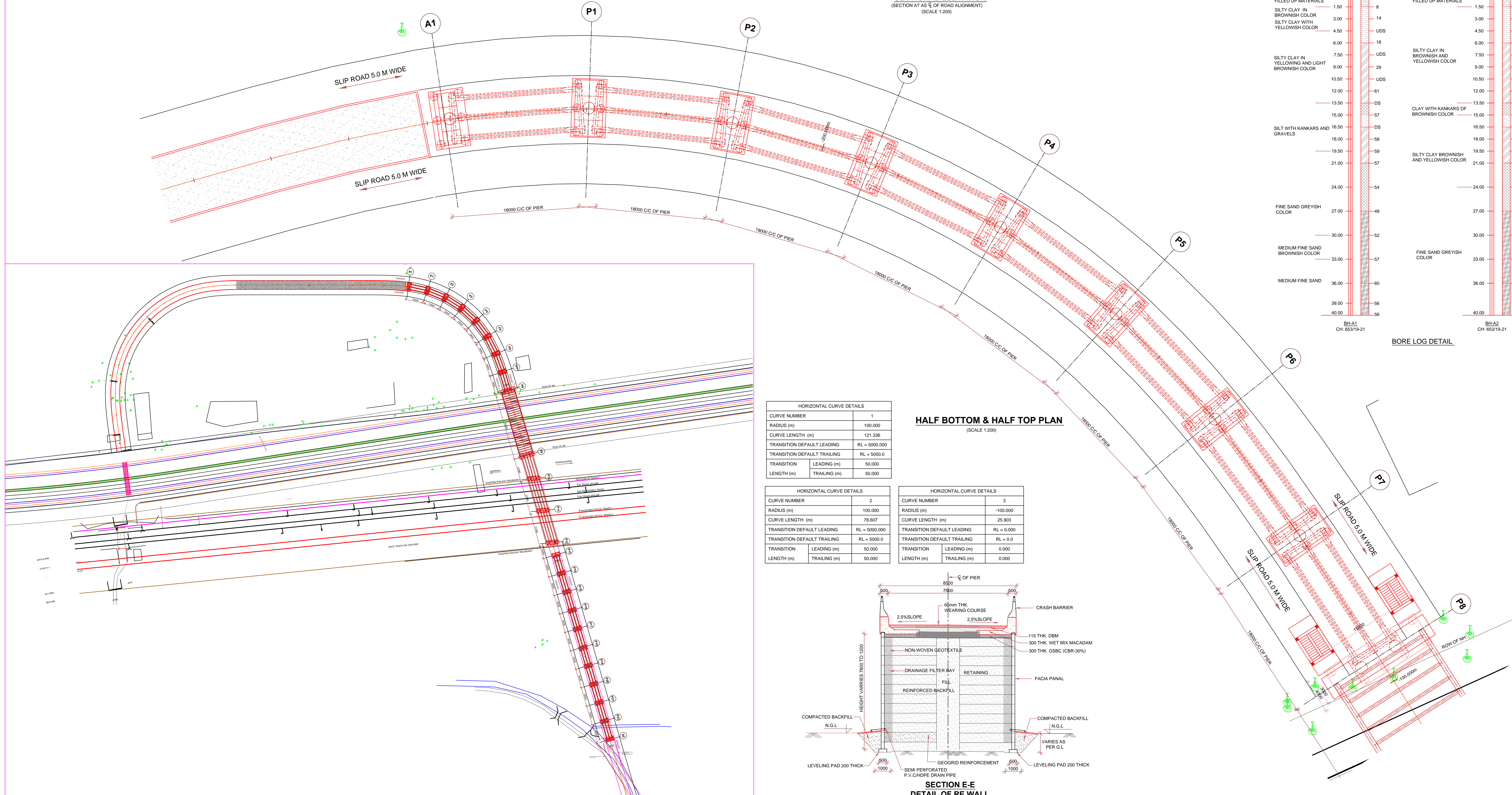
