



GRID CONNECTIVITY TO TFL TO SUPPLY 90 MW POWER AND
CONSTRUCTION OF 220 KV LILO GIS

TALCHER FERTILIZERS LTD. (TFL) AT TALCHER, ODISHA)



Date: 08.08.2022

AMENDMENT – IV

NIT, No. PNMM/PC-183/E-4017/NCB Dated 20.06.2022

Sub.: GRID CONNECTIVITY TO TFL TO SUPPLY 90 MW POWER AND CONSTRUCTION OF
220 KV LILO GIS AT TALCHER FERTILIZERS LIMITED, TALCHER, ODISHA

This is for information of Bidders that Amendment-IV date 08.08.2022 is being issued and shall be read in conjunction with the original NIT issued on 10.03.2022 and all subsequent amendment(s).

***All other terms & conditions of NIT shall remain unchanged.**

For & on behalf of
Talcher Fertilizers Limited


P. R. Sahu
Addl. G.M (M.M)
Projects & Development India Ltd.



GRID CONNECTIVITY TO TFLTO SUPPLY 90 MW POWER AND CONSTRUCTION OF 220KV LILO GIS AT
TALCHER FERTILIZERS LIMITED;

NIT NO : PNMM/PC-183/E- 4017/NCB, Dated-20.06.2022



AMENDMENT No.: -IV Dated : 08.08.2022

Sl. No.	Reference of Bidding Document				Existing Clause	Amendment Type	Amended Clause
	Part Sec	Page No.	Clause no	Subject / Heading		M/D/A	
TECHNICAL							
1)	TS	437 of 1622	17	Type Tests	"The type test report shall not be older than 7 years from the date of bid opening."	M	<i>"The major electrical equipment/material being supplied should have been Type Tested and the provisions for the same shall be governed by "Guidelines for the Validity Period of Type Test(s) conducted on Major Electrical Equipment in Power Transmission System" issued by CEA in May'2020, read along with any amendments/revisions issued subsequently."</i>
2)	TS	N/A	N/A	Technical Specifications for 220kV GIS Hall Ventilation System	N/A	A	Refer Annexure A – "GIS VENTILATION SYSTEM"
3)	TS	1463 of 1622	Annexure	220KV Transmission Line Specifications	Annexure to 220KV Transmission Line Specifications	A	Refer Annexure B – "Additional information reg. 220kV LILO Line" i) 220kV LILO Angle Schedule



GRID CONNECTIVITY TO TFLTO SUPPLY 90 MW POWER AND CONSTRUCTION OF 220KV LILO GIS AT
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	Part Sec	Page No.	Clause no	Subject / Heading		M/D/A	
							ii) .kmz file of the LILO Route Note: Due to file type constraint on CPP Portal, the .kmz file can be viewed from the Amendment document uploaded on PDIL & TFL website.
4)	TS	1615 of 1622	Annexure X – IV	Tender Drawings	LT (ACDB & DCDB) SLD	A	Refer Annexure C – “LT (ACDB & DCDB) SLD”
5)	TS	1615 of 1622	Annexure X – IV	Tender Drawings	Sectional Drawing of Switch Yard Cable Trenches	A	Refer Annexure D – “Sectional Drawing of Switch Yard Cable Trenches”
6)	TS	1615 of 1622	Annexure X – IV	Tender Drawings	Tender Reference Drawing of Car Parking Shed	A	Refer Annexure E – “Tender Reference Drawing of Car Parking Shed”
7)	TS	1615 of 1622	Annexure X – IV	Tender Drawings	Tender Reference Drawing of Store Room	A	Refer Annexure F – “Tender Reference Drawing of Store Room”
8)	TS	1615 of 1622	Annexure X – IV	Tender Drawings	Tender Reference Drawing of Triple Pole Structure	A	Refer Annexure G – “Tender Reference Drawing of Triple Pole Structure”
9)	TS	N/A	N/A	Price Schedule	N/A	M	Refer Revised Price Schedule “Additional Line Item Included – Supply of 2 TR ”



GRID CONNECTIVITY TO TFLTO SUPPLY 90 MW POWER AND CONSTRUCTION OF 220KV LILO GIS AT
TALCHER FERTILIZERS LIMITED;

NIT NO : PNMM/PC-183/E- 4017/NCB, Dated-20.06.2022



AMENDMENT No.: -IV Dated : 08.08.2022

Sl. No.	Reference of Bidding Document				Existing Clause	Amendment Type	Amended Clause
	Part Sec	Page No.	Clause no	Subject / Heading		M/D/A	
							<i>Capacity Split Air Conditioning Units (Inverter Type Latest Model) of OPTCL approved make – Qty.: 12 Nos.”</i>
10)	TS	N/A	N/A	Price Schedule	N/A	M	Refer Revised Price Schedule Change in Quantity at Sr. No. 20.35 (Supply) and 52.35 (Erection) – “87L (Line Differential Relay) Numerical Relay for remote end Station” – Existing Qty. – 1 Nos. & Amended Qty. 2 Nos.
11)	GCC	210 of 1622	24.	Contract Performance Security	N/A	A	Refer Annexure H – “Provision of Additional Bank Guarantees for Major Equipments”

M: MODIFICATION, A: ADDITION, D: DELETION

Note: - The clauses in Amendment shall take precedence/superseded over all other pre bid replies against the respective clause.

ANNEXURE-A

GIS VENTILATION SYSTEM

TECHNICAL SPECIFICATION FOR GIS VENTILATION SYSTEM

INTRODUCTION:

This Specification is intended to establish design criteria for ventilation system of the following infrastructure facilities required for 220/33kV Switching substation, ODISHA at TFL Premises.

- 220kV GIS BUILDING.

This specification will also present general operational requirement, description of the ventilation system envisaged.

Ventilation system:

220kV GIS hall shall have an independent ventilation system. Each ventilation system shall consist of two 100% capacity systems, one operating and one stand-by.

To ensure that the air being supplied to the GIS hall is free from dust particles, a minimum two stage dust filtration process shall be supplied. This shall consist of at least the following:

1. Pre Filters:

To remove dust particles down to 10 micron in size with at least 95% efficiency

2. Fine Filters:

To remove dust particles down to 5 microns in size with at least 99% efficiency

- All the filters shall be panel type. Easy access should be available to the filters for replacement/cleaning.
- The ventilation of the 220kV GIS hall shall be of a positive pressure type with minimum 4 air changes per hour.
- The pressure inside the 220kV GIS hall shall be maintained 5mm of Water above the atmospheric pressure.
- Fresh outdoor air shall be filtered before being blown into the GIS hall by the air fans to avoid dust accumulation on components present in the GIS hall.
- 220kV GIS hall shall be provided with motorized exhaust dampers with local control.

GENERAL OPERATIONAL REQUIREMENTS:

The primary requirement of the ventilation system is to provide acceptable environmental conditions suitable for all occupied areas and for all electrical panels & equipment requiring a regulated environment. The conditions air infiltration, air movement shall be controlled as required in the respective areas

The ventilation system performs the following objectives:

- Maintain proper air circulation inside room
- Maintain dust free environment through pressurized system

– Removal of bad odor, vapor generated inside room

The concept as presented here below for various facilities follows the above general operational requirements and is based on the requirement of the specification as well as on the applicable local and international codes and standards.

APPLICABLE CODES & STANDARDS:

- ASHRAE handbook
- Occupational safety and health act (USA)
- ISHRAE publications
- IS 277 - Galvanized steel sheets
- IS 325 - Three phase induction motors

The list furnished above for Codes & standards may not cover certain aspects or products. In such cases where norms/ standards/ guidelines other than those listed above are followed, approval from owner’s engineers will be solicited.

SYSTEM DESCRIPTION:

VENTILATION SYSTEM:

Following are the systems to be adopted for Ventilation arrangement and ventilation fan sizing.

PREMISES TO BE COVERED	TYPE OF VENTILATION SYSTEM
TFL S/S- 220kV GIS BUILDING	Filtered air supply by floor mounted Centrifugal fan filter Unit of 2 nos. (1W+1S) and hot air exhaust through wall mounted Motorized Exhaust Damper. Fan filter unit shall be installed in AHU room.

SYSTEM COMPONENT FOR VENTILATION SYSTEM:

Pressurized Ventilation System shall be provided for TFL S/S- 220kV GIS BUILDING S/S with floor mounted Centrifugal type Supply Air Fan, inlet louver, dry panel type pre- filter (95% efficiency down to 10 micron), fine filter (99% efficiency down to 5 micron), flexible connection, duct work, supply air grille with VCD etc. as required and exhaust through wall mounted Motorized Exhaust Damper.

CONTROL SYSTEM:

All ventilation fan, motorized dampers shall be operated through MCC cum PDB. Fans in case of fire in the respective zone shall be stopped through the MCC cum PDB in the event of receive of fire signal form a particular zone.

Motors of exhaust dampers provided in Wall remain de-energized in normal condition to effect close of dampers. In the event of Over Pressure, the motors of Exhaust dampers will be energized and the damper will be opened due to spring action, the relevant DP Switch can get the Feedback for Exhaust Damper.

DESIGN CRITERIA:**OUTSIDE DESIGN CONDITIONS:**

Summer: 35°C Dry Bulb and 66% RH

Monsoon: 28.7°C Dry Bulb and 86% RH

Winter: 11.2°C Dry Bulb and 73% RH

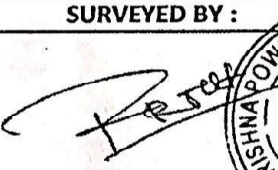
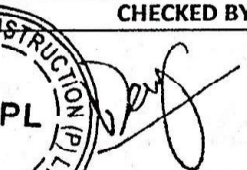
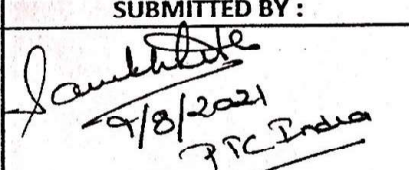


AIR CHANGE PER HOUR (ACPH) FOR VENTILATION SYSTEM:

Following Air Change per Hour shall be followed for various buildings, as per the Industrial standard generally followed for selecting fan capacity.


S.NO.	NAME OF THE AREA	MINIMUM AIR CHANGE RATE PER HOUR (ACPH)
1.	220kV GIS Hall	2

ANGLE SCHEDULE


220KV DC LILO LINE CONNECTIVITY FROM RENGALI - NALCO 220 KV DC LINE (LOCATION -30) TO
TALCHER FERTILIZER LIMITED SUB STATION .

