



Bharat Heavy Electricals Limited

Transmission Business Group

6th Floor, BHEL Sadan, Plot No.- 25, Sector 16A,
Noida, DISTT. – GAUTAM BUDDH NAGAR (U.P.)
email: akmeena@bhel.in

Corrigendum No. 01 Date: 07.02.2025

References:

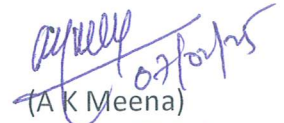
- i) Tender Spec No: TBSM/KURAWAR/CIVIL PKG-II/TENDER/ 24-25, DATE: 05.02.2025
- ii) Tender ID: **2025_BHEL_44824_1** (Through <https://eprocurebhel.co.in>)
- iii) NIT No. **88636** (Through BHEL Website)

With reference to above tender for “EXECUTION AND HANDING OVER OF “CIVIL WORKS OF BOUNDARY WALL, SECURITY HUT, LABOUR HUT, MAIN ENTRANCE GATE, SITE LEVELLING, OPEN AND CLOSED STORES, APPROACH ROAD TO STORES AT 765/400/220/132KV KURAWAR S/S IN MADHYA PRADESH”, following clarification/ amendment may please be noted: -

1. **3.0 Project Information/ BHEL’s Contacts sheet revised** (updated the contact person: for contract execution issues)
2. **10.1 Scope Technical Specification for civil works added with reference Drawings 21 pages** attached (to be part of technical specification)

All other terms & conditions of the tender specification remain unchanged.

Please enclose a copy of Corrigendum No. 01 duly signed by your authorized signatory and stamped along with your technical bid.


(A K Meena)

Sr. DGM/TBSM

Bharat Heavy Electricals Limited

PROJECT INFORMATION

1.0 CUSTOMER:

M/s POWERGRID CORPORATION OF INDIA LIMITED

2.0 PROJECT LOCATION AND DETAILS:

TENDER FOR “CIVIL WORKS OF BOUNDARY WALL, SECURITY HUT, LABOUR HUT, MAIN ENTRANCE GATE, SITE LEVELLING, OPEN AND CLOSED STORES, APPROACH ROAD TO STORES AT 765/400/220/132KV KURAWAR (NEW) S/S.”

SITE ADDRESS:

BHEL-TBG
765/400/220 /132kV Kurawar Substation (POWERGRID)
NH-46 Highway, Kurawar Mandi, Vill. Raghokhedi, Tehsil-Narsingharh,
Distt. Rajgarh (MP) Pin- 465667, Approx. 60 km from Bhopal Nearest Railway Station-
Kalapipal (30km), Sehore (45 KM)

3.0 CONTACT PERSON: FOR CONTRACTUAL ISSUES

Ashok Kumar Meena
Sr. DGM (TBSM)
SUBCONTRACTS MANAGEMENT,
TRANSMISSION BUSINESS GROUP,
Plot No. 25, Sector-16A, Noida,
Distt. Gautambudh Nagar, UP-201301
PHONE: 0120-674-8545/ 9831038136
E-mail: akmeena@bhel.in

CONTACT PERSON: FOR ENGINEERING ISSUES

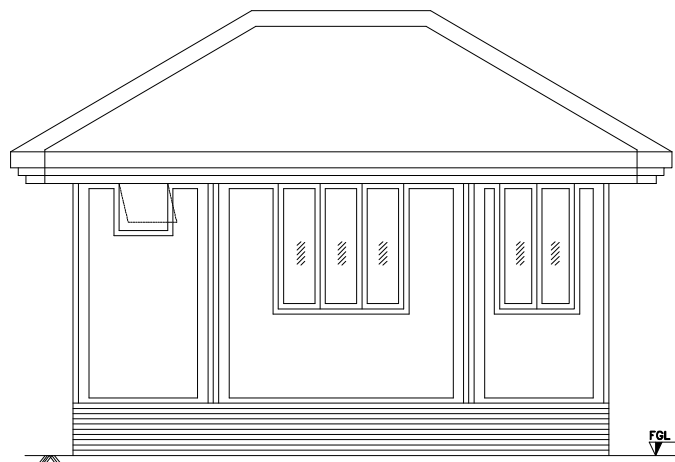
Shyam Vihari
Sr. Manager (TBEM-Civil)
TRANSMISSION BUSINESS GROUP,
Plot No. 25, Sector-16A, Noida,
Distt. Gautambudh Nagar, UP-201301
PHONE: 0120- 674- 8544 / 9958201144
E-mail: svihari@bhel.in

CONTACT PERSON: FOR CONTRACT EXECUTION ISSUES

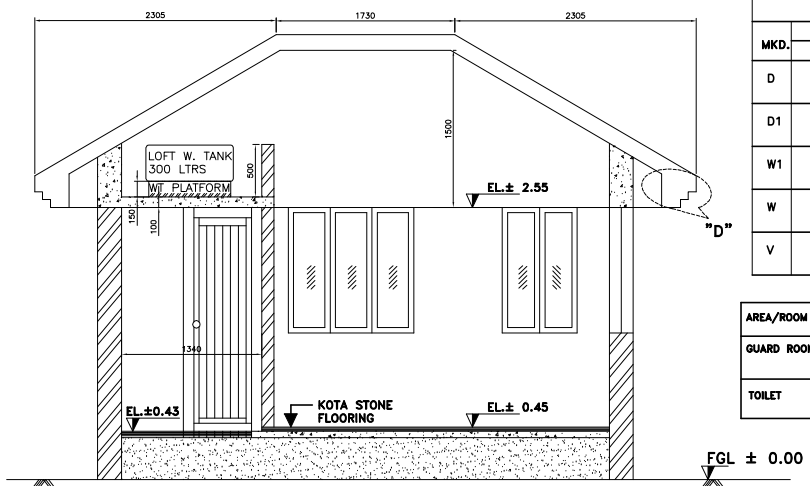
Sunil Kumar
AGM & Sector Head/TBNS
TRANSMISSION BUSINESS GROUP,
Plot No. 25, Sector-16A, Noida,
Distt. Gautambudh Nagar, UP-201301
PHONE: 9761724520
E-mail: sunil.kumar@bhel.in



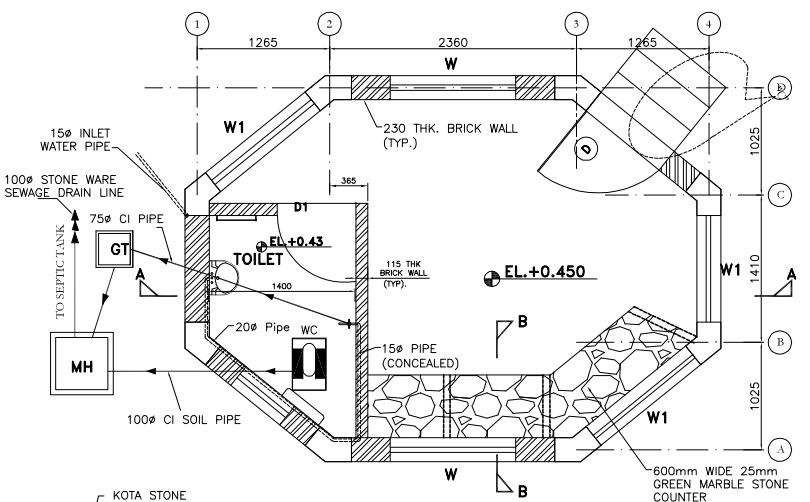
30/06



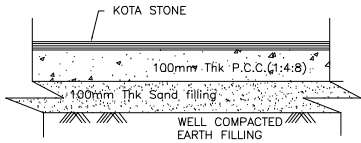
ELEVATION



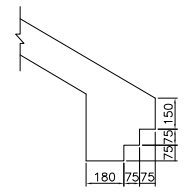
SECTION A-A



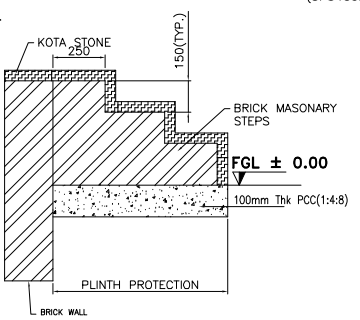
FLOOR PLAN



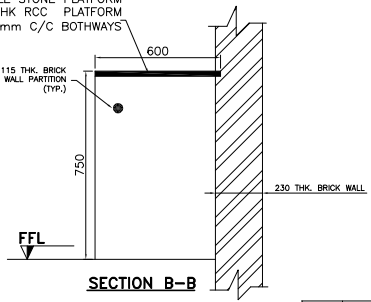
FLOORING DETAILS



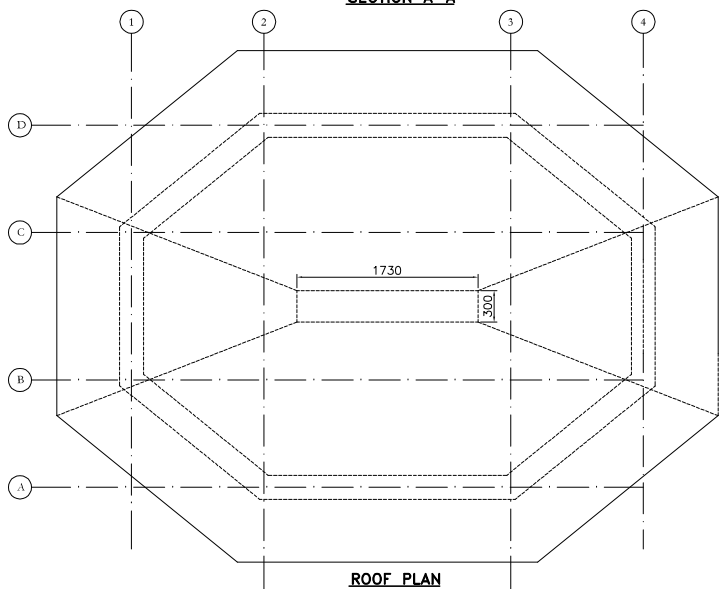
DETAIL "D"



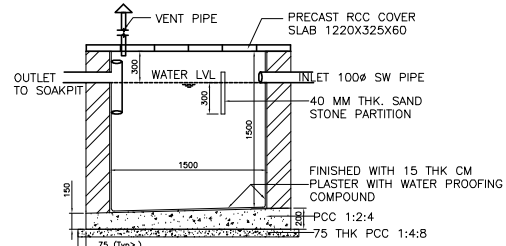
DETAIL "C"



SECTION B-B



ROOF PLAN



TYP. SECTION OF SEPTIC TANK
(NOTE: INTERNAL DIMENSION OF SEPTIC TANK IS 750MMX1500MM)

SCHEDULE OF DOORS AND WINDOWS				
MKD.	SIZE		DESCRIPTION	NOS. REQD.
	WIDTH	HEIGHT		
D	900	2100	FULLY GLAZED PLAIN/ETCHED UPVC FRAME & DOOR AS PER SPECS.	1
D1	750	2100	UPVC DOOR & DOOR FRAME WITH LAMINATED PARTICLE BOARD DOOR	1
W1	1000	1200	2 EQ.PANNELS SLIDING/OPENABLE UPVC WINDOW	3
W	1200	1200	3 EQ.PANNELS SLIDING/OPENABLE UPVC WINDOW	2
V	900	450	UPVC TOP HUNG VENTILATOR WITH EXHAUST FAN	1

FINISHING SCHEDULE					
AREA/ROOM	FLOORING	SKIRTING /DADO	CEILING	INTERNAL PAINT ON WALLS	PAINT ON CEILING
GUARD ROOM	20 THK KOTA STONE FLOOR	100 HIGH KOTA	RCC SLAB WITH 6mm PLASTER	OPB	OPB
TOILET	CERAMIC TILE	GLAZED TILE DADO UP TO 1.5 HIGH	RCC SLAB WITH PLASTER	WHITE WASH	WHITE WASH

PLUMBING & SANITARY SCHEDULE			
SR. NO.	ITEM	DESCRIPTION	NOS. REQD.
1.	INTERNAL/EXTERNAL WATER SUPPLY PIPES	CPCV PIPE AS PER BOQ OR uPVC PIPE SUPPLY PIPES	—
2.	INTERNAL COOLER	ADJACENT TO TOILET BLOCK (OF APPROVED MAKE).	1
3.	W.C. (INDIAN STYLE)	ORISSA PATTERN WC AS PER BOQ WITH ALL FITTING OF APPROVED MAKE.	1
4.	WASH BASIN	AS PER BOQ WITH ALL FITTING OF APPROVED MAKE	1
5.	MIRROR	ABOVE WASH BASIN SIZE – 600X450	1
6.	TOWEL RAIL	CP BRASS SIZE – 600 LONG 20 Ø ROD	1
7.	SOAP HOLDER & LIQUID SOAP DISPENSER	CP BRASS	1

- NOTES :--
1. ALL DIMENSION ARE IN MM.
 2. ALL ELEVATION ARE IN METERS.
 3. ALL ITEMS SHALL BE EXECUTED AS PER BOQ.
 4. PLASTERING :--
 - (a) OUTER FACE SHALL HAVE TEXTURE PAINT FINISH OVER EXTERNAL 12 MM THK. PLASTER IN 1:6 CEMENT SAND MORTAR MIXED WITH WATER PROOFING COMPOUND.
 - (b) INTERNAL - 15MM THK PLASTER IN 1:6 CEMENT SAND MORTAR
 5. 900 MM WIDE PLINTH PROTECTION SHALL BE PROVIDED
 6. SOAK PIT SHALL BE PROVIDED.
 7. LOCATION OF SEPTIC TANK AND SOAK PIT SHALL BE DECIDED BY SITE
 8. WATER SUPPLY CONNECTION TO BE DECIDED BY SITE

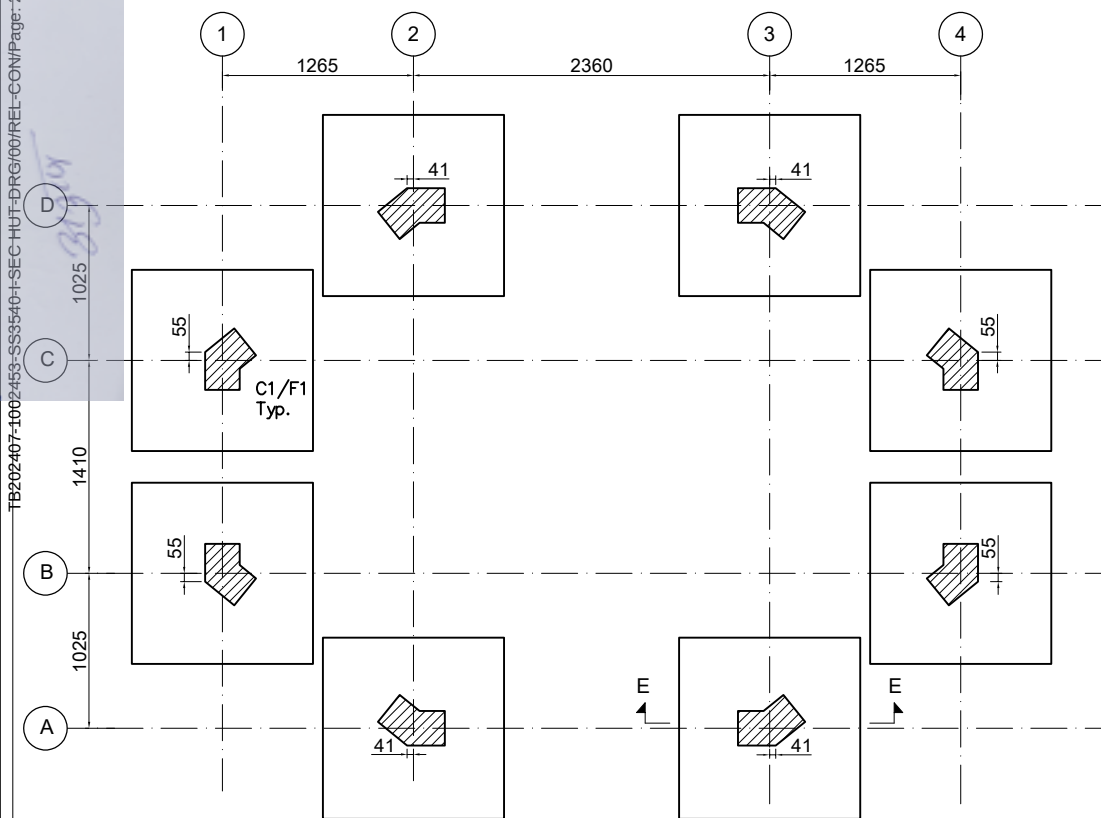
RELEASED FOR TENDER/CONSTRUCTION

POWER GRID CORPORATION
OF INDIA LIMITED
(A Government of India Enterprise)

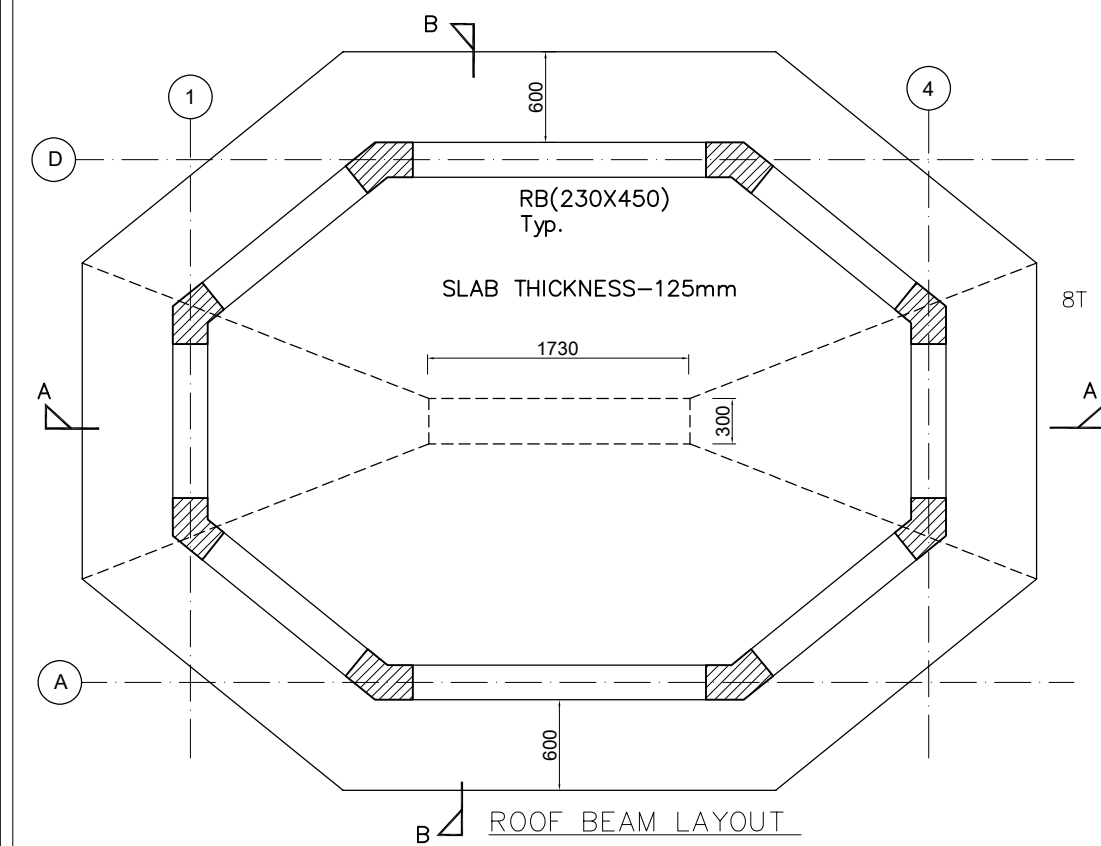


TITLE :
ARCHITECTURAL DETAILS OF SECURITY ROOM

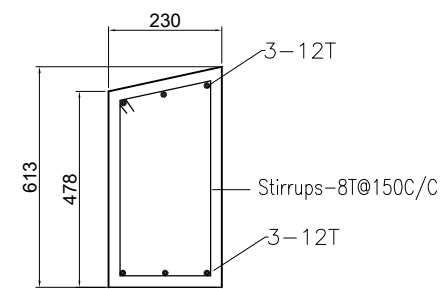
00									
REV	DCDE (ENGG-CIVIL)	CDE (ENGG-HVDC)	AGM (ENGG-HVDC)	GM (ENGG-CIVIL)	GM (ENGG-HVDC)	DATE	SCALE NTS	DRG NO.- C/ENGG/SECURITY/HUT/ARCH-01	SHEET 1 OF 1 R-0



