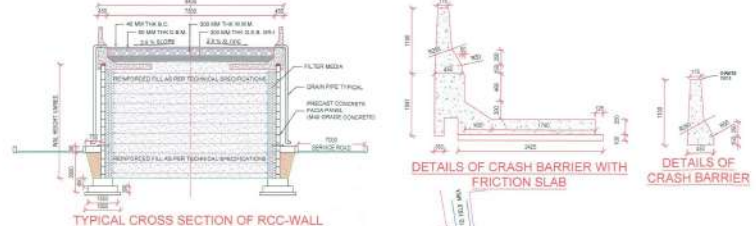
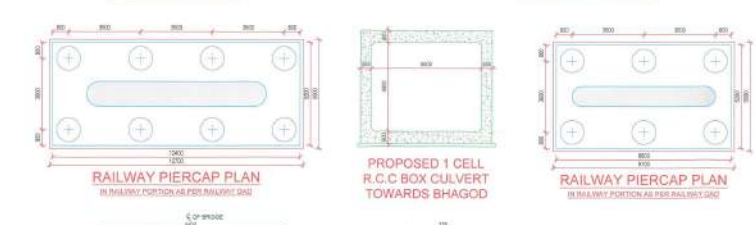
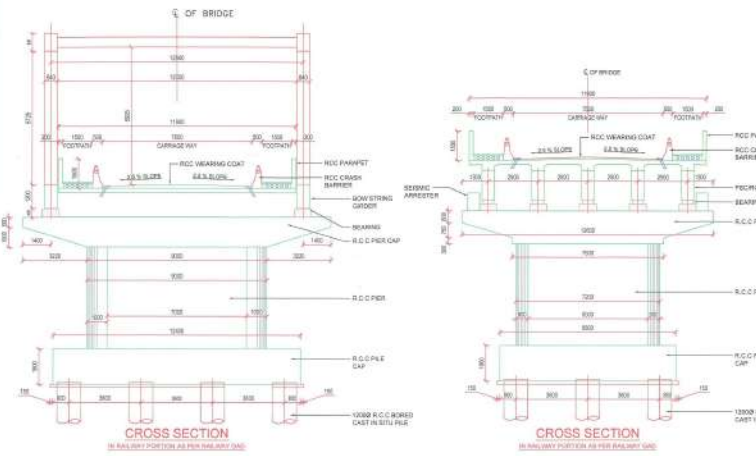


LONGITUDINAL SECTION



REDUCED LEVEL TABLES FOR PIERS (TENTATIVE) with columns for MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, and PILE FRC.

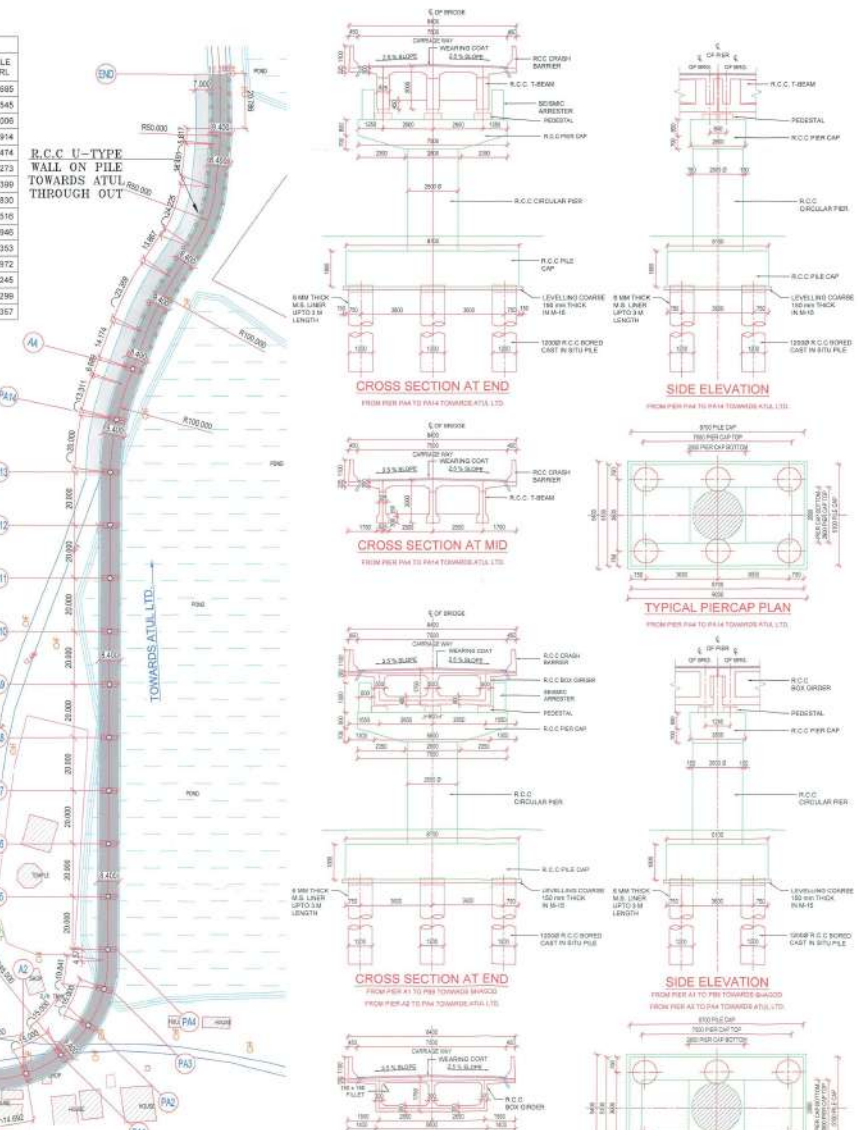
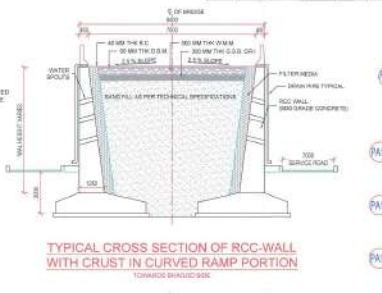


Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

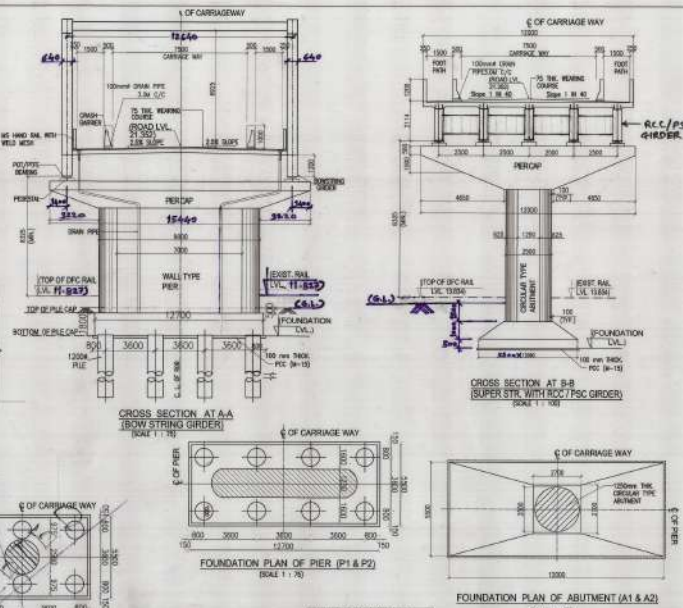
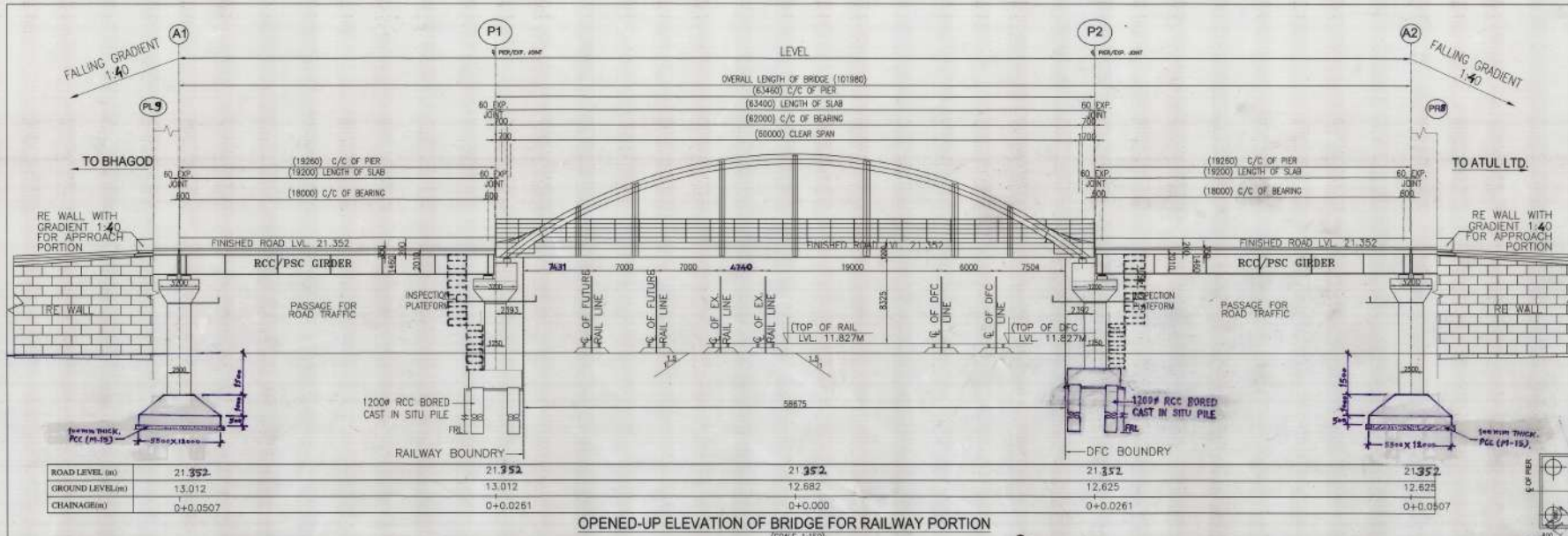
Table with columns: MARK, F.R.L., PIER TOP, PILE CAP TOP, PILE TOP, PILE FRC.

