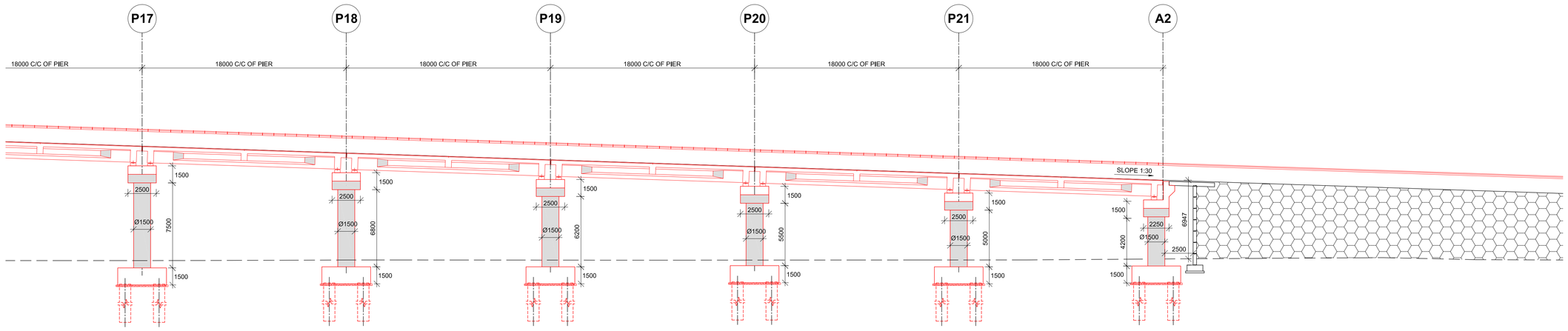
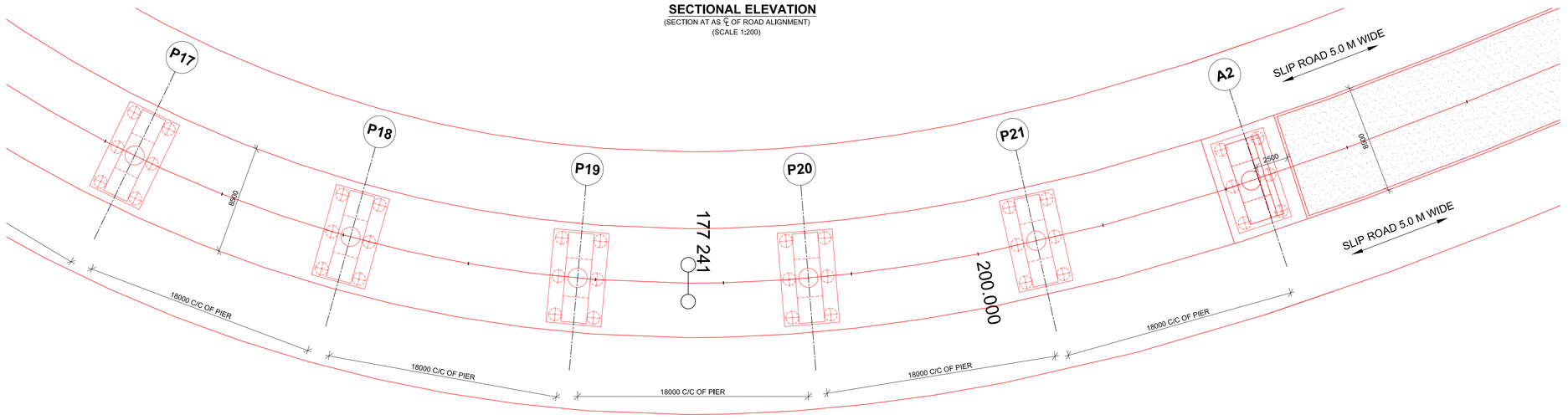


SECTIONAL ELEVATION
(SECTION AT ℄ OF ROAD ALIGNMENT)
(SCALE 1:200)



