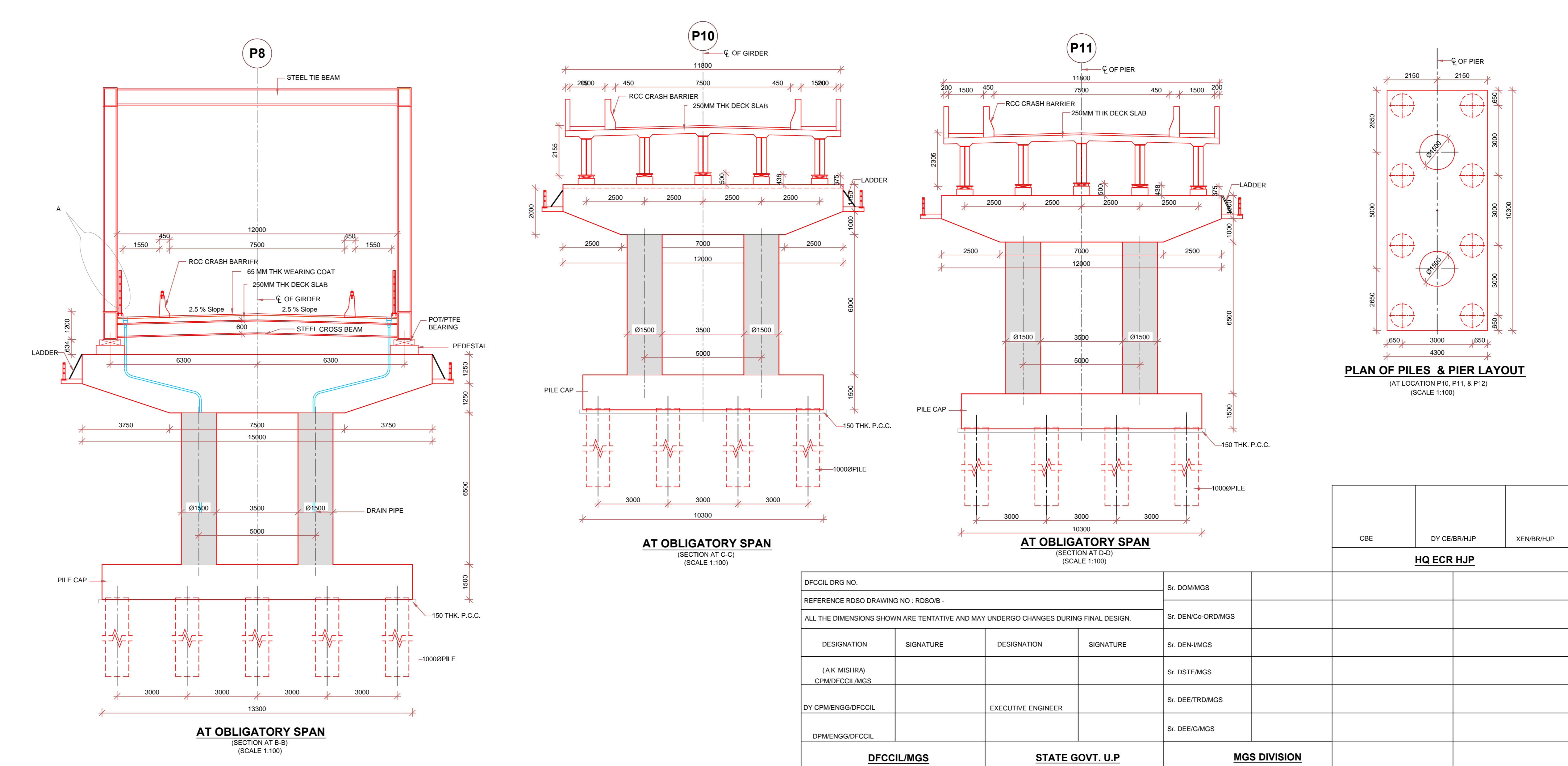
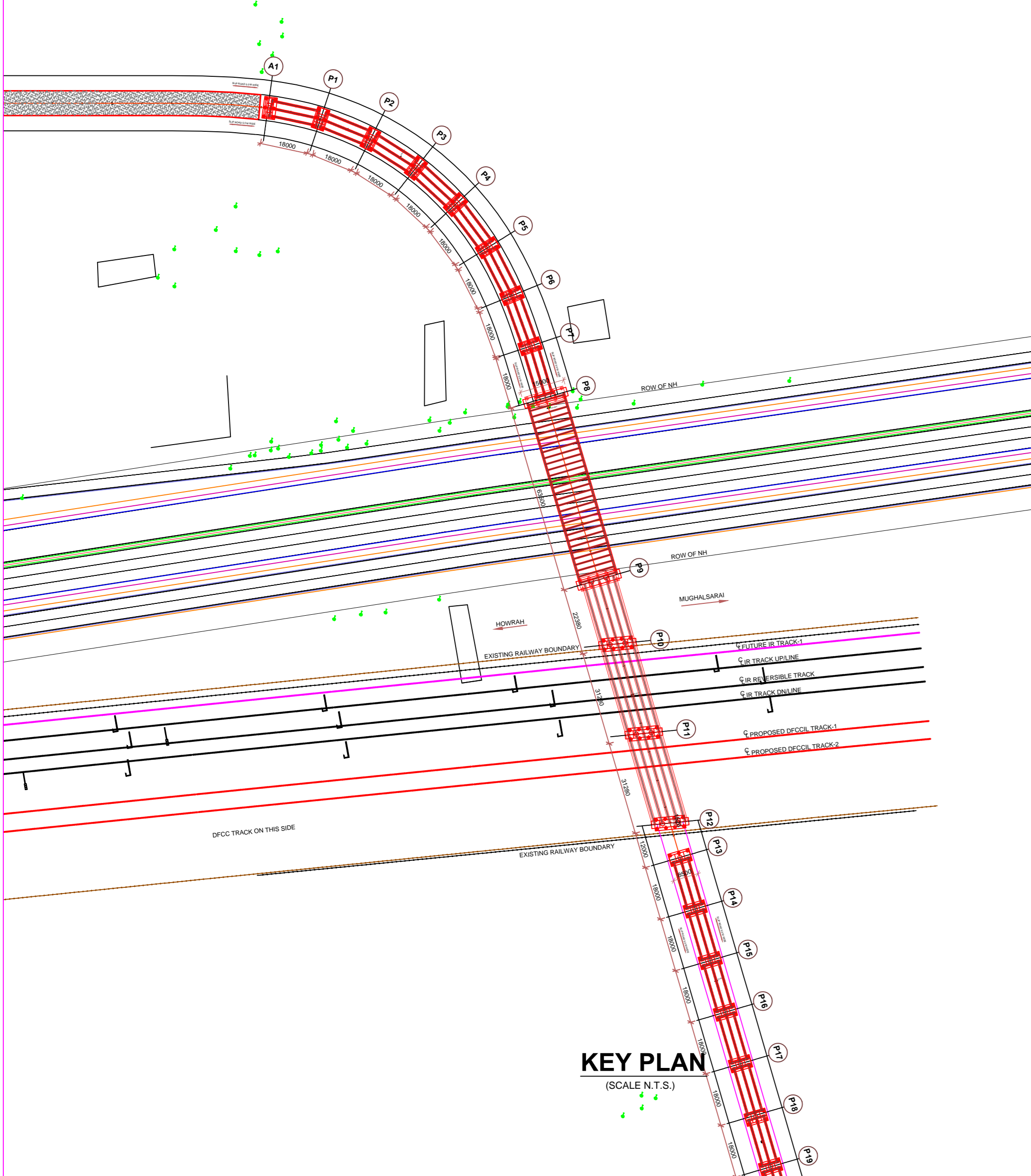


Station	P8	P9	P10	P11	P12	P13	P14														
EXISTING LEVEL	76.219	75.352	75.176	75.103	74.870	74.923	74.884	74.947	74.930	74.972	74.695	74.877	74.859	74.923	74.947	74.930	74.972				
PROPOSED LEVEL	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000	77.000				
HORIZONTAL	Straight			Right Transition			Right Arc			Right Transition			Straight			Right Transition			Straight		
VERTICAL	Gradient = 0.000%			Gradient = 0.000%			Gradient = 3.333%			Gradient = 0.000%			Gradient = 0.000%			Gradient = 0.000%			Gradient = 0.000%		
LEVEL DIFFERENCE	0.781	0.648	0.824	0.903	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930	0.930				
CHAINAGE	433.000	460.000	490.000	500.000	530.000	560.000	590.000	620.000	650.000	680.000	710.000	740.000	770.000	800.000	830.000	860.000	890.000				



- ### SPECIAL NOTES:
- LAUNCHING SCHEME OF THE RAILWAY SPAN GIRDER WILL BE SUBMITTED SEPARATELY.
