



- 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 WITHIN RAILWAY BOUNDARY TO BE DONE WITHOUT PRESENCE OF RAILWAY REPRESENTATIVE.
 4. GIRDERS OVER ROB PROPER TO BE FABRICATED PREFERABLY BY RDSO APPROVED FIRMS.
- 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 REVERSED BEFORE HANDING UP DESIGN WORK IN HAND. ANY DISCREPANCY NOTED SHOULD BE FORWARDED THROUGH ALTERATIONS DULY SIGNED.
 4. MAXIMUM SAFE BEARING CAPACITY AT THE FOUNDATION LEVEL CONSIDERED AS PER GEOTECHNICAL REPORT. IF IT IS LESS THAN THE BASE PRESSURE, THE FOUNDATION HAS TO BE REDESIGNED.
 5. CHANGE SPILT BERTH TO BE PROVIDED AS PER BERTH LEVEL CONSIDERED AS PER GEOTECHNICAL REPORT.
 6. EXPOSURE CONDITION OF THE BRIDGE AND ITS COMPONENTS SHOULD BE DECLARED AS PER IRC 21-2000/RC 110 FOR DETAILS OF SUPERSTRUCTURE AND FOUNDATION REFER RDSO CODES FOR RELEVANT EXPOSURE CONDITION SHALL BE FOLLOWED.
 7. FOR DETAILS OF SUBSTRUCTURE AND FOUNDATION REFER SEPARATE DRAWING DULY APPROVED BY RAILWAY/DFCC.
 8. WORK SHALL BE CARRIED OUT UNDER THE SUPERVISION OF RAILWAY ENGINEERS WITHIN RAILWAY LAND LIMIT.
 9. TYPE OF BEARING - POT/PIFF.
 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. DFCC PRIVATE AUTHORITIES SHOULD BE ENSURED 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 SIGNALING ARRANGEMENT WILL BE DONE AS PER G.R. 15.09 (P) & S.R. 15.09 (D) OR CR 15.09/28 & S.R. 15.09/28 WHICH EVER IS ADOPTABLE IF REQUIRED.
 15. LOADING STANDARD OF ROB SHALL BE AS PER RDSO CODES.
 16. FULL FLEDGED LOAD TEST OF SUPER STRUCTURE SHOULD BE DONE AS PER IRC-SP-8 TO ENSURE QUALITY WORK.
 17. CONCRETE DESIGN MK. RCC DECK SLAB - M40 CRASH BARRIER - M40
 18. MANNED LEVEL CROSSING NO 79-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.897/23-11-2015-10/20/2015 DATED: 07.06.2016.
 20. T.U. OF L.C. IS 20.10 OF DATED 07/2015.
 21. PROVISION OF SLABS FOR THE SUPERSTRUCTURE FOR THE SUPPORTING THE AC TRACTION WIRE TO BE MADE INVARIABLY IN CONSULTATION WITH CONCERN AUTHORITIES BASED ON TYPICAL DRAWING.
 22. ALL R.C.C. P.C.C. WORK SHOULD CONFORM TO RELEVANT ISIRC CODES & MOST SPECIFICATION.
 23. FOR FABRICATION, WORKMANSHIP, INSPECTION & TESTING, PROTECTION AGAINST CORROSION ETC. RELEVANT PROVISION OF IRC-24/2011 SHALL BE FOLLOWED.
 24. THE DEPTH OF FOUNDATION SHOWN IN THIS DRAWING IS TENTATIVE & SHOULD BE DECIDED BY COMPETENT AUTHORITIES AS PER ACTUAL SOIL PROPERTIES AND DESIGN CALCULATION.
 25. REPRESENTATIVE OF TELECOM & SIGNAL DEPARTMENTS SHOULD BE MADE AVAILABLE BEFORE COMMENCEMENT OF PROPOSED WORK. IN THE VICINITY OF SIGNAL & TELECOM CABLE.
 26. TEMPORARY ARRANGEMENT DRAWING OR METHODOLOGY TO LAUNCHING OF GIRDERS OVER RAILWAY TRACK SHOULD BE GOT APPROVED FROM RAILWAY AUTHORITY BEFORE START THE WORK.
 27. PRECAUTIONARY MEASURES FOR CONSTRUCTION OF ROB ON DEPOSIT WORKCOST SHARING WORK WITH STATE GOVT. AND PRIVATE AGENCY ISSUED BY ADVISOR CIVIL ENGINEERING RAILWAY BOARD LETTER NO. 18/2016/10/2016 DATED: 16.02.2016, 27.10.2016, 27.10.2016, 16.02.2011 & 04.07.2012 SHOULD BE STRICTLY FOLLOWED.
 28. NO CONSTRUCTION JOINT SHALL BE NORMALLY ALLOWED IN CONCRETE WORKS WITHOUT SPECIAL PRECAUTIONS AS PER THE RELEVANT BRIDGE CODES AND SUITABLE PROTECTION PAINTING OR APPROVED NAME SHOULD BE USED TO PAINT THE UNDERSIDE OF CONCRETE ROB GIRDERS ALSO TO ENSURE LONG LIFE.
 29. GUARD RAIL SHOULD BE PROVIDED IN THE TRACK NEAR THE ISOLATED PIER 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.
 30. INSPECTION LADDER/STEPS SHOULD BE PROVIDED TO ENSURE PROPER INSPECTION/ACCESSIBILITY OF ROB.
 31. STRUCTURAL STEEL SHALL CONFORM TO IS 2063 (GRADE - B).
 32. STRIP SEAL TYPE EXPANSION JOINTS SHALL BE PROVIDED AS PER LATEST MOST REQUIREMENT. CONTRACTOR SHOULD SUBMIT DRAWING OF EXPANSION JOINTS FROM FIRMS APPROVED BY MOST AT VARIOUS RELEVANT AMBIENT TEMPERATURE TO SIFT SITE CONDITIONS WITH THE APPROVAL OF ENGINEER IN CHIEF.
 33. TO PROTECT THE CONCRETE FROM DAMAGE DUE TO SNAKE OF LOCOWORMS, 4 MM WIRE STRIP WITH POLY-SULPHIDE PAINT PREFERABLE IN BLACK COLOUR SHALL BE PROVIDED IN THE SOFFIT OF THE DECK OVER RUNNING TRACK.
 34. STANDARDS MAINTENANCE AGREEMENT SHOULD BE EXECUTED WITH RAILWAY AND STATE GOVT. AUTHORITIES FOR GRANT OF PERMISSION FOR CONSTRUCTION OF ROB/RUB IN RAILWAY PORTION.
 35. NO WORK SHOULD BE TAKEN UP IN HAND TILL PROOF CHECKED DESIGN AND DRAWING WITHIN RAILWAY PORTION AREA APPROVED BY RAILWAY.
 36. ALL STEEL STRUCTURES SHOULD HAVE ANTI - CORROSION PROTECTION OF LONG DURABILITY.
 37. FOR DETAILS OF SUPER STRUCTURE OF RAILWAY SPAN OF 30.00 M REFER RDSO'S DRG. NO. RDSO/11/508 AND FOR 30M GIRDER REFER RDSO'S DRG. NO. RDSO/11/508.
 38. ANY CHANGE IN THE GAD FOR RAILWAY PORTION SHOULD BE DONE WITH PRIOR APPROVAL OF RAILWAY.
 39. CLEAR COVER TO OUTER MOST STEEL SHOULD BE PROVIDED AS PER APPROVAL OF RAILWAY.
 40. 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.
 41. FOR JACKING UP THE GIRDER FOR ANY HANDLING REQUIREMENTS IN FUTURE SUCH AS FOR REPLACEMENT OF BEARINGS OR ANY OTHER WORK REQUIRED, SUITABLE FEATURES SHOULD BE PROVIDED TO ENABLE JACKING. THE DIMENSIONS & LEVELS SHOWN IN THE GAD ARE SUBJECT TO CHANGES AS PER SITE REQUIREMENT/DETAIL DESIGN AND WILL BE DONE WITH PRIOR APPROVAL OF RAILWAY.
 42. THE BRIDGE IS DESIGNED FOR SEISMIC ZONE III.
 43. GIRDERS SHALL BE METALISED AS PER IS-2001.
 44. VERTICAL CURVE WILL BE PROVIDED WHEREVER THERE IS CHANGE IN GRADIENT IN APPROACHES AS PER IRC SP-21.
 45. RESTRAINT ON BOTH SIDE OF OUTER MOST GIRDER ON PIER CAP & ABUTMENT CAP WILL BE PROVIDED IN SEISMIC ZONE I & V.
 46. APPROACH SPAN CONFIGURATION ARE INDICATIVE ONLY. FINAL SPAN OF APPROACH SPAN DECIDED BY URS&C/END.
 48. WHEN SKEW ANGLE MORE THAN 20° GIRDER WILL BE DESIGN BY MR RITES LTD.

