

38831/2020/PS-PEM-CIV

**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

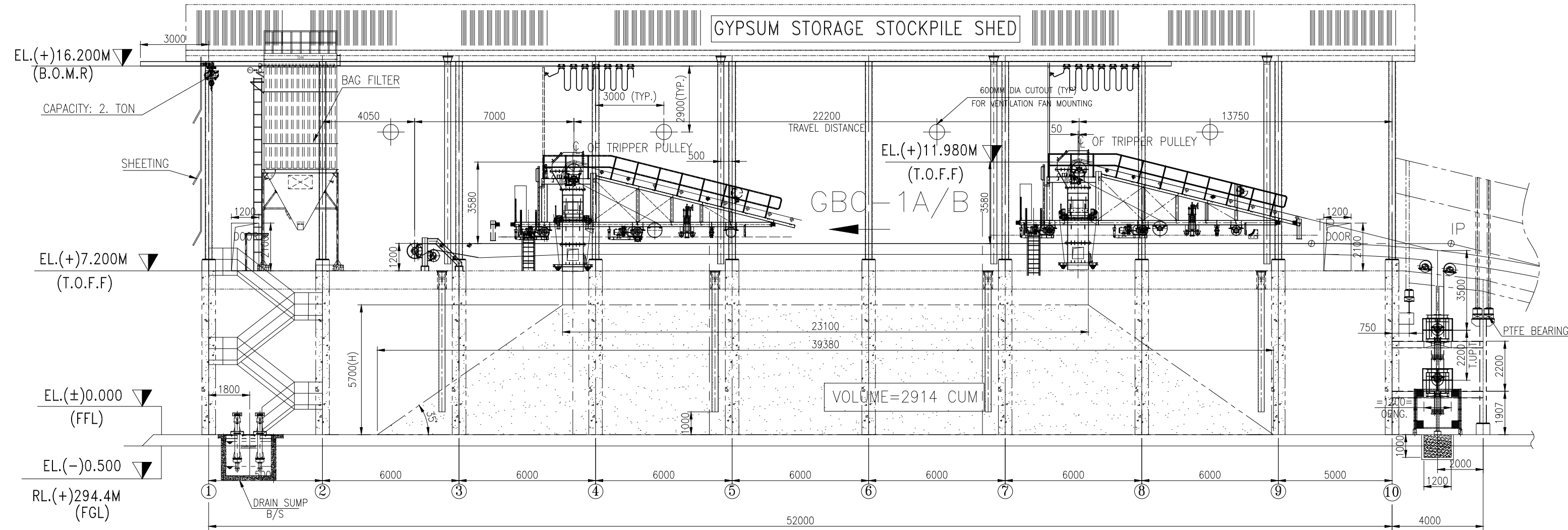
Annexure-C1

FIRST ANGLE PROJECTION

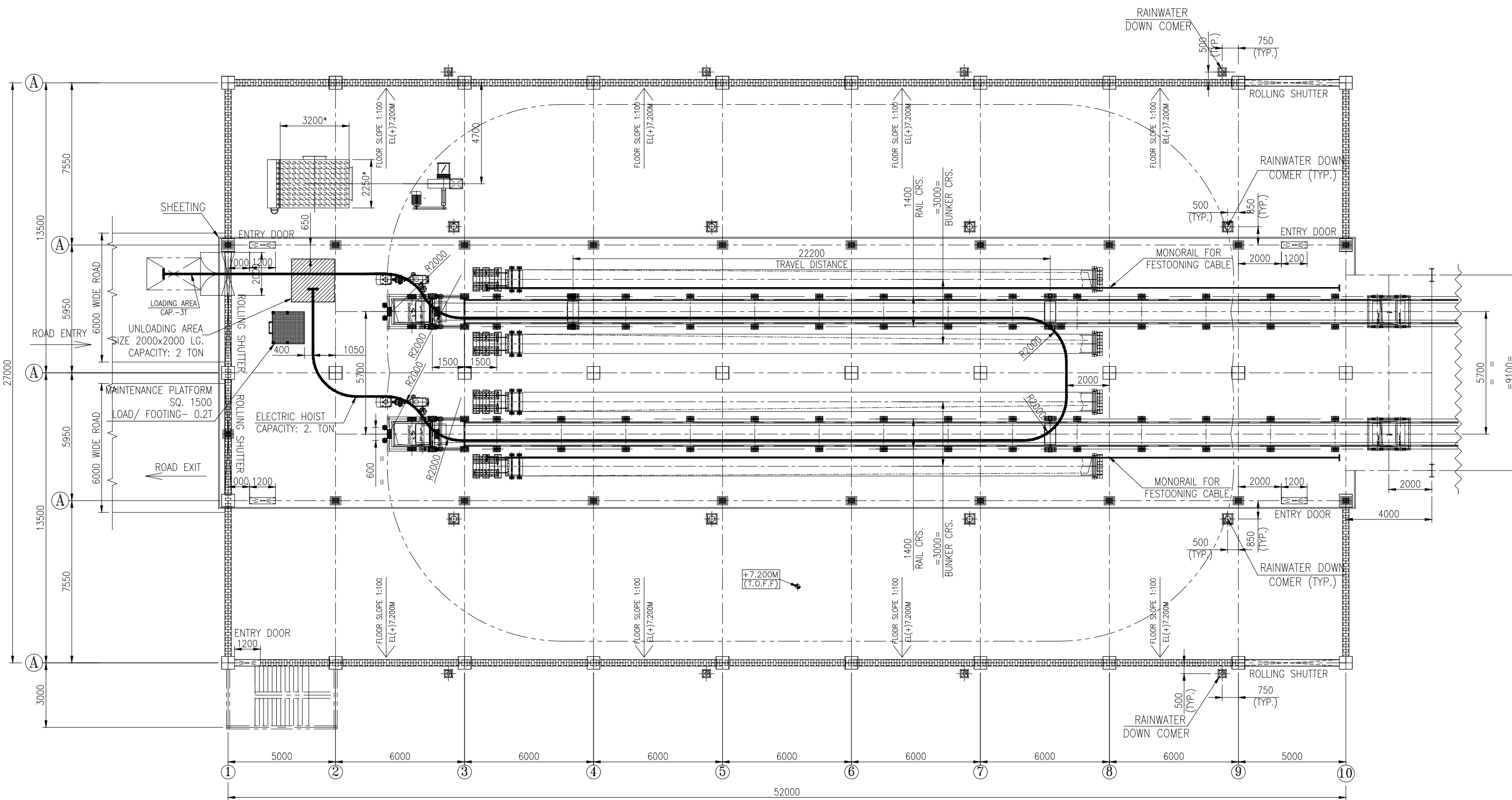
ALL DIMENSIONS ARE IN MM

680-B-W\p-601-6666

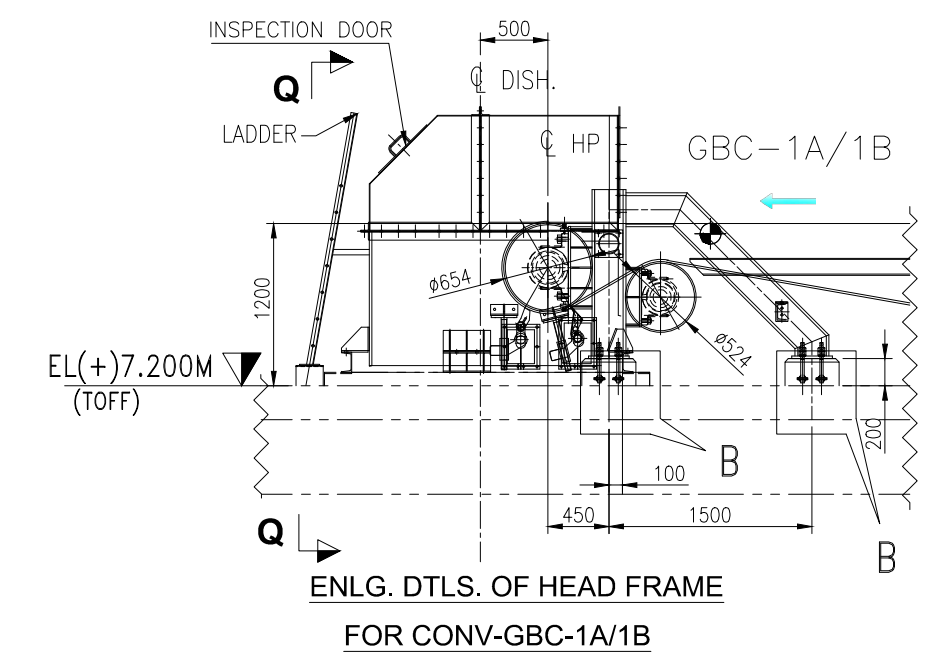
ON ONWAY



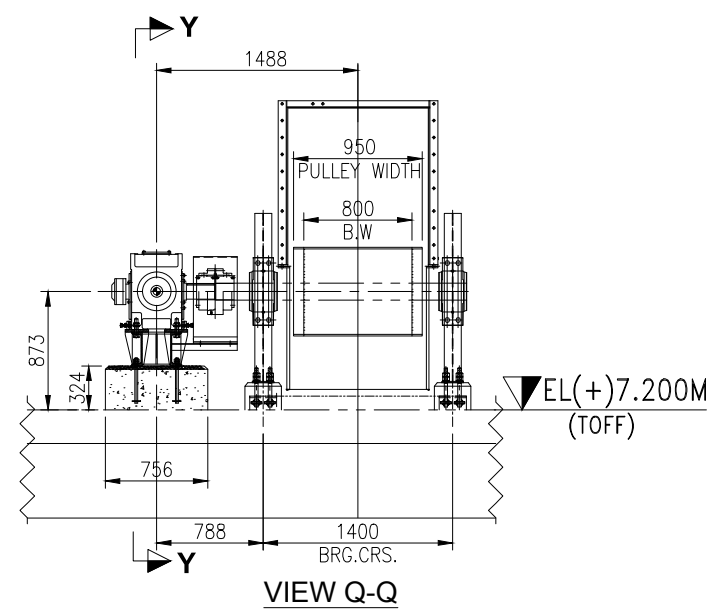
ELEVATION



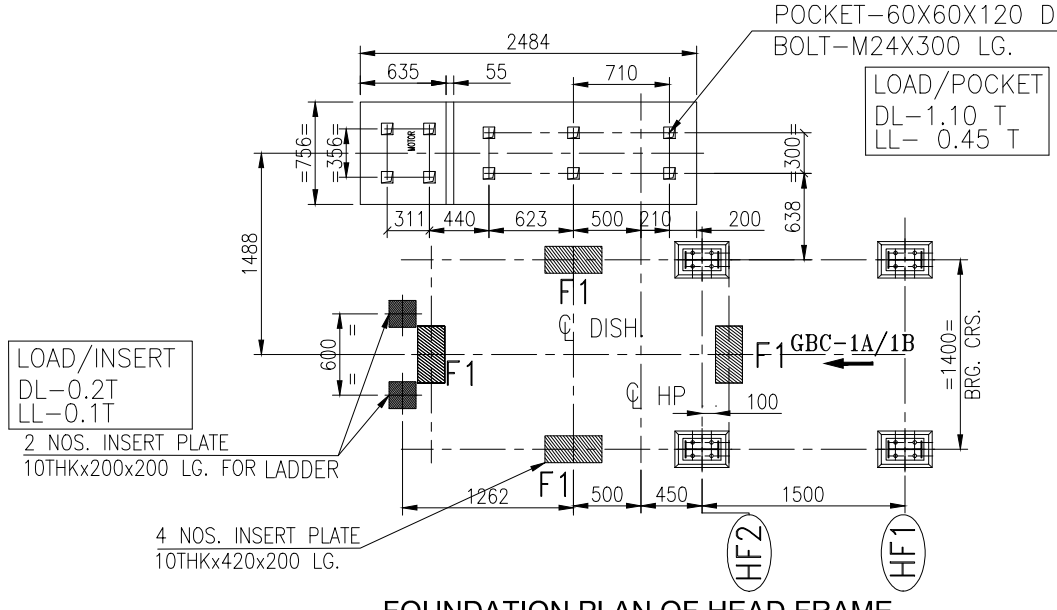
FLOOR PLAN AT EL+7.200M LEVEL



ENLG. DTLS. OF HEAD FRAME FOR CONV-GBC-1A/1B



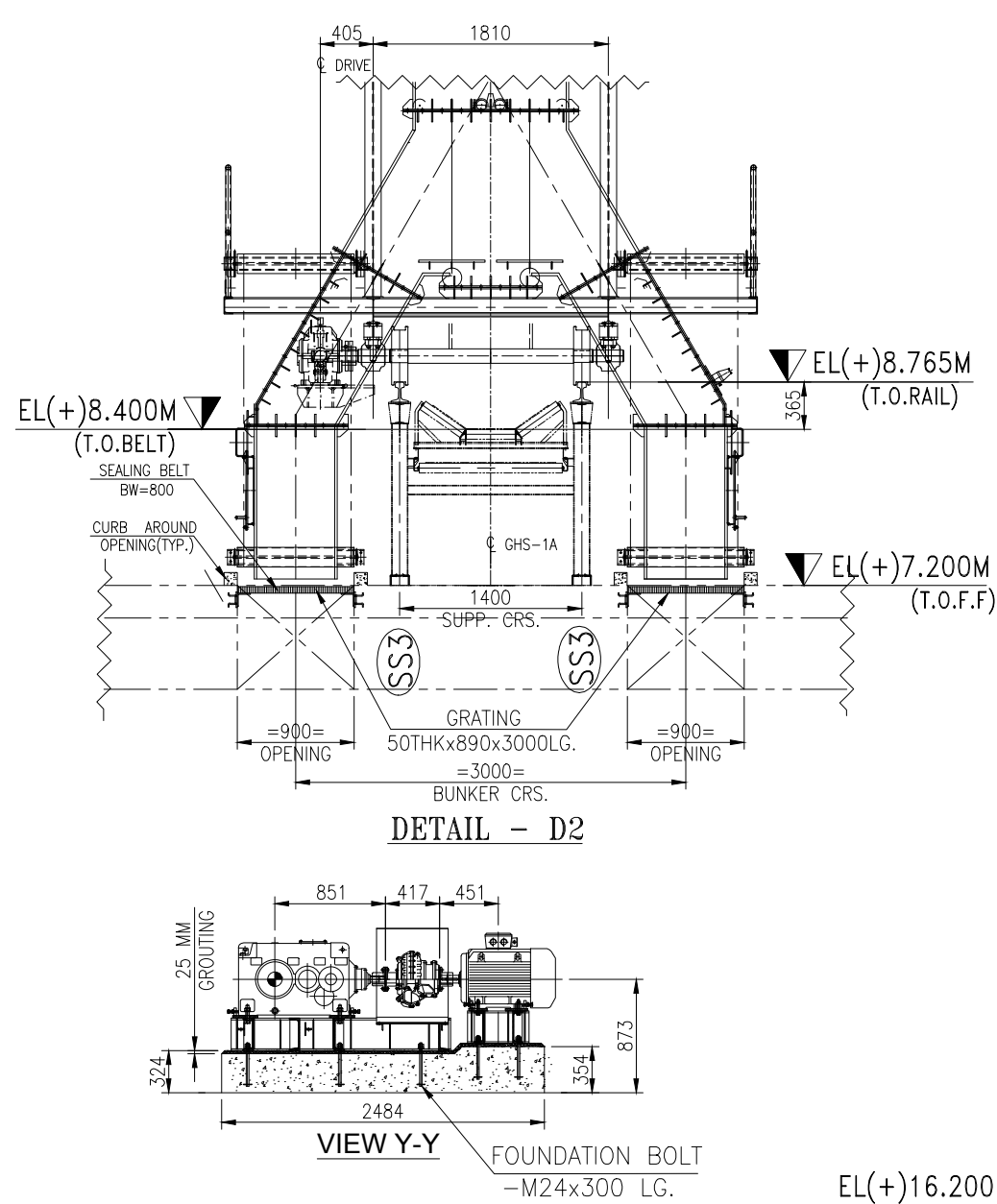
VIEW Q-Q



FOUNDATION PLAN OF HEAD FRAME FOR CONV-GBC-1A/1B

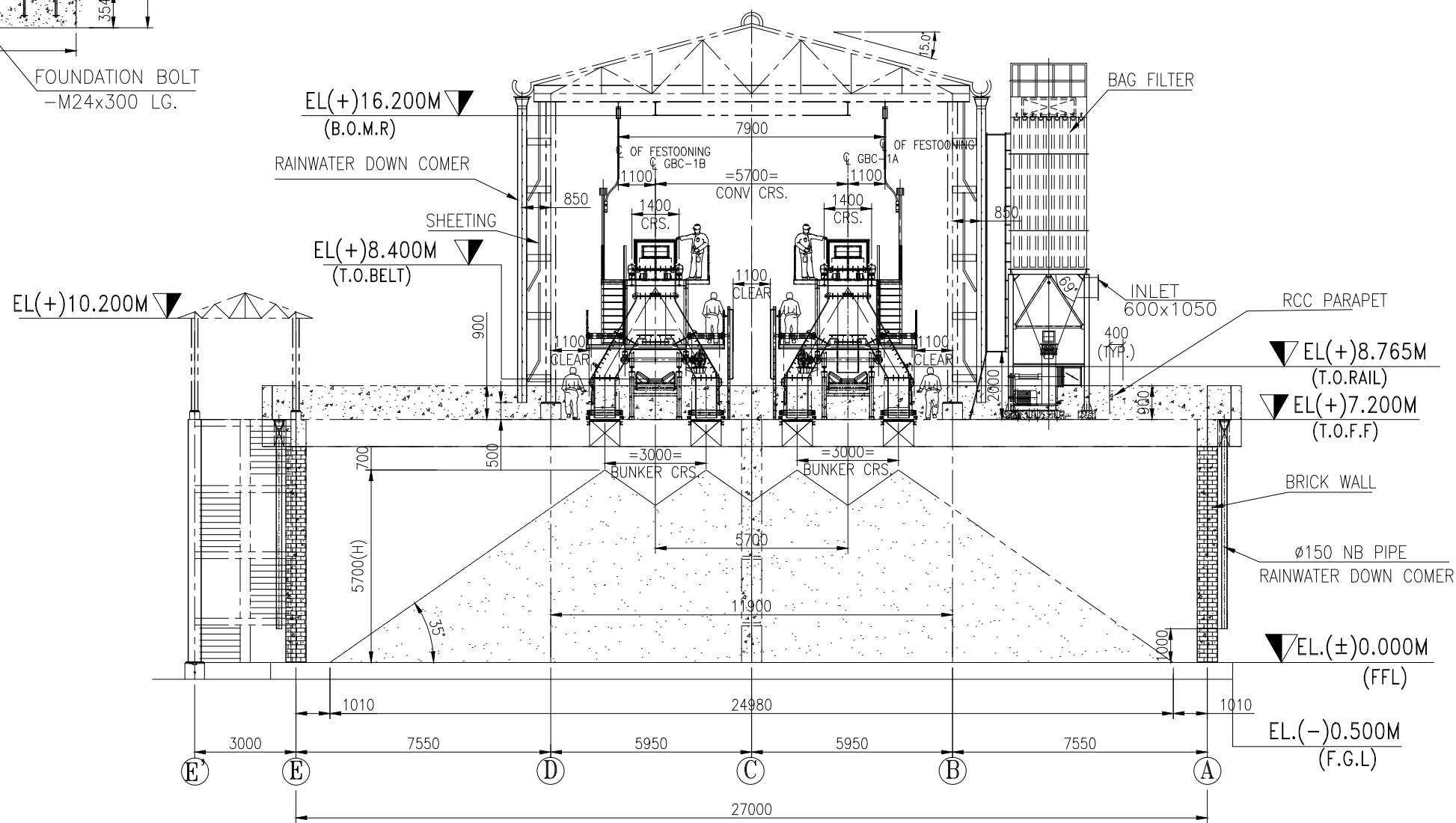
NOTES:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN METERS.
2. EL(+10.00) CORRESPONDS TO RL(+294.900M). FGL IN THIS AREA IS EL(-)0.50M
3. ALL (*) MARKED DIMENSIONS ARE INDICATIVE & SHALL BE FINALIZED AFTER GETTING THE EQUIPMENT DRGS.
4. FLOOR LEVEL SHOWN IN THE DRG. ARE 500MM ABOVE FGL. ALL OTHER LEVEL SHOWN ARE W.R.T PLINTH LEVEL.
5. CIVIL/STRUCTURAL DETAILS SHALL BE AS PER THE APPROVED CIVIL/ STRUCTURAL DRAWINGS.
6. INSPECTION DOOR SHALL BE LEAK PROOF.
7. REFER SEPERATE DRG. FOR DE SYSTEM.
8. HANDRAIL AND CURB WALL TO BE PROVIDED ALL AROUND EDGES AND OPENING
9. WIND AND SEISMIC LOAD TO BE CONSIDERED SEPARATELY FOR DE SYSTEM EQUIPMENTS
10. EXTENSION OF RCC SLAB AS REQUIRED TO BE CONSIDERED DURING CIVIL DESIGN.
11. ELECTRICAL AND UTILITY CUT-OUT & HOLES SHOWN IN THIS DRAWING ARE FOR IDENTIFICATION PURPOSE.