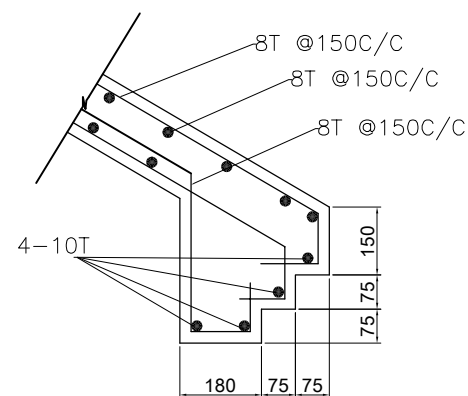
FOUNDATION & COLUMN LAYOUT



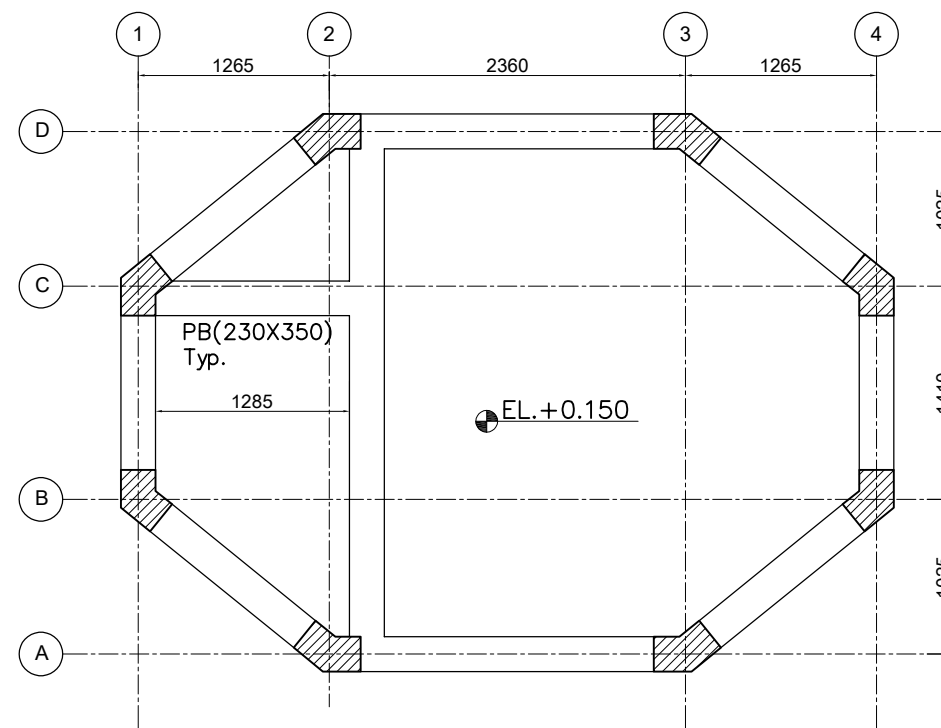
ROOF BEAM LAYOUT



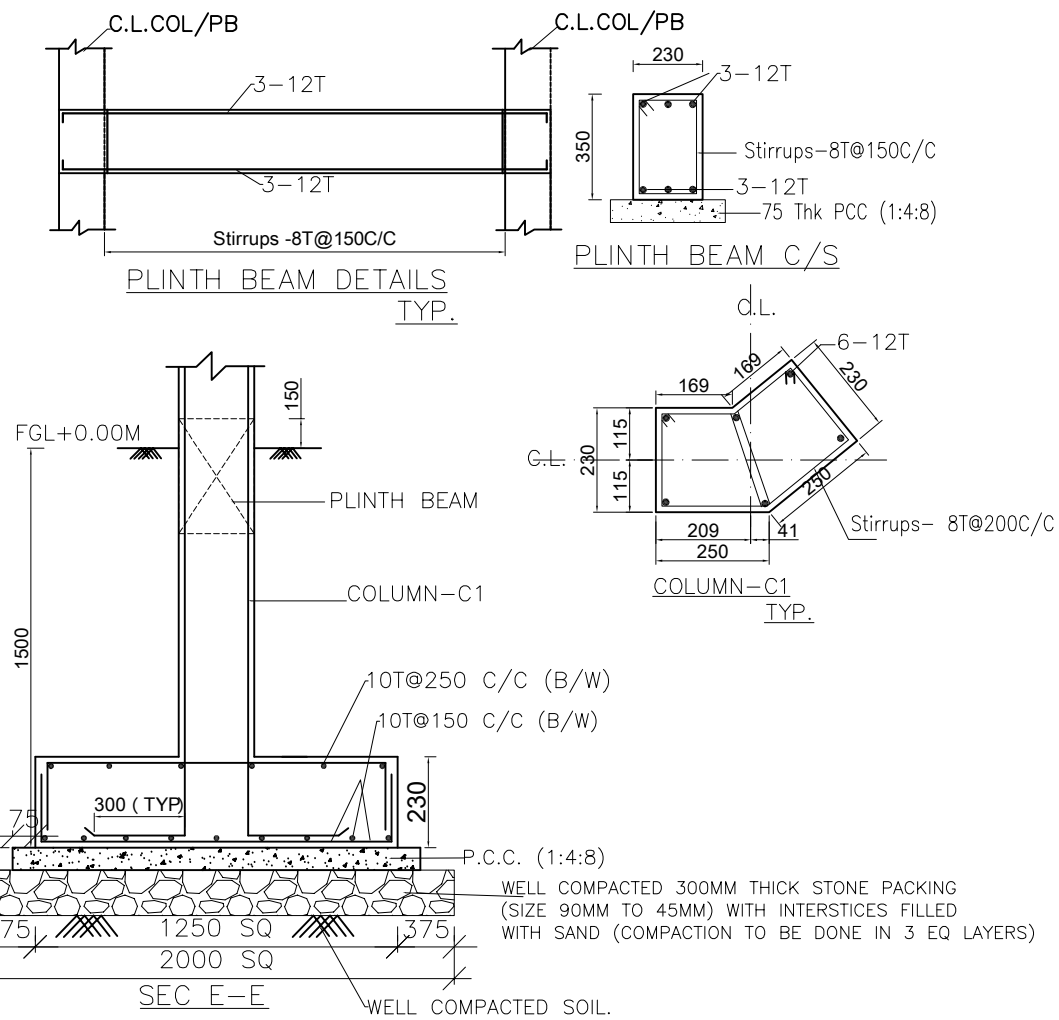
ROOF BEAM C/S



DETAIL "A"

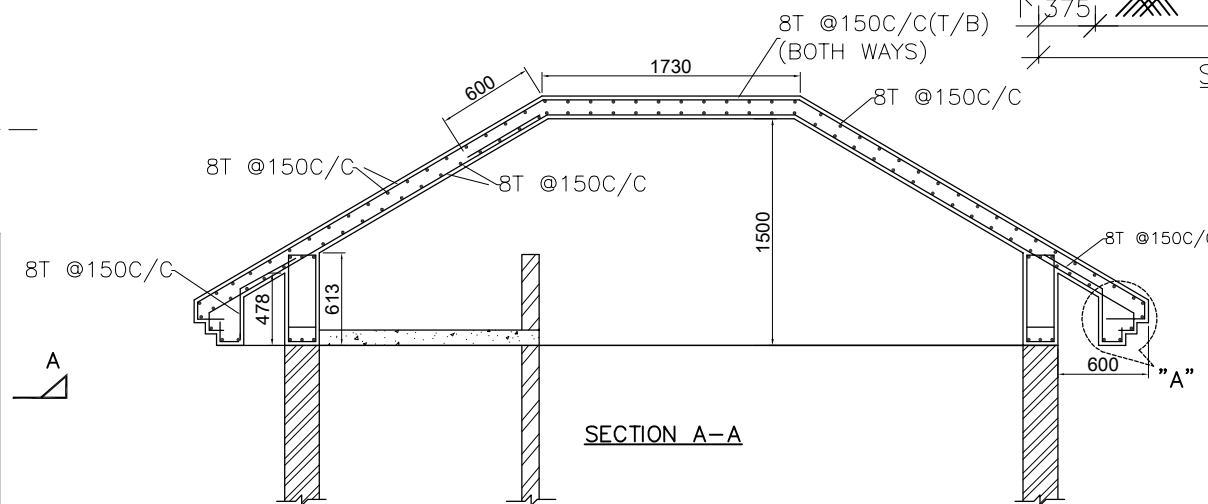


PLINTH BEAM LAYOUT

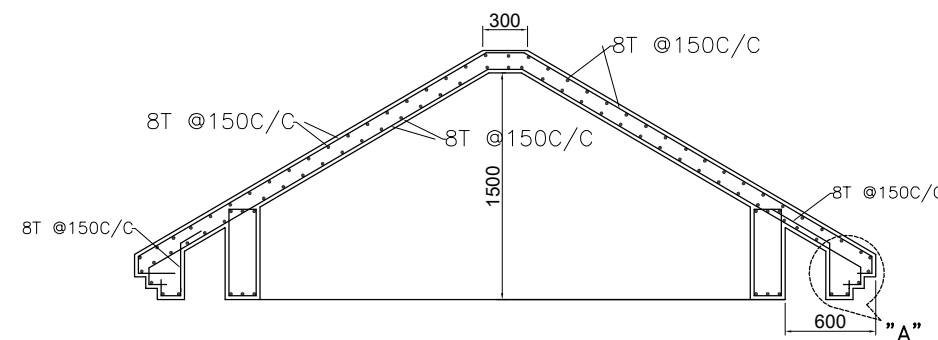
SEC E-E

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETER AND LEVELS ARE IN METRES. LEVELS MENTIONED IN THE DRAWING ARE FINISHED LEVEL. ALLOWANCE SHALL BE KEPT FOR FINISHES.
2. DRAWING SHOULD NOT BE SCALED ONLY WRITTEN DIMENSIONS TO BE FOLLOWED
3. CONCRETE GRADE M25 MIX ; GARDE OF REINF. STEEL AS PER TS
4. LAPPING TO REINFORCEMENT FOR
 - BEAM TENSION REINFORCEMENT SHALL BE AT 'd' FROM SUPPORT d = EFFECTIVE DEPTH.
 - BEAM COMPRESSION REINFORCEMENT SHALL BE AT MID SPAN.
 - COLUMN LONGITUDINAL REINFORCEMENT SHALL BE AT MID-HEIGHT OF FLOOR.
5. LAPPING TO REINFORCEMENT SHALL BE 50 X BAR DIA.
6. ADEQUATE CHAIRS SHALL BE PROVIDED.
7. ALL ISOLATED FOOTINGS ARE CONCENTRIC WITH COLUMNS.
8. For detailing of reinforcement refer IS-456 & SP-34



SECTION A-A



SECTION B-B

LOFT SALB

100 MM THK. RCC SLAB WITH 8T @150C/C BOTH WAYS, WATER PROOFING COMPOUND SHALL BE ADDED IN THE RCC SLAB CONCRETE

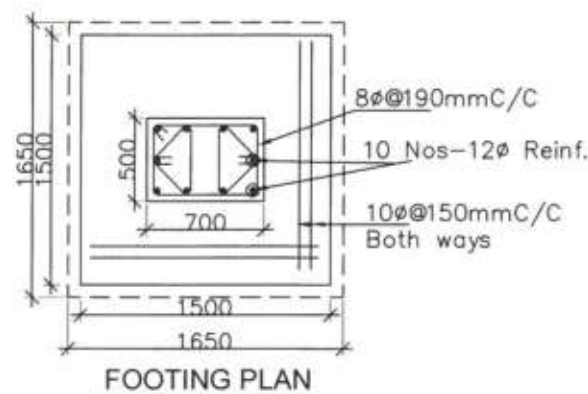
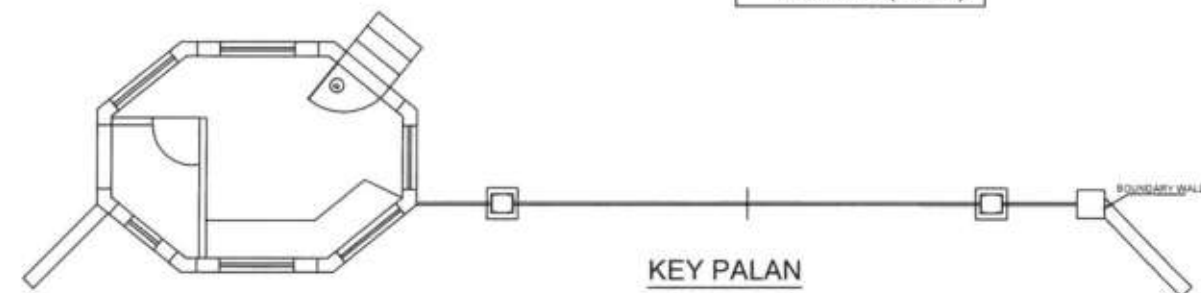
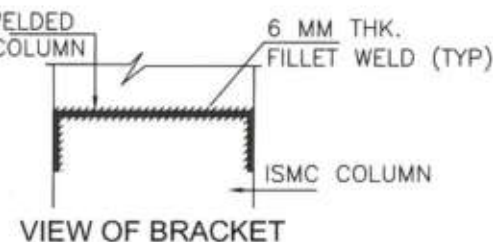
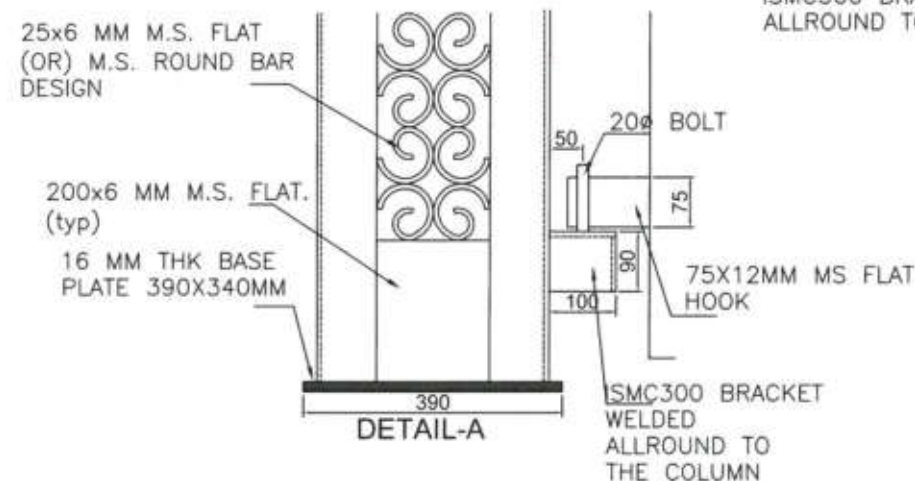
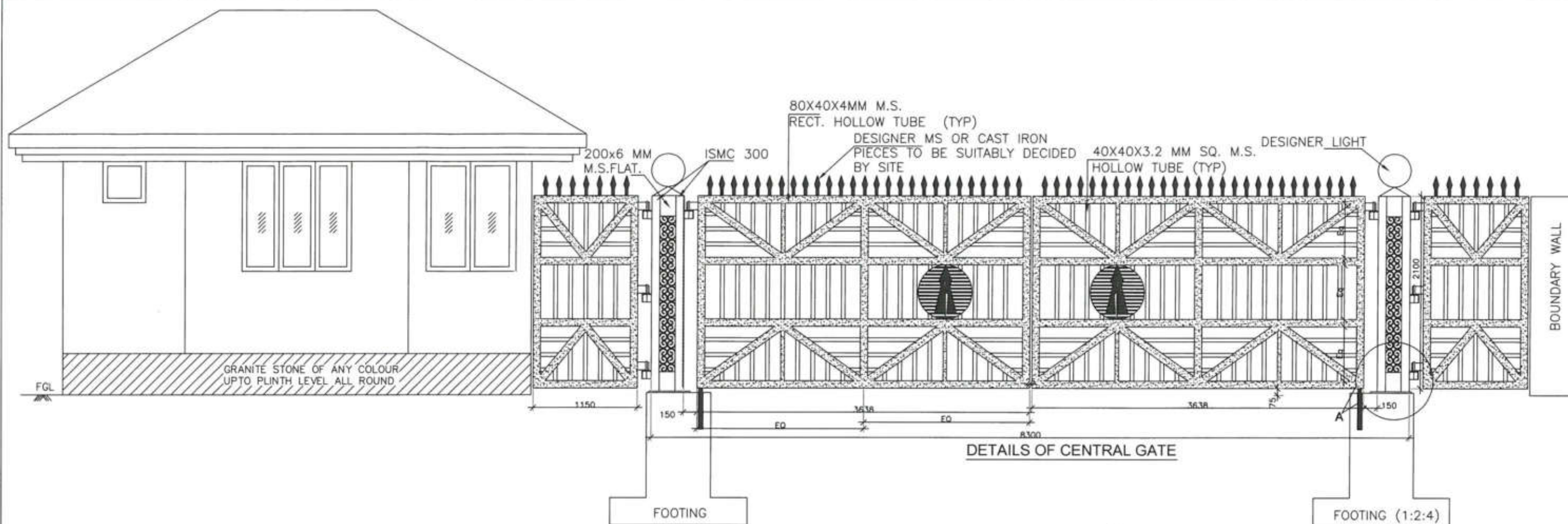
POWER GRID CORPORATION
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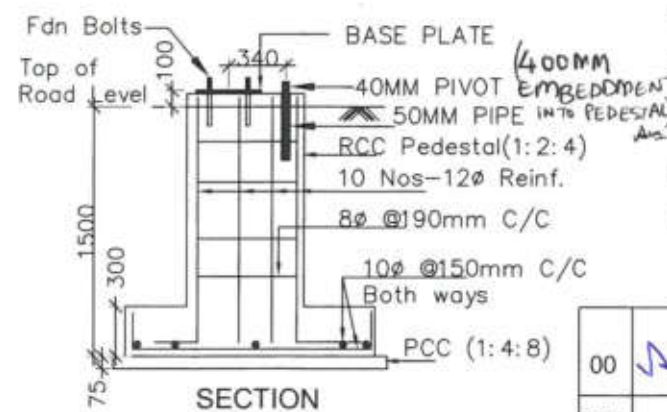
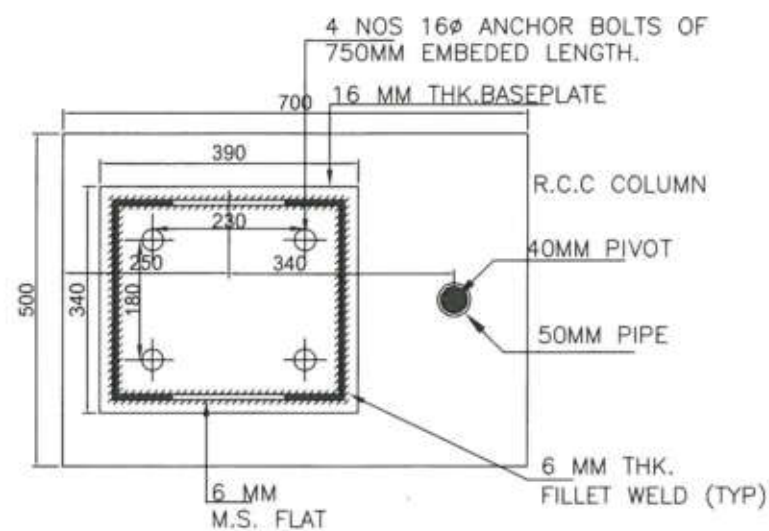
PROJECT :	765/400KV AHMEDABAD S/S (NEW)
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TITLE :	STRUCTURAL DETAILS OF SECURITY ROOM
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SCALE NTS	DRG NO.:- C/ENGG/SEC HUT/STR-01	SHEET 1 OF 1	R-0
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- GENERAL NOTES:-
1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
 2. DO NOT SCALE THE DRAWING, FOLLOW WRITTEN DIMENSIONS ONLY.
 3. THE DRAWING SHALL BE READ TOGETHER IN CONJUNCTION WITH OTHER RELEVANT STRUCTURAL, ARCHITECTURAL, SERVICE DRAWINGS AND SPECIFICATIONS.
 4. ANY DISCREPANCY IN DRAWING TO BE BROUGHT TO THE NOTICE SITE INCHARGE/STRUCTURAL CONSULTANT PRIOR TO EXECUTION
 5. ALL WELDS ARE 6 MM CONTINUOUS FILLET WELDS UNLESS NOTED OTHERWISE.
 6. WELDING SHALL CONFORM TO IS 816 -1969.
 7. ALL ELECTRODES SHALL CONFORM TO IS 814 (PART -1)-1974. ALL ELECTRODES SHALL CONFORM TO IS 814 (PART -1)-1974.
 8. ALL FABRICATION, HANDLING AND ERECTION TO BE STRICTLY AS PER IS 800-1984.
 9. ALL STRUCTURAL STEEL AND PLATES SHALL CONFORM TO INDIAN STANDARDS
 10. ALL STRUCTURAL MEMBERS, AFTER FABRICATION SHALL BE PAINTED WITH STEEL PRIMING COAT AS PER CPWD SPECIFICATIONS.
 11. CONCRETE GRADE SHALL BE 1:2:4 UNLESS NOTED OTHERWISE.
 12. ALL REINFORCEMENT SHALL BE OF GRADE Fe-500 CONFORMS TO IS:1786 OR TMT BARS OF EQUIVALENT GRADE.
 13. MINIMUM CLEAR COVER TO THE REINFORCEMENT SHALL BE AS PER LATEST IS:456.
 14. ALL STRUCTURAL MEMBERS SHALL BE PAINTED WITH ENAMEL PAINT.



