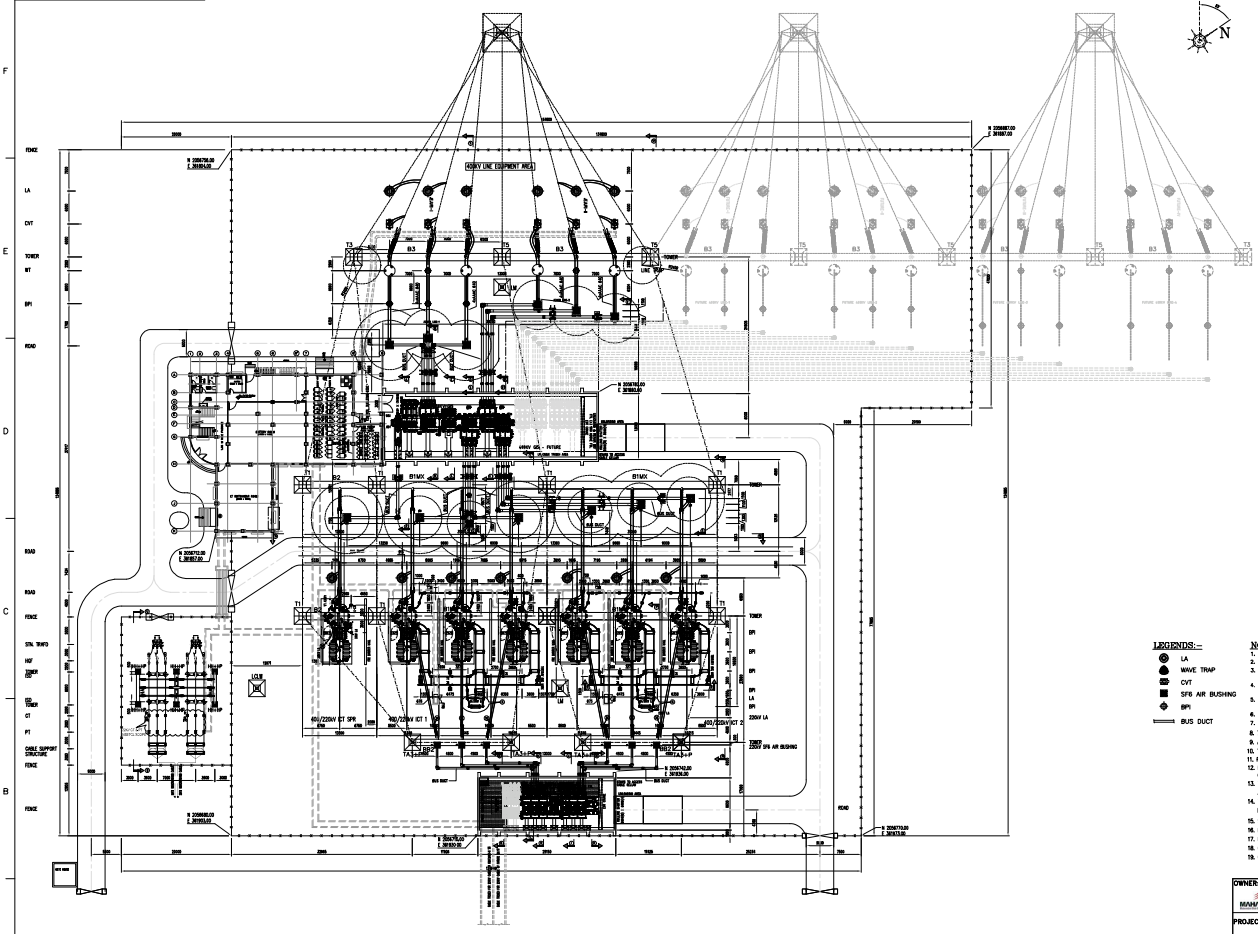
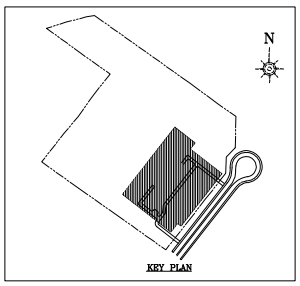
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DRAWING NO. : 5427PC041-HN3-E-SYD-ARR-0001





