

- NOTES FOR S & T**
- SAT STAYT (a) ADJUSTING, SKEWING, SKEWING, AND ROLL TO BE INFORMED WELL IN ADVANCE BEFORE EXCAVATION WORK.
 - NECESSARY PRECAUTIONS SPECIFIED IN GUIDELINES ISSUED BY RAILWAY SHOULD BE FOLLOWED.
 - AS PER RAILWAY BOARD LETTER NO. 2001/LE/CL/PTK, DATED 24.08.2013, IF ANY SAT AND OPC CABLE IS DAMAGED, A FLAT PENALTY OF WILL BE IMPOSED ON CONTRACTOR.
 - CABLE TO BE PROTECTED BY EXECUTIVE DEPARTMENT DURING EXCAVATION OF WORK BY PROVIDING SUITABLE MEANS.
 - MANUAL DIGGING SHOULD BE DONE FOR OPEN EXCAVATION.
 - PROVISION OF SAT SUB-ESTIMATE TO BE MADE IN MAIN ESTIMATE.
- REMARKS**
- SPEED RESTRICTION FOR FIRST TRAIN TO BE KEPT AS - STOP DEAD END AND 10 KMPH AND THEREAFTER SUBSEQUENT TRAINS MAY BE PERMITTED WITH 200KPH PROVIDED WITH THE FOLLOWING CONDITIONS:
 - BRIDGE TIMBER SLEEPER ARE PROVIDED ORDER WITH HOOK BOLTS AND FULL TRACK FITTINGS.
 - TRACK GEOMETRY IS RECORDED EVERYDAY AND IS MAINTAINED FOR 20 KMPH S.E.
 - STAKE SLEEPER OR SUPPORT IS PROVIDED PACKING IN SLEEPER ONE IS ATTENDED AS AND WHEN REQUIRED TO MAINTAINED LEVEL OF R.G.

DRAINAGE ARRANGEMENT SHOWN IN PLAN IS TENTATIVE :

CONCERN SR.DEN, DEN, WILL BE FULLY RESPONSIBLE FOR PLANNING AND DESIGNING ONE OR MORE SUITABLE DRAINAGE ARRANGEMENTS SUCH AS CONNECTING TO NEARBY LOW AREA, BRIDGE, SOAK PIT, RECHARGE BORE WELL, SUMP WITH/WITHOUT PUMPING ARRANGEMENTS ETC.

SUITABLE ROAD BUMPS SHOULD BE PROVIDED ON APPROACH ROADS TO AVOID INGRESS OF WATER IN TO THE RUB FORTION.

THE PROPOSED APPROACH ROAD AND DRAINAGE ARRANGEMENTS SHOULD BE DONE BY THE EXECUTING AUTHORITY AS PER FIELD CONDITIONS AND AS PER GUIDELINES OF THE COO-VISE LETTER NO. W/400, VOL. IV/3 DTD. 10.03.2015.

GAP BETWEEN BOX UNIT SHALL BE SEALED BY PRESSURE GROUTING WITH GROUT EPDM MORTAR BY PROVIDING BORE SHEETS BEHIND THE JOINT.

IN CASE THE EXCAVATED PORTION IS NOT COVERED BY THE PUMPS BOX AT THE END OF THE DAYS WORK, THE VERTICAL CUT SHALL BE PROTECTED BY FILING SAND BAGS TILL THE WORK OF PUMPING RECOMMENCES.

OPR. NOTES

AUTOMATIC BLOCK WILL BE GRANTED AS PER MARGIN & CONDITION PERMITS.

B) TWO WILL HAVE TO BE PLANNED FOR THIS WORK.

