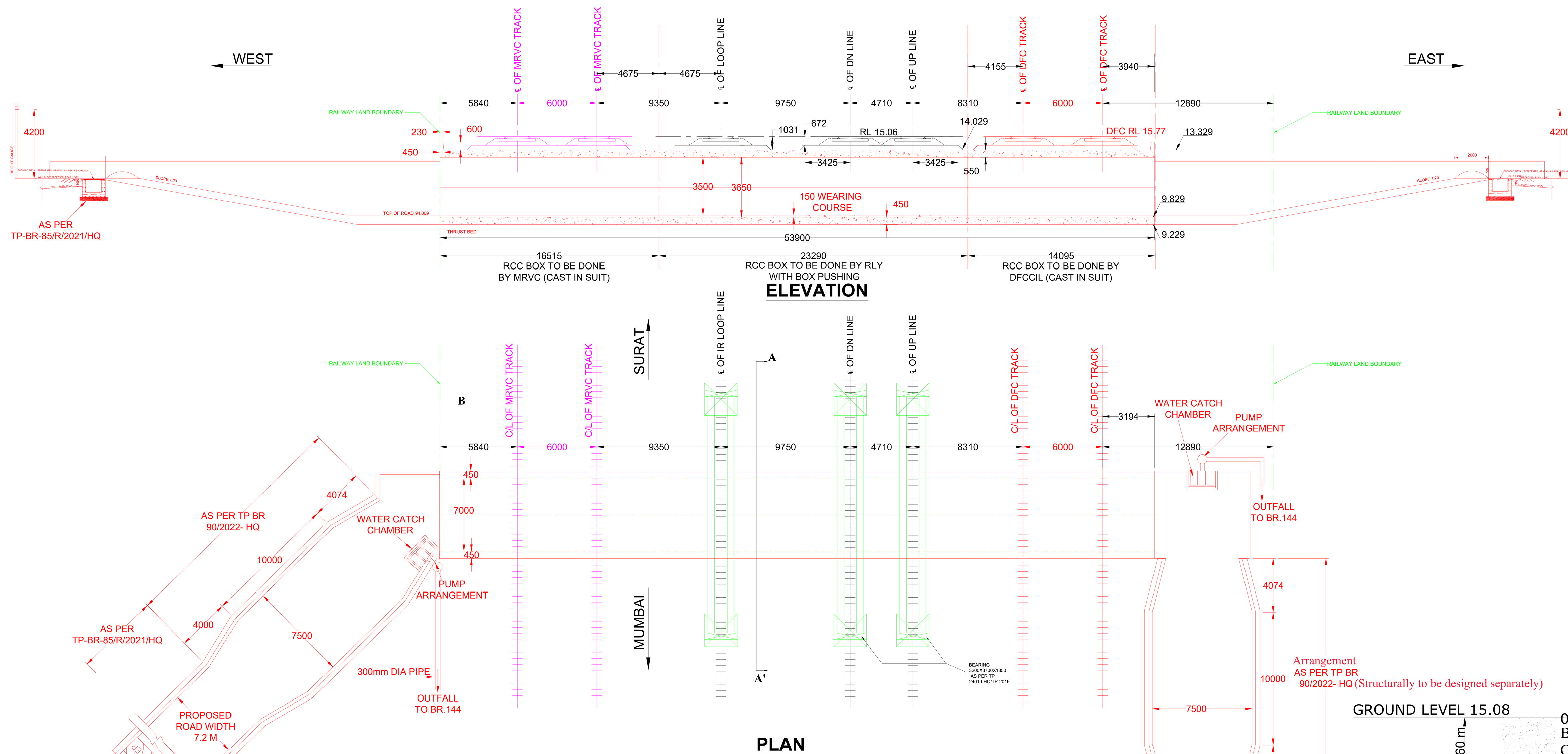
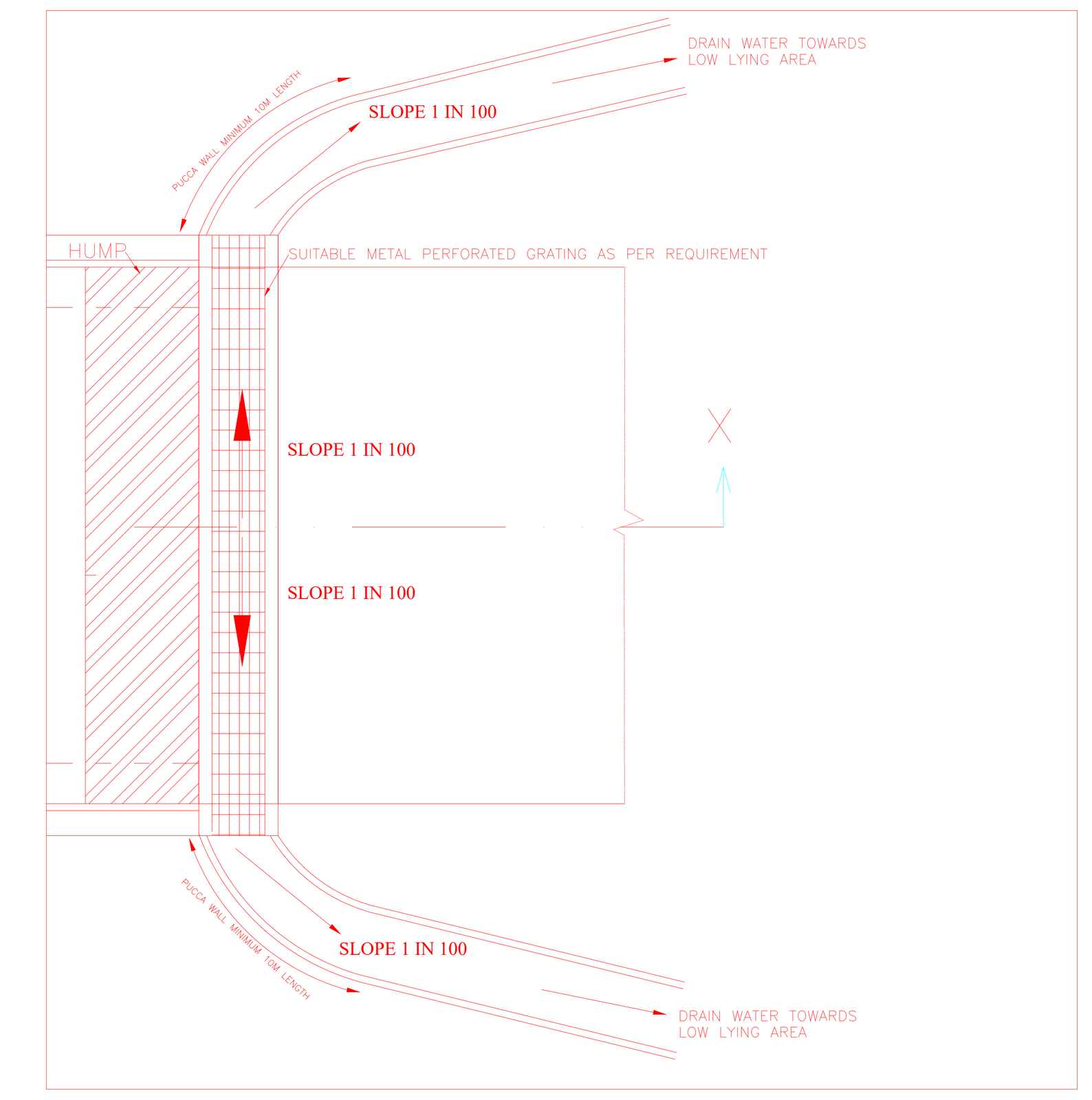
