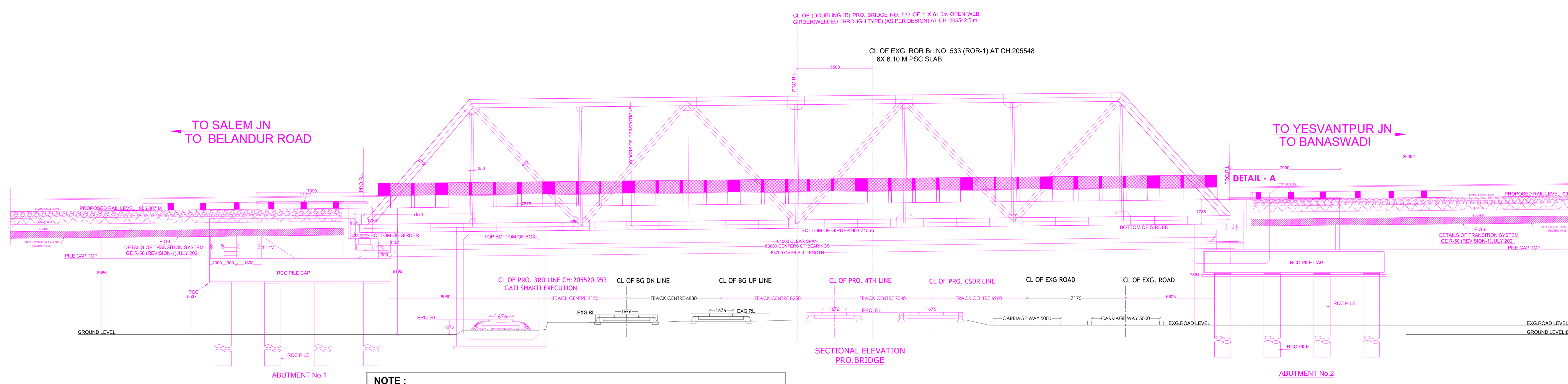
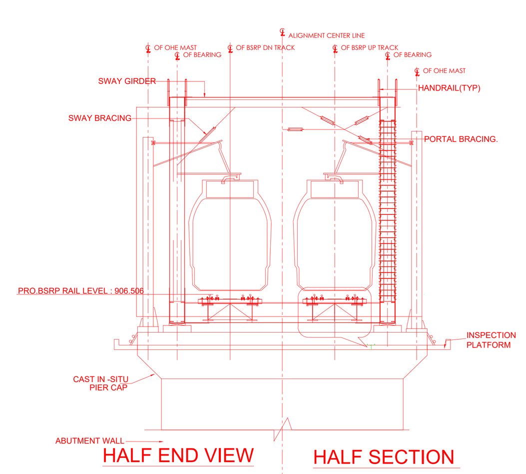


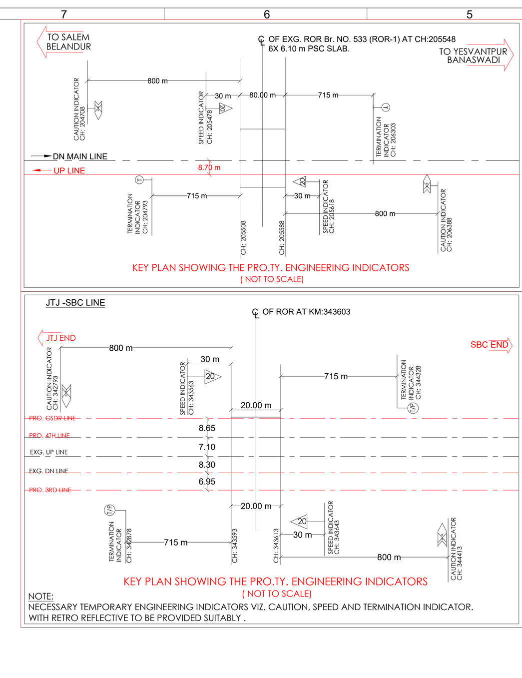
NOTE :

GAD OF DOUBLING HAS ALREADY BEEN APPROVED BY CBE/SWR WIDE DRAWING NO: SWR/2024/GAD-193/ ROR NO 533/SA-SBC/KRIDE DATED BY: 09.09.2024.

