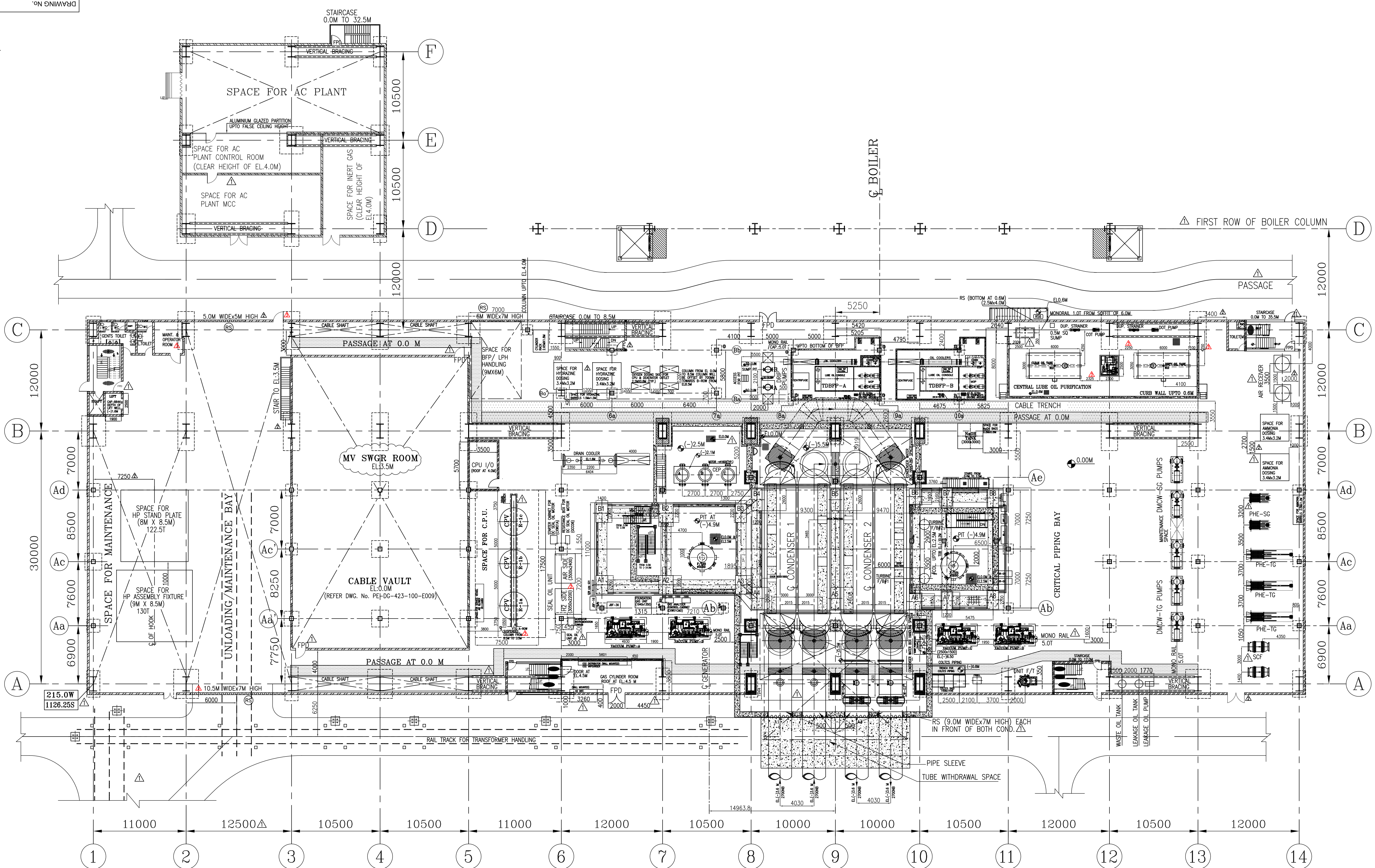
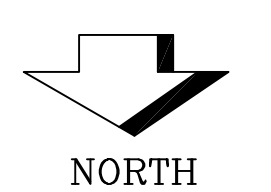
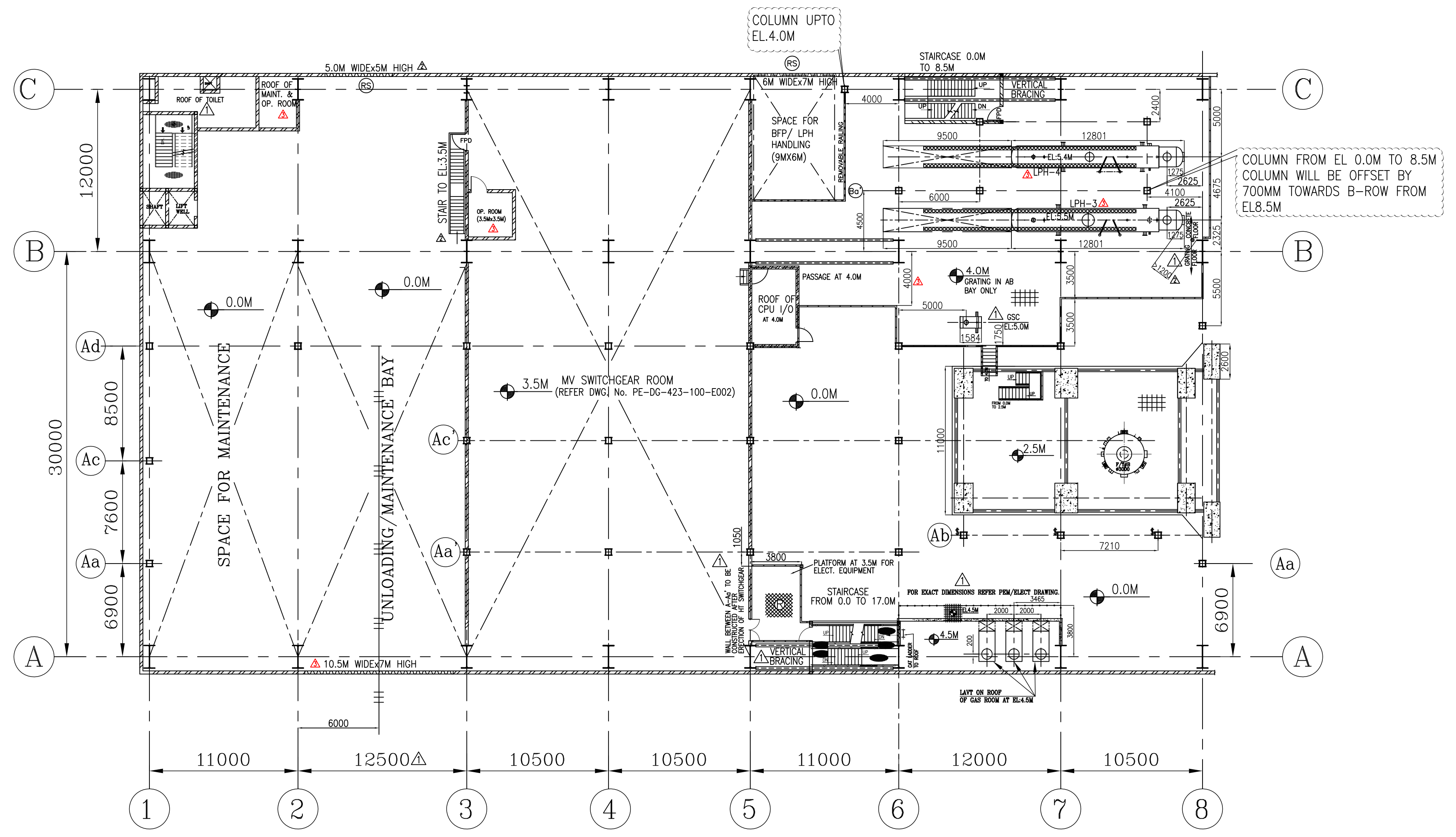
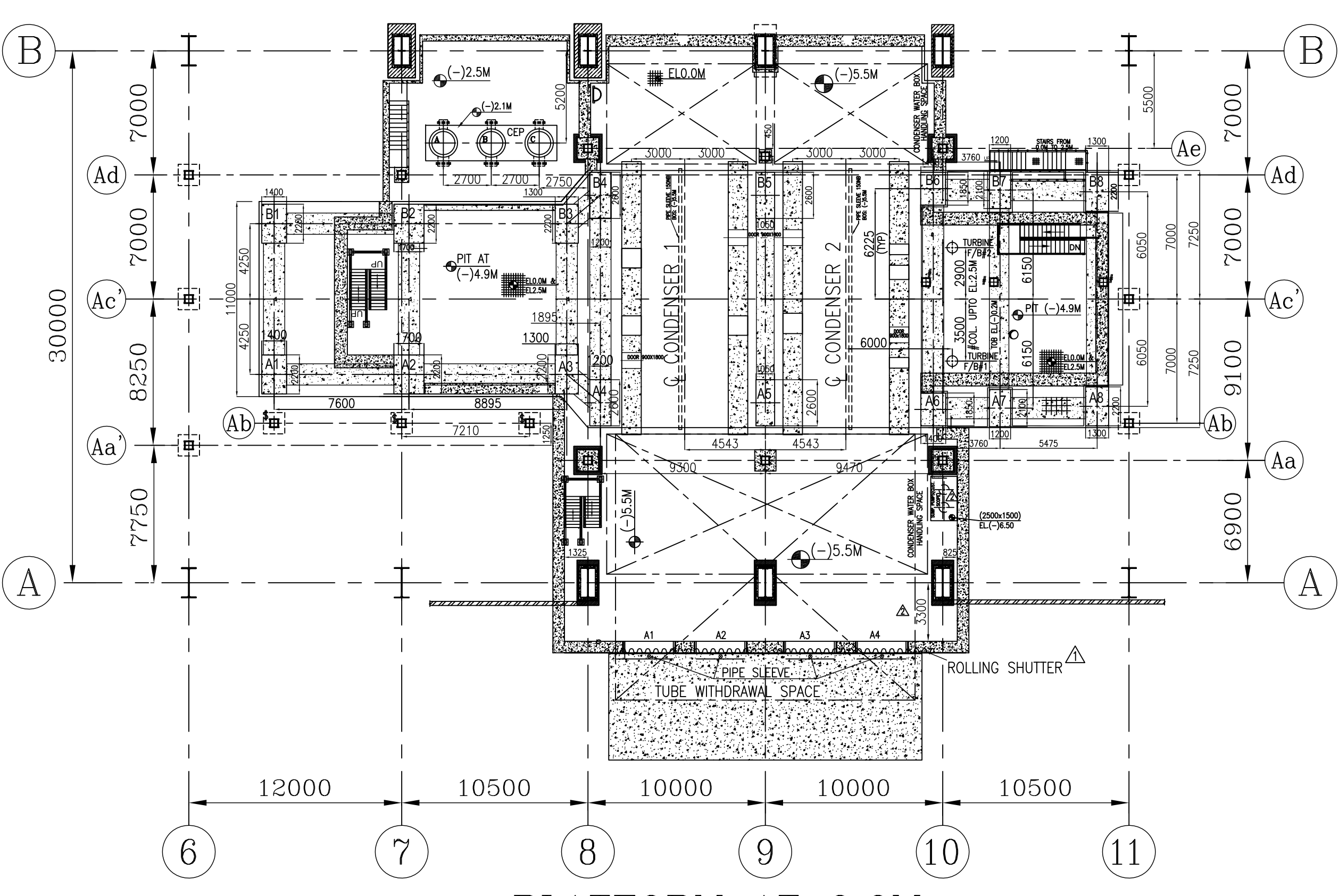




