Bharat Heavy Electricals Limited

(A Govt. of India Undertaking)
Transmission Business Group
Materials Management, 5th Floor, Plot No.25,
Sector-16A, Noida, Uttar Pradesh, PIN No: 201301
Phone: 0120-2218840, Email: gaurav.agarwal@bhel.in

CORRIGENDUM - 02 TO NIT NO-99017

Dated 21-04-2026

Subject: Corrigendum-02 to Tender enquiry for Pre-Bid Tie up with the GIS OEM for Supply & Services of 765kV GIS Pkg for POWERGRID's Substation Package SS-147T (Pendurthi & Srikakulam) Tender / Project.

Project	: POWERGRID's Substation Package SS-147T (Pendurthi & Srikakulam)
Equipment / Item	: Supply & Services of 765KV GIS
Enquiry No/Date	: 61G2700005 Dated 09-04-2026
BHEL NIT NO	: 99017
Original Tender due date	**: 20-04-2026**

This Corrigendum is issued by BHEL TBG against above mentioned NIT/ enquiry for issuance of Technical Corrigendum-02 (enclosed).

All other terms and conditions for this tender enquiry shall remain unchanged.

Bidder to ensure submission of offer on or before due date.

Note: Tender ID on CPP Portal is **2026_BHEL_60072_1.**

Thanking you

-------Sd/------
Gaurav Agarwal
BHEL TBG, NOIDA

Ref. No.	**Technical Corrigendum-02**
Project:	**Pre-Bid Tie up for 765kV GIS Substation Package SS 147T for a) Establishment of 765kV GIS at 765/400kV Pendurthi (Vizag) GIS substation; and b) Extension works at 765kV Srikakulam GIS substation associated with "Transmission system for proposed Green Hydrogen / Green Ammonia projects in Vizag area, Andhra Pradesh (Phase-I)" through Tariff Based Competitive Bidding (TBCB) Route prior to RfP bid submission by POWERGRID to BPC; Specification No.: CC/T/W-GIS/DOM/A06/25/13593**
Package/Item:	**GAS INSULATED SWITCHGEAR WITH ITS ACCESSORIES**
Technical Specification No.	**TB-PBTU-GIS-PGCIL-SS147T, REV-00**
Date:	**21.04.2026**

Sl. No.	Volume/ Section/ Clause	Volume/ Section/ Clause as Existing	Volume/ Section/ Clause as Amended/ Added in Technical Corrigendum
1	Technical Specification / Section 1.3	Section-1.3- Section Project	**Amendment No. II (Technical)** to the Technical Portion of the Bidding Document. (Copy attached).
2	-	-	**Clarification-I (Technical)** (Copy attached)

Note:

1. The changes/ revision are marked/ highlighted in yellow.
2. Amendment/ addendum/ clarification/ corrigendum issued herein shall form part of Technical Specification.

Bidders to please note that amendment/addendum/ clarification/ corrigendum issued shall supersede the respective Volume/ Section/ Clause of Technical Specification Document to the extent for the Volume/ Section/ Clause or part thereof the amendment is issued.

Amendment No. I (Technical) dated 21.04.2026 to the technical portion of the Bidding Document for **Pre-Bid Tie up** for 765kV GIS Substation Package **SS 147T** for a) Establishment of 765kV GIS at 765/400kV Pendurthi (Vizag) GIS substation; and b) Extension works at 765kV Srikakulam GIS substation associated with "Transmission system for proposed Green Hydrogen / Green Ammonia projects in Vizag area, Andhra Pradesh (Phase-I)" through Tariff Based Competitive Bidding (TBCB) Route prior to RfP bid submission by POWERGRID to BPC; Specification No.: CC/T/W-GIS/DOM/A06/25/13593

<table>
<tr><th>Sl. No.</th><th>Clause Ref. No.</th><th>Existing provision</th><th>Amended as</th></tr>
<tr><td colspan="4">AMENDMENT IN SECTION PROJECT_REV 00 CLAUSES</td></tr>
<tr><td>1.</td><td>Section 1.3 of Technical Specification-[Section Project]</td><td>-</td><td>Annexure VI- Technical Specification for Scissor Man Lift (Attached)</td></tr>
<tr><td>2.</td><td>Section 1.3 of Technical Specification-[Section Project]</td><td>-</td><td>
<table>
<tr><th>Sr. No.</th><th>Drawing No.</th><th>Description</th><th>Rev</th></tr>
<tr><td colspan="4">Electrical Drawings</td></tr>
<tr><td>2.</td><td>C/ENGG/CIVIL/765KV/GIS/ARCH/DRW/01</td><td>STANDARD 765kV GIS BUILDING ARCHITECTURAL DRAWING</td><td>R0</td></tr>
</table>
<table>
<tr><th colspan="3">Drawings of Existing Substations</th></tr>
<tr><th>Sr. No.</th><th>Drawing No.</th><th>Description</th></tr>
<tr><td colspan="3">765kV Srikakulam GIS SS</td></tr>
<tr><td>a.</td><td>NHVS-EMC-SRKL-E-LAY-DRG-001 ZF15-800(50-9)5KBJ.449.704 Rev 3</td><td>Single Line Diagram</td></tr>
<tr><td>b.</td><td>-</td><td>Layout Plan</td></tr>
<tr><td>c.</td><td>NHVS-EMC-645-SRKL-E-ERT-DRG-002 Rev 0</td><td>Earth mat Layout</td></tr>
</table>
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Technical Specification for Scissor Man Lift

1. General:

The specification is intended to provide the technical requirement of scissor man lift designed for vertical elevation of personnel and equipment in Gas Insulated Substations (GIS) near Indoor and outdoor GIS and GIB installation. The scissor man lift shall be of reputed Indian make with service support available in India.

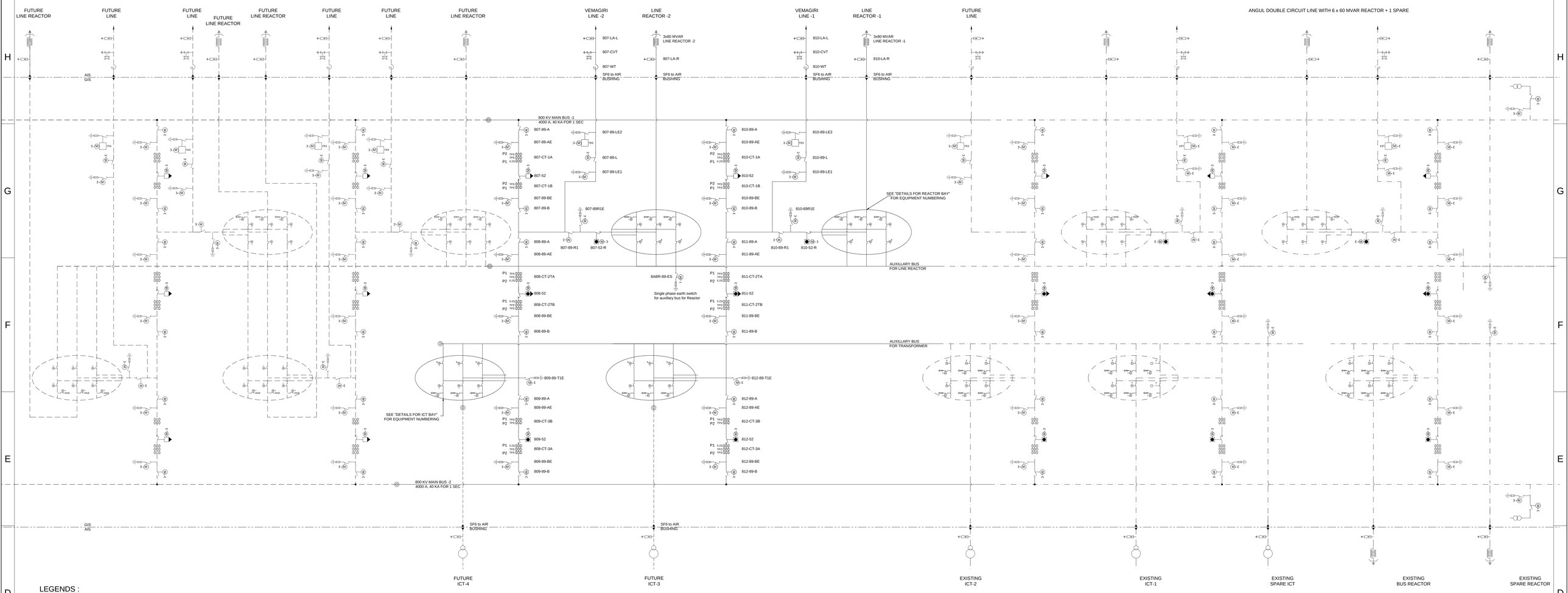
The scope of supply includes design, engineering, manufacturing, testing, inspection, packing, forwarding, delivery on FOR destination basis, assembly of parts at site (if required), other services required for successful commissioning, demonstration, and training (at site) of scissor man lift compliance to this technical specification.

2. Technical Requirement:

S.No.	Description	Parameter
	Maximum load capacity	Minimum 225 Kgs for 400kV & Minimum 300 Kgs for 765kV
	Maximum platform height	For 400kV Minimum attainable platform height (indoor) should be 5.7 Meters & 08 meters for 765kV
	Power Source	• Electrically powered, Battery-operated. • Provision for both AC and DC power input. • Provided with in-built automatic charger suitable for Single phase 230/240VAC, 50Hz or 3- phase, 415V, 50Hz AC supply
	Lifting Mechanism	Hydraulic Scissors Type.
	Mobility	Self-propelled with variable speed control.
	Continues operation time	12 hours on a single charge.
	Drive In Raised Condition	Facility to drive in Raised Conditions
	Maximum drive speed (stowed) Maximum drive speed (raised)	4.0 km/h 0.8 km/h
	Terrain capabilities	Inside GIS building and outdoor switchyard.
	Platform Size	Minimum platform dimensions: 1.5m x 0.5m. (LXW) Scissor Man Lift shall accommodate at least two persons along with tools, facilitating maintenance and inspection activities of GIS installation. Platform shall be Basket Type with handrail.
	Platform Extension	Extendable platform for increased workspace to facilitates access to GIS components. Minimum horizontal extension outreach should be 0.90 Meters
	Applicable Standard	Scissor Man Lift should comply with the international standards (BS EN 280 or EN 280 OR ANSI or any other applicable standards of country of origin)

	Safety Features (Minimum)	• Emergency stop button with instantaneous cut-off for all power sources. • Overload protection to prevent strain on the lift mechanism. • Safety railing around the platform with a self-closing gate, meeting the height and strength requirements for GIS environments. • Audible and visual alarms for movement and height limits. • Non-marking tires designed to protect the flooring in indoor GIS areas. • Elevated platform shall be provided with tilt monitoring system and slope monitoring system with safety shutdown feature. • Battery main switch shall be provided on the chassis for emergency switch OFF of the power supply.
	Controls	• Joystick controls for precise movement, allowing operators to navigate through confined spaces in GIS Hall and switchyards. • Emergency descent mechanism in case of power failure, ensuring a safe return to ground level. • Control panel with clear indicators for battery status, elevation height, and system faults. • The Scissor Man Lift shall be suitable for reaching elevated equipment in GIS and switchyard installations and shall be provided with specialized features for working on GIS structures, ensuring precise positioning near equipment.
	Material and Construction:	• Corrosion-resistant materials, especially suited for corrosive atmosphere. • Robust and durable steel structure to withstand the rigors of EHV Substation maintenance. • Platform floor with an anti-slip surface for safety during operation. • It shall be possible to work at the rated heights up to rated capacity without “out-riggers”. If the outriggers are provided, the chassis dimension shall not exceed the dimensions provided in the above specifications.
	Operational Environment	• Temperature range: -10°C to 50°C, suitable for the diverse climate conditions experienced in India. • Weatherproofing for outdoor use, ensuring reliable operation during adverse weather conditions.

