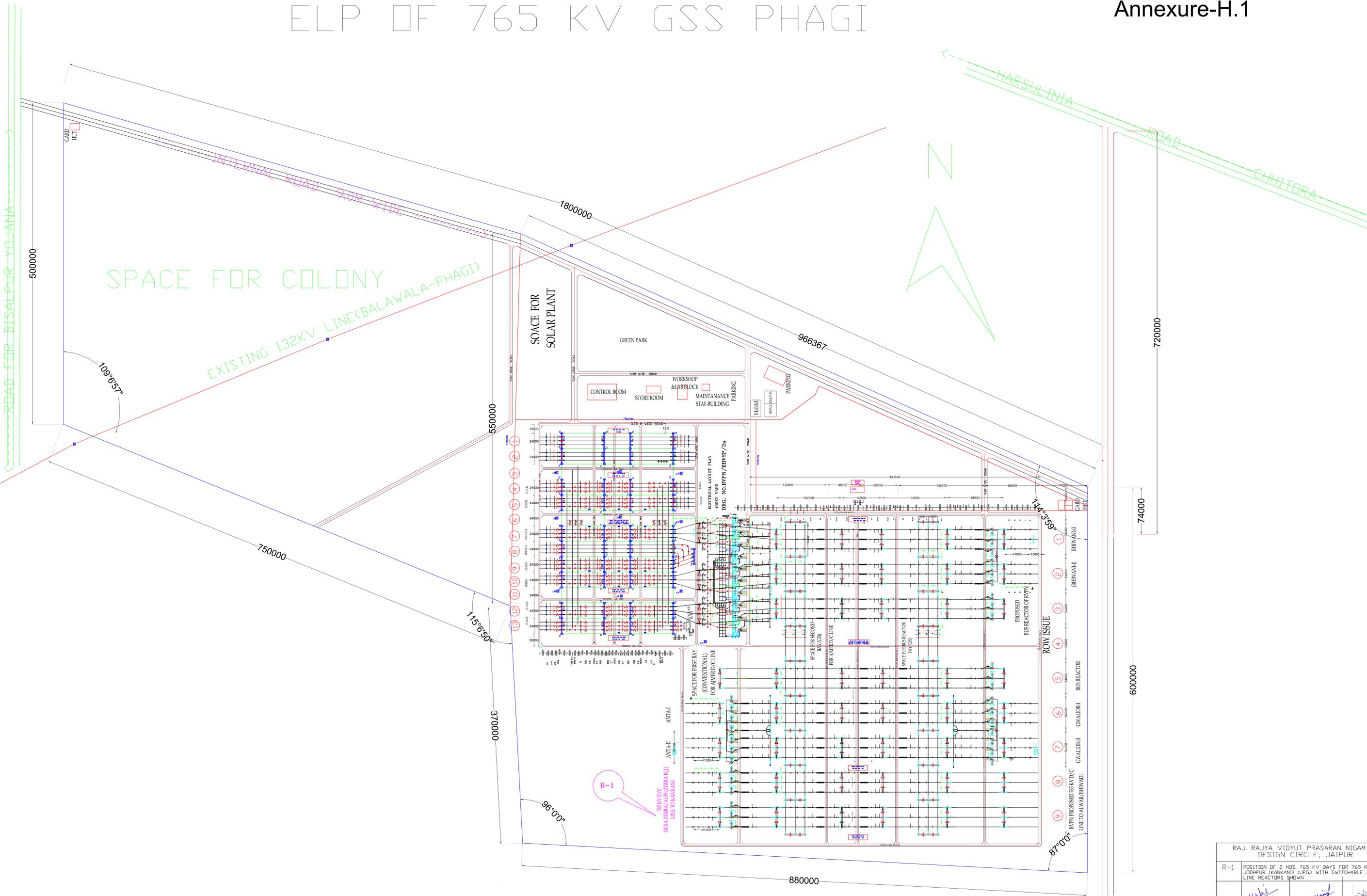


ELP OF 765 KV GSS PHAGI

Annexure-H.1

PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT

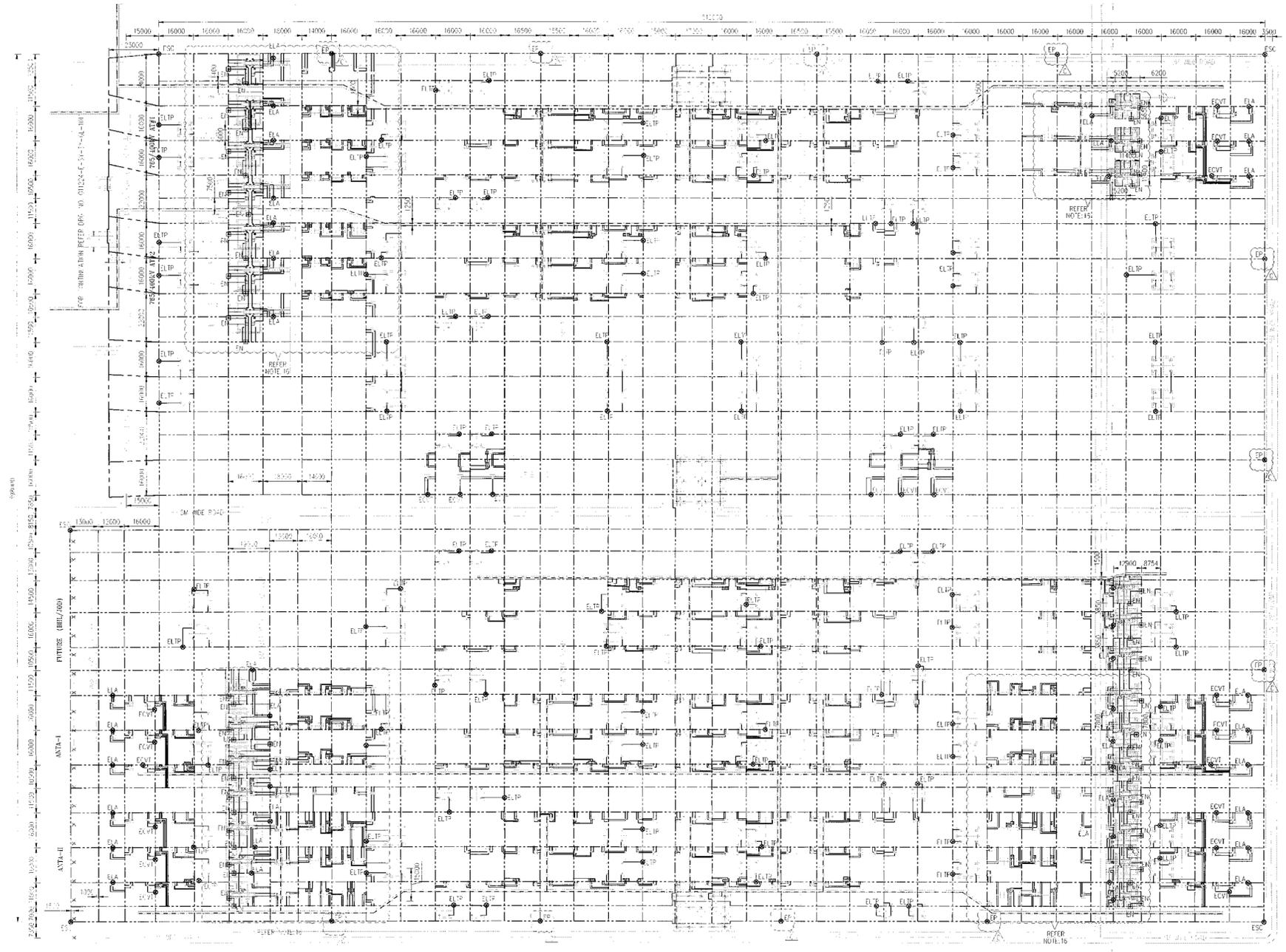
PRODUCED BY AN AUTODESK EDUCATIONAL PRODUCT



RAJ. RAJYA VIDYUT PRASARAN NIGAM LTD. DESIGN CIRCLE, JAIPUR		
R-1	POSITION OF 2 NOS. 765 KV BAYS FOR 765 KV GSS JUBHPUR (KANKANI) CUPC WITH SWITCHABLE 2X240 MVAR LINE REACTORS SHOWN	
KAPIL AGRAWAL AEN/DESIGN	M.K. MATHUR XEN/DESIGN	J.P. RAMAWAT SE/DESIGN

