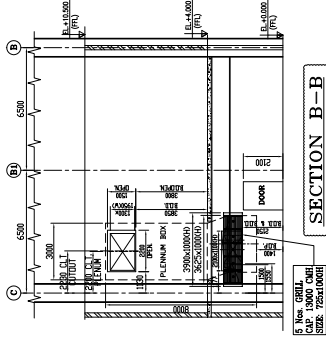
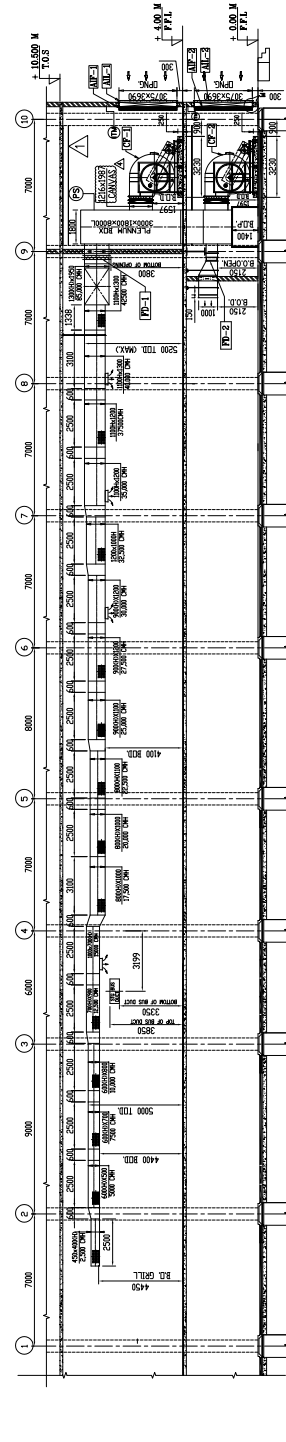
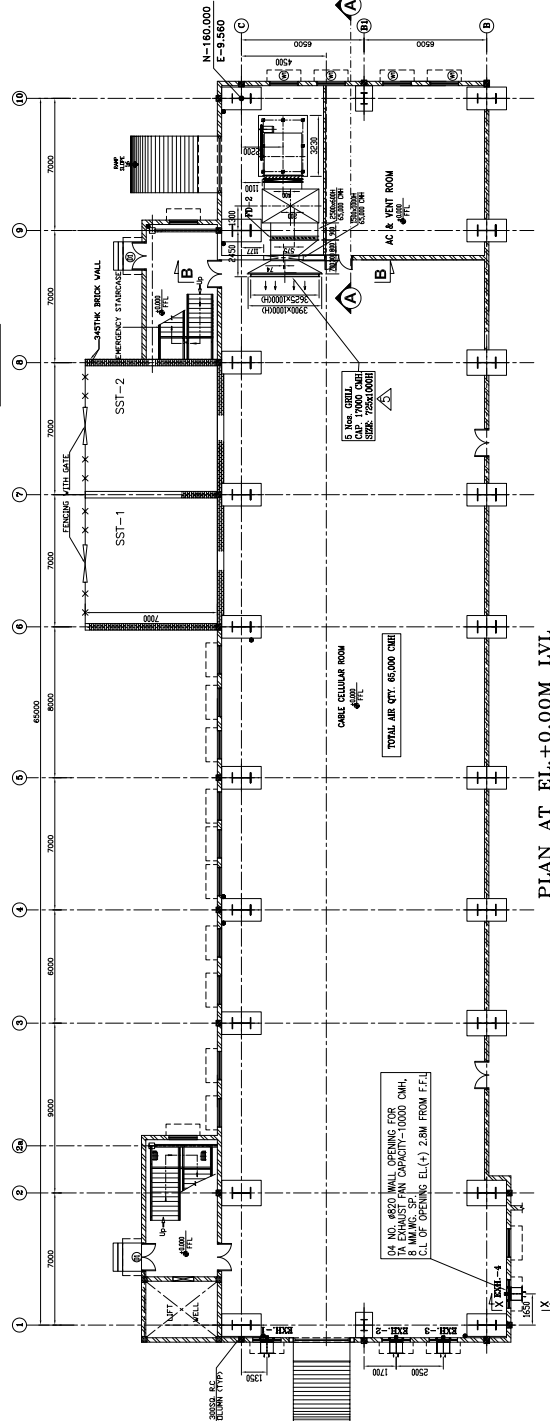