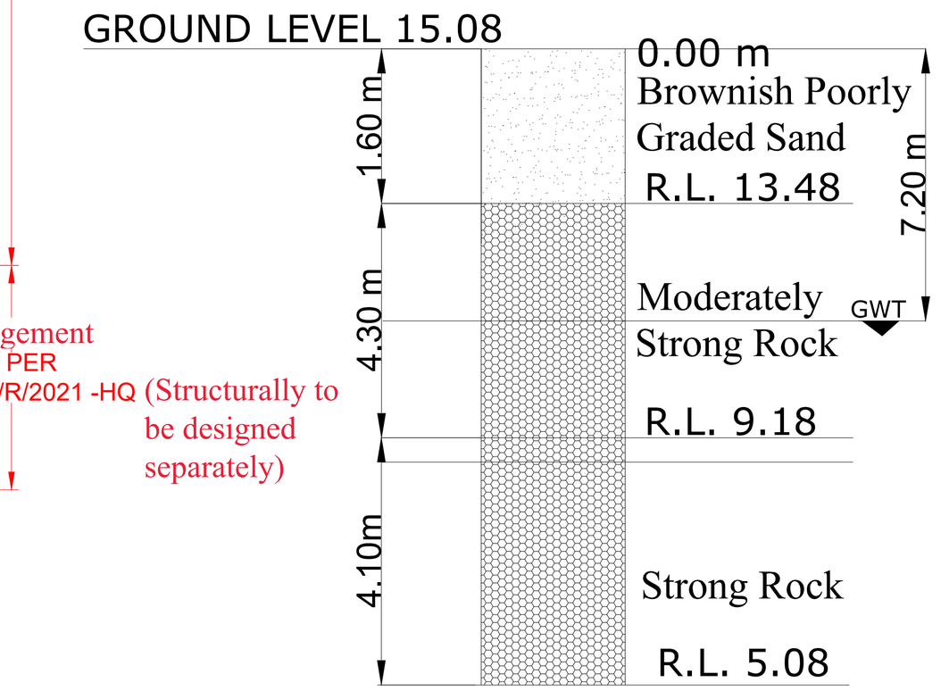
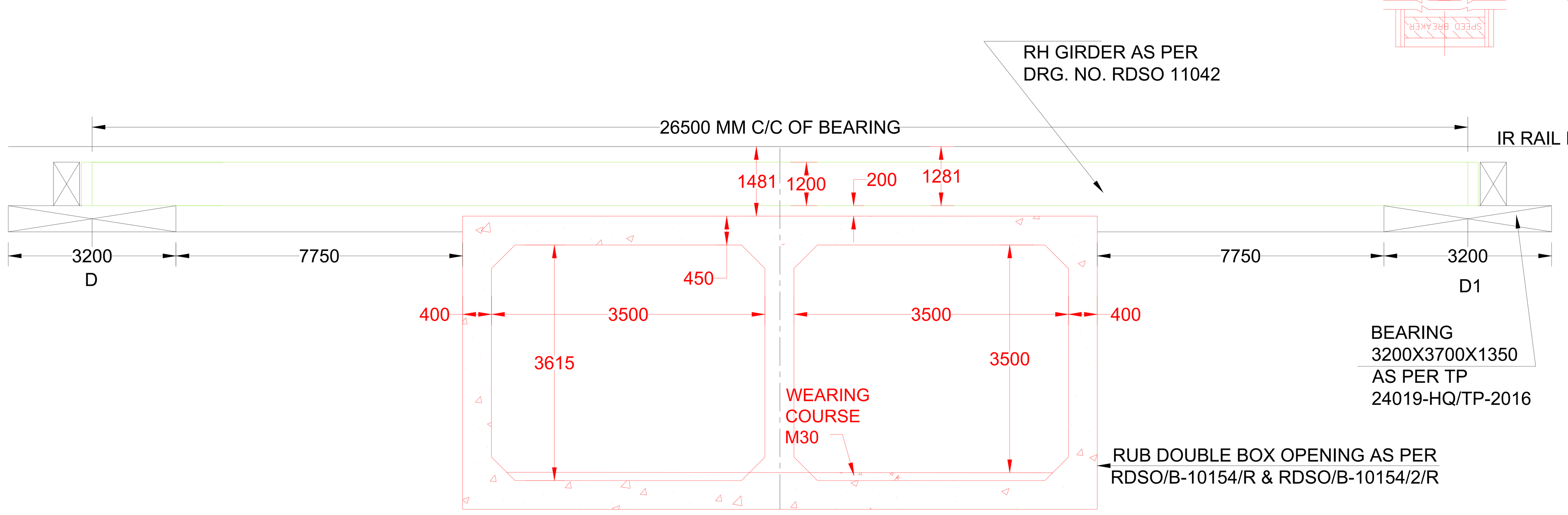




