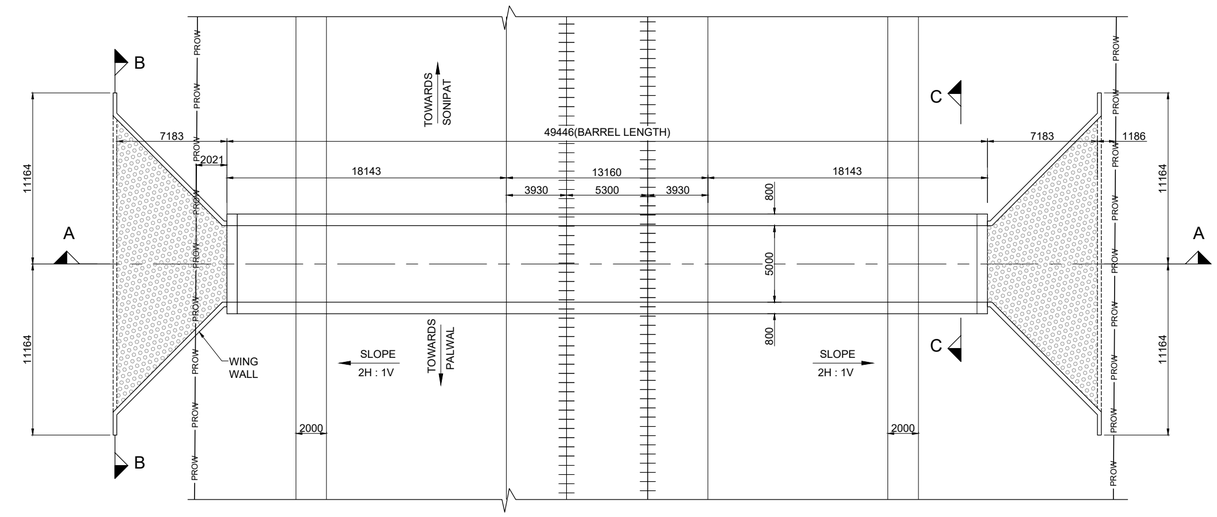
SECTIONAL ELEVATION AT A-A

SCALE 1:200



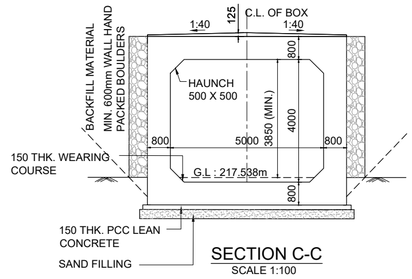
KEY PLAN

SCALE 1:NTS



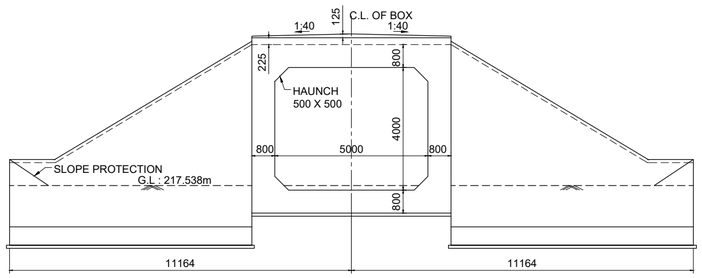
PLAN AT TOP

SCALE 1:200



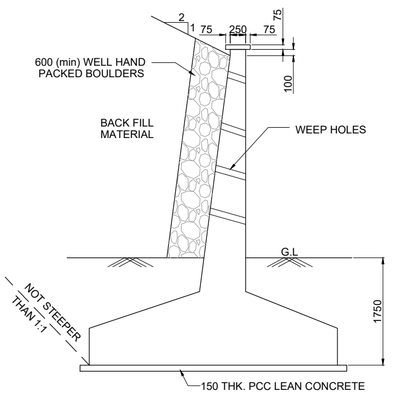
SECTION C-C

SCALE 1:100



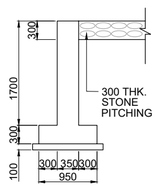
VIEW AT B-B

SCALE 1:100



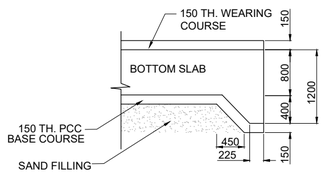
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



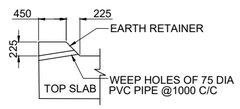
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

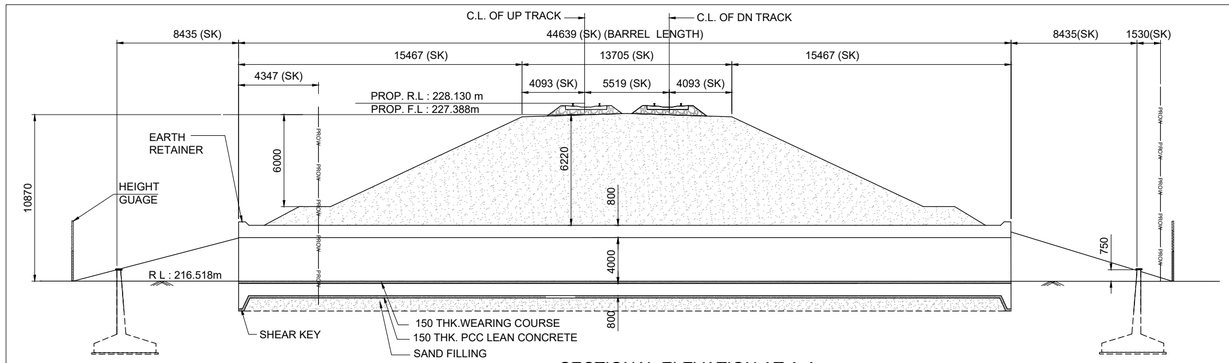
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 140
SPAN 1.0X5.0X4.0 RCC BOX AT CH: 56755.035

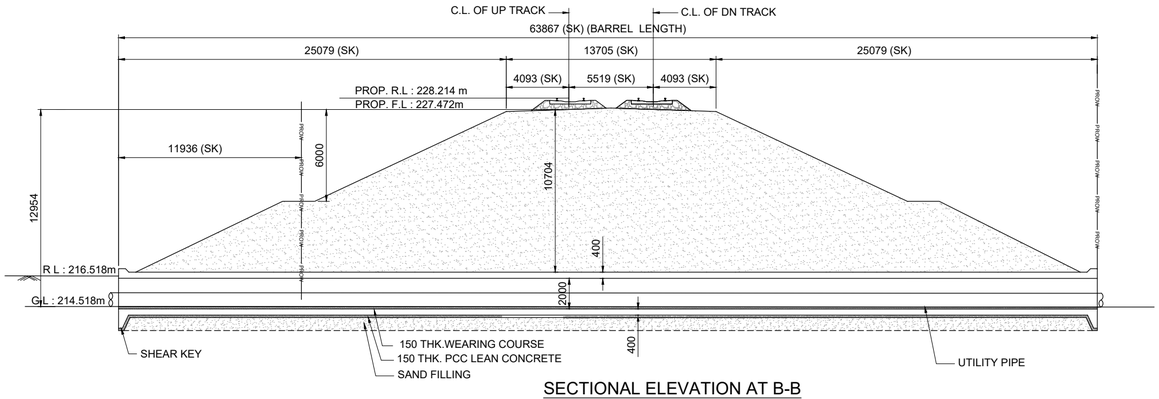
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01140_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



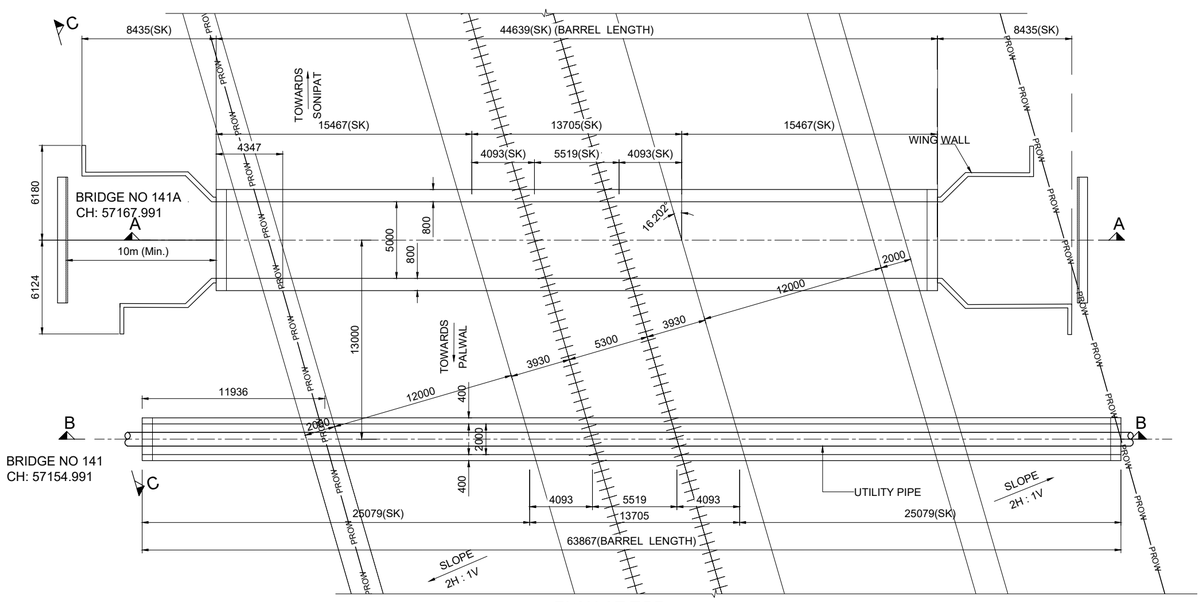
SECTIONAL ELEVATION AT A-A

SCALE 1:200



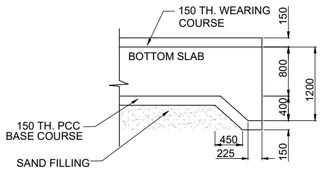
SECTIONAL ELEVATION AT B-B

SCALE 1:200



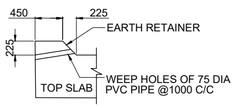
PLAN AT TOP

SCALE 1:200



SHEAR KEY

SCALE 1:50

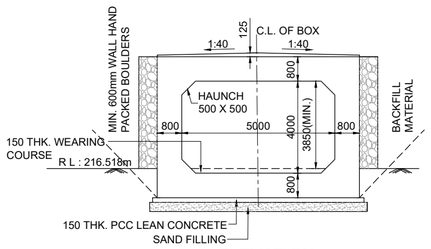


EARTH RETAINER

SCALE 1:50

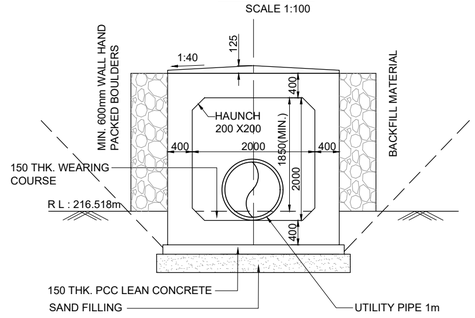
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL



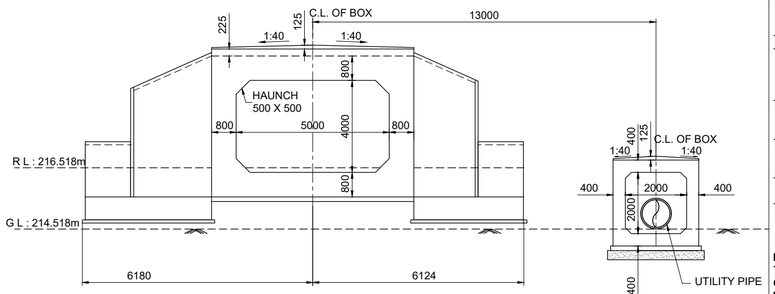
ELEVATION

SCALE 1:100



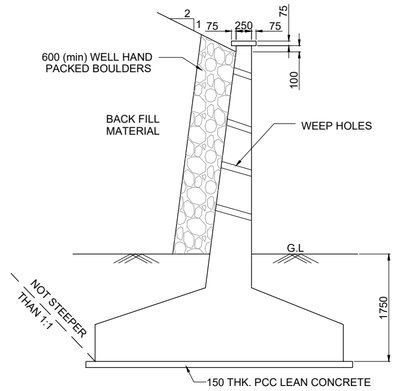
ELEVATION

SCALE 1:50



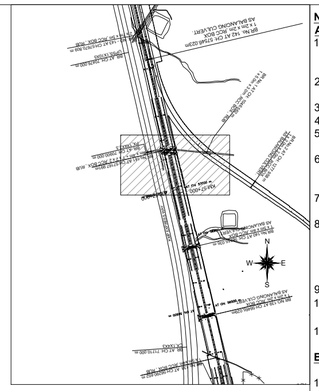
SECTION C-C

SCALE 1:100



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



KEY PLAN

SCALE 1:NTS

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
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11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

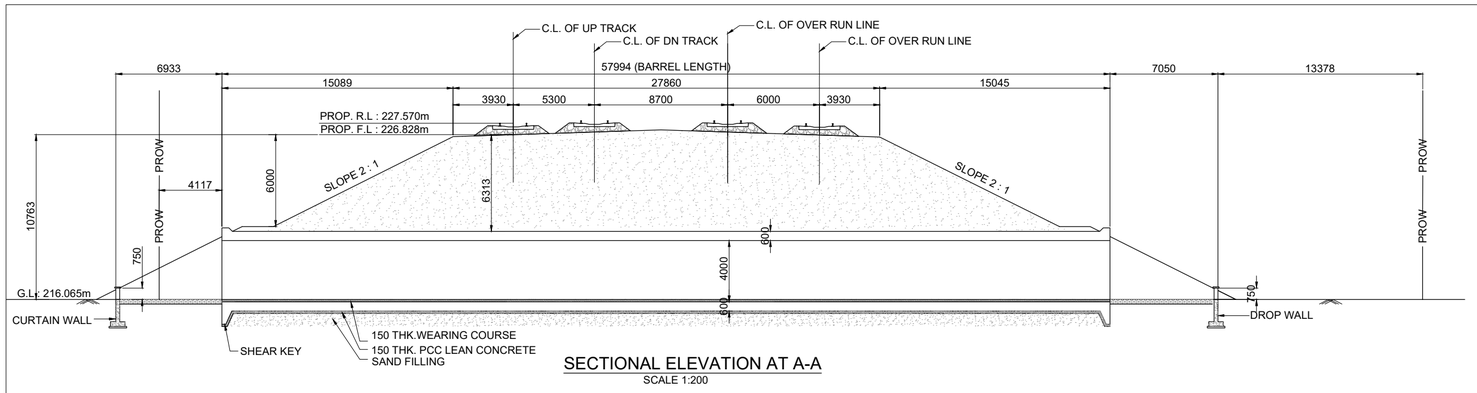
SMEC Smarter with Sustainability

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

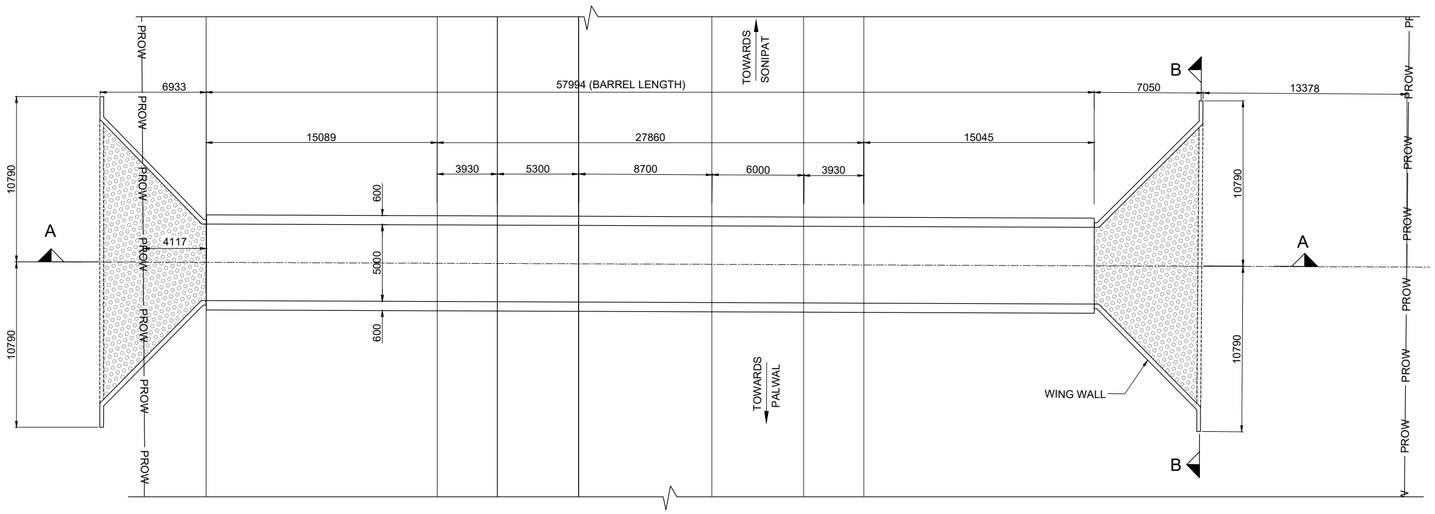
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD + BALANCING CULVERT BRIDGE NO 141/ 141A 1x2x2+1x5x4 RCC BOX AT CH: 57154.991/57167.991

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01141_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTIONAL ELEVATION AT A-A
SCALE 1:200



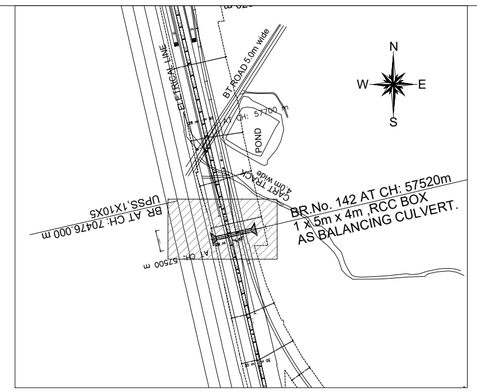
PLAN AT TOP
SCALE 1:200

VIEW AT B-B
SCALE 1:50

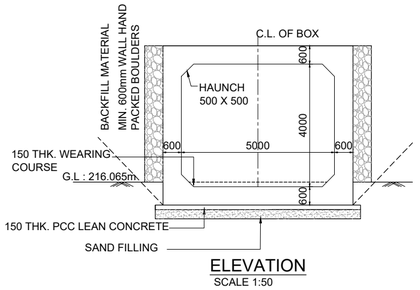
DROP / CURTAIN WALL DETAILS
SCALE 1:50

SHEAR KEY
SCALE 1:50

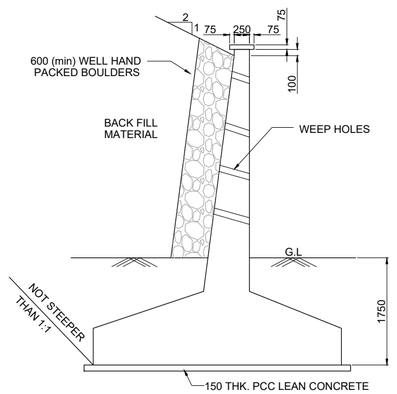
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
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B) TECHNICAL NOTES :

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4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

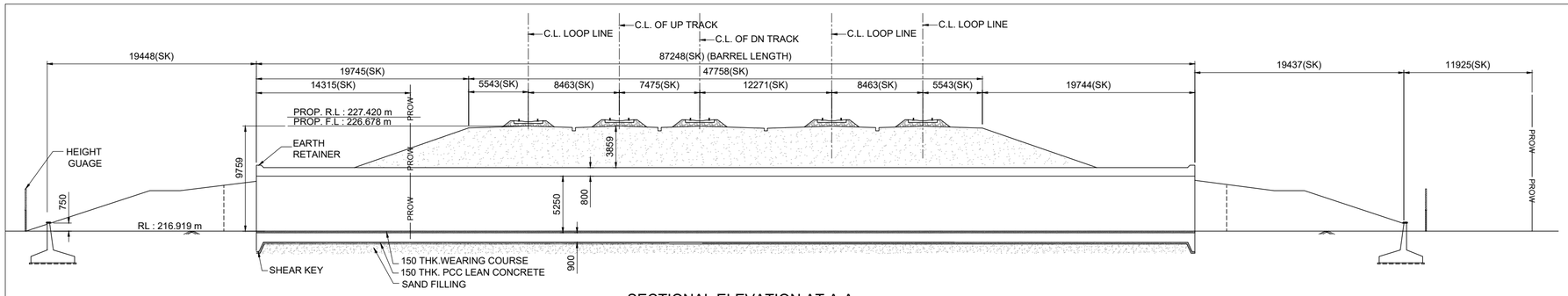
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:-CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO 142 1X5.0X4.0m RCC BOX AT CH.57520

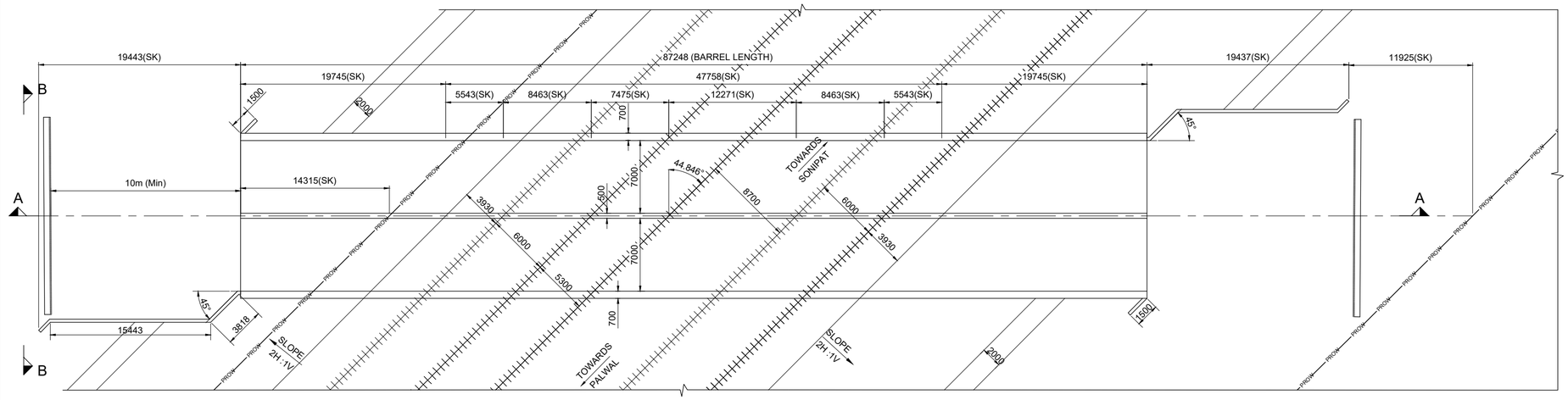
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01142_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



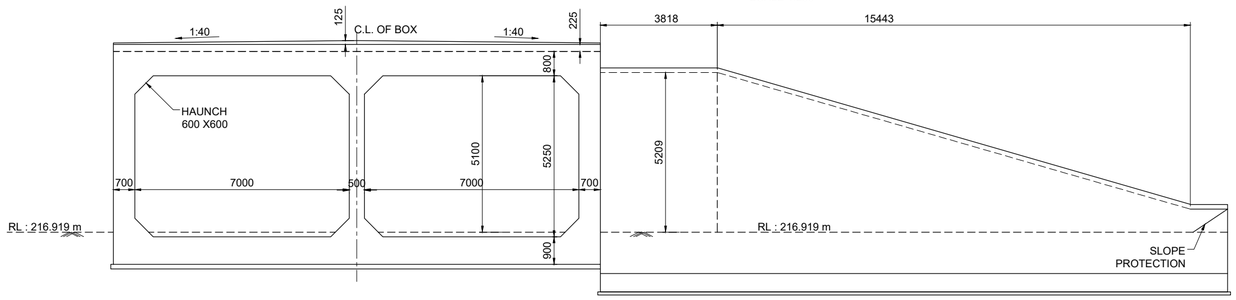
SECTIONAL ELEVATION AT A-A

SCALE 1:250



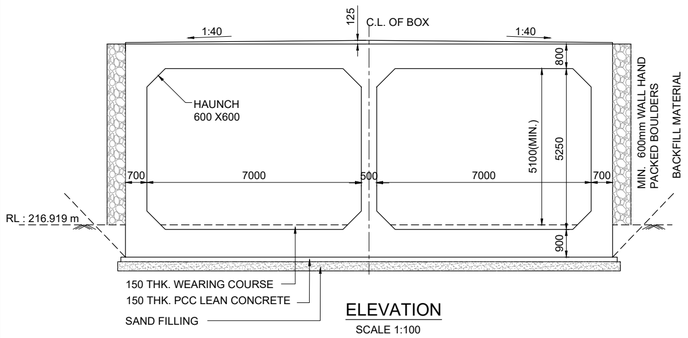
PLAN AT TOP

SCALE 1:250



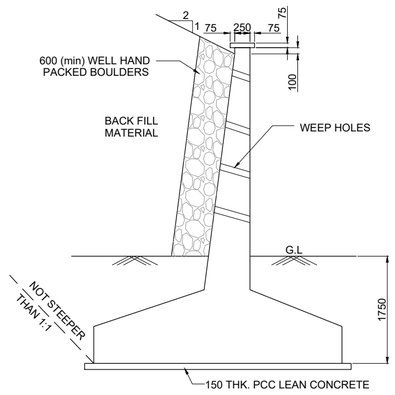
SECTION B-B

SCALE 1:100



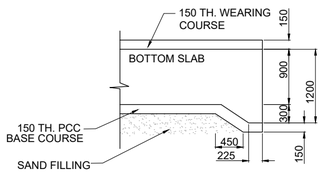
ELEVATION

SCALE 1:100



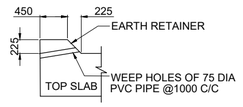
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



SHEAR KEY

SCALE 1:50

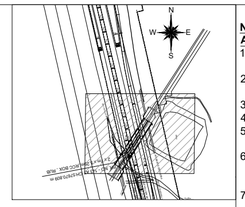


EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL



KEY PLAN

(NOT TO SCALE)

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

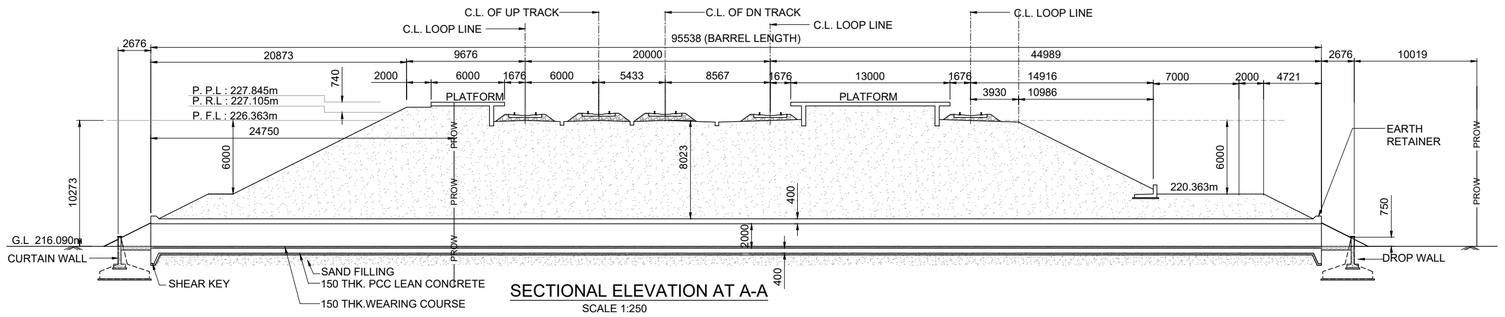
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

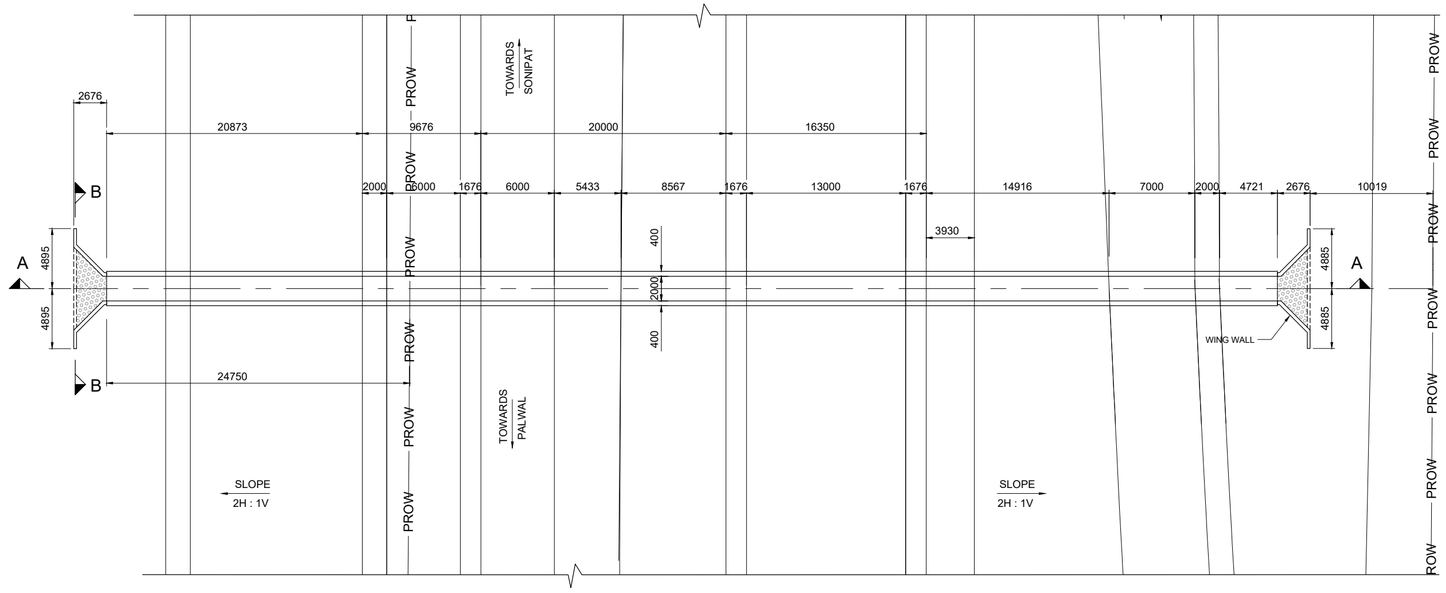
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO 143 SPAN 2.0X7.0X5.25 RCC BOX AT CH: 57670.809

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01143_A1	1 OF 1

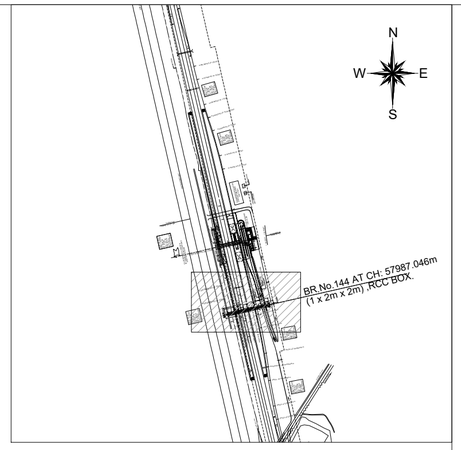
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



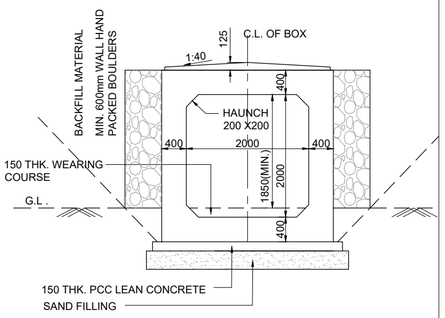
SECTIONAL ELEVATION AT A-A
SCALE 1:250



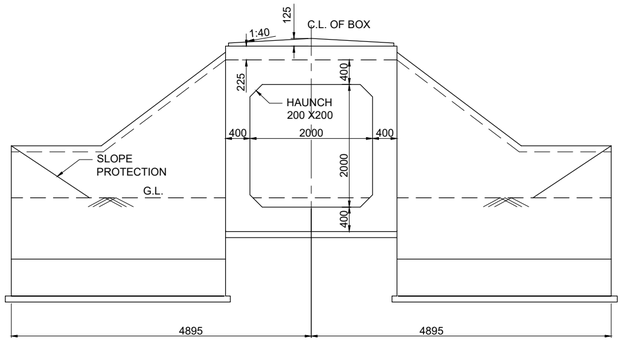
PLAN AT TOP
SCALE 1:250



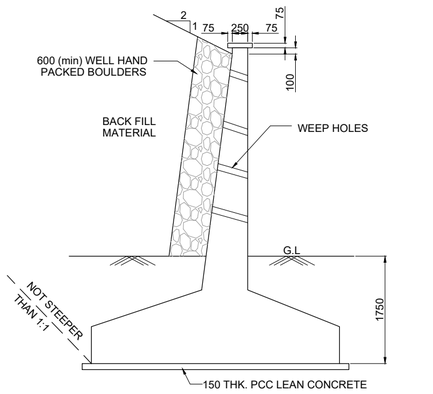
KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50



VIEW AT B-B
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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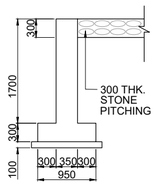
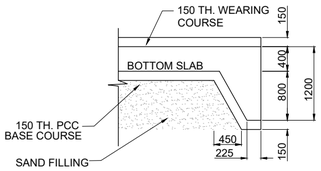
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

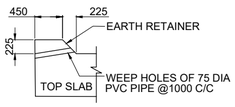
1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

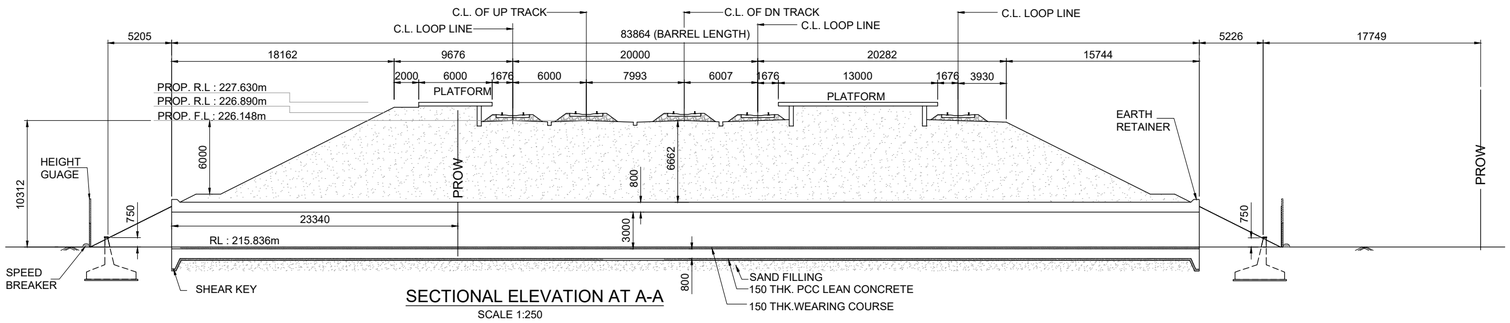
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 144
SPAN 1.0X2.0X2.0 RCC BOX AT CH: 57987.046

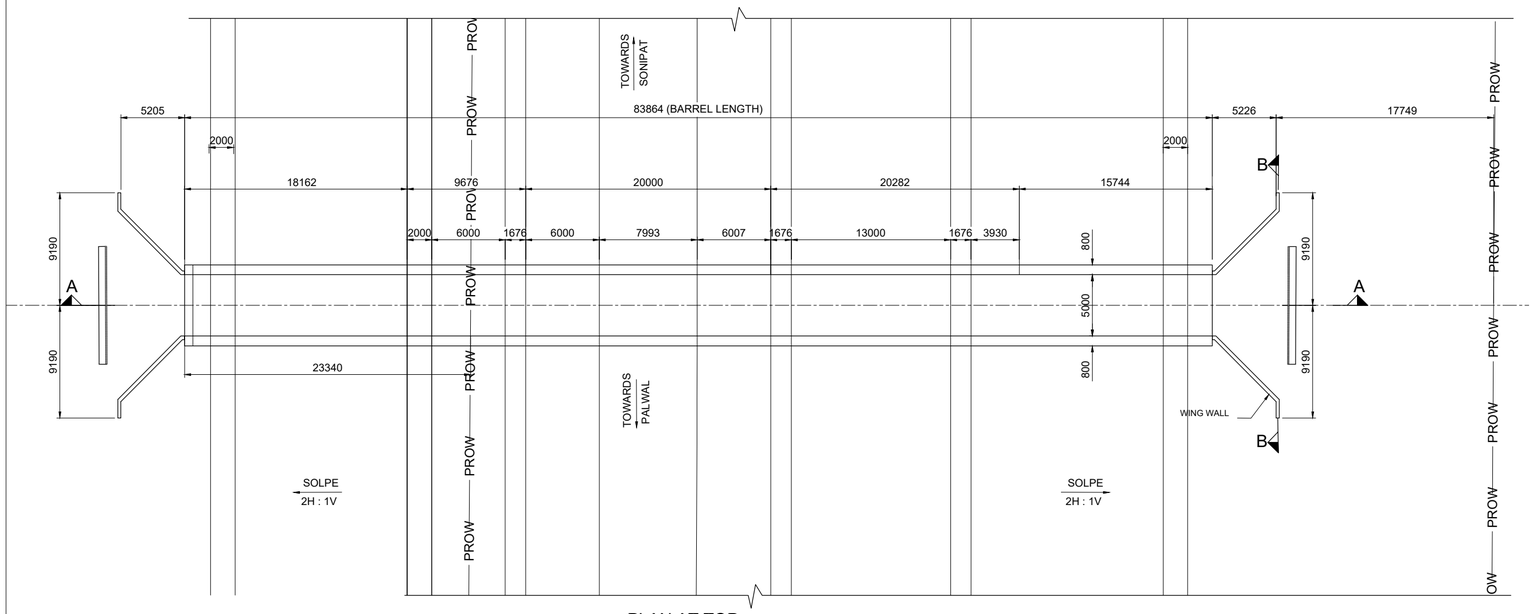
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_01144_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



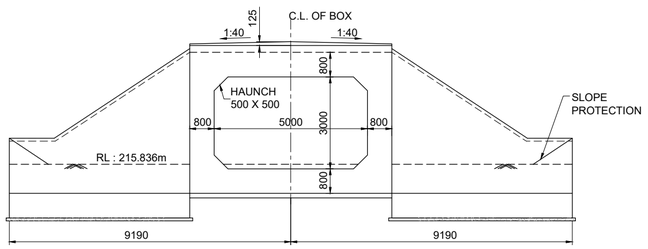
SECTIONAL ELEVATION AT A-A

SCALE 1:250



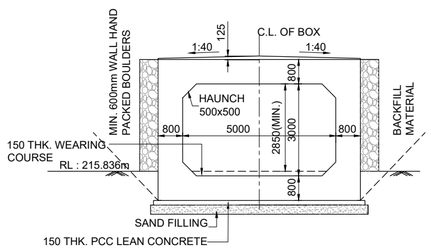
PLAN AT TOP

SCALE 1:250



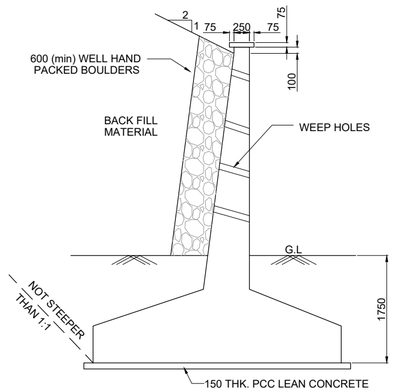
SECTION B-B

SCALE 1:100



ELEVATION

SCALE 1:100

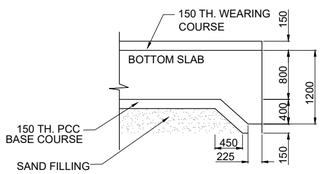


TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

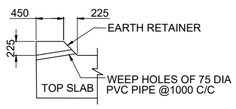
LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL



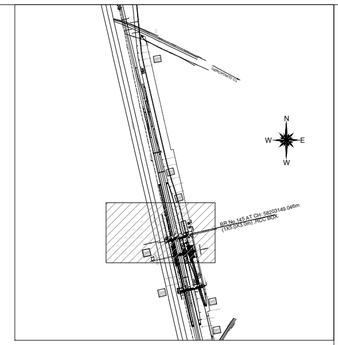
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50



KEY PLAN

SCALE 1:NTS

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
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   (ii) IRS CONCRETE BRIDGE CODE
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
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14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
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16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
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PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

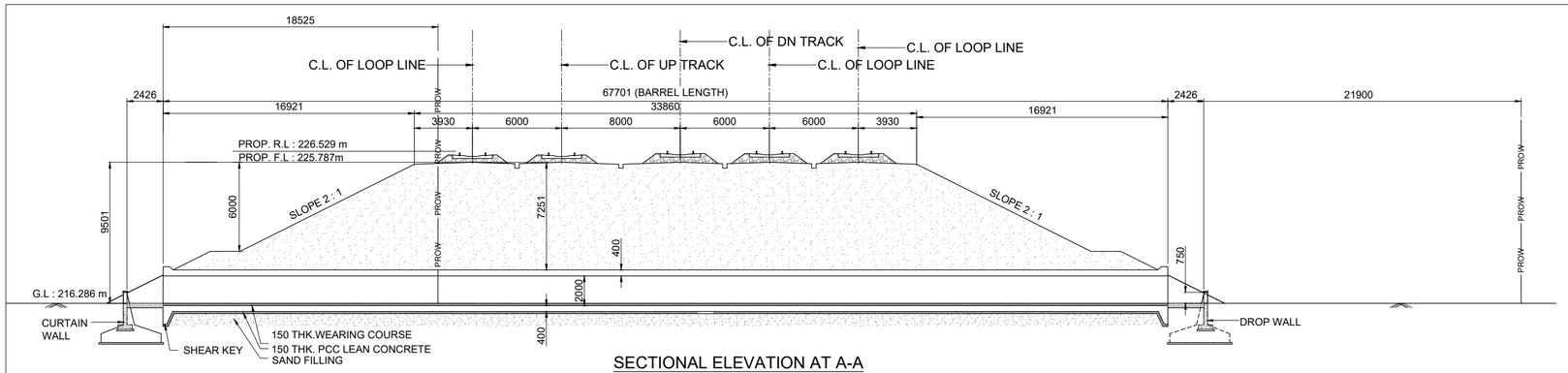
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

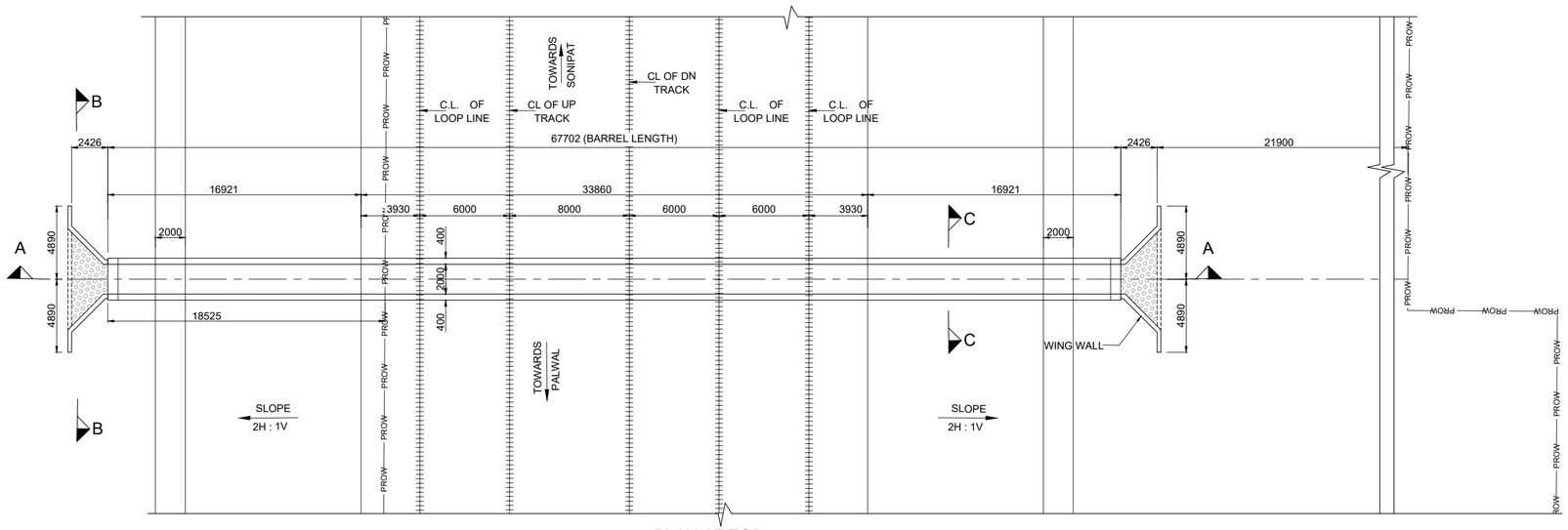
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 145
1X5.0X3.0m RCC BOX AT CH. 58203.149m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01145_A1	1 OF 1

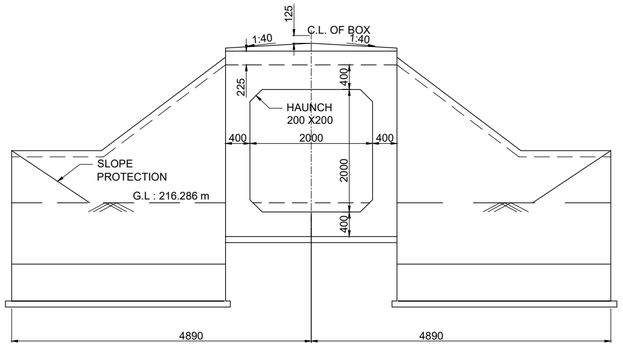
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



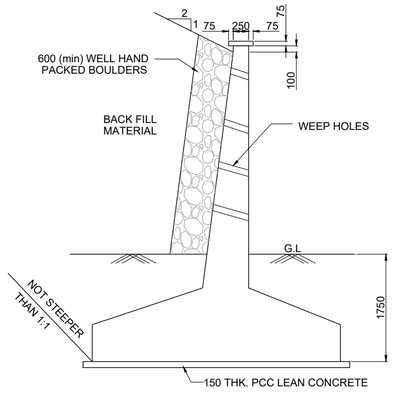
SECTIONAL ELEVATION AT A-A
SCALE 1:200



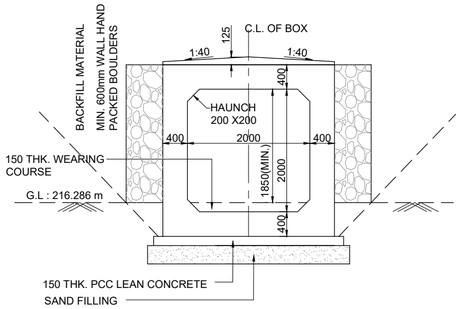
PLAN AT TOP
SCALE 1:200



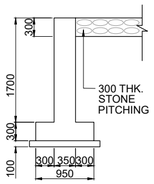
VIEW AT B-B
SCALE 1:50



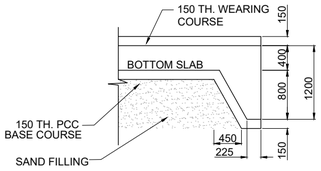
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



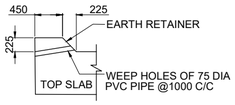
SECTION
SCALE 1:50



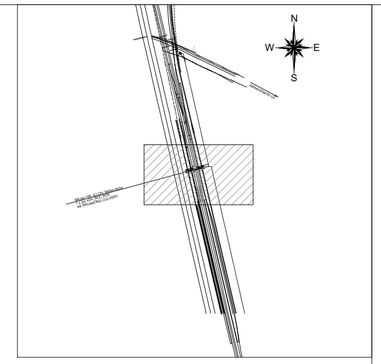
DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE 1:NTS

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

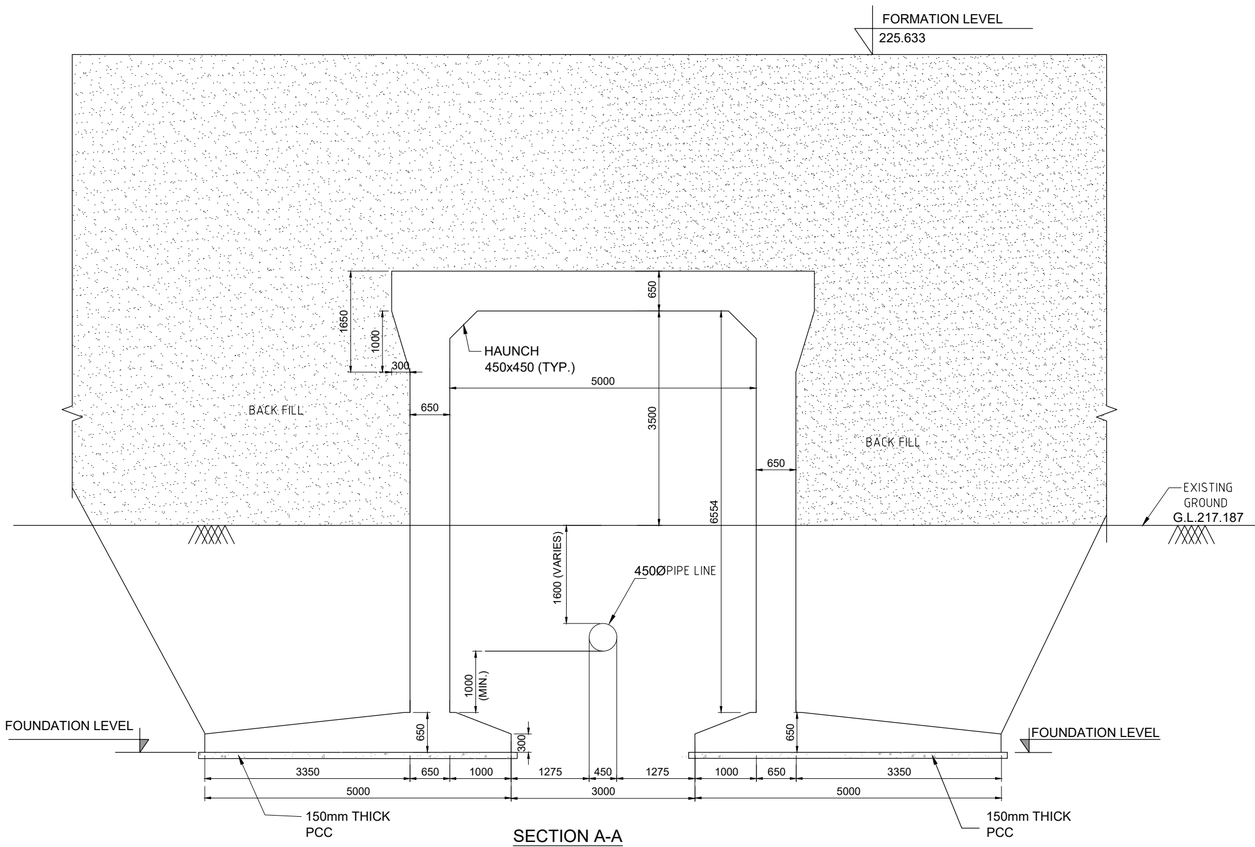
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO 146
1X2.0X2.0m RCC BOX AT CH. 58564.993m

DRG. NO. GC-HRIDC-C23-DRW-BRD-GAD-01146_A1

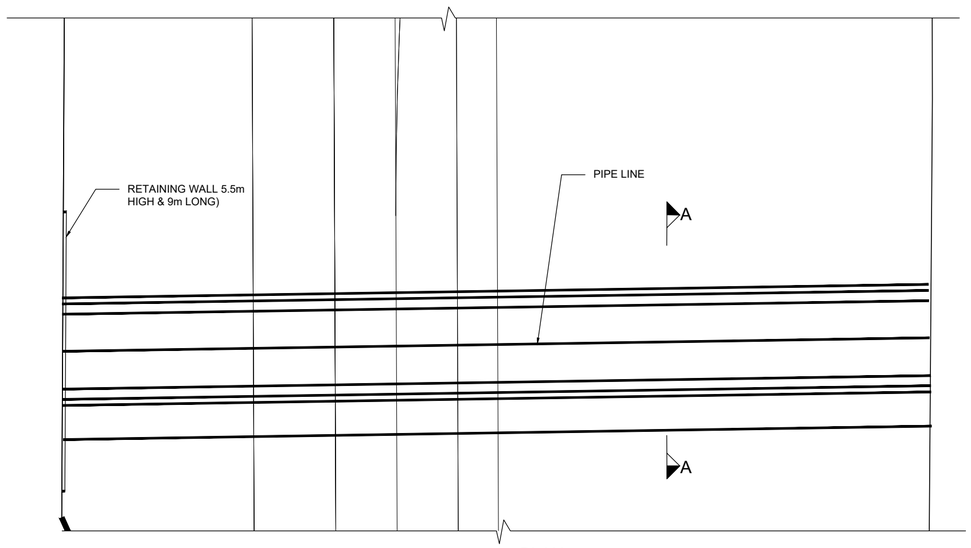
SHEET NO. 1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



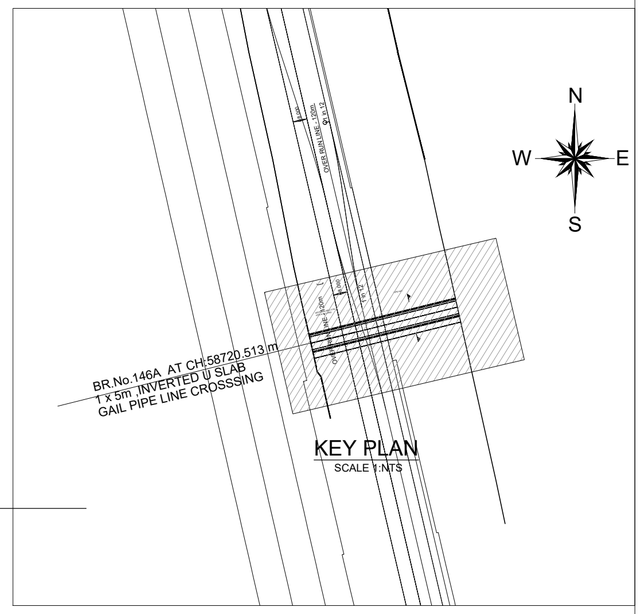
SECTION A-A

SCALE 1:50



PLAN

SCALE 1:300



NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
3. BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING.
4. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSESIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BRIDGE AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF STRUCTURE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

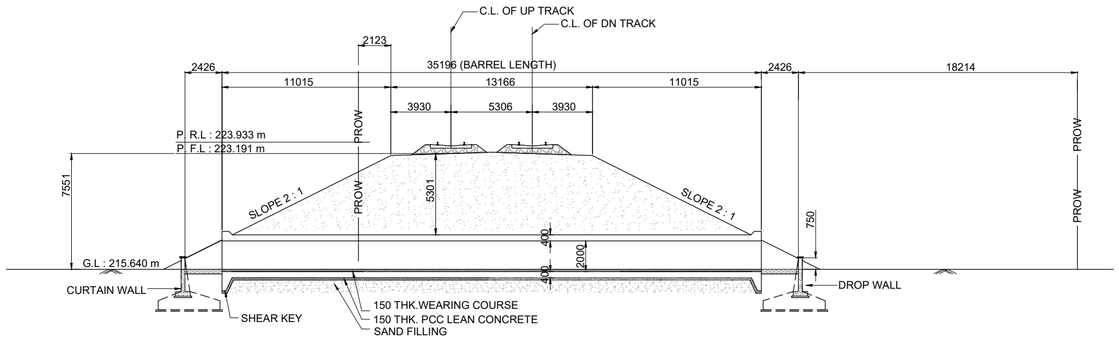
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.146A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 58720.513m

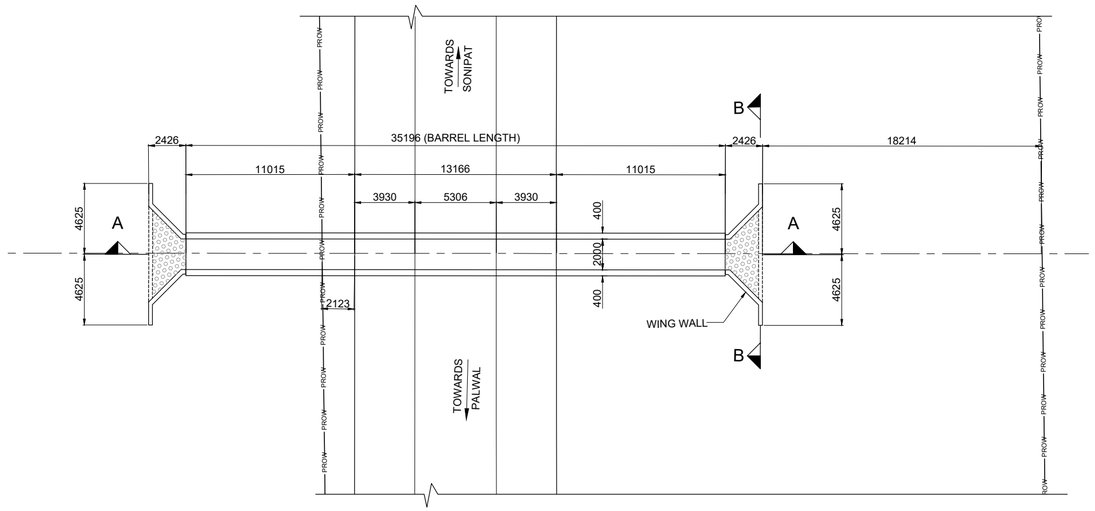
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01146_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



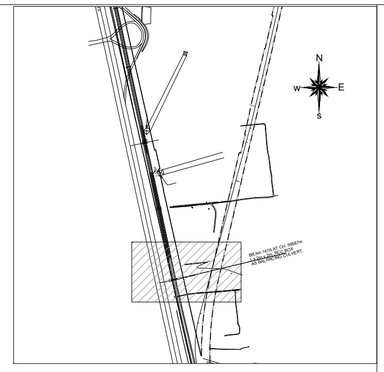
SECTIONAL ELEVATION AT A-A

SCALE 1:200



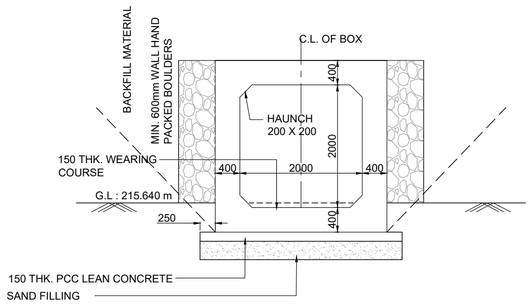
PLAN AT TOP

SCALE 1:200



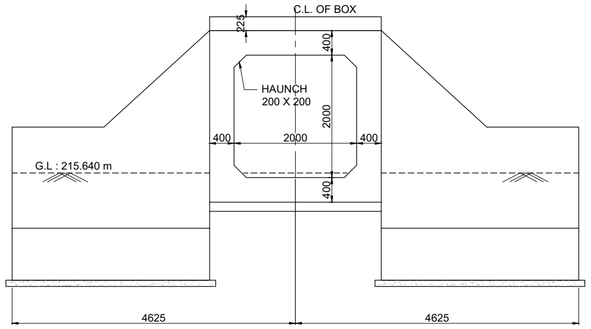
KEY PLAN

SCALE 1:NTS



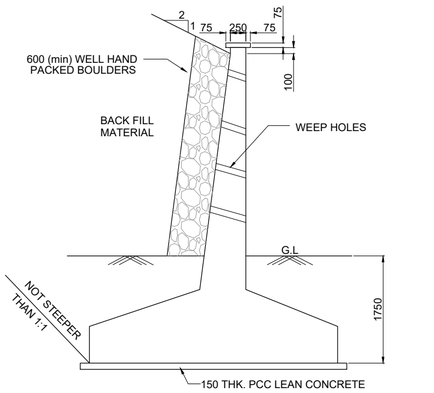
ELEVATION

SCALE 1:50



VIEW AT B-B

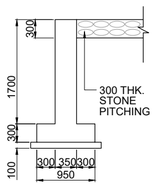
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