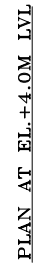
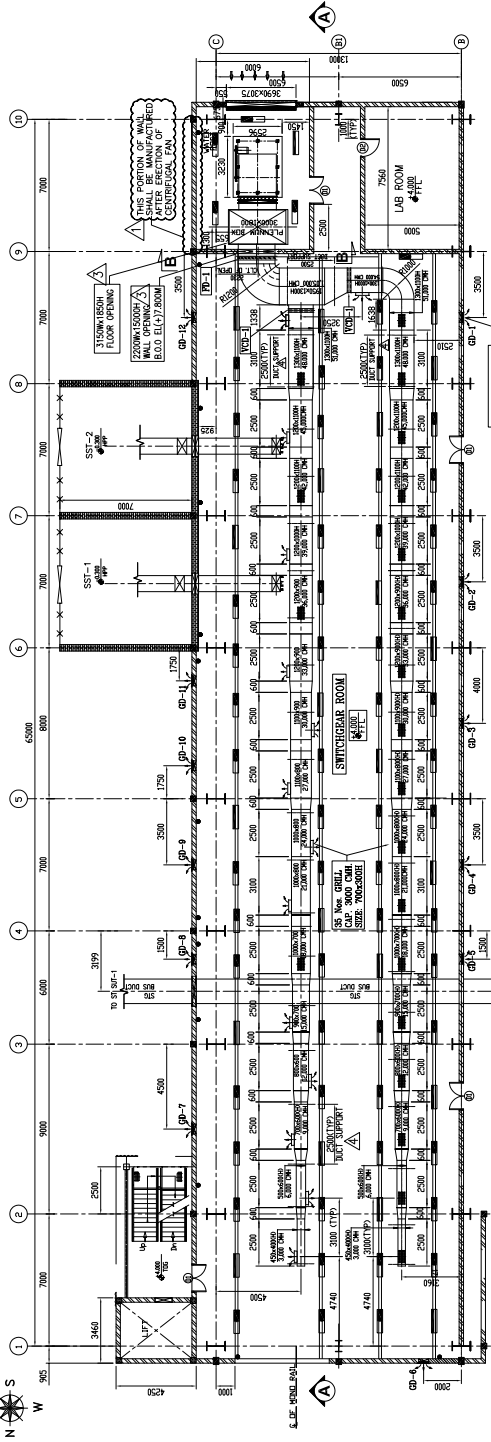




