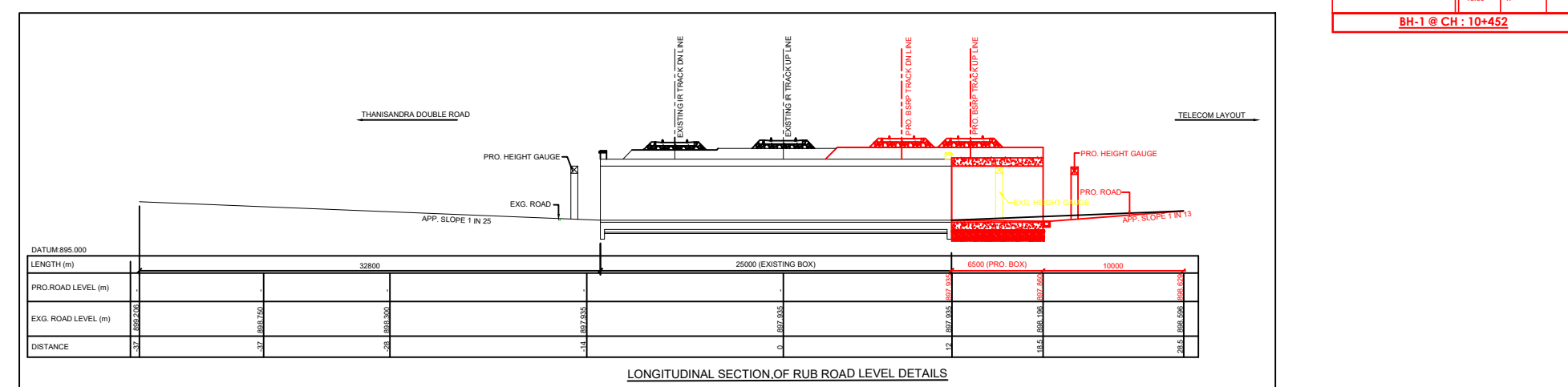
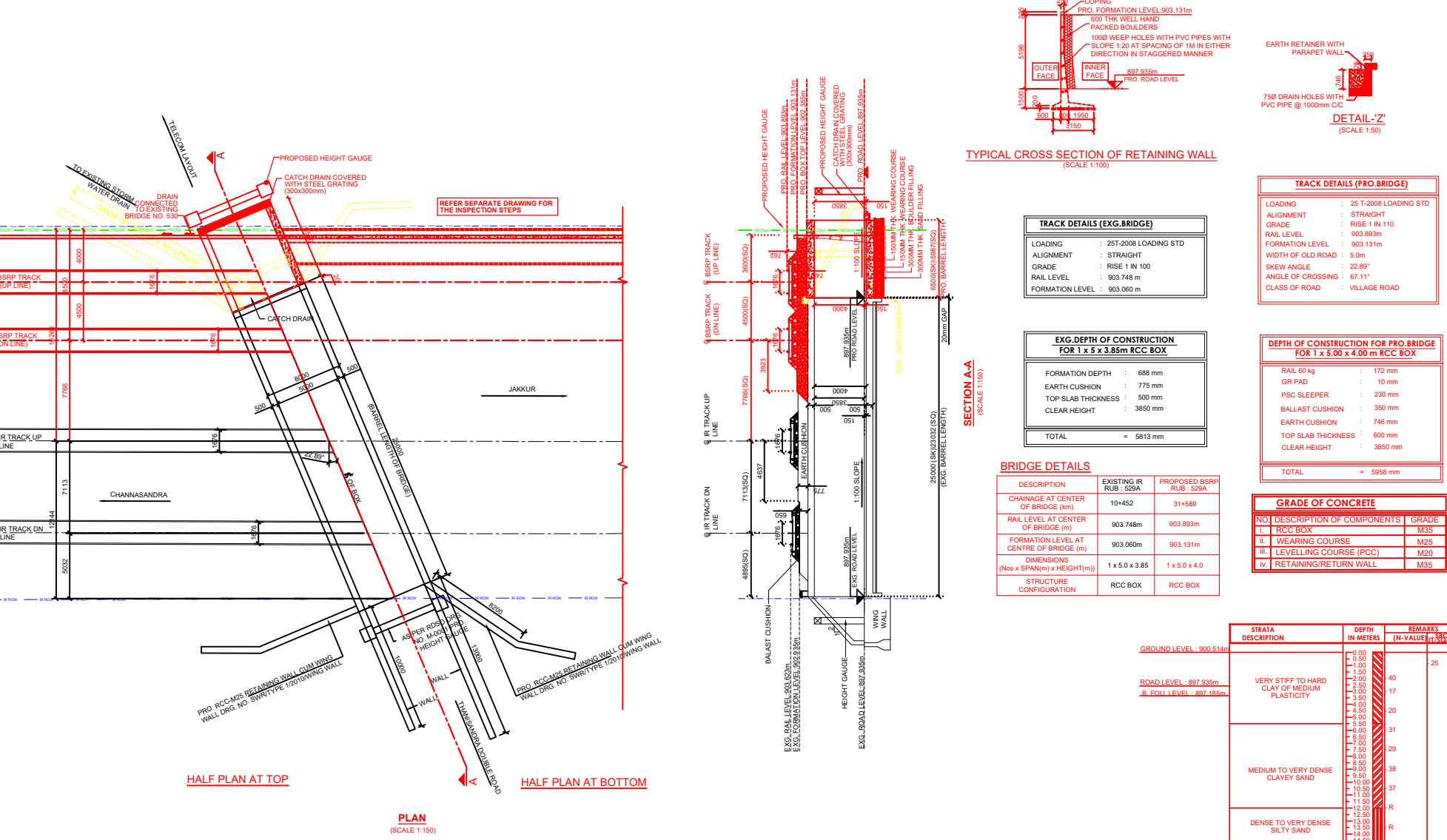