LIST OF STANDARD NOTES FOR GAB OF BRIDGE

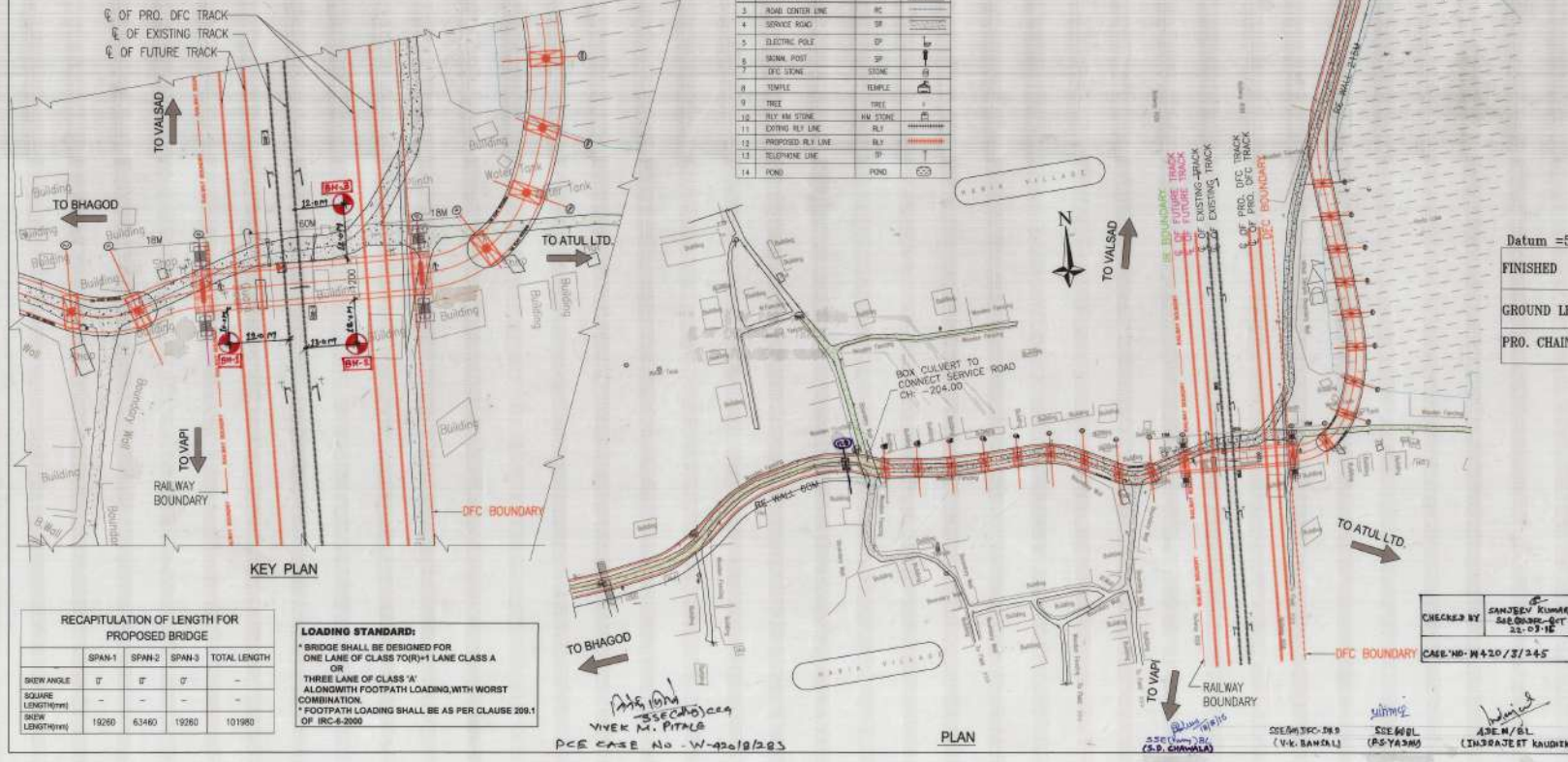
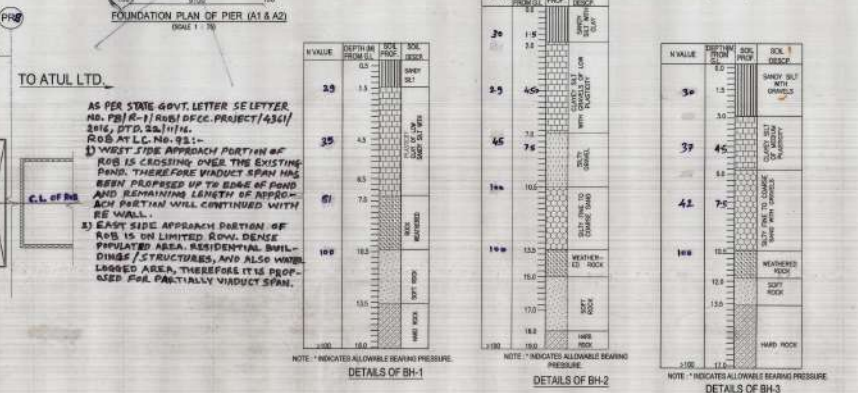
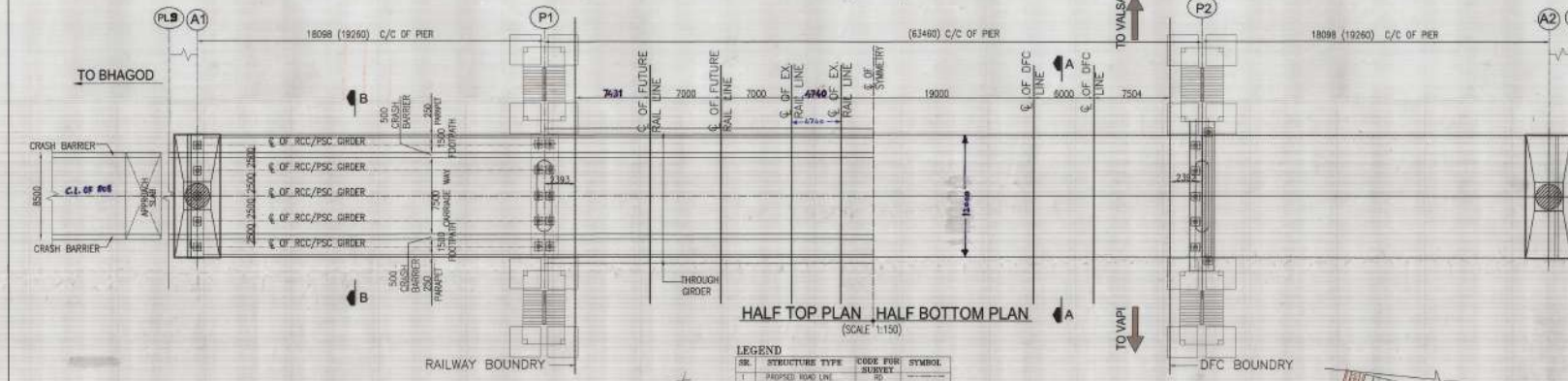
- 1. ALL DIMENSIONS ARE IN MILLIMETERS AND LEVELS IN METERS UNLESS NOTED OTHERWISE.
2. NO DIMENSIONS SHALL BE HEARD FROM THIS DRAWING UNLESS NOTED OTHERWISE.
3. EXISTING TRACK SHOWN IN BLACK.
4. PROPOSED TRACK SHOWN IN RED.
5. PROPOSED ROAD OVER BRIDGE (RAILWAY PORTION) SHOWN IN GREEN AND ROAD PORTION SHOWN IN MAGENTA BY SITE PLAN.
6. EXISTING RAILWAY LAND BOUNDARY SHOWN IN GREEN AND LEVEL CROSSING SHOWN IN BLUE.
7. ACTUAL LOCATION OF BRIDGE SHALL BE DECIDED BY RLY. ENGINEER-IN-CHARGE, IN CONSULTATION WITH ROAD AUTHORITIES AT THE TIME OF ITS CONSTRUCTION.
8. ACTUAL DEPTH OF FOUNDATION SHALL BE DECIDED BY RLY. ENGINEER-IN-CHARGE TO SUIT THE SOIL STRATA NOT WITH AT THE SITE.
9. VERTICAL CLEARANCE FROM EXISTENT RAIL LEVEL TO BOTTOM OF GIRDERS SHALL BE NOT LESS THAN 6.50 METERS FROM A.C. TRACTION AREA AND 8.00 METERS IN CASE OF GIRDERS.
10. GROUND LEVEL SHALL BE PROVIDED AS PER STANDARD DRAWING.
11. BRIDGE AND SEE OF GIRDERS, POST-TENSIONING BEAMS, SHOWS IN THE DRAWING ARE TENTATIVE AND ARE SUBJECT TO CHANGE BY FINAL BRIDGE & BEARING.
12. BRIDGE AND DIMENSIONS OF ABUTMENTS, PIERS, PIER CAP, PIER BRACKET SHALL BE THE BRIDGE ARE TENTATIVE AND ARE SUBJECT TO CHANGE BY FINAL BRIDGE & BEARING.
13. BRIDGE SHALL BE PROVIDED AS ABUTMENT AND RETAINING WALL.
14. BRIDGE SHALL BE PROVIDED AS ABUTMENT AND RETAINING WALL.
15. ONLY CONTROLLED CEMENT CONCRETE MIX IS TO BE PROVIDED GRADE OF CONCRETE FOR MASS CONCRETE AND R.C.C. SHALL NOT BE LESS THAN M-30 AND M-30 RESPECTIVELY.