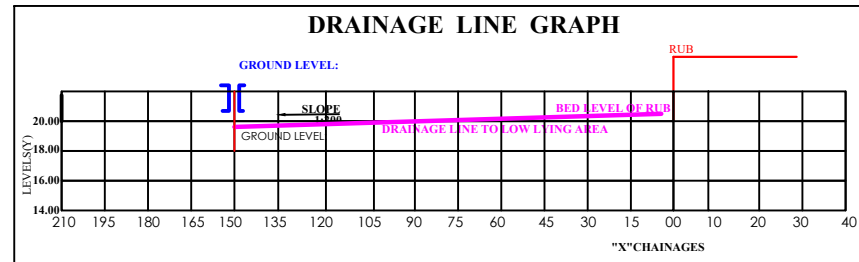
- SAT SUB-**
- BEFORE EXCAVATING THE WORK SAT STAYT (a) ADJUSTING, SKEWING, AND ROLL TO BE INFORMED WELL IN ADVANCE BEFORE EXCAVATION WORK.
 - NECESSARY PRECAUTIONS SPECIFIED IN GUIDELINES ISSUED BY RAILWAY SHOULD BE FOLLOWED.
 - AS PER RAILWAY BOARD LETTER NO. 2001/LE/CL/PTK, DATED 24.08.2013, IF ANY SAT AND OPC CABLE IS DAMAGED, A FLAT PENALTY OF WILL BE IMPOSED ON CONTRACTOR.
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 - MANUAL DIGGING SHOULD BE DONE FOR OPEN EXCAVATION.
 - PROVISION OF SAT SUB-ESTIMATE TO BE MADE IN MAIN ESTIMATE.

TERMINAL

- TERMINAL SUB-ESTIMATE TO BE INCLUDED IN MAIN ESTIMATE OF RUB.

TABLE NO. 08 OF RAILWAY BOARD LETTER NO. 2017/CE/WR/BB/8 DATED 22.04.2020

Height of embankment	Level of ground water table with respect to ground level			
	Low		High	
Annual Rainfall <500mm	Annual Rainfall >500mm	Annual Rainfall <500mm	Annual Rainfall >500mm	Annual Rainfall >500mm
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 drains 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 lower than the ground level	Sump+Open drains or combination of both (Pumping arrangement as stand by)	Cover over the approaches +Sump+Open drains or combination of both (Pumping arrangement as stand by)	Lining of the subways+Cover over the approaches +Sump+Pumping arrangement +Surface drainage and suitable cross drainage whenever required. RCB preferable over RUB	Lining of the subways+Cover over the approaches +Sump+Pumping arrangement +Surface drainage and suitable cross drainage whenever required. RCB preferable over RUB
SCHEMATIC ARRANGEMENT SHOWN IN GROUP-III		SCHEMATIC ARRANGEMENT SHOWN IN GROUP-IV		