12. BUILDING SHALL BE DESIGNED CONSIDERING CHUTE CLOGGING CONDITION.



DETAIL - D2

VIEW Y-Y



SECTION: A-A

REFERENCE DRAWINGS/DOCUMENTS

NTPC DRG. NO.	DESCRIPTION
9993-109-PVM-B-074	FLOW DIAGRAM LHP & GHP
9993-109-PVM-F-020	PLANT LAYOUT OF FGD SYSTEM
9993-109-PVM-B-076	TYP. GALLERY CONV. CROSS SECTION
9993-XXX-PVM-X-XXX	GA OF GYPSUM BELT CONVEYOR GBC-1A/1B
9993-XXX-PVM-X-XXX	GA OF TRAVELLING TRIPPER FOR CONV.GBC-1A/1B

INDICATIVE & TENDER PURPOSE ONLY

OWNER/CONSULTANT
NTPC-SAIL POWER COMPANY PVT. LTD.

PROJECT:
EXPANSION OF BHILAI POWER PROJECT
FGD PACKAGE (2X250MW)

MAIN CONTRACTOR:
BHARAT HEAVY ELECTRICALS LTD.
INDUSTRIAL SYSTEMS GROUP, BANGALORE

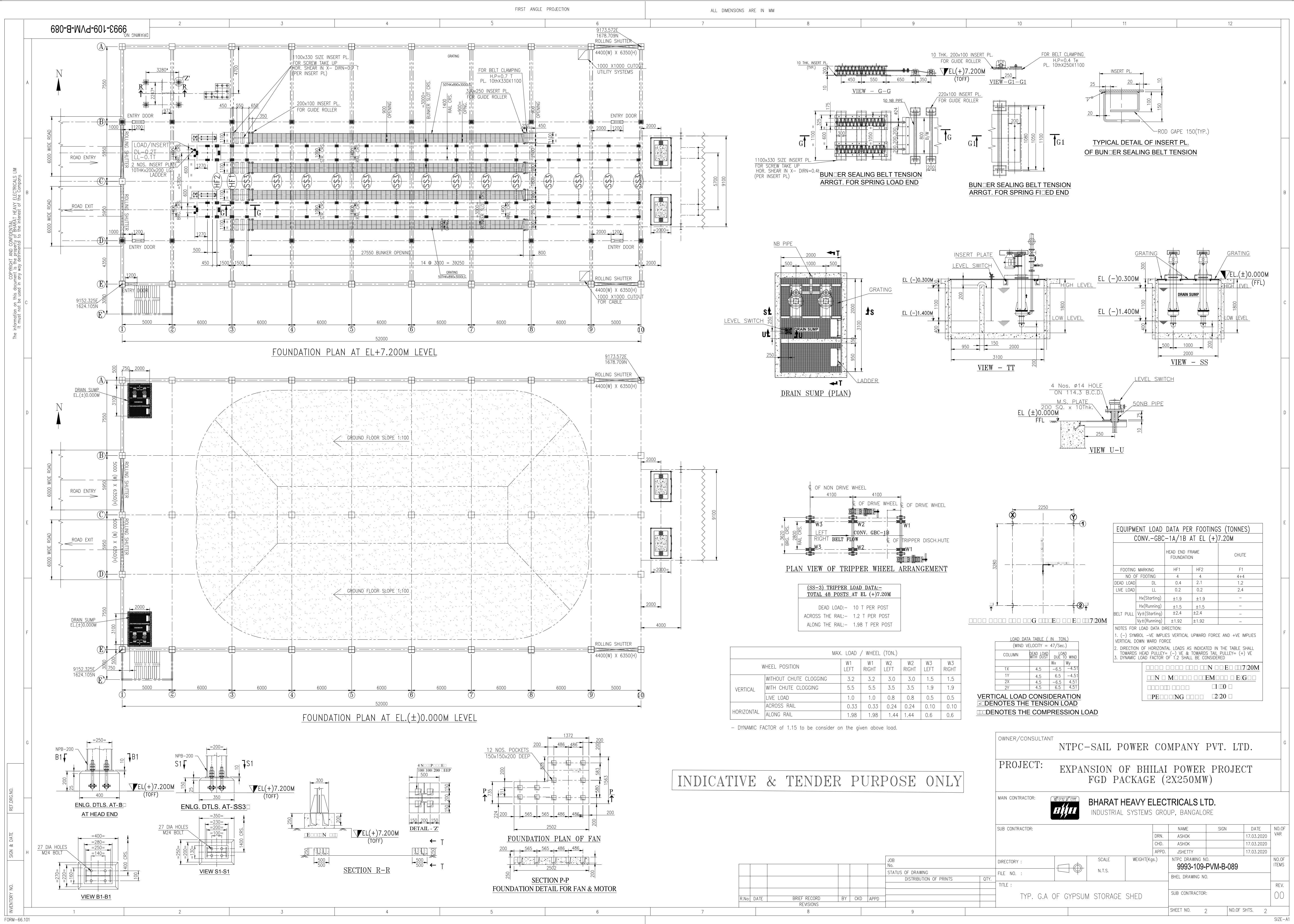
SUB CONTRACTOR:	NAME	SIGN	DATE	NO.OF VAR
	DRN. ASHOK		17.03.2020	
	CHD. ASHOK		17.03.2020	
	APPD. JSHETTY		17.03.2020	

DIRECTORY :	SCALE	WEIGHT(Kgs.)	NTPC DRAWING NO.	NO.OF ITEMS
FILE NO. :	N.T.S.		9993-109-PVM-B-089	
TITLE :			BHEL DRAWING NO.	

TYP. G.A OF GYPSUM STORAGE SHED

SUB CONTRACTOR:

SHEET NO. 1 NO.OF SHTS. 2



38831/2020/PS-PEM-CIV

**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

Annexure-C2

38831/2020/PS-PEM-CIV

**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

Annexure-C3

FIRST ANGLE PROJECTION

ALL DIMENSIONS ARE IN MM

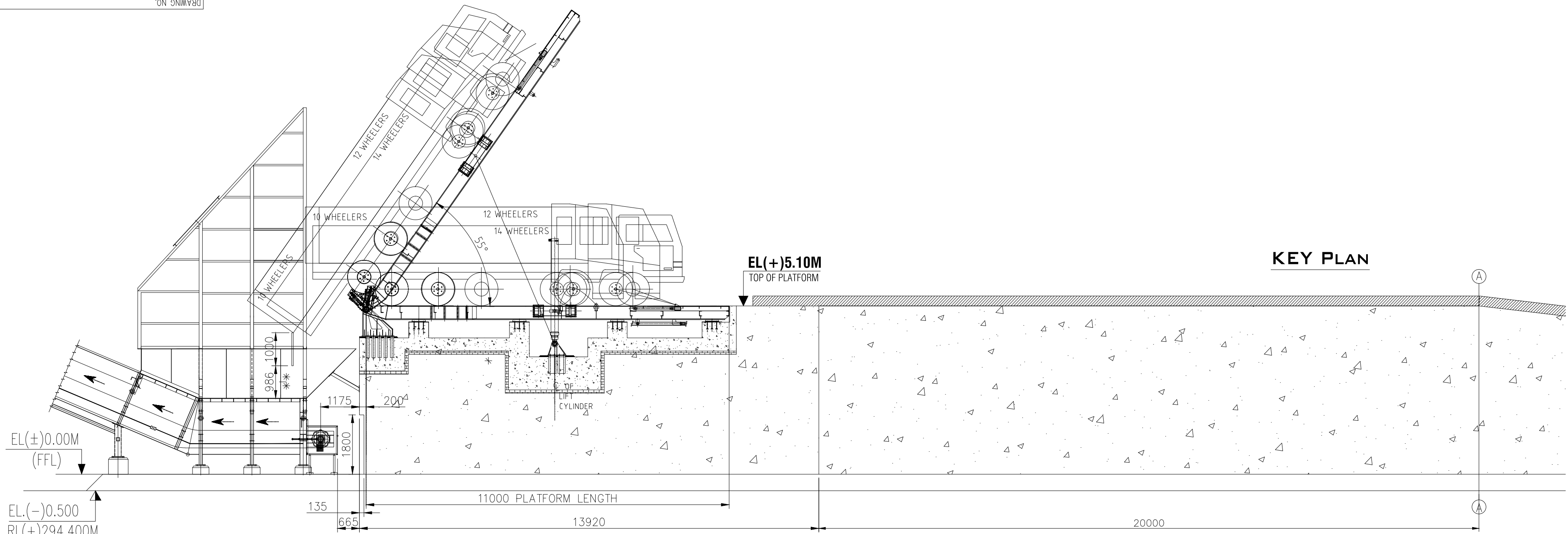
COPYRIGHT AND CONFIDENTIAL
The information on this document is the property of BHARAT HEAVY ELECTRICALS LIMITED and must not be used in any way detrimental to the interest of the company.

INVENTORY NO.

