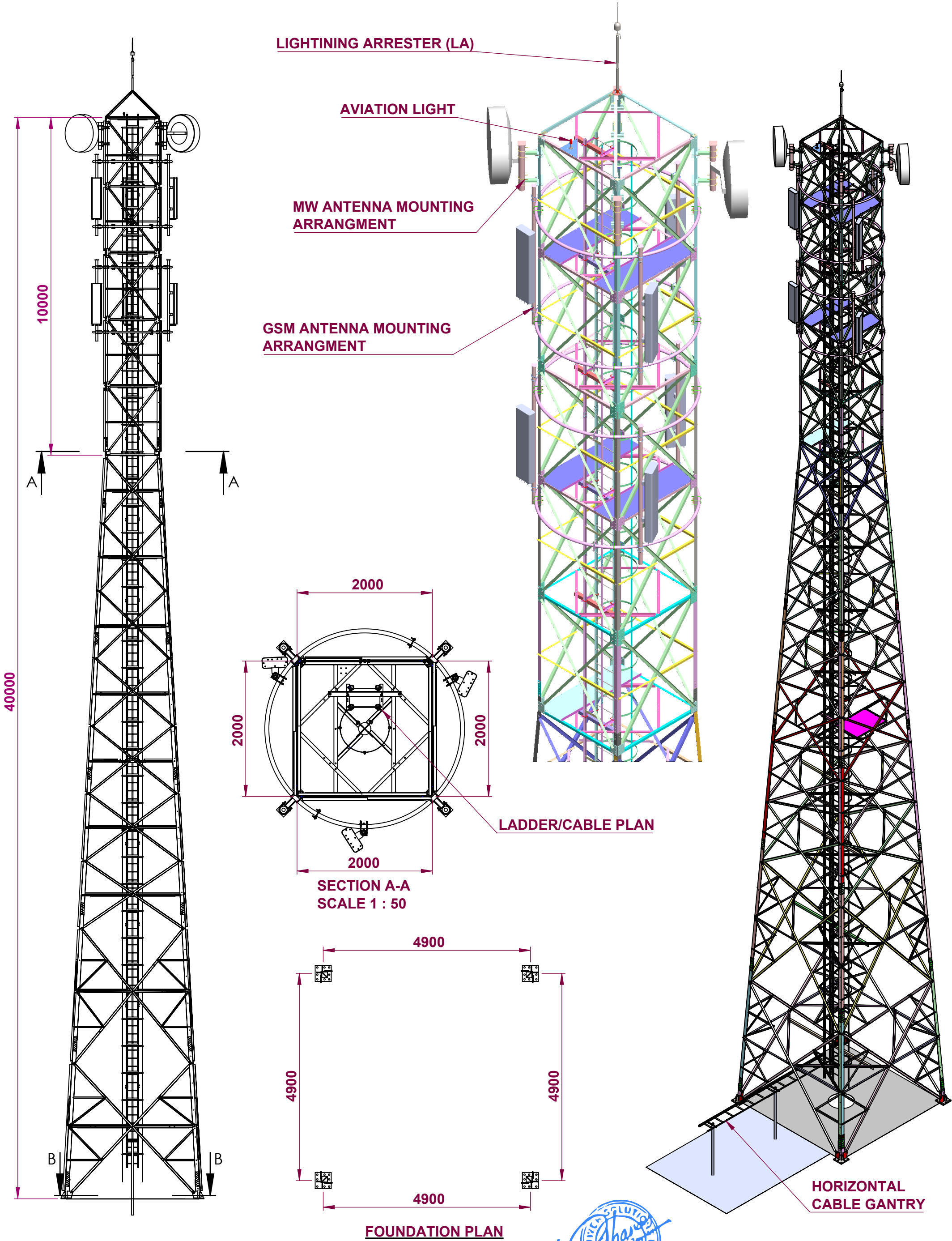


[illegible]



NOTE:-
ALL DIMENSIONS ARE IN MM

	NAME	SIGNATURE	DATE	TOLERANCE:	SCALE: 1:500	DRW. NO:	DRW. NAME:
DRAWN BY:	PRAM	PRAM	28-11-2025	ISO 2768-m		IPS-40M-4L-BT-6G2M	40 METER 4 LEG TOWER
DESIGNED BY:	SUJITH	SUJITH	28-11-2025				
CHECKED BY:	SUJITH	SUJITH	28-11-2025				
						REV	PROJECT NAME:
						0	BHUTAN TELECOM
						SHEET NO:	
						1 OF 1	
						SIZE:	
						A3	