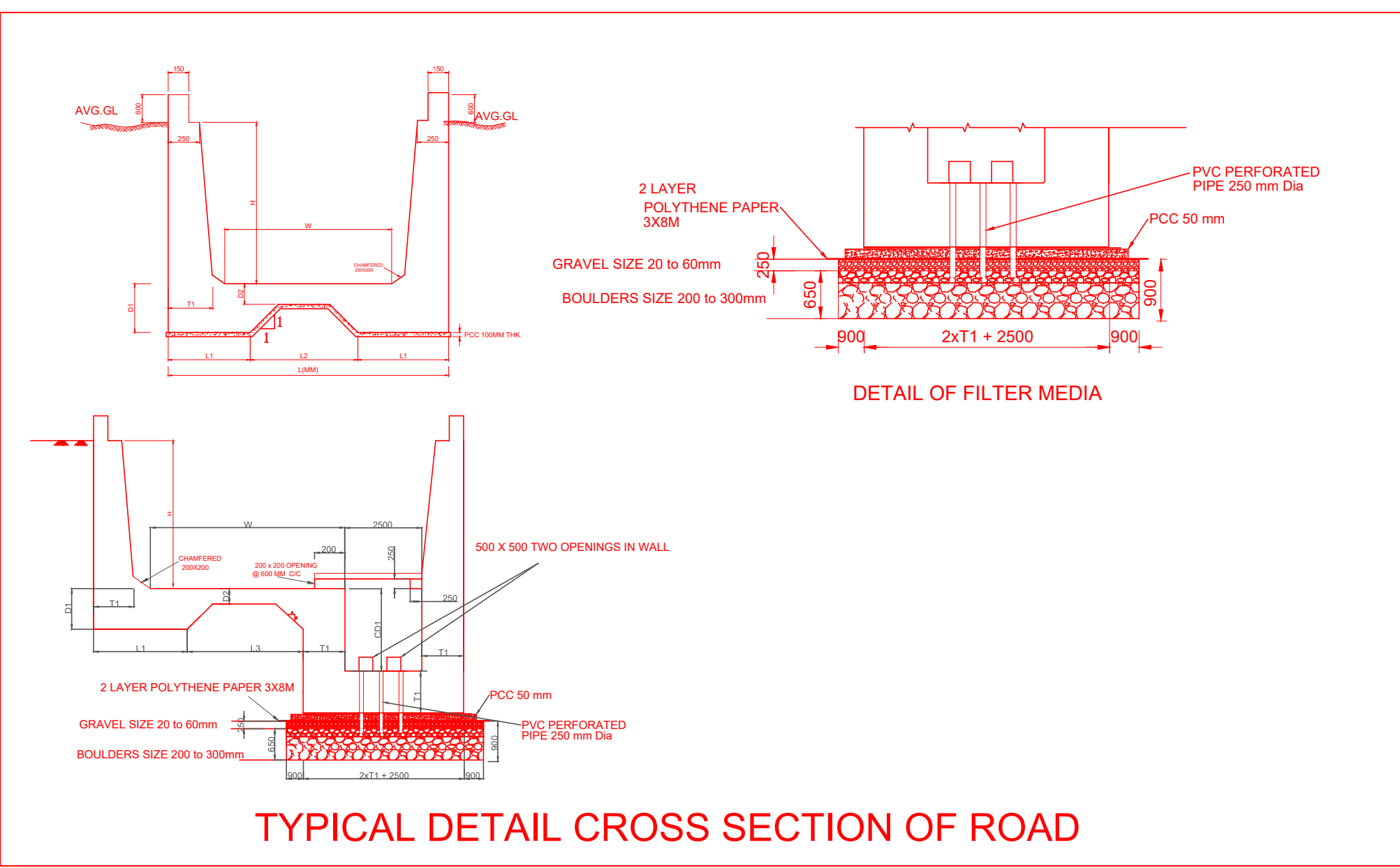