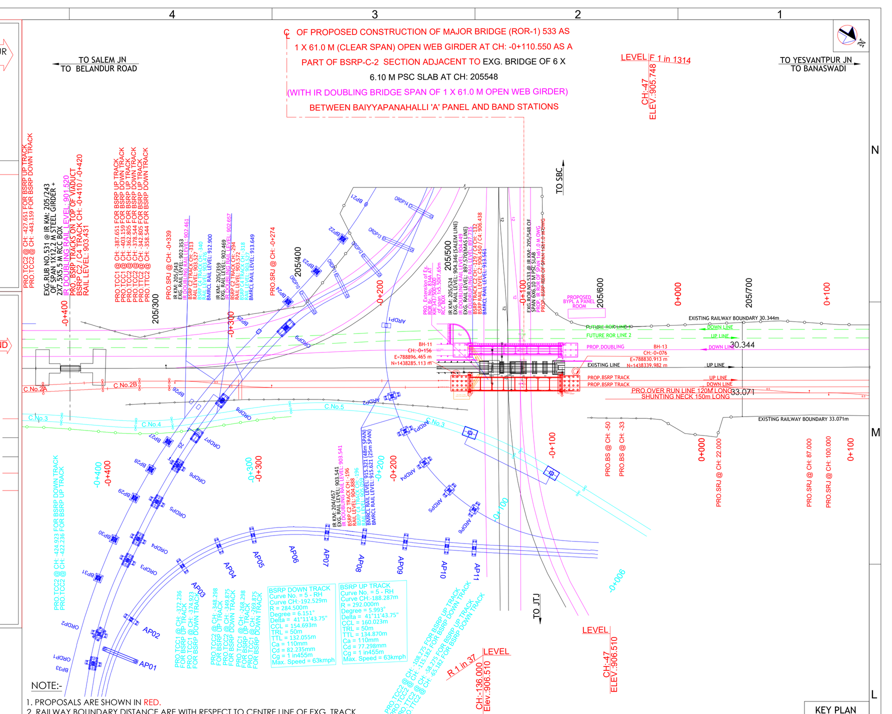


HALF END VIEW HALF SECTION

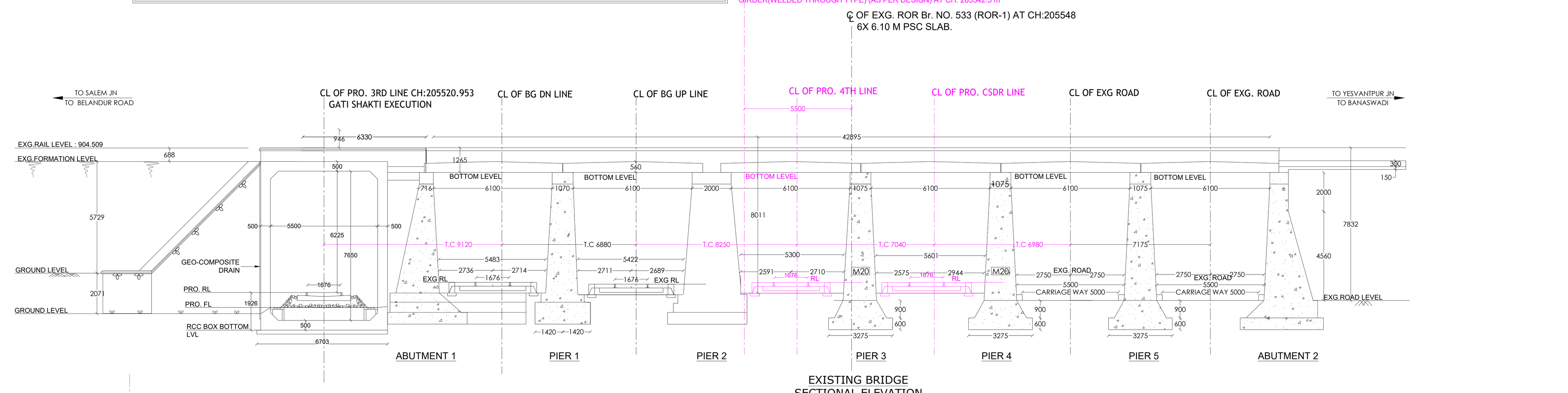
(TENTATIVE DIMENSIONS)



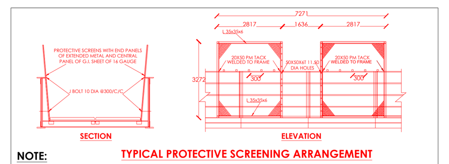
NOTE:
NECESSARY TEMPORARY ENGINEERING INDICATORS VIZ. CAUTION, SPEED AND TERMINATION INDICATOR. WITH RETRO REFLECTIVE TO BE PROVIDED SUITABLY .



NOTE:-
1. PROPOSALS ARE SHOWN IN RED.
2. RAILWAY BOUNDARY DISTANCE ARE WITH RESPECT TO CENTRE LINE OF EXG. TRACK.
3. TRACK IS STRAIGHT ON BRIDGE LOCATION.



EXISTING BRIDGE
SECTIONAL ELEVATION



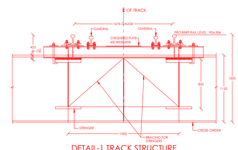
NOTE:
1. CONTINOUS PROTECTIVE SCREEN AS PER RDSO. ETI/C/0068-MOD-I OR WHICHEVER IS LATEST.
2. THE METHOD OF FIXING SHALL BE DECIDED TO SUIT THE LOCAL SITE CONDITION.
3. THE PROTECTIVE SCREEN MAY BE FIXED IN VERTICAL POSITION WHEN THERE IS NO OBSTRUCTION EITHER INSIDE OR OUTSIDE.

DEPTH OF CONSTRUCTION

SR. NO.	TYPE	AS PER DESIGN
1	60 kg/52 kg RAIL HEIGHT IN mm.	172
2	THICKNESS OF GROOVE RUBBER PAD (RAIL PAD) IN mm.	10
3	THICKNESS OF M.S. CANTED BEARING PLATE IN mm.	18
4	DEPTH OF H-BEAM SLEEPER IN mm.	200
5	THICKNESS OF ELECTROMETRIC PAD IN mm.	25
6	OVER ALL DEPTH OF GIRDER FOR 64.0m SPAN AS PER TENTATIVE NON-STANDARD. (CROSS GIRDER) IN mm.	1200
	TOTAL HEIGHT FROM RAIL LEVEL TO BOTTOM OF GIRDER IN mm.	1625

TRACK DETAILS (PRO.BSRP)

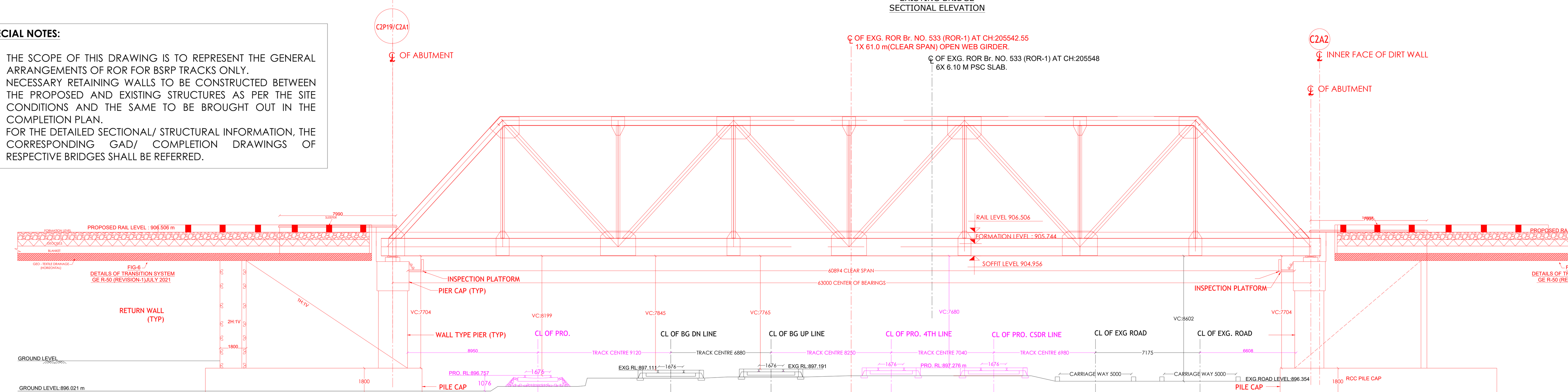
LOADING	: 17 T-AXLE LOAD
ALIGNMENT	: STRAIGHT
GRADE	: LEVEL
RAIL LEVEL	: 906.506 m
FORMATION LEVEL	: 905.744 m



DETAIL-1 TRACK STRUCTURE

SPECIAL NOTES:

1. THE SCOPE OF THIS DRAWING IS TO REPRESENT THE GENERAL ARRANGEMENTS OF ROR FOR BSRP TRACKS ONLY.
2. NECESSARY RETAINING WALLS TO BE CONSTRUCTED BETWEEN THE PROPOSED AND EXISTING STRUCTURES AS PER THE SITE CONDITIONS AND THE SAME TO BE BROUGHT OUT IN THE COMPLETION PLAN.
3. FOR THE DETAILED SECTIONAL/ STRUCTURAL INFORMATION, THE CORRESPONDING GAD/ COMPLETION DRAWINGS OF RESPECTIVE BRIDGES SHALL BE REFERRED.