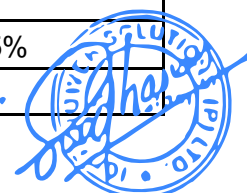
ICON POWER SOLUTIONS(P) LTD.
112-113, Sector-5, IMT Manesar,
Gurugram, Haryana, INDIA-122050
TEL : +91 124 4120600/01/02

ICON POWER SOLUTIONS PVT LTD

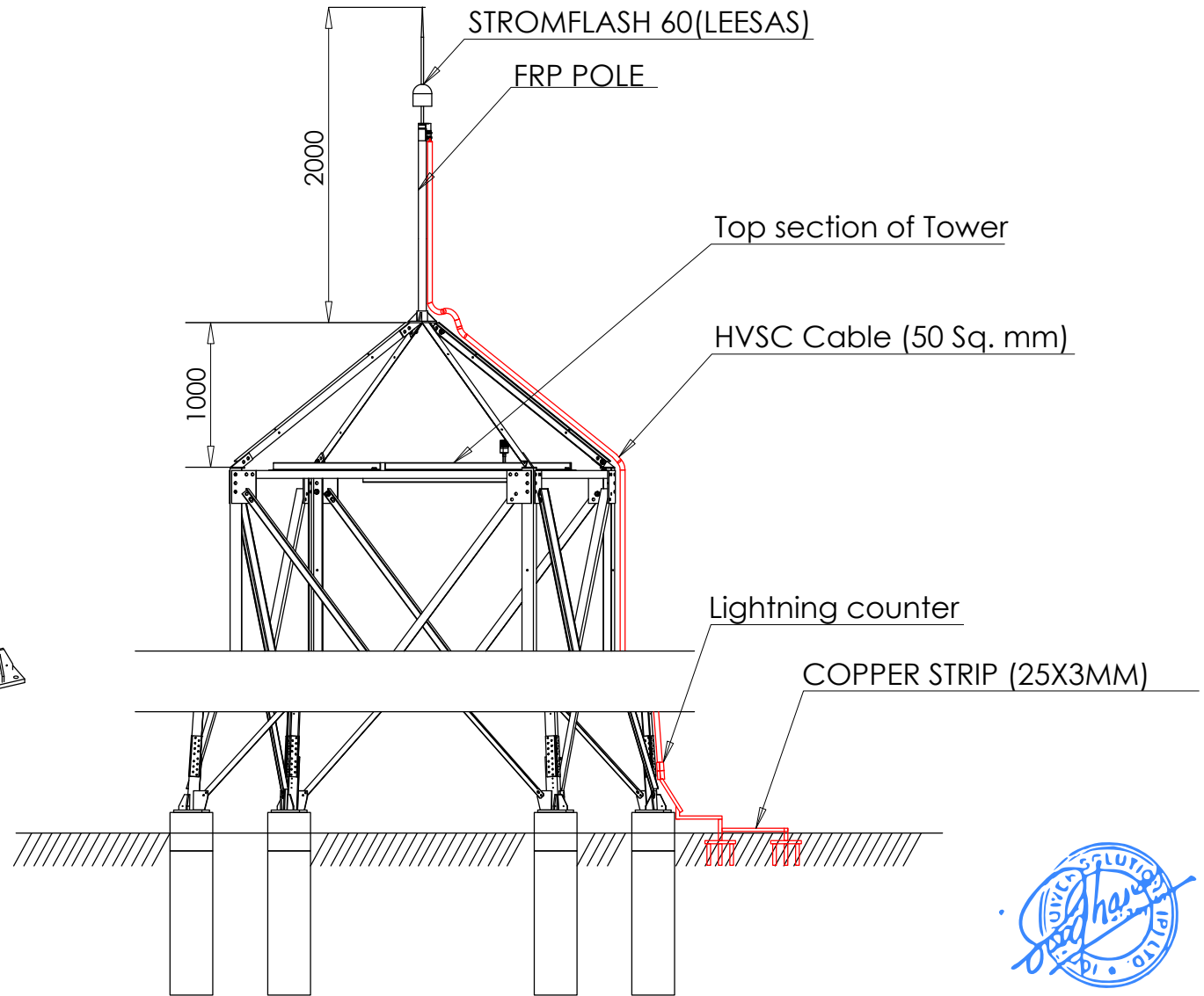
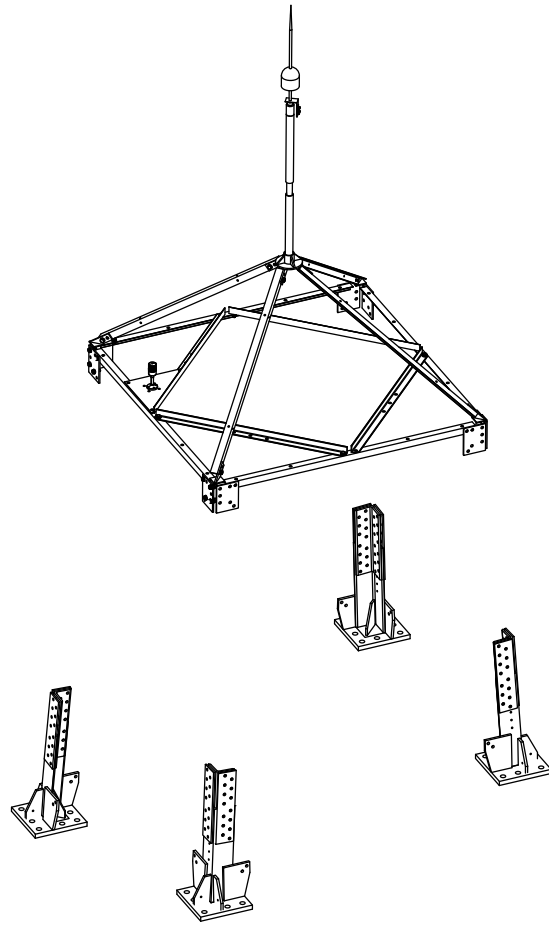
112 113, Sector 5, IMT Manesar, Gurgaon - 122050, Haryana

