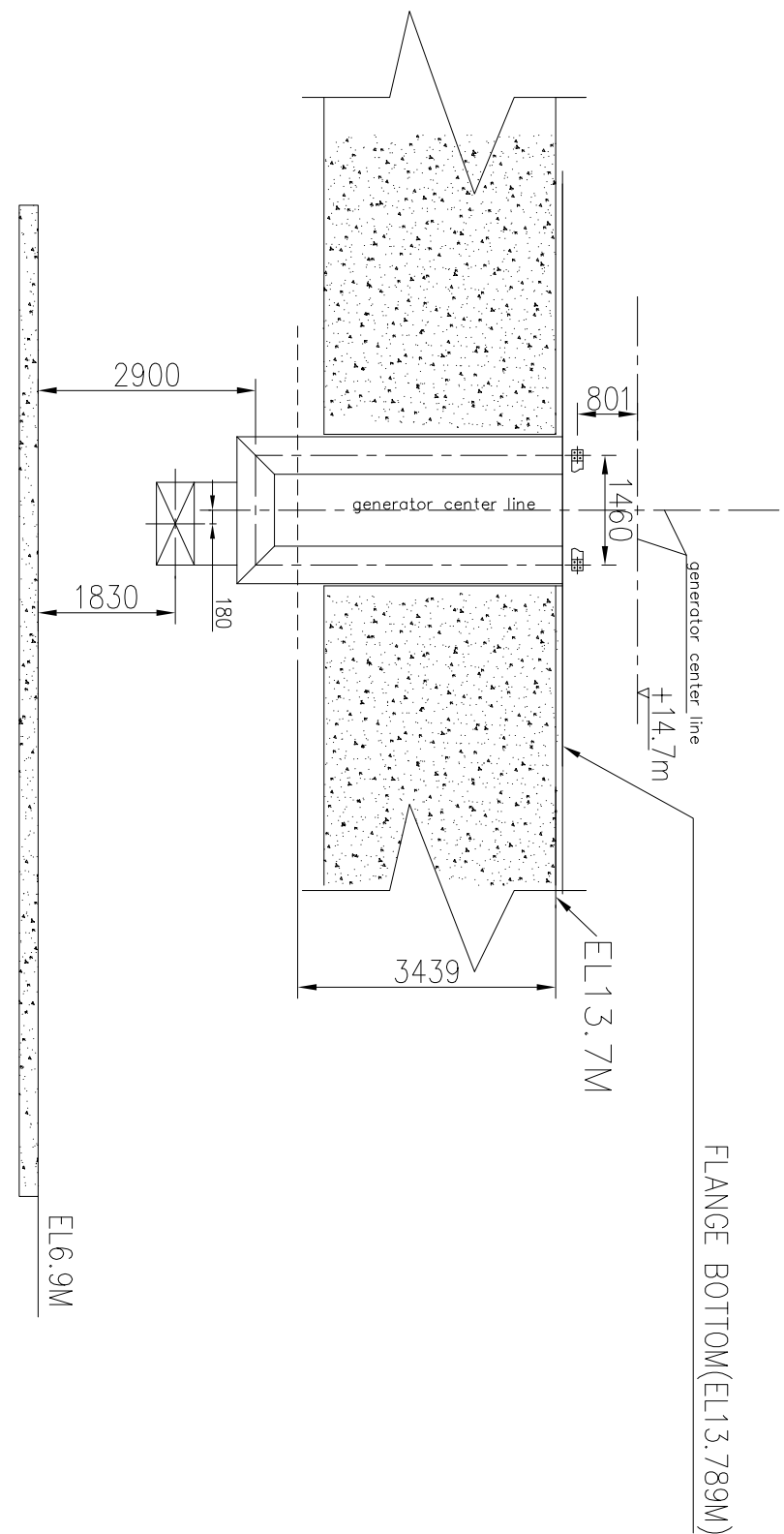
