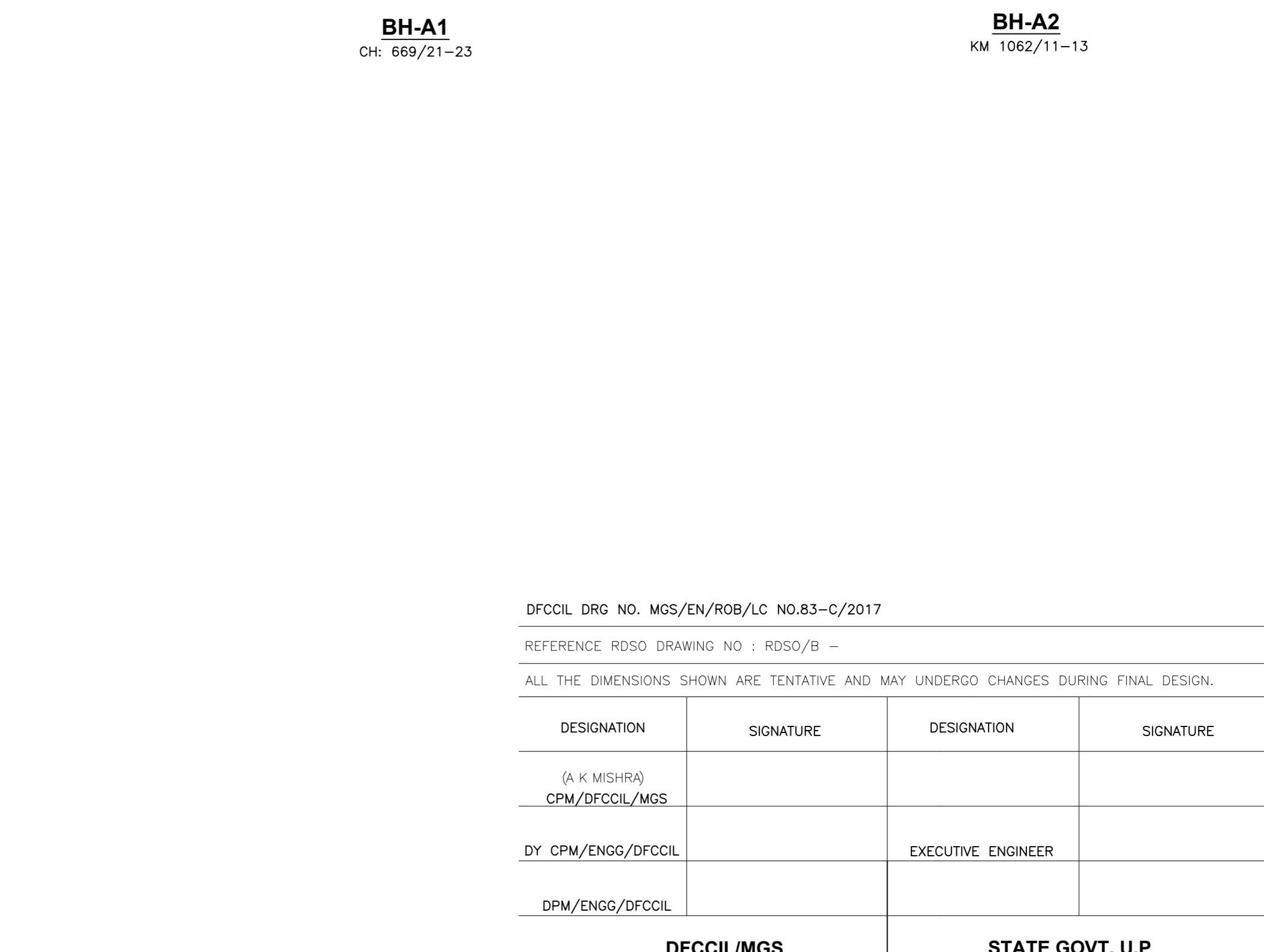
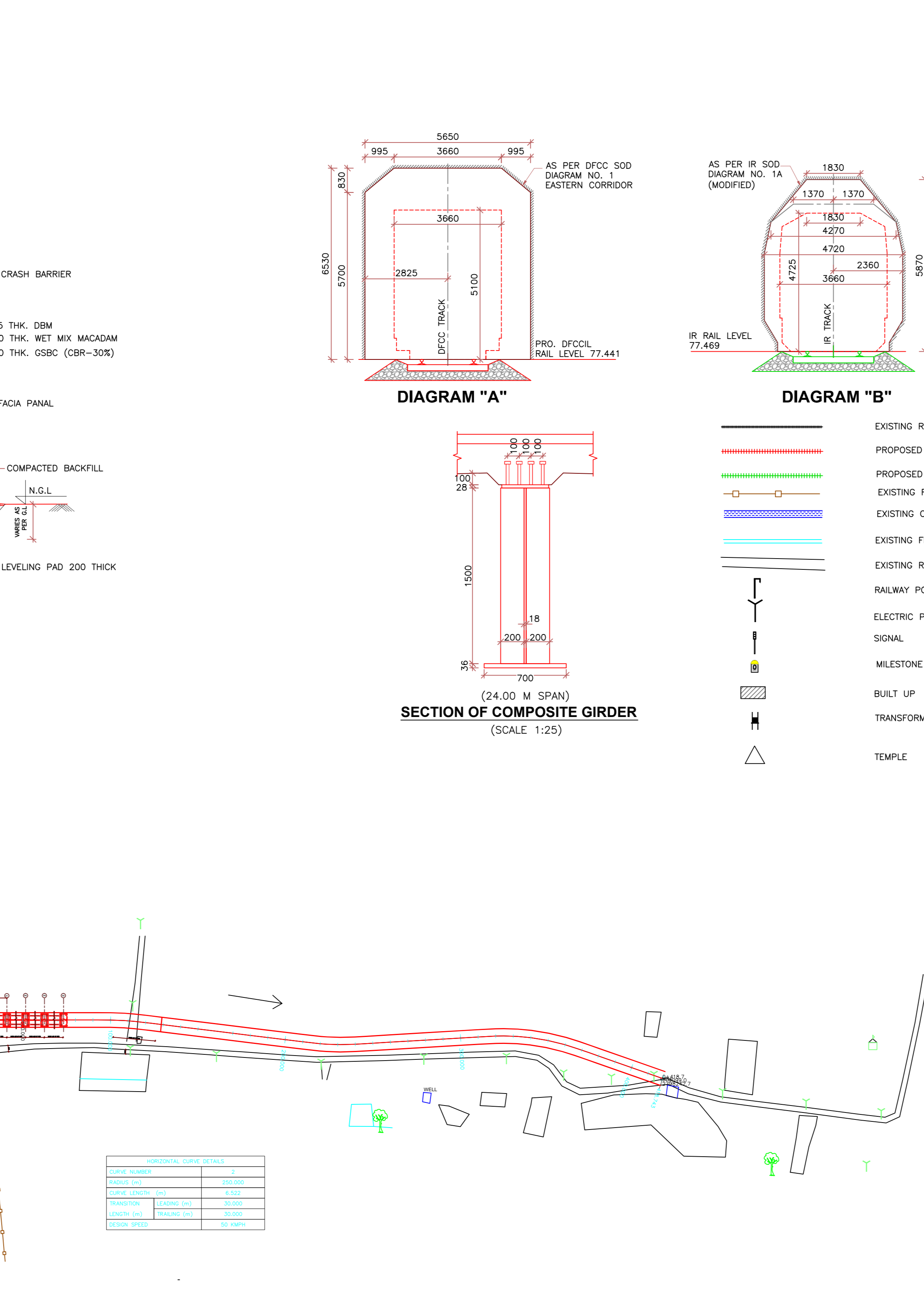