Annexure H.6

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- LEGEND:-**
- PROPOSED MAIN EARTH MAT (40mm φ MS ROD) 75x12mm φ GS FLAT (BELOW GROUND LEVELS)
 - AUXILIARY EARTH MAT FOR ISOLATOR
 - ROD EARTH ELECTRODE FOR TOWER WIDE PEAK
 - ESC --- ROD EARTH ELECTRODE FOR SWITCHYARD CORNERS
 - ELA --- ROD EARTH ELECTRODE FOR STEP-DOWN TRANSFORMER
 - ECVT --- ROD EARTH ELECTRODE FOR CAPACITOR VOLTAGE TRANSFORMER
 - EP --- 40mm φ 3M LONG GS PIPE ELECTRODE WITH TREATED PIT
 - EP --- 40mm φ 3M LONG DIRECTLY DRIVEN MS ROD ELECTRODE
- RVPNL REFERENCE DRAWING:-**
1. GENERAL ARRANGEMENT / LAYOUT PLAN - 765/400KV SUBSTATION PHAGI - DRG. NO. RVPN/EHVSP/IN-1/DWG.30
 2. ELECTRICAL LAYOUT PLAN - 765/400KV GSS AT PHAGI (JAI-PUR-SOUTH) - DRG. NO. RVPN/EHVSP/IN-1/346.30
 3. TYPICAL EQUIPMENT EARTHING DETAILS - DRG. NO. RVPN/EHVSP/IN-1/DWG-13 TO 30
- L&T REFERENCE DRAWING:-**
1. 765/400KV GSS AT PHAGI (NEW) SUBSTATION 400KV SWITCHYARD LAYOUT - PLAN & SECTION, DRG. NO. 011224-E-SY-SY-EL-1005
 2. 765/400KV GSS AT PHAGI (NEW) SUBSTATION 765-V CABLE BENCH LAYOUT - PLAN & SECTION, DRG. NO. 011224-E-SY-SY-CL-1017
 3. EARTHING DESIGN CALCULATION - No. 011224-E-SY-SY-DC-1061
- NOTES:-**
1. ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED
 2. MAIN MAT, BELOW GROUND LEVEL CONNECTIONS, AUXILIARY MAT AND EQUIPMENT LOCATION SHOWN ARE NEGATIVE ON Y & MINOR MODIFICATION SHALL BE CARRIED OUT TO SUIT SITE CONDITIONS IN CONSULTATION WITH INCHARGE IN CHARGE
 3. EVERY EQUIPMENT/STRUCTURE SHALL BE CONNECTED TO MAIN MAT AS PER TYPICAL EARTHING DETAILS FOR EQUIPMENT & STRUCTURE DRG. NO. RVPN/EHVSP/IN-1/DWG.13 TO 30
 4. EARTHING CONNECTIONS TO EQUIPMENT TERMINALS SHALL BE OF BOLTED TYPE
 5. ALL THE WELD JOINTS SHALL BE REINFORCED WITH ROD LEAD AND AFTERWARDS COATED WITH BITUMEN COMPOUND TO PREVENT CORROSION
 6. CABLE SUPPORTS IN TRENCHES SHALL BE EARTHED BY 50x6 mm MS FLAT RUNNING ALONG THE TOP TIER OF THE CABLE TRENCH
 7. WHEREVER EARTHING CONDUCTOR INTERFERS WITH FOUNDATION, MAIN MAT CONDUCTOR SHALL BE INVERTED SUITABLY AT SITE
 8. WHEREVER EARTHING CONDUCTOR INTERFERES ACROSS CABLE TRENCH AND RAIL TRACKS IT SHALL BE LAID AT 300mm BELOW IT
 9. EARTHING CONDUCTOR CROSSING ROAD SHALL BE LAID AT LEAST 300mm BELOW AND TO SUIT SITE CONDITIONS
 10. MINIMUM DISTANCE OF 4000mm SHALL BE MAINTAINED BETWEEN ANY TWO ADJACENT EARTH ELECTRODES
 11. DMS SHALL BE CONNECTED TO EARTHING CONDUCTOR BY ADJACENT CABLE TRENCH
 12. FOR CONTROL BUILDING & S.B CONTROL ROOM KINDLY REFER TO RESPECTIVE EARTHING LAYOUTS
 13. 150x150x5mm AUXILIARY EARTH MAT OF ENER MESH(300x300mm) SHALL BE PROVIDED UNDER ISOLATOR MAIN SWITCH & EARTH SWITCH OPERATING MECHANISMS AT A DEPTH OF 300mm BELOW FGL
 14. MAIN MAT SHALL BE BURIED AT A DEPTH OF 300mm BELOW FGL
 15. EARTHING CONDUCTOR SHALL LAID 1500mm OUTSIDE THE PROPOSED SWITCHYARD FENCE ALTERNATIVE POST OF THE FENCE AND GATES SHALL BE CONNECTED TO EARTHING LEAD BY ONE LEAD
 16. MAIN MAT BELOW GROUND LEVELS AND EQUIPMENT LOCATION SHOWN FOR 765/400KV TRANSFORMER AND 765KV REACTOR AREA ARE INDICATIVE ONLY. THE SAME SHALL BE PAVED ALONG WITH 765/400KV TRANSFORMER AND 765KV REACTOR OR YARD LAYOUT
 17. FOR ANTIWEED & GRAVEL FILLING LAYOUT, REFER DRG. NO. 011224-C-SY-SY-MS-1501

BOQ :-

SYMBOL	DESCRIPTION	UNIT	QTY.
⊙	40mm φ 3M LONG MS ROD ELECTRODE WITH TREATED PIT	No.	146
⊙	40mm φ 3M LONG DIRECTLY DRIVEN MS ROD ELECTRODE	No.	11
⊠	40mm φ 3M LONG GS PIPE ELECTRODE WITH TREATED PIT	No.	54
---	40mm φ MS ROD (MAIN MAT)	M	31000
---	40mm φ MS ROD (AUXILIARY MAT FOR ISOLATOR)	M	3000
---	75x12mm φ GS FLAT (BELOW GROUND LEVELS)	M	15000
---	75x12mm φ GS FLAT (ABOVE GROUND LEVELS)	M	14500
---	GREY TIRE CLAMP TO SUIT 75x12mm φ GS FLAT	No.	9600
---	50x6mm GS FLAT (MMS/SW/ACT)	M	1600
---	50x6mm MS FLAT (CABLE TRENCH EARTHING)	M	3500

REVISIONS	NO.	DATE	BY	CHKD.	APPD.	DESCRIPTION
C	1	07.06.12	AKL	AKL	AKL	REVISED BASED ON RVPNL COMMENTS DATED: 07.06.12
D	2	11.07.12	AKL	AKL	AKL	REVISED BASED ON RVPNL COMMENTS RECEIVED ON DATED 11.07.12
A	3	19.07.12	AKL	AKL	AKL	ISSUED FOR APPROVAL

L&T Construction
Power Transmission & Distribution

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LTD
CONSULTANT:

PROJECT: ESTABLISHMENT OF 2x1500MVA, 765/400KV SUBSTATION AT PHAGI (JAIPUR) ALONG WITH 400KV TERMINAL BAYS AT EXISTING 400KV HEERAPURA SUBSTATION.

SUPPLIER/CONTRACTOR:

JOB No.: 011224-E-SY
TITLE: 765/400KV GSS AT PHAGI (NEW) SUBSTATION 765KV SWITCHYARD EARTHING LAYOUT
SCALE: 1:1100
PROJECTION:

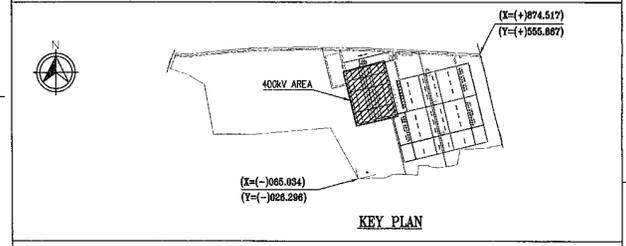
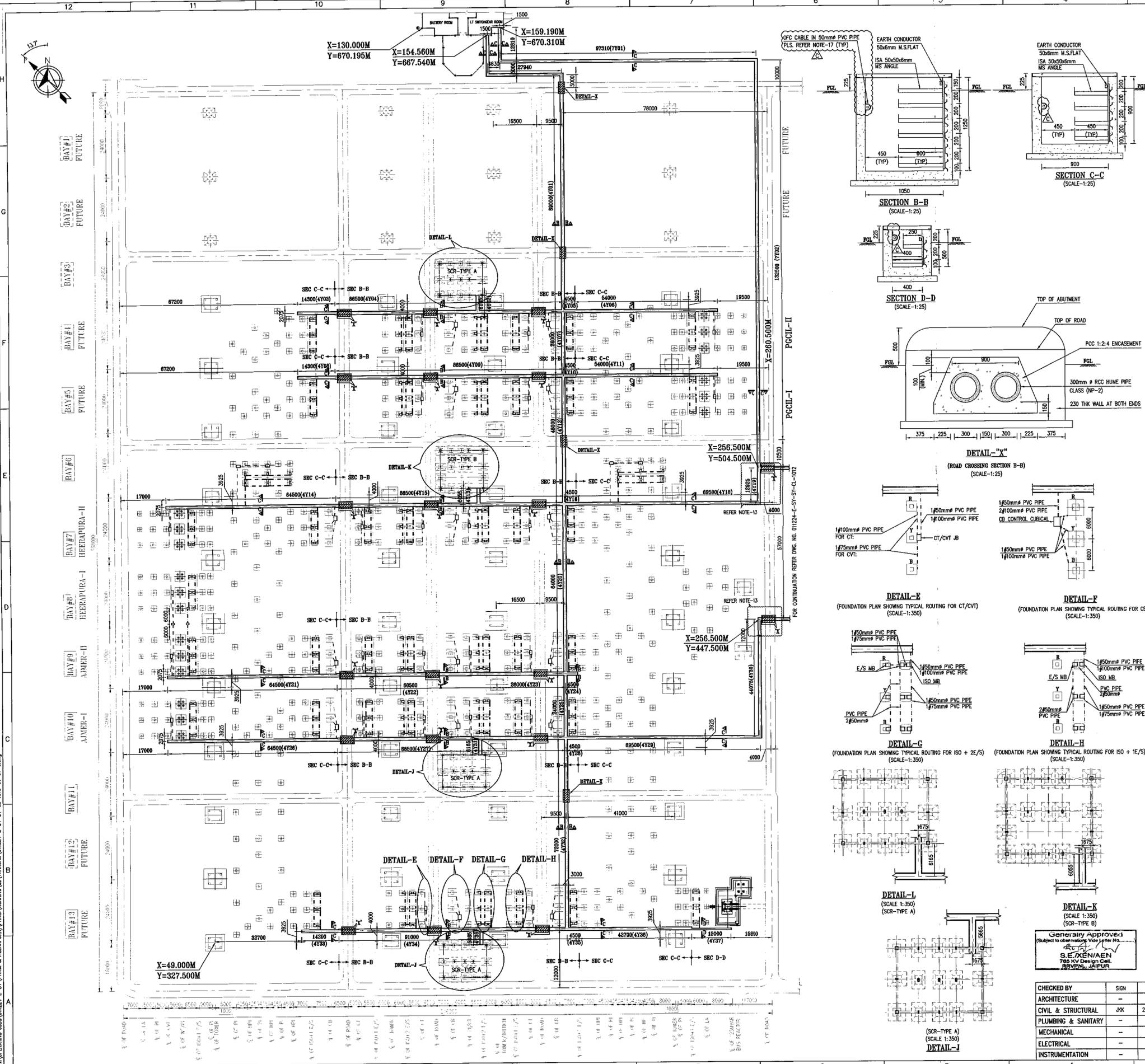
CHECKED BY

ARCHITECTURE	PLUMBING & SANITARY	MECHANICAL	ELECTRICAL	INSTRUMENTATION
---	---	---	---	---

DRG. No.	0	1	1	2	2	4	-	E	-	S	-	S	-	G	-	L	-	1	0	1	0
RELEASED FOR	<input type="checkbox"/> PRELIMINARY <input type="checkbox"/> TENDER <input type="checkbox"/> INFORMATION <input checked="" type="checkbox"/> APPROVAL <input type="checkbox"/> CONSTRUCTION																				

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LEGEND

- CABLE TRENCH
- - - PIPE SLEEVE
- ▨ ROAD CROSSING
- CABLE PULL PIT

RRVNP REFERENCE DRAWING

- ELECTRICAL LAYOUT PLAN - DRG. NO. RVPN/EHSP/IN-1/DRG-2a. SHEET 1 OF 3.
- SECTIONAL DRAWINGS OF 400KV YARD AT PHAGI (JAIPUR) - DRG. NO. RVPN/EHSP/IN-1/DRG-3a. SHEET 1 OF 4.
- GENERAL ARRANGEMENT OF OUTDOOR CABLE TRENCH - DRG. NO. RVPN/IN-1/DRG-5

L&T REFERENCE DRAWING

- 765/400kV GSS AT PHAGI (NEW) - 400KV SWITCHYARD LAYOUT PLAN & SECTIONS - DRG. NO. 011224-E-SY-SY-EL-1005.
- 765/400kV GSS AT PHAGI (NEW) - 400KV AREA FOUNDATION LAYOUT - DRG. NO. 011224-E-SY-SY-FL-1009.

- NOTES:-**
- ALL DIMENSIONS ARE IN mm UNLESS OTHERWISE SPECIFIED.
 - PVC PIPES SHALL BE CLASS 4 OF IS4985 & BURIED AT A DEPTH OF 350mm FROM TOP OF PCC.
 - SIZE OF THE PIPES & CONDUITS SHALL BE SELECTED BASED ON 40% FILL CRITERION & SEPARATE PVC PIPES SHALL BE LAID FOR CONTROL & POWER CABLES.
 - WHEREVER CABLES CROSS ROADS, DRAINS AND RAIL TRACKS, THESE SHALL BE LAID IN REINFORCED SPUN CONCRETE OR STEEL PIPES BURIED AT NOT LESS THAN ONE METRE DEPTH AS PER SWITCHYARD ERECTION SPECIFICATION.
 - AFTER LAYING CABLES, THE END OF PIPES SHALL BE SUITABLY SEALED AT SITE BY AVAILABLE PACKING MATERIAL TO PREVENT INGRESS OF WATER INSIDE THE PIPES.
 - POWER AND CONTROL CABLE SHALL BE SUPPORTED ON ANGLES IN TRENCHES.
 - POWER & CONTROL CABLES SHALL BE LAID IN SEPARATE TIERS IN CABLE TRENCH.
 - ALL OPTICAL FIBRE CABLES SHALL RUN THROUGH 50MM DIA HD-PVC PIPE INSIDE THE CABLE TRENCH.
 - LIGHTING CABLE SHALL BE ROUTED THROUGH PVC PIPES WHEREVER THERE IS NO NEAR BY CABLE TRENCH.
 - CABLE TRENCH ROUTE IS INDICATIVE ONLY. MINOR ADJUSTMENTS SHALL BE CARRIED OUT DURING CONSTRUCTION TO SUIT SITE CONDITION.
 - CABLEING WILL BE DONE AS DETAILED IN TECHNICAL SPECIFICATION.
 - LOCATION OF SUMP PIT AND DIRECTION OF LONGITUDINAL SLOPE REFER CIVIL CABLE TRENCH LAYOUT.
 - THE TRENCH LOCATION SHOWN FOR 765KV TRANSFORMER INTERCONNECTION IS TENTATIVE. THE SAME SHALL BE FINALISED AS PER APPROVED 765KV TRANSFORMER YARD LAYOUT.
 - DISTANCE BETWEEN TWO CABLE TERMINATION PIT (CABLE PULL PIT) SHALL NOT BE MORE THAN 15 METRE INCREASE OF CONTINUOUS CABLE LAYING IN PVC PIPE.
 - CABLES FROM GROUND TO EQUIPMENT L&B SHALL BE TAKEN IN PERFORATED CABLE TRAY.
 - WHILE ROUTING CABLE TRENCH NEAR ISOLATORS POSITION, PLACE FOR AUXILIARY EARTH MAT SHOULD BE ENSURED.
 - FOR TYPICAL CLAMPING ARRANGEMENT OF PVC PIPE CARRYING OFC CABLES, PLEASE REFER DRG. NO. 011224-C-SY-SY-NR-1145.