16. FINISHING COST OF CONCRETE THROUGH PROVIDED ROAD SURFACE BE MAINTAINED BY ROAD AUTHORITY.
17. REINFORCEMENT OF BRIDGE SHALL BE DONE ONLY IN PRESENCE OF AUTHORIZED RAILWAY REPRESENTATIVE TO ENSURE THE SAFETY OF EXISTING TRACK PROPER PROTECTION SHALL BE TAKEN DURING EXECUTION OF OPEN FOUNDATION NEAR THE TRACK PROPER CROSSING SHALL BE DONE TO PROTECT SLOPE FAILURE OF SOIL.
18. ADDITIONAL LOAD TRANSFERRED FROM FUTURE TRACK SHALL BE CONSIDERED WHILE DESIGNING OVER FOUNDATION OF EXISTING BRIDGE.
19. IN ORDER TO OFFER ADEQUATE RESISTANCE AGAINST COLLISION, THE FOUNDATION SHALL BE PROVIDED WITH SUFFICIENT PROTECTIVE COATING DEPENDING UPON THE ENVIRONMENT CONDITION AS PER PRACTICE OF RAILWAY ENGINEERS AT THE SITE OR AS RECOMMENDED BY RAILWAY ENGINEERS AT THE SITE OR AS RECOMMENDED BY RAILWAY AUTHORITY AND MAINTAINED DURING THE PERIOD OF CONSTRUCTION OF BRIDGE.
20. DIMENSIONS AND DEPTH OF BRIDGE SHALL BE CHECKED BY RLY/NOTED OTHERWISE BY RLY/ENGINEER-IN-CHARGE.
21. LADDER AND PLATFORM FOR INSPECTION OF BRIDGE SHALL BE PROVIDED AT EVERY PIER.
22. BRIDGE SHALL BE CONSTRUCTED WITH PROTECTIVE COATING ETC. SHALL BE HANDLED OVER TO RAILWAY ENGINEERS IN CHARGE.
23. BEFORE OPENING OF BRIDGE COMPLETION DRAWING AND COMPLETE COST OF BRIDGE SHALL BE APPROVED BY RLY/ENGINEER-IN-CHARGE.
24. BEFORE OPENING OF BRIDGE (RAILWAY PORTION) FOR ROAD TRAFFIC APPROVAL OF RAILWAY ENGINEERS IN CHARGE IS TO BE OBTAINED BY ROAD AUTHORITY.
25. GRADE OF CONCRETE:
- R.C.C. ABUTMENT/PIER: M-30
- R.C.C. PIER/PIER CAP: M-30
- R.C.C. BRIDGE PIER: M-30
- R.C.C. T BEAM SUPERSTRUCTURE: M-30
- R.C.C. BEAM SUPERSTRUCTURE: M-30
- R.C.C. BOX CULVERT: M-30
- BRIDGE FRETWORK: M-30
26. REINFORCEMENT SHALL BE OF HYDRA BRIDGE OF GRADE BR-500 CONFORMING TO IS:1006 (LATEST VERSION).
27. BRIDGE SHALL BE PROVIDED AT END ON THE TOP OF PIERS/ABUTMENT CAP TO REDUCE POSSIBILITY OF TOPPING OF GIRDERS DURING LAUNCHING OF GIRDERS.
28. BRIDGE SHALL BE PROVIDED BEFORE COMMENCEMENT OF WORK.
29. BRIDGE SHALL BE PROVIDED FOR TWO LANES OF ROAD TRAFFIC.
30. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
31. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
32. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
33. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
34. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
35. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
36. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
37. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
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39. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
40. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
41. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
42. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
43. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
44. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
45. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
46. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
47. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
48. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
49. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.
50. BRIDGE SHALL BE PROVIDED WITH 1.50 M CLEARANCE FROM TRACK CENTERLINE TO ROAD CENTERLINE.

