SPECIAL NOTES FOR CONSTRUCTION RUB

1. IT SHOULD BE ENSURED THAT THE REDUCED LEVELS OF ROAD TOP IN APPROACHES AND RAILWAY PORTIONS SHOULD BE SMOOTH WITHOUT ANY ABRUPT CHANGE IN LEVELS.
2. EXG. DRAINAGE ARRANGEMENTS HAVE BEEN RETAINED/TO COMPLY TO RUB AS PER PCE CIRCULAR NO. 05/2021 DATED _____ &CE/SWR LETTER NO. _____ BRIDGE DESIGN & DRAWING/VOL-III DATED _____
3. THE JUNCTION BETWEEN EXTENDED RUB WITH EXISTING STRUCTURE SHALL BE SEALED AS ADVISED IN THE DETAILED SCHEME ISSUED BY CBE/SWR/UBL/VOL-III/CE/BN/SWR LETTER NO SWR/W/TO/POLICY/_____DATED:_____

GENERAL NOTES:

1. ALL DIMENSIONS SHOWN IN THIS GAD ARE IN MM AND REDUCED LEVELS (W.R.T. MSL) ARE IN M UNLESS OTHERWISE SPECIFIED.
2. DO NOT SCALE THE DRAWING ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
3. EXPOSURE CONDITION IS MODERATE.
4. SEISMIC ZONE IS ZONE II.
5. STANDARD OF RAILWAY LOADING: 25T AXLE LOADING - 2008 STANDARD.
6. STANDARD OF ROAD LOADING : IRC.
7. PROPOSAL IS SHOWN IN RED COLOUR IN THE KEY PLAN.
8. EXISTING BRIDGE DETAILS ARE BASED ON DATA COLLECTED FROM SITE BY FIELD EXECUTIVES.
9. THE ENTIRE WORK SHALL BE CARRIED OUT AS PER THE INSTRUCTIONS AND TO THE SATISFACTION OF THE ENGINEER IN CHARGE AT SITE.
10. RAIL LEVELS, 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/PLAN AND OTHER CONNECTED DRAWINGS IF ANY.
11. THIS GAD IS SUBJECT TO MAINTAINING SAME LEVEL, ALIGNMENT, GRADE & TRACK CENTER DISTANCE AS THAT OF APPROVED WORKING SECTION/ PLAN AND YARD PLANS IF ANY.
12. 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.
13. ALL RCC SURFACES COMING IN CONTACT WITH SOIL MUST BE PAINTED WITH APPROVED BITUMINOUS PAINT. NO OTHER CONCRETE SURFACE SHALL BE PAINTED AND IN THIS CONNECTION INSTRUCTIONS ISSUED VIDE CAO LETTER NO: W.148/CONTRA/POLICY/VOL/IV,DATED _____ SHALL BE FOLLOWED STRICTLY.
14. NO CALCIUM CHLORIDE SHALL BE NORMALLY ALLOWED IN CONCRETE WITHOUT SPECIAL PRECAUTIONS AS PER RELEVANT CODES.
15. CONTROLLED CONCRETE WITH HIGH WATERING SHALL BE USED FOR CONCRETE.
16. CURING OF ALL CONCRETE WORK AS PER RELEVANT CODES OF PRACTICE SHALL BE ENSURED.
17. UNDERGROUND CABLE ETC., IF ANY SHALL BE REMOVED AND RE-LAYED BEFORE THE EXECUTION OF WORK STARTS,IF CABLES SHALL BE PROTECTED AT SITE BY K-RIDE. ALL PRECAUTIONARY STEPS MUST BE TAKEN ACCORDING TO TELECOMMUNICATION CIRCULAR NO. 17/2015. ISSUED BY RAILWAY BOARD VIDE LETTER NO.2003/TELE/VOL I PT, DC DATED:24.06.2015.
18. 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 AS PER THE ACTUAL SOIL ENCOUNTERED AT SITE DURING EXECUTION.
19. ALL STRUCTURAL DIMENSIONS OF SUBSTRUCTURE DESIGN AND OTHER STRUCTURES SHOWN IN THIS GAD ARE TENTATIVE. THE DIMENSIONS SHOWN IN THIS GAD ARE BASED ON THE PRELIMINARY DESIGN. THE DETAILED DESIGN/ DRAWING WILL BE PROCESSED SEPARATELY AFTER THE APPROVAL OF GAD.
20. MAXIMUM GALLEATED PRESSURE AT BOTTOM OF FOUNDATION FOR DIFFERENT ELEMENTS OF THIS SUBWAY IS AS FOLLOWS:

