

Annexure – 1

List of Documents (400kV Switchyard at Bhadradi TPS) -

Sl No	Doc No.	Description	Pages
1	TB-3-380-510-001	Single Line Diagram of 400kV Switchyard	2
2	TB-0-380-510-002 (Sh.1/2)	400kV Switchyard Plan	1
3	TB-0-380-510-002 (Sh.2/2)	Sectional Elevation of 400kV Switchyard	1
4	TB-0-380-510-004	Cable Trench Layout for 400kV Switchyard	1

	1	2	3	4	5	6	7
1							
2							
3							
4							
5							
6							
7							

CORE NO.	CURRENT RATIO (A)	OUTPUT BURDEN (VA)	ACCURACY CLASS AS PER IEC44-1	MIN. KNEE POINT VOLTAGE (VOLTS)	MAX. CT SECONDARY WINDING RES. ohms	MAX. EXCITING CURRENT (mA) AT KNEE POINT VOLTAGE
1	3000-2000-500/1	-	PS	3000-2000-500	15-10-2.5	20 on 3000/1 top 30 on 2000/1 top 120 on 500/1 top
2	3000-2000-500/1	-	PS	3000-2000-500	15-10-2.5	20 on 3000/1 top 30 on 2000/1 top 120 on 500/1 top
3	3000-2000-1000-500/1	20	0.2s ISF < 5 WITH AUX. REACTOR	-	-	-
4	3000-2000-500/1	-	PS	6000-4000-1000	15-10-2.5	20 on 3000/1 top 30 on 2000/1 top 120 on 500/1 top
5	3000-2000-500/1	-	PS	6000-4000-1000	15-10-2.5	20 on 3000/1 top 30 on 2000/1 top 120 on 500/1 top

CORE NO.	CURRENT RATIO (A)	OUTPUT BURDEN (VA)	ACCURACY CLASS AS PER IEC44-1	MIN. KNEE POINT VOLTAGE (VOLTS)	MAX. CT SECONDARY WINDING RES. ohms	MAX. EXCITING CURRENT (mA) AT KNEE POINT
1	3000-2000-500/1	20	0.2s ISF ≤ 5 WITH AUX. REACTOR	—	—	—
2	3000-2000-500/1	20	0.2s ISF ≤ 5 WITH AUX. REACTOR	—	—	—

RATIO	$(400/\sqrt{3} \text{ kV})/((110/\sqrt{3} \text{ V})/(110/\sqrt{3} \text{ V}))$
SEC-1	CLASS 3P, 50 VA
SEC-2	CLASS 3P, 50 VA
SEC-3	CLASS 0.2, 50 VA
	CAPACITANCE - 4400 pF (+10% -5%)

RATIO	$(400/\sqrt{3} \text{ kV})/((110/\sqrt{3} \text{ V})/(110/\sqrt{3} \text{ V}))$
SEC-1	CLASS 0.2, 25 VA
SEC-2	CLASS 0.2, 25 VA
	CAPACITANCE - 4400 pF (+10%, -5%)

REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.
05	27.11.15	MMK	WK	AS	04	28.10.15	MMK	WK	AS
SHEET 1 REVISED.									

REV.	DATE	ALTD.	CHD.	APPD.	REV.	DATE	ALTD.	CHD.	APPD.
02	11.05.15	PR	SA/-	PR/RK	SA/-	10.04.15	PR	SA/-	PR/RK
SLO REVISED IN LINE WITH TSGENCO COMMENTS RECEIVED VIDE DATED: 30.04.15.									
SLO REVISED IN LINE WITH TSGENCO COMMENTS RECEIVED VIDE DATED: 10.04.15.									

REV.	DATE	ALTD.	CHD.	APPD.	NAME	SIGN.	DATE
01	10.04.15	PR	SA/-	PR/RK	SA/-	SA/-	16.02.15
CHECKED							16.02.15
APPROVED							16.02.15
DISTRIBUTION OF PRINTS							
DEPT.							CODE
TBEM							422

NAME OF CUSTOMER/PROJECT
TELANGANA STATE POWER GENERATION CORPORATION LIMITED.
BHADRADRI THERMAL POWER STATION, UNIT#1 TO 4 (4X270 MW)