  - MAINTENANCE AGREEMENT TO BE EXECUTED BEFORE EXECUTION OF WORK.
  - NO WORK WITHIN RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAILWAY REPRESENTATIVE.
  - GIRDERS OVER ROBE PROPER TO BE FABRICATED PREFERABLY BY ROSD APPROVED FIRMS.
  - SEPARATE DRAWING FOR FOUNDATION, SUB STRUCTURE & OTHER STRUCTURAL DETAILS.
  - APPROVAL FOR CONSTRUCTION OF ROB ON PILE FOUNDATION HAS BEEN OBTAINED BY CAGCON/SOUTH SIDE.
  - NOTE: NO. 10.02.2017
  - SUITABLE RETAINING WALL SHALL BE PROVIDED AS PER DESIGN WHERE EVER REQUIRED.
- ### NOTES:
- ALL DIMENSION ARE IN M.M. AND LEVELS ARE IN METERS UNLESS SPECIFIED OTHERWISE.
  - DIMENSION ARE NOT TO BE SCALE ONLY WRITTEN DIMENSIONS ARE TO BE FOLLOWED.
  - ALL THE DIMENSIONS SHOWN SHOULD BE CHECKED AT SITE BEFORE TAKING UP DESIGN WORK IN HAND. ANY DISCREPANCY NOTED SHOULD BE FORWARDED IMMEDIATELY TO THE DESIGNER.
  - MAXIMUM SAFE BEARING CAPACITY AT THE FOUNDING LEVEL CONSIDERED AS PER GEOTECHNICAL REPORT IF IT IS LESS THAN THE SAFE BEARING CAPACITY OF THE FOUNDATION SHALL BE REDUCED ACCORDINGLY.
  - DRAINAGE SLOPE SHALL BE PROVIDED AS PER NORTH SPECIFICATION.
  - EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER IRC 21.200/IRC 112/IS 456. ALL SPECIFICATIONS LAID DOWN IN IRC CODES/IS 456 CODE FOR RELEVANT EXPOSURE CONDITION SHALL BE FOLLOWED.
  - 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.
  - SANCTION OF CRG SHOULD BE OBTAINED PRIOR TO EXECUTION OF PROPOSED WORK.
  - TYPE OF BEARING - POTTY BEARING.
  - SUITABLE GR. F. REQUIRED SHOULD BE IMPOSED BEFORE TAKING UP THE EXECUTION OF WORK WITH THE APPROVAL OF ENGINEER IN CHARGE.
  - DESIGN SHALL BE AS PER LATEST RELEVANT CODE OF IRC INCLUDING SP-33 AND OTHER CODES AS APPROVED BY M.S.E.
  - STATE GOVT./PRIVATE AUTHORITY SHOULD ENSURE DURING EXECUTION OF WORK SAFETY OF RUNNING RAIL TRAFFIC SHOULD NOT BE AFFECTED.