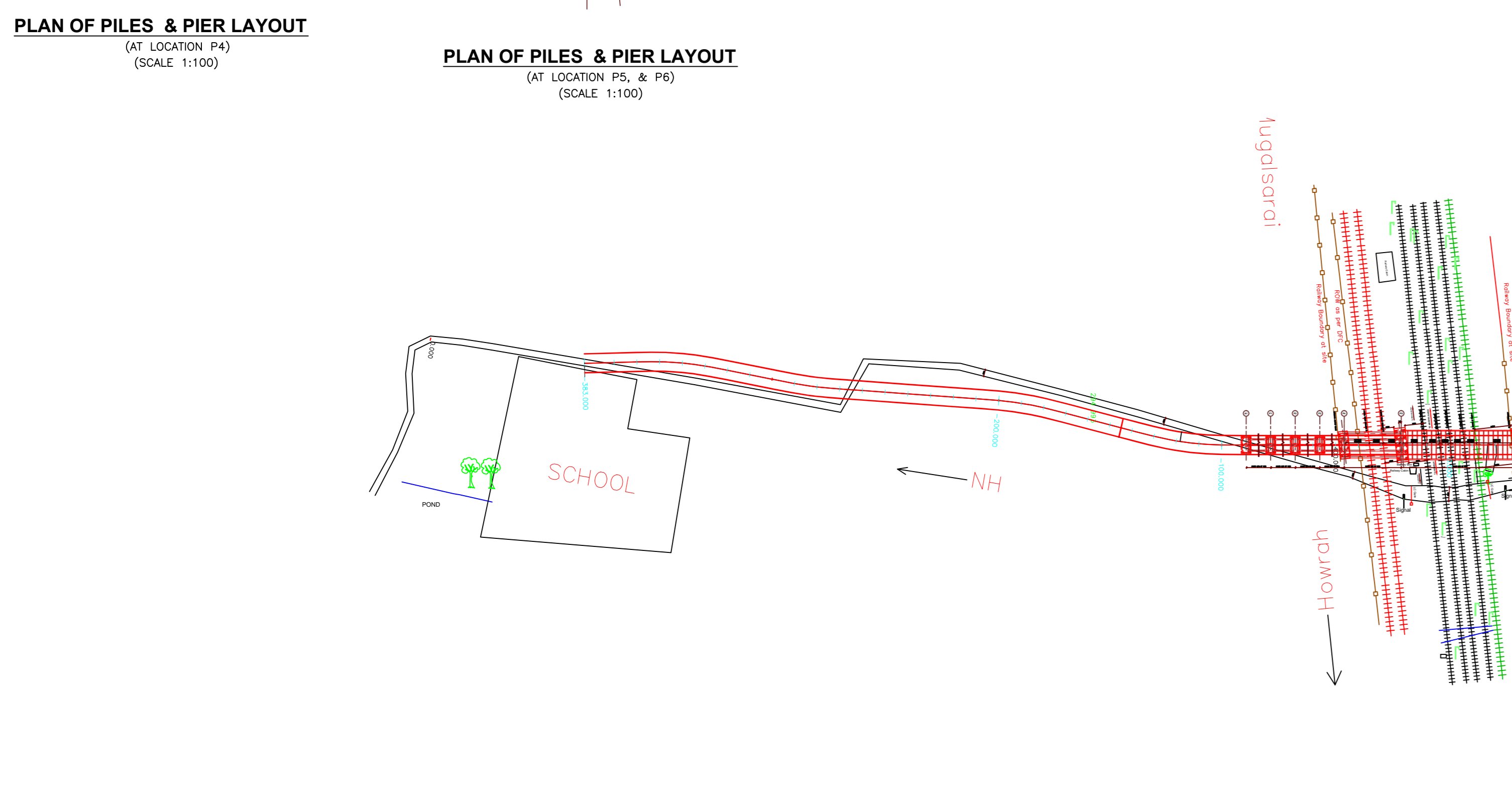
