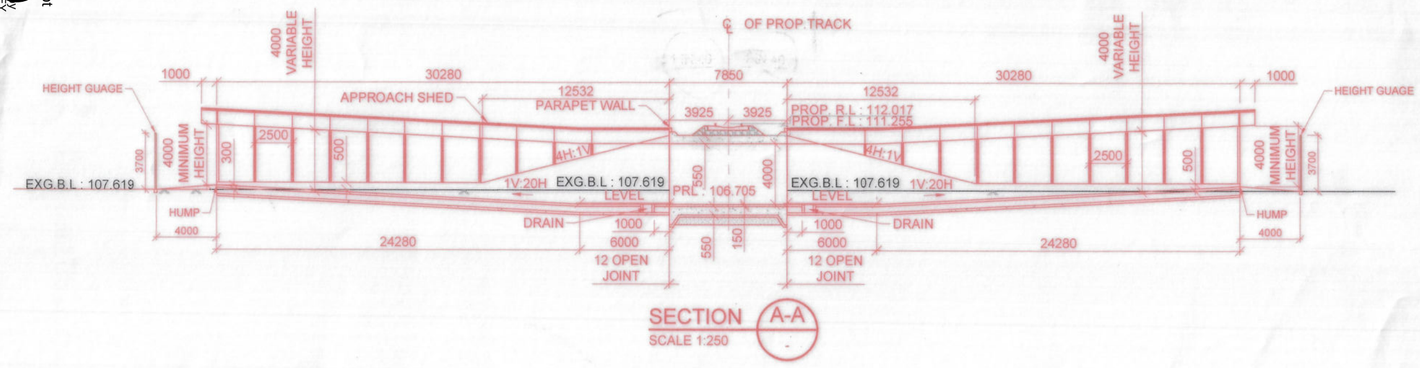
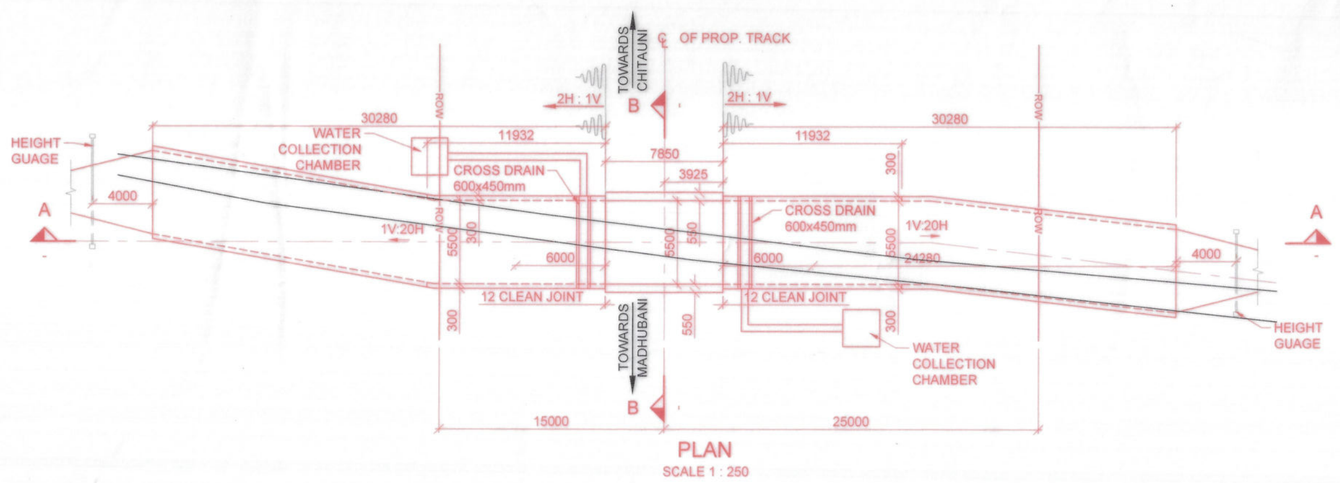
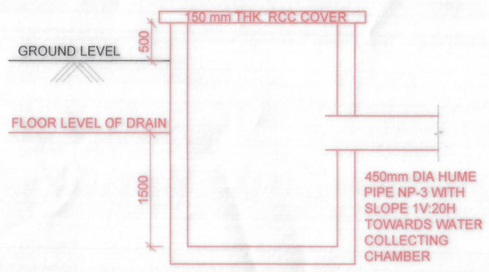
Signature Not Verified
Digitally signed by RANJEET KUMAR SINGH
Date: 2025.06.07 17:08:21 +05'30'
Reason: SSE/DRG./CON/CPR
Location: HQ, NEW DELHI