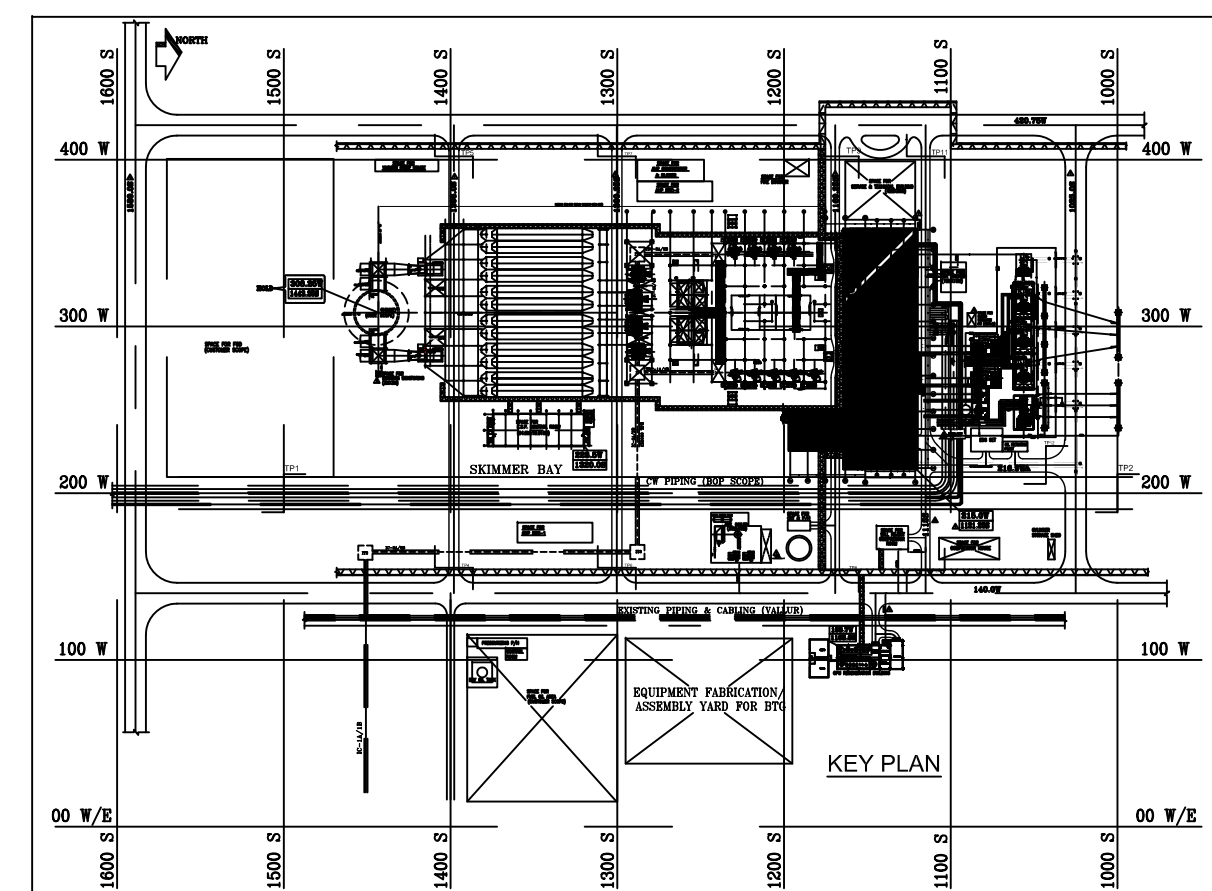
TG HALL EQUIPMENT LAYOUT PLAN AT EL 0.0M