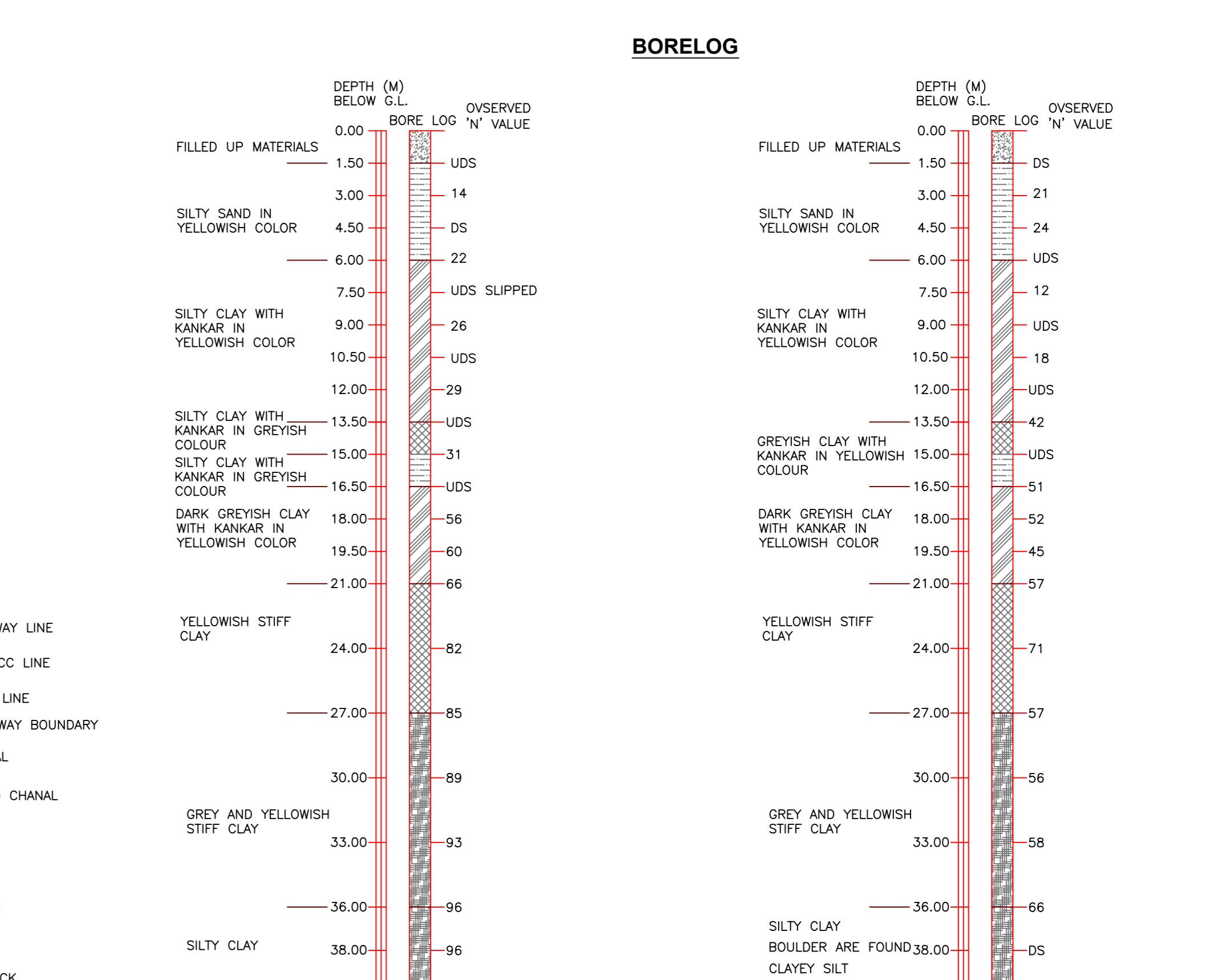
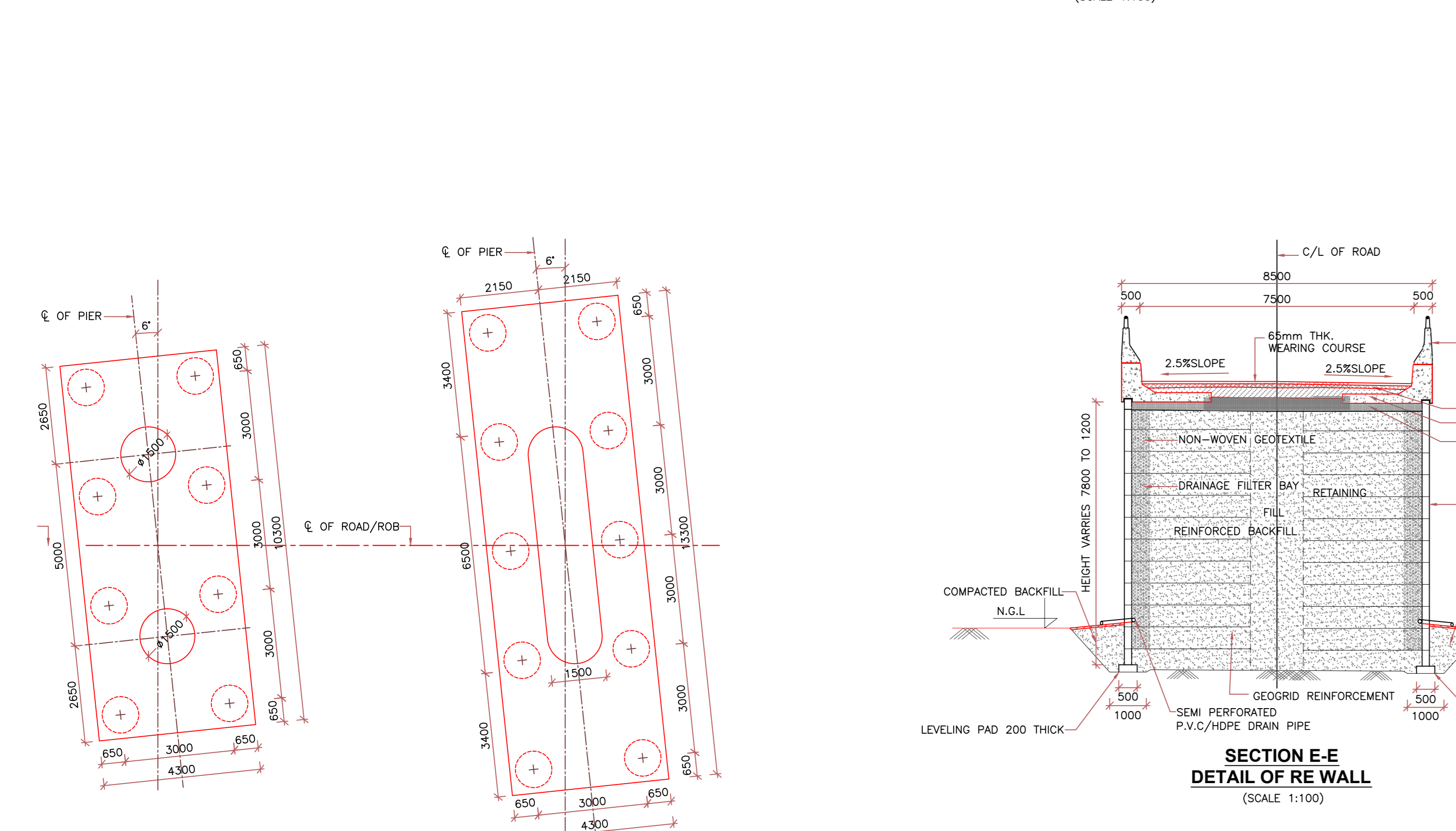