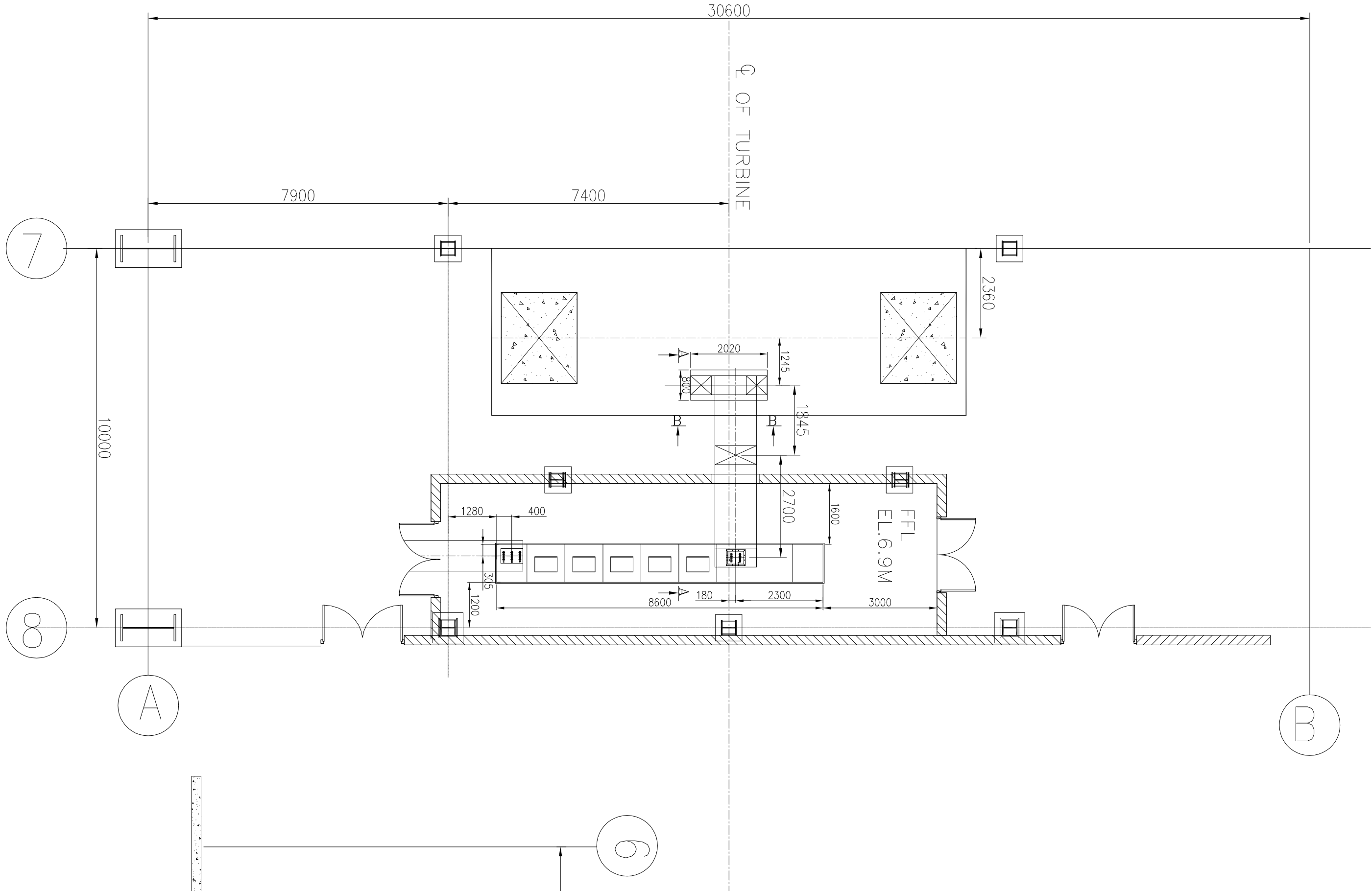
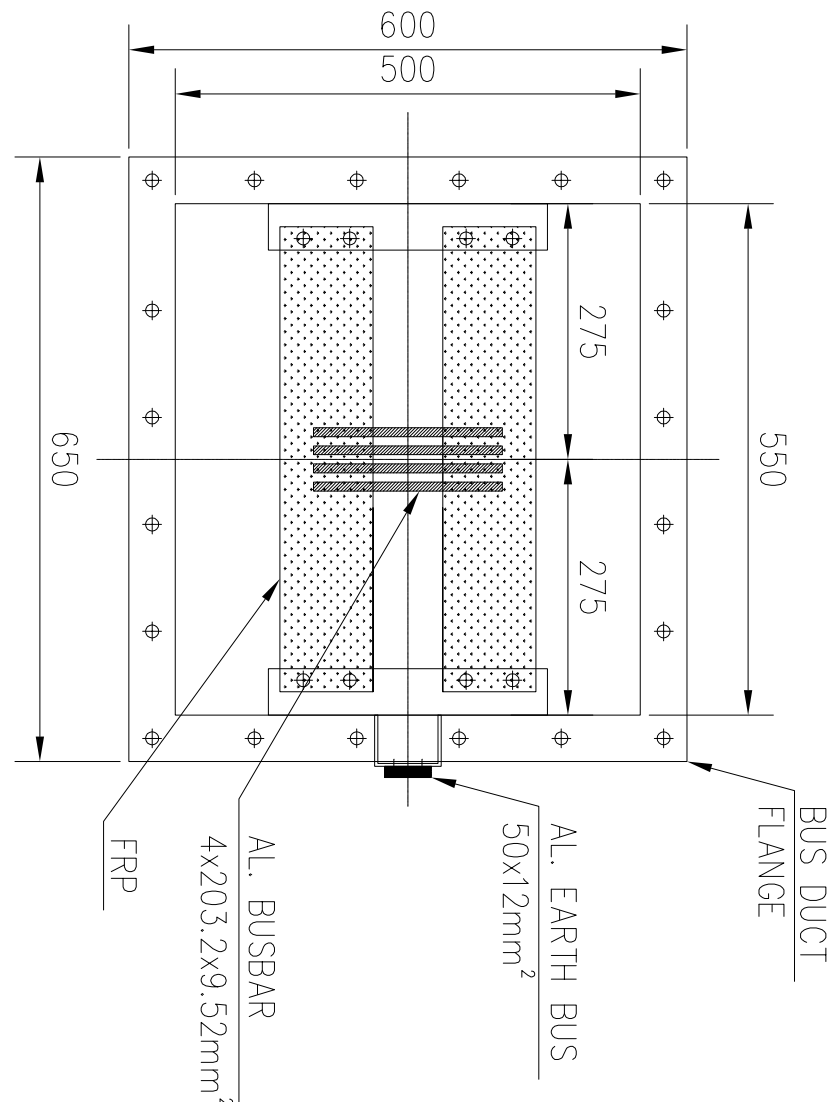
