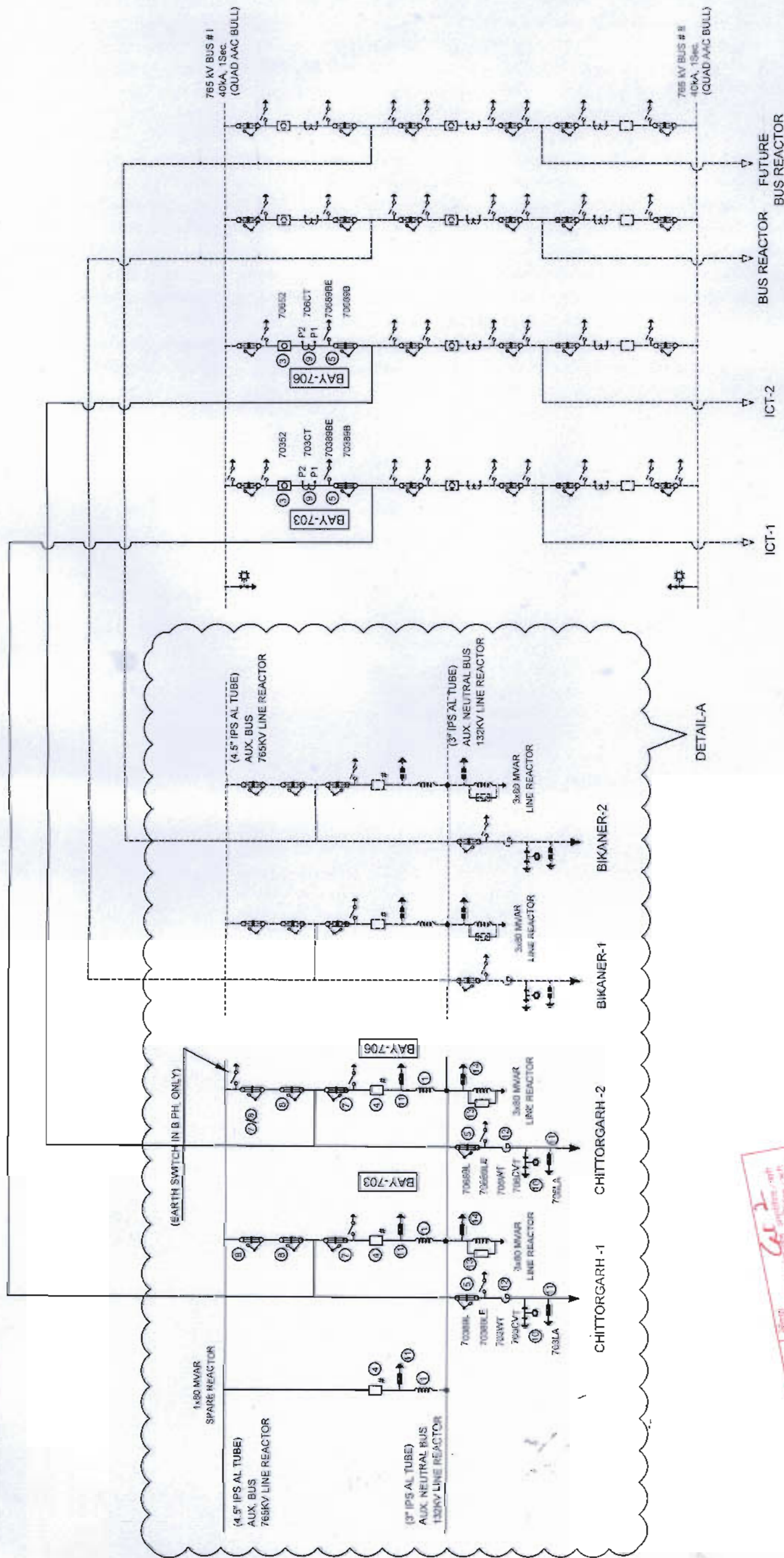


ANNEXURE -1 (DRAWING LIST)

Sl. No.	Description of drg./doc.	Drg./doc. No.	Rev no.
1.	Single line diagram for Ext. of 765kV Ajmer Substation(Three sheets)	TB-3-386-510-001A	01
2.	Layout plan for Ext. of 765kV ajmer Substation	TB-0-386-510-002A	01
3.	Section elevation for Ext. of 765kV Ajmer Substation	TB-1-386-510-003A	01
4.	PGCIL standard equipment earthing drawing	C/ENG/STD/EARTHINGS	00

FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN MM)

V100-015-985-3-B1 'ON DRAWING



DETAIL-A

NOA NO. : CC-CS/483-NRI/SS-2802/11/GB/NOA-1&2/5478 & 5479 DT. 31.07.15

POWER GRID CORPORATION OF INDIA LIMITED
SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S &
765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR
ISTS(PART-B)

REV.	DATE	ALTERED	CHECKED	APPROVED	ZONE
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POWER GRID CORPORATION OF INDIA LIMITED
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ISTS(PART-B)

REVISED AS PER CUSTOMER LETTER DATED 04.11.15	ZONE	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER CUSTOMER	DATE	REVISED AS PER 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FIRST ANGLE PROJECTION (ALL DIMENSIONS ARE IN MM)

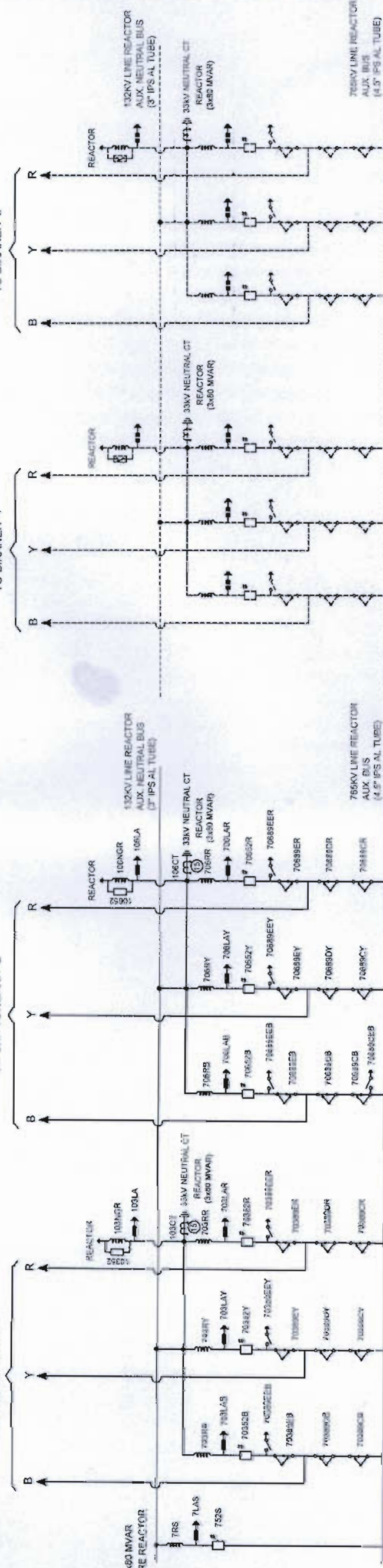
DRAWING No. TB-3-BL 100-015-985-386

TO CHITTORGARH -1

TO CHITTORGARH -2

TO BIKANER -1

TO BIKANER -2



DETAIL-A
(ARRANGEMENT OF LINE REACTOR AND AUX. BUS.)

SYSTEM PARAMETERS	
DESCRIPTION	
1) HIGHEST SYSTEM VOLTAGE	765 kV
2) SYSTEM OPERATING VOLTAGE	132 kV (r.m.s.)
3) P.F. WITHSTAND VOLTAGE	1.4 kV
4) LIGHTING IMPULSE WITHSTAND VOLTAGE	830 kV (r.m.s.)
5) SWITCHING IMPULSE WITHSTAND VOLTAGE	2100 kV
6) SYSTEM FAULT LEVEL	1660 kV
7) CREEPAGE	40KA FOR 1 Sec.
8) SYSTEM EARTHING	25MM/KV
	EFFECTIVELY

NDA NO. : CC-CS/483-NRI/SS-2802/11/G8/NOA-1&2/5478 & 5479 DT. 31.07.15

ADDITIONAL INFORMATION
W.O.No. 85004
STATUS OF DRAWING CONTRACT
DISTRIBUTION OF PRINTS

POWER GRID CORPORATION OF INDIA LIMITED
SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S & 765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR
ISTS(PART-B)

भारत भारती इलेक्ट्रिकल्स लिमिटेड
दूरस्थित परियोजना विभाग
BHARAT HEAVY ELECTRICALS LTD.
TRANSMISSION PROJECTS DIVISION

भारत भारती इलेक्ट्रिकल्स लिमिटेड
दूरस्थित परियोजना विभाग
BHARAT HEAVY ELECTRICALS LTD.
TRANSMISSION PROJECTS DIVISION

REV. 01
DATE 21.11.15
CHECKED SK/AA
APPROVED AS/RS

REV. 01
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दूरस्थित परियोजना विभाग
BHARAT HEAVY ELECTRICALS LTD.
TRANSMISSION PROJECTS DIVISION

LEGENDS:-

_____ PRESENT SCOPE

----- FUTURE/EXISTING SCOPE

NOTE:-

- 1) SUPPLY, ERECTION, TESTING AND COMMISSIONING OF AUX BUS FOR REACTOR BAY SHALL BE IN PGCIL SCOPE.
- 2) WAVE TRAP SHALL BE PROVIDED IN TWO PHASE ONLY.

REFERENCE DWG/DOC. :--

- 1) SINGLE LINE DIAGRAM (TENDER DRAWING)
DRG. NO - C/ENG/NR-I765KV/CHITTORGAR/H/SID/01 R-0






BILL OF QTY. FOR 132 & 33KV MAIN EQUIPMENTS:

NO OF CORES	CORE NO	APPLICATION	CURRENT RATIO	OUTPUT BURDEN (VA)	ACCURACY CLASS	Min. KNEE FL VOLTAGE (V)	Max. CT SEC. WDG. RESISTANCE (In Ohm)	Max EXCITATION CURRENT AT V _k (IN mA)
6	1	BUS DIFF. CHECK	3000/2000/500/1	-	TPS*	3000/2000/500	15/102.5	20 ON 3000/1 TAP; 30 ON 2000/1; 120 ON 500/1 TAP
	2	BUS DIFF. MAIN	3000/2000/500/1	-	TPS*	3000/2000/500	15/102.5	20 ON 3000/1 TAP; 30 ON 2000/1; 120 ON 500/1 TAP
	3	METERING	3000/ 2000/ 500/1	20 20 20	0.2S 0.2S 0.2S	- - -	- - -	- - -
	4	METERING	3000/ 2000/ 500/1	20 20 30	0.2S 0.2S 0.2S	- - -	- - -	- - -
	5	TRANS DIFF. / LINE PROT.N.	3000/ 2000/ 500/1	-	TPS*	3000/ 2000/ 500	15/102.5	20 ON 3000/1 TAP; 30 ON 2000/1; 120 ON 500/1 TAP
	6	LINE PROT.N. / BUS PROT.N.	3000/ 2000/ 500/1	-	TPS*	3000/ 2000/ 500	15/102.5	20 ON 3000/1 TAP; 30 ON 2000/1; 120 ON 500/1 TAP

NOTE: 1) * ALL PROTECTION CORES SHALL BE OF ACCURACY CLASS TPS AS PER IEC : 60044-6.
2) METERING CORE SHALL BE OF ACCURACY CLASS 0.2S AS PER IEC : 60044-1.

800KV CVT

Ratio	7.65KV / 110V	110KV / 110V	110KV / 110V
	13	13	13
Sec - I	Class-	0.5/3P, 50VA	
Sec - II	Class-	0.5/3P, 50VA	
Sec - III	Class-	0.2, 50VA	
		Capacitance	1800 pF (+10% -5%)

S/N/O	DESCRIPTION	RATING	QTY (NO.)	SYMBOL	SCOPE OF SUPPLY	LEGEND	LOCATION
13	SF6 CIRCUIT BREAKER FOR NGR BYPASS (1 PH)	132KV, 1250A	2		BHEL	52	10352, 10652
14	SURGE ARRESTER (1 PH.)	120 KV, 10 KA 8 KJ/KV	2		POCIL	LA	103LA, 106LA
15	NEUTRAL CT. (1 PH.) WITH 120% EXTENDED CURRENT RATING	33KV	2		PCCIL	CT	103CT, 106CT

NOA NO : CC-CS/483-NRI/SS-2802/11/GB/NOA-1&2/5478 & 5479 DT. 31.07.15

ADDITIONAL INFORMATION W.O.No. 85004	STATUS OF DRAWING CONTRACT	DISTRIBUTION OF PRINTS		REV. DATE ALTERED DIM 21.11.15 CHECKED SK/AA APPROVED AS/RS		REV. DATE 21.11.15
NAME OF CUSTOMER/PROJECT शारदा/परियोजना का नाम		NAME OF CUSTOMER/PROJECT शारदा/परियोजना का नाम		NAME OF CUSTOMER/PROJECT शारदा/परियोजना का नाम		NAME OF CUSTOMER/PROJECT शारदा/परियोजना का नाम
SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S & 765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR (ISTS(PART-B))		SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S & 765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR (ISTS(PART-B))		SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S & 765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR (ISTS(PART-B))		SUBSTATION PACKAGE-SS01 FOR EXT. OF 765KV AJMER S/S & 765KV CHITTORGARH S/S UNDER GREEN ENERGY CORRIDOR (ISTS(PART-B))
भारतीय विद्युत नियंत्रण BHEL भारतीय विद्युत नियंत्रण BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION		भारतीय विद्युत नियंत्रण BHEL भारतीय विद्युत नियंत्रण BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION		भारतीय विद्युत नियंत्रण BHEL भारतीय विद्युत नियंत्रण BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION		भारतीय विद्युत नियंत्रण BHEL भारतीय विद्युत नियंत्रण BHARAT HEAVY ELECTRICALS LTD. TRANSMISSION PROJECTS DIVISION
सिंगल लाइन डायग्राम FOR EXT. OF 765KV AJMER SUBSTATION		सिंगल लाइन डायग्राम FOR EXT. OF 765KV AJMER SUBSTATION		सिंगल लाइन डायग्राम FOR EXT. OF 765KV AJMER SUBSTATION		सिंगल लाइन डायग्राम FOR EXT. OF 765KV AJMER SUBSTATION
ड्राइंग/रिव. TB-3-386-510-001A		ड्राइंग/रिव. TB-3-386-510-001A		ड्राइंग/रिव. TB-3-386-510-001A		ड्राइंग/रिव. TB-3-386-510-001A
9000 क. / SHEET No. 2		9000 क. / SHEET No. 2		9000 क. / SHEET No. 2		9000 क. / SHEET No. 2

GENERAL INSTRUCTIONS FOR EARTHING:

1. Location of earthing conductors / risers shown in the earthing drawing may change to suit the site condition.
2. Two different risers of one structure/equipment shall be connected to different conductors of main earthmat.
3. Earthing conductor around the building shall be buried at a minimum distance of 1500 mm from the outer boundary of the building.
4. Minimum distance of 6000 mm shall be maintained between two treated (pipe) electrodes.
5. For surge arrester, earthing lead from surge counter to main earthmat shall be shortest in length as practically as possible. Earthing lead from surge arrester shall not be passed through any pipe.
6. No welding is allowed in the over ground earthing leads/risers.