RELEASED FOR TENDER/CONSTRUCTION

POWER GRID CORPORATION
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PROJECT:
400/220 SUB STATIONS

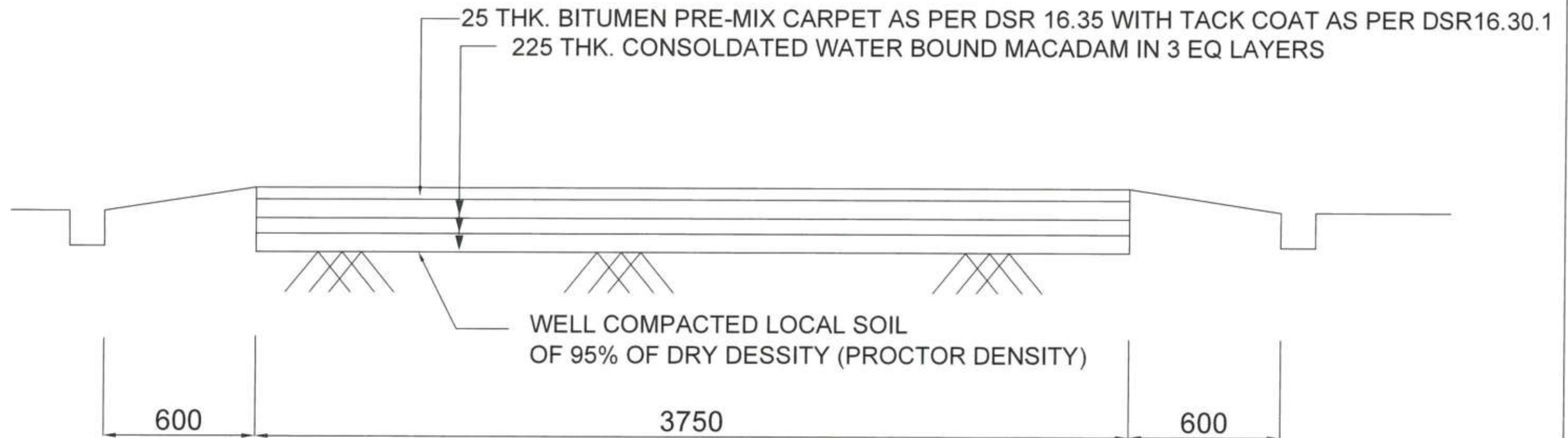
TITLE:
DETAILS OF MAIN ENTRANCE GATE

REV	DE	ASSTT GM	AGM	GM	DATE
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(ENGG-CIVIL)	(ENGG-CIVIL)	(ENGG-CIVIL)	(ENGG-CIVIL)		

SCALE: NTS
DRG NO.: C/ENGG/MAIN GATE/01
SHEET 1 OF 1 R-0

NOTES:

1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. CAMBER OF 1:50 SHALL BE PROVIDED.
3. THE WORK SHALL BE CARRIED OUT AS PER CPWD SPECIFICATION.
4. DRAIN SHALL BE AS PER DRAIN LAY OUT.
5. TOP OF ROAD SHALL BE 175MM ABOVE FINISHED GROUND LEVEL.
6. MATERIAL SPECIFICATION SHALL CONFIRM TO CPWD SPEC.
7. 100MM DIA. RCC HUME PIPE SHALL BE PLACED ACROSS THE ROAD AT EVERY 100M INTERVAL ALONG THE ROAD.
8. FINISHED TOP OF ROAD CREST SHALL BE 175 MM (MIN.) ABOVE F.G.L. HOWEVER, IN CASE APPROACH ROAD IS BEING CONSTRUCTED IN UNLEVELLED AREA THEN CREST LEVEL OF ROAD SHALL BE MINIMUM 300 MM ABOVE H.F.L.
9. IF EXPANSIVE SOIL IS ENCOUNTERED AT FOUNDING LVL. IT SHALL BE REMOVED TO A MIN. DEPTH OF 300 MM AND SHALL BE REPLACED WELL COMPACTED (IN 02 EQ LAYERS) C.N.S. MATERIAL.



TYP. CROSS SECTION OF 3.75 M WIDE ROAD

POWER GRID CORPORATION
OF INDIA LIMITED

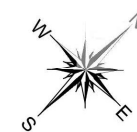
(A Government of India Enterprise)



PROJECT: 765/400 AND 400/220 kV SUBSTATION

TITLE: DETAILS OF BITUMINOUS ROAD

0										
REV.	DESCRIPTION	PERP.	REVD.	REVD.	APPD.	DATE	SCALE NTS	DRAWING NO.	C/ENGG/BITM/ROAD/01	REV R-0



DOOR WINDOW SCHEDULE					
TYPE	SIZE	SILL LVL.	UNTEL LVL.	DESCRIPTION	QTY.
D	600x2100	--	+2100MM FROM F.F.L	SINGLE SHUTTER WOODEN FLUSH DOOR	09
D1	1500x2100	--	+2100MM FROM F.F.L	DOUBLE SHUTTER WOODEN FLUSH DOOR	02
D2	750x2100	--	+2100MM FROM F.F.L	SINGLE SHUTTER WOODEN FLUSH DOOR	16
W1	900x900	+100MM FROM F.F.L	+2100MM FROM F.F.L	MS TUBULAR FRAME WINDOW WITH CLEAR FLOAT GLASS	22
V	600x300	+100MM FROM F.F.L	+2100MM FROM F.F.L	MS TUBULAR FRAME VENTILATOR WITH CLEAR FLOAT GLASS	12

 - ROOF PANEL
0.50MM THK GI TRAPEZOIDAL PROFILE SHEET WITH 8MM POLYUM
INSULATION (64 CUM /KG) SUPPORTED BY MS TRUSS.

OWNER

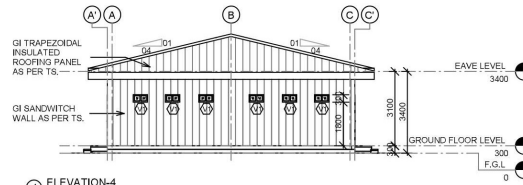
PROJECT	LABOUR HUT
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SUBSTATION	
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DRG. TITLE	ARCHITECTURAL FLOOR PLANS FOR LABOUR HUT
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DRG. NO.:	C/ENGG/LABOUR HUT/01
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SCALE:	1:100	SHEET:	01 OF 02	A1
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NOTES:-

1. ALL DIMENSIONS ARE IN MM AND LEVELS ARE IN METERS, UNLESS STATED OTHERWISE.
2. ONLY WRITTEN DIMENSION SHALL BE FOLLOWED, DO NOT SCALE THE DRAWING, FOLLOW IT CORRESPONDES TO FINISHED SURFACE UNLESS SPECIFIED.
3. ANY DISCREPANCIES SHOULD BE BROUGHT TO THE NOTICE OF THE ARCHITECT PRIOR TO EXECUTION OF JOBBROJURING MATERIALS AT SITE.
4. SIZE OF COLUMNS & BEAMS ARE JUST INDICATIVE.
5. DRAWING TO BE READ ON CONJUNCTION WITH TECHNICAL SPECIFICATION.
7. ALL FINISHES SHALL BE AS PER LABOUR MUTTS.

STRUCTURAL DETAILS

1. PRIMARY MEMBERS FABRICATED FROM PLATES AND SECTIONS WITH MINIMUM YIELD STRENGTH OF 340 MPa OR TO SUIT DESIGN BY CONTINUOUS DOUBLE SIDE WELDING.

2. SECONDARY MEMBERS FOR PURLING AND GUTTS SHALL CONFORM TO THE PHYSICAL SPECIFICATION OF 1475 MPa AND BE EQUIVALENT TO STAINLESS STEEL HAVING A MINIMUM YIELD STRENGTH OF 340 MPa AND SHALL BE OF PRE GALVANIZED HAVING A TOTAL COATING THICKNESS OF 275 G/SM² INCLUSIVE OF BOTH SIDE. THE MINIMUM THICKNESS OF SECONDARY MEMBERS SHALL BE 2.5MM.

3. SECONDARY MEMBERS SHALL CONFORM TO THE LOCAL SPECIFICATION IS 2062 OF MINIMUM 2434MPa YIELD STRENGTH.

4. ALL THE CUTTING SECTIONS SHALL CONFORM TO THE PHYSICAL SPECIFICATION IS 2062.

5. ALL OTHER MISCELLANEOUS SECONDARY MEMBERS SHALL HAVE MINIMUM YIELD STRENGTH OF 250 MPa.

6. THE COATING TO BE EQUALLY DIVIDED BETWEEN GAIRS, TO MINIMIZE OOD SIZE PANELS BETWEEN COLUMNS.

LEGENDS:-

FFL-FINISHED FLOOR LEVEL
F.G.L. - FINISHED GROUND LEVEL
W - WINDOW
D-DOOR
V-VENTILATOR

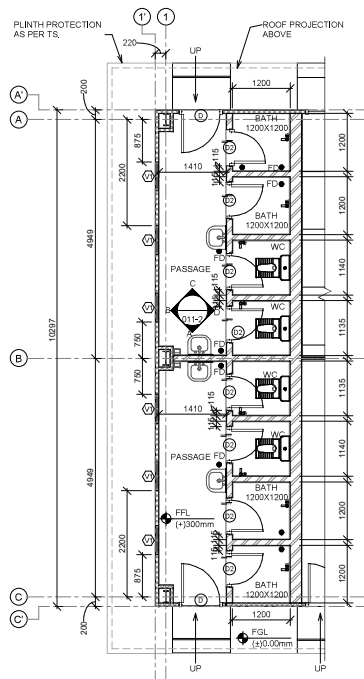
 - RCC

 - BRICK WALL

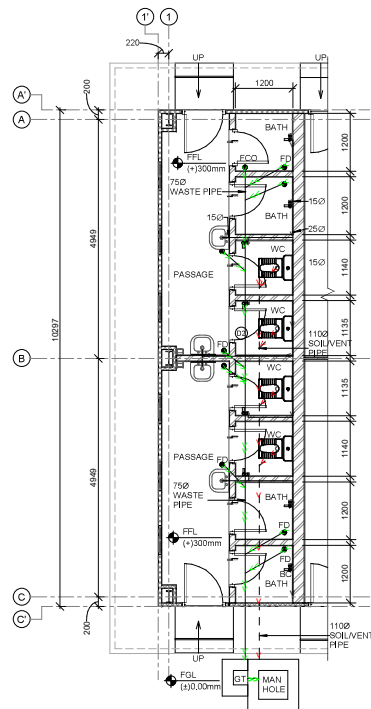
INTERNAL WALL PARTITION: LIGHT GAUGE STEEL STRUCTURE USING 50MM GALVANISED SECTIONS BOTH VERTICALLY AND HORIZONTALLY AT A GAP OF 600MM. 8 MM CEMENT FIBRE BOARD CEMENT FIBRE BOARD BOTH SIDES AND 50MM GLASS WOOL INSULATION AND JOINTS CONCEALED WITH POLYMER BASED PUTTY AND EXTERIOR SIDE WEATHER PROOF PLASTIC PAINT EMULSION PAINT.

 - ROOF PANEL
0.50MM THK GI TRAPEZOIDAL PROFILE SHEET WITH 8MM POLYUM
INSULATION (64 CUM /KG) SUPPORTED BY MS TRUSS.

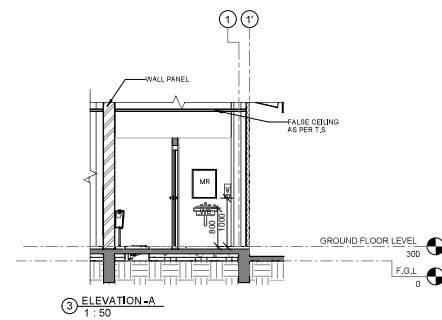
REV.	DESCRIPTION	PREP. SIGN.	CHEKD. SIGN.	APPD.	DATE		
OWNER		POWER GRID CORPORATION OF INDIA LTD SALUNKE PLANTEDY-2 SECTOR-DN GURGAON-HARYANA D - 122001					
PROJECT	LABOUR HUT						
SUBSTATION							
DWG. TITLE	ARCHITECTURAL ELEVATIONS AND SECTIONS FOR LABOUR HUT						
DWG. NO:	C/ENGG/LABOUR HUT/D1-						
SCALE :	1 : 100		SHEET: 02 OF 02			A1	



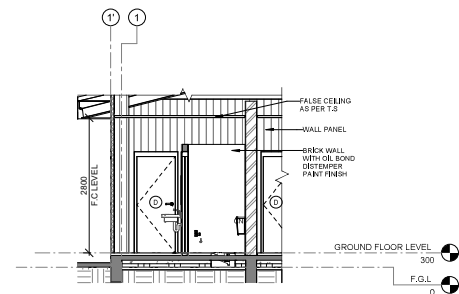
1. GROUND FLOOR TOILET - FIXTURE LAYOUT
1:50



2. GROUND FLOOR TOILET - PLUMBING LAYOUT
1:50



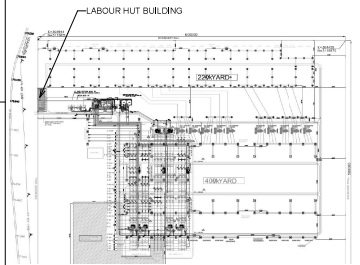
3. ELEVATION-A
1:50



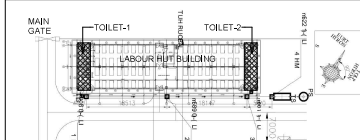
4. ELEVATION-C
1:50

GENERAL NOTES -

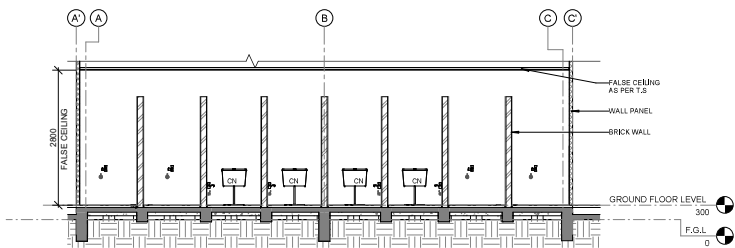
1. ALL DIMENSIONS & LEVEL ARE IN MM UNLESS STATED OTHERWISE.
2. FFL +500 SHALL CORRESPOND TO LEVEL +10.10M WHEREVER INDICATED.
3. SIZES OF COLUMNS ARE JUST INDICATIVE. SIZES SHALL BE AS PER STRUCTURAL DETAIL.
4. ALL LEVELS ARE TO BE VERIFIED BEFORE THE START OF CONSTRUCTION.
5. ALL ARCHITECTURAL FINISHES SHALL BE AS PER TS.
6. LOCATION/ORIENTATION/CORNER/LEVELS OF THE BUILDING SHALL BE CROSS-CHECKED WITH STRUCTURAL/CIVIL DRAWINGS. IN CASE OF ANY MISMATCH THE SAME SHALL BE RESOLVED BEFORE CONSTRUCTION.
7. REFERENCE SHALL BE MADE TO RELEVANT DRAWINGS BEFORE STARTING FLOORING WORKS. TRENCHECUT CUTS IN FLOOR SHALL BE PROVIDED IN ACCORDANCE WITH RELEVANT ELECTRICAL/EQUIPMENT DRAWINGS.
8. ALL TOILET AND PLUMBING FIXTURES SHALL BE AS PER TS, & SOQ.