PLAN AT EL. 3.5/4.0M



PLATFORM AT 0.0M



REFERENCE DRGS:			
SL No.	TITLE	NUMBER	UNIT
1	MAIN PLANT EQUIPMENT LAYOUT PLAN	PE-DG-423-100-M002	PEM
2	TO EQUIPMENT PLAN AT EL 8.5 M	PE-DG-423-100-M004	PEM
3	TO EQUIPMENT PLAN AT EL 17.0 M	PE-DG-423-100-M005	PEM
4	TO EQUIPMENT PLAN AT MISCELLANEOUS FLOORS IN BC BAY	PE-DG-423-100-M006	PEM
5	T.G. HALL CROSS SECTION	PE-DG-423-100-M007	PEM
6	CONDENSER ASSEMBLY (GENERAL ARRANGEMENT)	01601070073C215	HWR
7	GENERAL ARRANGEMENT OF DRAIN COOLER	HY-DG-2-06201-33701	HYD
8	GENERAL ARRANGEMENT OF GLAND STEAM CONDENSER	0-162-05-70014215	HWR
9	GENERAL ARRANGEMENT OF LPH # 3	HY-DG-2-26226-44001	HYD
10	GENERAL ARRANGEMENT OF LPH # 4	HY-DG-2-26231-44101	HYD
11	GENERAL ARRANGEMENT F / T-A	BP-DG-423-102-0001	BPL
12	GENERAL ARRANGEMENT F / T-B	BP-DG-423-102-0002	BPL
13	GENERAL ARRANGEMENT CEP	----	HYD
14	GENERAL ARRANGEMENT SEAL OIL UNIT	----	HWR
15	GENERAL ARRANGEMENT OF VACUUM PUMPS CONDENSER # 1	----	HWR
16	GENERAL ARRANGEMENT OF VACUUM PUMPS CONDENSER # 2	----	HWR
17	TDBFP LUBE OIL	----	HYD
18	GA & FOUNDATION DETAILS DRIP PUMPS	HY-DG-1-18100-57284	HYD
19	GA WASTE OIL TANK	2-13100-V6146	HWR
20	GA OF PHE	----	PEM
21	GA EDW PUMP	----	PEM
22	GA LEAKAGE/DIRTY TANK AND PUMP	2-13100-V6145	HWR
23	AIR RECEIVER	----	PEM
24	GA OF CPU (PIPING LAYOUT FOR SERVICE VESSEL AREA)	----	PEM
25	GA AMMONIA SKID	----	PEM
26	GA HYDRAZINE SKID	----	PEM
27	GA OF OXYGEN DOSING	----	PEM
28	GA NAOH TANK / SKID	----	PEM
29	LIST OF JUNCTION BOX	----	HWR
30	GA OF COLTS	----	PEM

LEGENDS	
	PIPE HATCH
	VERTICAL BRACING
	FIRE PROOF DOOR
	GRATING
	CHEQUERED PLATE
	REMOVABLE
	HAND RAILING
	CABLE TRAY
	FIRE BARRIER WALL
	INDICATES PIPES/CABLE TRESTLE
	ROLLING SHUTTER
	RAIL TRACK
	CABLE TRENCH
	PASSAGEWAY

- NOTES:-
- ALL DIMENSION ARE IN MM AND LEVELS ARE IN METRES.
 - ALL ELEVATION MARKED ARE W.R.T. TG HALL FINISHED FLOOR ELEVATION OF EL 0.00M WHICH CORRESPONDS TO RL(+10.0M).
 - CABLE DUCT/TRENCH/SILT LAYOUT IS SHOWN FOR REPRESENTATION PURPOSE ONLY. FOR DETAILS REFER ELECTRICAL DRAWING.

CIVIL TO NOTE:

\$ COLUMN FROM 0.0 TO ~13.5(BOTTOM OF OIL CANAL)