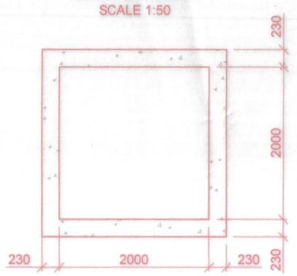
SECTION A-A
SCALE 1:250



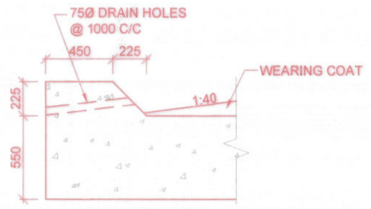
PLAN
SCALE 1 : 250



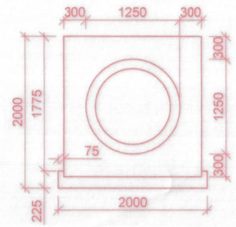
ELEVATION
SCALE 1:50



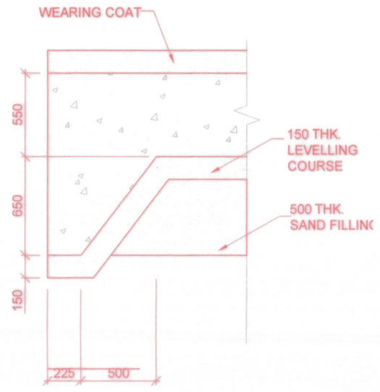
PLAN
DETAILS OF WATER COLLECTION CHAMBER
SCALE 1:50



(SCALE 1:25)



TYPICAL SECTION OF CROSS HUME PIPE DRAIN IN APPROACH ROAD OF LHS WORK
SCALE 1:50



SHEAR KEY
(SCALE 1:25)

AUTHORITY OF WORK
PINK BOOK- 2024-25
PAGE NO.-4:2:1
ITEM NO. - 32

LEGEND

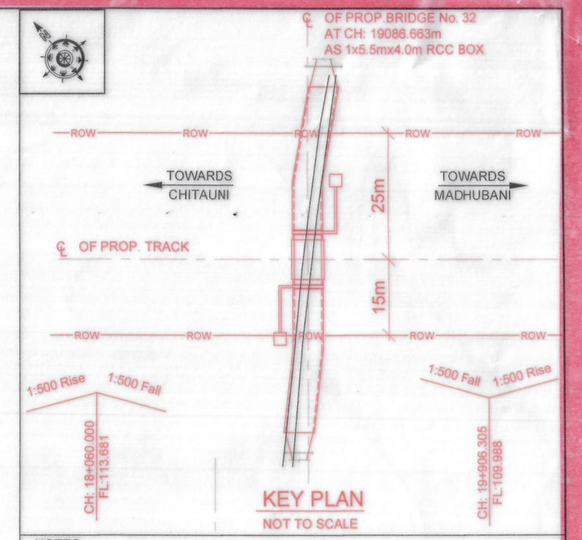
F.L	FORMATION LEVEL
R.L	RAIL LEVEL
B.L	BED LEVEL
PROP.	PROPOSED
THK.	THICKNESS
CH.	CHAINAGE
PCC	PLAIN CEMENT CONCRETE
RCC	REINFORCED CEMENT CONCRETE
BR.	BRIDGE
BOF	BOTTOM OF FOUNDATION
P.R.L	PROPOSED ROAD LEVEL
EXG.	EXISTING

CONSTRUCTION DEPTH

1) RAIL (60kg)	172 mm
2) RUBBER PAD	10 mm
3) WIDER PSC SLEEPER HEIGHT AT RAIL SEAT	230 mm
4) MINIMUM BALLAST THK.	350 mm
TOTAL	762 mm