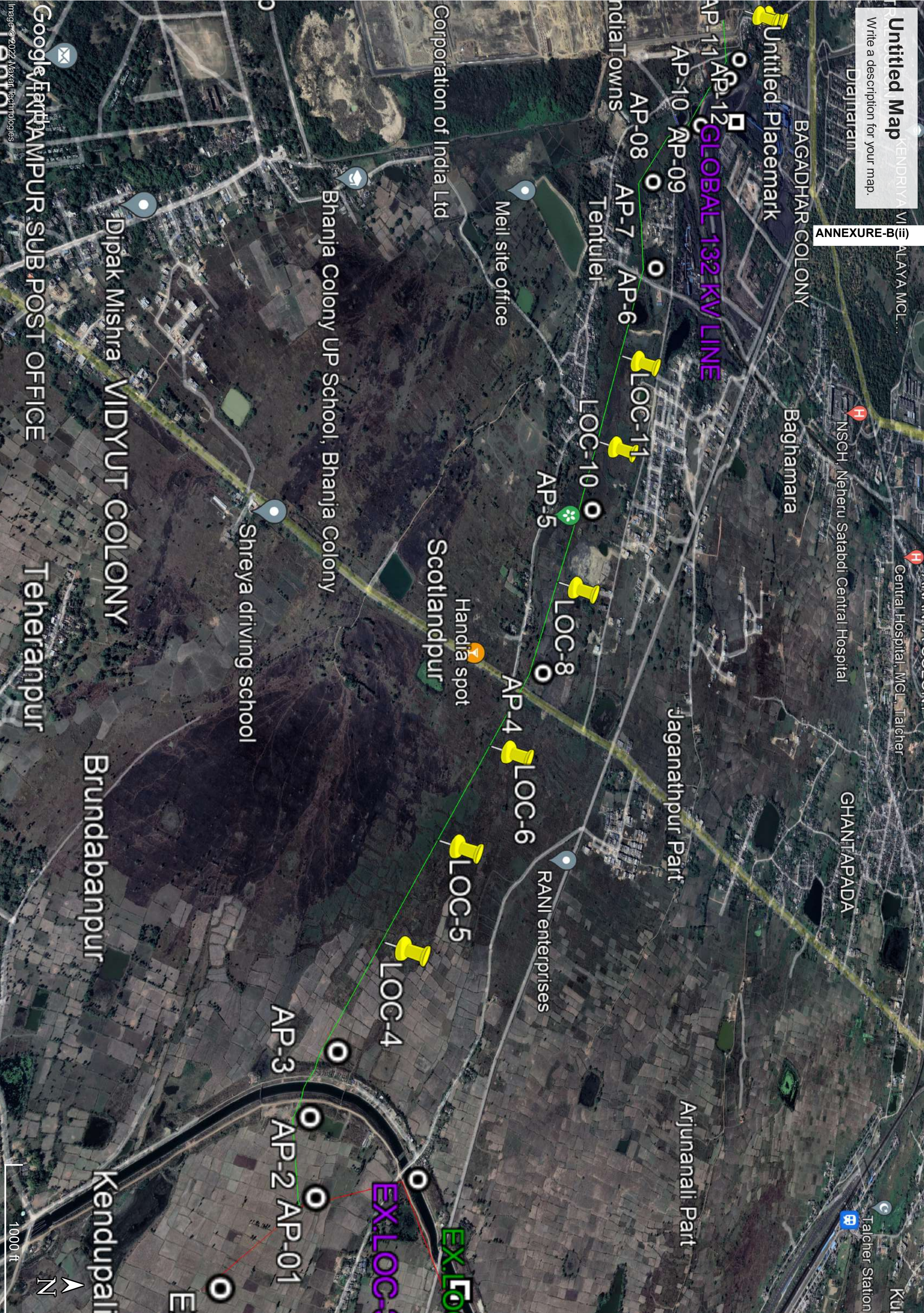
SL. NO.	AP. NO.	ANGLE OF DEVIATION	AP TO AP	SPAN LENGTH IN MTR	REMARKS & CROSSING
1			LOC.NO -31 TO LOC. NO -30	320	MORUM ROAD ,PADDY FIELD
2			LOC.NO -29 TO LOC. NO -30	300	PADDY FIELD
3			LOC. NO -30 TO AP-01	20	PADDY FIELD
4	1	10°-25'-16"RT	AP- 01 TO AP-02	196	PADDY FIELD
5	2	34°-58'-11"RT	AP- 02 TO AP-03	166	MORUM ROAD ,11 KV LINE, PADDY FIELD
6	3	34°-58'-11"RT	AP- 03 TO AP-04	1150	TARROAD, PADDY FIELD
7	4	14°-10'-18"LT	AP- 04 TO AP-05	510	PADDY FIELD
8	5	02°-53'-31"LT	AP- 05 TO AP-06	790	11 KV LINE, 33 KV LINE, POND, CONCRETE ROAD, PADDY FIELD
9	6	25°-42'-57"LT	AP- 06 TO AP-07	260	WATER AREA
10	7	42°-20'-42"RT	AP- 07 TO AP-08	220	WATER AREA
11	8	25°-14'-26"RT	AP- 08 TO AP-09	116	MORUM ROAD, 11 KV LINE, DEFUNCT RLY LINE OF TFL,
12	9	28°-59'-14"LT	AP- 09 TO AP-10	200	GLOBAL BOUNDARY WALL
13	10	16°-24'-06"RT	AP- 10 TO AP-11	58	GLOBAL 132 KV DC LINE
14	11	16°-22'-09"LT	AP- 11 TO AP-12	96	BARREN LAND
15	12	48°-45'-22"LT	AP- 12 TO GANTRY	80	TARROAD, TFL BOUNDARY WALL
TOTAL LENGTH =				4482	
SURVEYED BY :		CHECKED BY :		SUBMITTED BY :	
				 9/8/2021 PTC India	
M/S KRISHNA POWER CONSTRUCTION (P) LTD					
VERIFIED BY :		COUNTERSIGN BY :		APPROVED BY :	
					
S.D.O. (Elect.) EHT (C), Sub-Division OPTCL, Meramundali-B		Deputy General Manager (Elect.) EHT Construction Division OPTCL, ANGUL			

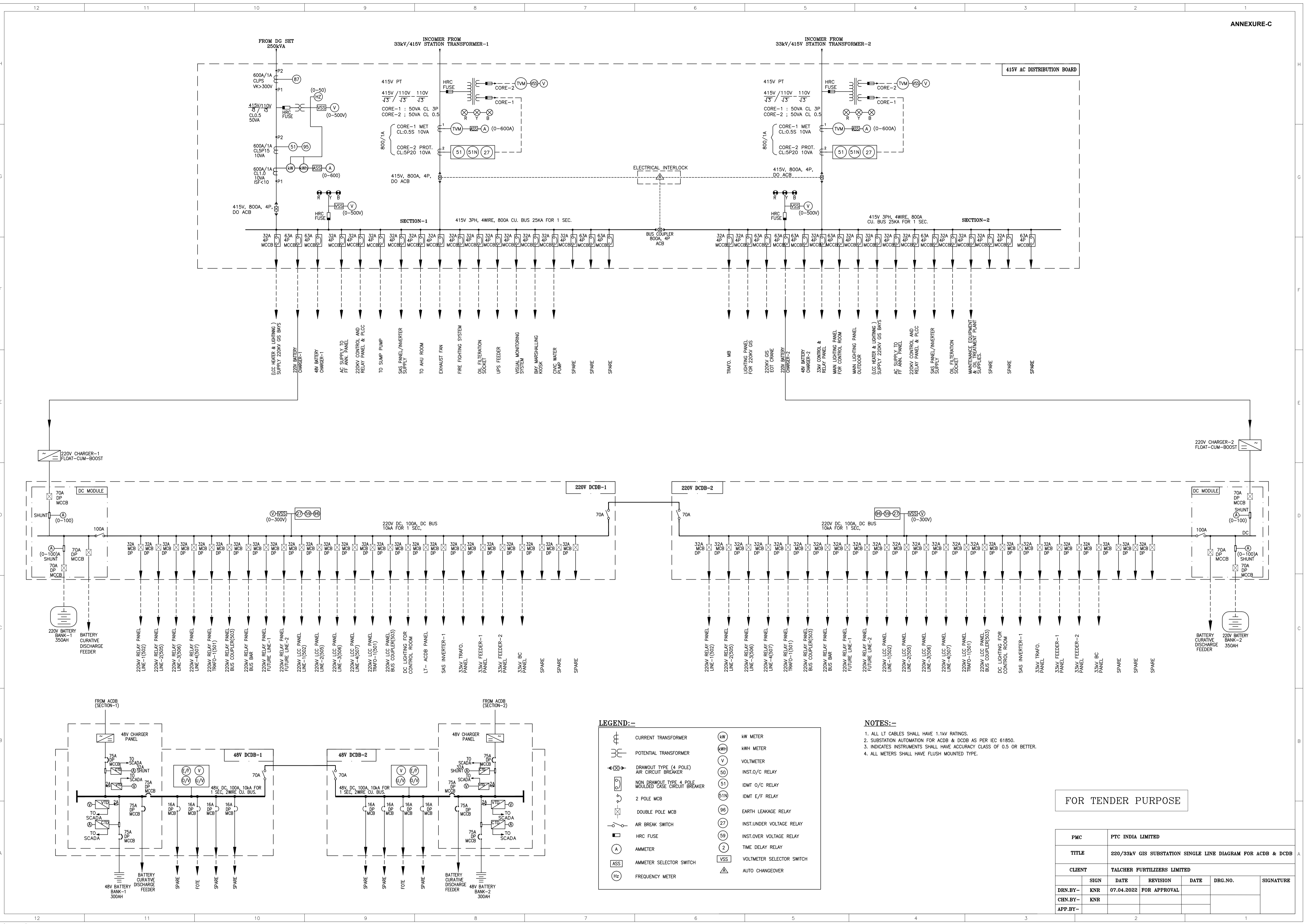
RECOMENDED


General Manager (Elect.)
EHT (Construction) v Circle
OPTCL, Jaipur Road

APPROVED


Sr. G.M. (Const.) v Circle
OPTCL, Bhubaneswar





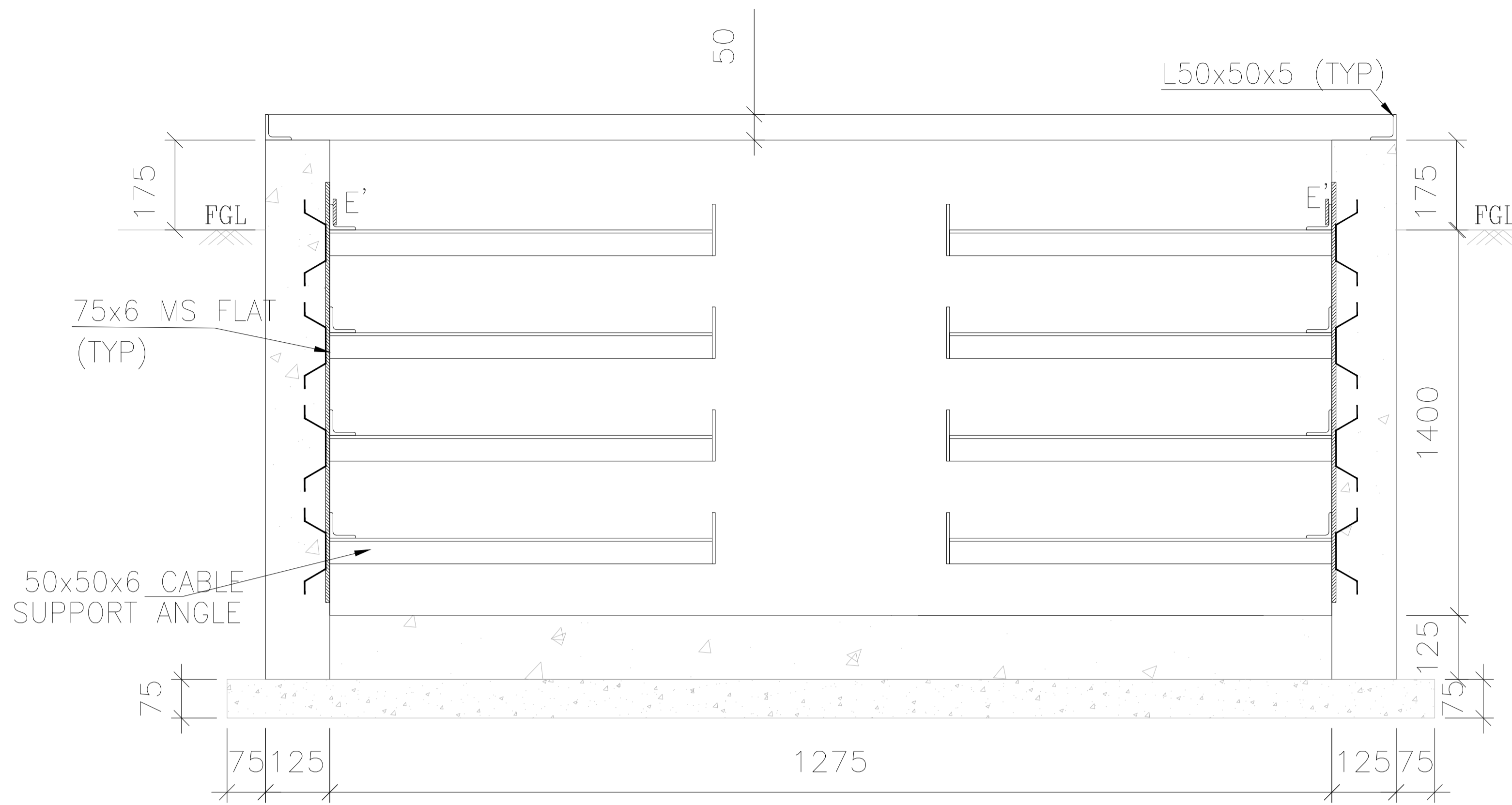
LEGEND:-

	CURRENT TRANSFORMER		KW METER
	POTENTIAL TRANSFORMER		KWH METER
	DRAWOUT TYPE (4 POLE) AIR CIRCUIT BREAKER		VOLTMETER
	NON DRAWOUT TYPE 4 POLE MOULDED CASE CIRCUIT BREAKER		INST.O/C RELAY
	2 POLE MCB		INST.E/F RELAY
	DOUBLE POLE MCB		EARTH LEAKAGE RELAY
	AIR BREAK SWITCH		INST.UNDER VOLTAGE RELAY
	HRC FUSE		INST.OVER VOLTAGE RELAY
	AMMETER		TIME DELAY RELAY
	AMMETER SELECTOR SWITCH		VOLTMETER SELECTOR SWITCH
	FREQUENCY METER		AUTO CHANGEOVER