DOQ:-

SNO	DESCRIPTION	UNIT	QTY
01	TYPE-B TRENCH	M	830
02	TYPE-C TRENCH	M	700
03	TYPE-D TRENCH	M	15
04	100mm PVC PIPE	M	1160
05	75mm PVC PIPE	M	710
06	50mm PVC PIPE	M	2950
07	100mm WIDTH, 75mm HIGH (2mm THICK) PERFORATED TRAY	M	830

REV. NO.	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
C	REVISED BASED ON RRVNPL COMMENTS DATED: 07.08.12	SJ	SR	GS	AKL
B	REVISED BASED ON RRVNPL COMMENTS DATED: 11.07.12	SJ	SR	GS	AKL
A	ISSUED FOR APPROVAL	SJ	SR	GS	AKL

REVISIONS

L&T Construction
 Power Transmission & Distribution

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN
 CONSULTANT: NIGAM LTD

PROJECT: ESTABLISHMENT OF 2x1500MVA, 765/400KV SUBSTATION AT PHAGI (JAIPUR) ALONG WITH 400KV TERMINAL BAYS AT EXISTING 400KV HEERAPURA SUBSTATION.

SUPPLIER/CONTRACTOR:

JOB NO.: 011224-E-SY
 TITLE: 765/400KV GSS AT PHAGI (NEW) SUBSTATION 400KV SWITCHYARD CABLE TRENCH LAYOUT - PLAN & SECTIONS

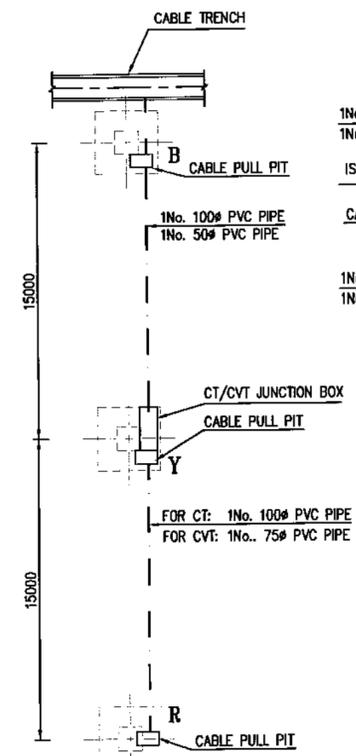
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DRG. No. 011224-E-SY-SY-CL-1013
 SHEET 01 OF 01

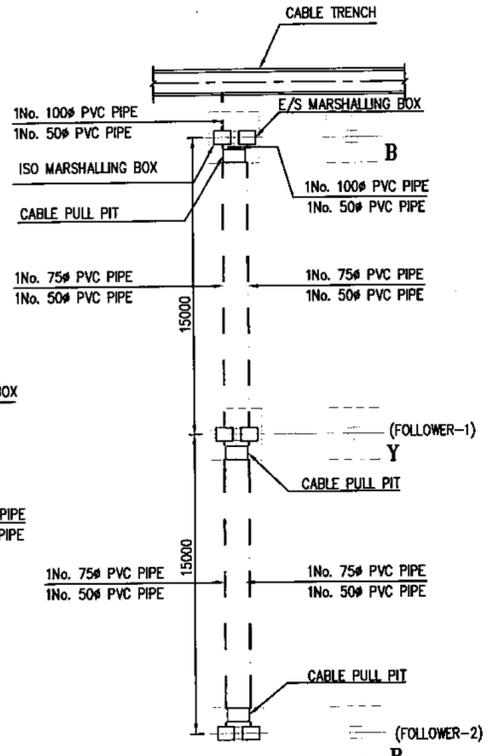
RELEASED FOR: PRELIMINARY TENDER INFORMATION APPROVAL CONSTRUCTION

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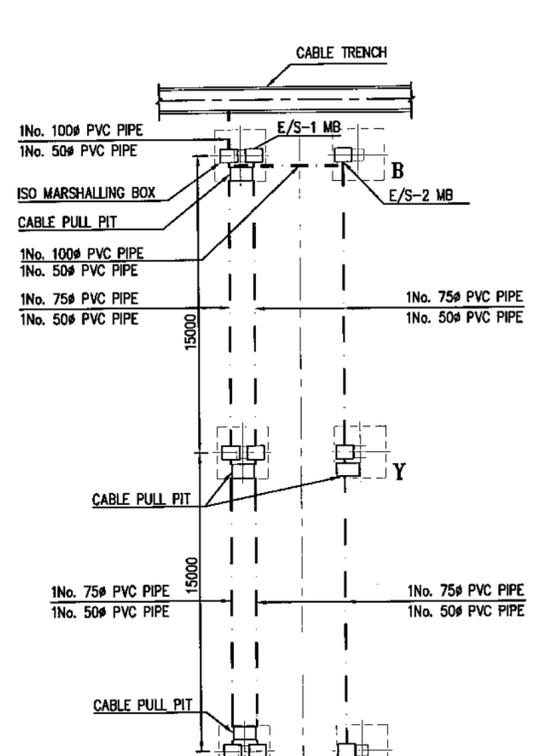
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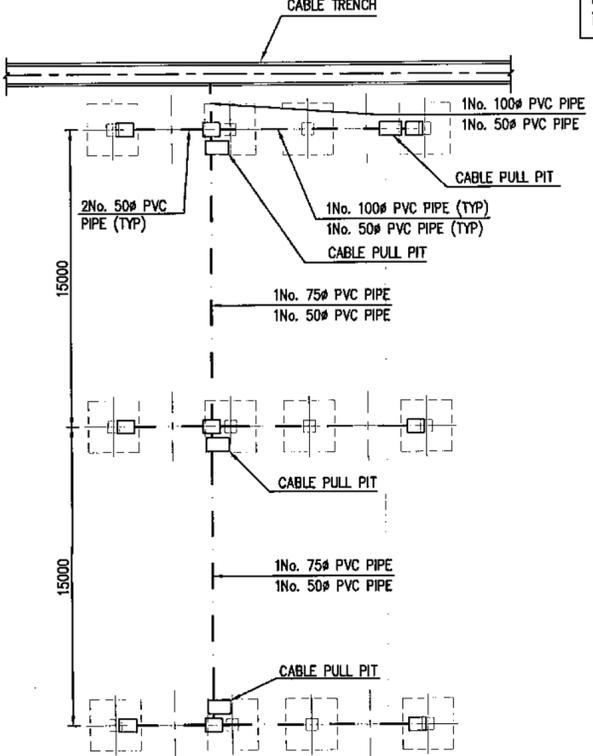
DETAIL-E
(FOUNDATION PLAN SHOWING
TYPICAL ROUTING FOR 765kV CT/CVT)
(SCALE-1:250)



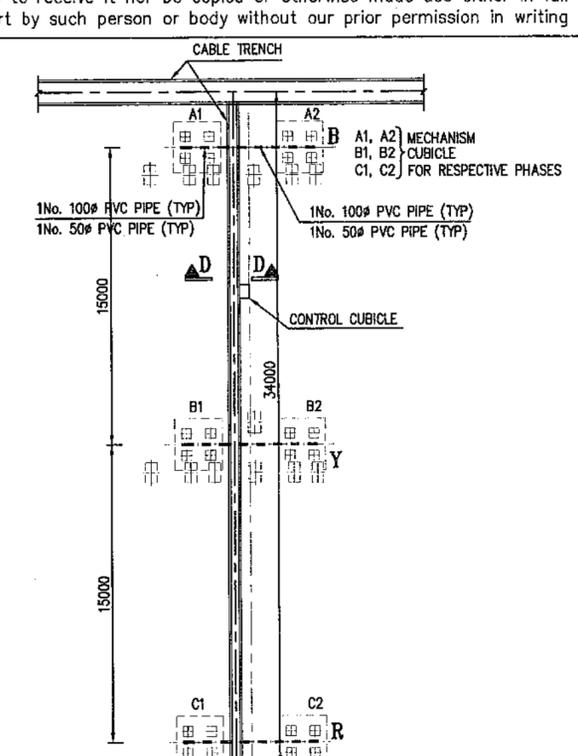
DETAIL-F
(FOUNDATION PLAN SHOWING
TYPICAL ROUTING FOR 765kV ISO+1E/S)
(SCALE-1:250)