NAME OF CONSULTANT: DESEIN PRIVATE LIMITED

BHARAT HEAVY ELECTRICALS LIMITED
TRANSMISSION BUSINESS GROUP

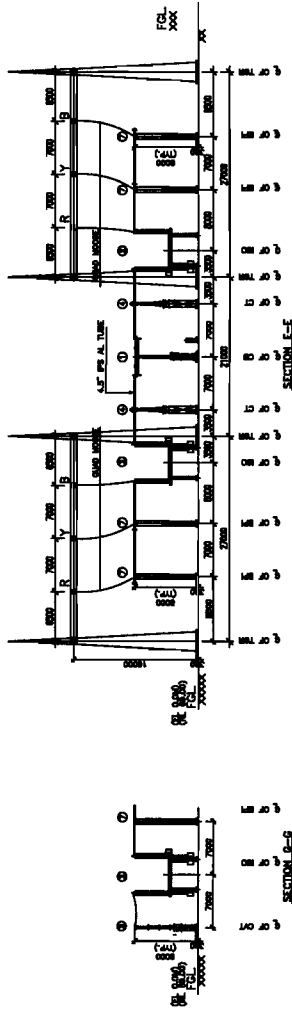
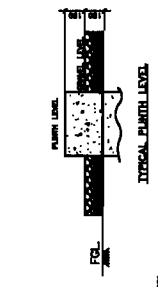
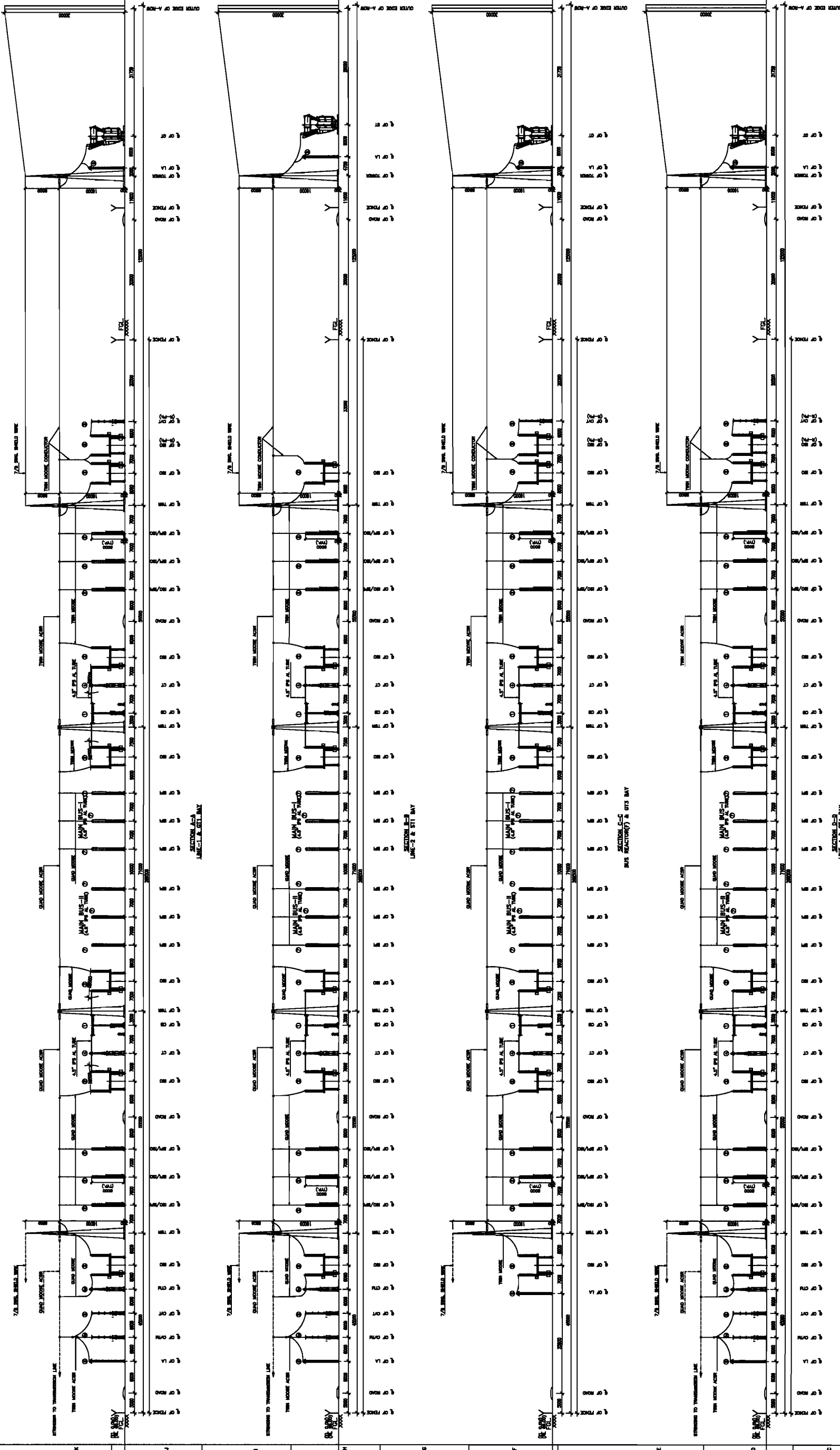
SINGLE LINE DIAGRAM OF 400kV SWITCHYARD