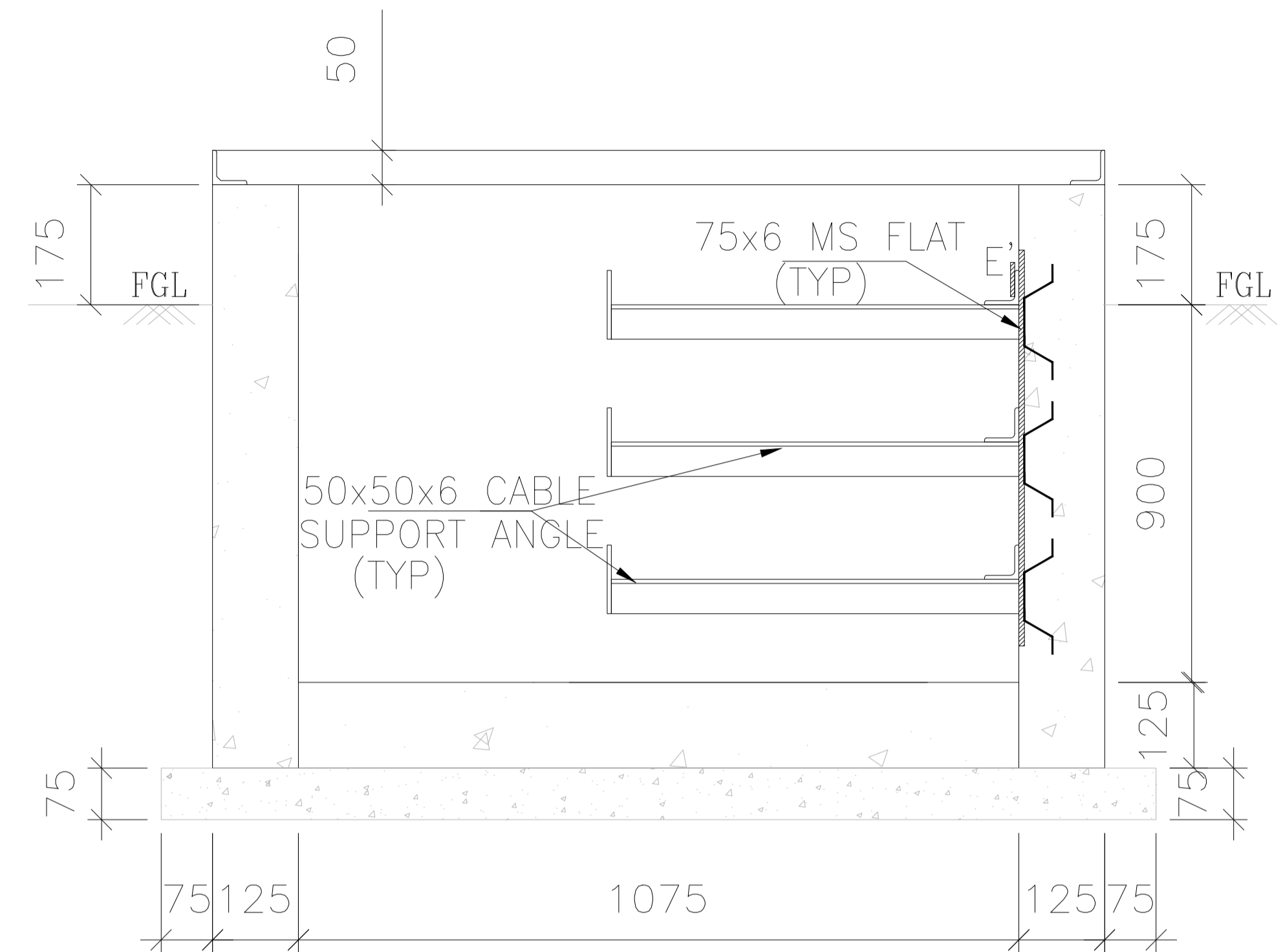
- NOTES:-**
1. ALL LT CABLES SHALL HAVE 1.1kV RATINGS.
 2. SUBSTATION AUTOMATION FOR ACDB & DCDB AS PER IEC 61850.
 3. INDICATES INSTRUMENTS SHALL HAVE ACCURACY CLASS OF 0.5 OR BETTER.
 4. ALL METERS SHALL HAVE FLUSH MOUNTED TYPE.

FOR TENDER PURPOSE

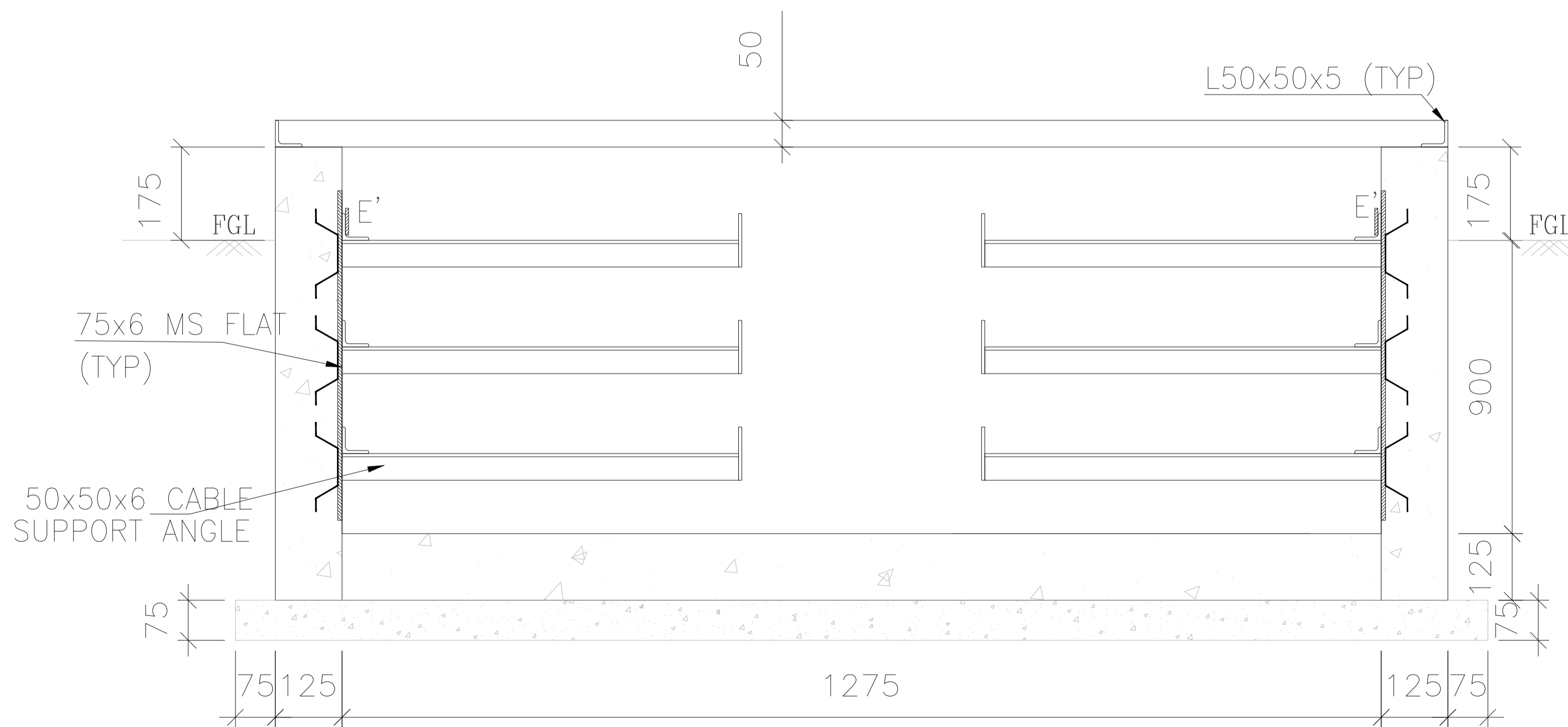
PMC	PTC INDIA LIMITED				
TITLE	220/33kV GIS SUBSTATION SINGLE LINE DIAGRAM FOR ACDB & DCDB				
CLIENT	TALCHER FERTILIZERS LIMITED				
SIGN	DATE	REVISION	DATE	DRG.NO.	SIGNATURE
DRN.BY-	KNR	07.04.2022	FOR APPROVAL		
CHN.BY-	KNR				
APP.BY-					