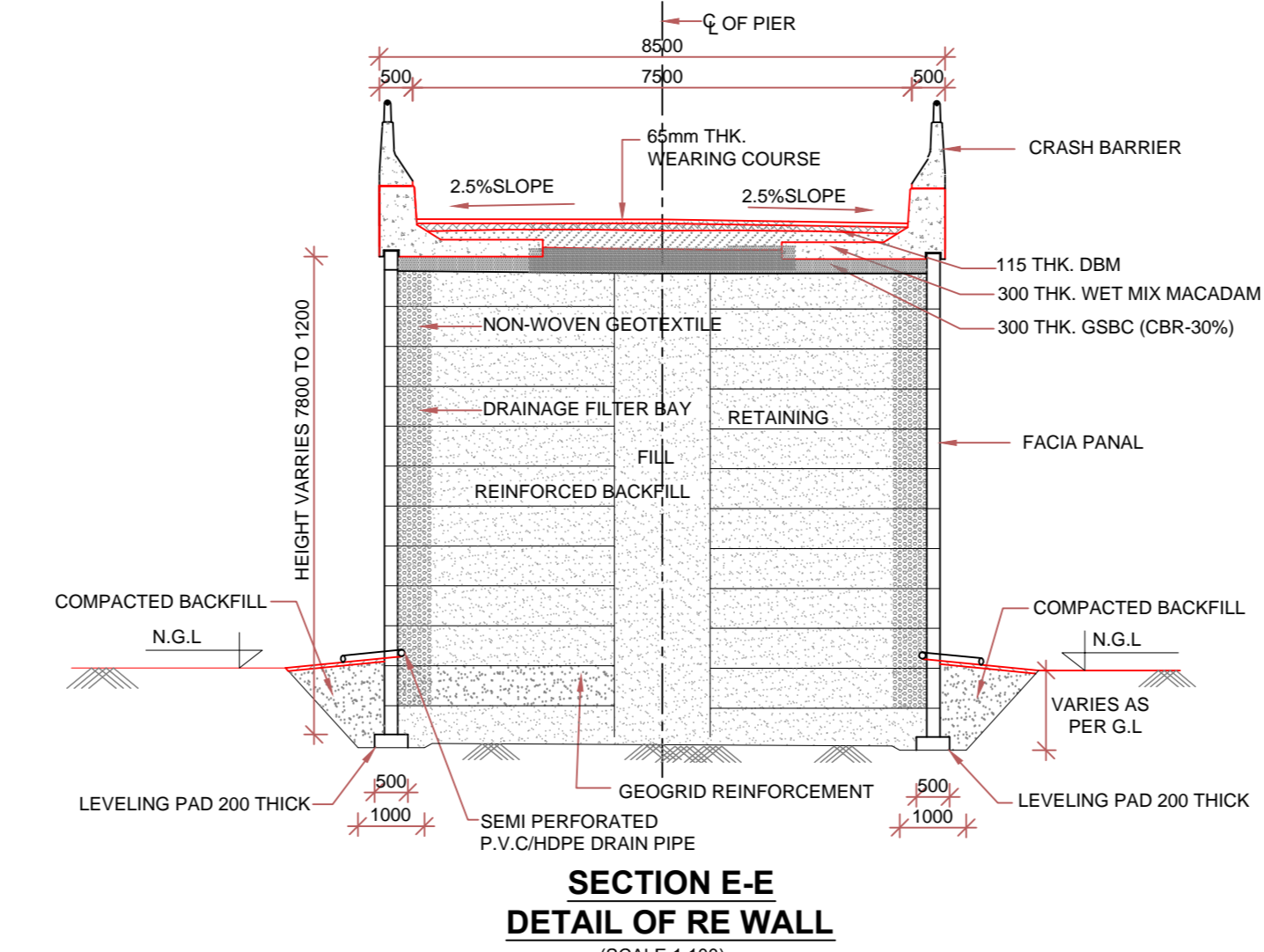