SCALE	NTS	W O N O	84010	DRG. No.	TB-3-380-510-001
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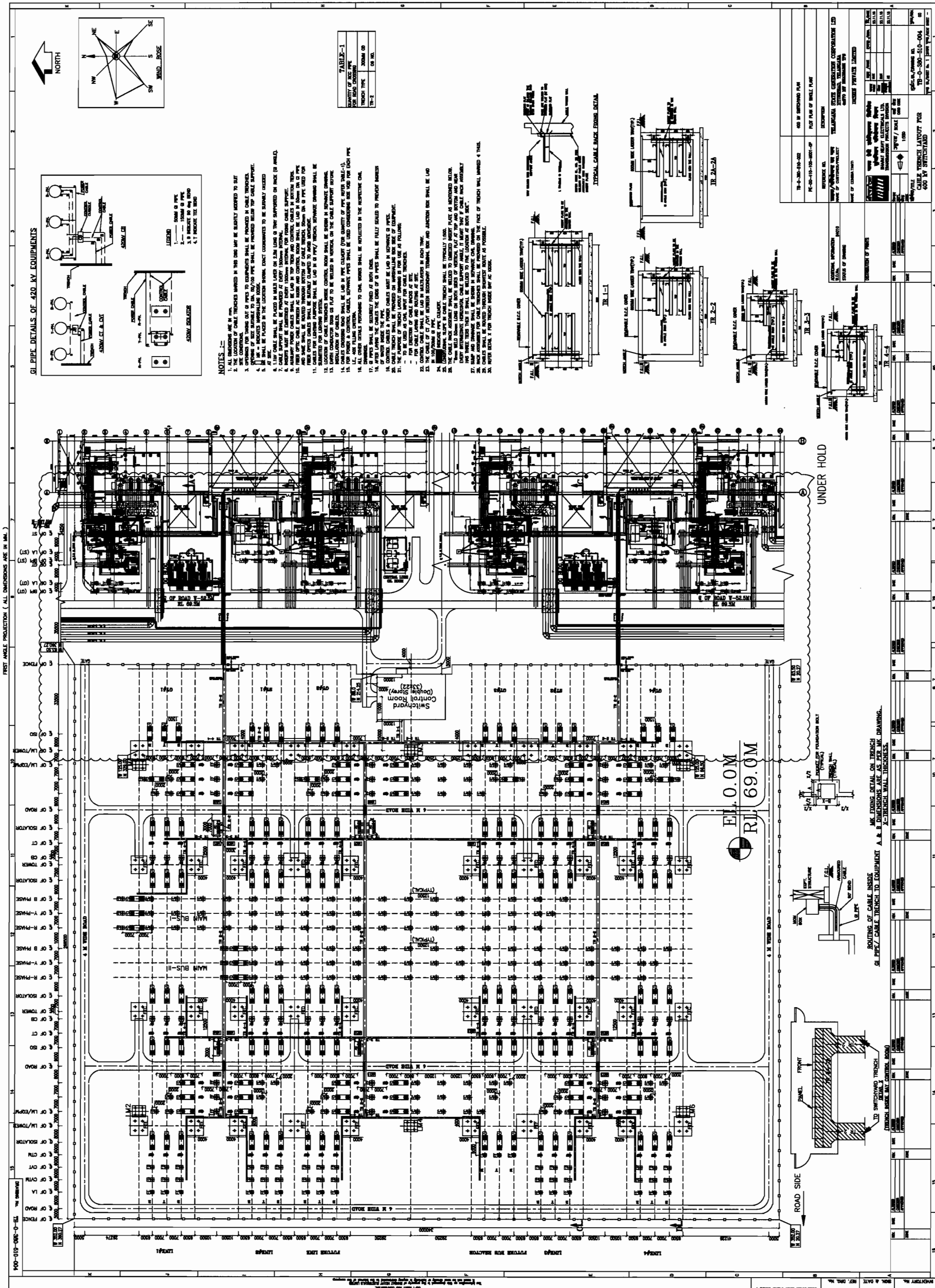
REV. OF