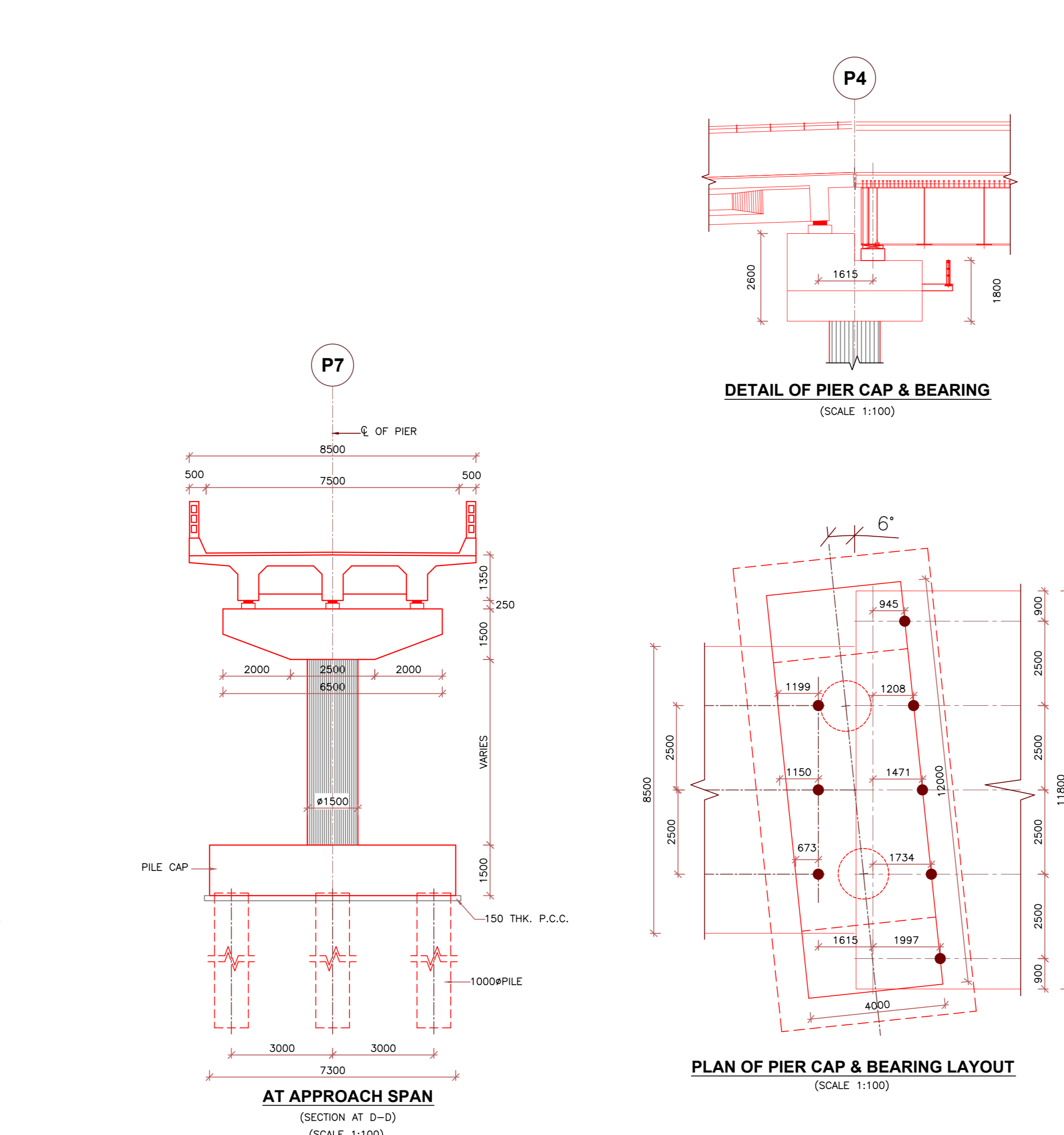
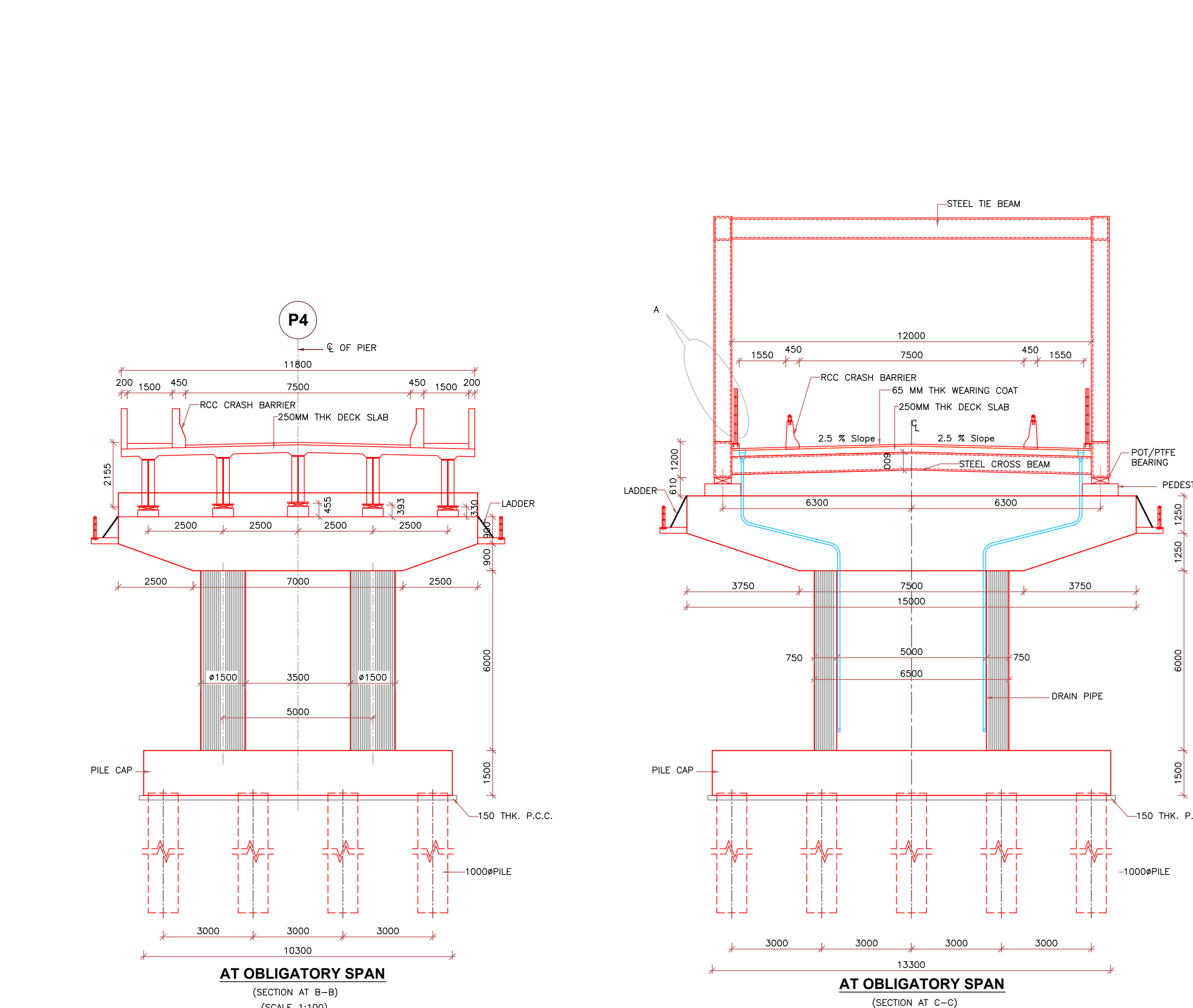


SANCTION OF CRS TO BE TAKEN PRIOR TO EXECUTION OF WORK