COLOR CODE LEGEND

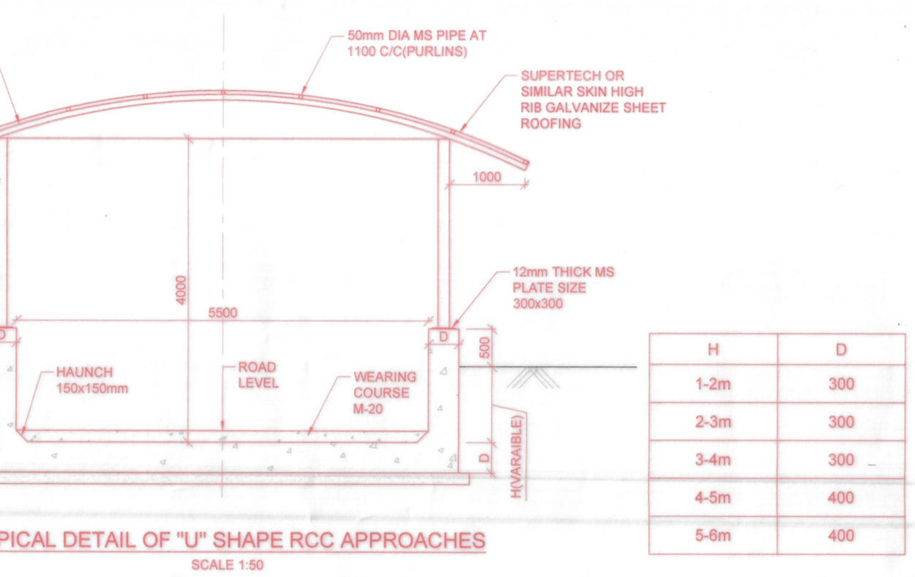
RED	-	PROPOSED
CONTINUOUS	-	VISIBLE
DOTTED	-	INVISIBLE
BLACK	-	EXISTING



KEY PLAN
NOT TO SCALE

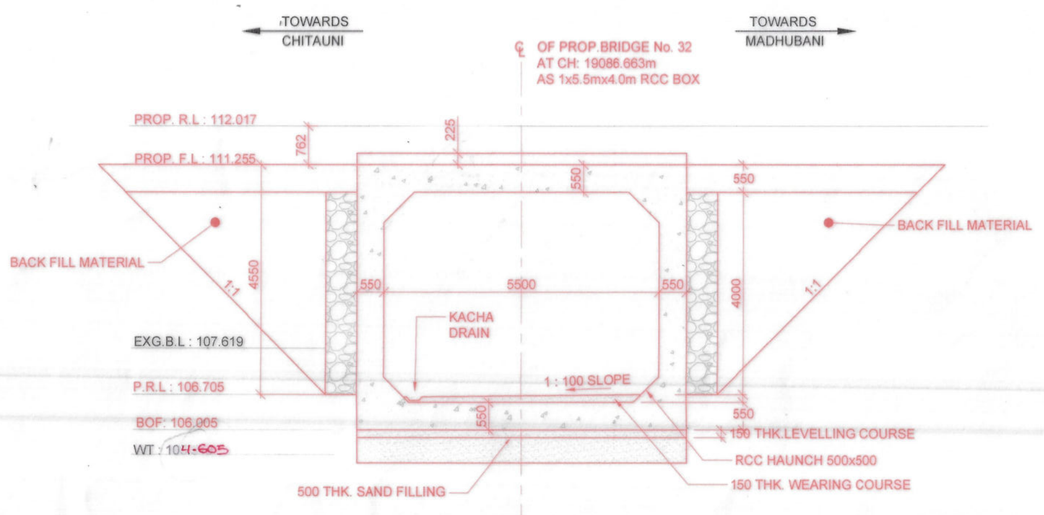
NOTES:

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS UNLESS OTHERWISE MENTIONED.
2. DIMENSIONS ARE NOT TO BE SCALED. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. ALL REINFORCEMENT SHALL BE HIGH YIELD STRENGTH DEFORMED BARS (GRADE Fe 415) CONFORMING TO IS: 1786.
4. MINIMUM LAP LENGTH REQUIREMENT FOR M-35 SHALL BE 48 TIMES AS PER IS 456
5. THE BRIDGE IS LOCATED IN SEISMIC ZONE IV.
6. ENSURE PROPER COMPACTION OF SOIL BEHIND RETAINING WALLS.
7. BEHIND RCC BOX WELL HAND PACKED BOULDERS/COBBLES TO A THICKNESS NOT LESS THAN 600MM WITH SMALLER SIZE TOWARD, SHELL BE PROVIDED AS PER DRAWING & AS PER CLAUSE 7.5 OF IRC GUIDELINES FOR STRUCTURE AND FOUNDATION CODE.
8. MAXIMUM DESIGN PRESSURE ON FOUNDATION CONCRETE SHALL BE 12.14 T/M².
9. FOR REINFORCEMENT DETAIL OF RCC BOX SEE DRAWING NUMBER RS/D/B-10152/R AND RS/D/B-10152/1R.
10. RCC BOX WITH KEY CONSTRUCTION SHALL BE AS PER DRAWING NUMBERS RS/D/B-10152/R AND RS/D/B-10152/R.
11. EPOXY GROUTING WITH GI SHEET ON BOTTOM OF JOINTS TO BE PROVIDED TO PREVENT ANY LEAKAGES AT JOINT.
12. SUITABLE GRANULAR MATERIALS TO BE PROVIDED BELOW RCC BOX TO IMPROVE BEARING CAPACITY OF SOIL, IF REQUIRED.
13. FOR RCC WORK DESIGN MIXED M35 WILL BE USED EXPECT UNLESS OTHERWISE SPECIFIED.
14. WATERPROOFING COMPOUND MIX WITH CONCRETE FOR WATERPROOFING.
15. ON BOTH APPROACHES SHED WILL BE AS PER APPROVED CBE DRAWING NO.B/LHS/PBE-SZP/117/06-19.
16. BEHIND RCC BOX WELL HAND PACKED BOULDERS/COBBLES TO A THICKNESS NOT LESS THEN 600MM WITH SMALLER SIZE TOWARDS BACK FILL, SHALL BE PROVIDED AS PER DRAWING & AS PER CLAUSE 7.5 OF IRC BRIDGE SUB STRUCTURE & FOUNDATION CODE.
17. TOP OF RETAINING WALL SHALL BE KEPT MINIMUM 500 MM ABOVE THE EXISTING GROUND LEVEL AT ALL LOCATIONS IN APPROACH.
18. BEFORE EXECUTION OF WORK FEASIBILITY WILL BE CHECKED BY SITE ENGINEER.
19. LAYOUT SHOULD BE CHECKED BY AXEN/XEN/CON & ALL REFERENCE, PILLARS & LINE SHOULD BE KEPT INTACT TILL THE ENTIRE WORK IS COMPLETED.
20. HEIGHT GAUGE, SPEED BREAKER WARNING BOARD ETC SHOULD BE PROVIDED ON BOTH END OF THE SUBWAY.
21. RCC WATER COLLECTION CHAMBER FOR THE RAINWATER, INFILTRATING INTO THE APPROACH ROAD AND LHS SHOULD BE CAST MONOLITHICALLY WITH RCC FLOOR AND WALL SO THAT NO INGRESS OF GROUND WATER IN IT.
22. TYPICAL PLAN FOR HUME PIPE CULVERT HAS BEEN SHOWN IN THE DRAWING FOR CONSTRUCTION AT APPROACHES IF REQUIRED.
23. AS THE GROUND WATER LEVEL IS HIGH ALL THE NECESSARY PRECAUTIONS TO BE TAKEN TO PROTECT THE LHS FROM WATER LOGGING ETC.
24. RECOMMENDATION GIVEN IN RLY BD'S LETTER NO. 2017/CE-IV/LHS/88DT 22/04/2020 SHOULD BE FOLLOWED AS PER SITE CONDITION.
25. LAND WILL BE ACQUIRED AS PER SITE CONDITION.
26. U-TYPE RETURN WALL AS PER APPROVED CBE DRG. NO. B/LHS/PBE-SZP/117/06-19.
27. TYPE OF ROAD IS VILLAGE ROAD.
28. SHARP CURVE IN THE APPROACH ROAD TO BE AVOIDED.
29. HEIGHT GAUGE AS PER RDSO DRG. RDSO/M-0001.
30. SOIL BEARING CAPACITY AFTER STRENGTHENING OF SOIL AND CONFIRMED BY PLATE LOAD TEST SHOULD BE MENTION IN COMPLETION PLAN.
31. HUMP AND STEEL GRATING DRAIN COVER AS PER DRAWING NO. B-10159.