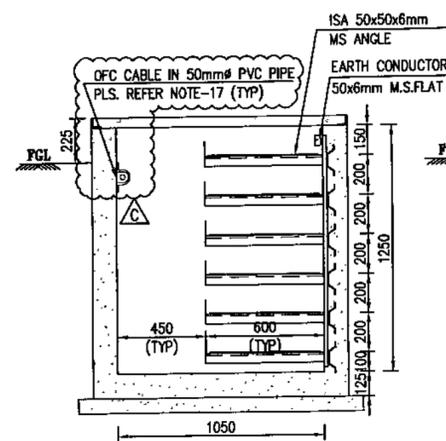
DETAIL-Q
(FOUNDATION PLAN SHOWING
TYPICAL ROUTING FOR 765kV ISO+2E/S)
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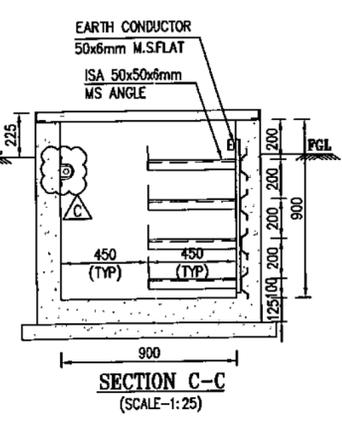
DETAIL-G
(FOUNDATION PLAN SHOWING
TYPICAL ROUTING FOR 765kV SWITCHING ISOLATOR)
(SCALE-1:250)



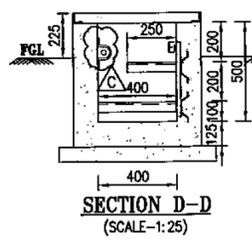
DETAIL-H
(FOUNDATION PLAN SHOWING
TYPICAL ROUTING FOR 765kV CB)
(SCALE-1:250)



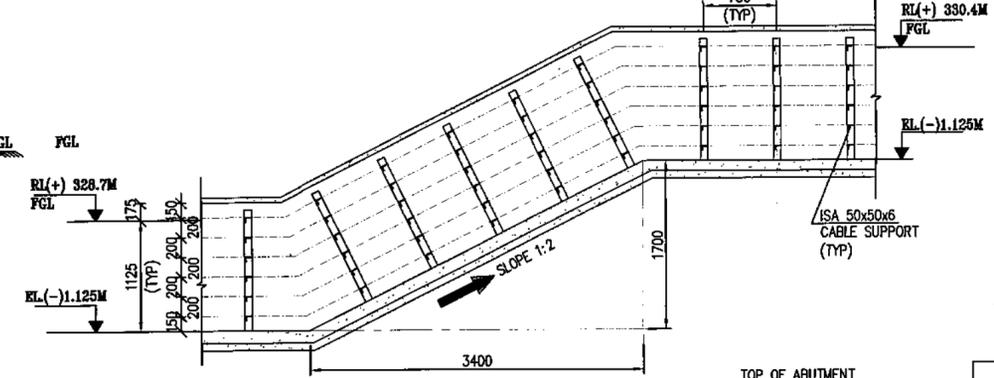
SECTION B-B
(SCALE-1:25)



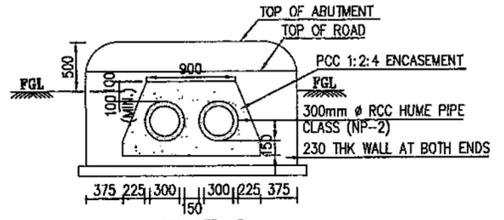
SECTION C-C
(SCALE-1:25)



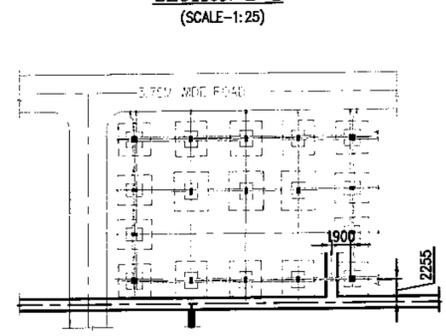
SECTION D-D
(SCALE-1:25)



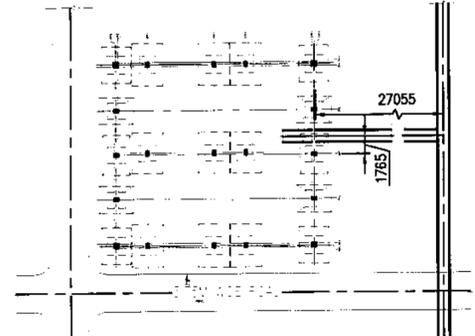
SECTION L-L
(SCALE-1:50)



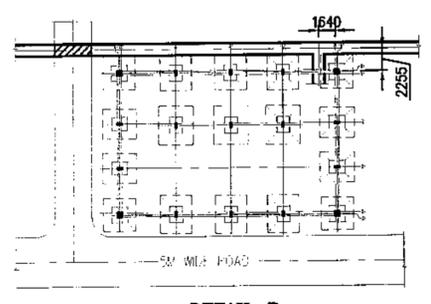
DETAIL-J
(SCALE-1:50)
(TYPICAL ROAD CROSSING DETAILS FOR SECTION B-B)



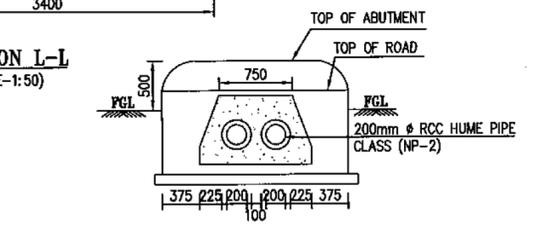
DETAIL-M
(SCALE-1:500)
(SCR1-TYPE A)



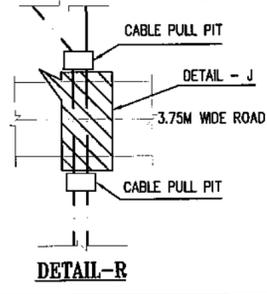
DETAIL-N
(SCALE-1:500)
(SCR2-TYPE B)



DETAIL-P
(SCALE-1:500)
(SCR3-TYPE A)



DETAIL-K
(TYPICAL ROAD CROSSING DETAILS FOR SECTION C-C)
(SCALE-1:50)



DETAIL-R

Checked by: S.E. XEN/AEN, 765 KV Design Cell, RRVPNL, JAIPUR

CHECKED BY	SIGN	DATE
ARCHITECTURE	-	-
CIVIL & STRUCTURAL	JKC	29.08.12
PLUMBING & SANITARY	-	-
MECHANICAL	-	-
ELECTRICAL	-	-
INSTRUMENTATION	-	-

NOTES:-
1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. ALL LEGEND, NOTES, REFERENCE DRAWING AND BOQ PLEASE REFER SHEET 01 OF 02 OF THIS DRAWING.

REV. No	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
C	REVISED BASED ON RRVPNL COMMENTS DATED: 7.08.12	SJ	SBR	GS	AKL
B	REVISED BASED ON RRVPNL COMMENTS DATED: 11.07.12	SJ	SBR	GS	AKL
A	ISSUED FOR APPROVAL	SJ	SBR	GS	AKL

REVISIONS

L&T Construction
Power Transmission & Distribution

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN
NIGAM LTD.

CONSULTANT:

PROJECT: ESTABLISHMENT OF 2x1500MVA, 765/400KV SUBSTATION AT PHAGI (JAIPUR)
ALONG WITH 400KV TERMINAL BAYS AT EXISTING 400KV HEERAPURA SUBSTATION

SUPPLIER/ CONTRACTOR:

JOB No.: 011224-E-SY TITLE: 765/400KV GSS AT PHAGI (NEW) SUBSTATION
765KV SWITCHYARD CABLE TRENCH LAYOUT - PLAN & SECTION