STRUCTURE	P max (KN/M²)
RCC BOX	189.67
RETAINING WALL	200T

21. SAFE BEARING CAPACITY OF SOIL/ROCK AT BOTTOM OF FOUNDATION IS 400 KN/M² AS PER SOIL REPORT.
22. OPEN FOUNDATION.
    a. ENGINEER INCHARGE SHALL ENSURE MAXIMUM CALCULATED FOUNDATION PRESSURE AT FOUNDATION LEVEL SHALL NOT EXCEED SAFE BEARING CAPACITY OF SOIL AT THAT LOCATION.
23. THE MINIMUM HORIZONTAL & VERTICAL DISTANCES HAS BEEN PROVIDED AS PER LATEST SOD FOR RAILWAYS/BSRP.
24. PROPER DRAINAGE ARRANGEMENTS HAVE TO BE PROVIDED TO LEAD THE WATER FROM RUB TO LOW LYING AREAS/NALLAHS CONSIST OF GRANULAR MATERIALS OF GW, GP, SW, GROUPS AS PER IS:1498-1970(RCC BOX).
    MAINTAINABILITY OF BH USING RAIN WATER HARVESTING TECHNIQUES AS PER CPD/BW/SWR/UBL LETTER NO. SWR/W.TO/POLICY/VOL.II/2019-2020.
25. SUITABLE GROUND RAILS SHALL BE PROVIDED ON TRACK AT RUB LOCATIONS AS PER STANDARD IR SPECIFICATION.
26. SUITABLE HIGHT GAUGE TO BE PROVIDED ON EITHER SIDE OF RUB LOCATION AS PER STANDARD IR SPECIFICATION.
27. DETAILED INSTRUCTIONS ISSUED FOR CONSTRUCTION OF RUB/SUBWAY BY CRS/ADVICE LETTER NO: 1501/E(O)1/2017-18/7-6, DATED27-04-2018 FORWARDED BY CRS/SBC VIDE LETTER NO: 022011/2013-14-SWR, DATED:05-05-2018 SHALL BE FOLLOWED.
28. ALL THE FOLLOWING SAFETY MEASURES SHALL BE FOLLOWED.
    a. ADEQUATE SAFETY MEASURES FOR RUNNING TRAINS SHALL BE ADOPTED WHILE DOING THE EARTH WORK BELOW THE TRACK.
    b. DURING CONSTRUCTION OF THE BRIDGE THE EXISTING TRACK SHALL BE PROTECTED SUITABLE BY PROVIDING NECESSARY SPEED RESTRICTIONS BY PROVIDING TEMPORARY SPEED RESTRICTION BOARDS.
    c. DURING THE CONSTRUCTION OF THE PROPOSED BRIDGE PROPER SAFETY PRECAUTIONS TO BE TAKEN WHILE EXECUTING FOUNDATION WORK CLOSE TO THE EXISTING BRIDGE FOUNDATIONS INCLUDING IMPOSING SPEED RESTRICTIONS IF REQUIRED.
    d. THE GRADUAL RELEASE OF SPEED RESTRICTION SHALL BE AS PER PARA NO.238 (1)(iii) OF IRPWM.
    e. NECESSARY SAFETY ARRANGEMENTS TO BE MADE TO PROTECT EXISTING BRIDGE STRUCTURE WHEREVER NECESSARY.
    f. JOINT PROCEDURE FOR ORDER ON SAFETY RELATED ISSUES PERTAINING TO WORK SITE IN CONSTRUCTION PROJECTS (IPO No: W.339/SAFETY PRECAUTION, DT:18.02.2011) ISSUED VIDE CTE LTR NO. SWR/W.343/SAFETY AT WORK SPOT DT:20.06.2017 HAS TO BE STRICTLY FOLLOWED.
    g. 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.
    h. SUITABLE SAFETY BARRICADING HAS TO PROVIDED WHENEVER WORK IS BEING EXECUTED PARALLEL TO THE RUNNING TRACK.
29. THE GAD HAS BEEN PREPARED BASED ON THE JOINT INSPECTION REPORT DATED _____ BETWEEN RAILWAY AND CONCERNED AUTHORITIES.
30. SUITABLE SPAN OF 1X5.4MTS (IN PROPOSED RUB PORTION) IS PROPOSED FOR FLEXIBLE VEHICULAR MOVEMENTS WITH A BARREL LENGTH OF 14.40M WITH 45 DEGREE SKEW IN THE GAD.
31. PROPER VENTILATION & LIGHTING ARRANGEMENTS WILL BE PROVIDED FOR THE SUBWAY.
32. APPROVAL OF OPEN AGE TO BE OBTAINED FOR PROPOSING NON-STANDARD DESIGN OF RCC BOX.
33. GEOMYSICAL SURVEY WILL BE DONE BEFORE EXECUTION & NO. OF INJECTION RECHARGE WELLS WILL BE DECIDED ACCORDINGLY.
34. STRUCTURES WITHIN THE K-RIDE ROW IS ONLY CONSIDERED IN L&T SCOPE OF WORK.
35. SUITABLE DRAINAGE ARRANGEMENT TO BE PROVIDED AS PER REQUIREMENT.
36. DIMENSIONS OF RETAINING WALLS, SHOWN IN GAD ARE ONLY "INDICATIVE" AND TO BE FOLLOWED AS PER APPROVED DESIGN AND DRAWINGS.
37. BRIDGE INSPECTION STEPS TO BE PROVIDED WITH LANDINGS AT APPROPRIATE LOCATIONS AND SPREAD AND RISE TO BE 300mm AND 150mm RESPECTIVELY.
38. BASE COURSE SHALL BE 350MM OF PROPERLY COMPACTED CRUSHED STONE LAYER OF 80MM SIZE AND DOWNGRADED SHALL BE PROVIDED BELOW PCC LEVELING COURSE AS A COMMON CONSTRUCTION PRACTICE, THIS LAYER SHOULD FULFILL THE CRITERIA OF BINDING THE BOX CULVERT AND THE UNDERNEATH SOIL.