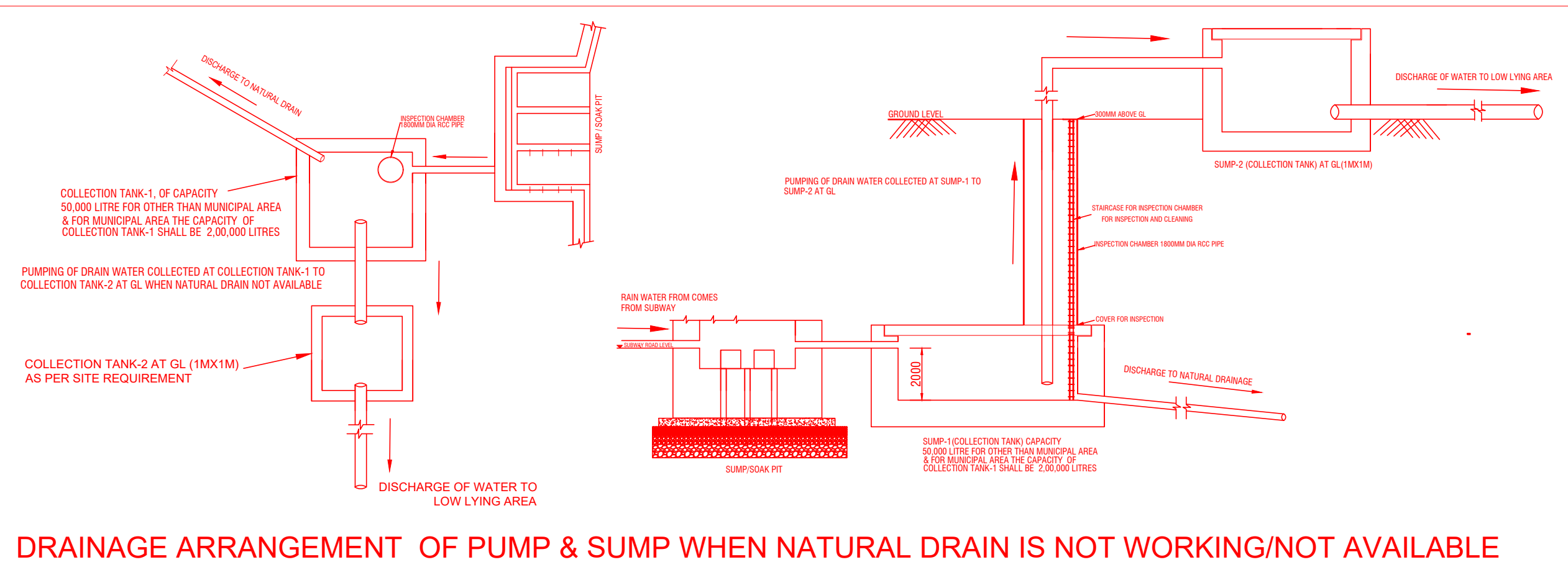
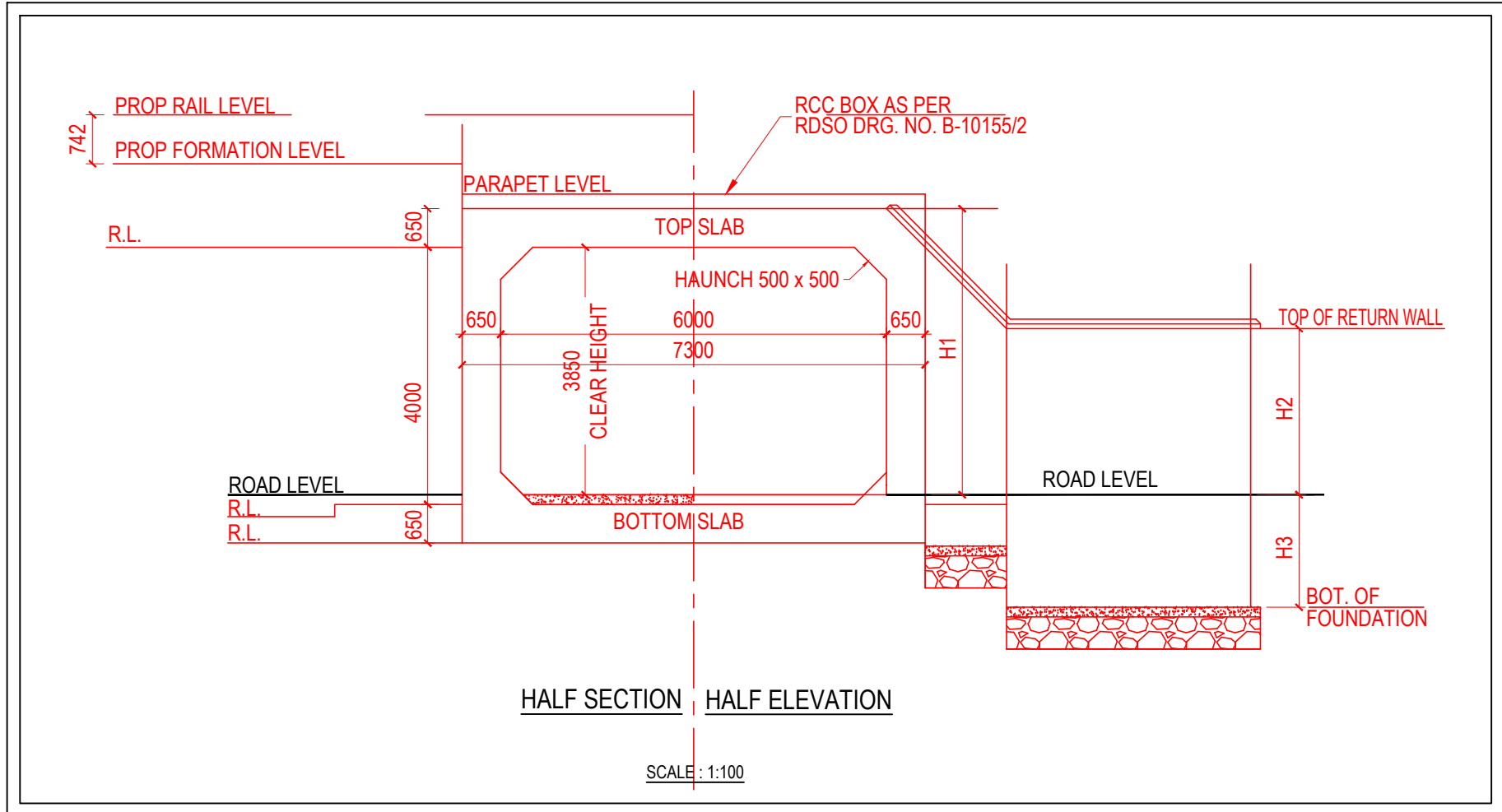