SIGN & DATE

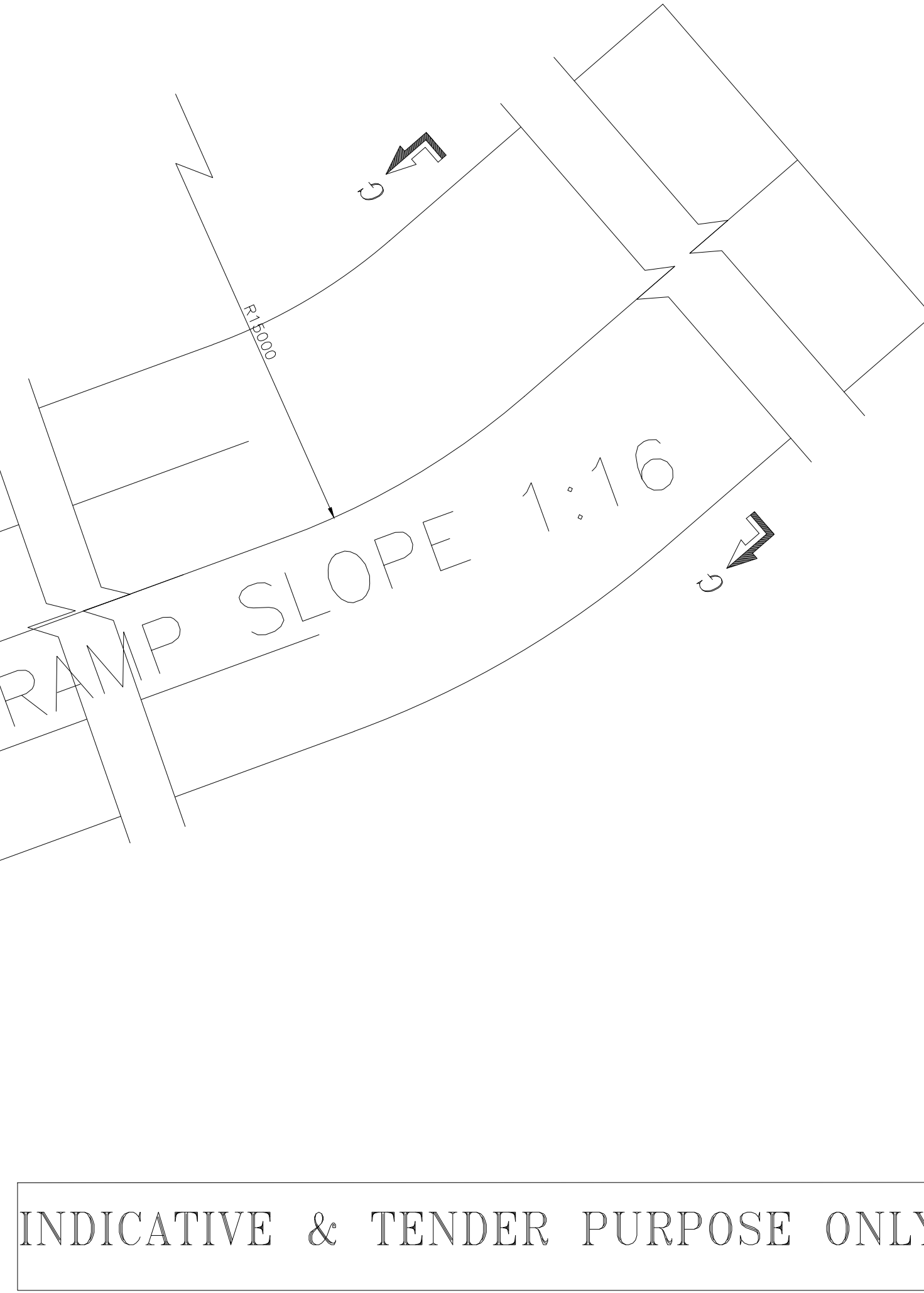
REF.DWG.NO.

FORM-66.101



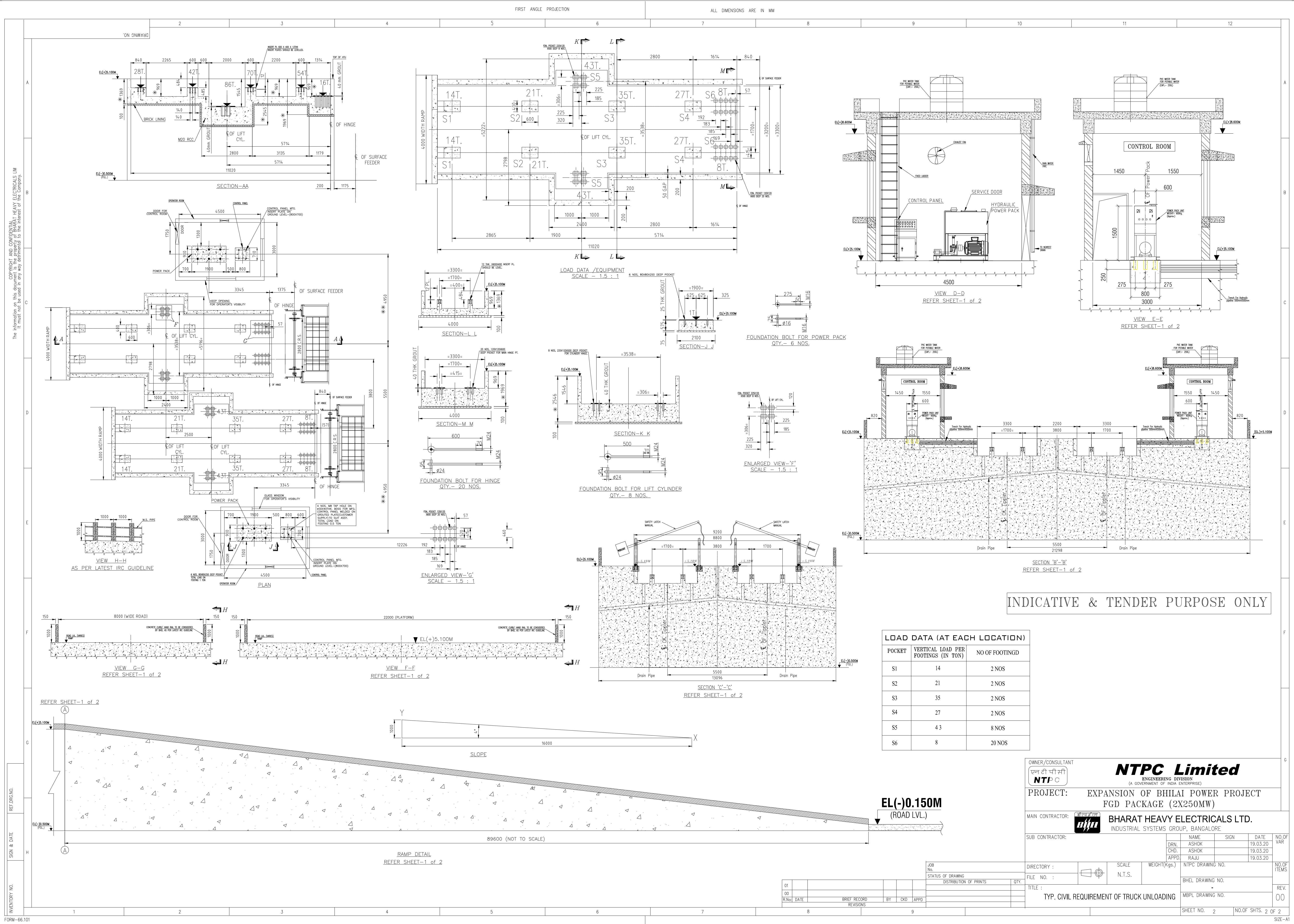
NOTES:

1. ALL DIMENSIONS ARE IN MM & ELEVATIONS IN METERS UNLESS STATED OTHERWISE.
2. ALL LEVELS ARE IN M.
3. EL(+/-)0.00 CORRESPONDS TO RL(+294.900M) . FGL IN THIS AREA IS EL(-)0.50M.
4. FLOOR LEVEL SHOWN IN THE DRG. ARE 500MM ABOVE FGL. ALL OTHER LEVEL SHOWN ARE W.R.T PLINTH LEVEL.
5. * MARKED DIMENSIONS SHALL BE FINALIZED AFTER FINALIZATION OF EQUIPMENT.
6. LOAD DATA OF TRUCK TIPPLER HAS BEEN PROVIDED CONSIDERING MAX 14 WHEELER 5 AXLE TRUCK. MAX. GROSS WEIGHT IS 60 TON.
7. CURB WALL OR HANDRAIL SHALL BE CONSIDERED ALL ALONG RAMP BY CIVIL AS PER PREVAILING STANDARD.
8. NATURAL SLOPE AT PIT TO BE PROVIDED TO AVOID WATER ACCUMULATION.
9. RAMP SLOPE SHOWN IS TENTATIVE SAME MAY UNDERGO CHANGE DURING DETAIL ENGINEERING.



INDICATIVE & TENDER PURPOSE ONLY

OWNER/CONSULTANT एन टी सी NTPC		NTPC Limited ENGINEERING DIVISION (A GOVERNMENT OF INDIA ENTERPRISE)	
PROJECT: EXPANSION OF BHILAI POWER PROJECT FGD PACKAGE (2X250MW)			
MAIN CONTRACTOR: भारत भारी इलेक्ट्रिकल्स लि. BHARAT HEAVY ELECTRICALS LTD.		INDUSTRIAL SYSTEMS GROUP, BANGALORE	
SUB CONTRACTOR:		NAME SIGN DATE NO.OF VAX DRN. ASHOK 19.03.20 CHD. ASHOK 19.03.20 APPD. RAJU 19.03.20	
JOB No. STATUS OF DRAWING DISTRIBUTION OF PRINTS		NTPC DRAWING NO. BHPL DRAWING NO. MBPL DRAWING NO.	
FILE NO. : TITLE : TYP. CIVIL REQUIREMENT OF TRUCK UNLOADING		SCALE N.T.S. WEIGHT(Kgs.) NO.OF ITEMS	
SHEET NO. 1		NO.OF SHTS. 1 OF 2	



38831/2020/PS-PEM-CIV

**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

**Annexure-
C4.C12 &C13**

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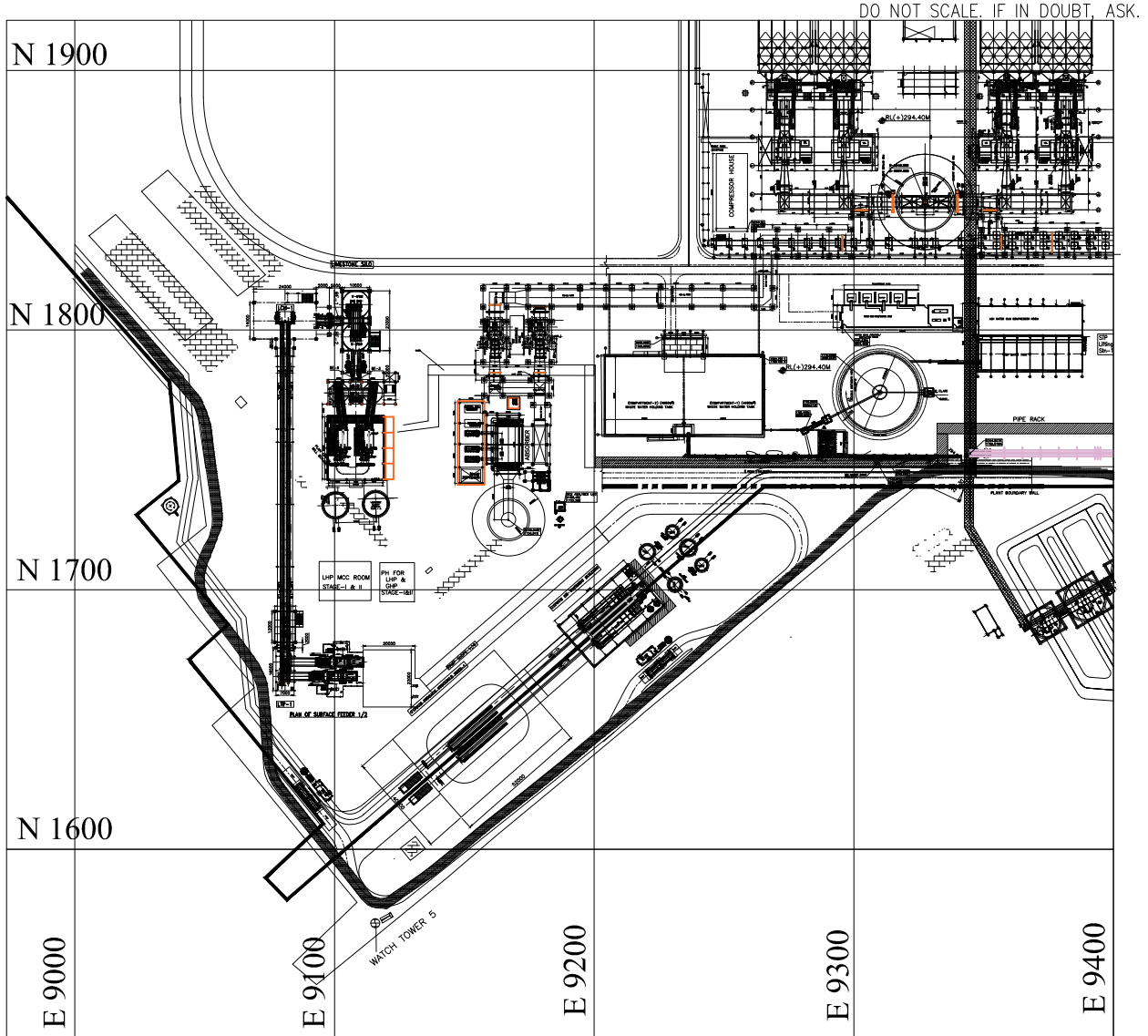
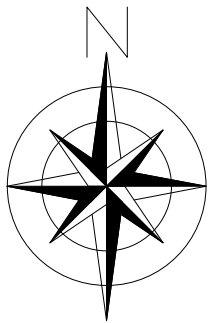


NOTES:-

1. ALL DIMENSIONS ARE IN MM & LEVELS ARE IN M.
2. FLOOR LEVEL SHOWN ARE TOP OF F.F./TOP OF STRUCTURE.
3. ALL THE OPENING SHALL BE PROVIDED WITH HANDRAIL.
4. STRUCTURAL ARRGOT. SHOWN ARE INDICATIVE ONLY.
5. ALL THE OPENINGS SHALL BE PROVIDED WITH ISA 50X50X6 CURB ANGLE & 100mm HIGH 150mm WIDTH CURB WALL TO AVOID WATER FALLING DOWN.
6. 3mm PORTION PLATE SHALL BE PROVIDED AT TRAVEL ZONE(VGTU)
7. FOR DS/SW/DW/C/S REFER SEPARATE LAYOUT DRAWING.
8. EL+0.00 OF MAIN PLANT AREA CORRESPONDS TO RL. 294.900M.
9. THE DIMENSIONS ARE INDICATIVE ONLY AS MARKED * & SHALL BE FINALIZED AFTER GETTING THE COMPONENT DRS.
10. FLOOR LEVEL SHOWN IN THE DRG. ARE 500MM ABOVE FGL. ALL OTHER LEVEL SHOWN ARE SHOWN W.R.T PLINTH LEVEL.
11. CIVIL/STRUCTURAL DETAILS INDICATED TENTATIVE.
12. INSPECTION DOOR SHALL BE LEAK PROOF.
13. REFER SEPARATE DRG. FOR DE SYSTEM.

