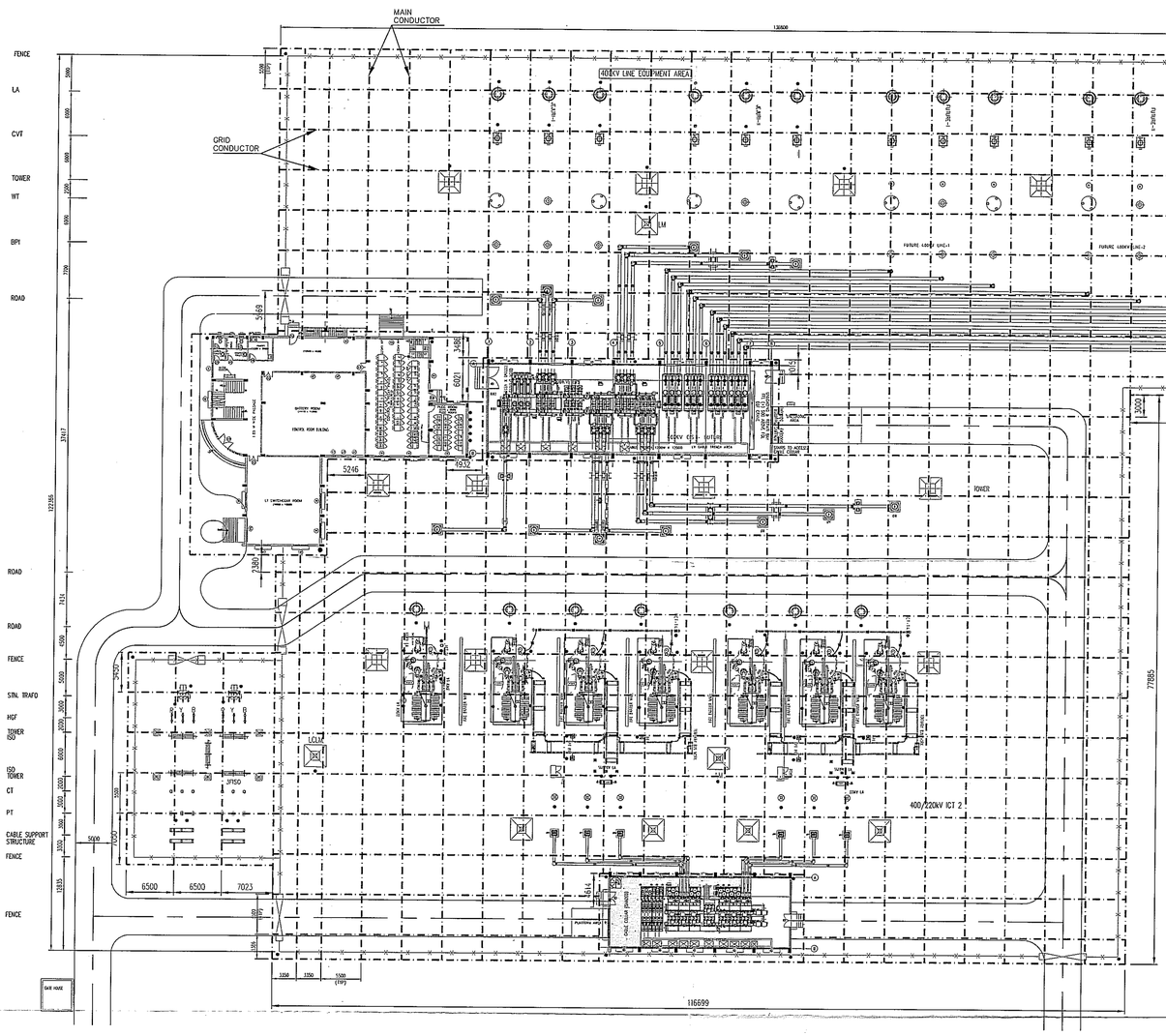
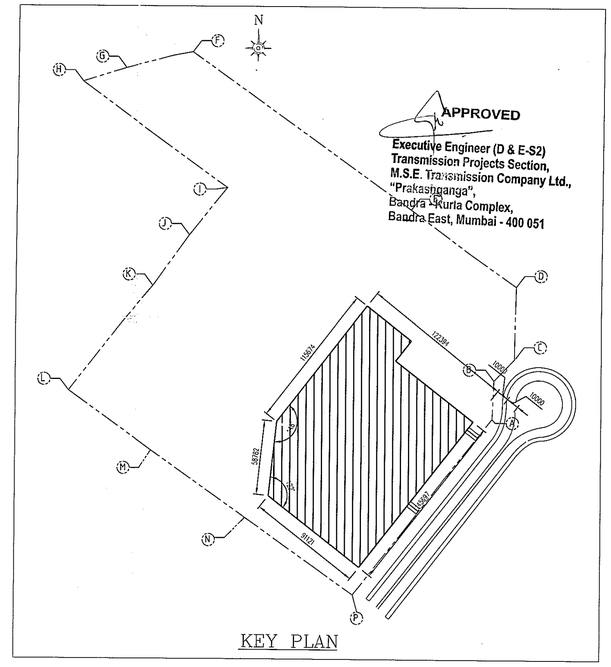
DRAWING NO. :5427PW041-HN3-E-SYD-EAR-0203

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EARTHMAT DESIGN FOR 400/220 kV HINJEWADI-III SUB-STN.