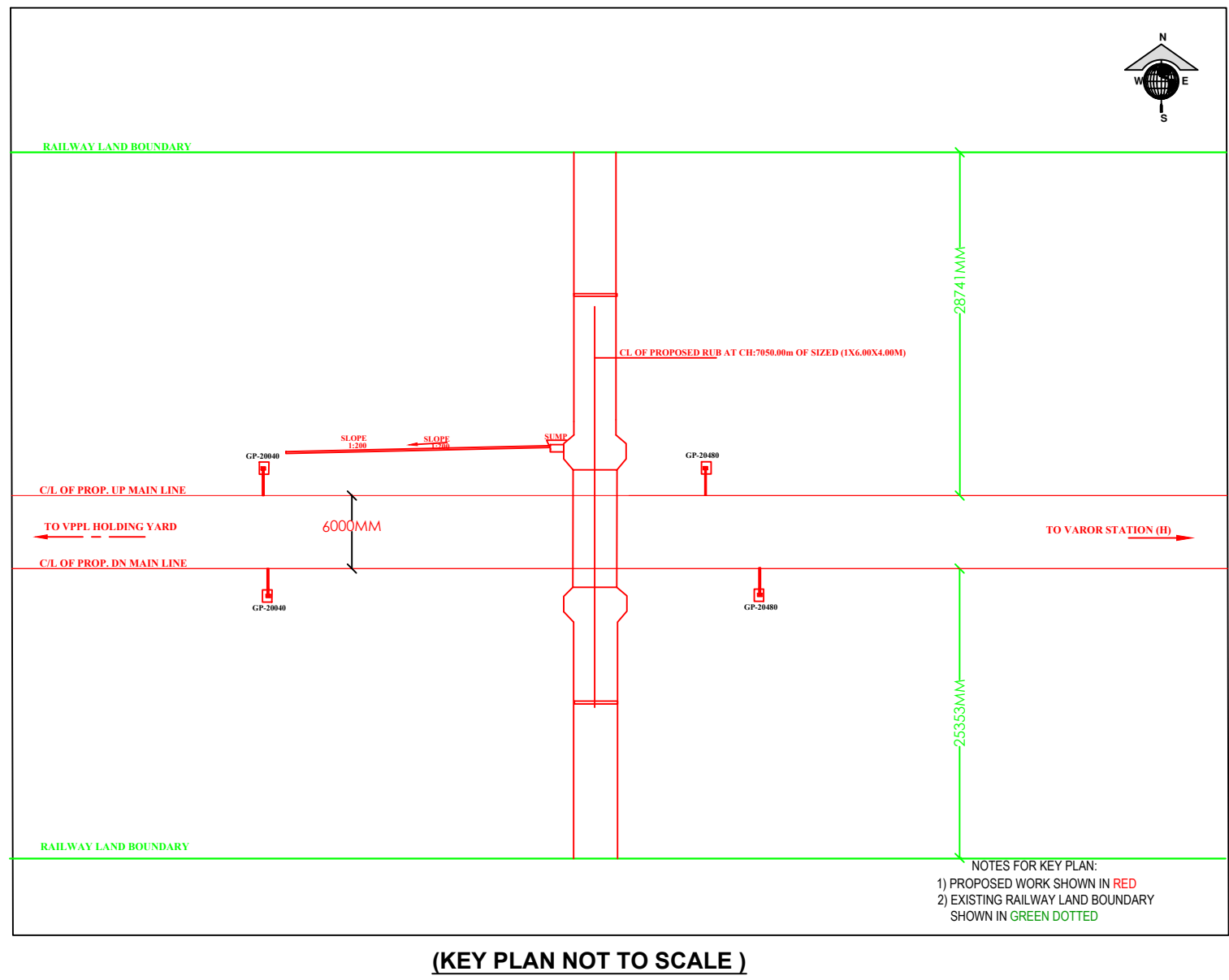