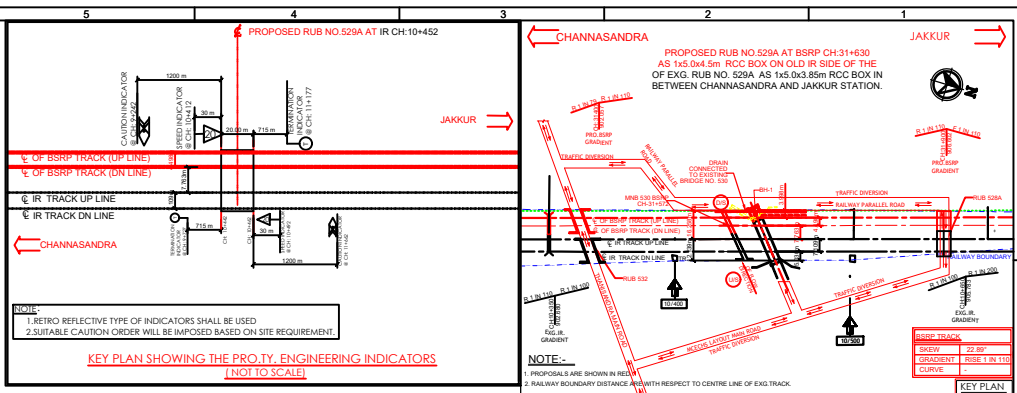