- 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 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 CBE/E.C.R.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) SPEED RESTRICTION OF 30 KM/H WILL BE IMPOSED BEFORE ERECTION OF TEMPORARY STAGING WORK.
(vi) POSITIONING OF CRANE SLAB WITHIN THE AREA SUBJECT TO APPROVAL OF RAILWAY.
(vii) TRAFFIC BLOCK IMPOSED AND LAUNCHING OF GIRDERS.
(viii) CASTING OF RCC DECK SLAB WITH SHUTTERING SUPPORTED ON GIRDERS.
(ix) REMOVAL OF STAGING AND SHUTTERING OF DECK SLAB.
(x) COMPLETION OF ANCILLARY 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.

EAST CENTRAL RAILWAY (E.C.RLY)

PROPOSED TWO LANE ROB
SPAN 1x36.00+1x30.00 FOR OBLIGATORY SPAN
IN LIEU OF L-XING NO 71C, IR CH. 6457-9
(SKEW ANGLE AT IR-43' & DFCC 23°)
(TVU-26120, DT.07/2015)

ON MUGHALSARAI - GAYA SECTION
OF EAST CENTRAL RAILWAY MUGHALSARAI
GENERAL ARRANGEMENT DRAWING

DRMMS		CRB	DY CBR/HJP	XENBR/HJP
SI: DEN/CO-ORD/MGS			HQ ECR HJP	
SI: DEN/MGS				
SI: DSTE/MGS				
SI: DEU/TRD/MGS				
SI: DEI/G/MGS				
SI: DPM/ENG/DFCC				
SI: DFCIL/MGS		STATE GOVT. U.P.	MGS DIVISION	

ALL THE DIMENSIONS SHOWN ARE TENTATIVE AND MAY UNDERGO CHANGES DURING FINAL DESIGN.

DESIGNATION	SIGNATURE	DESIGNATION	SIGNATURE
(A.K. MISHRA) CPM/DFCC/LMS		EXECUTIVE ENGINEER	
DY CPM/ENG/DFCC			
DPM/ENG/DFCC			

DRG. NO. RITES/REC/DFCC/ROB 71G/CA
SI. NO. 2 OF 3
DATE: NOVEMBER, 2017
REV. RD

SCALE: 100 0 100 200 300m
200 0 200 400 500mm

(SUNEEL KUMAR) (ATIF AHMED) (MD NONAM) (D.S. NEGI) (A.K. MATHUR)
DRAWN BY: AMD MANAGER/MD JGMG

RFES
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IRITES
THE INFRASTRUCTURE PEOPLE