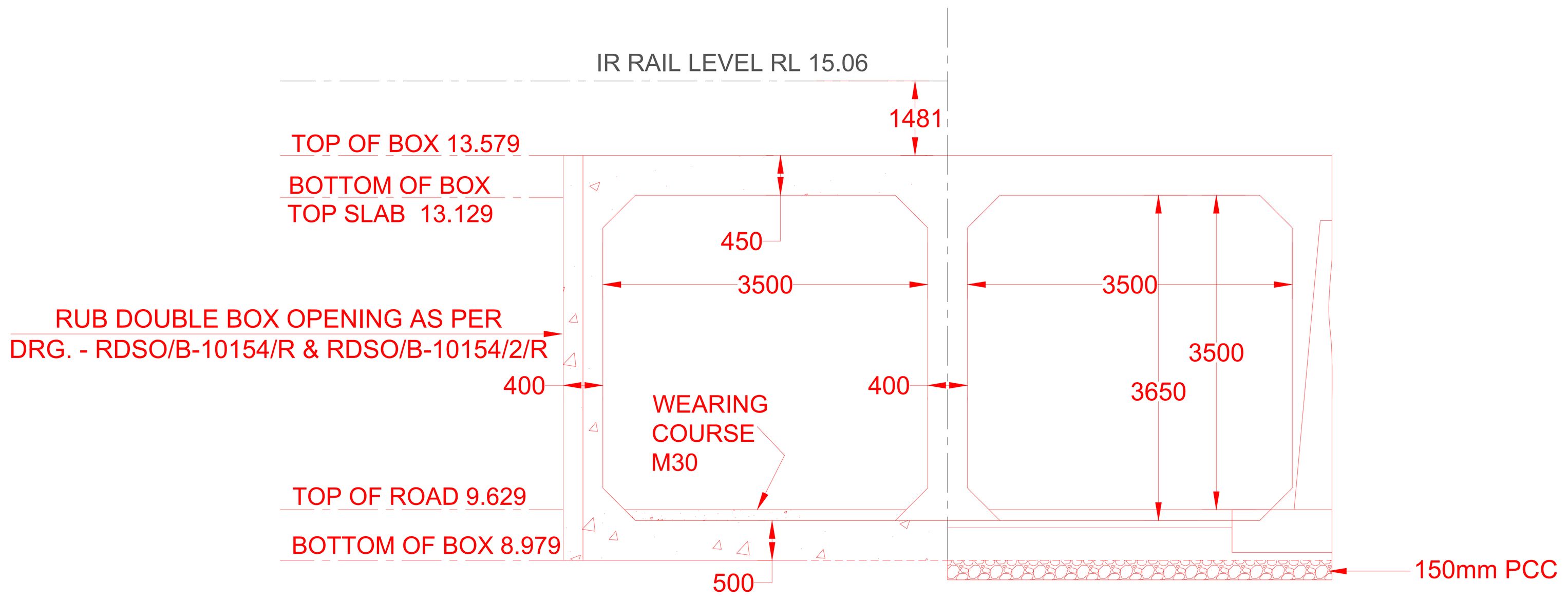


BORELOG DETAIL

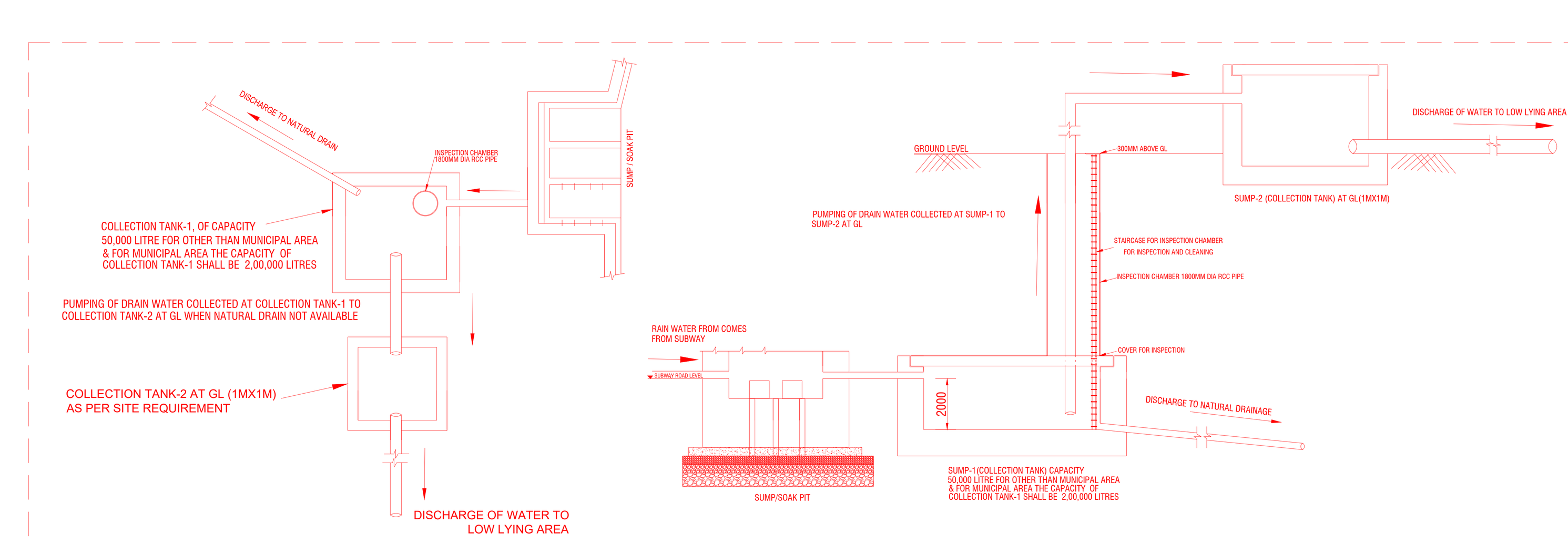
(NOT TO SCALE)