		• Suitable for use in dusty or mildly corrosive environments.
	Maintenance and Serviceability	• Easy access panels for routine maintenance. • Comprehensive user manual with maintenance schedule and guidelines. • Commissioning of the Equipment at Site, initial one-time training to users and first year complete maintenance shall deemed to be included.



LEGENDS :

765 KV GIS EQUIPMENTS

SYMBOL	DESCRIPTION	ACTUAL QTY	LOA QTY	SYMBOL	DESCRIPTION	ACTUAL QTY	LOA QTY
	CIRCUIT BREAKER WITH PIR ,WITHOUT CSD (3 PHASE), 3150 A, 50 kA FOR 1 Sec. CONTROL DC220V,MOTOR AC220V.	2	2		MAINTENANCE EARTHING SWITCH WITH 10 kV,1000A FOR 10min. INSULATION (1-PHASE) CONTROL DC220V,MOTOR DC220V.	13	13
	CIRCUIT BREAKER WITH CSD, WITHOUT PIR (3 PHASE), 3150 A, 50 kA FOR 1 Sec. CONTROL DC220V,MOTOR AC220V.	4	4		HIGH SPEED EARTHING SWITCH WITH 10 kV,1000A FOR 10min INSULATION (3-PHASE) CONTROL DC220V,MOTOR DC220V.	2	2
	CIRCUIT BREAKER WITH PIR & CSD (3 PHASE), 3150 A, 50 kA FOR 1 Sec. CONTROL DC220V,MOTOR AC220V.	2	2		CURRENT TRANSFORMER, 3 CORES,1 PHASE	24	24
	DISCONNECTOR (3 PHASE), 3150 A, 50 kA FOR 1 Sec. CONTROL DC220V,MOTOR DC220V.	16	16		CURRENT TRANSFORMER, 2 CORES, 1 PHASE	12	12
	DISCONNECTOR (1 PHASE), 3150 A, 50 kA FOR 1 Sec. WITHSTAND PHASE - PHASE INSULATION CONTROL DC220V,MOTOR DC220V.	12	12		INDUCTIVE POTENTIAL TRANSFORMER, 1 PHASE (NISSIN MAKE)	0	0
	DISCONNECTOR (1 PHASE), 3150 A, 50 kA FOR 1 Sec. CONTROL DC220V,MOTOR DC220V.	12	12		SF6 AIR BUSHING (1 PHASE)	12	18
	MAINTENANCE EARTHING SWITCH WITH 10 kV, 1000A FOR 10 min. INSULATION (3 PHASE) CONTROL DC220V,MOTOR DC220V.	18	18		INTERFACE MODULE WITH ISOLATING LINK FOR FUTURE EXTN.	14	14

765 KV AIS EQUIPMENTS

	624 KV, 1PH SURGE ARRESTOR	12	12		3150 A, 50 KA(for 1 Sec) 1 mH 1 PH LINE TRAP	4	4
	765 KV, 8800 pF, 1 PH CAPACITIVE VOLTAGE TRANSFORMER	6	6				

SYSTEM PARAMETER :

SL. NO.	DESCRIPTION OF PARAMETERS	765 kV SYSTEM
1	SYSTEM OPERATING VOLTAGE	765 kV
2	MAXIMUM OPERATING VOLTAGE OF THE SYSTEM (r.m.s.)	800 kV
3	RATED FREQUENCY	50 Hz
4	NO. OF PHASE	3
5	RATED INSULATION LEVELS	
i)	FULL WAVE IMPULSE WITHSTAND VOLTAGE (1.2/50 microsec.)	2100 kVp
ii)	SWITCHING IMPULSE WITHSTAND VOLTAGE (250/2500 microsec.) DRY AND WET	1550 kVp
iii)	ONE MINUTE POWER FREQUENCY DRY WITHSTAND VOLTAGE (r.m.s.)	830 kV
iv)	ONE MINUTE POWER FREQUENCY DRY AND WET WITHSTAND VOLTAGE (r.m.s.)	--
6	CORONA EXTINCTION VOLTAGE	508 kV
7	MAXIMUM RADIO INTERFERENCE VOLTAGE FOR FREQUENCY BETWEEN 0.5 MHz AND 2 MHz AT 266 kV r.m.s.	2500 microvolt
8	MINIMUM CREEPAGE DISTANCE (31 mm/kV)	24800 mm
9	MINIMUM CLEARANCES	
i)	PHASE TO PHASE	7600 mm (FOR CONDUCTOR - CONDUCTOR CONFIGURATION) 9400 mm (FOR ROD - CONDUCTOR CONFIGURATION)
ii)	PHASE TO EARTH	4900 mm (FOR CONDUCTOR - STRUCTURE CONFIGURATION) 6400 mm (FOR ROD - STRUCTURE CONFIGURATION)
iii)	SECTIONAL CLEARANCES	10300 mm
10	RATED SHORT CIRCUIT CURRENT FOR 1 sec. DURATION	40 kA
11	SYSTEM NEUTRAL EARTHING	EFFECTIVELY EARTHED

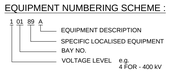
765 kV VOLTAGE TRANSFORMER :

Designation	Windings	Ratio	Class	Application	Burden (VA)
- PT1 - PT2	Primary	765 kV / √3			
	Secondary 1	110 V / √3	3P	Protection	50 VA
	Secondary 2	110 V / √3	3P	Protection	50 VA
	Secondary 3	110 V / √3	0.2	Metering	50 VA

765 kV CURRENT TRANSFORMER :

DESIGNATION	CORE-NO.	RATIO	CLASS	APPLICATION	BURDEN (VA)	Min Knee pt.Voltage Vk(V)	Max CT Sec. Wdg.Resistance (Ohm)	Max Excitation current at Vk(Amp)
CT-1A & CT-3A CT-2TA & CT-2TB	Core-1	3000-2000-500/1A	TPS	Feeder Protection		3000-2000-500	12/8/2	20 on 3000/1tap 30 on 2000/1tap 120 on 500/1tap
	Core-2	3000-2000-500/1A	TPS	Feeder Protection		3000-2000-500	12/8/2	20 on 3000/1tap 30 on 2000/1tap 120 on 500/1tap
	Core-3	3000-2000-500/1A	0.2S	METERING	20VA	FOR METERING CORE 1000/1 RATIO SHALL BE ACHIEVED BY TAKING TAP FROM 3000 AND 2000 POINT		
CT-1B & CT-3B	Core-1	3000-2000-500/1A	TPS	Busbar Differential Protection		3000-2000-500	12/8/2	20 on 3000/1tap 30 on 2000/1tap 120 on 500/1tap
	Core-2	3000-2000-500/1A	TPS	Busbar Differential Protection		3000-2000-500	12/8/2	20 on 3000/1tap 30 on 2000/1tap 120 on 500/1tap

EQUIPMENT NUMBERING SCHEME :



SCOPE OF WORK :

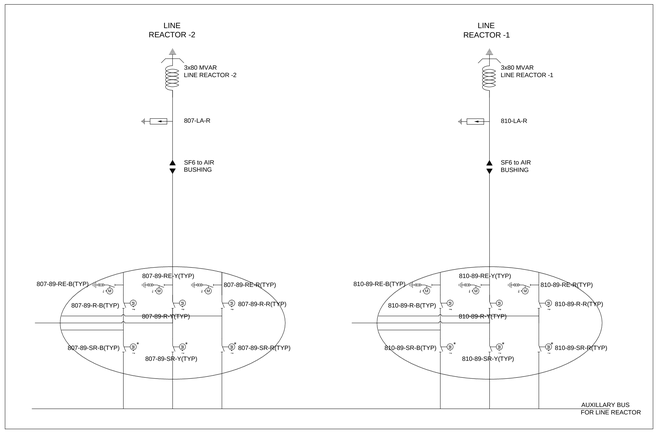
PRESENT SCOPE

FUTURE

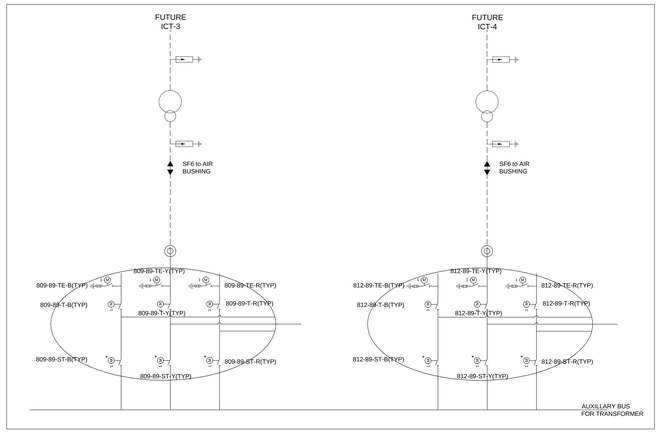
EXISTING

REFERENCE DRAWING:

1. Tender SLD Drawing - C/ENGG/SS/STS/765 SLD Rev1
2. Tender GA Drawing - C/ENGG/SS/SR/765 kV SRIKAKULAM EXTN/GA/1 Rev1



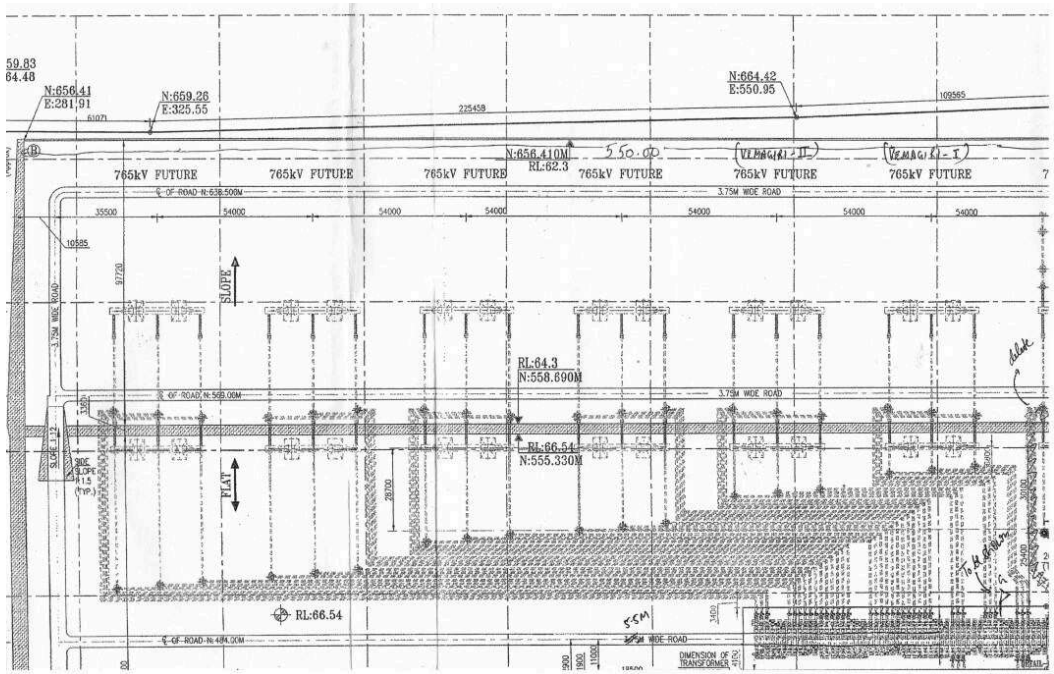
DETAILS FOR REACTOR BAY

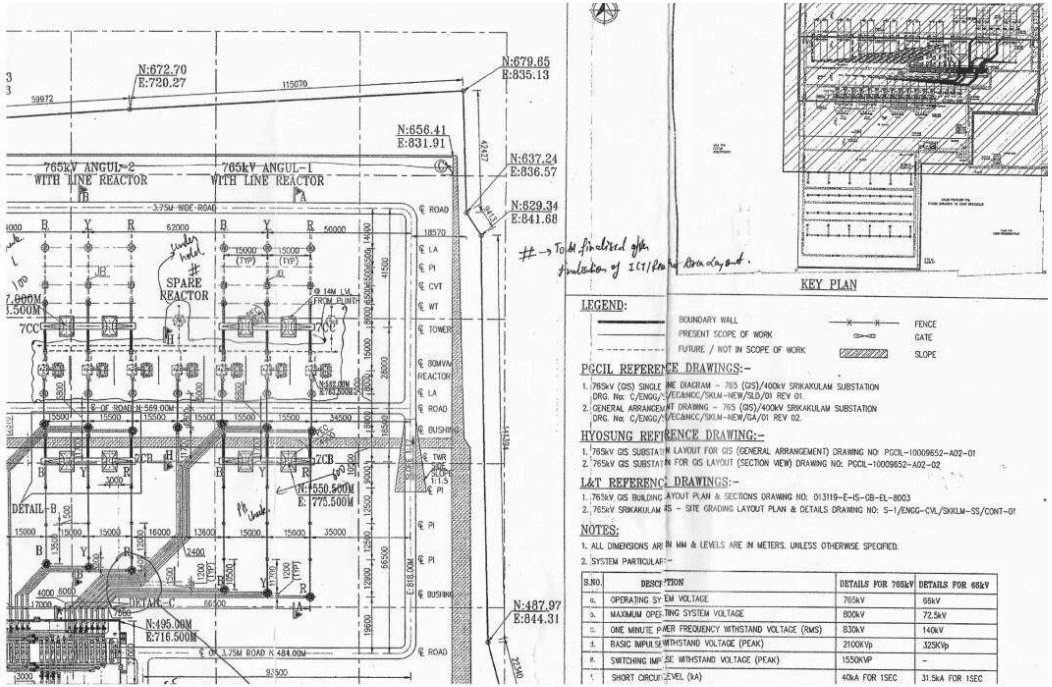


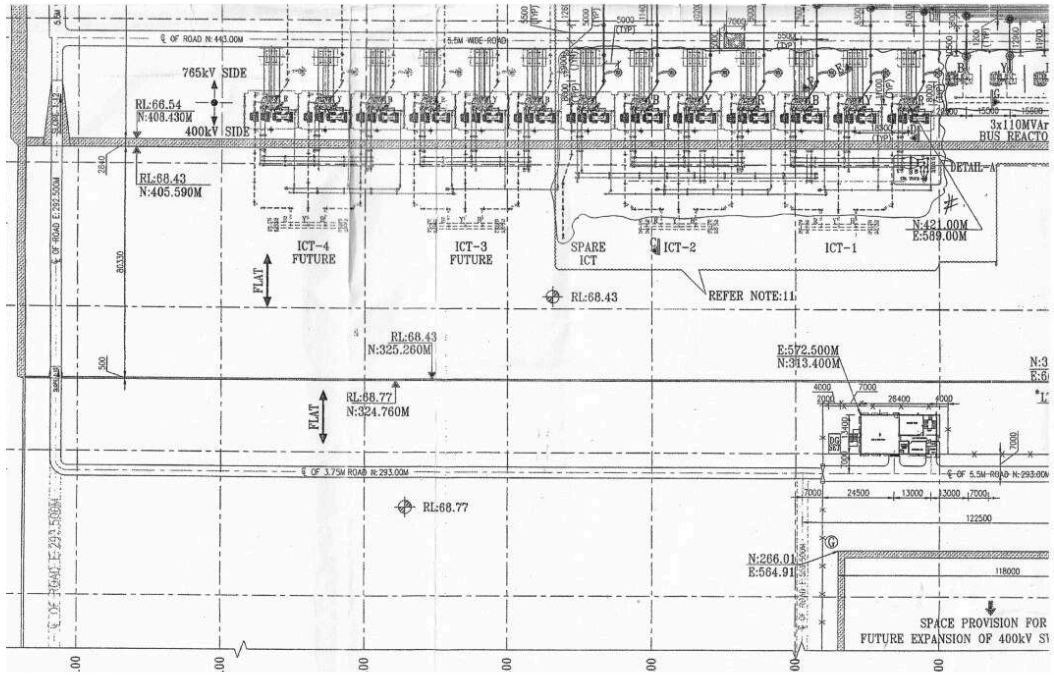
DETAILS FOR ICT BAY

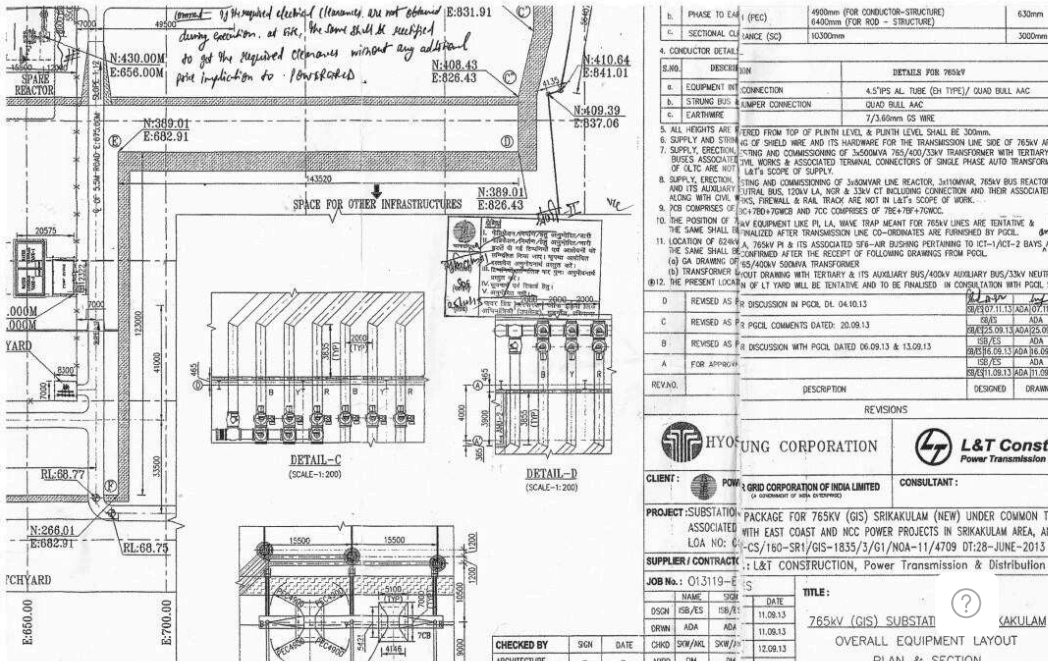
REV.	DESCRIPTION	PREP.	CHKD.	APPD.	DATE
3	FOURTH SUBMISSION	S.D / U.S.	I.S.	P.K.M.	15.04.16
2	THIRD SUBMISSION (As per PGCIL comment on 19.03.15)	S.D / U.S.	I.S.	P.K.M.	22.03.15
1	SECOND SUBMISSION	S.D / U.S.	I.S.	P.K.M.	21.01.15
0	FIRST SUBMISSION	S.D / U.S.	I.S.	P.K.M.	17.01.15

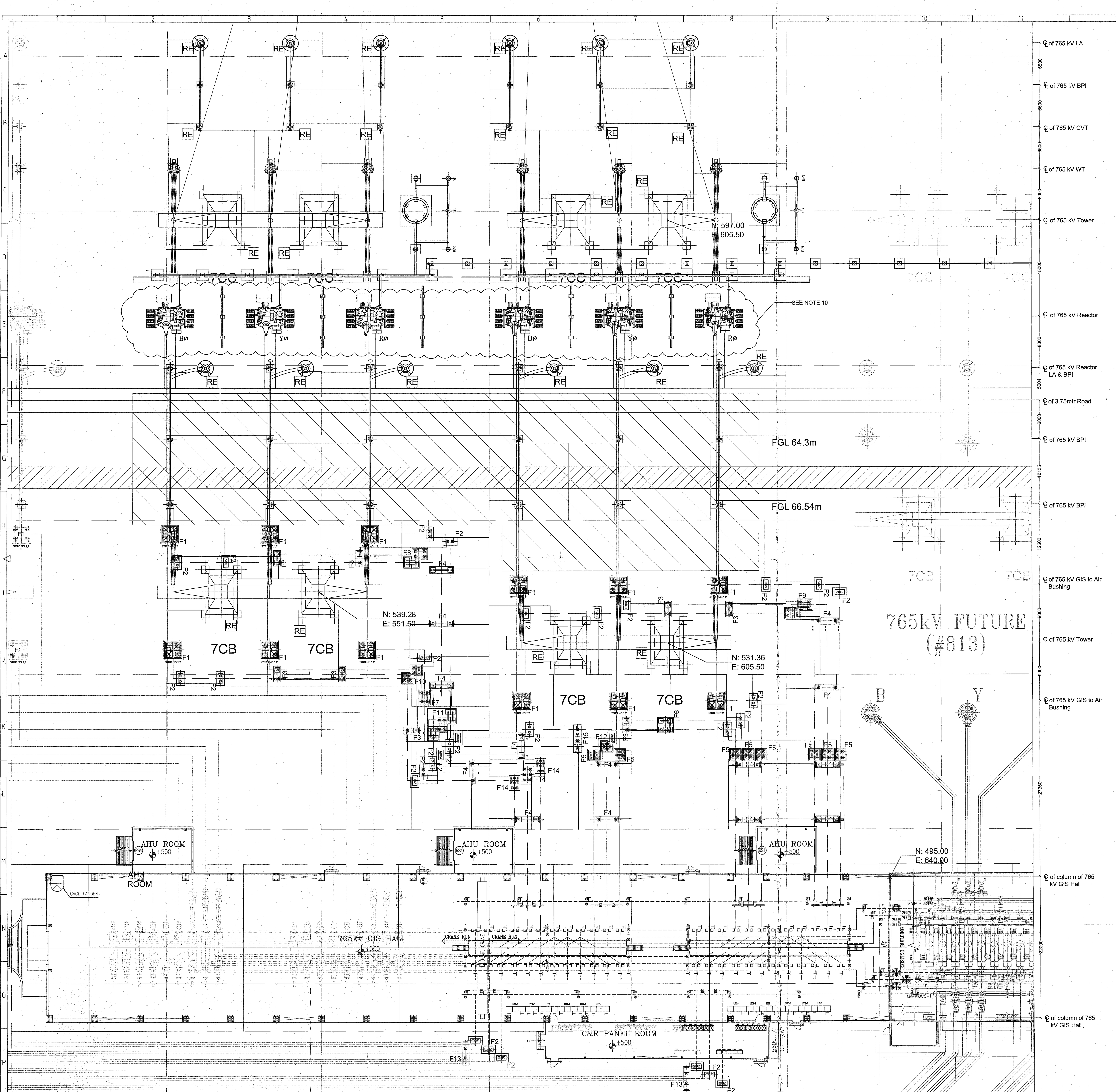
CUSTOMER	Power Grid Corporation of India Limited (A Government of India Enterprises)
CONTRACTOR	New North East Electric Group High Voltage Switchgear Co. Ltd. No.38, Jingxing North Street, Tiexi District, Shenyang, 110025, P.R. CHINA
	EMC Limited Constantia Office Complex, 11, Dr.U.N.Brahmachari Street, 8th Floor (South Block) Kolkata - 700 017.INDIA
	THIS DRAWING IS THE PROPERTY OF M/S EMC LIMITED AND NOT TO BE COPIED OR USED WITHOUT THEIR PRIOR PERMISSION
NOA NO.	SUPPLY: CC-CS/446-SR1/GIS-2338/3/GS/NOA-II/5151. Date: 18.12.2014
	SERVICE: CC-CS/446-SR1/GIS-2338/3/GS/NOA-III/5152. Date: 18.12.2014
PROJECT	765/400kV Vemagiri (GIS) Substation (New) and (ii) 765kV Srikakulam (GIS) Substation Extension under system strengthening in Southern Region for import of power from Eastern Region
SUBSTATION	765/400kV SRIKAKULAM (Extn.) GIS Sub-station
DRG. TITLE	SINGLE LINE DIAGRAM (765 kV)
DRG. NO. :	NHVS-EMC-SRKL-E-LAY-DRG-001 ZF15-800(50-9)5KBJ.449.704
SCALE	N.T.S. JOB NO. SHEET 1 OF 1