HOIST SCHEDULE									
ITEM NO.	MONORAIL SECTION	HOIST TYPE	CAP.	LIFTING HT.	OPERATING HT. FROM FFL	L/B.RADIUS	QTY.	LOCATION LVL. ELEVATION	HANDLING EQUIP. & LOCATION
①	ISMB 300	ELECTRICAL	2 T	10.500 MTRS.	10.500 MTRS.	3MTRS	01 NO.	EL(+)10.500M (B.O.M.R)	BELOW ROOF FOR DRIVE EQUIPMENT OF SURFACE FEEDER
②	ISMB 300	MANUAL	1 T	3.550 MTRS.	3.550 MTRS.	NA	01 NO.	EL(+)3.550M (B.O.M.R)	FOR TAIL PULLEY OF CONV LBCN-1A/2

01	12.03.20	REVISED BASED UPDATED LAYOUT AND NTPC COMMENTS ON R-0	DUT	ASH	JSHETTY
R.No.	DATE	BRIEF RECORD	BY	CKD	APPD
		REVISIONS			



KEY PLAN

LEGEND:—

T.O.F.F. = TOP OF FINISHED FLOOR
T.O.S = TOP OF STRUCTURE
F.F.L = FINISH FLOOR LEVEL
F.G.L = FINISH GROUND LEVEL
H.P. = HEAD PULLEY
T.P. = TAIL PULLEY
S.P. = SNUB PULLEY
B.P. = BEND PULLEY
D.L. = DEAD LOAD
L.L. = LIVE LOAD
T.I. = TRANSITION IDLER
B.O.M.R.B = BOTTOM OF MONORAIL BEAM
I.W = INSPECTION WINDOW
C.J.S = CHUTE JAM SWITCH

REFERENCE DRAWINGS/DOCUMENTS	
NTPC-DRG. NO.	DESCRIPTION
9993-109-PVM-B-074	FLOW DIAGRAM LHP & GHP
9993-109-PVM-F-020	GENERAL PLANT LAYOUT OF LHP & GHP
9993-109-PVM-B-076	TYP. GALLERY CONV. CROSS SECTION
9993-109-PVM-B-353	GA OF LIME STONE CONV LBC-1A/1B
9993-109-PVM-B-077	GA OF BULK RECEIVING UNIT1 & 2

TENDER PURPOSE ONLY

OWNER/CONSULTANT



NTPC Limited
ENGINEERING DIVISION
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT:

NSPCL BHILAI 2X250MW
FGD - PACKAGE

MAIN CONTRACTOR:



BHARAT HEAVY ELECTRICALS LTD.
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE	
DRN.	DUT		12.03.2020	
CHD.	ASH		12.03.2020	
APPD.	JSHETTY		12.03.2020	

DIRECTORY :



SCALE	WEIGHT(Kgs.)
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TITLE : TYP. GA OF LIME STONE TP-1

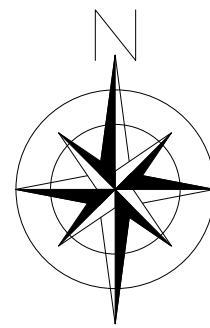
DRAWING NO.
IS-1-GA-748-100-M003

REV.
01

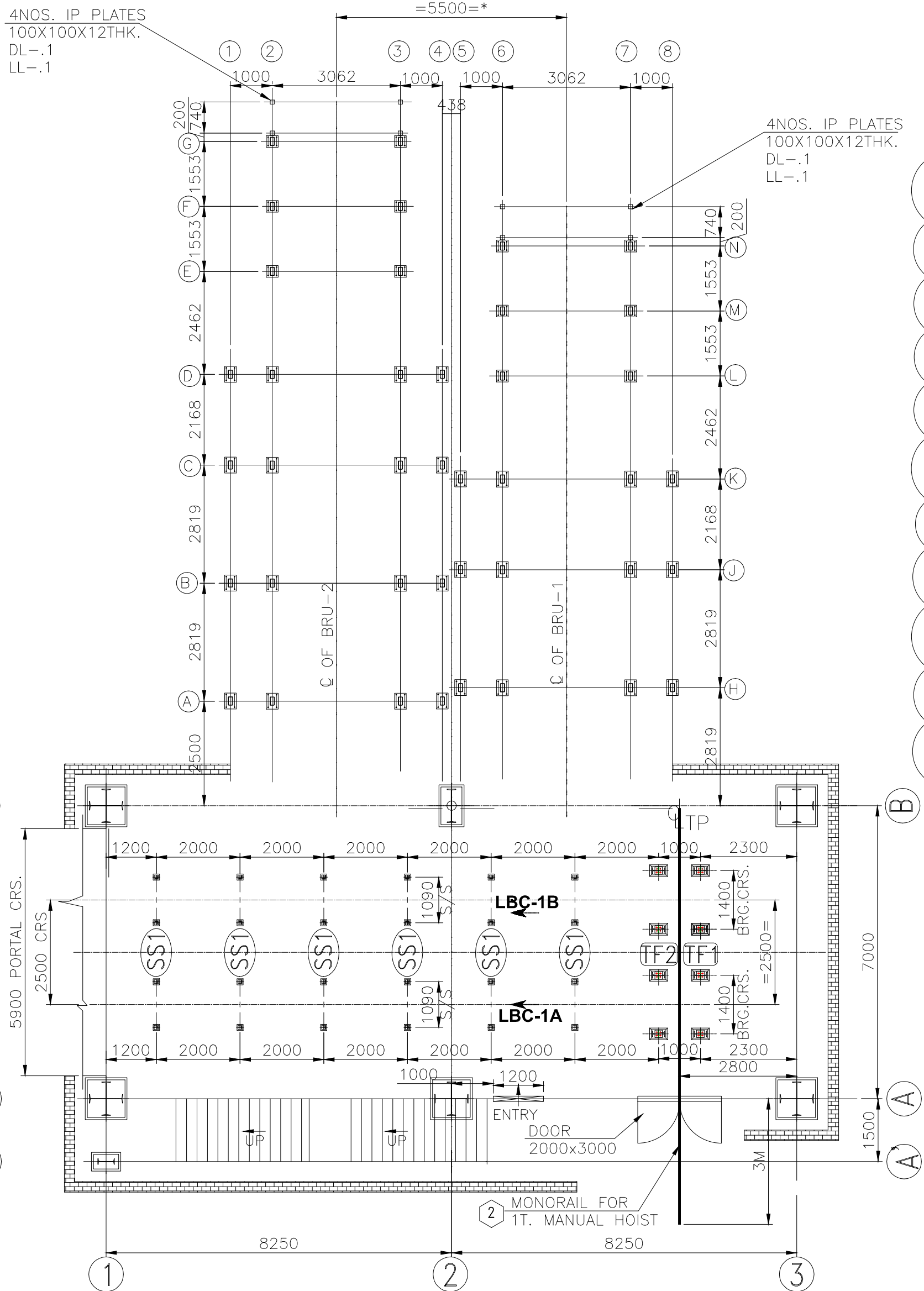
SHEET NO.	1	NO.OF SHTS.	1 OF 2
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DRAWING NO.

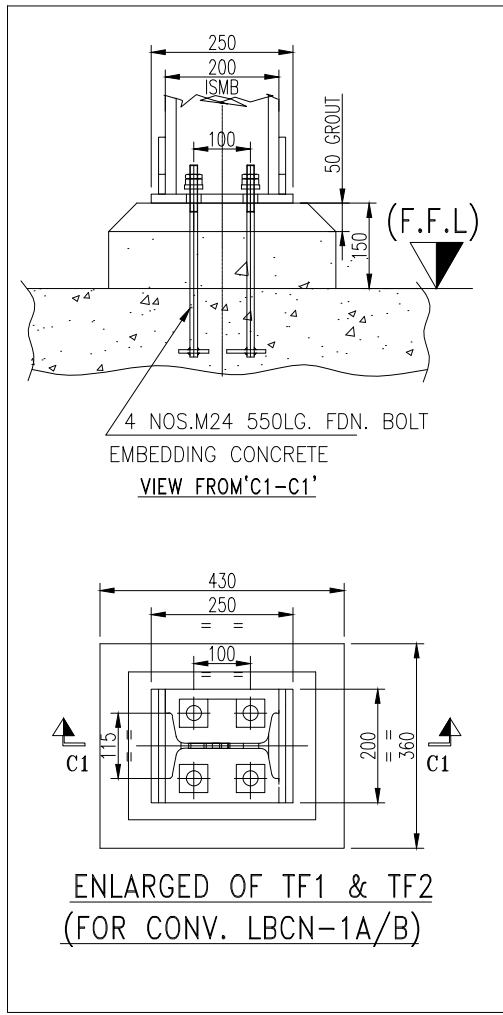
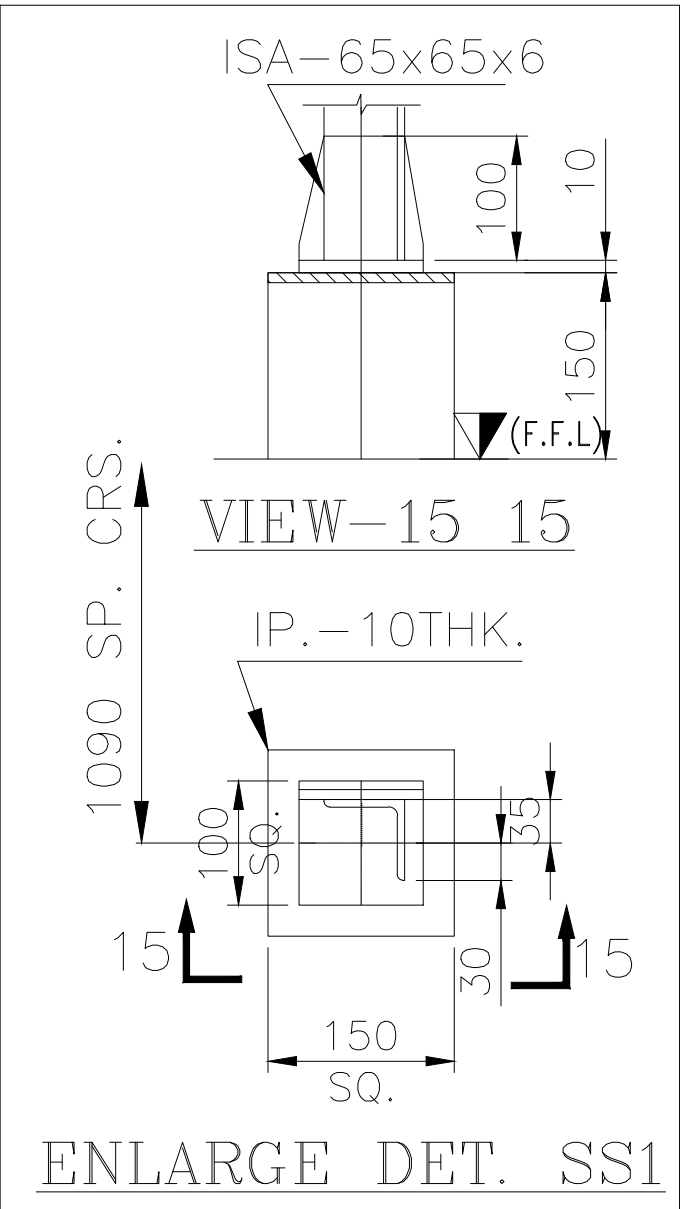
DO NOT SCALE. IF IN DOUBT, ASK



HOLD



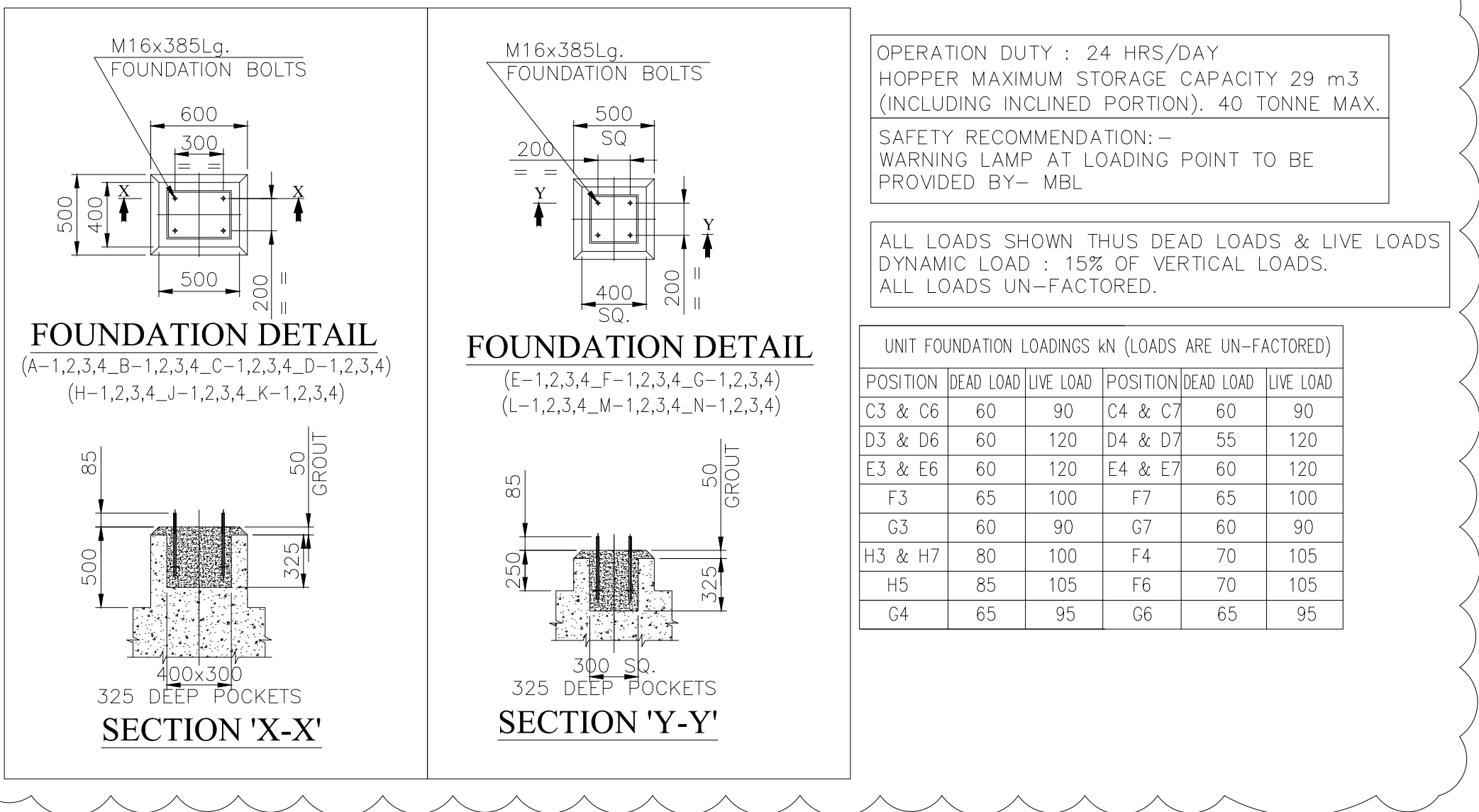
FLOOR PLAN AT LEVEL EL($\pm$)0.000M (F.F.L)



TENDER PURPOSE ONLY

EQUIPMENT LOAD DATA PER FOOTINGS (TONNES)							
		SURFACE FEEDER 1/2			LBC-1A/B		
		EL(+). 4.500M		EL(+). 2.750M	EL(±) 0.000M		
					TAIL END	FOUNDATION	SHORT POST
FOOTING MARKING		P1	P2	P3	TF1	TF2	SS1
NO OF FOOTING		7	2	3	4	4	24
DEAD LOAD	DL	**	**	**	0.825	0.55	4.5
LIVE LOAD	LL	**	**	**	0.2	0.2	6.5
BELT PULL	Hx(Starting)	-3.00	-3.00	-3.30	-3.00	-3.30	-
	Hx(Running)	-3.05	-3.05	-3.35	-3.05	-3.35	-
	Vy ±(Starting)	±1.8	±1.8	±2.1	±1.8	±2.1	-
	Vy ±(Running)	±4.02	±4.02	±4.2	±4.02	±4.2	-