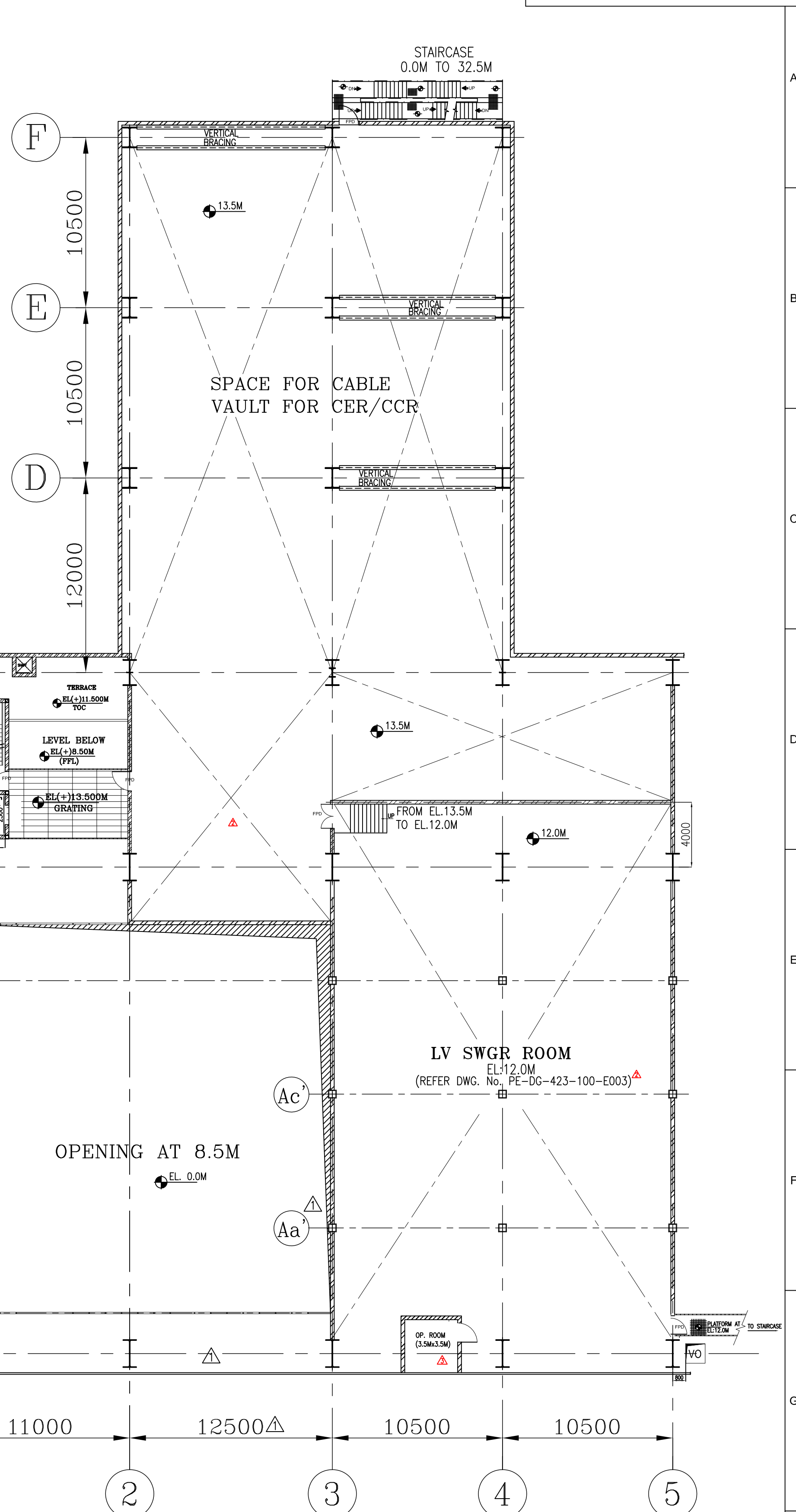
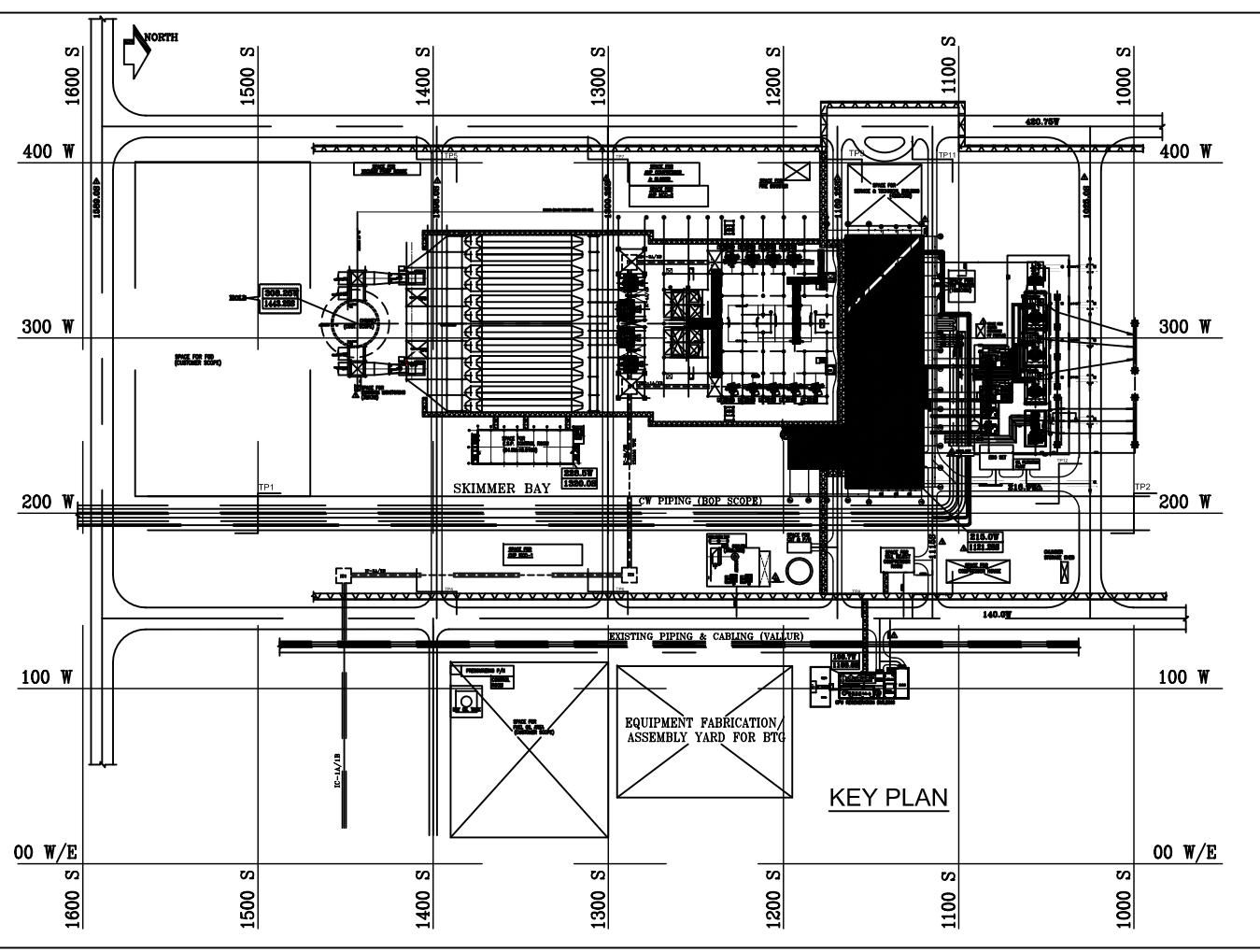
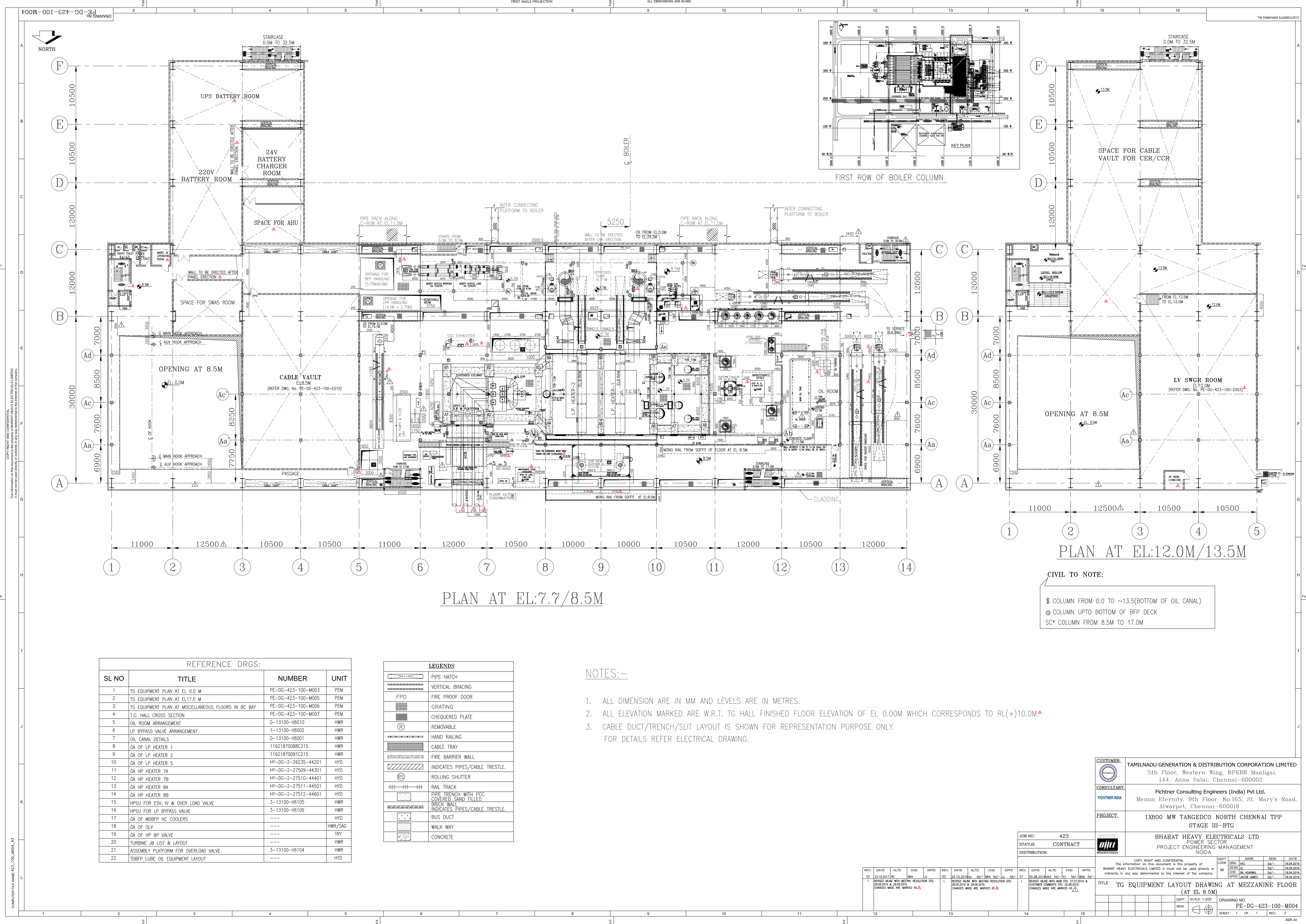
COLUMN UPTO EL:2.5M