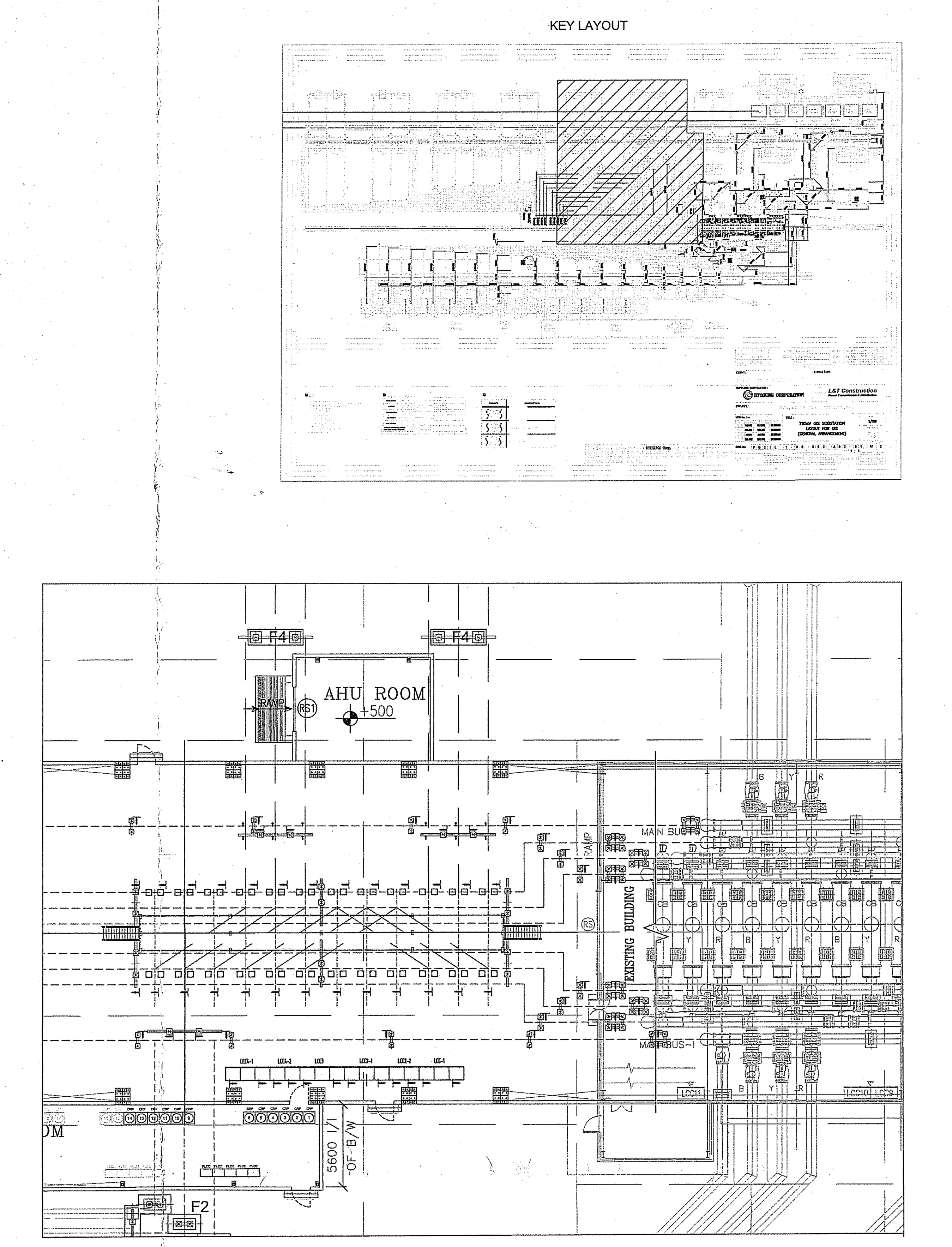












NOTE:

1. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE SPECIFIED.
2. EARTHING CONDUCTORS IN OUTDOOR AREAS SHALL BE BURIED AT LEAST 600 MM BELOW FINISHED GROUND LEVEL UNLESS STATED OTHERWISE.
3. WHEREVER EARTHING CONDUCTOR CROSSES CABLE TRENCHES, UNDERGROUND SERVICE DUCTS, PIPES, TUNNELS, RAILWAY TRACKS ETC., IT SHALL BE LAID MINIMUM 300 MM BELOW THEM AND SHALL BE CIRCUMVENTED IN CASE IT FOULS WITH EQUIPMENT/STRUCTURE FOUNDATIONS.
4. TAP-CONNECTIONS FROM THE EARTHING GRID TO THE EQUIPMENT/STRUCTURE TO BE EARTHED SHALL BE TERMINATED ON THE EARTHING TERMINALS OF THE EQUIPMENT/STRUCTURE AS PER "STANDARD EARTHING DETAILS – DRG NO.C/ENG/STD/EARTHINGS"
5. EARTHING CONDUCTORS OR LEADS ALONG THEIR RUN ON CABLE TRENCH, LADDER, WALLS ETC. SHALL BE SUPPORTED BY SUITABLE WELDING/CLEATING AT INTERVALS OF 750 MM. WHEREVER IT PASSES THROUGH WALLS, FLOORS ETC., GALVANISED IRON SLEEVES SHALL BE PROVIDED FOR THE PASSAGE OF THE CONDUCTOR AND BOTH ENDS OF THE SLEEVE SHALL BE SEALED TO PREVENT THE PASSAGE OF WATER THROUGH THE SLEEVES.
6. EARTHING CONDUCTOR AROUND THE BUILDING SHALL BE BURIED IN EARTH AT A MINIMUM DISTANCE OF 1500 MM FROM THE OUTER BOUNDARY OF THE BUILDING. IN CASE HIGH TEMPERATURE IS ENCOUNTERED AT SOME LOCATION, THE EARTHING CONDUCTOR SHALL BE LAID MINIMUM 1500 MM AWAY FROM SUCH LOCATION.
7. FOR GIS HALL, MAIN EARTHMAT SHALL BE BURIED AT LEAST 1000MM BELOW FINISHED GROUND LEVEL..
8. EARTHING CONDUCTORS CROSSING THE ROAD SHALL BE LAID 300 MM BELOW ROAD OR AT GREATER DEPTH TO SUIT THE SITE CONDITIONS.
9. EARTHING CONDUCTORS EMBEDDED IN THE CONCRETE SHALL HAVE APPROXIMATELY 50 MM CONCRETE COVER.
10. EARTHING OF 765kV REACTORS ARE NOT IN SCOPE OF EMC/NHVS.

CAT-IV

Note

V/C

	I. ~~Approved/Released for Fabrication/ construction~~
	II. Approved/Released for Fabrication/ construction Subject to Incorporation of comments Modification as Noted. Revised Drawing Required.
(Signature)	III. To Be Resubmitted for Approval after Incorporating the Comments.
(Designation) 31.3.16	IV. For information & Record.
	V. ~~Not approved~~
	Power Grid Corporation of India Ltd. Engg. Deptt. (S/S Group) Gurgaon, Haryana

All equipments / structure etc earthing with existing main earthmat shall be done as per Powergrid standard earthing drgs / details mentioned at Note-4 of this drg.

REFERENCE DRAWINGS-

1. **HYOSUNG DRG**- 765 kV GIS SUBSTATION LAYOUT FOR GIS (GA)- PGCIL-10009652-A02-01.
2. **LnT/HYOSUNG DRG**- 765 kV GIS SUBSTATION SRIKAKULAM OVERALL EARTHING LAYOUT- O13119-E-IS-SY-GL-1020.
3. **NHVS/EMC GA DRG** - 765kV SRIKAKULAM EXTN. GIS SUBSTATION, GA & PLAN Rev-02.

SCOPE OF WORK :

——— PRESENT SCOPE

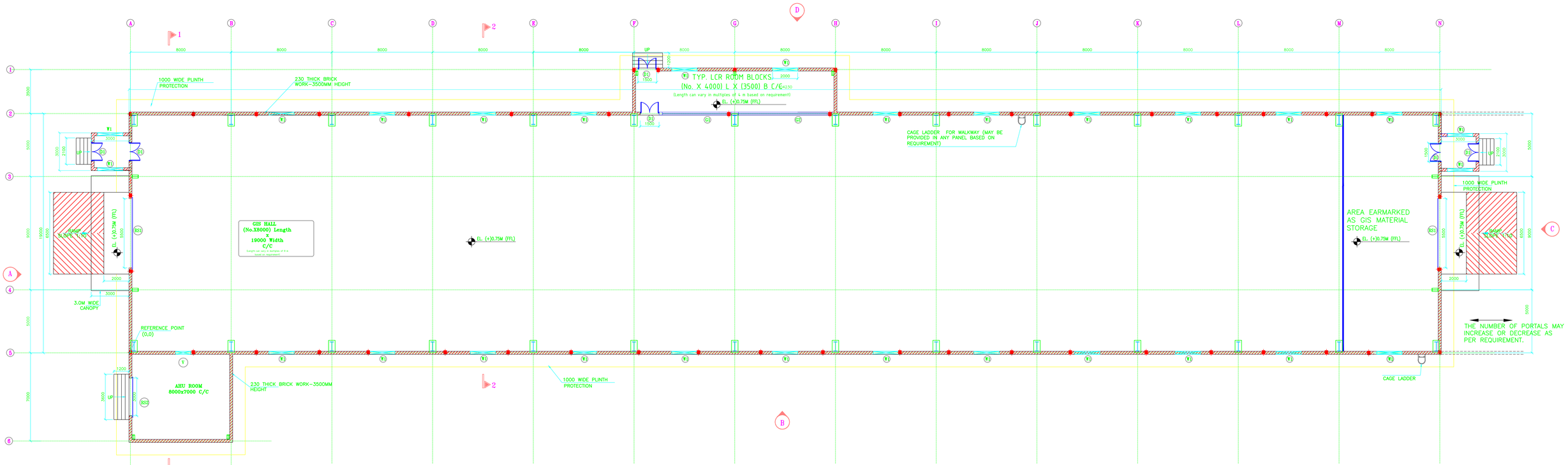
- - - - EXISTING SCOPE

(2) Any additional item / quantity of earthing material required in order to meet actual site requirement shall be supplied / erected by M/s EMC free of cost without any additional cost implication to powergrid.