SECTIONAL ELEVATION
(SECTION AT 5% OF ROAD ALIGNMENT)
(SCALE: 1:200)



HALF BOTTOM & HALF TOP PLAN
(SCALE: 1:200)

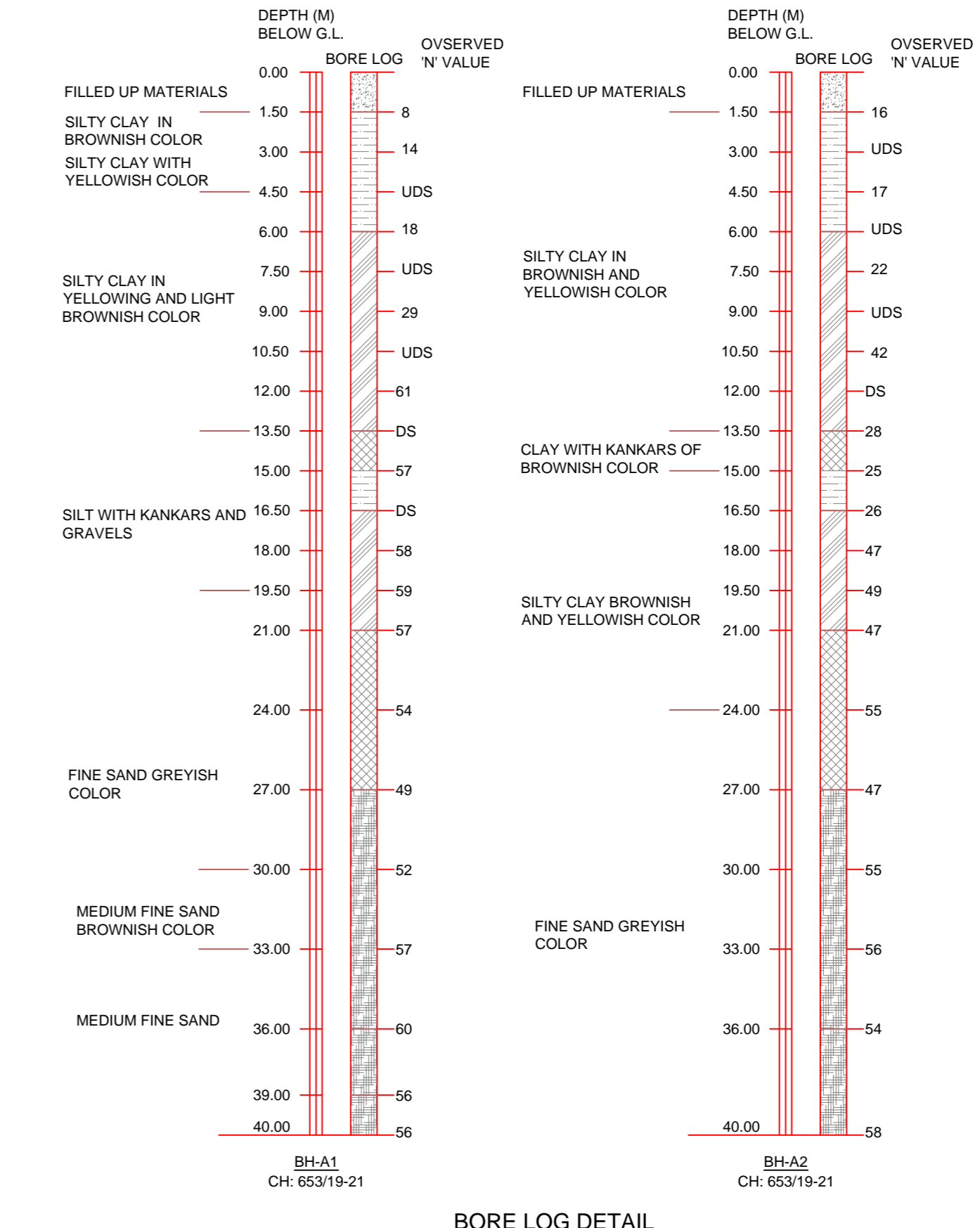
HORIZONTAL CURVE DETAILS			
CURVE NUMBER	1	CURVE NUMBER	2
RADIUS (m)	100.000	RADIUS (m)	100.000
CURVE LENGTH (m)	121.336	CURVE LENGTH (m)	78.607
TRANSITION DEFAULT LEADING	RL = 5000.000	TRANSITION DEFAULT LEADING	RL = 5000.0
TRANSITION DEFAULT TRAILING	RL = 5000.0	TRANSITION DEFAULT TRAILING	RL = 0.0
TRANSITION LEADING (m)	50.000	TRANSITION LEADING (m)	0.000
TRANSITION TRAILING (m)	50.000	TRANSITION TRAILING (m)	0.000



SECTION E-E
DETAIL OF RE WALL
(SCALE: 1:100)