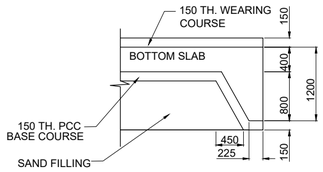
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



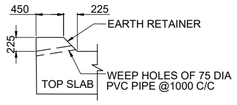
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, SUITABLE SLOPE TO BE PROVIDE ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
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   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

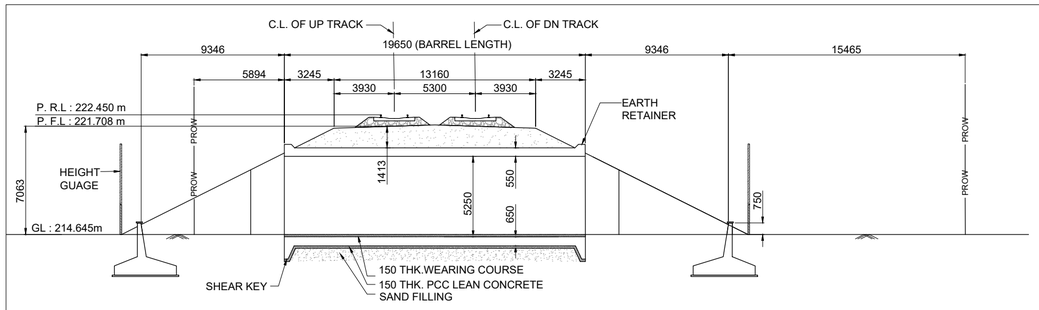
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

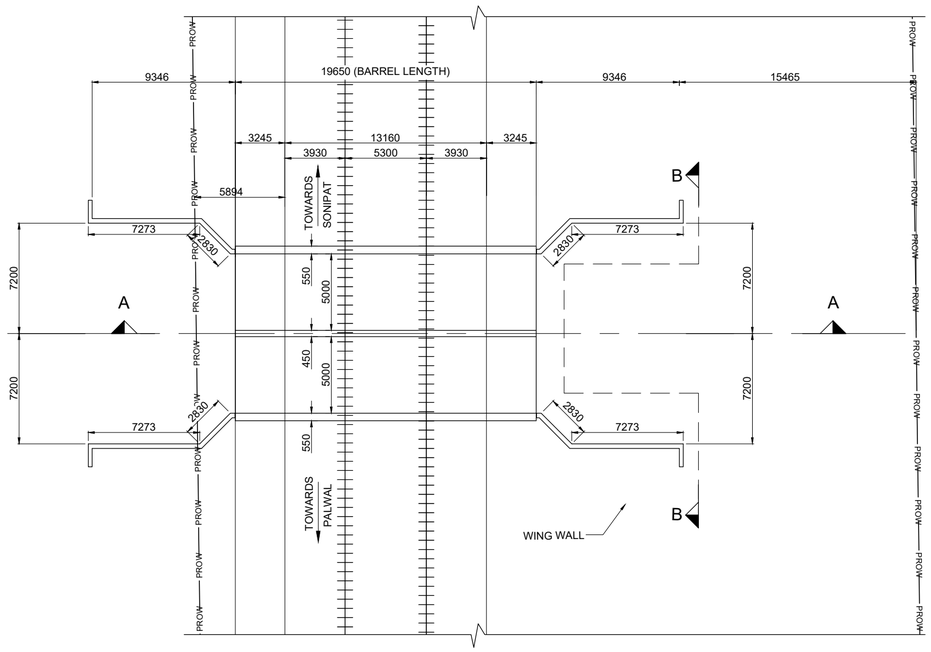
TITLE:-GENERAL ARRANGEMENT DRAWING
FOR BALANCING CULVERT BRIDGE NO 147A
1X2.0X2.0m RCC BOX AT CH. 59587.000m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRW-GAD-01147A_A0	1 OF 1

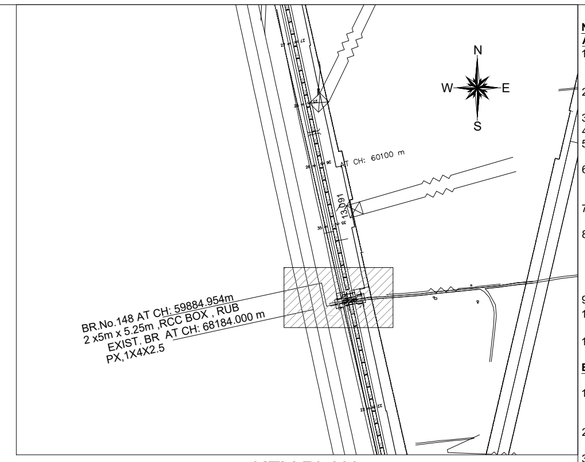
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



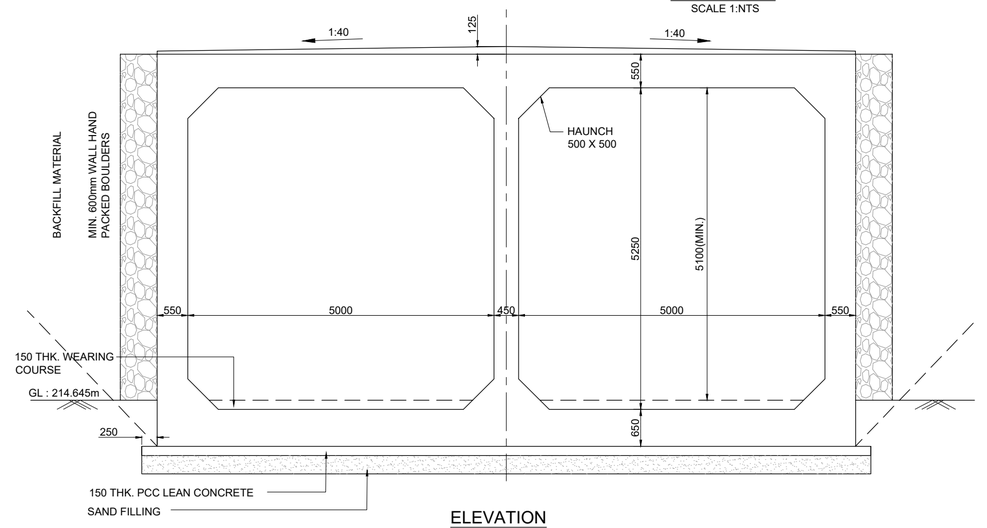
SECTIONAL ELEVATION AT A-A
SCALE 1:200



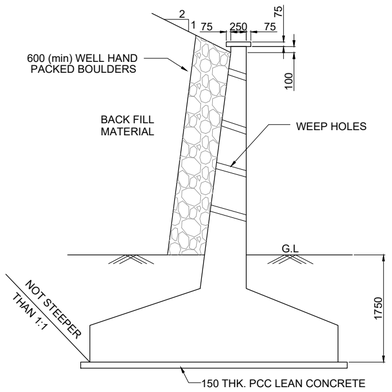
PLAN AT TOP
SCALE 1:200



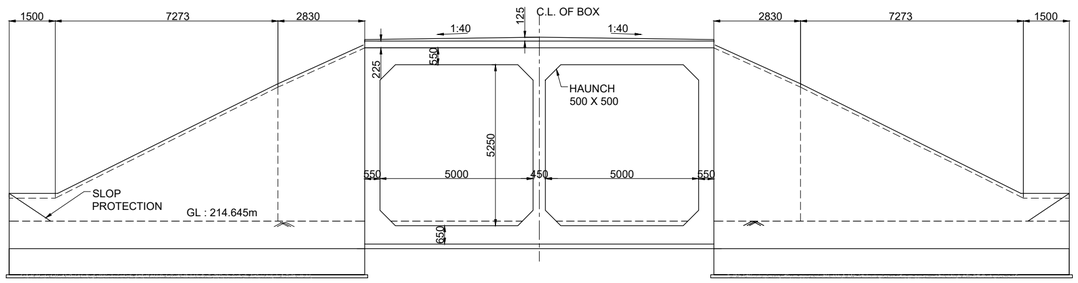
KEY PLAN
SCALE 1:NTS



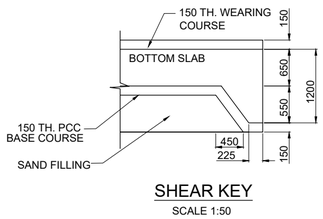
ELEVATION
SCALE 1:50



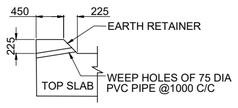
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



VIEW AT B-B
SCALE 1:100



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

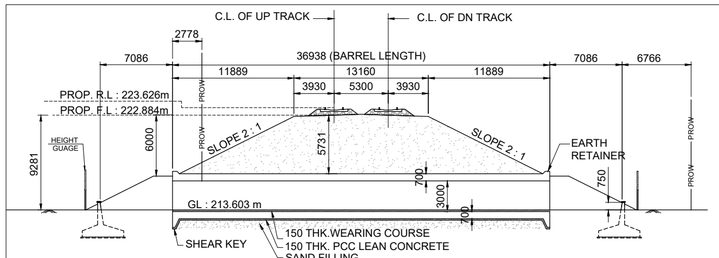
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO 148 SPAN
2.0X5.0X5.25 RCC BOX AT CH.59884.954

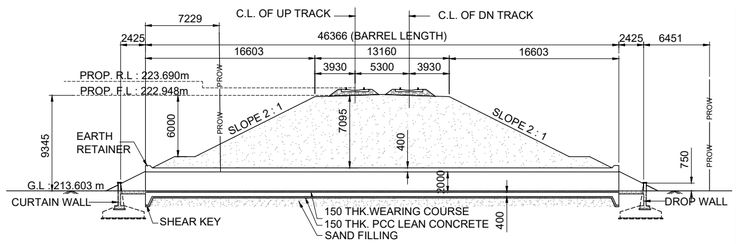
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01148_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



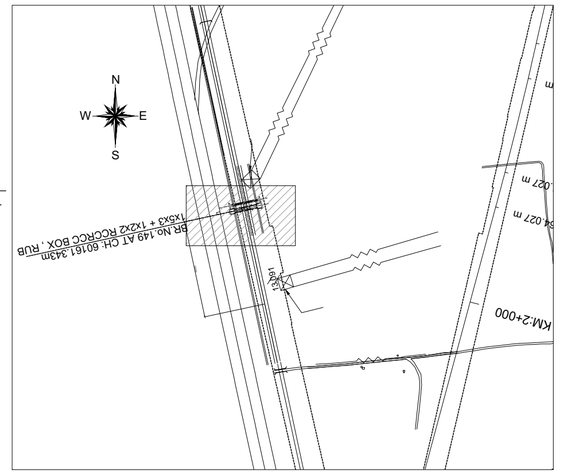
SECTIONAL ELEVATION AT A-A

SCALE 1:300



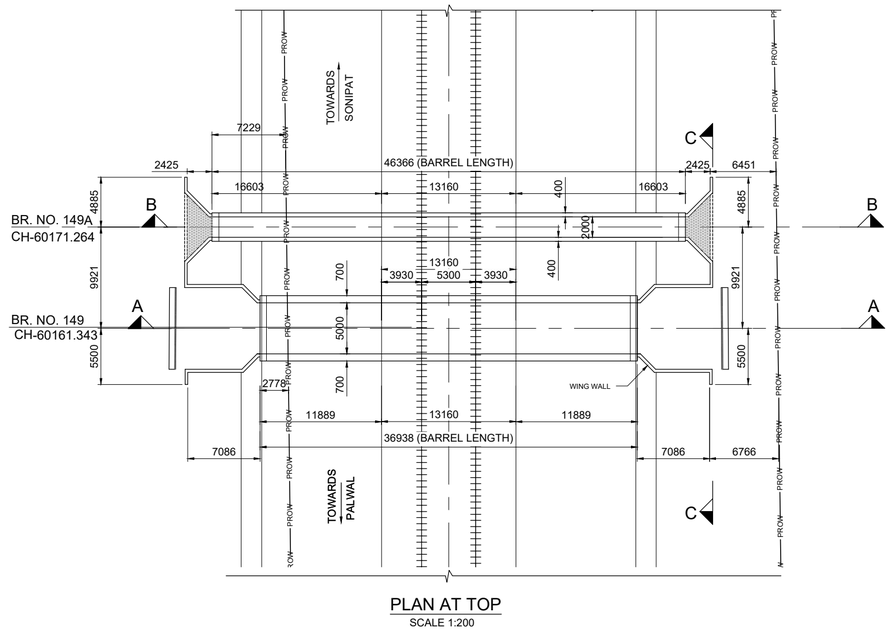
SECTIONAL ELEVATION AT B-B

SCALE 1:300



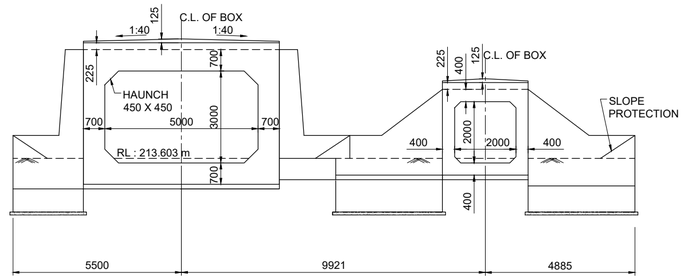
KEY PLAN

SCALE 1:NTS



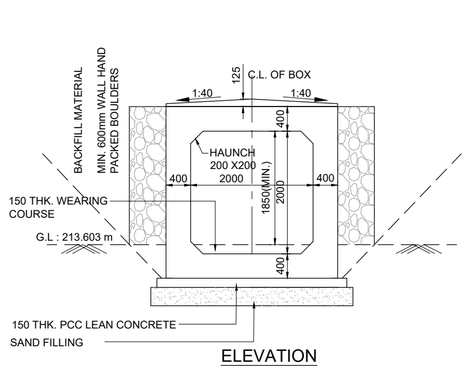
PLAN AT TOP

SCALE 1:200



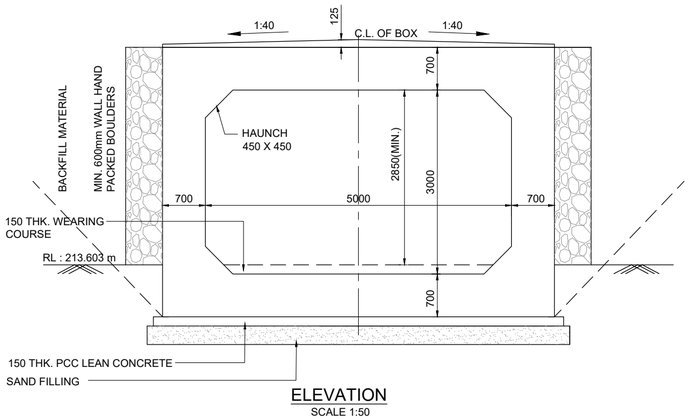
VIEW AT C-C

SCALE 1:100



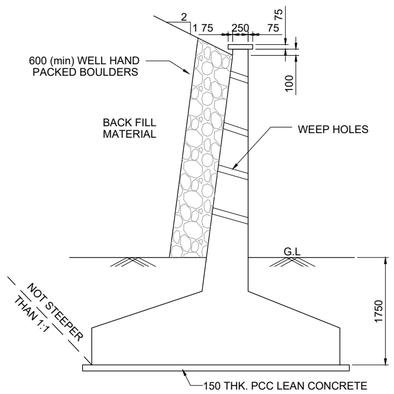
ELEVATION

SCALE 1:50



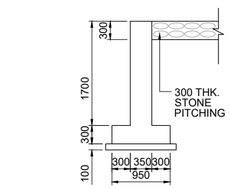
ELEVATION

SCALE 1:50



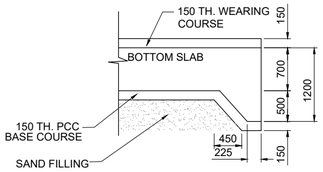
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



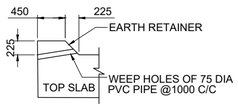
DROP / CURTAIN WALL DETAILS

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
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B) TECHNICAL NOTES :

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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
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16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

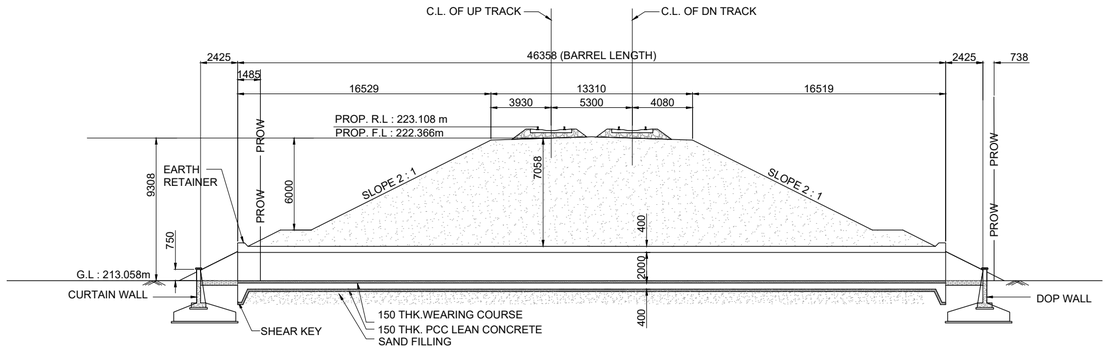
RITES THE INFRASTRUCTURE PEOPLE

SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD+BALANCING CULVERT BRIDGE NO 149/149A 1x5x3 + 1x2x2 RCC BOX AT CH. 60161.343m/60171.264m

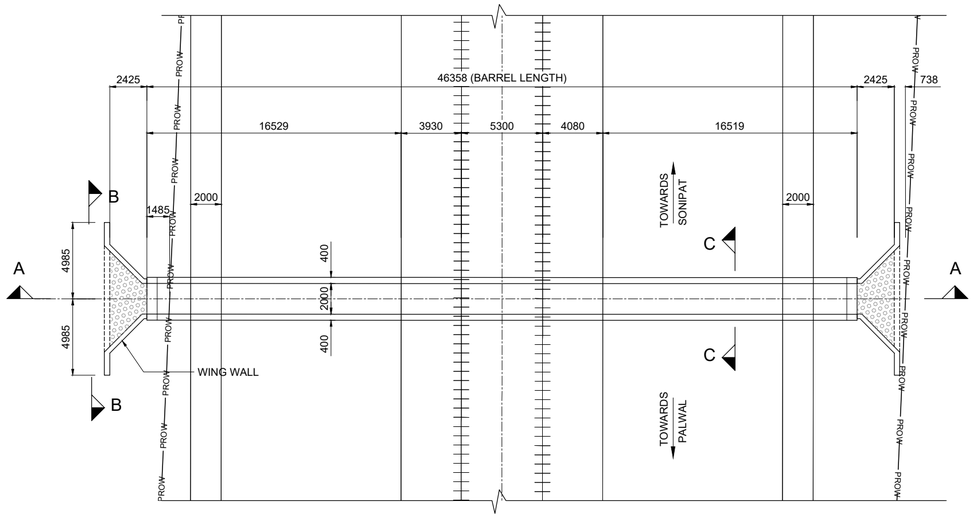
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01149_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



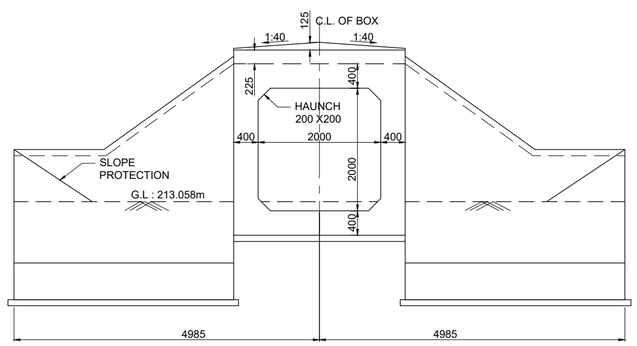
SECTIONAL ELEVATION AT A-A

SCALE 1:200



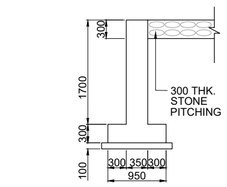
PLAN AT TOP

SCALE 1:200



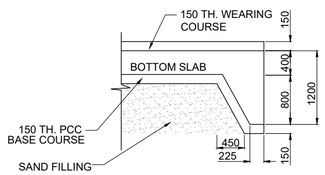
VIEW AT B-B

SCALE 1:50



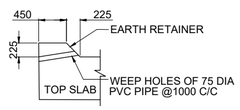
DROP / CURTAIN WALL DETAILS

SCALE 1:50



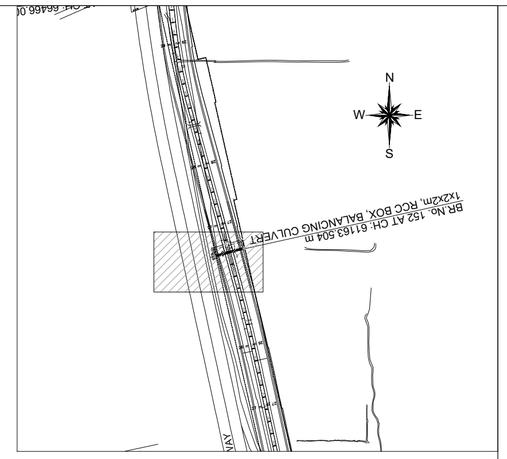
SHEAR KEY

SCALE 1:50



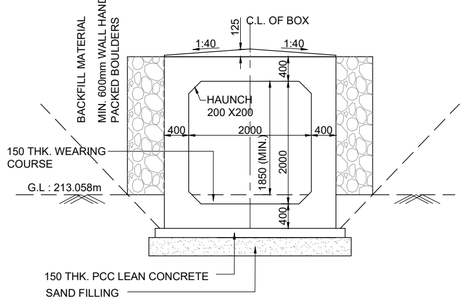
EARTH RETAINER

SCALE 1:50



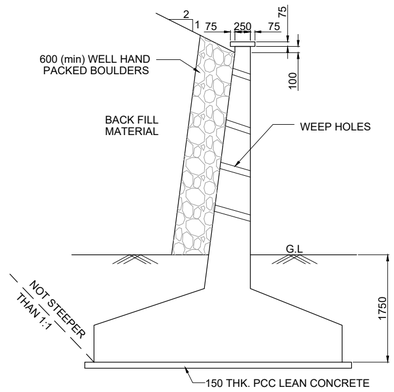
KEY PLAN

SCALE 1:NTS



ELEVATION

SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER, 50mm PCC M-20 WITH SUITABLE SLOPE TO BE USED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE. GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT BRIDGE NO 154
SPAN 1.0X2.0X2.0 RCC BOX AT CH.61163.504

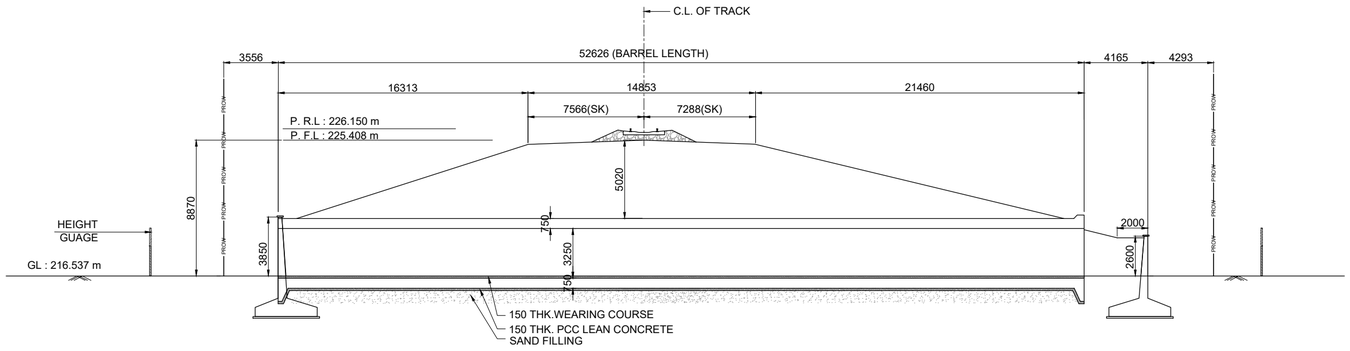
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01154_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

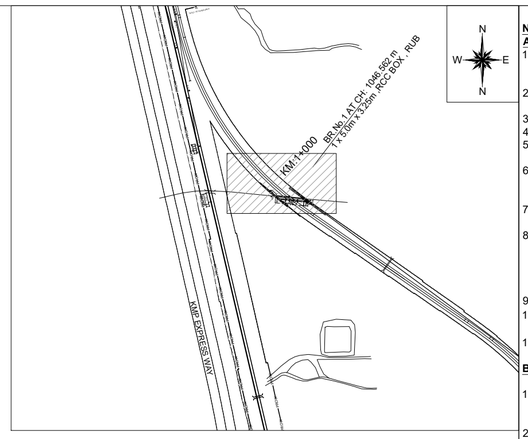
4 Minor Bridges

4.1.2 Connecting Line

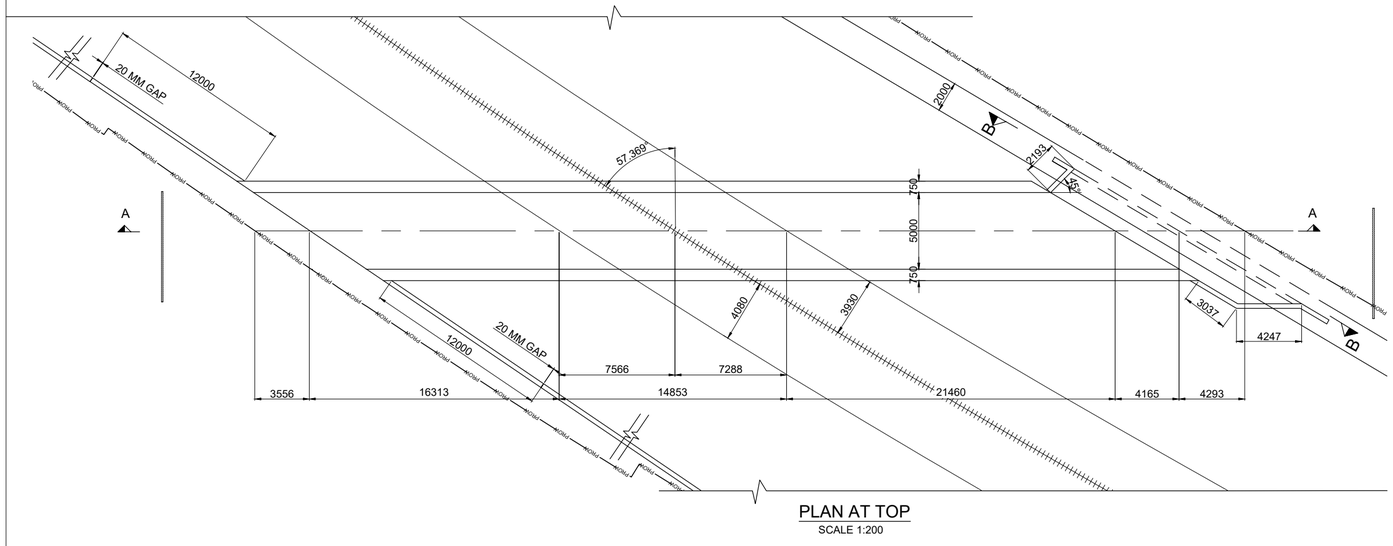
A. New Patli to Patli



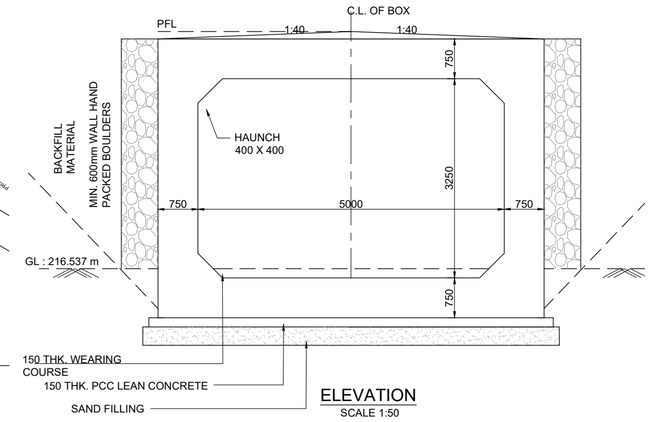
SECTIONAL ELEVATION AT A-A
SCALE 1:200



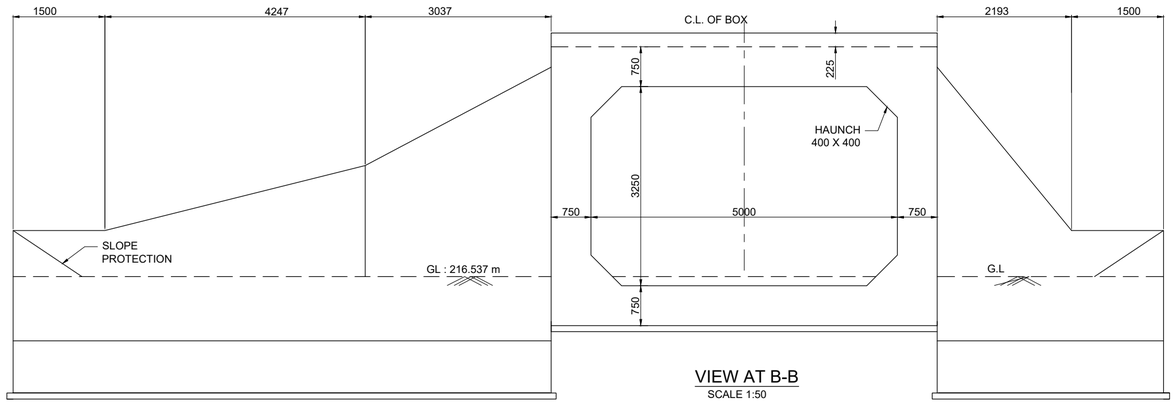
KEY PLAN
SCALE 1:NTS



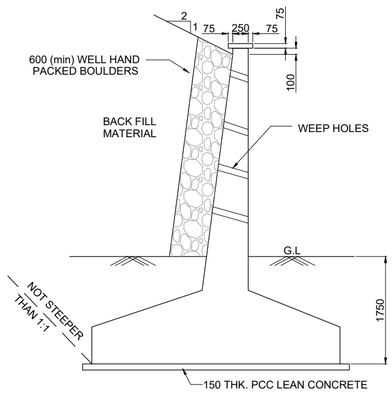
PLAN AT TOP
SCALE 1:200



ELEVATION
SCALE 1:50

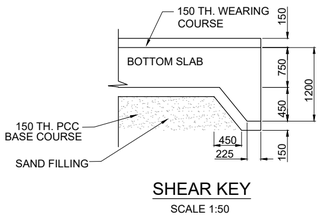


VIEW AT B-B
SCALE 1:50

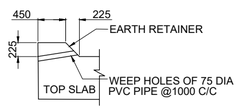


WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
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6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER,SUITABLE SLOPE TO BE PRPPOSED ON TOP OF BOX SLAB.
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7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:

TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

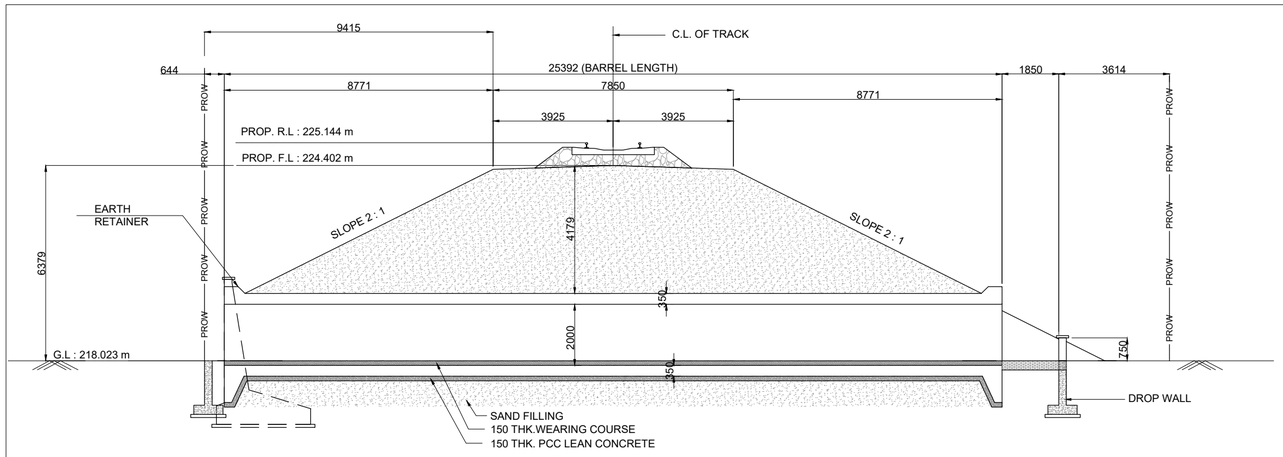
RITES THE INFRASTRUCTURE PEOPLE

SMEC

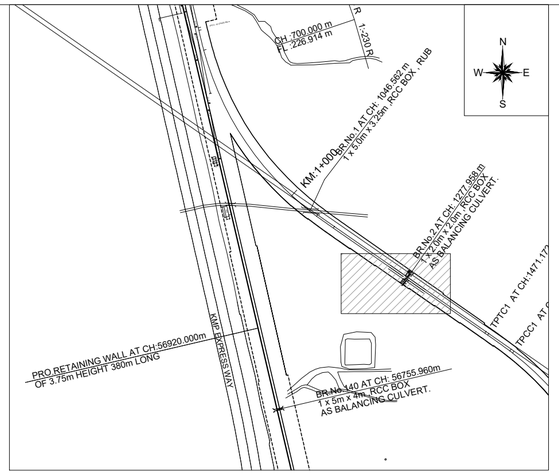
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.1 - 1X5.0X3.25m RCC BOX AT CH. 1046.562m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03001_A1	1 OF 1

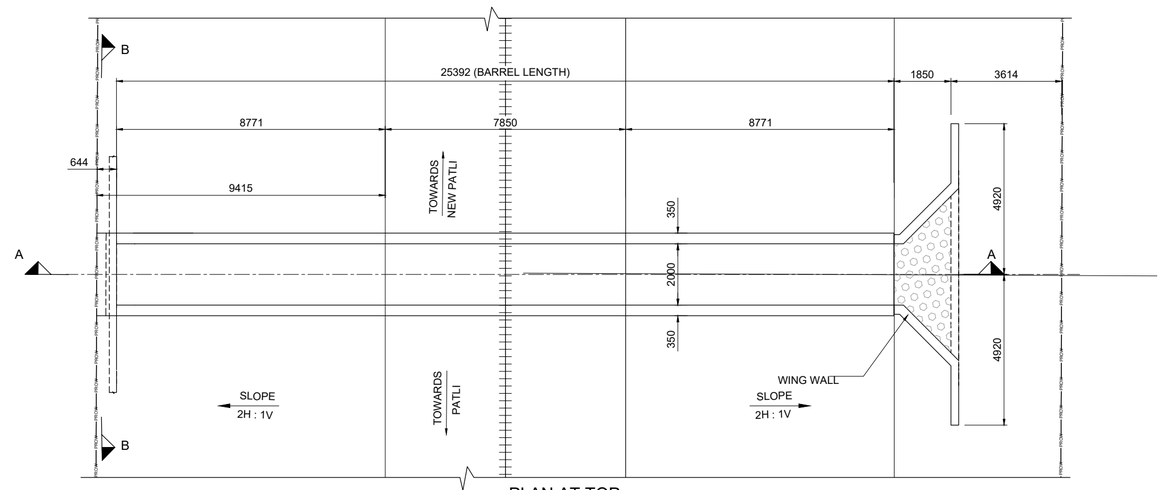
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



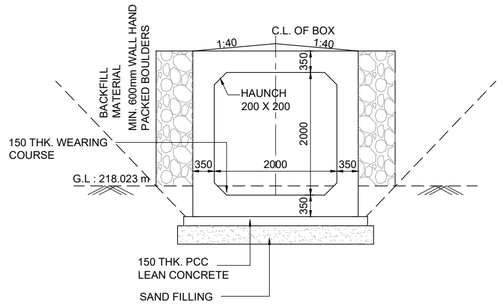
SECTIONAL ELEVATION AT A-A
SCALE 1:100



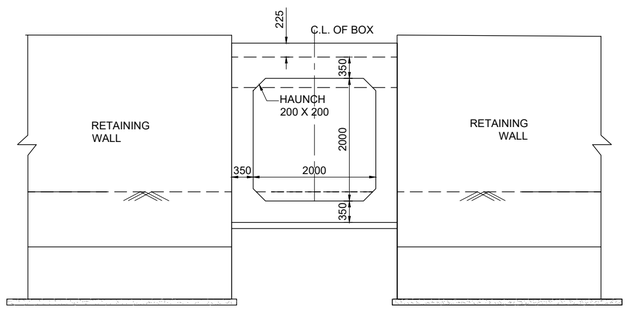
KEY PLAN
SCALE 1:NTS



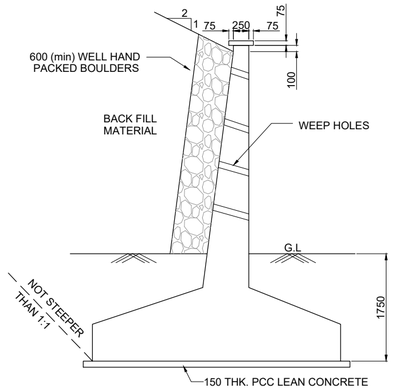
PLAN AT TOP
SCALE 1:100



ELEVATION
SCALE 1:50

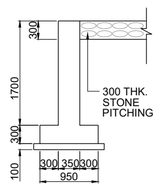


VIEW B-B
SCALE 1:50

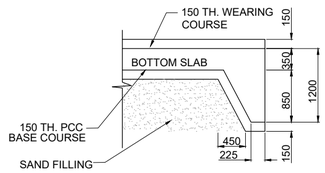


WING WALL (TO BE DESIGN AS PER SITE CONDITION)

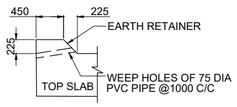
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



EARTH RETAINER
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT CHINAGE & LEVELS WHICH ARE IN METERS. NO DIMENSIONS SHALL NOT BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
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13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
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16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

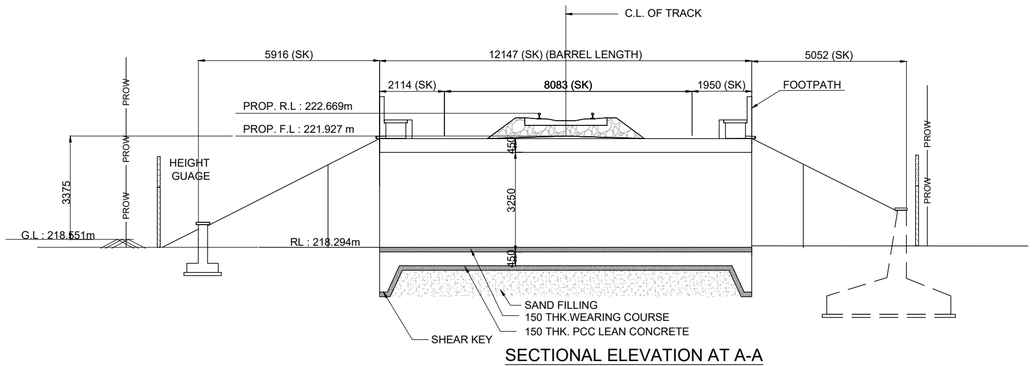
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR BALANCING CULVERT NO.2 -1X2.0X2.0m RCC BOX AT CH. 1277.958m (CONNECTING LINE NEW PATLI TO PATLI)

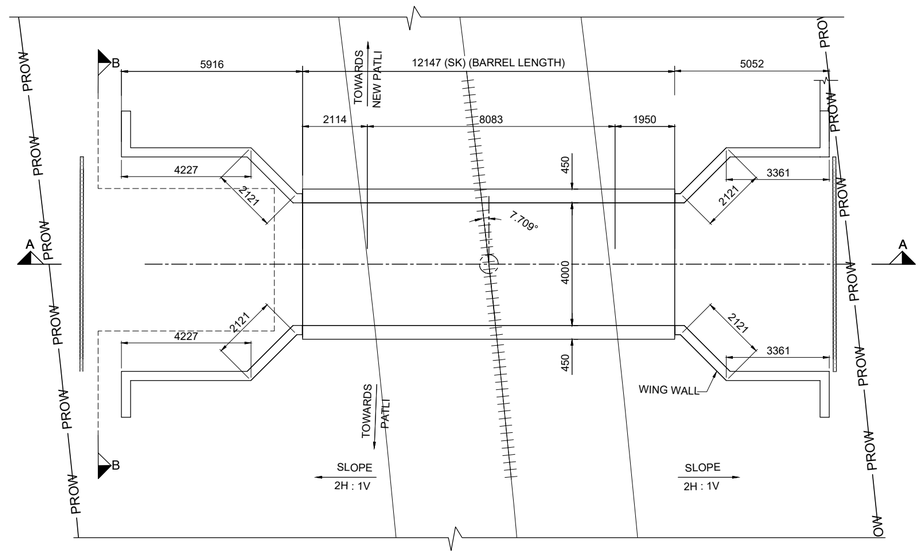
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03002_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



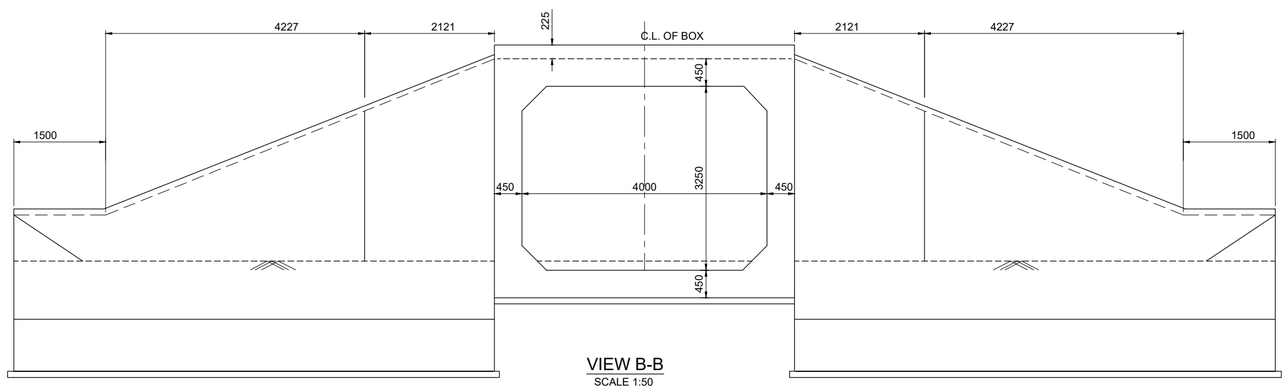
SECTIONAL ELEVATION AT A-A

SCALE 1:100



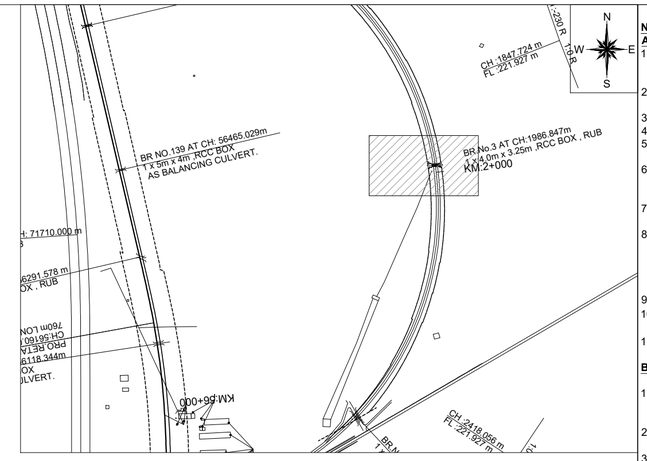
PLAN AT TOP

SCALE 1:100



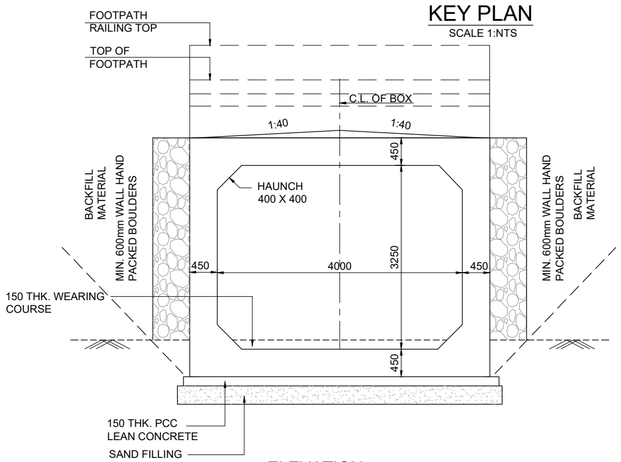
VIEW B-B

SCALE 1:50



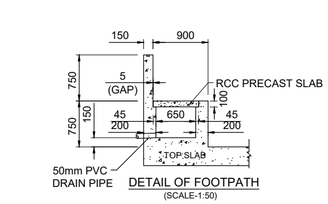
KEY PLAN

SCALE 1:NTS



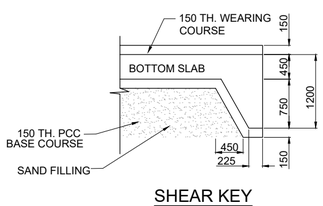
ELEVATION

SCALE 1:50



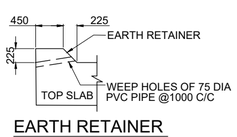
DETAIL OF FOOTPATH

(SCALE-1:50)



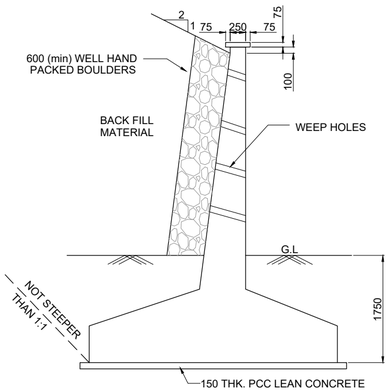
SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT CHAINAGE & LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM THE DRAWING. ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
17. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE

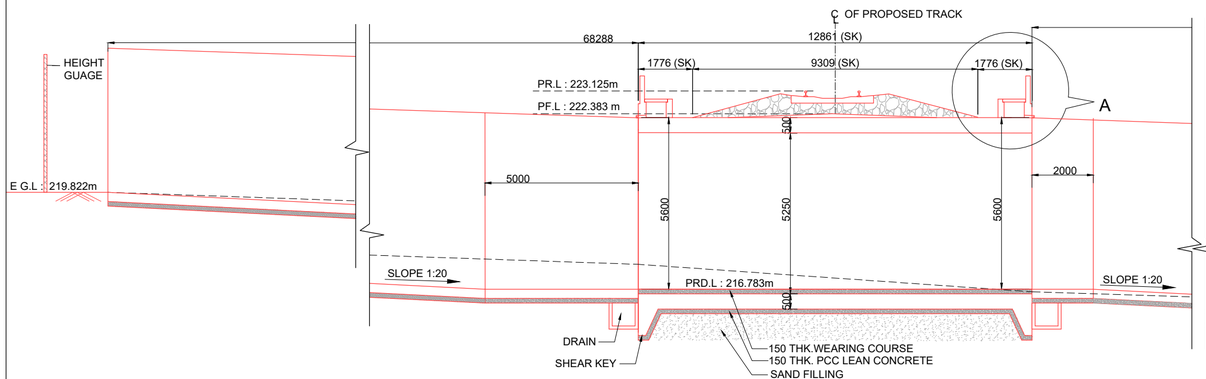
SMEC

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.3 - 1X4.0X3.25m RCC BOX AT CH. 1986.847m (CONNECTING LINE NEW PATLI TO PATLI)

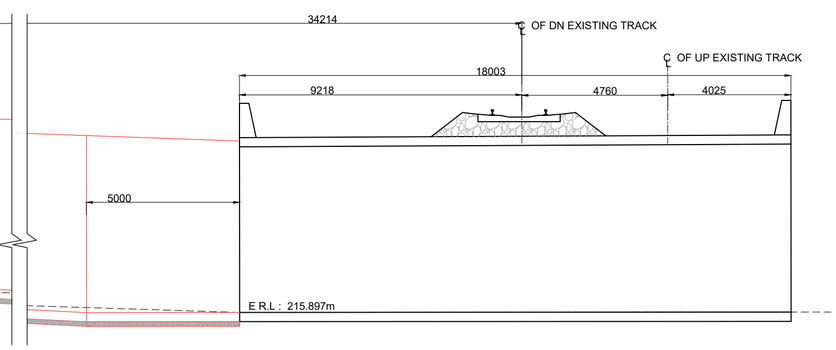
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03003_A1	1 OF 1

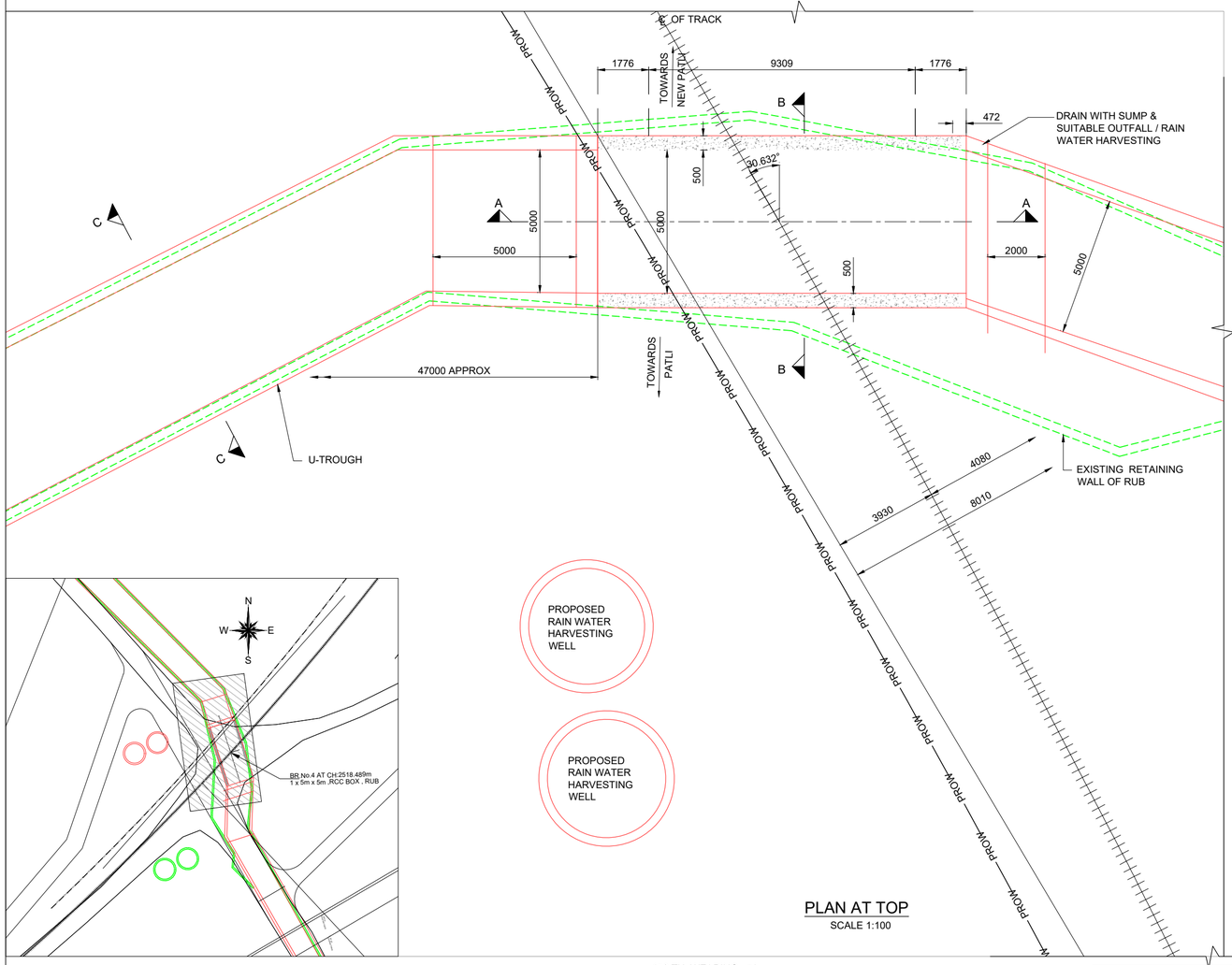
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTIONAL ELEVATION AT A-A

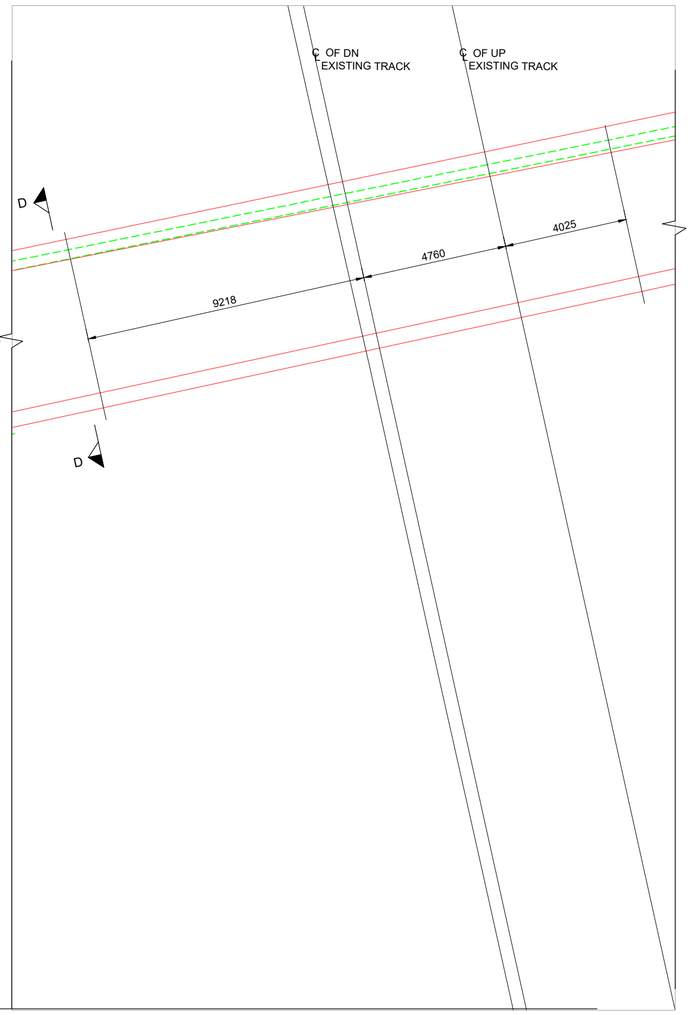
SCALE 1:100





PLAN AT TOP

SCALE 1:100

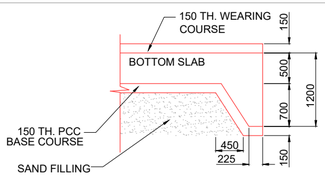


KEY PLAN

SCALE 1:NTS

PROPOSED RAIN WATER HARVESTING WELL

PROPOSED RAIN WATER HARVESTING WELL



SHEAR KEY

SCALE 1:50

LEGEND	
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
PRDL	PROPOSED ROAD LEVEL
ERL	EXISTING ROAD LEVEL
EGL	EXISTING GROUND LEVEL
———	PROPOSED
- - - -	DISMANTEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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8. EXPOSURE CONDITION- MODERATE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
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    GRADE OF CONCRETE :
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14. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.
15. SPEED BREAKER SHOULD BE PROVIDED ON EITHER APPROACH OF RUB AT A DISTANCE OF 20M FROM THE BRIDGE COVERING FULL WIDTH OF THE ROAD INCLUDE BERMS.
16. RETAINING WALL ALONG THE ROAD SHALL BE MIN 300 ABOVE GROUND LEVEL.NO WEEP HOLE SHALL BE PROVIDED IN RETAINING WALL.
17. DRAIN WITH SUMP & SUITABLE OUTFALL SHALL BE PROVIDED FOR PROPER DRAINAGE. HUMP SHALL BE PROVIDED AT BOTH ENDS OF THE RAMP.
18. SHED SHALL BE PROVIDED OVER THE RAMP.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

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CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

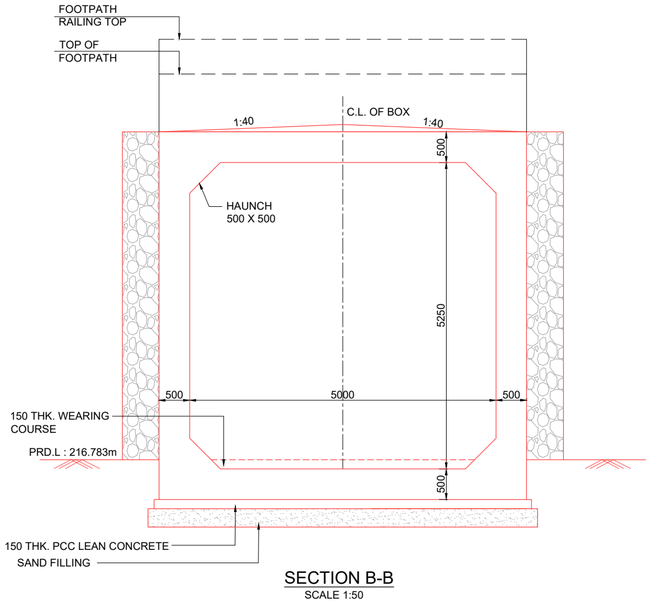
RITES THE INFRASTRUCTURE PEOPLE

SMEC

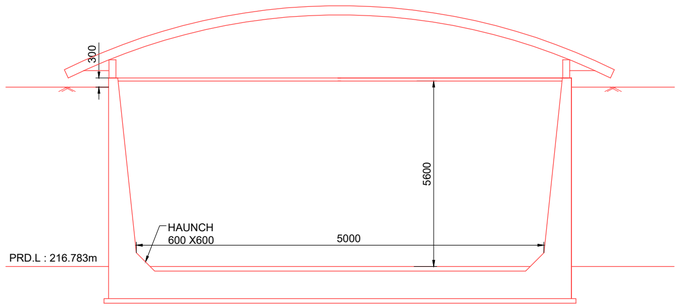
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.4 - 1X5.0X5.25m RCC BOX AT CH. 2518.489m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03004_A1	1 OF 2

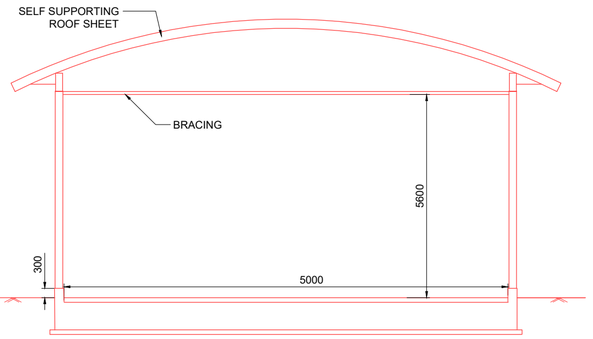
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