EMC LIMITED Delhi

CUSTOMER	Power Grid Corporation of India Limited (A Government of India Enterprises)	
CONTRACTOR	NHVS New North East Electric Group High Voltage Switchgear Co. Ltd. No.38, Jingxing North Street, Tiexi District, Shenyang, 110025, P.R. CHINA	
THIS DRAWING IS THE PROPERTY OF M/S EMC LIMITED AND NOT TO BE COPIED OR USED WITHOUT THEIR PRIOR PERMISSION	EMC Limited Constantia Office Complex, 11, Dr.U.N.Brahmachari Street, 8th Floor (South Block) Kolkata - 700 017,INDIA	
NOA NO.	SUPPLY	CC-CS/446-SR1/GIS-2338/3/G5/NOA-II/5151. Date: 18.12.2014
	SERVICE	CC-CS/446-SR1/GIS-2338/3/G5/NOA-III/5152. Date: 18.12.2014
PROJECT	765/400kV Vemagiri (GIS) Substation (New) and (ii) 765kV Srikakulam (GIS) Substation Extension under system strengthening in Southern Region for import of power from Eastern Region	
SUBSTATION	765/400kV SRIKAKULAM (Extn.) GIS Sub-station	
DRG. TITLE	EARTHMAT LAYOUT	
DRG. NO. :	NHVS-EMC-645-SRKL-E-ERT-DRG-002	
SCALE	N.T.S.	JOB NO. 645 SHEET 1 OF 1

REV.	DESCRIPTION	PREP.	CHKD.	APPD.	DATE
0	FIRST SUBMISSION	S.D	I.S.	P.K.M.	09.03.16



FLOOR PLAN

NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED. DO NOT SCALE THE DRAWING.
3. ALL DIMENSIONS SHALL BE CHECKED PRIOR TO EXECUTION OF THE WORK.
4. GIS HALL SHALL BE MADE IN MODULAR SIZE OF 8(L)X19(W) METER. THE NUMBER OF PORTALS MAY INCREASE OR DECREASE AS PER REQUIREMENT.
5. LCR ROOM TO BE MADE IN MODULAR SIZE OF 4(L)x3.5(W) METER AND SHALL BE PLACED SUITABLY AS PER REQUIREMENT OF LAYOUT(PREFERABLY AT CENTER OF GIS HALL). IF LENGTH IS TO BE INCREASED COLUMNS SHALL BE ADDED AT DISTANCE OF 3.0M EACH.
6. AHU ROOM TO BE MADE IN BLOCK SIZE OF 8(L)X7(W) METER AND SHALL BE PLACED AT CORNER OF GIS HALL. INCASE MORE THAN ONE AHU ROOM ARE REQUIRED SAME SHALL BE PLACED ON SAME SIDE OF GIS HALL.
7. CLEAR INTERNAL HEIGHT OF THE BUILDING FROM FFL SHALL BE 16.5 METER
8. NO CROSS BRACING SHALL BE PROVIDED BETWEEN HEIGHT OF 2.5 METER TO 7 MTR HEIGHT FROM FFL.
9. REFERENCE COORDINATE (0,0) MARKED IN THIS DRAWING. THIS SHALL USED TO FREEZE THE REFERENCE POINT OF GIS EQUIPMENT.
10. BUILDING PLINTH SHALL BE MINIMUM 750MM ABOVE FINISHED GROUND LEVEL.
11. FOR LOCATION AND SIZE OF COLUMNS AND PEDESTALS, REFER STRUCTURAL DRAWING.
12. FOR FINISHING SCHEDULE, DOOR, WINDOW AND VENTILATOR DETAILS SHALL BE SUBMITTED SEPARATELY
13. ALL EXTERIOR AND INTERIOR WALLS WILL BE OF 230MM THICK BRICK MASONRY
14. ALL THE BRICK WORK SHALL BE DONE IN BRICK MASONRY WITH 1:6 CM.
15. ALL DRAWING SHALL BE COORDINATED WITH OTHER RELATED DRAWINGS OF STRUCTURAL, HVAC, FIRE FIGHTING AND ELECTRICAL ETC.
16. BRACED BAY & WALL LIGHTS SHOWN IN THIS DRAWING ARE TENTATIVE ONLY. FOR DETAILS REFER STRUCTURAL DRAWING.
17. ROLLING SHUTTER RS1 CAN BE PLACED IN GRIDS 2-3,3-4,4-5,A-B ON EITHER SIDE AS DECIDED DURING DETAILED ENGINEERING. THE LOCATION OF DOORS/WINDOWS SHALL BE INTERCHANGED ACCORDINGLY.
18. AHU ROOM SHALL NOT BE CONSTRUCTED IF IT IS NOT IN THE BPS.
19. EOT CRANE HOOK BLIND ZONE ALONG CROSS TRAVEL SHALL NOT BE MORE THAN 1200 MM.
20. DUCT SEALING ARRANGEMENT SHALL BE PROVIDED BY THE PEB VENDOR
21. THIS DRAWING SHOWS MODULAR ARRANGEMENT OF GIS HALL AND LCR ROOM. IF LENGTH IS INCREASED IN THESE AREAS THEN THE WINDOWS/VENTILATORS/SKYLIGHTS SHALL BE ADDED IN THE SAME PATTERN AS SHOWN IN THE DRAWING.
22. CAGE LADDER LOCATION SHOWN HERE IS TENTATIVE. THE SAME SHALL BE FINALIZED IN THE STRUCTURAL DRAWING BASED ON OPERATIONAL REQUIREMENT.
23. GIS STORE:
    AREA FOR GIS STORE SHALL BE PROVIDED AT THE END OF THE GIS HALL AS SHOWN. THE AREA DESIGNATED FOR THE STORE SHALL BE SAME AS SHOWN IN THE DRAWING I.E. 8MX19M. CRANE FROM THE GIS HALL SHALL RUN INTO THE GIS STORE AREA ALSO.

LEGEND:-

FFL	– FINISHED FLOOR LEVEL
FGL	– FINISHED GROUND LEVEL
TYP	– TYPICAL
FC	– FALSE CEILING
G	– GLAZED PARTITION
W	– WINDOW
V	– VENTILATOR
D	– DOOR
RS	– ROLLING SHUTTER
	– 230MM THK. BLOCK WALL

RELEASED FOR CONSTRUCTION

No.	Rev. No.	Date	Remarks
1.	R0	21.02.2025	--

पावरग्रिड POWERGRID

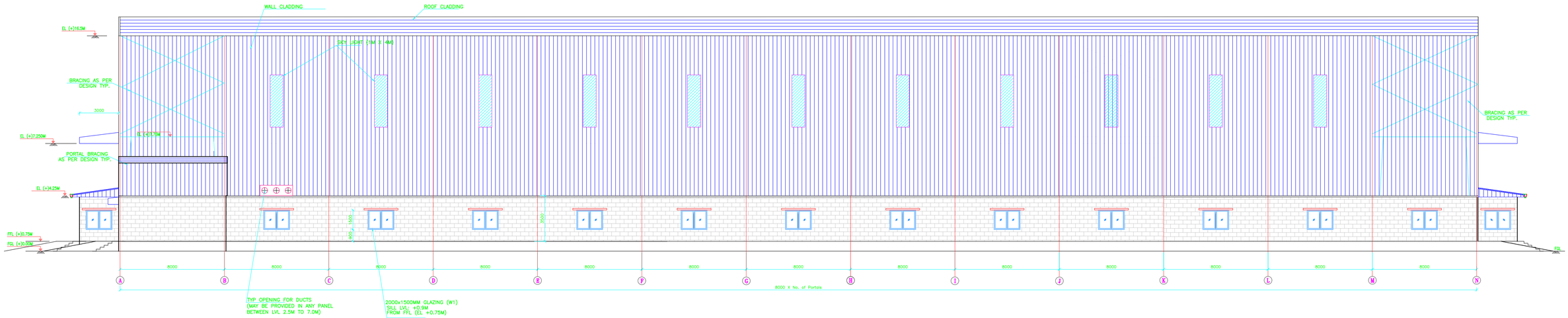
PROJECT:-
SUB-STATION PACKAGE
765/400 kV

TITLE :
STANDARD 765 kV GIS BUILDING ARCHITECTURAL DRAWING (PLAN)

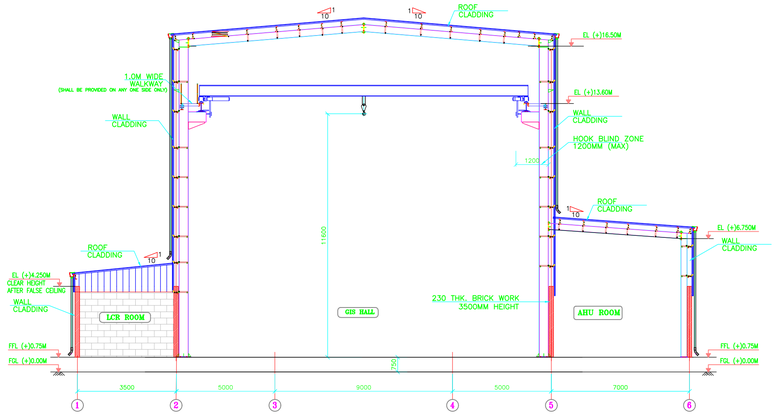
DRAWING No.-
C/ENGG/CIVIL/765KV/GIS/ARCH/DRW/01

PREP.	REVD.	REVD. (ELEC.)	REVD.	APPD.	DATE

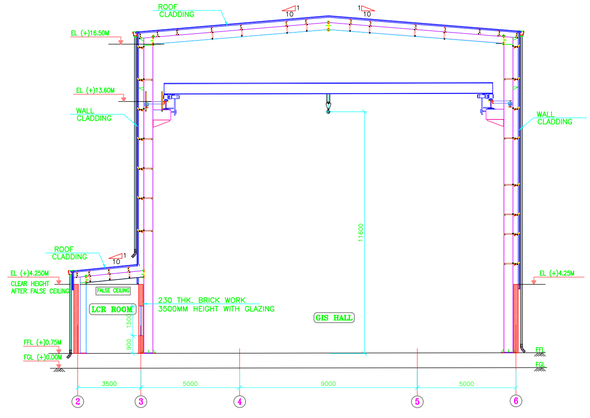
SCALE	Sheet	REVISION
N.T.S.	1 OF 3	0



ELEVATION -B



SECTION 1-1



SECTION 2-2

RELEASED FOR CONSTRUCTION

No.	Rev. No.	Date	Remarks
1.	R0	21.02.2025	--

पावरग्रिड POWERGRID

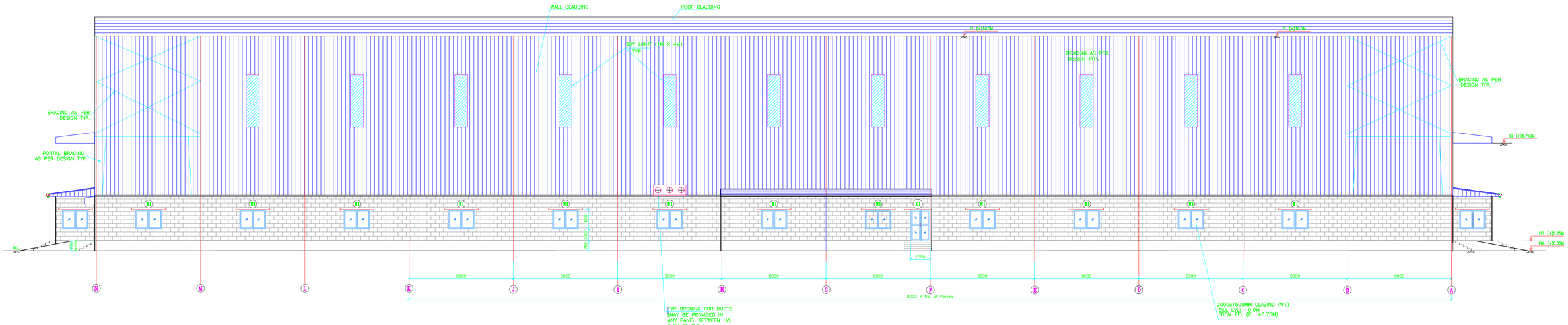
PROJECT:-
SUB-STATION PACKAGE
765/400 kV