KEY PLAN
(SCALE: 1:5)



BORE LOG DETAIL

SANCTION OF CRS TO BE TAKEN PRIOR TO EXECUTION OF WORK
SPECIAL NOTES

1. LAUNCHING SCHEME OF THE RAILWAY SPAN GIRDER WILL BE SUBMITTED SEPARATELY.
2. MAINTENANCE AGREEMENT TO BE EXECUTED BEFORE EXECUTION OF WORK.
3. NO WORK WITH RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAILWAY REPRESENTATIVE.
4. GIRDERS OVER ROB PROPER TO BE FABRICATED PREFERABLY BY RISO APPROVED FIRMS.
5. SEE SEPARATE DRAWING FOR FOUNDATION, SUB STRUCTURE & OTHER STRUCTURAL DETAILS.
6. APPROVAL FOR CONSTRUCTION OF ROB ON PILE FOUNDATION HAS BEEN OBTAINED BY CADDOONSOUTH VIDE NOTE NO. 18/03/2018 DATED 22.03.2017.
7. SUITABLE RE WALL/ RETAIN WALL WILL BE PROVIDED AS PER DESIGN WHERE EVER REQUIRED.

NOTES

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
2. DIMENSIONS ARE NOT TO BE SCALED ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
3. ALL THE DIMENSIONS SHOWN SHOULD BE VERIFIED AT SITE BEFORE TAKING UP DESIGN WORK IN HAND. ANY DISCREPANCY NOTES SHOULD BE FORWARDED THROUGH ALTERATIONS DULY SIGNED.
4. MAXIMUM SAFE BEARING CAPACITY AT THE FOUNDING LEVEL CONSIDERED AS PER GEOTECHNICAL REPORT. IF IT IS LESS THAN THE SAFE BEARING CAPACITY, SUB STRUCTURE & OTHER STRUCTURAL DETAILS.
5. DRAINAGE SLOPE SHALL BE PROVIDED AS PER NORTH SPECIFICATION.
6. EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER IRC 21:2009/11/2015-466. ALL SPECIFICATION LAID DOWN IN IRC CODES IS 466 CODE FOR RELEVANT EXPOSURE CONDITION SHALL BE FOLLOWED.
7. FOR DETAILS OF SUBSTRUCTURE AND FOUNDATION REFER SEPARATE DRAWING DULY APPROVED BY RAILWAY.
8. WORK SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF RAILWAY ENGINEERS WITH RAILWAY LAND LIGHT.
9. SANCTION OF CRS SHOULD BE OBTAINED PRIOR TO EXECUTION OF PROPOSED WORK.
10. TYPE OF BEARING - RIGID FOOTING.
11. SUITABLE UTILITY DUCTS IF REQUIRED SHOULD BE PROVIDED BELOW FOOTPATH SLAB WITH THE APPROVAL OF ENGINEER IN CHARGE.
12. DESIGN SHALL BE AS PER LATEST RELEVANT CODE OF IRC INCLUDING SP-33 AND OTHER CODES AS APPROVED BY M.C.E.T.
13. STATE GOVT./PRIVATE AUTHORITIES SHOULD BE ENSURE DURING EXECUTION OF WORK SAFETY OF RUNNING RAIL TRAFFIC SHOULD NOT BE AFFECTED.
14. SUITABLE SR, IF REQUIRED SHOULD BE IMPOSED BEFORE TAKING UP THE EXECUTION OF WORK WITH THE APPROVAL OF ENGINEER IN CHARGE.
15. TEMPORARY SIGNALING ARRANGEMENT WILL BE DONE AS PER G.R. 15.00 (D) & S.R. 15.00 (D) OR G.R.15.00/2 & S.R. 15.00 (D) AS PER REQUIREMENT.
16. LOADING STANDARD OF ROB AS PER IRC-6:2000.
17. FULL LOADED LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-5 TO ENSURE QUALITY WORK.
18. CONCRETE DESIGN MIX - M40 PER PIER CAP/PILE CAP - M35 CRASH BARRIER - M40 PEDESTAL - M40