LEGENDS table listing symbols for bridge components like pier, abutment, etc.

GOVERNMENT OF GUJARAT ROAD AND BUILDING DEPARTMENT stamp and signature area.



1. ALL DIMENSIONS ARE IN METERS UNLESS OTHERWISE SPECIFIED.
2. NO DIMENSIONS SHALL BE SCALED FROM THIS DRAWING UNLESS OTHERWISE SPECIFIED.
3. EXISTING RAILWAY TRACKS AND EXISTING ROAD BOUNDARY ARE SHOWN IN BLACK AND PROPOSED RAIL TRACKS, D.F.C. BOUNDARY AND FUTURE ROAD ARE SHOWN IN RED.
4. ACTUAL LOCATION OF ROB SHALL BE DECIDED BY RLY. ENGINEER IN CHARGE IN CONSULTATION WITH ROAD AUTHORITY AT THE TIME OF ITS CONSTRUCTION.
5. ACTUAL DEPTH OF FOUNDATION SHALL BE DECIDED BY ENGINEER IN CHARGE TO SUIT THE SOIL STRATA MET WITH AT THE SITE.
6. VERTICAL CLEARANCE FROM THE HIGHEST RAIL LEVEL TO BOTTOM OF GIRDERS SHALL NOT BE LESS THAN 4.50 METERS FOR THE TRACKS AREA AND 3.50 METERS IN CASE OF SHUTTER/DOUBLE TRACK COMPOUND ROUTE.
7. GRADE RAIL SHALL BE PROVIDED AS PER STANDARD DRAWING.
8. SHAPES AND SIZE OF GIRDERS, FIVE PILE BEARING, BEARING CAPS, BEARING AND FOOTING ARE SUBJECTIVE AND ARE SUBJECT TO CHANGE IN TIME DESIGN AND DRAWING.
9. SHAPES AND DIMENSIONS OF ABUTMENT, PIERS, PER CAP, PIER CAP AND FOOTING ARE SUBJECTIVE AND ARE SUBJECT TO CHANGE IN TIME DESIGN AND DRAWING.
10. KEEP HOLES SHALL BE PROVIDED IN ABUTMENTS AND RETURN WALLS.
11. ALL CROSS BARRIERS SHALL BE PROVIDED AS PER MOST STD.
12. ONLY CONTROLLED GIBBY CONCRETES MAY BE USED IN PREPARATION OF CONCRETE FOR MASS CONCRETE AND FOR RCC WORK SHALL NOT BE LESSER THAN M-30 AND M-25 RESPECTIVELY.
13. BEARING CAPS OF THICKNESS... SHALL BE PROVIDED, ROAD SURFACE TO BE MANAGED BY ROAD AUTHORITY.
14. A SEPARATE LAUNCHING SCHEME OF SUPERSTRUCTURE AND TO BE SUBMITTED WHICH SHALL BE APPROVED BY ROAD AUTHORITY AND COMPLETE SET OF ROB IN HAND COPY AND SET COPY APPROVED BY AUTHORITY SHALL BE SUBMITTED TO ROAD AUTHORITY IN CHARGE.
15. EXCAVATION OF ROB WORK SHALL BE DONE ONLY IN PRESENCE OF AUTHORIZED RAILWAY REPRESENTATIVE TO ENSURE THE SAFETY OF RUNNING TRAINS. PROPER PROTECTIONS SHALL BE TAKEN DURING LOCATION OF DEPTH FOUNDATION NEAR THE EXISTING RAILWAY TRACK IN CASE THE LOCATION TO BE DONE NEAR THE TRACK, PROPER SIGNING SHALL BE DONE TO PREVENT SLIP FALLS OF VEHICLES.
16. ADDITIONAL LOAD TRANSFERRED FROM FUTURE TRACKS SHALL BE CONSIDERED WHILE DESIGNING OPEN FOUNDATION ON EITHER SIDE.
17. IN ORDER TO GETTER ADEQUATE REINFORCEMENT AGAIN CONSIDERATION THE REINFORCEMENT BARS SHALL BE PROVIDED WITH SUFFICIENT PROTECTIVE COATING BETWEEN SPANS AND ABUTMENTS/PIERS SHALL BE PROVIDED AS PER PARA 7.15 OF CONCRETE BRIDGE CODE (SECTION 3.1.2 OF 20.04.2004).