MODUS OPERANDI

1. IMPOSE 20KMPH SPEED RESTRICTIONS DURING EXCAVATION WORKS IF REQUIRED AS PER SITE CONDITION.
2. DIVERT THE EXISTING ROAD IF ANY.
3. PROPOSED RETAINING WALL TO BE DISMANTLED TO FACILITATE TO DEVELOPMENT WITH SUITABLE SHORING CONDITION AS PER SITE CONDITION.
4. EARTHWORK EXCAVATION TO BE DONE FOR PROPOSED BARREL LENGTH WITH 350MM BASE COURSE BENEATH THE BOX BOTTOM RAFT.
5. RETAINING WALL & BRIDGE PROTECTION WORKS TO BE DONE.
6. BACKFILL AS PER IRS SUBSTRUCTURE CODE TO BE DONE
7. REMOVE THE SPEED RESTRICTION IF IMPOSED & ALSO RE-DIVERT THE WATER THROUGH THE BRIDGE.

SPECIFICATION:

1. ALL CIVIL WORKS HAVE TO BE CARRIED OUT AS PER THE FOLLOWING
    1.1 INDIAN RAILWAY UNIFIED STANDARD SPECIFICATIONS FOR WORKS AND MATERIALS 2010.
    1.2 IRS CONCRETE BRIDGE CODE 2004 & RELEVANT I.S SPECIFICATIONS.
    1.3 IRS BRIDGE SUBSTRUCTURE AND FOUNDATION CODE 2013.
    1.4 IRS BRIDGE RULES 2014
    1.5 IRS SCHEDULE OF DIMENSIONS 2004 CORRECTED UP TO LATEST CORRECTION SLIPS.
2. WEEP HOLES : 100MM DIA PVC/AC PIPES AS IRS SUBSTRUCTURE CODE 2013 CL:7.6
3. BACKFILL: GEO-COMPOSITE DRAIN AS PER RAILWAY BOARD LETTER NO 2017/CE-II/CJP/RUB/38, DATED 18.02.2018. BEHIND THE GEO COMPOSITE DRAIN, BACKFILL MATERIALS SHALL CONSIST OF GRANULAR MATERIALS OF GW, GP, SW, GROUPS AS PER IS:1498-1970 (ABUTMENTS, RETAINING WALLS ..) (OR) THE BOULDER FILLING SHALL CONSIST OF WELL HAND-PACKED BOULDERS AND COBBLERS TO THICKNESS NOT LESS THAN 600MM WITH SMALLER SIZE TOWARDS THE BACK. BEHIND THE BOULDER FILLING, BACKFILL MATERIAL SHALL CONSIST OF GRANULAR MATERIALS OF GW,GP,SW GROUPS AS PER IS 1498-1970(RCC BOX)
4. HIGH STRENGTH DEFORMED BARS (TOR) SHALL CONFORM TO IS: 1786-2008 (FE 500).
5. BAR BENDING SHALL BE CONFORMING TO IS:2502
6. LOADING STANDARD: 25T - 2008 AXLE LOAD.
7. CONCRETE SHALL BE MECHANICALLY MIXED, VIBRATED & THOROUGHLY CURED.

RESPONSIBILITY NOTES:

1. THE RUB WORK WILL BE EXECUTED BY K-RIDE FOR BOTH RAILWAY AND APPROACH PORTION OF RUB EVEN BEYOND RAILWAY BOUNDARY ALONG WITH DRAINAGE ARRANGEMENTS.
2. EXISTING TELEGRAPH POSTS, ELECTRIC POSTS, SIGNAL CABLES, WATER & DRAINAGE, WATER MAINS AND ALL OTHER UTILITIES COMING IN THE WAY SHALL BE SHIFTED SUITABLY BY THE RESPECTIVE DEPARTMENTS OF RAILWAYS / STATE AUTHORITIES.
3. NECESSARY TEMPORARY DIVERSION OF ROAD TRAFFIC HAS TO BE PROVIDED BY THE K-RIDE AGENCY AT THE TIME OF EXECUTION OF WORK BASED ON THE JOINT INSPECTION BETWEEN STATE AND RAILWAY AUTHORITIES. SUITABLE TEMPORARY SERVICE ROADS FOR THE USE OF PUBLIC SHALL BE ARRANGED AND MAINTAINED BY THE K-RIDE WHEREVER & WHENEVER REQUIRED.
4. ROAD APPROACH ON EITHER SIDE OF THE PROPOSED RUB SHOULD BE SUITABLY ALIGNED AND REGRADED BY K-RIDE AUTHORITY IN DUE CONSULTATION WITH STATE AUTHORITIES.
5. THE RESPONSIBILITY FOR THE MAINTENANCE OF ROAD PASSING THROUGH THE RUB, LIGHTING, DRAINAGE SYSTEM, DIVERSION ROAD AND ANY OTHER CONSTRUCTION PROJECTS (IPO NO: W.339/SAFETY PRECAUTION, DT:18.02.2011) ISSUED VIDE CTE LTR NO. SWR/W.343/SAFETY AT WORK SPOT DT:20.06.2017 HAS TO BE STRICTLY FOLLOWED.
6. IN CASE OF ANY LAND ACQUISITION INVOLVED FOR EXECUTING THE RUB WORK, K-RIDE AUTHORITY SHALL ACQUIRE SUCH LAND CHARGEABLE TO THE CONCERNED AS PER EXTANT RULES AND STATE GOVERNMENT HAS TO ACQUIRE SUCH LAND.