19. MANNE LEVEL CROSSING NO 78-C EXIST AT THIS LOCATION.
20. L.C. SHALL BE CLOSED SMALL TANGENTS WITH COMMISSIONING OF ROB AND NOC IN THIS REGARD HAS BEEN ISSUED BY STATE GOVT. VIDE LETTER NO. DATED / / .
21. T/SV OF L.C. IS 80707 OF DATED 08/01/15.
22. TEMPORARY DIVERSION OF ROAD TRAFFIC DURING CONSTRUCTION OF ROB/ROB WILL BE THROUGH DIVERSION ROAD. AUTHORITY WILL ENSURE DIVERSION ROAD TRAFFIC THROUGHOUT THE PROPOSED DIVERSION BEFORE EXECUTION.
23. REINFORCEMENT SHALL BE TMT DEFORMED BARS GRADE F-500 CONFORMING TO IS 1786.
24. PROVISION OF CLAMPS IN THE SUPERSTRUCTURE FOR THE SUPPORTING THE AC TRACTION WIRE TO BE MADE IN ADVANCE IN CONSULTATION WITH CONCERNED AUTHORITIES BASED ON TYPICAL DRAWING.
25. ALL R.C.C. WORK SHOULD CONFORM TO RELEVANT ISIRC CODES & MOST SPECIFICATION.
26. FOR FABRICATION, WORKMANSHIP, ACCEPTANCE & TESTING, PROTECTION AGAINST CORROSION ETC. RELEVANT PROVISIONS OF IS:242001 SHALL BE FOLLOWED.
27. THE DEPTH OF FOUNDATION SHOWN IN THIS DRAWING IS TENTATIVE & SHOULD BE DECIDED BY COMPETENT AUTHORITIES AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
28. REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENTS SHOULD BE MADE AVAILABLE BEFORE COMMENCEMENT OF PROPOSED WORK. IN THE VICINITY OF SIGNAL & TELECOM CABLE.
29. TEMPORARY ARRANGEMENT DRAWING OR METHODOLOGY TO LAUNCHING OF GIRDERS OVER RAILWAY TRACK SHOULD BE GOT APPROVED FROM RAILWAY AUTHORITY BEFORE START THE WORK.
30. DIMENSION GIVEN IN THIS DRAWING MUST BE RECONCILED AT SITE BEFORE START OF WORK FOR FEASIBILITY. PRECAUTIONARY MEASURES FOR CONSTRUCTION OF ROB ON DEPOSIT WORK/ROB SHARING WORK WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY BOARD LETTER NO. OICE-08/03/2018 DATED: 16.07.2018, 27.10.2018, 13.02.2019 & 09.07.2012 SHOULD BE STRICTLY FOLLOWED.
31. NO CONSTRUCTION JOINT SHALL BE NORMALLY ALLOWED IN CONCRETE WORKS WITHOUT SPECIAL PRECAUTIONS AS PER THE RELEVANT ISIRC CODES AND SUITABLE PROTECTION PAINTING OF APPROVED MAKE SHOULD BE DONE TO PAINT THE UNDESIRABLE OF CONCRETE ROB GIRDERS ALSO TO ENSURE LONG LIFE.
32. CONTROLLED CONCRETE WITH WEIGH BATCHING SHALL BE USED.
33. GUARD RAIL SHOULD BE PROVIDED IN THE TRACK NEAR THE ISOLATED PILLAR OF ROB. NO CONSTRUCTION JOINT SHALL BE ALLOWED IN PCC OR RCC SLAB OR GIRDER AND CURING OF ALL CONCRETE AND MASONRY WORKS AS PER THE RELEVANT CODES OF PRACTICE SHALL BE ENSURED BEFORE USE.
34. INSPECTION LADDERS/STEPS SHOULD BE PROVIDED TO ENSURE PROPER INSPECTION/ACCESSIBILITY OF ROB.
35. STRUCTURAL STEEL SHALL CONFORM TO IS 2002 (GRADE - B).
36. STRIP REAL TYPICAL EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST MOST REQUIREMENT. CONTRACTOR SHOULD FURNISH DESIGN/DRAWINGS OF EXPANSION JOINTS FROM FIRMS APPROVED BY MOST AT VARIOUS RELEVANT AMBIENT TEMPERATURE TO SUIT SITE CONDITIONS WITH THE APPROVAL OF ENGINEER IN CHIEF.