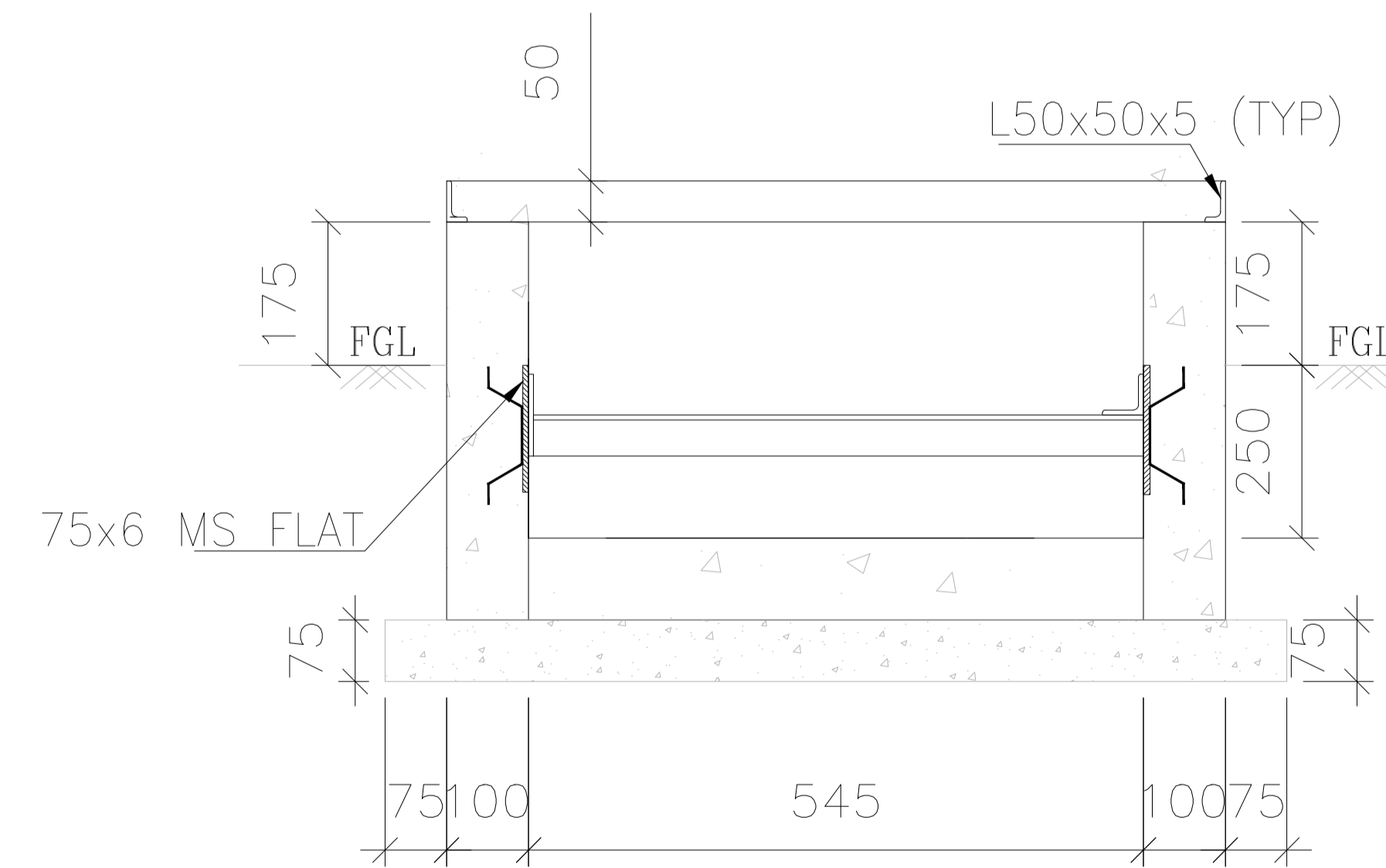
SECTION 1-1



SECTION 3-3



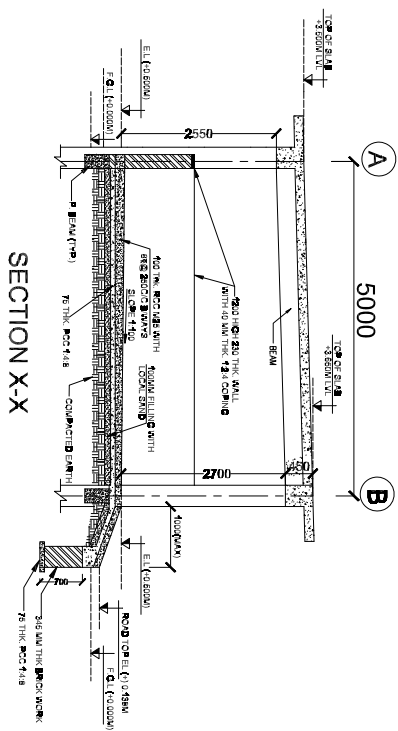
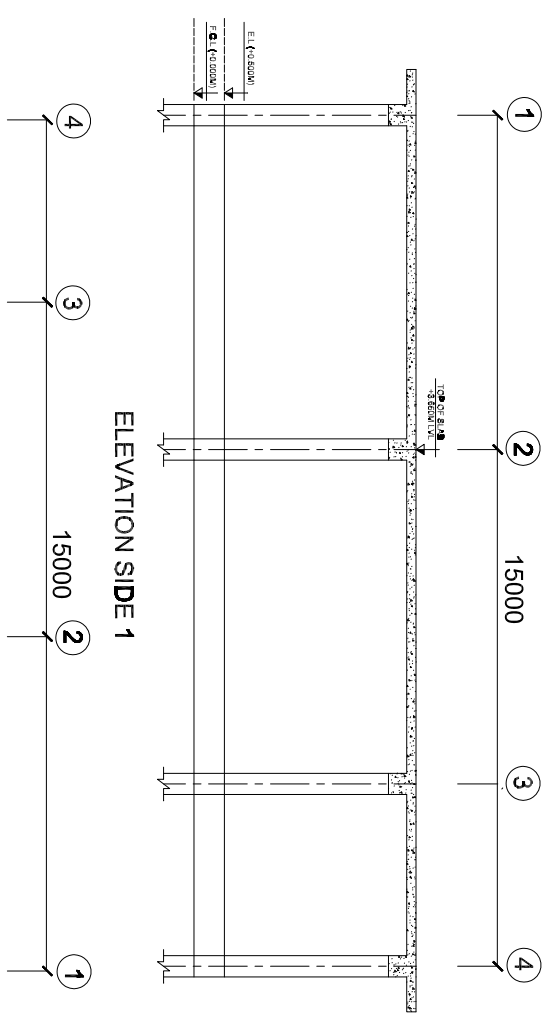
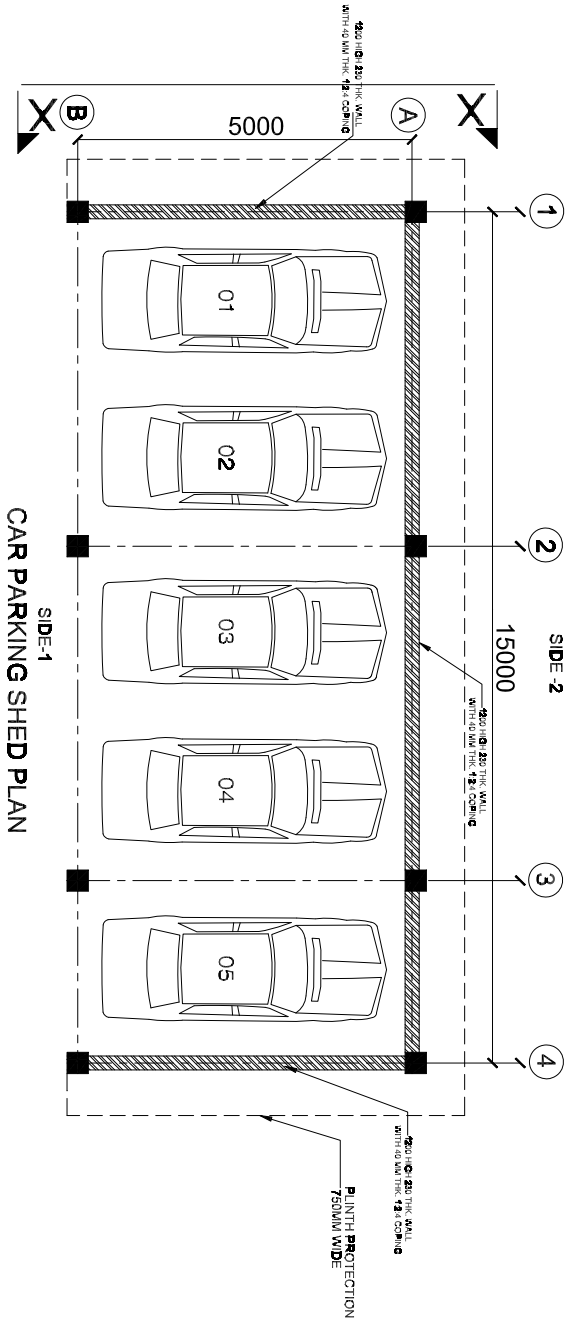
SECTION 2-2



SECTION 4-4

FOR TENDER PURPOSE

TYP. APPROVAL : SIGN & STAMP			
PDS APPROVAL : SIGN & STAMP			
PTC SIGN & STAMP			
		CHECKED	APPROVAL
CLIENT:	TALCHER FERTILIZERS LIMITED		
PWC:	PTC INDIA LIMITED		
PROJECT:	220KV GIS SWITCHING SUBSTATION		
DRAWN:	TITLE: OUTDOOR CABLE TRENCH		
CHECKED:	SCALE: 1:40		
APPROVED:	DRAWING NO: TPL/PDIL/PTC/PLAN-06		
REV. DATE DESCRIPTION	DATE	SHT No.	REV. No.
0 12.07.2022 FOR APPROVAL		01	0

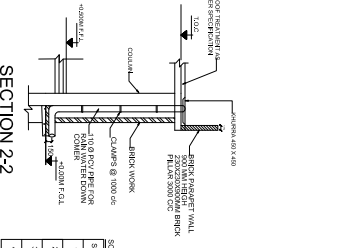
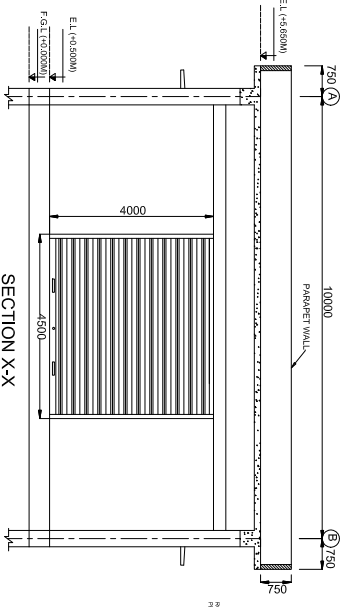
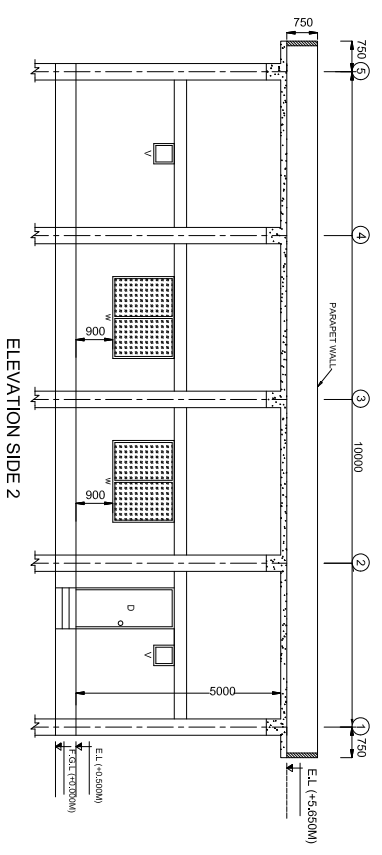
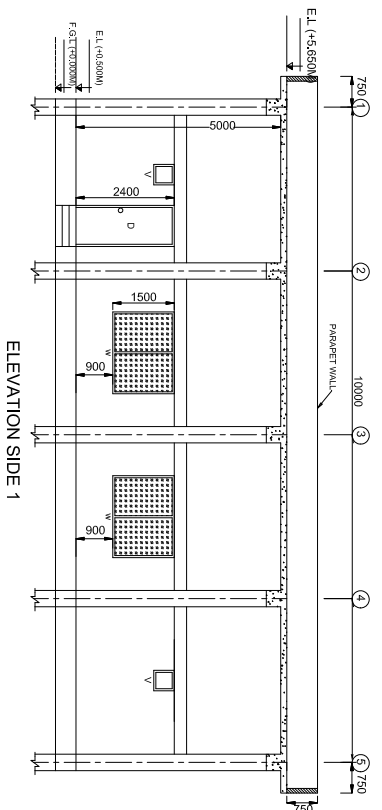
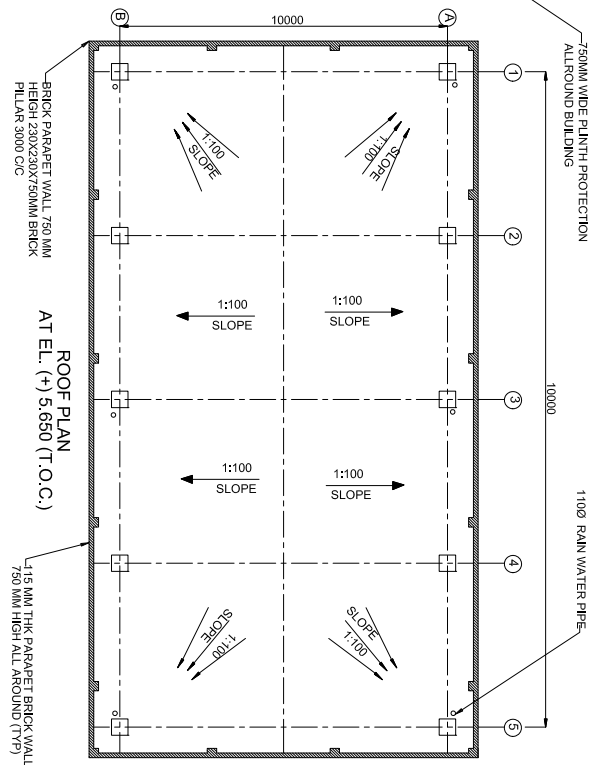
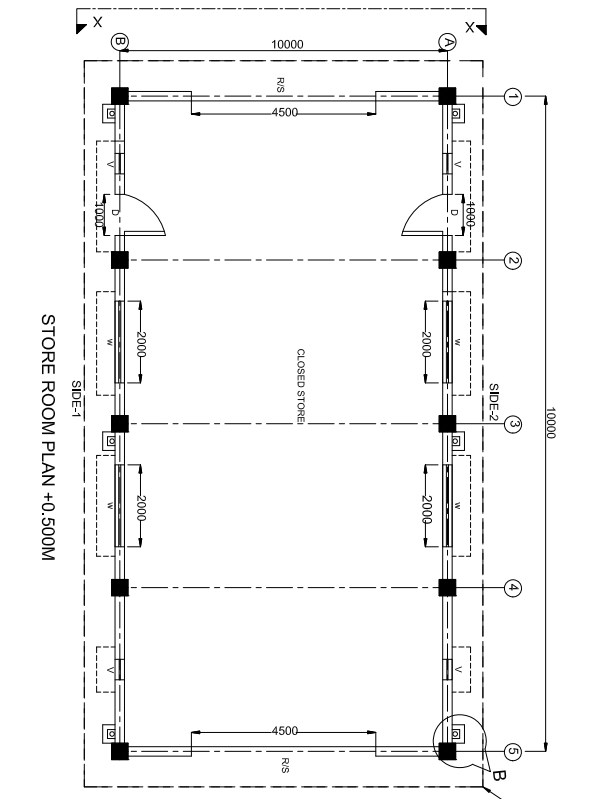