PROPOSED BRIDGE ELEVATION (SCALE 1:150)
OLD BRIDGE ELEVATION (SCALE 1:150)
EXTENDED BRIDGE ELEVATION (SCALE 1:150)



LONGITUDINAL SECTION OF RUB ROAD LEVEL DETAILS



KEY PLAN SHOWING THE PRO.TY. ENGINEERING INDICATORS (NOT TO SCALE)

- SPECIFICATION:**
- ALL WORKS ARE TO BE CARRIED OUT AS PER THE FOLLOWING.
 - INDIAN RAILWAY UNIFIED STANDARD SPECIFICATIONS FOR WORKS AND MATERIALS 2019.
 - IRIS CONCRETE BRIDGE CODE 2014 (REPRINT) & RELEVANT IS SPECIFICATIONS.
 - IRIS BRIDGE SUB-STRUCTURE CODE, 2013 (2ND REVISED).
 - IRIS BRIDGE RULES 2014 (REPRINT).
 - IRIS SCHEDULE OF DIMENSIONS 2022 (READ WITH UPDATED CORRECTION SLIP).
 - WEEP HOLES - WEEP HOLES TO BE PROVIDED AS PER PARA 7.6 OF SUB-STRUCTURE CODE & WEEP HOLES SHALL BE OF 75/100 DIA. PVC/AC PIPES STAGGERED AT 1000 C/C ABOVE LOW WATER LEVEL IN BOTH WING WALL/RETURN WALL & EARTH RETAINER OF BOX.
 - THE BOULDER FILLING SHALL CONSIST OF WELL-HAND-PAKED BOULDERS & COBBLES TO THICKNESS NOT LESS THAN 600 mm BEHIND THE BOULDER FILLING. BACKFILLING MATERIALS SHALL CONSIST OF GRANULAR MATERIALS OF GW, GP, SW CORRECT AS PER IS 1498 - 1970.
 - GRADE OF STEEL FOR RCC IS FE 500/500D CONFIRMING TO IS 1786-2008.
 - LOADING STANDARD: 25T - 2008 AXLE LOAD.
 - CONCRETE SHALL BE MECHANICALLY MIXED, VIBRATED & THOROUGHLY CURED.
- MODUS OPERANDI:**
- IMPOSE 20KMPH SPEED RESTRICTIONS BEFORE THE EXCAVATION WORK.
 - DIVERT THE TRAFFIC THROUGH NEAREST RUB 529A. PROPER TRAFFIC SIGNALS TO BE PROVIDED FOR DIVERSION OF TRAFFIC WITH TRAFFIC CONTROLLING PERSON. PERMISSION TO BE OBTAINED FROM COMPETENT AUTHORITY FOR DIVERSION/CLOSING OF TRAFFIC.
 - EARTHWORK EXCAVATION TO BE DONE FOR PROPOSED BARREL LENGTH OF RCC BOX.
 - IF MAXIMUM BASE PRESSURE AT FOUNDATION LEVEL IS LESS THAN THE SAFE BEARING CAPACITY OF SOIL, THEN SOIL IMPROVEMENT TO BE DONE.
 - EARTHWORK EXCAVATION TO BE DONE FOR PROPOSED BARREL LENGTH WITH 300mm SAND AND 300mm BOULDER FILL BENEATH THE BOX BOTTOM RAFT.
 - THE EXTENSION OF THE PROPOSED RUB SHALL BUTT TO EXISTING RUB AND CONSTRUCT RCC BOX AS PER GAD.
 - PROPER SEALING BETWEEN THE EXISTING AND PROPOSED BRIDGE WILL BE PROVIDED AS PER SITE REQUIREMENTS TO AVOID THE SEEPAGE OF WATER.
 - RETAININGS WALL WORKS TO BE DONE.
 - BOULDER FILLING AND BACKFILL AS PER IRIS SUBSTRUCTURE AND FOUNDATION CODE TO BE DONE.
 - COMPLETE THE REMAINING WORK IN ALL RESPECTS WITHOUT INFRINGING TRAIN TRAFFIC & RESTORE THE NORMAL SPEED IN EXG. LINE AFTER ATTAINING THE REQUIRED CONSOLIDATION IN NEW EMBANKMENTS.
- REFERENCE:**
- WEEP HOLES AS PER PARA 7.6 OF BRIDGE SUBSTRUCTURE AND FOUNDATION CODE.
 - RCC BOX AS PER DESIGN.
 - RETAINING WALL AS PER DESIGN.
 - HEIGHT GAUGE AS PER RDSO/M-8001.
 - BALLAST RETAINER AS PER DESIGN MONOLITHIC WITH THE BOX.
 - BACKFILL MATERIAL BEHIND RCC BOX AS PER PARA 7.5 OF IRIS BRIDGE SUBSTRUCTURE & FOUNDATION CODE.