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

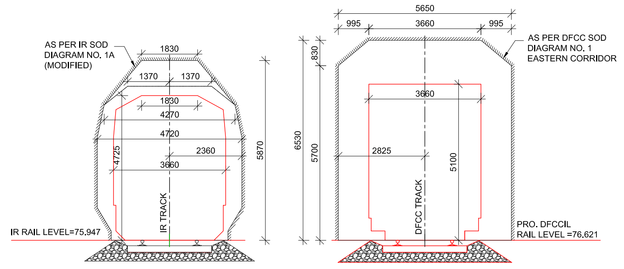
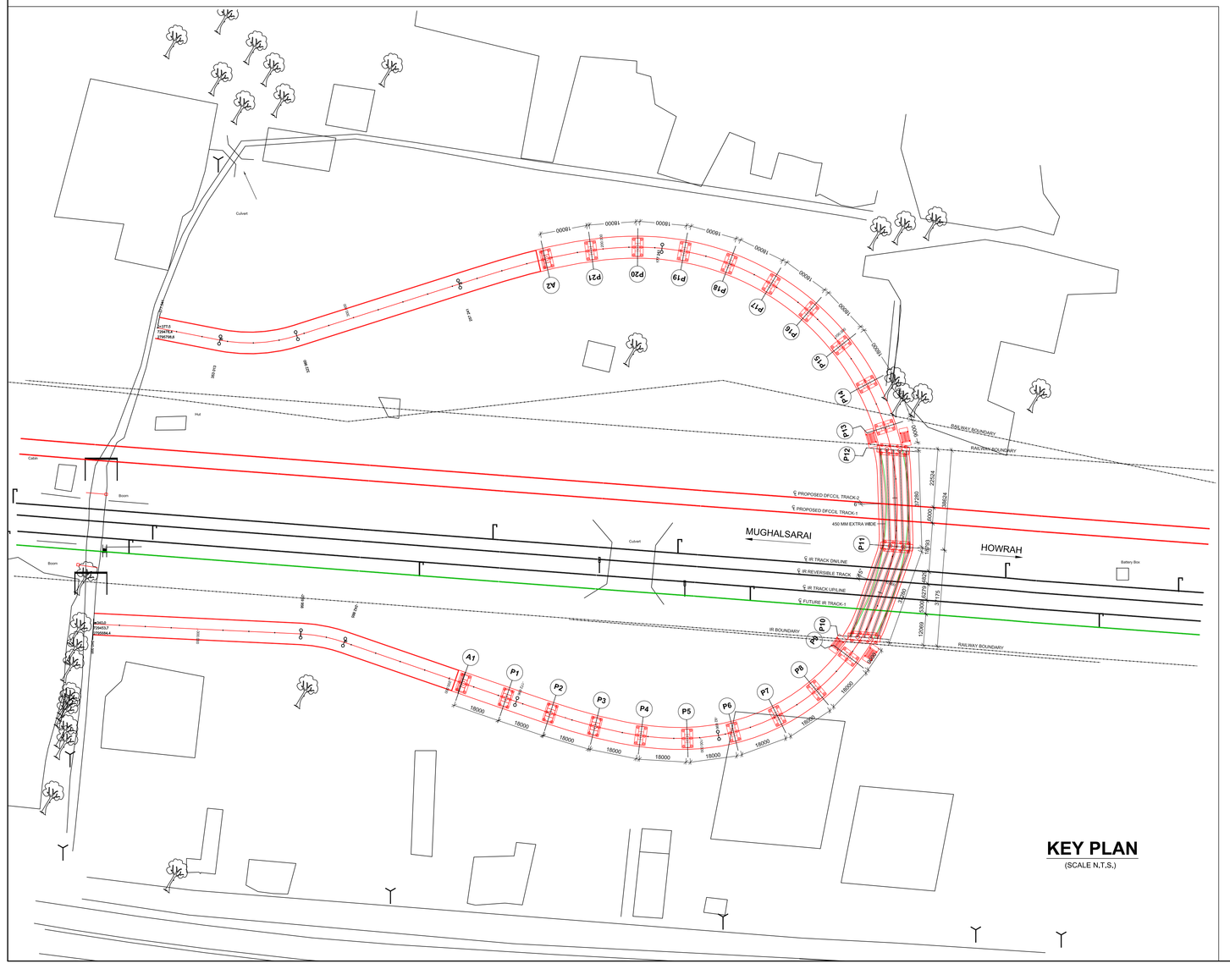
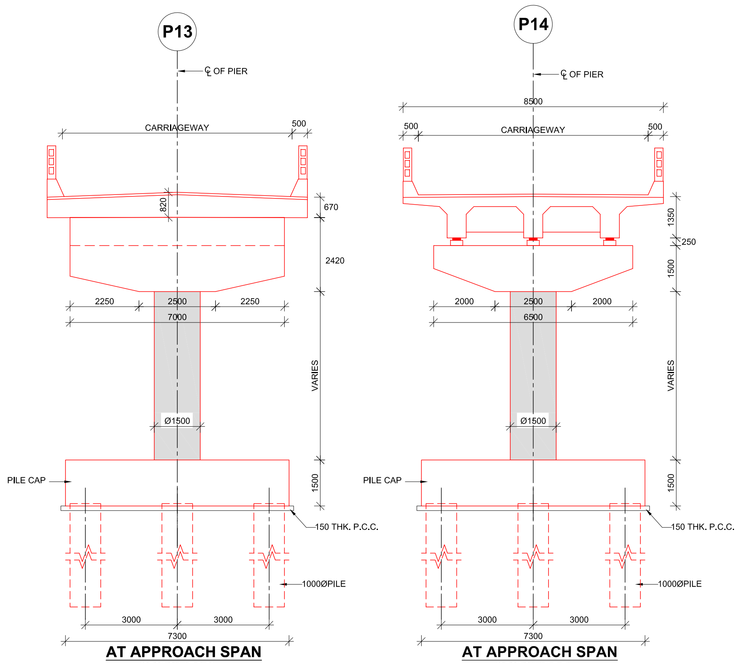