REFERENCE DRAWINGS	
DETAILS OF R.C.C. BOX	RD500-B-10123
DETAILS OF REINFORCEMENT	RD500-B-10151/2
DETAILS OF DRAINAGE	AS PER DESIGN
DETAILS OF RETURN WALLS	AS PER DESIGN

[TRACK DETAILS OF BOTH SIDE 500 M FROM EXISTING LC:]	
TYPE OF RAIL:	60KG/90LTS
TYPE OF SLEEPERS:	PSC-60KG
TYPE OF RAIL FITTINGS:	ELASTIC
ALIGNMENT OF TRACK:	STRAIGHT
BALLAST CUSHION :	CLEAN 150 TOTAL=250

NOTES:-

- EXISTING WORK SHOWN IN BLACK.
- PROPOSED WORK SHOWN IN SITE PLAN.
- ALL DIMENSIONS ARE IN MILLIMETERS AND LEVEL ARE IN METER EXCEPT STATED OTHERWISE.
- DO NOT SCALE THE DRAWING, FOLLOW ONLY WRITTEN DIMENSION.
- FOR DETAIL OF PRECAST RCC BOX AND SAT UNITS REFER DRAWING NO. RD50 1015 & 1015/2.
- RED SLOPE 1 IN 100 SHOULD BE PROVIDED TOWARDS EITHER SIDES ON WHICH DRAINAGE OF STORM WATER IS FEASIBLE.
- TEMPORARY ENGINEERING INDICATOR WILL BE PROVIDED AS PER 15.09.11/49 OF CR.
- TEMPORARY SPEED RESTRICTION BOARD AND CAUTION INDICATOR BOARD WILL BE PROVIDED.
- HEIGHT GAUGE SHALL BE PROVIDED AT EITHER END OF SUB WAY AT SUITABLE DISTANCE BASED ON RD50 DRG. RD50-6001.
- TWO COATS OF BITUMINOUS SOLUTION SHALL BE APPLIED ON TOP OF TOP SLAB OF RCC BOX BEFORE SPREADING THE RAIL LAST.
- MINIMUM GRADE OF CONCRETE FOR RCC BOX SHALL BE M-35.
- RCC BOX IS DESIGNED FOR 25-200 T LOADING.
- FROM INFORMATION WILL BE GIVEN TO SSE (SIVTEL) FOR THE PROTECTION OF THE CABLES.
- 10MM DIA. OF A.C. PIPE AS WEEP HOLES TO BE PROVIDED IN WING WALLS.
- SUITABLE DRAINAGE ARRANGEMENT PROVIDED WHICH HAS BEEN CHECKED BY FIELD ENGINEERS AND FEASIBLE AT SITE.
- PROVIDE SHORING HEIGHT OF MINIMUM 200 MM AND ALSO KEEP READY ADDITIONAL 500 BAGS FILLED UP WITH SAND FOR PROVIDING SHORING TO AVOID THE ROLLING DOWN OF FORMATION SOIL.
- SIDE SLOPE ALONG APPROACH ROAD TO BE PROTECTED BY STONE PITCHING / TIEUP IF REQUIRED ACCORDING TO SOIL STRATA.
- SR. DEN/DEN TO ENSURE THAT THE APPROVAL OF CONCERN ROAD AUTHORITY SHOULD BE OBTAINED ON GAD BEFORE COMMENCING OF THE WORK.
- ROAD TRAFFIC SHOULD BE DIVERTED SUITABLY AT SUITABLE LOCATION IN CONSULTATION WITH ROAD AUTHORITY.
- FOR TEMPORARY DIVERSION REFER SEPARATE DRAWING.
- SAFETY OF THE TRACK SHALL BE ENSURED BY SR. DEN/DEN FOR ALL THE TIME WHILE EXECUTION OF THE WORK.
- MAXIMUM FOUNDATION PRESSURE IS TSM. ENGINEER IN-CHARGE SHOULD ENSURE THAT THE SBC OF SOIL AT FOUNDING LEVEL IS MORE THAN THE FOUNDATION PRESSURE.
- FOR DETAILS OF WING AND RETURN WALL REFER SEPARATE DRAWING.
- SR. DEN/DEN TO ENSURE THAT THE SOIL CONDITION HAS BEEN ASCERTAINED BEFORE TAKING THE WORK IN HAND AND EXCAVATION DONE EITHER WITH ADEQUATE SLOPE OR WITH SLOPE PROTECTION MEASURE IN PLACE.
- PCE SANCTION SHALL BE OBTAINED FOR THE PROPOSED WORK.
- MAXIMUM FOUNDATION PRESSURE IN ACCORDANCE WITH DESIGN OF BOX WING & RETURN WALL. ADOPTED PERMISSIBLE SOIL BEARING CAPACITY SHOULD BE MORE MAX. FOUNDATION PRESSURE OF BOX WING & RETURN.
- WING & RETURN WALL SHALL BE CONSTRUCTED UNDER SR 25 KMPH ONLY WHERE EXTENSION OF BOX IS LESS THAN 1.5 TIMES OF BOX BOTTOM 1/2 IN BG.
- ROAD ELEMENTS SHOULD BE PLANNED IN ACCORDANCE WITH IRC CODE AS FAR AS POSSIBLE.
- SPEED RESTRICTION BOARDS SHALL BE PROVIDED ON ROAD PERMITTED IN IRC CODES.
- CONCERNED SR.DEN/DEN IS FULLY RESPONSIBLE FOR PLANNING & DESIGNING ONE OR MORE SUITABLE DRAINAGE ARRANGEMENTS SUCH AS CONNECTING TO NEARBY LOW LYING AREA, BRIDGE, SOAK PIT, RECHARGE BORE WELL, SUMP WITH/WITHOUT PUMPING ARRANGEMENT, PROVIDING COVERING SHEET ETC.