SPECIAL NOTES FOR 25 kV AC TRACTION SYSTEM

1. NECESSARY PROTECTIVE ARRANGEMENT SHALL BE MADE BY CONSTRUCTION ORGANIZATION IN CONSULTATION WITH ELECTRICAL TRD/BRANCH TO AVOID ANY ELECTRICAL INDUCTION DURING LAUNCHING OF GIRDER/EXECUTION OF WORK.
2. WHILE LAUNCHING OF GIRDER ABOVE THE OHE AND ALSO DURING ANY WORK INVOLVING LESS THAN 2M WORKING CLEARANCE FROM OHE, THE WORK SHALL BE CARRIED OUT ONLY DURING POWER BLOCK CONDITION BY OBTAINING PERMISSION TO WORK FORM AUTHORIZED TRD BRANCH OF OFFICIALS.
3. ALL STEEL STRUCTURE & GIRDERS INVOLVING THE ABOVE WORKS SHALL BE STRICTLY EARTHEN TO TRACTION RAIL. SEPARATE EARTH PIPE FOR SAFETY OF WORKING STAFF.
4. GIRDER LAUNCHING / EXECUTION OF WORK TO BE DONE WITHOUT DISTURBING OHE.
5. OHE TRACTION CONDUCTORS SHALL BE PROFILED TO GET MAXIMUM CONTACT WIRE HEIGHT WITH NORMAL ELECTRICAL CLEARANCE AFTER COMPLETION OF WORK BY OUTRD.
6. ALL OHE PROFILING WORKS, GIRDERS ERECTION ETC., WILL BE DONE UNDER THE SUPERVISION OF SSE/OUTRD UNDER POWER BLOCK CONDITIONS.
7. JOINT PROCEDURE ORDER FOR PROVISION PROTECTIVE SCREEN OVER PROTECTIVE SCREEN OVER 25AV AC ELECTRIFIED SECTION CIRCULATED VIDE LETTER NO SWR/W. IV.339/BRIDGE - DESIGN AND DRAWING/VOL III DT _____ TO BE STRICTLY FOLLOWED.

JUSTIFICATION FOR TRACK CENTRE DISTANCE

TRACK CENTRE DECIDED BASED ON THE APPROVED ALIGNMENT PLAN OF IR /BSRP : _____.

JUSTIFICATION FOR SELECTION THE SPAN

SPAN SELECTED AS PER THE JOINT INSPECTION REPORT DATED _____ BETWEEN RAILWAY OFFICIALS AND BBMP OFFICIALS. FOR THIS PURPOSE SBC DIVISION DEMANDED FOR A 5.6M ROAD IN THE FORMATION. HENCE A BARREL LENGTH OF 14.420 M HAS BEEN PROPOSED IN THIS GAD.

KEY PLAN NOTE:

1. PROPOSALS ARE SHOWN IN RED.
2. RAILWAY BOUNDARIES ARE WITH RESPECT TO CENTRE LINE OF EXG.TRACK.
3. TRACKS IS IN CURVE ON BRIDGE LOCATION.

REFERENCE:

1. BOX DESIGN ENDRE DOCUMENT NO- DOC-BSRP-CR2-AG-DGN-BR-20-1510.
2. K-RIDE SUBSTRUCTURE BOOK - 022077-BSRP-CR2-C-UB-0-20-1029
3. RETURN WALL - 022077-BSRP-CR2-C-UB-0-20-1030.
4. WEEP HOLES AS PER PARA 7.6 OF SUB-STRUCTURE CODE
5. EARTH RETAINING AS PER DESIGN,MONOLITHIC WITH BOX
6. CURTAIN WALL AND TOE WALL AS PER DESIGN
7. BACKFILL MATERIALS BEHIND RCC BOX TO PROVIDE AS PER PARA 5 OF IRS BRIDGE SUBSTRUCTURE & FOUNDATION CODE
8. BORING DETAILS AS PER DESIGN NOS.OTHEC WITH BOX
9. DRAINAGE ARRANGEMENT DRG. NO-022077-BSRP-CR2-UB-DR-20-1631