Technical Specification sheet of 40MTR 4 Legged Angular Tower

S.No.		DESCRIPTION	DETAILS	REMARK
1		DESIGN SPECIFICATION	(ANSI/TIA-222G)	
	1.1	Design Wind Velocity		
		Survival	150 KMPH	
		Operational	105 KMPH	
	1.2	Twist & Sway	Less than <.5 degree	
	1.3	Factor of Safety	1.2 For Dead Load	
			1.6 For Wind Load	
	1.4	Antenna Loading		
		GSM Antenna	6 nos.	200 Kg
		RRU	6 nos.	90 Kg
		1.2 Dia MW Antenna	2nos.	100 Kg
	1.5	Antenna Pole Mount stand	As per requirement	
2		Obstruction Light System		
	2.1	No .Of Obstruction Light Lamp&Watts	1 No. LED Type	
	2.2	Power Cable Type&Length	2.5 Sqmm x 50 mtr. Length	2 core armoured
3		Lighting Protection & Earthing System(Grounding system)		
	3.1	Lightning Arrestor	Lightning Arrestor (ESE) STORMFLASH 60 (LEESAS)	1 nos with FRP mast and HVSC cable & Counter
4	4.1	Structure Of Tower	Self Suppprtng 4 legged Angular construction with vertical ladder in the center intergrated with cable tray & horizontal cable tray from tower to Building	
	4.2	Main Leg	90 Degree Angle	
	4.3	Bracing	90 Degree Angle	
	4.4	Climbing Ladder	450 mm Rung Width, 300mm Rung space & 700mm Hoop	
	4.5	Cable Tray Verticle	450 mm Width	along the tower Height
	4.6	Cable Tray Horizontal	450 mm Width	6 MTR.
	4.7	Steel Type	Mild Steel - E 250	
	4.8	Platforms		
		Working	2 Nos	32.5 & 38.0 Mtr
		Rest	2 Nos.	15.5 & 28 Mtr
5	5.1	Foundation bolt & Template	As Per Tower Design	Included
	5.2	Bolts & Nut with spring &	Hot Dipped Galvanized Property Class 5.6	Extra 2%
		Plane washer	As per Standard ASTM A 153	
	5.3	Size	As per Design Specs.	
6	6.0	Hot Dipped Galvanization	As per Standard ISO 1461	85 Microns
7		<u>Others to be specified</u>		
	7.1	Weight Per Tower	9200 Kg	(+/-) 5%
	7.2	Drawing No.	IPS-40M-4L-BT-6G2M	