CROSS SECTION AT A-A'



HALF SECTION & HALF ELEVATION



DRAINAGE ARRANGEMENT OF PUMP & SUMP WHEN NATURAL DRAIN IS NOT WORKING/NOT AVAILABLE

TABLE NO. 06 PF RAILWAY BOARD LETTER NO. 2017/CE-IV/RUB/88 DATED :-22.04.2020

HEIGHT OF EMBANKMENT	LEVEL OF GROUND WATER TABLE WITH RESPECT TO GROUND LEVEL			
	ANNUAL RAINFALL <800MM	ANNUAL RAINFALL >800MM	ANNUAL RAINFALL <800MM	ANNUAL RAINFALL >800MM
TRACK ON EMBANKMENT AND ROAD LEVEL INSIDE THE RCC BOX HIGHER THAN THE GROUND LEVEL	MINOR WORKS AS PER SITE REQUIREMENT TO BE DECIDED BY ENGINEER IN CHARGE	MINOR WORKS AS PER SITE REQUIREMENT TO BE DECIDED BY ENGINEER IN CHARGE	MINOR WORKS AS PER SITE REQUIREMENT TO BE DECIDED BY ENGINEER IN CHARGE	PROPER SIDE DRAIN AND CROSS DRAINS AS PER SITE REQUIREMENT
	SCHEMATIC ARRANGEMENT SHOWN IN GROUP-I			SCHEMATIC ARRANGEMENT SHOWN IN GROUP-II
TRACK ON EMBANKMENT AND ROAD LEVEL INSIDE THE RCC BOX HIGHER THAN THE GROUND LEVEL	SUMP + OPEN DRAINS/CLOSED DRAINS OR COMBINATION OF BOTH	COVER OVER THE APPROACHES +SUMP + OPEN DRAINS/CLOSED DRAINS OR COMBINATION OF BOTH(PUMPING ARRANGEMENT AS STANDY)	LINING OF THE SUBWAY+COVER OVER THE APPROACHES +SUMP+PUMPING ARRANGEMENT +SURFACE DRAINAGE AND SUITABLE CROSS DRAINAGE WHEREVER REQUIRED.	LINING OF THE SUBWAY+COVER OVER THE APPROACHES +SUMP+PUMPING ARRANGEMENT +SURFACE DRAINAGE AND SUITABLE CROSS DRAINAGE WHEREVER REQUIRED.
	SCHEMATIC ARRANGEMENT SHOWN IN GROUP-III		SCHEMATIC ARRANGEMENT SHOWN IN GROUP-IV	

AVG ANNUAL RAINFALL DATA OF LAST 5 YEARS	
YEAR	TOTAL RAINFALL
2017	1531
2018	1109
2019	1815
2020	1726
2021	1601

IMPORTANT NOTES:-

(APPLICABLE FOR THE R/GIRDER IS PROVIDED FOR 40 KMPH)

1. MAXIMUM PERMISSIBLE SPEED OF 50 KMPH MAY BE ALLOWED ONLY AFTER CHECKING THE STABILITY OF ARRANGEMENT IN STAGES OF SPEED AT 20 TO 30, AND GRADUALLY INCREASE 40KMPH, SSE(P,WAY) INCHARGE SHALL CHECK THE ALIGNMENT AND LEVEL AFTER PASSAGE OF EVERY TRAIN.

   INITIALLY AND SHALL TAKE NECESSARY CORRECTIVE MEASURE AS REQUIRED. AFTER STABILIZATION OF THE ALIGNMENT AND LEVELS SHALL BE RAISED FROM INITIAL SPEED OF 20 TO 30, 40 KMPH AND 40 KMPH IN STAGE AT EACH STAGE HE WILL MONITOR ALIGNMENT, LEVELS OF GIRDER BESIDE THE TRACK PARAMETERS. IN CASE OF ANY EXCESSIVE MISALIGNMENT OR EXCESSIVE DIFFERENCE OF CROSS LEVELS HE CAN REDUCE THE SPEED TO 20KMPH.

2. EVEN AFTER STABILIZATION OF THE ALIGNMENT AND CROSS LEVELS SHALL CHECKED ATLEAST ONCE DAILY.

3.MAXIMUM BASE PRESSURE ON SOIL 20T/SQ-M.

4.RELIEVING GIRDER TO BE USED SHALL BE FIT FOR 32.5Y-2008 LOADING WITH PERMISSIBLE SPEED OF 40KMPH. IF RELIEVING GIRDER FIT FOR 50KMPH IS NOT AVAILABLE THE WORK SHOULD BE DONE USING OTHER RELIEVING WITH SR OF 20KMPH AND PHASE WORK WILL BE STAND MODIFIED ACCORDINGLY.