KEY PLAN

SYSTEM PARAMETERS

Sl.No.	DESCRIPTION OF PARAMETER	400kV SYSTEM	220kV SYSTEM
1	SYSTEM OPERATING VOLTAGE	400kV	220kV
2	MAX. OPERATING VOLTAGE OF THE SYSTEM (rms)	420kV	245kV
3	RATED FREQUENCY	50Hz	50Hz
4	NO. OF PHASES	3	3
5	RATED INSULATION LEVELS i) LIGHTNING IMPULSE WITHSTAND VOLTAGE B/W LINE TERMINALS & EARTH ii) SWITCHING IMPULSE WITHSTAND VOLTAGE (250/2500=Minimum.) B/W LINE TERMINALS & EARTH (AS PER IEC 61936) iii) ONE MINUTE POWER FREQUENCY WITHSTAND VOLTAGE (rms) BETWEEN ISOLATION (AS PER IEC 61936)	1425kVp 1050kVp 510kV	1050kVp -- 460kV
6	CORONA EXTINCTION VOLTAGE	320kV	--
7	MAX. RADIO INTERFERENCE VOLTAGE FOR FREQUENCY BETWEEN 0.5MHz & 2MHz AT 320kV rms FOR 400kV SYSTEM	1000 microV	--
8	MIN. CREEPAGE DISTANCE	25MM/kV (10500 MM)	25MM/kV (6125 MM)
9	MIN. CLEARANCE i) PHASE TO PHASE ii) PHASE TO EARTH iii) SECTIONAL CLEARANCE iv) GROUND CLEARANCE	4200 MM 3400 MM 6000 MM 8000 MM	2100 MM 2100 MM 5000 MM 5500 MM
10	RATED SHORT CIRCUIT CURRENT FOR 3 SEC. DURATION	50kA	50kA
11	SYSTEM NEUTRAL EARTHING	SOLIDLY EARTHED	SOLIDLY EARTHED
12	CONDUCTOR LINE ICT	4xAAAC 640 2xAAAC 640	5xTC/1000 SQ.MM XLPE CU. CABLE 2xAAAC 640