NOTES:-

1

- 1) ALL DIMENSIONS ARE IN MM AND ELEVATION ARE IN METERS.
- 2) ALL CIVIL WORK, AIR TIGHT DUCT FOR CENTRIFUGAL FAN SHALL BE CONSTRUCTED TO THE FOLLOWING SPECIFICATIONS:-
 - a) DUCT RIGIDITY SHALL BE 2500 MM
 - b) MAXIMUM DISTANCE OF DUCT SUPPORTS SHALL BE 2500 MM
 - c) FLEX DAMPER SHALL BE MOTORISED TYPE
 - d) ALL WALL OPENINGS & GROUTING ARE IN DUCT'S SCOPE.
 - e) MAXIMUM VELOCITY OF AIR IN DUCT SHALL BE :

Δ

 MAIN BRANCH DUCT
SUPPLY GR
- 3) FOR G.A. OF CENTRIFUGAL FAN REF. DOC/MAINT-8704
- 4) ALL DUCT SUPPORT SUCH AS ROD, ANGLE, ANCHOR FASTENERS SHALL BE IN DUCT'S SCOPE
- 5) DUCT FOR PLENUM IS IN ROD'S SCOPE

8	REVISED AS INTERNALLY CHANGED.		P.D	S.S/MA	04.03.17
7	REVISED AS PER BHEL COMMENTS VIED E-MAIL DATED 12/9/2015		P.D	ANC.	15.09.15
6	REVISED AS PER BHEL COMMENTS VED E-MAIL DATED 17/9/2015		P.D	ANC.	07.09.15
5	REVISED AS PER BHEL COMMENTS		P.D	ANC.	23.08.15
4	REVISED AS PER BHEL DOCUMENTS NO. HYO/PESD/MANUP/VENT/830C DATED 25.04.14		ANMESH	S.S	23.06.14
3	REVISED AS PER BHEL DOCUMENTS NO. HYO/PESD/MANUP/VENT/830BATED 30.12.13		ANMESH	S.S	22.11.13
2	REVISED AS PER BHEL DOCUMENTS NO. HYO/PESD/MANUP/VENT/830A DATED 8.4.13		ANMESH	S.S	22.11.13
1	REVISED AS PER BHEL COMMENTS NO DATED 23.07.12		A.K/SHAM	S.M.	18.12.12
REV. NO.	NATURE OF REVISION & DESCRIPTION	DRAWN	CHECKED	DATE	
CUSTOMER	ASSAM POWER GENERATION CORPORATION LTD.				

GUWAHATI, ASSAM

CONSULTANT :  **DEVELOPMENT CONSULTANTS (P) LTD**
CONSULTING ENGINEERS

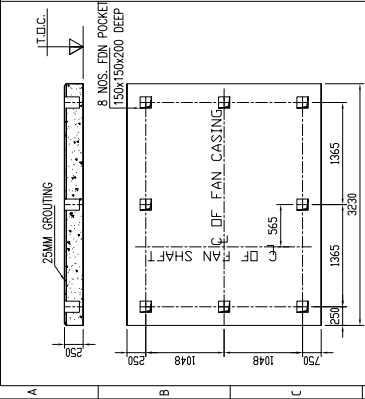
PROJECT: 1X100MW NAMRUP COMBINED CYCLE REPLACEMENT
POWER PROJECT (PHASE-1) AT NAMRUP,ASSAM

EPC CONTRACTOR

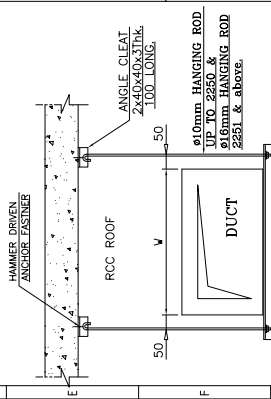
**BHARAT HEAVY ELECTRICALS LTD.,
HYDERABAD**

TITLE: DUCT LAYOUT FOR VENTILATION SYSTEM OF

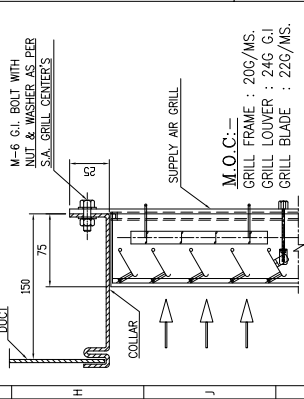
ME	EL	C&I		DEPT.	SCALE	CDC DOC. NO.	SHEET SIZE
				SIGN	NTS	CDC/NAMRUP-8734	A1
				DATE		SHEET NO : 1 OF 2	REV : 8



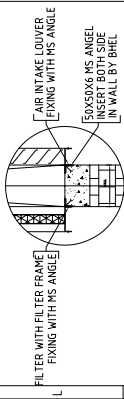
DETAIL OF CENTRIFUGAL FAN FOUNDATION
SCALE = 3:1