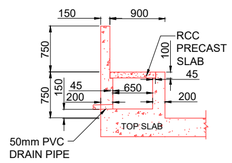
SECTION B-B
SCALE 1:50



SECTION D-D
NTS
COVER SHED ON APPROACH ROAD



SECTION C-C
NTS
COVER SHED ON APPROACH ROAD



DETAIL OF A
(SCALE-1:50)
(FOOTPATH)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
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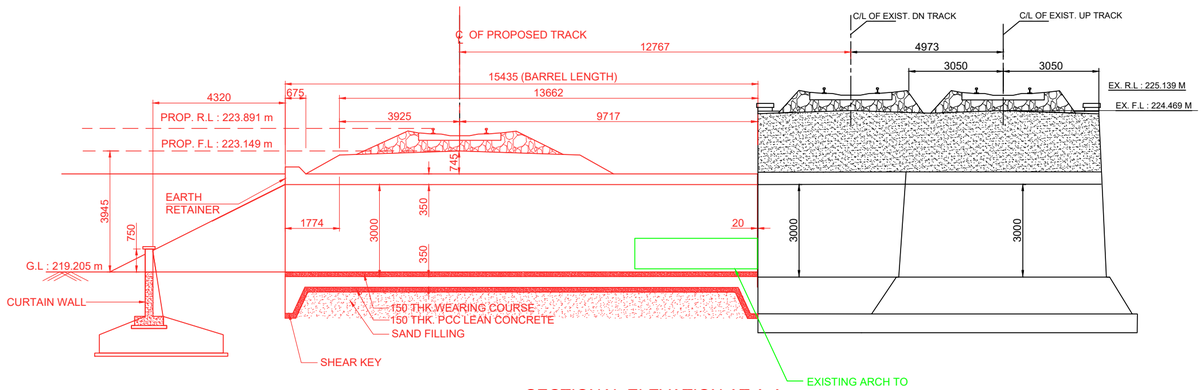
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

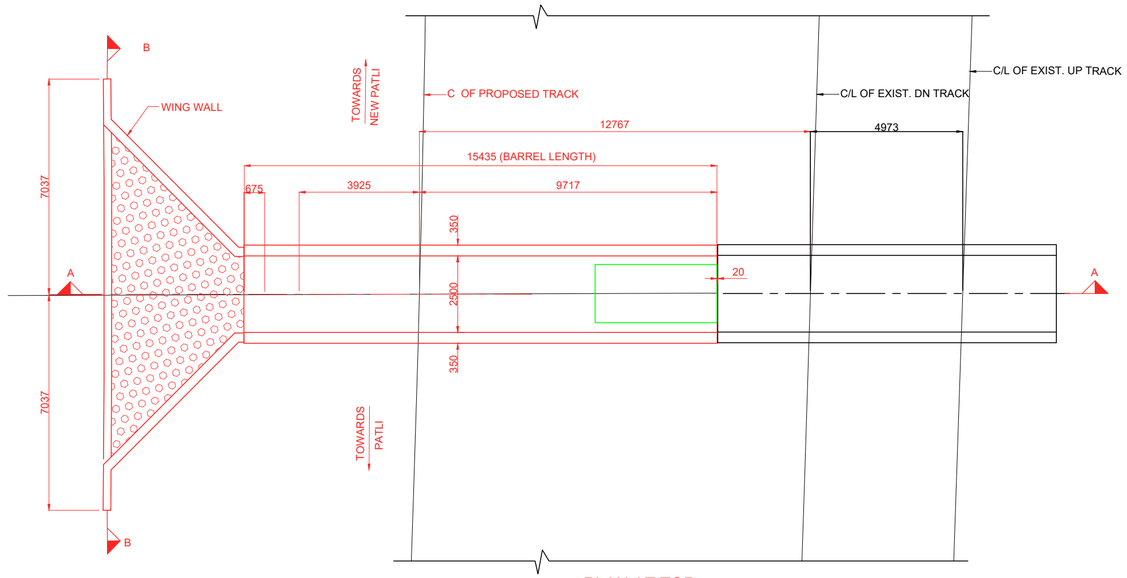
TITLE:-CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR ROAD UNDER BRIDGE NO.4 - 1X5.0X5.25m RCC BOX AT CH. 2518.489m (CONNECTING LINE NEW PATLI TO PATLI)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-03004_A1	2 OF 2

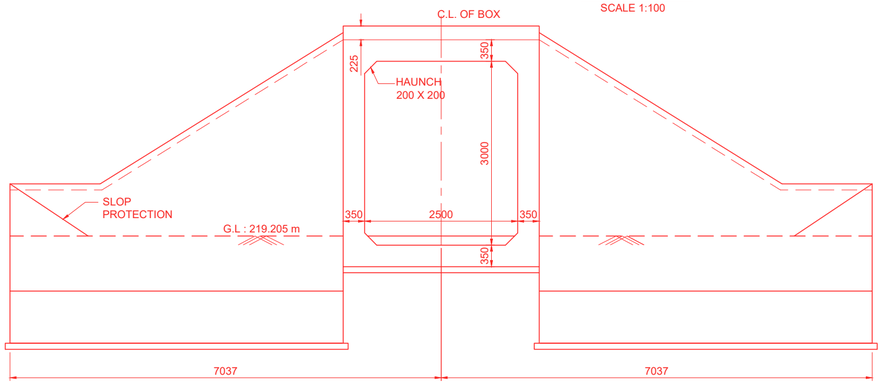
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



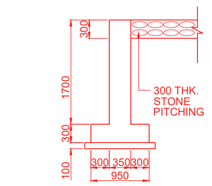
SECTIONAL ELEVATION AT A-A
SCALE 1:100



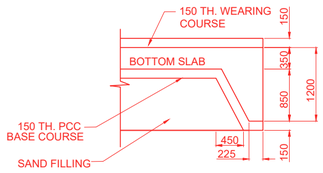
PLAN AT TOP
SCALE 1:100



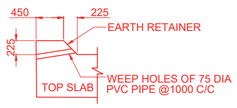
VIEW B-B
SCALE 1:50



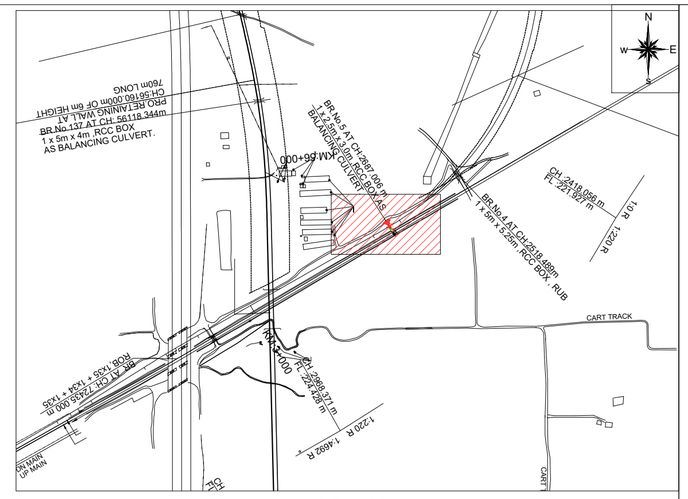
CURTAIN WALL DETAILS
SCALE 1:50



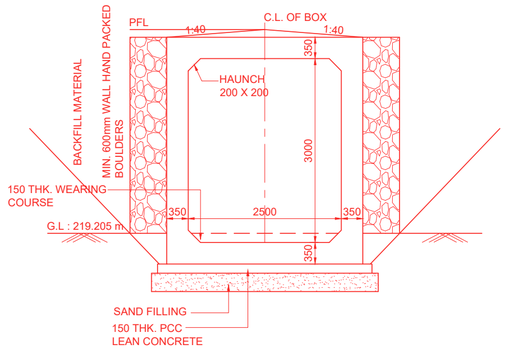
SHEAR KEY
SCALE 1:50



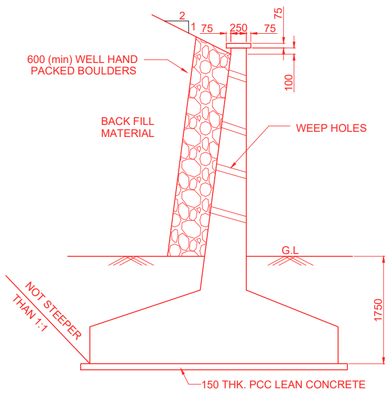
EARTH RETAINER
SCALE 1:50



KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50



WING WALL (TO BE DESIGN AS PER SITE CONDITION)

TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
———	PROPOSED
———	DISMANTEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD,
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Smarter Skills Sounder Solutions

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERTNO.5 - 1X2.5X3.0mRCC BOX AT CH. 2687.006 AND EXIST BOX. SIZE- 1X2.5X3.0 (CONNECTING LINE NEW PATLI TO PATLI)

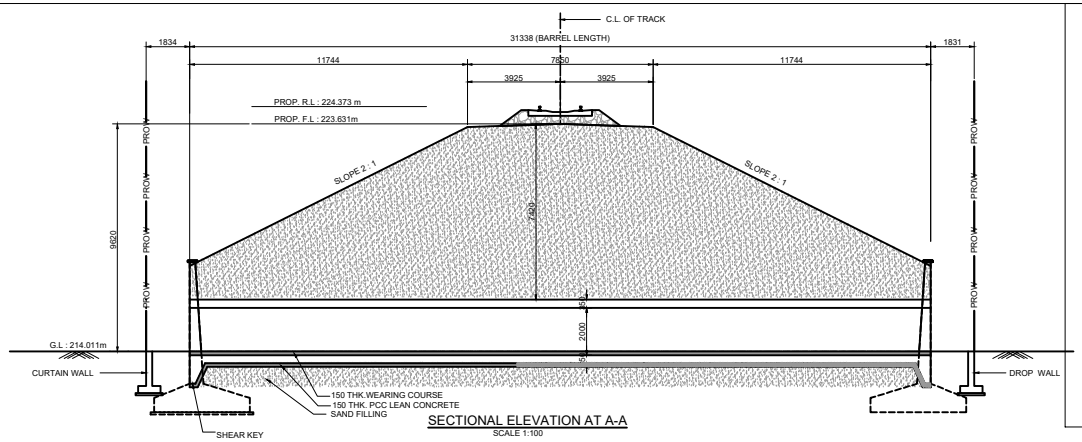
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03005_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

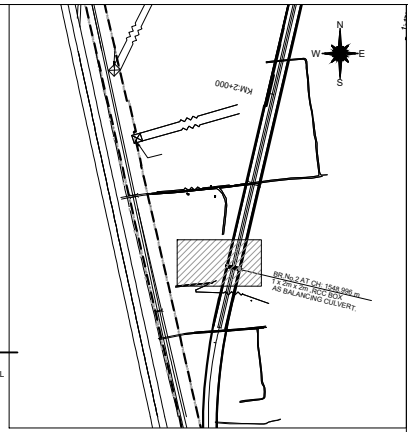
4 Minor Bridges

4.1.2 Connecting Line

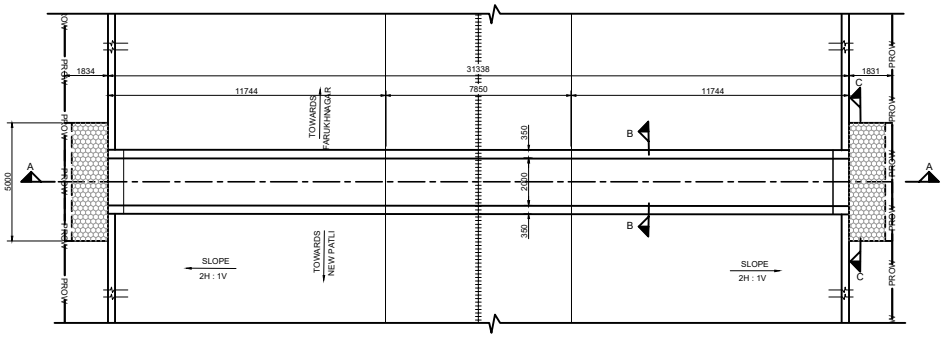
B. New Patli to Sultanpur



SECTIONAL ELEVATION AT A-A
SCALE 1:100



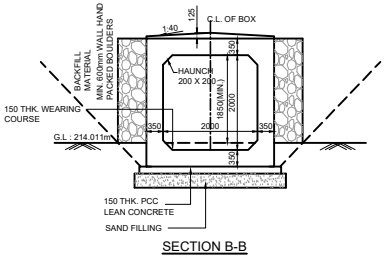
KEY PLAN
SCALE 1:NTS



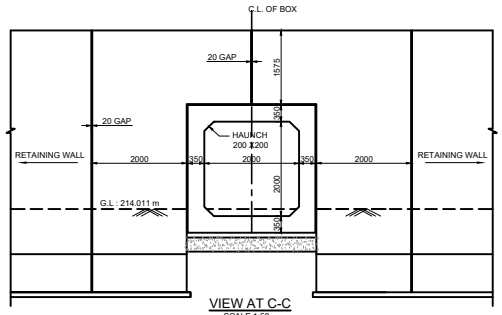
PLAN AT TOP
SCALE 1:100

LEGEND

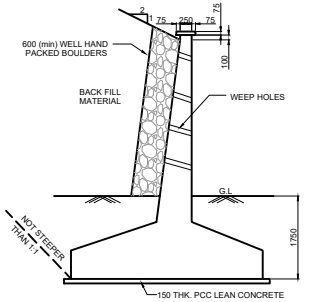
PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL



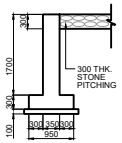
SECTION B-B
SCALE 1:50



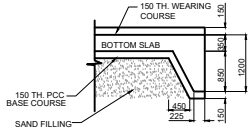
VIEW AT C-C
SCALE 1:50



TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

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4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
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7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
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16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

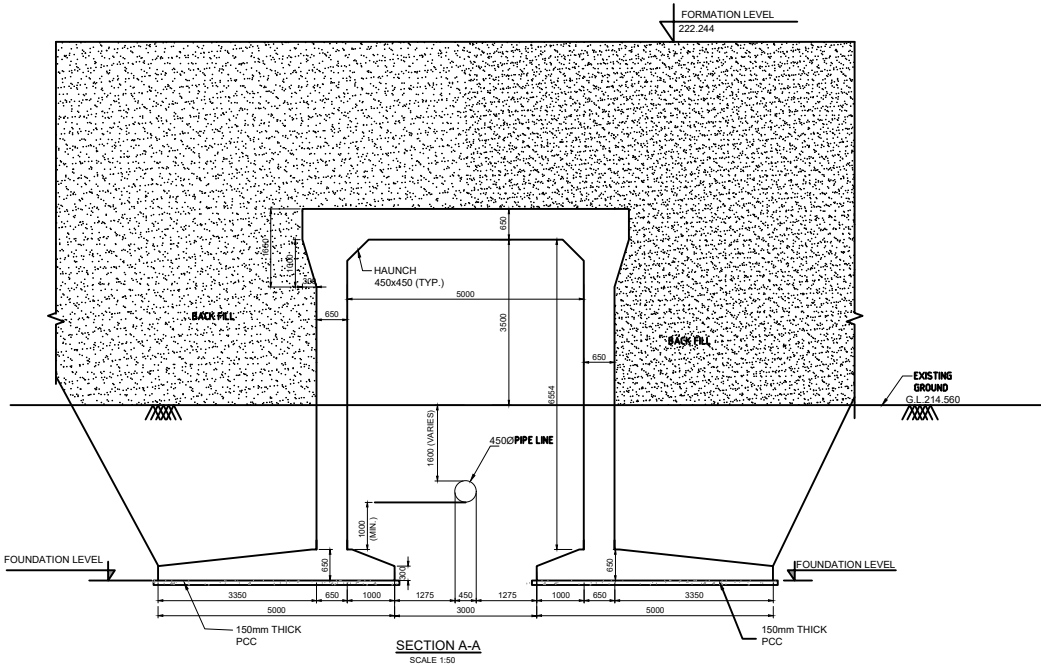
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

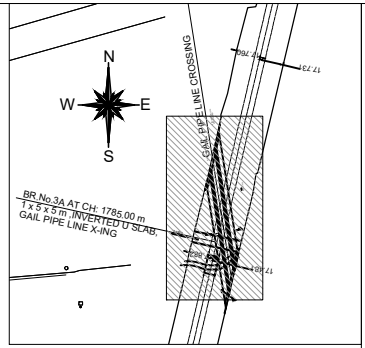
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO.2 - 1X2.0X2.0m RCC BOX AT CH.1548.996 (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04002_A1	1 OF 1

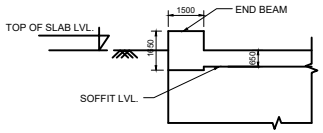
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



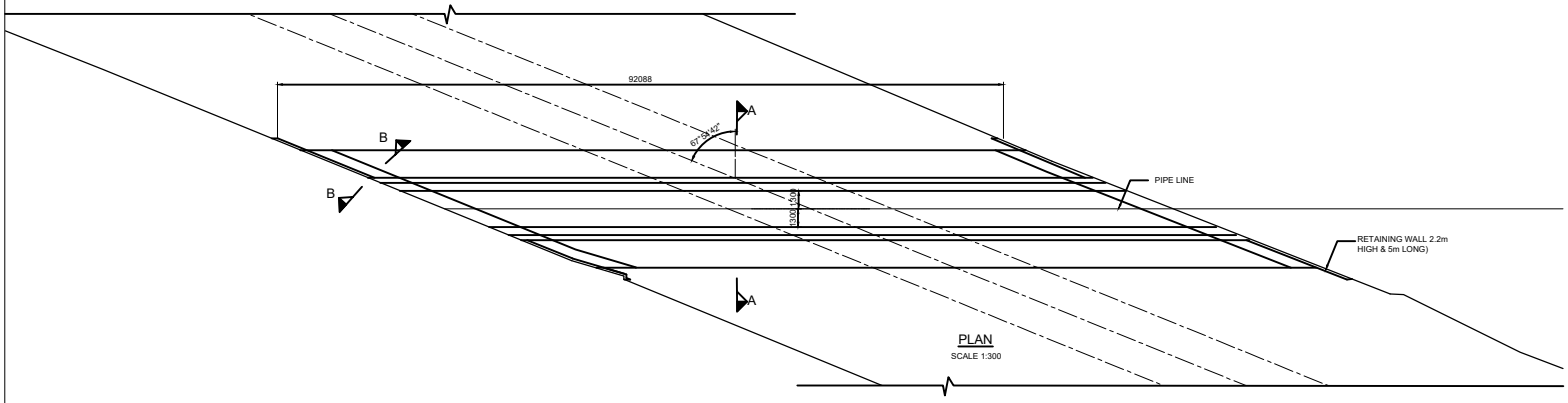
SECTION A-A
SCALE 1:50



KEY PLAN
SCALE 1:NTS



SECTION B-B
SCALE 1:50



PLAN
SCALE 1:300

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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5. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL, BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
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9. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF STRUCTURE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT.HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
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8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
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12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

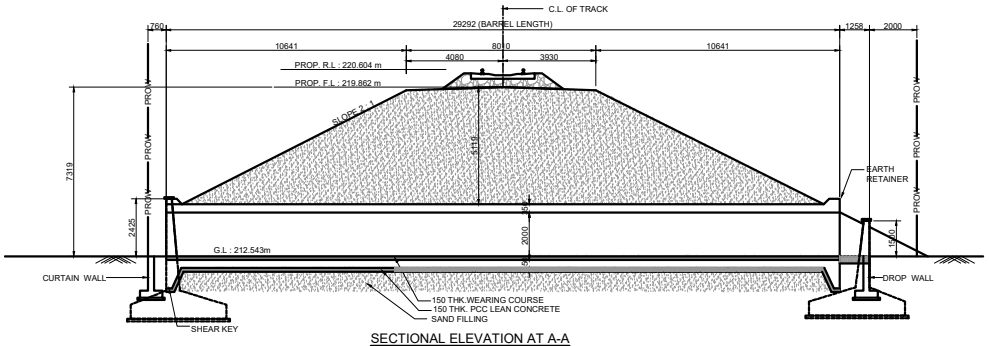
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

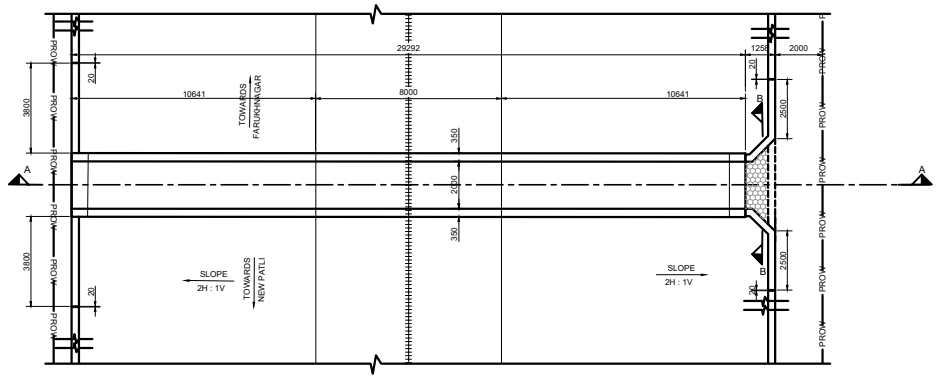
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.3A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 1785m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_03003A_A0	1 OF 1

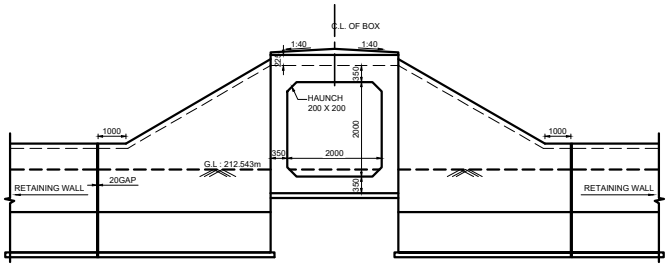
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



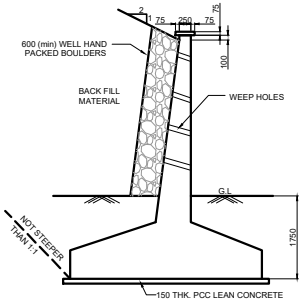
SECTIONAL ELEVATION AT A-A
SCALE 1:100



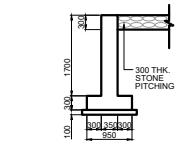
PLAN AT TOP
SCALE 1:100



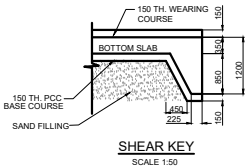
VIEW B-B
SCALE 1:50



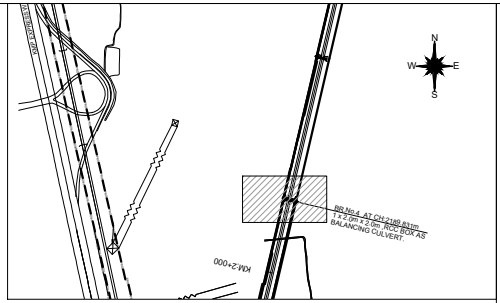
TYPICAL DETAIL OF RETURN WALL / WING WALL
SCALE 1:50



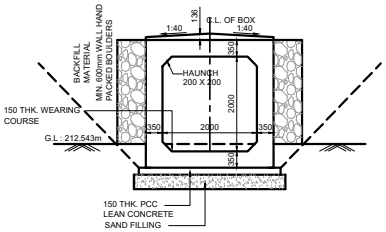
DROP / CURTAIN WALL DETAILS
SCALE 1:50



SHEAR KEY
SCALE 1:50



KEY PLAN
SCALE 1:NTS



ELEVATION
SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF PRITHALA STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL , BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
2. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
4. ALL CLEAN/ EXPANSION JOINTS SHALL BE FILLED WITH THERMOCOL.
5. PLACEMENT LEVEL OF BOX AS SHOWN IN THIS GAD IS INDICATIVE AND MAY BE SUITABLY LOWERED/ELEVATED BASED UPON THE REQUIREMENT OF CLEARANCE, DRAINAGE &NATURAL GROUND PROFILE.
6. DIMENSION OF THE BOX MAY BE SUITABLY MODIFIED AS PER SITE REQUIREMENT,HEIGHT OF BOX SHOWN INCLUDES MINIMUM REQUIRED CLEAR OPENING HEIGHT AND WEARING COARSE. OVERALL HEIGHT OF BOX OPENING MAY VARY AS PER SITE REQUIREMENT AND ACTUAL ROAD/GROUND PROFILE.
7. DESIGN CRITERIA SHALL BE BASED ON FOLLOWING IRS CODES
   (i) IRS BRIDGE RULE
   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
8. SEISMIC ZONE- IV
9. EXPOSURE CONDITION- MODERATE.
10. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
11. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB- STRUCTURE AND FOUNDATION CODE.
12. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM. CONFIRMING TO IS: 3117.
13. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC /WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
15. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. ADEQUATE SLOPE IN BOTTOM SLAB OF RCC BOX TOWARDS DIRECTION OF FLOW SHALL BE PROVIDED

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

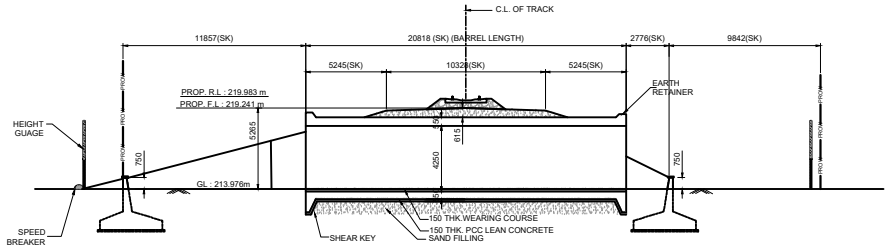
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BALANCING CULVERT BRIDGE NO.4 - 1X2.0X2.0m RCC BOX AT CH. 2189.831m (CONNECTING LINE NEW PATLI TO SULTAANPUR)

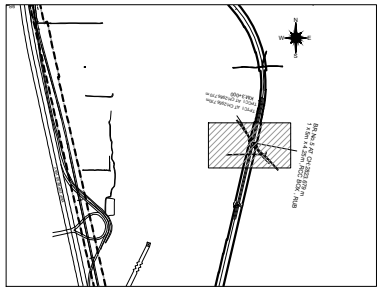
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04004_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



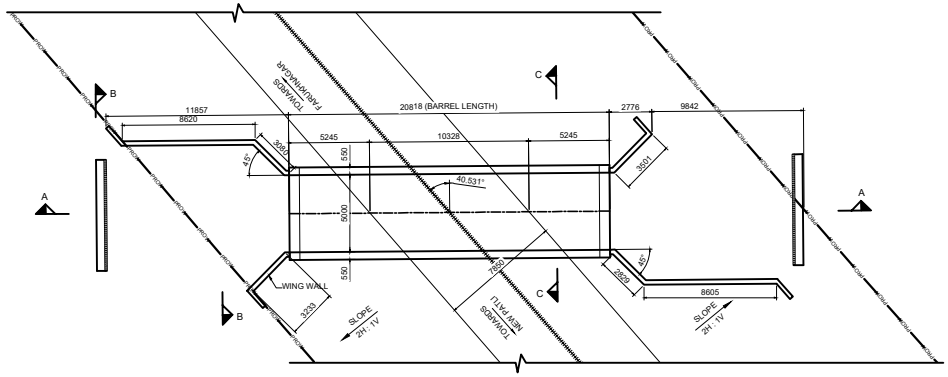
SECTIONAL ELEVATION AT A-A

SCALE 1:150



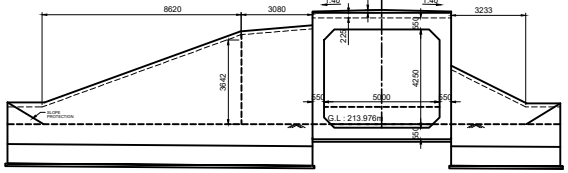
KEY PLAN

SCALE 1:NTS



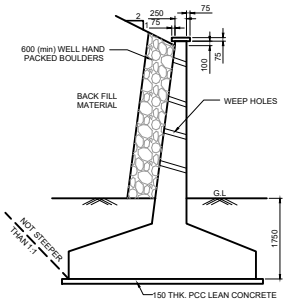
PLAN AT TOP

SCALE 1:150



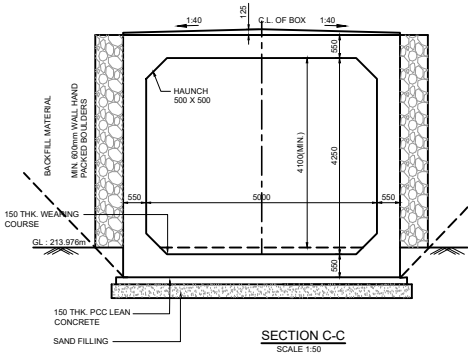
VIEW AT B-B

SCALE 1:100



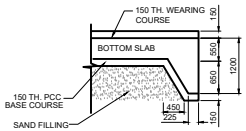
TYPICAL DETAIL OF RETURN WALL / WING WALL

SCALE 1:50



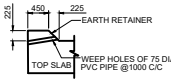
SECTION C-C

SCALE 1:50



SHEAR KEY

SCALE 1:50



EARTH RETAINER

SCALE 1:50

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

NOTES :

A) GENERAL NOTES

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. THE CHAINAGES SHOWN ARE RECKONED FROM C/L OF NEW PATLI STATION BUILDING TAKEN AS 0.00 M, WITH RESPECT TO UP MAIN LINE.
3. FOR RAIL LEVELS, FORMATION LEVEL, GRADES ETC. REFER L-SECTION.
4. BOX BRIDGE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.
5. THE EXISTING DETAILS ARE AS PER SITE SURVEY AND SHALL BE VERIFIED BY THE CONCTRACTOR BEFORE EXECUTION.
6. ENGINEER IN CHARGE/ SITE ENGINEER SHOULD VERIFY THE RAIL LEVEL FORMATION LEVEL, BED LEVEL & TRACK CENTER AT SITE BEFORE COMMENCEMENT OF WORK.
7. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
8. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/ISSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
9. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
10. DETAILED DESIGN DRAWING WILL BE PREPARED BASED ON THIS CONCEPTUAL APPROVED GAD.
11. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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   (ii) IRS CONCRETE BRIDGE CODE
   (iii) IRS BRIDGE SUB-STRUCTURE & FOUNDATION CODE
7. SEISMIC ZONE- IV
8. EXPOSURE CONDITION- MODERATE.
9. DURING CONSTRUCTION, IF REQUIRED, ROAD CLOSURE TO BE OBTAINED FROM CONCERNED ROAD/CIVIL AUTHORITIES. DIVERSION OF ROAD IF ANY, REQUIRED IS TO BE DONE BY CONTRACTOR AT HIS COST
10. THE BACK FILL MATERIAL SHALL BE CONFORMING TO CLAUSE 7.5 OF IRS SUB-STRUCTURE AND FOUNDATION CODE.
11. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 K.G/SQM.CONFIRMING TO IS: 3117.
12. REINFORCEMENT SHALL BE Fe 500D (TMT) CONFORMING TO IS 1786
13. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
    (i) ALL RCC/WEARING COURSE =M:35/DETAILED DESIGN DRG.
    (ii) LEVELING COURSE/LEAN CONCRETE =M:20/DETAILED DESIGN DRG.
14. BEARING CAPACITY OF SOIL SHALL BE ENSURED AS PER DETAILED DESIGN REQUIREMENT. IF REQUIRED GROUND IMPROVEMENT MAY BE CARRIED OUT AND CONFIRMED THROUGH FIELD TESTING.
15. FOUNDATION LEVEL SHOWN IN DRAWING IS TENTATIVE. DETAILED DESIGN DRAWING SHALL BE FOLLOWED FOR FOUNDATION LEVEL DURING EXECUTION.
16. HEIGHT GAUGE SHALL BE PROVIDE AS PER RDSO STANDARD DRAWING NO. RDSO/M0001.

IMPORTANT NOTE:
TOP OF BOTTOM SLAB OF RCC BOX SHALL NOT BE KEPT ABOVE THE NATURAL GROUND LEVEL.HOWEVER, ROAD LEVEL AND VERTICAL CLEARANCE ABOVE ROAD LEVEL SHALL BE MAINTAINED AS SHOWN IN THE DRAWING.OVERALL HEIGHT OF THE BOX MAY NEED MODIFICATION ACCORDINGLY.THE HEIGHT OF RCC BOX SHALL BE PROVIDED KEEPING ABOVE PROVISION IN VIEW.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

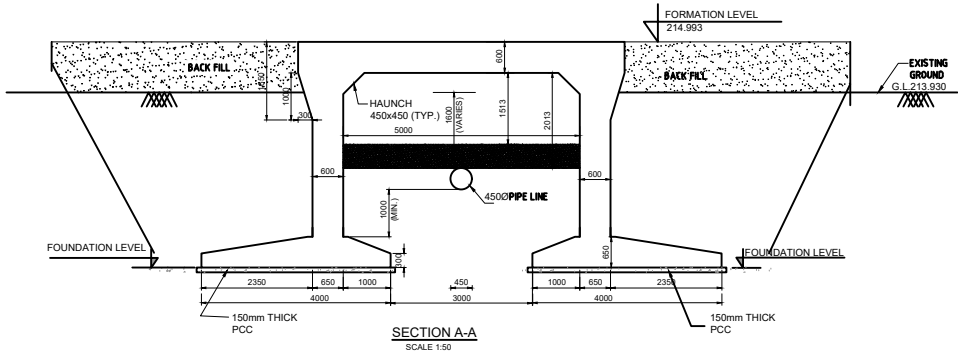
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

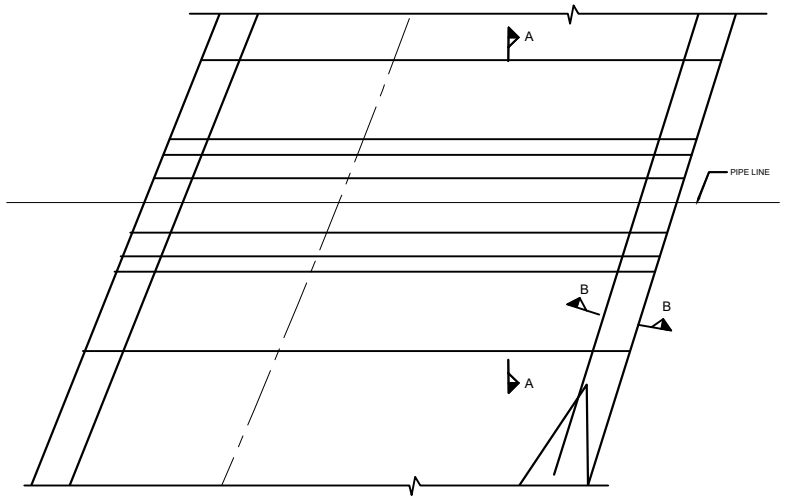
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR ROAD UNDER BRIDGE NO.5 - 1X5.0X4.25m RCC BOX AT CH. 2823.679 m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04005_A1	1 OF 1

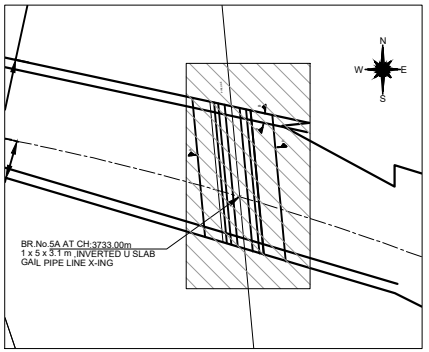
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



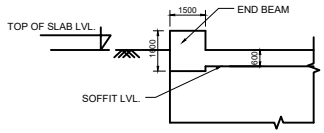
SECTION A-A
SCALE 1:50



PLAN
SCALE 1:100



KEY PLAN
SCALE 1:NTS



SECTION B-B
SCALE 1:50

NOTES :

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1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
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6. SUITABLE BED SLOPE SHALL BE PROVIDED AND ADJUSTED AS PER SITE CONDITIONS
7. ENGINEER IN CHARGE/SITE ENGINEER SHALL ENSURE THE SAFETY OF TRACK/ROAD AT ALL THE TIME AND SHALL TAKE NECESSARY PRECAUTIONS TO PREVENT DAMAGE OF S&T CABLE /OFC DURING EXECUTION OF WORK CONCERNED DEPT. SUCH AS BSNL/AIRTEL/SSE/SIG/ADSTE ETC. SHALL BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
8. THIS DRAWING IS THE PROPERTY OF HRIDC AND FOR EXCLUSIVE USE OF HORC.
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10. THICKNESS OF STRUCTURAL MEMBERS ARE TENTATIVE AND WILL BE FINALISED AFTER DETAILED DESIGN.

B) TECHNICAL NOTES :

1. PROTECTION WORK ON SLOPES OF BANK UP TO 15M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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3. FOR PROPER DRAINAGE OF WATER SUITABLE SLOPE TO BE PROVIDED ON TOP OF BOX SLAB.
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8. SEISMIC ZONE- IV
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14. FOR CONCRETE SPECIFICATION REFER IRS CONCRETE BRIDGE CODE.
    GRADE OF CONCRETE :
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PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

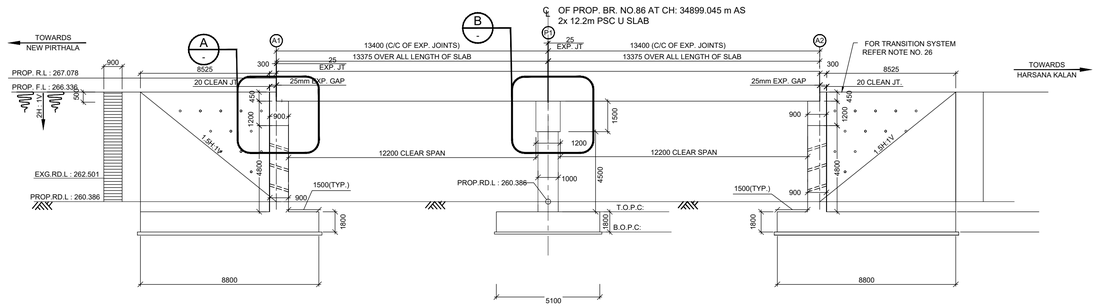
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR BRIDGE NO.5A - 5 m CLEAR SPAN INVERTED U OVER GAIL PIPE LINE CROSSING AT CH. 3733m (CONNECTING LINE NEW PATLI TO SULTANPUR)

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD_04005A_A0	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

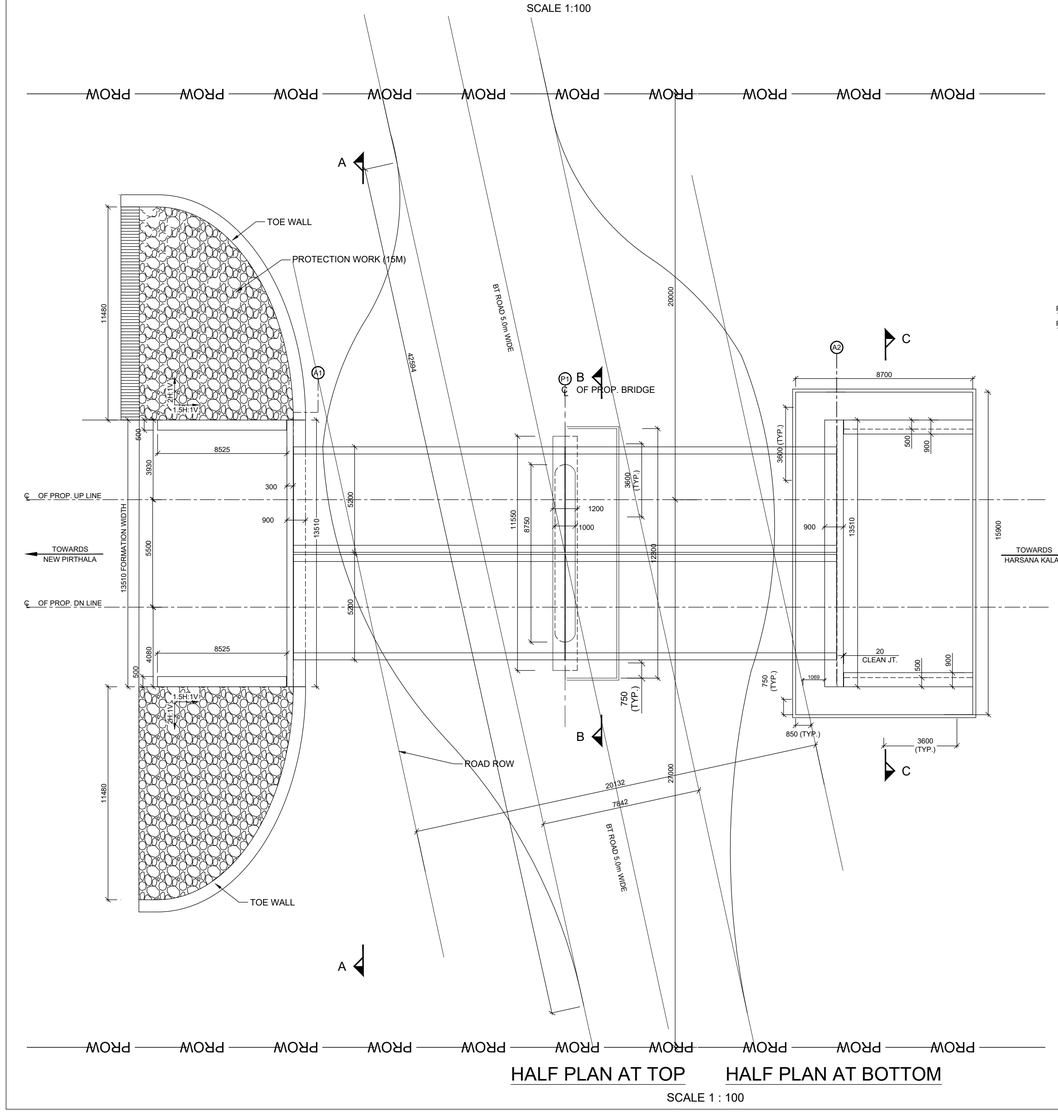
4.2 Major Bridges

4.2.1 Main Line



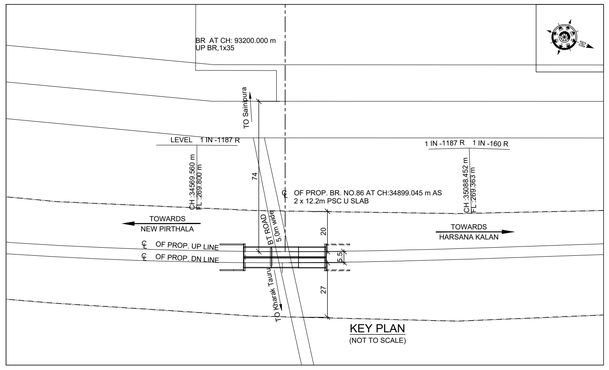
ELEVATION

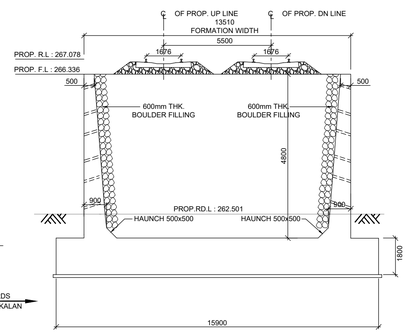
SCALE 1:100



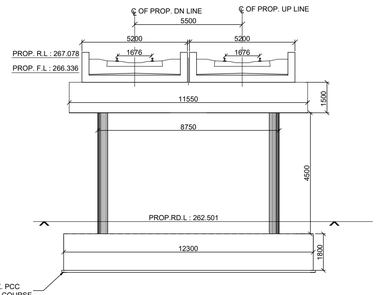
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 100

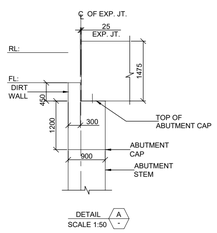




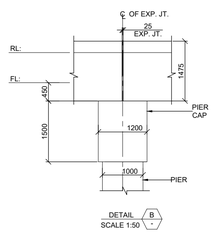
SECTION C-C
SCALE 1 : 100



SECTION B-B
SCALE 1 : 100



DETAIL A
SCALE 1:50



DETAIL B
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER.
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - III.
   vii) STANDARD OF LOADING :
   SUPER-STRUCTURE - 25T (RDSO STANDARD) &
   SUB-STRUCTURE - 32.5T - 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE & TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL,ROAD LEVEL, FORMATION LEVEL AND RAIL LEVEL AND ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UPTO 30M, BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURNWALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THE DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. FOR TOE WALL DETAILS REFER SEPARATE SKETCH NO. GC-HRIDC-SK-GEN-014.
26. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

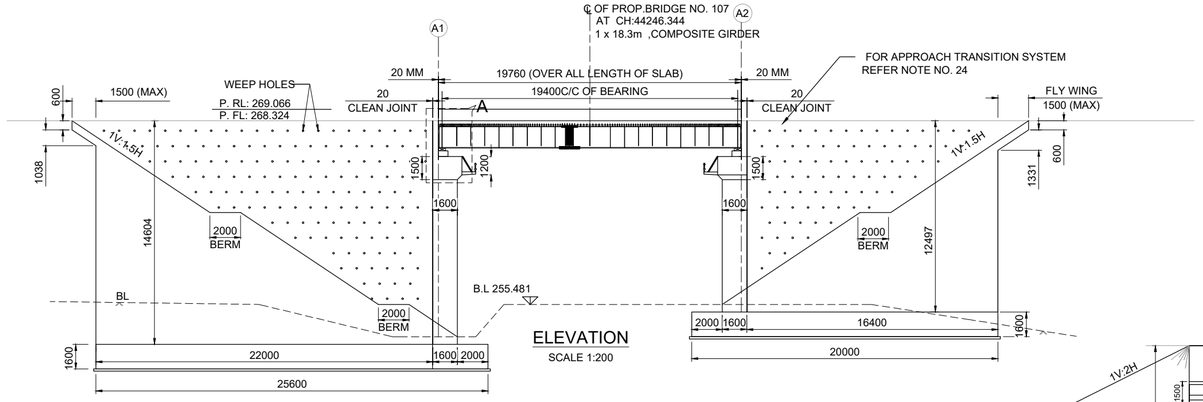
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

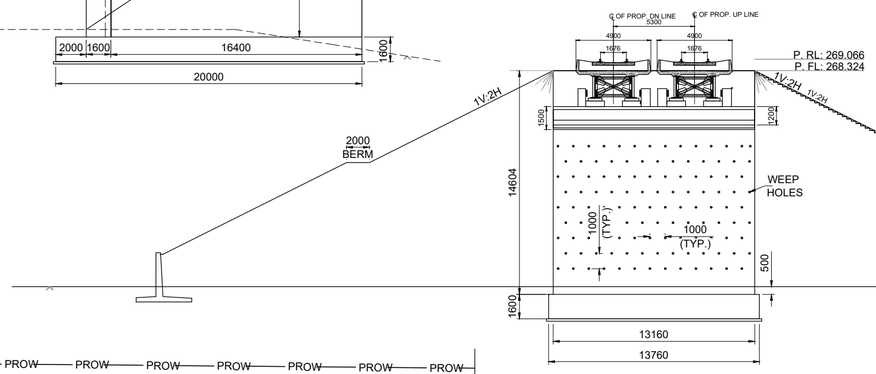
TITLE CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR MAJOR BRIDGE NO 86 AT CH: 34899.045m AS 2X12.2m PSC U SLAB

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01086_A1	1 OF 1

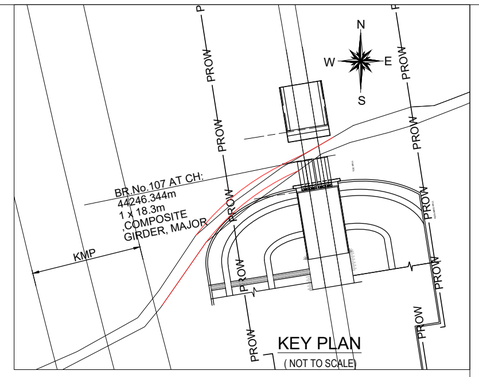
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



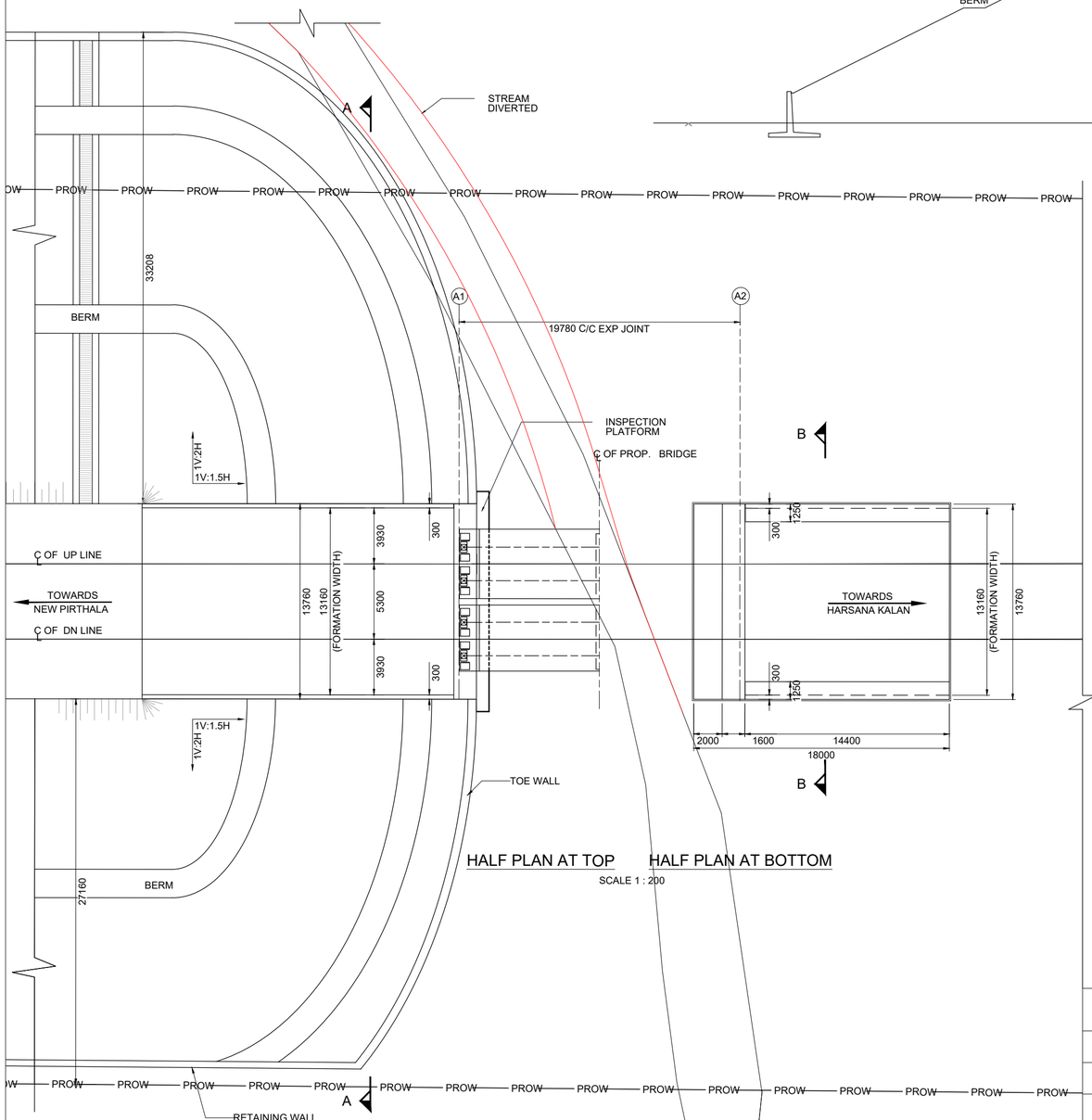
ELEVATION
SCALE 1:200



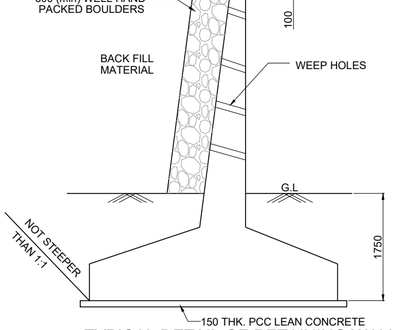
SECTION A-A
(SCALE 1:200)



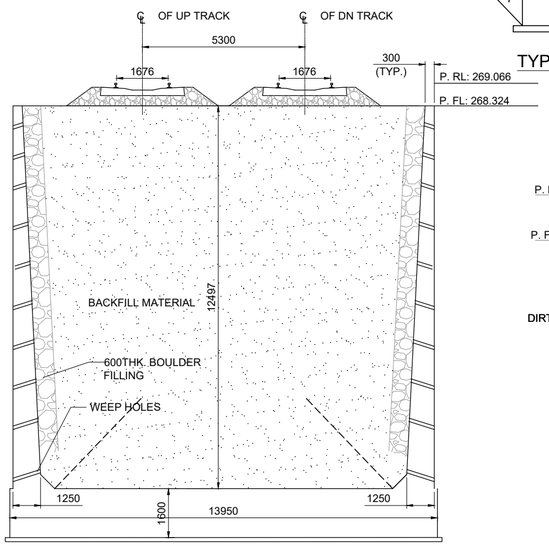
KEY PLAN
(NOT TO SCALE)



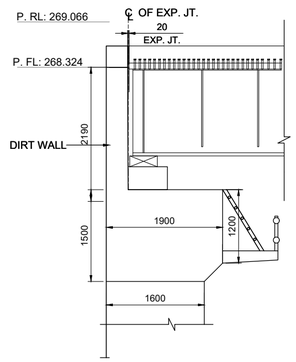
HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



TYPICAL DETAIL OF RETAINING WALL
SCALE 1:50



SECTION B-B
SCALE 1:100



DETAIL -A
SCALE 1:50

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) EXPOSURE CONDITION - MODERATE.
   v) SEISMIC ZONE - IV
   vi) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. STONE PITCHING ON SLOPES OF BANK ON APPROACHES OF BRIDGE MAY BE PROVIDED AS DIRECTED BY ENGINEER.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-11753/R1 TO 11753/7R1
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
22. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
23. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
24. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.
25. PATHWAY ARRANGEMENT SHELL BE PROVIDED ON OUTER SIDES OF THE COMPOSITE GIRDER. PATHWAY SHELL BE PROVIDED AS PER RDSO DWG. NO.CBS-0046 (CG).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

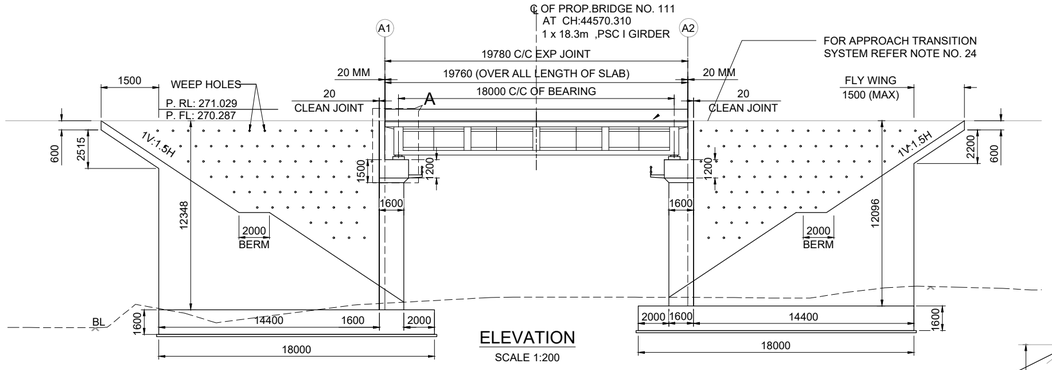
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE SMEC

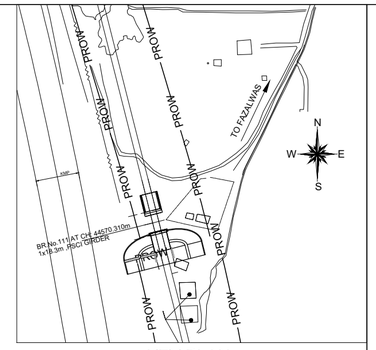
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR BRIDGE NO.107 AT CH: 44246.344m 1 x 18.3 m COMPOSITE GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01107_A1	1 OF 1

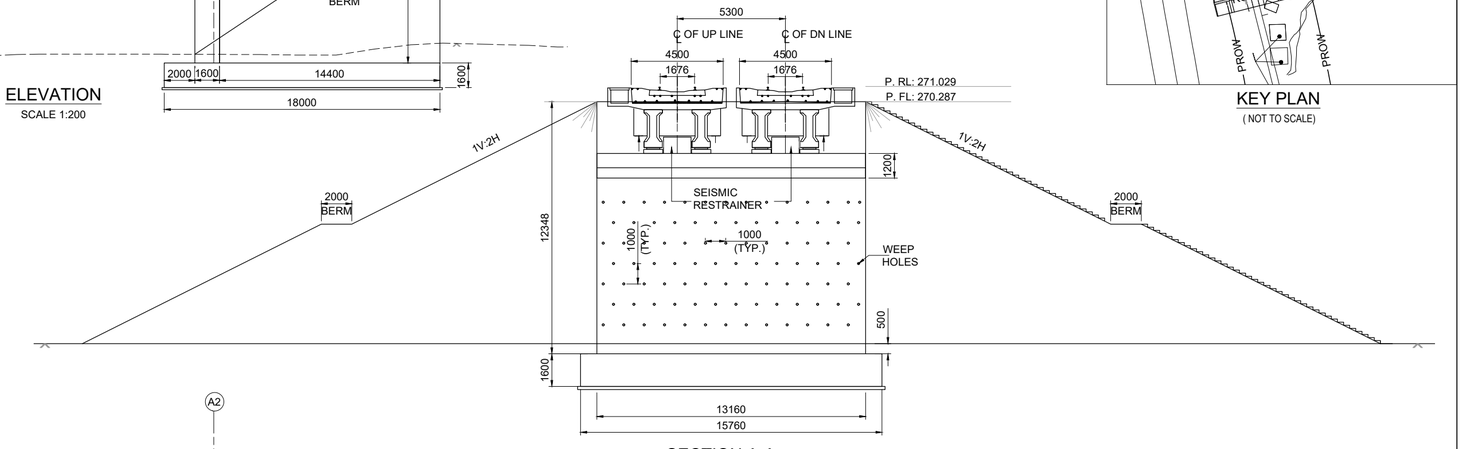
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