  - SUITABLE SR. F. REQUIRED SHOULD BE IMPOSED BEFORE TAKING UP THE EXECUTION OF WORK WITH THE APPROVAL OF ENGINEER IN CHARGE.
  - TEMPORARY SIGNALING ARRANGEMENT WILL BE DONE AS PER G.R.15.09 (S&R) 15.09 (D) OR G.R.15.09/26 S&R.
  - LOADING STANDARD OF ROB AS PER IRC-2000.
  - FULL SCALED LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-5 TO ENSURE QUALITY WORK.
  - CONCRETE DESIGN MIX: RCC DECK SLAB - M40; PIER PIER CAP/PILE CAP: M35; CRASH BARRIER - M30; PEDESTAL - M30.
  - LEVELING COURSE - M35.
  - MANHOLE CROSSING NO 78-C EXIST AT THIS LOCATION.
  - L.C. SHALL BE CLOSED IMMEDIATELY WITH COMMISSIONING OF ROB AND NO IN THIS REGARD HAS BEEN ISSUED BY STATE GOVT. VIDE LETTER NO. \_\_\_\_\_ DATED \_\_\_\_\_.
  - TWO (2) NO. OF CHAINAGE MARKERS TO BE PROVIDED.
  - TEMPORARY DIVERSION OF ROAD TRAFFIC DURING CONSTRUCTION OF ROBSHALL BE THROUGH DIVERSION BOARD AUTHORITY WITHIN RAILWAY BOUNDARY WITHIN DIVERSION OF ROAD TRAFFIC AS PER PROPOSED DIVERSION BEFORE EXECUTION.
  - REINFORCEMENT SHALL BE TWT DEFORMED BARS GRADE F-500 CONFORMING TO IS 1786.
  - PROVISION OF CLAMP IN THE SUPERSTRUCTURE FOR THE SUPPORTING THE AC TRACTION WIRE TO BE MADE INVARIABLY IN CONSTRUCTION WITH CONSULTATION OF RDSO ON TYPICAL DRAWING.
  - FOR FABRICATION WORKMANSHIP, INSPECTION AND TESTING, PROTECTION AGAINST CORROSION ETC. RELEVANT DIVISION OF IRC 24-2001 SHALL BE FOLLOWED.
  - THE DEPTH OF FOUNDATION SHOWN IN THE DRAWING IS TENTATIVE & SHOULD BE DECIDED BY COMPETENT AUTHORITY AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
  - REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENT SHOULD BE MADE AVAILABLE BEFORE COMMENCEMENT OF CONSTRUCTION OF ROB ON DEPOSIT WORKSHEET SHARING WORK WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY BOARD LETTER NO. \_\_\_\_\_ DATED 16.09.2009. 27.10.2010. 14.03.2011 & 09.01.2012 SHOULD BE STRICTLY FOLLOWED.
  - NO CONSTRUCTION JUNT SHALL BE NORMALLY ALLOWED IN CONCRETE WORKS WITHOUT SPECIAL PRECAUTIONS AS PER THE RELEVANT CODES OF PRACTICE. SUITABLE PROTECTION PAINTING APPROVED SHOULD BE APPLIED TO PAINT THE UNDERSIDE OF CONCRETE ROBS GIRDERS ALSO TO ENSURE LONG LIFE.
  - CONTROLLED CONCRETE WITH WEIGH BATCHING SHALL BE USED.
  - ROBS SHALL BE PROVIDED WITH PROPER JOINTS TO ENSURE PROPER INSPECTION ACCESSIBILITY OF ROB.
  - STRUCTURAL STEEL SHALL CONFORM TO IS 2062 (GRADE - B).
  - SEAL TYPE EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST BEST METHOD. CONTRACTOR SHOULD FURNISH DESIGN/DRAWING OF EXPANSION JOINTS FROM FIRMS APPROVED BY M&S AT VARIOUS STRIP SEAL TYPE EXPANSION JOINTS TO SUIT SITE CONDITIONS WITH THE APPROVAL OF ENGINEER IN CHARGE.