NOTES FOR LOAD DATA DIRECTION:
1. (-) SYMBOL -VE IMPLIES VERTICAL UPWARD FORCE AND +VE IMPLIES VERTICAL DOWN WARD FORCE
2. DIRECTION OF HORIZONTAL LOADS AS INDICATED IN THE TABLE SHALL
TOWARDS TAIL PULLEY= (+) VE
TOWARDS HEAD PULLEY= (-) VE



UNIT FOUNDATION LOADINGS kN (LOADS ARE UN-FACTORED)					
POSITION	DEAD LOAD	LIVE LOAD	POSITION	DEAD LOAD	LIVE LOAD
C3 & C6	60	90	C4 & C7	60	90
C3 & D6	60	120	D4 & D7	55	120
E3 & E6	60	120	E4 & E7	60	120
F3	65	100	F7	65	100
G3	60	90	G7	60	90
H3 & H7	80	100	F4	70	105
H5	85	105	F6	70	105
G4	65	95	G6	65	95

OWNER/CONSULTANT

NTPC Limited

ENGINEERING DIVISION
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT:

NSPCL BHILAI 2X250MW
FGD - PACKAGE

MAIN CONTRACTOR:



BHARAT HEAVY ELECTRICALS LTD.
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE	
DRN.	DUT		12.03.2020	
CHD.	ASH		12.03.2020	
APPD.	JSHETTY		12.03.2020	

JOB No.	DIRECTORY :		SCALE	WEIGHT(kgs.)	NTPC DRAWING NO.
STATUS OF DRAWING	FILE NO. :		N.T.S.		9993-109-PVM-B-078
DISTRIBUTION OF PRINTS	QTY.				
	TITLE :	TYP. GA OF LIME STONE TP-1			DRAWING NO.
					IS-1-GA-748-100-M003
					REV.
					01

01	12.03.20	REVISED BASED UPDATED LAYOUT AND NTPC COMMENTS ON R-0	DUT	ASH	JSHEITY
R.No.	DATE	BRIEF RECORD	BY	CKD	APPD
		REVISIONS			

38831/2020/PS-PEM-CIV



**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

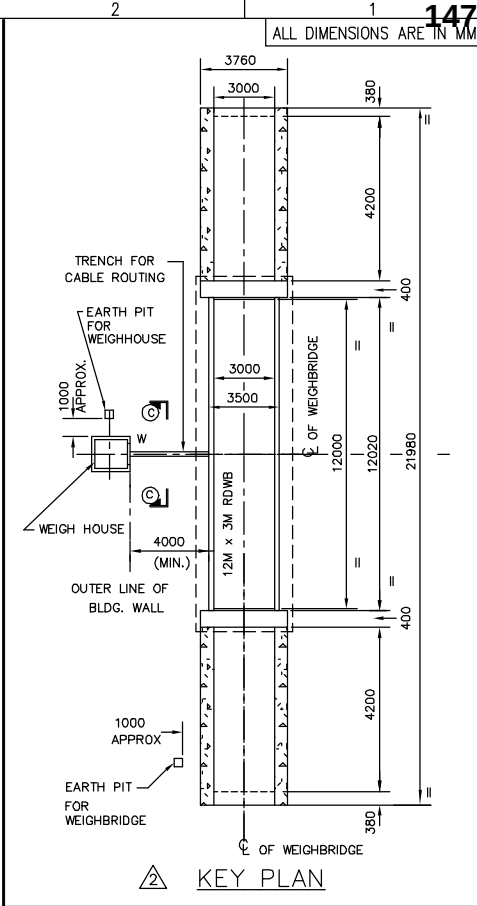
VOLUME - II B

SECTION - A

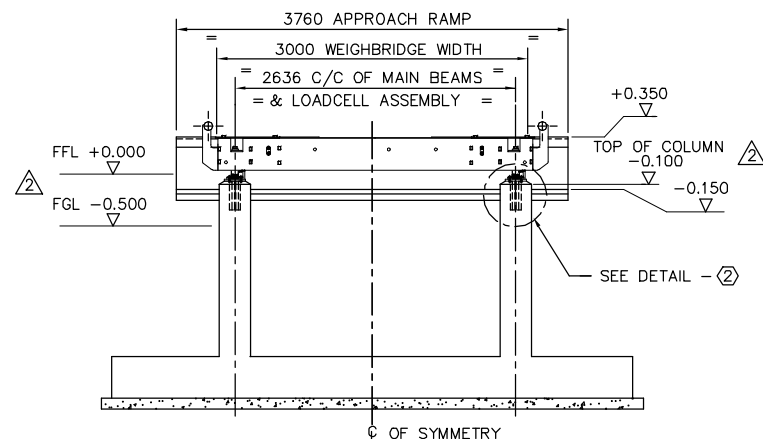
REV.NO. 00 DATE 11-02-2020

SHEET

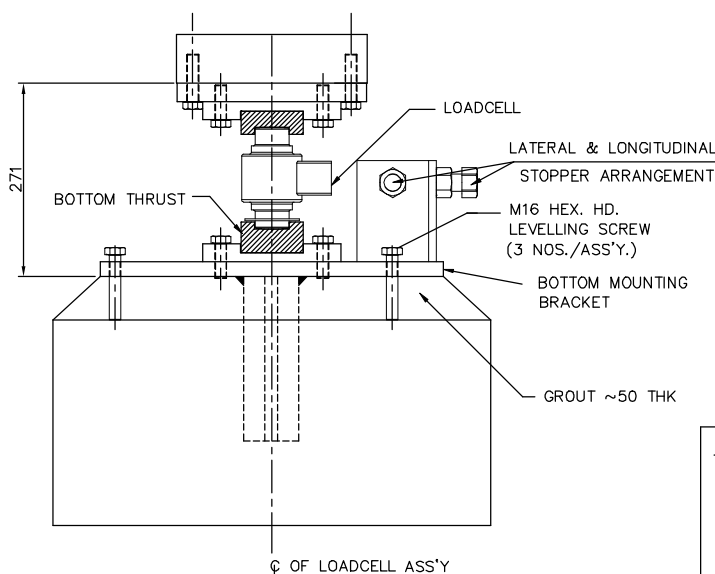
**Annexure-
C5 & C6**



KEY PLAN



SECTION 'A - A'



12M x 3M PITLESS ABOVE GRADE
TRUCK WEIGHBRIDGE
100 MT CAPACITY
 ANTI-SKID FLOATING STEEL DECK

- GENERAL NOTES:

1. ALL GROUT TO BE NON-SHRINK TYPE GROUT SUCH AS FOSROC GP- 2 OR ALADLITE. CEMENT CONCRETE OR MORTAR TYPE GROUTS ARE NOT ACCEPTABLE.
2. LOADCELL BEARING KIT STAND MUST BE LEVEL AND HORIZONTAL IN TWO PERPENDICULAR DIRECTIONS.
3. 10mm BUMPER CHECK GAPS ARE TO BE SET AFTER WEIGHBRIDGE INSTALLATION IS COMPLETED.
4. TOP MOUNTING BRACKETS OF LOADCELL ASSEMBLIES ARE TO BE BOLTED TO THE WEIGHBRIDGE BEFORE LOWERING IT IN TO THE FOUNDATION.
5. CIVIL WORKS FOR WEIGHBRIDGE FOUNDATION INCLUDING GROUT AND EARTH PITS ARE AS PER THIS DRAWING WILL BE IN THE SCOPE OF CUSTOMER.
6. ALL DIMENSIONS ARE IN 'mm' & ALL LEVELS ARE IN 'METRES' UNLESS OTHERWISE SPECIFIED.
7. ROAD / FORMATION LEVEL IS TAKEN AS REFERENCE LEVEL (i.e -0.150).

Diagram illustrating the cross-section of a 100mm diameter G.I. pipe with 20 THK plastering, embedded in a 600mm x 600mm concrete slab. The slab is made of P.C.C. 1:4:8/40mm - 100 THK. The pipe is surrounded by brick work in CM (1:5) and 20 THK plastering in CM (1:3). The top of the pipe is at a level of -0.150.

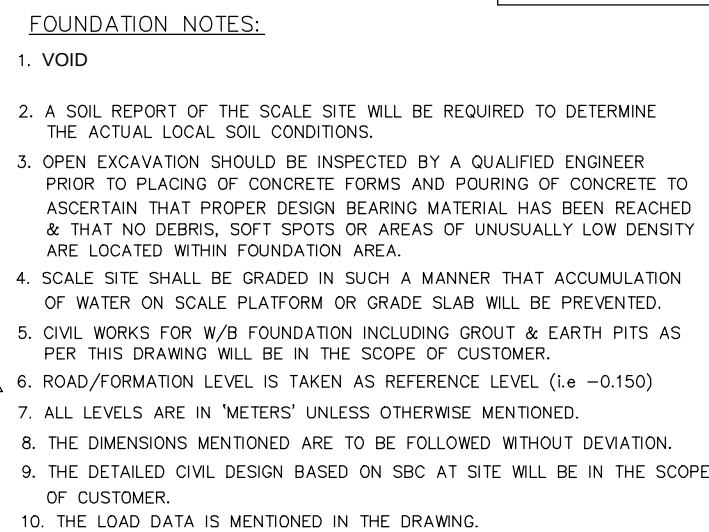
- THIS DRAWING IS INDICATIVE & TENDER
PURPOSE ONLY.
TYPICAL GA OF WEIGH BRIDGE

SECTION C-C

- CROSS SECTIONAL DETAILS OF CABLE TRENCH

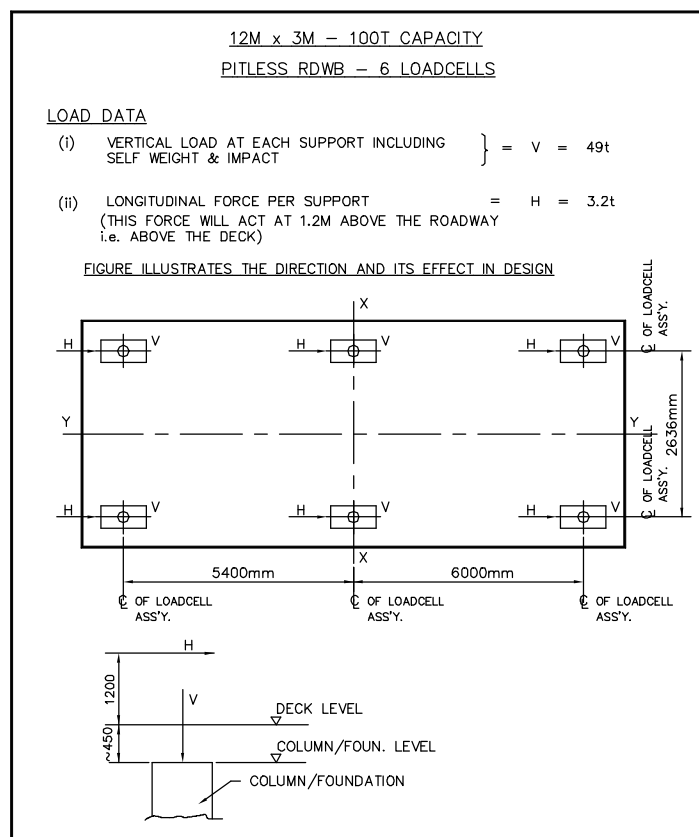
ARRANGEMENTS OF LOADCELL ASSEMBLY

DETAIL - 3

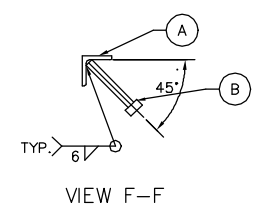


1. SCALE FOOTINGS & APPROACH RAMP MUST BE CONSTRUCTED TRUE TO LEVEL AND SHAPE FOR PROPER SCALE OPERATION AS PER SPECIFICATION.
2. CONCRETE COMPRESSIVE STRENGTH @ 28 DAYS FOR M25 GRADE. TO BE 20N/Sq.mm. CONCRETE TO BE AIR ENTRAINED AND PLACED IN ACCORDANCE WITH IS:456. MAXIMUM AGGREGATE SIZE SHALL BE 20mm STONE, UNLESS OTHERWISE SPECIFIED.
3. ANCHOR BOLTS SHALL BE PLACED WITHIN ± 3 . SHALL BE LEFT DURING CIVIL WORK. GROUTING OF ANCHOR BOLTS SHALL BE DONE AT THE TIME OF MECHANICAL INSTALLATION.

a.) ALL STEEL TO BE AS PER IS:2062.
MATERIAL TO BE FABRICATED IN ACCORDANCE WITH IS SPECIFICATIONS
AND CODES OF STANDARD PRACTICE.



SECTION E-E SHOWING TYP. ANCHORING BEAM
WITH GROUT ARRANGEMENT

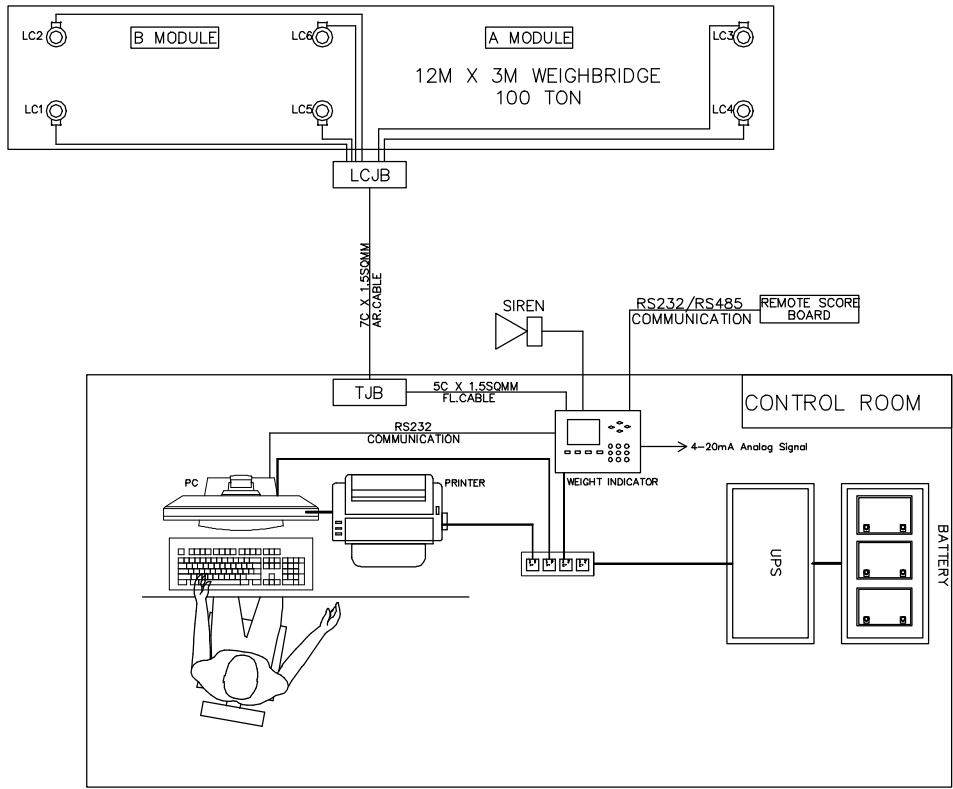


SECTION C - C
(TYPICAL @ THREE PLACES)