1. LAUNCHING SCHEME OF THE ROW STRING GIRDER WILL BE SUBMITTED SEPARATELY.
 2. MAINTENANCE AGREEMENT TO BE EXECUTED BEFORE EXECUTION OF WORK.
 3. NO WORK WITHIN RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAIL REPRESENTATIVE.
 4. GIRDERS OVER ROW 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 CAD/CON/SOUTH VIDE NOTE NO. - ECR/CE/CON/S/ROB DATED 22.03.2017.
 7. SUITABLE RE WALL/ RE TURN 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. 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. ANY DISCREPANCY NOTED SHOULD BE FORWARDED THROUGH ALTERATIONS DULY SIGNED.
 4. MAXIMUM SAFE BEARING CAPACITY AT THE FOUNDING LEVEL CONSIDERED AS PER GEOTECH REPORT, IF IT IS LESS THAN THE BASE PRESSURE, THE FOUNDATION HAS TO BE REDESIGNED.
 5. ALL THE DIMENSIONS OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER SUBMIT SEPARATE SHEET OF DRAINAGE SPOUTS AS PER LATEST NORTH STANDARDS.
 6. EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER 21-2000/IS:456. ALL SPECIFICATION LAD DOWN IN IRC CODE/IS:456 CODE FOR RELIABILITY CONDITION SHALL BE FOLLOWED.
 7. FOR DETAILS OF SUBSTRUCTURE AND FOUNDATION REFER SEPARATE DRAWING DULY APPR BY RAILWAY.
 8. WORK SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF RAILWAY ENGINEERS WITHIN RAILWAY LIMIT.
 9. SANCTION OF CRS SHOULD BE OBTAINED PRIOR TO EXECUTION OF FOOTPATH SLAB WITH APPROVAL OF ENGINEER IN CHARGE.
 10. TYPE OF BEARING :- POT-PIT.
 11. SUITABLE UTILITY DUCTS IF REQUIRED SHOULD BE PROVIDED BELOW FOOTPATH SLAB WITH APPROVAL OF ENGINEER IN CHARGE.
 12. DESIGN SHALL BE AS PER LATEST RELEVANT CODE OF IRC INCLUDING SP-33 AND OTHER C AS APPROVED BY M.O.S.T.
 13. STATE GOVT./PRIVATE AUTHORITIES SHOULD BE ENSURE DURING EXECUTION OF WORK SAFETY RUNNING RAIL TRAFFIC SHOULD NOT BE AFFECTED.
 14. TEMPORARY DIVERSION OF ROAD & SIGNALS SHOULD BE PROVIDED BEFORE TAKING UP THE EXECUTION OF WITH THE APPROVAL OF ENGINEER IN CHARGE.
 15. TEMPORARY SIGNALING ARRANGEMENT WILL BE DONE AS PER G.R.15.09 (D) & S.R.15.09 (F) & IS:1509 (A) & IS:1509 (B) WHICH IS APPLICABLE IF REQUIRED.
 16. LOADING STANDARD OF ROB AS PER IRC-6/2000.
 17. FULL FLEESD LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-5 TO EN QUALITY WORK.
 18. CONCRETE DESIGN MIX:
RCC DECK SLAB : M40
PIER/PIER CAP, PILE/PIER CAP : M35
CRASH BARRIER : M15
LEVELING COURSE : M15
 19. MAINED LEVEL CROSSING SHALL NOT EXIST AT THIS LOCATION.
 20. L.C. SHALL BE CLOSED SIMULTANEOUSLY WITH COMMISSIONING OF ROB AND NOC IN THIS RE HAS BEEN ISSUED BY STATE GOVT. VIDE LETTER NO.586/23-11-2015/Z(273)/2015 D 28.02.16.
 21. T.V.U OF L.C IS 58128 OF YEAR OCT-2015.
 22. TEMPORARY DIVERSION OF ROAD TRAFFIC DURING CONSTRUCTION OF ROB/RUB WILL BE THIS DIVERSION ROAD. AUTHORITY WILL ENSURE DIVERSION OF EXISTING ROAD TRAFFIC THROUGH PROVIDED DIVERSION ROAD.