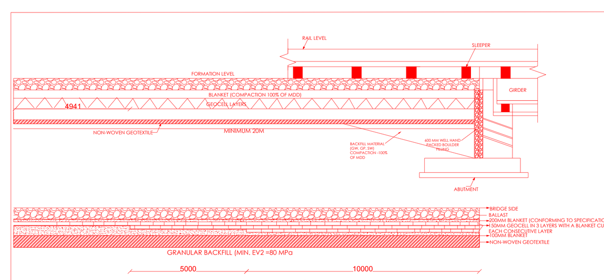


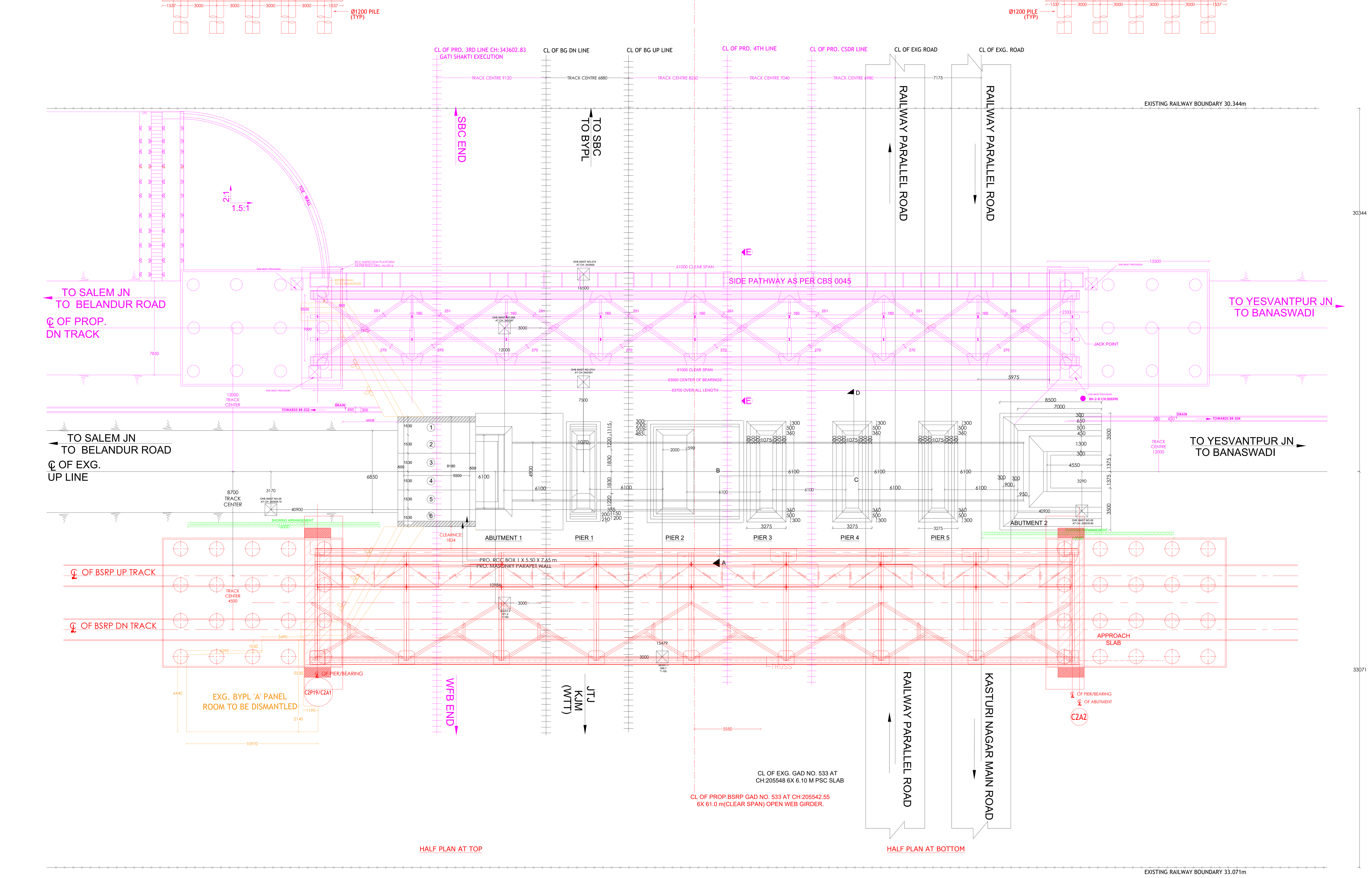
FIG-6
DETAILS OF TRANSITION SYSTEM
GE R-50 (REVISION-2) AUGUST 2024

BORELOG ID (BH-11)

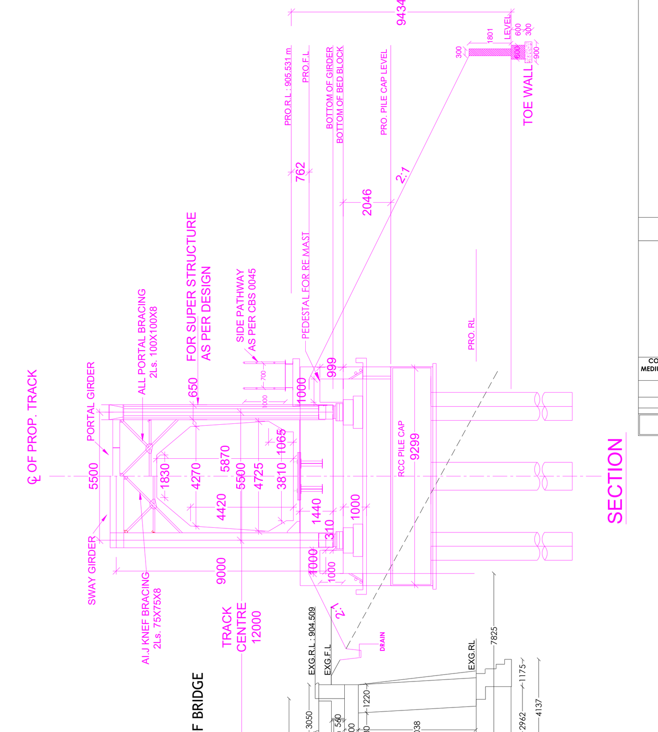
STRATA DESCRIPTION	DEPTH IN METERS	REMARKS BLOW COUNTS (N-VALUE) CR / RQD (%)
GROUND LEVEL: 896.950	0.00	
LOOSE TO MEDIUM DENSE CLAYEY SAND (SC) (892.950)	1.00–4.00	N =9 (3/4/5); N =11 (4/6/5)
STIFF INOGANIC SILT OF MEDIUM PLASTICITY (MI) (892.450)		
VERY STIFF INORGANIC SILT OF HIGH COMPRESSIBILITY (MH) (891.450)	5.00	N =15 (5/7/8)
STIFF TO VERY STIFF INORGANIC SILT OF MEDIUM PLASTICITY (MI) (889.450)	6.00–7.00	N =12 (6/5/7)
MEDIUM DENSE TO DENSE SILTY SAND (SM) (886.450)	8.00–10.00	N =23 (5/9/14); N =41 (13/17/24)
VERY STIFF INORGANIC SILT OF MEDIUM PLASTICITY (MI) (883.450)	11.00–13.00	N =27 (7/12/15); N =26 (8/10/16)
MEDIUM DENSE TO DENSE SILTY SAND (SM) (880.450)	14.00–16.00	N =26 (9/11/15); N =32 (7/13/19)
VERY STIFF INORGANIC SILT OF MEDIUM PLASTICITY (MI) (878.950)	17.00–18.00	N =25 (7/11/14)
MEDIUM DENSE TO VERY DENSE SILTY SAND (SM) (866.950)	18.00–30.00	N =41 (12/18/23); N =29 (9/13/16); N =48 (10/16/32); N =24 (6/9/15); N =63 (15/25/38); R (50 FOR 40mm); R (50 FOR 60mm); R (50 FOR 130mm); R (50 FOR 70mm)
END OF BOREHOLE AT 30.00M		

