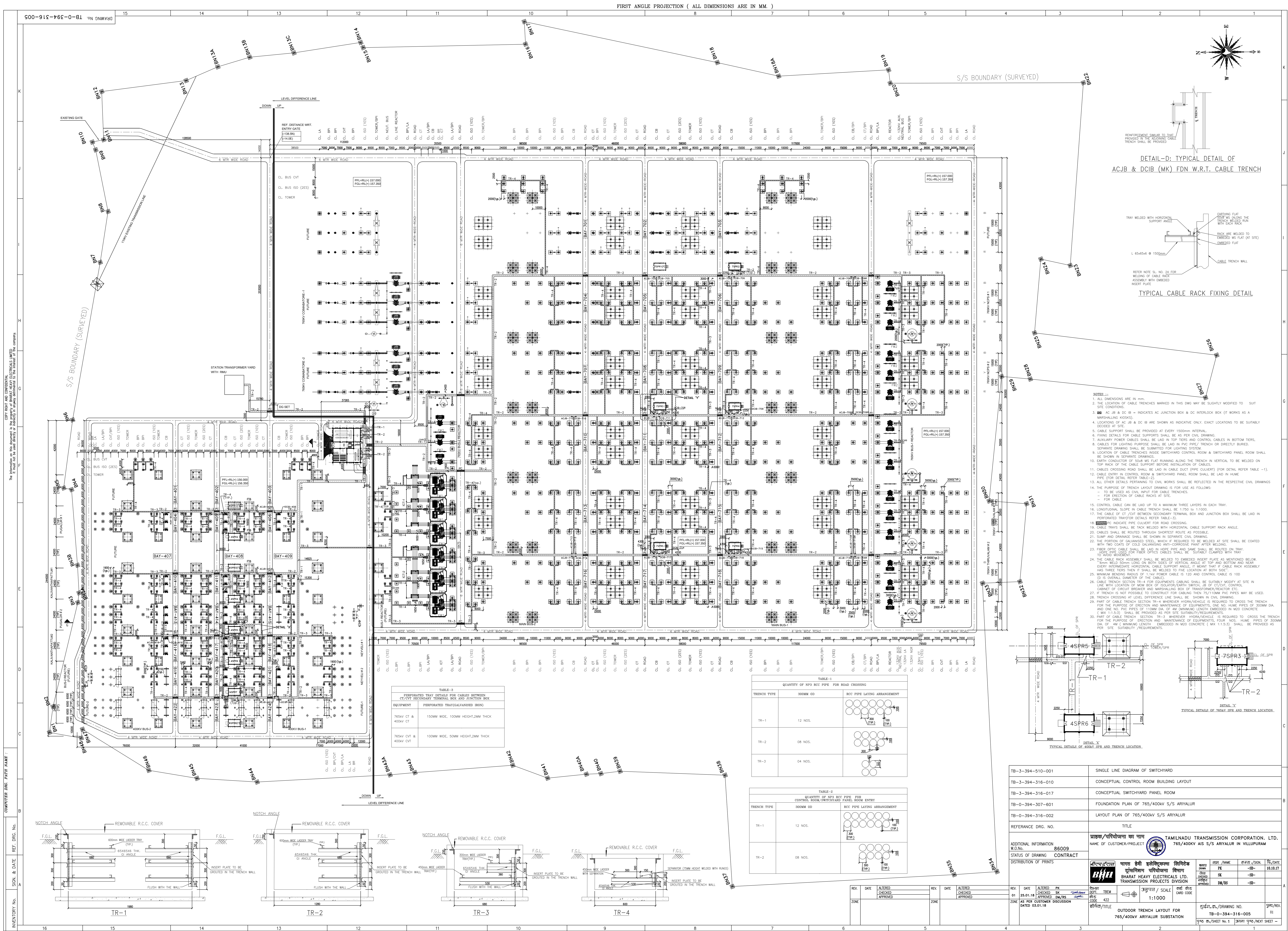
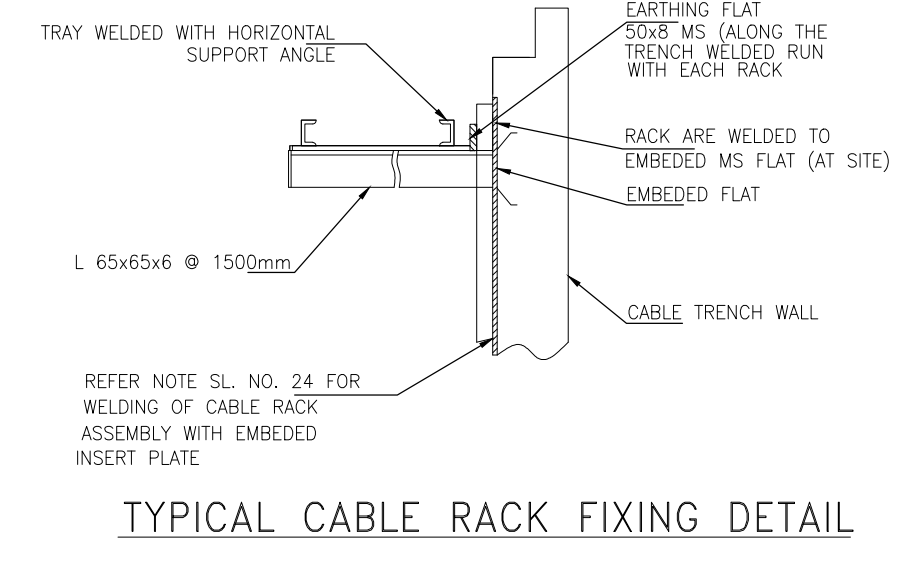