SCALE: 1:250

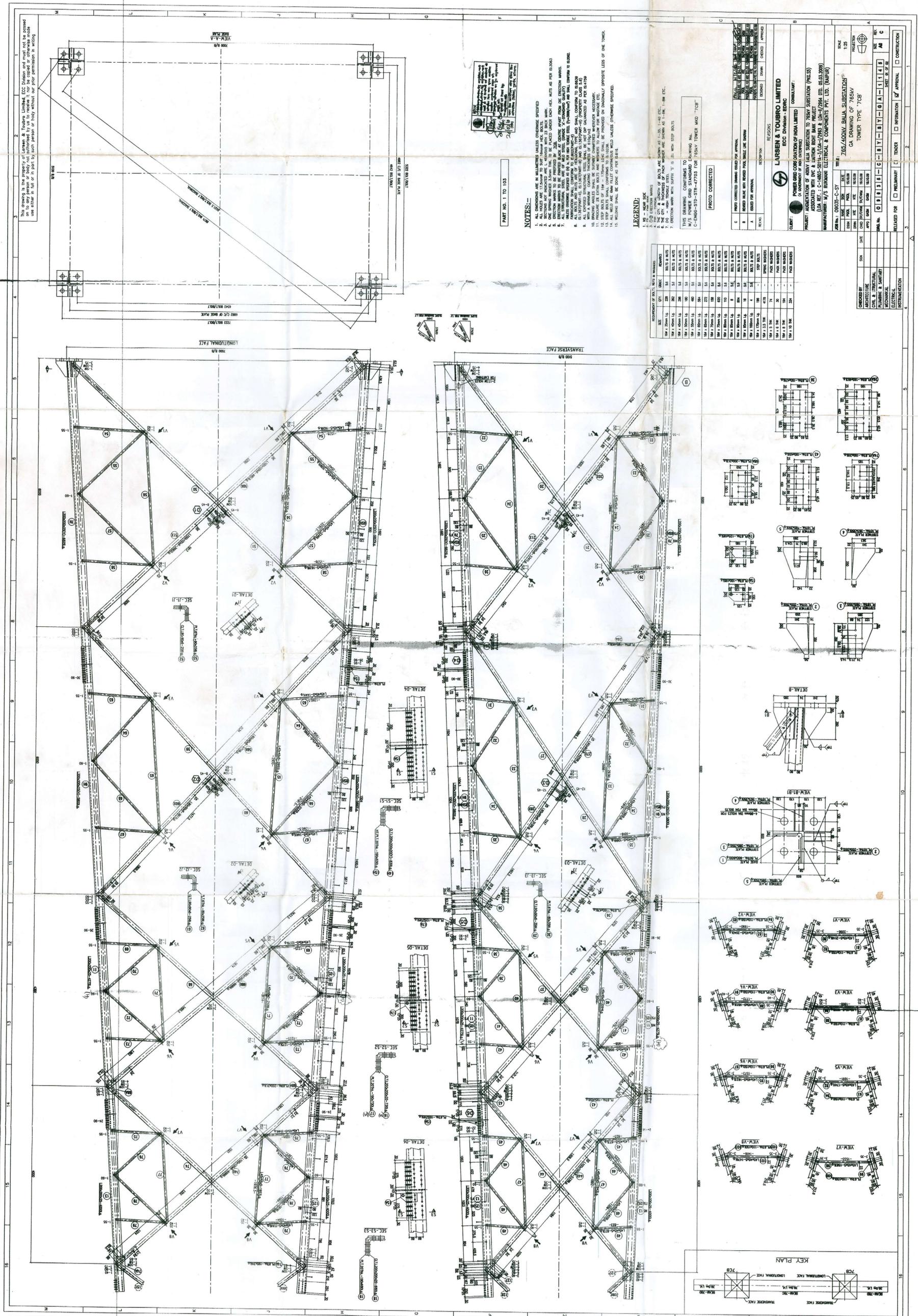
PROJECTION:

SIZE: A2

DRG. No. 011224-E-SY-SY-CL-1012

RELEASED FOR: PRELIMINARY TENDER INFORMATION APPROVAL CONSTRUCTION

Z:\Rev\OPERATING JOBS\011224-E-SY (PHAGI & HEERAPURA)\PHAGI\WORKING\CL\THANGAM\011224-E-SY-SY-CL-1012-02-C.dwg



NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SPECIFIED.
2. ALL BOLTS ARE TO BE OF THE HEAVY HEXAGON TYPE.
3. ONE SPRING WASHER SHALL BE PROVIDED FOR EACH BOLT.
4. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
5. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
6. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
7. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
8. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
9. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
10. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
11. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
12. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
13. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
14. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
15. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
16. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
17. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
18. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
19. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.
20. THE CITY & LENGTH OF BOLTS ARE SHOWN AS 1-10, 1-10, 1-10 ETC.

LEGEND:

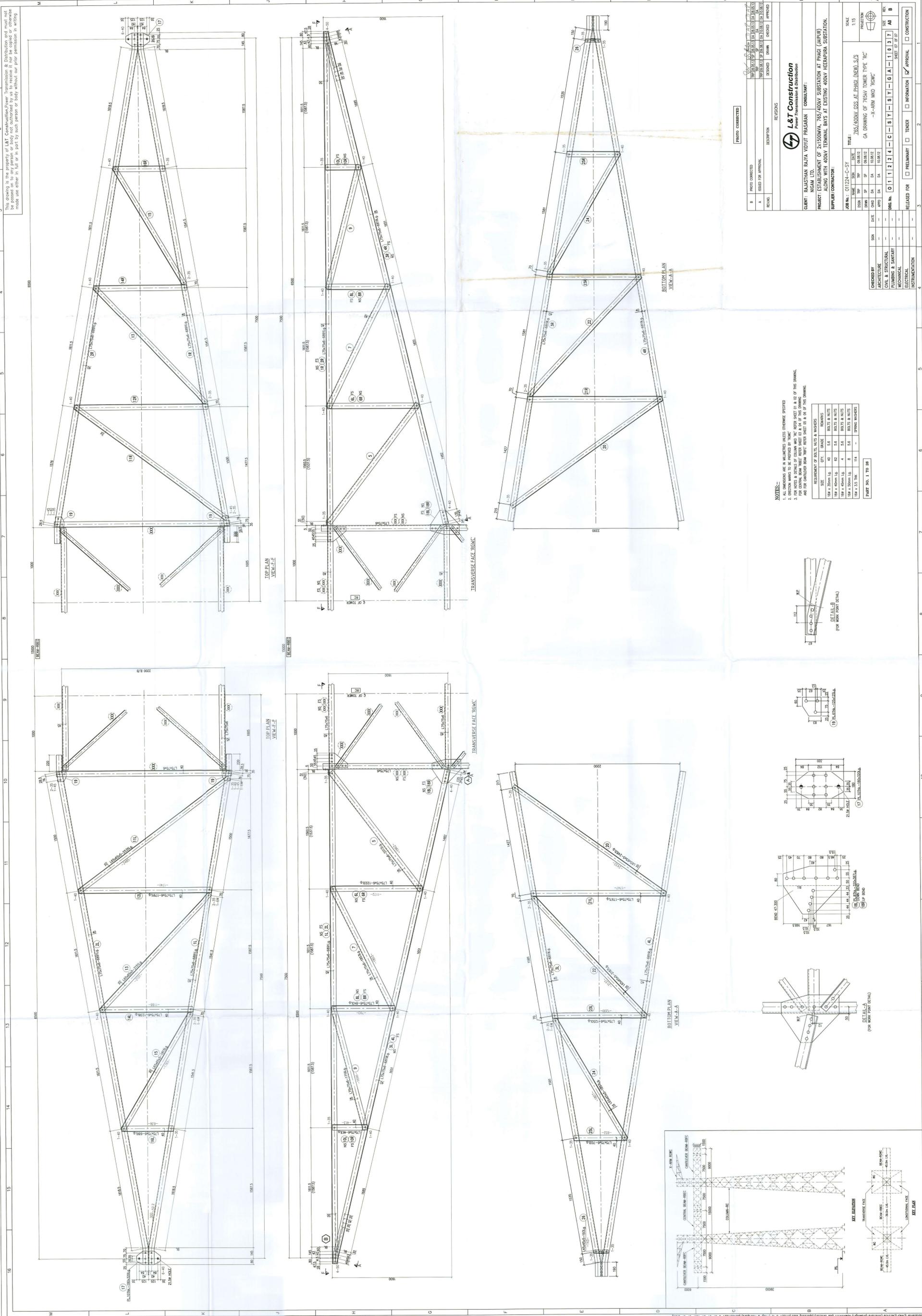
SYMBOL	DESCRIPTION
(Symbol)	1. 100% WELD
(Symbol)	2. 50% WELD
(Symbol)	3. 25% WELD
(Symbol)	4. 10% WELD
(Symbol)	5. 5% WELD
(Symbol)	6. 2% WELD
(Symbol)	7. 1% WELD
(Symbol)	8. 0.5% WELD
(Symbol)	9. 0.2% WELD
(Symbol)	10. 0.1% WELD
(Symbol)	11. 0.05% WELD
(Symbol)	12. 0.02% WELD
(Symbol)	13. 0.01% WELD
(Symbol)	14. 0.005% WELD
(Symbol)	15. 0.002% WELD
(Symbol)	16. 0.001% WELD
(Symbol)	17. 0.0005% WELD
(Symbol)	18. 0.0002% WELD
(Symbol)	19. 0.0001% WELD
(Symbol)	20. 0.00005% WELD
(Symbol)	21. 0.00002% WELD
(Symbol)	22. 0.00001% WELD
(Symbol)	23. 0.000005% WELD
(Symbol)	24. 0.000002% WELD
(Symbol)	25. 0.000001% WELD