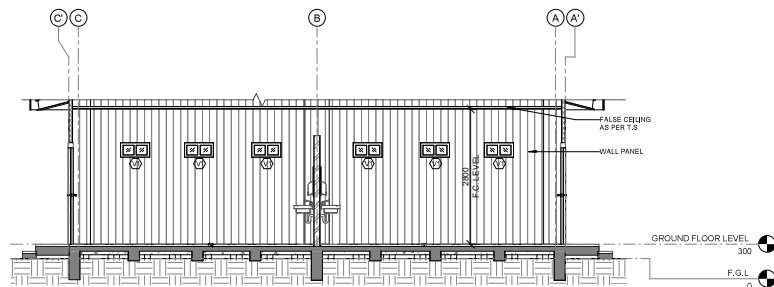
KEY PLAN - OVERALL LAYOUT
SCALE - NTS



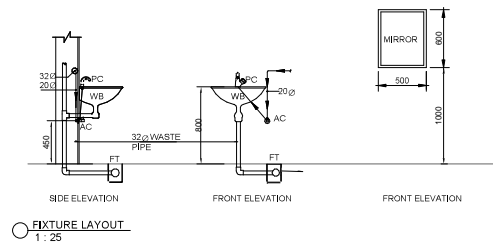
KEY PLAN - BEVERAGE LAYOUT
SCALE - NTS



5. ELEVATION-B
1:50



6. ELEVATION-D
1:50



7. FIXTURE LAYOUT
1:25

PIPE LEGEND	
	75Ø WASTE PIPE
	110Ø SOIL PIPE
	WATER SUPPLY PIPE
	PVC PIPE FOR HOT & COLD WATER SUPPLY

PLUMBING LEGEND	
DIAMETER OF WATER SUPPLY	
NOMINAL DIAMETER (in mm)	NOMINAL DIAMETER (in inches)
15	1/2"
25	1"
40	1.5"

LEGENDS-	
FFL = FINISHED FLOOR LEVEL	AC = ANGLE COCK
TOC = TOP OF CONCRETE	BC = BIB COCK
D = DOOR	HF = HEALTH FAUCET
V = VENTILATOR	PH = PAPER HOLDER
WC = WATER CLOSET	FC = FLUSH COCK
WB = WASH BASIN	PC = PILLAR COCK
FD = FLOOR DRAIN	SC = STOP COCK
FT = FLOOR TRAP	L.S. = LIQUID SOAP HOLDER
MR = MIRROR	B.T. = BOTTLE TRAP
	C.N. = CISTERN

NOTE -
* SPECIFICATIONS OF TOILET FIXTURES AND OTHER DETAILS SHALL BE AS PER TS, & SOQ.

ISSUED FOR TENDER
PURPOSE ONLY

REV.	DESCRIPTION	PREP.	CHEK.	APPD.	DATE
01	ISSUED FOR APPROVAL	TS	SM	SM	28-09-2022
OWNER: POWER GRID CORPORATION OF INDIA LTD.					
CONTRACTOR: KEC INTERNATIONAL LTD.					
PROJECT: SUBSTATION PACKAGE-SS01 FOR CONSTRUCTION OF NEW 400/220KV SUBSTATION AT BIKANER. EXTENSION OF 400KV BHIWADI (GIS)SIS AND EXTENSION OF KHETRI S/S UNDER TBCC ROUTE.					
SUBSTATION: 400KV BIKANER SS-NEW					
DRG. TITLE: ARCHITECTURAL TYPICAL TOILET DETAIL FOR LABOUR HUT BIKANER					
DRG. NO.: KEC-SA126-BK-ESC-655-DRG-011					
SCALE: 1:50					
SHEET: 02 OF 02					
A1					

NOTES

1. All dimensions & levels are in mm unless otherwise specified.
2. All dimensions to be read, not scaled.
3. uPVC Doors, window ventilators shall be sliding or openable or partially openable / partially fixed or fixed type of factory made uPVC door/window (casement / sliding), ventilators, fixed glazing and partition as per pre-fab structure labour hut.
4. The make and sections of uPVC profile shall be approved by engineer-in-charge.
5. For location of doors, windows etc. refer approved architectural drawing.
6. The sections of frame is indicative, site to modify the sizes of the frame as per site requirement.

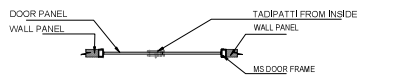
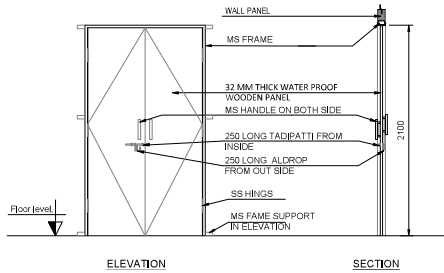
LEGEND

FGL - FINISH GROUND LEVEL.
FPL - FINISH FLOOR LEVEL.
D - DOOR
W - WINDOW
V - VENTILATOR

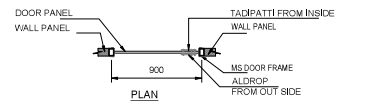
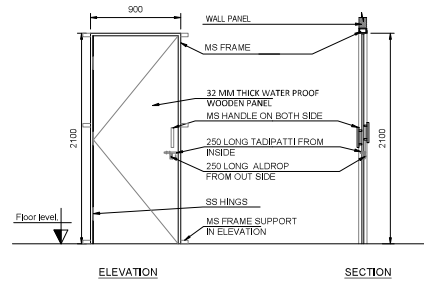
230mm THK BRICK WALL
R.C.C.
WALL PANEL

BUILDING SPECIFICATIONS

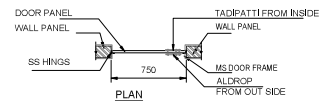
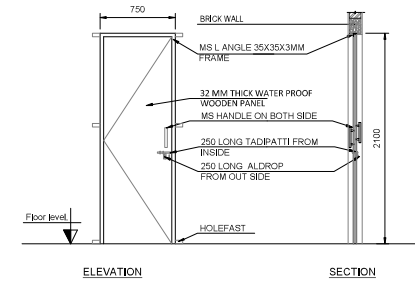
BUILDING SPECIFICATIONS SHALL BE AS PER T.S
PRE-FAB STRUCTURE LABOUR HUT



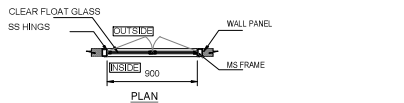
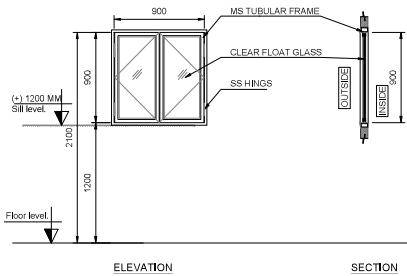
D1 - 1500x2100
MS TUBULAR FRAME WATER PROOF DOUBLE SHUTTER DOOR
G.F. - 02 NOS - 6.30 SQ MT



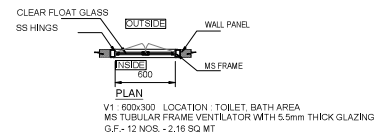
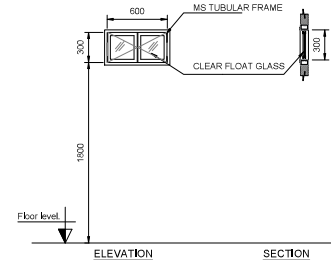
D2 - 900x2100
LOCATION: TOILET, ROOMS & PANTRY
(MS TUBULAR FRAME WATER PROOF SINGLE SHUTTER FLUSH DOOR)
G.F. - 09 NOS - 17.01 SQ MT



D2 - 750x2100
LOCATION: BATH, TOILET
MS L ANGLE FRAME SINGLE SHUTTER FLUSH DOOR
G.F. - 12 NOS - 16.9 SQ MT



V1 - 900x900 LOCATION: ROOMS
(MS TUBULAR FRAME OPENABLE WINDOW WITH CLEAR FLOAT GLASS.)
G.F. - 22 NOS - 17.82 SQ MT

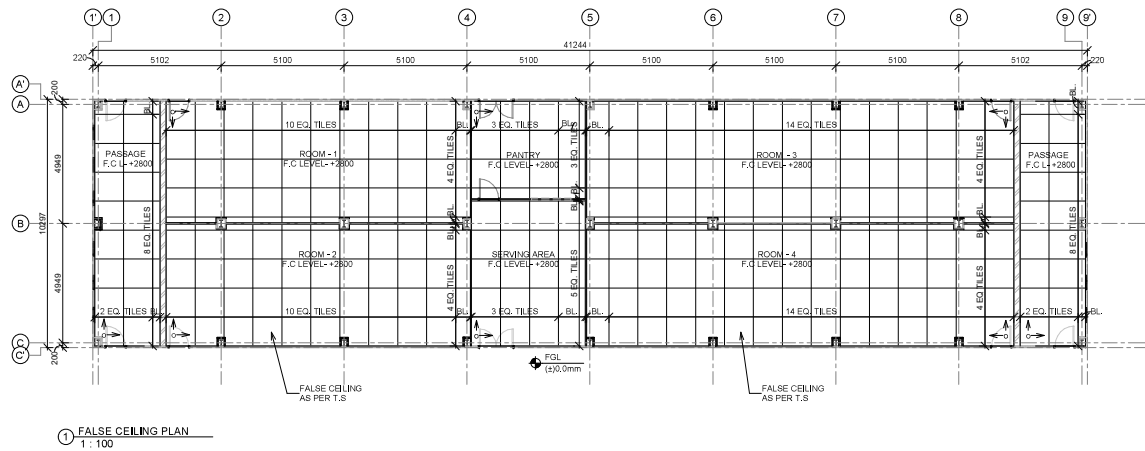


V1 - 600x300 LOCATION: TOILET, BATH AREA
MS TUBULAR FRAME VENTILATOR WITH 5.5mm THICK GLAZING.
G.F. - 12 NOS - 2.16 SQ MT

DOOR WINDOW SCHEDULE					
TYPE	SIZES	SILL LVL.	LINTEL LVL.	DESCRIPTION	NOS.
D	900 X 2100	-	2100	MS TUBULAR FRAME 32 MM THICK WATER PROOF WOODEN SINGLE SHUTTER FLUSH DOOR WITH SS HINGS	09
D1	1500 X 2100	-	2100	MS TUBULAR FRAME 32 MM THICK WATER PROOF WOODEN DOUBLE SHUTTER FLUSH DOOR WITH SS HINGS	02
D2	750 X 2100	-	2100	MS L ANGLE FRAME 32 MM THICK WATER PROOF WOODEN SINGLE SHUTTER FLUSH DOOR WITH SS HINGS	16
W1	900 X 900	1200	2100	MS TUBULAR FRAME WINDOW WITH CLEAR FLOAT GLASS	22
V1	300 X 600	1800	2100	MS TUBULAR FRAME VENTILATOR WITH CLEAR FLOAT GLASS	12

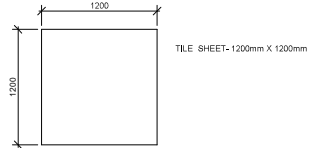
**ISSUED FOR TENDER
PURPOSE ONLY**

R0		ISSUED FOR APPROVAL		TS	SM	SM	15-09-2022
REV.		DESCRIPTION		PREP.	CHEKD.	APPD.	DATE
OWNER		POWER GRID CORPORATION OF INDIA LTD		SIGN.			
CONTRACTOR		KEC INTERNATIONAL LTD.		SIGN.			
PROJECT		SUBSTATION PACKAGE-SS01 FOR CONSTRUCTION OF NEW 400/220KV SUBSTATION AT BIKANER, EXTENSION OF 400KV BHIMADI (G)S/S AND EXTENSION OF KHETRI S/S UNDER TBCE ROUTE.		SIGN.			
SUBSTATION		400KV BIKANER SS -NEW		SIGN.			
DRG. TITLE		DOOR WINDOW DETAILS FOR LABOUR HUT		SIGN.			
DRG. NO.		KEC-SA126-BIK-ESC-805-DRG-010		SIGN.			
SCALE:		1 : 25		SHEET:		01 OF 01	
						A1	



- GENERAL NOTES
1. ALL DIMENSIONS AND LEVEL ARE IN MM UNLESS OTHERWISE SPECIFIED.
 2. DO NOT SCALE THE DRAWING. ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 3. ALL MEASUREMENTS MUST BE CHECKED IN CASE OF DISCREPANCY IT SHALL BE REPORTED BEFORE EXECUTION.
 4. REFER LISTING LAYOUT AND AC DUCT LAYOUT FOR LISTING FEATURES RELEVANT DETAIL.
 5. CEILING STRIPS SHALL BE CUT ACCORDINGLY FOR FITTING THE FEATURES / FITTINGS.
 6. REFER TENDER TECHNICAL SPECIFICATIONS FOR FALSE CEILING.
 7. SUPPLY AIR DIFFUSER SIZE SHALL BE AS PER HVAC LAYOUT.
 8. IN CASE OF ANY CONFLICT WITH TENDER PACKAGE, THE SAME SHALL BE GOT RESOLVED BEFORE PROCUREMENT AND EXECUTION.
 9. COLOR SCHEME FOR ALL ARCHITECTURAL WORKS SHALL BE SUBJECT TO APPROVAL OF THE OWNER.
 10. AS CONSIDERING CONVENIENT WORK FLOW FALSE CEILING WORK SHOULD BE DONE AFTER COMPLETION OF ELECTRICAL WORK.
 11. F.C.L. LEVEL FOR RESPECTIVE FLOORS SHALL BE MEASURED FROM THE F.F.L OF THE RESPECTIVE FLOOR.

LEGENDS
E.Q. = EQUAL
F.F.L. = FINISHED FLOOR LEVEL
F.C.L. = FALSE CEILING LEVEL
B.L. = BALANCE

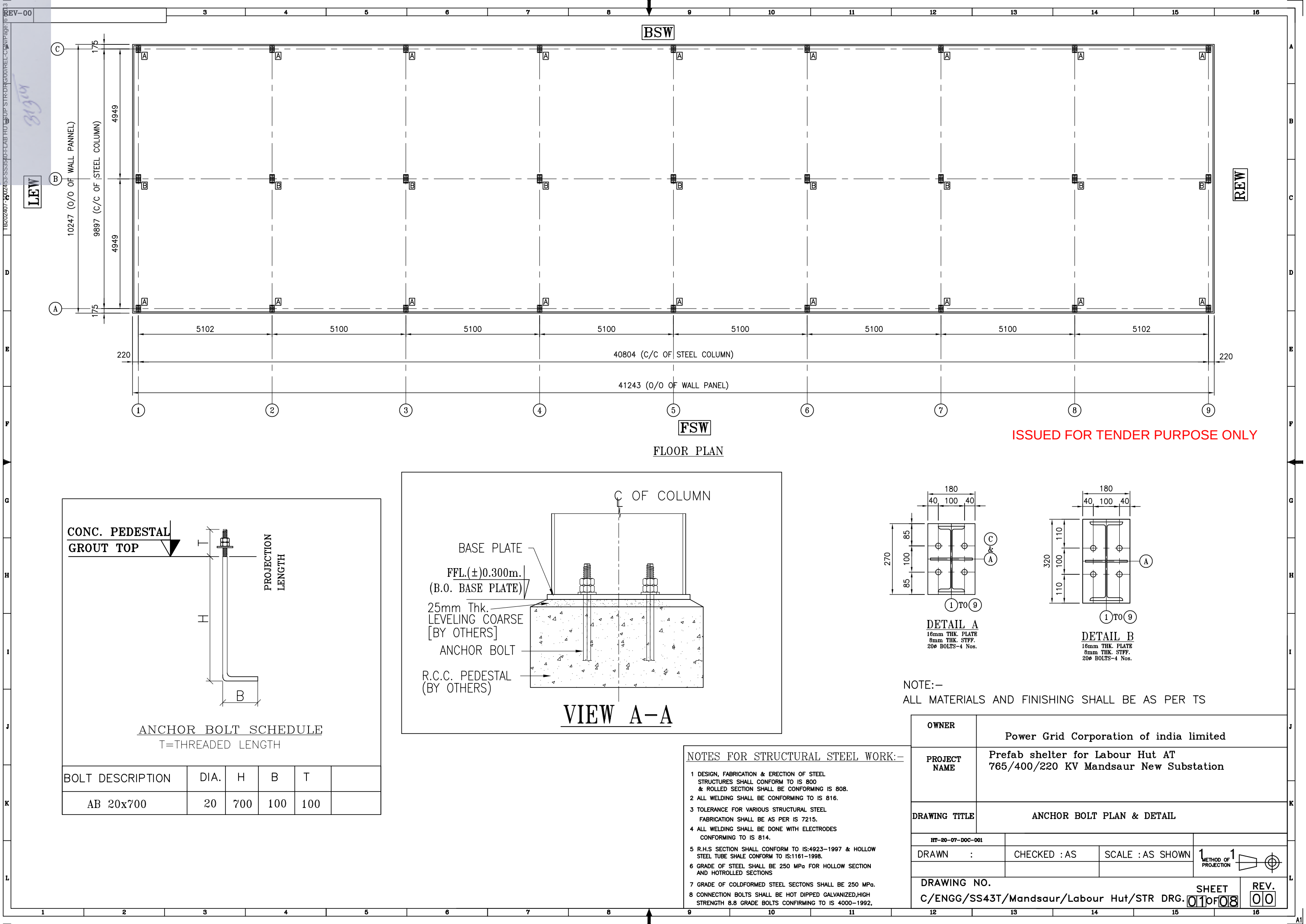


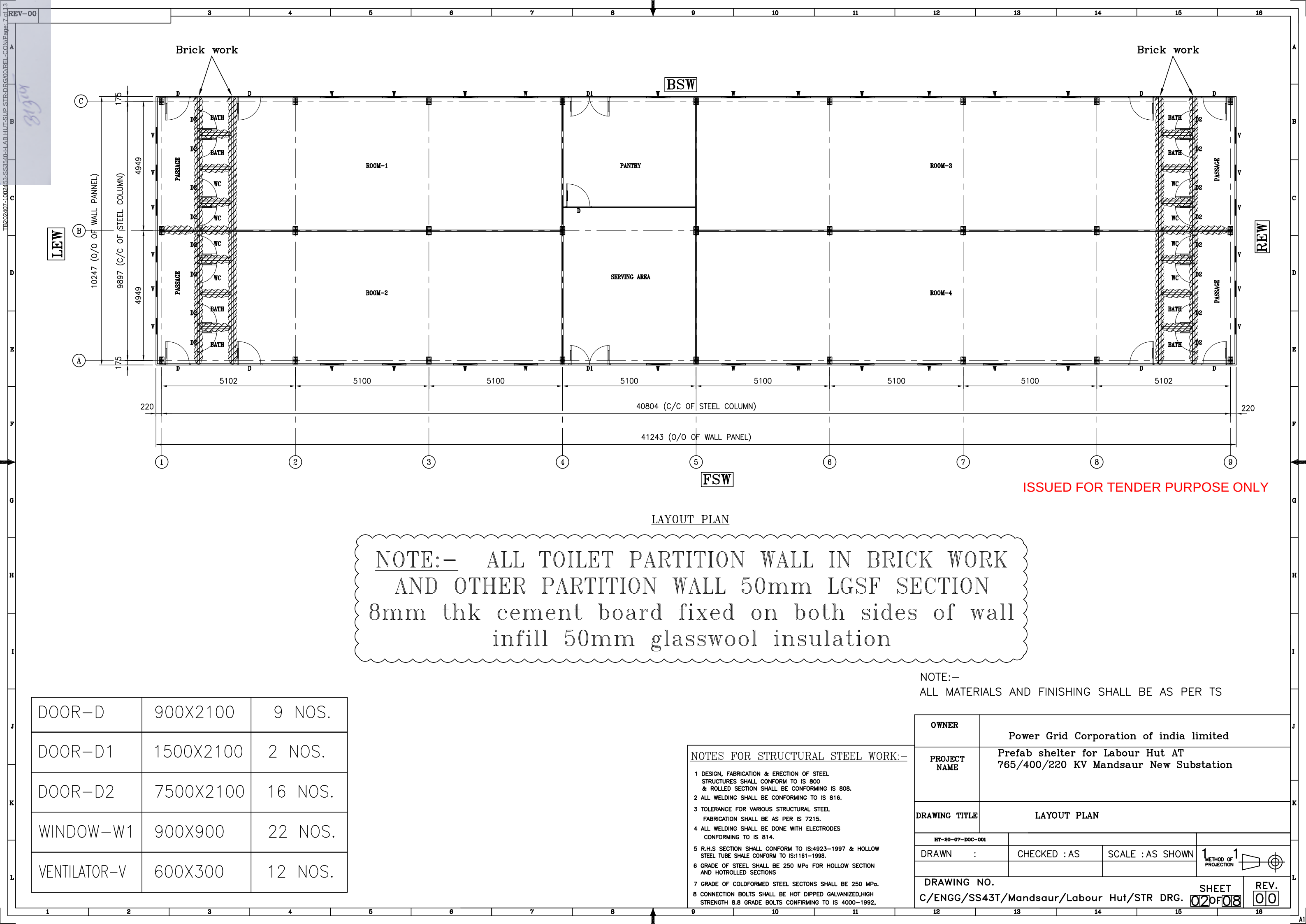
AREAS / ROOMS PROVIDED WITH FALSE CEILING SHOWN THUS
→ START POINT