- PRIOR COMMENCING THE WORK, FEASIBILITY OF DRAINAGE ARRANGEMENT SHOULD BE ENSURED BY CONCERNED SR.DEN/DEN/IN-CHARGE IN TERMS OF RAILWAY BOARD LETTER NO.2017/CE/49. REBURNATED 22.01.2020.
- ACTUAL DEPTH OF FOUNDATION SHALL BE DECIDED BY ENGINEER-IN-CHARGE TO SUIT THE SOIL STRATA MET WITH AT THE SITE. ENGINEER-IN-CHARGE SHOULD ENSURE THAT SBC OF SOIL AT FOUNDING LEVEL IS MORE THAN BEARING PRESSURE AT THAT LEVEL.
- EARTH FILL BEHIND BOX AND EXCAVATED PART OF EMBANKMENT FOR BEARING SUPPORT SHALL BE DONE WITH GRANULAR MATERIAL QUARRY DUST.
- IF TRACK ALIGNMENT IS IN CURVE THEN EXECUTIVE IN-CHARGE SHOULD MAKE PROPER ARRANGEMENT FOR STABILITY AND SAFETY OF TRACK/RH GIRDERS, SUPPORTING CHAIRS BEARINGS ETC.
- EXECUTIVE IN-CHARGE SHOULD ENSURE THAT, THE SAFE BEARING CAPACITY AT FOUNDING LEVEL SITE IS MORE THAN THE MAXIMUM FOUNDATION PRESSURE SHOWN IN STRUCTURAL DESIGN DRAWING BEFORE STARTING THE WORK.
- (a) PRIOR COMMENCING THE WORK ENGINEER IN-CHARGE SITE ENGINEER TO ENSURE THAT THE SBC OF SOIL IS HIGHER THAN THE ACTUAL FOUNDATION PRESSURE MENTIONED IN DETAILED DRAWING. (b) ANY DISCREPANCY FOUND REGARDING DIMENSION AND FEASIBILITY OF THE PROPOSAL, BROUGHT TO THE NOTICE OF HQ OFFICE, PRIOR COMMENCING THE WORK. (c) PRIOR COMMENCING THE WORK, SR. DEN/DEN/ENGINEER IN CHARGE MUST CHECK THE BORE LOG DETAILS AND SHOULD MATCH THE SOIL PRESENT AT THE SITE WITH THE INFORMATION OF THE SOIL PROVIDED IN BORE LOG DETAILS AT THE SITE.
- (a) PRIOR COMMENCING THE WORK, SR. DEN/DEN/ENGINEER IN CHARGE MUST CHECK THE BORE LOG DETAILS AND SHOULD MATCH THE SOIL PRESENT AT THE SITE WITH THE INFORMATION OF THE SOIL PROVIDED IN BORE LOG DETAILS IN GAD.
- PRIOR COMMENCING THE WORK SR. DEN/DEN/ENGINEER IN CHARGE MUST ENSURE THAT THE PROVISION OF DRAINAGE ARRANGEMENTS AND ENSURING THAT DRAIN WATER/RAIN WATER IN SUBWAY WILL BE DRAINED OUT TOWARDS LOW LYING AREA, BRIDGE, SOAK PIT, RECHARGE WELL, SUMP OR ANY OTHER SUITABLE LOCATION WITH PUMP OR ANY OTHER SUITABLE METHOD AND ENSURE THAT THERE SHOULD BE NO WATER LOGGING IN THE SUBWAY.
- PRIOR COMMENCING THE WORK SR. DEN/DEN/ENGINEER IN CHARGE MUST ENSURE THAT THE PROVISION OF ROOF COVERING FOR APPROACHES SHOULD BE MADE AS PER TABLE NO.08 OF RAILWAY BOARD LETTER NO.2017/CE/49/REBURNATED 22.04.2020. (b) PRIOR COMMENCING THE WORK SR. DEN/DEN/ENGINEER IN CHARGE MUST ENSURE THAT THE SIGNATURE OF ROAD AUTHORITY HAS BEEN OBTAINED ON GAD.
- (a) REINFORCEMENT IS TO BE CHECKED BY SECTIONAL ADEN BEFORE CONCRETE TO ENSURE THAT THE ARRANGEMENT OF BARS IS AS PER STRUCTURAL DRAWING.
- IF SUFFICIENT TIME LAPS AFTER RECEIPT OF REINFORCEMENT THEN SUITABLE ANTI CORROSIVE TREATMENT TO BE APPLIED.
- NO CONCRETING TO BE DONE WITHOUT ADEN CERTIFICATE.
- THE SHUTTERING/FORM WORK SHALL BE DESIGNED AND CONSTRUCTED SO AS TO REMAIN SUFFICIENTLY RIGID DURING PLACING AND COMPACTION OF CONCRETE AND SHALL BE SUCH AS TO PREVENT LOSS OF SLURRY FROM THE CONCRETE FOR FURTHER DETAIL REGARDING DESIGN, DETAILING ETC. REFERENCE MAY BE MADE TO EACH PART. THE TOLERANCE ON THE SHAPES, LINES AND DIMENSIONS SHOWN IN THE DRAWING SHALL BE WITHIN THE LIMIT GIVEN BELOW:
 - +2MM DIMENSION OF CROSS-SECTION OF COLUMNS AND BEAMS -40MM
- AS FAR AS POSSIBLE COLD JOINT IS TO BE AVOIDED HOWEVER IF COLD JOINT IS COMING WHILE CASTING UP BIGGER STRUCTURE, NECESSARY STEPS AS PER IS456 CLAUSE 11.4 SHOULD BE TAKEN AND BEFORE INTRODUCING FRESH CONCRETE OVERSET CONCRETE, CHEMICAL BONDING AGENT AS APPROVED BY ENGINEER IN CHARGE SHOULD BE APPLIED.