TITLE :
STANDARD 765 kV GIS BUILDING ARCHITECTURAL DRAWING (ELEVATION & SECTIONS)

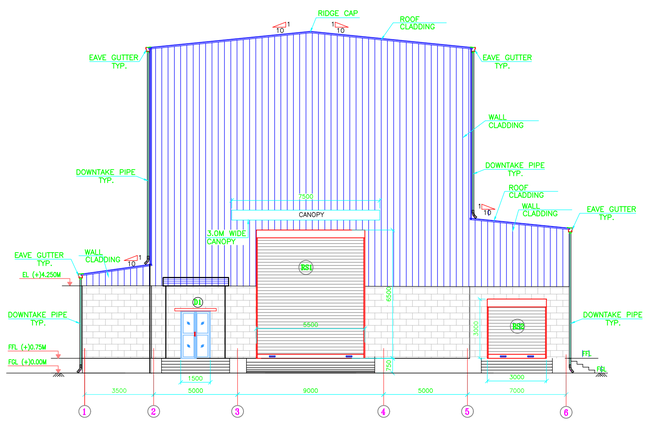
DRAWING No.-
C/ENGG/CIVIL/765KV/GIS/ARCH/DRW/01

PREP.	REVD.	REVD. (ELEC.)	REVD.	APPD.	DATE

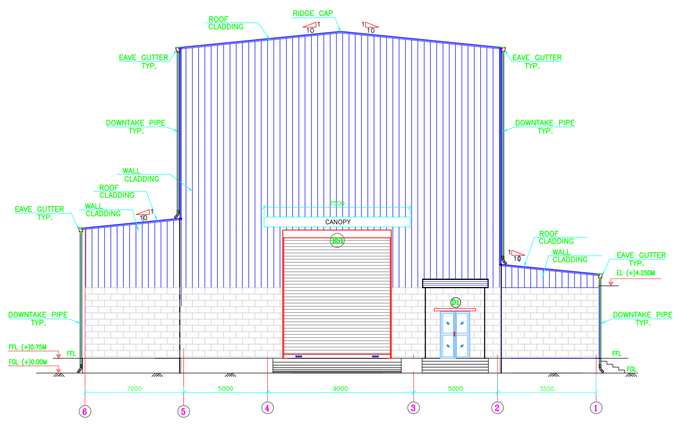
SCALE	Sheet	REVISION
N.T.S.	1 OF 3	0



ELEVATION -D



ELEVATION -A



ELEVATION -C

RELEASED FOR CONSTRUCTION

No.	Rev. No.	Date	Remarks
1.	R0	21.02.2025	--

पावरग्रिड
POWERGRID

PROJECT:-
SUB-STATION PACKAGE
765/400 kV

TITLE :
STANDARD 765 kV GIS BUILDING ARCHITECTURAL DRAWING (ELEVATION & SECTIONS)

DRAWING No.-
C/ENGG/CIVIL/765KV/GIS/ARCH/DRW/01

PREP.	REVD.	REVD. (ELEC.)	REVD.	APPD.	DATE

SCALE	Sheet	REVISION
N.T.S.	1 OF 3	0

Clarification-I (TECHNICAL)

Clarification-1 (Technical queries) to the bidding document for Pre-Bid Tie up for 765kV GIS Substation Package SS 147T for a) Establishment of 765kV GIS at 765/400kV Pendurthi (Vizag) GIS substation; and b) Extension works at 765kV Srikakulam GIS substation associated with "Transmission system for proposed Green Hydrogen / Green Ammonia projects in Vizag area, Andhra Pradesh (Phase-I)" through Tariff Based Competitive Bidding (TBCB) Route prior to RfP bid submission by POWERGRID to BPC; Specification No.: CC/T/W-GIS/DOM/A06/25/13593

S.No.	Document Volume / Section & Page no.	Reference Clause	Query Description	POWERGRID's Reply
	765/400 kV Pendurthi (Vizag) GIS substation.			
1	General	Plot dimensions	Please provide the length & width [Land allocated] for the proposed 765/400 kV Pendurthi (Vizag) GIS substation	Requisite details shall be shared during detailed engineering to successful bidder. Bidder may quote as per BPS
2	Section Project SS147T Rev00_Revised Cl No. 2.2.1.1, B	"800 kVA, 33/0.433kV LT Transformer (2nd) and associated 33kV class Isolator, HG fuse, Surge Arrestor, Bus Post Insulator, conductor, clamps, connectors, structures etc. complete in all respect for connection with DISCOM Power supply."	Kindly confirm the location of DISCOM Power supply and its associated bay inside Substation.	Location of DISCOM Power supply shall be shared during detailed engineering to successful bidder. Further, Layout of 765/400 kV Pendurthi (Vizag) SS is in bidder's scope and shall be finalized during detailed engineering based on best engineering practices, meeting the requirements of Technical Specifications & orientation of line corridors. Bidder may quote as per BPS
3	Section Project SS147T Rev00_Revised	"(AC/DC Distribution boards) considering all present and future 765kV, 400kV & 220kV bays/ ICTs/Reactors as per clause no 2.1 above is under present scope."	As per clause 2.1, future 220kV bay details are not present. Kindly provide us with the required details to consider AC/DC DBs accordingly	Future provision requirement is specified at clause 2.1 (A) of Section- Project. Bidder to quote as per provision of bidding documents
4	Section Project SS147T Rev00_Revised Cl No. 2.2.1.1.r.	"Visual monitoring system for watch and ward of substation premises as per technical specifications. Further, in addition to the gates of the switchyard, the cameras shall also be located around the boundaries of entire S/s plot at suitable locations."	With reference to respective clause, please provide the criteria/philosophy for estimation of quantity of camera units at substation plot boundaries.	Bidder to quote as per provision of bidding documents
5	Section Project SS147T Rev00_Revised	Lightning protection	We understand that bidder scope of lightning protection will be limited to present scope bays only. Please confirm.	Confirmed
6	Section Project SS147T Rev00_Revised	"LED based Lighting and illumination system for the switchyard area under present scope, Streets, Control Room cum Administrative Building, GIS Building (including associated Relay Panel Rooms & AHU Rooms), Fire Fighting Pump House, DG Set area, LT station area, Security hut and Labour Hut etc."	Kindly confirm whether street lighting is to be provided for the entire substation or limited only to the 765 kV switchyard area.	Street lighting of roads being developed under present scope is envisaged under present scope
7	General	Soil test	Please provide the soil resistivity report for calculation and estimation of earthing materials for our reference. We have not considered stone spreading in future bay area. Kindly confirm our understanding.	Soil Investigation including soil resistivity testing is in the scope of Bidder. For Main Earthmat quantity, bidder may quote as per BPS, for estimation of riser bidder may refer Clause 1.15 of FAQ attached with Annexure- III (SPECIFIC REQUIREMENT Rev 10) Gravel spreading for future area is not envisaged under present scope
	Extension of 765kV Srikakulam GIS Substation			
8	Section Project, 2.2.2.1 B h)	As per referred clause, it is mentioned as "The Main Earthmat in some parts of the present scope for 765kV switchyard area is already existing. The existing main earthmat shall be extended for the balance portion of switchyard area under the present scope, as per requirement. "	In this regard, please provide Earthing conductor size and material of existing earthing conductor.	Bidder to quote as per BPS
9	Existing details	Inputs for Bay extension work	Please provide the following input for 765KV GIS bay extension work at existing stations: a) Protection SLD b) Existing substation Earthing layout c) Existing control building layout d) Existing Lightning Protection (DSLP) Layout for both outdoor and buildings e) Existing Outdoor Illumination Layout f) Existing Visual monitoring system (VMS) layout- outdoor g) Existing AC and DC single line diagram h) Existing substation switchyard equipment layout plan and section i) Existing single line diagram of substation	Refer Amendment-IV. Additional details as available shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy. Contact person details for site visit are as below: Manager (Engg), SR-1 (C.No. 9177636766)
10	Existing details	Inputs for Bay extension work	Please provide the following input from extension work at existing stations: a) 765kV GIS Hall layout- Existing GIS Building Plan and section view along with GIS make details b) What is the free space available inside the GIS Hall. Please specify the length & width available for bay extension. c) Availability of interface/extension module in the existing 765kV GIS. d) Make & Model number of existing GIS e) Existing EOT crane capacity and Hook height	No GIS extension work inside GIS Hall at 765kV Srikakulam SS is envisaged under present scope. Bidder to quote as per provision of bidding documents
11	Section Project, 2.2.1.1 B c)	"CB relay Panels for 02 nos. 765kV line bays and 2 Nos Switchable line Reactor bays will be existing & placed inside the existing Local relay panel room of 765kV GIS building"	Please provide the existing control panel schematic drawing for working.	Requisite details shall be shared during detailed engineering to successful bidder.

12	Existing details	AC/DC feeders	We understand that spare feeders with sufficient ratings are already available at existing AC and DC distribution boards for present scope of works. Bidder scope is limited to supply of cables to present bays from existing feeder modules. Please confirm.	Confirmed
13	Existing details	DSLP	Please confirm whether existing switchyard has any Lightning Mast (LM) Nearby the proposed bay 765KV outdoor area a) Please specify the distance at which the LM is available b) Please specify the height of LM	Requisite details shall be shared during detailed engineering to successful bidder. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
14	Existing details	Existing VMS details	Kindly confirm whether VMS is present for existing bays.	VMS for bays under present scope shall be provided under present scope. Refer, Amendment-IV
15	Existing details	Indoor Cable trench	Kindly confirm whether cable trench in 765kV GIS building is available for existing bays.	Confirmed
16	Existing details	Outdoor Cable trench	Please confirm whether space is available in the existing trench for present scope bays or we have to create new trench upto existing CRB from present scope bays LT cablings.	Confirmed. However, if required new cable trench shall be constructed and same shall be paid under relevant BPS item
17	General	Dismantling works	We do not envisage dismantling of any existing equipments /structures/ buildings under present scope. Encumbrance free land for bay extension shall be provided by PGCIL to the Bidder. Please confirm.	Reasonably Encumbrance free land will be provided to successful Bidder.
18	Section Project, 2.2.1.1 B e)	“Necessary configuration of data at Gateway for remote operation from NTAMC, Backup NTAMC, RTAMC & supervision from RLDC/ Backup RLDC is included in present scope.”	As per referred clause, we understand that only configuration of data at existing Gateway for remote operations shall be under present scope of work. We are not considering any station level substation automation equipments and gateway in our scope. Please confirm	Refer clause No. 2.2.1.B d) of Section- Project
19	Section Project, 2.2.1.1 B c)	“Any modification required in the existing protection scheme is included in the present scope"	Based on the referred clause, please provide the existing bus bar architecture drawings for better understanding of scope.	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
CIVIL QUERIES				
	765/400 kV Pendurthi (Vizag) GIS substation.			
20	Tender Specification : Volume II, Section project - Scope of work,	2.2.1.3 Civil works	Please provide the following details for the proposed area. 1. Soil investigation report (if available) 2. Contour layout showing existing ground level (if available) 3. HFL Data (in order to finalize the FGL) 4. Site global co-ordinates for the proposed plot in order to estimate the quantum of work.	1. Soil Inestigation is in the scope of the Bidder. 2.Site levelling including Contouring is in bidder scope. 3.HFL data duly verified by POWERGRID Site is required to be arranged by contractor during detailed engineering. 4. Shall be provided to successful bidder during detailed engineering. Bidder may quote as per BPS
21	Tender Specification : Volume II, Section project - Scope of work,	2.2.1.3 Civil works 6.v BPS Schedule-3, Item No:167	In section project, it was mentioned that RCC retaining wall shall be constructed if required. But in BPS, it was mentioned as random rubble masonry to be provided. Please confirm whether to provide RRM retaining wall as per BPS or RCC retaining wall as per Section project.	Requirement & Details of retaining wall shall be decided during detail engineering
	Extension of 765kV Srikakulam GIS Substation			
22	Tender Specification : Volume II, Section project - Scope of work,	2.2.1.3 Civil works	Please provide the following details for the proposed bay extension area. 1. Soil investigation report (if available) 2. Contour layout showing existing ground level (if available) 3. HFL Data (in order to finalize the FGL) 4. Site global co-ordinates for the proposed plot in order to estimate the quantum of work.	1. Soil investigation shall be shared with the succesful bidder during detailed engineering. 2.Site levelling including Contouring is in bidder scope. 3.HFL data duly verified by POWERGRID Site is required to be arranged by contractor during detailed engineering. 4. Coordinates of Srikakulam SS: 18°48'26.16"N, 84°27'9.01"E