@ COLUMN UPTO BOTTOM OF BFP DECK

MAX BEAM DEPTH FOR PLATFORM BELOW TG DECK AT EL:2.5M TO BE RESTRICTED TO 400MM.

CUSTOMER:	TAMILNADU GENERATION & DISTRIBUTION CORPORATION LIMITED 5th Floor, Western Wing, NPKRR Maaligai, 144, Anna Salai, Chennai-600002
CONSULTANT:	Fichtner Consulting Engineers (India) Pvt Ltd. Menon Eternity, 9th Floor, No.165, St. Mary's Road, Alwarpet, Chennai-600018
PROJECT:	1X800 MW TANGEDCO NORTH CHENNAI TPP STAGE III-BTG
JOB NO.	423
STATUS	CONTRACT
DISTRIBUTION	
DEPT.	POWER SECTOR
NAME	BHARAT HEAVY ELECTRICALS LTD
SIGN	PROJECT ENGINEERING MANAGEMENT
DATE	Noida
CODE	
DESIGN	
CHKD	
APPROV	
TITLE	TG EQUIPMENT LAYOUT DRAWING AT 'GROUND FLOOR (AT EL 0.0M)
DEPT.	SCALE 1:225
SIGN	DRAWING NO. PE-DG-423-100-M003
SHEET	1 OF 1
REV.	3

REV.	DATE	ALTD	CHD	APPO	REV.	DATE	ALTD	CHD	APPO	REV.	DATE	ALTD	CHD	APPO
01	03.10.2017				01	24.10.2018				01	20.08.2018			
1. REVISED IN LINE WITH MEETING RESOLUTION DTD. 27.07.2016 & 28.08.2016 & 29.08.2016. CHANGES MADE ARE MARKED AS Δ.														
1. REVISED IN LINE WITH MEETING RESOLUTION DTD. 27.07.2016 & 28.08.2016 & 29.08.2016. CHANGES MADE ARE MARKED AS Δ.														
1. REVISED IN LINE WITH MEETING RESOLUTION DTD. 27.07.2016 & 28.08.2016 & 29.08.2016. CHANGES MADE ARE MARKED AS Δ.														



PLAN AT EL:7.7/8.5M

PLAN AT EL:12.0M/13.5M

CIVIL TO NOTE:
\$ COLUMN FROM 0.0 TO ~13.5(BOTTOM OF OIL CANAL)
@ COLUMN UPTO BOTTOM OF BFP DECK
SC* COLUMN FROM 8.5M TO 17.0M

REFERENCE DRGS:			
SL NO	TITLE	NUMBER	UNIT
1	TG EQUIPMENT PLAN AT EL. 0.0 M	PE-DG-423-100-M003	PEM
2	TG EQUIPMENT PLAN AT EL17.0 M	PE-DG-423-100-M005	PEM
3	TG EQUIPMENT PLAN AT MISCELLANEOUS FLOORS IN BC BAY	PE-DG-423-100-M006	PEM
4	T.G. HALL CROSS SECTION	PE-DG-423-100-M007	PEM
5	OIL ROOM ARRANGEMENT	0-13100-V6010	HWR
6	LP BYPASS VALVE ARRANGEMENT	1-13100-V6002	HWR
7	OIL CANAL DETAILS	0-13100-V6001	HWR
8	GA OF LP HEATER 1	1162187008C215	HWR
9	GA OF LP HEATER 2	11621870091C215	HWR
10	GA OF LP HEATER 5	HY-DG-2-26235-44201	HYD
11	GA HP HEATER 7A	HY-DG-2-27509-44301	HYD
12	GA HP HEATER 7B	HY-DG-2-27510-44401	HYD
13	GA HP HEATER 8A	HY-DG-2-27511-44501	HYD
14	GA HP HEATER 8B	HY-DG-2-27512-44601	HYD
15	HPSU FOR ESV, IV & OVER LOAD VALVE	3-13100-V6105	HWR
16	HPSU FOR LP BYPASS VALVE	3-13100-V6106	HWR
17	GA OF MOBFP HC COOLERS	----	HYD
18	GA OF OLV	----	HWR/SAG
19	GA OF HP BP VALVE	----	TRY
20	TURBINE JB LIST & LAYOUT	----	HWR
21	ASSEMBLY PLATFORM FOR OVERLOAD VALVE	3-13100-V6104	HWR
22	TDBFP LUBE OIL EQUIPMENT LAYOUT	----	HYD

LEGENDS	
	PIPE HATCH
	VERTICAL BRACING
	FIRE PROOF DOOR
	GRATING
	CHEQUERED PLATE
	REMOVABLE
	HAND RAILING
	CABLE TRAY
	FIRE BARRIER WALL
	INDICATES PIPES/CABLE TRESTLE
	ROLLING SHUTTER
	RAIL TRACK
	PIPE TRENCH WITH PCC COVERED SAND FILLED
	BRICK WALL
	INDICATES PIPES/CABLE TRESTLE
	BUS DUCT
	WALK WAY
	CONCRETE

NOTES:-

- ALL DIMENSION ARE IN MM AND LEVELS ARE IN METRES.
- ALL ELEVATION MARKED ARE W.R.T. TG HALL FINISHED FLOOR ELEVATION OF EL 0.00M WHICH CORRESPONDS TO RL(+)10.0M.
- CABLE DUCT/TRENCH/SPLIT LAYOUT IS SHOWN FOR REPRESENTATION PURPOSE ONLY. FOR DETAILS REFER ELECTRICAL DRAWING.