- GENERAL NOTES:**
- ALL DIMENSIONS SHOWN IN THIS GAD ARE IN MM AND REDUCED LEVELS (W.R.T. MSL) ARE IN M UNLESS OTHERWISE SPECIFIED.
 - DO NOT SCALE THE DRAWING ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 - EXISTING BRIDGE DETAILS ARE BASED ON DATA COLLECTED FROM SITE BY FIELD EXECUTIVES.
 - STANDARD OF RAILWAY LOADING: 25T AXLE LOADING - 2008 STANDARD.
 - THE ENTIRE WORK SHALL BE CARRIED OUT AS PER THE INSTRUCTIONS AND TO THE SATISFACTION OF THE ENGINEER IN CHARGE AT SITE.
 - RAIL LEVEL, FORMATION LEVEL, ETC., SHOULD BE CROSS VERIFIED BY THE ENGINEER IN CHARGE BEFORE AND DURING EXECUTION OF WORK AT SITE AS PER LATEST APPROVED WORKING SECTION/PLANS AND OTHER CONNECTED DRAWINGS IF ANY.
 - ON TOP OF CONCRETE AT THE END OF EACH DAY'S WORK, DEPRESSION SHALL BE MADE TO FORM KEYS FOR ADEQUATE BOND FOR NEXT DAY CONCRETING.
 - NO CONSTRUCTION JUMP SHALL BE NORMALLY ALLOWED IN CONCRETE WITHOUT SPECIAL PRECAUTIONS AS PER RELEVANT CODES.
 - CONTROLLED CONCRETE WITH WEIGH BATCHING SHALL BE USED FOR CONCRETE.
 - CURING OF ALL CONCRETE WORK AS PER RELEVANT CODES OF PRACTICE SHALL BE ENSURED.
 - UNDERGROUND CABLE ETC., IF ANY, SHALL BE REMOVED AND RE-ALIGNED BEFORE THE EXECUTION OF WORK STARTS. SBT CABLES SHALL BE PROTECTED AT SITE BY K-RIDE. ALL PRECAUTIONARY STEPS MUST BE TAKEN ACCORDING TO TELECOMMUNICATION CIRCULAR NO. 17/2013, ISSUED BY RAILWAY BOARD VIDE LETTER NO. 2003/TELE.VOL I.P.T. DC, DATED 24.06.2013.
 - THE TYPE AND DEPTH OF THE FOUNDATION SHOWN IN GAD ARE BASED ON THE SOIL REPORT SUBMITTED AT THE TIME OF PREPARATION OF THIS GAD AND IT IS INDICATIVE ONLY. ACTUAL TYPE AND DEPTH WILL BE DECIDED BY THE ENGINEER-IN-CHARGE BEFORE THE ACTUAL SOIL ENCOUNTERED AT SITE DURING EXECUTION.
 - ALL STRUCTURAL DIMENSION OF SUBWAY IS AS PER DESIGN AND OTHER STRUCTURES SHOWN IN THIS GAD ARE TENTATIVE. THE DIMENSIONS SHOWN IN THIS GAD ARE BASED ON THE PRELIMINARY DESIGN. THE DETAILED DESIGNING/DRAWING WILL BE PROCESSED SEPARATELY AFTER THE APPROVAL OF GAD.
 - SBC OF SOIL AT FOUNDATION LEVEL IS APPROX. 25.07 T/SQ.M FOR RCC BOX. SOIL IMPROVEMENT TO BE DONE WITH SAND & BOULDER FILLING.
 - ENGINEER INCHARGE SHALL ENSURE MAXIMUM CALCULATED FOUNDATION PRESSURE AT FOUNDATION LEVEL SHALL NOT EXCEED SAFE BEARING CAPACITY OF SOIL AT THAT LOCATION.
 - PROPER DRAINAGE ARRANGEMENTS HAVE TO BE PROVIDED TO LEAD THE WATER FROM RUB TO LOW LYING AREAS EITHER BY LAYING UNDERGROUND PIPES / OPEN DRAINS WITH PROPER MAINTAINABILITY OR BY USING RAIN WATER HARVESTING TECHNIQUES AS PER CPD/BW/SWR/UBL LETTER NO. SWR/W.70/POLICY/VOL.IV, DATED 01.10.2020.
 - SUITABLE HEIGHT GAUGE TO BE PROVIDED ON EITHER SIDE OF RUB LOCATION AS PER STANDARD IR SPECIFICATION.
 - ALL THE FOLLOWING SAFETY MEASURES SHALL BE FOLLOWED.
 - ADEQUATE SAFETY MEASURES FOR RUNNING TRAINS SHALL BE ADOPTED WHILE DOING THE EARTH WORK BELOW THE TRACK.
 - DURING CONSTRUCTION OF THE BRIDGE THE EXISTING TRACK SHALL BE PROTECTED SUITABLY BY IMPOSING NECESSARY SPEED RESTRICTIONS BY PROVIDING TEMPORARY ENGINEERING INDICATORS.
 - DURING THE CONSTRUCTION OF THE PROPOSED BRIDGE PROPER SAFETY PRECAUTIONS TO BE TAKEN WHILE EXECUTING FOUNDATION WORK CLOSE TO THE EXISTING BRIDGE FOUNDATION INCLUDING IMPOSING SPEED RESTRICTIONS IF REQUIRED.
 - THE GRADUAL RELEASE OF SPEED RESTRICTION SHALL BE AS PER PARA NO.238 (2)(I) OF IRPW-2020.
 - NECESSARY SHORING ARRANGEMENTS TO BE MADE TO PROTECT EXISTING BRIDGE STRUCTURE WHEREVER NECESSARY.
 - 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.
 - SUITABLE SAFETY BARRICADING HAS TO BE PROVIDED WHENEVER WORK IS BEING EXECUTED PARALLEL TO THE RUNNING TRACK.
 - NECESSARY DRAINAGE ARRANGEMENT TO BE PROVIDED AS PER REQUIREMENT.
 - DIMENSIONS OF RETAINING WALLS, SHOWN IN GAD ARE ONLY "INDICATIVE" AND TO BE FOLLOWED AS PER APPROVED DESIGN AND DRAWINGS.
 - WHEREVER SBC IS LESS THAN FOUNDATION PRESSURE TO IMPROVE THE SBC OF SOIL TWO LAYERS OF SAND & BOULDER FILLING OF 300mm THICKNESS EACH TO BE LAID & COMPACTED BEFORE LEVELLING COURSE OF 150mm FOR RCC BOX, RETAINING WALL FOUNDATION.