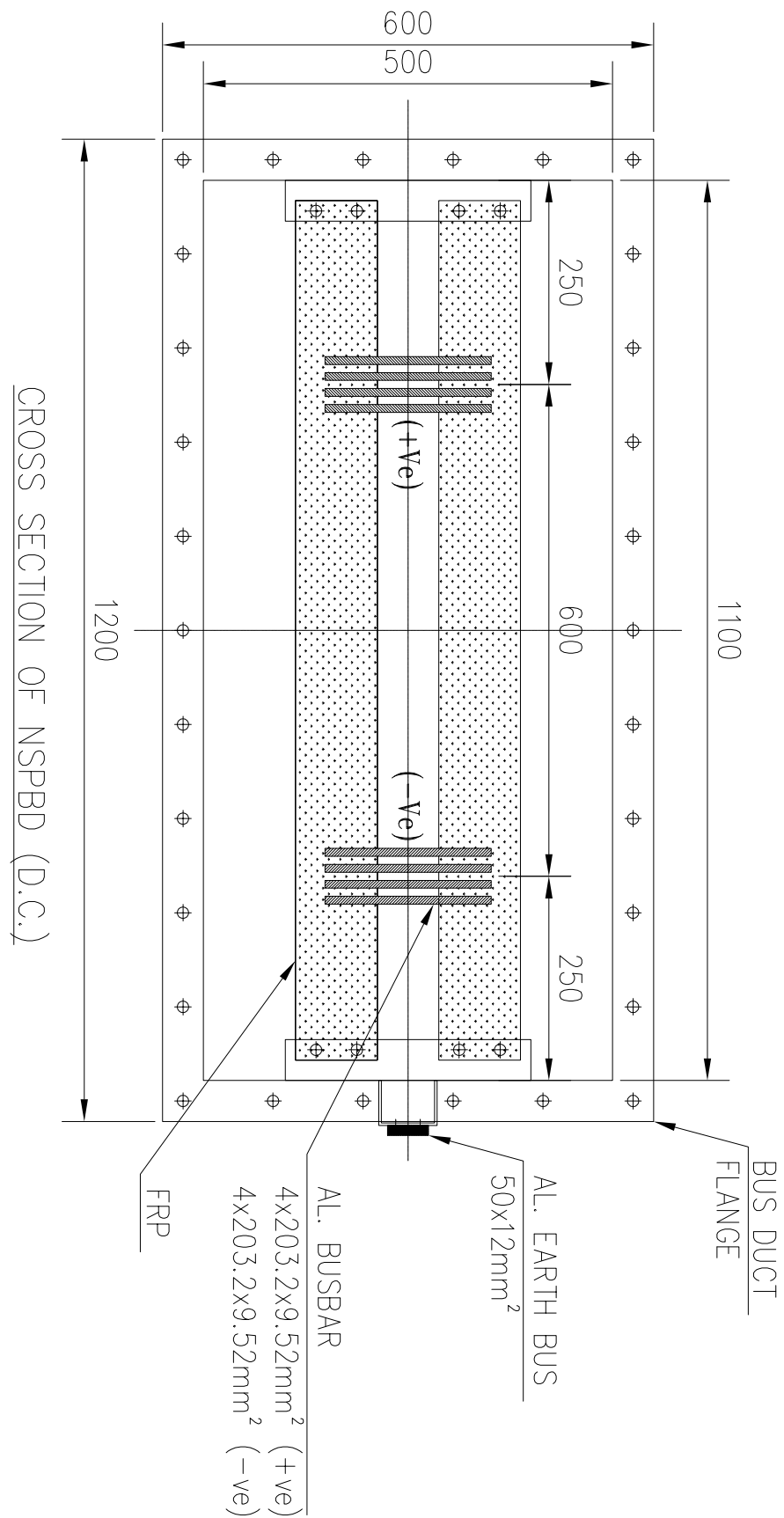