RELEASED FOR CONSTRUCTION

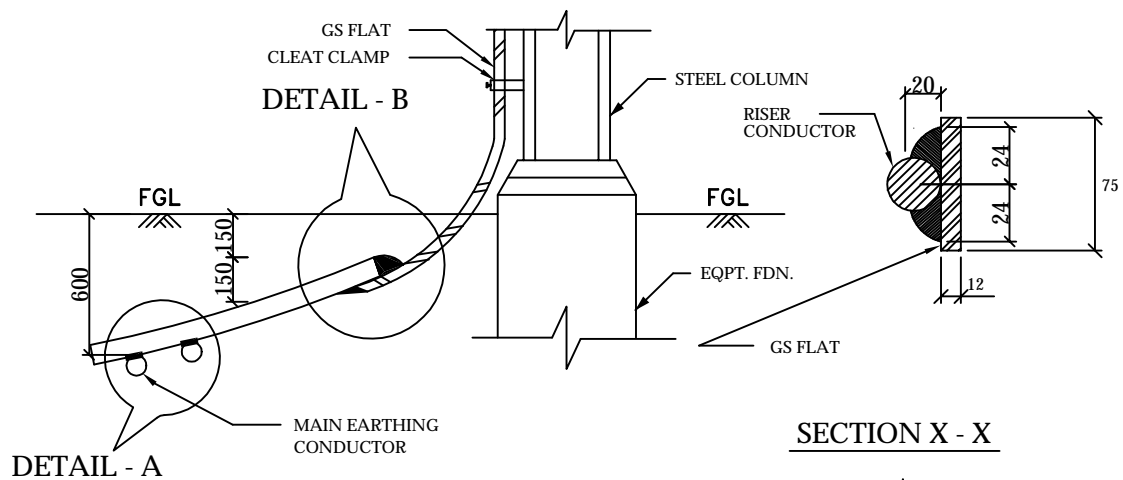
**POWER GRID CORPORATION
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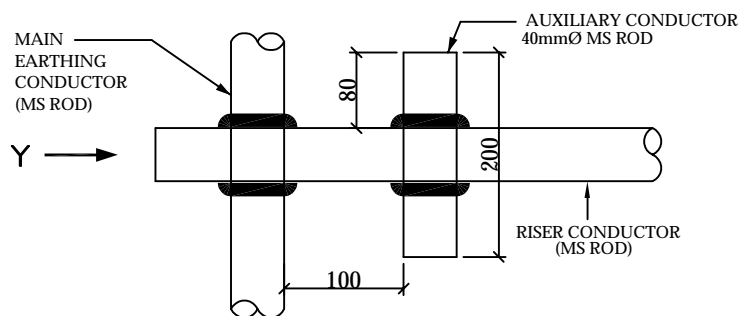
PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

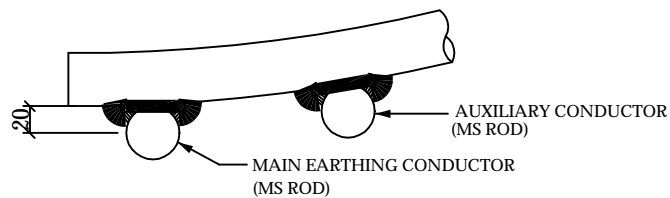
<i>JH Parkar</i>	<i>JH Parkar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev.
CKD BY	PRPD BY	Date	SHEET # 1	00



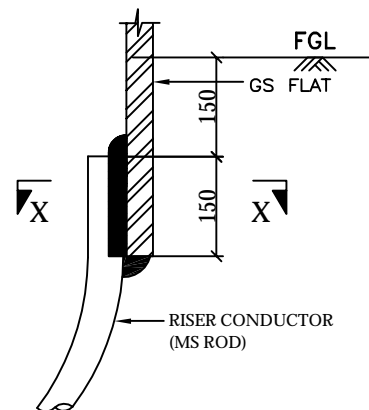
TYPICAL DETAILS OF RISER



PLAN

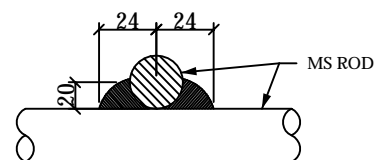


**ELEVATION
DETAIL - A**



ELEVATION

DETAIL - B



VIEW - Y

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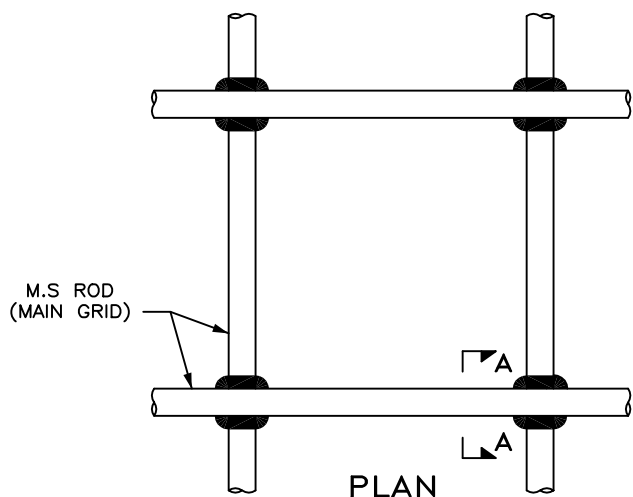
**POWER GRID CORPORATION
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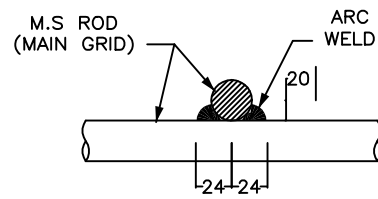
PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

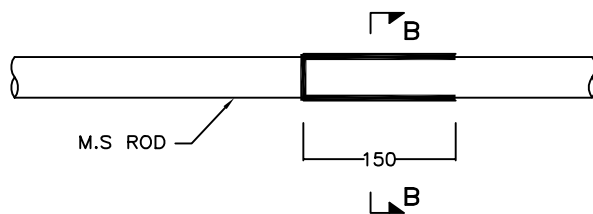
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CKD BY	PRPD BY	Date		



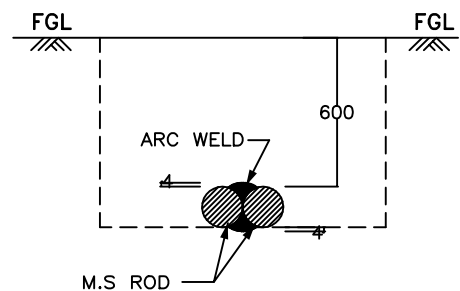
PLAN
DETAIL OF CROSS JOINT



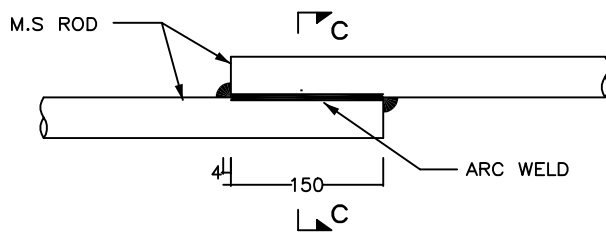
SECTION A - A



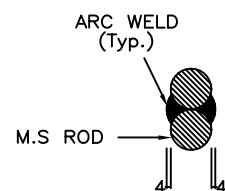
ELEVATION
(CONDUCTORS KEPT ON SIDES)



SECTION B - B



ELEVATION
(CONDUCTORS ONE ABOVE THE OTHER)



SECTION C - C

DETAIL OF LAP JOINT

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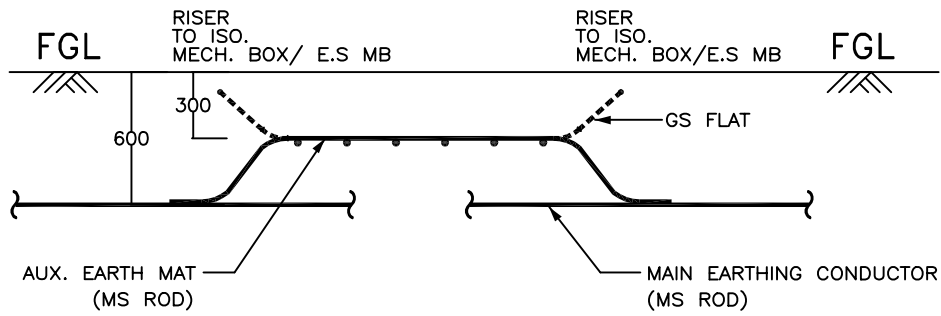


PROJECT :- STANDARD

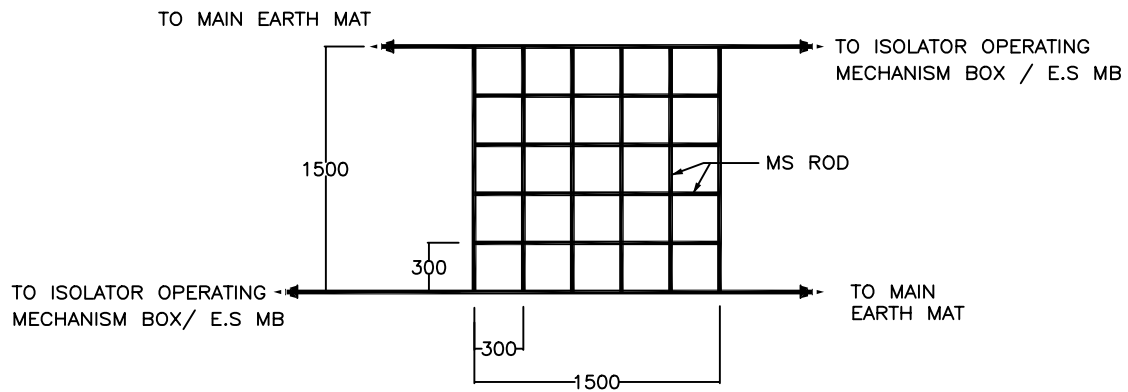
TITLE:- STANDARD EARTHING DETAILS

<i>KK Parkar</i>	<i>KK Parkar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 3	Rev. 00
CKD BY	PRPD BY	Date		

AUXILIARY EARTH MAT



ELEVATION



PLAN

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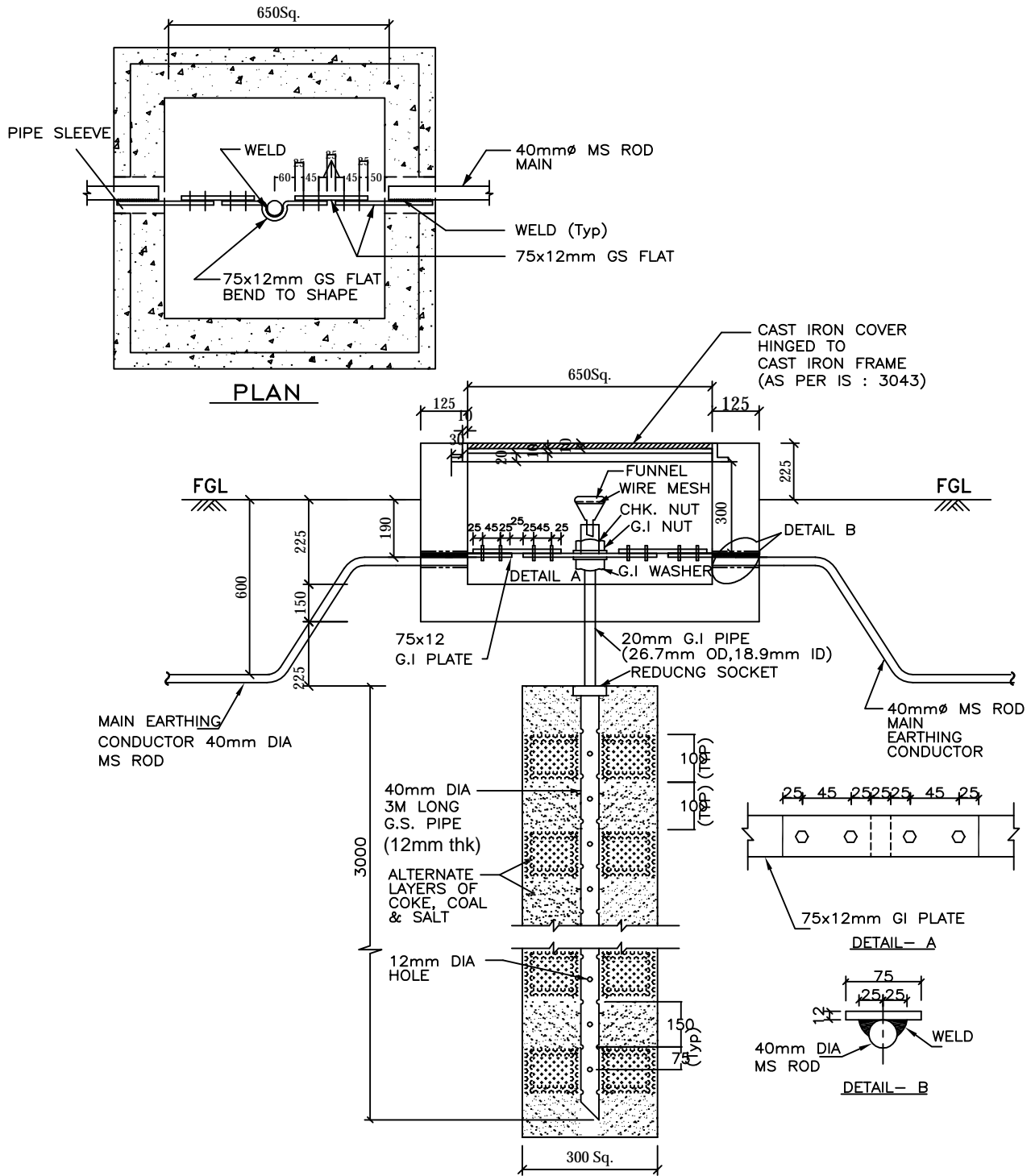