DETAIL-D: TYPICAL DETAIL OF ACJB & DCIB (MK) FDN W.R.T. CABLE TRENCH



- NOTES:
1. ALL DIMENSIONS ARE IN MM.
 2. THE LOCATION OF CABLE TRENCHES SHOWN IN THIS DWG MAY BE SLIGHTLY MODIFIED TO SUIT SITE CONDITIONS.
 3. AC JB & DC IB - INDICATES AC JUNCTION BOX & DC INTERLOCK BOX (IT WORKS AS A MARSHALLING KNOCKS).
 4. LOCATIONS OF AC JB & DC IB ARE SHOWN AS INDICATIVE ONLY, EXACT LOCATIONS TO BE SUITABLY DECIDED AT SITE.
 5. CABLE SUPPORT SHALL BE PROVIDED AT EVERY 1500MM INTERVAL.
 6. FIXING DETAILS FOR CABLE SUPPORTS SHALL BE AS PER CIVIL DRAWING.
 7. AUXILIARY POWER CABLES SHALL BE LAID IN TOP TIER AND CONTROL CABLES IN BOTTOM TIERS.
 8. CABLES FOR LIGHTING PURPOSE SHALL BE LAID IN PVC PIPE/TRENCH OR DIRECTLY BURIED. SEPARATE DRAWING SHALL BE SUBMITTED FOR LIGHTING SYSTEM.
 9. LOCATION OF CABLE TRENCHES INSIDE SWITCHYARD CONTROL ROOM & SWITCHYARD PANEL ROOM SHALL BE SHOWN IN SEPARATE DRAWINGS.
 10. EARTH CONDUCTOR OF SOLE MS FLAT RUNNING ALONG THE TRENCH IN VERTICAL TO BE WELDED ON TOP RACK OF THE CABLE SUPPORT BEFORE INSTALLATION OF CABLES.
 11. CABLES CROSSING ROAD SHALL BE LAID IN CABLE DUCT (PIPE CULVERT) (FOR DETAIL REFER TABLE -1).
 12. CABLE ENTRY IN CONTROL ROOM & SWITCHYARD PANEL ROOM SHALL BE LAID IN HUMIDITY PIPE (FOR DETAIL REFER TABLE-2).
 13. ALL OTHER DETAILS PERTAINING TO CIVIL WORKS SHALL BE REFLECTED IN THE RESPECTIVE CIVIL DRAWINGS.
 14. THE PURPOSE OF TRENCH LAYOUT DRAWING IS FOR USE AS FOLLOWS:
 - TO BE USED AS CIVIL INPUT FOR CABLE TRENCHES.
 - FOR ERECTION OF CABLE RACKS AT SITE.
 - FOR CABLE.
 15. CONTROL CABLE CAN BE LAID UP TO A MAXIMUM THREE LAYERS IN EACH TRAY.
 16. LONGITUDINAL SLOPE IN CABLE TRENCH SHALL BE 1:750 TO 1:1000.
 17. THE CABLE OF CT /CVT BETWEEN SECONDARY TERMINAL BOX AND JUNCTION BOX SHALL BE LAID IN PERFORATED TRAY/PIPE DETAIL REFER TABLE-3).