MK NO.	DESCRIPTION	UNIT WT.	NO. REQ'D	TOTAL WT	REMARKS
MK-2	GUARD POST ISMB 200 x 100 X 500LG.- 25.4kg/m	12.7	4	51	BY CUSTOMER
MK-3	APPROACH COPING	25.5	2	51	BY CUSTOMER
A	ISA 75 x 75 x 6 x 3760LG.-6.8kg/m	25.5	2		
B	12 DIA x 150 LG. STUD	-	18		

SHOP NOTE:
6 x 50 STRAP ANCHORS WITH A 200mm LEG
AND 50mm HOOK CAN BE SUBSTITUTED FOR ITEMS "B"

TYPICAL GA OF WEIGH BRIDGE



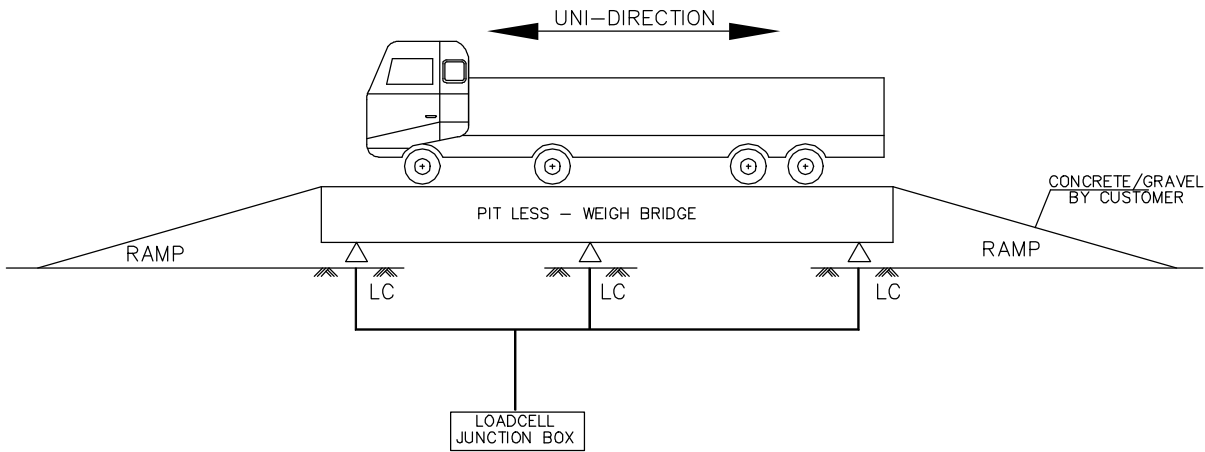
BILL OF MATERIAL				
SL. NO	ITEM DESCRIPTION	QTY	MAKE	REMARK
1	PIT LESS – WEIGH BRIDGE STRUCTURE	1 NO	RLWSIL	
2	LOADCELL (COMPRESSION) 40T	6 NOS	RLWSIL	
3	WEIGHT INDICATOR(920I) WITH MODBUS	1 NO	RLWSIL	
4	LOADCELL JUNCTION BOX	1 NO	SPELSPERG	
5	TERMINATION JUNCTION BOX	1 NO	SPELSPERG	
6	PC (i5 , 2GB RAM, 500GB HDD, 21” MONITOR)	1 NO	DELL	
7	LASER MONO PRINTER	1 NO	HP	
8	UPS 1 KVA 30MIN BACK-UP	1 NO	HIREL	
9	REMOTE SCORE BOARD	1 NO	RLWSIL	
10	SPIKE BUSTER	1 NO	RLWSIL	
11	SIREN	1 NO	RLWSIL	
12	RELAY BOX	1 NO	SPELSPERG	
13	7C X 1.5SQMM SH AR CABLE	30 MTR	POLYCAB/LAPP	

1
1

1

1

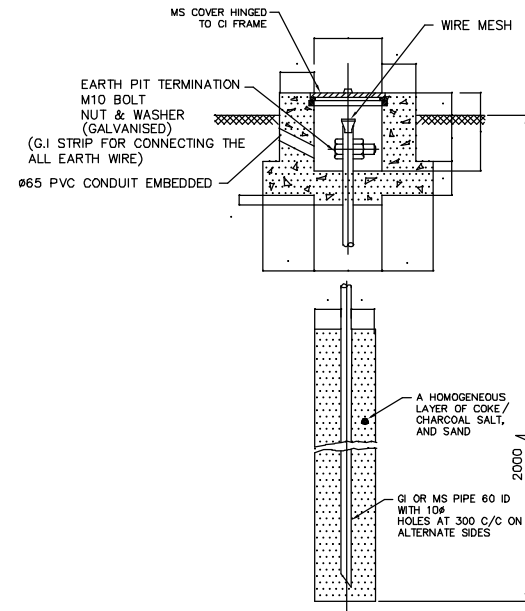
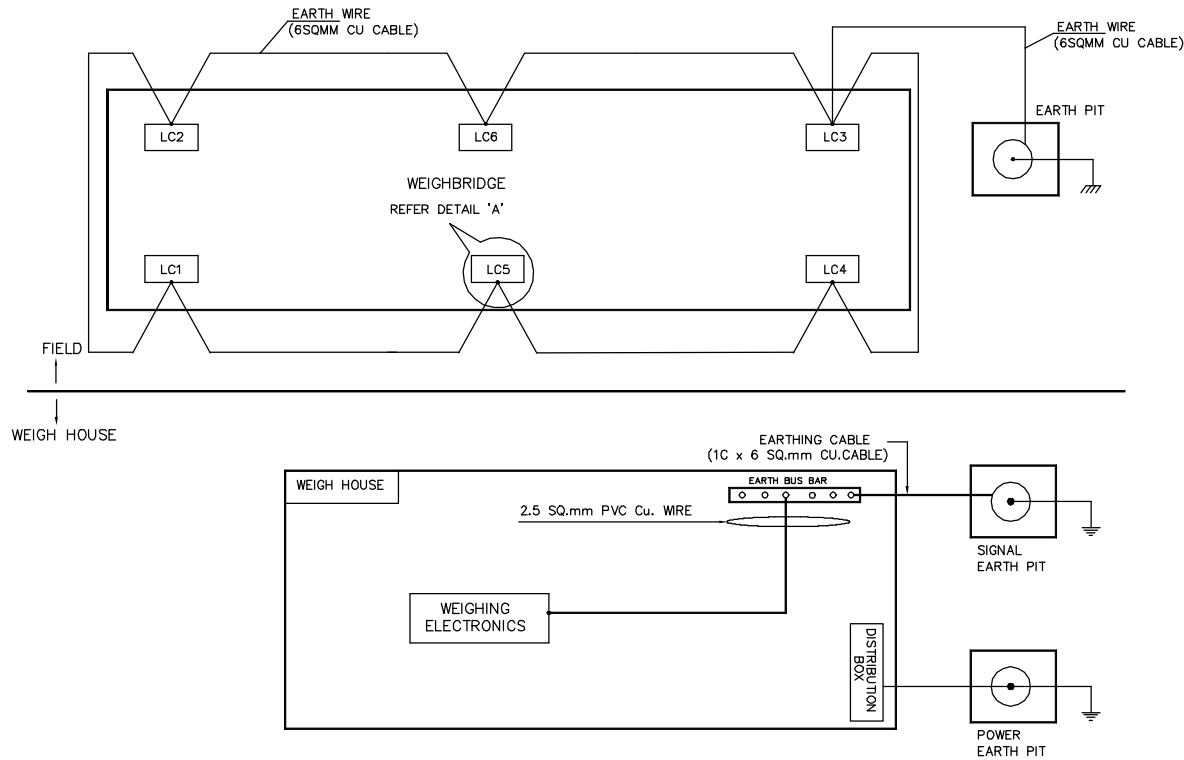
NOTE:
A)AS PER LEGAL METROLOGY WEIGHTS & MESURE RULE CLASS-III, WEIGHT MACHINES ACCURACY 0.025% GIVEN IN 920-I DATA SHEET
B)USING 10% OF FULL SCALE CAPACITY 60T, STD TEST WEIGHTS, CALLIBRATION WILL BE DONE
C)EACH 40 L/ CELL WILL WITHSTAND 60T (150% OF ITS CAPACITY) INCLUDING STRUCTURE WEIGHT



ELEVATION VIEW

THIS DRAWING IS INDICATIVE & TENDER PURPOSE ONLY.

TYPICAL GA OF WEIGH BRIDGE



DETAIL OF
EARTH PIT

SEAL THE CONDUIT ENTRY WITH BITUMEN AFTER
CONNECTING THE EARTH WIRE TO THE EARTH ROD.

⊛ ALL EARTHING MATERIALS & EARTH PIT ARE IN
CUSTOMERS SCOPE.

NOTE :

1. EARTH BUS BAR : MOUNTED IN THE SIDE WALL OF WEIGH HOUSE
2. EARTHING WIRE (OR) CABLE :- USE 10SWG COPPER WIRE FOR WEIGHBRIDGE EARTHING
AND USE 6 SQ.mm SINGLE CORE CU.CABLE FOR WEIGH HOUSE EARTHING.
3. TERMINATION OF CABLES/CONDUCTORS WITH EARTH
BUS BAR HAS TO BE DONE WITH SUITABLE SCREWS & NUTS (GALVANIZED)
4. THE OVERALL LOOP RESISTANCE SHOULD BE MAINTAINED AT <3 OHM
BETWEEN ANY POINTS IN THE LAYOUT.

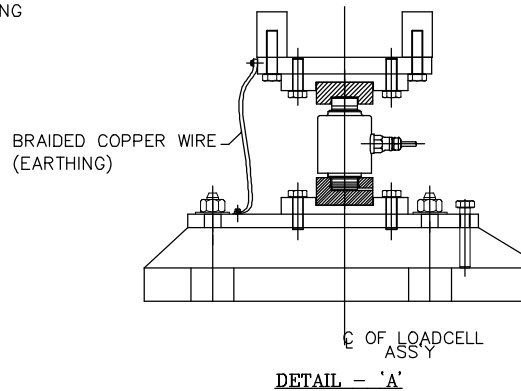
MAINTENANCE

ENSURE PERIODICALLY THAT;

- * ALL CONNECTIONS ARE CORROSION FREE.
- * ALL CONNECTIONS ARE TIGHT
- * ALL CONNECTIONS HAVE A LOW OHMIC RESISTANCE (<3 OHM).
- * ALL DEVICES THAT REQUIRE EARTHING ARE EARTHED.

LEGEND:-

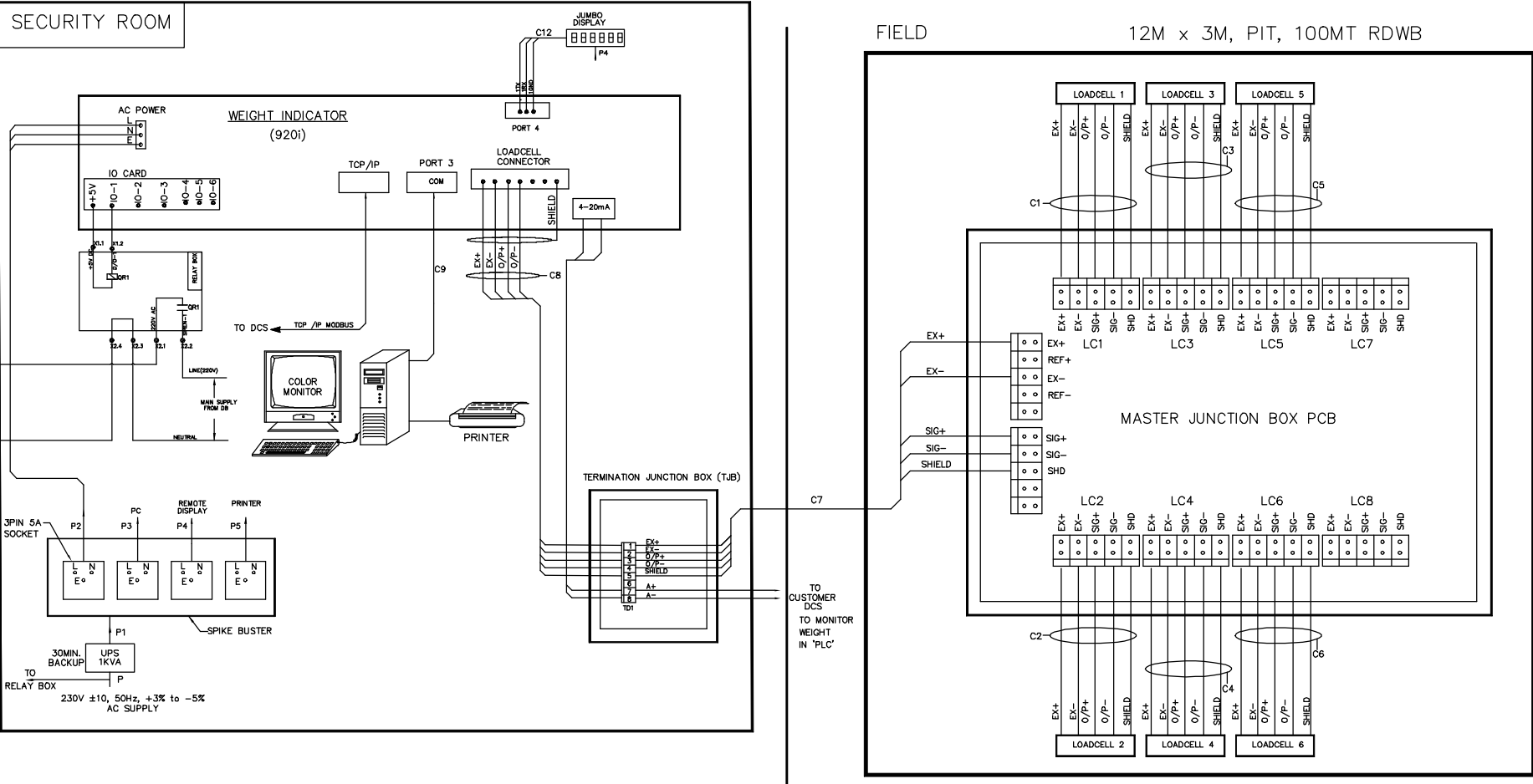
- | | |
|-----------|----------------|
| LC1 - LC6 | - LOADCELL |
| JB | - JUNCTION BOX |



DETAIL - 'A'

THIS DRAWING IS INDICATIVE & TENDER
PURPOSE ONLY.