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>SKP</i>	<i>SKP</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev. 00
CKD BY	PRPD BY	Date	SHEET # 4	

PIPE ELECTRODE



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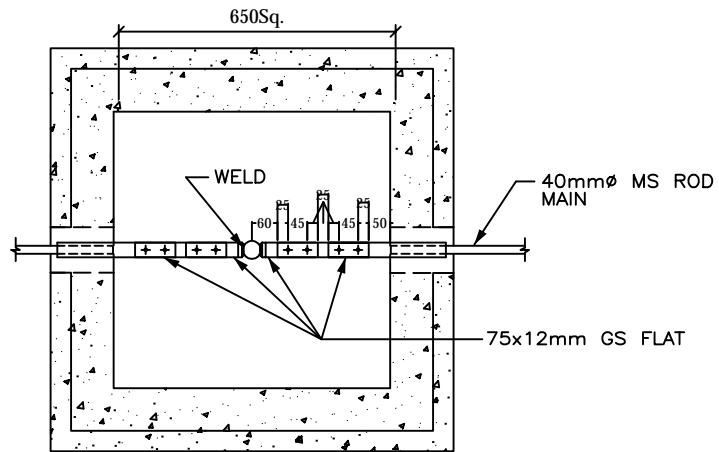


PROJECT :- STANDARD

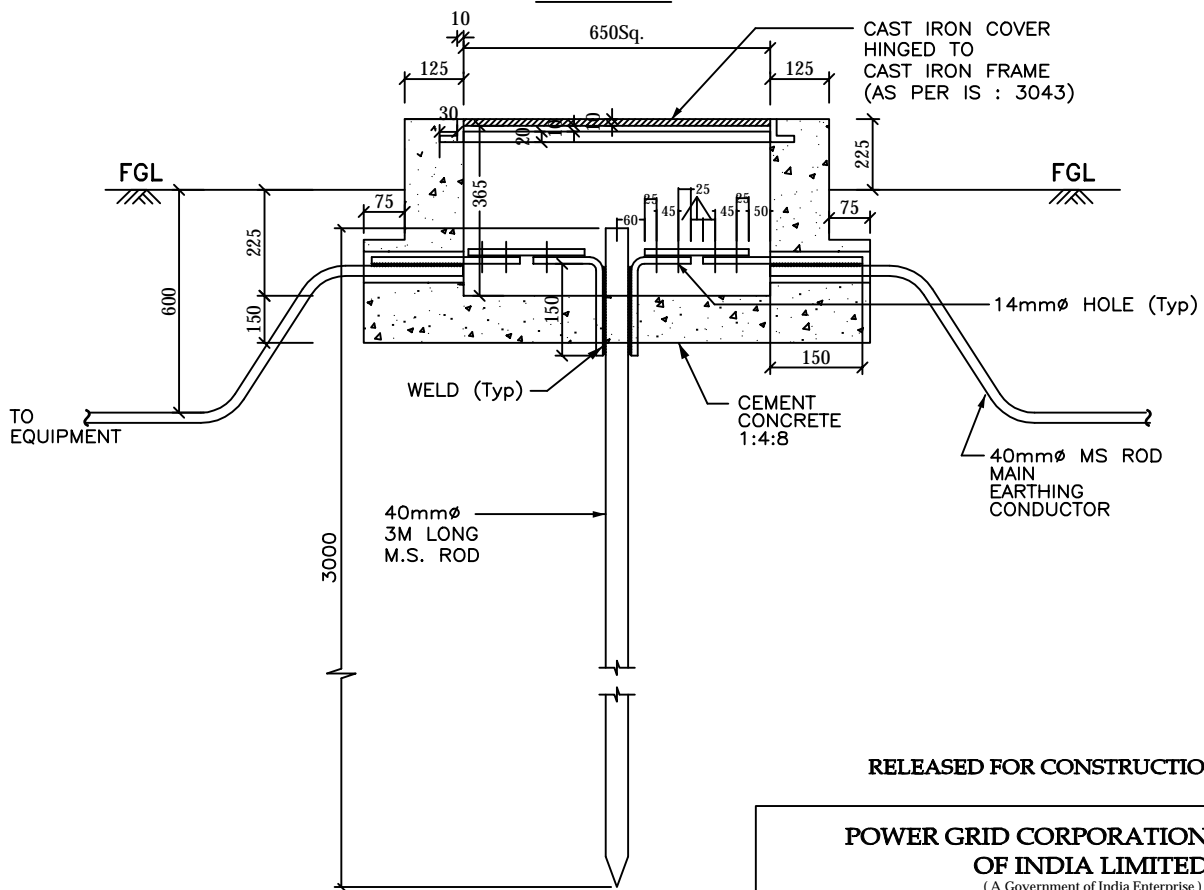
TITLE:- STANDARD EARTHING DETAILS

CKD BY	PRPD BY	Date	Drawing No.: C/ENG/STD/EARTHING SHEET # 5	Rev. 00
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ROD ELECTRODE WITH TEST LINK FOR LM, TOWER WITH PEAK, CVT, LA



PLAN

ELEVATION

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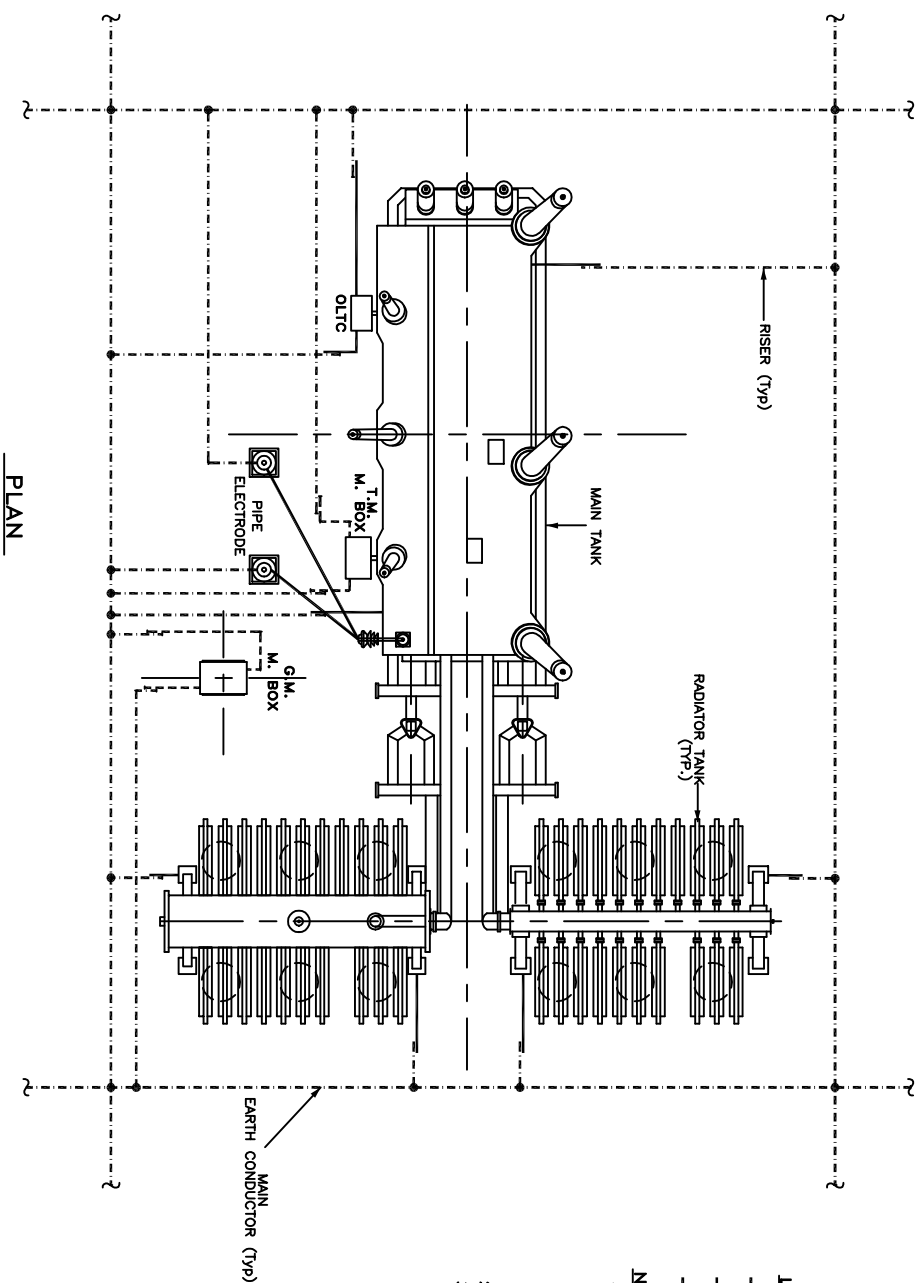


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>HKD Purchar</i>	<i>HKD Purchar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 6	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF TRANSFORMER/ REACTOR



LEGEND

-----	40mmø MS ROD
—————	75 x 12 mm GS FLAT
-----	50 x 6 mm GS FLAT

NOTES :-

1. **No. OF RISERS :-**
- | | | |
|-------------------------|---|-------------------|
| MAIN TANK | - | 2 Nos. |
| RADIATOR TANK | - | 4 Nos. (ICT only) |
| OLTC | - | 2 Nos./M. BOX |
| NEUTRAL EARTH ELECTRODE | - | 2 Nos. |
2. **No. OF PIPE ELECTRODE REQUIRED = 2 Nos.**
3. **PIVOT SUPPORTS SHALL BE EARTHED TO THE MAIN EARTHING CONDUCTOR BY GS FLAT.**

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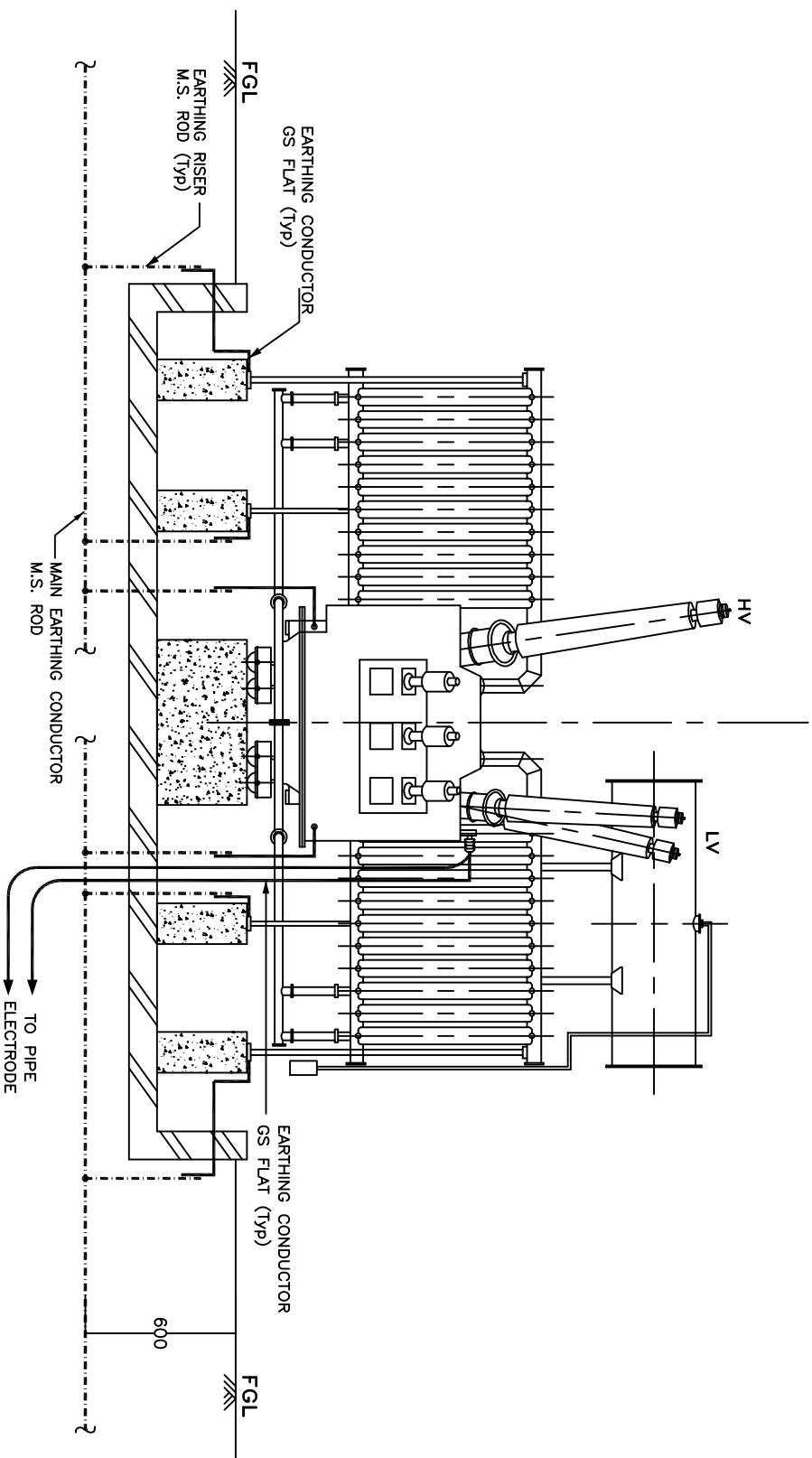