5. PROPER SHORING TO BE DESIGNED FOR PROTECTION OF EMBANKMENT AS SHOWN IN DRAWING OR PARTIAL AIR PUSHING TO BE ADOPTED. PARTIAL AIR PUSHING IS THE PUSHING IN WHICH PUSHING SHALL BE DONE USING RELIEVING GIRDER AND REMOVING SOIL FROM TOP OF BOX AND PARTIALLY FROM SIDE OF BOX BEFORE STARTING OF PUSHING WORK.

PHASE WORK

OPERATION 1 WITHOUT LINE BLOCK EXCAVATE EARTH UPTO REQUIRED DEPTH FOR THRUST BED AND AUXILIARY BED AS PER APPROVED DRG. AND CURE IT SUITABLY.CAST RCC BOX UNITS AS PER RDSO DRG. AND CURE IT SUITABLY.

OPERATION 2 TRANSPORT TEMPORARY R/GIRDER 26800 O/A LENGTH AT SITE SUITABLY.

PHASE I UNDERLINE AND POWER BLOCK(SR.20KMPH ON UP LINE) OPERATION 3 REMOVE TRACK WITH SLEEPERS, EXCAVATE EARTH AND ERECT SLEEPER CRIBS D AND D1. EXCAVATE EARTH TO ACCOMMODATE R/GIRDER. INSERT 26500 MM C/C OF BEARING LENGTH R/GIRDER RESTING ITS EITHER ENDS ON SLEEPER CRIB D AND D1 AND LAY TRACK AND RESTORE TRAFFIC @ DEAD STOP & 10 KMPH IN STAGES AS PER.

PHASE II UNDER LINE AND POWER BLOCK ON UP LINE(SR @ DEAD STOP & 10 KMPH ON DN LINE)

OPERATION 4 (UP LINE) REPEAT OPERATION 3 FOR UP LINE WITHOUT LINE AND POWER BLOCK (SR 20 TO 40 KMPH ON UP AND DN LINE)

OPERATION 5 PUSH THE LEADING BOX UNIT /SEGMENT NO.1 ACROSS THE TRACK. PUSH REMAINING BOX UNITS /SEGMENTS IN THE SAME MANNER UP TO REQUIRED LENGTH

PHASE III UNDER LINE AND POWER BLOCK ON DN LINE(SR @DEAD STOP & 10 KMPH ON UP LINE)

OPERATION 6 (DN LINE) REMOVE TRACK WITH SLEEPERS, REMOVE ALL TEMPORARY ARRANGEMENT FILL UP EARTH IN REMAINING PORTION MAKE UP BANK, SPREAD BALLAST AND LAY TRACK AND RESTORE TRAFFIC AT 20KMPH.

PHASE IV UNDER LINE AND POWER BLOCK ON UP LINE(SR 20KMPH ON DN LINE)

OPERATION 7 (UP LINE) REPEAT OPERATION 6 ON UP LINE RELAX THE SPEED GRADUALLY TO NORMAL AFTER THE BANK HAS BEEN CONSOLIDATED SUFFICIENTLY.

REMARKS: -

SPEED RESTRICTION FOR FIRST TRAIN TO BE KEPT AS STOP DEAD END AND 10 KMPH AND THERAFTER SUBSEQUENT TRINS MAY BE PERMITTED WITH 20 KMPH

PROVIDED WITH THE FOLLOWING CONDITION-

1. BRIDGE TIMBER SLEEPER ARE PROVIDED OVER GIRDER WITH HOOK BOLTS AND FULL TRACK FITTINGS.
2. TRACK GEOMETRY IS RECORDED EVERYDAY AND IS MAINTAINED FOR 20 KMPH S.R.
3. STABLE SLEEPER CRIB SUPPORT IS PROVIDED PACKING IN SLEEPER CRIB IS ATTENDED AS AND WHEN REQUIRED TO MAINTAINED LEVEL OF R.G.

S&T NOTE: -

(1) S&T STAFF i.e. DSTE/BL, SSE(SIG)B, SSE(TELE) BL AND SIGNAL CONTROLLER/BL TO BE INFORMED WELL IN ADVANCE BEFORE EXECUTION OF WORK.
(2) NECESSARY PRECAUTIONS SPECIFIED IN GUIDELINES ISSUED BY RAILWAY SHOULD BE FOLLOWED
(3) AS PER RLY. BOARD LETTER NO 2003/TELE/RCL/1pt.x dated 05.05.07, If ANY S&T AND OFC CABLE IS DAMAGED, A FLAT PENALTY OF RS. ONE LAKH WILL BE IMPOSED ON CONTRACTOR.
(4) CABLE TO BE PROTECTED BY EXECUTIVE DEPARTMENT DURING EXECUTION OF WORK BY PROVIDING SUITABLE MEANS.
(5) MANUAL DIGGING SHOULD BE DONE FOR OPEN EXCAVATION.
(6) PROVISION OF S&T SUB-ESTIMATE TO BE MADE IN MAIN ESTIMATE.