- LOADING STANDARD**
- A) PRO. BRIDGE: 25T-2008 LOADING STD
B) EXG. BRIDGE: 25T-2008 LOADING STD
- BASE PRESSURE AT FOUNDATION LEVEL**
- | STRUCTURE | MAX. AS PER DESIGN |
|------------------------------------|--------------------|
| RCC BOX (T/M ²) | AS PER DESIGN |
| RETAINING WALL (T/M ²) | AS PER DESIGN |
- SPECIAL NOTES:**
- RAIL LEVEL, FORMATION LEVEL, ETC., SHOULD BE CROSS VERIFIED BY THE ENGINEER-IN-CHARGE BEFORE AND DURING EXECUTION OF WORK AT SITE, AS PER LATEST APPROVED WORKING SECTION/PLANS AND OTHER CONNECTED DRAWINGS IF ANY.
 - BEFORE EXECUTION OF WORK, ENGINEER IN CHARGE SHOULD ENSURE 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.
 - SOIL IMPROVEMENT TO BE DONE: ENGINEER-IN-CHARGE SHALL ENSURE THAT AFTER SOIL IMPROVEMENT, SBC OF SOIL BELOW THE BOX SHALL BE MORE THAN MAXIMUM BASE PRESSURE AT BOTTOM LEVEL OF RCC BOX I.e. 25 T/SQ.M.
 - ENGINEER IN-CHARGE SHOULD ENSURE THAT SUITABILITY OF THE EXISTING BRIDGE TO TAKE OF 25T LOAD DISPERSION FOR ITS ELEMENTS SUCH AS SUBSTRUCTURE AND FOUNDATION BEFORE TAKING UP PROPOSAL WORK.
 - THE EXTENSION OF THE PROPOSED BRIDGE SHALL BUTT TO EXISTING BRIDGE AND PROPER SEALING BETWEEN THE EXISTING AND PROPOSED BRIDGE WILL BE ENSURED TO AVOID THE SEEPAGE OF WATER.
- ALL THE FOLLOWING SAFETY MEASURES SHALL BE FOLLOWED:**
- ADEQUATE SAFETY MEASURES FOR RUNNING TRAINS SHALL BE ADOPTED WHILE DOING THE EARTH WORK BELOW THE TRACK.
 - DURING CONSTRUCTION OF THE BRIDGE, THE EXISTING TRACK SHALL BE PROTECTED SUITABLY BY IMPOSING NECESSARY SPEED RESTRICTION BY PROVIDING TEMPORARY ENGINEERING INDICATORS.
 - DURING THE CONSTRUCTION OF THE PROPOSED BRIDGE PROPER SAFETY PRECAUTIONS TO BE TAKEN WHILE EXECUTING FOUNDATION WORK CLOSE TO THE EXISTING BRIDGE FOUNDATION INCLUDING IMPOSING SPEED RESTRICTIONS IF REQUIRED.
 - THE GRADUAL RELEASE OF SPEED RESTRICTION SHALL BE AS PER PARA 637 (1) (F) OF IRPW-2020.
 - NECESSARY SHORING ARRANGEMENTS TO BE MADE TO PROTECT EXISTING BRIDGE STRUCTURE WHEREVER NECESSARY.
 - JOINT PROCEDURE ORDER ON SAFETY RELATED ISSUES PERTAINING TO WORK SITE IN CONSTRUCTION.
 - PROJECTS (PO 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.
 - 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.
 - SUITABLE SAFETY BARRICADING HAS TO BE PROVIDED WHENEVER WORK IS BEING EXECUTED PARALLEL TO THE RUNNING TRACK.
 - NECESSARY PROTECTIVE ARRANGEMENTS SHALL BE MADE BY KRIIDE IN CONSULTATION WITH SBC DIVISION ELECTRICAL TRD/BANCH TO AVOID ANY ELECTRICAL INDUCTION DURING EXECUTION OF PROPOSED WORK.