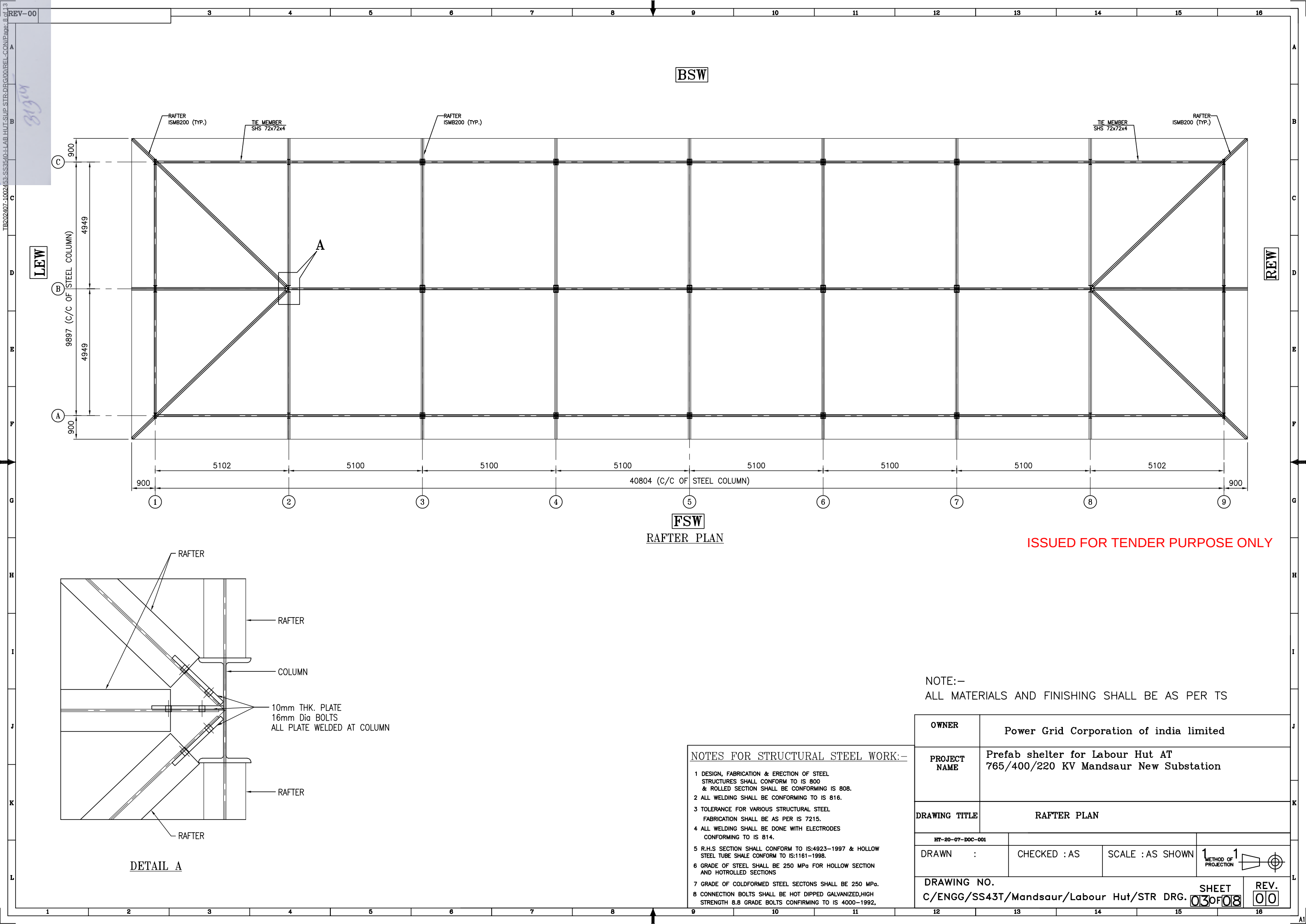
FALSE CEILING SCHEDULE		
S.NO.	LOCATION	FALSE CEILING MATERIAL
GROUND FLOOR		
1.	LABOUR HUT	2800
2.	PANTRY	2800
3.	SERVING AREA	2800
4.	CORRIDOR	2800
5.	BATH AND WC	2800

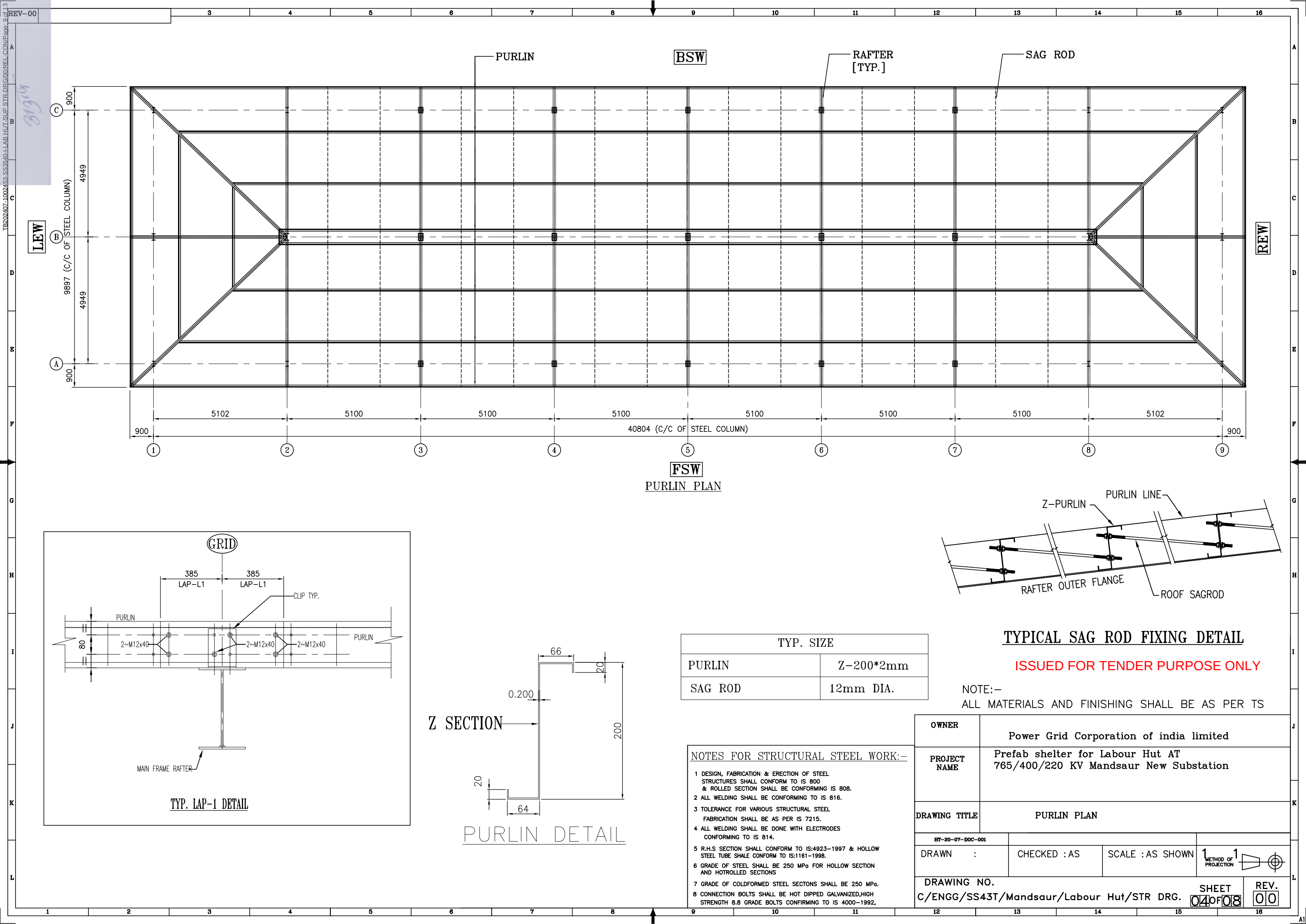
ISSUED FOR TENDER
PURPOSE ONLY

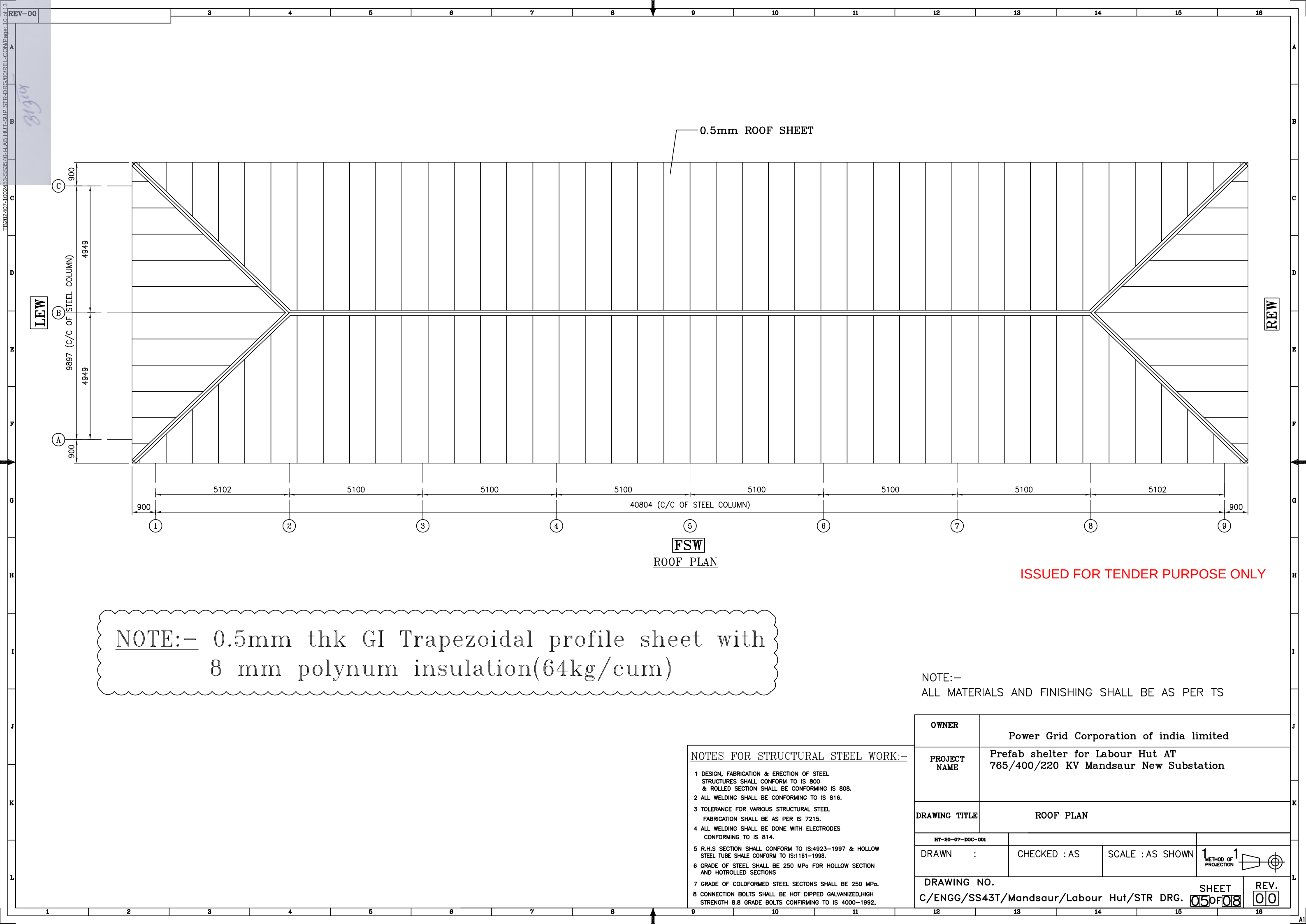
NO.	ISSUED FOR APPROVAL	TS	SM	SM	14-09-2022
REV.	DESCRIPTION	PREP.	CHEK.	APPD.	DATE
OWNER	POWER GRID CORPORATION OF INDIA LTD BILGAHATI SUBSTATION, BILGAHATI, DISTRICT-121001				
CONTRACTOR	KEC INTERNATIONAL LTD. B-11/100, BILGAHATI, DISTRICT-121001 PHONE NO. 011-26100100/100101/100102				
PROJECT	SUBSTATION PACKAGE-SS01 FOR CONSTRUCTION OF NEW 400/20KV SUBSTATION AT BIKANER, EXTENSION OF 400KV BHWADI (GIS)/SIS AND EXTENSION OF KHETRI SIS UNDER TBOR ROUTE.				
SUBSTATION	400KV BIKANER SS- NEW				
DRG. TITLE	ARCHITECTURAL FALSE CEILING PLAN FOR LABOUR HUT				
DRG. NO.	KEC-SA126-BK-KEC-405-ORG-014				
SCALE	1:100	SHEET	01 OF 01	A1	