CERTIFICATE OF DRAINAGE ARRANGEMENTS :

IT IS CERTIFIED THAT THE DRAINAGE ARRANGEMENTS FOR THE PROPOSED CONSTRUCTION OF RUB IN LIEU OF BR 5418 AT BSRP CH :- 4+720 AT CORRIDOR 2 OF BSRP HAVE BEEN THOROUGHLY CHECKED AND THERE WILL BE NO PROBLEM OF DRAINAGE AT THIS LOCATION IN THE FUTURE.

(-Sd-)	(-Sd-)
AGM/K-RIDE	GM/K-RIDE

BRIDGE STRENGTH CERTIFICATE

CERTIFIED THAT THE PRO RCC BOX BRIDGE NO:5418 AT BSRP CH :- 4+720 OF SPAN OF 1 x 5.6 x 2.65m AT RIB DESIGN IS 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 25T - 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-)	(-Sd-)
AGM/K-RIDE	GM/K-RIDE

EMPLOYER :

RAIL INFRASTRUCTURE DEVELOPMENT COMPANY (KARNATAKA) LIMITED

GENERAL CONSULTANTS:

AECOM-EGIS-WSP

GENERAL ARRANGEMENT DRAWING

BENGALURU SUBURBAN RAILWAY PROJECT (BSRP)
K-RIDE CORRIDOR - 2

PROPOSED EXTENSION OF EXISTING RUB 541B (RCC BOX 1 x 5.6 x 2.65)WITH PROPOSED RUB (RCC BOX 1X5.6X2.8) (CLEAR HEIGHT 2.65) AT EXG. IR CH:210/369.025 BSRP CHAINAGE 4+720 BETWEEN BANASAWADI AND NAGAVARA STATIONS