THE RAILWAY BOARD SANCTION FOR BENGALURU SUBURBAN TRANSPORT PROJECT (148.17KMS) VIDE LETTER NO:2019/JV CELL/K-RIDE/BSTP/EBR/07 DATED:21/10/2020

AUTHORITY OF WORK: IS AS PER DFSR OF BSRR, LIST OF LC ELIMINATION AND FIRST PAGE OF DFSR IS ATTACHED IN E-DAS

GENERAL CONSULTANTS:

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

BENGALURU DIVISION

BAIYAPPANAHALLI - RAJANUKUNTE SECTION OF BSRR C-4

AUTHORITY OF WORK: AS PER BSRR DFSR

PROPOSED RUB NO.529A AT BSRR CH.31+630
AS 1x5.0x4.5m RCC BOX ON OLD IR SIDE OF THE OF EXG. RUB NO. 529A AS 1x5.0x3.85m RCC BOX IN BETWEEN CHANNASANDRA AND JAKKUR STATION.

K RIDE DRG.NO: KRIDE/BSRR/C-4/PKG2/RUB-529A
HQ.DRG.NO: SCALE - 1 : 100

LEGEND:
Total Barrel length of RUB 529A = 9.5m.
Completed Barrel length = 0 m (BSRR Side).
Remaining Barrel length yet to be Constructed.

CONCEPTUAL / TENDER DRAWING

GC/K-RIDE	K-RIDE
FOR GC	FOR K-RIDE