PROJECT :- STANDARD




TITLE:- STANDARD EARTHING DETAILS

		Drawing No.: C/ENG/STD/EARTHINGS SHEET # 7	Rev. 00
269826-0000	269826-0000	27/3/2008	
CKD BY	PRPD BY	Date	

EARTHING OF TRANSFORMER/ REACTOR



LEGEND

	40mm \varnothing MS ROD
	75 x 12 mm GS FLAT
	50 x 6 mm GS FLAT

END VIEW

RELEASED FOR CONSTRUCTION



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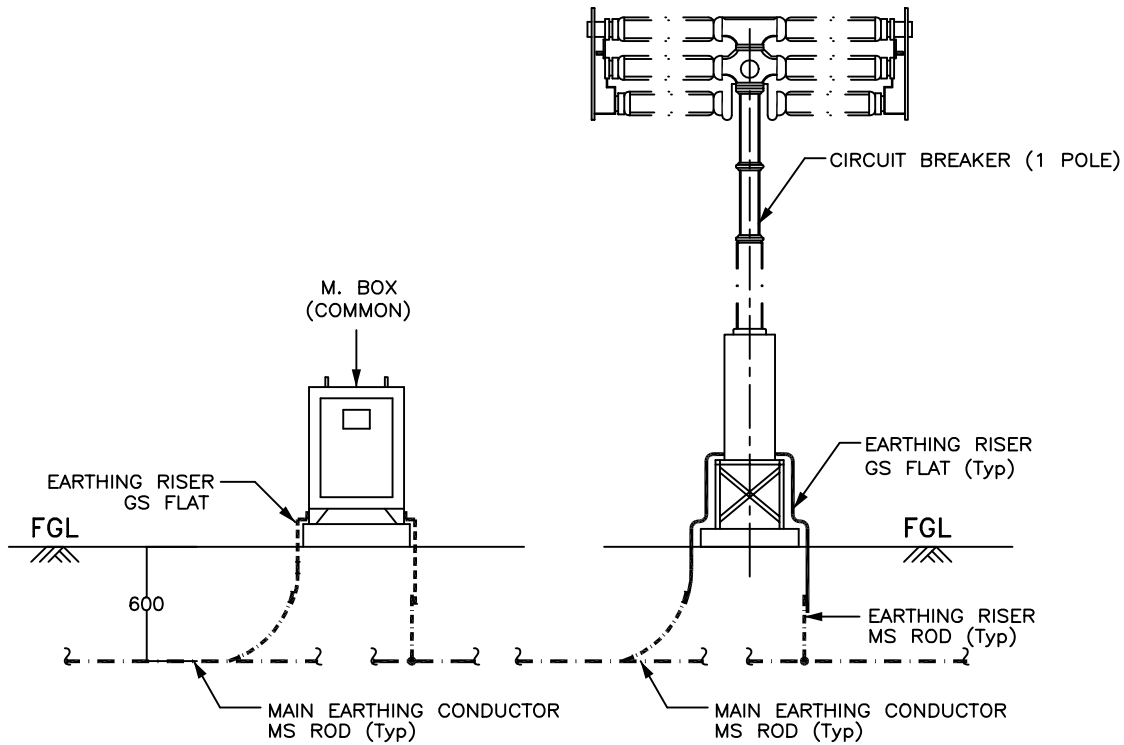
पुनर्विद्युत

PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

		Drawing No: C/ENG/STD/EARTHINGS SHEET # 8	Rev. 00
36062B-Rev.00	27/3/2008		
CKD BY	PRPD BY	Date	

EARTHING OF CIRCUIT BREAKER



ELEVATION

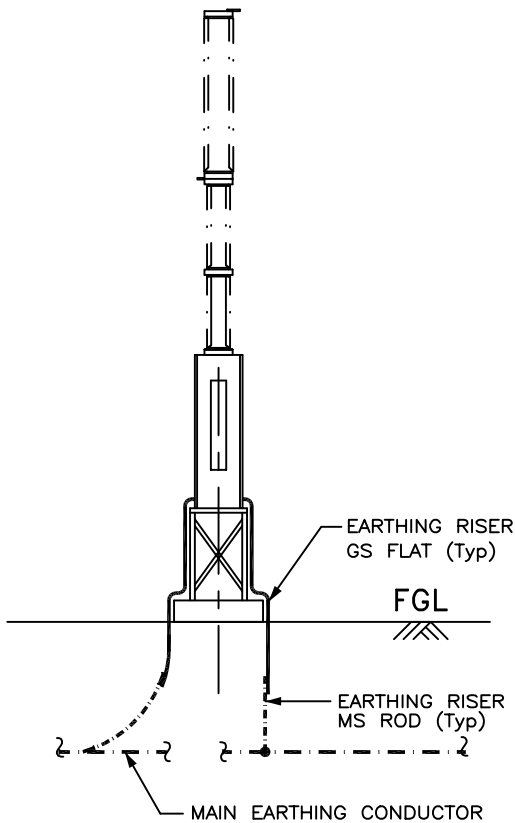
NOTES :-

1. No. OF RISERS FOR CIRCUIT BREAKER = 2 Nos. / PHASE
1. No. OF RISERS FOR LADDER (IF Applicable) = 2 Nos.
2. No. OF RISERS FOR MAR. BOX = 2 Nos.
3. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

LEGEND

	40mm ϕ MS ROD
	75 x 12 mm GS FLAT
	50 x 6 mm GS FLAT

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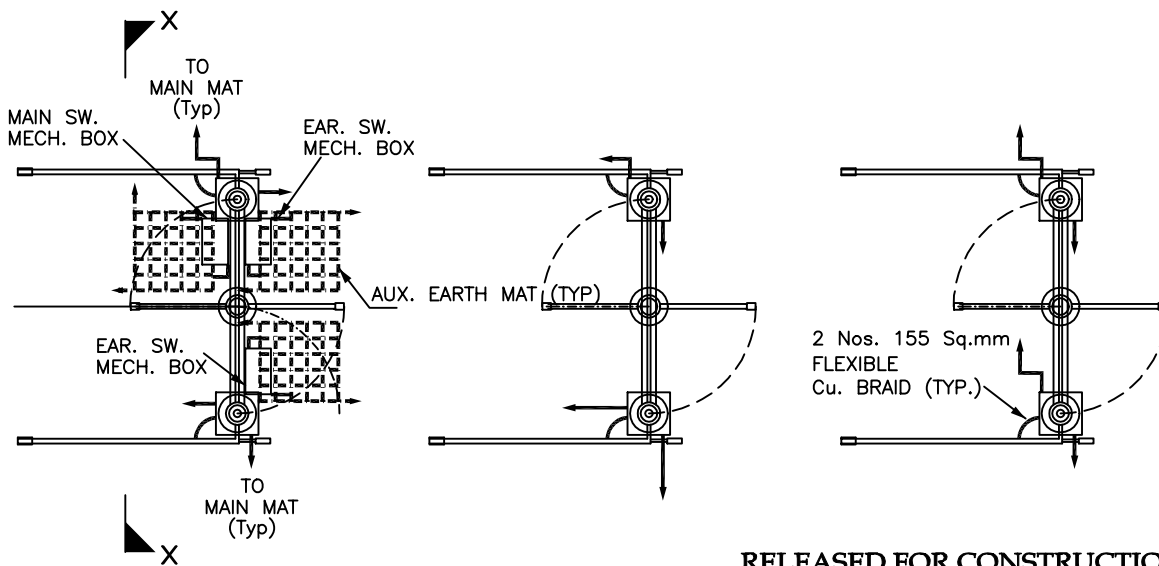
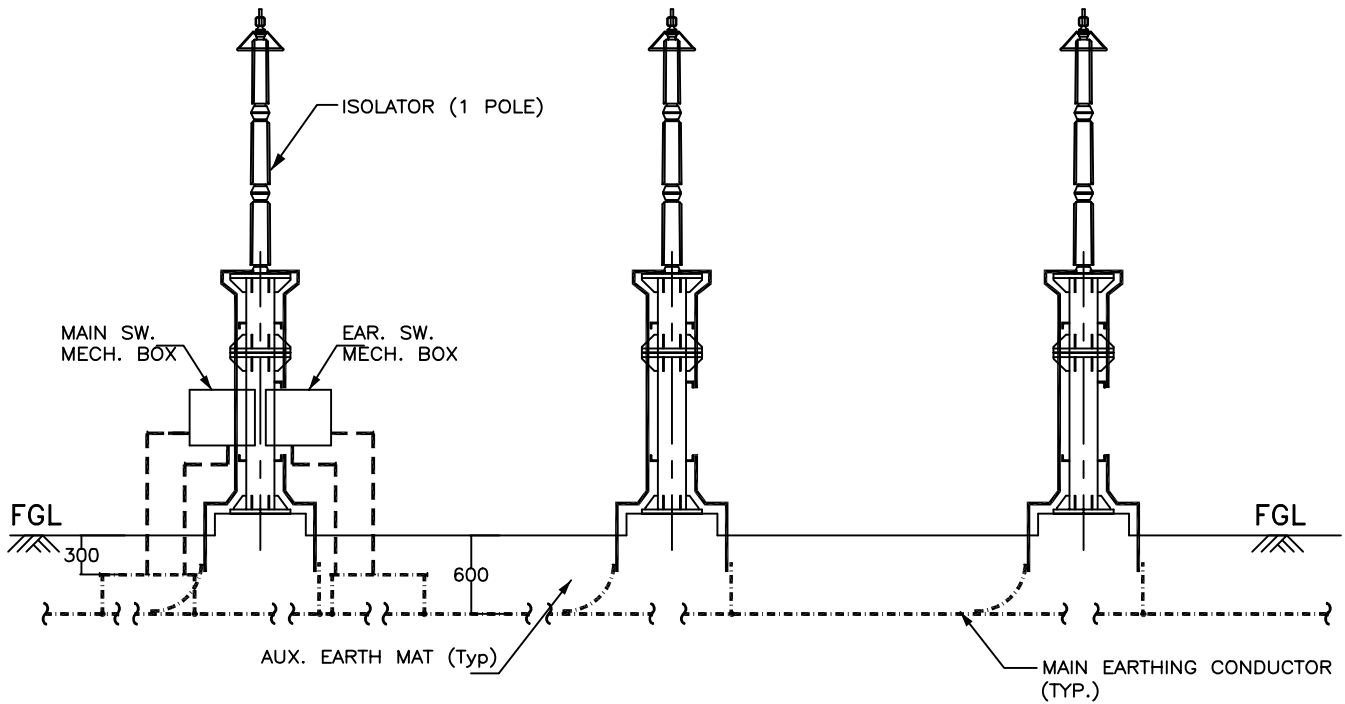


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>KKP</i>	<i>KKP</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev. 00
CKD BY	PRPD BY	Date	SHEET # 9	

EARTHING OF ISOLATOR



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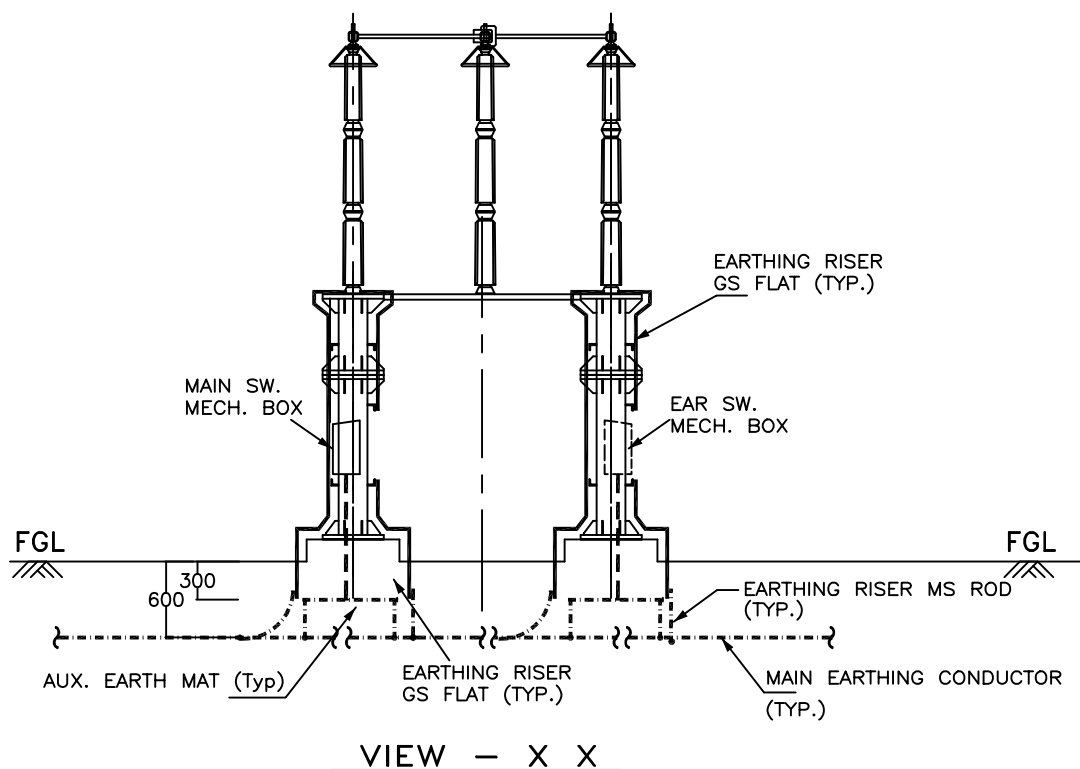


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>MDK Parkar</i>	<i>MDK Parkar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev. 00
CKD BY	PRPD BY	Date	SHEET # 10	

EARTHING OF ISOLATOR (1 PH)



LEGEND

	40mm ϕ MS ROD
	75 x 12 mm GS FLAT
	50 x 6 mm GS FLAT

NOTES :-

1. No. OF RISERS FOR ISOLATOR = 4 Nos. / PHASE.
2. No. OF RISERS FOR MAIN MECH. BOX = 2 Nos.
3. No. OF RISERS FOR EARTH SW. MECH. BOX = 2 Nos. / BOX.
4. No. OF AUXILIARY EARTH MAT = 1 Nos. FOR EACH MB
5. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.
6. NO. OF AUX. EARTHMAT IS INDICATIVE ONLY. IT SHALL BE EXECUTED AS PER ACTUAL NUMBER/POSITION OF EARTH SWITCHES.