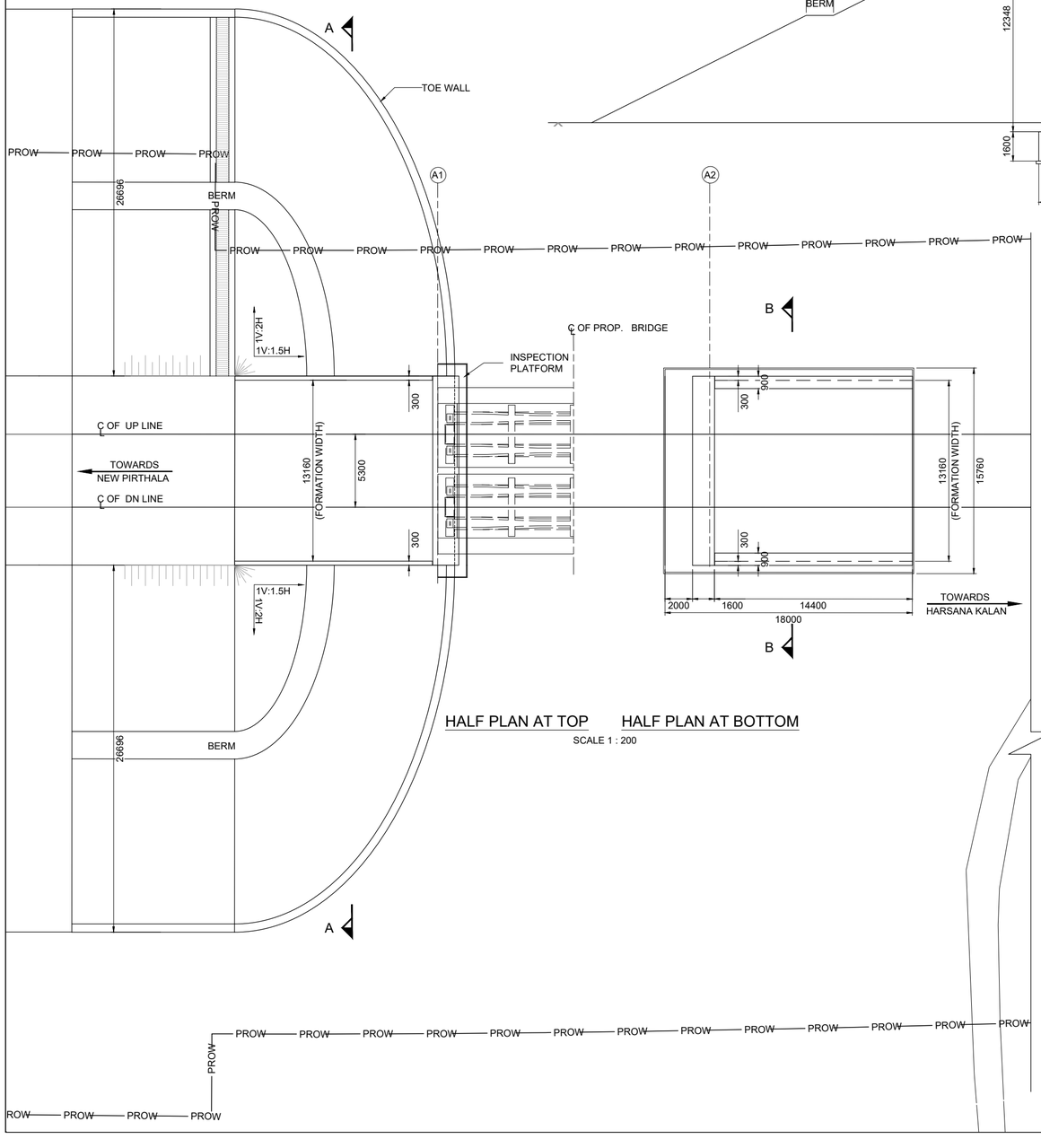
ELEVATION
SCALE 1:200



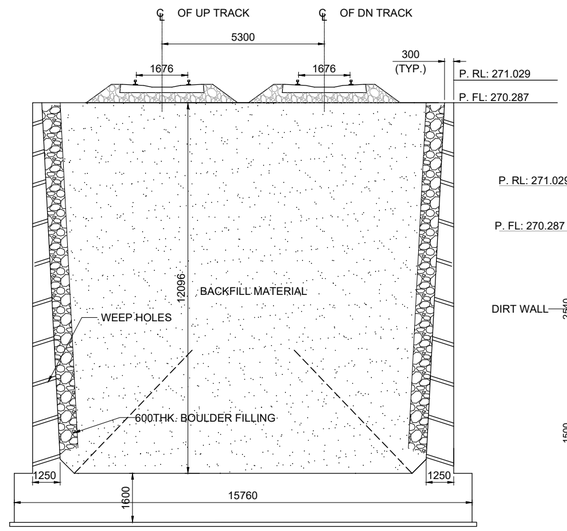
KEY PLAN
(NOT TO SCALE)



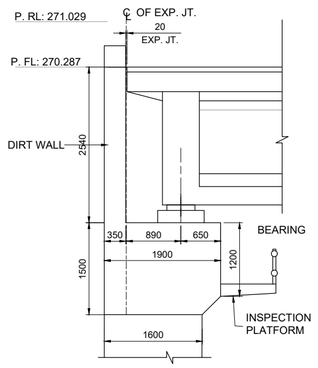
SECTION A-A
(SCALE 1:150)



HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1 : 200



SECTION B-B
SCALE 1:100



DETAIL -A
SCALE 1:50

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. STONE PITCHING ON SLOPES OF BANK ON APPROACHES OF BRIDGE MAY BE PROVIDED AS DIRECTED BY ENGINEER.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-10273 TO 10273/4
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
22. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
23. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
24. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
RL	ROAD LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

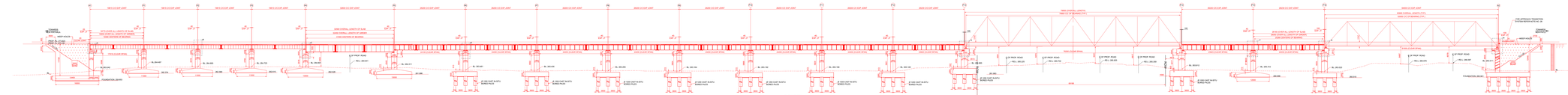
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

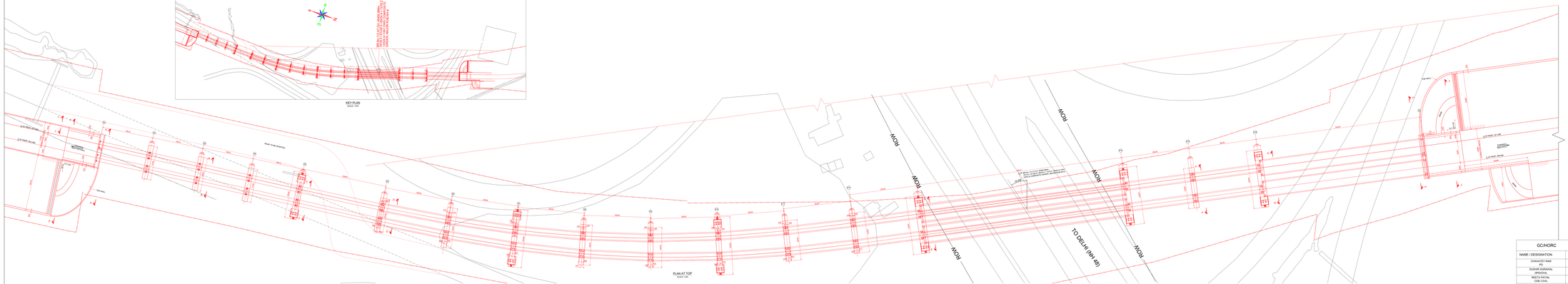
RITES THE INFRASTRUCTURE PEOPLE SMEC

TITLE:- CONCEPTUALGENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO.111 AT CH: 44570.310 m AS 1 x 18.3 m PSC I GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01111_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022





NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CODES
   a) RDSO/B-11852/1 GUIDELINES AND FOUNDATION CODE 2015
   b) RDSO BRIDGE CODE 2004
   c) IRS BRIDGE RULES 2014
   d) IRS CONCRETE BRIDGE CODE
   e) EARTHQUAKE CONDITION : MODERATE
   f) LOADING STANDARD
      a) STANDARD OF LOADING – SUPER STRUCTURE (S) 07 (RDSO STANDARD) DAD LOADING
      b) SUB STRUCTURE (S) 07 (RDSO STANDARD) DAD LOADING (DESIGN FOR 25 TONNE AXLE LOADING)
4. CLEARANCES
   ALL CLEARANCES, DIMENSIONS AND SIZES ARE INDICATIVE AND THERE MAY ARISE SOME CHANGE DURING DETAIL DESIGN.
5. DETAILED DESIGN
   DETAILED DESIGN SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION AND DOWN IRS CONCRETE BRIDGE CODE.
6. BEARING ARRANGEMENT
   i) FOR MULTIBAY UNIT (4 RETURN SHALL)
   ii) FOR SINGLE UNIT
   ALL FOR LEVEL OF BEARING
7. FOUNDATION AND BEARING : MF MECHANICALLY HARD AND HARVTED.
8. IRS DESIGN SHALL BE APPLICABLE AT CHAINAGE : IN CURVES
9. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe 500D CONFORMING TO IS : 1786:2008 SHALL BE USED FOR REINFORCEMENT.
10. DESIGN & TYPICAL DRAWING FOR PIER, ABUTMENT, RETURN WALL AND WING WALL ARE ENCLOSED.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 30°
12. ALL EXPOSED CONCRETE SURFACES SHALL BE FINISHED WITH A COAT OF APPROVED CP BRIDGE SHALL BE DONE AS PER SPECIFICATION AND DRAWING.
13. ALL CONCRETE WORKS SHALL BE DONE AS PER IRS CONCRETE BRIDGE CODE 2013.
14. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR TAR AS PER IRS CONCRETE BRIDGE CODE.
15. CURVED SHALL BE DONE AS PER CLAUSE NO 2.5.3 OF IRS CONCRETE BRIDGE CODE
16. THE SPECIFICATION FOR THE SUPERSTRUCTURE REFER TO ALL COMPETENT GANDR CONTRACTOR AS PER PARA 626 OF IRPWM WITH UPDATED CORRECTION SLIPS
17. NIL
18. THE SPECIFICATION FOR THE SUBSTRUCTURE REFER TO ALL COMPETENT GANDR CONTRACTOR AS PER PARA 626 OF IRPWM WITH UPDATED CORRECTION SLIPS FOR 30.5m COMPOSITE GIRDER RDSO/B-11704/RT TO 11704/RT, 31m OPEN WEB GIRDER RDSO/B-11704/RT TO 11704/RT, 30.5m PSC GIRDER RDSO/B-11704/RT TO 11704/RT
19. CONCRETING WILL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH LATEST AMENDMENTS AND MOST HIGH CODE FOR PILE FOUNDATION AND TESTING WILL BE AS PER IS CODE
20. ALL DIMENSIONS AND LEVELS SHALL BE VERIFIED AT SITE BEFORE EXECUTION
21. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED AND SHALL NOT BE COPIED OR USED
22. ARRANGEMENT FOR HYDRAULIC JACK SHALL BE PROVIDED AS PER RDSO DWG. NO. BRIDGE NO. 11 AND 12 ONLY
23. TROLLEY REFUGE SHALL BE PROVIDED ON OPPOSITE SIDES OF PIERS AS PER RDSO GUIDELINES AND SPECIFICATION FOR BRIDGE APPROACHES
24. PROTECTION WORK ON SLOPES OF BANK UP TO 20m(APPROX) FROM APPROACHES OF BRIDGE SHALL BE DONE AS PER SPECIFICATION FOR BRIDGE APPROACHES
25. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER SPECIFICATION FOR BRIDGE APPROACHES
26. TRANSITION PITCHING TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO SPECIFICATION FOR BRIDGE APPROACHES. REFER SECTION NO. GC-HRDC-DR-GEN-015 FOR APPROACHES OF BRIDGES& FOR DETAILS REFER SHEETION NO. GC-HRDC-DR-GEN-016.

CONSTRUCTION DEPTH

1 TRACK STRUCTURE	1010mm
2 BALLAST TOP	75 mm
3 BALLAST BOTTOM	300 mm
4 SUB BALLAST	150 mm
5 FORMATION LAYER	150 mm
6 FORMATION TOP	6 mm
7 FORMATION BOTTOM	31 mm
TOTAL	950 mm

CONSTRUCTION DEPTH

	PROP. GIR
1 Deck	1010 mm
2 Ballast Top	75 mm
3 Rail Support	225 mm
4 Rail Top	75 mm
5 Rail Rail	75 mm

LEGEND:

FL	FLOOR LEVEL
FOL	FORMATION LEVEL
GL	GROUND LEVEL
RL	RAIL LEVEL
BCL	BOTTOM CAP TOP
TCL	TOP CAP TOP
PCC	PLAIN CEMENT CONCRETE
EJ	EXPANSION JOINT
CL	CENTRE LINE/CAMBER
TOL	TOWING
BRG	BRG LEVEL

COLOR CODE LEGEND

PROPOSED
EXISTING

DESCRIPTION OF PROPOSED BRIDGE

1	CHAINAGE no.
2	TYPE OF BRIDGE
3	FOUNDATION CODE
4	SKEW ANGLE
5	No. OF SPANS
6	TYPE OF SPANS

43+08.500
PSC GIRDER
(2) 30m
SKEW 90°
30.5(2) 15.2
PSC GIRDER

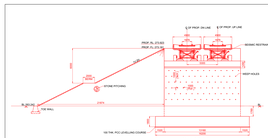
TRACK DETAILS

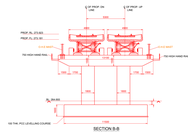
RAILS	60 KG/m
SLEEPERS	PSC
RAIL FASTENING	ELASTIC
FORMATION	6.7m

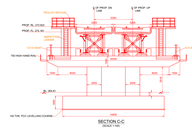
PROJECT:	HARYANA ORBITAL RAIL CORRIDOR CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI/KTC(L)/BULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE
CLIENT:	HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.
CONSULTANT:	GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR RITES Limited in consortium with SMEC International Pty. Ltd.

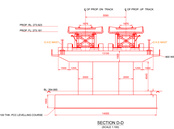
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHHAVI/TEY RAM PO		R.S. KUMAR DM/PWI/HRIDC	
SUDHIR AGRAWAL CDE/ CIVIL		UMA KUNAD DGM(C)	
REETU PATIL CDE/ CIVIL			

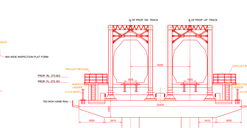
TITLE	CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROP. MAJOR RUB NO.112, AT CH: 43400 (MSH-49.18,SCC0.1+7430.5(SCG)+MSH-8.4,SCG)+7478.2(SCWG) UCH-8,SCG)+7491(SWG)
DRG. NO.	GC-HRDC-C23-DRG-BRD-GAD-01112_A1
SHEET NO.	1 OF 2
SCALE :	AS SHOWN
ISSUE DATE	11-11-2022
REVISED DATE	08-12-2022

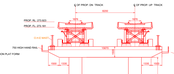


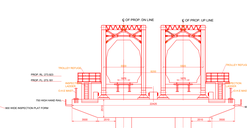


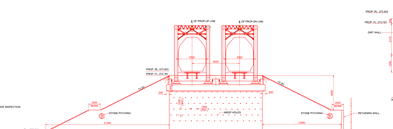


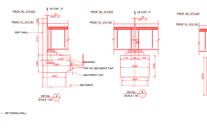


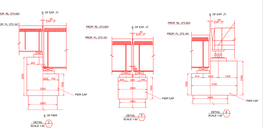


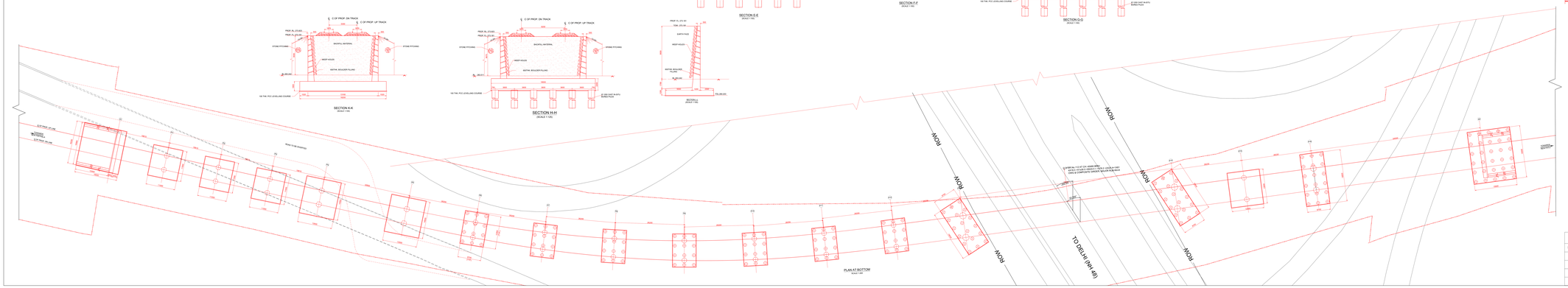












NOTES :-
1. FOR GENERAL NOTES REFER SHEET 1 OF 2

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING KSAOTI-PATLI-DULTANPUR-ASAUDHA BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANTS FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

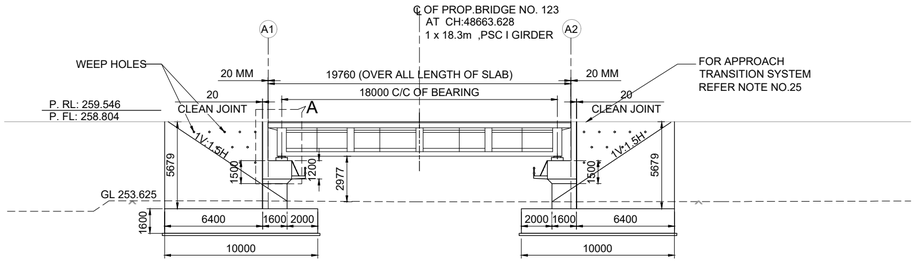
RITES Ltd. | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PO		R.K. KUMAR DM/PM/HRIDC	
SUDHIR AGRAWAL CDO/ CIVIL		UMA M.RAO DGM(C)	
REETU PATIAL CDO/ CIVIL			

TITLE : CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROP. MAJOR RUB NO.112, AT CH. 45495.985m
43118.5(CG) I+1430.5(CG) I+6924.4 (DG)+1478.2(DRG) I,DN1-N1(DN1)-1491(DWG)

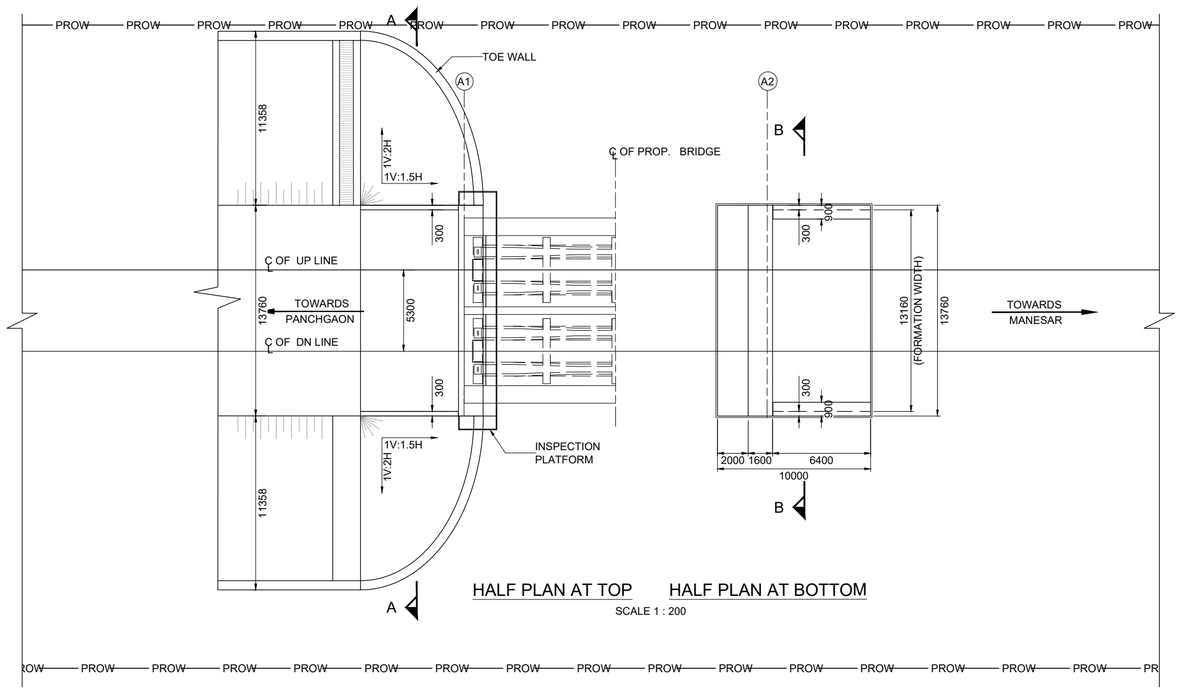
DRG. NO.	SHEET NO.
GC-HRDC-C23-DRG-BRD-GAD-01112_A	2 OF 2

SCALE :	ISSUE DATE:	REVISED DATE:
AS SHOWN	11-11-2022	08-12-2022



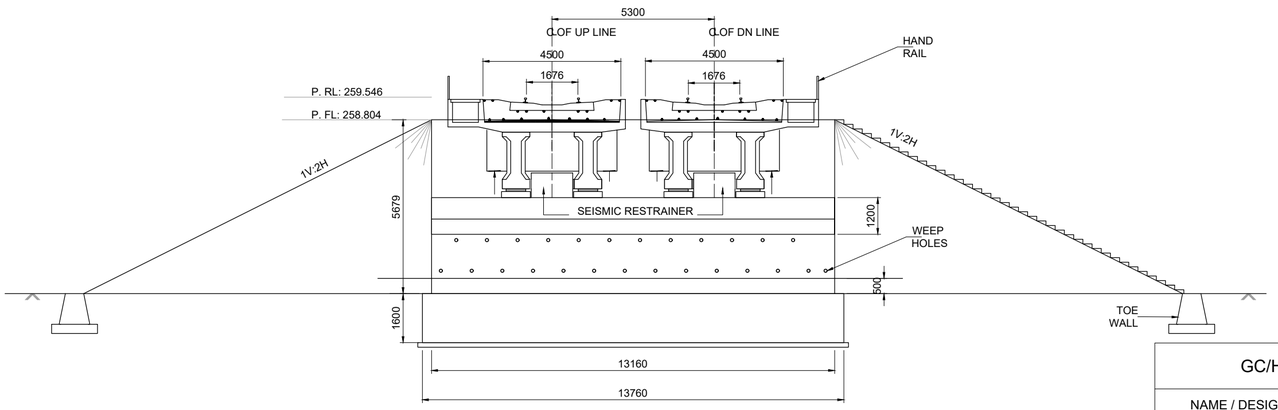
ELEVATION

SCALE 1:200



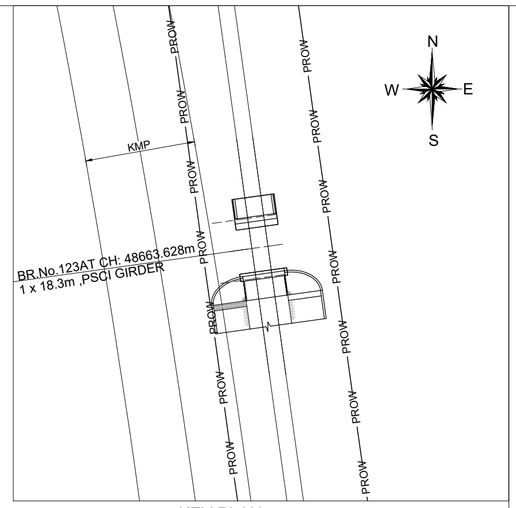
HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200



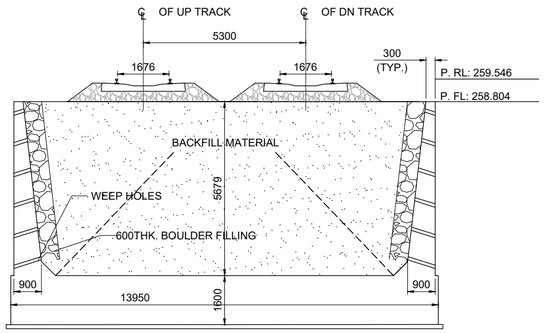
SECTION A-A

(SCALE 1:100)



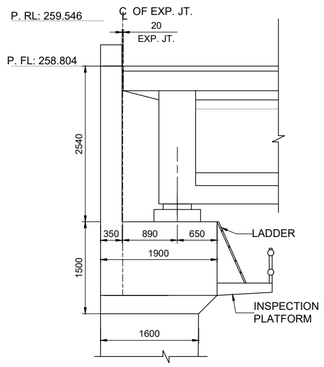
KEY PLAN

(NOT TO SCALE)



SECTION B-B

SCALE 1:100



DETAIL -A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) EXPOSURE CONDITION - MODERATE.
   v) SEISMIC ZONE - IV
   vi) STANDARD OF LOADING :- SUPER STRUCTURE-25T AND SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR PILE & PILE CAP----------M35
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. ROAD LEVEL & FORMATION LEVEL AND RAIL LEVEL SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
18. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
19. THE SPECIFICATIONS FOR THE PSC I GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-10273 TO 10273/4
20. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
21. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

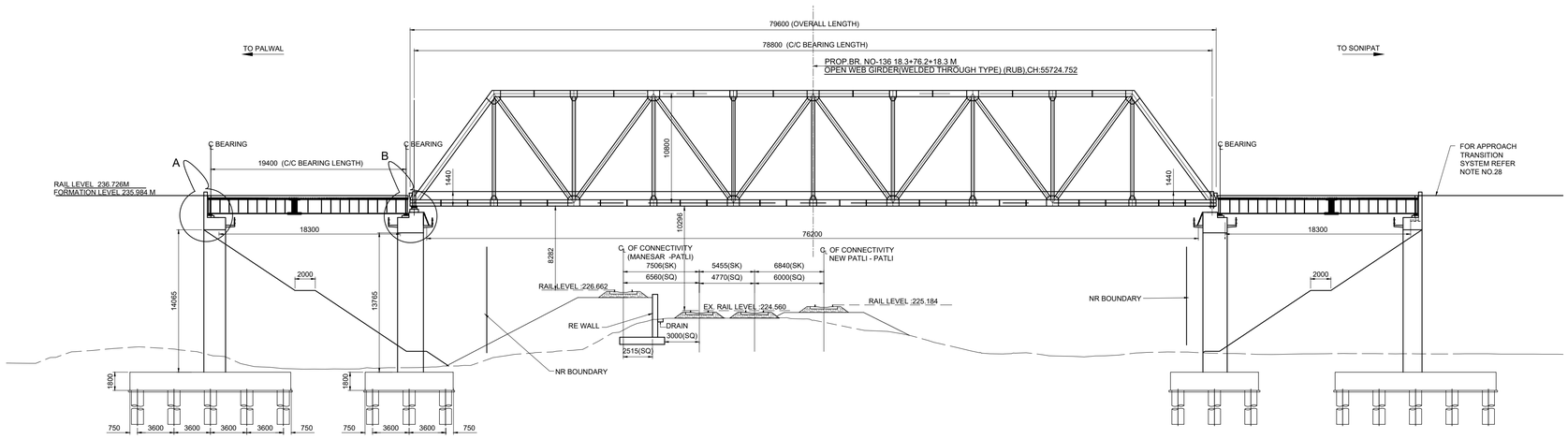
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE SMEC

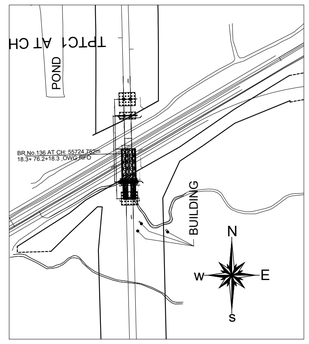
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED VIADUCT BR NO.123 AT CH: 48663.628m AS 1 x 18.3 m PSC I GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRG-BRD-GAD-01123_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

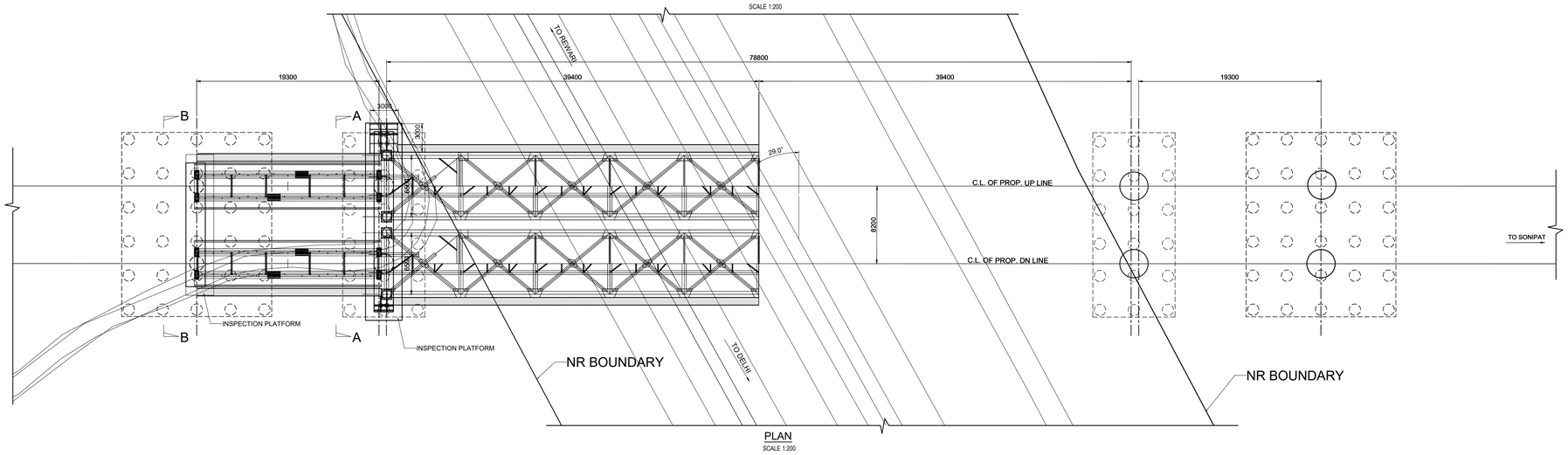


DATUM - 205.00					
FORMATION LEVEL	235.984	235.984	235.984	235.984	235.984
GROUND LEVEL	220.218	218.994	223.665	220.413	220.362
CHAINAGE	55666.052	55685.352	55724.752	55764.152	55783.452

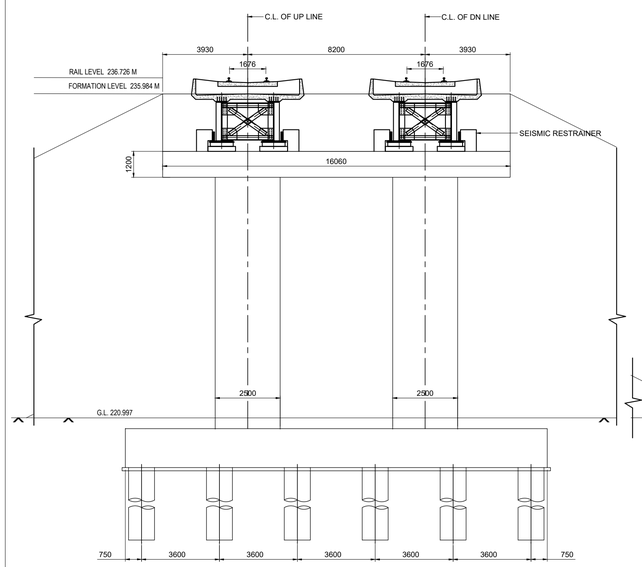


KEYPLAN
(NOT TO SCALE)

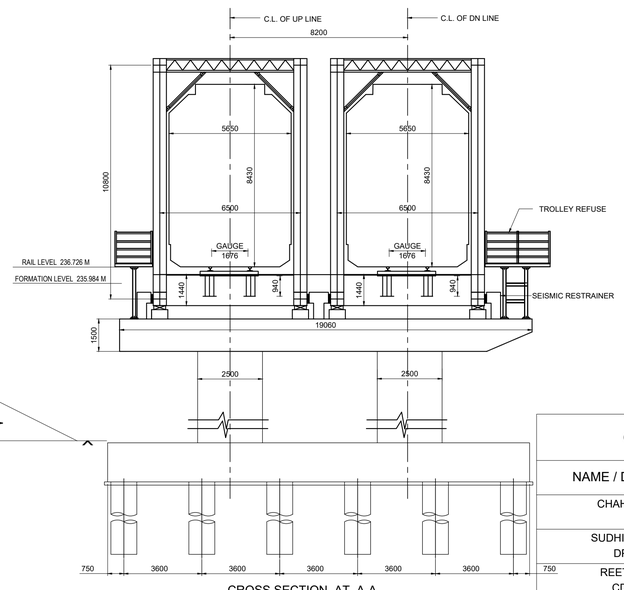
SECTIONAL ELEVATION
SCALE 1:200



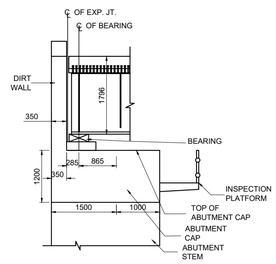
PLAN
SCALE 1:200



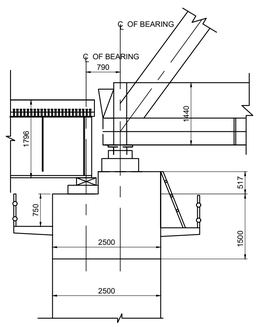
CROSS SECTION AT B-B
(SCALE 1:100)



CROSS SECTION AT A-A
(SCALE 1:100)



DETAILS AT "A"
SCALE 1:50



DETAILS AT "B"
SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG),SUPER STRUCTURE-25T (RDSO STANDARD CG) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. TYPE OF FOUNDATION SHALL BE PILE FOUNDATION. NO.OF PILES & SIZE OF SUBSTRUCTURE SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786-2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BACK FILL BEHIND RETURN WALL / WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
16. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
17. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
18. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-17101 TO 17118 AND COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO B-11753/1R1 TO 11753/7R1.
19. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
20. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
21. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
22. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
23. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045(FOR OWG) & CBS-0046 (FOR CG).
24. TROLLEY REFUGE SHALL BE PROVIDED ON OPPOSITE SIDES OF EACH CENTRAL PIER.
25. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
26. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
27. PROVISION FOR OHE MAST SHALL BE KEPT ON PIER CAP REQUIREMENT.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

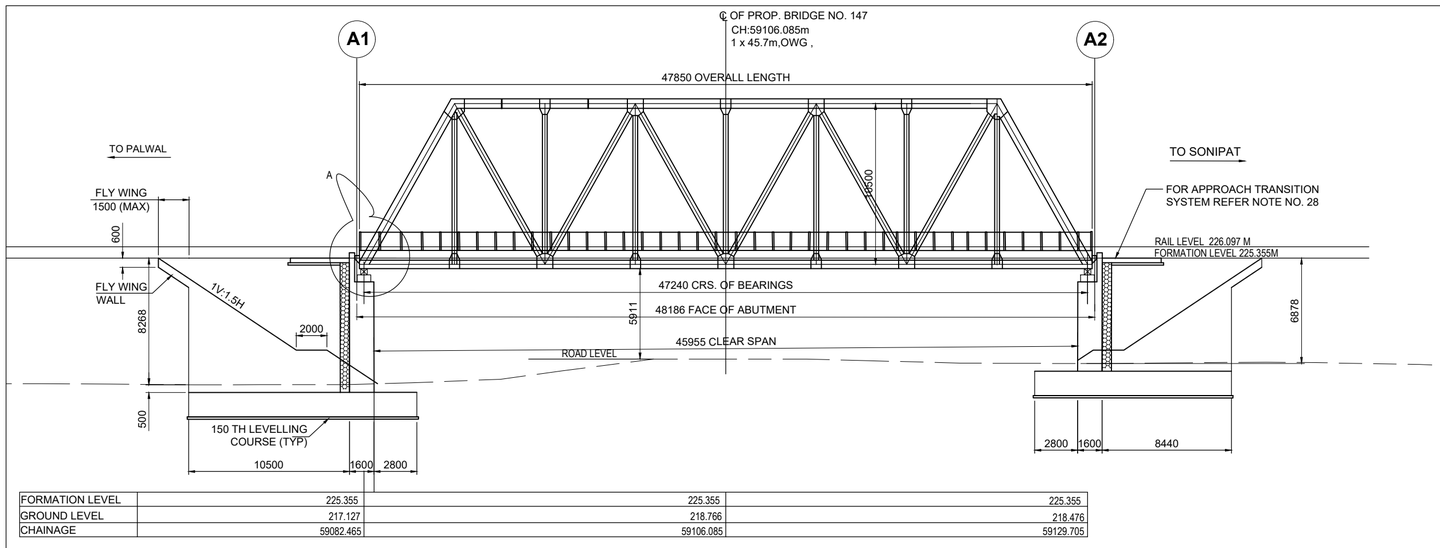
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR ROR BRIDGE NO.136, 18.3(CG)+76.2(OWG)+18.3 (CG) AT CH: 55724.752m

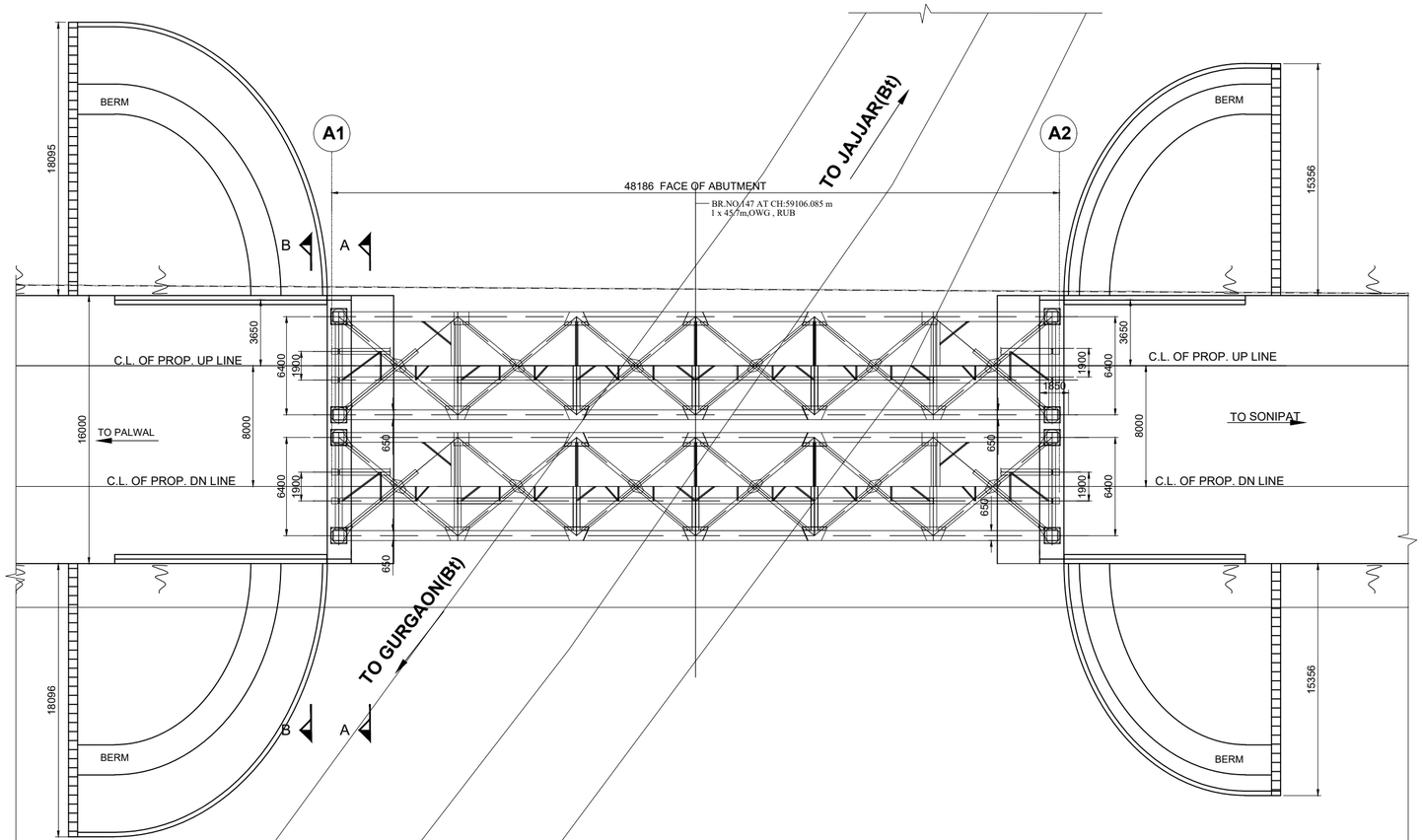
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01136_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

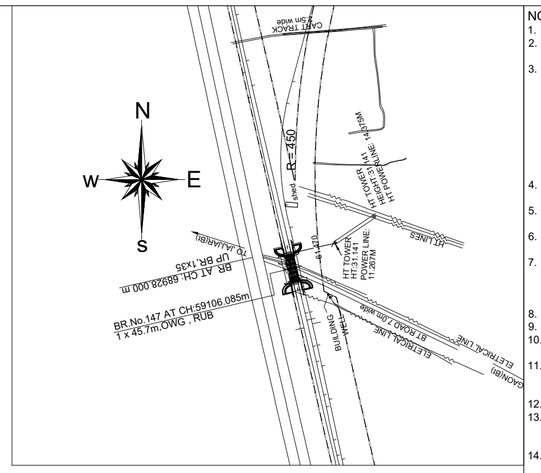


FORMATION LEVEL	225.355	225.355	225.355
GROUND LEVEL	217.127	218.766	218.476
CHAINAGE	59082.465	59106.085	59129.705

SECTIONAL ELEVATION
SCALE 1:200



PLAN AT TOP
SCALE 1:200



KEY PLAN
SCALE 1:NTS

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   - i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   - ii) IRS CONCRETE BRIDGE CODE 2014.
   - iii) IRS BRIDGE RULES 2014.
   - iv) IS 2911 PART-1 SECTION-2.
   - v) EXPOSURE CONDITION - MODERATE.
   - vi) SEISMIC ZONE - IV
   - vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG), SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   - i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   - ii) FOR FOUNDATION ----------M35
   - iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-17081 TO 17098
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045 (FOR OWG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

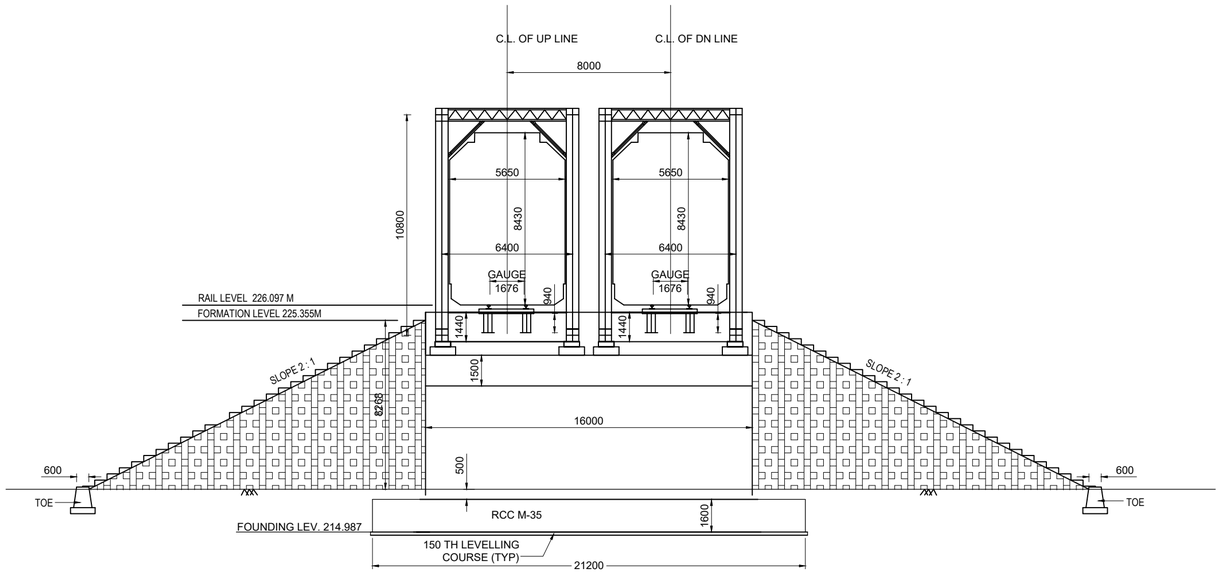
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.147 AT CH:59106.085m 1 x 45.7m,OPEN WEB GIRDER

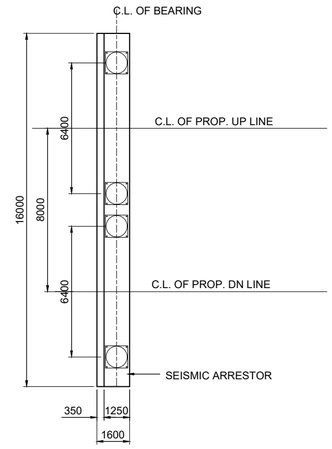
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01147_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	14-12-2022



CROSS SECTION AT A-A (ABUTMENT)

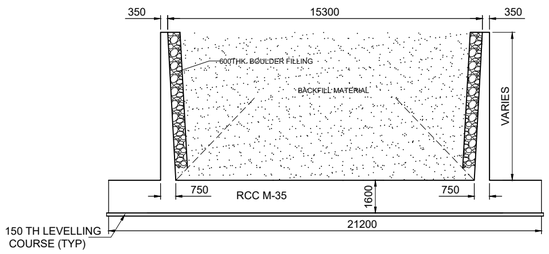
SCALE 1:150



TYPICAL DETAILS OF ABUTMENT CAP

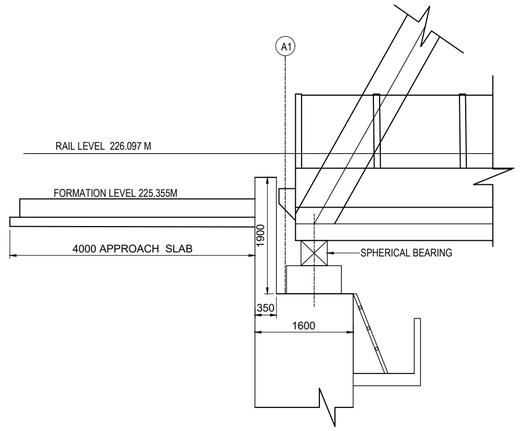
SCALE 1:150

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER.
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED.



CROSS SECTION AT B-B

SCALE 1:150



DETAILS AT "A"

SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

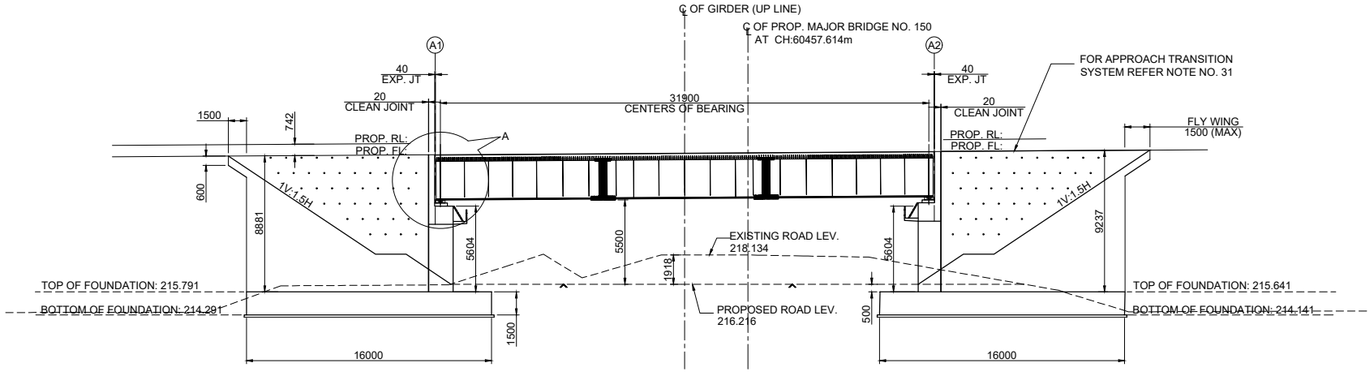
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.147 AT
59106.085 m 1 x 45.7m,OPEN WEB GIRDER

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01147_A1	2 OF 2

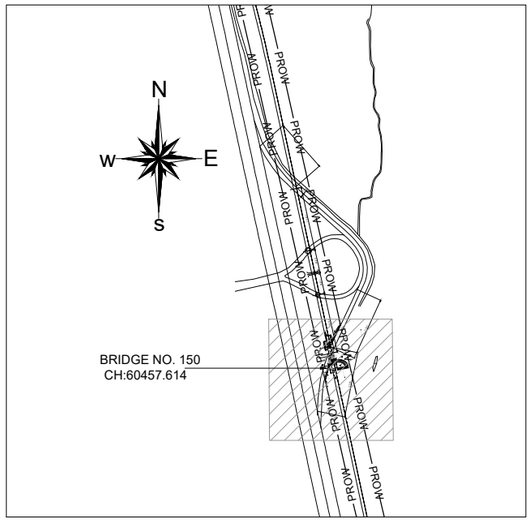
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	224.666	224.796	224.872
GROUND LEVEL	216.224	217.991	216.862
CHAINAGE	60437.522	60457.614	60469.422

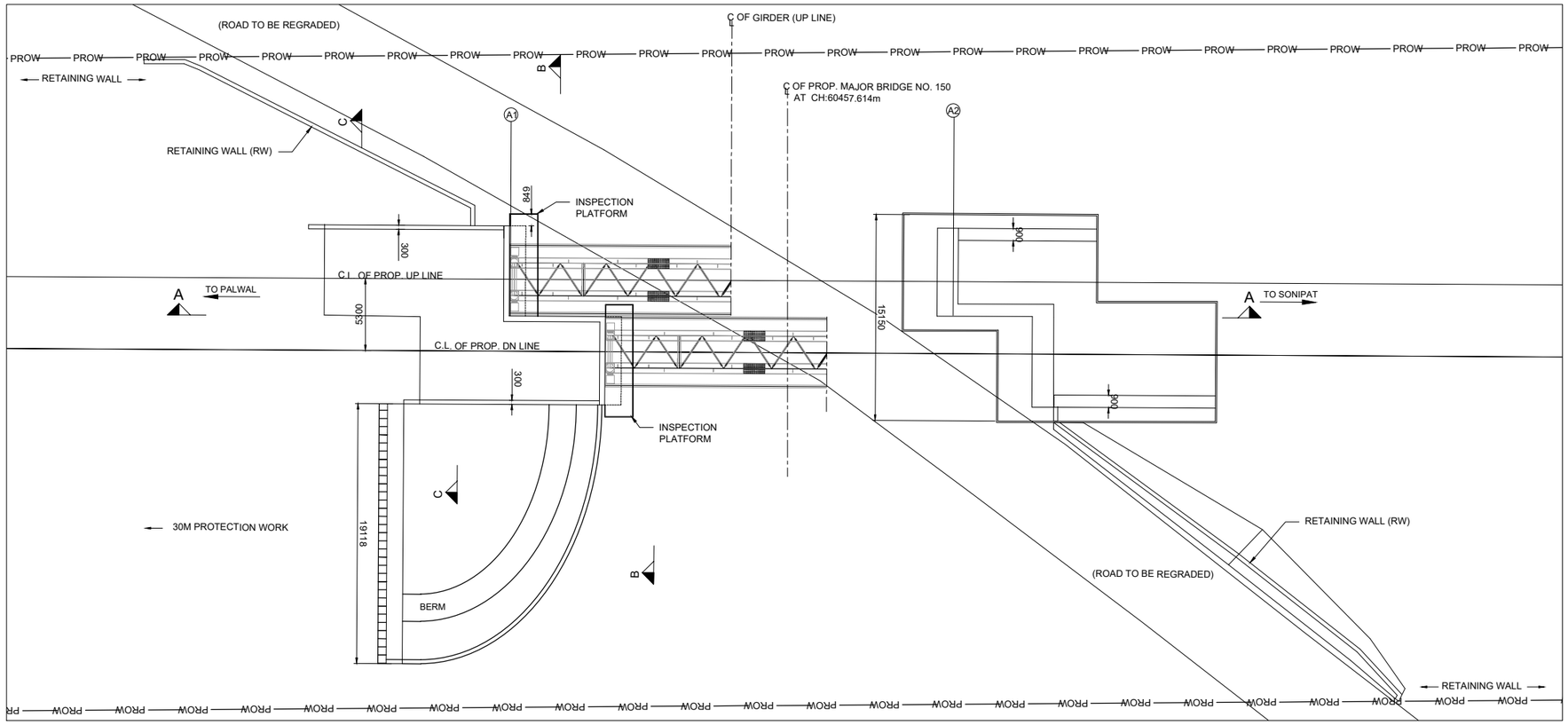
SECTIONAL ELEVATION

SCALE 1:200



KEY PLAN

SCALE 1:NTS



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   - i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   - ii) IRS CONCRETE BRIDGE CODE 2014.
   - iii) IRS BRIDGE RULES 2014.
   - iv) IS 2911 PART-1 SECTION-2.
   - v) EXPOSURE CONDITION - MODERATE.
   - vi) SEISMIC ZONE - IV
   - vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   - i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   - ii) FOR FOUNDATION ----------M35
   - iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN & WING WALL TO BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL OF RETURN & WING WALL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11754/R2 TO 11754/6.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046 (FOR CG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. EXISTING ROAD SHALL BE FIRST DIVERTED TEMPORARILY TO THE EXSITING ROAD STANDARDS.
28. THEREAFTER EXISTING ROAD SHALL BE LOWERED AS SHOWN IN THE DRAWING. L-SECTION OF LOWERED ROAD SHALL BE GOT APPROVED FROM THE ENGINEER BEFORE START OF WORK.
29. PROTECTIVE BARRIERS FOR ABUTMENTS SHALL BE PROVIDED AS APPROVED BY THE ENGINEER.
30. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BRIDGE AFTER PROTECTION WORK.
31. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

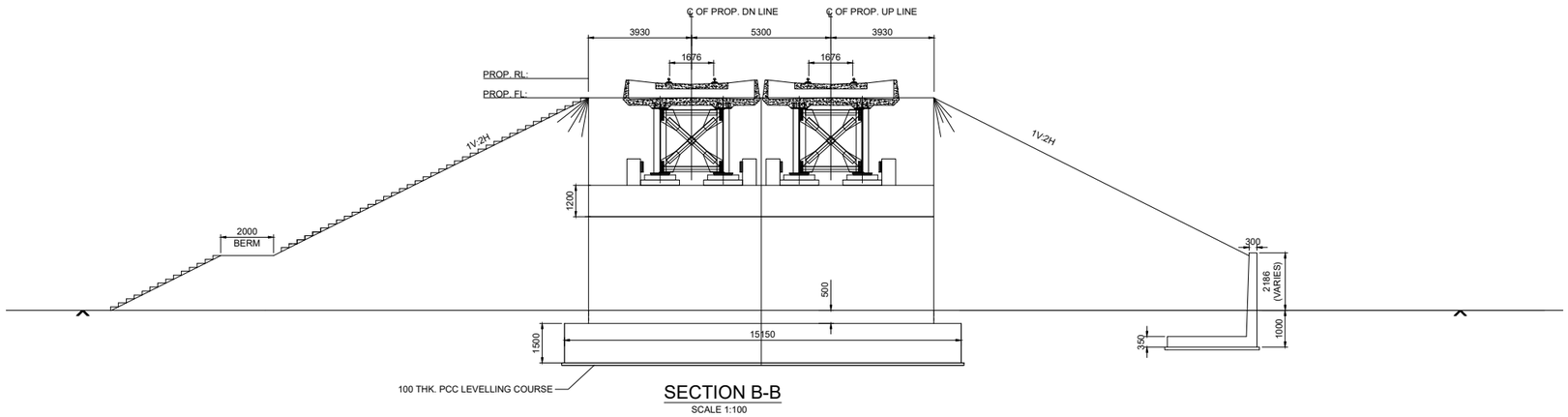
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

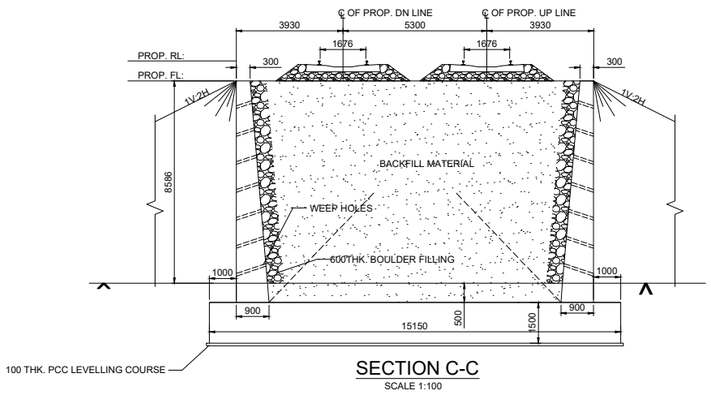
FOR PROPOSED MAJOR RUB NO.150,
1 x 30.5m COMPOSITE GIRDER AT CH: 60457.614m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01150_A1	1 OF 2

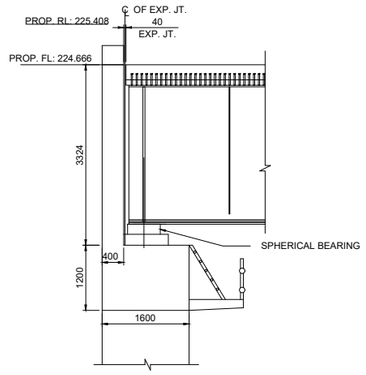
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



DETAIL- A
SCALE 1:50

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

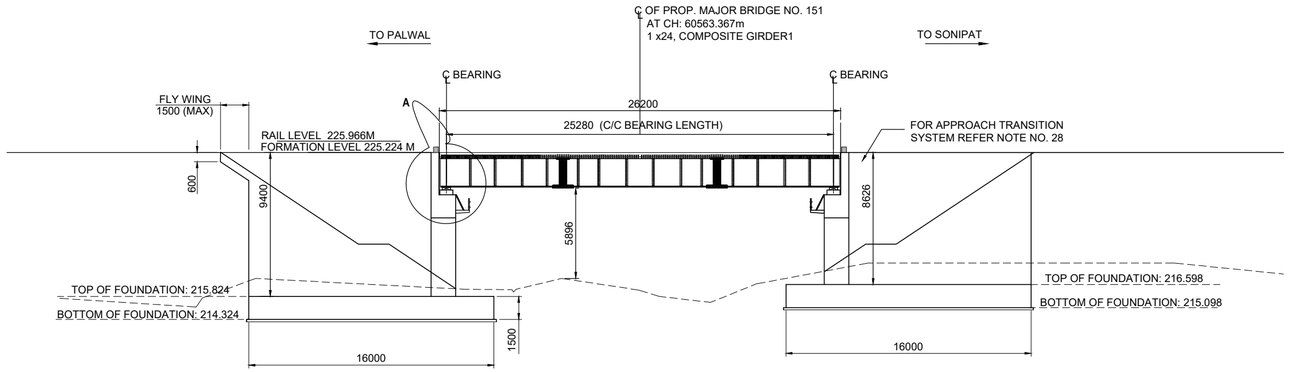
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.150,
1 x 30.5m COMPOSITE GIRDER AT CH: 60457.614m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01150_A1	2 OF 2

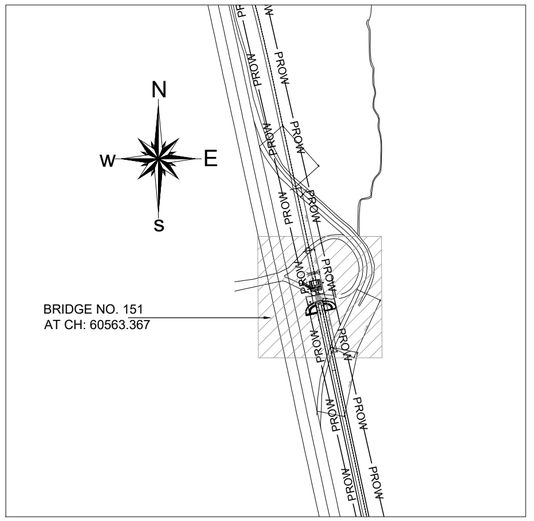
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	216.358	216.223	217.583
CHAINAGE	60550.727	60563.367	60767.004