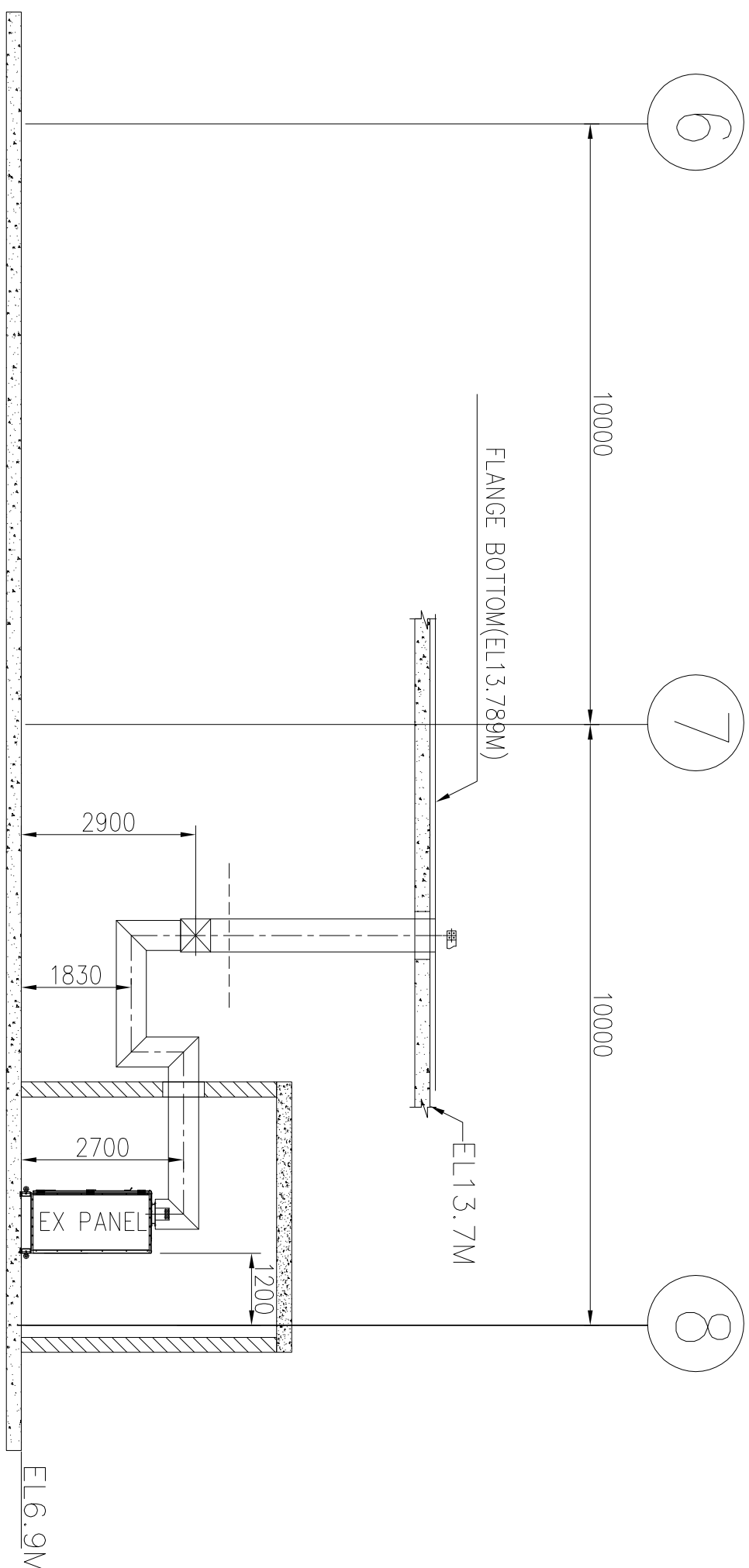