23	Tender Specification : Volume II, Section project - Scope of work,	2.2.1.3 Civil works	Please Provide the following details for the proposed bay extension area. 1. Existing cable trench layout 2. Existing drain & road layout 3. Existing site grading & gravel spreading layout 4. Existing building layout. In order to estimate the quantum of work.	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
24	Tender Specification : Volume II, Section project - Scope of work,	2.2.1.3 Civil works 6.v BPS Schedule-3, Item No:258	In section project, it was mentioned that RCC retaining wall shall be constructed if required. But in BPS, it was mentioned as random rubble masonry to be provided. Please confirm whether to provide RRM retaining wall as per BPS or RCC retaining wall as per Section project.	Requirement & Details of retaining wall shall be decided during detail engineering
MECHANICAL QUERIES				
	Extension of 765kV Srikakulam GIS Substation			
25	General		Please provide the tapping point location for fire hydrant system and diameter of the pipe at tapping location.(Near to present scope)	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
26	General		Please provide existing fire fighting pump capacity details (Main pump, Jockey pump).	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
27	General		Please provide the details of available spare zones in existing FDA panel and details of existing FDA system.	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy. Further, refer Amendment-IV
28	General		Please provide the Flow and pressure details at tapping point.	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
29	General		Please provide the details of available spare Annunciation windows at FFPH and Control room building.	Requisite details shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy. Further, refer Amendment-IV
Electrical				
1) Establishment of 765kV GIS Pendurathi (Vizag)				
30	General	Plot Plan	Please sharer the plot Plan, cordinates including line gantry cordinates.	Location/coordinates of identified land/Plot plan of proposed new substation shall be shared during detailed engineering to successful bidder.
31	General	DG Shade	We understand that DG Set will be provided with standard encloser saparate DG Shade is not required - Please confirm	Confirmed
32	General	integration of PMU	We understand, integration of PMU with Phasor data Concentrator (PDC) at RLDC/SLDC is excluded from bidder scope. Please confirm.	The Scope of Contractor is limited upto Substation Only. However, necessary support shall be provided by Contractor for integration at Control Centre end from Substation. Refer TS Clause 1.1 (b). Separate line item is identified in TS for this integration works. Bidder to Comply TS.
33	General	Cables	All Cables from Trafo/Reactor to CMB is in supplier scope only. Kindly confirm	Cables from Transformer/Reactor to CMB is not envisaged under present scope
34	Section Project	Clause2.21.1 B r)- Visual monitoring system - Further, in addition to the gates of the switchyard, the cameras shall also be located around the boundaries of entire S/s plot at suitable locations.	We understand that in this clause, we have to provide the Bullet cameras on all the gates of boundary wall, Please confirm.	Confirmed

35	Section Project	Clause 9.8 -End Piece (Interface) module as defined in Annexure-S11 of Specific Requirements, Rev-10 (attached at Annexure-III) under sl. no. (i) GIS Bus bar module for 765kV GIS, shall be provided on one side of busbar module.	We Understand only one side interface module need to consider in GIS Extension for Bus Bar, Auxiliary bus for Spare Ict and Spare Reactor, Please confirm.	Refer Amendment-II
36	General	STATCOM work/Feeders	we are not considering any work for statcom bay in presect scope of work as LT AC /DC loading, FFPH, any other civil and electrical work, Kindly confirm.	AC/DC feeders for 400kV STATCOM bay (excluding STATCOM station) are under present scope Capacity of FFPH shall include the requirement for STATCOM station also. Further, the FACP located FFPH as per TS shall include relay & windows for Coupling transformers also
2) Extension works at 765kV Srikakulam GIS				
37	General	Layout and other drawings	Please Share the Existing OGA, SBC, ERT report, Indoor/Outdoor cable trench, Earthmat layout, VMS layout, HVWS Piping layout, etc. Drawings.	Refer Amendment-IV. Additional details as available shall be provided to successful bidder during detailed engineering. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and topography, infrastructure and also the design philosophy. Contact person details for site visit are as below: Manager (Engg), SR-1 (C.No. 9177636766)
38	General	Layout & Drawing/Document	We understand that existing VMS is suitable to cater the augumentation of new cameras.	Confirmed
39	Section Project	Augmentation of Visual Monitoring System (VMS)	As PTZ cameras quantity not confirmed in Section project/BOQ, we are considering 2 nos PTZ cameras here, and not considering any Bullet camera, Please confirm	Refer, Amendment-IV
40	Section Project	Section Project	As Line/Reactor bays supply and construction under separate scheme, hence any earthing/ other work in side the GIS building related to GIS bays erection commissioning not covered in present scope of work, Please confirm.	Confirmed
41	General	Cable Pull pit, Cable trays & covers, Junction box, buried cable trenches etc. as required	We understand that existing main cable trench to control room building has adequate space in cable support arrangement to accommodate the cabling requirement for present scope bays. Please confirm our understanding.	Confirmed. However, if required new cable trench shall be constructed, bidder to quote as per BPS
42	Section Project	Section Project	We are not considering any Extension module for main Bus, Please confirm	Confirmed
Civil				
A) Establishment of 765kV GIS at 765/400kV Pendurthi				
43	General	Land Acquisition for Proposed 765/400kV Pendurthi Substation	It is understood that the proposed land is already occupied by the client and encumbrance free land will be provided to the bidder. Please confirm.	Reasonably Encumbrance free land will be provided to successful Bidder
44	General	Land Coordinates for Proposed 765/400kV Pendurthi Substation	Request you to share the coordinates (4 corners) of the proposed land for construction of substation to enable assessment of site accessibility and logistics prior to bidding.	Location/coordinates of identified land/Plot plan of proposed new substation shall be shared during detailed engineering to successful bidder
45	General	Land Development for Proposed 765/400kV Pendurthi Substation	Request you to share the contour (if available) of the proposed land along with the FGL to be considered for computing land development works. Also, request you to provide (if available) the geotechnical investigation report to understand the soil strata of the proposed land.	Soil Investigation & Site levelling including contouring is in the scope of Bidder.
46	General	FFL, plinth & road levels	Please provide FFL, plinth & road levels for our design engineering works.	Bidder may quote as per provisions of bidding document.
47	General	Cutting of Trees in the proposed Pendurthi Sub Stations	It is understood that that the proposed land for sub stations does not consist of any trees. If the land consists of trees which are to be cut down, the required approvals/permissions and associated charges related will be borne by the client. Please confirm.	Refer cl 20.4 of TS, Section: Civil Works, Rev 12

48	Section Project and Price Schedule (Sch -3)	Approach Road	Based on the Scope of Work and the BoQ, we understand that the approach road is not included in the bidder's scope. If construction of the approach road required for project execution, payment for the same will be made as per the applicable unit rate of the corresponding BPS item. Please Confirm	Approach road is in bidder;s scope. Payment shall be made for the same as per corresponding BPS item.
49	General	Reference Standard Civil & Structure drawings for Tower/Gantry/LM/Equipments/Monopole LCLM	Request you to kindly share the standard civil & structure drawings for Tower/Gantry/LM/Equipments/Monopole LCLM for our reference and better understanding.	Standard drawings form part of the tender documents. In addition, drawings within Powergrid's scope shall be provided to the successful bidder during the detailed engineering stage. Furthermore, all designs and drawings falling under the bidder's scope shall be submitted to Powergrid for approval during detailed engineering. Bidder may quote as per Bidding documents
50	Section Project and Price Schedule (Sch -3)	Clause 2.2.1.3 - (7) -(vii) ; Sno 159,160, 161, 162, and 163.	Please confirm the required slope to be provided in the cable trenches to ensure effective drainage. Moreover, if a precast trench system is proposed, kindly clarify whether the precast elements should be installed on a sloped PCC bedding or if the trench section height will be varied and the slope will be achieved through screeding.	Minimum slope of 1:1000 shall be provided as mentioned in Tender drawing for Cable trench. Design & drawing for Precast RCC type cable trench is in scope of bidder. The cable trench drawing attached in the tender documents shall be referred for trench width, depth and tray arrangement (number, pattern and angle section for trays) only
51	General	Drainage Requirement	Request you to kindly provide historical rainfall data and flood data for any drainage requirement (if) outside substation boundary. Also, Please confirm the outfall point where the storm water drain would be connected.	Rainfall/flood data to be arranged by the bidder.The outfall point where the storm water drain would be connected will be confirmed during detailed engineering.
52	General	Civil Drawings	Kindly share the standard civil drawings of Control Room Building (CRB), Porta Cabin, PEB-765kV GIS Building, PEB-765kV GIS - AHU, PEB-765kV GIS - Panel Room, Rail cumRoad, Septic Tank and Soak Pit for CRB, Septic Tank and Soak Pit Security Room, Septic Tank and Soak Pit Labour Hut, Retaining Wall and Precast Firewall for our understanding and estimation purpose.	Standard drawings form part of the tender documents. In addition, drawings within Powergrid's scope shall be provided to the successful bidder during the detailed engineering stage. Furthermore, all designs and drawings falling under the bidder's scope shall be submitted to Powergrid for approval during detailed engineering. Bidder may quote as per Bidding documents
53	General	Dismantling & Demolishing works	We do not envisage any dismantling or demolition works at the new Pendurthi substation. If any such work required, we request you to kindly provide a revised BOQ including the additional items related to this scope, along with details of the disposal point.	Bidder may quote as per provisions of bidding document.
B) Extension of 765kV Srikakulam GIS Bay				
54	General		Please furnish the following details for the Existing Substation:- 1. FGL of the proposed substation. 2. Soil investigation report. 3. High Flood Level. 4. Contour map. 5. Electrical Layout 6. Coordinates 7. Soil Bearing Capacity	1: FGL shall be proposed by vendor for approval of POWERGRID based on the approved contour level drawing and site verified HFL data. 2:& 7. Soil investigation shall be shared with the succesful bidder during detailed engineering. 3: HFL data duly verified by POWERGRID Site is required to be arranged by contractor during detailed engineering. 4: Site levelling including Contouring is in bidder scope. 5 . Refer Amendment-IV for Existing GA. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and topography, infrastructure and also the design philosophy. 6. Coordinates of Existing Srikakulam SS: 18°48'26.16"N, 84°27'9.01"E
55	General	Cutting of Trees in the exisitng Srikakulam Sub Stations	It is understood that that the existing land for sub stations does not consist of any trees. If the land consists of trees which are to be cut down, the required approvals/permissions and associated charges related will be borne by the client. Please confirm.	Refer cl 20.4 of TS, Section: Civil Works, Rev 12
56	General	Drainage Requirement	Please confirm whether the newly constructed drains will be connected to the existing drainage system and that no new outfall point is proposed under the scope of work.	Drainage sytem shall be finalised during detailed engineering. Bidder may quote as per provisions of bidding document.
57	General	GIS Building	Please confirm whether new GIS Building is to be constructed or extension/modification of exisiting building is to be done. If modification/extension is to be done then, please share the civil drawings of exisiting GIS Building. Also, Please confirm whether the EOT crane needs to be extended or new EOT crane to be installed.	Extension/modification of Existing GIS Building & New GIS Building is not envisaged under present scope. Bidder to quote as per provision of Bidding documents
58	Price_Schedule (Sch-3)	Clause 2.2.2.3 -5 - (iii) ; Sr no 250,251,252, and 253	Please confirm & clarify the following: 1) Whether all the sections would be cast in situ type or precast type? 2) Longitudinal slope of 1:1000 shall be maintained in the trenches. Please suggest if pre cast trench is adopted then whether precast trench will be laid in sloped PCC bed or whether section height will be increased and slope will be maintained by screeding.	1) Section 1-1 would be cast in situ type only. Other sections may be cast in situ or precast. 2) Design & drawing for Precast RCC type cable trench is in scope of bidder. The cable trench drawing attached in the tender documents shall be referred for trench width, depth and tray arrangement (number, pattern and angle section for trays) only