  - TO PROTECT THE CONCRETE FROM DAMAGE DUE TO SMOKE OF LOCOMOTIVES, 4.0M WIDE STRIP WITH HIGH QUALITY PAINT PREFERABLY IN BLACK COLOR SHALL BE PROVIDED IN THE SOFFIT OF THE DECK OVER RUNNING TRACKS.
  - STANDARD MAINTENANCE AGREEMENT SHOULD BE EXECUTED WITH RAILWAY AND STATE GOVT. AUTHORITIES FOR GRANT OF PERMISSION FOR CONSTRUCTION OF ROBSHALL PARTITION.
  - ROAD AUTHORITY SHALL TAKE UP THE WORK OF LAYING OF NEW WEARING COAT IN FUTURE EXISTING WEARING COAT SHOULD BE COMPLETELY REMOVED.
  - NO WORK SHALL BE TAKEN UP UNTIL PROOF CHECKED DESIGN AND DRAWING WITHIN RAILWAY PORTION AREA APPROVED BY RAILWAY.
  - ALL STEEL STRUCTURES SHOULD HAVE AN ANTI-CORROSION PROTECTION OF LONG DURATION.
  - FOR DETAILS OF SUPER STRUCTURE OF RAILWAY SPAN OF 30.0M SPAN REFER ROSD'S DRG. NO. RDSO/1775/0K AND FOR 30M GIRDER REFER ROSD'S DRG. NO. RDSO/1775/0K.
  - ANY CHANGE IN THE CAD FOR RAILWAY PORTION SHOULD BE DONE WITH PRIOR APPROVAL OF RAILWAY.
  - CLEAR COVER TO OUTER MOST STEEL SHALL BE AS UNDER:  
A. FOR SUPER STRUCTURE - 50MM  
B. FOR FOUNDATION - 75MM  
C. FOR ABUTMENT, DIET WALL AND RETURN WALL - 50MM
  - BACK FILLING BEHIND ABUTMENTS SHALL CONSISTS OF SELECTED EARTH CONFORM TO SOIL PROPERTIES CLASS. 35007 + 1786/02A.
  - FOR JACKING UP THE GIRDER FOR ANY HANDLING REQUIREMENTS IN FUTURE SUCH AS FOR REPLACEMENT OF BEARINGS OR OTHER WORKS REQUIRED, SUITABLE FEATURES SHOULD BE PROVIDED TO ENABLE JACKING.
  - THE DIMENSIONS & LEVELS SHOWN IN THE CAD ARE SUBJECT TO CHANGES AS PER SITE REQUIREMENT AND WILL BE DONE WITH PRIOR APPROVAL OF RAILWAY.
  - THE BRIDGE IS DESIGNED FOR SEISMIC ZONE II.
  - DIMENSIONS MAY GET CHANGED AFTER ITS DETAILED DESIGN.
  - AS PER DATA GIVEN BY DCC OFFICIAL, THE DISTANCE BETWEEN PROPOSED DFC TRACK FROM ON LINE AND ITS PROPOSED LEVEL HAVE BEEN SHOWN IN THE DRAWING.
  - PROVISION OF EXPANSION JOINT SHOULD BE BEYOND THE GIRDER.
  - GIRDER SHALL BE FABRICATED AS PER RDSO JOB.
  - VERTICAL CLEARANCE WILL BE TAKEN FROM HIGHEST RAIL LEVEL.
  - PILE CURVE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADIENT IN APPROACHES AS PER IRC SP-25.
  - SAFE BEARING CAPACITY AT FOUNDING LEVEL SHALL BE TAKEN AND TO BE VERIFIED AT SITE & REQUIRED REINFORCEMENT FOR BOTH SIDE OF EXTENDED ROBE ON PIER CAP & ABUTMENT CAP WILL BE PROVIDED IN SEISMIC ZONE II & V.
  - DRAWING FOR BOTH SIDE OF EXTENDED ROBE ON PIER CAP & ABUTMENT CAP WILL BE PROVIDED IN START OF WORK.