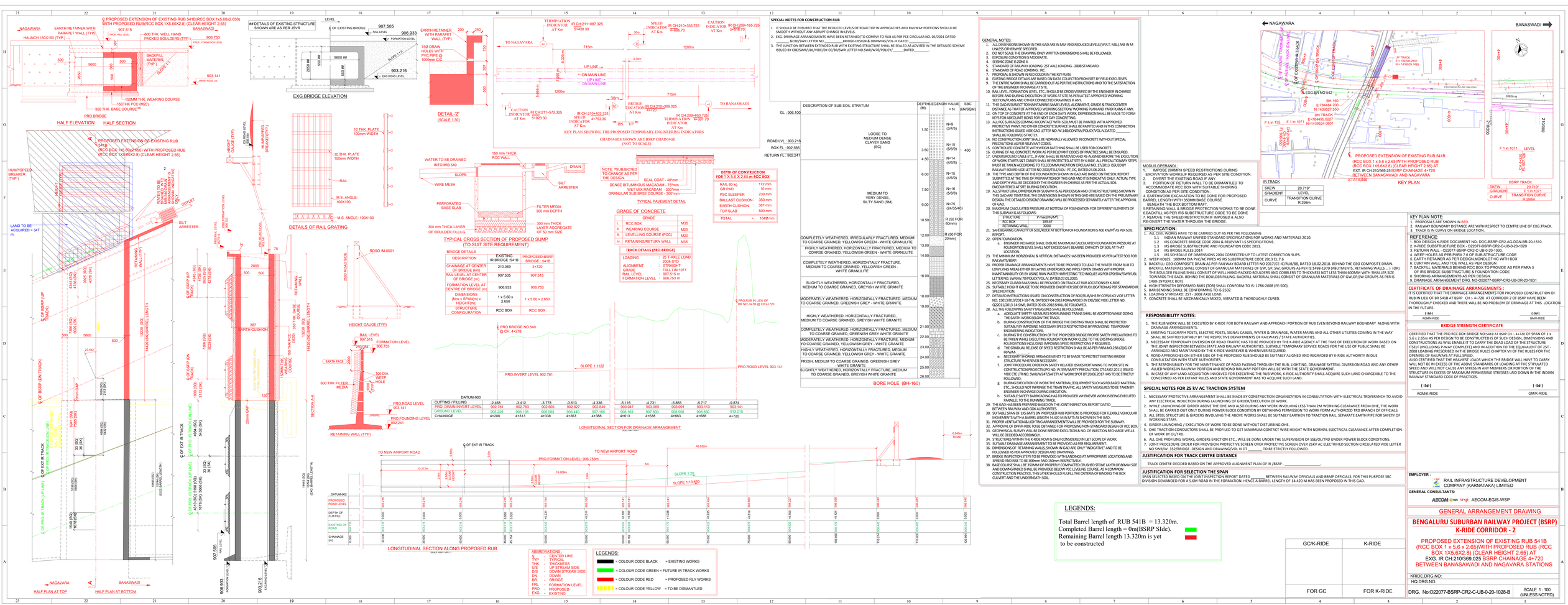
	GC/K-RIDE	K-RIDE
	FOR GC	FOR K-RIDE

KRIDE DRG.NO:

HQ DRG.NO:

DRG. No:O22077-BSRP-CR2-C-UB-0-20-1028-B

SCALE 1 : 100 (UNLESS NOTED)