 23. REINFORCEMENT SHALL BE TMT DEFORMED BARS GRADE 'Fe 500' CONFORMING TO IS 1786.
 24. PROVISION OF CLAMPS AT THE SUPPORTING THE AS TRACTION WIRE SHALL BE MADE INVARIABLY IN CONSULTATION WITH CONCERN AUTHORITIES BASED ON TYPICAL DRAWING ALL R.C.C./P.C.C./P.C. WORK SHOULD CONFORM TO RELEVANT IS/IRC CODES & SPECIFICATION.
 25. FABRICATION, WORKMANSHIP, INSPECTION & TESTING PROTECTION AGAINST CORROSION RELEVANT PROVISIONS OF IRC-24-2001 SHALL BE FOLLOWED.
 26. THE DEPTH OF FOUNDATION SHOWN IN THIS DRAWING IS TENTATIVE & SHOULD BE DECIDE COMPETENT AUTHORITIES AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
 27. REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENT SHOULD BE MADE AVAILABLE AT COMMENCEMENT OF PROPOSED WORK IN THE VICINITY OF SIGNAL & TELECOM CABLE.
 28. TEMPORARY ARRANGEMENT DRAWING OR METHODOLOGY TO LAUNCHING OF GIRDERS OVER RA 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 FEASIBILITY.
 30. PRECAUTIONARY MEASURES FOR CONSTRUCTION OF ROB ON DEPOSIT WORK/COST SHARING WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY E LETTER NO. 97/CE-1/BSO/158(POLICY)PT-II, DATED -16.07.2009, 27.10.2009, 15.02.2010 DRO/2012 SHOULD BE STRICTLY FOLLOWED.
 31. NO CONSTRUCTION JOINT SHALL BE NORMALLY ALLOWED IN CONCRETE WORKS WITHOUT SP APPROVAL AS PER THE RELEVANT BRIDGE CODES AND SUITABLE PROTECTION FINISH APPROVED MAKE SHOULD BE USED TO PAINT THE UNDERSIDE OF CONCRETE ROBS GIRDERS ALLS ENSURE LONG LIFE.
 32. CONTROLLED CONCRETE WITH WEGH BATCHING SHALL BE USED.
 33. QUARRY BARRIERS SHALL BE PROVIDED IN THE TRACK NEAR THE ISOLATED PILLAR OF ROB CONSTRUCTION JOINT SHALL BE ALLOWED IN PSC OR RCC SLAB OR GIRDER AND CURING OF CONCRETE AND MASONRY WORKS AS PER THE RELEVANT CODES OF PRACTICE SHALL BE EN BEFORE USE.
 34. INSPECTION LADDER/STEPS SHOULD BE PROVIDED TO ENSURE PROPER INSPECTION/ACCESS OF ROB.
 35. STRUCTURAL STEEL SHALL CONFORM TO IS:2062 (GRADE - B).
 36. STRIP SEAL, FIRE EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST MOST REQUIRE CONTRACTOR SHOULD FURNISH DESIGN/DRAWING OF EXPANSION JOINTS FROM FIRMS APPROVE MOST AT BARBUDS RELATIVE AMBIENT TEMPERATURE TO SUIT SITE CONDITIONS WITH THE APPR OF ENGINEER IN CHIEF.
 37. TO PROTECT THE CONCRETE FROM DAMAGE DUE TO SMOKE OF LOCOMOTIVES, 4.0MM WIDE WITH POLYSULPHIDE PAINT PREFERABLE IN BLACK COLOUR SHALL BE PROVIDED IN THE S OF THE DECK OVER RAILWAY PORTION.
 38. STANDARD MAINTENANCE AGREEMENT SHOULD BE EXECUTED WITH RAILWAY AND STATE AUTHORITIES FOR GRANT OF PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY E ROAD AUTHORITY SHOULD ENSURE THAT BEFORE LAYING OF ANY NEW WEARING COAT IN F EXISTING WEARING COAT SHOULD BE COMPLETELY REMOVED.
 39. NO WORK SHOULD BE TAKEN UP IN HAND TILL PROOF CHECKED DESIGN AND DRAWING RAILWAY PORTION AREA APPROVED BY RAILWAY.
 40. ALL STEEL STRUCTURES SHOULD HAVE AN ANTI-CORROSION PROTECTION OF LONG DURABILITY.
 41. FOR DETAILS OF SUPER STRUCTURE OF 18.00M SPAN REFER RDSO DRG. NO. B-1141/L/R AND FOR LOW RAILWAY SPAN OF ROW REFER RDSO DRG. NO. B-1141/L/R.
 42. ANY CHANGE IN THE GAD FOR RAILWAY PORTION SHOULD BE DONE WITH PRIOR APPROVA RAILWAY.
 43. CLEAR COVER TO OUTER MOST STEEL SHALL BE AS UNDER
A. FOR SUPER STRUCTURE - 50MM
B. FOR FOUNDATION - 75MM
C. FOR ABUTMENT, DWY WALL AND RETURN WALL - 50MM
 44. BACK FILLING BEHIND ABUTMENTS SHALL CONSISTS OF SELECTED EARTH CONFORM TO PROPERTIES CH. 0-30' GR-20 & 18M/50M.
 45. FOR JACKING UP THE GIRDER FOR ANY HANDLING REQUIREMENTS IN FUTURE SUCH AS REPLACEMENT OF BEARING OR ANY OTHER WORK REQUIRED, SUITABLE FEATURES SHOULD PROVIDED TO ENABLE JACKING.