DFCCIL NOTE: -

(1) THE APPROACH INDICATED ON THE DFC END OF RUB ARE TENTATIVE AND SUBJECT TO MODIFICATION AP PER AVAILABILITY OF LAND AT SITE.
(2) DUE TO NON-AVAILABILITY OF LAND IN APPROACHES/ ROAD WIDTH RETAINING WALL AS NECESSARY SHALL BE PROVIDED FOR SUFFICIENT LENGTH.
(3) CONSTRUCTION OF APPROACHES: -

AS THE NEW ROB IS TO BE CONSTRUCTED BY TWO DIFFERENT AGENCIES i.e. DFC & WESTERN RAILWAY, TO AVOID DISCONNECTION OF EXISTING ROAD FOR LONG DURATION, THE FINAL COMMISSIONING OF RUB FOR TRAFFIC SHALL BE DONE BY THE AGENCY WHICH IS EXECUTING THE WORK SUBSEQUENT TO PREVIOUS AGENCY. THIS SHALL INCLUDE CARRYING OUT RESIDUAL APPROACH CONNECTION WORK AT BOTH ENDS.

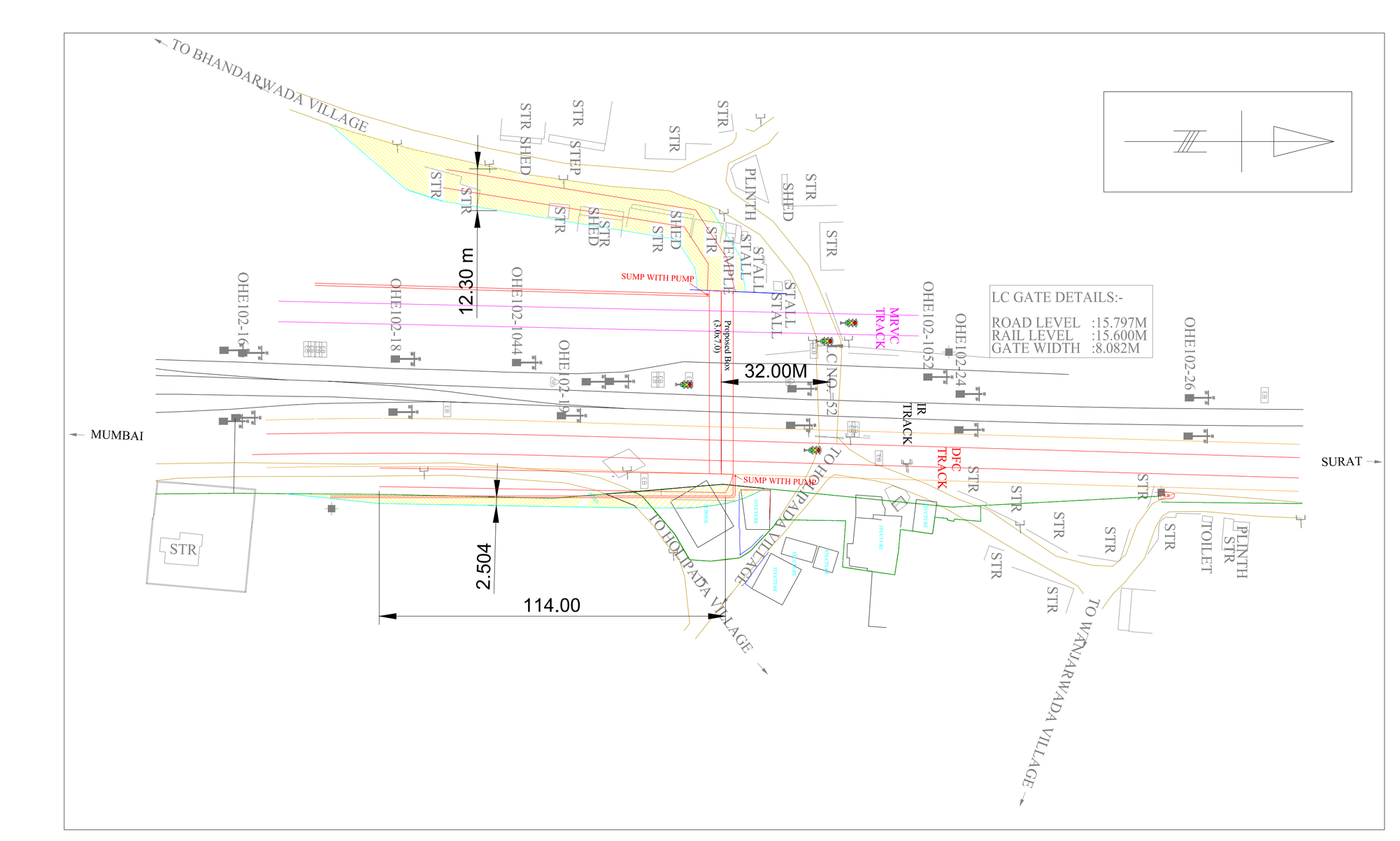
NOTES FOR ROAD AUTHORITY: -

(AS PER RAILWAY BOARD LETTER NO.2006/CE/-IV/MISC-2 (RUBS) DT.18/04/2012

(I) RESPONSIBILITY FOR THE MAINTENANCE OF ROAD PASSING THROUGH SUBWAY, LIGHTING, DRAINAGE SYSTEM, DIVERSION ROAD AND ANY OTHER ALLIED WORKS WILL BE AS PER EXTEND RAILWAY POLICY.
(II) FUTURE MAINTENANCE OF SUBWAY PROPER SHALL BE DONE BY RAILWAY,
(III) LAND ACQUISITION OUTSIDE THE RAILWAY AREA WII BE AS PER EXTEND RAILWAY POLICY.
(IV) SECTIONAL SRDEN WILL ENSURE THAT ABOVE ASPECT ARE DEALT ACCORDINGLY.
(V) BOISAR AREA IS FLOODING ZONE,PUMPING ARRANGEMENT IF REQUIRED WILL BE WORNED BY LOCAL AUTHORITY.