BORELOG ID (BH-13)

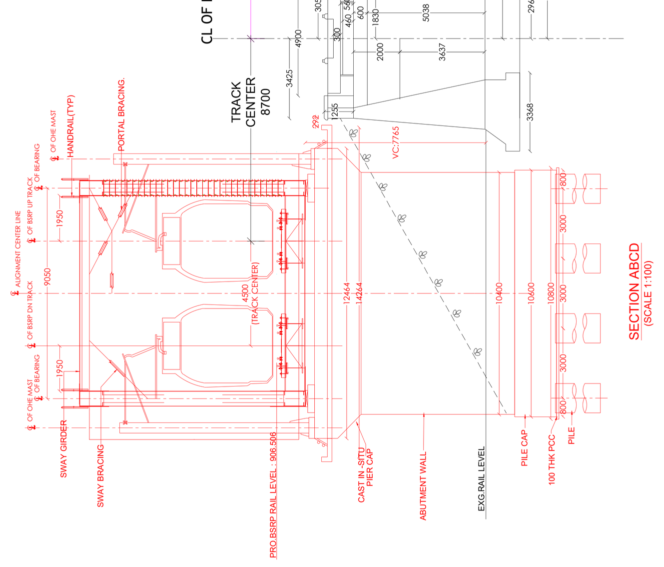
STRATA DESCRIPTION	DEPTH IN METERS	REMARKS BLOW COUNTS (N-VALUE) CR / RQD (%)
GROUND LEVEL: 897.487	0.00	
LOOSE CLAYEY SAND (SC) (894.487)	1.00–3.00	N =5 (2/2/3)
SIFF INOGANIC SILT OF MEDIUM PLASTICITY (MI) (891.987)	4.00–5.00	N =9 (3/4/5); N =10 (3/5/5)
MEDIUM DENCE SILTY SAND (SM) (891.487)	6.00	N =23 (6/13/10)
VERY STIFF INORGANIC SILT OF MEDIUM PLASTICITY (MI) (888.487)	7.00–9.00	N =23 (4/8/15)
DENCE SILTY SAND (SM) (886.987)	10.00	N =46 (5/18/28)
BOULDER (885.487)	11.00–12.00	R (50 FOR 130mm) 6 / NIL
DENCE TO VERY DENCE SILTY SAND (SM) (874.487)	12.00–23.00	N =37 (10/18/19); N =40 (11/18/22); R(40/50 FOR 40mm); R(30/50 FOR 80mm); NIL / NIL; R(50 FOR 140mm) NIL / NIL; R(50 FOR 140mm); NIL / NIL; R(37/50 FOR 50mm) NIL / NIL; R(50 FOR 130mm)
BOULDER (873.487)	24.00	28 / NIL
VERY DENCE SILTY SAND (SM) (868.487)	25.00–29.00	NIL / NIL; R(50 FOR 30mm); R(50 FOR 50mm) NIL / NIL; R(50 FOR 80mm) NIL / NIL
COMPLETELY WEATHERED, IRREGULARLY FRACTURED, MEDIUM TO COARSE GRAINED YELLOWISH BROWN-WHITE GRANULITE (867.487)	30.00	R(50 FOR 90mm) 45 / NIL
END OF BOREHOLE AT 30.00M		



PLAN



SECTION



SECTION ABCD
(SCALE 1:100)

LEGENDS:

—·—·—	COLOUR CODE BLACK	= EXISTING IR BOUNDARY
——	COLOUR CODE BLACK	= EXISTING WORK
——	COLOUR CODE RED	= PROPOSED BSRP WORKS
——	COLOUR CODE YELLOW	= DISMANTLING WORKS
——	COLOUR CODE MAGENTA	= PRO.DOUBLING IR WORKS

SI NO	ALTERATION NO	DESCRIPTION	SIGNATURE OF OFFICER

MODUS OPERENDI(TENTATIVE ONLY):

STAGE I: BEFORE TAKING UP WORKS

1. ENSURE SAFETY FOR RUNNING TRAINS AND IR FORMATION, DULY PROVIDING SAFETY BARRICADES AND WARNING BOARDS AT APPROPRIATE LOCATIONS.
2. IMPOSE SPEED RESTRICTIONS 20 KMPH SPEED AS PER IRPSM, DULY FIXING TEMPORARY SPEED RESTRICTIONS INDICATORS AS PER SKETCH.
3. PROVIDE THE SHORING ARRANGEMENTS, WHEREVER REQUIRED.
4. ENSURE RELOCATING/SHIFTING OF INFRINGING IR OHE MASTS.
5. ENSURE DISMANTLING AND SHIFTING OF EXISTING IR-A-PANEL-BYPL BUILDING FOR HUSSLE FREE WORKING.

STAGE II: FABRICATION OF OWG AND CASTING OF PILE, PILE CAP AND PIERS

6. ENSURE APPROVAL OF GAD AND DETAILED DESIGN AND DRAWINGS FOR SUB-STRUCTURE AND SUPER-STRUCTURE OPEN WEB GIRDER.
7. FABRICATE THE OPEN WEB GIRDER PART BY PART AS PER APPROVED DESIGN AND DRAWINGS.
8. MAKE THE FIRM BASE ON APPROACHES ON ONE SIDE FOR ROR SUPER-STRUCTURE.
9. EXCAVATE THE EARTH TO REQUIRED DEPTH AND DIMENSIONS.
10. CAST THE PILE, PILE CAP AND PIERS AS PER APPROVED DRAWINGS, ENSURE PROPER CURING AND REQUIRED STRENGTH.