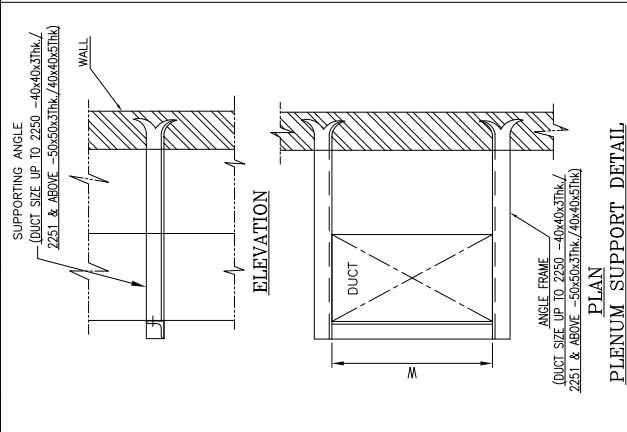
HORIZONTAL DUCT SUPPORTS DETAIL



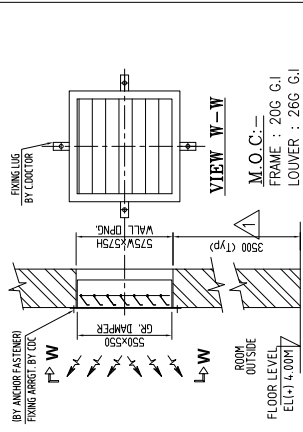
TYP. GRAVITY DAMPER ARRANGEMENT



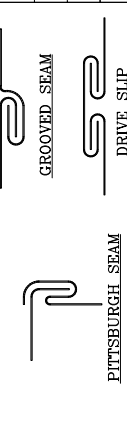
DETAIL OF M



PLENUM SUPPORT DETAIL



TYP. GRAVITY DAMPER ARRANGEMENT



TYPES OF CONSTRUCTION OF SEAMS AND CONNECTIONS

SL. NO.	SIZE	AIR QTY. IN CMH	QTY. NOS.	TOTAL AIR QTY. IN CMH	LOCATION OF GRILL
1.	700x300H	3,000	35	1,05,000	SWITCH GEAR ROOM AT EL.+4.00M
2.	725x1000H	13,000	05	65,000	CABLE CELLULAR ROOM AT EL.+0.00M
TOTAL AIR QTY.=1,70,000 CMH.					

SL. NO.	SIZE	QTY.	LOCATION
1.	60-1 TO 60-12	550x550	12 NOS.
SWITCH GEAR ROOM AT EL.+4.00M			

SL. NO.	SIZE	QTY.	LOCATION
1.	FD-1	1950x1300H	1 No.
2.	FD-2	2500x600H	1 No.
CABLE CELLULAR ROOM AT EL.+0.00M			

SL. NO.	SIZE	QTY.	LOCATION
1.	VD-1	1300x1100H	2 Nos.
SWITCH GEAR ROOM AT EL.+4.00M			

SL. NO.	SIZE	QTY.	LOCATION
1.	VD-1	1300x1100H	2 Nos.
SWITCH GEAR ROOM AT EL.+4.00M			

EQUIPMENT SCHEDULE

TAG NO.	DESCRIPTION	QTY.
CF1-CF2	CENTRIFUGAL FAN WITH ACCESSORIES CAPACITY : 85000 CMH (SUPPLY)	2
AIL1-AIL2	3690W(1/3)x3075H(1/3) G.I. AIR INTAKE LOUVER WITH BIRD SCREEN	2
AIF1-AIF2	610X610X150 THK HOPE AIR INTAKE FILTER 30+30	2
GD1-GD12	GRAVITY DAMPER	TABLE
FD1-FD2	MOTORISED FIRE DAMPER	TABLE
VCD1-2	VOLUME CONTROL DAMPER	TABLE
DUCT	DUCT WITH DUCT SUPPORT	LOT
PS	SUPPLY AIR GRILL WITH VCD	TABLE
PS	PRESSURE SWITCH	1
ITM	INCLINED TUBE MANOMETER	2
EXH1-EXH4	TUBE AXIAL EXHAUST FAN CAP.-10000 CMH;8 mm/Wg. SP. FAN SIZE:TA-30	4

SL. NO.	GAUGE	AREA (m2)	TOTAL AREA (m2)
1.	24	55.0	
2.	22	365.0	580.00
3.	20	50.0	
4.	18	110.0	

SL. NO.	MATERIAL	LENGTH (mtr.)
1.	M.S. ANGLE ISA 40X40X3	65
2.	M.S. ANGLE ISA 40X40X5	50
3.	M.S. #10 DIA ROD	250
4.	M.S. #16 DIA ROD	12