SECTION: B-B



SECTION: A-A



01	21.03.14	LAYOUT OF NSPBD (D.C.)	SHIV	SURAJ	SURAJ	R.K.LAL
REV.	DATE	DESCRIPTION	DRAWN	DESIGN	CHKD	APPD

PROJECT: 2 X 660 MW NCC POWER PROJECT
Painampuram , Muthukur Mandal, S.P.S.R.Nellore District, A.P.

OWNER: NCC POWER PROJECTS LIMITED

OWNER'S CONSULTANT:  TATA CONSULTING ENGINEERS LIMITED, BENGALURU

CONTRACTOR:  NCC Limited

CONTRACTOR'S CONSULTANTS:  L & T - SARGENT & LUNDY LIMITED, Kolkata

SUB-CONTRACTOR: ABB INDIA

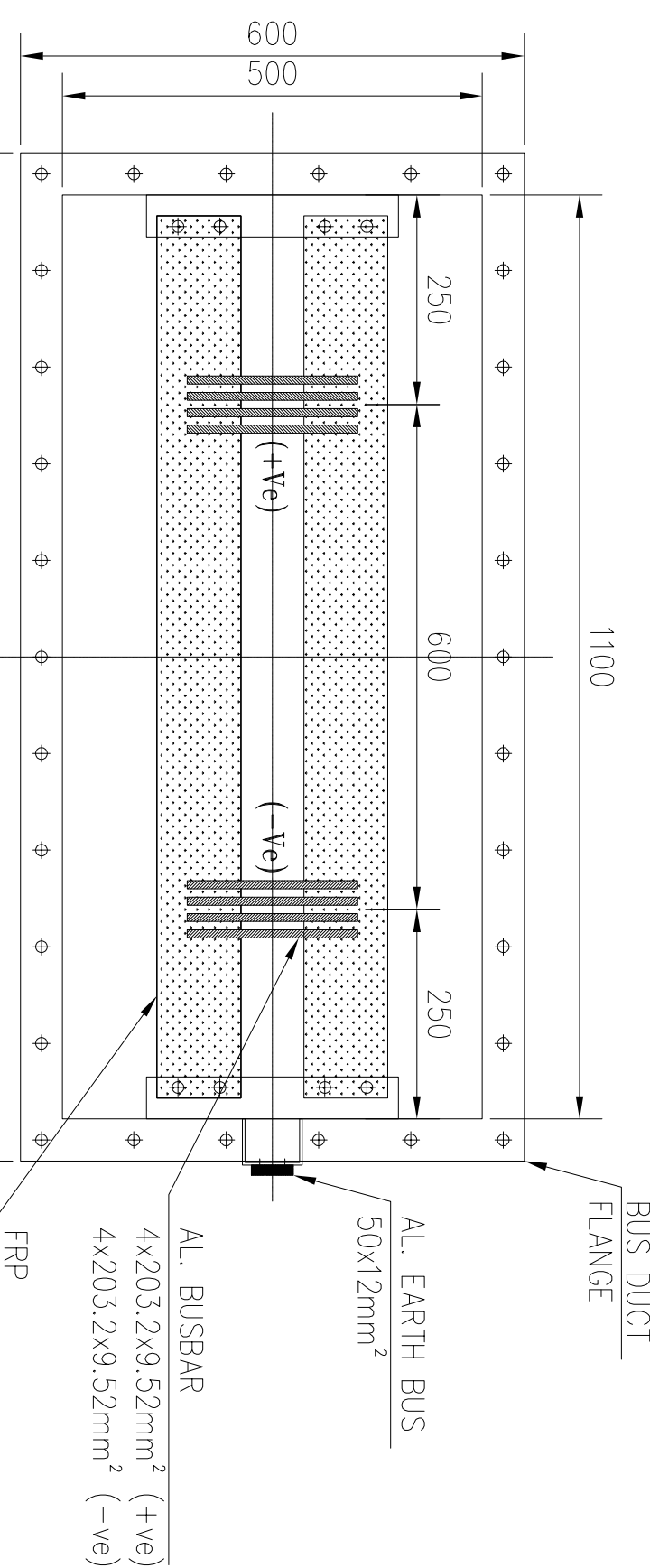
TITLE:

LAYOUT D.C NSPBD

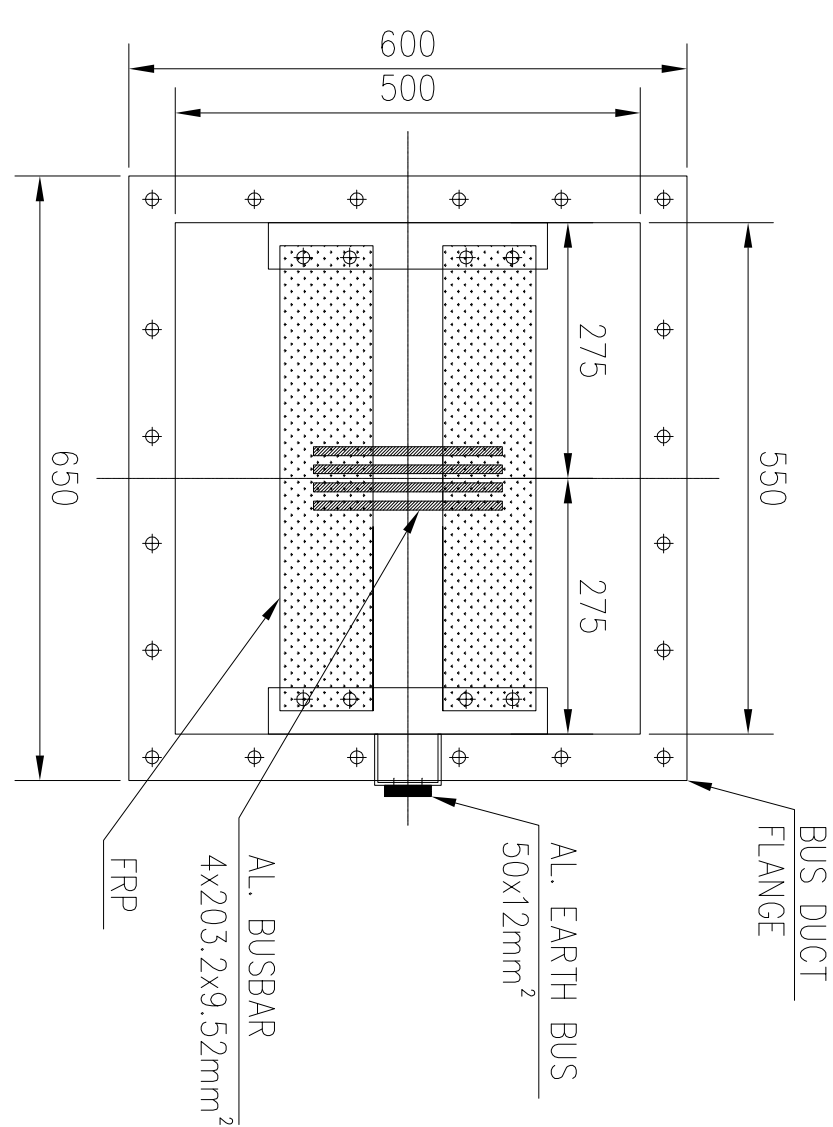
DESIGN					
DRAWN					
CHECKED					
APPROVED					