STAGE III: LAUCHING OF O.W.G AS PER APPROVED LAUCHING ARRANGEMENT DRAWING

11. PROVIDE FOUNDATIONS FOR LAYING TRACK BEAM ON APPROACH AS WELL AS IN SUPER-STRUCTURE ZONE AS PER THE CONSTRUCTON METHODOLOGY.
12. BRING FIRST PART PF TRUSS AND PLACE THE SAME ON RAILS AND TRACK BEAM.
13. AFTER COMPLETING CONNECTIONS, MOVE THIS PART IN SUPER-STRUCTURE DIRECTION, USING SUITABLE ARRANGEMENT.
14. BRING ANOTHER PART OF TRUSS AND PLACE AND CONNECT IT WITH OTHER PART OF TRUSS ON RAIL AND TRACK BEAMS.
15. MOVE THE COMBINED TRUSS IN SUPER-STRUCTURE DIRECTION.
16. THIS PROCEDURE SHALL BE REPEATED TILL BOTH END OF TRUSS REACHES ON RESPECTIVE BEARING LOCATION.
17. LIFT THE TRUSS USING JACKS PLACED BELOW CROSS GIRDER AT TRUSS END.
18. REMOVE THE TRACK AND TRESTLE ARRANGEMENT BELOW THE TRACK.
19. FIX THE BEARINGS AS PER APPROVED BEARING LAYOUT DRAWING.
20. LOWER THE TRUSS BY RELEASING PRESSURE FROM JACKS.
21. COMPLY THE WORKS IN ALL RESPECTS AND RESTORE NORMAL.

NOTE: THE DETAIL LAUNCHING SCHEME TO BE SUBMITTED FOR THE APPROVAL OF COMPETENT AUTHORITY.

SPECIFICATION:

1. ALL WORKS ARE TO BE CARRIED OUT AS PER THE FOLLOWING
I) INDIAN RAILWAY UNIFIED STANDARD SPECIFICATIONS FOR WORKS AND MATERIALS 2019.
II) IRS CONCRETE BRIDGE CODE 2004 & RELEVANT I.S SPECIFICATIONS.
III) IRS BRIDGE SUB-STRUCTURE CODE,1985(RVSD).
IV) IRS BRIDGE RULES.
2. FOUNDATION :- CEMENT CONCRETE OF GRADE M30 WITH MAX.20 MM SIZE GRADED OF APPROVED QUALITY.
3. SUB STRUCTURE :- MASS CONCRETE USING M30 GRADE USING 20 MM MAX.SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY AND MINIMUM CEMENTITIOUS MATERIAL CONTENT FOR DURABILITY CONSIDERATION SHOULD CONFIRM TO CLAUSE 5.4.5 OF CONCRETE BR.CODE.
4. SUPER STRUCTURE :- OPEN WEB GIRDER AS PER DESIGN.
5. BED BLOCK :- RCC BED BLOCK M:40 GRADE USING 20MM MAX. SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY.
6. COPING :- CC M:25 GRADE USING 20MM MAX. SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY.
7. PITCHING :- DRY STONE PITCHING 300MM THICK OVER 300MM THICK SAND MIXED GRAVEL & 300 MM STONE CHIPS (AS PER PARA 205 OF INDIAN RAILWAY BRIDGE MANUAL ANNEXURE 2/3).
8. LEVELING COURSE :- 150 MM THICK M20 GRADE USING 20 MM MAX. SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY.
9. LOADING STANDARD :- 25 T AXLE LOAD-2008 STANDARD.
10. TOE WALL :- R.R MASONRY IN CEMENT MORTAR MIX WITH C.C M20 MIX IN FOUNDATION.
11. RETURN WALL AS PER DESIGN.
12. GRADE OF STEEL FOR RCC IS FE 500 CONFIRMING TO IS 1786-2008.
13. PROVIDE SKIN REINFORCEMENT OF 10 MM DIA @ 200 MM C/C FOR ABUTMENT,PIER,WING & RETURN WALL.
14. BAR BENDING SHALL CONFORM TO IS 2502.HIGH YIELD STRENGTH DEFORMED BARS OF GRADE FE 500 CONFORMING TO IS:1786 - 2008 SHALL BE USED AS REINFORCEMENT.

REFERENCE:

1. OPEN WEB GIRDER AS PER DESIGN.
2. ABUTMENT, BED BLOCK (WITH PROVISION OF OHE MAST) & PEDESTAL ARE AS PER DESIGN.
3. RETURN WALL AS PER DESIGN.
4. BEARING AS PER DESIGN.
5. EXISTING BRIDGE DETAILS ARE AS PER DRG NO: CN/BNC/BR/247-97/COM.
6. SHORING ARRANGEMENT AS PER DESIGN.
7. RCC INSPECTION PLATFORM AS PER RDSO DRG.NO.CBS/0016.
8. STAINLESS STEEL CHEQUERED PLATES TO BE USED SIDE PATHWAYS ETC. AS PER CBE/SWR LETTER NO. SWR/W.70/POLICY/2022 DATED 04.08.2023.
9. LOAD TEST TO BE CONDUCTED AS PER RDSO REPORT BS -128 (R3)
10. INSTRUMENTATION OF BRIDGE TO BE CONDUCTED AS PER RDSO REPORT BS -106 (R2)
11. SELF LOCKING STEEL NUTS TO BE USED IN HOOK BOLTS AS PER RDSO LR NO.CBS/SELF LOCKING NUTS DT 16.03.2023.

SPECIAL NOTES: ALL THE FOLLOWING SAFETY MEASURES SHALL BE FOLLOWED:-

1. ADEQUATE SAFETY MEASURES FOR RUNNING TRAINS SHALL BE ADOPTED, WHILE EXECUTION OF BRIDGE WORKS BELOW THE TRACK.
2. DURING CONSTRUCTION OF BRIDGE, EXISTING TRACK SHALL BE PROTECTED SUITABLY BY IMPOSING NECESSARY SPEED RESTRICTION BY PROVIDING TEMPORARY ENGINEERING INDICATIONS.
3. DURING THE CONSTRUCTION OF THE PROPOSED BRIDGE, PROPER SAFETY PRECAUTIONS TO BE TAKEN WHILE EXECUTING CLOSE TO THE EXISTING TRACK, BY PROVIDING SAFETY BARRICADING
4. THE GRADUAL RELEASE OF SPEED RESTRICTION SHALL BE AS PER PARA 637 (1) (F) OF IRPWM - 2020.
5. NECESSARY SHORING ARRANGEMENTS IF REQUIRED TO BE MADE TO PROTECT EXISTING BRIDGE STRUCTURE WHEREVER REQUIRED AND TO PROTECTIVE WORKS, RETURN WALLS ETC.
6. JOINT PROCEDURE ORDER ON SAFETY RELATED ISSUES PERTAINING TO WORK SITE IN CONSTRUCTION.
7. PROJECTS (JPO NO. W.339/SAFETY PRECAUTION, DT: 18.02.2011) ISSUED VIDE CTE LR.NO.SWR/W.247/SAFETY AT WORK SPOT DT: 20.06.2017 HAS TO BE STRICTLY FOLLOWED.
8. DURING EXECUTION OF WORK, THE MATERIAL/EQUIPMENT SUCH AS RELEASED MATERIAL ETC. SHOULD NOT INFRINGE THE TRAIN TRAFFIC. ALL SAFETY. MEASURES TO BE TAKEN BY ENGINEER IN CHARGE DURING EXECUTION.
9. SUITABLE SAFETY BARRICADING HAS TO BE PROVIDED WHENEVER WORK IS BEING EXECUTED PARALLEL TO THE RUNNING TRACK.
10. NECESSARY PROTECTIVE ARRANGEMENTS SHALL BE MADE BY KRIDE IN CONSULTATION WITH SBC DIVISION ELECTRICAL TRD/BRANCH TO AVOID ANY ELECTRICAL INDUCTION DURING EXECUTION OF PROPOSED WORK.
11. DISMANTLING OF EXISTING PROTECTIVE WORKS, SUCH AS PITCHING. RETURN WALL, ETC TO BE DONE AS PER SITE CONDITION DULY TAKING ALL THE SAFETY PRECAUTIONS AND INDICATING TO GC/K-RIDE/IR AUTHORITIES, WELL IN ADVANCE.