 18. CABLE TRAYS SHALL BE TACK WELDED WITH HORIZONTAL CABLE SUPPORT RACK ANGLE.
 19. CABLES SHALL BE ROUTED THROUGH SHORTEST ROUTE AS POSSIBLE.
 20. SUMPT AND DRAINAGE SHALL BE SHOWN IN SEPARATE CIVIL DRAWING.
 21. THE PORTION OF GALVANIZED STEEL WHICH IS REQUIRED TO BE WELDED AT SITE SHALL BE COATED WITH TWO COATS OF ZINC GALVANIZING ANTI-CORROSION PAINT AFTER WELDING.
 22. FIBER OPTIC CABLE SHALL BE LAID IN HOPE PIPE AND SAME SHALL BE ROUTED ON TRAY.
 23. FIBER OPTIC CABLE SHALL BE LAID IN HOPE PIPE AND SAME SHALL BE ROUTED ON TRAY.
 24. THE CABLE RACK ASSEMBLY SHALL BE WELDED TO EXISTING INSERT PLATE AS MENTIONED BELOW.
 - 600MM WELDED JOINTS LONG ON BOTH SIDES OF VERTICAL ANGLE AT TOP AND BOTTOM AND NEAR EVERY INTERMEDIATE LONGITUDINAL CABLE SUPPORT ANGLE. IT MEANS THAT IF CABLE RACK ASSEMBLY HAS THREE TIERS THEN IT SHALL BE WELDED TO FIVE LOCATION AT BOTH SIDES.
 25. MINIMUM BENDING RADIUS OF 11KV POWER CABLE IS 120 AND CONTROL CABLE IS 100.
 26. CABLE TRAY SECTION TR-4 FOR EQUIPMENT CABLEING SHALL BE SUITABLY MODIFY AT SITE IN LINE WITH LOCATION OF MAIN BOX OF RELAY/CONTROL/ SWITCH/ TRANSFORMER/REACTOR ETC.
 27. IF TRENCH IS NOT POSSIBLE TO CONSTRUCT FOR CABLEING THEN 75/100MM PVC PIPES MAY BE USED.
 28. TRENCH CROSSING AT LEVEL DIFFERENCE LINE SHALL BE SHOWN IN CIVIL DRAWING.
 29. PART OF CABLE TRENCH SECTION TR-4 WHEREVER HYDRA/VEHICLE IS REQUIRED TO CROSS THE TRENCH FOR THE PURPOSE OF ERECTION AND MAINTENANCE OF EQUIPMENTS, ONE NO. HUME PIPES OF 300MM DIA. (MS 11.5:5.3) SHALL BE PROVIDED AS PER SITE SUTABILITY/REQUIREMENTS.
 30. PART OF CABLE TRENCH SECTION TR-3 WHEREVER HYDRA/VEHICLE IS REQUIRED TO CROSS THE TRENCH FOR THE PURPOSE OF ERECTION AND MAINTENANCE OF EQUIPMENTS, FOUR NOS. HUME PIPES OF 300MM DIA. OF 4M (MINIMUM) LENGTH, EMBEDDED IN M20 CONCRETE (1:MK 11:0:3) SHALL BE PROVIDED AS PER SITE SUTABILITY/REQUIREMENTS.