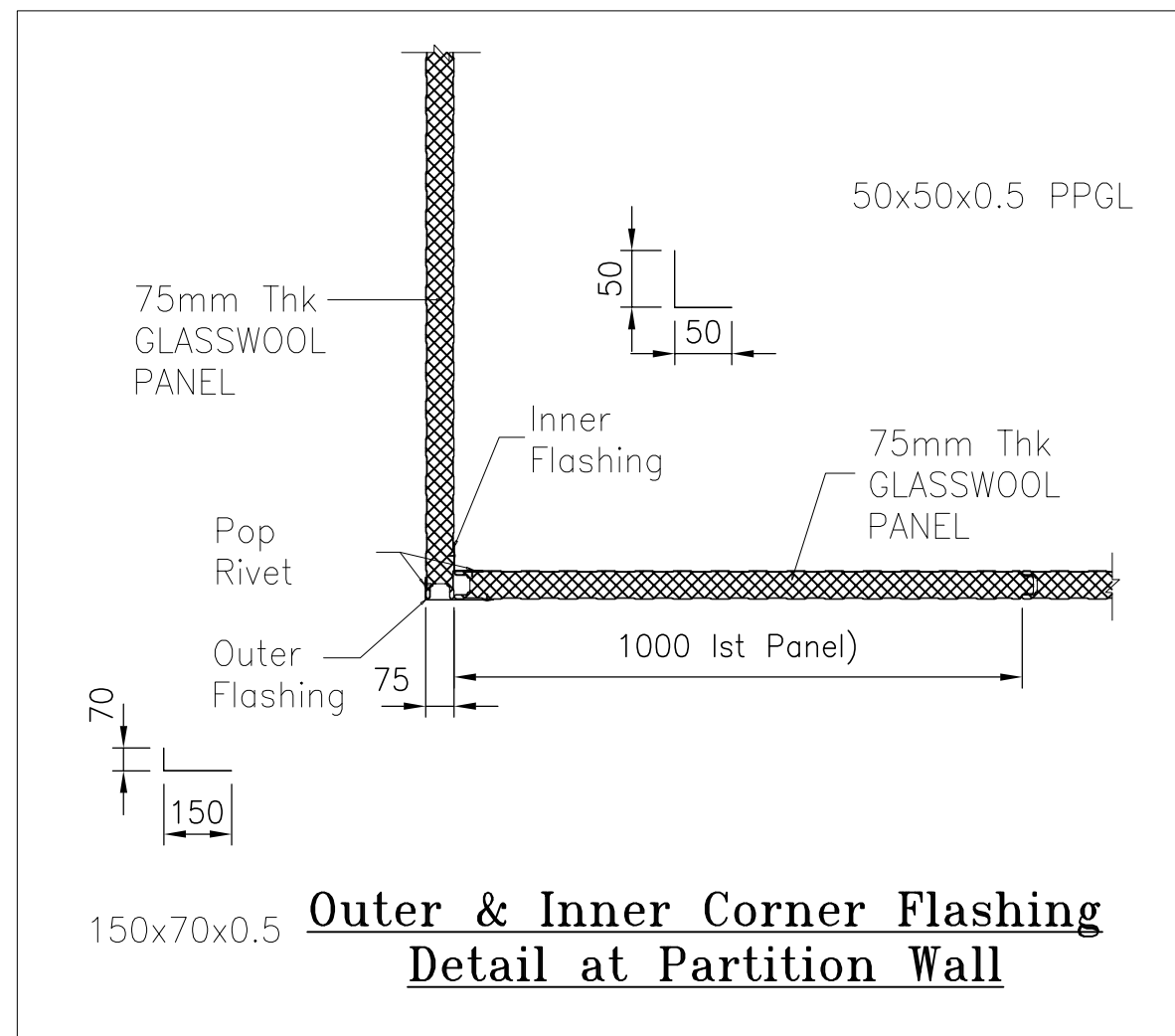
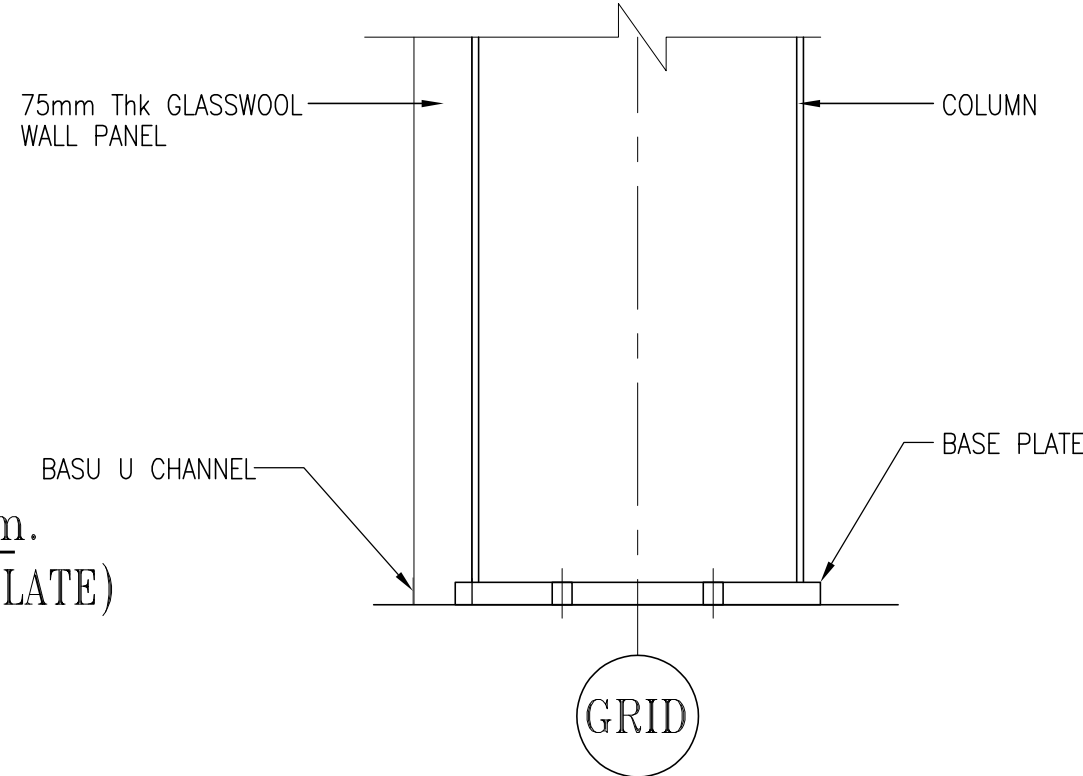
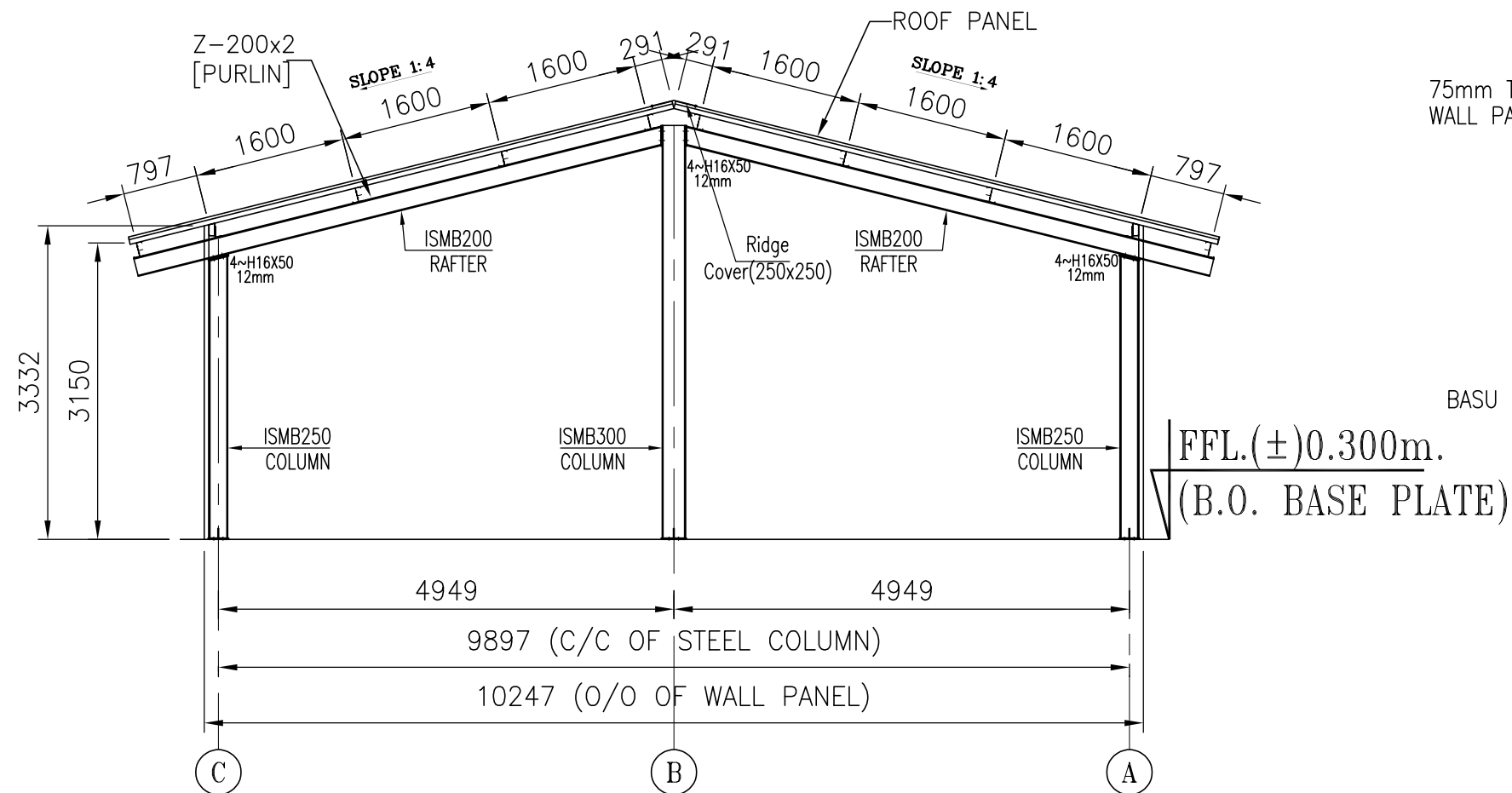








REV-00
11 of 11
TB202407-1002453-SS3540-LAB HUT-STR DRG/00/REL-CON/Page: 11 of 11

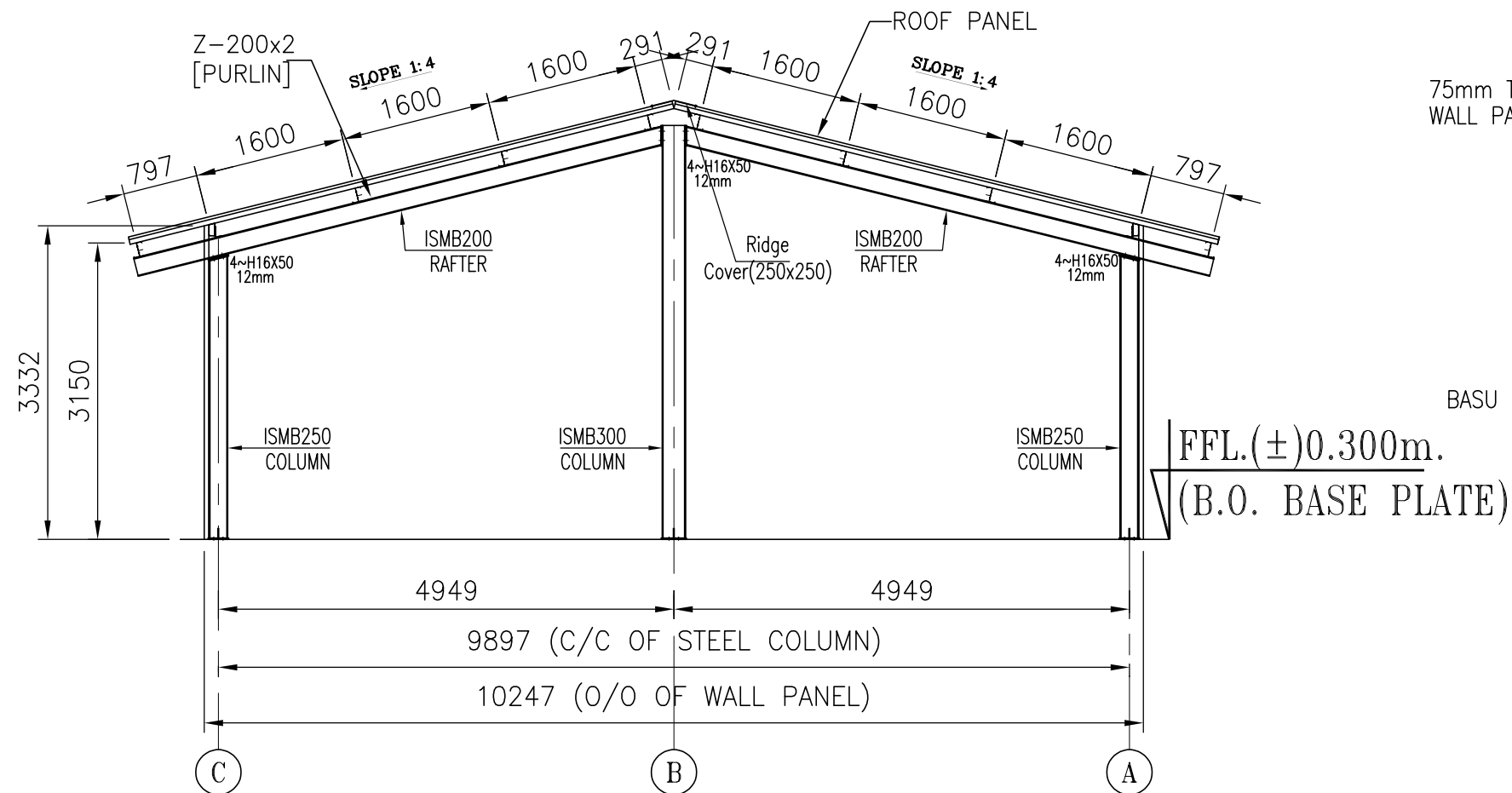


ISSUED FOR TENDER PURPOSE ONLY

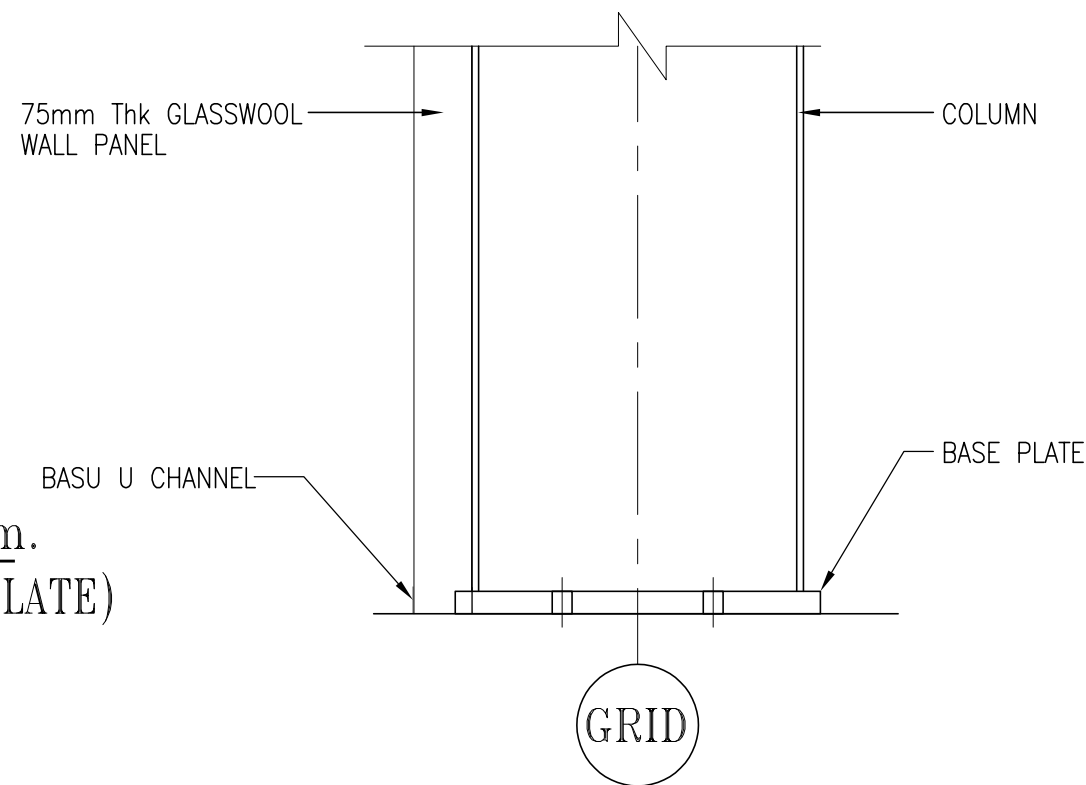
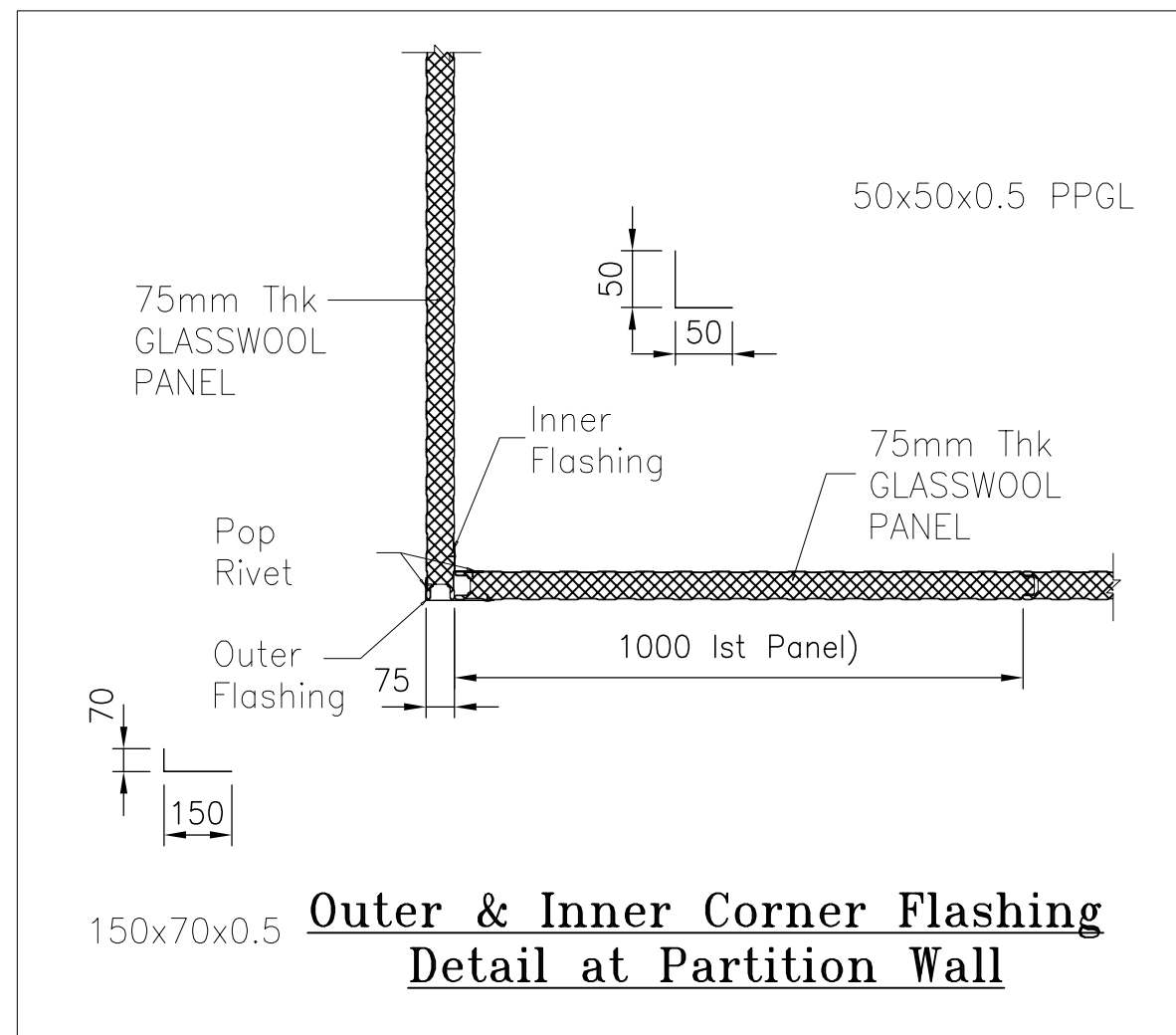
NOTE:-
ALL MATERIALS AND FINISHING SHALL BE AS PER TS

OWNER	Power Grid Corporation of india limited		
PROJECT NAME	Prefab shelter for Labour Hut AT 765/400/220 KV Mandsaur New Substation		
DRAWING TITLE	TYP. SECTION		
HT-20-07-DOC-001			
DRAWN :	CHECKED : AS	SCALE : AS SHOWN	METHOD OF PROJECTION
DRAWING NO. C/ENGG/SS43T/Mandsaur/Labour Hut/STR DRG.	SHEET 06 OF 08	REV. 00	

REV-00
12 of 12
TB202407-1002453-SS3540-LAB HUT-STR DRG/00/REL-CON/Page: 12 of 12