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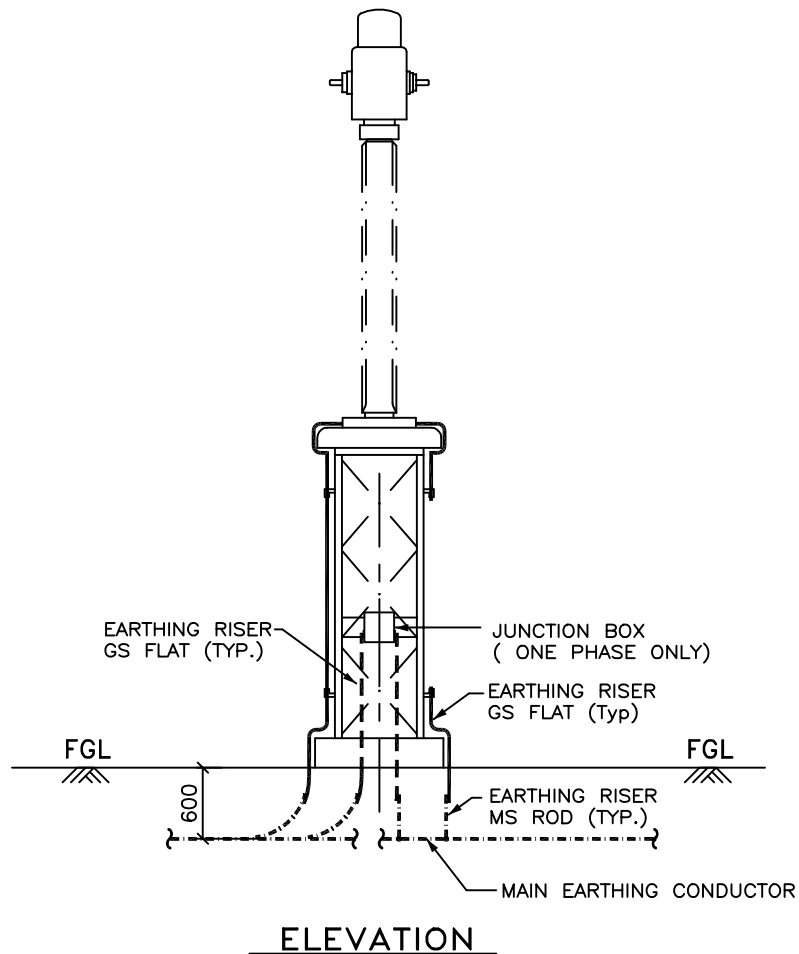


PROJECT :- STANDARD




TITLE:- STANDARD EARTHING DETAILS

<i>HNK Panhar</i>	<i>HNK Panhar</i>	27/3/2008	Drawing No.:	Rev.
CKD BY	PRPD BY	Date	C/ENG/STD/EARTHINGS SHEET # 11	00

EARTHING OF CURRENT TRANSFORMER (1 PH)



LEGEND

	40mm ϕ MS ROD
	75 x 12 mm GS FLAT
	50 x 6 mm GS FLAT

NOTES :-

1. No. OF RISERS = 2 Nos. / PHASE.
2. No. OF RISERS FOR JUN. BOX = 2 Nos.
3. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

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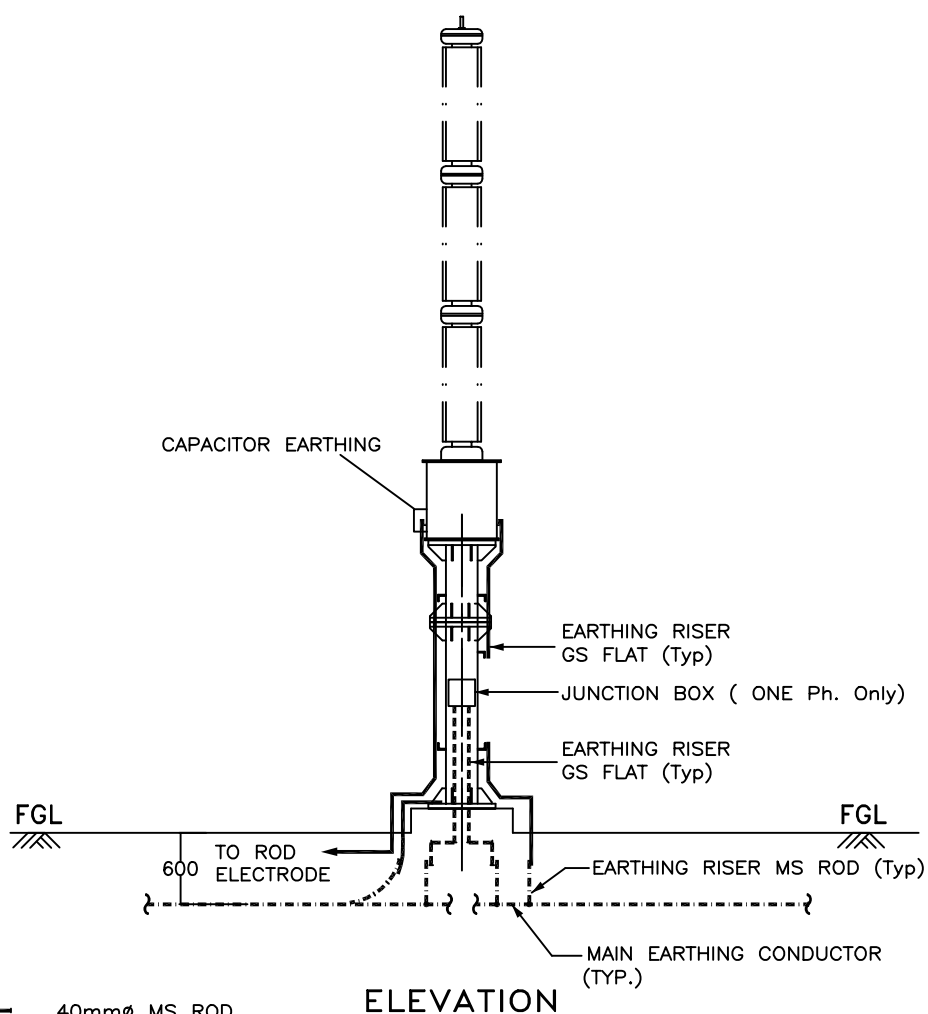


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>SKP</i>	<i>SKP</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 12	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF CAPACITIVE VOLTAGE TRANSFORMER (1 PH)



LEGEND

— · — · — · —	40mm ϕ MS ROD
—————	75 x 12 mm GS FLAT
-----	50 x 6 mm GS FLAT

NOTES :-

1. No. OF RISERS = 3 Nos. / PHASE.
2. No. OF RISERS FOR J. BOX = 2 Nos.
3. No. OF ROD ELECTRODE REQUIRED = 1 No. / PHASE.
4. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

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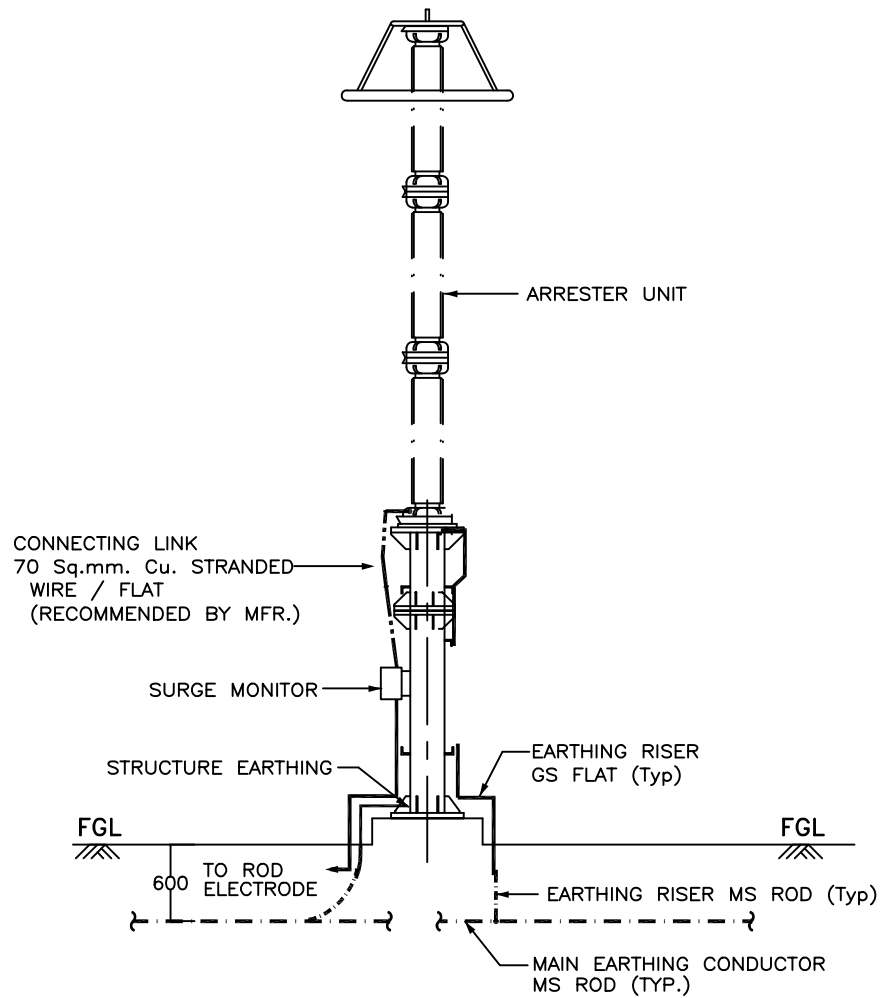


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>KKPankar</i>	<i>KKPankar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 13	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF SURGE ARRESTER (1PH)



ELEVATION

LEGEND

— · — · — 40mm ϕ MS ROD

———— 75 x 12 mm GS FLAT

NOTES :-

- 1 . No. OF RISERS = 3 Nos. / PHASE.
- 2 . No. OF ROD ELECTRODE REQUIRED = 1 No. / PHASE.
- 3 . CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

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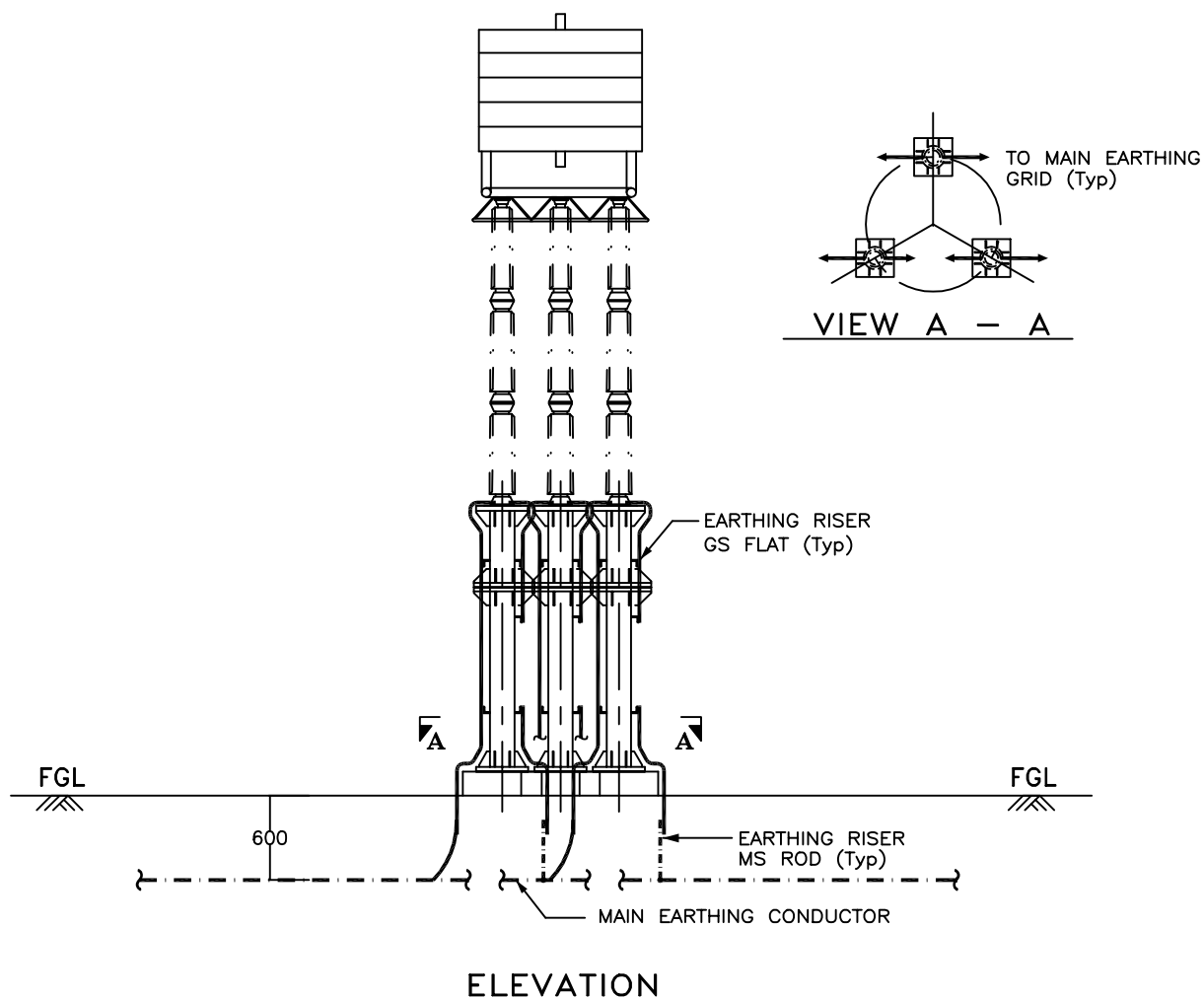


