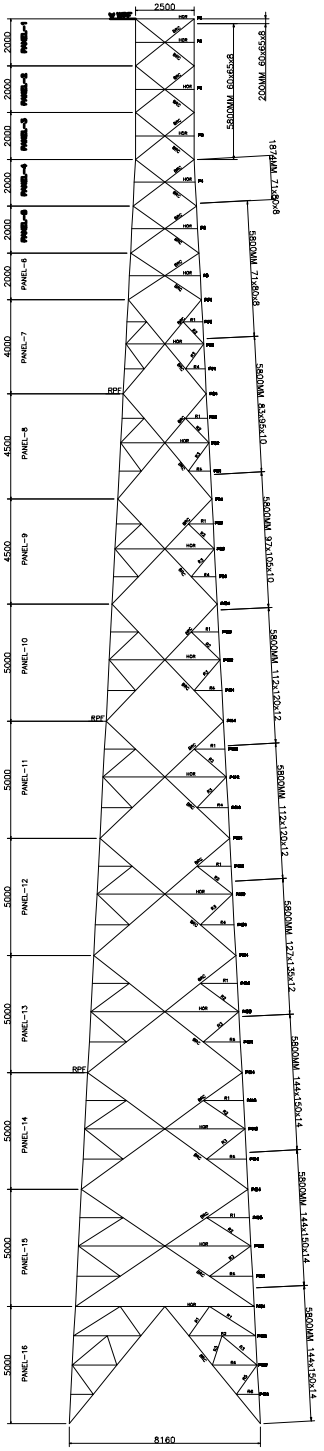
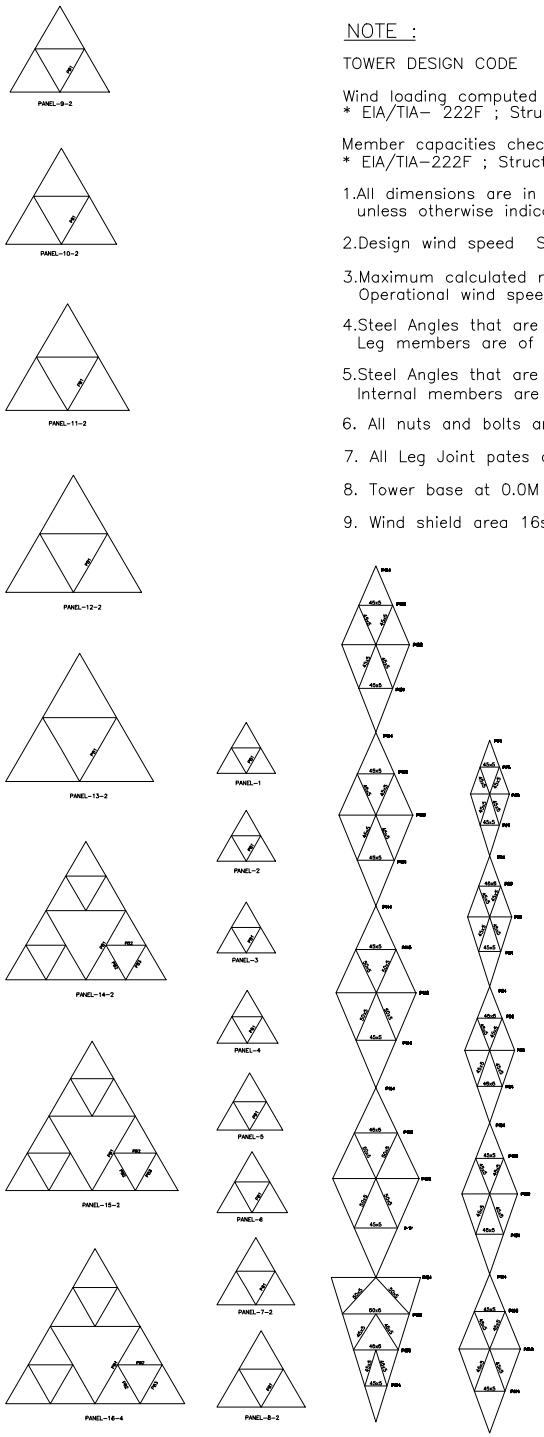
CAD FILE NUMBER

