Date: **June 23, 2021**

Black & Veatch Corp.
6800 W. 115th St., Suite 2292
Overland Park, KS 66211
(913) 458-6909

Structural Analysis Report

Co-Locate

Site Number: 585456
Site Name: LAKE CITY WEST - A

BU Number: 809328
Site Name: LAKE CITY W J-FL-012-058
JDE Job Number: 671598
Work Order Number: 1982212
Order Number: 565094 Rev. 0

Black & Veatch Corp. Project Number: 406642

555 Hackney Lane, Lake City, Columbia County, FL
Latitude **Longitude**
250 Foot - Self Support Tower

Black & Veatch Corp. is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC5: Proposed Equipment Configuration **Sufficient Capacity**

This analysis utilizes an ultimate 3-second gust wind speed of 118 mph as required by the 2020 Florida Building Code 7th Edition. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

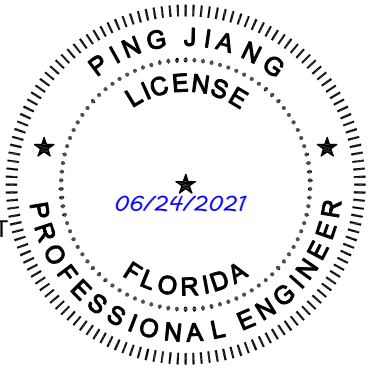
Structural analysis prepared by: Thanyaporn Yakhasem

Respectfully submitted by:

Ping Jiang, P.E.
Professional Engineer

Digitally signed by Jiang, Ping
DN: CN="Jiang, Ping", O=Black Veatch, C=US
Date: 2021.06.24 20:43:29-05'00'

THIS ITEM HAS BEEN ELECTRONICALLY SIGNED & SEALED BY PING JIANG, P.E., ON THE TIME & DATE STAMP SHOWN USING A DIGITAL SIGNATURE. PRINTED COPIES OF THIS DOCUMENT ARE NOT CONSIDERED SIGNED & SEALED & THE SIGNATURE MUST BE VERIFIED ON ANY ELECTRONIC COPIES.



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1) INTRODUCTION

This tower is a 250 ft Self Support tower designed by Rohn Industries, Inc.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	118 mph
Exposure Category:	C
Topographic Factor:	1
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
231.0	231.0	3	ericsson	AIR 6449 w/ Mount Pipe	3	1-5/8
		3	ericsson	RRUS 4449 B5/B12		
		3	ericsson	RRUS 8843 B2/B66A		
		6	jma wireless	MX06FRO860-02 w/ Mount Pipe		
		3	raycap	RVZDC-6627-PF-48_CCIV2		
		3	site pro 1	VFA12-HD 12' Heavy Duty V-Frame		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
252.0	252.0	1	cci tower mounts (v2.1)	Sector Mount [SM 504-3]	10 3	1-5/8 1-1/4
	250.0	3	andrew	TMBXX-6517-A2M w/ Mount Pipe		
		3	nokia	FASB w/ Mount Pipe		
		3	nokia	FRBG		
		3	nokia	FRIG		
		3	raycap	ASU9338TYP01		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	121904	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	121914	CCISITES
4-TOWER MANUFACTURER DRAWINGS	13075	CCISITES

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

3.2) Assumptions

1) Tower and structures were maintained in accordance with the TIA-222 Standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