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>CKD</i>	<i>PRPD</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 14	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF WAVE TRAP (1PH)



LEGEND

- · — · — · — 40mm \varnothing MS ROD
—— 75 x 12 mm GS FLAT

NOTE :-

1. No. OF RISERS = 6 Nos. / PHASE.
2. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

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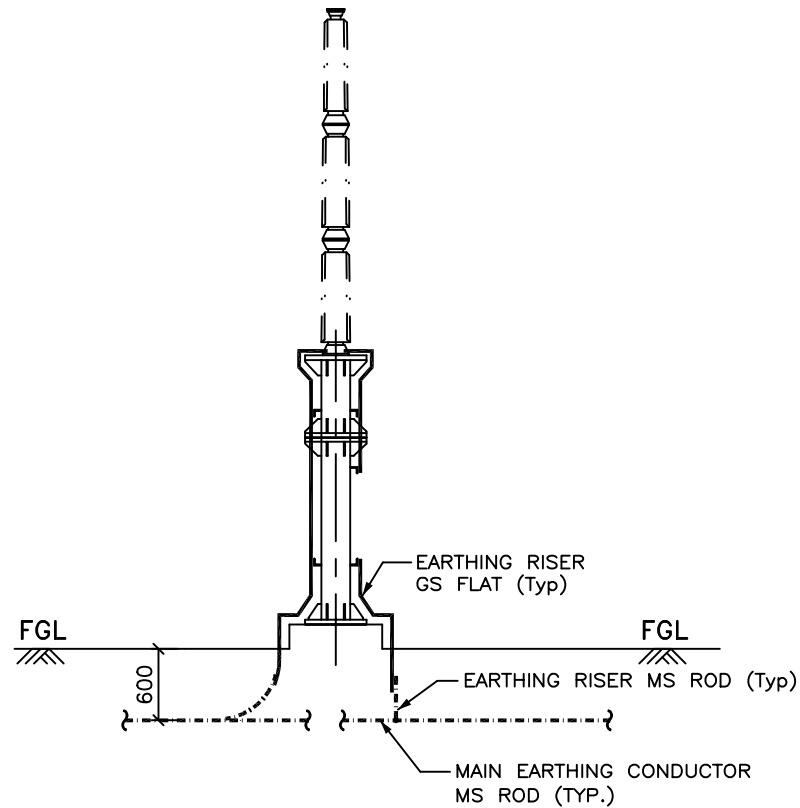


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS



<i>JN Parkar</i>	<i>JN Parkar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 15	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF POST INSULATOR (1PH)



ELEVATION

LEGEND

	40mm ϕ MS ROD
	75 x 12 mm GS FLAT

NOTES :-

1. No. OF RISERS = 2 Nos. / PHASE.
2. CLEAT CLAMP SHALL BE PROVIDED AT 1000mm INTERVAL.

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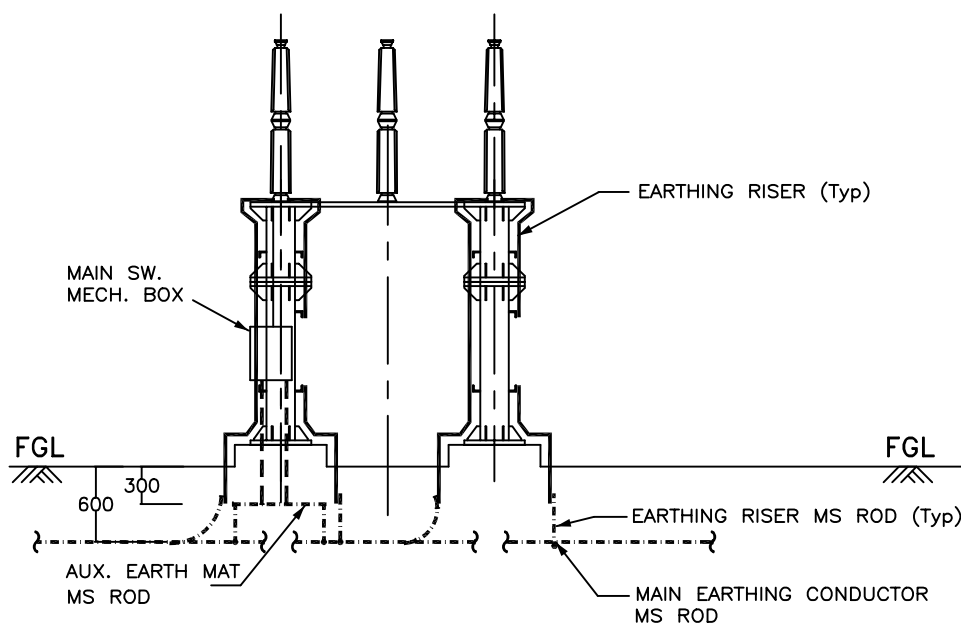


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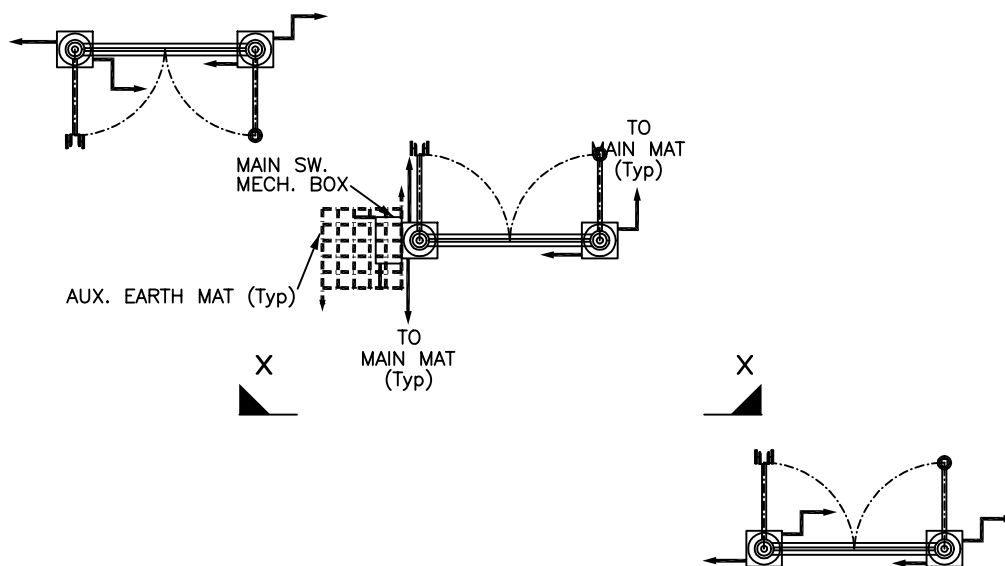
TITLE:- STANDARD EARTHING DETAILS

<i>SKP</i>	<i>SKP</i>	27/3/2008	Drawing No.:	Rev.
CKD BY	PRPD BY	Date	C/ENG/STD/EARTHINGS SHEET # 16	00

TANDEM ISOLATOR



VIEW - X X



PLAN

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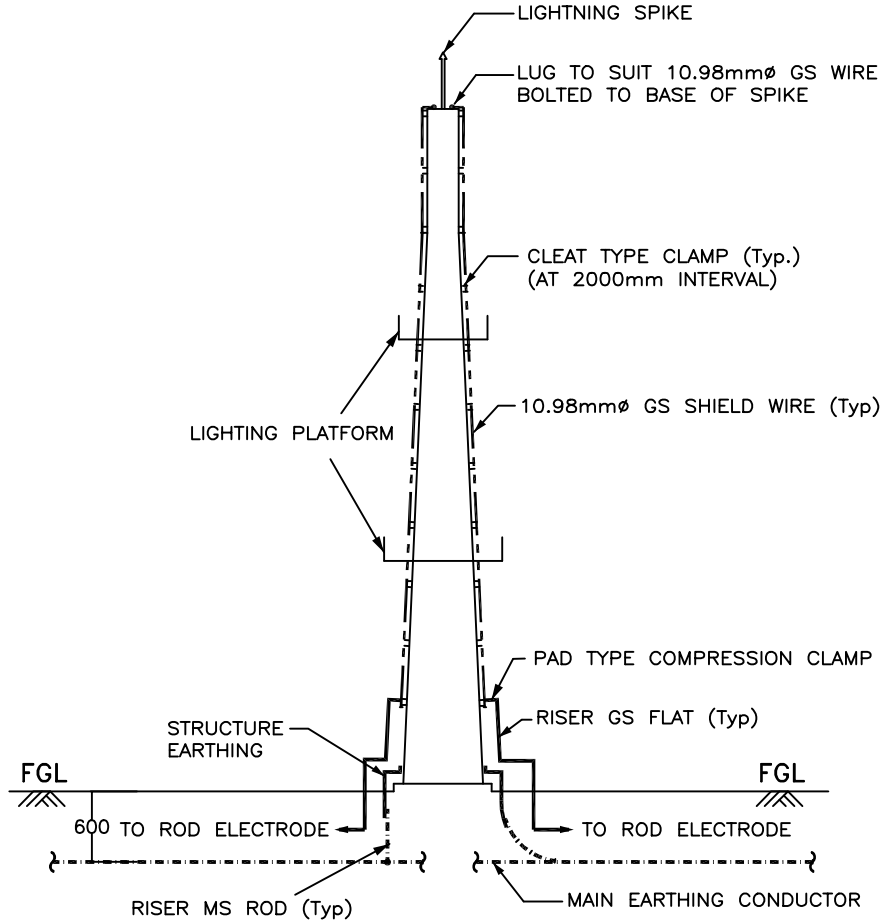
पावरग्रिड

PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>JKP/Perkar</i>	<i>JKP/Perkar</i>	27/3/2008	Drawing No.:	Rev.
CKD BY	PRPD BY	Date	C/ENG/STD/EARTHINGS	00
			SHEET # 17	

EARTHING OF LIGHTNING MAST



NOTES :-

1. No. OF RISERS = 4 Nos.
2. No. OF ROD ELECTRODE REQUIRED = 2 Nos.
3. No. OF PAD TYPE CLAMP = 2 Nos.

LEGEND

- · — · — · — 40mm ϕ MS ROD
- 75 x 12 mm GS FLAT

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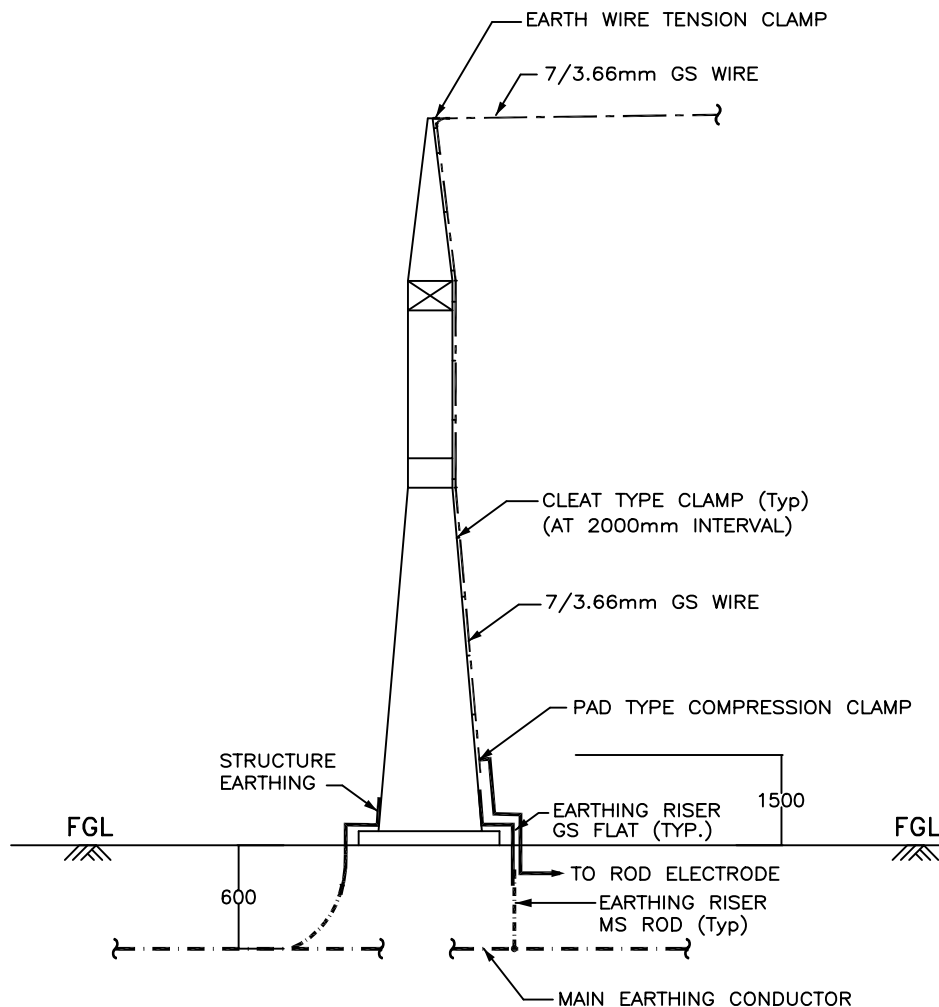


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>HN Parkar</i>	<i>HN Parkar</i>	27/3/2008	Drawing No.:	Rev.
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			SHEET # 18	