NCC.DRG. NO.: NPT10111-PE-V-GA-440499-010
VENDOR DRG. NO.: BHEL/RU/NSPBD/DC/001
REV.00
REV.00

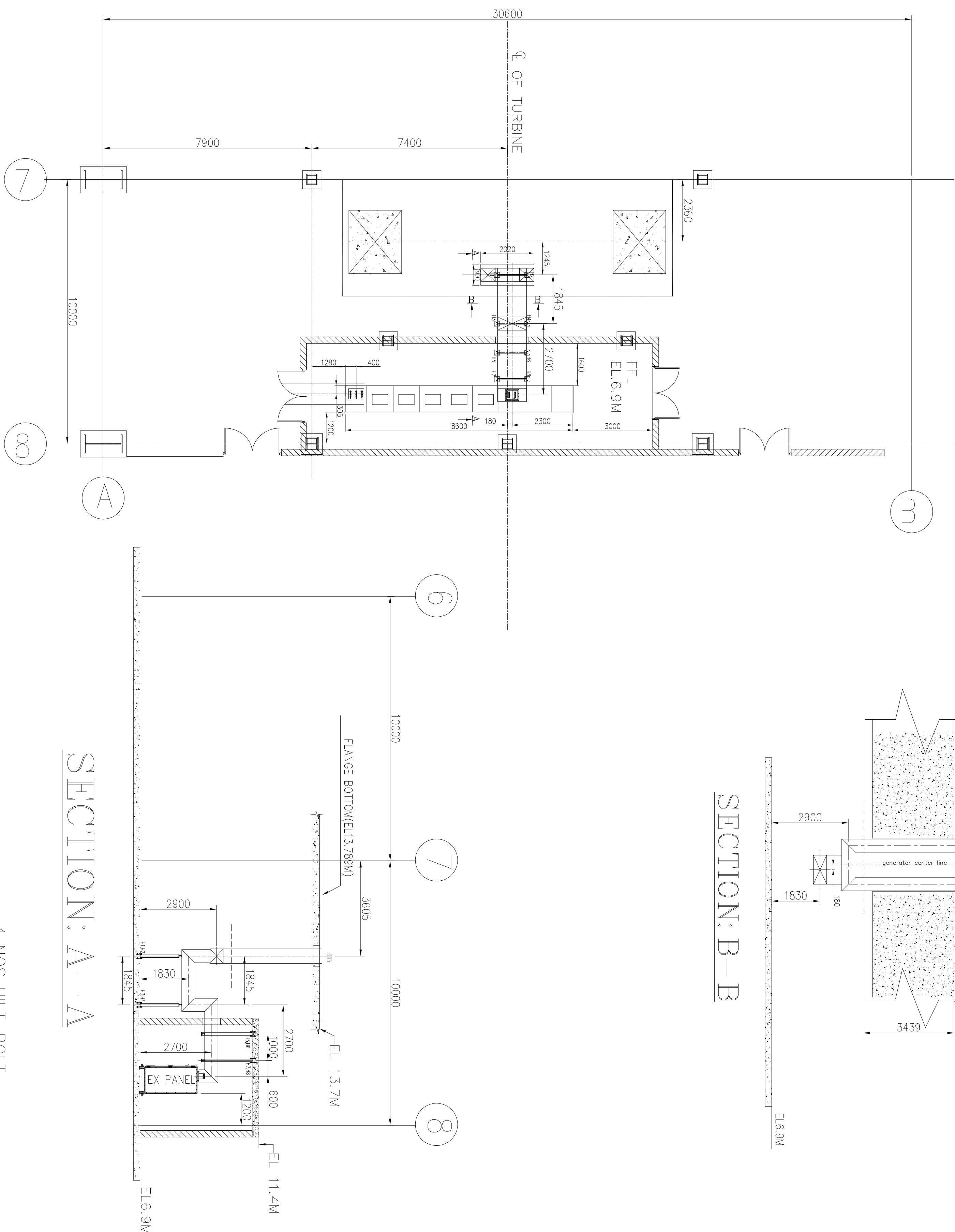
SCALE:- SHEET:1 OF 1



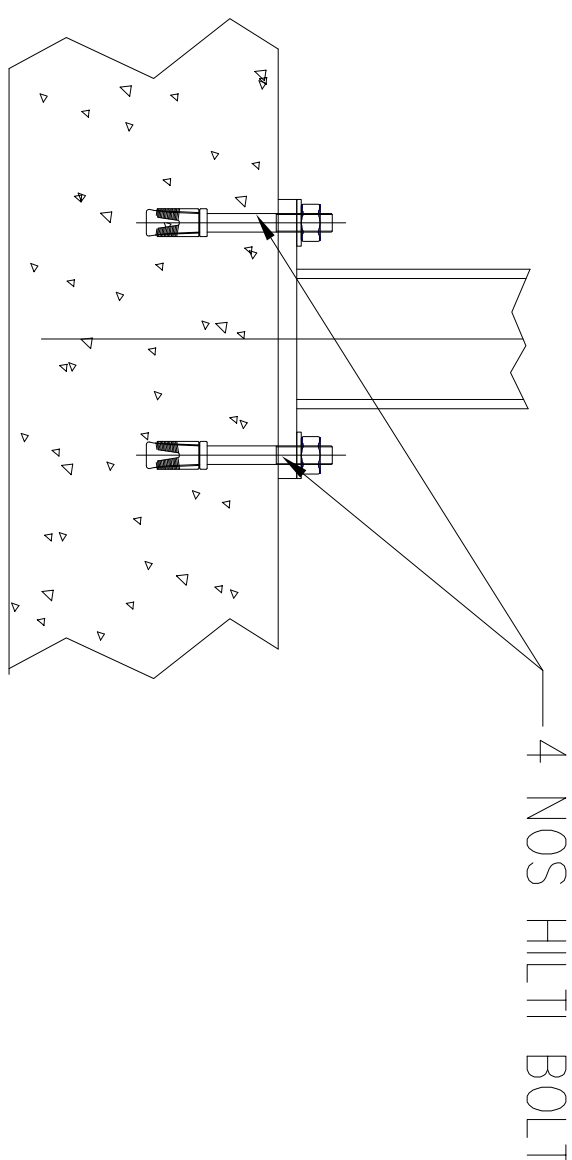
CROSS SECTION OF NSPBD (D.C.)



CROSS SECTION OF NSPBD (D.C.)



SECTION: A—A



HILTI BOLT M16x200 LG.

HIT8

DETAIL-A

REV.	DATE	DESCRIPTION	DRAWN	DESIGN	CHKD	APPD

Painampuram , Muthukur Mandal, S.P.S.R.Nellore District, A.P.

2 X 660 MW NCC POWER PROJECT
puram, Muthukur Mandal, S.P.S.R.Nellore District

OWNERS' CONSULTANT:	 TATA CONSULTING ENGINEERS LIMITED, BENGALURU
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CONTRACTOR:  **NCC Limited**

CONTRACTORS
CONSULTANTS:

 L&T-S&L L & T - SARGENT & LUNDY LIMITED, Kolkata

ABB INDIA

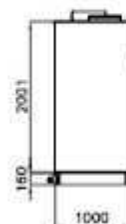
	DATE	NAME	TITLE:	
DESIGN			FOUNDATION LAYOUT D.C NSPBD	
DRAWN				
CHECKED				
APPROVED				
			NCC.DRG. NO.: NP110111-PE-V-GA-440499-010	REV.00
VENDOR DRG. NO.: BHEL/RU/NSPBD/DC/002			REV.00	

DATA SHEET FOR NON SEGREGATED PHASE BUSDUCT (500V DC, 5500A DP)