NOTES:-

1. EXISTING WORK SHOWN IN BLACK.
2. PROPOSED WORK SHOWN RED IN SITE PLAN,RLY BOUNDARY,TEMPORARY WORK SHOWN IN GREEN & DFC WORK SHOWN IN MAGENTA.
3. ALL DIMENSION ARE IN MILLIMETERS AND LEVELS ARE IN METER OTHERWISE STATED EXCEPT.
4. DO NOT SCALE THE DRAWING, FOLLOW ONLY WRITTEN DIMENSION.
5. FOR SLAB & WALL THICKNESS & REINFORCEMENT DETAILS REFER DRG. R.D.S.O B-10157/2.
6. BED SLOPE 1 IN 1000 SHOULD BE PROVIDED TOWARDS SIDES ON WHICH DRAINAGE OF STORM WATER IS FEASIBLE.
7. TEMPORARY ENGINEERING INDICATOR WILL BE PROVIDED AS PER 15.09 (i) (d) OF GR.
8. TEMPORARY SPEED RESTRICTION BOARD AND CAUTION INDICATOR BOARD WILL BE PROVIDED.
9. HEIGHT GAUGE SHALL BE PROVIDED AT EITHER END OF SUB WAY AT 4000MM AWAY BASED ON RDSO DRG. NO. RDSO/M-0001.
10. TWO COATS OF BITUMINOUS SOLUTION SHALL BE APPLIED ON TOP OF TOP SLAB OF RCC BOX BEFORE SPREADING THE BALLAST.
11. MINIMUM GRADE OF CONCRETE FOR RCC BOX SHALL BE M-35 RCC BOX IS DESIGNED BY 32.5 T LOADING.
12. PRIOR INFORMATION WILL BE GIVEN TO SSE (SIG)/(TEL) FOR THE PROTECTION OF THE CABLES.
13. 100MM DIA. OF A.C. PIPE AS WEEP HOLES TO BE PROVIDED IN WING & RETURN WALLS.
14. PROVIDE SHORING HEIGHT OF MINIMUM 2.0 M AND ALSO KEEP READY ADDITIONAL 500 BAGS FILLED UP WITH SAND FOR PROVIDING SHORING TO AVOID THE ROLLING DOWN OF FORMATION SOIL.
15. SIDE SLOPE ALONG APPROACH ROAD TO BE PROTECTED BY STONE PITCHING / TURFING IF REQUIRED ACCORDING TO SOIL STRATA.
16. THE MAINTAINCE OF ROAD SURFACE DRAINAGE AND LIGHTING IN SUBWAY SHOULD BE DONE BY THE ROAD AUTHORITY.
17. TRAFFIC WILL BE DIVERTED TO TEMPORARY DIVERSION BEFORE COMMENCING THE WORK
18. REDUCED LEVEL OF AVERAGE MAXIMUM WATER TABLE DURNIG MANSOON IS 93.55.
19. SR.DEN/DEN TO ENSURE THAT THE APPROVAL AND SIGNATURE OF CONCERN ROAD AUTHORITY SHOULD BE OBTAINED ON GAD BEFORE COMMENCING OF THE WORK.
20. SR.DEN/DEN TO ENSURE THAT THE SIGNATURE OF ROAD AUTHORITY HAS BEEN OBTAINED PRIOR COMMENCING OF THE WORK.
21. SAFETY OF THE TRACK SHALL BE ENSURED BY SR. DEN/DEN FOR ALL THE TIME WHILE EXECUTION OF THE WORK.
22. MAXIMUM FOUNDATION PRESSURE IS 210KN/SQM.
23. FOR DETAILS OF U WALL AND RETURN WALL REFER T.P. NO. BR-31(HQ)/2014, BR-30(HQ)/2014.
24. SR.DEN/DEN TO ENSURE THAT THE SOIL CONDITION HAS BEEN ASCERTAINED BEFORE HAND AND EXECUTION DONE EITHER WITH ADEQUATE SLOPE OR WITH SLOPE PROTECTION MEASURE IN PLACE.
25. CRS SANCTION SHALL BE OBTAINED FOR THE PROPOSED WORK.
26. EARTH FILL BEHIND BOX AND EXCAVATED PART OF EMBANKMENT FOR CC CRIBS SUPPORT SHALL BE DONE WITH GRANULAR MATERIAL / QUARRY DUST.
27. AIR PUSHING METHOD TO BE ADOPTED FOR BOX PUSHING. AIR PUSHING WHICH R.C.C BOX SEGMENT TO BE PUSHED UNDER RELIEVING GIRDER BY REMOVING SOILUPTO THE TOP OF BOX CUTTING PLATE WITH APPROXIMATELY .500MM PROJECTION TO BE FIXED AT BOTTOM AND EITHER SIDE OF LANDING SEGMENT, DESIGN OF THRUST BED AND CUTTING PLATE SHALL BE GET APPROVED FRON HQ'S BEFORE START WORK
28. MACHINE MOUNTED HEAVY DUTY PNEUMATIC BREAKER SHALL BE USED FOR BREAKING OF ROCKS.
29. LIGHT WEIGHT PNEUMATIC /ELECTRIC BREAKER SHALL BE USED FOR MAKING UNEVEN BOTTOM.
30. GRANULAR MATERIAL OF GW,SW GROUPS AS PER 1498-1970 (AS PER BRIDGE SUB STRUCTURE AND FOUNDATION CODE TO BE DONE BEFORE RELAXING THE SPEED.
31. PRIOR COMMENCING THE WORK SITE ENGINEER/ENGINEER-IN-CHARGE TO ENSURE THE SBC OF SOIL IS HIGHER THAN MAXIMUM FOUNDATION PRESSURE AS PER APPROVED DRAWING.
32. TRACK PARAMETER TO BE OBSERVED IN FIRST MANSOON SEASON AND SUITABLE MEASURE TO BE ADOPTED TO PREVENT SETTLEMENT.
33. PRIOP COMMENCING OF THE WORK SRDEN/SITE ENGG TO ENSURE THAT THE RAIN WATER / DRAIN WATER SUBWAY WILL BE DRAIN OUT TOWARDS LOW LYING AREA ANY OYHER SUITABLE LOCATION BY PUMP OR ANY OTHER SUITABLE METHOD.
34. PRIOR COMMENCING THE WORK SRDEN/SITE ENGG TO ENSURE THAT PHASE WORK SHOWN IN SECTION B-B CAN BE EXECUTED ESPECIALLY SUITABLE SLOPE IS FEASIBLE AND SOIL STRATA IS OF HARD ROCK/BALLAST.
35. PRIOR COMMENCING THE WORK SRDEN/DEN/ SITE ENGG/ENGINEER IN CHARGE TO ENSURE THAT DIMENSIONS SHOWN IN DRAWING ARE AVAILABLE AT SITE, IF ANY DISCREPANCY FOUND, IT MUST BE BROUGHT TO THE NO.
36. PRIOR COMMENCING THE WORK SRDEN/DEN/SITE ENGINEER/ENGINEER-IN-CHARGE MUST CHECK THE BORE LOG DETAILS AND SHOULD MATCH THE SOIL PRESENT AT THE SITE.
37. PRIOR COMMENCING THE WORK SRDEN/DEN WILL BE FULLY RESPONSIBLE FOR PLANNING AND DESIGNING OF DRAINAGE ARRANGEMENT AND ENSURING THAT DRAIN WATER/RAIN WATER IN SUBWAY WILL BE DRAIN OUT TOWARDS LOWLYING AREA.BRIDGE SOAK PIT, RECHARGE WELL,SUMP OR ANY OTHER SUITABLE LOCATION WITH THE PUMP OR ANY OTHER SUITABLE METHOD AND ENSURE THAT THERE SHOULD BE NO WATER LOGGING IN THE SUBWAY.
38. PRIOR COMMENCING THE WORK SRDEN/DEN/ SITE ENGG/ENGINEER IN CHARGE TO ENSURE THAT THE ROOF COVERING FOR APPROACHES SHOULD BE MADE AS PER TABLE NO.06 OF RAILWAY BOARD LETTER NO. 2017/CE-IV/RUB/88 DATED:- 22.04.2020.