EARTHING OF TOWER WITH PEAK



ELEVATION

NOTES :-

1. No. OF RISERS = 3 Nos.
2. No. OF ROD ELECTRODE REQUIRED = 1 No.
3. No. OF PAD TYPE CLAMP = 1 No.

LEGEND

- · — · — 40mm ϕ MS ROD
 ————— 75 x 12 mm GS FLAT

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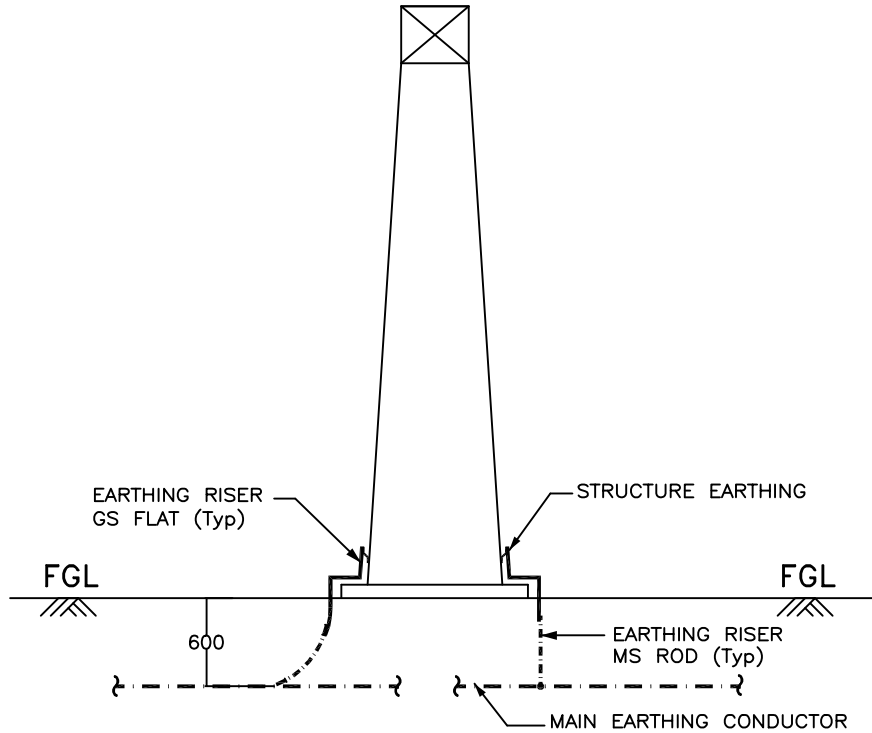


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

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EARTHING OF TOWER WITHOUT PEAK



ELEVATION

LEGEND

- · — · — · — 40mm ϕ MS ROD
- 75 x 12 mm GS FLAT

NOTES :-

1. No. OF RISERS = 2 Nos.

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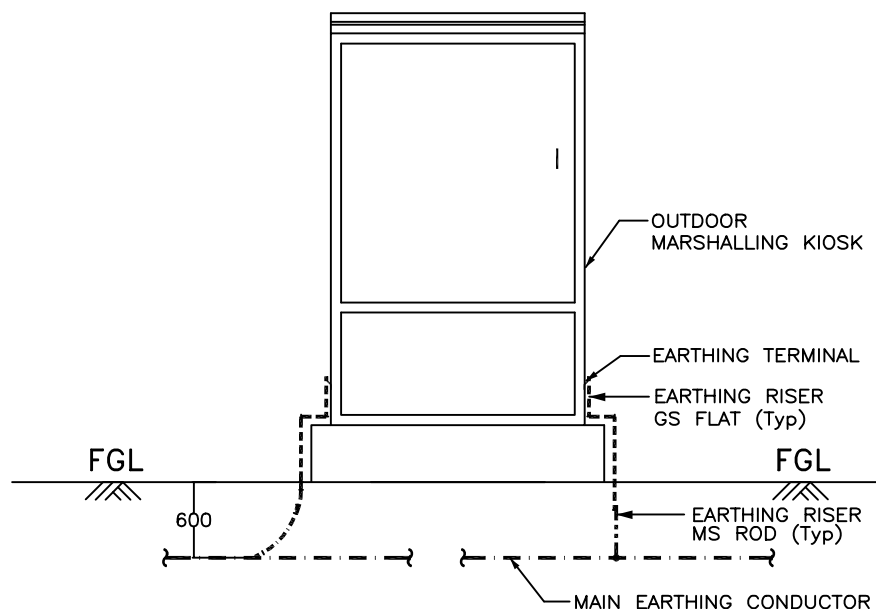


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>KKPurkay</i>	<i>KKPurkay</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 20	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF BAY MARSHALLING BOX



LEGEND

— · — · — · —	40mm \varnothing MS ROD
—————	75 x 12 mm GS FLAT
-----	50 x 6 mm GS FLAT

NOTE :-

1. No. OF RISERS = 2 Nos.

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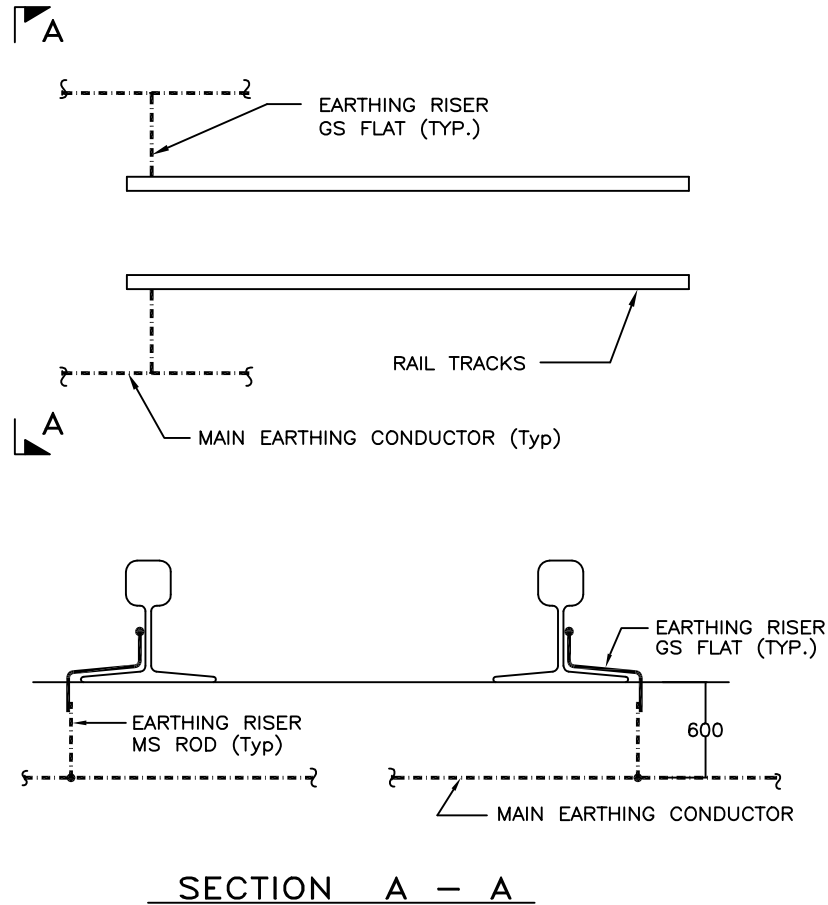


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

<i>SKP</i>	<i>SKP</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev.
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EARTHING OF RAIL TRACK



LEGEND

— · — · —	40mm ϕ MS ROD
—————	75 x 12 mm GS FLAT

NOTES :-

1. EACH RAIL SHALL BE EARTHED AT 30M INTERVAL AND ALSO AT BOTH ENDS.

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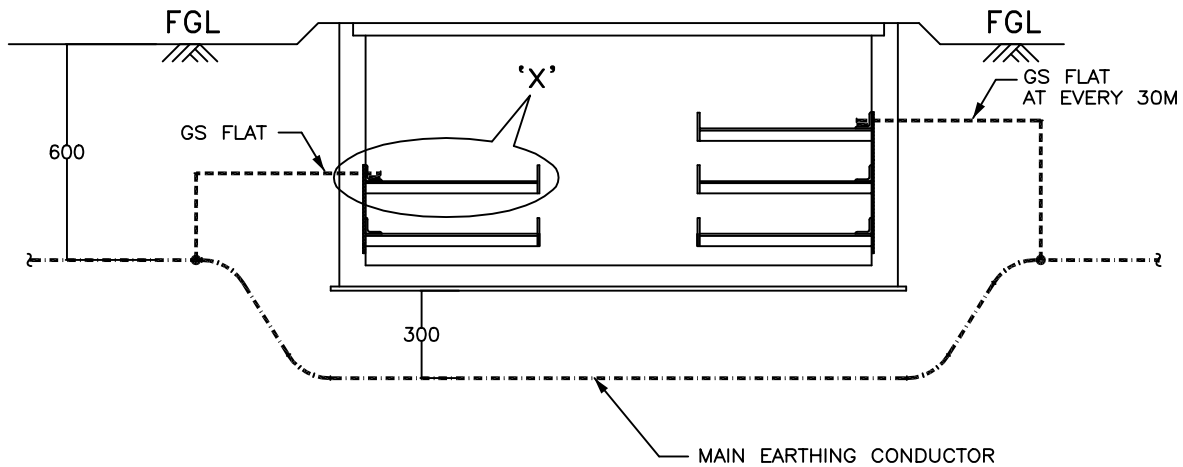


PROJECT :- STANDARD

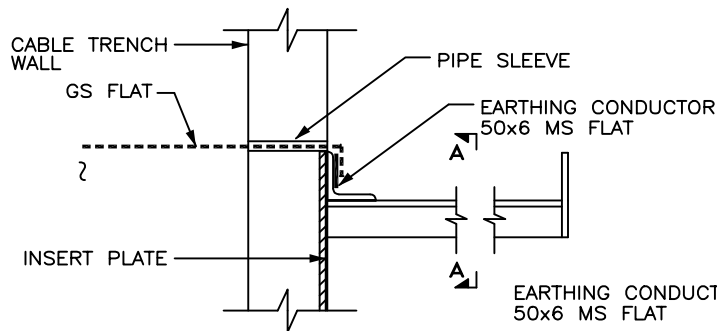
TITLE:- STANDARD EARTHING DETAILS

<i>HN Parhar</i>	<i>HN Parhar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS	Rev.
CKD BY	PRPD BY	Date	SHEET # 22	00

EARTHING OF CABLE TRENCH



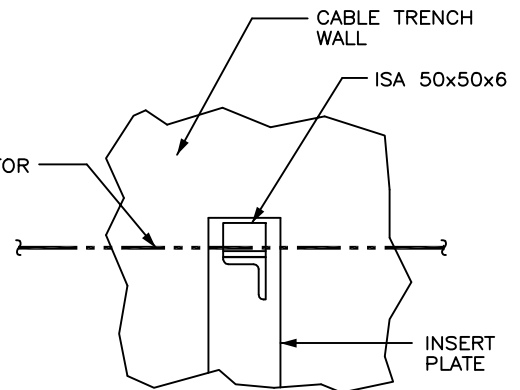
TYPICAL CROSS SECTION OF CABLE TRENCH



DETAIL - X

NOTES :-

1. MS FLAT SHALL RUN ON TOP TIER ALL ALONG THE CABLE TRENCHES & WELDED TO EACH OF THE RACKS.
2. MS FLAT SHALL BE EARTHED AT 30M INTERVAL AND ALSO AT BOTH ENDS.



SECTION A - A

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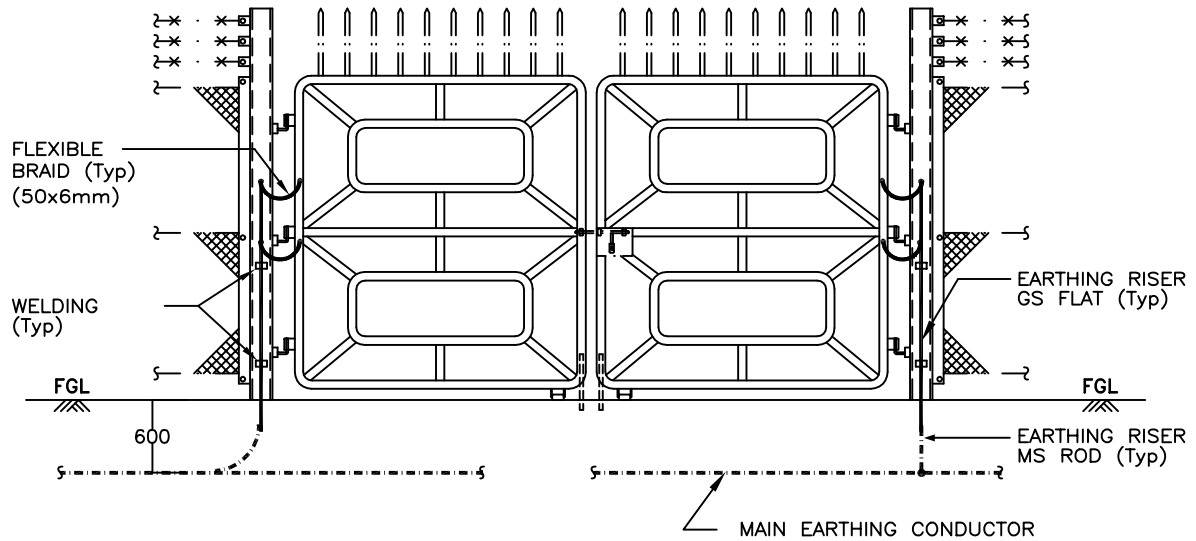


PROJECT :- STANDARD

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<i>KKPankar</i>	<i>KKPankar</i>	27/3/2008	Drawing No.: C/ENG/STD/EARTHINGS SHEET # 23	Rev. 00
CKD BY	PRPD BY	Date		

EARTHING OF GATES & FENCE



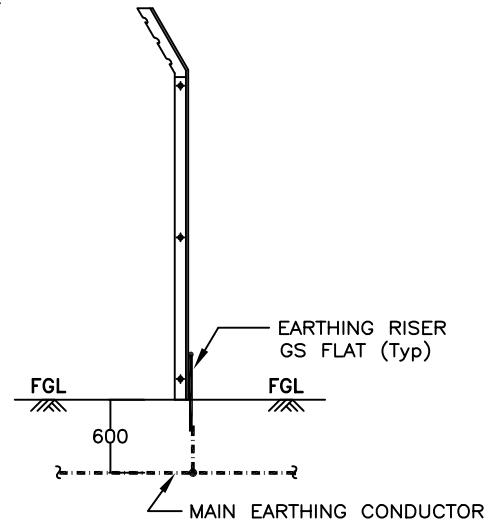
MAIN GATE

LEGEND

	40mm \varnothing MS ROD
	75 x 12 mm GS FLAT
	50 x 6 mm MS FLAT

NOTES :-

	FENCE POST	MAIN GATE
1 . No. OF RISERS REQUIRED	1	2
2 . No. OF FLEXIBLE BRAID	—	4
3. ALL GATES SHALL BE CONNECTED TO EARTHING GRID.		
4. EVERY ALTERNATE FENCE SHALL BE CONNECTED TO EARTHING GRID.		