CLIENT: LARSEN & TOUBRO LIMITED
PROJECT: 765/4500KVA BAJAJ SUBSTATION
DESIGNER: LARSEN & TOUBRO LIMITED
DATE: 15/08/2018
SCALE: 1:25
PROJECT NO.: 765/4500KVA BAJAJ SUBSTATION
TOWER TYPE: TOWER TYPE 'A'

APPROVALS:

DESIGNED	CHECKED	APPROVED
(Signature)	(Signature)	(Signature)

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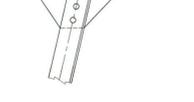
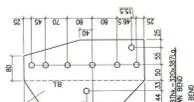
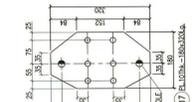
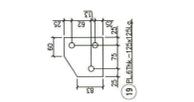
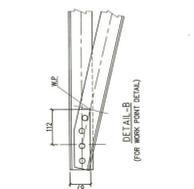


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NOTES:-
 1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
 2. MEMBER END CONNECTIONS SHALL BE AS SHOWN UNLESS OTHERWISE SPECIFIED.
 3. FOR CENTRAL BEAM BARS: REFER SHEET 01 & 02 OF THIS DRAWING.
 4. FOR CENTRAL BEAM BARS: REFER SHEET 03 & 04 OF THIS DRAWING.
 5. FOR CENTRAL BEAM BARS: REFER SHEET 05 & 06 OF THIS DRAWING.

SIZE	QTY.	GRADE	REMARKS
16x 3.5mm L3	40	S3	ROCKETS & NUTS
16x 3.5mm L3	80	S3	ROCKETS & NUTS
16x 3.5mm L3	8	S3	ROCKETS & NUTS
16x 3.5mm L3	8	S3	ROCKETS & NUTS
16x 3.5mm L3	114	S3	SPRING WASHERS

PART NO. 1 TO 20



REV.	DATE	BY	CHKD.	DESCRIPTION
1	10/08/22
2	10/08/22

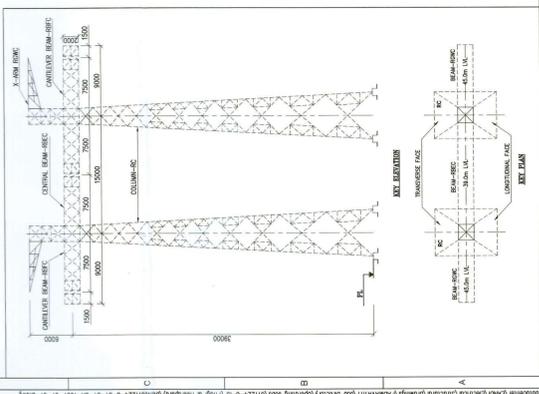
L&T Construction
 Power Transmission & Distribution

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN CONSULTANT.
 PROJECT: DESIGN & CONSTRUCTION OF 2x150KV, 765/400V SUBSTATION AT PHAG (JURIB) ALONG WITH 400V TERMINAL BAYS AT EXISTING 400V HEERAPURA SUBSTATION.
 SUPPLIER CONTRACTOR:

DATE: 01/12/24 - C-5Y
 TITLE: 765/400V GSS AT PHAG (NEW) S/S
 SCALE: 1:15
 PROJECTION: GA DRAWING OF 765KV TOWER TYPE 'RC' - X-ARM MID 'RC'

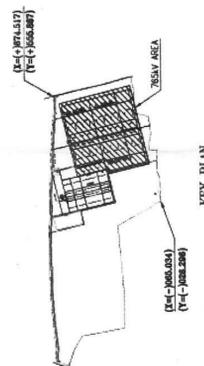
CHECKED BY: ARCHITECTURE, CIVIL & STRUCTURAL, PLUMBING & SANITARY, MECHANICAL, ELECTRICAL
 INSTRUMENTATION

RELEASED FOR: PRELIMINARY TENDER INFORMATION APPROVAL CONSTRUCTION





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- LEGEND:-**
- PRESENT SCOPE
 - NOT IN PRESENT SCOPE/EXISTING
 - ZONE OF PROTECTION BY SHIELD WIRE FOR STRING BUS AT 30M LEVEL. (CALCULATION CL. 4.1)
 - ZONE OF PROTECTION BY SHIELD WIRE FOR STRING BUS AT 27M LEVEL WITH 30M LEVEL STRING BUS TOWER. (CALCULATION CL. 4.3)
 - ZONE OF PROTECTION BY SHIELD WIRE FOR MAIN BUS AT 27M LEVEL WITH 30M LEVEL STRING BUS TOWER. (CALCULATION CL. 4.3)
 - ZONE OF PROTECTION BY SHIELD WIRE FOR MAIN BUS AT 27M LEVEL WITH 27M LEVEL MAIN BUS TOWER. (CALCULATION CL. 4.4)
 - EXTENDED ZONE OF PROTECTION BY SHIELD WIRE AT 14M LEVEL. (CALCULATION CL. 4.5)
 - EXTENDED ZONE OF PROTECTION BY SHIELD WIRE AT 3M LEVEL. (CALCULATION CL. 4.6)
 - EXTENDED ZONE OF PROTECTION BY SHIELD WIRE FOR TRANSFORMER AREA AT 15M LEVEL. (CALCULATION CL. 4.6)
 - ZONE OF PROTECTION BY SHIELD WIRE FOR LINE SIDE EQUIPMENT/BUS.

REVIVAL REFERENCE DRAWINGS:-

- ELECTRICAL LAYOUT PLAN - 765/400KV GSS AT PHAGI (JAIPIUR-SOUTH) - DRG. NO. R/P/W/2005/765-1/JR/26a SHEET 1 OF 3.
- SECTIONAL DRAWINGS OF 765V TOWER AT PHAGI (JAIPIUR) - DRG. NO. R/P/W/2005/765-1/JR/36 SHEET 2 OF 4.

L&T REFERENCE DRAWINGS:-

- 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 765V SWITCHYARD LAYOUT PLAN & SECTIONS
- 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 765/400KV WTR CONNECTING AREA LAYOUT PLAN & SECTIONS
- 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 765V SWITCHYARD DIRECT STROKE LIGHTNING PROTECTION CALCULATION

NOTES:-

- ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
- LINE SIDE EQUIPMENTS SHALL BE PROTECTED BY THE EARTH WIRE WHICH WILL BE CONNECTED TO THE TRANSMISSION LINE TOWER.

BILL OF QUANTITY FOR LIGHTNING PROTECTION:-

Sl. No.	DESCRIPTION	QTY.
1.	7/45mm GALVANISED STEEL EARTH WIRE	6100 M
2.	TENSION CLAMP WITH D-SHAPE ASSEMBLY TO SUIT 7/45mm CS EARTH WIRE	130 Nos
3.	PC CLAMP TO SUIT 7/45mm CS EARTH WIRE	80 Nos
4.	CLEAT CLAMP TO SUIT 75x25mm CS FLAT	1670 Nos
5.	PAID TYPE COMPRESSION CLAMP TO SUIT 7/45mm CS EARTH WIRE AND 75x25mm CS FLAT	80 Nos
6.	75x25mm CS FLAT	3000 M
7.	CLEAT CLAMP TO SUIT 7/45mm CS EARTH WIRE	60 Nos
8.	TEST LINK TO SUIT 75x25mm CS FLAT	80 Nos

REVISIONS

REVISION	DESCRIPTION	DESIGNED	DRAWN	CHECKED	APPROVED
A	ISSUED FOR APPROVAL				
B	REVISED IN LINE WITH REVIVAL LETTER REF. R/P/W/2005/765-1/JR/26a SHEET 1 OF 3				
C	REVISED IN LINE WITH REVIVAL LETTER REF. R/P/W/2005/765-1/JR/36 SHEET 2 OF 4				

L&T Construction
Power Transmission & Distribution

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN NIGAM LTD

PROJECT ESTABLISHMENT OF 2x1500MVA 765/400KV SUBSTATION AT PHAGI (JAIPIUR) ALONG WITH 400KV TERMINAL BAYS AT EXISTING 400KV HEERAPURA SUBSTATION.