DIAGRAM "A"

DIAGRAM "B"

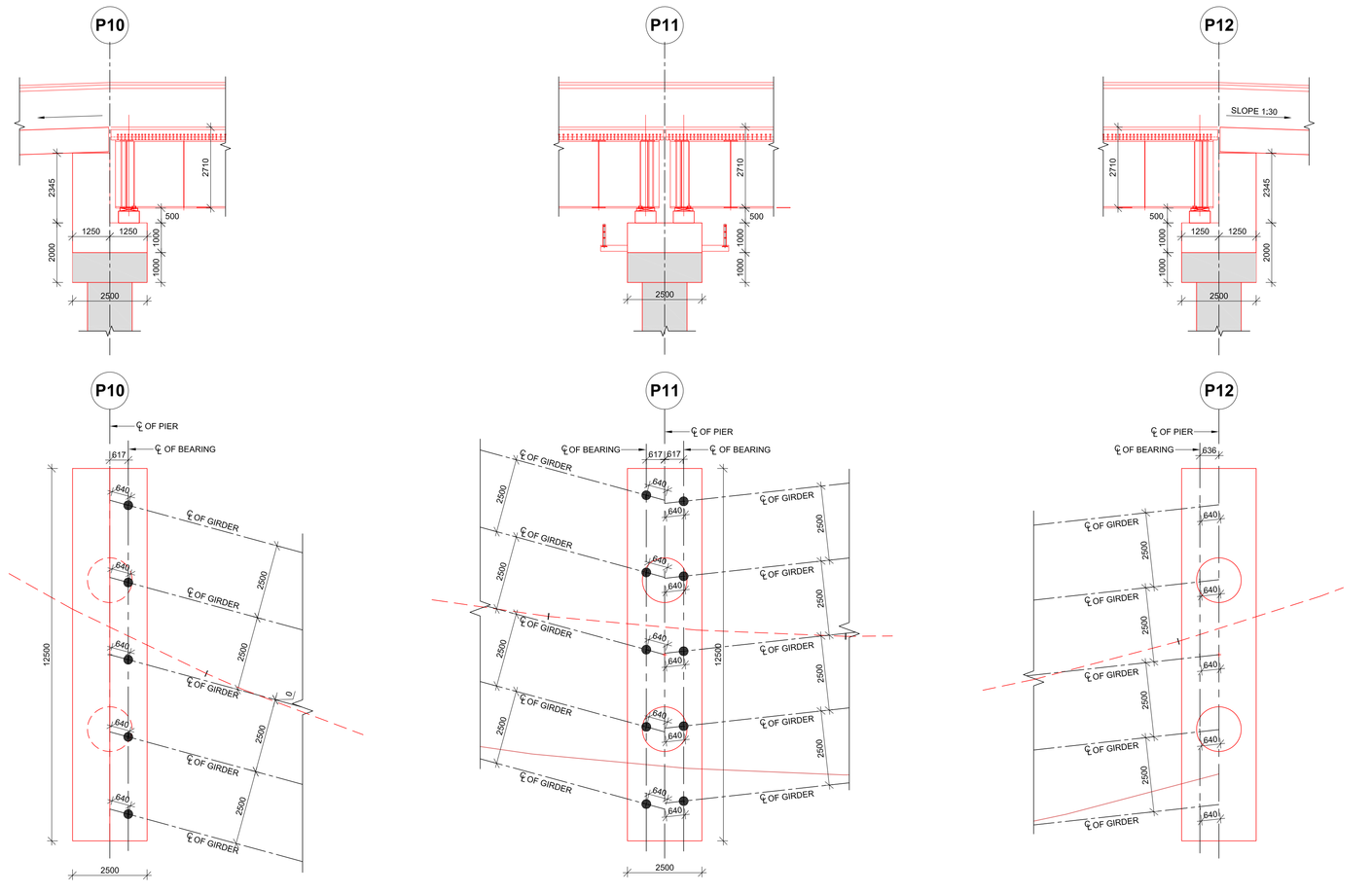


KEY PLAN
(SCALE N.T.S.)



AT APPROACH SPAN
(SECTION AT D-D)
(SCALE 1:100)

AT APPROACH SPAN
(SECTION AT E-E)
(SCALE 1:100)



PLAN OF PIER CAP & BEARING LAYOUT
(SCALE 1:100)

SANCTION OF CRS TO BE TAKEN PRIOR TO EXECUTION OF WORK

SPECIAL NOTES:

1. LAUNCHING SCHEME OF THE RAILWAY SPAN GIRDER WILL BE SUMITTED SEPARATLY.
2. MAINTENANCE AGREEMENT TO BE EXECUTED BEFORE EXECUTION OF WORK.
3. NO WORK WITHIN RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAILWAY REPRESENTATIVE.
4. GIRDERS OVER ROB PROPER TO BE FABRICATED PREFERABLY BY RDSO 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 CAO/CON/SOUTH VIDE NOTE NO. : ECRCE/CON/S/ROB DATED 22.03.2017.
7. SUITABLE RE WALL/ RE TURN WALL WILL BE PROVIDED AS PER DESIGNE WHERE EVER REQUIRED.