FENCE POST (ALTERNATE FENCE POST)

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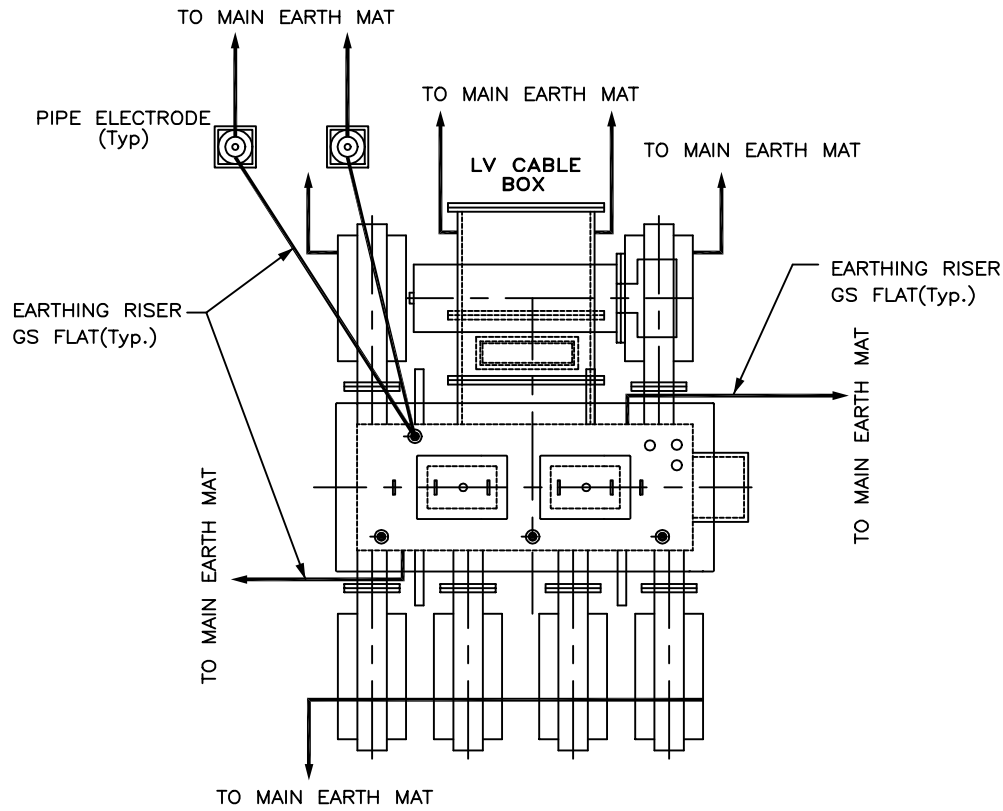


PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

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EARTHING OF LT TRANSFORMER



PLAN

LEGEND

— · — · — · —	40mm ϕ MS ROD
—————	75 x 12 mm GS FLAT
-----	50 x 6 mm GS FLAT

NOTES :-

1. No. OF RISERS FOR MAIN TANK & T.M. MAR. BOX = 4 Nos.
2. No. OF RISERS FOR LV CABLE BOX & RADIATOR = 4 Nos.
3. No. OF RISERS FOR PIPE ELECTRODE = 2 Nos.
4. No. OF PIPE ELECTRODES REQUIRED = 2 Nos.

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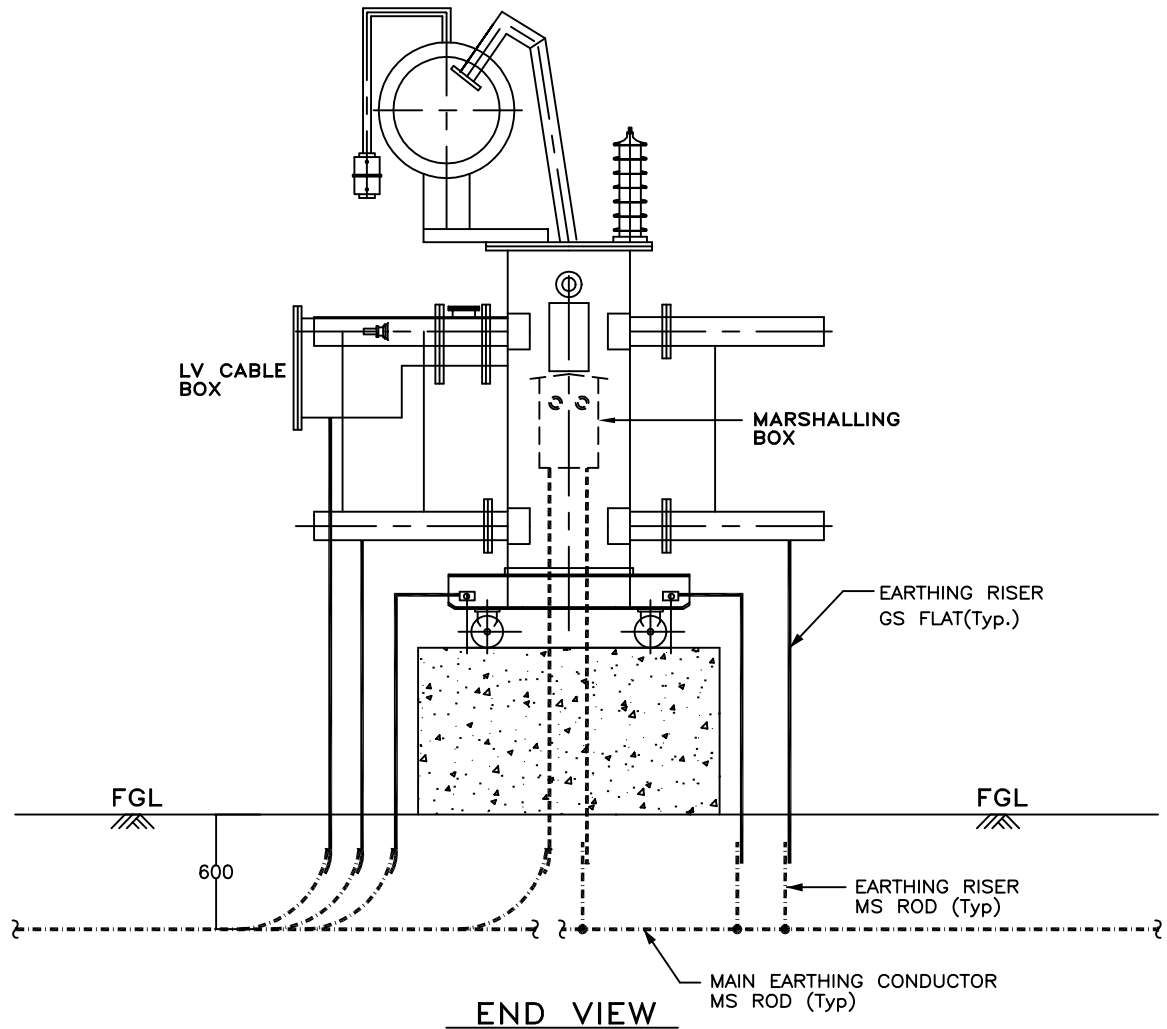


PROJECT :- STANDARD

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EARTHING OF LT TRANSFORMER



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PROJECT :- STANDARD

TITLE:- STANDARD EARTHING DETAILS

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EARTHING OF PYLON SUPPORTS

Pylon supports shall be grounded through 50x6mm GI flat to the ring around the Pylon supports of 75x12mm GI flat which in turn is connected to the main grid (40 mm dia MS rod) at 2 to 3 points as available.

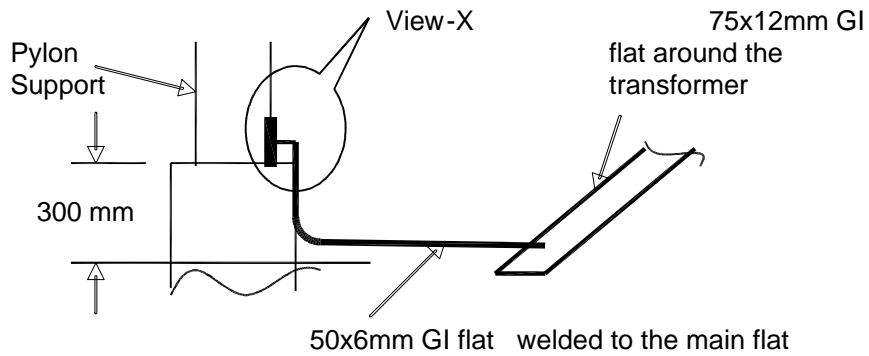


Fig.- Elevation (Earthing of Pylon Supports)

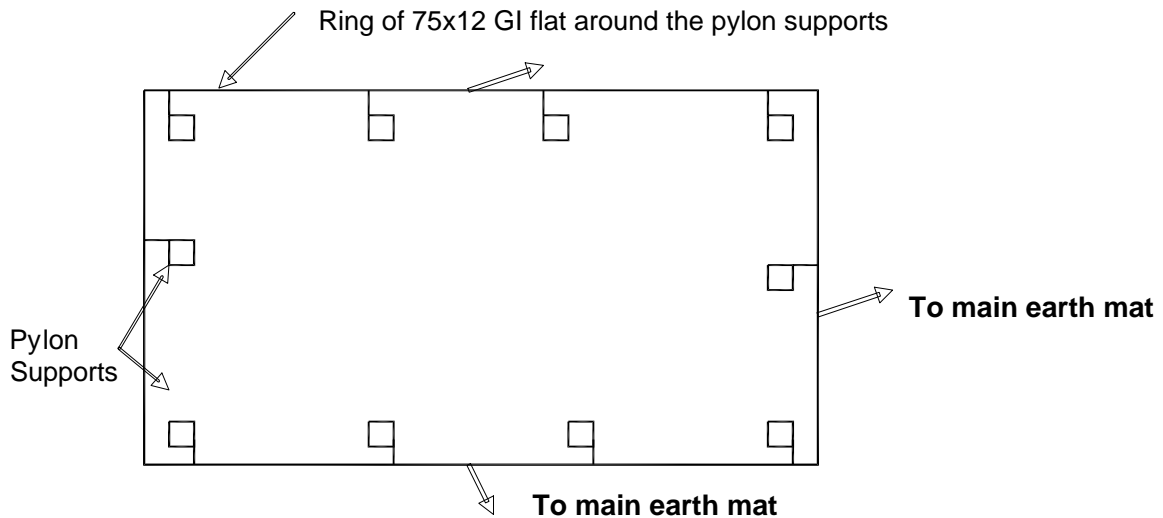


Fig.- Layout (Earthing of Pylon Supports)

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EARTHING OF HYDRANT/ HVW SPRAY PIPING

These pipes shall be grounded at pump house through 50x6mm GI flat connected to the main flat, 75x12mm running around the room.

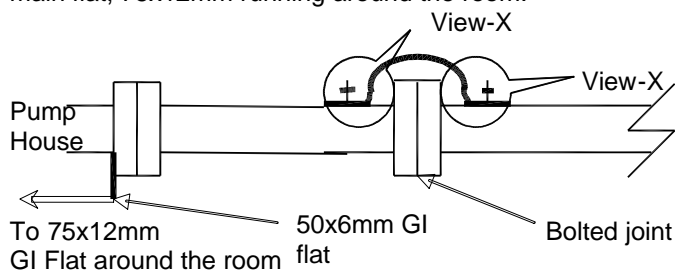


Fig.-Earthing of Hydrant / HVW Spray Piping

EARTHING OF HYDRANT POST/ HOSE BOX

A bolt shall be welded to these structures at the time of installation which can be used to connect them to the nearest riser or main 75x12mm GI flat through 50x6mm GI flat.

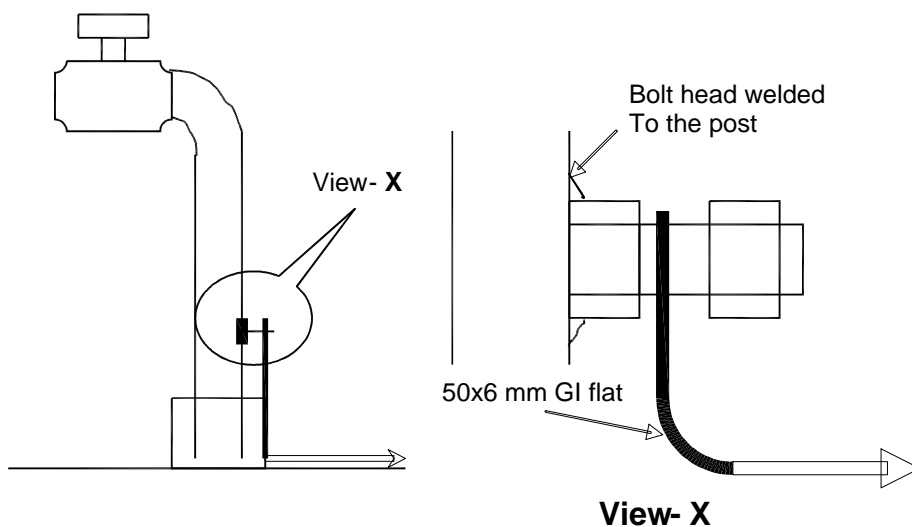


Fig.- Earthing of hydrant box / hose box

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