18. OFFER FOR THE RAILWAY PORTION AT BRIDGE SHALL BE AT NEAR BY LOCATION DECIDED BY THE RAILWAY ENGINEER IN CHARGE AND APPROVED BY ROAD AUTHORITY AND MANAGED DURING THE PERIOD OF CONSTRUCTION OF THE PROJECT.
19. DRAWING AND DESIGN OF ROB SHALL BE PROOF CHECKED BY R/W/AT OR DEPUTED CONSULTANT AS APPROVED BY ENGINEERING.
20. USING SUSTAINABILITY AND CORROSION PROTECTION SHOULD BE APPLIED TO THE STEEL STRUCTURE.
21. INSPECTION LADDER AND PLATFORM FOR INSPECTION OF BEARING SHOULD BE PROVIDED AT EVERY PILE.
22. ALL TECHNICAL RECORD (A, C) CURVE STRENGTH, PRESSURING DETAILS ETC. SHALL BE PROVIDED TO RAILWAY ENGINEER IN CHARGE.
23. BEARING CAPS OF ROB (CONCRETE BEARING) AND COMPLETE SET OF ROB IN HAND COPY AND SET COPY APPROVED BY AUTHORITY SHALL BE SUBMITTED TO ROAD AUTHORITY IN CHARGE.
24. BEFORE OPENING OF ROB WITHIN ABUTMENT PORTION 1 FOR ROAD TRAFFIC, APPROVAL OF RAILWAY ENGINEER IN CHARGE IS TO BE OBTAINED BY ROAD AUTHORITY.
25. GRADE OF CONCRETE  
RCC ABUTMENT: M35  
RCC PIER: M35  
RCC BEARING CAP: M35  
RCC BEARING CAP: M35  
RCC BEARING CAP: M35
26. STEEPER SHOULD BE PROVIDED AT END OF THE PIER / ABUTMENT CAP TO REDUCE PROBABILITIES OF TOPPING IF GROUND DURING LAUNCHING OF GIDER.
27. ONE SANCTION SHALL BE OBTAINED BEFORE COMMENCEMENT OF WORK.
28. AS PER RAILWAY BOARD LETTER NO. 2007/RE/76/76-774 DATED 13.03.2011. TRACK LEVEL SHALL BE PROTECT.
29. THE COST OF MAINTENANCE OF ONE TO BE CHARGEABLE TO ESTIMATE.
30. DIMENSIONS OF ALL STRUCTURAL MEMBERS (E, P, R, PER, CAP, PIER, ABUTMENT, PER CAP, ETC.) SHALL BE PROVIDED AND SHALL BE AS PER STRUCTURAL DESIGN AND DRAWING SUBMITTED BY CONSULTANT/RAILWAY AND APPROVED BY RAILWAY.
31. STRUCTURAL STEEL OF COMPOSITE GIRDERS CONFORM TO IS 2002-2008 E250 B0 OTHERWISE SPECIFIED IN DESIGN.
32. S.B.C. AT 3.0m DEPTH = 30 T/m<sup>2</sup>
33. ROAD TRAFFIC SHALL BE STOPPED AT SEPARATE LOCATION IN CONSULTATION WITH ROAD AUTHORITY.
34. EXISTING LC WILL BE CLOSED AFTER COMPLETION OF ROB WORK.
35. THE GAP BEARING AS PER ROAD FORMING (CONSOLIDATED) ROAD SEE LETTER NO. CRP/REG/MS, DATED 15.03.2014) SHALL BE ENSURED BY INSPECTING ENGINEER.
36. COMMENT LETTER FROM DISTRICT COLLECTOR, MUMBAI FOR CLOSING OF LEVEL CROSSING NO. 102 HAS BEEN OBTAINED. YOU LETTER NO.
37. D.F.C. BOUNDARY IS TENTATIVE, IT SHALL BE FINALIZED AFTER LAND ACQUISITION.
38. STORM DRAIN TO BE PROVIDED UP TO GRADE LEVEL.
39. PRIOR COMMENCING THE WORK CONTRACTOR TO ENSURE THAT SIGNATURE OF ROAD AUTHORITY SHALL BE OBTAINED.
40. SIZE & DEPTH OF OPEN FOUNDATION SHOWN IN THIS CASE IS TENTATIVE & IT WILL BE AS PER DESIGN & SOIL STRATA MET WITH.
41. FOR BHW-STRONG GIRDER PIER AND SOIL MET WITH 6.0m HIGHER THAN 6.0m C/C OF BEARING.