37. TO PROTECT THE CONCRETE FROM DAMAGE DUE TO SMOKE OF LOCOMOTIVES, 4.0M WIDE STRIP WITH POLYURETHANE PAINT PREFERABLE IN BLACK COLOUR SHALL BE PROVIDED IN THE SOFFIT OF THE DECK OVER RUNNING TRACKS.
38. STANDARD MAINTENANCE AGREEMENT SHOULD BE EXECUTED WITH RAILWAY AND STATE GOVT. AUTHORITIES FOR GRANT OF PERMISSION FOR CONSTRUCTION OF ROB/ROB IN RAILWAY PORTION.
39. ROAD AUTHORITY SHOULD ENSURE THAT BEFORE LAYING OF ANY NEW WEARING COURSE IN FUTURE EXISTING WEARING COAT SHOULD BE COMPLETELY REMOVED.
40. NO WORK SHOULD BE TAKEN UP IN HAND TILL PROOF CHECKED DESIGN AND DRAWING WITHIN RAILWAY PORTION AREA APPROVED BY RAILWAY.
41. ALL STEEL STRUCTURES SHOULD HAVE ANTI - CORROSION PROTECTION OF LONG DURABILITY.
42. FOR DETAILS OF SUPER STRUCTURE OF RAILWAY SPAN OF 30.0M SPAN REFER RISO DS NO. RD/RS-11/2018 AND FOR 5M GIRDER REFER RISO DS NO. RD/RS-08/11/2018.
43. ANY CHANGE IN THE GAD FOR RAILWAY PORTION SHOULD BE DONE WITH PRIOR APPROVAL OF RAILWAY.
44. CLEAR COVER TO OUTER MOST STEEL SHALL BE AS UNDER
A. FOR SUPER STRUCTURE - 50MM.
B. FOR FOUNDATION - 75MM.
C. FOR ABUTMENT, DIRT WALL AND RETURN WALL - 50MM.
45. BACK FILLING BEHIND ABUTMENTS SHALL CONSISTS OF SELECTED EARTH CONFORM TO SOIL PROPERTIES C=0.0, Phi=37 & H=180MM.
46. FOR JACKING UP THE GIRDER FOR ANY HANDLING REQUIREMENTS IN FUTURE SUCH AS FOR REPLACEMENT OF BEARING OR ANY OTHER WORK REQUIRED, SUITABLE FEATURES SHOULD BE PROVIDED TO ENABLE JACKING.
47. THE DIMENSIONS & LEVELS SHOWN IN THE GAD ARE SUBJECT TO CHANGES AS PER SITE REQUIREMENT AND WILL BE DONE WITH PRIOR APPROVAL OF RAILWAY.
48. THE BRIDGE IS DESIGNED FOR SEISMIC ZONE III.
49. AS PER DATA GIVEN BY DFC OFFICIAL, THE DISTANCE BETWEEN PROPOSED DFC TRACK FROM ON LINE AND ITS PROPOSED LEVEL HAVE BEEN SHOWN IN THE DRAWING.
50. PROVISION OF EXPANSION JOINT SHOULD BE BEYOND THE GIRDER.
51. GIRDER SHALL BE METALLISED AS PER IS:81:2001.
52. VERTICAL CLEARANCE WILL BE TAKEN FROM HIGHEST RAIL LEVEL.
53. VERTICAL CLEARANCE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADE IN APPROACHES AS PER IRC SP-23.
54. SAFE BEARING CAPACITY AT FOUNDING LEVELS SHALL BE TAKEN AND TO BE VERIFIED AT SITE IF REQUIRED.
55. RESTRICTIONS ON BOTH SIDES OF OUTERMOST GIRDER ON PER CAP & ABUTMENT CAP WILL BE PROVIDED IN SEISMIC ZONE IV & V.
56. DRAWING FOR SHIFTING OF LC WILL BE GOT APPROVED FROM COMPETENT AUTHORITY BEFORE START OF WORK.
57. SAT CABLE SHOULD BE SHIFTED BEFORE UNDOING TACKING OR TRENCHING NEAR RAIL TRACK BY SAT CONSTRUCTION.
58. APPROACH SPAN CONFIGURATION ARE INDICATIVE ONLY. FINAL SPAN OF APPROACH SPAN DECIDED BY UPSCCL END.