TYPICAL GA OF WEIGH BRIDGE



CABLE SCHEDULE :-

SL. NO.	CABLE CODE NO.	FROM	TO	CABLE TYPE	QTY.	REMARKS
1	P	CUSTOMER MAINS	U P S	3 x 16/0.2 mm FLEXIBLE CABLE	1.5 Mts	INTEGRAL PART OF UPS
2	P1	U P S	SPIKE BUSTER	3 x 16/0.2 mm FLEXIBLE CABLE	1.5 Mts	INTEGRAL PART OF SPIKE BUSTER
3	P2	SPIKE BUSTER	WEIGHING ELECTRONICS 920i	3 x 16/0.2 mm FLEXIBLE CABLE	1.5 Mts.	
4	P3	SPIKE BUSTER	P C	3 x 16/0.2 mm FLEXIBLE CABLE	1.5 Mts.	POWER CORD WITH ONE END 3 PIN SOCKET AND ANOTHER END 3 PIN PLUG
5	P5	SPIKE BUSTER	PRINTER	3 x 16/0.2 mm FLEXIBLE CABLE	1.5 Mts.	
6	P4	SPIKE BUSTER	REMOTE DISPLAY	3 x 16/0.2 mm FLEXIBLE CABLE	15 Mts.	
7	C1	LOADCELL-1	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	INTEGRAL PART OF THE LOADCELL
8	C2	LOADCELL-2	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	
9	C3	LOADCELL-3	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	
10	C4	LOADCELL-4	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	
11	C5	LOADCELL-5	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	
12	C6	LOADCELL-6	MASTER JUNCTION BOX (MJB)	4 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	20 Mts.	

SL. NO.	CABLE CODE NO.	FROM	TO	CABLE TYPE	QTY.	REMARKS
13	C7	MASTER JUNCTION BOX (MJB)	TERMINATION JUNCTION BOX (TJB)	7 x 1.5 SQ.mm SHIELDED AR. CABLE	30 Mts.	
14	C8	TERMINATION JUNCTION BOX (TJB4)	WEIGHING ELECTRONICS 920i	7 x 7/0.2 mm SHIELDED FLEXIBLE CABLE	2.5 Mts.	
15	C9	WEIGHING ELECTRONICS 920i	PC	3C x 0.5 mm SHIELDED FLEXIBLE CABLE	10 Mts.	
16	C10	WEIGHING ELECTRONICS 920i	REMOTE DISPLAY	3C x 0.5 mm SHIELDED FLEXIBLE CABLE	20 Mts.	
17	C11	RELAY	SIREN	3C x 1.5 mm FLEXIBLE CABLE	10 Mts.	

NOTE

1. FOR EARTHING SCHEME REFER DWG.No.4-1491-004
2. JUNCTION BOXES ARE SPELSPERG MAKE, IP65
3. TERMINAL BLACK SCREWLESS TYPE MAKE:ELMEX

LEGEND DETAILS

- EXC+ : EXCITATION +VE
EXC- : EXCITATION -VE
O/P+ : OUTPUT +VE
O/P- : OUTPUT -VE
TB : TERMINAL BLOCK
JB : JUNCTION BOX

THIS DRAWING IS INDICATIVE & TENDER PURPOSE ONLY.

TYPICAL GA OF WEIGH BRIDGE

38831/2020/PS-PEM-CIV



**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

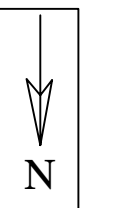
REV.NO. 00 DATE 11-02-2020

SHEET

**Annexure-
C7 & C8**

ON

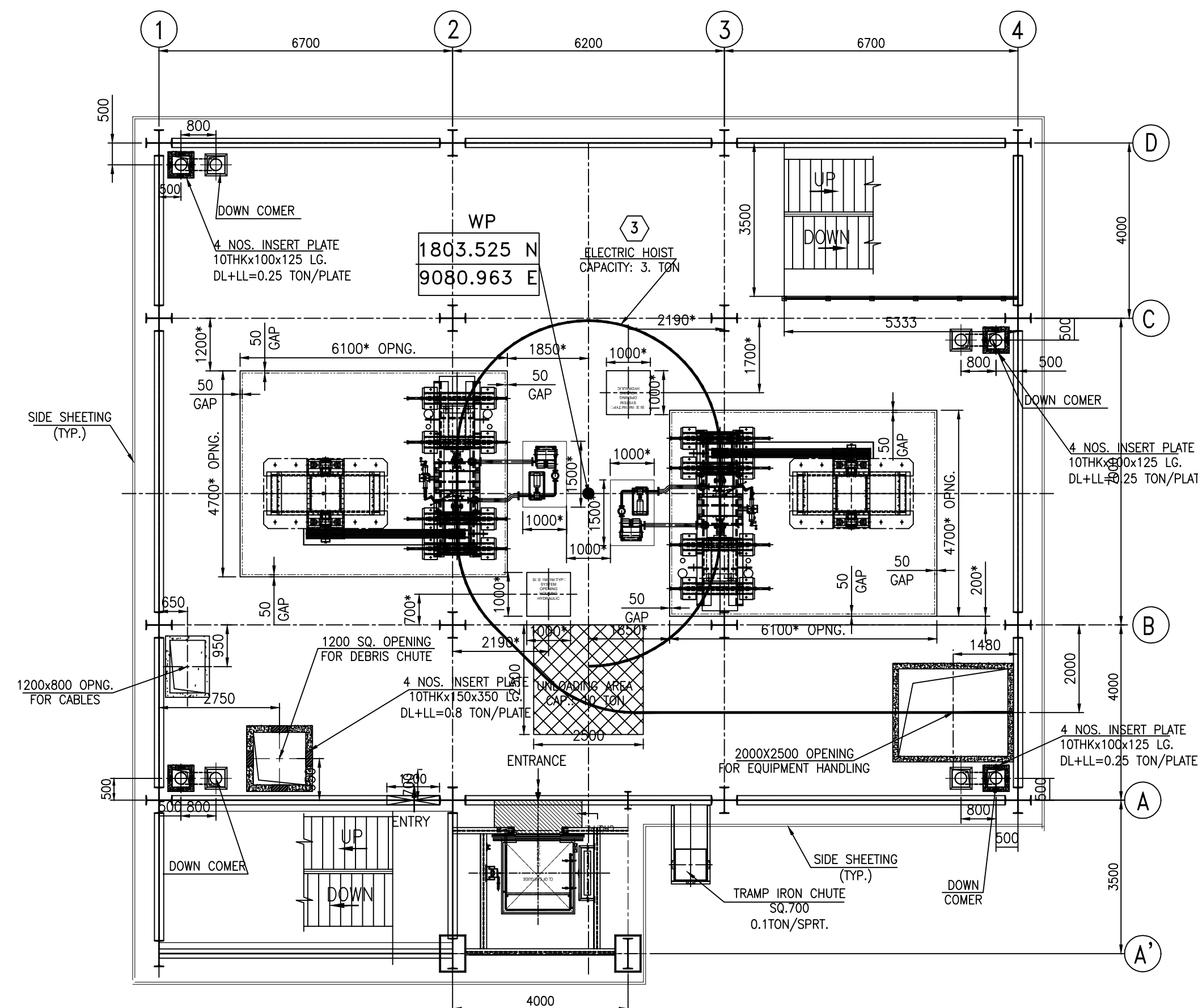
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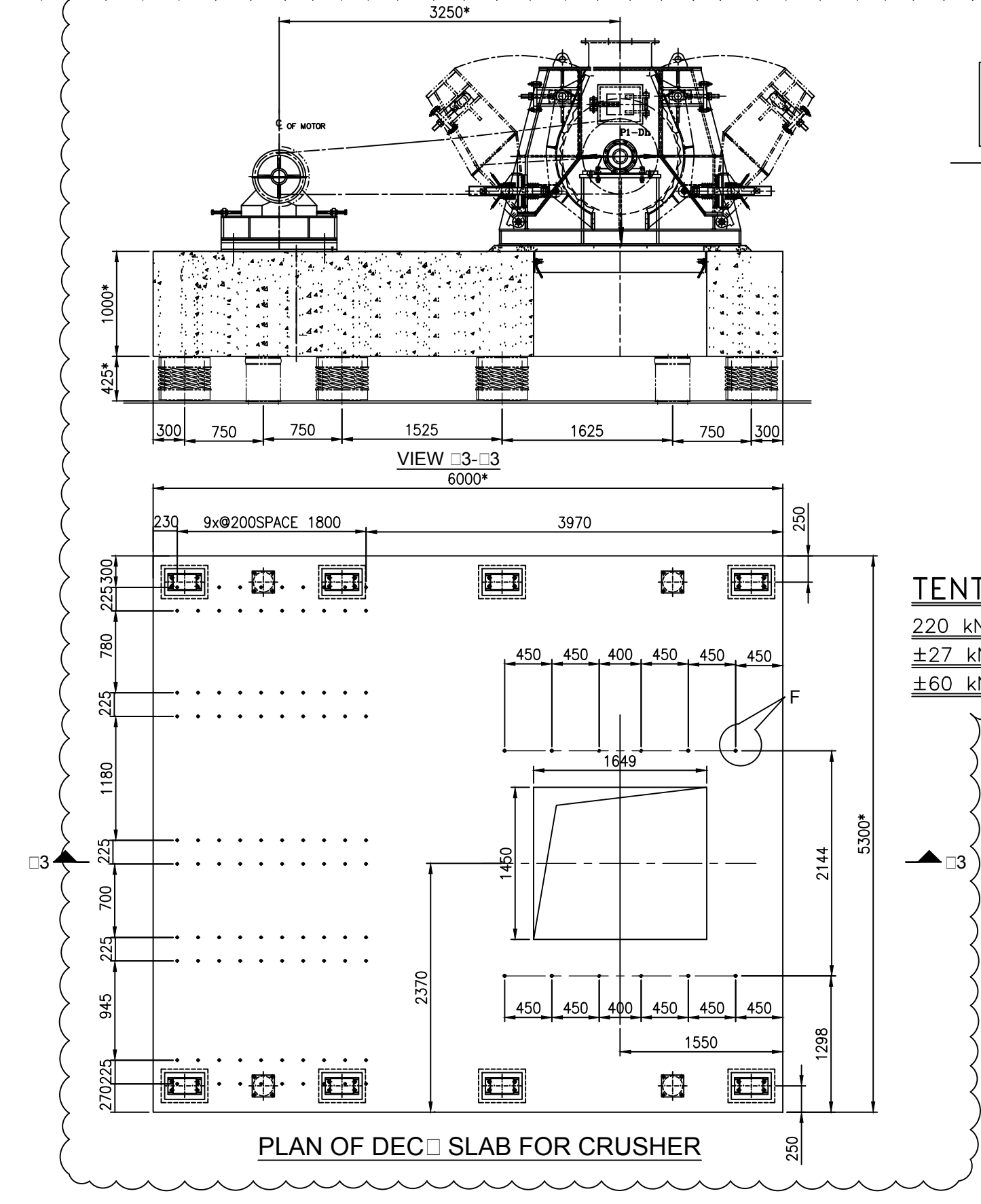
2'



2'



FOUNDATION PLAN AT LEVEL EL(+)9.700M (TOFF)



PLAN OF DEC▯ SLAB FOR CRUSHER

Diagram illustrating the loading conditions on the base plate:

- STATIC LOAD (2.8 T) is applied vertically downwards at the center.
- PDY. LOAD 5.5T/BOLT is applied horizontally at the edge of the base plate.

TENTATIVE LOAD ON SUBSTRUCTURE :- CRUSHER }

220 kN / SPRING ELEMENT (VERTICAL)
±27 kN / SPRING ELEMENT (HORIZONTAL)
±60 kN / VISCODAMPER (HORIZONTAL & VERTICAL)

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NTPC

NTPC Limited
ENGINEERING DIVISION
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT:	2X250 MW NSPCL BHILAI FGD – PACKAGE
----------	--

MAIN CONTRACTOR:  **BHARAT HEAVY ELECTRICALS LTD.**
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE
DRN.	DUT		23.04.2020
CHD.	SUR		23.04.2020
APPD.	JSHETTY		23.04.2020

SCALE
N.T.S.

WEIGHT(Kgs.)

NTPC DRAWING NO.
9993-109-PVM

DATE :				
TITLE :	GA OF LIME STONE CRUSHER HOUSE			

DRAWING NO.	REV. 00
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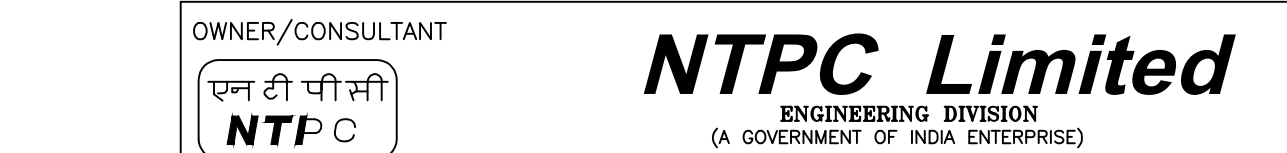
						DISTRIBUTION OF PRINTS	QTY
R.No:	DATE	BRIEF RECORD	BY	CKD	APPD		



Diagram of a square base plate with a central pipe. The base plate is 70 units wide and 70 units high. The pipe is 32NB (M). The base plate is 10 THK.x70 SQ.

HOLD

- * STATIC LOADS ARE INCLUSIVE OF MATERIAL LOAD ON DECK.
- * DYNAMIC LOADS ARE OVER AND ABOVE THE STATIC LOADS.
- * DIRECTION OF HORIZONTAL DYNAMIC LOAD IS ALONG THE LENGTH OF THE SCREEN.



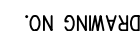
MAIN CONTRACTOR:  **BHARAT HEAVY ELECTRICALS LTD.**
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE
DRN.	DUT		23.04.2020
CHD.	ASHOK		23.04.2020
APPD.	JSHETTY/RAJU		23.04.2020

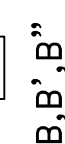
TITLE :	DRAWING NO.	REV.
GA OF LIME STONE CRUSHER HOUSE		00

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R.No:	DATE	BRIEF RECORD	BY	CKD	APPD	
		REVISIONS				

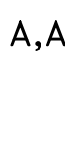
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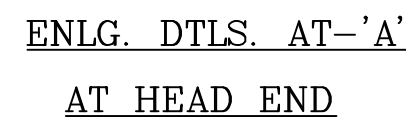
FLOOR PLAN AT LEVEL EL(+) 20.100M (TOFF)



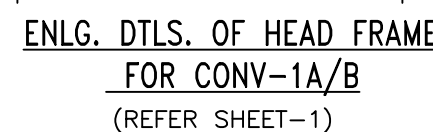
FOUNDATION PLAN AT LEVEL EL(+)^{20.100M} (TOFF)



DETAIL-15
BASE PLT. DET. SS1



VIEW A1-A1



VIEW P-P

VIEW P-P (FOUNDATION PAN)

WEIGHT(Kgs.)	NTPC DRAWING NO. 9993-109-PVM-B-091	
HOUSE	DRAWING NO.	R 0

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ENGINEERING DIVISION
(A GOVERNMENT OF INDIA ENTERPRISE)

2X250 MW NSPCL BHILAI
FGD - PACKAGE

BHARAT HEAVY ELECTRICALS LTD.
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE
DRN.	DUT		23.04.2020
CHD.	ASHOK		23.04.2020
APPD.	JSHETTY/RAJU		23.04.2020

DIRECTORY 1
FILE NO.

N.T.S.