SIGNATURE BLOCK

CE-C-I-CCG	
DYCE-C-CCG	
AXEN-C-CCG	
SSE-C-W-KILE	
PINK BOOK ITEM NO: 31 OF PB 2024-25/NR	
DRG. NO.: DY.CE/CCG/ /D-VADHAVAN PORT	
TITLE	
CONNECTING RAILWAY:	WESTERN RAILWAY
DIVISION : MUMBAI	SECTION : VR - ST SECTION
PROJECT : NEW DOUBLE LINE BETWEEN VADHAVAN PORT AND NEW PALSHAR STATION (22.23 KM)	
TYPICAL GAD : PROPOSED CONSTRUCTION OF RUB NO.9CH(7650.000), 11(CH:7960.000) 12(CH:8726.702) 20(CH:14198.285), 30(CH:16708.055) & 43(CH:19803.822) AS 1 X 6.00 X 4.00 m RCC BOX IN BETWEEN VANGAON AND VADHAVAN PORT	
GENERAL ARRANGEMENT DRAWING	
RAIL LOADING STANDARD : 25 T AXLE LOADING (2008)	
CONTRACTOR	
SATRA Services and Solutions Private Limited	
SHEET NO: SHEET 1	
SCALE: AS SHOWN (UNLESS OTHERWISE SPECIFIED)	
SHEET SIZE: A0 (200 X 841)	
ISSUE DATE:	