FOR TENDER PURPOSE

- Notes:-**
1. ALL DIMENSION ARE IN MM
 2. DO NOT SCALE THE DRAWING. FOLLOW WRITTEN DIMENSIONS ONLY.
 3. ANY DISCREPANCY TO BE BROUGHT TO THE NOTICE OF SITE INCHARGE
 4. DRAWING FOLLOWED ONLY FOR TENDER PURPOSE.
 5. TOTAL PARKING LENGTH AND BREADTH = 15MX15M (AREA=225SQ M)
 6. SHED PARKING LENGTH AND BREADTH = 15MX5M

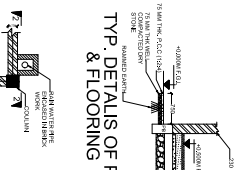
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2	12/02/2023	FOR APPROVAL		
3	12/02/2023	FOR APPROVAL		

NO.	DATE	DESCRIPTION	BY	CHECKED
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2	12/02/2023	FOR APPROVAL		
3	12/02/2023	FOR APPROVAL		

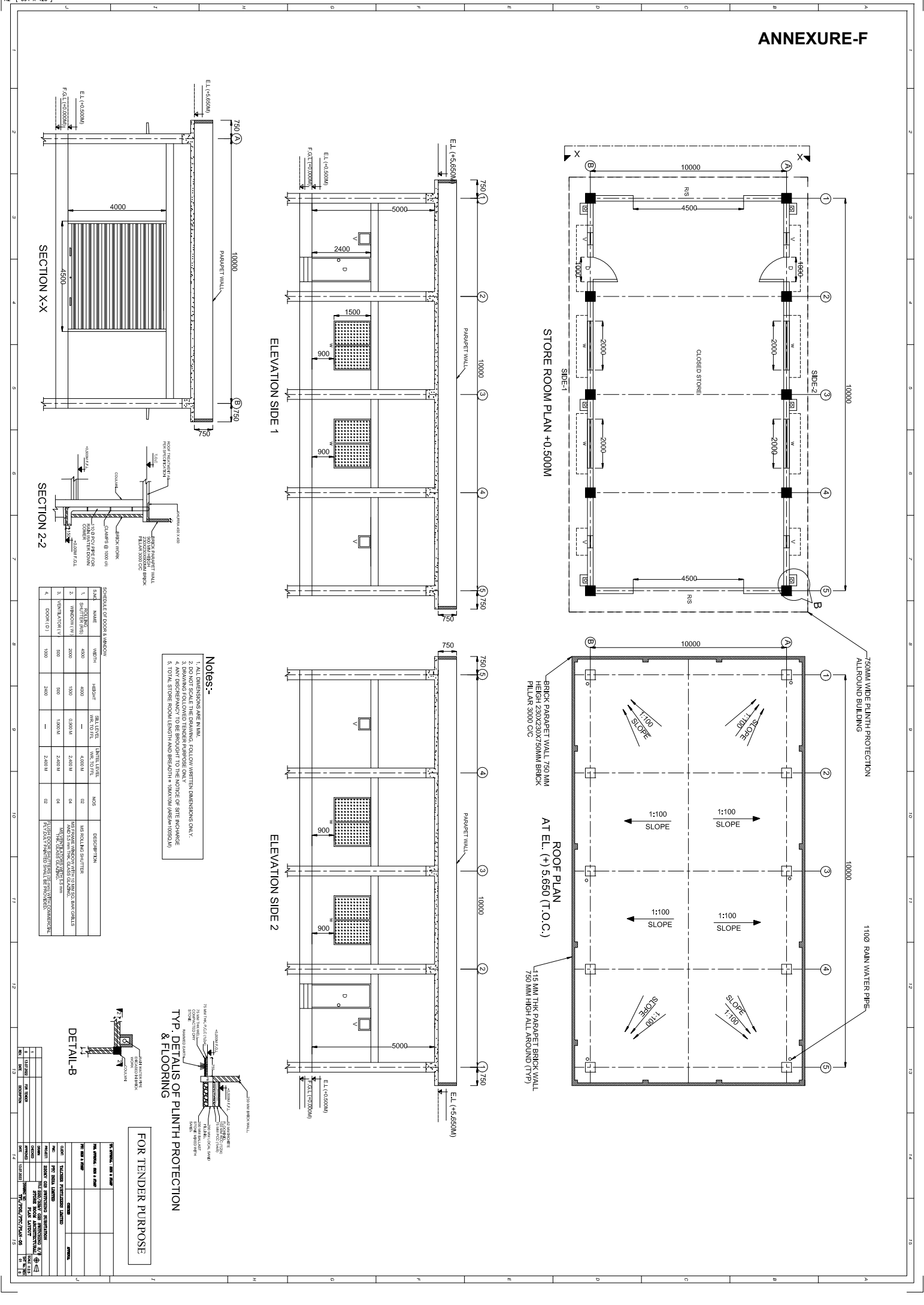


- Notes:-**
1. ALL DIMENSIONS ARE IN MM.
 2. DO NOT SCALE THE DRAWING. FOLLOW WRITTEN DIMENSIONS ONLY.
 3. DRAWING FOLLOWS TENDER PURPOSE ONLY.
 4. ALL DIMENSIONS ARE TO FACE UNLESS SPECIFIED OTHERWISE.
 5. TOTAL STORE ROOM LENGTH AND BREADTH = 10000MM (AREA=100SQM).

SCHEDULE OF DOOR & WINDOW						
Sl. No.	NAME	WIDTH	HEIGHT	SL. LEVEL	FINISH LEVEL	NO. OF
1.	DOOR (D)	1000	2100	0.000 M	2.100 M	01
2.	WINDOW (W)	2000	1500	0.900 M	2.400 M	04
3.	VENTILATION (V)	500	500	1.000 M	1.500 M	04
4.	DOOR (D)	1000	2100	—	2.400 M	02

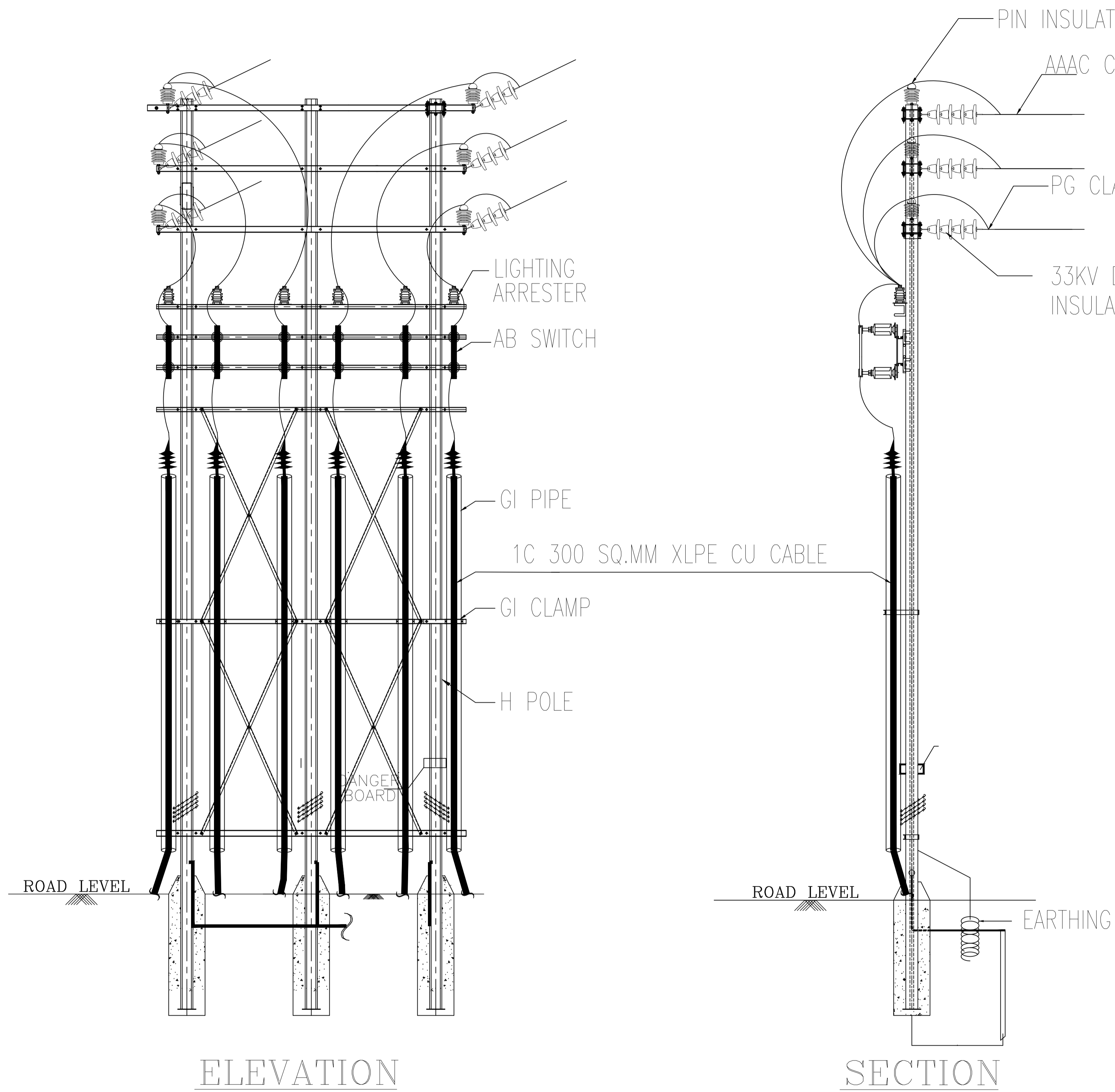


FOR TENDER PURPOSE



NO.	DATE	DESCRIPTION
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NO.	DATE	DESCRIPTION
1	12/02/2023	FOR TENDER PURPOSE