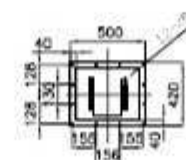
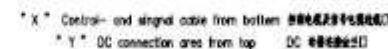
Sl. No.	Item Description	Units	Values & Details
1.0	Busduct		
1.1	Applicable Standard		IS - 8623, Part - 2
1.2	Type of Busduct		Non Phase Segregated
1.3	Type of Cooling		Natural
1.4	Operating Voltage	V	500V DC
1.5	Rated Voltage Class	kV	1.1kV
1.6	Frequency	Hz	50Hz
1.7	Degree of Protection		IP - 54 for Indoor & IP - 55 for Outdoor
1.8	One minute power frequency withstand Voltage	kV	3.5kV
1.9	Design Ambient Temperature	*C	50*C
1.10	Phase to earth clearance (minimum)	mm	25mm
1.11	Rated Symmetrical short-circuit current (minimum) for one sec	kA (rms)	N/A
1.12	Momentary current rating	kAp	N/A
1.13	Weight (three phase)		
	5500A	Kg/M	Approx. 90Kg.
1.14	Standard section length	M	2.45m
1.15	Finish		
	a) Exterior		RAL7032 for Indoor & 632 of IS-5 for Outdoor
	b) Interior		Matt Black
2.0	Bus Conductor		
2.1	Materials & Grade		Alumium Alloy, Grade 63401
2.2	Shape & Dimensions		Rectangular
2.3	Continuous Current Rating at design ambient : 50 Deg C	Amp	100% of rated current
2.4	Size	mm	
	5500A		203.2 x 9.35 x 2 FOR EACH POLE
2.5	Conductor wall thickness	mm	
	5500A		9.35mm
2.6	Method of joining adjacent sections		Bolted
2.7	Maximum allowable temperature rise at Bus conductor (Hot Spot)	Deg. C	40* Deg for Bolted Joints (Plain)
2.8	Bus spacing (Phase to Phase)	mm	Min. 25mm
2.9	Bus spacing (Phase to Neutral)	mm	Min. 25mm
2.10	Conductor to enclosure clearance	mm	Min. 25mm
2.11	Clearances between live point and earth	mm	Min. 25mm
3.0	Bus Enclosure		
3.1	Material and Grade		Alumium Alloy
3.2	Shape		Rectangular
3.3	Wal thickness	mm	3mm
3.4	Outside Cross Section (Width x Height)		
	5500A	mm x mm	1100 x 500 (± 1%)
3.5	Method of joining adjacent sections		Bolted
3.6	Maximum allowable temperature of the enclosure	Deg. C	70* Deg.
5.0	Flexible Connections		
5.1	Material and Grade		Copper
5.2	Continuous Current Rating	Amps.	100% of rated current
7.0	Bellows		

DATA SHEET FOR NON SEGREGATED PHASE BUSDUCT (500V DC, 5500A DP)

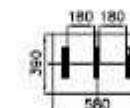
Sl. No.	Item Description	Units	Values & Details
7.1	Manufacturer		Reputed
7.2	Material and Grade		Neoprene
7.3	Maximum permissible expansion	mm	50 - 60mm
7.4	Material and grade of gaskets used for inspection covers		EPDM
8.0	Seal - Off Bushings		Seal off Plate (FRP)
8.1	Manufacturer		Reputed
8.2	Type Designation		
8.3	Material		FRP
8.4	Voltage Class	kV	1.1kV
8.5	Greepage Distance	mm/kV	Not Applicable
8.6	Quantity	Nos.	2nos. (Bottom & Top)
9.0	Bus Insulators		
9.1	Manufacturer		Reputed
9.2	Material		FRP / SMC / DMC
9.3	Applicable Standard		IS 10192 - 1982 / IS 2824 - 07
9.4	Voltage Class	kV	1.1kV
9.5	Minimum Creepage distance	mm/kV	Min. 25mm
9.6	Number of insulators at each point of support	Nos.	2nos.
10.0	Space Heaters		
10.1	Manufacturer		Reputed
10.2	Rating	kW	100Watt
10.3	Quantity	Nos.	1no. of Every 5 meters
11.0	Dimension & Weight of the Largest shipping Piece		
11.1	Length	m	3m Approx.



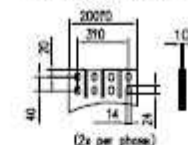
GROUND FIXATION 地面固定



* 2 * AC connection from top AC 電線接続口



DETAILS, COPPER BARS. 40000



序号 No.	名称 NAME	规格及数量 SPECIFICATION	单位 UNIT	数量 QTY	备注 NOTE
1	+ER : 空气开关 AVR outside		套 SET	2	制造商/工厂名称 Cacktion manufacture's cabinet
2	+EE : 无感启动 DC field breaker outside DC connection outside field-suppression		套 SET	2	制造商/工厂名称 Cacktion manufacture's cabinet
3	+EG1-5 : 逆变器 Converter		套 SET	10	制造商/工厂名称 Cacktion manufacture's cabinet
4	+EA : AC 电连接器 AC Connection outside		套 SET	2	制造商/工厂名称 Cacktion manufacture's cabinet
5	导轨 Channel steel	[10]	米 M	50	用于安装制造商/工厂名称, 导轨 Cacktion manufacture's cabinet, guide

Notes:

1. This drawing is designed according to excitation manufacture's drawing.
2. The quantity in equipment & material list is for both Unit 1 and Unit 2.

RELEASED FOR APPROVAL

[illegible]