CUSTOMER:

CONSULTANT:

PROJECT:

TAMILNADU GENERATION & DISTRIBUTION CORPORATION LIMITED
5th Floor, Western Wing, NPKRR Maaligai,
144, Anna Salai, Chennai-600002

Fichtner Consulting Engineers (India) Pvt Ltd.
Menon Eternity, 9th Floor, No.169, St. Mary's Road,
Alwarpet, Chennai-600018

1X800 MW TANGEDCO NORTH CHENNAI TPP
STAGE III-BTG

BHARAT HEAVY ELECTRICALS LTD
POWER SECTOR
PROJECT ENGINEERING MANAGEMENT
Noida

JOB NO. 423
STATUS CONTRACT
DISTRIBUTION

DEPT. SCALE 1:200
SIGN

REV. DATE ALTD CHD APPD
01 23.10.2016
1 26.09.2016 & 29.09.2016
CHANGES MADE ARE MARKED AS \$

REV. DATE ALTD CHD APPD
01 23.10.2016
1 26.09.2016 & 29.09.2016
CHANGES MADE ARE MARKED AS \$

REV. DATE ALTD CHD APPD
01 23.10.2016
1 26.09.2016 & 29.09.2016
CHANGES MADE ARE MARKED AS \$

DEPT. NAME SIGN DATE
CHD BK AGARWAL 26/09/2016
CHD BK AGARWAL 26/09/2016
APPD JACOB JAMES 26/09/2016

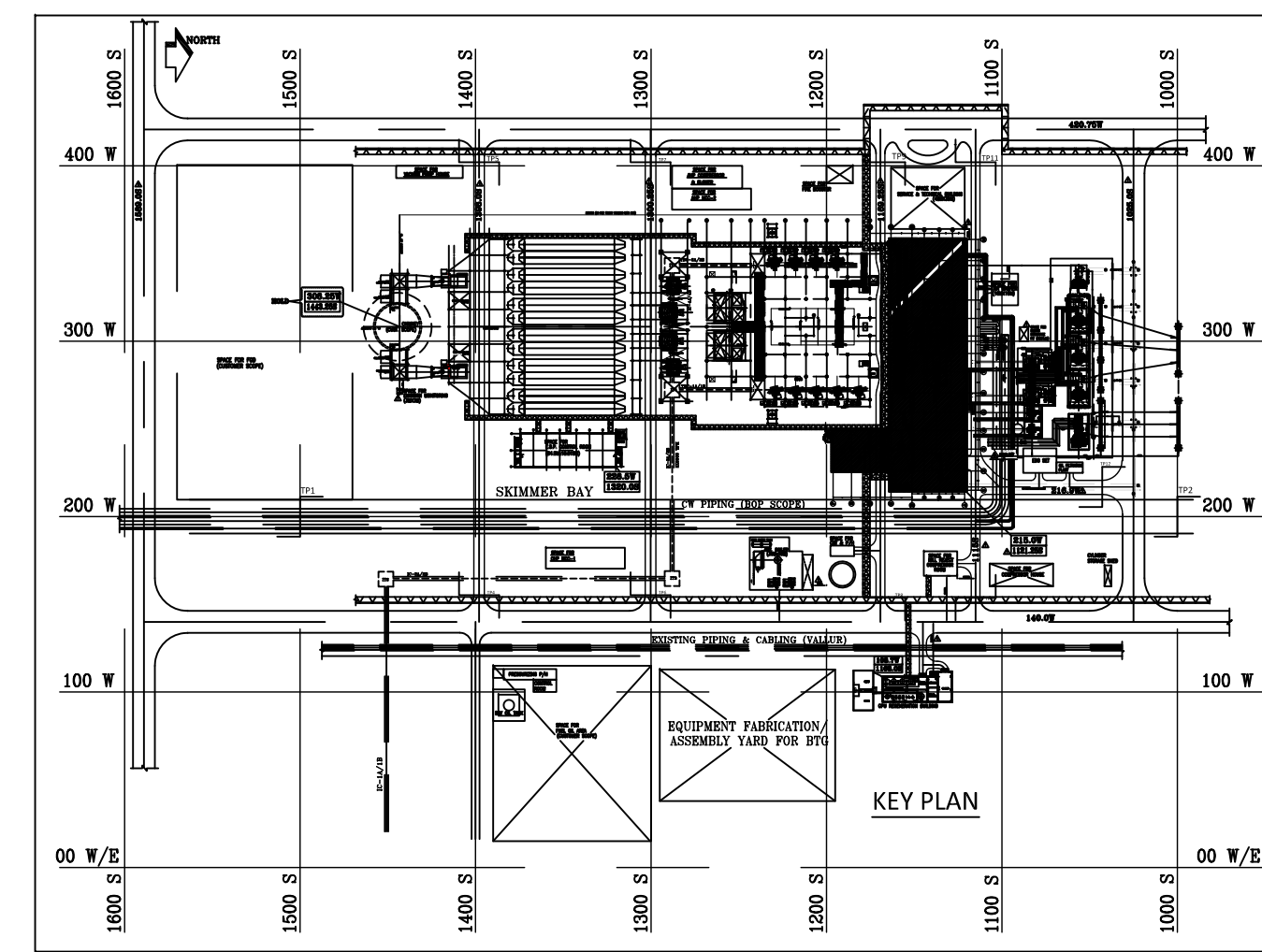
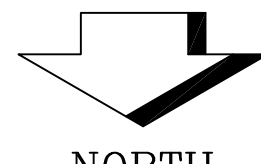
DEPT. NAME SIGN DATE
CHD BK AGARWAL 26/09/2016
CHD BK AGARWAL 26/09/2016
APPD JACOB JAMES 26/09/2016

TITLE TG EQUIPMENT LAYOUT DRAWING AT MEZZANINE FLOOR
(AT EL 8.5M)

DRAWING NO. PE-DG-423-100-M004
SHEET 1 OF 1 REV. 3

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It must not be used directly or indirectly in any way detrimental to the interest of the company.