SECTION ALONG GRID - 2 TO 8

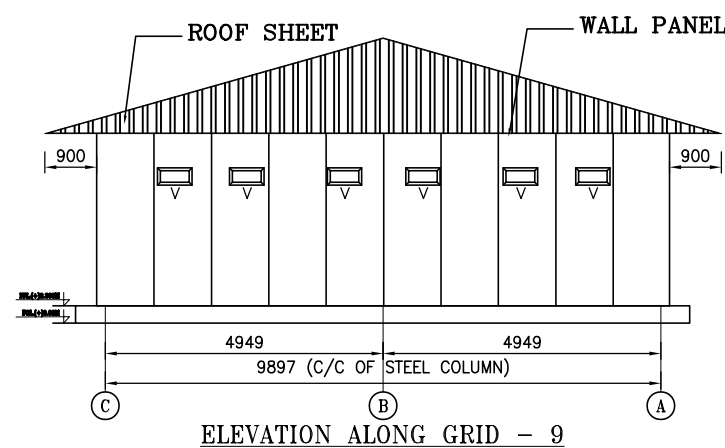
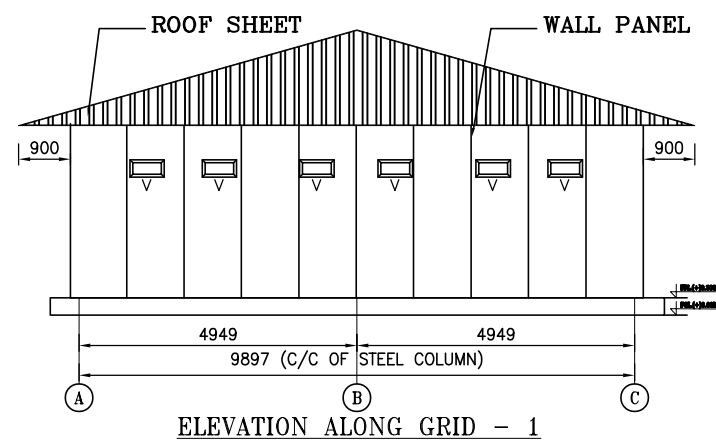
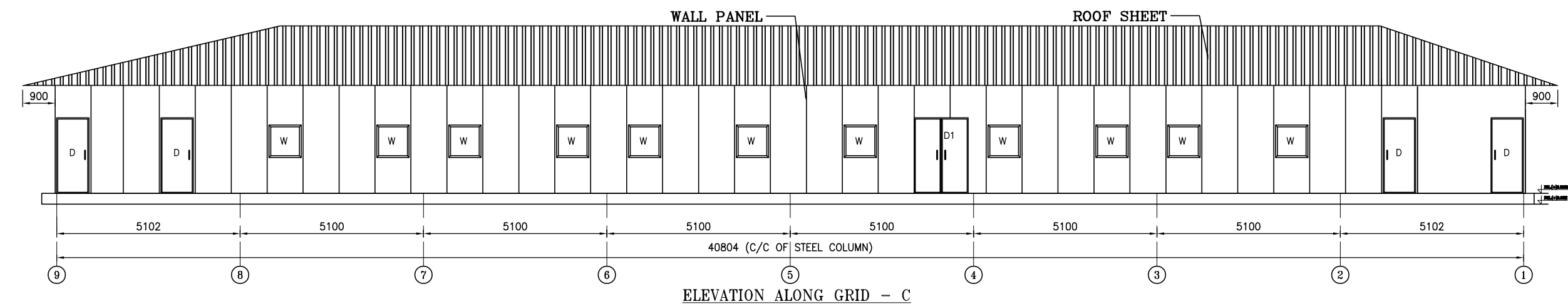
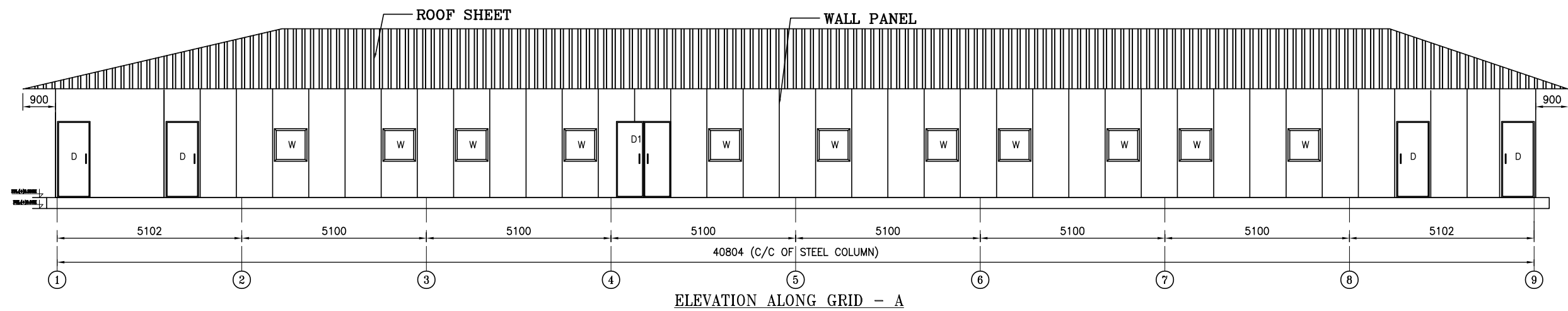


TYP. PANEL FIXING DETAIL

ISSUED FOR TENDER PURPOSE ONLY

NOTE:-
ALL MATERIALS AND FINISHING SHALL BE AS PER TS

OWNER	Power Grid Corporation of india limited		
PROJECT NAME	Prefab shelter for Labour Hut AT 765/400/220 KV Mandsaur New Substation		
DRAWING TITLE	TYP. SECTION		
HT-20-07-DOC-001			
DRAWN :	CHECKED : AS	SCALE : AS SHOWN	METHOD OF PROJECTION
DRAWING NO. C/ENGG/SS43T/Mandsaur/Labour Hut/STR DRG.		SHEET 06 OF 08	REV. 00



ISSUED FOR TENDER PURPOSE ONLY

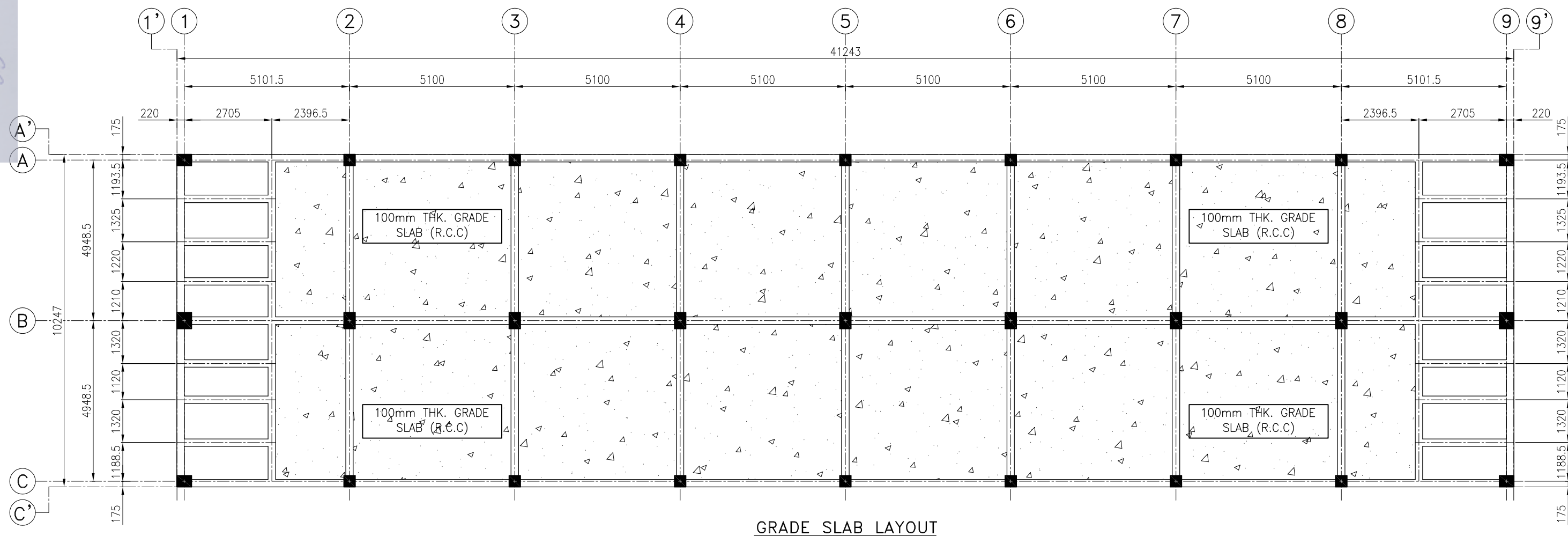
NOTES FOR STRUCTURAL STEEL WORK:-

- 1 DESIGN, FABRICATION & ERECTION OF STEEL STRUCTURES SHALL CONFORM TO IS 800 & ROLLED SECTION SHALL BE CONFORMING IS 808.
- 2 ALL WELDING SHALL BE CONFORMING TO IS 816.
- 3 TOLERANCE FOR VARIOUS STRUCTURAL STEEL FABRICATION SHALL BE AS PER IS 7215.
- 4 ALL WELDING SHALL BE DONE WITH ELECTRODES CONFORMING TO IS 814.
- 5 R.H.S SECTION SHALL CONFORM TO IS:4923-1997 & HOLLOW STEEL TUBE SHALL CONFORM TO IS:1161-1998.
- 6 GRADE OF STEEL SHALL BE 250 MPa FOR HOLLOW SECTION AND HOTROLLED SECTIONS
- 7 GRADE OF COLDFORMED STEEL SECTIONS SHALL BE 250 MPa.
- 8 CONNECTION BOLTS SHALL BE HOT DIPPED GALVANIZED,HIGH STRENGTH 8.8 GRADE BOLTS CONFIRMING TO IS 4000-1992,

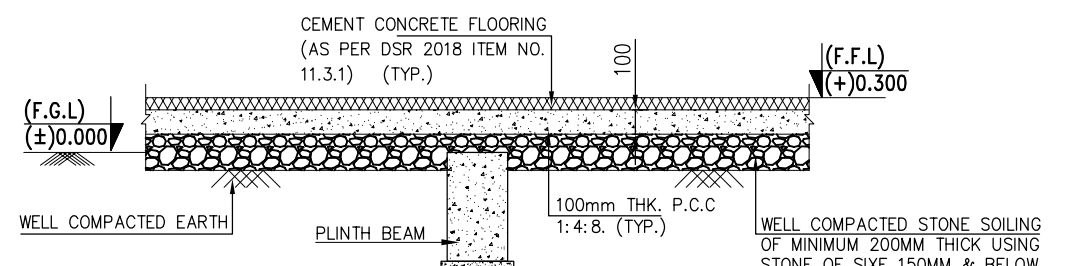
NOTE:-
ALL MATERIALS AND FINISHING SHALL BE AS PER TS

NOTE:- 0.5mm G.I sheet panel with 75mm Thk thermocole /Glasswool insulation 12kg/m³ shall be painted with weather proof texture paint outside and oil bond distemper inside

OWNER	Power Grid Corporation of india limited		
PROJECT NAME	Prefab shelter for Labour Hut AT 765/400/220 KV Mandsaur New Substation		
CONTRACTOR	KEC International Ltd.		
DRAWING TITLE	ELEVATIONS		
HT-20-07-D0C-001			
DRAWN :	CHECKED : AS	SCALE : AS SHOWN	METHOD OF PROJECTION
DRAWING NO. C/ENGG/SS43T/Mandsaur/Labour Hut/STR DRG.	SHEET 08 of 08		REV. 00



GRADE SLAB LAYOUT



TYPICAL 100MM THK. GRADE SLAB DETAIL
(SCALE-N.T.S)

ISSUED FOR TENDER PURPOSE ONLY

**POWER GRID CORPORATION OF
INDIA LIMITED**
(A GOVT OF INDIA ENTERPRISE)



PROJECT

ESTABLISHMENT OF
765/400/220KV
MANDSAUR S/S
(SS-43T)

	SUBSTATION
--	------------

DRG. TITLE

4	DRG. NO.:
---	-----------

C/ENGG/SS43T/Mandsaur/Labour Hut/ GRADE SLAB/DRG.
--

TOT. SH:	01
----------	----

SHEET: 01 OF 01

NOTES:-

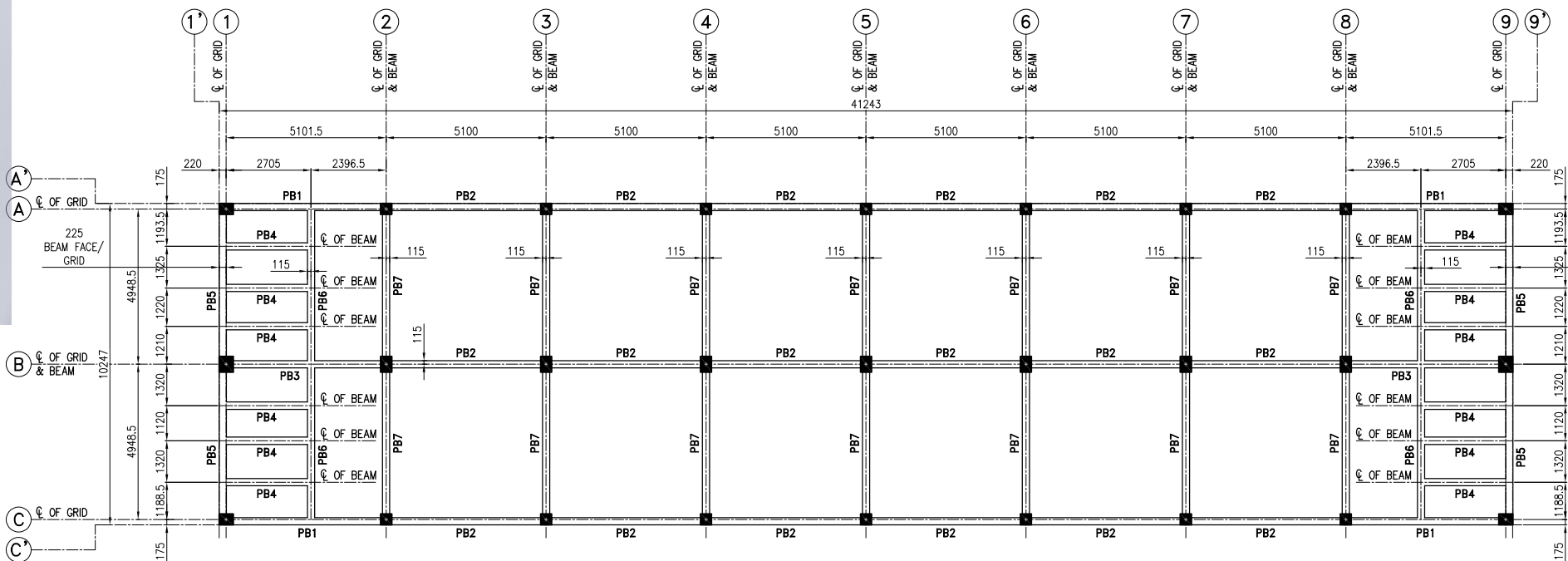
1. ALL DIMENSIONS ARE IN M.M. AND ALL LEVELS ARE IN METERS.
2. UNLESS WRITTEN DIMENSIONS TO BE FOLLOWED AND DRAWING NOT TO BE SCALED.
3. EL. ± 0.00 CORRESPONDS TO FINISHED GROUND LEVEL (FGL).
4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH RELEVANT CONTRACT DOCUMENTS. DRAWING AND ANY DISCREPANCY SHOULD BE IMMEDIATELY BROUGHT TO NOTICE.
5. REINFORCEMENT STEEL SHALL BE AS PER TECHNICAL SPECIFICATION.
6. LAP LENGTH FOR DEVELOPMENT LENGTH SHALL BE 50 TIMES DIA OF BARS.
7. GRADE OF CONCRETE SHALL BE AS PER BPS.
8. UNLESS NOTED OTHERWISE, PCC SHALL BE (1:4:8) AND 75MM THICK AND 75MM PROJECTED BEYOND REINFORCEMENT DETAILING.
9. REFER SP34 FOR REINFORCEMENT DETAILING.

<u>CLEAR COVER</u>	
PRTICULAR	COVER
BEAM	(40MM.)

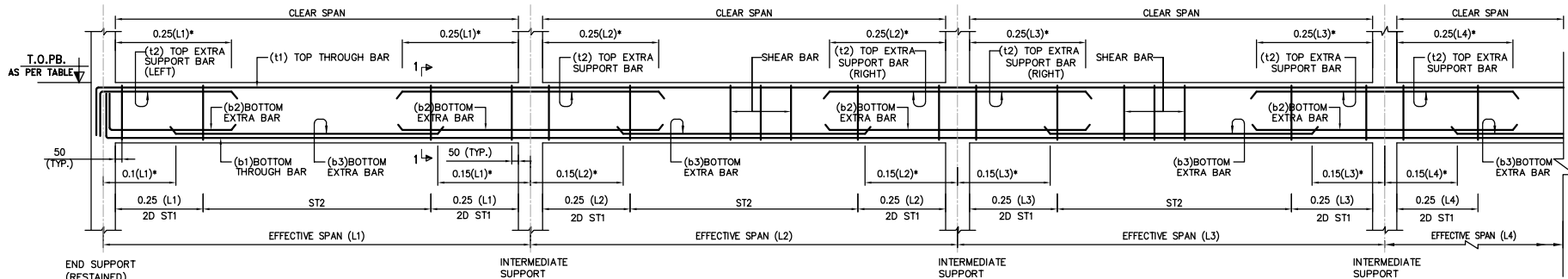
LEGEND:-

N.G.L. = NATURAL GROUND LEVEL	--- = BOTTOM REINFORCEMENT
F.F.L. = FINISHED FLOOR LEVEL	_____ = TOP REINFORCEMENT
F.G.L. = FINISHED GROUND LEVEL	PED. = PEDESTAL
© = CENTER LINE	PB = PLINTH BEAM
_____ = GRID LINE	TYP. = TYPICAL
FDN. = FOUNDATION	

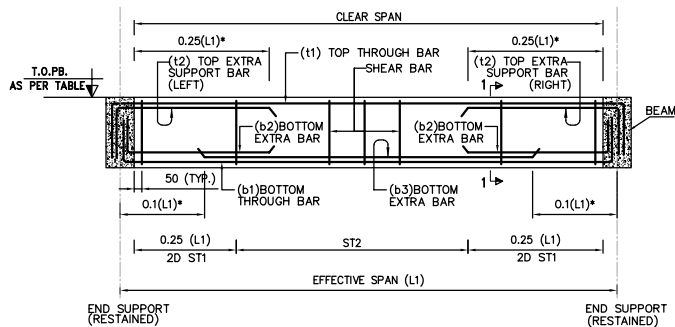
00	FOR APPROVAL				16.08.2024
REV.	DESCRIPTION	PREP.	CHEKED. SIGN.	APPD.	DATE



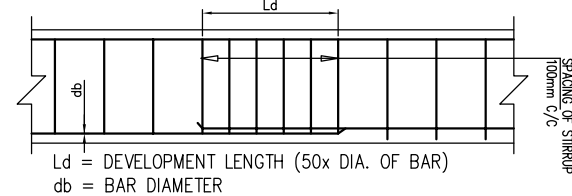
PLINTH BEAM LAYOUT PLAN AT EL. (+)0.150M



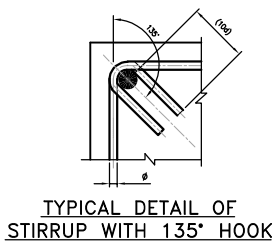
TYP. LS. FOR CONTINUOUS PLINTH BEAM (TYPE-I)



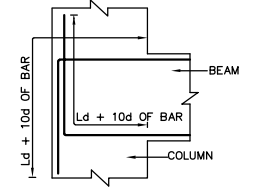
TYP. (BEAM TO BEAM) LS. FOR PLINTH BEAM (TYPE-II)



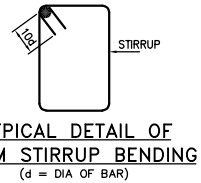
TYPICAL DETAIL OF ARRANGEMENT OF STIRRUPS AT SPLICE LOCATION IN BEAM



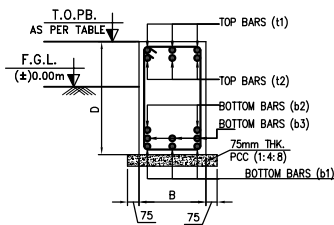
TYPICAL DETAIL OF STIRRUP WITH 135° HOOK



ANCHORAGE OF BEAM BARS AT THE END COLUMNS



TYPICAL DETAIL OF BEAM STIRRUP BENDING (d = DIA OF BAR)



TYPICAL SECTION 1-1

- NOTES:-
1. ALL DIMENSIONS ARE IN M.M. AND ALL LEVELS ARE IN METERS.
 2. ONLY WRITTEN DIMENSIONS TO BE FOLLOWED AND DRAWING NOT TO BE SCALED.
 3. EL. (+)0.00 CORRESPONDS TO FINISHED GROUND LEVEL (FGL).
 4. THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH RELEVANT ARCHITECTURAL DRAWING AND ANY DISCREPANCY SHOULD BE IMMEDIATELY BROUGHT TO NOTICE.
 5. REINFORCEMENT STEEL SHALL BE AS PER TECHNICAL SPECIFICATION.
 6. LAP, ANCHORAGE & DEVELOPMENT LENGTH FOR SHALL BE 50 TIMES DIA OF BARS.
 7. GRADE OF CONCRETE SHALL BE AS PER BPS.
 8. UNLESS NOTED OTHERWISE, PCC SHALL BE (1:4:8) AND 75MM THICK AND 75MM PROJECTED BEYOND THE FACE OF RCC.
 9. REFER SP34 FOR REINFORCEMENT DETAILING.