AVG. SOIL RESISTIVITY	= 65 OHM. MTRS.
VOLTAGE LEVEL OF S/S	= 400 KV
FAULT CURRENT	= 50 KA
LENGTH OF EARTHMAT AREA	= 116.699 MTRS
BREADTH OF EARTHMAT AREA	= 124.385 MTRS
NO OF ELECTRODES	= 96 NOS.
SPACING BETWEEN EARTHMAT CONDUCTORS	= 5.5 MTRS
TOTAL LENGTH OF CONDUCTOR (GRID+RISER)	= 6750 MTRS
NO. OF PARALLEL MAIN CONDUCTORS	= 24 NOS.
NO. OF PARALLEL GRID CONDUCTORS	= 23 NOS.
SIZE OF MAIN CONDUCTOR & SIZE OF GRID CONDUCTOR	= 75 x 10 MM M.S. FLAT
SIZE OF RISERS FOR EQUIPMENT EARTHING	= 50 x 8 MM G. I. FLAT
TOLERABLE TOUCH POTENTIAL	= 520.148462 VOLTS
ACTUAL TOUCH POTENTIAL	= 486.003351 VOLTS
TOLERABLE STEP POTENTIAL	= 1732.59385 VOLTS
ACTUAL STEP POTENTIAL	= 451.700477 VOLTS
GROUND RESISTANCE	= 0.2577 OHMS

NOTES

1) LA & CVT EARTHING SHALL BE TERMINATED DIRECTLY ON EARTHING ELECTRODES AND IN TURN SHALL BE CONNECTED TO MAIN EARTHMAT.
2) DEPTH OF MAIN EARTHMAT (75x10mm MS FLAT) SHALL NOT BE LESS THAN 600mm BELOW GROUND LEVEL.
3) EARTHING ELECTRODE – 150mm DIA, 10mm THICK , 3mtrs. LONG C.I. PIPE
4) EVERY EQUIPMENT SHALL BE PROVIDED WITH TWO SEPARATE EARTHING CONNECTIONS.
5) 5 NOS. OF EARTHING ELECTRODES PROVIDED FOR PLCC ROOM SHALL BE INTERCONNECTED WITH EACH OTHER HOWEVER SHALL NOT BE CONNECTED TO MAIN EARTH.
6) DEPTH OF GIS EARTHMAT (50x6mm Cu. FLAT) SHALL BE LAID AT 500mm BELOW FINISH LEVEL FOR BOTH 220kV & 400kV GIS BUILDING REFER SEPERATE DRG. NO. 5427PW041-HN3-E-SYD-EAR-0202

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☑ APPROVAL ☐ AS BUILT
☐ PROTO ☐ CONSTRUCTION
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☐ MANUFACTURING ☐ INDENT
☐ RECORD ☐ EXECUTION
ALSTOM T&D INDIA LTD.
DT. 15/07/2013 SIGN. WITH. SIG.

REV.	DESCRIPTION	DRAWN	SIGN.	CHECKED	SIGN.	APPROVED	SIGN.	STATUS
		Date		Date		Date		
		Name		Name		Name		
		Date		Date		Date		
REV3	REVISED AS PER DISCUSSION DT.01/07/2013	Name YGB Date 12.07.2013		Name MNH Date 12.07.2013		Name SSC Date 12.07.2013		
REV2	REVISED AS PER MSETCL COMMENTS LETTER DT 12/06/2013	Name HVP Date 21.06.2013		Name MNH Date 21.06.2013		Name SSC Date 21.06.2013		
REV1	AS PER MSETCL LETTER DT 06/05/2013 & DISCUSSION DT 03/06/2013	Name HVP Date 06.05.2013		Name MNH Date 05.06.2013		Name SSC Date 06.06.2013		
REV0	FOR CLIENT APPROVAL	Name YGB Date 15.04.2013		Name MNH Date 15.04.2013		Name SSC Date 15.04.2013		

REFR. DRG. NO.	DESCRIPTION

OWNER: MAHARASHTRA STATE ELECTRICITY TRANS.CO.LTD.

PROJECT : 400/220KV GIS SUB-STATION HINJEWADI-III, PUNE

LOA REF: MSETCL/CO/C&M/Contract/TKC-III/T-1102/Supply/Areva/4012 DATED 20-03-2012
TENDER NO.: T-1102 PACKAGE-"A"

TITLE : EARTHING LAYOUT FOR 400 & 220kV OUTDOOR YARD

A1 | ALSTOM | ALSTOM T&D INDIA LTD (FORMERLY AREVA T&D INDIA LTD) VULCAN INSURANCE BLDG (3RD FL) VEER NARIMAN ROAD, CHURCHGATE MUMBAI – 400 020

DRAWING NO. 5427PW041-HN3-E-SYD-EAR-0203

TOTAL SH. 01 | SH.No. | REV.
SCALE 1:400 | 1 OF 1 | 3