COMPUTER FILE NAME: 423_100_M004_43



REFERENCE DRGS:		
SL NO	TITLE	NUMBER UNIT
1	TC EQUIPMENT PLAN AT L1 0.0 M	PE-06-423-100-M003 FEM
2	TC EQUIPMENT PLAN AT L1 8.5 M	PE-06-423-100-M004 FEM
3	TC EQUIPMENT PLAN AT MISCELLANEOUS FLOORS IN BC BAY	PE-06-423-100-M006 FEM
4	T.C. CROSS SECTION	PE-06-423-100-M007 FEM
5	GA OF MDBFP	HY-DG-1-18000-57827 HYD
6	GA OF TDBFP	HY-DG-1-18000-57826 HYD
7	GA OF HP HEATER 9A	HY-DG-2-27523-44701 HYD
8	GA OF HP HEATER 9B	HY-DG-2-27524-44801 HYD
9	GA OF DESUPERHEATER-7A	HY-DG-2-27518-44901 HYD
10	GA OF DESUPERHEATER-7B	HY-DG-2-27519-45001 HYD
11	FOUNDATION ARRANGEMENT FOR BFP AND DRIVE TURBINE	HY-DG-1-31301-16535 HYD
12	FOUNDATION ARRANGEMENT OF MDBFP	HY-DG-1-18000-57825 HYD
13	TC DECK FOUNDATION PLAN	0-13100-V6152 HWR
14	OIL CANAL DETAILS	0-13100-V6001 HWR
15	LAYDOWN SPACE FOR GENERATOR COMPONENTS	3-139-00-01092 HWR
16	LAYDOWN SPACE FOR STEAM TURBINE COMPONENTS	1-3100-V6016 HWR
17	REMOVABLE MAINTENANCE PLATFORM FOR IPSV	3-13100-V6090 HWR

LEGENDS	
	PIPE HATCH
	VERTICAL BRACING
	FIRE PROOF DOOR
	GRATING
	CHEQUERED PLATE
	REMOVABLE
	HAND RAILING
	CABLE TRAY
	FIRE BARRIER WALL
	INDICATES PIPES/CABLE TRESTLE
	ROLLING SHUTTER
	RAIL TRACK
	PIPE TRENCH WITH PCC COVERED SAND FILLED
	BRICK WALL
	INDICATES PIPES/CABLE TRESTLE
	BUS DUCT
	WALK WAY
	CONCRETE

NOTES:—

1. ALL DIMENSION ARE IN MM AND LEVELS ARE IN METRES.
2. ALL ELEVATION MARKED ARE W.R.T. TG HALL FINISHED FLOOR ELEVATION OF EL 0.00M WHICH CORRESPONDS TO RL(+10.0M)▲
3. CABLE DUCT/TRENCH/SPLIT LAYOUT IS SHOWN FOR REPRESENTATION PURPOSE ONLY. FOR DETAILS REFER ELECTRICAL DRAWING.

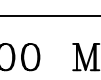
PLAN AT EL:17.0M

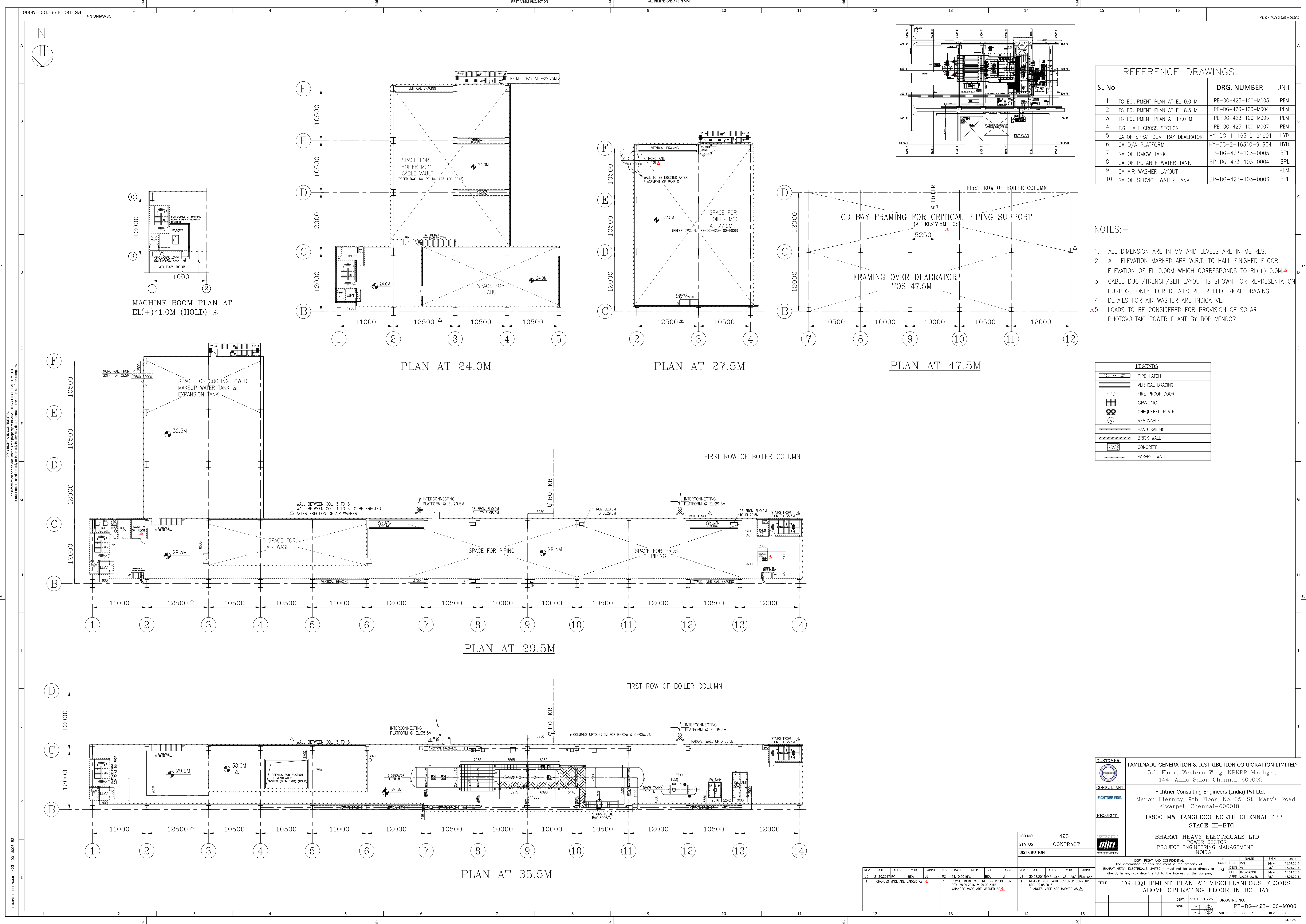
DETAIL OF LAY-DOWN SPACE FOR TG COMPONENTS