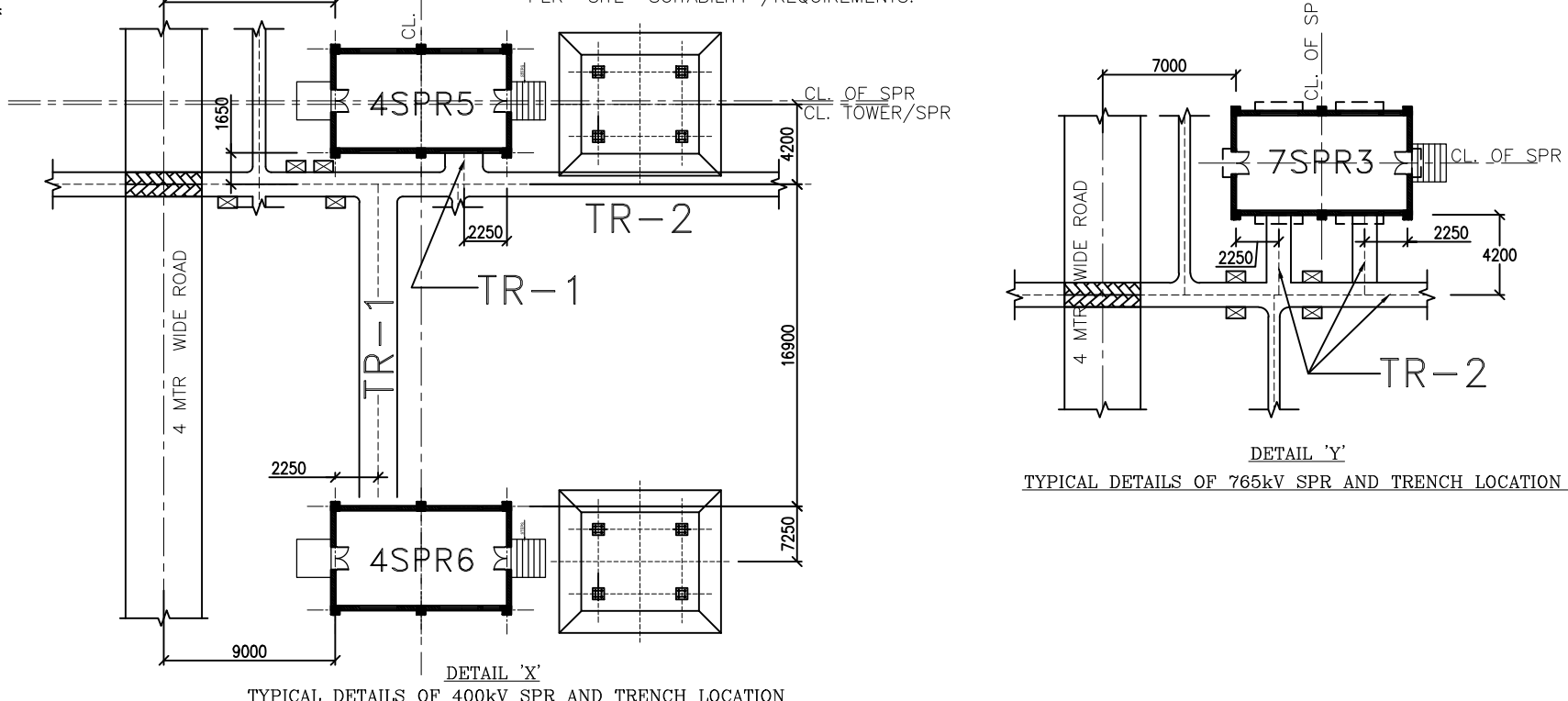


TABLE-1
QUANTITY OF NP3 RSC PIPE FOR ROAD CROSSING

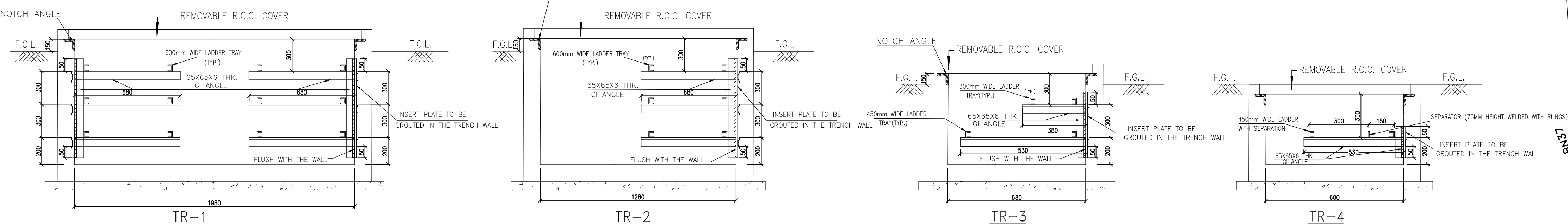
TRENCH TYPE	300MM GD	RSC PIPE LAYING ARRANGEMENT
TR-1	12 NOS.	
TR-2	08 NOS.	
TR-3	04 NOS.	

TABLE-2
QUANTITY OF NP3 RSC PIPE FOR CONTROL ROOM/SWITCHYARD PANEL ROOM ENTRY

TRENCH TYPE	300MM GD	RSC PIPE LAYING ARRANGEMENT
TR-1	12 NOS.	
TR-2	08 NOS.	

TABLE-3
PERFORATED TRAY DETAILS FOR CABLES BETWEEN CT/CVT SECONDARY TERMINAL BOX AND JUNCTION BOX

EQUIPMENT	PERFORATED TRAY (GALVANIZED IRON)
765KV CT & 400KV CT	150MM WIDE, 100MM HEIGHT, 2MM THICK
765KV CVT & 400KV CVT	100MM WIDE, 50MM HEIGHT, 2MM THICK



TB-3-394-510-001	SINGLE LINE DIAGRAM OF SWITCHYARD
TB-3-394-316-010	CONCEPTUAL CONTROL ROOM BUILDING LAYOUT
TB-3-394-316-017	CONCEPTUAL SWITCHYARD PANEL ROOM
TB-0-394-307-601	FOUNDATION PLAN OF 765/400KV S/S ARIYALUR
TB-0-394-316-002	LAYOUT PLAN OF 765/400KV S/S ARIYALUR
REFERENCE DRG. NO.	TITLE
ADDITIONAL INFORMATION NO. 86009	தமிழ்நாடு மின்சாரக் கழகம் TAMILNADU TRANSMISSION CORPORATION. LTD.
STATUS OF DRAWING CONTRACT	765/400KV S/S ARIYALUR IN VILLUPURAM
DISTRIBUTION OF PRINTS	பிளவுபடம் Bharat Heavy Electricals Ltd. TRANSMISSION PROJECTS DIVISION
REV. DATE 01 25.01.18 AS PER CUSTOMER DISCUSSION DATED 03.01.18	பிரதி / NAME PK SK MS/RS SCALE 1:1000 CADD CODE OUTDOOR TRENCH LAYOUT FOR 765/400KV ARIYALUR SUBSTATION திட்டம் / DRAWING NO. TB-0-394-316-005 புரக்க / SHEET No. 1 அடுத்த பக்கம் / NEXT SHEET