TYPICAL DETAIL OF "U" SHAPE RCC APPROACHES
SCALE 1:50

H	D
1-2m	300
2-3m	300
3-4m	300
4-5m	400
5-6m	400



SECTION B-B
SCALE 1:75

BOREHOLE PROFILE
SECTION: CHITAUNI TO MADHUBANI
Bore Hole Terminated at : 10.45M.

DEPTH (M)		SPT N-VALUE	DESCRIPTION OF SOIL	IS CLASSIFICATION
0.00	0.50	--	SM	LOOSE TO MEDIUM DENSE LITE GRAY SILTY SAND (SM)
0.50	0.95	7		
1.50	1.95	12		
3.00	3.45	15		
4.50	4.95	16	SP	MEDIUM DENSE LITE GRAY COARSE GRAINED SAND (SP)
6.00	6.45	16		
7.50	7.95	17		
9.00	9.45	18		
10.00	10.45	19		

RL=106.574
FL=105.824
SBC=36.29 t/m² > 12.14 t/m² (safe)

BRIDGE NO.: 32
BOREHOLE NO.: 01

EXG.B.L : 107.619 — 1V:20H — PRO. ROAD — EXG.B.L : 107.619 — 1V:20H — EXG.B.L : 107.619

	4000	24280		6000	12	7850	12	6000		24280		4000
PRO. ROAD LEVEL (M)	107.619	107.919	107.708	107.458	107.208	106.958	106.705	106.705	106.705	106.705	106.705	106.958	107.208	107.458	107.708	107.919	107.619
GROUND LEVEL (M)	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619	107.619
CHAINAGE (M)	38.217	34.217	30.000	25.000	20.000	15.000	9.937	3.925	0.000	3.925	9.937	15.000	20.000	25.000	30.000	34.217	38.217

L-SECTION CONNECTING EXT. ROAD/GROUND
SCALE 1:125

S.NO.	BR.NO.	CHAINAGE	SIZE OF STRUCTURE NO.XSPAN (M)XHT.(M)	SKEW ANGLE DEGREE	R.L RAIL LEVEL	F.L FORMATION LEVEL	G.L GROUNDLEVEL /EXISTING ROAD LEVEL	P.R.L PROP. ROAD LEVEL	F.L FOUNDING LEVEL
1.	32	19086.663	1X5.5X4.0	0°	112.017	111.255	107.619	106.705	106.005

FOR EPC TENDER ONLY

LOADING STANDARD
25T-AXLE LOAD-2008

		CE / CON / I/GKP	(SANJAY KANOJIA)
DY. CE / CON /BSB	(PANKAJ RANDEY)	DY. CE / CON. / P&D	(SHAILENDRA SINGH)
XEN / CON / GKP.	(S.K.SINGH)	XEN / C / DESIGN	(R.K.SINGH)

. CONST. & HQ. OFFICER'S SIGNATURE

CLIENT : NORTH EASTERN RAILWAY

PROJECT : CHITAUNI-TAMKUHI ROAD NEW LINE PART-1

TITLE : GENERAL ARRANGEMENT DRAWING FOR PROPOSED BR. NO. 32 (1X5.5MX4.0M) (RUB) KM 19/0-1

BETWEEN STATION :-CHITAUNI-MADHUBANI | KM : 19/0-1 CH:- 19086.663M

TYPE OF MAP : GENERAL ARRANGEMENT DRAWING

FILE NO. AAA/2644/STR/BR.NO. 32/GAD/001

CONSULTANT aarvee associates architects engineers & consultants pvt. ltd.

CE/CON./ Plan No. B/RUB / CTE-TOI / 77 / 06 - 2025 | SCALE AS SHOWN

Date: 23/06/2025 | SHEET :

(G.K.MISHRA) SSE/W/CON/GKP	RANJEET KUMAR SINGH (R.K.SINGH) SSE/DRG./CON/CPR	JE/DES/CON/GKP	(BILAL AHMAD) SSE/DESI/CON/GKP	DRAWN	CHK. BY