NO	DESCRIPTION	WT/IN T	AREA M ² X
50	HP SHFT	200	5.5 X 1.3
51	ENHANCED CASING	250	3.4 X 2.3
52	INNER CASING UPPER PART	170	3.4 X 2.0
53	IP SHFT	40.0	6.232 X 1.7
54	P TURNING OUTER CASING UPPER PART	41.0	5.89 X 4.4
55	P TURNING INNER CASING UPPER PART	32.0	3.9 X 3.5 X
56	P TURNING INNER CASING LOWER PART	37.0	3.9 X 2.5
57	LP SHFT	56.0	6.932 X 5.6
58	LP1 & LP2 OUTER CASING UPPER PART	28.0	8.5 X 5.932
59	LP1 & LP2-INNER CASING UPPER HALF	26.0	5.55 X 3.6
60	LP SHFT SEAL CAS -TE & GE (4 NO.)	0.5	0.405 X 1.12
61	HP FRONT BEARING UPPER PART PEDESTAL COVER	0.8	0.65 X 1.35
62	HP REAR BEARING UPPER PART PEDESTAL COVER	0.8	0.8 X 1.45
63	P REAR BEARING UPPER PART PEDESTAL COVER	2.3	1.215 X 2.1
64	P REAR BEARING UPPER PART PEDESTAL COVER	2.3	1.275 X 2.1
65	P REAR BEARING UPPER PART PEDESTAL COVER	2.3	1.255 X 2.1
66	GUIDE BLADE COVER ASSEMBLY 2 NOS	3.5	4.1 X 0.6
67	GENERATOR - MOTOR	93.0	14.57 X 1.91
68	END SHIELD UPPER & LOWER HALF (ES) 2 NOS	9.0	1.2 X 3.9
69	END SHIELD UPPER & LOWER HALF (TS) 2 NOS	8.0	1.2 X 3.6
70	HYDROGEN COOLERS (2 NOS TWIN TYPE)	4.5	5.0 X 1.5
71	HYDROGEN COOLERS HOUSING	26.0	4.6 X 5.2
72	DUCTOR	30.0	3.6 X 2.201
73	DUCTOR HOUSING	3.5	4.4 X 1.6
74	BEARING SHELLS -TS & ES 4NOS	0.5	0.5 X 0.8
75	HP CONTROL VALVE 2 NOS	2.2	2.1 X 0.9
76	HP CONTROL VALVE ACTUATOR 2 Nos.	1.6	1.5 X 0.68
77	HP STOP VALVE 2 Nos.	2.5	2.0 X 1.0
78	HP STOP VALVE ACTUATOR 2 Nos.	1.2	1.5 X 0.67
79	IP CONTROL VALVE 2 NOS	6.5	3.0 X 1.3
80	IP CONTROL VALVE ACTUATOR 2 Nos.	1.6	2.0 X 0.9
81	IP STOP VALVE 2 Nos.	7.0	2.1 X 1.7
82	IP STOP VALVE ACTUATOR 2 NOS	1.4	2.1 X 0.67
83	LP BYPASS CONTROL VALVE 2 NOS	2.2	2.0 X 2.0
84	CROSS OVER PIPE - PART1	3.0	12 X 3.1
85	CROSS OVER PIPE - PART2	2.2	6.5 X 3.3
86	LP BYPASS CONTROL VALVE ACTUATOR 2 NOS	0.5	2 X 0.7
87	OVERLOAD CONTROL VALVE	0.8	1.5 X 1.6
88	OVERLOAD CONTROL VALVE ACTUATOR	1.0	1.6 X 0.6
89	LIFTING BEAM	8.0	8.5 X 3.3

DETAIL-A

EQUIPMENT LAYDOWN ARRANGEMENT FOR TG & GENERATOR COMPONENTS AT 17.0M

CUSTOMER:	TAMILNADU GENERATION & DISTRIBUTION CORPORATION LIMITED 5th Floor, Western Wing, NPKRR Maailgai, 144, Anna Salai, Chennai-600002
CONSULTANT:	Fichtner Consulting Engineers (India) Pvt Ltd. Menon Eternity, 9th Floor, No.165, St. Mary's Road, Alwarpet, Chennai-600018
PROJECT:	1X800 MW TANGEDCO NORTH CHENNAI TPP STAGE III-BTG
	BHARAT HEAVY ELECTRICALS LTD POWER SECTOR PROJECT ENGINEERING MANAGEMENT NOIDA
	 COPIY RIGHT AND CONFIDENTIAL The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED it must not be used directly or indirectly in any way detrimental to the interest of the company.
TITLE	TG EQUIPMENT PLAN AT OPERATING FLOOR (AT EL 17.0M)
DEPT.	SCALE 1:2000
SIGN	  DRAWING NO. PE-DG-423-100-M01 SHEET 1 OF 1 REV. 3



REFERENCE DRAWINGS:			
SL No		DRG. NUMBER	UNIT
1	TG EQUIPMENT PLAN AT EL. 0.0 M	PE-DG-423-100-M003	PEM
2	TG EQUIPMENT PLAN AT EL. 8.5 M	PE-DG-423-100-M004	PEM
3	TG EQUIPMENT PLAN AT EL. 17.0 M	PE-DG-423-100-M005	PEM
4	T.G. HALL CROSS SECTION	PE-DG-423-100-M007	PEM
5	GA OF SPRAY CUM TRAY DEAERATOR	HY-DG-1-16310-91901	HYD
6	GA D/A PLATFORM	HY-DG-2-16310-91904	HYD
7	GA OF DMCW TANK	BP-DG-423-103-0005	BPL
8	GA OF POTABLE WATER TANK	BP-DG-423-103-0004	BPL
9	GA AIR WASHER LAYOUT	---	PEM
10	GA OF SERVICE WATER TANK	BP-DG-423-103-0006	BPL

- NOTES:--
- ALL DIMENSION ARE IN MM AND LEVELS ARE IN METRES.
 - ALL ELEVATION MARKED ARE W.R.T. TG HALL FINISHED FLOOR ELEVATION OF EL.0.0M WHICH CORRESPONDS TO RL(+)-10.0M.
 - CABLE DUCT/TRENCH/SLOT LAYOUT IS SHOWN FOR REPRESENTATION PURPOSE ONLY. FOR DETAILS REFER ELECTRICAL DRAWING.
 - DETAILS FOR AIR WASHER ARE INDICATIVE.
 - LOADS TO BE CONSIDERED FOR PROVISION OF SOLAR PHOTOVOLTAIC POWER PLANT BY BOP VENDOR.

LEGENDS	
	PIPE HATCH
	VERTICAL BRACING
	FIRE PROOF DOOR
	GRATING
	CHEQUERED PLATE
	REMOVABLE
	HAND RAILING
	BRICK WALL
	CONCRETE
	PARAPET WALL

CUSTOMER:	TAMILNADU GENERATION & DISTRIBUTION CORPORATION LIMITED		
	5th Floor, Western Wing, NPKRR Maaligai, 144, Anna Salai, Chennai-600002		
CONSULTANT:	Fichtner Consulting Engineers (India) Pvt Ltd.		
	Menon Eternity, 9th Floor, No.165, St. Mary's Road, Alwarpet, Chennai-600018		
PROJECT:	1X800 MW TANGEDCO NORTH CHENNAI TPP STAGE III-BTG		
STATUS:	BHARAT HEAVY ELECTRICALS LTD		
	POWER SECTOR PROJECT ENGINEERING MANAGEMENT Noida		

REV.	DATE	ALTD	CHD	APPD	REV.	DATE	ALTD	CHD	APPD	REV.	DATE	ALTD	CHD	APPD
03	21.10.2017	02	01	01	02	24.10.2018	01	01	01	01	29.08.2018	01	01	01
1. CHANGES MADE ARE MARKED AS					1. REVISED IN LINE WITH MEETING RESOLUTION DTD. 28.09.2016 & 29.09.2016. CHANGES MADE ARE MARKED AS					1. REVISED IN LINE WITH CUSTOMER COMMENTS DTD. 02.08.2016. CHANGES MADE ARE MARKED AS				

TITLE		TG EQUIPMENT PLAN AT MISCELLANEOUS FLOORS ABOVE OPERATING FLOOR IN BC BAY	
DRAWING NO.		PE-DG-423-100-M006	
SHEET		1 OF 1	