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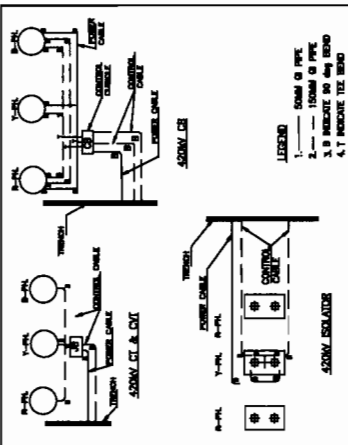
COMPUTER DRG. PATH NAME :

[illegible]

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN MM.)



GI PIPE DETAILS OF 420 KV EQUIPMENTS

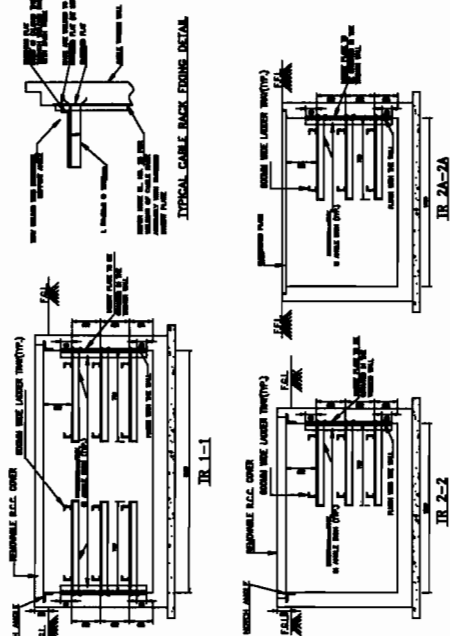


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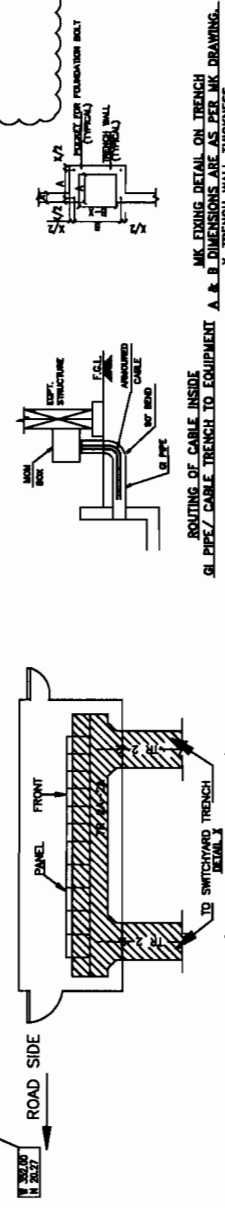
1. ALL DIMENSIONS ARE IN MM.
2. THE LOCATION OF CABLE TRENCHES MARKED IN THIS DRAWING SHALL BE SLIGHTLY MODIFIED TO SUIT THE CONSTRUCTION OF THE EQUIPMENT.
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TABLE-1

QUANTITY OF JOINT PIPE FOR EACH TRENCH	TRENCH TYPE	JOINT OR JOINTS
1	TR-1	1
2	TR-2	2



EL. 0.0 M
RT. 69.0 M



PROJECT NO.	TR-0-380-510-004
PROJECT NAME	400 KV SWITCHGEAR
PROJECT LOCATION	TR-0-380-510-004
PROJECT DATE	1999
PROJECT SCALE	1:1000
PROJECT DRAWN BY	1999
PROJECT CHECKED BY	1999
PROJECT APPROVED BY	1999
PROJECT REVISION	1999
PROJECT DESCRIPTION	400 KV SWITCHGEAR
PROJECT DRAWING NO.	TR-0-380-510-004
PROJECT DRAWING DATE	1999
PROJECT DRAWING SCALE	1:1000
PROJECT DRAWING DRAWN BY	1999
PROJECT DRAWING CHECKED BY	1999
PROJECT DRAWING APPROVED BY	1999
PROJECT DRAWING REVISION	1999