SITE KEY PLAN (NOT TO SCALE)

- EXISTING TRACK
- DFC TRACK
- MRVC TRACK
- DFC ROW/RAILWAY BOUNDARY
- EXISTING ROAD AND MODIFICATION
- SERVICE ROAD BOUNDARY
- COMPOUND WALL
- LAND ACQUISITION
- PROPOSED SERVICE ROAD 3.5 WIDTH
- EXISTING ROAD

PCE NO . e-30251-DRM/1-D

1) Ref. Drg No.:- ,

WESTERN RAILWAY

DIVISION: BCT | HEAD QUARTER

BOISAR

PROPOSAL FOR CONSTRUCTION OF NEW RUB AT LC 52. (IR CHAINAGE- 102/19-21)

(Scale:- As Shown)

GM/Co-Ord/MUM/N — 27.1.2022

GM/CIVIL/N/MUM — 27.1.22

Dy.CPM/S&T/N/MUM

PM/S&T/VALSAD — 10.3.22

Dy.CPM/ELECT/N/MUM — 11.3.22

Dy.PM/ELECT/N/MUM

APM-III/ENGG/MUM/N — 27/01/22

EXE/ENGG/MUM

G V L SATYA KUMAR — DRM-MMCT

AVNEESH VERMA — Digitally signed by AVNEESH VERMA Date: 2022.08.18 12:22:34 +05'30' — ADRM(I)MMCT

PIYUSH BALIRAM KHANDARE — Digitally signed by PIYUSH BALIRAM KHANDARE Date: 2022.07.26 17:35:18 +05'30' — Sr.DOM-MMCT

SUNIL RAMSAJEEVAN MISHRA — Sr.DCM-MMCT

BALRAM RAMPHAL VERMA — Digitally signed by BALRAM RAMPHAL VERMA Date: 2022.07.27 13:10:49 +05'30' — Sr.DSTE(N)MMCT

CHANDRA MOHAN SINGH — Digitally signed by CHANDRA MOHAN SINGH Date: 2022.08.17 16:54:02 +05'30' — Sr.DEE(P)MMCT

YOGESH KR SHARMA — Digitally signed by YOGESH KR SHARMA Date: 2022.07.30 15:36:47 +05'30' — Sr.DEN(CO)MMCT

R ARUN KUMAR — Digitally signed by R ARUN KUMAR Date: 2022.07.29 10:14:11 +05'30' — Sr. DEN(N)MMCT

MANJUL MATHUR — Digitally signed by MANJUL MATHUR Date: 2022.10.07 18:11:52 +05'30' — CBE-CCG

HIMANSHU SHARMA — Digitally signed by HIMANSHU SHARMA Date: 2022.10.07 17:22:25 +05'30' — DYCE-DESIGN-CCG

N K Chaudhary — Digitally signed by N K Chaudhary Date: 2022.10.07 16:33:48 +05'30' — AXEN-DESIGN-CCG

ADEN/DRD

SSE (W)/DRD

SSE(P-WAY)/PLG

DFC DRG No. :- CGM/N/MUM/RUB/52/2022/014

VILAS SOPAN WADEKAR — Digitally signed by VILAS SOPAN WADEKAR Date: 2022.08.29 13:35:34 +05'30' — ED/CIVIL/MRVC

PRAKASH SHYAM JOSHI — Digitally signed by PRAKASH SHYAM JOSHI Date: 2022.08.25 16:02:57 +05'30' — DYCPM/CIVIL/II/MRVC

EE/PWD/PLG