59	General	Exisitng Civil & Structure drawings for Tower/Gantry/LM/Equipments.	Request you to kindly share the exisitng civil & structure drawings for Tower/Gantry/LM/Equipments for our reference and better understanding.	Existing drawings shall be shared during detailed engineering. Bidder may quote as per provisions of bidding document.
60	General	Civil Drawings	Kindly share the standard civil drawings of Precast Firewall and Rail cum Road for our understanding and estimation purpose.	Standard drawings form part of the tender documents. In addition, drawings within Powergrid's scope shall be provided to the successful bidder during the detailed engineering stage. Furthermore, all designs and drawings falling under the bidder's scope shall be submitted to Powergrid for approval during detailed engineering. Bidder may quote as per Bidding documents
61	Price Schedule (Sch - 3)	Soil Investigation	As per our previous bidding experience with PGCIL and the Technical Specifications for Civil Works, two bore-log tests are generally conducted for soil investigation in extension substation project. We understand that the same scope shall be applicable for the Extension of Srikakulam Substation as well. Kindly confirm our understanding.	Soil Investigation is not required. Soil investigation report shall be shared with the succesful bidder during detailed engineering.
62	Price Schedule (Sch - 3)	Sr no 257 (Dismantling Work)	Kindly confirm that the scope includes only the dismantling of the RCC foundation. Any dismantling work beyond this will not be considered by us. Furthermore, please provide the designated disposal location for the dismantled debris.	Bidder may quote as per provisions of bidding document. The location for disposal of unserviceble material shall be informed to the succesful bidder during execution stage. Bidder to quote as per provisions of contract document.
63	General	Transit Camp	Transit Camp is not envisaged neither in Srikakulam extension sub station. Please confirm.	Confirmed
Common				
64	Price Schedule (Sch - 3)	Sr no 112 and 224	It is understood that if blasting is required for hard rock areas then, the required approvals/permissions and the associated official charges will be borne by the Clauseient. If the charges are to be borne by the bidder then the said charges will be reimbursed on submission of proofs for the same. Please confirm.	The required permissions/licenses etc. for such operations shall be obtained by the bidder. The charges for such permissions shall also be borne by the bidder. No reimbursement on such account shall be made.
65	General	Price Schedule (Sch - 3)	We understand that the quantity mentioned in "Price schedule" is tentative and for any changes in quantity during detailed engineering/execution, Bidder may ask for quantity amendment. Please confirm.	Any change in the quantity shall be dealt in line with provisions of bidding documents/contracts
66	General	Price Schedule (Sch - 3)	We understand that the items mentioned in "Price schedule" is tentative and for any additional items required during detailed engineering/execution, Bidder may ask for BOQ amendment. Please confirm.	Any additional item required during detailed engineering shall be dealt in line with provisions of bidding documents/contracts
67	General	Use of CNS materials in filling	Please confirm wether the CNS (cohesive non swelling materials like compacted Moorum/replacement of soild with Good Earth/stone boulders mixed with sand) is required below foundation.	Bidder may quote as per provisions of bidding document.
68	General	Use of Alternate Constructional Material (M sand, Crush Sand, Stone Dust, PPC etc.)	Please confirm the usage of alternate construction materials like (M sand, Stone Dust, PPC etc.) due to location/availability/government orders constraints. Also, Please confirm that we can use M sand, Stone Dust, Crush Sand etc. over river sand for following construction works: i. Concrete works ii. Plastering and masonry iii Any other specific applications as per project requirements	Technical Specification/SFQP documents attached with tender documents are to be referred.
69	General	Land Development	Please confirm that the scope of land development is limited to the current project requirements and does not include any future expansion or development."	Bidder may quote as per provisions of bidding document.
70	General	Pile work/Stone column	As per our understanding, there is no requirement of stone column/pile/pile cap works. If it is required then, Please share the amended BOQ with an additional items related to this scope. Please confirm.	Presently pile foundations/stone columns is not envisaged. However, if requried during detailed Engg the same shall be dealt as per the provision of contracts.

71	General	Construction Power & Water Supply	It is understood that the water supply & power arrangement for construction purpose will be provided upto a single point adjoining the site by the client free of cost. Please confirm.	Bidder to refer clause no 14.3 of SECTION-GENERAL TECHNICAL REQUIREMENTS (GTR) which is reproduced below: - *"Employer shall make available the auxiliary supplies at a single point in the substation on chargeable basis. The prevailing energy rates of the state shall be applicable. All further distribution from the same for construction supply shall be made by the contractor. However, in case of failure of power due to any unavoidable circumstances, the contractor shall make his own necessary arrangements like diesel generator sets etc. at his own cost so that progress of work is not affected, and Employer shall in no case be responsible for any delay in works because of non-availability of power.* *Employer shall make available construction water supply at a single point in the substation. All further distribution for the same shall be made by the Contractor. In case of nonavailability or inadequate availability of water for construction work, the contractor shall make his own arrangement at his own cost and the Employer shall in no case be responsible for any delay in works because of non-availability or inadequate availability of water."*
72	General	Nallah Diversions	We do not envisage any Nallah diversion required neither for new sub station nor any extension sub station. If Nallah diversion is needed then request you to please provide specific line item & quantity for the same in the amended BOQ.	Bidder may quote as per provisions of bidding document.
73	Site Storage Facility	Site Storage Facility	We presume that space shall be provided at site for storage & site office construction at free of cost. **Please confirm.**	It is not binding on employer to provide the space for requisite facilities. However, the same can be provided at substation site, subject to availability of space.
74	Order of Precedence	Order of Precedence	In case of any discrepancy in price schedule (BPS), section project and technical specification, kindly confirm the order of precedence for consideration of item.	Refer Cl 7.0 of Section- Project wherein it is mentioned that: "In case of any discrepancy between Section-PROJECT, Section-GTR and other technical specifications on scope of works, Section-PROJECT shall prevail over all other sections. In case of any discrepancy between Section-GTR and individual sections for various equipments, requirement of individual equipment section shall prevail. In case of any discrepancy between Main body of Section-Project and Annexure(s) of Section-Project, provisions specified in Main body of Section-Project shall prevail. In case of any discrepancy between BPS and other sections, BPS shall prevail over the other sections of the technical specifications. However, for rating of the BPS items, associated Section-Project shall be referred to."
75	General	SLD & Tender Layout	We request you to please share the tender SLD & Layout for better understanding	SLD & Layout is in bidder's scope and shall be finalized during detailed engineering based on best engineering practices, meeting the requirements of Technical Specifications & orientation of line corridors. Bidder may quote as per BPS
76	Section Project 2.2.2.1.A; Extension of 765kV Srikakulam GIS Substation	The extension piece (interface) module (for connection between present scope GIB duct and existing end piece (interface) modules) shall be provided under present scope.	As per refered clause we understand that existing end piece module address to 02 nos. of 765kV GIS Line feeder Bay module along with switchable line reactor bay module which are being provided under separate scheme. Kindly confirm.	Confirmed
77	General		Bidder request to provide remote end PLCC and FOTE make.	Requisite details shall be shared during detailed engineering to successful bidder. Further, in line with clause 1.6 of Section- Project bidder may visit the existing substation site and acquaint themselves with topography, infrastructure and also the design philosophy.
78	SUBSTATION – CIVIL WORKS – REV 12 2.0 GEOTECHNICAL INVESTIGATION:	Geo-Technical Investigation Report and Contour Survey	Please share the Geo-Technical Investigation Report and Contour Survey data for our reference and further planning.	Soil Inestigation & Site levelling including Contouring is in bidder's scope.
79	General Site Preparation	FGL,HFL,NGL	Please provide the Finished Ground Level (FGL) and the High Flood Level (HFL) for the proposed PSS location, as these details are essential for planning of grading, drainage, and foundation levels.	FGL shall be proposed by contractor for approval of POWERGRID based on the approved contour level drawing and site verified HFL data which is to be arranged by contractor during detail enfgineering.

80	Price schedule	Price shcedule Rev1-GIS BOQ-SCH 1-Sr.no 4 &5 Pre-insertion resgister	Please note that the recent surge in power transmission products' demand & availability of limited supply chain (only 2 sub-suppliers globally) has resulted in exceptionally high manufacturing lead times (up to & exceeding 150 weeks) of Pre-insertion Resistors (PIR). Further, we wish to highlight that Central Electricity Authority (Technical Standards for Construction of Electrical Plants and Electric Lines) Regulations, 2022 (extract is attached) allows both PIR as well as Controlled Switching Device (CSD) for 765/ 400 kV Circuit Breakers controlling lines. In view of the above, we request you to consider accepting CSD in place of PIR.	Refer clause 9.19 of Section- Project whwrein it is mentioned that *'For Circuit breaker(s) controlling 400kV Transmission line(s), with or without Line Reactor and 765kV Transmission line(s) without Line Reactor, Controlled Switching Device (CSD) suitable for Line Switching Application in lieu of PIR shall also be acceptable.'*
81	Specific requirement	S.N. 5, Clause no 9.2 Type test validity	As per latest CEA Guidelines, Validity of Type test Report for CT, CVT & WT is 15 years as on date of Bid opening and we request you to kindly accept the same.	Refer clause 9.26 of Section- Project wherein revised Type test validity requirements as per CEA Guidelines have already been incorporated
82	Price schedule	Price shcedule Rev1_CRP BOQ-SCH 1-Sr.no 41 & 42 Control and relay panels for line and line reactor protection panel	Quanity of control and relay panel for line and line reactor protection panels shoud be 5 and 3 nos respectively instead of 4 & 2 nos as per revised scope.	Bidder to quote as per BPS