  - SET BACK SHALL BE SHIFTED BEFORE UNDER TAKING DIGGING OR TRENCHING NEAR RB TRACK BY SAT CONSTRUCTION.
  - APPROACH SPAN CONFIGURATION ARE INDICATIVE ONLY. FINAL SPAN OF APPROACH SPAN DECIDED BY UPSC/CL END.

### OPERATION SCHEDULE FOR RAILWAY SPAN:

- TRACK SHALL BE PROTECTED SUITABLY DURING THE CONSTRUCTION OF BRIDGE FOR SAFETY OF RUNNING TRAIN.
- ADAPTABLE MEASURES SHALL BE TAKEN AT SITE TO ENSURE SAFETY OF WORKING MEMBERS, MATERIALS, EQUIPMENTS, TRAFFIC ETC.
- FOR SHIFTING OF THE MASTS AND SIGNALING EQUIPMENTS, DIVISION MAY BE CONSULTED AS PER EXISTING INTIMATION.
- FOR LAUNCHING OF GIRDERS OVER RAILWAY TRACK, SUITABLE BLOCK WILL BE TAKEN WITH ADVANCE INTIMATION.
- DETAILED STRUCTURAL DRAWINGS OF THE ROB SHALL BE APPROVED BY COMPETENT AUTHORITY.
- LAUNCHING SCHEME SHALL BE APPROVED BY COME & RAILWAY BEFORE EXECUTION OF WORK.
- DRAWING APPROVAL SHALL BE SUBJECTED TO APPROVAL OF ALIGNMENT AND LEVELS BY STATE GOVT.
- CONSTRUCTION SEQUENCE:  
(i) CONSTRUCTION OF SUITABLE FOUNDATION FOR PIERS.  
(ii) CONSTRUCTION OF ROBE, ABUTMENT, PIER CAP AND ABUTMENT CAP.  
(iii) CONSTRUCTION OF SUITABLE PEDESTALS.  
(iv) FABRICATION OF STEEL GIRDERS, CROSS GIRDERS AND DIAPHRAGMS ETC.  
(v) POSITIONING OF GIRDERS 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 ANCILLARY WORKS LIKE CRASH BARRIER, RAILING, WEARING COURSE, EXPANSION JOINT ETC.
- ALL SAFETY RULES SHALL BE FOLLOWED DURING EXECUTION OF WORK.
- RAILWAY AUTHORITIES SHALL BE INFORMED BEFORE STARTING ANY WORK. INSTRUCTIONS GIVEN BY RAILWAY AUTHORITIES TIME TO TIME DURING EXECUTION SHALL BE FOLLOWED.

## EAST CENTRAL RAILWAY (E.C.RLY)

### PROPOSED TWO LANE ROBS PAN 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

HQ EOR HJP		
CBE	DY CEBR/HJP	XENBR/HJP

DFCCIL DRG NO.	Sr. DOMNGS
REFERENCE ROSD DRAWING NO - ROSD/08	Sr. DEVC/O-ORDMGS
ALL THE DIMENSIONS SHOWN ARE TENTATIVE AND MAY UNDERGO CHANGES DURING FINAL DESIGN.	Sr. DEN/IMGMS
DESIGNATION	Sr. DSTEMS
(A.K MSHRA) CPM/DFCCIL/MGS	Sr. DEET/DMGS
DY CPM/ENGG/DFCCIL	Sr. DEE/GMGS
DP/ANENGG/DFCCIL	
DFCCIL/MGS	STATE GOVT. U.P
	MGS DIVISION

DRG. NO.	RITES/RICEDDF/CR/ROB_750/CA.			
SH. NO.	2 OF 3			
DATE	OCTOBER, 2017			
REV.	Ro			
SCALE	100 0 100 200 300cm 200 0 200 400 600cm			
(SUNEEL KUMAR) DRAWN BY	(ATIF AHMED) AMD	(MD. NOMAN) MANAGER/B	(D.S. NEG) JAMD	(A.K. MATHUR) GGMD
RITES LTD.				