NOTES:-

1. ALL DIMENSION ARE IN MM, AND LEVELS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
2. DIMENSION ARE NOT TO BE SCALED ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
3. ALL THE DIMENSIONS SHOWN SHOULD BE VERIFIED AT SITE BEFORE TAKING UP DESIGN WORK IN HAND, ANY DISCREPANCY NOTED 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 BASE PRESSURE, THE FOUNDATION HAS TO BE REDESIGNED.
5. DRAINAGE SPOUT SHALL BE PROVIDED AS PER MORTH SPECIFICATION,
6. EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER IRC 21-2000/IRC 112/83/456, ALL SPECIFICATION LAID DOWN IN IRC CODES/456 CODE FOR RELEVANT EXPOSURE CONDITION SHALL BE FOLLOWED.
7. FOR DETAILS OF SUBSTRUCTURE AND FOUNDATION REFER SEPARATE DRAWING DULY APPROVED BY RAILWAY, WORK SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF RAILWAY ENGINEERS WITHIN RAILWAY LAND LIMIT.
8. SANCTION OF CRS SHOULD BE OBTAINED PRIOR TO EXECUTION OF PROPOSED WORK,
9. TYPE OF BEARING :- POT-PTFE
10. SUITABLE UTILITY DUCTS IF REQUIRED SHOULD BE PROVIDED BELOW FOOTPATH SLAB WITH THE APPROVAL OF ENGINEER IN CHARGE.
11. DESIGN SHALL BE AS PER LATEST RELEVANT CODE OF IRC INCLUDING SP-33 AND OTHER CODES AS APPROVED BY M.O.S.T.
12. STATE GOVT./PRIVATE AUTHORITIES SHOULD BE ENSURE DURING EXECUTION OF WORK SAFETY OF RUNNING RAIL TRAFFIC SHOULD NOT BE AFFECTED.
13. SUITABLE SR. IF REQUIRED SHOULD BE IMPOSED BEFORE TAKING UP THE EXECUTION OF WORK WITH THE APPROVAL OF ENGINEER IN CHARGE.
14. TEMPORARY SIGNALLING ARRANGEMENT WILL BE DONE AS PER G,R,15.09 (ED &S,R 15.09 (2) OR GR15,09(2)B &S,R 15.09(2) WHICHEVER IS ADOPTABLE IF REQUIRED.
15. LOADING STANDARD OF ROB AS PER IRC-6:2000.
16. FULL FLEDGED LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-5 TO ENSURE QUALITY WORK.
17. CONCRETE DESIGN MIX,
    RCC DECK SLAB : M40 PIER,PIER CAP,PILE,PILE CAP : M35
    CRASH BARRIER : M40 PEDESTAL : M40
    LEVELING COURSE : M15
18. MANNED LEVEL CROSSING NO 78-C EXIST AT THIS LOCATION.
19. L.C. SHALL BE CLOSED SIMULTANEOUSLY WITH COMMISSIONING OF ROB AND NOC IN THIS REGARD HAS BEEN ISSUED BY STATE GOVT. VIDE LETTER NO._____ DATED __/__/____
20. TVU OF L.C. IS 29853 OF DATED 08/2015,
21. TEMPORARY DIVERSION OF ROAD TRAFFIC DURING CONSTRUCTION OF ROB/RUB WILL BE THROUGH DIVERSION ROAD, AUTHORITY WILL ENSURE DIVERSION OF EXISTING ROAD TRAFFIC THROUGH THE PROPOSED DIVERSION BEFORE EXECUTION.
22. REINFORCEMENT SHALL BE TMT DEFORMED BARS GRADE Fe 500 CONFORMING TO IS 1786,
23. PROVISION OF CLAMPS IN THE SUPERSTRUCTURE FOR THE SUPPORTING THE AC TRACTION WIRE TO BE MADE INVARIABLY IN CONSULTATION WITH CONCERN AUTHORITIES BASED ON TYPICAL DRAWING.
24. ALL R,C,C.,P.C.C. WORK SHOULD CONFORM TO RELEVANT IS/IRC CODES & MOST SPECIFICATION.
25. FOR FABRICATION, WORKMANSHIP, INCEPTION & TESTING, PROTECTION AGAINST CORROSION ETC. RELEVANT PROVISION OF IRC-24-2001 SHALL BE FOLLOWED.
26. THE DEPTH OF FOUNDATION SHOWN IN THIS DRAWING IS TENTATIVE & SHOULD BE DECIDED BY COMPETENT AUTHORITIES AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
27. REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENTS SHOULD BE MADE AVAILABLE BEFORE COMMENCEMENT OF PROPOSED WORK , IN THE VICINITY OF SIGNAL & TELECOM CABLE.