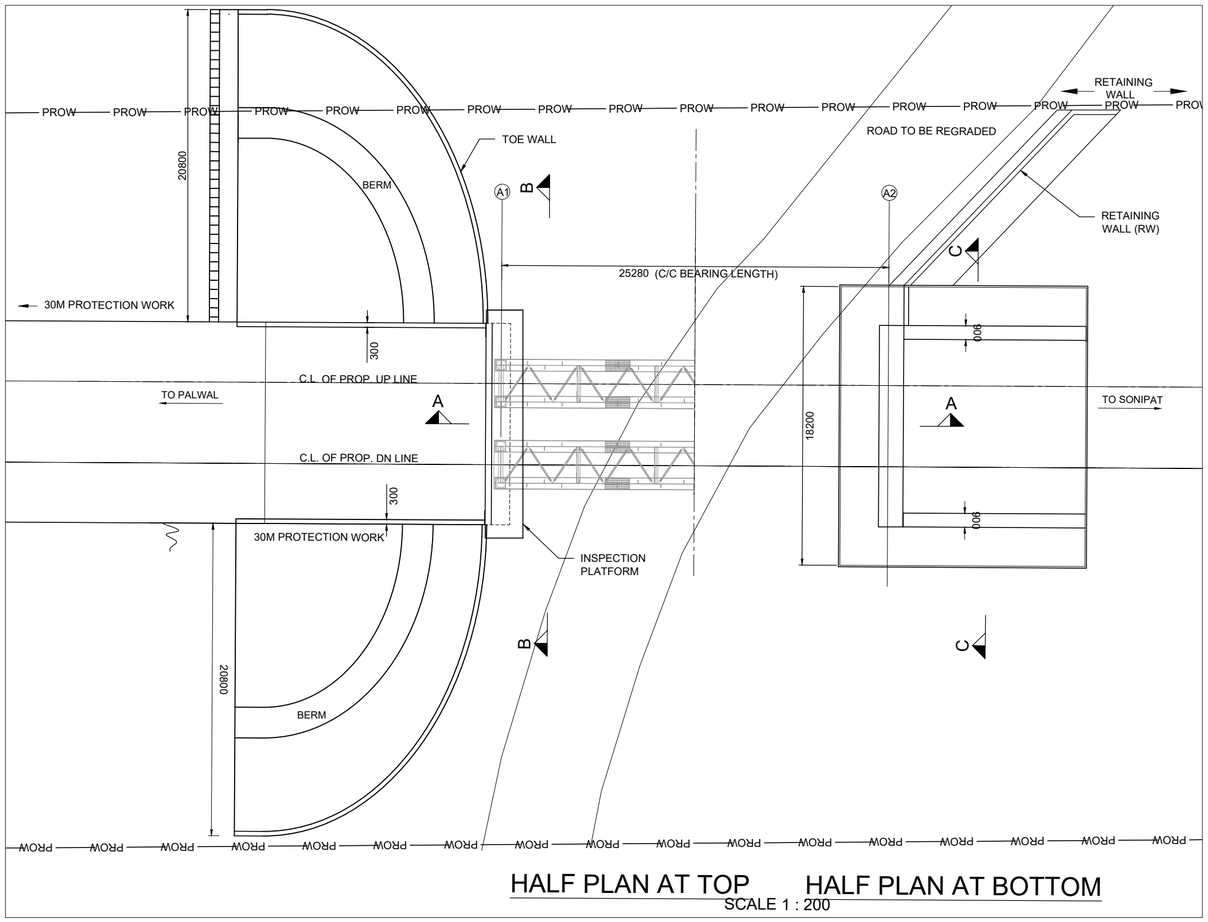
SECTIONAL ELEVATION

SCALE 1:200



KEY PLAN

SCALE 1:NTS



HALF PLAN AT TOP HALF PLAN AT BOTTOM

SCALE 1 : 200

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11751/R1 TO 11751/8.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. PATHWAY SHALL BE PROVIDED ON OUTER SIDE OF CG. RDSO DWG. NO. CBS-0046 (FOR CG.) SHALL BE FOLLOWED FOR ARRANGEMENT OF PATHWAY.
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY APPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
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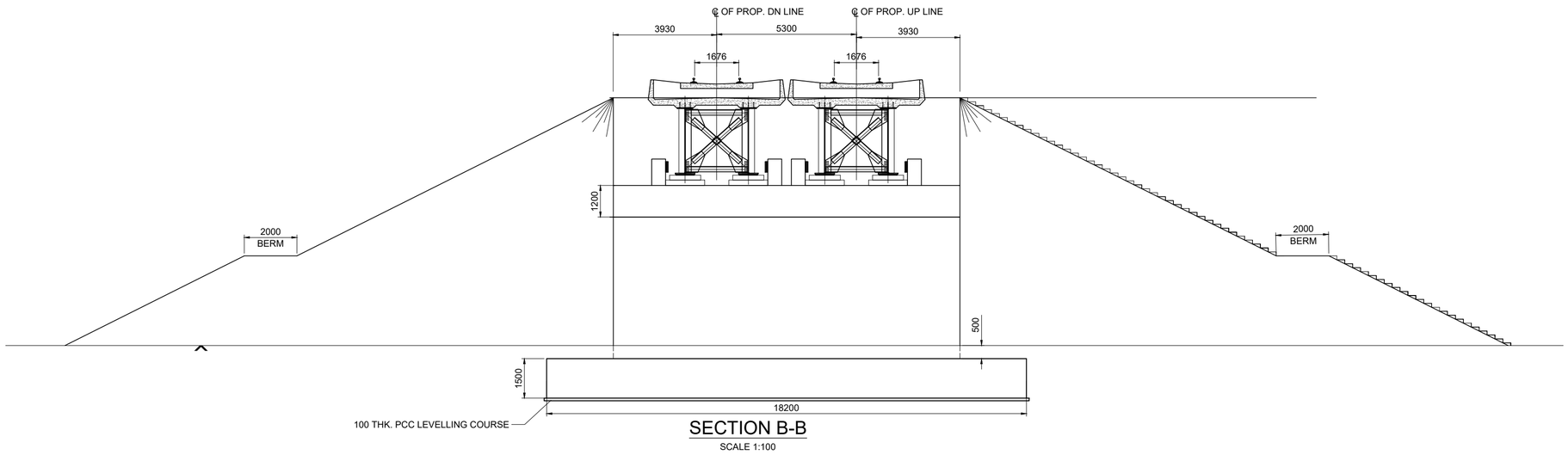
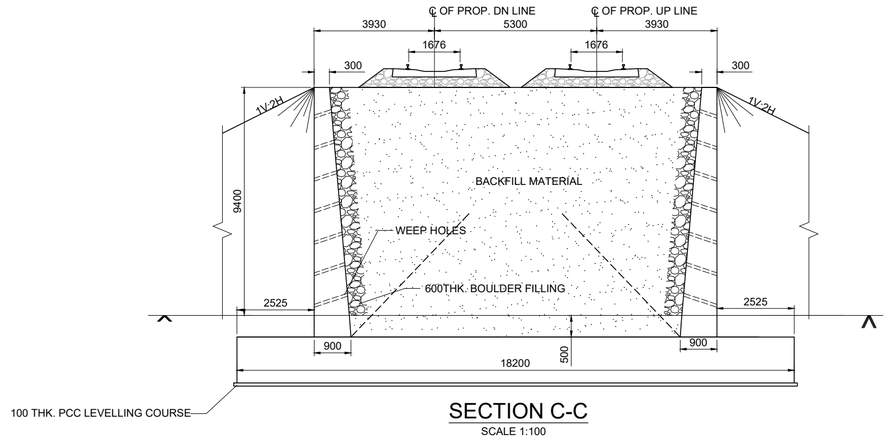
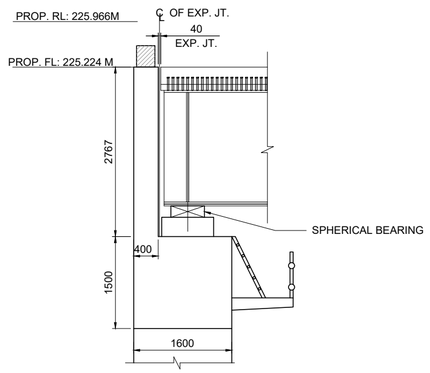


SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



DETAIL- A
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

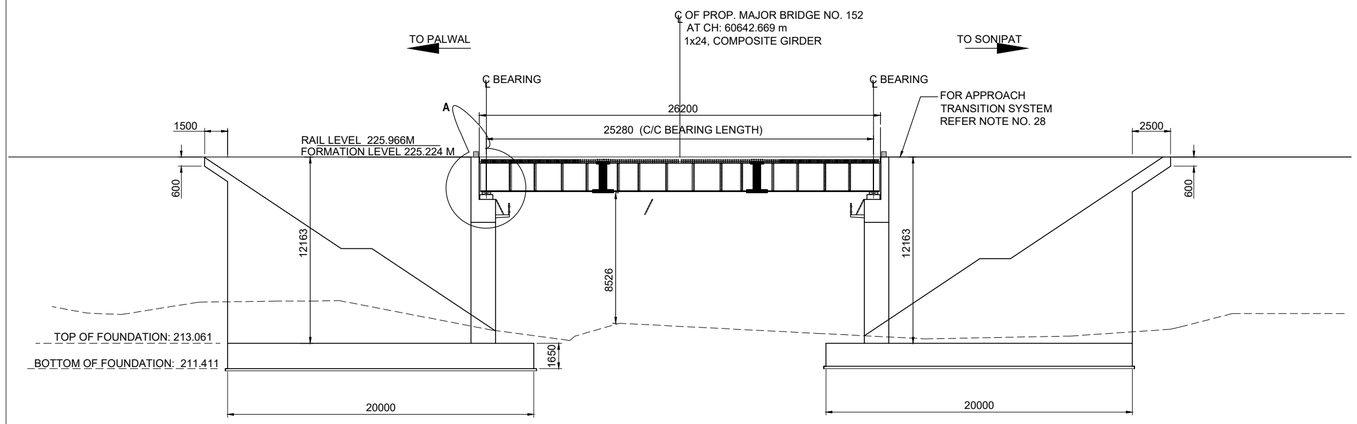
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.151,
1 x 24.4m COMPOSITE GIRDER AT CH: 60563.367m

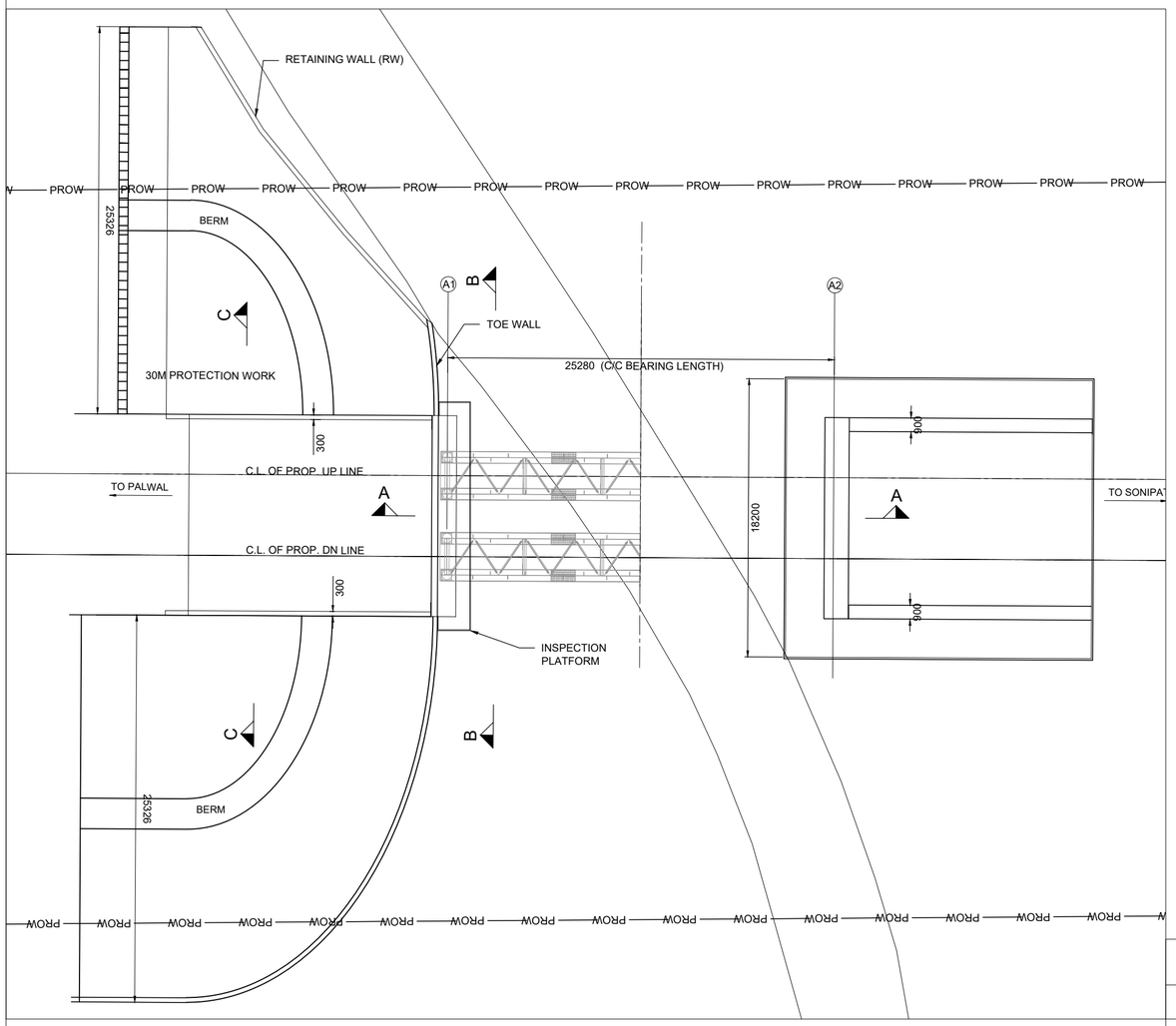
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01151_A1	2 OF 2

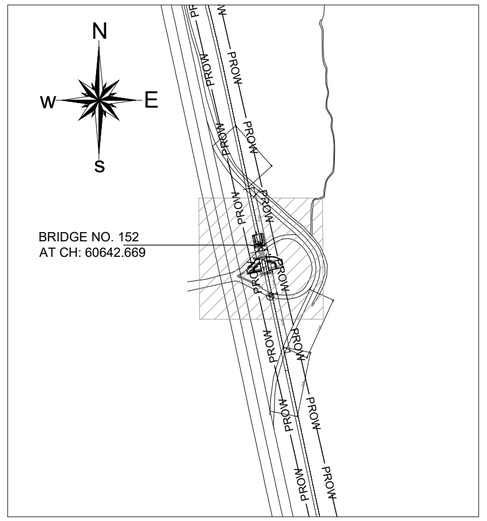
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



FORMATION LEVEL	225.224	225.224	225.224
GROUND LEVEL	213.996	214.178	213.528
CHAINAGE	60630.029	60642.669	60655.309

SECTIONAL ELEVATION
SCALE 1:200





KEY PLAN
SCALE - N.T.S

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
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   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
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11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
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17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
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21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
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23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. PATHWAY SHALL BE PROVIDED ON OUTER SIDE OF CG. RDSO DWG. NO. CBS-0046 (FOR CG.) SHALL BE FOLLOWED FOR ARRANGEMENT OF PATHWAY.
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PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

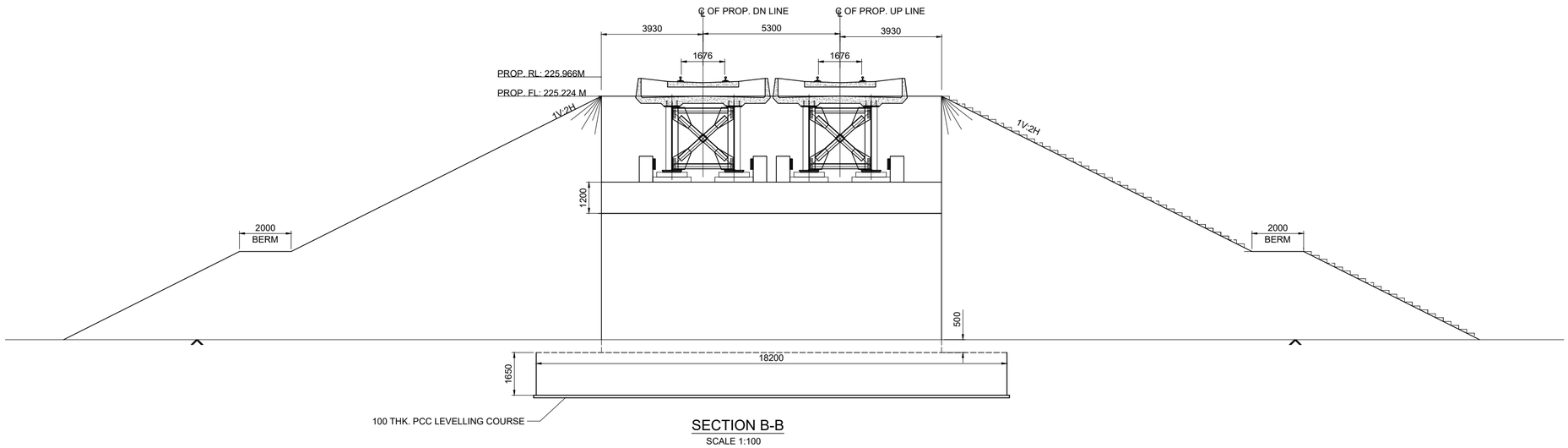
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
THE INFRASTRUCTURE PEOPLE

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

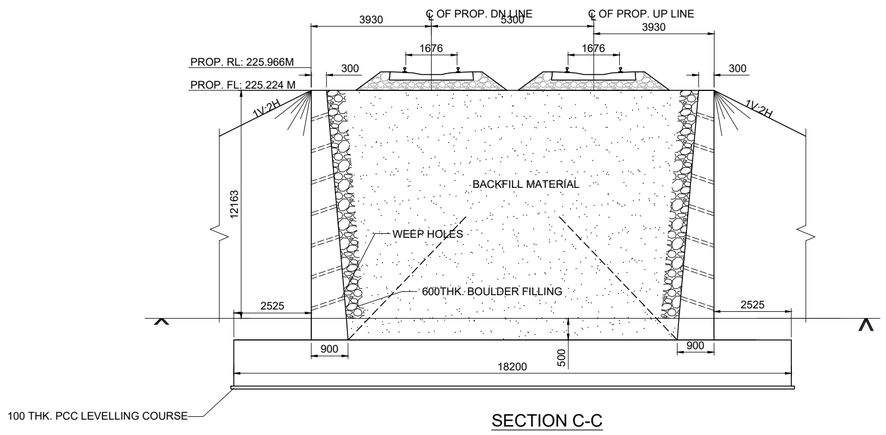
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022



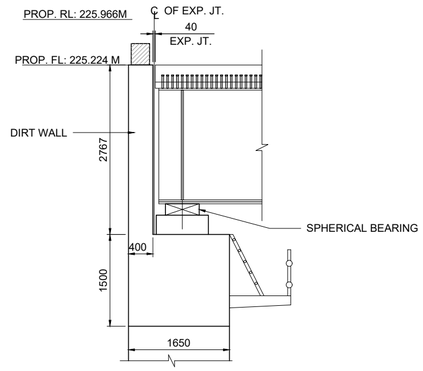
SECTION B-B

SCALE 1:100



SECTION C-C

SCALE 1:100



DETAIL- A

SCALE 1:50

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
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GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR

RITES Limited in consortium with SMEC International Pty. Ltd.

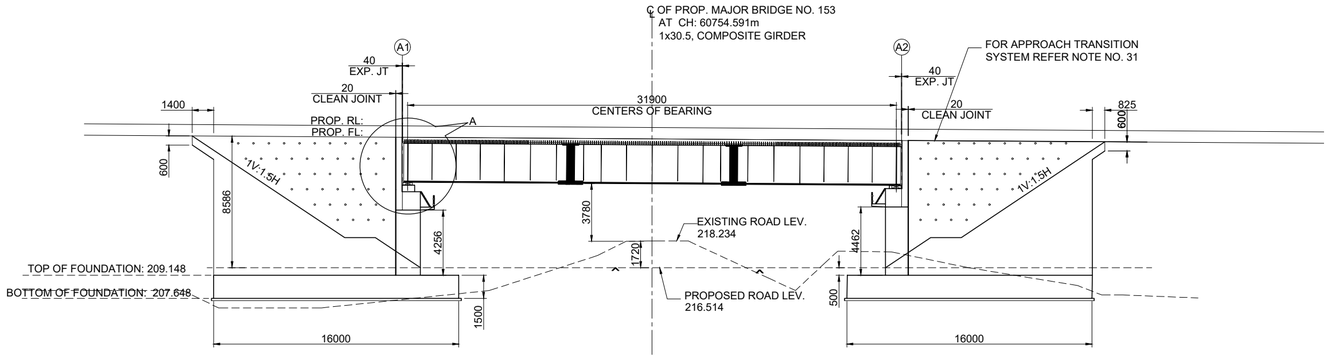
RITES THE INFRASTRUCTURE PEOPLE | SMEC

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING

FOR PROPOSED MAJOR RUB NO.152,
1 x 24.4m COMPOSITE GIRDER AT CH: 60642.669 m

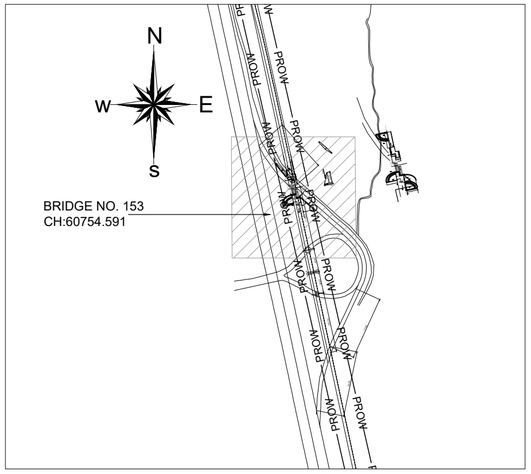
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01152_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

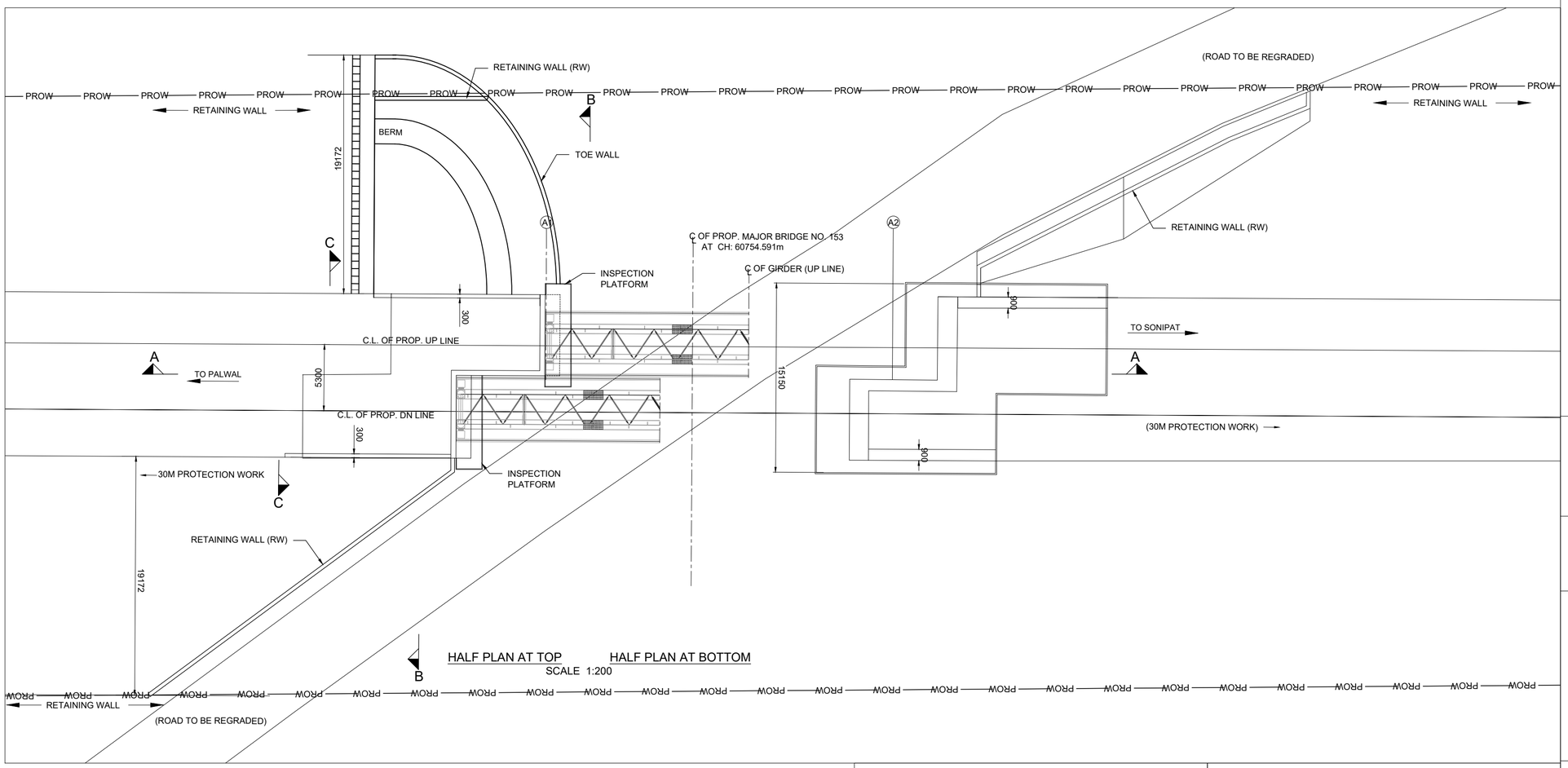


FORMATION LEVEL	224.898	224.898	224.898
GROUND LEVEL	214.948	218.234	215.865
CHAINAGE	60743.12	60754.591	60775.02

SECTIONAL ELEVATION
SCALE 1:200



KEY PLAN
SCALE - N.T.S



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   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T, SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
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   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
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8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
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10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
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18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE COMPOSITE GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-11754/R2 TO 11754/6.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0046 (FOR CG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. EXISTING ROAD SHALL BE FIRST DIVERTED TEMPORARILY TO THE EXSITING ROAD STANDARDS.
28. THEREAFTER EXISTING ROAD SHALL BE LOWERED AS SHOWN IN THE DRAWING. L-SECTION OF LOWERED ROAD SHALL BE GOT APPROVED FROM THE ENGINEER BEFORE START OF WORK.
29. PROTECTIVE BARRIERS FOR ABUTMENTS SHALL BE PROVIDED AS APPROVED BY THE ENGINEER.
30. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
31. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
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RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC

GC/HORC		HRIDC	
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SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.153,
1 x 30.5 m COMPOSITE GIRDER AT 60754.591m

DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01153_A1	1 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

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1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
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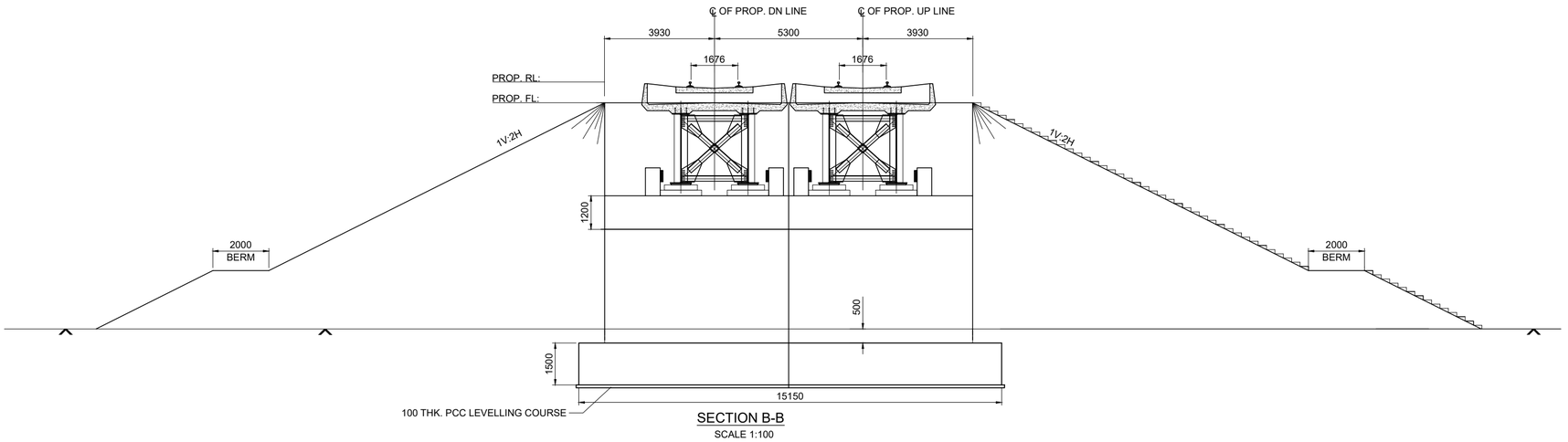
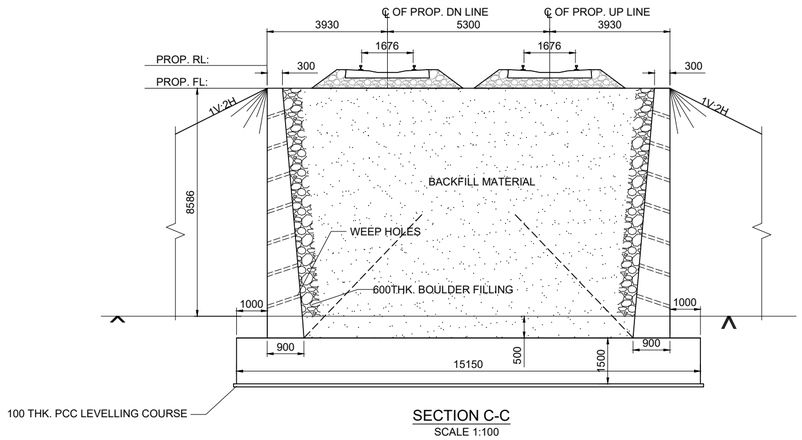
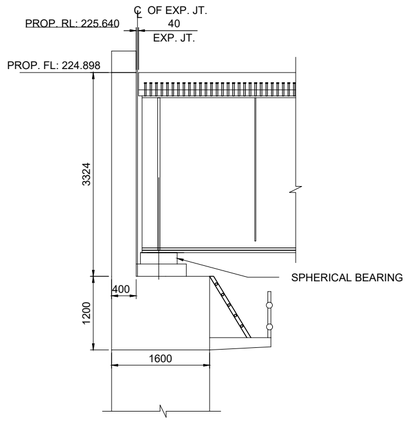


SECTION B-B
SCALE 1:100



SECTION C-C
SCALE 1:100



DETAIL- A
SCALE 1:50

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

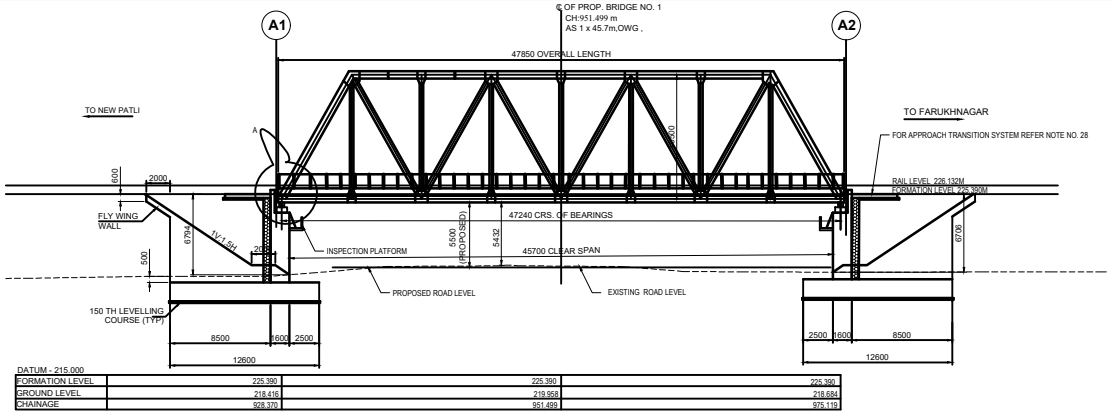
THE INFRASTRUCTURE PEOPLE

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING
FOR PROPOSED MAJOR RUB NO.153,
1 x 30.5 m COMPOSITE GIRDER AT 60754.591m

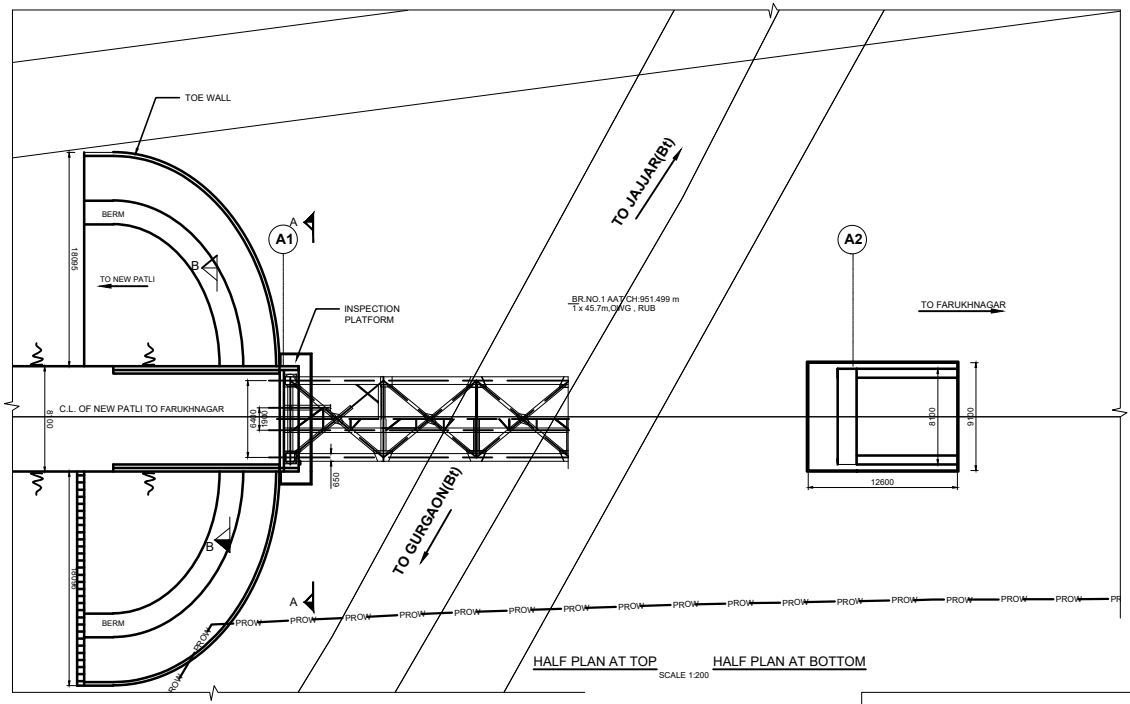
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-01153_A1	2 OF 2

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

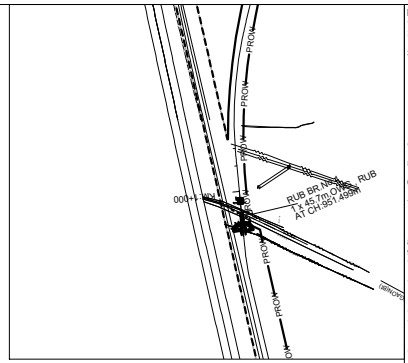
4 Major Bridges
4.2.2 Connecting Line
A New Patli-Sultanpur



SECTIONAL ELEVATION
SCALE 1:200



HALF PLAN AT TOP HALF PLAN AT BOTTOM
SCALE 1:200



KEY PLAN
SCALE 1:NTS

NOTES:
1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-32.5T (RDSO STANDARD OWG), SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
5. SIZE AND TYPE OF FOUNDATION SHOWN IS TENTATIVE AND MAY CHANGE DURING DETAILED DESIGN.
6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
   i) FOR ABUTMENT,DIRT & RETURN WALL----------M35
   ii) FOR FOUNDATION ----------M35
   iii) FOR LEVELING COURSE----------M20
8. ALL CONCRETE WORK SHALL BE MECHANICALLY MIXED AND VIBRATED.
9. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
10. HIGH YIELD STRENGTH DEFORMED BARS OF GRADE Fe-500D CONFORMING TO IS: 1786- 2008 SHALL BE USED AS REINFORCEMENT.
11. BED LEVEL & ROAD LEVEL FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
12. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
13. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
14. BOULDER FILLING & BOULDER PACKING BEHIND RETURN WALL / WING WALL SHALL BE DONE AS PER IRS FOUNDATION & SUBSTRUCTURE CODE CL.7.5.2.
15. BACK FILL SHALL BE AS PER CL.7.5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE 2013.
16. 75mm DIA WEEP HOLES TO BE PROVIDED @1000 C/C HORZ. AND 1000 MM C/C VERTICALLY ABOVE LOWEST WATER LEVEL IN RETURN WALL AS PER IRS SUB STRUCTURE CODE CLAUSE 7.6.
17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE OPEN WEB GIRDER SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO/B-17081 TO 17098
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. ARRANGEMENT FOR PATHWAY SHALL BE PROVIDED AS PER RDSO DWG. NO. CBS-0045 (FOR OWG).
26. SEISMIC ARRESTOR SHALL BE PROVIDED ON THE PIER/ABUTMENT CAP.
27. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
28. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

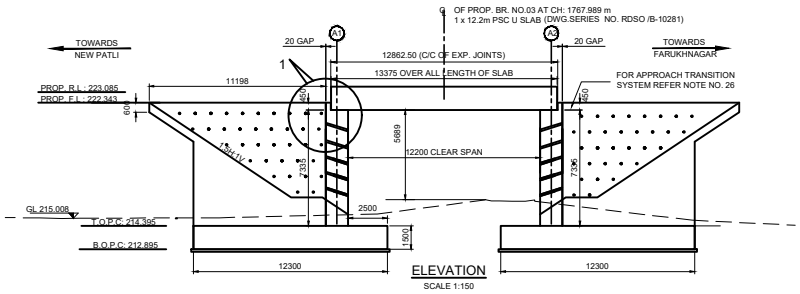
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

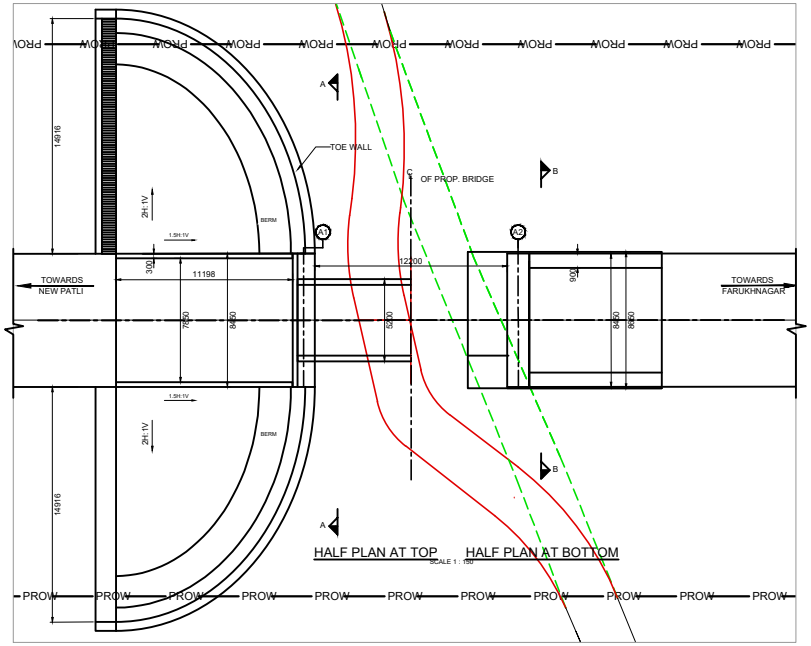
GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

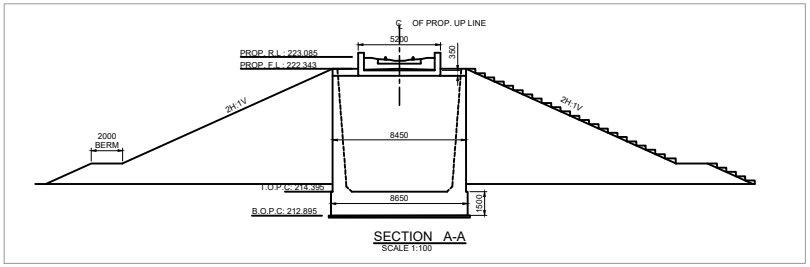
TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO. 1 AT CH:951.499 m 1 x 45.7m,OPEN WEB GIRDER(CONNECTING LINE NEW PATLI TO SULTANPUR)

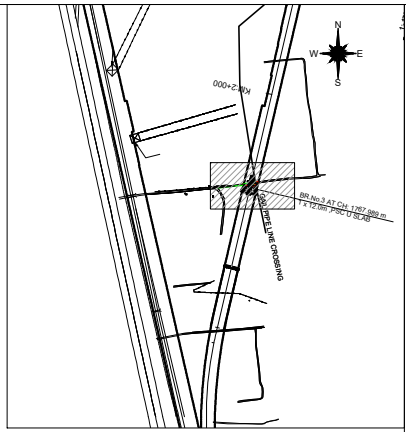
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04001_A1	1 OF 1

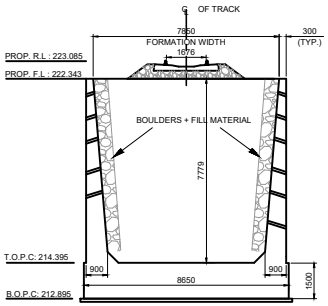
SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

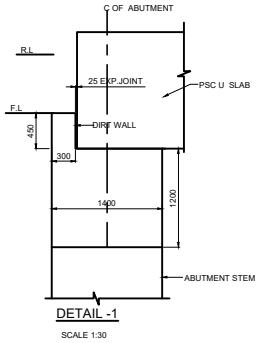












NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS ARE IN METER
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. DESIGN CRITERIA
   i) IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
   ii) IRS CONCRETE BRIDGE CODE 2014.
   iii) IRS BRIDGE RULES 2014.
   iv) IS 2911 PART-1 SECTION-2.
   v) EXPOSURE CONDITION - MODERATE.
   vi) SEISMIC ZONE - IV
   vii) STANDARD OF LOADING :- SUPER STRUCTURE-25T (RDSO STANDARD) & SUB STRUCTURE-32.5T- 2008 LOADING.
4. THE STRUCTURAL DIMENSIONS AND SIZES ARE INDICATIVE AND THESE MAY VARY DURING DETAIL DESIGN.
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6. ALL RCC AND CC WORKS SHALL BE DONE IN ACCORDANCE WITH SPECIFICATION LAID DOWN IN IRS CONCRETE BRIDGE CODE.
7. THE GRADE OF CONCRETE
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8. MIX DESIGN SHALL BE APPROVED BY ENGINEER - IN CHARGE.
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10. BED LEVEL & ROAD LEVEL,FORMATION LEVEL AND RAIL LEVEL & ALIGNMENT SHALL BE VERIFIED BY THE ENGINEER AT SITE BEFORE EXECUTION OF WORK.
11. ANGLE OF INTERNAL FRICTION OF BACK FILL SHALL NOT BE LESS THAN 35.
12. PROTECTION WORK ON SLOPES OF BANK UP TO 30M,BOTH SIDES ON APPROACHES OF BRIDGE SHALL BE DONE AS PER SKETCH NO. GC-HRIDC-SK-GEN-015.
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17. ALL RCC SURFACES COMING IN CONTACT WITH SOIL SHOULD BE PAINTED WITH BITUMEN OR COAL TAR OF APPROVED QUALITY @ 1.464 KG/SQM.
18. CURING SHALL BE DONE AS PER CLAUSE NO 8.4 OF IRS CONCRETE BRIDGE CODE.
19. SAFETY & PROTECTION OF THE PROPOSED WORK IS TO BE ENSURED BY THE CONTRACTOR AS PER PARA 826 OF IRPWM WITH UPDATED CORRECTION SLIPS OF 2011-12.
20. THE SPECIFICATIONS FOR THE PSC U SLAB SHALL BE IN ACCORDANCE WITH RDSO DRG.NO'S : RDSO 10281,10281/1 AND 10281/2.
21. CONCRETING SHALL BE DONE IN ACCORDANCE WITH IRS CONCRETE BRIDGE CODE WITH 20MM MAXIMUM SIZE AGGREGATE.
22. ALL DIMENSIONS AND LEVELS SHOULD BE VERIFIED AT SITE BEFORE EXECUTION.
23. BRIDGE DETAILS LIKE , DL, INSPECTION STEPS PAINTINGS ETC SHOULD BE FOLLOWED AS PER BRIDGE MANUAL, DURING CONSTRUCTION.
24. THIS DRAWING IS PROPERTY OF HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED (HRIDC) AND EXCLUSIVE USE OF HRIDC.
25. INSPECTION STEPS SHALL BE PROVIDED AT DIAGONALLY OPPOSITE ENDS OF THE BOX AFTER PROTECTION WORK.
26. TRANSITION SYSTEM TO BE ADOPTED ON BRIDGE APPROACHES SHALL BE AS PER RDSO REPORT NO. GE:R-50(TRANSITION SYSTEM ON APPROACHES OF BRIDEGES). FOR DETAILS REFER SKETCH NO. GC-HRIDC-SK-GEN-019.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL
———	PROPOSED ROAD
- - - -	DISMANTEL ROAD

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R.R KUMAR GM/IP&P/HRIDC	
SUDHIR AGRAWAL DPD/CIVIL		UMA.M.RAO DGM/C-W	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

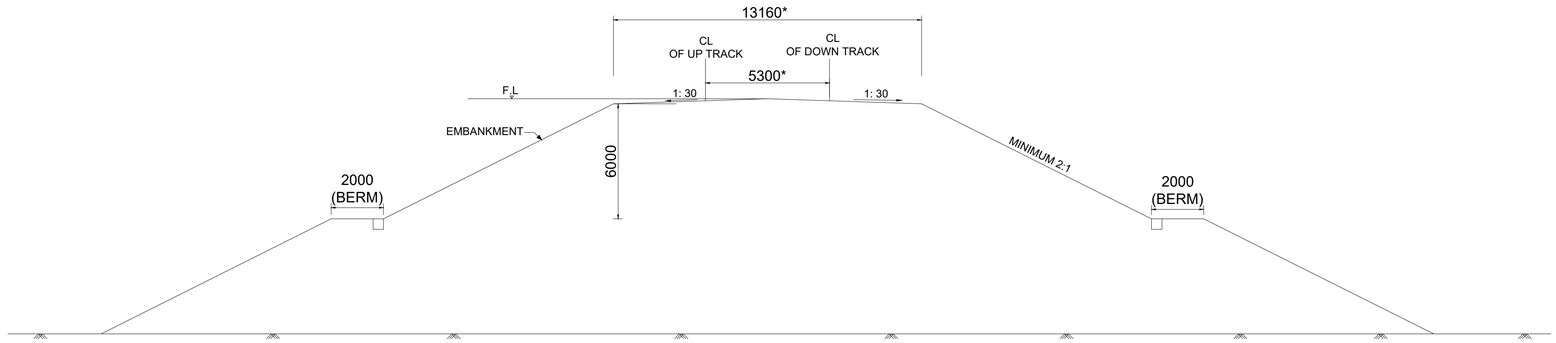
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

TITLE:- CONCEPTUAL GENERAL ARRANGEMENT DRAWING FOR PROPOSED MAJOR RUB NO. 3, 1 x 12.2m PSC U SLAB AT CH.1767.989 (CONNECTING LINE NEW PATLI TO SULTANPUR)

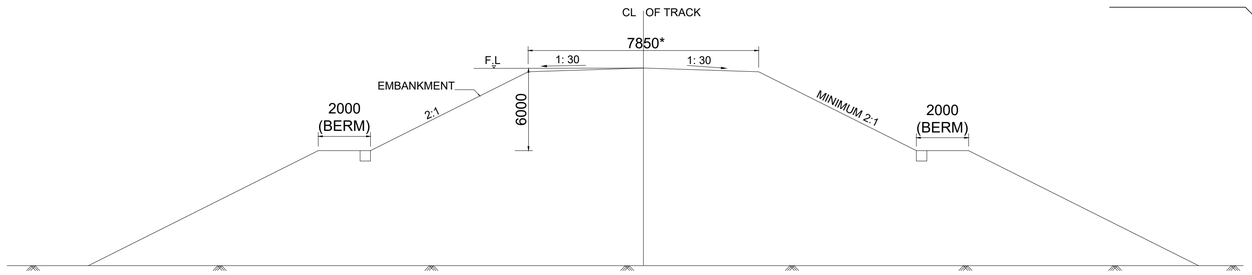
DRG. NO.	SHEET NO.
GC-HRIDC-C23-DRW-BRD-GAD-04003_A1	1 OF 1

SCALE :	ISSUE DATE	REVISED DATE
AS SHOWN	11-11-2022	16-12-2022

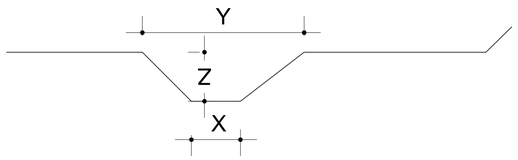
5 Miscellaneous Drawings (Conceptual Plan)



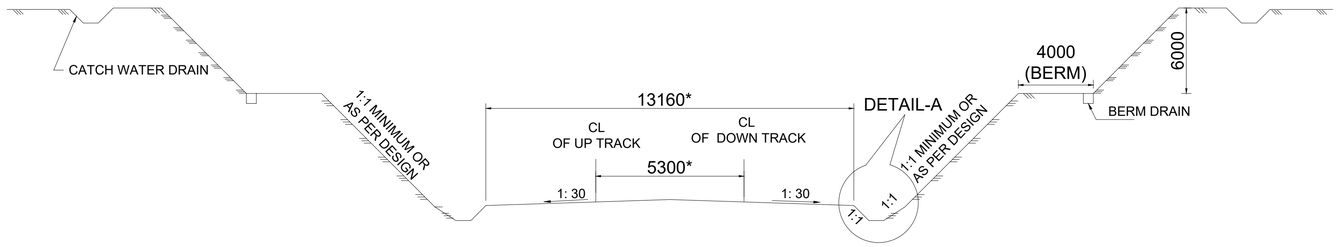
TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR DOUBLE TRACK)



TYPICAL CROSS-SECTION OF EMBANKMENT
(FOR SINGLE TRACK)



DETAIL-A



TYPICAL CROSS-SECTION OF CUTTING
(FOR DOUBLE TRACK)

NOTES:
1. ALL DIMENSION ARE IN MM.
2. DEPTH OF BALLAST CUSHION SHOULD BE PROVIDED AS PER PARA 212(2) OF IRPWM.
3. CROSS SLOPE OF 1IN 30 SHALL BE PROVIDED.
4. MINIMUM FORMATION WIDTH OF 13160 MM SHALL BE ENSURED FOR NEW WORKS IN BOTH EMBANKMENT AND IN CUTTING (EXCLUDING SIDE DRAIN)
5. * FORMATION WIDTH SHALL BE INCREASED BASED ON CURVE & SUPER ELEVATION AS PER IRSOD.
6. X, Y, Z DIMENSIONS SHALL BE AS PER DESIGN.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

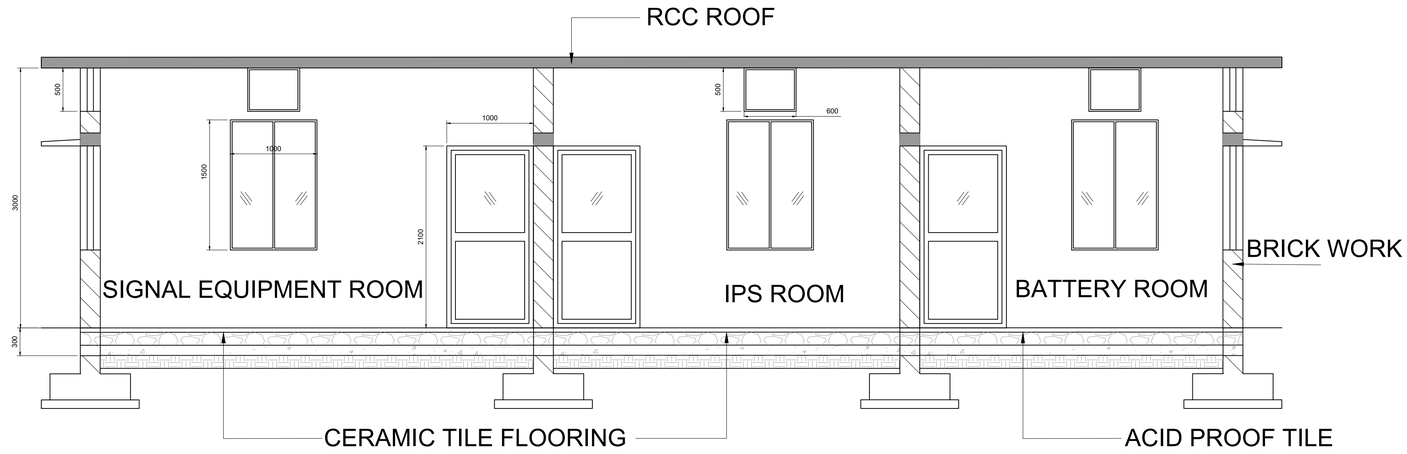
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TYPICAL EMBANKMENT/CUTTING PROFILE

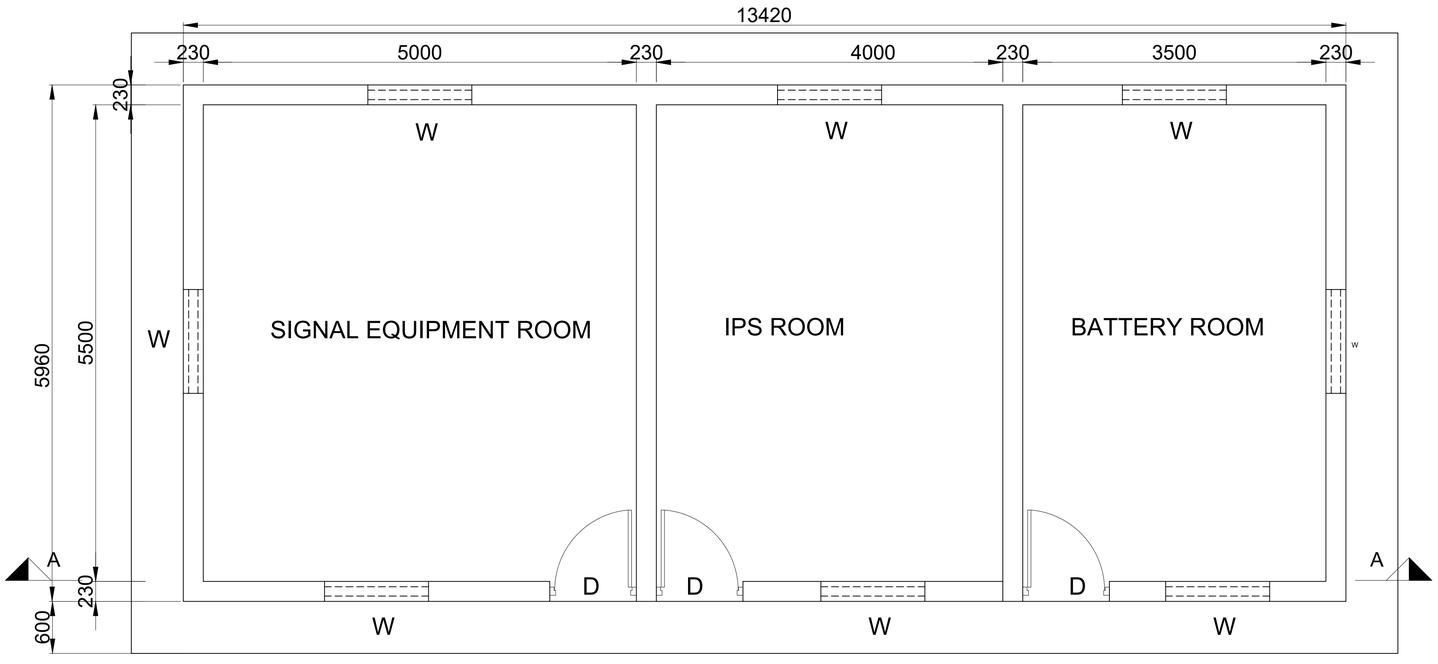
DRG. NO.	GC-HRIDC-SK-GEN-001_A1	SHEET NO.
SCALE : AS SHOWN		ISSUE DATE 28.12.2022



SECTIONAL ELEVATION A-A

SCHEDULE

DOOR	2100x1000
WINDOW	1000x1500
VENTILATOR	600x500



PLAN

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. PLINTH LEVEL SHALL BE KEPT AT LEAST 300mm ABOVE THE GROUND LEVEL.
3. DPC SHALL BE PROVIDED ABOVE PLINTH LEVEL.
4. FOUNDATION SHALL BE DESIGNED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER.
5. DOOR & WINDOW FRAMES SHALL BE OF STEEL.
6. DOOR SHUTTERS SHALL BE 35mm THICK FLUSH DOORS.
7. WINDOWS AND VENTILATORS SHALL BE AS PER RELEVANT IS CODES.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

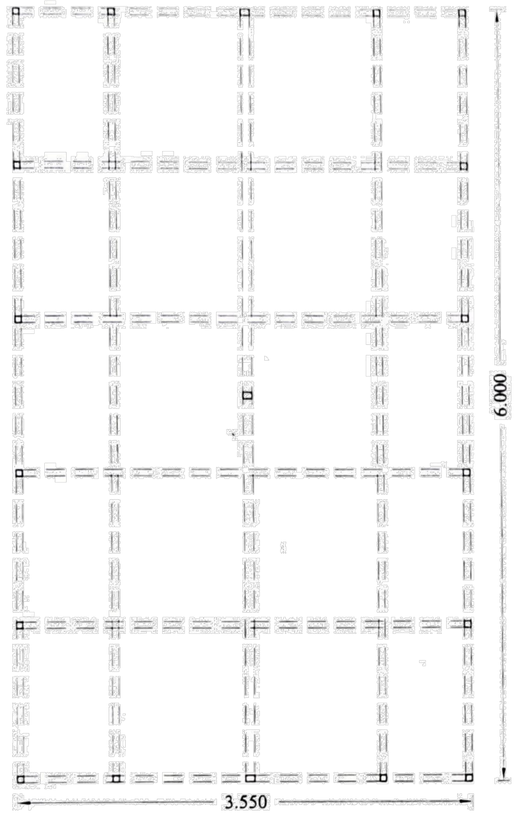
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