 46. THE DIMENSIONS & LEVELS SHOWN IN THE GAD ARE SUBJECT TO CHANGES AS PER REQUIREMENT AND WILL BE DONE WITH PRIOR APPROVAL OF RAILWAY.
 47. DIMENSIONS MAY GET CHANGED AFTER ITS DETAILED DESIGN.
 48. AS PER DATA GIVEN BY DFC OFFICAL, THE DISTANCE BETWEEN PROPOSED DFC TRACK ROW LINE AND ITS PROPOSED LEVEL HAS BEEN SHOWN IN THE DRAWING.
 49. PROVISION OF EXPANSION JOINT SHOULD BE BEYOND THE GIRDER.
 50. GIRDERS SHALL BE METAL AS PER IS:2001.
 51. VERTICAL CLEARANCE WILL BE TAKEN FROM HIGHEST RAIL LEVEL.
 52. VERTICAL CURVE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADIENT IN APPROACH PER IRC SP-23.
 53. SAFE BEARING CAPACITY AT 2.0M DEPTH 13.00 T/M².
 54. RESTRAINER ON BOTH SIDE OF OUTERMOST GIRDER ON PIER CAP & ABUTMENT CAP WILL PROVIDED.
 55. DRAWING FOR SHIFTING OF LC WILL BE GOT APPROVED FROM COMPETENT AUTHORITY BEFORE START WORK.
 56. SAT CABLE SHOULD BE SHIFTED BEFORE UNDER TAKING DIGGING OR TRENCHING NEAR IR TRACK BY S&T/CONSTRUCTION.



OPERATION SCHEDULE FOR RAILWAY SPAN:

1. TRACK SHALL BE PROTECTED SUITABLY DURING THE CONSTRUCTION OF BRIDGE/ROB FOR SAFE OF RUNNING TRAIN.
2. ADEQUATE MEASURES SHALL BE TAKEN AT SITE TO ENSURE SAFETY FOR WORKING MEMBER MATERIALS, EQUIPMENTS, TRAFFIC ETC.
3. FOR SHIFTING OF THE MASTS AND SIGNALING EQUIPMENTS, DIVISION MAY BE CONSULTED AS F EXTANT RULES.
4. FOR LAUNCHING OF GIRDERS OVER RAILWAY TRACK, SUITABLE BLOCK WILL BE TAKEN W ADVANCE INFORMATION.
5. DETAILED STRUCTURAL DRAWINGS OF THE ROB SHALL BE APPROVED BY COMPETENT AUTHORITY.
6. LAUNCHING SCHEME SHALL BE APPROVED BY CBE/CE/R/H/HP BEFORE EXECUTION OF WORK.
7. DRAWING APPROVAL SHALL BE SUBJECTED TO APPROVAL OF ALIGNMENT AND LEVELS BY ST GOVT.

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 TRAF BLOCK IMPROVED AND LAUNCHING OF GIRDERS.
- (v) CASTING OF RCC DECK SLAB WITH SHUTTERING SUPPORTED ON GIRDERS.
- (vi) REMOVAL OF STAGING AND SHUTTERING OF DECK SLAB.
- (vii) COMPLETION OF ANCHORAGE WORKS LIKE CRASH BARRIER, RAILING, WEARING COAT.

9. ALL SAFETY RULES SHALL BE FOLLOWED DURING EXECUTION OF WORK

10. RAILWAY AUTHORITIES SHALL BE INFORMED BEFORE STARTING ANY WORK. INSTRUCTIONS GIVEN RAILWAY AUTHORITIES TIME TO TIME DURING EXECUTION SHALL BE FOLLOWED.

EAST CENTRAL RAILWAY
PROPOSED TWO LANE ROB
SPAN 1x24.00+1x48.00 M FOR OBLIGATORY SPAN
IN LIEU OF L-XING NO 81, IN BETWEEN KM 667/37- (SKEW ANGLE 6°) (TVU-6615, DT.11.2012)
ON MUGHALSARAI - GAYA SECTION
GENERAL ARRANGEMENT DRAWING

DRG. NO.	IRTES/R/RECD/DFC/ROB. 81/GA.
SH. NO.	2 OF 2
DATE	SEPTEMBER, 2017
REV.	RD

SCALE: 100 0 100 200 300m
 200 0 200 400 600cm

(SUNEEL KUMAR) DRAWN BY	(MD. NONAM) MANAGER/D	(REETU PATIL) JGM/D	(D.S. NEG) JGM/D	(A.K. MATH) JGM/D
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SR. DDM/MGS

DESIGNATION	SIGNATURE	DESIGNATION	SIGNATURE
(A.K. MISHRA) CPM/DFCCIL/MGS			
DY CPM/ENGS/DFCCIL		EXECUTIVE ENGINEER	
CPM/ENGS/DFCCIL			

DFCCIL/MGS STATE GOVT. U.P. MGS DIVISION