28. TEMPORARY ARRANGEMENT DRAWING OR METHODOLOGY TO LAUNCHING OF GIRDERS OVER RAILWAY TRACK SHOULD BE GOT APPROVED FROM RAILWAY AUTHORITY BEFORE START THE WORK.
29. DIMENSION GIVEN IN THIS DRAWING MUST BE RECONCILED AT SITE BEFORE START OF WORK FOR FEASIBILITY,
30. PRECAUTIONARY MEASURES FOR CONSTRUCTION OF ROB ON DEPOSIT WORK/COST SHARING WORK WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY BOARD LETTER NO. 97/CE-1/BRO/158(POLICY)PT./II, DATED -16.07.2009, 27.10.2009, 15.02.2011 & 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 BRIDGE CODES AND SUITABLE PROTECTION PAINTING OF APPROVED MAKE SHOULD BE USED TO PAINT THE UNDERSIDE 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 PSC 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 LADDER/STEPS SHOULD BE PROVIDED TO ENSURE PROPER INSPECTION/ACCESSIBILITY OF ROB.
35. STRUCTURAL STEEL SHALL CONFIRM TO IS:2062 (GRADE - B),
36. STRIP SEAL TYPE EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST MOST REQUIREMENT. CONTRACTOR SHOULD FURNISH DESIGN/DRAWING 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, 4.00M WIDE STRIP WITH POLYSULPHIDE 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/RUB IN RAILWAY PORTION.
39. ROAD AUTHORITY SHOULD ENSURE THAT BEFORE LAYING OF ANY NEW WEARING COAT 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 - CORROSIVE PROTECTION OF LONG DURABILITY.
42. FOR DETAILS OF SUPER STRUCTURE OF RAILWAY SPAN OF 30.00M SPAN REFER RDSO'S DRG. NO. RDSO/B-11755/R, AND FOR 36M GIRDER REFER RDSO'S DRG, NO.RDSO/B-11757/R,
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, Ø=30° Y =18KN/CUM.
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. DIMENSIONS MAY GET CHANGED AFTER ITS DETAILED DESIGN,
50. AS PER DATA GIVEN BY DFC OFFICIAL, THE DISTANCE BETWEEN PROPOSED DFC TRACK FROM DN LINE AND ITS PROPOSED LEVEL HAVE BEEN SHOWN IN THE DRAWING,
51. PROVISION OF EXPANSION JOINT SHOULD BE BEYOND THE GIRDER.
52. GIRDER SHALL BE METALISED AS PER IRS-B1-2001
53. VERTICAL CLEARANCE WILL BE TAKEN FROM HIGHEST RAIL LEVEL
54. VERTICAL CURVE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADIENT IN APPROACHES AS PER IRC SP-23,
55. SAFE BEARING CAPACITY AT FOUNDING LEVEL SHALL BE TAKEN AND TO BE VERIFIED AT SITE IF REQUIRED,
56. RESTRAINER ON BOTH SIDE OF OUTERMOST GIRDER ON PIER CAP & ABUTMENT CAP WILL BE PROVIDED IN SEISMIC ZONE IV & V,
57. DRAWING FOR SHIFTING OF LC WILL BE GOT APPROVED FROM COMPETENT AUTHORITY BEFORE START OF WORK,
58. S&T CABLE SHOULD BE SHIFTED BEFORE UNDER TAKING DIGGING OR TRENCHING NEAR IR TRACK BY S&T/CONSTRUCTION,
59. APPROACH SPAN CONFIGURATION ARE INDICATIVE ONLY, FINAL SPAN OF APPROACH SPAN DECIDED BY UPSBCL 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 EXTANT 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 CBE/E,C,Rly/HJP 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) CONSTRUCTION OF RCC PEDESTALS,
   (iv) FABRICATION OF STEEL GIRDERS, CROSS GIRDERS AND DIAPHRAGMS ETC,
   (v) POSITIONING OF CRANES FOR LIFTING AND PLACEMENT OF GIRDERS WITH RAILWAY TRAFFIC BLOCK IMPOSED AND LAUNCHING OF GIRDERS,
   (vi) CASTING OF RCC DECK SLAB WITH SHUTTERING SUPPORTED ON GIRDERS,
   (vii) REMOVAL OF STAGING AND SHUTTERING OF DECK SLAB,
   (viii) COMPLETION OF ANCILLIARY 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