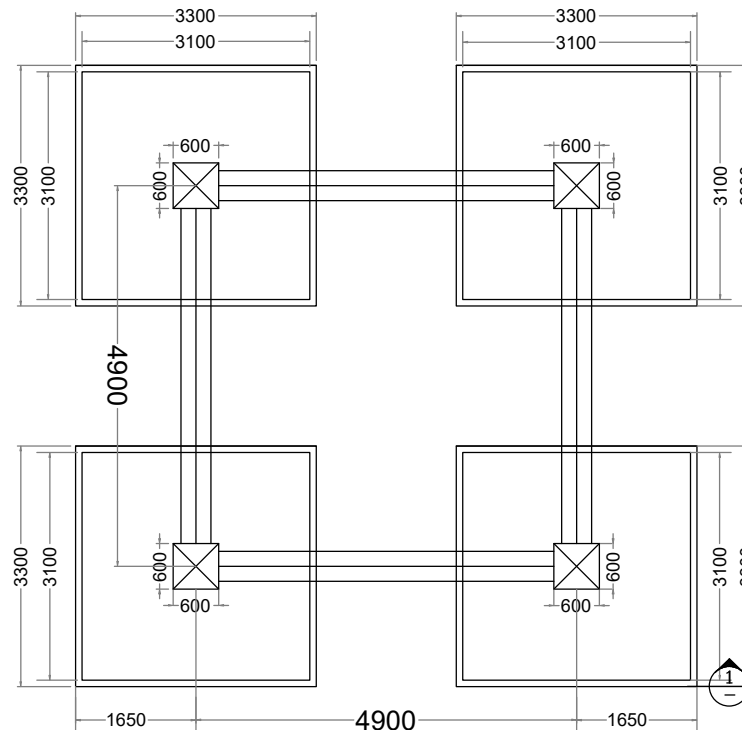
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	NAME	SIGNATURE	DATE	CHANGES	NAME	SIGNATURE	DATE	NO:	TOLERANCE:	SCALE: 1:50	DRW. NO:	DRW. NAME:
DRAWN BY:	PANKAJ	PANKAJ	03-12-2025						X ±		LA-ASSY-4LEG TOWER	LIGHTING ARRESTOR MOUNTING ARRANGEMENT-4LEG
DESIGNED BY:	SUJITH	SUJITH	03-12-2025						X.X ±		REV 0	PROJECT NAME:
CHECKED BY:	SUJITH	SUJITH	03-12-2025						X.XX ±		SIZE: A4	BHUTAN TELECOM LTD 2026
									X.XXX ±			
									ANGLES ±			

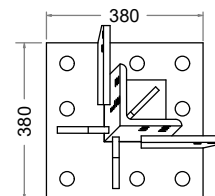


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SECTION 2
—

COLUMN 650X650



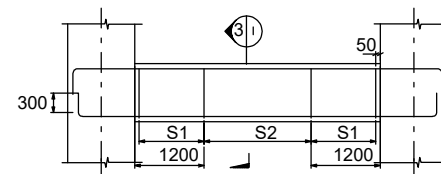
450

300

3-B16

3-B16

SECTION 3



TIE BEAM (TYP DETAILS)