SPECIAL NOTES FOR 25kv AC TRACTION SYSTEM:-

1. NECESSARY PROTECTIVE ARRANGEMENT SHALL BE MADE BY CONTRACTOR IN CONSULTATION WITH KRIDE AND GC TO AVOID ANY ELECTRICAL INDUCTION DURING EXECUTION OF WORK.
2. DURING ANY WORK INVOLVING LESS THAN 2.0M WORKING CLEARANCE FROM OHE, THE WORK SHALL BE CARRIED OUT ONLY DURING POWER BLOCK CONDITION BY OBTAINING PERMISSION TO WORK FROM AUTHORIZED TRD BRANCH OFFICIALS.
3. OHE TRACTION CONDUCTORS SHALL BE PROFILED TO GET MAXIMUM CONTACT WIRE HEIGHT WITH NORMAL ELECTRICAL CLEARANCE AFTER COMPLETION OF WORK BY OL/TRD,
4. ALL OHE PROFILING WORKS, GIRDERS ERECTION, WILL BE DONE UNDER THE SUPERVISION OF SSE/OL/TRD UNDER POWER BLOCK CONDITIONS.

Sr.DSTE-SBC-NOTES :

1. JOINT INSPECTION MAY BE CARRIED OUT TO IDENTIFY CABLES BEFORE THE COMMENCEMENT OF EARTH WORKS.
2. SHIFTING OF OFC, QUAD CABLES PASSING THROUGH THE PROPOSED ALIGNMENT SHALL BE CARRIED OUT. IF CABLES ARE EXPOSED, SECURE THE CABLES PROPERLY TO AVOID DAMAGES.

JUSTIFICATION FOR PILE FOUNDATION :

VIDE KRIDE LETTER NO: KRIDE/BSRP/C-2/GAD/139, DT:06.04.2026 JUSTIFICATION REGARDING PILE FOUNDATION HAS BEEN GIVEN(COPY ENCLOSED).

NOTES:

1. ALL LEVELS ARE W.R.T TO MSL. ALL DIMENSIONS ARE IN MM & REDUCED LEVELS ARE SHOWN IN METERS (W.R.T.MSL) UNLESS STATED OTHERWISE.
2. DO NOT SCALE THE DRAWINGS. FOLLOW FIGURED DIMENSIONS ONLY.
3. THE TYPE & DEPTH OF FOUNDATION SHOWN IN THE GAD ARE INDICATIVE ONLY. ACTUAL TYPE & DEPTH OF FOUNDATION WILL BE DECIDED BY ENGINEER IN CHARGE BASED ON THE SOIL ENCOUNTERED AT SITE DURING EXECUTION & AS PER DESIGN.
4. 50 mm DIA PVC PIPES TO BE PROVIDED ON BOTH SIDE OF DECK SLAB & BALLAST RETAINERS.
5. EXPOSURE CONDITION IS MODERATE.
6. PROPOSED BRIDGE IS ON DOWN LINE ON THE EXG. BRIDGE.
7. DETAILS OF OLD BRIDGE (EXG) AS PER COMPLETION PLAN DETAILS PROVIDED.
8. DISMANTLING OF EXISTING PROTECTIVE/PITCHING IF ANY SHOULD BE DONE AS PER SITE CONDITIONS.
9. THE ENVIRONMENT SHALL BE CONSIDERED "MODERATE" AND THE BRIDGE IS LOCATE IN SEISMIC ZONE-II.
10. BACKFILL SHOULD BE AS PER THE CLAUSE 7.5 OF IRS BRIDGE SUB STRUCUTURE & FOUNDATION CODE AND RDSO DRG NO.GE/SD/0003/REV1/2002.
11. SEPARATE STRUCTURAL DRAWING SHOULD BE REFERRED FOR EXECUTION PURPOSE.
12. CONCRETE SHALL BE MECHANICALLY MIXED,VIBRATED & THOROUGHLY CURED.
13. SUITABLE PROTECTION WORKS MAY BE PROVIDED AS PER REQUIREMENT OF THE SITE CONDITION BY ENGINEER-IN-CHARGE.
14. 150 MM THICK M20 GRADE USING 20 MM MAX. SIZE GRADED HARD STONE AGGREGATE OF APPROVED QUALITY.
15. GUARD RAILS ARE TO BE PROVIDED FOR THE ENTIRE LENGTH OVER BRIDGES.
16. A. ON THE TOP SURFACE OF CONCRETE AT THE END OF EACH DAYS WORK DEPRESSION IN ZIG-ZAG PATTERN TO BE FORMED BY EMBEDDING WOODEN SCANTLINGS OR SLEEPERS TO FORM KEY FOR ADEQUATE BOND FOR THE NEXT DAYS CONCRETING.
B. ON THE NEXT WORKING DAY ALL THE LAITANCE SHALL BE REMOVED BY SCRUBBING THE SURFACE WITH WIRE BRUSH WITHOUT DISLODGING THE PARTICLES OF AGGREGATE,THE SURFACE SHALL BE THOROUGHLY WETTED & CAN BE COATED WITH NEAT CEMENT GROUT BEFORE FIRST LAYER OF CONCRETE IS LAID.
17. GRADE FOR CONTROLLED CONCRETE FOR VARIOUS COMPONENTS OF BRIDGE:

No.	DESCRIPTION OF COMPONENTS	GRADE	AGG*
i.	BALLAST RETAINERS	M35	20
ii.	BED BLOCK, PEDESTALS, DIRT WALLS	M40	20
iii.	ABUTMENTS	M35/40	20
iv.	RETURN WALL	M35	20
v.	DIRT WALLS	M30	20
vi.	RCC PILE AND PILE CAP	M30	20