SUPPLIER CONTRACTOR:

JOB No.: 011224-E-SY
SCALE: 1:1200

TITLE: 765/400KV GSS AT PHAGI (NEW) SUBSTATION
765KV SWITCHYARD AREA
LIGHTNING PROTECTION LAYOUT

DATE: 06.03.12
DATE: 07.03.12
DATE: 07.03.12
DATE: 06.03.12

DRG. No.: 011224-E-SY-1-1-0108

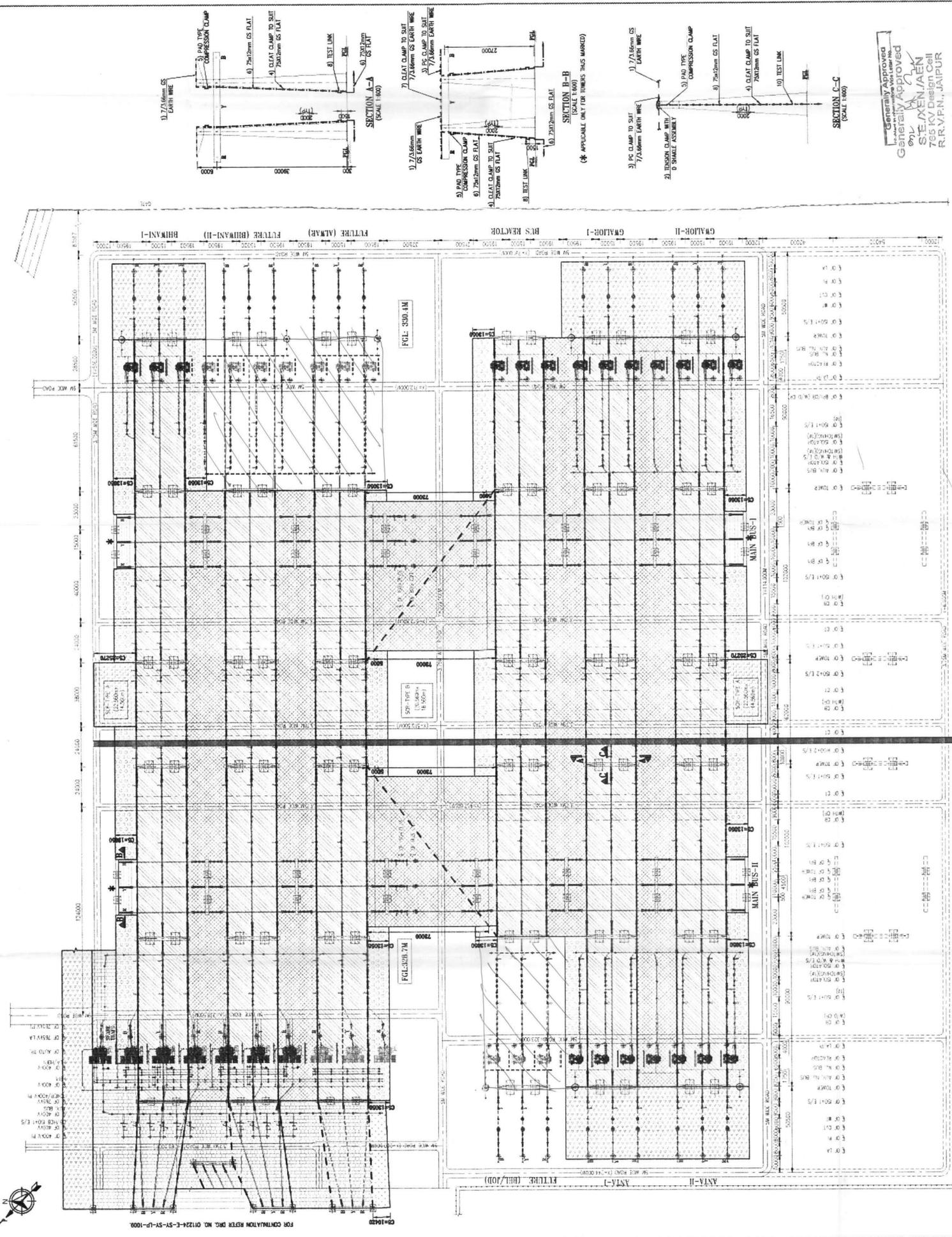
PROJECTION: 1st ANGLE

SHEET No.: 0108

NO. OF SHEETS: 01

CHECKED BY: ARCHITECTURE: D.A.Z. DATE: 18.05.12
CIVIL & STRUCTURAL: D.A.Z.
PLUMBING & SANITARY: DATE: -
MECHANICAL: DATE: -
INSTRUMENTATION: DATE: -

RELEASED FOR: PRELIMINARY TENDER INFORMATION APPROVAL CONSTRUCTION



CHECKED BY: ARCHITECTURE: D.A.Z. DATE: 18.05.12
CIVIL & STRUCTURAL: D.A.Z.
PLUMBING & SANITARY: DATE: -
MECHANICAL: DATE: -
INSTRUMENTATION: DATE: -

RELEASED FOR: PRELIMINARY TENDER INFORMATION APPROVAL CONSTRUCTION

1	2	3	4	5	6	7	8
RELEASED FOR: <input type="checkbox"/> PRELIMINARY <input type="checkbox"/> TENDER <input type="checkbox"/> INFORMATION <input checked="" type="checkbox"/> APPROVAL <input type="checkbox"/> CONSTRUCTION		INSTRUMENTATION ELECTRICAL MECHANICAL PLUMBING & SANITARY CIVIL & STRUCTURAL ARCHITECTURE		CHECKED BY: _____ DATE: _____ SIGN: _____		JOB No.: 011224-E-SY TITLE: 765/400KV GSS AT PHAGI (NEW) SUBSTATION STREET LIGHTING LAYOUT	
DRG. No. 011224-E-SY-11-0099-01-01-B		SHEET 01 OF 01		SIZE A2		SCALE 1:2500	

CLIENT: RAJASTHAN RAJYA VIDYUT PRASARAN CONSULTANT: L&T Construction Project: ESTABLISHMENT OF 2x1500MVA, 765/400KV SUBSTATION AT PHAGI (ALONG WITH 400KV TERMINAL BAYS AT EXISTING 400KV HEERAPURA SUBSTATION). SUPPLIER/CONTRACTOR: NIGAM LTD.	REVISIONS REV. No. DESCRIPTION B REVISED IN LINE WITH RFP COMMENTS DATED 06.01.14 A ISSUE FOR APPROVAL
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REVISIONS REV. No. DESCRIPTION B REVISED IN LINE WITH RFP COMMENTS DATED 06.01.14 A ISSUE FOR APPROVAL	CHECKED BY: _____ DATE: _____ SIGN: _____
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LEGEND	DESCRIPTION	UNIT	QTY
☒	OUTDOOR STREET LIGHTING PANEL (TYPE: ACP3) MOUNTED AT 1.5M FROM FGL (FOR NORMAL STREET LIGHTING) AS PER SPECIFICATION SECTION: LS. C1.2.1.1	Nos	03
●	20M HIGH MAST HOT DIP GALVANIZED WITH GALVANIZED LANTERN CARriage ARRANGEMENT SUITABLE FOR 12 Nos OF 2x400W HPSV LUMINAIRES AND ITS CONTROL GEAR BOXES AND LIGHTING FINAL	Nos	03

NOTES:-

1. ALL DIMENSIONS ARE IN MILLIMETERS UNLESS OTHERWISE SPECIFIED.
2. ALL CO-ORDINATES ARE MARKED IN METRE.
3. EARTHING OF LIGHTING PANEL SHALL BE CARRIED OUT USING TWO SEPARATE 50x6mm GS FLAT & LIGHT FITTING SHALL BE DONE USING 16SWG GI WIRE.
4. LIGHTING CABLES SHALL BE DIRECTLY BURIED.

VERTICAL AIMING ANGLE (7) FIXTURES ON LIGHTING MAST

AIMING ANGLE (LATERAL)

REVISION REFERENCE DRAWING:-

1. ELECTRICAL LAYOUT PLAN - DRG. NO. RVPN/EHVSP/N-1/DRG-2a, SHEET 1 OF 3.
1. 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 765KV SWITCHYARD LAYOUT - PLAN & SECTIONS - DRG. NO. 011224-E-SY-11-004.
2. 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 400KV SWITCHYARD LAYOUT - PLAN & SECTIONS - DRG. NO. 011224-E-SY-11-005.

L&T REFERENCE DRAWINGS:-

1. 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 765KV SWITCHYARD LAYOUT - PLAN & SECTIONS
2. 765/400KV GSS AT PHAGI (NEW) SUBSTATION - 400KV SWITCHYARD LAYOUT - PLAN & SECTIONS

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