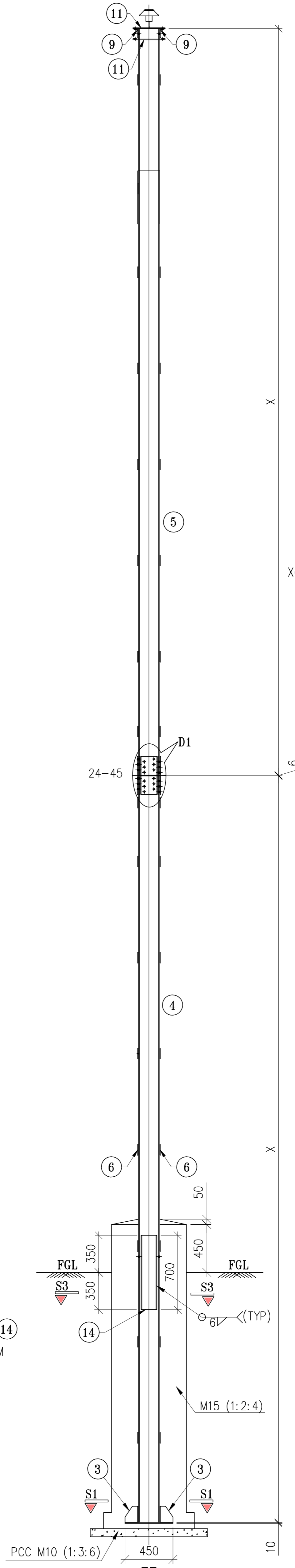
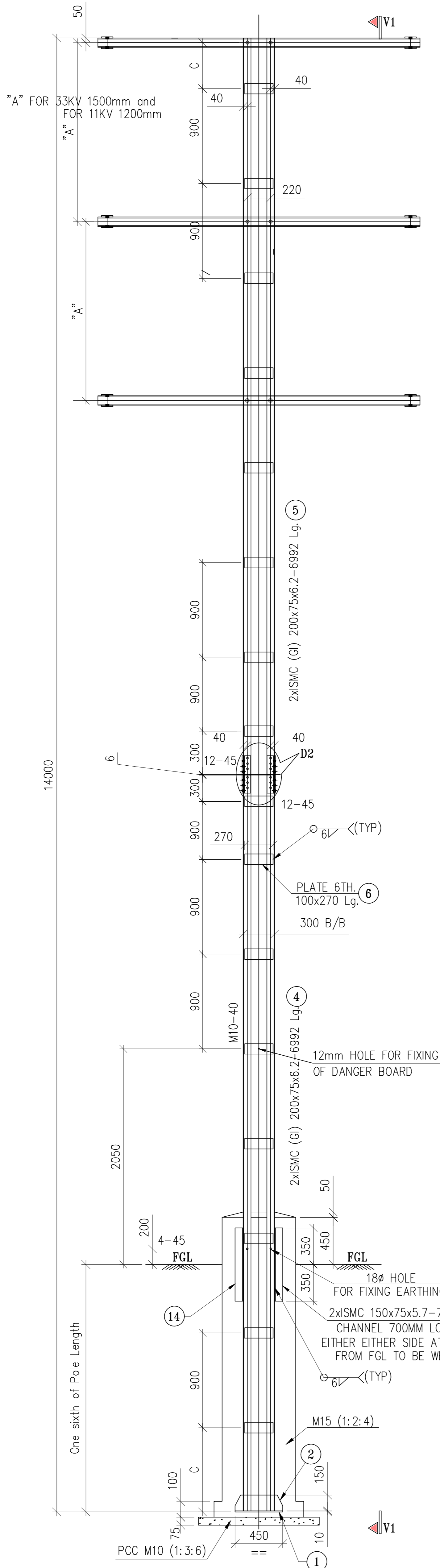


TENDER PURPOSE ONLY

- NOTES:**
1. ALL DIMENSION ARE IN MM.
 2. GL DENOTES GROUND LEVEL
 3. FOLLOWING MINIMUM CLARENCE SHALL BE MAINTAINED FOR 33KV SYSTEM.
 4. PHASE TO PHASE : 320 MM
 5. SAFETY WORKING CLARENCE (SECTIONAL CLARENCE) : 3000 MM. minimum
 6. GROUND CLARENCE : 3700 MM. minimum
 7. H/WPB POLES SHALL BE EARTHED THROUGH COIL EARTH USING S.W.G 8MM GI WIRE
 8. ALL CHANNEL AND ANGLE SHALL BE GALVANIZED AS PER TECHNICAL SPECIFICATION.

CLIENT: TALCHER FERTILIZERS LIMITED		SCALE: 1:60	
PMC: PTC INDIA LIMITED		TITLE: CABLE TERMINATION LINE TAKE OFF ARRANGEMENT	
PROJECT: 220KV GIS SWITCHING SUBSTATION		SHEET NO: 01	
DATE: 13.07.2022	DESCRIPTION: FOR APPROVAL	DATE: 13.07.2022	DESCRIPTION: TFL/PDIL/PTC/SECTION-07

14.0M H-POLE STRUCTURE DESIGN



$X(\text{in mm}) = (\text{LENGTH OF POLE} - 16) / 2$

Pole Grouting:
1:1.5:3 ratio concrete

SIDE VIEW V1-V1

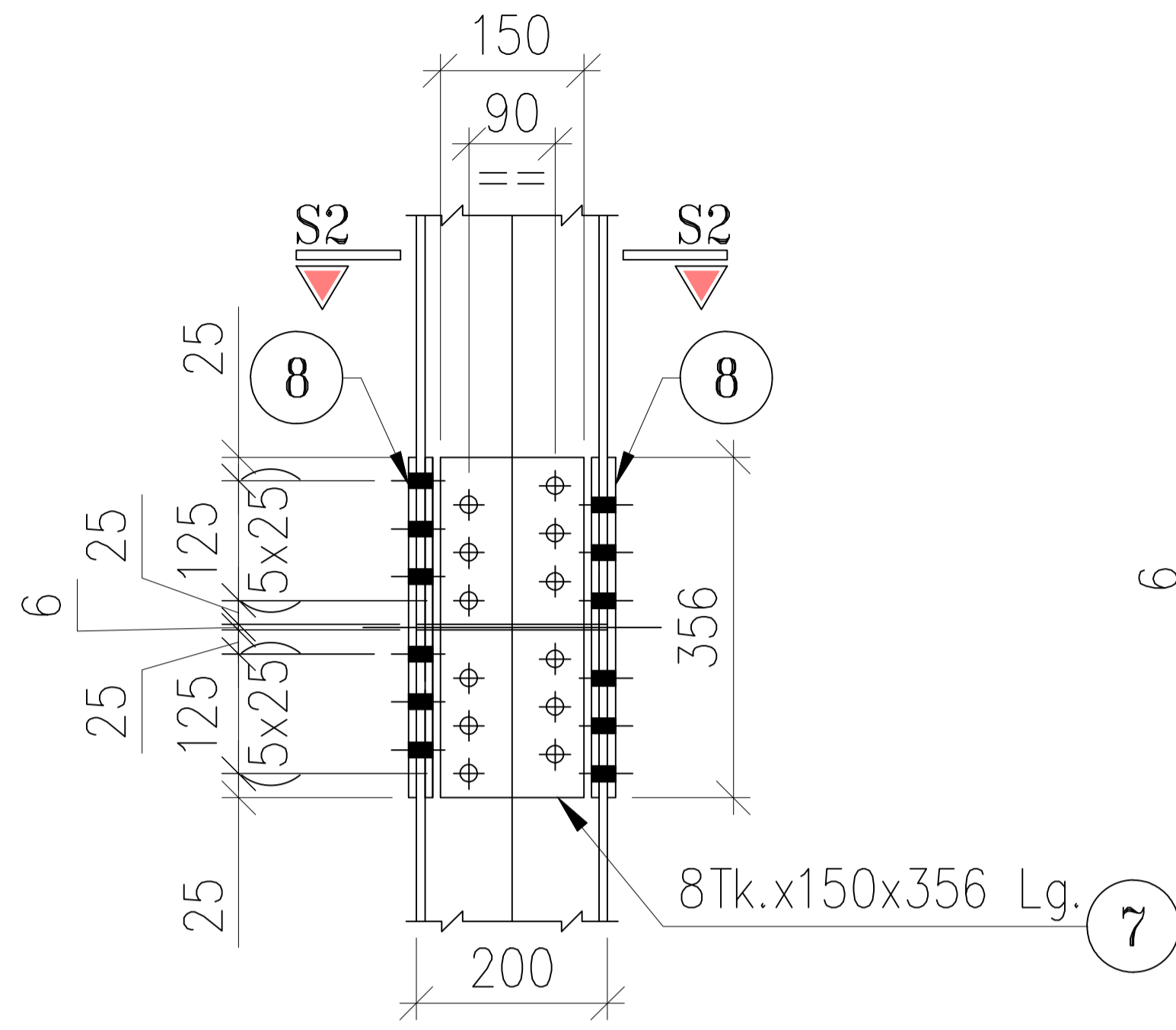
LEGENDS:-

- FGL - FINISHED GROUND LEVEL
- TYP. - TYPICAL

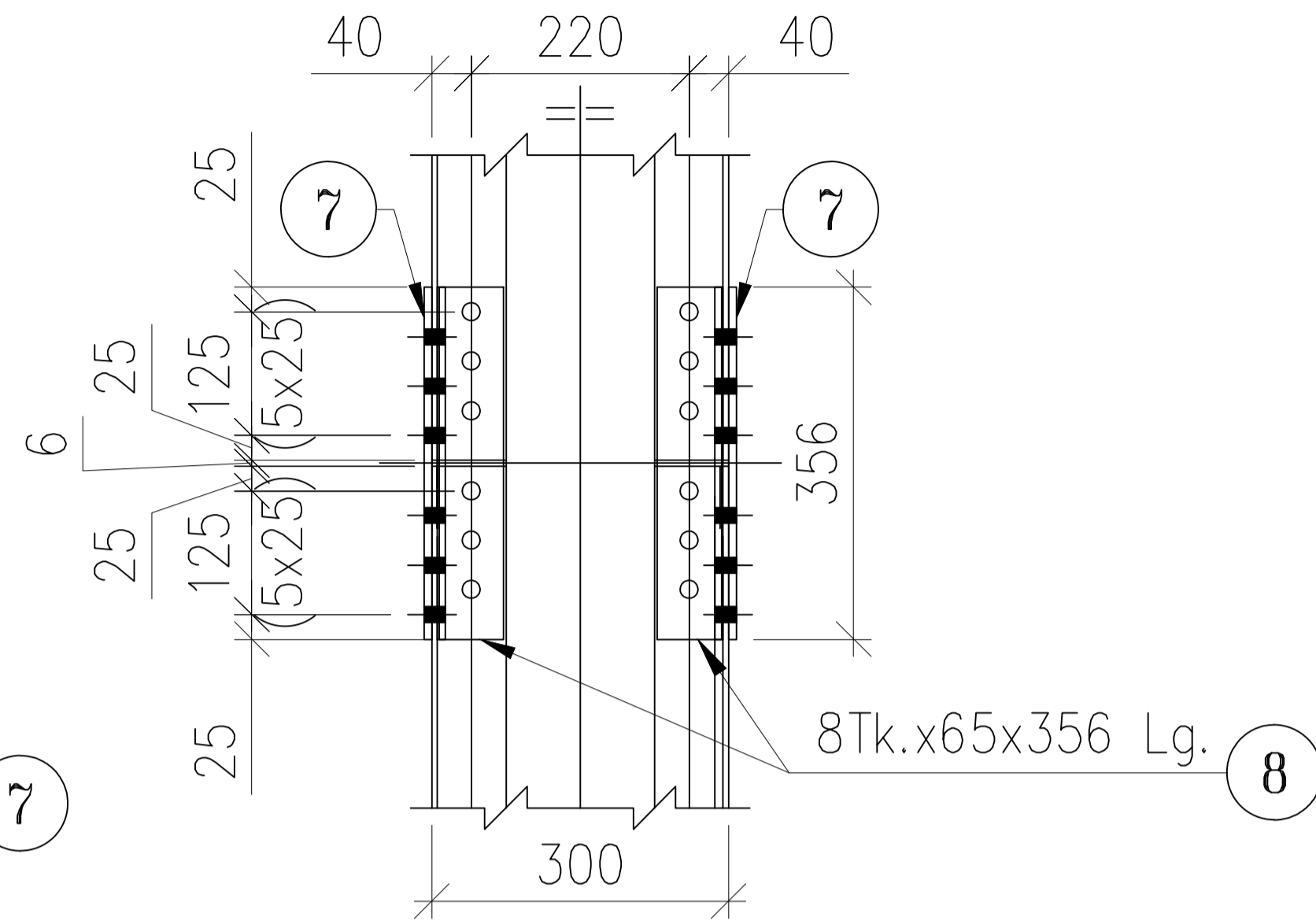
TENDER PURPOSE ONLY

REV	DATE	DESCRIPTION
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1	13/07/2022	FOR APPROVAL