NAGAVARA
BANASWADI
EARTH RETAINER WITH PARAPET WALL (TYP.)
HAUNCH 150X150 (TYP.)
907.515
PROP. RAIL LEVEL
600 THK. WELL HAND PACKED BOULDERS (TYP.)
906.753
PROP. FORMATION LEVEL
BACKFILL MATERIAL (TYP.)
SLOPE 1:1
903.141
PROP. ROAD LVL
150MM THK. WEARING COURSE
150TH.PCC (M20)
350 THK. BASE COURSE
PRO.BRIDGE
HALF ELEVATION
HALF SECTION
EXG.BRIDGE ELEVATION
DETAIL-'Z'
(SCALE 1:30)
PROPOSED EXTENSION OF EXISTING RUB 541B (RCC BOX 1X5.6X2.8) (CLEAR HEIGHT 2.65)
(RCC BOX 1X5.6X2.8) (CLEAR HEIGHT 2.65)
HUMP/SPEED BREAKER (TYP.)
HEIGHT GAUGE (TYP)
EXISTING WORK TO BE DISMANTLED AND DISPOSED AS PER ARRANGEMENT BY ENGINEER INCHARGE ONLY
OUTLET
SILT ARRESTER
LAND TO BE ACQUIRED = 347 m
RETAINING WALL(TYP)
PRO.RAIL LEVEL
PRO.TOP FORMATION LEVEL
PRO.ROAD LEVEL
903.141
PROP.FOUNDING LEVEL
902.241
EARTH CUSHION
TYPICAL CROSS SECTION OF PROPOSED SUMP (TO SUIT SITE REQUIREMENT)
BRIDGE DETAILS
DESCRIPTION | EXISTING IR BRIDGE :5418 | PROPOSED BSRP BRIDGE : 5418
CHAINAGE AT CENTER OF BRIDGE (m) | 210.369 | 4+720
RAIL LEVEL AT CENTER OF BRIDGE (m) | 907.505 | 907.515
FORMATION LEVEL AT CENTRE OF BRIDGE (m) | 906.933 | 906.753
DIMENSIONS (Nos x SPAN(m) x HEIGHT(m)) | 1 x 5.60 x 2.650 | 1 x 5.60 x 2.650
STRUCTURE CONFIGURATION | RCC BOX | RCC BOX
TRACK DETAILS (PRO.BRIDGE)
LOADING | 25 T AXLE LOAD - 2008-STD
ALIGNMENT | STRAIGHT
GRADE | FALLING 1 in 1071
RAIL LEVEL | 907.515 m
FORMATION LEVEL | 906.753 m
GRADE OF CONCRETE
GRADE
I. RCC BOX M35
II. WEARING COURSE M25
III. LEVELLING COURSE (PCC) M20
IV. RETAINING/RETURN WALL M35
DEPTH OF CONSTRUCTION FOR 1 X 5.6 X 2.65 m RCC BOX
RAIL 60 kg 172 mm
GR PAD 10 mm
PSC SLEEPER 230 mm
BALLAST CUSHION 350 mm
EARTH CUSHION 387 mm
TOP SLAB 500 mm
TOTAL = 1649 mm
PRO.BRIDGE NO.540 @ CH: 4+278
RAIL LEVEL 907.515
FORMATION LEVEL 906.753
100 DIA WEEP HOLE (TYP)
600 THK FILTER MEDIA
PRO.INVERT LEVEL 902.761