LEGENDS:-

- LA
- WAVE TRAP
- CVT
- SF6 AIR BUSHING
- BPI
- BUS DUCT

NOTES:-

1. ALL DIMENSIONS ARE IN MILIMETERS UNLESS OTHERWISE SPECIFIED.
2. WATER EQUIPMENT DIMENSIONS ARE INDICATIVE.
3. LINE CONDUCTOR ALONGWITH STRING INSULATOR, CLAMP CONNECTOR, HARDWARE & TERMINATION WORK IS NOT IN ALSTOM SCOPE.
4. STRING INSULATOR FOR 400kV COMPRISES OF 50 NOS. ANTIFOG DISC INSULATOR/ 2 NOS. OF POLYMER LONG ROD/ 2 NOS. OF GLASS LONG ROD/ 3 NOS. OF PORCELINE LONG ROD WITH 25mm/kV CREEPAGE DISTANCE PER PHASE.
5. STRING INSULATOR FOR 220kV COMPRISES OF 13 NOS. ANTIFOG DISC INSULATOR / 1 NO. OF POLYMER LONG ROD/ 1 NO. OF GLASS LONG ROD/ 1 NO. OF PORCELINE LONG ROD WITH 25mm/kV CREEPAGE DISTANCE PER PHASE.
6. 2xAAAC 640 SQ. MM CONDUCTOR SHALL BE USED FOR CONNECTION OF LA & CVT.
7. 4xAAAC 640 SQ. MM CONDUCTOR SHALL BE USED FOR CONNECTION OF LINE TO WT AND WT TO SF6 BUSHING.
8. 7/3.15mm DIA. GI EARTHWIRE SHALL BE USED FOR LIGHTNING PROTECTION.
9. ALL THE BUS HEIGHTS ARE REFERRED FROM FGL.
10. THE POWER CONNECTORS & HARDWARES SHALL BE DESIGNED FOR 50kA/1Sec FOR 400/220kV SYSTEM
11. ROAD OUTSIDE BOUNDARY WALL & EQUIPMENT SHOWN AS "FUTURE" ARE NOT IN ALSTOM SCOPE OF WORK.
12. PLINTH HEIGHT OF FOUNDATION WILL BE +450MM FROM THE FINISHED GROUND LEVEL (F.G.L.)
13. TERMINATION OF LINE SIDE SHIELD WIRE, TENSION CLAMP, INSULATOR STRING WITH HARDWARE AND CONDUCTORS ARE IN MSETCL SCOPE OF WORK.
14. THE POSITION OF LIGHTING MASTS IS TENTATIVE AND WILL BE FINALISED UPON COMPLETION OF DIRECT STROKE LIGHTNING PROTECTION AND ELUMINATION CALCULATIONS.
15. SHIELD WIRES WILL BE USED FOR DIRECT STROKE LIGHTNING PROTECTION WHEREVER THEY ARE AVAILABLE.
16. RESPECTIVE EQUIPMENT DRAWINGS SHALL BE REFERRED FOR EQUIPMENT DIMENSIONS AND DETAILS.
17. LEVELS SHOWN ARE TENTATIVE, TO BE DECIDED AT SITE AS PER SITE REQUIREMENT.
18. QUANTITY OF BUS POST INSULATORS (ALL VOLTAGE RATING) SHALL BE AS PER LAYOUT.
19. CABLE TRENCHES BEYOND FENCE AREA IS NOT IN ALSTOM SCOPE.

REFR. DRG. NO.	DESCRIPTION
5427PC041-HN3-E-SYD-ARR-0011	OVERALL PLOT PLAN
5427PC041-HN3-E-SYD-ARR-0002	400/220kV OUTDOOR YARD ELEVATION VIEWS
5427PM041-HN3-E-SYD-ARR-0028	CONTROL ROOM BUILDING PLAN AND ELEVATIONS
5427PM041-HN3-E-SYD-ARR-0027	400/220kV GIS ELEVATION VIEWS
5427PM041-HN3-E-SYD-ARR-0026	400/220kV GIS BULDING 400/220KV GIS SWITCHGEAR LAYOUT

REV.	DESCRIPTION	DRAWN	DATE	CHECKED	DATE	APPROVED	DATE	STATUS
REV2	REVISED AS PER MSETCL COMMENTS DTD. 29/07/2012 220kV GIS BUS DUCT FOR ICT BAYS	HAP 24.12.2012	24.12.2012	MAH 24.12.2012	24.12.2012	DSC 24.12.2012	24.12.2012	
REV1	REVISED AS PER MSETCL COMMENTS DTD. 03/07/2012	HAP 04.10.2012	04.10.2012	MAH 04.10.2012	04.10.2012	DSC 04.10.2012	04.10.2012	
REV0	FOR CLIENT APPROVAL	HAP 12.06.2012	12.06.2012	MAH 12.06.2012	12.06.2012	ITP 12.06.2012	12.06.2012	

OWNER: MAHARASHTRA STATE ELECTRICITY TRANS.CO.LTD.

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

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

TITLE : LAYOUT PLAN FOR 400 & 220kV OUTDOOR YARD

ALSTOM — ALSTOM T&D INDIA LTD, 6TH FLOOR, LAXMI BUILDING, 21, SANSAD MARG, NEW DELHI-110 001 (INDIA) TEL: +91 11 2372 0000 FAX: +91 11 2372 0001

DRAWING NO. 5427PC041-HN3-E-SYD-ARR-0001

FORM. SH. 02 — SCALE 1:250 — SHEET 1 OF 2 — REV. 2