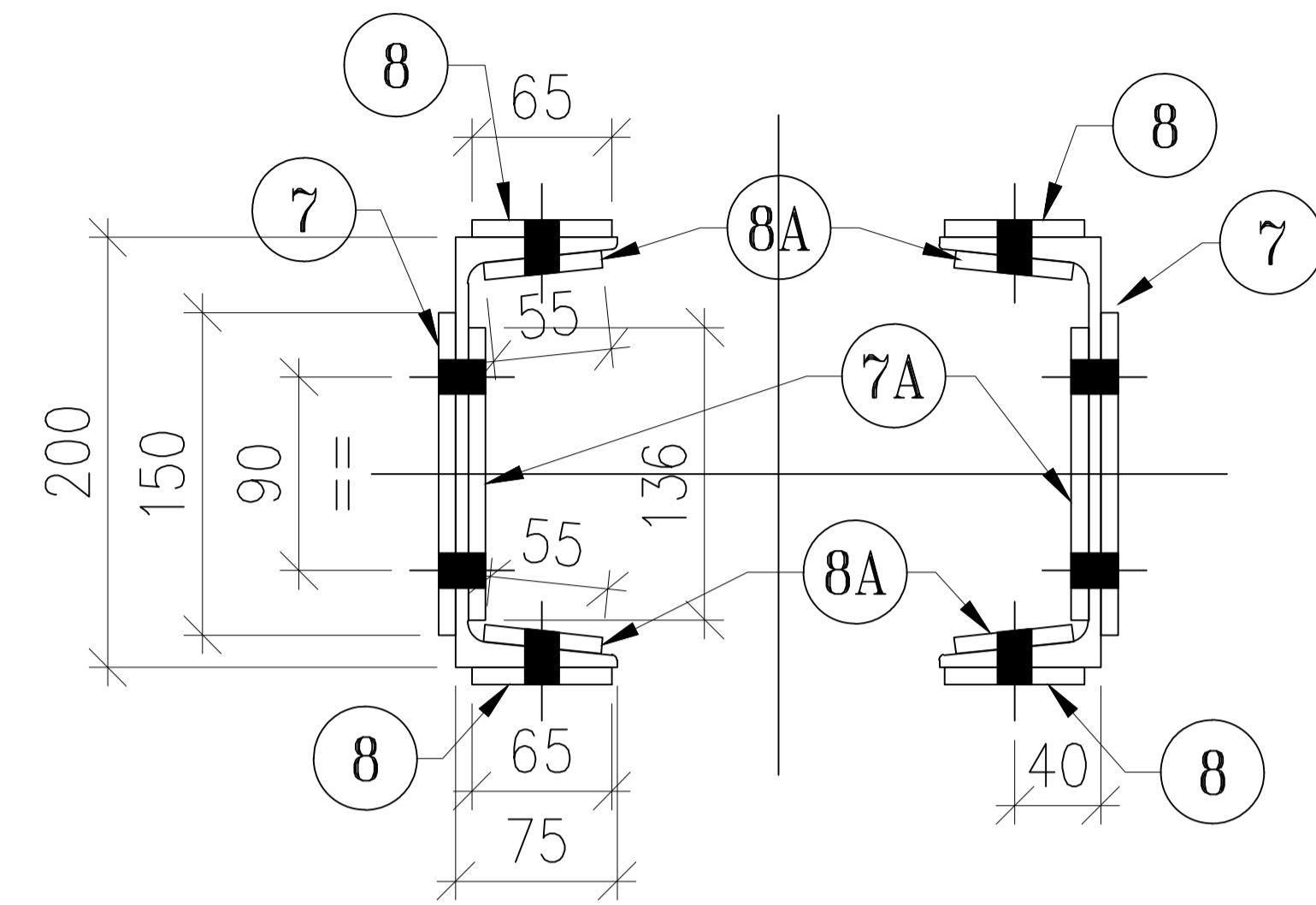
CLIENT	TALCHER FERTILIZERS LIMITED
PROJECT	PTC INDIA LIMITED
DESIGN	220KV GIS SWITCHING SUBSTATION
APPROVED	14 MTR H POLE STRUCTURE
DATE	13/07/2022
SCALE	1:1
DRAWN	PTC/PTL/PTC/H POLE-08
CHECKED	
DATE	



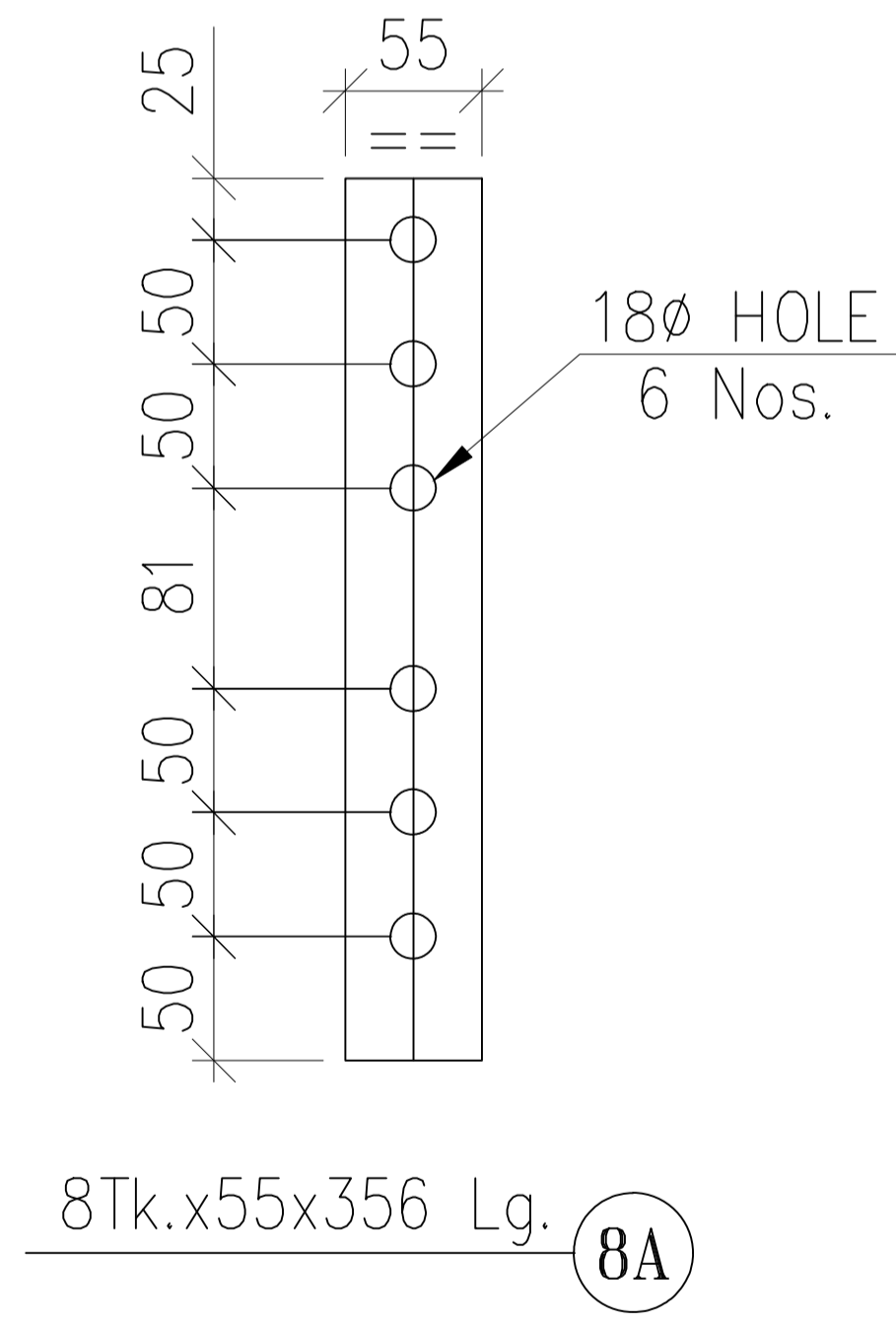
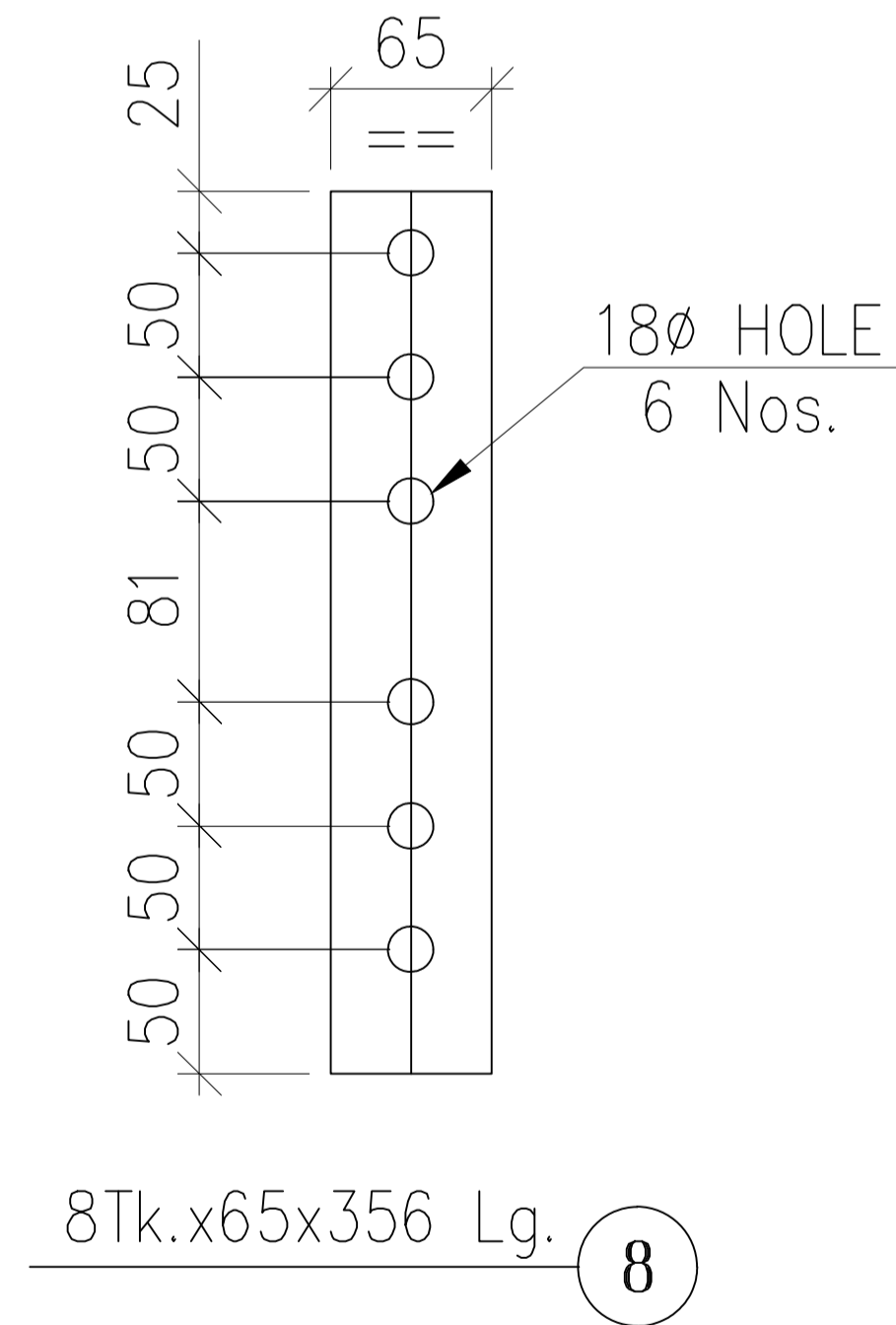
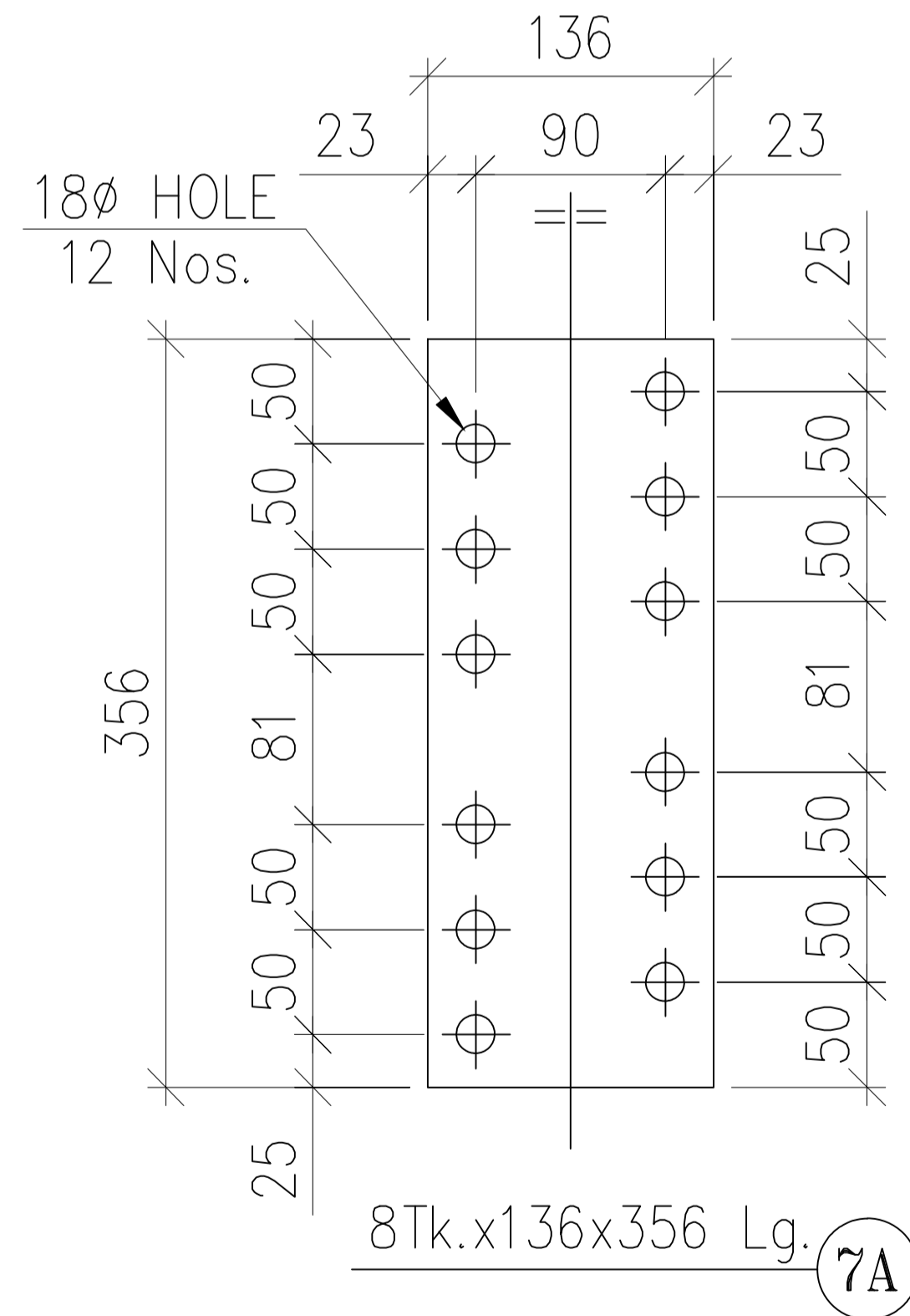
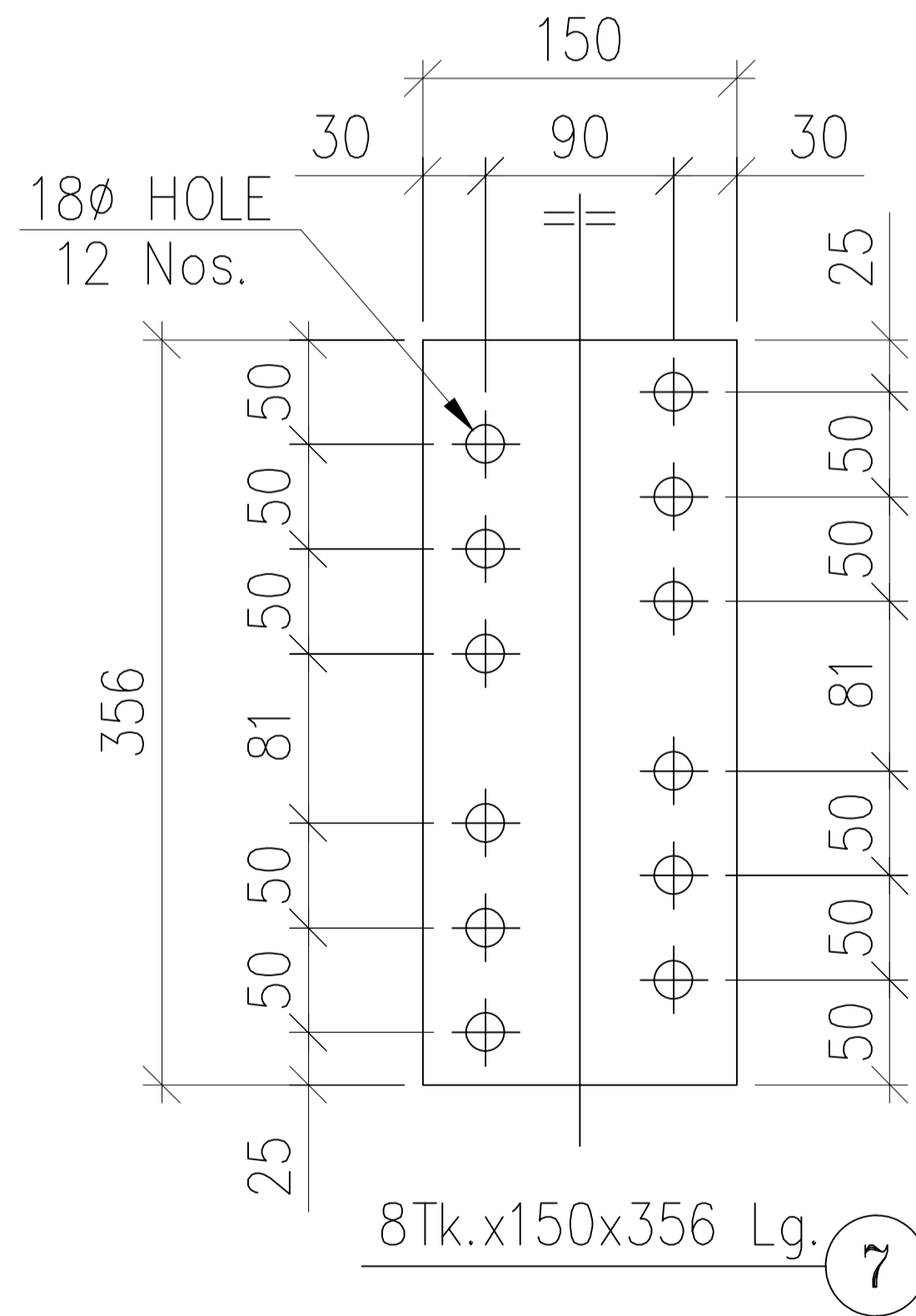
DETAIL-D1