PRO.ROAD LEVEL 903.141
PRO.FOUNDING LEVEL 902.241
RETAINING WALL (TYP)
SECTION A-A
LONGITUDINAL SECTION FOR DRAINAGE ARRANGEMENT
DATUM-900
CUTTING / FILLING: -2.468, -3.412, -3.778, -3.613, -4.336, -5.116, -4.731, -5.865, -5.717, -9.874
PRO.DRAIN.INVERT LEVEL: 902.761, 902.783, 902.805, 902.827, 902.849, 902.871, 903.091, 903.091, 903.113, 903.161
GROUND LEVEL: 905.229, 906.195, 906.583, 906.440, 907.185, 908.163, 907.900, 908.956, 908.830, 913.015
CHAINAGE: 4+288, 4+313, 4+338, 4+363, 4+388, 4+413, 4+438, 4+463, 4+488, 4+720
TERMINATION INDICATOR AT Km
IR CH:211+087.325 =S=438.30
SPEED INDICATOR AT Km
IR CH:210+335.725 =S=80.70
CAUTION INDICATOR AT Km
IR CH:209+165.725 =S=30.70
TO NAGAVARA
715m
1200m
UP LINE
DN MAIN LINE
DN LINE
KEY PLAN SHOWING THE PROPOSED TEMPORARY ENGINEERING INDICATORS
CHAINAGES SHOWN ARE BSRP CHAINAGE (NOT TO SCALE)
CAUTION INDICATOR AT Km
IR CH:211+572.325 =S=923.30
SPEED INDICATOR AT Km
IR CH:210+402.325 =S=733.30
BRIDGE LOCATION
IR CH:210+369.025 AT Km 4+720
IR CH:209+650.725 TERMINATION INDICATOR AT Km
TO BANASWADI
10 THK. PLATE 100mm WIDTH
WATER TO BE DRAINED INTO MB 540
SLOPE
WIRE MESH
RAIL
M.S. ANGLE: 100X100
PERFORATED BASE SLAB
DETAILS OF RAIL GRADING
150 mm THICK RCC WALL
DRAIN
SILT ARRESTER
NOTE: *SUBJECTED TO CHANGE AS PER THE DESIGN.
SEAL COAT - 40*mm
WET MIX MACADAM - 250*mm
DENSE BITUMINOUS MACADAM - 75*mm
GRANULAR SUB BASE COURSE - 300*mm
TYPICAL PAVEMENT DETAIL
300 mm THICK LAYER OF BOULDER FILLS.G
300 mm THICK LAYER AGGREGATE OF 50 mm SIZE
FILTER MEDIA 300 mm DEPTH
PRO.BRIDGE NO.5418 @ CH:4+720
PRO.ROAD LEVEL 903.141
PRO.INVERT LEVEL 902.761
SLOPE 1:1122
PRO.ROAD LEVEL 903.141
PRO.FOUNDING LEVEL 902.241
RETAINING WALL (TYP)
LONGITUDINAL SECTION ALONG PROPOSED RUB
DATUM-902
PROPOSED ROAD LEVEL: 903.274, 903.274, 903.274, 903.274, 903.274, 903.274, 903.184, 903.169, 903.151, 903.151, 903.151