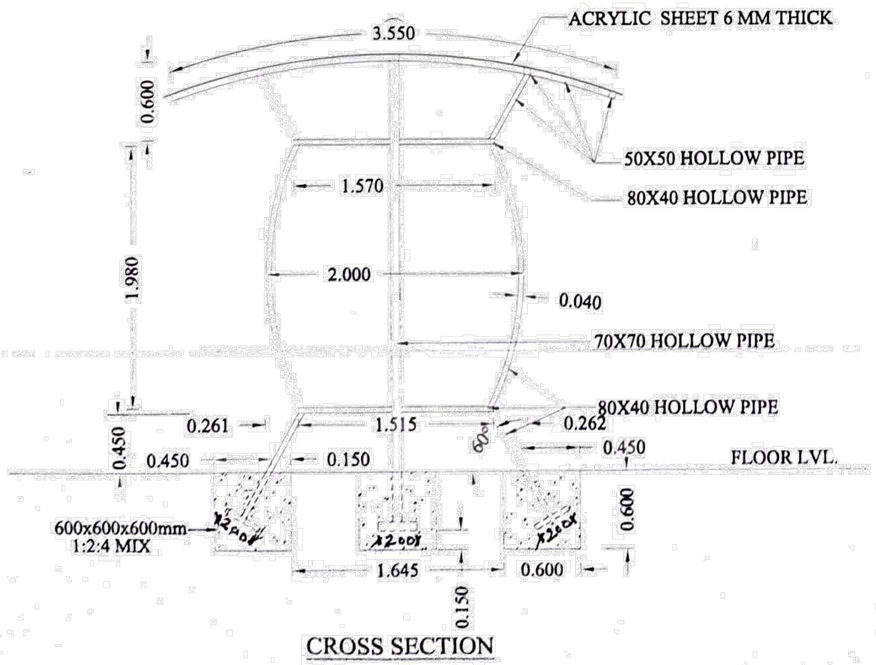
TITLE:- CONCEPTUAL PLAN
S & T HUT

DRG. NO. GC-HRIDC-SK-GEN-002_A1 | SHEET NO. 1 OF 1

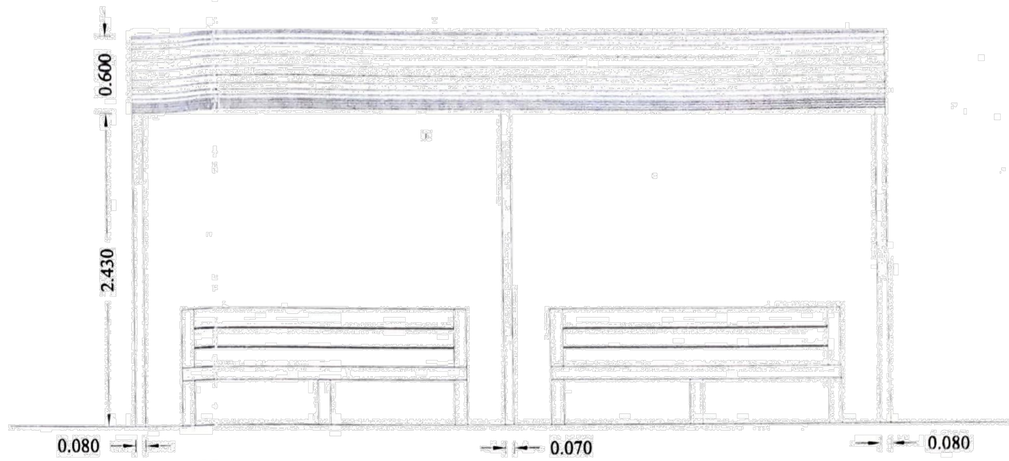
SCALE : AS SHOWN | ISSUE DATE 28.12.2022



PLAN



CROSS SECTION



FRONT VIEW

Note:-

1- All dimensions are in meter unless otherwise mentioned in the drawing.
2- 6mm thick Multi-wall Translucent Polycarbonate sheet both side UV Protected and in curved shape including Aluminum top and bottom profile with EPDM gasket,their fixing with S.S. Pipe purlins self tapping screw etc. on structure roof of shelter
3- This sketch is only for architectural purpose. Hollow Circular/ square/ rectangular sections of S.S. shall be used. Size mentioned in the drawing are tentative and shall be as per detailed design.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

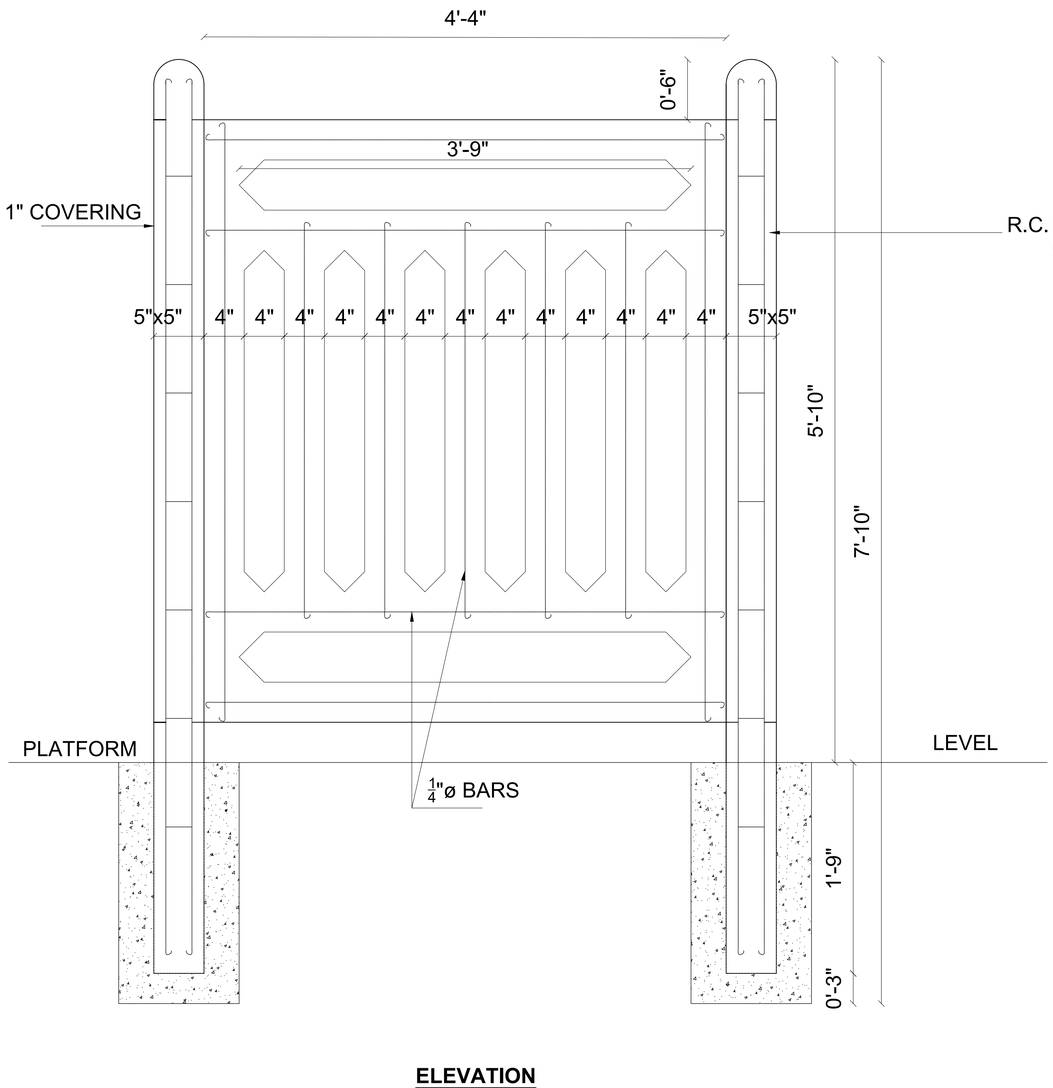
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

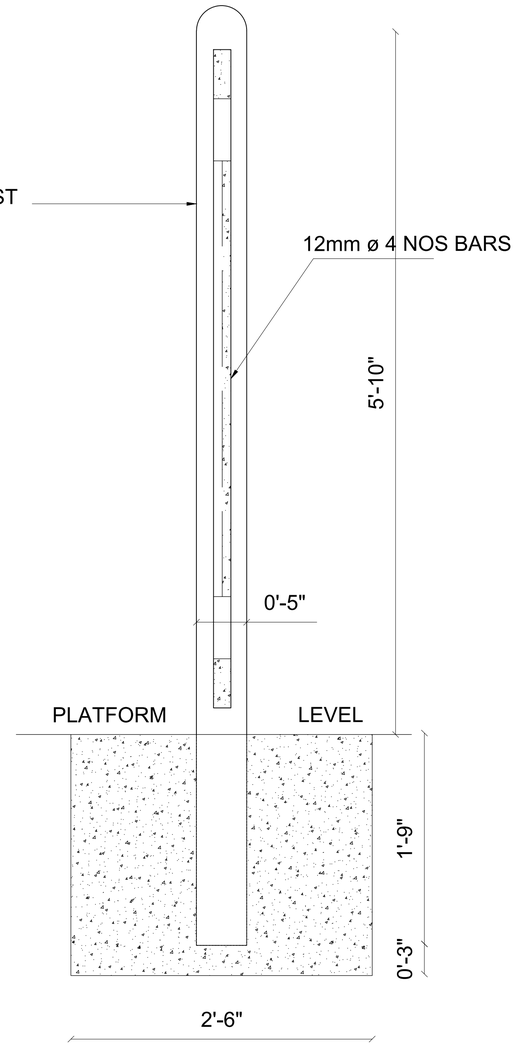
TITLE:- CONCEPTUAL PLAN
MINI PLATFORM SHELTER

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-003_A1	1 OF 1

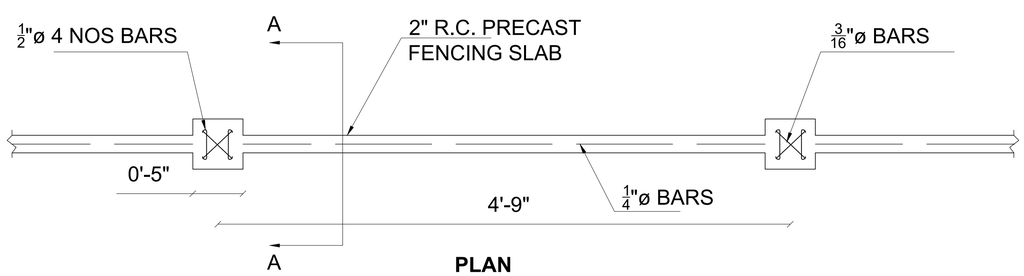
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



ELEVATION



SECTION AT A-A



PLAN

NOTES:
1. ALL DIMENSION ARE IN INCHES UNLESS OR OTHERWISE MENTIONED.
2. NO DIMENSION SHALL BE SCALED FROM THE DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

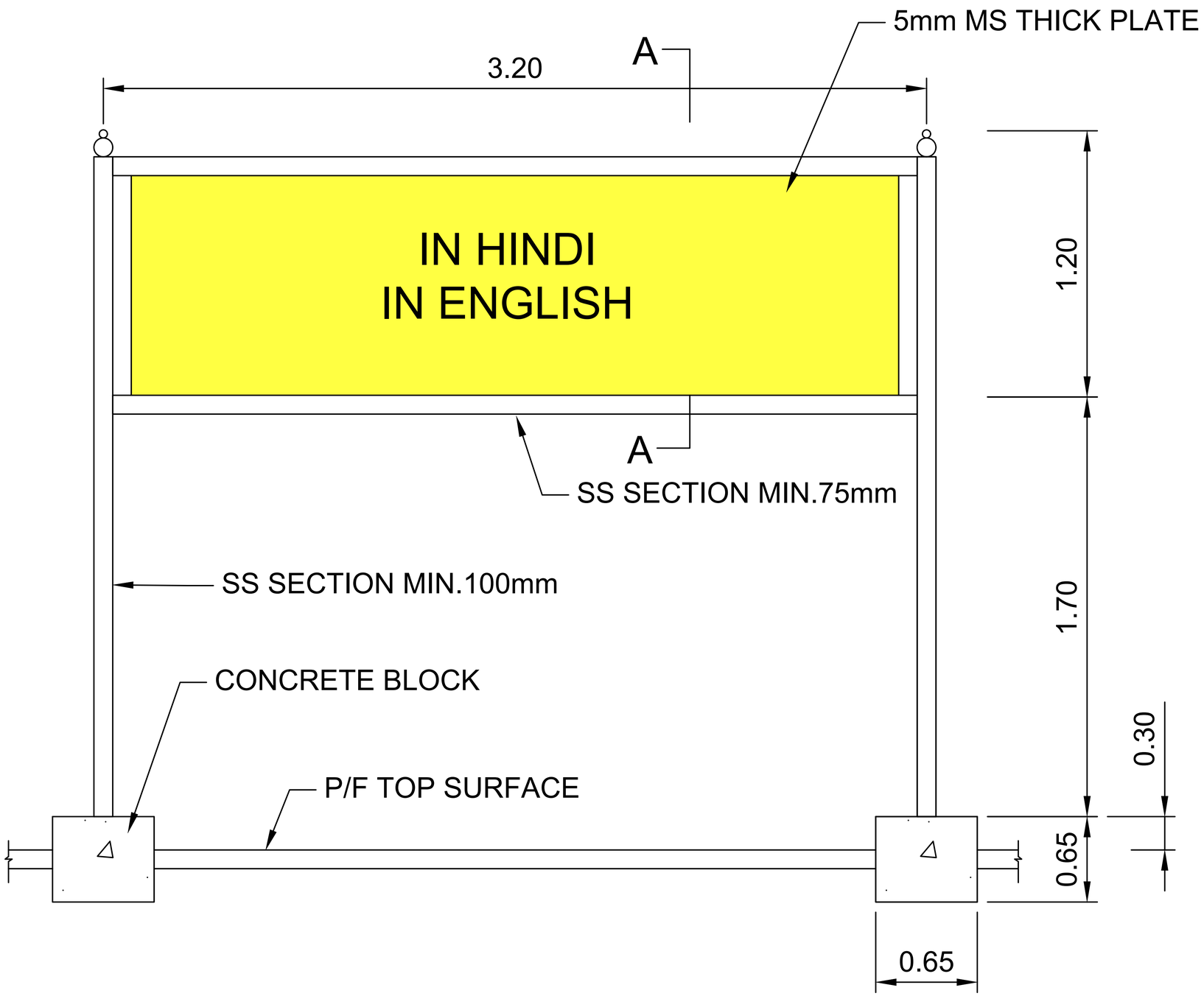
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
R.C. PRE-CAST FENCING FOR END PLATFORM

DRG. NO. GC-HRIDC-SK-GEN-004 | SHEET NO. 1 OF 1

SCALE : AS SHOWN | ISSUE DATE 28.12.2022



Notes:

1. THE PRINCIPAL NAME BOARDS PAINTED ON BOTH FACES SHOULD BE FIXED AT BOTH THE ENDS OF THE PLATFORM AND GENERALLY ORIENTED AT RIGHT ANGLE TO THE TRACK.
2. THE ACTUAL ANGEL AT WHICH THE NAME BOARD ARE FACED SHOULD BE DETERMINED BY THE SITE CONDITIONS ENSURING THE CRITERIA THAT THE NAME BOARDS ARE CLEARLY VISIBLE FROM APPROACHING TRAINS.
3. BOARD TO BE PAINTED YELLOW WITH BLACK LETTERS.
4. THE STATION NAME SHALL BE EXHIBITED IN THE FOLLOWING ORDER: REGIONAL LANGUAGE, HINDI AND ENGLISH.
5. HEIGHT OF LETTERS SHALL BE 300 MM, THICKNESS IN PROPORTIONS TO THE STYLE OF THE SCRIPT.
6. THE LOWER EDGE OF THE PRINCIPAL BOARD SHOULD BE 2M ABOVE THE PLATFORM.
7. THE PAINTING WORK SHALL BE COMMENCE ONLY AFTER THE SATISFACTORY SURFACE PREPARATION INSPECTED AND APPROVED BY THE ENGINEER.
8. 2 COATS OF APPROVED BRAND YELLOW PAINT SHALL BE APPLIED OVER THE ONE COAT OF PRIMER.
9. THE APPLIED COAT OF PAINT SHALL BE UNIFORM AND FREE FROM BRUSH MARKS, SACK MARKS, BLEMISHES ETC.
10. SS SECTION SIZE TO BE ADOPTED SHALL BE BASED UPON DETAILED DESIGN. SIZE SHALL NOT BE LESS THAN THAT MENTION DRAWING (CIRCULAR /SQUARE/RECTANGLE).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

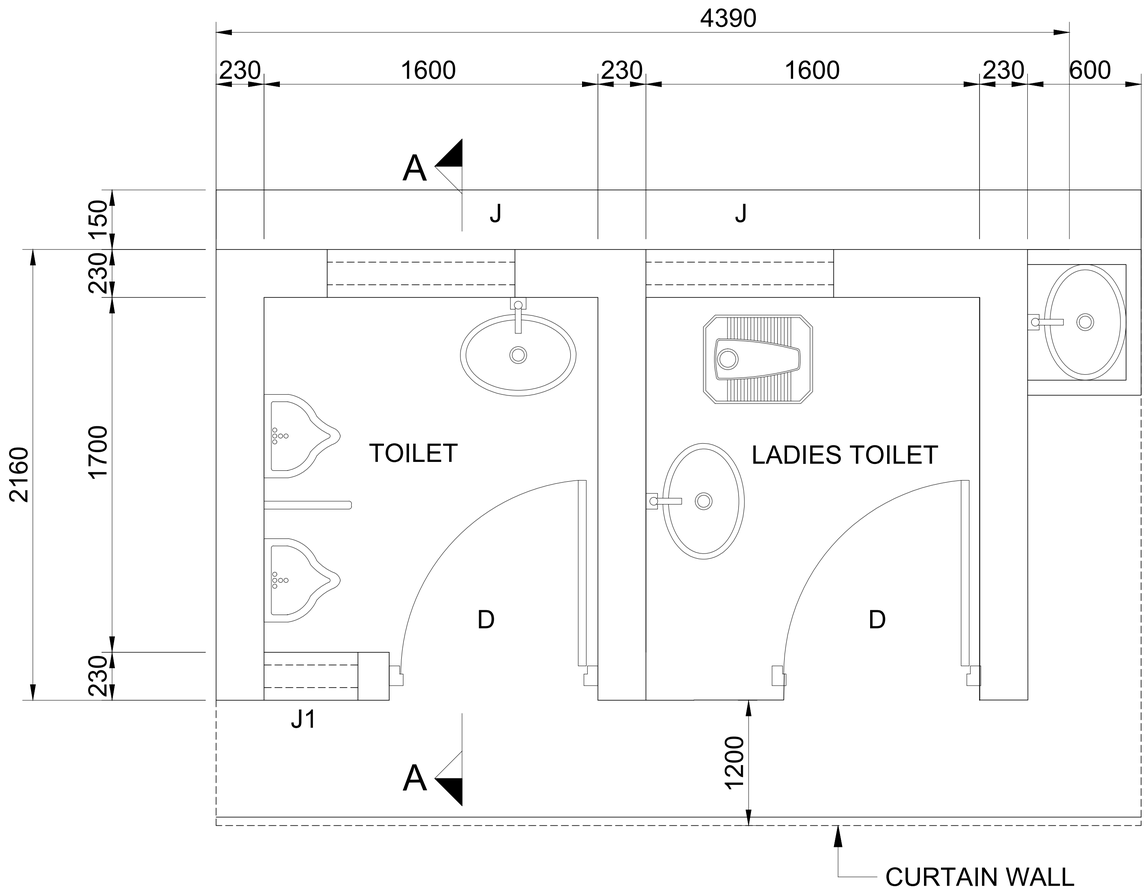
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

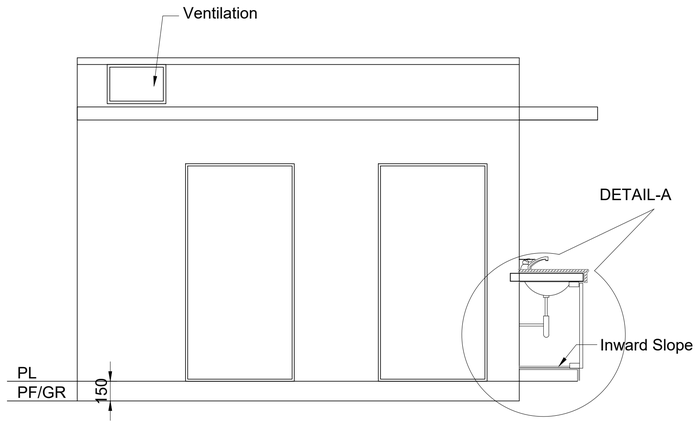
TITLE:- CONCEPTUAL PLAN
STATION NAME BOARD

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-005_A1	

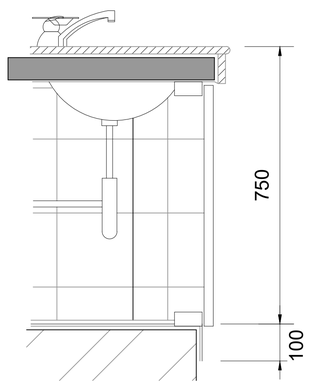
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



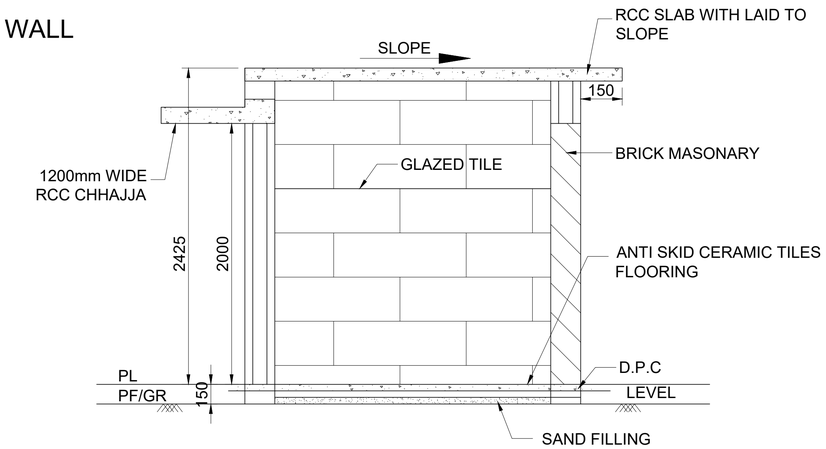
PLAN



FRONT ELEVATION



DETAIL 'A'



SECTION A-A

SCHEDULE OF JOINERY

REF.		SIZE
D	PVC DOOR	900x2000
J	RCC JALI (RAIN PROOF TYPE)	900x600
J1	RCC JALI (RAIN PROOF TYPE)	450x300

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FLOORING WITH ANTISKID CERAMIC TILES TO BE PROVIDED.
3. INSIDE WALLS SHALL BE PROVIDED WITH GLAZED TILES OF APPROVED QUALITY UPTO CEILING.
4. WHITE GLAZED FLAT BACK LIPPED/ FRONT URINAL 430X260X350MM SIZE WITH PVC AUTOMATIC FLUSHING CISTERN.
5. VITREOUS CHINA SQUATTING TYPE URINAL OF SIZE 450X350X100MM TO CONFORM IS 771-1963 WITH AUTOMATIC FLUSHING CISTERN.
6. WASH BASIN OF SIZE 630MM X 450MM WITH CP BRASS PILLAR TAP OUTSIDE THE TOILET AND 550MM X 400MM WITH CP BRASS PILLAR TAP SHALL BE PROVIDED INSIDE THE TOILETS.
7. PLUMBING TO BE CONCEALED.
8. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
9. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
10. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

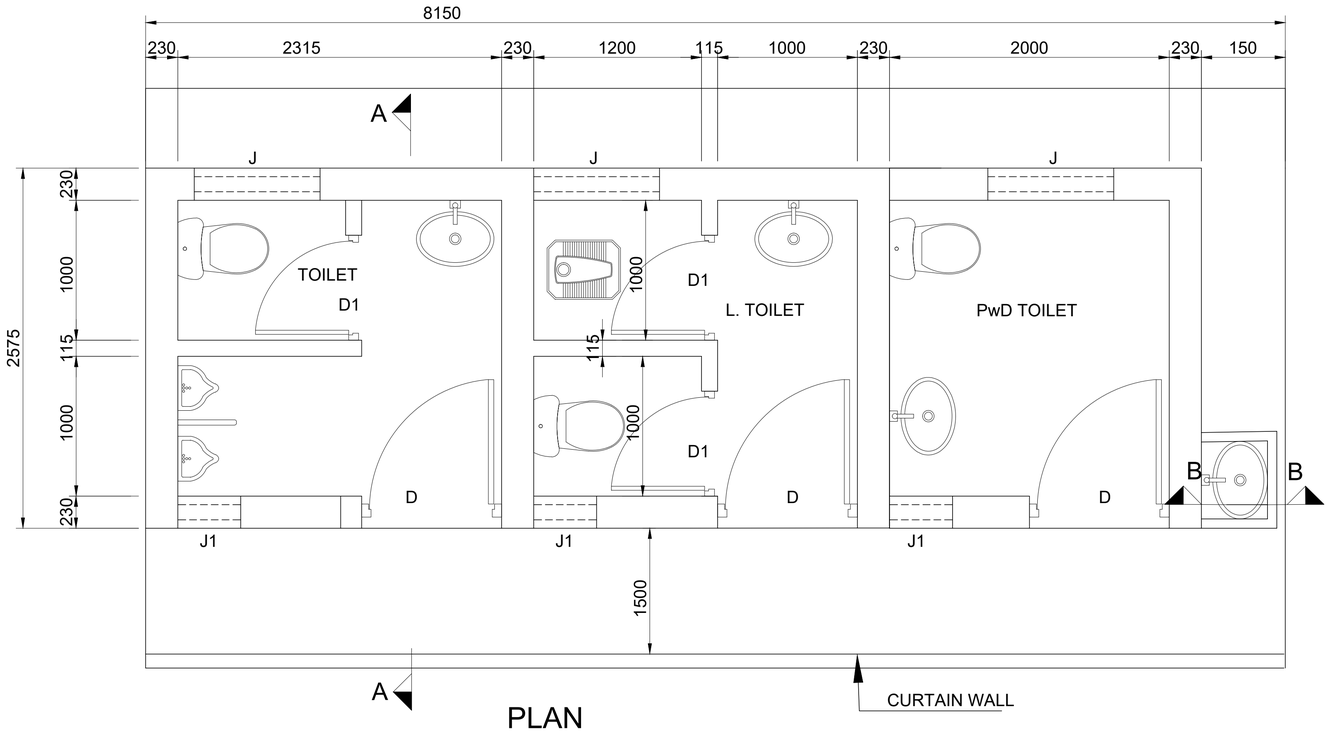
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON ISLAND PLATFORMS

DRG. NO. GC-HRIDC-SK-GEN-006_A1
SHEET NO. 1 OF 1

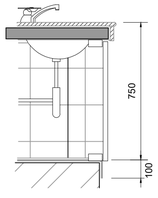
SCALE : AS SHOWN
ISSUE DATE 28.12.2022



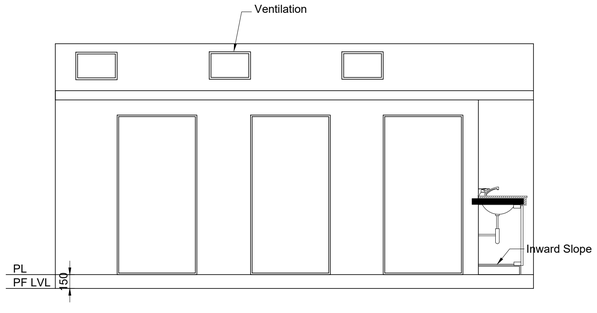
PLAN

NOTES :

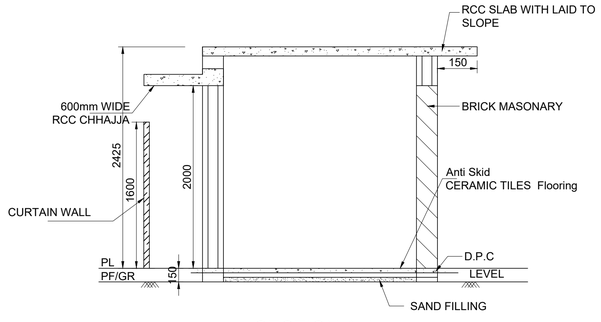
1. ALL DIMENSIONS ARE IN MILLIMETRES.
2. FLOORING WITH ANTISKID CERAMIC TILES TO BE PROVIDED.
3. INSIDE WALLS SHALL BE PROVIDED WITH GLAZED TILES OF APPROVED QUALITY UPTO CEILING.
4. WHITE GLAZED FLAT BACK LIPPED/ FRONT URINAL 430X260X350MM SIZE WITH PVC AUTOMATIC FLUSHING CISTERN.
5. VITREOUS CHINA SQUATTING TYPE URINAL OF SIZE 450X350X100MM TO CONFORM IS 771-1963 WITH AUTOMATIC FLUSHING CISTERN.
6. WASH BASIN OF SIZE 630MM X 450MM WITH CP BRASS PILLAR TAP OUTSIDE THE TOILET AND 550MM X 400MM WITH CP BRASS PILLAR TAP SHALL BE PROVIDED INSIDE THE TOILETS.
7. PLUMBING TO BE CONCEALED.
8. OVERHEAD TANK OF SUITABLE CAPACITY SHALL BE PROVIDED TO ENSURE UNINTERRUPTED WATER SUPPLY.
9. DRAINAGE IS TO BE CONNECTED TO SOAK PIT OF SUITABLE CAPACITY.
10. EFFLUENT TO BE DISCHARGE IN DRAINAGE SYSTEM (REFER SEPARATE DRAINAGE PLAN FOR DRAINAGE SYSTEM).



SECTION B-B



FRONT ELEVATION



SECTION A-A

SCHEDULE OF JOINERY

REF.		SIZE
D	PVC DOOR	900x2000
J	RCC JALI (RAIN PROOF TYPE)	900x600
J1	RCC JALI (RAIN PROOF TYPE)	450x300

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

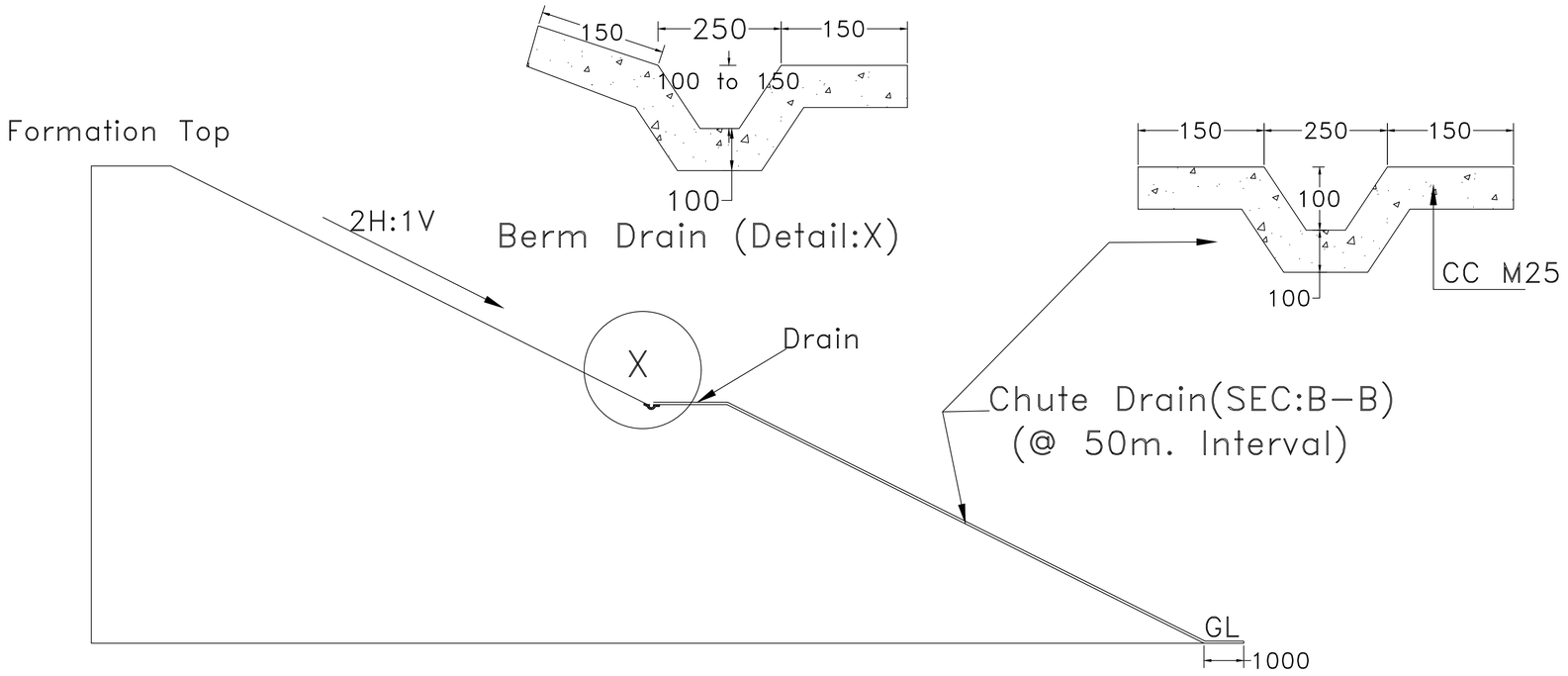
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

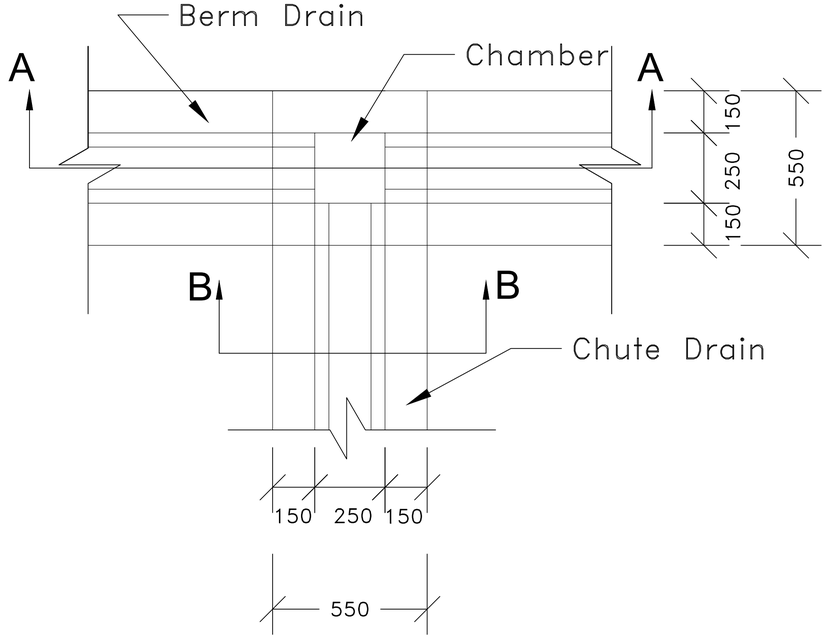
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

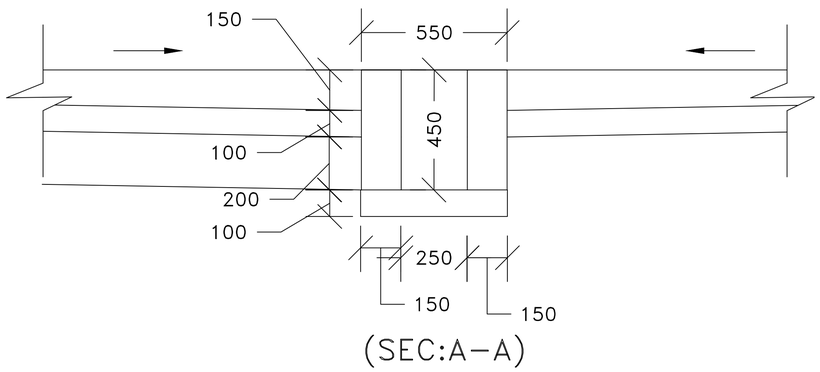
TITLE:- CONCEPTUAL PLAN
PROPOSED TOILET BLOCK ON END PLATFORMS

DRG. NO. GC-HRIDC-SK-GEN-007_A1 | SHEET NO. 1 OF1

SCALE : AS SHOWN | ISSUE DATE 28.12.2022







NOTES:-

1. ALL DIMESION ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

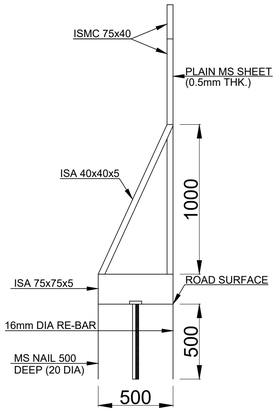
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

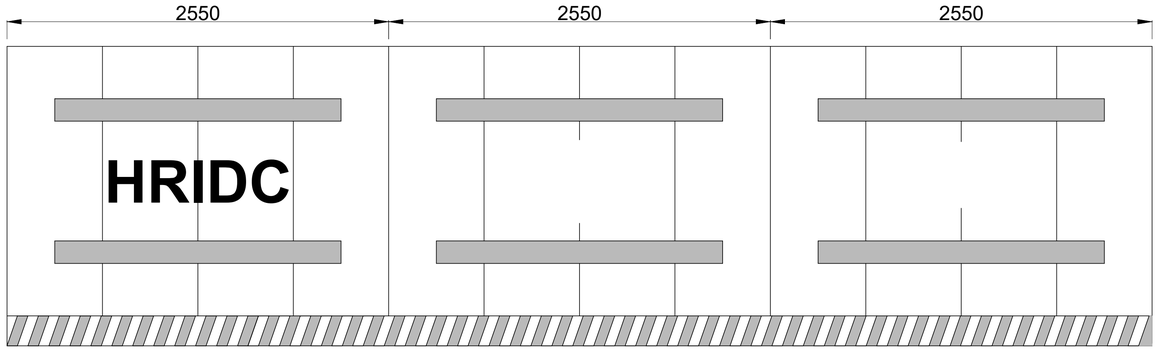
TITLE:- CONCEPTUAL PLAN
DRAINS FOR EMBANKMENT

DRG. NO. GC-HRIDC-SK-GEN-008_A1 | SHEET NO. 1 OF 1

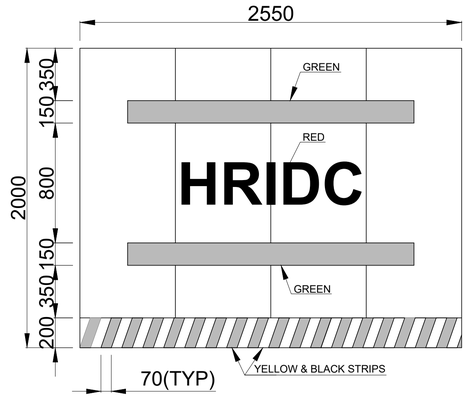
SCALE : AS SHOWN | ISSUE DATE 28.12.2022



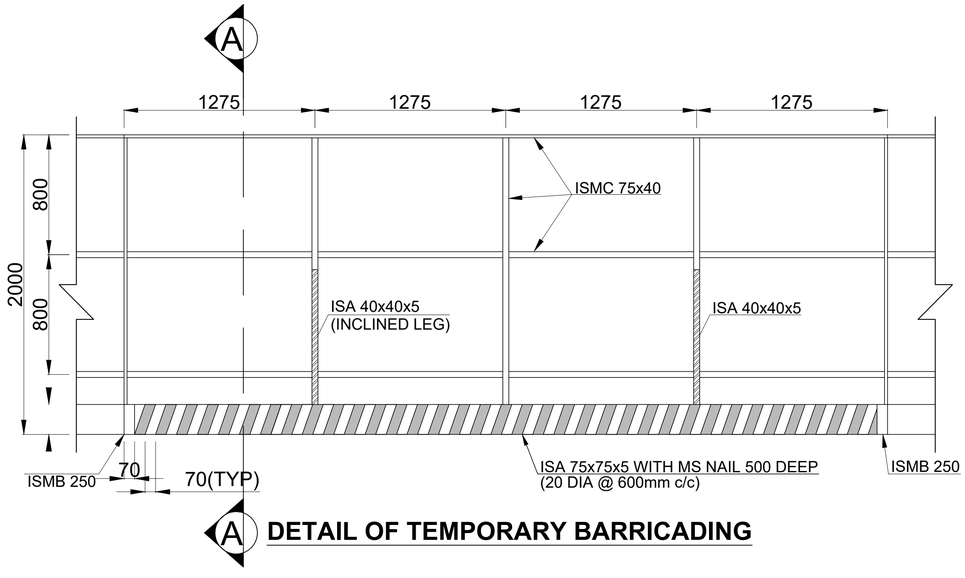
SECTION A-A



ELEVATION OF ONE UNIT OF TEMPORARY BARRICADING



ELEVATION OF ONE SET OF TEMPORARY BARRICADING



DETAIL OF TEMPORARY BARRICADING

NOTES:

1. ALL DIMENSIONS SHOWN ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. THIS BARRICADING SHALL BE USED AT LOCATION OF ROAD AND PEDESTRIAN TRAFFIC.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

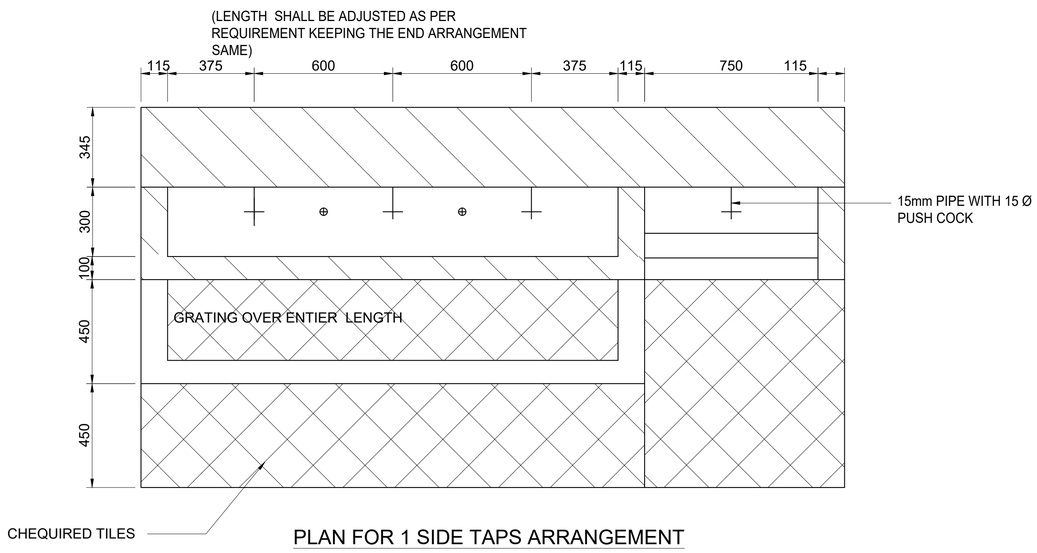
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

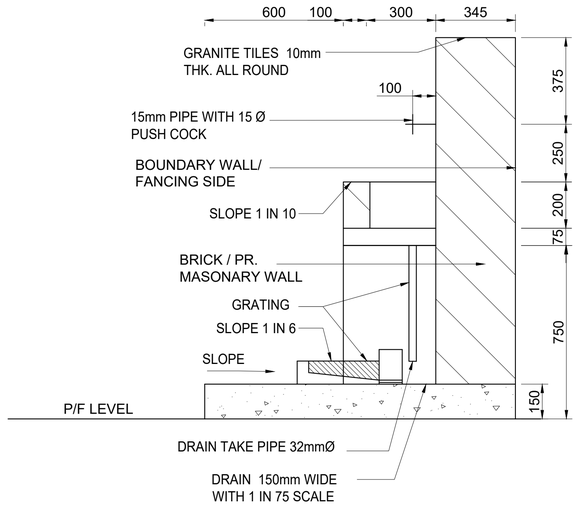
TITLE:- CONCEPTUAL PLAN
STEEL BARRICADE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-009	

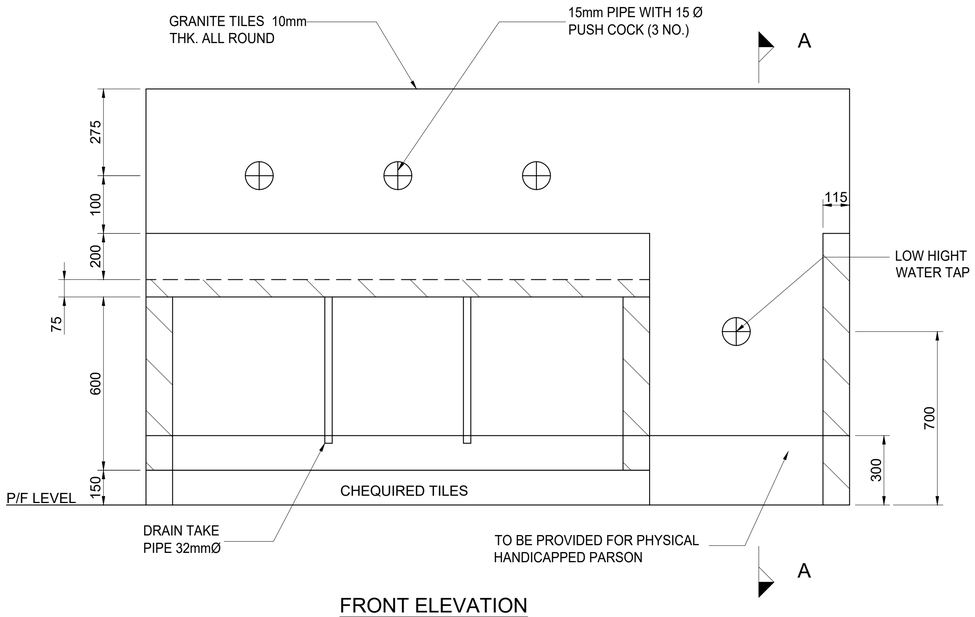
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



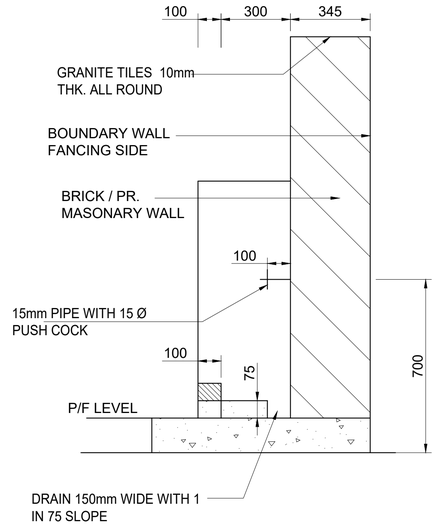
PLAN FOR 1 SIDE TAPS ARRANGEMENT



SECTION FOR ONE SIDE TAPS



FRONT ELEVATION



SECTION AT A-A

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETER
2. LENGTH SHALL BE ADJUSTED AS PER REQUIREMENT KEEPING THE END ARRANGEMENT SAME.
3. ALL EXPOSED SURFACES SHALL BE PROVIDE WITH GRANITE CLADDING.
4. CP BRASS TAPS WITH ANTI-SABOTAGE FITTINGS.
5. LOW HEIGHT WATER TAP TO BE PROVIDED FOR PHYSICALLY HANDICAPPED PERSONS.
6. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

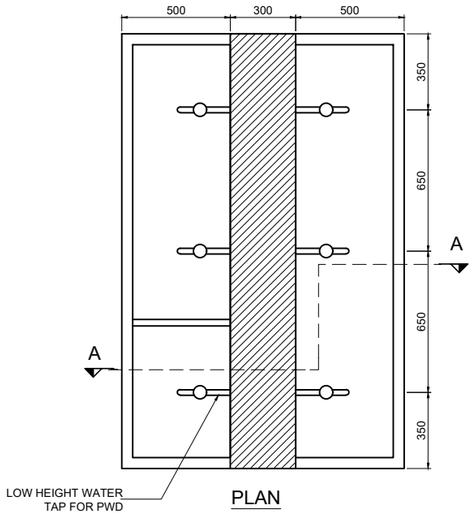
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

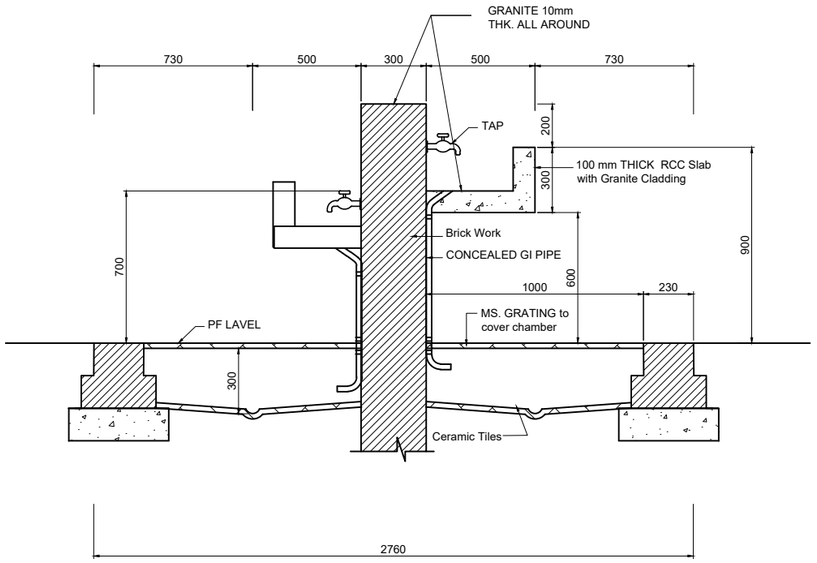
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH ONE SIDE TAPS ARRANGEMENT (END PLATFORM)

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-010_A1	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



PLAN



SECTION A-A

NOTES :

1. ALL DIMENSIONS ARE IN MM .
2. ALL EXPOSED SURFACE SHALL BE OF GRANITE CLADDING
3. CP BRASS TAPS WITH ANTY SABOTAGE FITTINGS.
4. SEPARATE DRAINAGE PLAN SHALL BE REFERRED FOR EFFLUENT DISCHARGE etc.
5. ALL DIMENSIONS ARE TENTATIVE AND MAY VARY AS PER THE REQUIREMENT.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

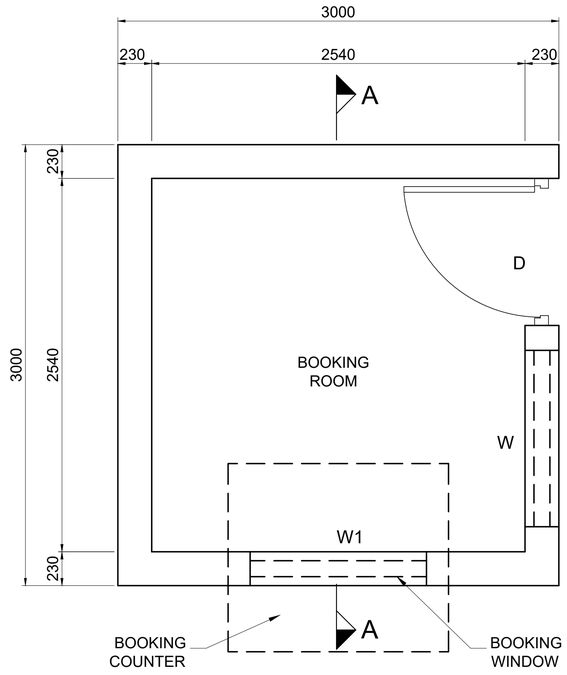
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

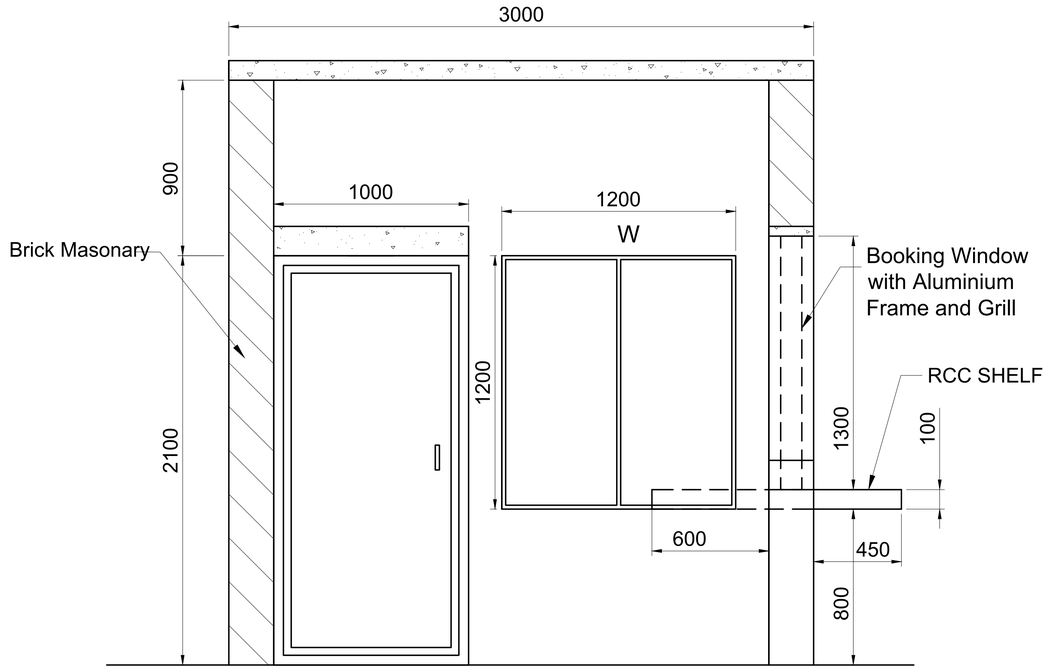
TITLE:- CONCEPTUAL PLAN
WATER BOOTH WITH BOTH SIDE TAPS ARRANGEMENT (ISLAND PLATFORM)

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-011_A1	

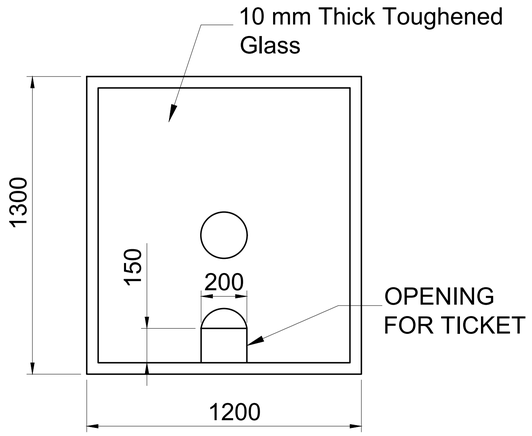
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



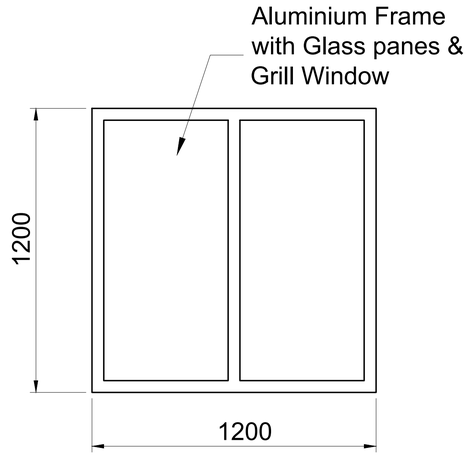
PLAN
(SCALE 1:50)



SECTION A-A
(SCALE 1:50)



DETAIL OF WINDOW (W1)
(SCALE 1:50)



DETAIL OF WINDOW (W)
(SCALE 1:50)

NOTES :

1. ALL DIMENSIONS ARE IN MILIMETERS.
2. DEEPTH OF FOUNDATION TO BE DECIDED AS PER SITE CONDITION.
3. RCC SHELF WITH GRANITE TOP TO BE PROVIDED FOR BOOKING COUNTER.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

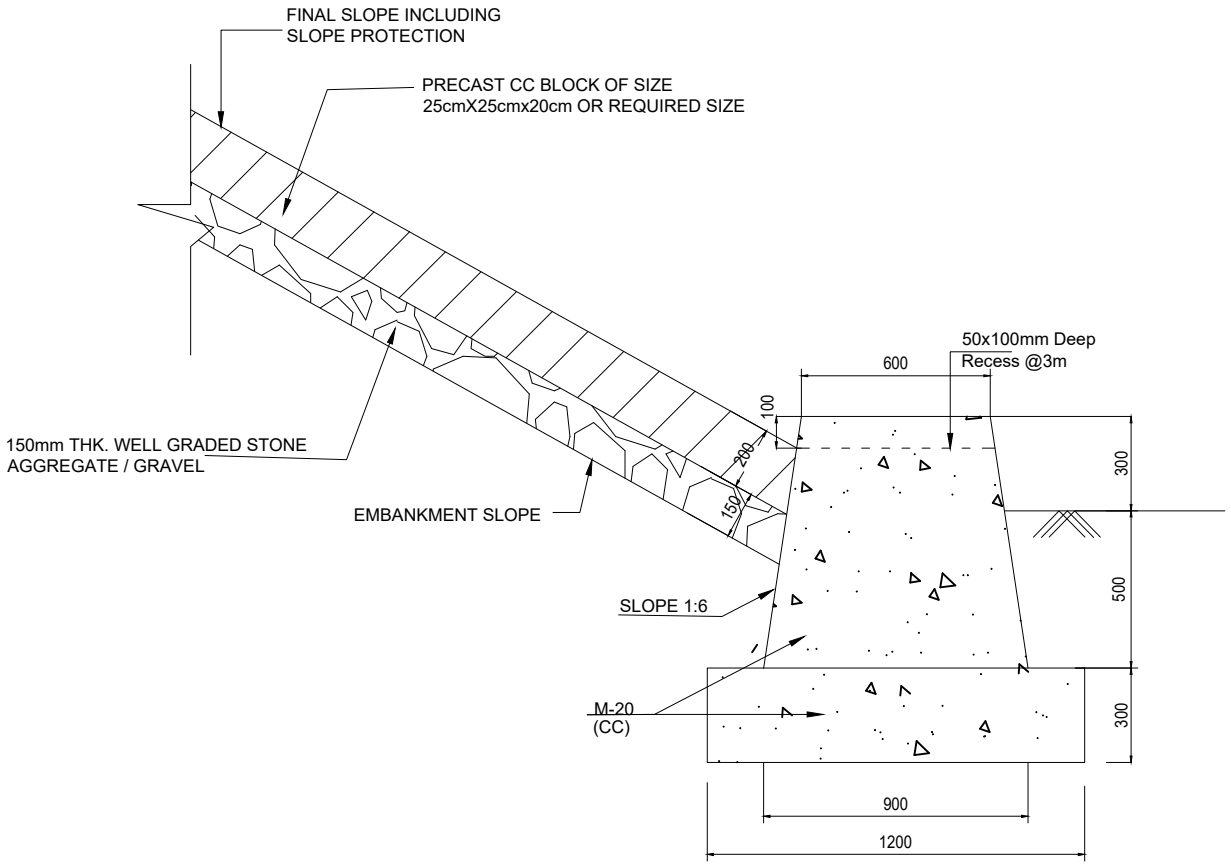
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TICKET COUNTER FOR
NEW PATLI STATION

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-013	

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



TOE WALL

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRE UNLESS OTHERWISE MENTIONED.
2. M-20 GRADE CONCRETE SHALL BE USED FOR TOE WALL.
3. 25MM EXPANSION GAP SHALL BE PROVIDED AT 30m (MAX.) OF LENGTH OF WALL.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

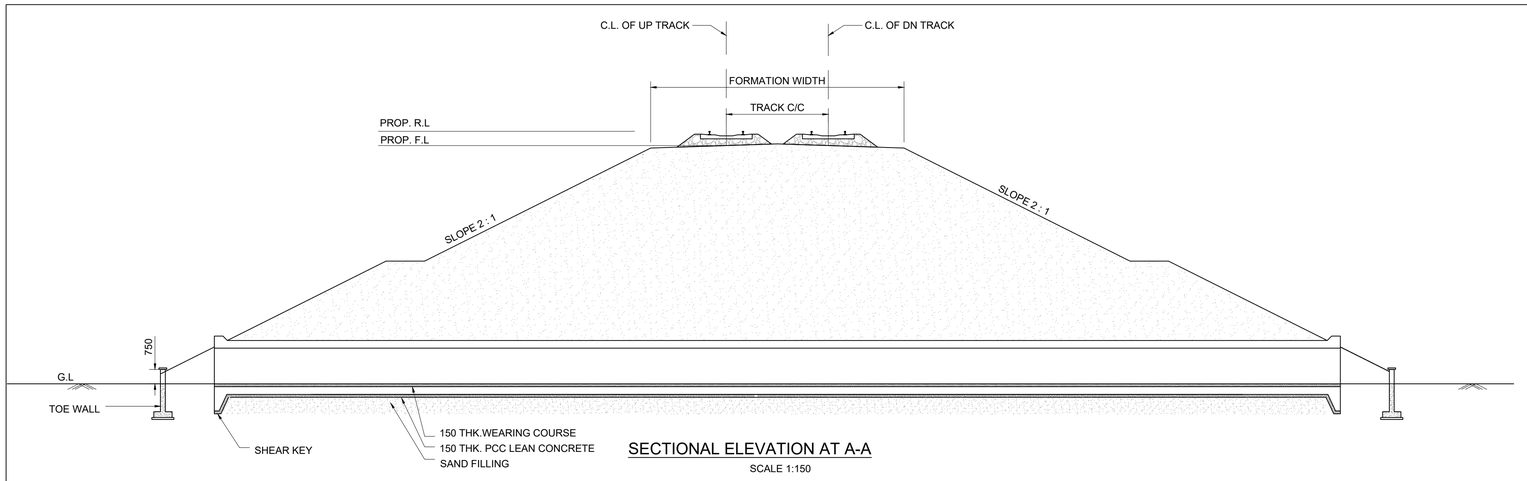
TITLE:- CONCEPTUAL PLAN
CC TOE WALL

DRG. NO. GC-HRIDC-SK-GEN-014_A1

SHEET NO. 1 OF 1

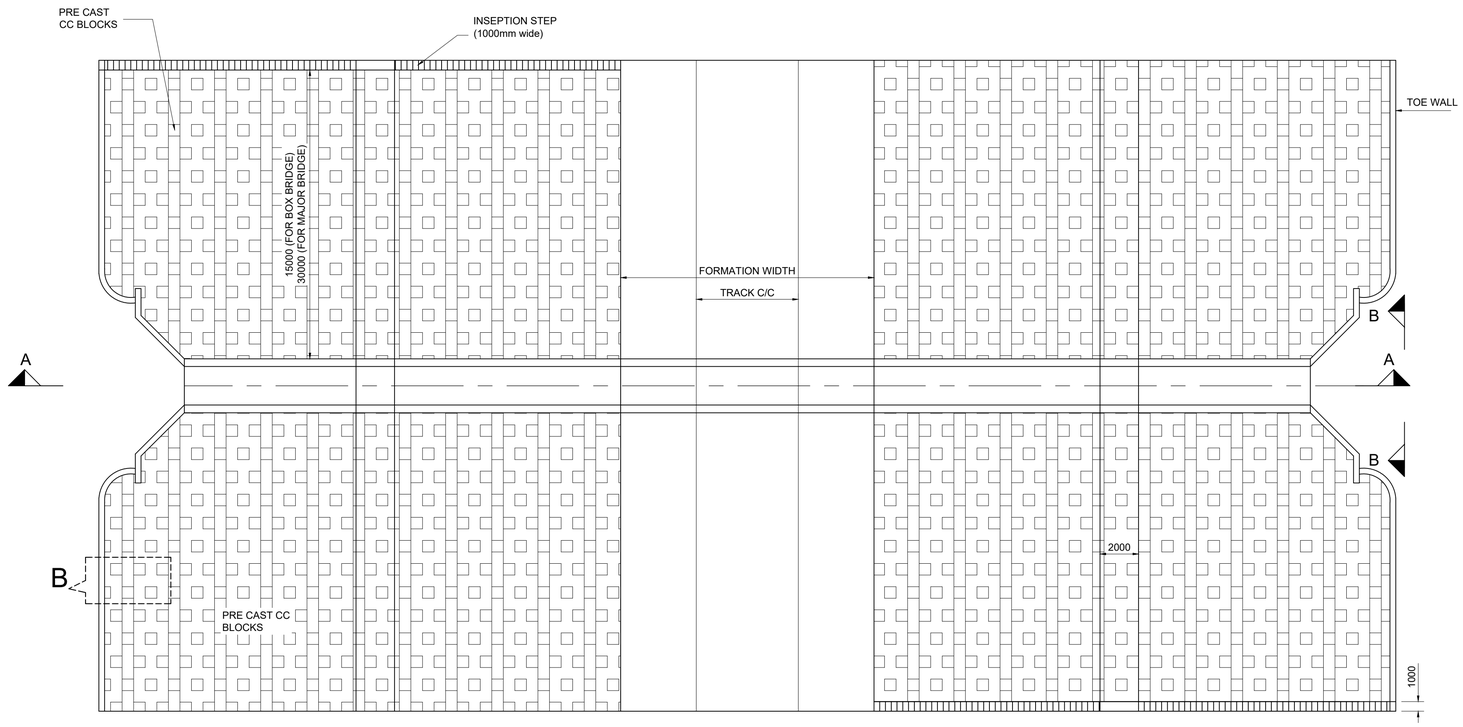
SCALE : AS SHOWN

ISSUE DATE 28.12.2022



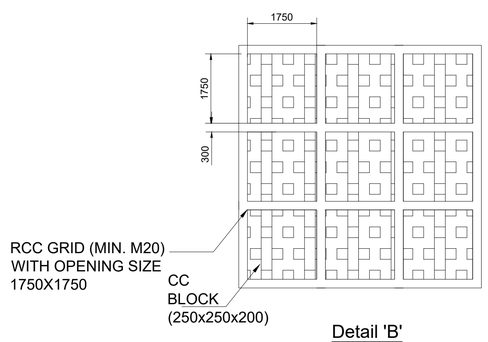
SECTIONAL ELEVATION AT A-A

SCALE 1:150



PLAN AT TOP

SCALE 1:150



Detail 'B'

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS, UNLESS OTHERWISE MENTIONED.
2. PROTECTION WORK WITH PRECAST CC BLOCK ON BOTH SIDES OF BRIDGES SHALL BE DONE FOR 15m LENGTH AND 30m LENGTH FOR MINOR BRIDGES & MAJOR BRIDGES RESPECTIVELY.
3. THIS DRAWING IS VALID FOR SINGLE/MULTIPLE NO. OF TRACKS. TRACKS SHOWN IN DRAWING ARE SYMBOLIC PRESENTATION ONLY.