CLEAR COVER

PRICULAR	COVER
BEAM	(40MM.)

LEGEND:-

N.G.L. = NATURAL GROUND LEVEL	----	= BOTTOM REINFORCEMENT
F.F.L. = FINISHED FLOOR LEVEL	----	= TOP REINFORCEMENT
F.G.L. = FINISHED GROUND LEVEL	PED.	= PEDESTAL
C = CENTER LINE	PB	= PLINTH BEAM
GL = GRID LINE	TYP.	= TYPICAL
FDN. = FOUNDATION		

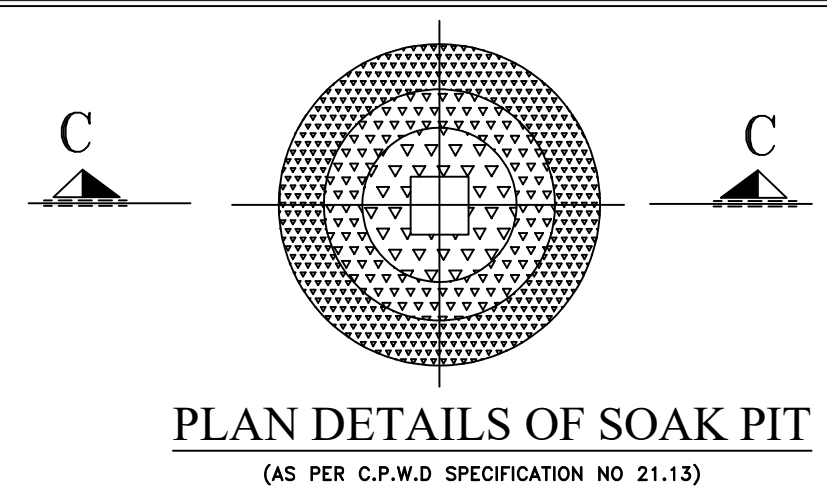
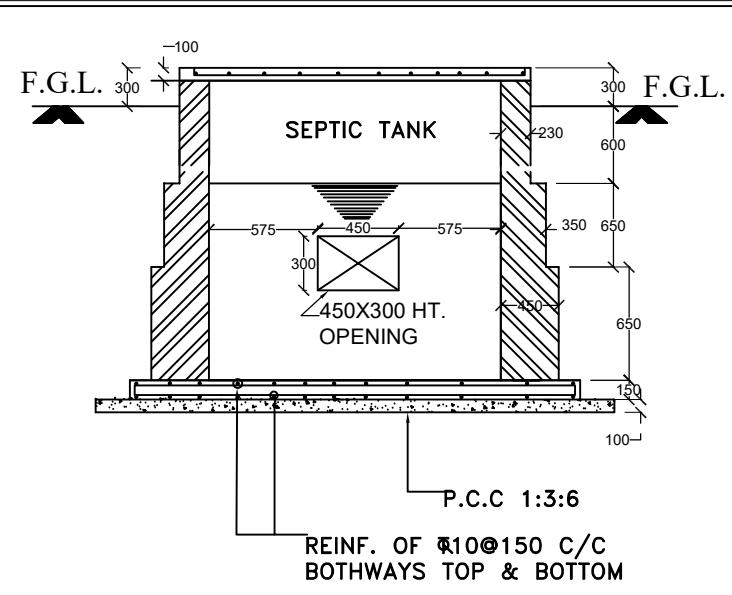
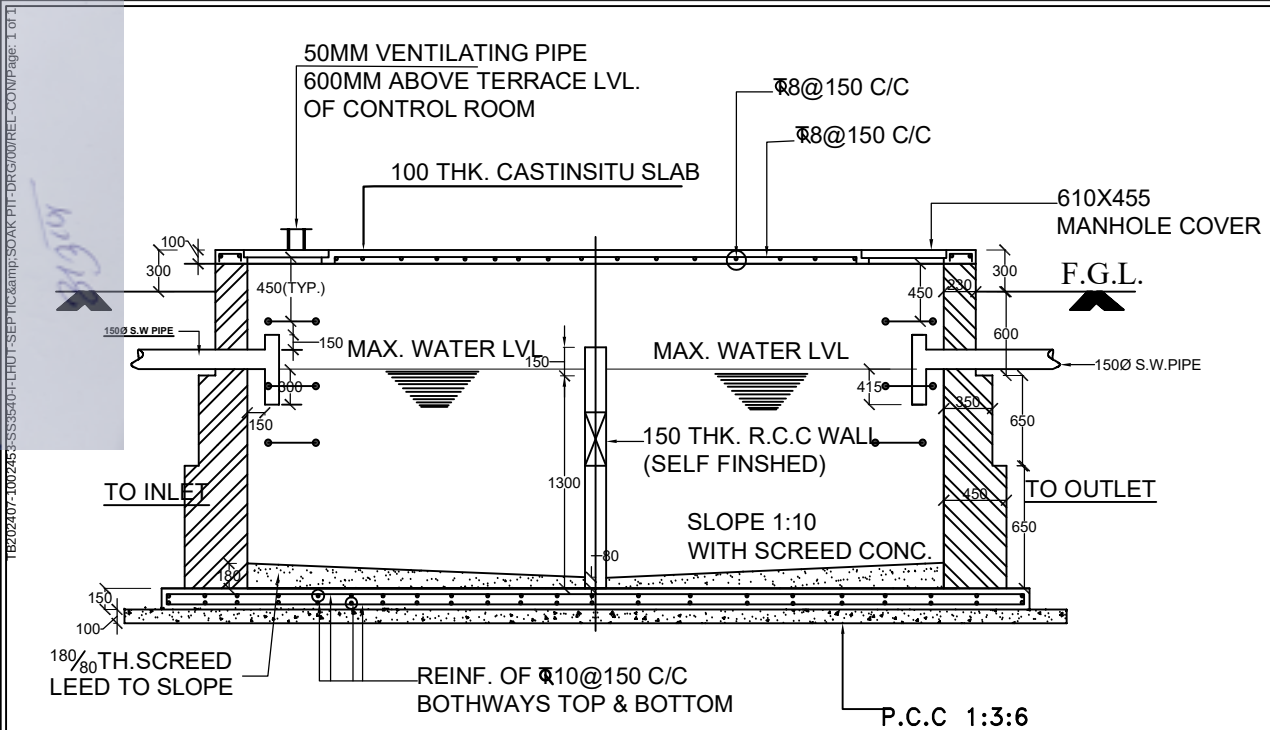
ISSUED FOR TENDER PURPOSE ONLY

POWER GRID CORPORATION OF
INDIA LIMITED
(A GOVT OF INDIA ENTERPRISE)

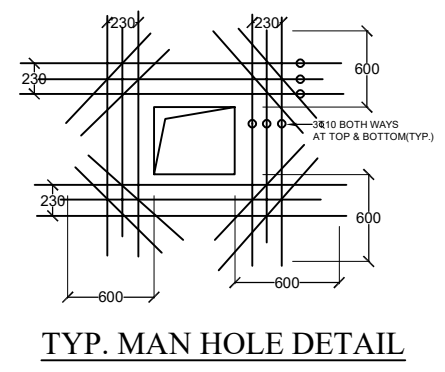
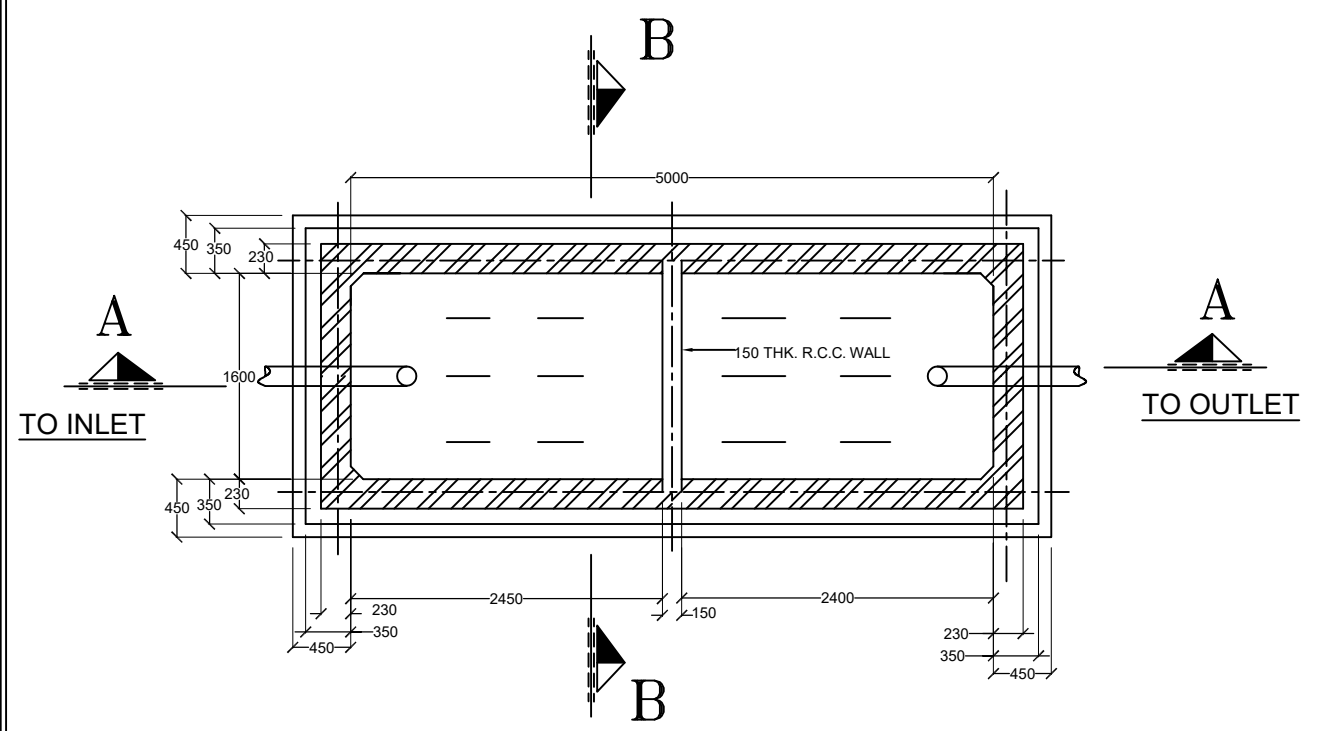
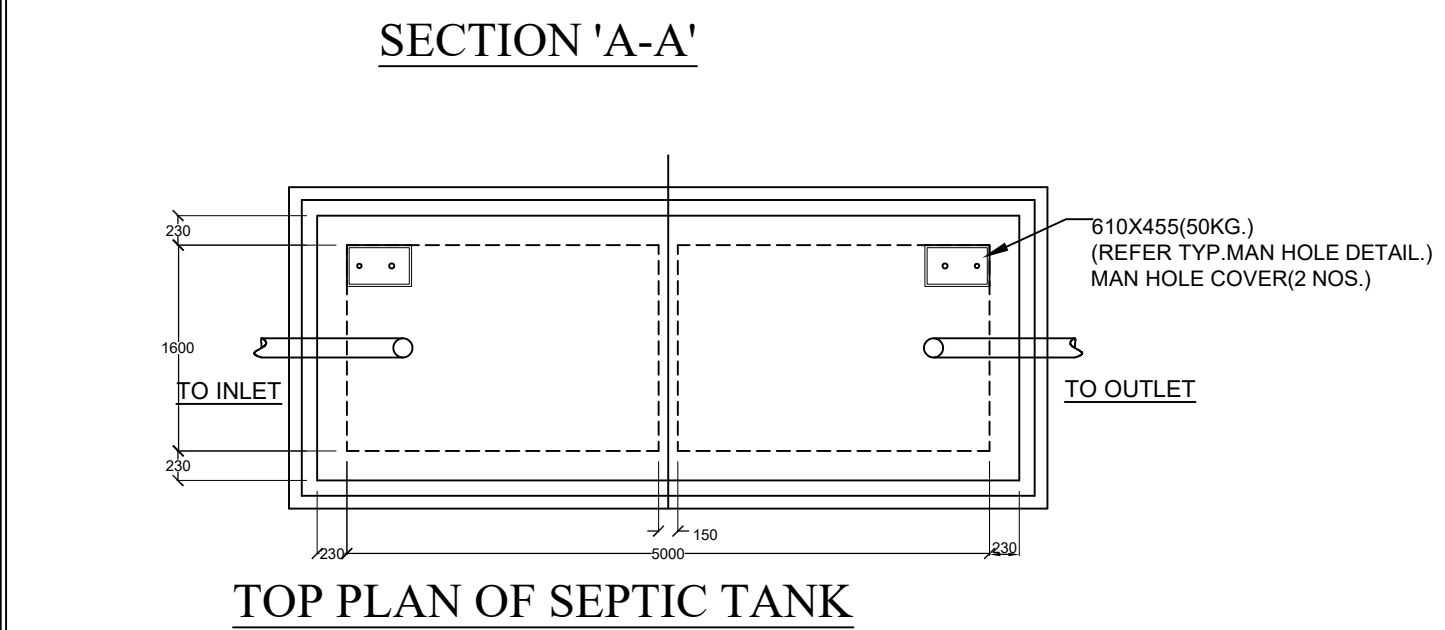
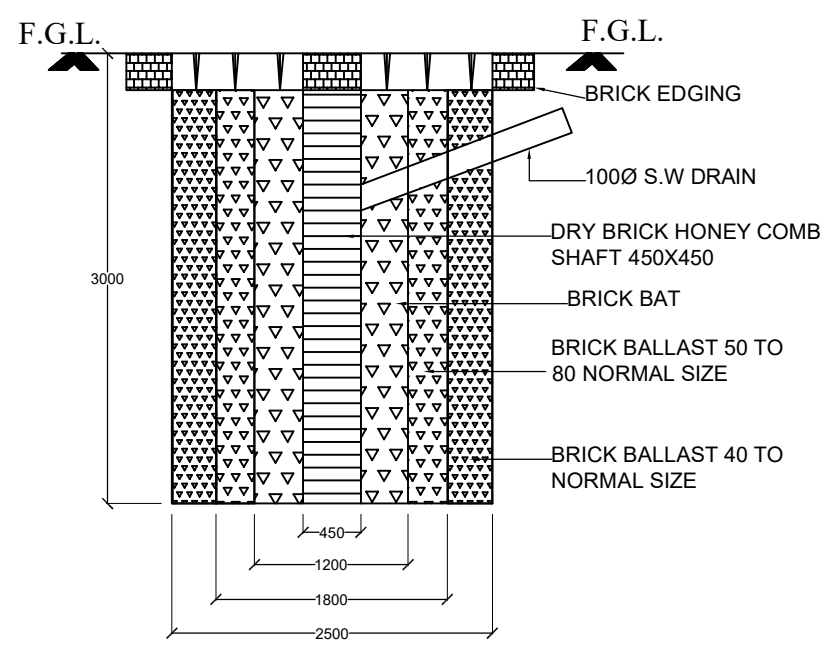


PROJECT	ESTABLISHMENT OF 765/400/220KV MANDSAUR S/S (SS-43T)		
SUBSTATION	765/400/220 kv Mandsaur S/S		
DRG. TITLE	PLINTH BEAM DETAILS OF LABOUR HUT		
DRG. NO.:	C/ENGG/SS43T/Mandsaur/LAB-HUT/ PLINTH-BEAM/DRG.		TOT. SH: 01
SCALE 1:100			SHEET: 01 OF 01

FOR APPROVAL	16.08.2024
REV. DESCRIPTION	DATE
PREP. CHECKD. APPD. SIGN.	



- ### NOTES
1. INCASE OF DISCREPANCY BETWEEN CIVIL FOUNDATION & S/Y (ELECTRICAL) PLAN & SECTION DRG. PLEASE STOP THE WORK AND CONSULT US.
 2. IN THIS DRAWING: ϕ DENOTES TOR STEEL CONFORMING TO TS.
 3. LAP & DEVELOPMENT LENGTH SHALL BE 50 TIMES DIA OF BAR
 4. PROVIDE CLEAR COVER TO REINF. AS UNDER.
 - 4.1. 50 MM FOR BOTTOM & 40 MM TOP & SIDE REINFORCEMENT OF RAFT.
 - 4.2. 40MM FOR WALL SOIL FACE,
 - 4.3. 25MM FOR WATER FACE,
 - 4.4. 25MM FOR TOP SLAB.
 5. ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE MTS.
 6. DO NOT SCALE THE DRAWING ONLY WRITTEN DIMENSIONS SHALL BE FOLLOWED.
 7. UNLESS OTHERWISE NOTED ALL CONCRETE SHALL BE OF GRADE AS PER BPS.
 8. INTERNAL W.P COMP. SHALL BE USED WHILE CONCRETING AS PER MFD'S MANUAL 40MM FOR WATERPROOF.
 9. 2 NUMBERS OF SUCH SEPTIC TANK & SOAK PIT SHALL BE CONSTRUCTED FOR EACH LABOUR HUT BUILDING (APPROX 420 SQM BUILDING).



ISSUED FOR TENDER PURPOSE ONLY

POWER GRID CORPORATION OF INDIA LIMITED (A GOVT OF INDIA ENTERPRISE)	 पावरग्रिड POWERGRID
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