DETAIL-D2



SECTION S2-S2



TENDER PURPOSE ONLY

CLIENT: TALCHER FERTILIZERS LIMITED	
PMC: PTC INDIA LIMITED	
PROJECT: 220KV GIS SWITCHING SUBSTATION	
DRAWN:	TITLE: 14 WBS: H POLE STRUCTURE
CHECKED:	SCALE: 1:40
APPROVED:	DRAWING NO: TPL/PDIL/PTC/H POLE-10
REV. DATE DESCRIPTION	DATE 13.07.2022
	SH. NO. REV. 01

(NIT NO.: PNMM/PC-183/E- 4017/NCB, Dated: 20-06-2022)

The following clauses are added as hereunder in Section V:

A. CONTRACT PERFORMANCE BANK GUARANTEE:

1. The successful bidder, to whom LoA is issued shall be required to furnish a Contract Performance Bank Guarantee on non-judicial stamp paper of appropriate value within 30 (Thirty) days from the date LOA. This Contract Performance Bank Guarantee (CPBG) amount shall be equal to three percent (3%) of the Contract Price (including GST) except supply cost of Power Transformers (including GST). Initially, the CPBG shall be valid for 3 (Three) Months over and above the work completion period plus Guarantee Period.

However, a separate second bank guarantee (CPBG) for 3% of the cost (including GST) of S/S Automation Equipment, FOTE/OLTE equipment, Cables, CT, PT, Breakers, Structures shall be submitted 01 (One) Month prior to expiry of the initial Guarantee Period which will be valid for 3 (Three) Months over and above the additional Guarantee Period beyond the guarantee period of such major items i.e. (36 months + 3 Months = 39 months).

A separate CPBG for 3% of the supply cost of the Power Transformers and GIS Equipment and associated materials (including GST) shall be submitted along with the initial CPBG, which will be valid for 63 (Sixty Three) Months over and above the work of completion period.

2. If the work completion period gets extended the Contract Performance Bank Guarantee shall be extended accordingly. In case the contract price gets revised, the successful bidder shall submit the amended Bank Guarantee to that effect.
3. The above CPBG shall be submitted (Original and two nos. of copies) to “**TALCHER FERTILIZERS LIMITED**” for acceptance. However, on scrutiny if any deficiency is observed to the said CPBG, the contractor shall be intimated about such deficiency to resubmit the fresh CPBG and /or amended CPBG in lieu of the Original BG. However, the fresh / amended CPBG shall be submitted within the time schedule prior to the signing of the contract agreement. Despite above, if the CPBG is not submitted or it is still not acceptable to “**TALCHER FERTILIZERS LIMITED**” contract shall become void and necessary action as per the contract shall follow.
4. The aforesaid CPBG shall be returned to the Contractor after successful completion of the guaranteed obligations under the contract.

B. PERFORMANCE GUARANTEE:

1. The Contractor shall guarantee that the equipment/materials will be new, unused and in accordance with the Contract documents and free from defects in material and workmanship for a period of 12 (Twelve) months commencing immediately after the satisfactory commissioning of the entire works under the contract. The Contractor's liability shall be to the extent of repair/replacement of such defective equipment/material either arising from faulty design or defective equipment/materials and/or bad workmanship. Such defective equipment/materials

shall be handed over to the Contractor for repair or replacement by a new one, unless otherwise repairable at site. The Contractor shall complete the repair/replacement work within the reasonable time frame intimated by the Engineer-In-Charge.

The additional Guarantee Period beyond the guarantee period above for the following major items i.e.

- i. **36 Months + 3 Months = 39 months for S/S Automation Equipment, FOTE/OLTE equipment, Cables, CT, PT, Breakers, Structures.**
- ii. **60 Months + 3 Months = 63 months for Power Transformer and GIS Equipment and associated materials.**

If any defects are not remedied within the time frame, the Engineer-In-Charge may proceed to do the work at the Contractor's risk and cost but without prejudice to any other rights, which **"TALCHER FERTILIZERS LIMITED"** may have against the Contractor in respect of such defects.

2. If it becomes necessary for the Contractor to replace or renew any defective portions of the works the provision of this clause shall apply to portion of the works so replaced or renewed until the expiry of guarantee period.
3. The repaired or new parts will be supplied and erected free of cost by the Contractor. If any repair is carried out on his behalf at the site, the Contractor shall bear the cost of such repairs.
4. The cost of any special or general overhaul rendered necessary during the maintenance period due to defects in the equipment or defective work carried out by the Contractor, the same shall be borne by the Contractor.
5. The acceptance of the equipment or works by the Engineer-In-Charge shall in no way relieve the Contractor of his obligations under this clause.
6. In the case of those defective parts, which are-not repairable at site but are essential for the operation of the equipment, the Contractor and the Engineer-In-Charge shall mutually agree to a program of replacement or renewal, which will minimize interruption to the maximum extent in the operation of the equipment.
7. At the end of the guarantee period, the Contractor's liability ceases except for latent defects.
8. The provisions contained in this clause will not be applicable.
 - a) If **"TALCHER FERTILIZERS LIMITED"** has not used the equipment according to generally approved industrial practice and in accordance with the conditions of operations specified and in accordance with operating manuals, if any.
 - b) In cases of normal wear and tear of the parts to be specifically mentioned by the Contractor in the offer.
9. The contractor shall not stand guarantee for the materials supplied by **"TALCHER FERTILIZERS LIMITED"** but shall stand guarantee during the erection of the materials.

C. FUNCTIONAL GUARANTEES: Bidder shall state the guaranteed technical particulars, performance or efficiency of different equipment/materials with respect to the Technical Specifications. Equipment / Materials offered shall have guaranteed acceptable particulars / performance / efficiency specified in Technical Specification.