18. ALL STRUCTURAL DETAILS OF ABUTMENT & FOUNDATION SHOWN ARE TENTATIVE. ACTUAL DETAILS WILL BE BASED ON SEPARATE APPROVED STRUCTURAL DRAWINGS/ DESIGNS.
19. NECESSARY SHORING ARRANGEMENTS TO BE DONE AS PER THE SITE CONDITIONS FOR THE PROTECTION OF EXISTING BRIDGE.
20. CONTROLLED CONCRETE AS PER DESIGN MIX TO BE USED AND MIXED BY WEIGH BATCHING.
21. PROPER DRAINAGE ARRANGEMENTS SHOULD BE PROVIDED TO DRAIN THE WATER COLLECTED BETWEEN THE EXISTING & THE PROPOSED BRIDGE.
22. STRUCTURAL DIMENSIONS & BASE PRESSURE SHOWN IN THIS GAD ARE TENTATIVE.WILL BE BASED ON ACTUAL DESIGN.
23. IT IS TO BE ENSURED BY AGM/CIVIL/PROJECTS BEFORE EXECUTION THAT THE MAXIMUM BASE PRESSURE AT FOUNDATION LEVEL FOR EACH ELEMENT OF BRIDGE IS LESS THAN THE SAFE BEARING CAPACITY OF SOIL AT THAT LOCATION.
24. SUITABLE SPEED RESTRICTIONS MAY BE IMPOSED BASED ON SITE CONDITIONS WHENEVER & WHEREVER IS NEEDED TO ENSURE SAFETY OF RUNNING LINE.
25. THE INSTRUCTIONS CONVEYED VIDE PCE CIRCULAR NO:01 / 2015 DT:09-03-15 WILL BE STRICTLY FOLLOWED WHILE EXECUTION OF THE WORK.
26. FEASIBILITY OF THIS STRUCTURE AT SITE SHOULD BE ENSURED BY AGM/CIVIL/PROJECTS.
27. JOINT PROCEDURE ORDER ON SAFETY RELATED ISSUES PERTAINING TO WORK SITE IN CONSTRUCTION PROJECTS (JPO NO .W.339/SAFETY PRECAUTIONS,DT:18-02-2011) ISSUED BY CTE LETTER NO. SWR/W.247/SAFETY AT WORKSPOT DT:20-06-2017 IS TO BE STRICTLY FOLLOWED.
28. THE FOUNDATION TO BE KEYED TO A MINIMUM DEPTH OF 0.30m IN CASE OF HARD ROCK & 1.50m IN CASE OF SOFT ROCK AS PER CLAUSE 403 OF IRBM.
29. ALL PILE WORKS SHALL BE EXECUTED AS PER IS 2911-PART-I/SECII/1978 FOR MARKING DANGER LEVEL FOR BRIDGE REFER PARA 703-4D OF BRIDGE MANUAL
30. JOINT PROCEDURE ORDER FOR PROVISION PROTECTIVE SCREEN OVER 25KV AC ELECTRIFIED SECTIONS CIRCULATED VIDE LETTER NO. SWR/W 352/BRIDGE-DESIGN AND DRAWING/VOL III DATED:30.03.2022, TO BE STRICTLY FOLLOWED FURTHER STANDARD RDSO DRAWING. RDSO/ETI/C/0068 SHALL BE ADOPTED FOR PROTECTIVE SCREEN AT ROR.
31. ALL HSFG BOLTS SHALL CONFIRM TO DRAWING NO. RDSO/B-11760/R1.
32. THE INSTRUCTIONS CONVEYED VIDE PCE CIRCULAR NO: 01/2015 DT:09-03-15, REGARDING 'WORK DISCIPLINE AT SITE' AND AS PER PCE CIRCULAR NO 01/2021 DATED: 22.06.2021 REGARDING 'ENSURING QUALITY OF WORK AND MAINTAINING SITE RECORDS IN WORKS CONTRACTS TO BE STRICTLY FOLLOWED.
33. DURING TENDERING PROCESS FOR FABRICATION OF STEEL GIRDER, GUIDELINES/PROCEDURE ISSUED BY RDSO LETTER NO.CBS/G/REG, DATED 24.05.2019 SHALL BE STRICTLY FOLLOWED
34. FOR SEQUENCE OF ANTI-CORROSIVE/PAINTING SCHEME TO THE STEEL GIRDERS OF RAILWAY BRIDGES, ROB/RUBS & FOBS, THE INSTRUCTIONS CONVEYED VIDE CBE/SWR LETTER NO.SWR/W.70/BRIDGE/POLICY, DATED 23.08.2019 SHALL BE STRICTLY FOLLOWED (IE, METALIZING WITH ALUMINUM AVERAGE THICKNESS 200 MICRONS FOLLOWED BY EPOXY PAINTING).
35. FOR ALL CONCRETE WORKS, RMC SHALL BE USED.
36. PROCUREMENT/FABRICATION OF STEEL GIRDERS SHALL BE DONE THROUGH RDSO APPROVED VENDORS/FABRICATORS.
37. PROTECTIVE SCREEN OVER THE TRACK PORTION MAY ALSO BE INCORPORATED AS THE SECTION IS ELECTRIFIED.
38. PROCUREMENT/FABRICATION OF STEEL GIRDERS SHALL BE DONE THROUGH RDSO APPROVED VENDORS/FABRICATORS.
39. PILE INTEGRITY TEST TO BE DONE COMPULSORY FROM EXPERT AGENCIES AND PROPER RECORD OF RESULTS OF THE SAME TO BE FURNISHED HQ FOR RECORD.
40. GAP OF GIRDER TO BE PREPARED AND APPROVED AS PER RDSO LR NO. CBS/Bridge Insp/ Genl Matters DATED 01.03.2023.
41. GAP OF BEARINGS SHALL BE PREPARED AND APPROVED BY COMPETENT AUTHORITY.
42. LOAD TEST TO BE CONDUCTED AS PER RAILWAY BOARD GUIDELINES.
43. INSTRUMENTATION OF BRIDGE TO BE CONDUCTED AS PER RDSO REPORT BS 106 (R2).
44. FOR DETAIL LAUNCHING SCHEME, SEPARATE TAD SHALL BE REFERRED.
45. PROVISION SHALL BE MADE FOR OHE MAST (INCLUDING SPARE MAST) ON THE ABUTMENT OR ON THE SQUARE RETURNS. THE DESIGN OF THE STRUCTURE SHALL BE MADE ACCORDINGLY.
46. RDSO GUIDELINES ON INTEGRITY TEST OF PILES (bs-41 REVISED) VIDE RDSO LETTER NO. CBS/DWF DATED 29.11.2023 TO BE FOLLOWED.
47. PILE LOAD TEST SHALL BE CONDUCTED AS PER RELEVANT CODAL PROVISIONS.
48. DURING THE DESIGN OF FOUNDATION, THE EFFECT OF LOAD EXERTED FROM THE EXISTING FOUNDATION AND TRACKS TO BE CONSIDERED.
49. THE BED BLOCK OF ABUTMENTS SHALL BE DESIGNED DULY TAKING OHE MAST INTO CONSIDERATION.
50. THAT PROPER RETAINING WALLS TO BE CONSTRUCTED CONNECTING BOTH THE PROPOSED AND EXISTING ABUTMENTS.

CERTIFICATE FOR SHORING

THIS IS TO CERTIFY THAT THE SHORING IS PROVIDED FOR THE PROTECTION OF EXISTING BANK AND TRACK FOR A DEPTH OF 2m, LENGTH UPTO 16m & HEIGHT OF 6.00 m FROM EXISTING GROUND LEVEL.