OPERATION SCHEDULE FOR RAILWAY SPAN:

1. TRACK SHALL BE PROTECTED SUITABLY DURING THE CONSTRUCTION OF BRIDGE/ROB FOR SAFETY OF RUNNING TRAIN.
2. ADEQUATE MEASURES SHALL BE TAKEN AT SITE TO ENSURE SAFETY FOR WORKING MEMBERS, MATERIALS, EQUIPMENTS, TRAFFIC ETC.
3. FOR SHIFTING OF THE MASTS AND SIGNALING EQUIPMENTS, DIVISION MAY BE CONSULTED AS PER EXISTING RULES.
4. FOR LAUNCHING OF GIRDERS OVER RAILWAY TRACK, SUITABLE BLOCK WILL BE TAKEN WITH ADVANCE INTIMATION.
5. DETAILED STRUCTURAL DRAWINGS OF THE ROB SHALL BE APPROVED BY COMPETENT AUTHORITY.
6. LAUNCHING SCHEME SHALL BE APPROVED BY CRSE BEFORE EXECUTION OF WORK.
7. DRAWING APPROVAL SHALL BE SUBJECTED TO APPROVAL OF ALIGNMENT AND LEVELS BY STATE GOVT.
8. CONSTRUCTION SEQUENCE:
(i) CONSTRUCTION OF SUITABLE FOUNDATION FOR PIERS.
(ii) CONSTRUCTION OF PIERS, ABUTMENT, PIER CAP AND ABUTMENT CAP.
(iii) FABRICATION OF STEEL GIRDERS, CROSS GIRDERS AND DIAPHRAGMS ETC.
(iv) POSITIONING OF CRANES FOR LIFTING AND PLACEMENT OF GIRDERS WITH RAILWAY TRAFFIC BLOCK IMPOSED AND LAUNCHING OF GIRDERS.
(v) CASTING OF RCC DECK SLAB WITH SHUTTLING OPERATED ON GIRDERS.
(vi) REMOVAL OF STAGING AND SHUTTLING OF DECK SLAB.
(vii) COMPLETION OF ANCHORAGE WORKS LIKE CRASH BARRIER, RAILING, WEARING COURSE, EXPANSION JOINT ETC.
9. ALL SAFETY RULES SHALL BE FOLLOWED DURING EXECUTION OF WORK.
10. RAILWAY AUTHORITIES SHALL BE INFORMED BEFORE STARTING ANY WORK. INSTRUCTIONS GIVEN BY RAILWAY AUTHORITIES TIME TO TIME DURING EXECUTION SHALL BE FOLLOWED.

FOR DRAFT

EAST CENTRAL RAILWAY (E.C.RLY)

PROPOSED TWO LANE ROB
SPAN 2x30.00 FOR OBLIGATORY SPAN
IN LIEU OF L-XING NO 75,
(SKEW ANGLE AT IR-11° & DFCC 11°)
(TVU-50707, DT.08/2015)
ON MUGHALSARAI - GAYA SECTION
OF EAST CENTRAL RAILWAY MUGHALSARAI
GENERAL ARRANGEMENT DRAWING

DRG. NO.	RITES/ARC/DFCC/ROB_75/CA			
SH. NO.	1 OF 3			
DATE	OCTOBER, 2017			
REV.	RO			
<p>SCALE 100 0 100 200 300m</p> <p>200 200 400 600m</p>				
(SUNEEL KUMAR)	(ATIF AHMED)	(MD. NOMAN)	(D.S. NEGI)	(A.K. MATHUR)
DRAWN BY	AMD	MANAGER/RO	JMD	GM/D
RITES LTD.				

DFCCIL DRG. NO.	SI: DOMMGS			
REFERENCE RISO DRAWING NO. - RISO-8	SI: DEN/CO-ORDMGS			
ALL THE DIMENSIONS SHOWN ARE TENTATIVE AND MAY UNDERGO CHANGES DURING FINAL DESIGN.	SI: DEN/MGS			
DESIGNATION	SIGNATURE	DESIGNATION	SIGNATURE	SI: DEE/TRDMGS
(A.K. MISHRA)		EXECUTIVE ENGINEER		SI: DEE/GMGS
CPM/DFCCIL/MGS				
DFCCIL/MGS	STATE GOVT. U.P.	MGS DIVISION		