LEGEND

PRL	PROPOSED RAIL LEVEL
PFL	PROPOSED FORMATION LEVEL
HFL	HEIGHEST FLOOD LEVEL
GL	GROUND LEVEL

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR

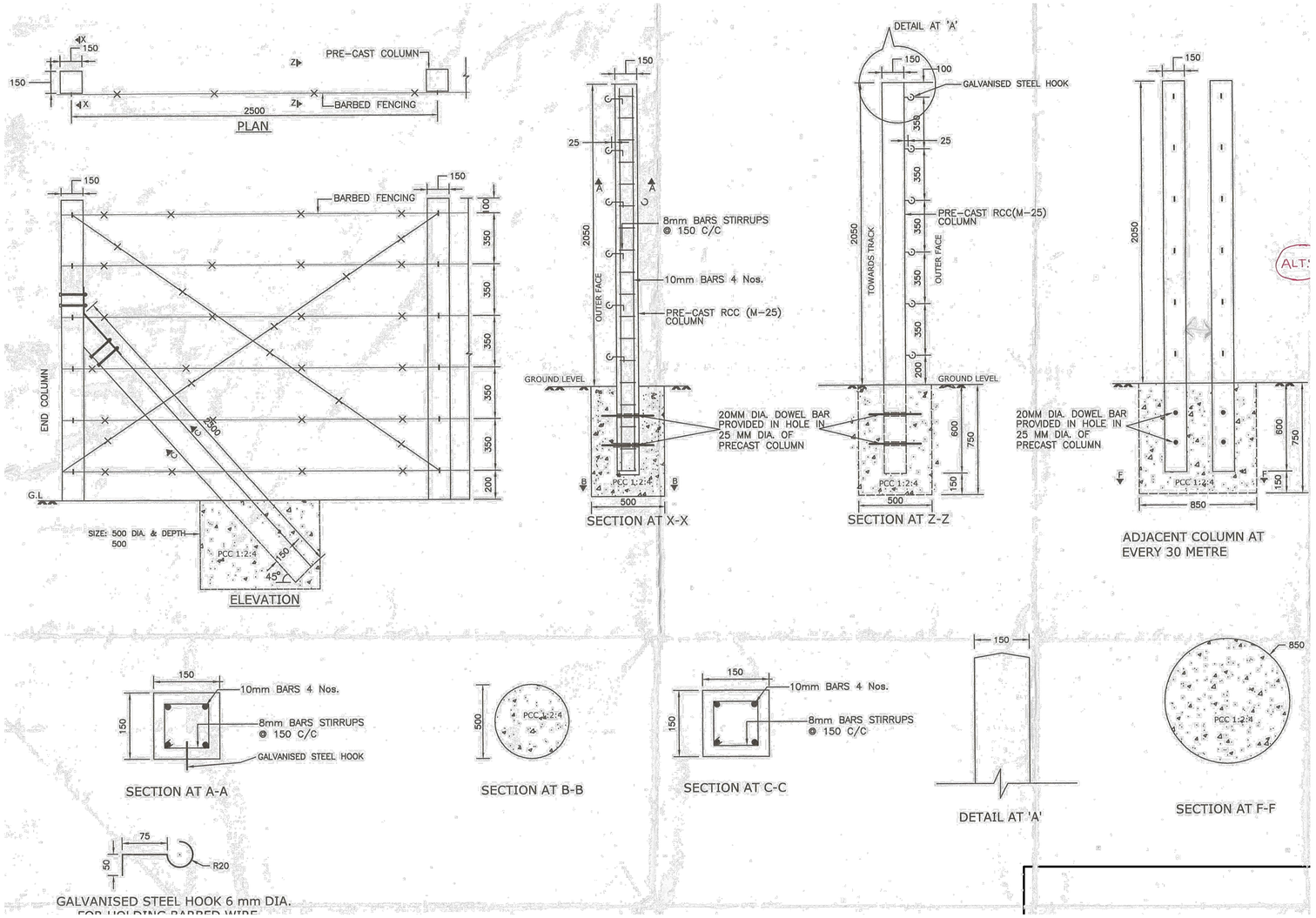
RITES Limited in consortium with SMEC International Pty. Ltd.

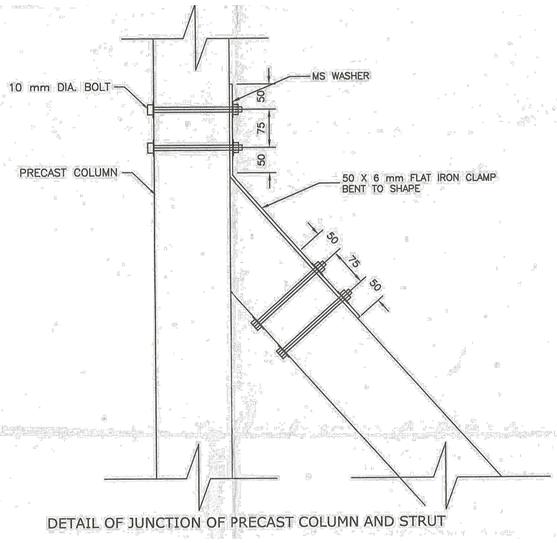
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN
TYPICAL DETAILS OF PROTECTION WORK

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-015_A1	

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022





NOTES:

1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
2. BARBED FENCING SHALL BE MADE OF G.I. BARBED WIRES CONFIRMING TO IS: 278. THE WEIGHT OF G.I. BARBED WIRE SHALL BE AS PER SOR.
3. THE G.I BARBED WIRES SHALL BE FIXED TO THE COLUMNS WITH HOOKS MADE OF 6 mm DIA. GALVANIZED STEEL. ANOTHER END OF GALVANIZED STEEL HOOK SHALL BE PLACED BEHIND STIRRUPS AND TIED WITH STIRRUPS AS PER DRAWING TO PROVIDE STRENGTH.
4. FOR ERECTION OF WIRE FENCING, RECOMMENDATIONS GIVEN IN IS:4996-1984 SHALL BE FOLLOWED. FENCING WIRE SHALL BE TIED TO GALVANISED STEEL HOOKS WITH SHORT PIECE OF LIGHT WIRE.
5. M-25 GRADE CONCRETE SHALL BE USED IN PRECAST COLUMN/ STRUT. COLUMN/ STRUT SHALL BE CAST AT CENTRALIZED DEPOT UNDER CONTROLLED CONDITION AS PER IS :456-2000.
6. TMT BARS OF GRADE FE 415/ 500 OF SPECIFIED DIA. SHALL BE USED. TMT BAR SHALL BE CONFIRMING TO IS:1786 (LATEST).
7. ZONAL RAILWAY MAY PAINT THEIR INITIALS (SUCH AS NR, SER etc.) ON COLUMN AND STRUT.
8. STRUT OR BRACE SHALL BE FIXED WITH END RCC COLUMN BY SUITABLE ARRANGEMENT AS DETAILED IN DRAWING. 50 X 6 mm MS FLAT SHALL BE USED TO CONNECT STRUT/BRACE TO RCC COLUMN. 10 mm DIA. MS BOLT BLACK HEXAGONAL HEAD ROUND NECK WITH HEXAGONAL NUTS AND TWO WASHER SHALL BE USED. AFTER TIGHTING NUT, END OF BOLT SHALL BE HAMMERED TO MAKE ANTITHEFT.
9. SUPPORTING STRUT SHALL BE PROVIDED AT FIRST / END COLUMN OR CHANGE OF DIRECTION.
10. 1:20 SLOPE SHALL BE PROVIDED ON TOP OF COLUMN AT THE TIME OF CASTING.
11. AT EVERY 30 METRE TWO COLUMN SHALL BE GROUTED SIDE BY SIDE.
12. IN UNDULATING AREA, COLUMN SHALL BE PLACED ACCORDINGLY SO THAT BARBED WIRE ARE ALIGNED HORIZONTAL. VERTICALITY OF COLUMN SHALL BE CHECKED DURING ERECTION.
13. FOUNDATION SHALL BE DUG USING AUGAR/ MECHANICAL BORING EARTH SHALL BE RAMMED PROPERLY AND 50 MM SAND SHALL BE PLACED BEFORE FOUNDATION CASTING. FOUNDATION SHALL BE CURED PROPERLY.
14. THIS CATLE FENCE SHALL BE PROVIDED AT RAILWAY BOUNDARY.
15. IS:456(LATEST) SHALL BE FOLLOWED IN ALL R.C.C & P.C.C. WORKS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD	ChahateyRam	R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

Notes:

1. THIS DRAWING IS BASED ON RDSO DRAWING NO. RDSO/WKS/2019/2.
2. GRADE OF CONCRETE M25.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

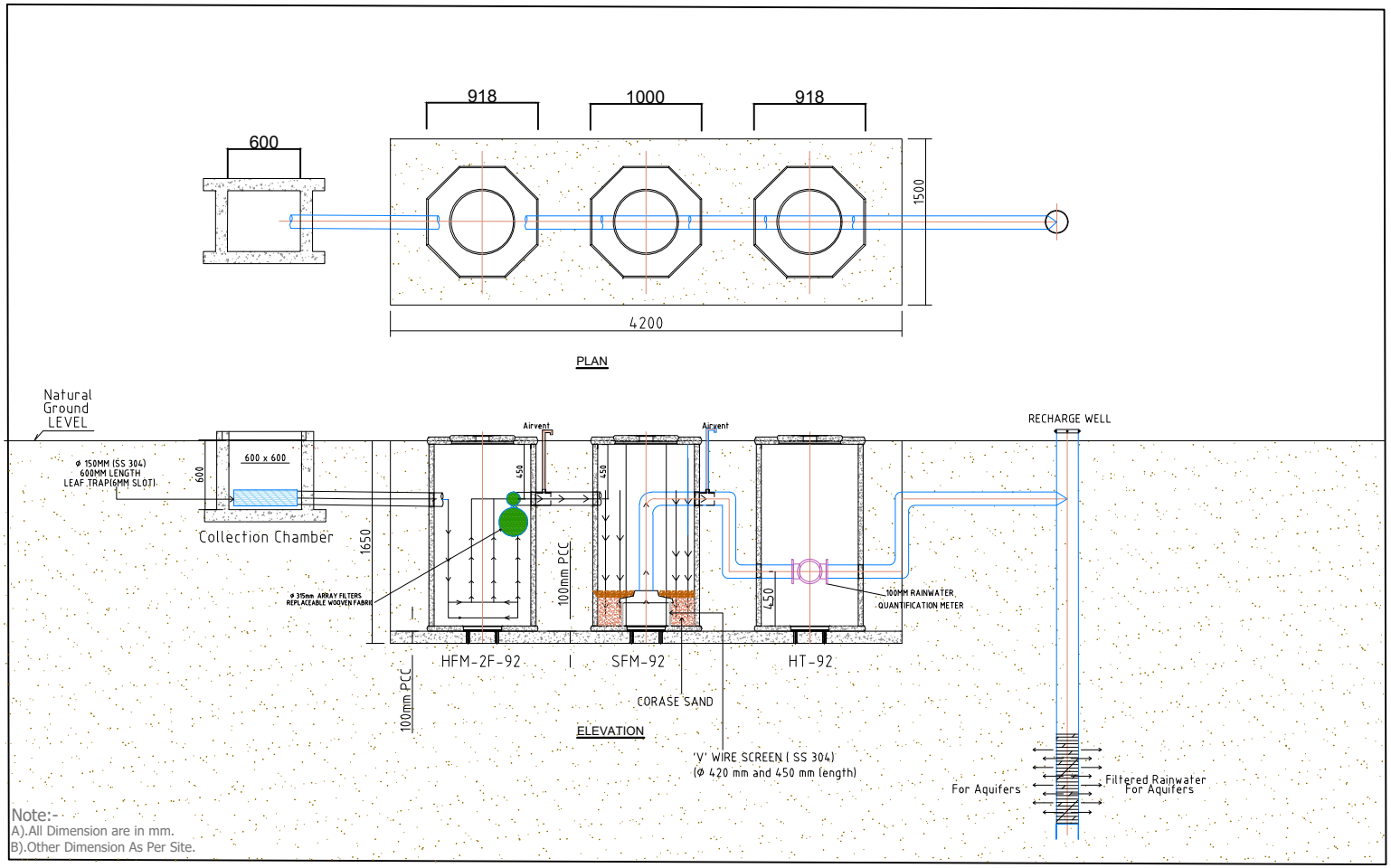
TITLE:- CONCEPTUAL PLAN BARBED WIRE FENCING

DRG. NO. GC-HRIDC-SK-GEN-016_A1

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



Note:-
A).All Dimension are in mm.
B).Other Dimension As Per Site.

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.

2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

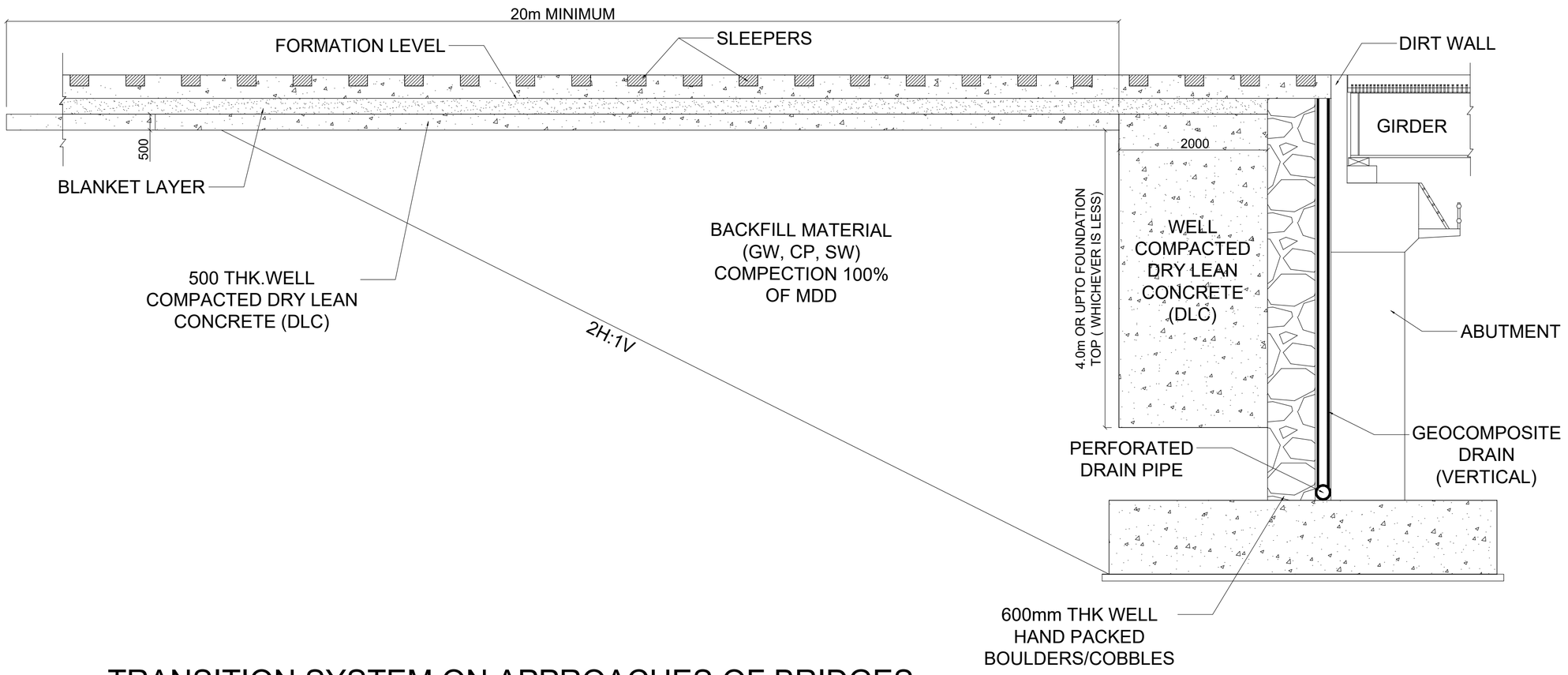
TITLE:- CONCEPTUAL PLAN
RAIN-WATER HARVESTING

DRG. NO. GC-HRIDC-SK-GEN-018

SHEET NO.

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



TRANSITION SYSTEM ON APPROACHES OF BRIDGES

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN.
3. THIS DRAWING IS PREPARED BASED UPON REFER RDSO REPORT NO. GE:R-50 DATED JULY-2021 FOR DETAILS THIS REPORT SHALL BE FOLLOWED.
4. GEOCOMPOSITE DRAINS TO BE USED BEHIND BRIDGE ABUTMENT SHALL BE AS PER RDSO/2018/GE:IRS-006, MARCH-2019 AND COMPREHENSIVE GUIDELINE AND SPECIFICATIONS FOR RAILWAY FORMATION.
5. PROVISION IN RETURN WALL SHALL BE KEPT TO TAKE OUT THE DISCHARGE FROM PERFORATED DRAIN PIPE.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

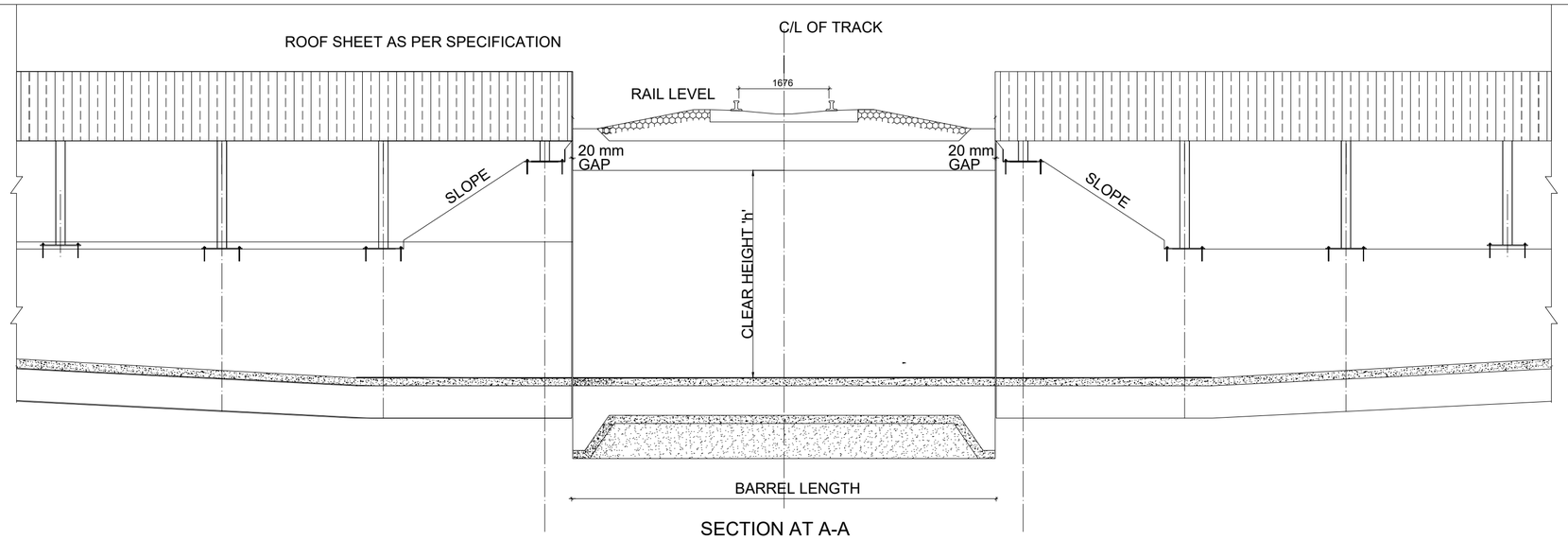
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

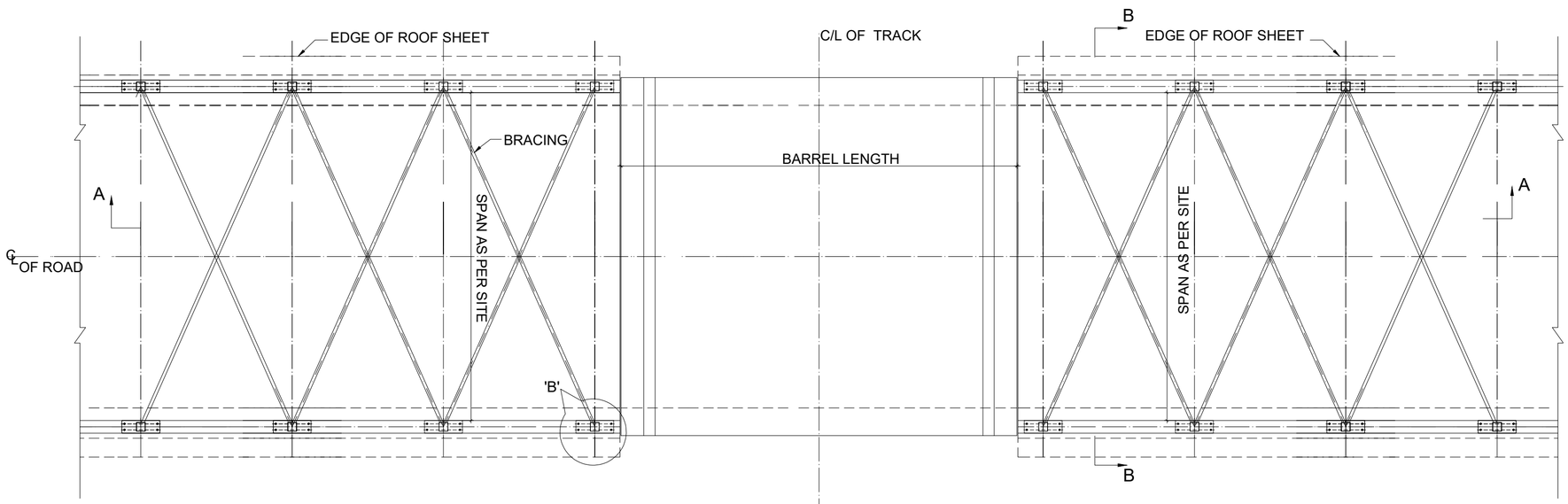
TITLE:-
CONCEPTUAL PLAN FOR
TRANSITION SYSTEM OF BRIDGE APPROACHES

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-019	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



SECTION AT A-A



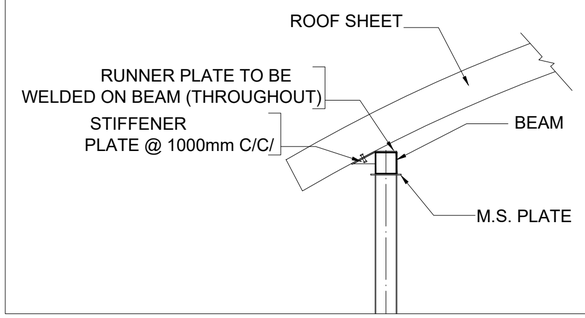
PLAN

NOTES :

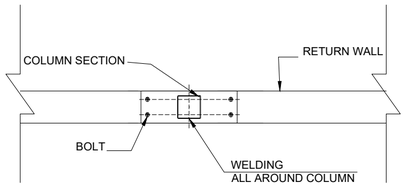
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. VERIFY ALL SCHEDULE OF DIMENSION BEFORE EXECUTION OF WORK AT SITE. ENGINEER IN CHARGE SHOULD ENSURE THE SAFETY OF TRACK/EXISTING STRUCTURES BEFORE EXECUTION OF WORK.
4. STRUCTURAL STEEL SHALL CONFORM TO IS : 2062.
5. ALL WELD SHALL BE ALL AROUND CONTINUOUS UNLESS OTHERWISE MENTIONED.
6. SIZE AND SPACING OF STRUCTURAL MEMBERS SHALL BE FINALIZED AFTER DETAILED DESIGN.
7. RDSO REPORT NO. RDSO/WKS/2015/3 SHALL BE FOLLOWED FOR SELF-SUPPORTING ROOFING SYSTEM DETAILS, ITS INSTALLATION AND MATERIAL SPECIFICATION.
8. ROOF COVERING SHALL BE OF HIGH QUALITY, HIGH GRADE, PRE COATED GALVALUME SHEET OF MINIMUM THICKNESS 0.9mm.
9. PROFLEX ROOFING SYSTEM SHALL BE ADOPTED FOR SELF-SUPPORTING ROOFING.
10. ROOFING PANELS SHALL BE MECHANICALLY SEAMED (INTERLOCK) AND FREE FROM NOTES, NUT, BOLTS OVERLAPS AND SEALANTS.
13. AFTER ERECTION OF ROOFING, IT SHALL BE BOLTED WITH THE SUPPORTING STRUCTURE BY SELF-SPLITTING SCREWS.

RUNNER PLATE
TO BE WELDED ON BEAM
(THROUGHOUT)

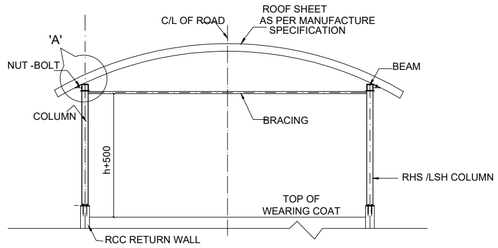
STIFFENER PLATE
@ 1000mm C/C/



DETAIL AT 'A'
NOT TO SCALE



DETAIL AT 'B'
NOT TO SCALE



SECTION AT B-B
DETAILS OF COVER SHED (COVER ON APPROACH ROAD)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

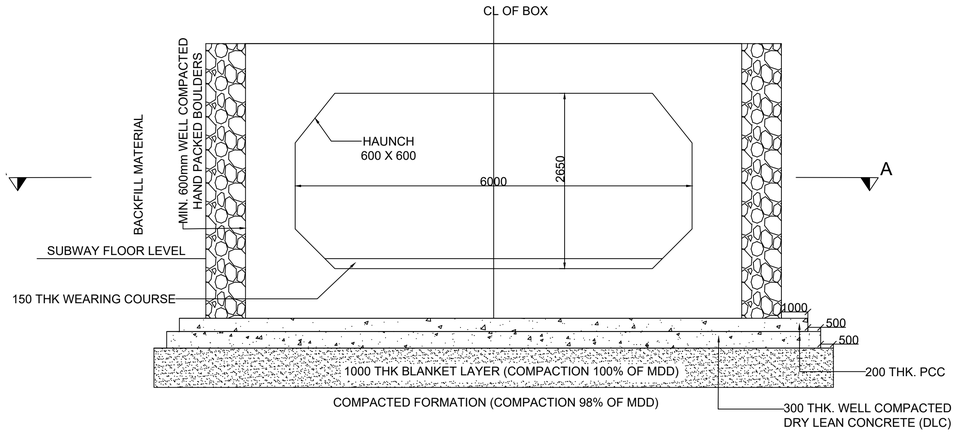
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

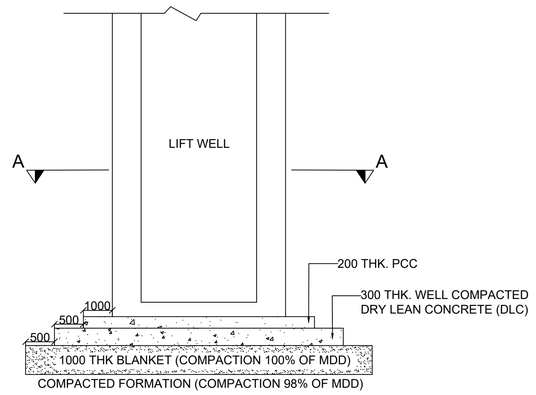
TITLE:- CONCEPTUAL PLAN FOR SELF SUPPORTING ROOF COVERING SHED

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-020	1 OF 1

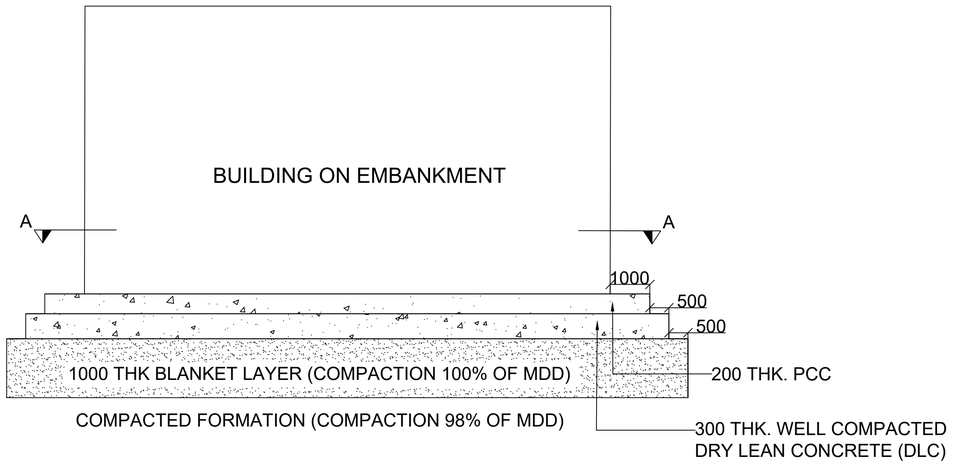
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



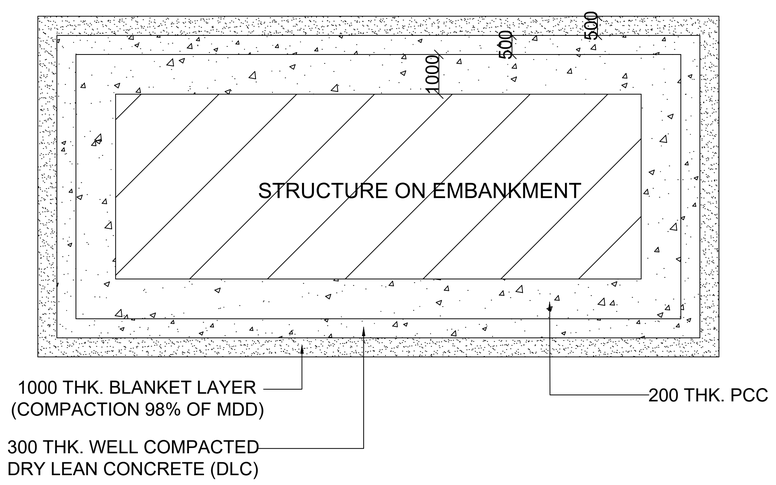
FORMATION DETAIL BELOW SUBWAY BOX



FORMATION DETAIL BELOW LIFT WELL



FORMATION DETAIL BUILDING



SECTION A-A
SCALE : NOT SCALE

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. FOR BLANKET LAYER DETAILS FOLLOW RDSO SPECIFICATION NO.: RDSO82020/GR:IRS-004 (COMPREHENSIVE GUIDELINE AND SPECIFICATION FOR RAILWAY FORMATION).

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

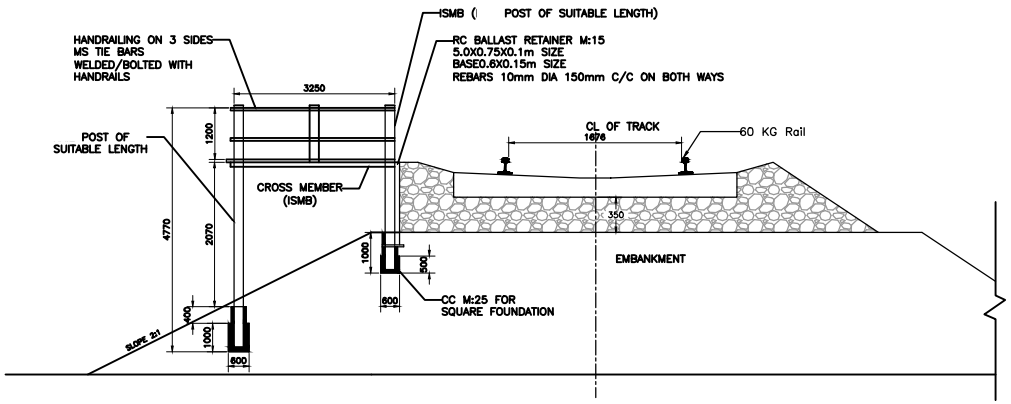
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

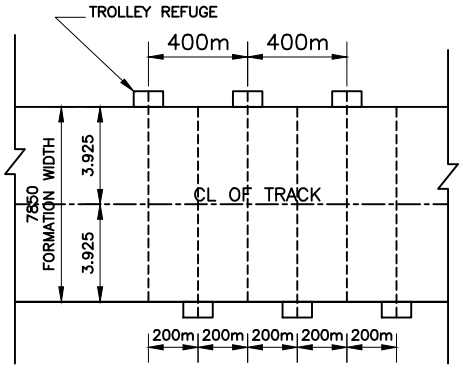
TITLE:- CONCEPTUAL PLAN FOR FORMATION DETAIL BELOW OF SUBWAY,LIFT WELL AND BUILDING

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-021	1 OF 1

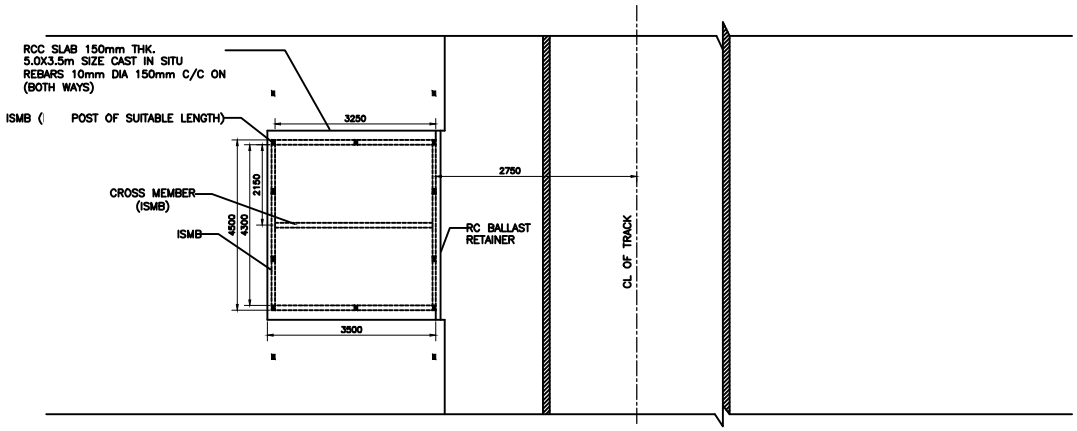
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



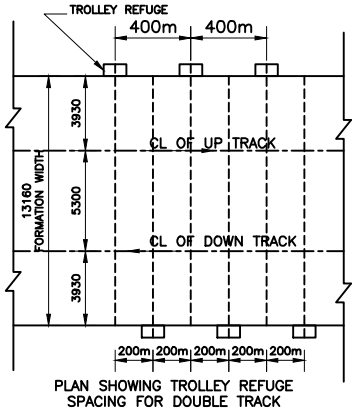
SECTIONAL ELEVATION



PLAN SHOWING TROLLEY REFUGE
SPACING FOR SINGLE TRACK



PLAN



PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.

2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

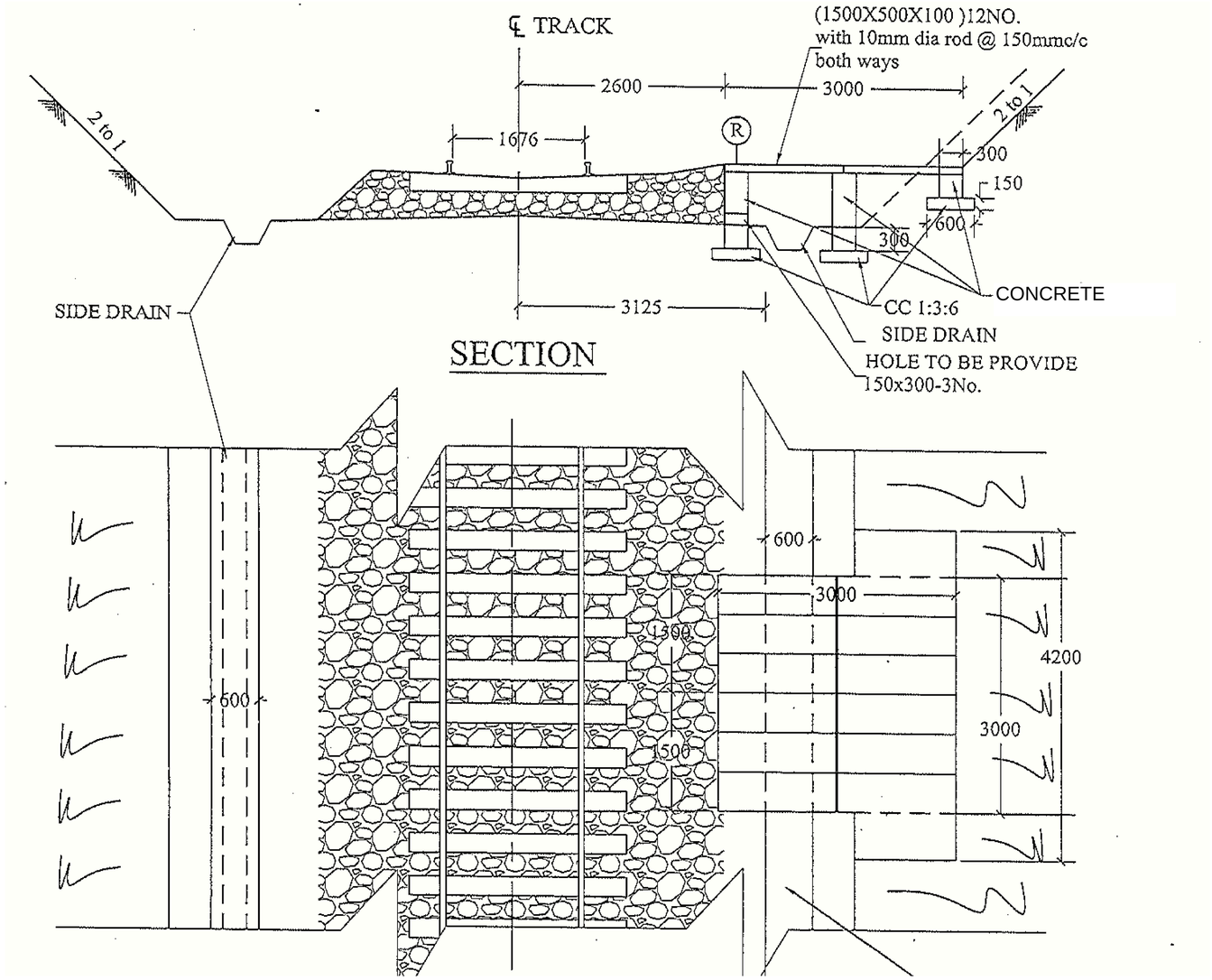
TITLE:- CONCEPTUAL PLAN FOR TROLLEY REFUGE IN EMBANKMENT

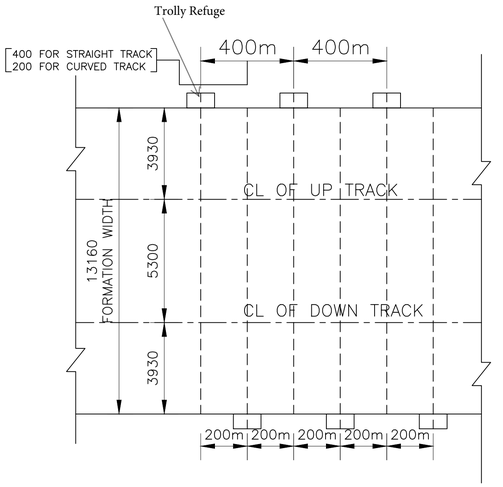
DRG. NO. GC-HRIDC-SK-GEN-022

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022





PLAN SHOWING TROLLEY REFUGE
SPACING FOR DOUBLE TRACK

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. RCC PRECAST SLAB M35 (1500X500X100)

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

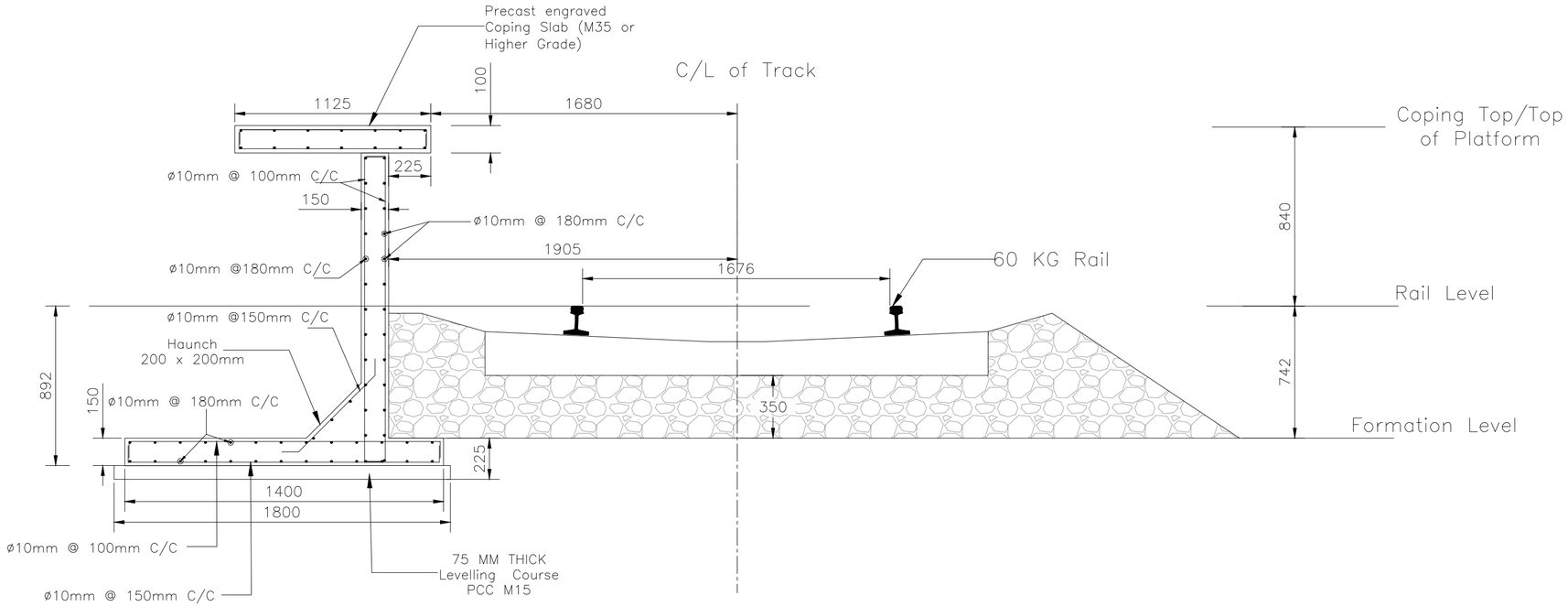
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL PLAN FOR
TROLLEY REFUGE IN CUTTING

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-023	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



SECTION FOR PLATFORM WALL

NOTES:

1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. 25MM CLEAR COVER SHALL BE PROVIDED TO ALL TYPES OF OUTERMOST REINFORCEMENT.
3. #INDICATES HIGH YIELD STRENGTH STEEL Fe–500 D(TMT) CONFORMING TO I.S. 2008.
4. ANCHORAGE SHALL BE 50 X DIA OF BARS & NOT MORE THAN 50% BARS SHALL BE LAPPED AT ONE SECTION. THE DISTANCE BETWEEN TWO LAPS SHALL BE MORE THAN 1.5 TIMES THE LAP LENGTH.
5. 50mm DIA. PVC PIPE AS WEEP HOLES ARE TO BE PROVIDED IN PLATFORM/TOE WALL @1000mm C/C HORIZONTALLY AND VERTICALLY STAGGERED. MINIMUM 50mm DISTANCE BETWEEN PIPE FACE & ALL STEEL MUST BE MAINTAINED.
6. THE BACK FILL IS TO BE PROVIDED CONFORMING TO CLAUSE 7.5 OF IRS SUB–STRUCTURE CODE. COMPACTION OF BACKFILL SHALL BE DONE AFTER COMPACTING THE SOIL GIVING PASSIVE PRESSURE FROM TRACK SIDE.
7. CONCRETE GRADE OF PLATFORM WALL SHALL BE M:35.
8. IT SHALL BE DESIGNED FOR SEISMIC ZONE IV.
9. COPING SLAB IS NOT MONOLITHICALLY CAST WITH WALL. IT SHALL BE PRESENT ON PLATFORM WALL TOP USING 1:3 CEMENT–SAND MORTAR COPING SHALL BE KEPT AFTER THE COMPACTION OF BACKFILL.
10. SIZE & REINFORCEMENT SHOWN IN DRAWING IS TENTATIVE AND DETAILED DESIGN SHALL TAKE CARE OF THE REQUIREMENT OF SEISMIC ZONE IV.
11. 25MM EXPANSION GAP SHALL BE PROVIDED AFTER EVERY 25m LENGTH.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

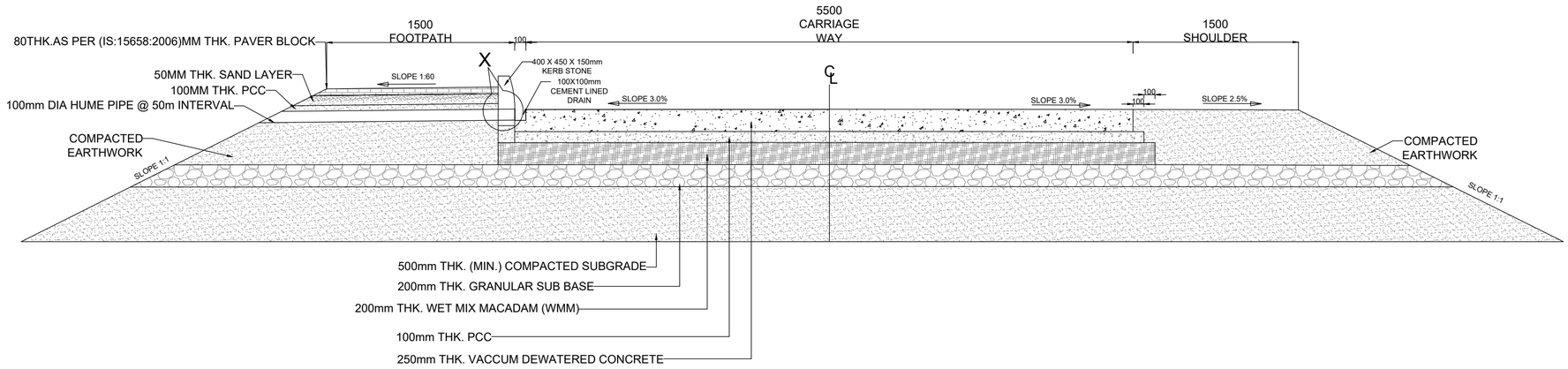
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

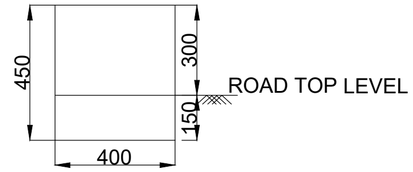
TITLE:- CONCEPTUAL SKETCH FOR RCC PLATFORM WALL

DRG. NO. GC-HRIDC-SK-GEN-024 | SHEET NO. 1 OF 1

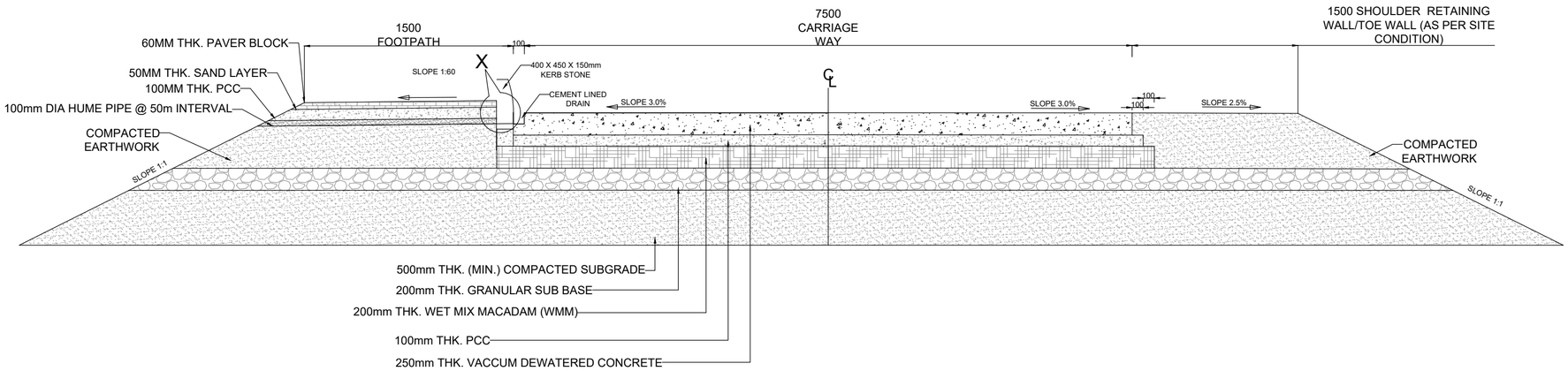
SCALE : AS SHOWN | ISSUE DATE 28.12.2022



TYPICAL CROSS-SECTION OF SINGLE LANE ROAD



DETAIL OF X



TYPICAL CROSS-SECTION OF DOUBLE LANE ROAD

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

NOTES:
1. ALL DIMENSION ARE IN MILLIMETERS EXPECT LEVELS WHICH ARE IN METERS. NO DIMENSION SHALL BE SCALED FROM DRAWING ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
2. ROAD SHALL BE CONSTRUCTED AS PER MORTH STANDARDS.
3. LAYING OF PAVE BLOCK SHALL BE AS PER IRC PROVISION.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

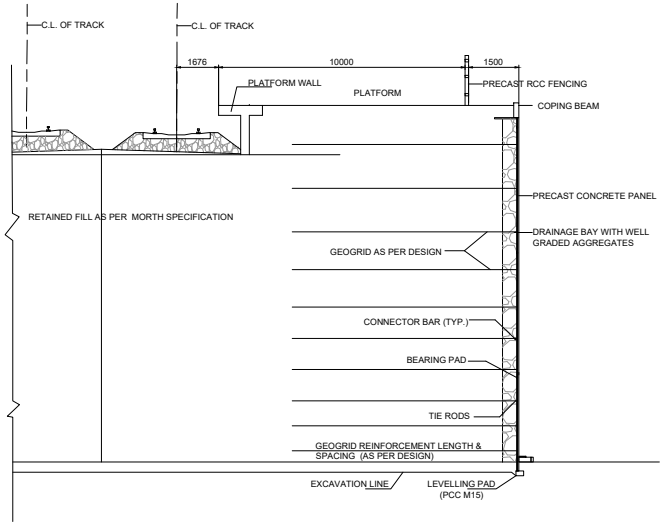
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

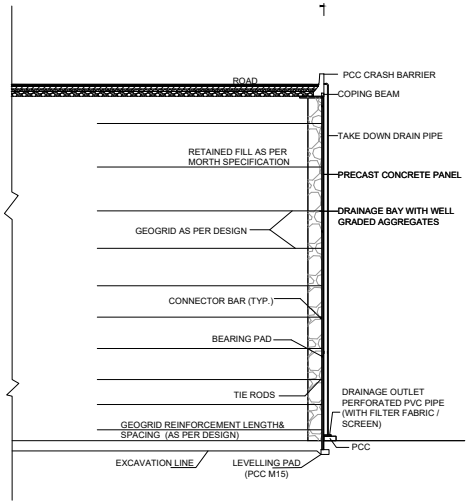
TITLE:- CONCEPTUAL SKETCH FOR SINGLE & DOUBLE LANE ROAD

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-025	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR RAIL PLATFROM



TYPICAL CROSS SECTION OF REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT AND PRECAST PANEL FACING FOR ROAD

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED OTHERWISE.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. DESIGNS, DETAILING OF RE WALL SHALL BE AS PER MORTH SPECIFICATION.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

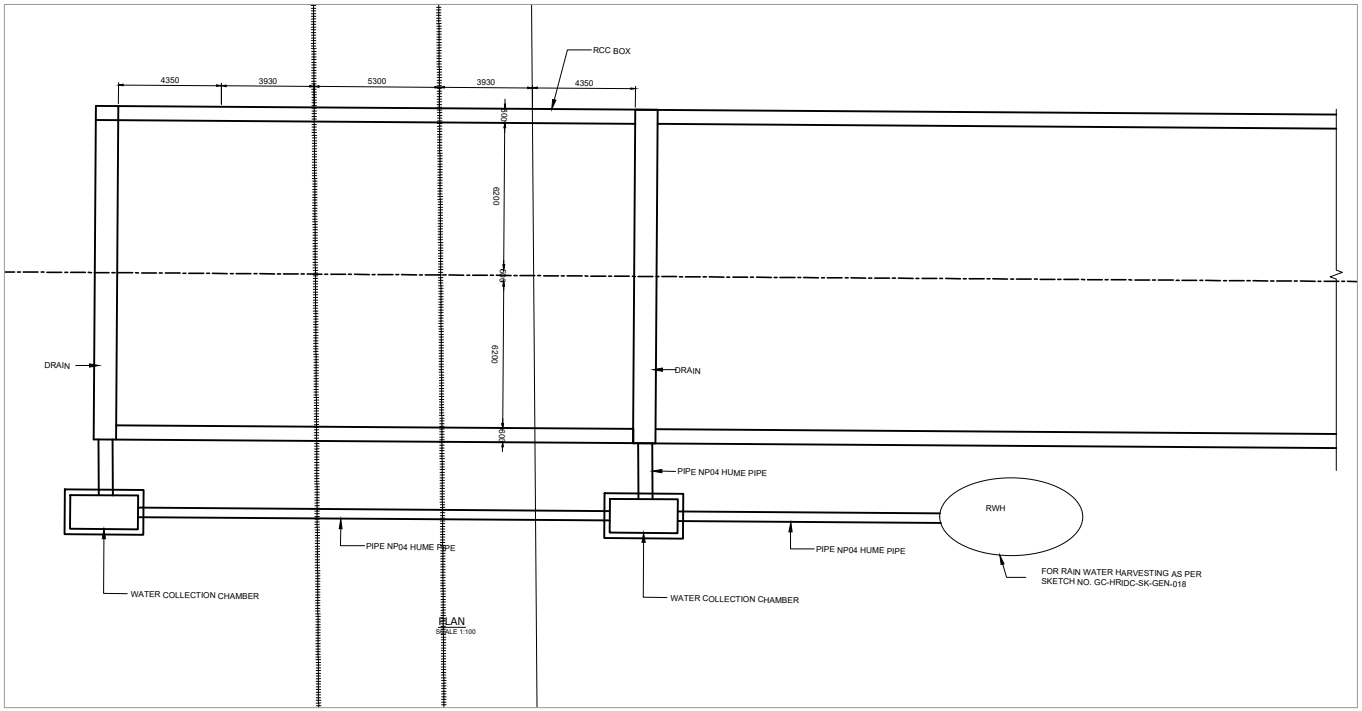
TITLE:- CONCEPTUAL SKETCH FOR REINFORCED EARTH WALL WITH GEOGRID REINFORCEMENT

DRG. NO. GC-HRIDC-SK-GEN-026

SHEET NO. 1 OF 1

SCALE : AS SHOWN

ISSUE DATE 28.12.2022



PLAN
SCALE 1:100

NOTES :
1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT LEVELS WHICH ARE IN METER, UNLESS OTHERWISE MENTIONED.
2. * SIZE OF SUMP SHALL BE AS PER DESIGN DISCHARGE.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Sarbana Jurong Group