CBE	DY CE/BR/HJP	XEN/BR/HJP
	HQ ECR HJP	

DFCCIL DRG NO.				Sr. DOM/MGS			
REFERENCE RDSO DRAWING NO : RDSO/B -				Sr. DEN/Co-ORD/MGS			
ALL THE DIMENSIONS SHOWN ARE TENTATIVE AND MAY UNDERGO CHANGES DURING FINAL DESIGN.				Sr. DEN-I/MGS			
DESIGNATION	SIGNATURE	DESIGNATION	SIGNATURE	Sr. DSTE/MGS			
(A.K MISHRA) CPM/DFCCIL/MGS				Sr. DEE/TRD/MGS			
DY CPM/ENGG/DFCCIL		EXECUTIVE ENGINEER		Sr. DEE/G/MGS			
DPM/ENGG/DFCCIL							
DFCCIL/MGS		**STATE GOVT. U.P**		**MGS DIVISION**			

EAST CENTRAL RAILWAY (E.C.RLY)

PROPOSED TWO LANE ROB SPAN 2x30.00 FOR OBLIGATORY SPAN IN LIEU OF L-XING NO 76, (SKEW ANGLE AT IR-7°& DFCC 19°) (TVU-29853, DT.08/2015) ON MUGHALSARAI - GAYA SECTION OF EAST CENTRAL RAILWAY MUGHALSARAI GENERAL ARRANGEMENT DRAWING

डेडीकेटेड फ्रेट कोरीडोर	DRG. NO.	RITES/R&RCED/DFC/ROB, 76C/GA,
	SH. NO.	3 OF 3
	DATE	SEPTEMBER, 2017
	REV.	R0

RITES THE INFRASTRUCTURE PEOPLE

SCALE 100 0 100 200 300cm / 200 0 200 400 600cm

(SUNEEL KUMAR) DRAWN BY	(ATIF AHMED) AM/D	(MD. NONAM) MANAGER/D	(D.S. NEGI) JGM/D	(A.K. MATHUR) GGM/D

RITES LTD.