PANEL NO:		16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1
RED	R1	L56x56x5	L50x50x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x6	L45x45x5	L45x45x5						
	R2	L56x56x5	L56x56x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5						
	R3	L50x50x5	L56x56x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5						
	R4	L50x50x5	L50x50x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5						
	R5	L50x50x5															
	R6	L45x45x5															
HOR		L80x80x6	L75x75x5	L75x75x5	L63x63x5	L63x63x5	L56x56x5	L50x50x5	L50x50x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L63x63x5
		2-M16-G8.8	2-M16-G8.8	2-M16-G8.8	1-M20-G8.8	1-M20-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M12-G8.8	1-M12-G8.8	1-M12-G8.8	1-M12-G8.8	1-M12-G8.8	1-M20-G8.8
PBR	PB1	L63x63x5	L63x63x5	L56x56x5	L56x56x5	L56x56x5	L56x56x5	L50x50x5	L50x50x5	L50x50x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5	L45x45x5
	PB2	L50x50x5	L45x45x5	L45x45x5													
	PB3	L50x50x5	L45x45x5	L45x45x5													
BRC		L90x90x7	L80x80x6	L80x80x6	L80x80x6	L75x75x5	L75x75x5	L75x75x5	L63x63x5	L63x63x5	L56x56x5	L56x56x5	L56x56x5	L56x56x5	L56x56x5	L56x56x5	L56x56x5
		2-M20-G8.8	2-M16-G8.8	2-M16-G8.8	2-M16-G8.8	2-M16-G8.8	2-M16-G8.8	2-M16-G8.8	1-M20-G8.8	1-M20-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8	1-M16-G8.8
LEG		UV144x150x14	UV144x150x14	UV127x135x12	UV112x120x12	UV112x120x12	UV112x120x12	UV112x120x12	UV97x105x10	UV83x95x10	UV83x95x10	UV71x80x8	UV71x80x8	UV71x80x8	UV60x65x8	UV60x65x8	UV60x65x8
		21-M20-G8.8	19-M20-G8.8	17-M20-G8.8	15-M20-G8.8	14-M20-G8.8	13-M20-G8.8	12-M20-G8.8	12-M20-G8.8	12-M20-G8.8	9-M20-G8.8	9-M16-G8.8	9-M16-G8.8	9-M16-G8.8	9-M16-G8.8	9-M16-G8.8	9-M16-G8.8





NOTE :

TOWER DESIGN CODE

Wind loading computed in accordance with:
* EIA/TIA– 222F ; Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.

Member capacities checked against the requirements of:
* EIA/TIA–222F ; Structural Standards for Steel Antenna Towers and Antenna Supporting Structures.

1.All dimensions are in MM.
unless otherwise indicated.

2.Design wind speed Servival 44.44m/S 3 second gust.

3.Maximum calculated rotation under
Operational wind speed 33.33m/s Operational Wind Speed Maximum tilt and twist less than 0.5 Deg

4.Steel Angles that are used in tower structure as
Leg members are of High (H) yield strength (Q 345) (fy–345 MPa)

5.Steel Angles that are used in tower structure as
Internal members are of Normal (N) yield strength (Q 235) (fy–235 MPa)

6. All nuts and bolts are G 8.8

7. All Leg Joint pates are of High (H) yield strength (Q 345) (fy–345 MPa)

8. Tower base at 0.0M As Green field

9. Wind shield area 16sqm

MATERIAL STRENGTH :

Sect. Size.	fy	Bolts
Internal Members		
L45x45x5	235	1–M14
L50x50x5	235	1–M16
L56x56x5	235	1–M16
L63x63x5	235	1–M20
L75x75x5	235	2–M16
L80x80x6	235	2–M16
L90x90x7	235	2–M20
Leg Members		
VU60x65x8	345	
VU71x80x8	345	
VU83x95x10	345	
VU97x105x10	345	
VU112x120x12	345	
VU127x135x12	345	
VU144x150x14	345	

LEGEND :

Member class	
LEG	LEG MEMBER
BRC	CROSS BRACING
PBR	PLAN BRACING
HOR	PLAN PERIMETER MEMBER
RED	REDUNDANT/HIP STAY
HIP	HIP BRASINGS
HPB	HIP PLAN BRASINGS

Maximum Reaction at Each tower leg (Ultimate) :

Diagonal Wind Case					
	Fx.(KN)	Fy.(KN)	Fz.(KN)	Mx.(KNm)	My.(KNm)
Max. Ten.(KN)	63.899	110.676	1078.058	4.748	2.740
Max Comp. (KN)	77.583	134.377	1348.864	6.703	3.869

REV	DESCRIPTION	DATE	BY	CHKD	APPD

Reb Mech (Pvt) Ltd.
169/10, Nawala Road, (Old Jayasekara Mawatha) Nugegoda, Sri Lanka.
e-mail : info@rebmech.com
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PROJECT

60M - 3Legged Self Supporting Tower

UV TOWER

CLIENT

DRAWN BY:	DESIGNED:
DATE :	DRAWING NUMBER: MOB/ TD 60/1[0]