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

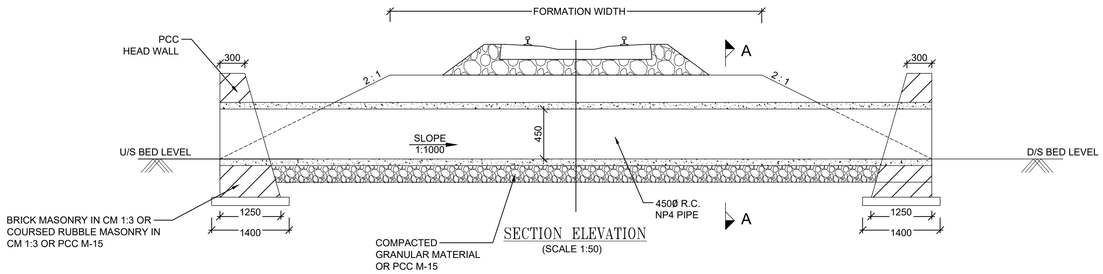
TITLE:- Conceptual Plan for sump

DRG. NO. GC-HRIDC-SK-GEN-027

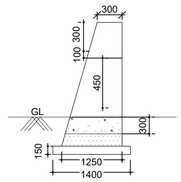
SHEET NO. 1 OF 1

SCALE : AS SHOWN

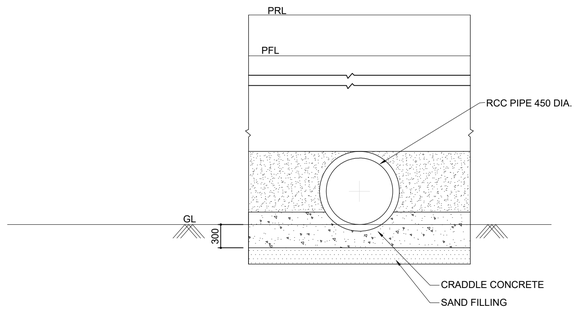
ISSUE DATE 28.12.2022



SECTION ELEVATION
(SCALE 1:50)



DETAIL OF HEAD WALL



SECTION A-A

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS IS REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. LONGITUDINAL SLOPE OF PIPE SHALL BE MIN. 1 IN 1000.
5. BEDDING CONDITION BELOW NP-04 PIPE SHALL BE AS PER IS:458.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

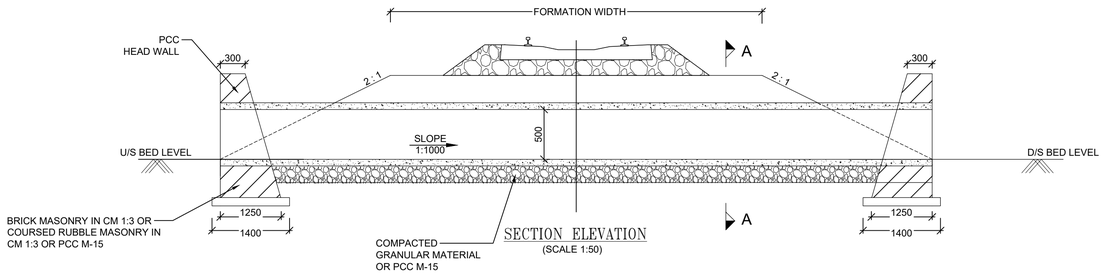
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

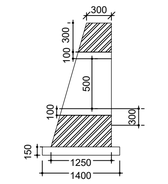
TITLE:- CONCEPTUAL SKETCH FOR NP4 PIPE OF 450mm DIA

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-028	1 OF 1

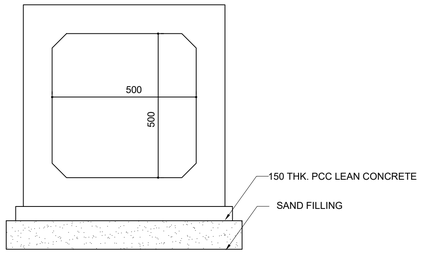
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



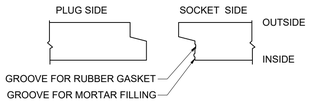
SECTION ELEVATION
(SCALE 1:50)



DETAIL OF HEAD WALL



SECTION B-B



PLUG &SOCKET JOINTS
SEALING MATERIAL RUBBER GASKET
FLANG BOLT CONNECTION

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS EXCEPT STATED.
2. DO NOT SCALE THE DRAWING FOLLOW ONLY WRITTEN DIMENSIONS.
3. LOOSE/UNSUITABLE SOIL BELOW CULVERTS IS REPLACED WITH SUITABLE GRANULAR MATERIAL.
4. STRUCTURE IS TO BE DESIGNED FOR 32.5 T LOADING AS APPLICABLE.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

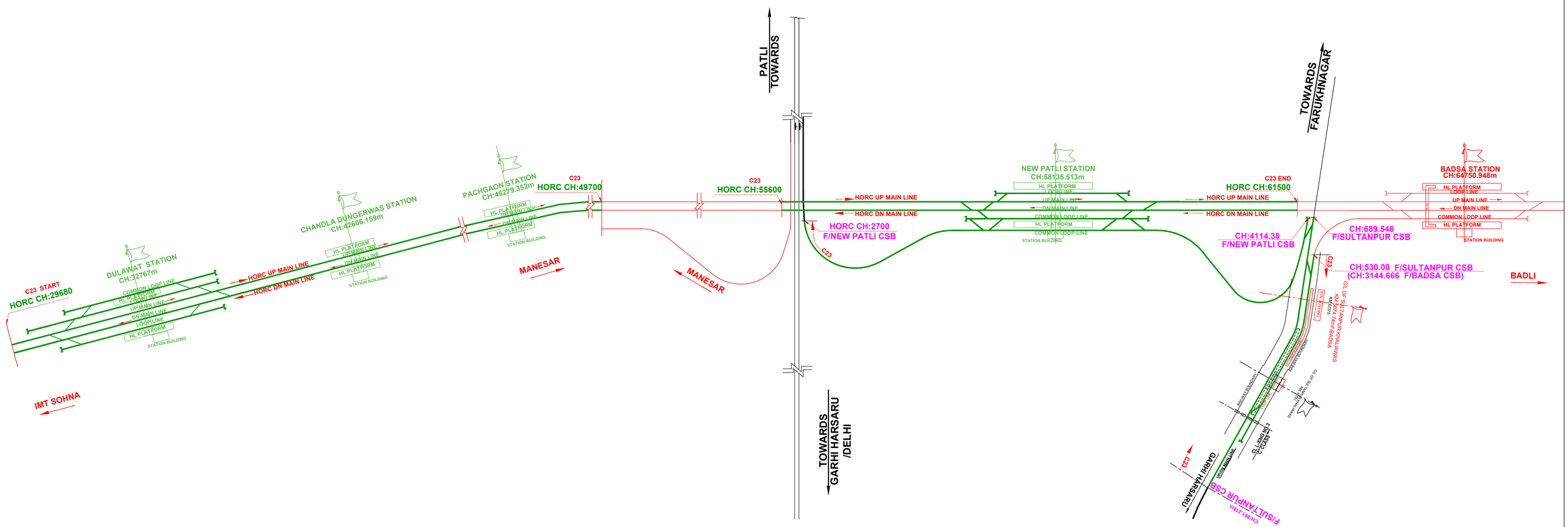
CONSULTANT:
GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL SKETCH FOR PRECAST
RCC BOX 500 X 500 MM SIZE

DRG. NO.	SHEET NO.
GC-HRIDC-SK-GEN-029	1 OF 1

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



LEGEND	
WORKS TO BE DONE BY C23 PACKAGE CONTRACTOR	
WORKS TO BE DONE BY OTHER PACKAGE CONTRACTOR	

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:

HARYANA ORBITAL RAIL CORRIDOR

CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:

HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:

GENERAL CONSULTANT FOR
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

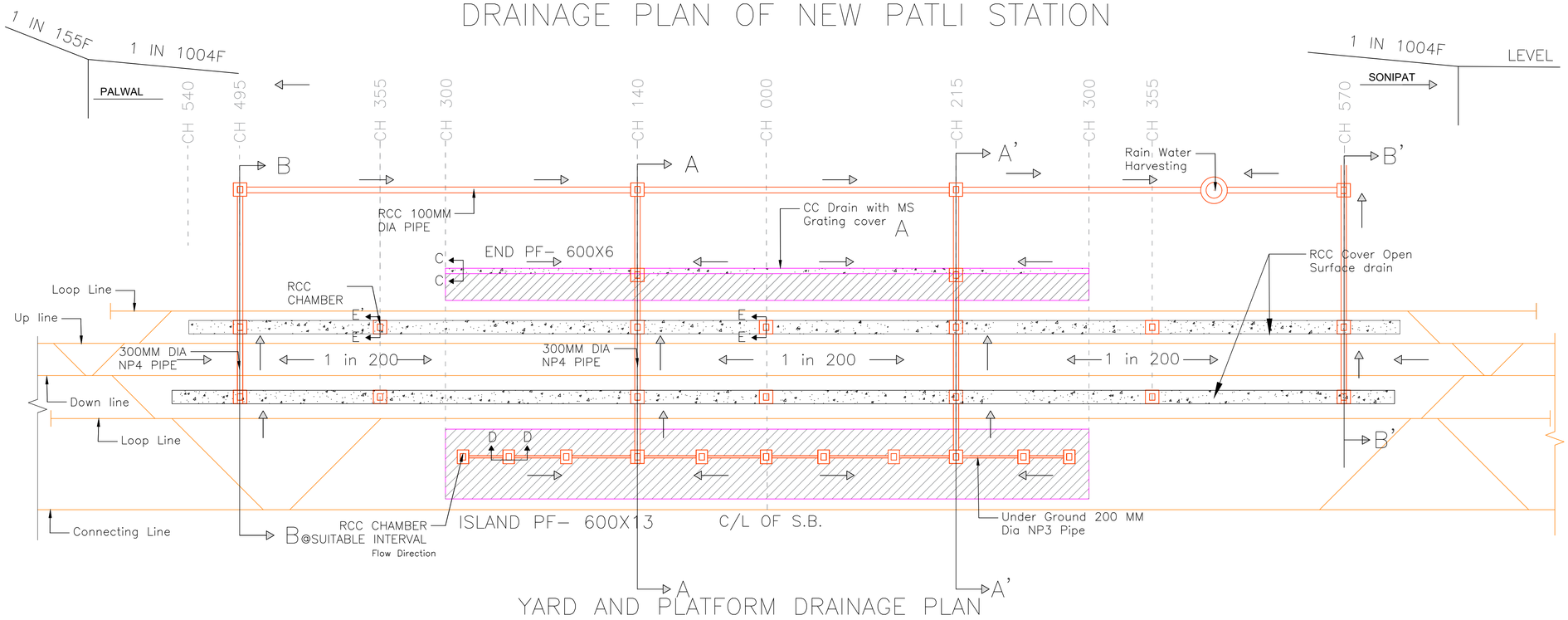
TITLE:-

JURISDICTIONAL SKETCH FOR CIVIL WORKS C-23 PACKAGE

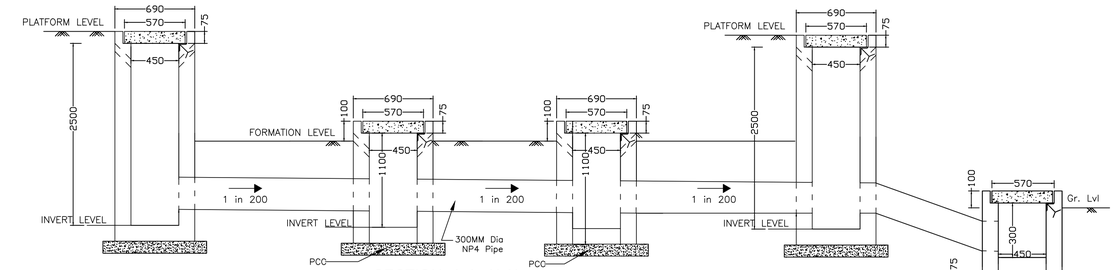
DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-001_A1	

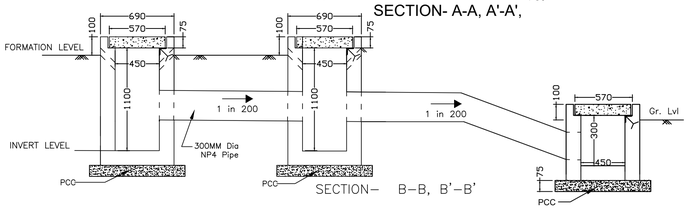
SCALE :	ISSUE DATE
AS SHOWN	28.12.2022

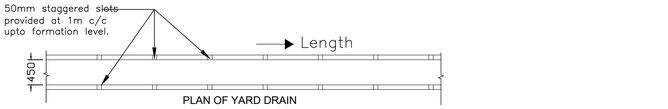
DRAINAGE PLAN OF NEW PATLI STATION

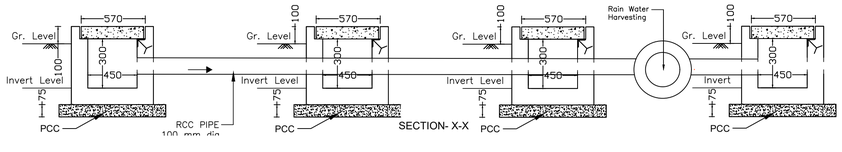


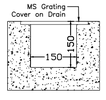
YARD AND PLATFORM DRAINAGE PLAN

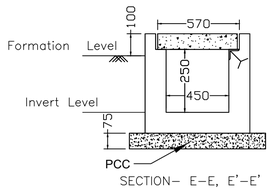


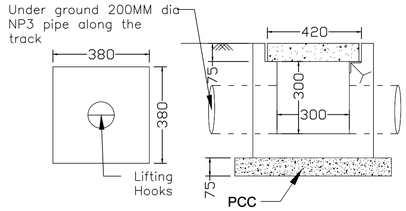


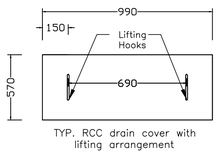












CHAINAGE	0	-140	215
FRL	0	-139	-214
DRAIN SLOPE	LEVEL	1 IN 200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-700	-1075
TOTAL DEPTH	-250.000	-1089.442	-1110.857

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

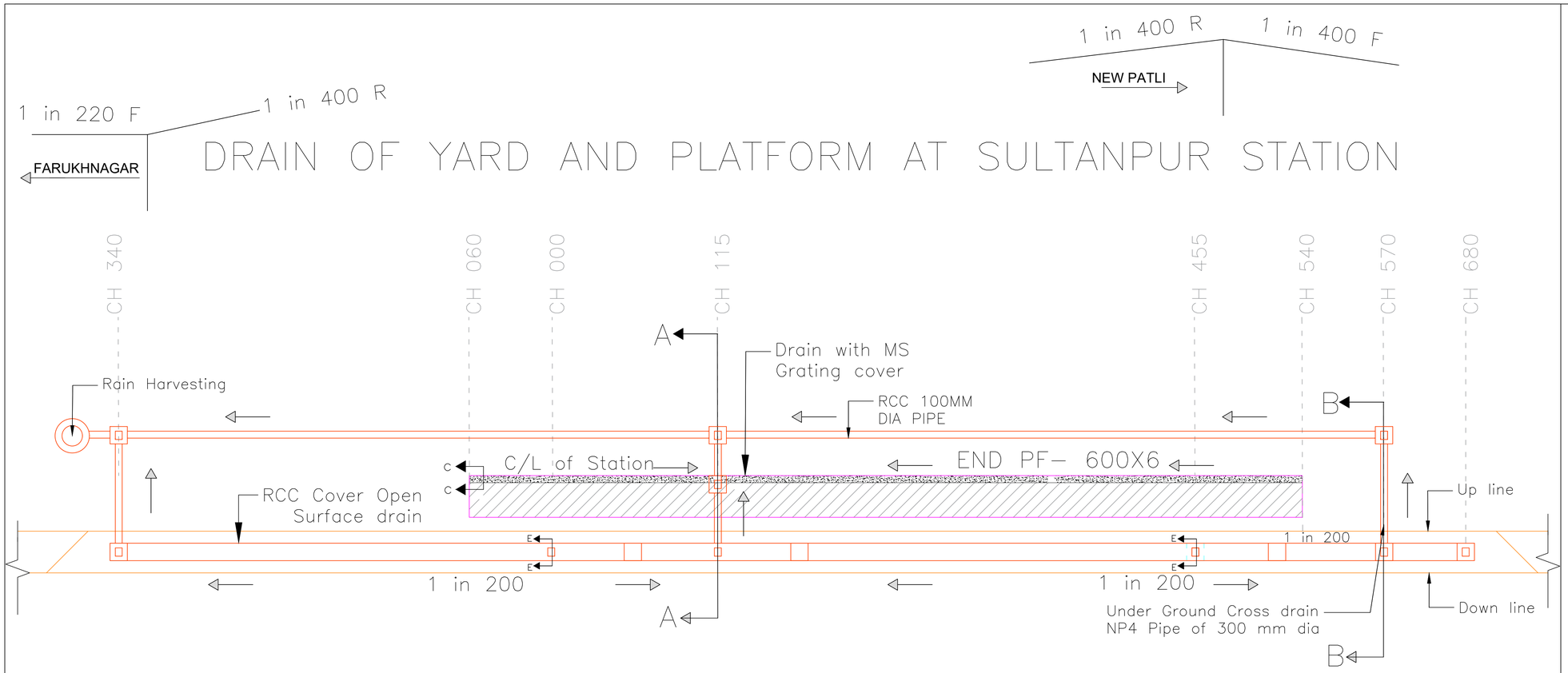
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

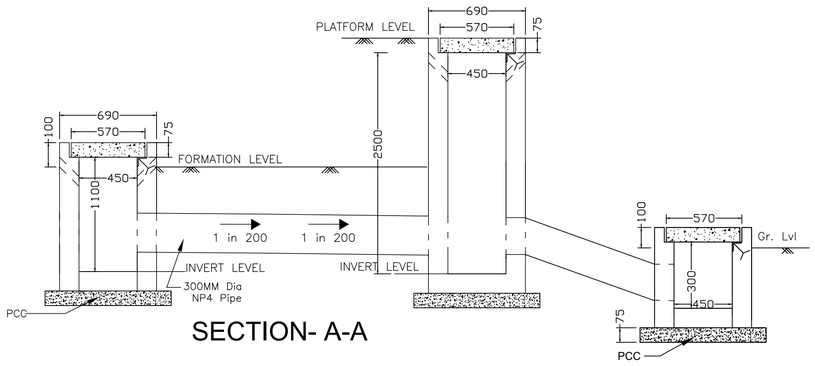
TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (NEW PATLI)

DRG. NO. GC-HRIDC-C23-SK-CIVIL-002_A1 | SHEET NO.

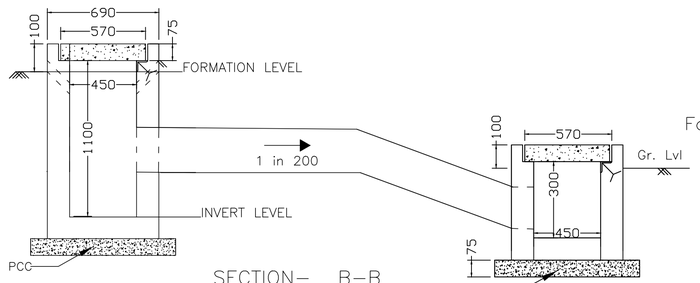
SCALE : AS SHOWN | ISSUE DATE 28.12.2022

DRAIN OF YARD AND PLATFORM AT SULTANPUR STATION

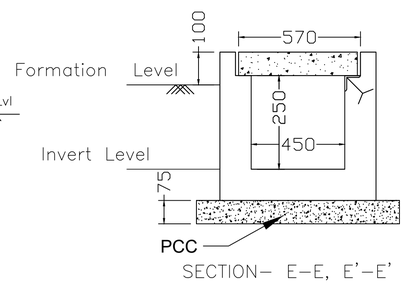




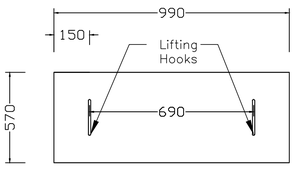
SECTION- A-A



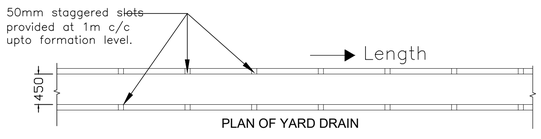
SECTION– B–B



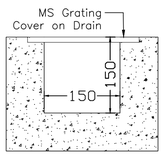
SECTION– E–E, E'–E'



TYP. RCC drain cover with lifting arrangement



PLAN OF YARD DRAIN



SECTION C–C

CHAINAGE	0	-340	115
FRL	0	-850	-288
DRAIN SLOPE	LEVEL	1 IN 200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1700	-575
TOTAL DEPTH	-250.000	-1100.000	-1112.500

Legend

- RCC YARD DRAIN WITH COVER
- PLATFORM AREA
- PF DRAIN WITH MS GRATING
- RCC CHAMBER

Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

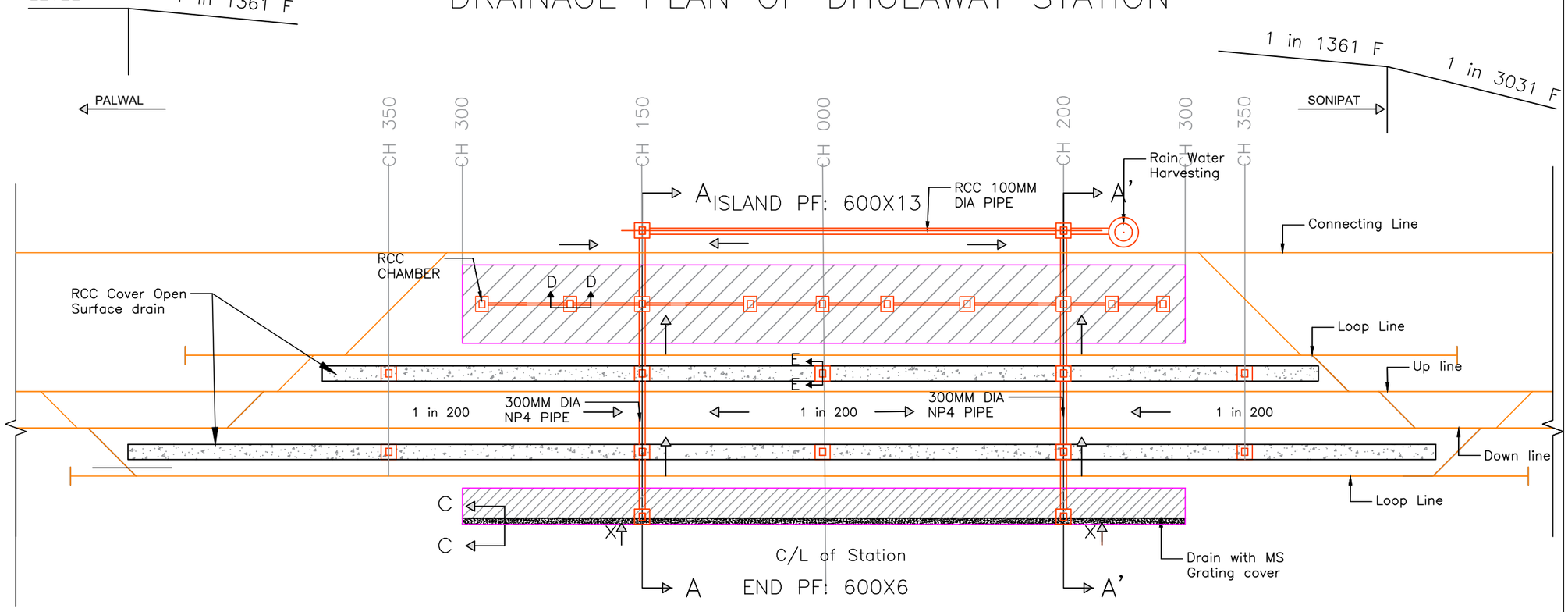
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (SULTANPUR)

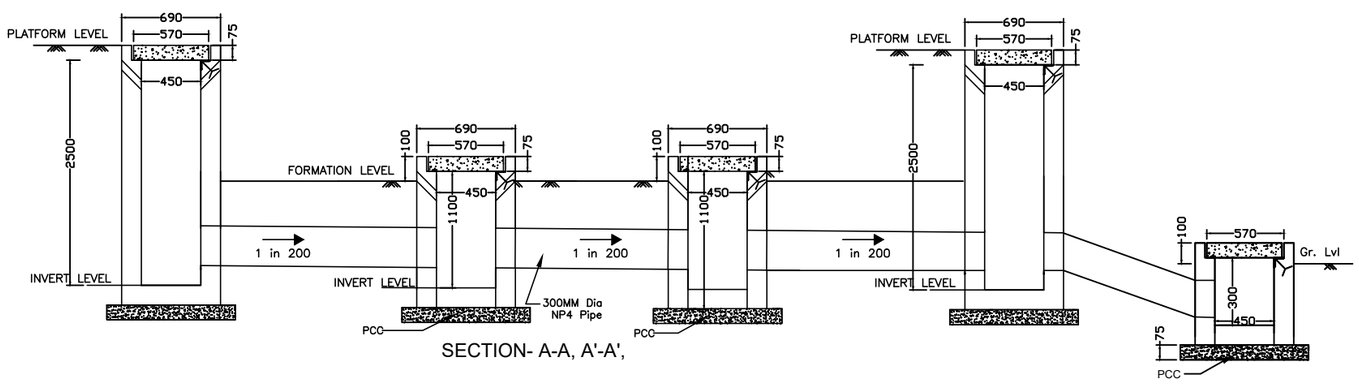
DRG. NO. GC-HRIDC-C23-SK-CIVIL-003_A1 | SHEET NO.

SCALE : AS SHOWN | ISSUE DATE 28.12.2022

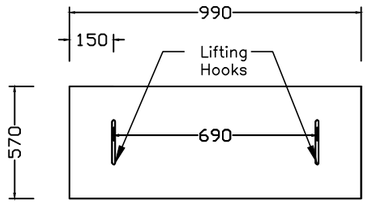
DRAINAGE PLAN OF DHULAWAT STATION



Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

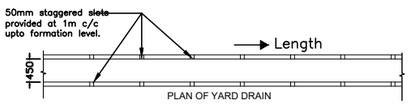


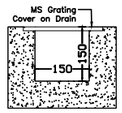
SECTION- A-A, A'-A',



TYP. RCC drain cover with lifting arrangement

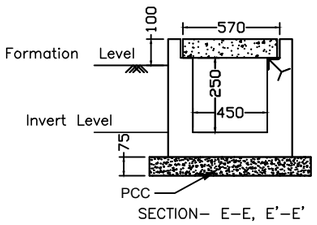
Legend
RCC YARD DRAIN WITH COVER
PLATFORM AREA
PF DRAIN WITH MS GRATING
RCC CHAMBER



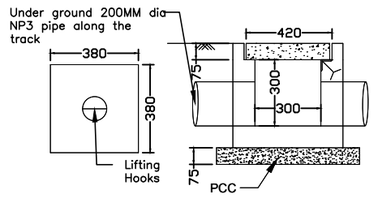


SECTION C–C

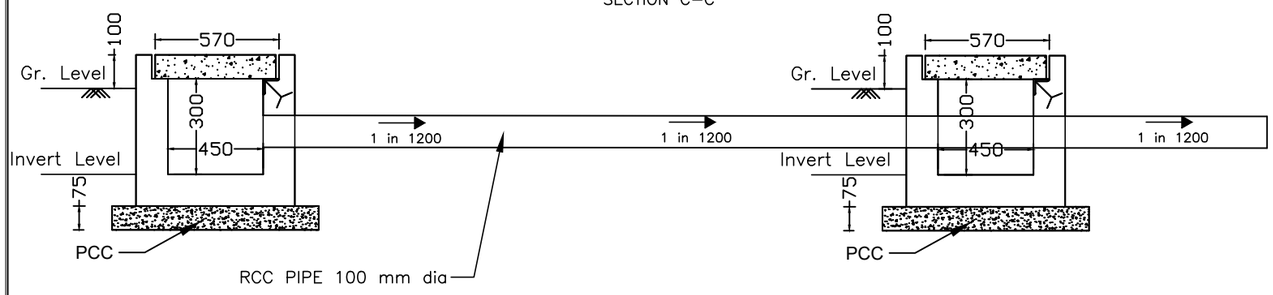
CHAINAGE	0	-150	200
FRL	0	110	-147
DRAIN SLOPE	LEVEL	1 IN200	1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-750	-1000
TOTAL DEPTH	-250.000	-1110.196	-1103.073



SECTION– E–E, E'–E'



SECTION- D-D



SECTION- X-X

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE
SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (DHULWAT)

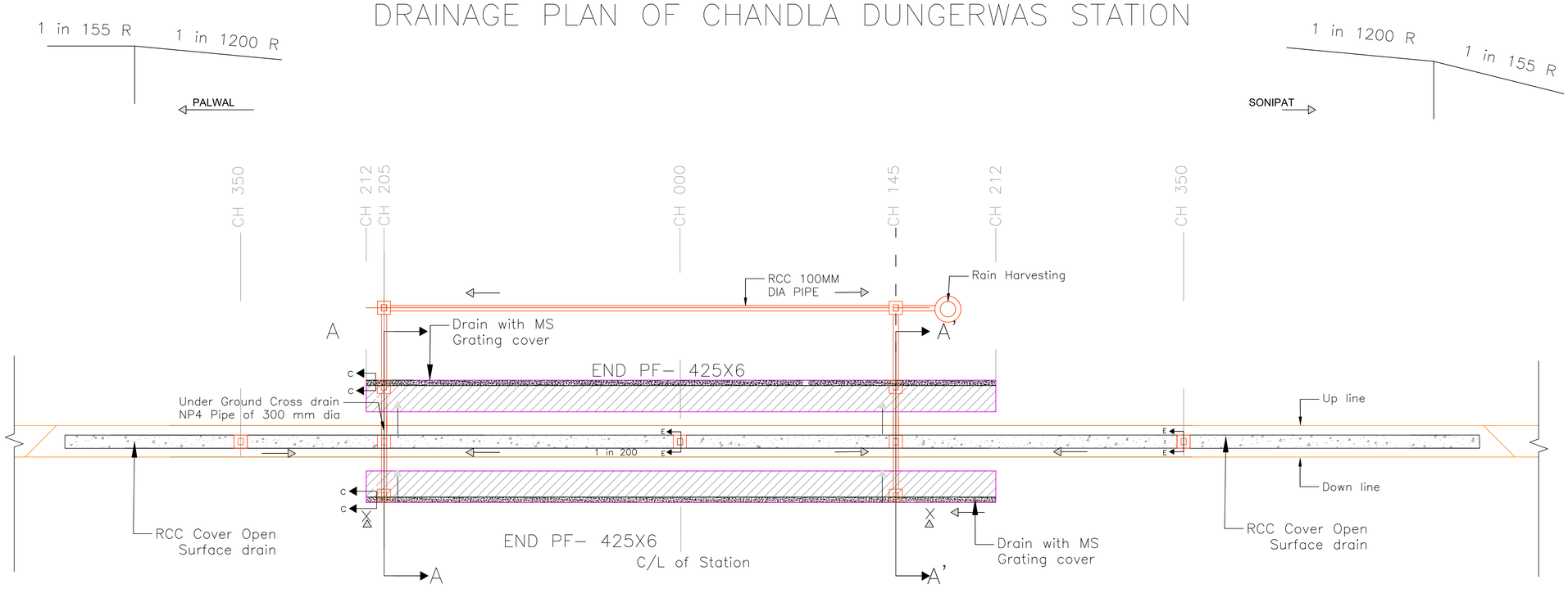
DRG. NO. GC-HRIDC-C23-SK-CIVIL-004_A1

SHEET NO.

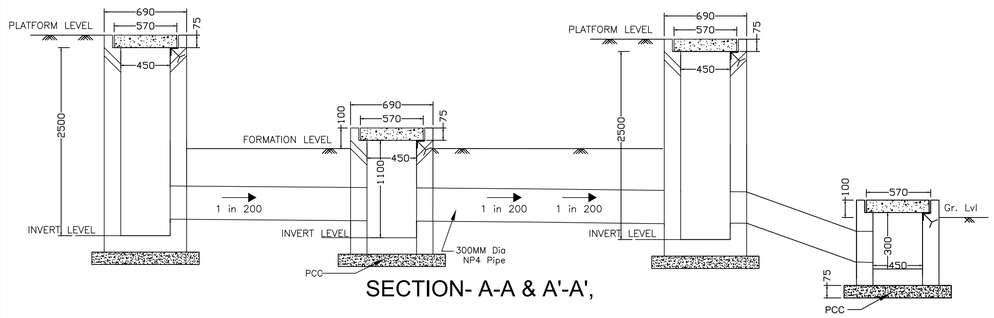
SCALE : AS SHOWN

ISSUE DATE 28.12.2022

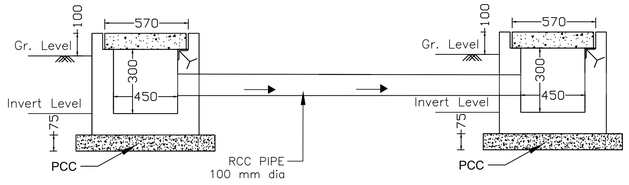
DRAINAGE PLAN OF CHANDLA DUNGERWAS STATION



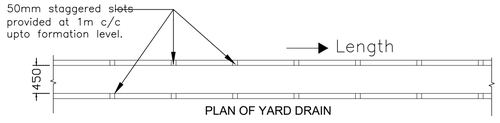
YARD AND PLATFORM DRAINAGE PLAN



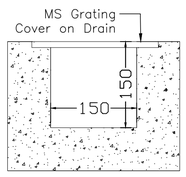
SECTION- A-A & A'-A',



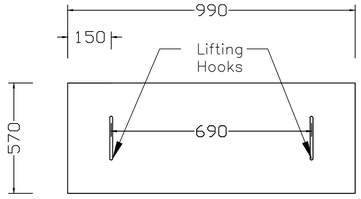
SECTION- X-X



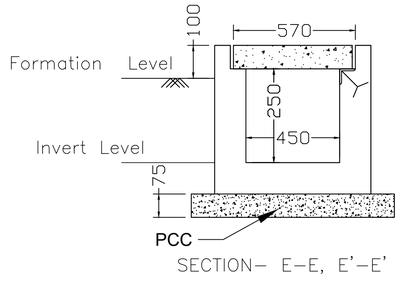
PLAN OF YARD DRAIN



SECTION C–C



TYP. RCC drain cover with lifting arrangement



SECTION– E–E, E'–E'

CHAINAGE	0	-205	145
FRL	0	-171	121
DRAIN SLOPE	LEVEL	1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-1025	-725
TOTAL DEPTH	-250.000	-1104.167	-1095.833

Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
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REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
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CLIENT:
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CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

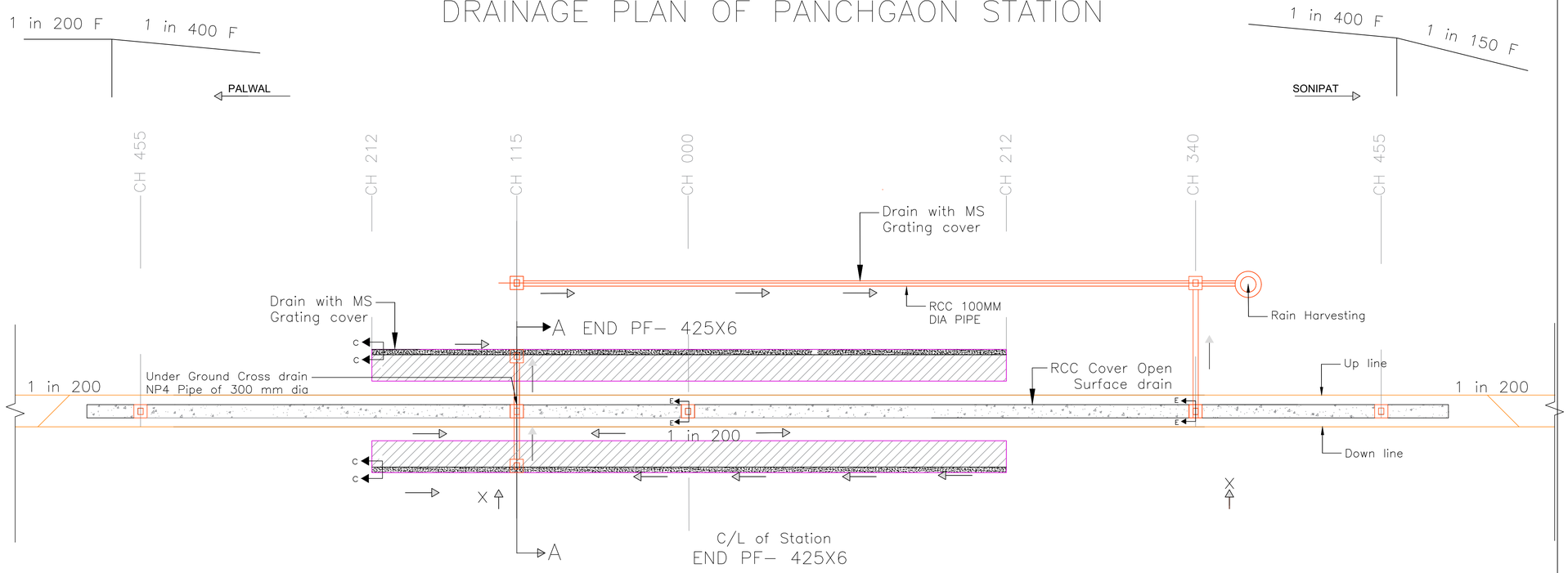
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:- CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (CHANDLA DUNGERWAS)

DRG. NO. GC-HRIDC-C23-SK-CIVIL-005_A1 | SHEET NO.

SCALE : AS SHOWN | ISSUE DATE 28.12.2022

DRAINAGE PLAN OF PANCHGAON STATION

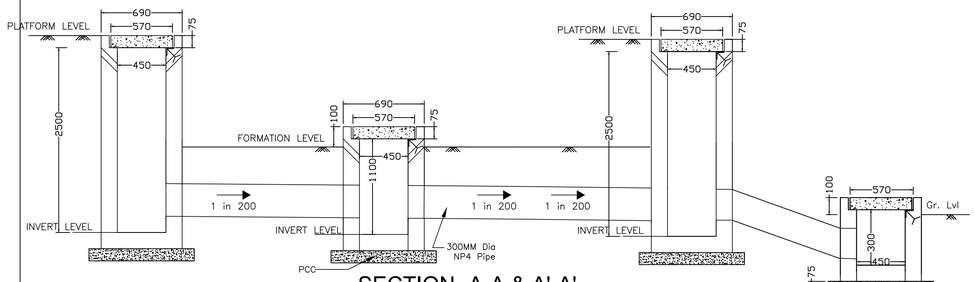


YARD AND PLATFORM DRAINAGE PLAN

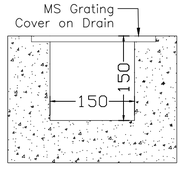
Legend

	RCC YARD DRAIN WITH COVER
	PLATFORM AREA
	PF DRAIN WITH MS GRATING
	RCC CHAMBER

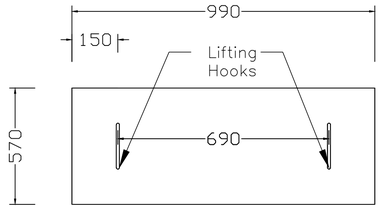
Note:–
1. All dimension are in mm unless otherwise specified.
2. Precast RCC Cover to be provided as per drawing.
3. Drain to be provided with adequate slope to ensure self Cleansing Velocity.
4. Drain to be made of RCC With Min. Grade of M25.



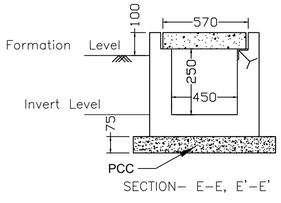
SECTION- A-A & A'-A',



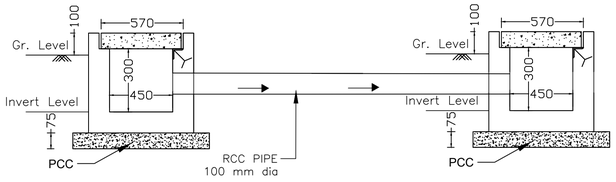
SECTION C–C



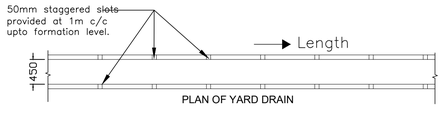
TYP. RCC drain cover with lifting arrangement



SECTION– E–E, E'–E'



SECTION- X-X



PLAN OF YARD DRAIN

CHAINAGE	0	-115	340
FRL	0	288	-850
DRAIN SLOPE	LEVEL	1 IN 200	FALL 1 IN 200
FIX DEPTH	-250	-250	-250
DEPTH DUE TO SLOPE	0	-575	-1700
TOTAL DEPTH	-250.000	-1112.500	-1100.000

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
CONNECTING PALWAL TO SONIPAT BYPASSING DELHI AREA BY LINKING ASAOTI-PATLI-SULTANPUR-ASAUDAH BY NEW ELECTRIFIED BG DOUBLE LINE

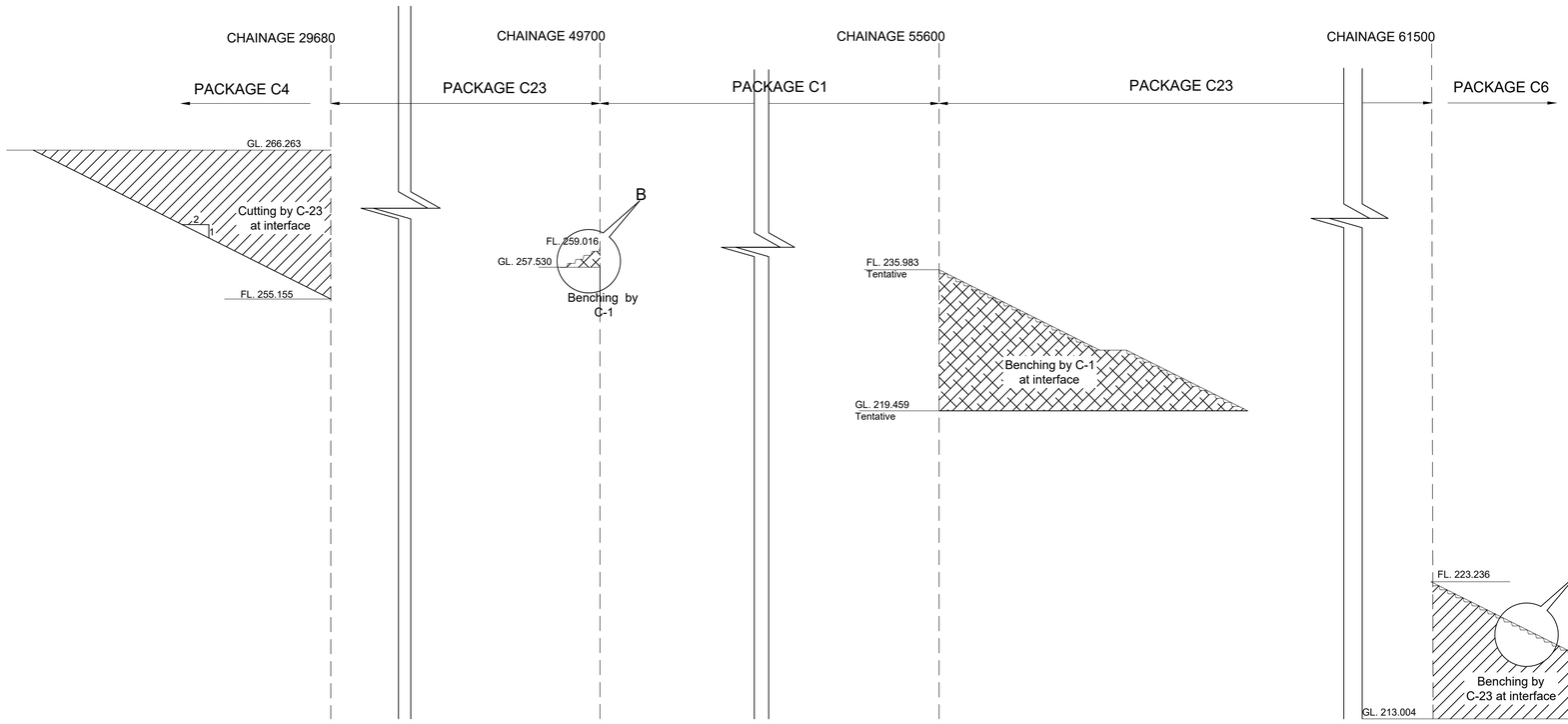
CLIENT:
HARYANA RAIL INFRASTRUCTURE DEVELOPMENT CORPORATION LIMITED.

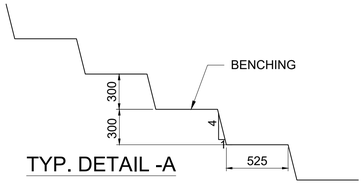
CONSULTANT:
GENERAL CONSULTANT FOR HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.
RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

TITLE:-
CONCEPTUAL PLAN DRAINAGE ARRANGEMENT (PANCHGOAN)

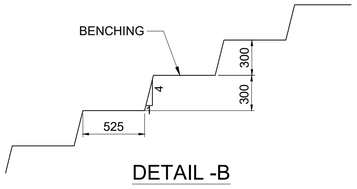
DRG. NO. GC-HRIDC-C23-SK-CIVIL-006_A1 | SHEET NO.

SCALE : AS SHOWN | ISSUE DATE 28.12.2022





TYP. DETAIL -A



DETAIL -B

NOTES :

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. FOR OTHER DETAILS REFER RDSO SPECIFICATION NO. RDSO/2020/GE:IRS-004 SEPTEMBER 2020 "COMPREHENSIVE GUIDELINES AND SPECIFICATIONS FOR RAILWAY FORMATION".
3. DETAILS OF HATCHED AS BELOW-
   - AREA IS IN THE SCOPE OF C23
   - AREA IS NOT IN THE SCOPE OF C23

GC/HORC		HRIDC	
NAME / DESIGNATION	SIGN	NAME / DESIGNATION	SIGN
CHAHATEY RAM PD		R. R. KUMAR GM/ IP&P	
SUDHIR AGRAWAL DPD/CIVIL		RAJU SOLANKI DGM/C-SOUTH	
REETU PATIAL CDE/ CIVIL			

PROJECT:
HARYANA ORBITAL RAIL CORRIDOR
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CONSULTANT:
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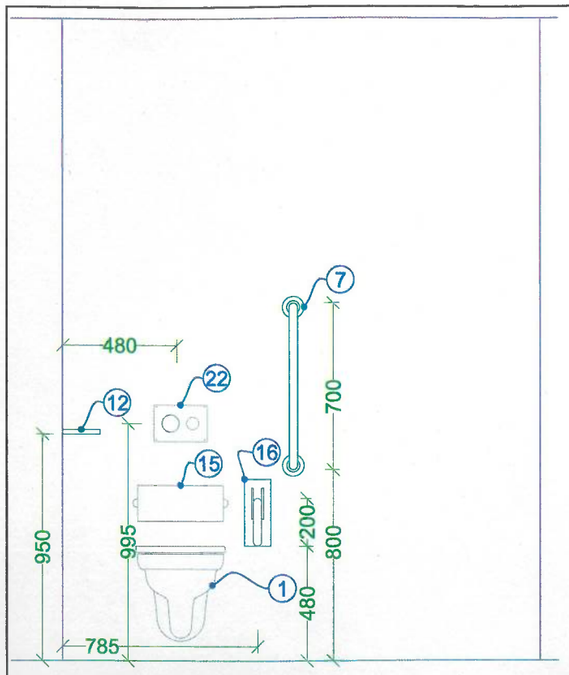
HARYANA ORBITAL RAIL CORRIDOR
RITES Limited in consortium with SMEC International Pty. Ltd.

RITES THE INFRASTRUCTURE PEOPLE | SMEC Member of the Surbana Jurong Group

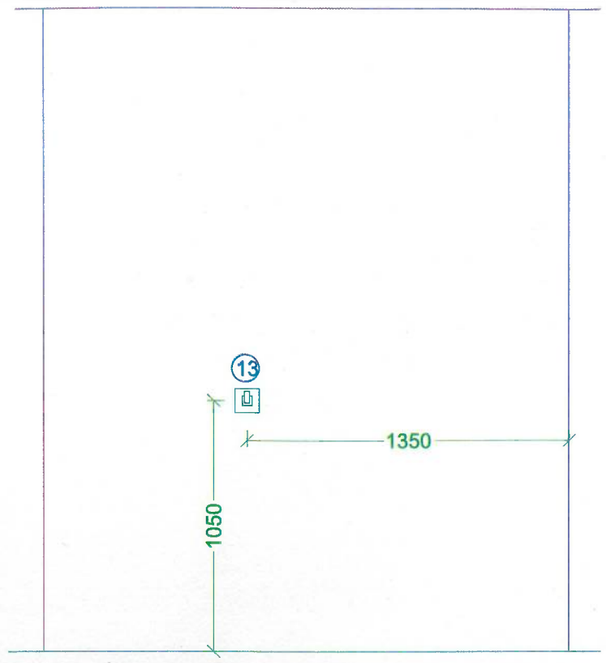
TITLE:- CONCEPTUAL PLAN BANK/CUTTING BENCHING AT INTERFACE LOCATION

DRG. NO.	SHEET NO.
GC-HRIDC-C23-SK-CIVIL-009_A1	

SCALE :	ISSUE DATE
AS SHOWN	28.12.2022



ELEVATION 'A'



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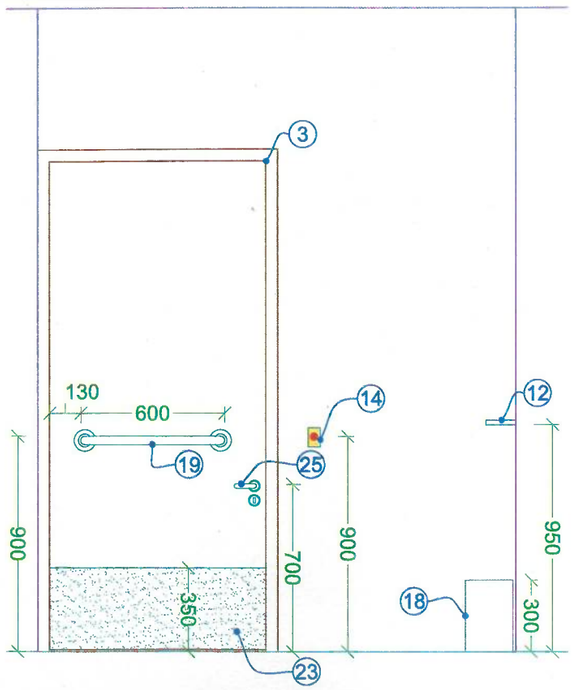
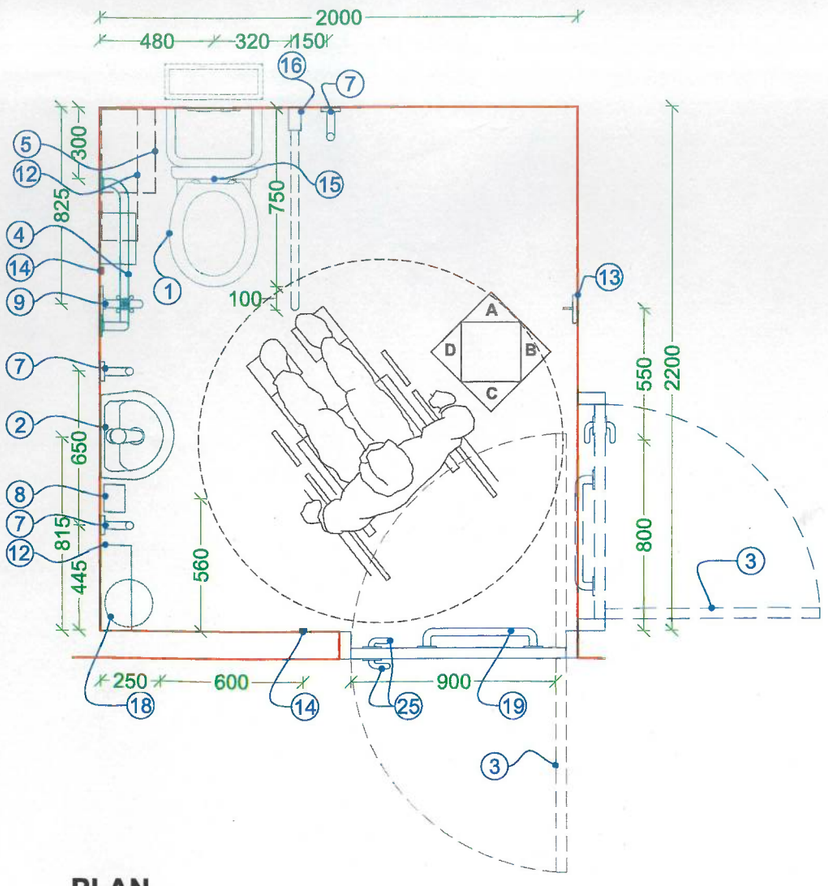


ELEVATION 'C'

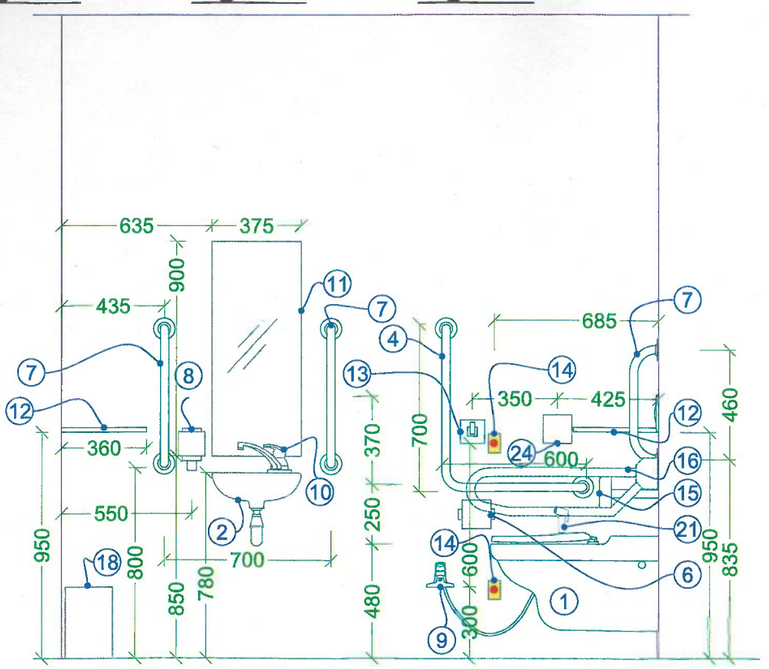


PLAN

Figure 1

Figure 2

Figure 3



ELEVATION 'D'

N.R.H.Q.E. PLAN NO.	: HQ/20/11-2021
TYPE PLAN NO.	: O-104/2021
CANCEL TYPE PLAN NO.	: .....

NOTE:-

1. DO NOT SCALE THIS DRAWING.
2. THIS DRAWING IS TO BE READ WITH ALL RELATED INFORMATION.
3. ALL DIMENSIONS TO BE VERIFIED ON SITE BY MAIN CONTRACTOR BEFORE THE COMMENCEMENT OF ANY DRAWING OR WORK WHATSOEVER.
4. ALL DIMENSIONS ARE IN MILLIMETER UNLESS SHOWN OTHERWISE.
5. ALL GRAB RAIL SHOULD BE PROPERLY FIXED TO HANDLE THE MINIMUM LOAD OF 45 kg (100 lbs).
6. ANTI-SKID OR SLIP RESISTANT TILES SHOULD BE USED ON FLOORING.
7. MIRROR SHOULD BE TILTED AT AN ANGLE OF 30° FOR BETTER VISIBILITY OF WHEELCHAIR USER.
8. VENTILATOR (600mm x 600mm) TO BE PROVIDED ACCORDING TO SITE OPENING.
9. ACCESSIBLE TOILET SHOULD HAVE THE INTERNATIONAL SYMBOL OF ACCESSIBILITY (WITH BRAILLE SIGNAGE) DISPLAYED OUTSIDE FOR WHEELCHAIR ACCESS (Figure 1).
10. THERE SHOULD BE ADEQUATE COLOUR & TONAL CONTRAST BETWEEN THE FIXTURES, WALLS & FLOORING. THIS IS TO ENABLE EASY RECOGNITION BY PERSONS WITH VISUAL IMPAIRMENTS.
11. **TOILET LEVEL SHOULD BE KEPT SAME AS LEVEL OF PLATFORM SO AS TO AVOID REQUIREMENT OF RAMP.**
12. **THIS DRAWING IS BASED ON RAILWAY BOARD'S LETTER NO. 2019/Stn.Dev.-I/03/06/Policy/PwDs dated 12.02.2020.**

LEGENDS:-

ITEM NO.	PARTICULARS/ DESCRIPTION OF ITEM
1	WALL HUNG COMMODE
2	WASH BASIN
3	DOUBLE SWING DOOR POSITIONS
4	STAINLESS STEEL WALL MOUNTED L-SHAPE GRAB RAIL
5	STAINLESS STEEL SANITARY NAPKIN DISPOSAL
6	STAINLESS STEEL TISSUE HOLDER
7	STAINLESS STEEL VERTICAL GRAB RAIL
8	SOAP DISPENSER
9	TWO WAY BIB COCK
10	LEVER HANDLE TAP (Figure 2)
11	MIRROR
12	STAINLESS STEEL SHELF
13	SINGLE POST CLOTH HOOK
14	ALARM SWITCH
15	BACK REST (Figure 3)
16	STAINLESS STEEL DROP DOWN RAIL
17	SANITARY DISPOSAL UNIT
18	STAINLESS STEEL DISPOSAL BIN
19	STAINLESS STEEL PULL RAIL
20	ALARM RESET BUTTON
21	HAND JET SPRAY
22	FULL & HALF FLUSH BUTTON
23	KICK PLATE
24	ALARM RESET BUTTON
25	D-LEVER HANDLE

MONA SRIVASTAVA (CE/STN. DEV.)	22/11/21
K.K. SHARMA (DY.CE/STN. DEV.)	22/11/21
MOHD. SHARIF (PREPARED BY: SSE/ARCH.)	10 Nov'2021

NORTHERN RAILWAY

TYPE PLAN

POWDER TOILET FOR DIVYANGS

CASE NO. SD/TP/2021	CANCEL PLAN NO. : NIL
SCALE : 1:25@A3	SHEET NO.: 01 OF 01
N.R.H.Q.E. PLAN NO. :	HQ/20/11-2021