Sd/- Signed copy attached in attachments
GENERAL CONSULTANT

GIRISH MASANAYAKANAHALLY RUDRAPPA
Digitally Signed By GIRISH MASANAYAKANAHALLY RUDRAPPA
Date:2026.01.01 17:38:45 +05'30'
GM/C-2/K-RIDE

BRIDGE STRENGTH CERTIFICATE

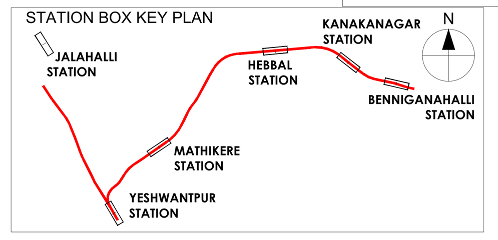
CERTIFIED THAT THE PRO OPEN WEB GIRDER BRIDGE AS PER DESIGN TO BE CONSTRUCTED IS OF SUCH DESIGN, DIMENSIONS AND CONSTRUCTIONS AS WILL ENABLE IT TO CARRY THE DEAD LOAD OF THE STRUCTURE ITSELF (INCLUDING P-WAY COMPLETE) AND IN ADDITION TO THE EQUIVALENT OF 17T - 2008 LOADING PRESCRIBED IN THE BRIDGE RULES CHAPTER VII OF THE RULES FOR THE OPENING OF RAILWAYS AT FULL SPEED.

ALSO CERTIFIED THAT THE HEAVIEST LOADS WHICH THE BRIDGE WILL HAVE TO CARRY WILL NOT BE IN EXCESS OF THE ABOVE STANDARDS OF LOADING AT THE STIPULATED SPEED AND WILL NOT CAUSE ANY STRESS IN ANY MEMBERS OR PORTION OF THE STRUCTURE IN EXCESS OF MAXIMUM PERMISSIBLE STRESSES LAID DOWN IN THE INDIAN RAILWAY STANDARD CODE OF PRACTICES.

Sd/- Signed copy attached in attachments
GENERAL CONSULTANT

GIRISH MASANAYAKANAHALLY RUDRAPPA
Digitally Signed By GIRISH MASANAYAKANAHALLY RUDRAPPA
Date:2026.01.01 17:39:10 +05'30'
GM/C-2/K-RIDE

STATION BOX KEY PLAN



LOADING STANDARD

A) PRO.BRIDGE:25T-AXLE LOAD 2008 STD
B) EXG.BRIDGE:MBG.-1987 LOADING
C) PRO.BRIDGE:17T-AXLE LOAD

HQ/SWR/UBL		
SSE/DRG/BR/HQ	VINUT MANAGULI	Digitally signed by VINUT MANAGULI
Dy.CE/BR/HQ	DEBADWAR VIPUL ULHAS	Digitally signed by DEBADWAR VIPUL ULHAS Date: 2026.06.09 11:49:56 +05'30'
CBE/SWR	C M RANGANATH	Digitally signed by C M RANGANATH Date: 2026.06.09 11:59:43 +05'30'

SBC DIVISION	
Sr.DEN/SOUTH/SBC	VIKRAM GAHANOLIYA Digitally Signed By VIKRAM GAHANOLIYA Date:2026.03.26 17:34:07 +05'30'
Sr.DEN/Co-Ord/SBC	RAJEEV SHARMA Digitally Signed By RAJEEV SHARMA Date:2026.03.26 17:55:36 +05'30'
Sr.DEE/TRD/SBC	SURENDRANATH VADDE Digitally Signed By SURENDRANATH VADDE Date:2026.03.30 13:03:49 +05'30'
Sr. DSTE/SBC	E RAMACHANDAR REDDY Digitally Signed By E RAMACHANDAR REDDY Date:2026.03.31 16:42:27 +05'30'
ADRM/G/SBC	PRAVEEN KATARAKI Digitally Signed By PRAVEEN KATARAKI Date:2026.04.02 11:03:08 +05'30'
DRM/SBC	ASHUTOSH KUMAR SINGH Digitally Signed By ASHUTOSH KUMAR SINGH Date:2026.04.10 13:30:20 +05'30'

GC BSRP	
PE/GC FOR BSRP	Sd/- Signed copy attached in attachments
PD/GC FOR BSRP	Sd/- Signed copy attached in attachments

K RIDE — RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

MANAGER/CIVIL /PLANNING	BABITHA ANTONY DIAS	BABITHA ANTONY DIAS Digitally Signed By BABITHA ANTONY DIAS Date:2026.01.01 17:35:46 +05'30'
GENERAL MANAGER/ CIVIL/C-2	M R GIRISH	GIRISH MASANAYAKANAHALLY RUDRAPPA Digitally Signed By GIRISH MASANAYAKANAHALLY RUDRAPPA Date:2026.01.01 17:39:49 +05'30'
GM/DESIGN/CIVIL	NARENDRA BANGALORE SHIVANATH	NARENDRA BANGALORE SHIVANATH Digitally Signed By NARENDRA BANGALORE SHIVANATH Date:2026.01.02 10:46:35 +05'30'
GM/ELE (I/C) KRIDE	KRISHTA NAIK NENAVATH	NENAVATH KRISHTA NAIK Digitally Signed By NENAVATH KRISHTA NAIK Date:2026.01.01 18:03:45 +05'30'
GM/S&T(I/C) K-RIDE	M R UMESH	MAHADEVAPURA RAMARAO UMESH Digitally Signed By MAHADEVAPURA RAMARAO UMESH Date:2026.01.02 11:25:34 +05'30'
DIRECTOR/ PROJECT & PLANNING	RAJESH KUMAR SINGH	RAJESH KUMAR SINGH Digitally Signed By RAJESH KUMAR SINGH Date:2026.01.02 12:08:38 +05'30'

GENERAL CONSULTANTS:
EGIS-AECOM-WSP

SOUTH WESTERN RAILWAY

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

AUTHORITY OF WORK :- AS PER BSRP DFSR

THE RAILWAY BOARD SANCTION FOR BENGALURU SUBURBAN TRANSPORT PROJECT (148.17 kms) VIDE LETTER NO:2019/JV CELL/KRIDE/BSTP/EBR/07 DATED:21.10.2020.

GENERAL ARRANGEMENT DRAWING

BENGALURU SUBURBAN RAILWAY PROJECT(BSRP) CORRIDOR-2
BETWEEN STATIONS BENNIGANAHALLI AND CHIKKABANAVARA

PROPOSED CONSTRUCTION OF MAJOR BRIDGE (ROR-1) 533 AS 1 X 61.0 M (CLEAR SPAN) OPEN WEB GIRDER AT CH: -0+110.550 AS A PART OF BSRP-C-2 SECTION ADJACENT TO EXG. BRIDGE OF 6 X 6.10 M PSC SLAB AT CH: 205548 BETWEEN BAIYYAPANAHALLI 'A' PANEL AND BAND STATIONS

KRIDE.DRG.NO: KRIDE/BSRP/C-2/BR/059/2025

SCALE - 1 : 100
(UNLESS SPECIFIED OTHERWISE)

HQ.DRG.NO:SWR/2026/GAD-70/BR NO 533 (ROR-1)/BSRP C-2/SA-BYPL/KRIDE