1

NTPC DRAWING NO	9993-109-PV
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	DRAWING NO.
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REV.	
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GA OF LIME STONE CRUSHER HOUSE

	SHEET NO.	1
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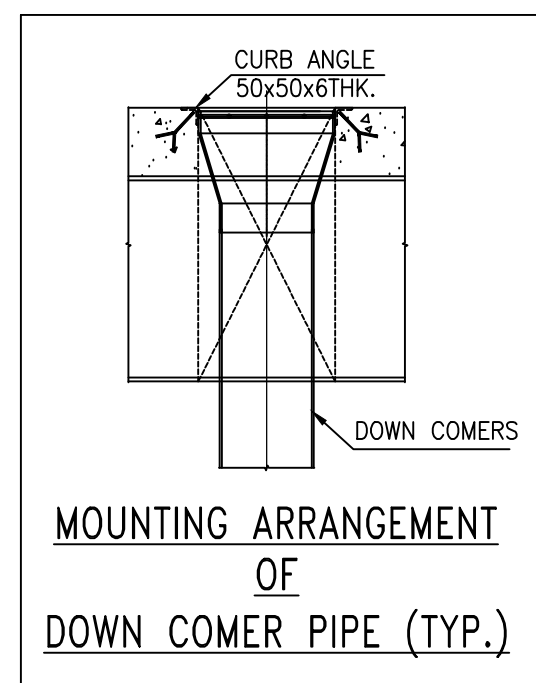
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SIZE-A

DRAWING NO.

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OWNER/CONSULTANT



NTPC Limited
ENGINEERING DIVISION
(A GOVERNMENT OF INDIA ENTERPRISE)

PROJECT:	2X250 MW NSPCL BHILAI FGD – PACKAGE
----------	--

MAIN CONTRACTOR:  **BHARAT HEAVY ELECTRICALS LTD.**
INDUSTRIAL SYSTEMS GROUP, BANGALORE

	NAME	SIGN	DATE
DRN.	DUT		23.04.2020
CHD.	ASHOK		23.04.2020
APPD.	JSHETTY/RAJU		23.04.2020

DIRECTORY :		SCALE	WEIGHT(Kgs.)	NTPC DRAWING NO.
FILE NO.		N.T.S.		9993-109-PVM-B-091

TITLE :	GA OF LIME STONE CRUSHER HOUSE
---------	--------------------------------

DRAWING NO.		REV.
		00
SHEET NO.	3	NO. OF SHTS. 3 OF 7

JOB No.	
STATUS OF DRAWING	
DISTRIBUTION OF PRINTS	QTY.

R.No:	DATE	BRIEF RECORD	BY	CKD	APPD
REVISIONS					

DRAWING NO.

DO NOT SCALE. IF IN DOUBT, ASK.

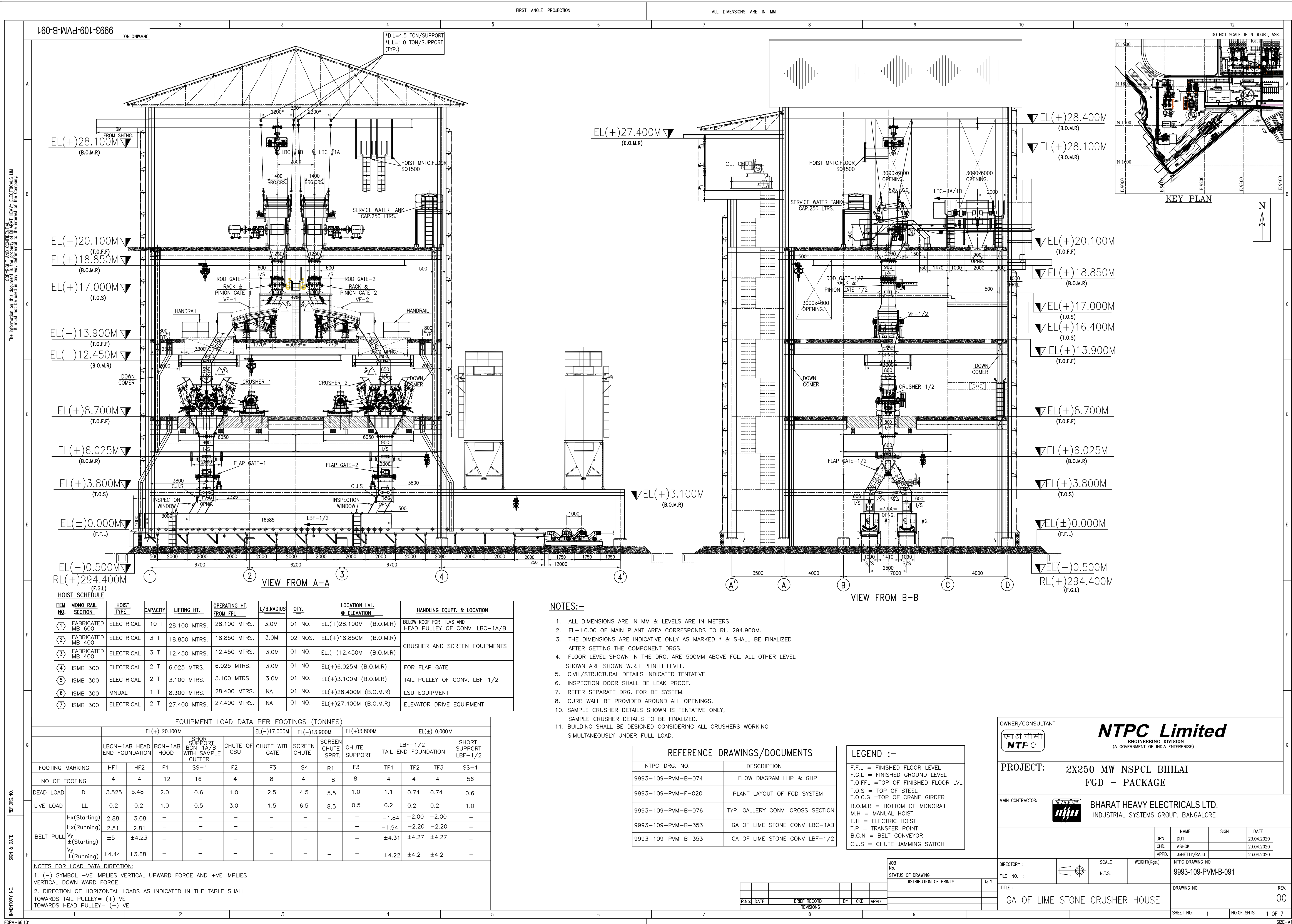
INVENTORY NO.

HOLD LOAD TABLE SAMPLING STATION

1	2	3	4	5	
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						DISTRIBUTION OF PRINTS		QTY
R.No:	DATE	BRIEF RECORD	BY	CKD	APPD			
REVISIONS								
8				9				



38831/2020/PS-PEM-CIV



**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

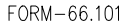
VOLUME - II B

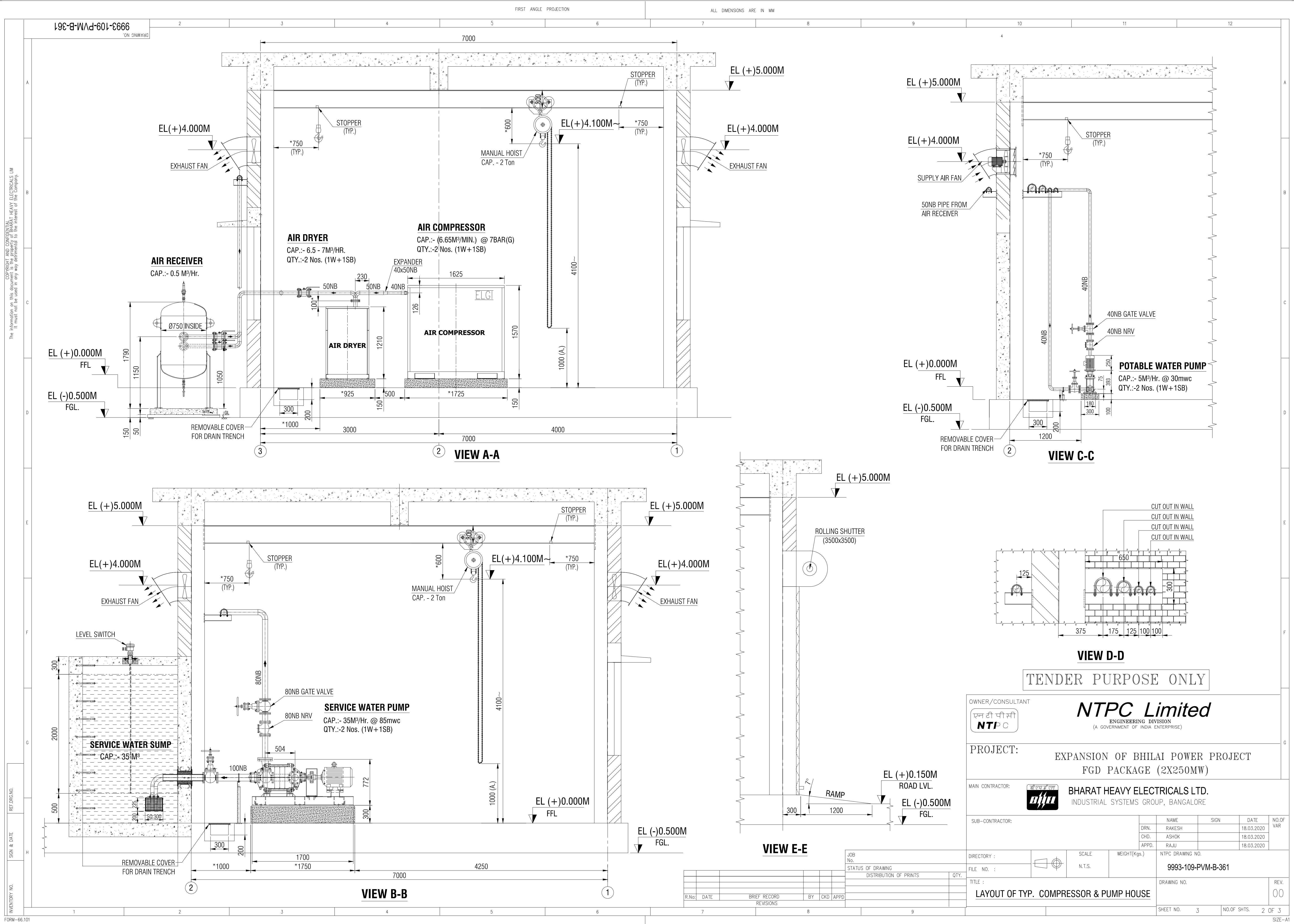
SECTION - A

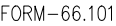
REV.NO. 00 DATE 11-02-2020

SHEET

Annexure- C9







38831/2020/PS-PEM-CIV

**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

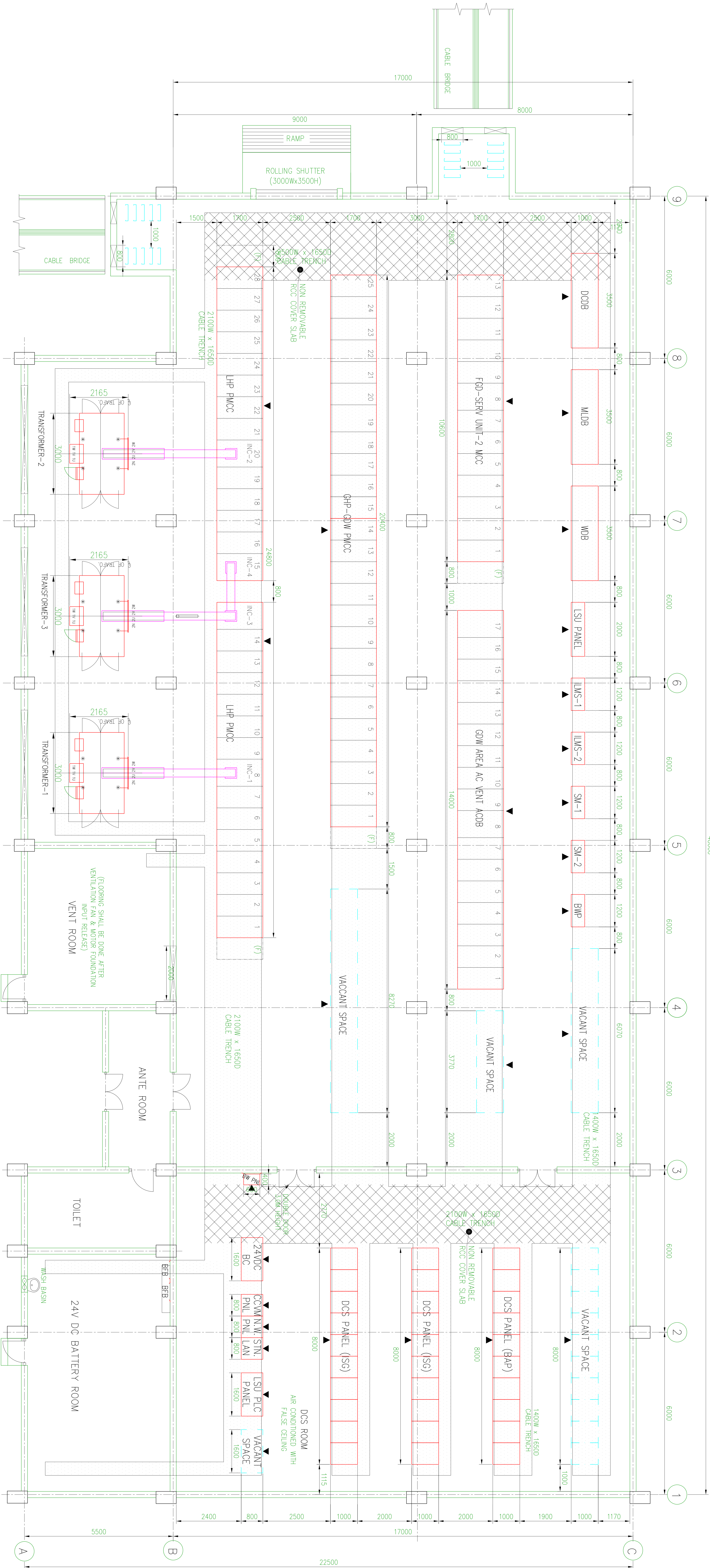
SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

Annexure- C10

ELECTRICAL EQUIPMENT LAYOUT (PLAN)



NOTES : CIVIL SCOPE FOR MCC BUILDINGS

- CHEQUERED PLATE FOR TRENCHES AND OPENINGS IN MCC BUILDINGS WHEREVER REQUIRED SHALL BE IN THE SCOPE OF CIVIL.
- CURB ANGLE IN TRENCHES AND INSERT PLATES IN THE MCC BUILDINGS WHEREVER REQUIRED SHALL BE IN THE SCOPE OF CIVIL.
- STRUCTURAL STEEL FOR ERECTION OF ELECTRICAL PANELS (MCC, ACDB ETC) WHEREVER REQUIRED SHALL BE IN THE SCOPE OF CIVIL ALONG WITH PAINTING.
- FALSE CEILING FOR AC ROOMS AS PER REQUIREMENT SHALL BE IN THE SCOPE OF CIVIL.
- ACID PROOF TILES AND PAINTING FOR WALL FOR BATTERY ROOM AS PER NIT SHALL BE IN THE SCOPE OF CIVIL.
- PORTABLE LADDER FOR TRENCHES.
- PCC BLOCKS FOR LIGHTNING PROTECTION ON THE ROOF OF THE BUILDING.
- TRAFO. FOUNDATION AND BUSDUCT FOUNDATION SHALL BE IN THE SCOPE OF CIVIL.

38831/2020/PS-PEM-CIV



**2 X 250 MW NSPCL BHILAI TPP-FGD
SCOPE OF WORK**

SPECIFICATION NO. PE-TS-468-600-C001

VOLUME - II B

SECTION - A

REV.NO. 00 DATE 11-02-2020

SHEET

Annexure- C11