FINISHED ROAD	GROUND LEVELS	PRO. CHAINAGE
11.352	11.367	350
11.352	11.397	300
11.352	11.509	250
11.352	11.843	200
11.352	12.285	150
11.352	12.705	100
11.352	13.033	50
11.352	13.021	0
11.352	12.589	0
11.352	13.033	50
11.352	12.705	100
11.352	12.285	150
11.352	11.843	200
11.352	11.509	250
11.352	11.367	300
11.352	11.352	350

RECAPITULATION OF LENGTH FOR PROPOSED BRIDGE			
SPAN-1	SPAN-2	SPAN-3	TOTAL LENGTH
19200	63480	18098	101980

**LOADING STANDARD:**  
BRIDGE SHALL BE DESIGNED FOR ONE LANE OF CLASS 'A' OR THREE LANE OF CLASS 'A' ALONG WITH FOOTPATH LOADING WITH WORST COMBINATION. FOOTPATH LOADING SHALL BE AS PER CLAUSE 209.1 OF IRC-8:2000

DESIGN CONSULTANT:  
**CONSTRUMA CONSULTANCY PRIVATE LIMITED**  
B.O.: D-37, G.F., Sector - 32, Noida - 201 301, U.P.  
Tel.: +91 - 120 - 4570152, 4570153  
H.O.: 2nd Floor, Pinky Plaza, 5th Road,  
Tel.: +91 - 22 - 26040984, 26487415

WESTERN RAILWAY	
DEPARTMENT: BCT	HEAD QUARTER
DRM-BCT (MUKUL JAIN)	CRB-CCG (K. C. SRAM)
ASST. DRM-BCT (SHELA MEENA)	CRB-CCG (SHELA MEENA)
SR. DRM-BCT (SHELA MEENA)	BY: CHEERJOCK (AYANSHI KUMAR)
DRM-BCT (SHELA MEENA)	BY: CHEERJOCK (Z. A. WAHED)
DRM-BCT (SHELA MEENA)	ASST. DRM-BCT (M. B. BHOOT)

PROJECT:  
PROPOSED ROB IN LIEU OF LC NO. 92 AT KM 189/24-26 (D.F.C. CH.30934) BETWEEN STATIONS PARDI TO ATUL OF MUMBAI-DELHI TRUNK ROUTE OF WESTERN RAILWAY

CLIENTS:  
THE CHIEF PROJECT MANAGER  
DEDICATED FREIGHT COORDINATION CORPORATION OF INDIA LTD.  
(A GOVERNMENT OF INDIA ENTERPRISE)  
ARUN-1, 4TH FLOOR, PLOD, DUMAS ROAD, NE. ESCON WALL,  
SURAT-395007. PH: 0281-2631310, FAX: 0281-2631320

TITLE:  
**GENERAL ARRANGEMENT DRAWING (RAILWAY PORTION)**

DRG. NO.	REV.	DATE
CCPL/WDFC/CPM/ST/LC_NO_92	RO	10.08.2016