SHEET DESCRIPTION	SHEET THICKNESS	DESCRIPTION	DISTANCE	BRACING
UPTO 600 MM	24 GAUGE (0.63 MM)	DRIVE SLIP/BAR SLIP(25mm)	2400 MM	NIL
601 MM TO 750 MM	24 GAUGE (0.63 MM)	DRIVE SLIP/BAR SLIP(25mm)	2400 MM	25X25X3 THK.
751 MM TO 1000 MM	22 GAUGE (0.80 MM)	DRIVE SLIP/BAR SLIP(25mm)	2400 MM	25X25X3 THK.
1001 MM TO 1500 MM	22 GAUGE (0.80 MM)	FLANGE (40X40X3 THK.)	2400 MM	40X40X3 THK.
1501 MM TO 2250 MM	20 GAUGE (1.00 MM)	FLANGE (40X40X3 THK.)	2400 MM	40X40X3 THK.
2251 MM TO & ABOVE	18 GAUGE (1.25 MM)	FLANGE (50X50X3 THK.)	2400 MM	(50X50X3 THK.)

BHEL REF. DRG. :-

- STG & SWITCHGEAR BUILDING & ARCHITECTURAL PLAN AT EL.+0.000M (DRG. NO.:0-38142-01885)
- STG & SWITCHGEAR BUILDING & ARCHITECTURAL PLAN AT EL.+4.00M LVL. (DRG. NO.:0-38142-01886)
- STG & SWITCHGEAR BLDG. ROOF PLAN AT EL.+16.40M & EL.+25.10M LVL. (DRG. NO.:0-38142-01888)
- STG & SWITCHGEAR BUILDING & SECTION (DRG. NO.:0-38142-09165)
- STRUCTURAL, RCC & BEAM DETAILS (DRG. NO.:)
- SWITCHGEAR EQUIPMENT LAYOUT (DRG. NO.0381-21-02036 REV.05)
- LT BUS DUCT LAYOUT (DRG. NO.1-381-21-02680-R02)
- STG BUS DUCT LAYOUT (DRG. NO R2-1260-03-1031 REV.-4.)
- CABLE TRAY LAYOUT (DRG. NO 0-381-21-00618 R-02 REV.-4.)
- ARCH LAYOUT OF SWITCHGEAR ROOM (DRG. NO)

7	REVISED AS INTERNALLY CHANGED.	P.D	S.SAHA	04.05.17
7	REVISED AS PER BHEL COMMENTS VIED E-MAIL DATED 12/9/2015	P.D	ANC.	15.09.15
6	REVISED AS PER BHEL COMMENTS VIED E-MAIL DATED 1/9/2015	P.D	ANC.	07.09.15
5	REVISED AS PER BHEL COMMENTS	P.D	ANC.	23.08.15
4	REVISED AS PER BHEL DOCUMENTS NO. HYD/PESD/NAMRUP/VENT/BSOC DATED 25.04.14	ANIMESH	S.S	23.06.14
3	REVISED AS PER BHEL DOCUMENTS NO. HYD/PESD/NAMRUP/VENT/SUBROUTED 30.12.13	ANIMESH	S.S	22.11.13
2	REVISED AS PER BHEL DOCUMENTS NO. HYD/PESD/NAMRUP/VENT/BSOA DATED 8.4.13	ANIMESH	S.S	22.11.13
1	REVISED AS PER BHEL COMMENTS NO DATED 23.07.12	A.K.SAHA	S.M.	18.12.12
REV. NO	NATURE OF REVISION & DESCRIPTION	DRAWN	CHECKED	DATE
ASSAM POWER GENERATION CORPORATION LTD.				
CUSTOMER:				

CONSULTANT :
DEVELOPMENT CONSULTANTS (P) LTD.
CONSULTING ENGINEERS

PROJECT:
1X100MW NAMRUP COMBINED CYCLE REPLACEMENT POWER PROJECT (PHASE-1) AT NAMRUP ASSAM

DESIGNER:
Bharat Heavy Electricals Ltd.
HYDERABAD

TITLE: DUCT LAYOUT FOR VENTILATION SYSTEM OF SWITCH GEAR ROOM AT EL.+4.00M LVL. & CABLE CELLULAR ROOM AT+0.00M LVL.			
ME	EL	C&H	SCALE
			1:50
			DATE
			SHEET NO : 2 OF 2
			REV : 8