STIRRUP DETAILS
S1:-2 LEGGED Y8 @ 100 C/C
S2:-2 LEGGED Y8 @ 200 C/C



1. ALL DIMENSIONS ARE IN MM UNLESS NOTED OTHERWISE.
2. USE M20 GRADE CONCRETE AND Fe 415 GRADE FOR STEEL.
3. CLEAR COVER TO MAIN REINFORCEMENT:-
 - (a) 50MM FOR FOUNDATION
 - (b) 25MM FOR BEAMS
 - (c) 40MM FOR COLUMNS
4. PRIOR TO AND DURING CONCRETING ALL BOLTS SHALL BE SECURELY HELD IN POSITION BY USE OF TEMPLATE.
5. BEFORE COMMENCEMENT OF CONSTRUCTION USING THIS DESIGN, CLIENT/CONTRACTOR SHALL CARRY OUT DETAILED SOIL INVESTIGATION OF EVERY SITE.
6. THIS FOUNDATION DESIGN SHALL NOT BE USED IN CASE HIGHLY SOIL ARE FOUND AT ANY DEPTH DURING SOIL INVESTIGATION.
7. CONCRETE SHALL BE MECHANICALLY MIXED & VIBRATED.
8. SPLICING OF BARS SHALL NOT BE MORE THAN 50% AT ANY LOCATION.
9. PROPER CURING OF CONCRETE SHALL BE DONE.
10. TENDING OF BARS SHALL BE PER S-260.
11. ANY DISCREPANCY SHOULD BE BROUGHT TO THE CONSULTANT'S ATTENTION.

S.No	DESCRIPTION	DETAILS
1	SOIL BEARING CAPACITY	10.00 T/SQM
2	DRY DENSITY OF SOIL	1.8 T/SQM
3	ANGLE OF REPOSE	30.00 DEGREE

ITEM	UNIT	TOTAL
EXCAVATION	CUM	139.16
PCC-(1:4:8)	CUM	4.096
RCC-M20	CUM	24.35
STEEL-Fe415	KG	2198.08

CHAIRS SHALL BE PROVIDED WHEREEVER REQUIRED



REV. NO.	DESCRIPTION		DATE	SIGN.
DRAWN	CHECKED	APPROVED	DATE	SCALE
HEMANT	SUJITH	SUJITH	29-11-2025	NTS

CLIENT:

BHUTAN TELECOM

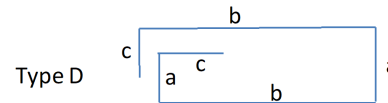
DESIGN BY: **ICON POWER SOLUTIONS PVT. LTD.**
GURGAON

PROJECT:	NETWORK EXPANSION 2025
----------	------------------------

TITLE : FOUNDATION DETAILS FOR 40M-4LEG TOWER
SBC : 10 T/SQM

	DRAWING No.	SH. NO.	RE
	IPS-40M-4L-BT-6G2M	1 OF 2	01

IPS-40M-4L-BT-6G2M Tower Bar Bending Schedule



Cover Slab 50 mm

Column 40 mm

Beam 25 mm

Item	Position	Type	Dia. Of Rebar	Size	Size	Size	Length	Qty in Nos both ways or total	Unit wt	Total Weight of
				a	b	c				
				(mm)	(mm)	(mm)	(mm)		(kg/m)	(kg)
Raft Slab	Top	B	B10	2900	250	250	3400	210	0.62	442.68
	Bottom	B	B10	2900	250	250	3400	210	0.62	442.68
Tie Beams	Top	B	B16	4900	300	300	5500	12	1.58	104.28
	Bottom	B	B16	4900	300	300	5500	12	1.58	104.28
	Strips	D	B8	250	400	80	1460	144	0.40	84.10
Column	Main	C	B25	3200	0	650	3850	48	3.86	713.33
	Ties	D	B8	570	570	80	2440	88	0.40	85.89
		D	B8	570	200	80	1700	176	0.40	119.68
	Total									2198.08

* Chairs Shall be Provided whenever required

Notes :

1. Dimensions of Bars are along the Center Lines.
3. Splicing of Bars should not be more than 50%. Length of splice as per Standards.



REVISION NOTES

REV. NO.	DESCRIPTION	DATE	SIGN.
DRAWN	CHECKED	APPROVED	DATE
HEMANT	SUJITH	SUJITH	29-11-2025
			NTS

CLIENT:

BHUTAN TELECOM

DESIGN BY: ICON POWER SOLUTIONS PVT. LTD.
GURGAON

PROJECT: NETWORK EXPANSION 2025

TITLE: FOUNDATION DETAILS FOR 40M-4LEG TOWER
SBC : 10 T/SQM

DRAWING No.	SH. NO.	REV.
IPS-40M-4L-BT-6G2M	2 OF 2	01