This analysis may be affected if any assumptions are not valid or have been made in error. Black & Veatch Corp. should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary) (Self Support Tower)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	250 - 240	Leg	ROHN 2.5 STD	2	-5.04	60.05	8.4	Pass
T2	240 - 220	Leg	ROHN 3 STD	29	-23.34	74.53	31.3	Pass
T3	220 - 200	Leg	ROHN 4 X-STR	67	-56.83	168.03	33.8	Pass
T4	200 - 180	Leg	ROHN 5 EH	106	-86.86	251.35	34.6	Pass
T5	180 - 160	Leg	ROHN 6 EH	145	-110.97	360.24	30.8	Pass
T6	160 - 140	Leg	ROHN 8 EHS	184	-130.09	413.33	31.5	Pass
T7	140 - 120	Leg	ROHN 8 EHS	211	-151.60	413.28	36.7	Pass
T8	120 - 100	Leg	ROHN 8 X-STR	238	-172.51	530.71	32.5	Pass
T9	100 - 80	Leg	ROHN 8 X-STR	265	-193.11	530.66	36.4	Pass
T10	80 - 60	Leg	ROHN 10 EH	292	-214.03	701.99	30.5	Pass
T11	60 - 40	Leg	ROHN 10 X-STR	319	-223.30	701.99	31.8	Pass
T12	40 - 20	Leg	ROHN 10 X-STR	352	-244.60	701.99	34.8	Pass
T13	20 - 0	Leg	ROHN 10 EH	385	-289.09	760.75	38.0	Pass
T1	250 - 240	Diagonal	ROHN 2 STD	8	-2.86	25.36	11.3	Pass
T2	240 - 220	Diagonal	ROHN 2 STD	32	-7.54	18.63	40.5	Pass
T3	220 - 200	Diagonal	ROHN 2 X-STR	71	-9.45	24.62	38.4	Pass
T4	200 - 180	Diagonal	ROHN 2 X-STR	110	-6.50	21.21	30.7	Pass
T5	180 - 160	Diagonal	ROHN 2 X-STR	149	-6.47	18.08	35.8	Pass
T6	160 - 140	Diagonal	ROHN 2.5 X-STR	188	-8.33	22.18	37.5	Pass
T7	140 - 120	Diagonal	ROHN 3 STD	215	-7.99	30.33	26.4	Pass
T8	120 - 100	Diagonal	ROHN 3 STD	242	-8.51	26.47	32.2	Pass
T9	100 - 80	Diagonal	ROHN 3 STD	269	-8.60	22.99	37.4	Pass
T10	80 - 60	Diagonal	ROHN 3 STD	296	-9.78	20.50	47.7	Pass
T11	60 - 40	Diagonal	ROHN 3 STD	323	-15.32	33.46	45.8	Pass
T12	40 - 20	Diagonal	ROHN 3 STD	356	-15.64	31.53	49.6	Pass
T13	20 - 0	Diagonal	ROHN 3 STD	389	-15.55	29.83	52.1	Pass
T1	250 - 240	Horizontal	ROHN 1.5 STD	7	-1.81	23.71	7.6	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T2	240 - 220	Horizontal	ROHN 1.5 STD	31	-4.05	23.65	17.1	Pass
T3	220 - 200	Horizontal	ROHN 1.5 STD	70	-5.11	23.65	21.6	Pass
T4	200 - 180	Horizontal	ROHN 1.5 STD	109	-4.10	20.11	20.4	Pass
T5	180 - 160	Horizontal	ROHN 2 STD	148	-4.47	28.49	15.7	Pass
T6	160 - 140	Horizontal	ROHN 2 STD	187	-5.09	23.88	21.3	Pass
T7	140 - 120	Horizontal	ROHN 2 STD	214	-5.33	17.80	29.9	Pass
T8	120 - 100	Horizontal	ROHN 2.5 STD	241	-5.97	30.40	19.6	Pass
T9	100 - 80	Horizontal	ROHN 2.5 STD	268	-6.31	23.33	27.0	Pass
T10	80 - 60	Horizontal	ROHN 2.5 STD	295	-7.25	18.74	38.7	Pass
T11	60 - 40	Horizontal	ROHN 3 STD	322	-8.09	33.29	24.3	Pass
T12	40 - 20	Horizontal	ROHN 3 STD	355	-8.73	27.40	31.9	Pass
T13	20 - 0	Horizontal	ROHN 3 STD	388	-9.37	22.94	40.8	Pass
T1	250 - 240	Top Girt	ROHN 1.5 STD	4	-1.70	23.77	7.2	Pass
T11	60 - 40	Redund Horz 1 Bracing	ROHN 1.5 STD	324	-3.88	14.74	26.3	Pass
T12	40 - 20	Redund Horz 1 Bracing	ROHN 1.5 STD	357	-4.24	12.04	35.2	Pass
T13	20 - 0	Redund Horz 1 Bracing	ROHN 1.5 STD	390	-5.02	10.03	50.0	Pass
T11	60 - 40	Redund Diag 1 Bracing	ROHN 1.5 STD	325	-3.52	4.53	77.8	Pass
T12	40 - 20	Redund Diag 1 Bracing	ROHN 2.25 TUBE	358	-3.61	4.52	80.0	Pass
T13	20 - 0	Redund Diag 1 Bracing	ROHN 2.25 TUBE	410	-4.02	4.23	95.1	Pass
T11	60 - 40	Redund Hip 1 Bracing	ROHN 1.5 STD	347	-0.02	12.73	0.2	Pass
T12	40 - 20	Redund Hip 1 Bracing	ROHN 1.5 STD	380	-0.02	10.54	0.2	Pass
T13	20 - 0	Redund Hip 1 Bracing	ROHN 1.5 STD	413	-0.02	8.88	0.2	Pass
T11	60 - 40	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	337	-0.06	11.01	0.6	Pass
T12	40 - 20	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	370	-0.06	9.90	0.6	Pass
T13	20 - 0	Redund Hip Diagonal 1 Bracing	ROHN 3 STD	403	-0.07	17.65	0.4	Pass
T1	250 - 240	Inner Bracing	L2x2x1/8	18	-0.00	8.80	0.1	Pass
T2	240 - 220	Inner Bracing	L2x2x1/8	42	-0.00	8.65	0.1	Pass
T3	220 - 200	Inner Bracing	L2x2x1/8	79	-0.00	8.48	0.1	Pass
T4	200 - 180	Inner Bracing	L2x2x1/8	120	-0.00	6.27	0.1	Pass
T5	180 - 160	Inner Bracing	L2x2x1/8	159	-0.01	4.28	0.1	Pass
T6	160 - 140	Inner Bracing	L2x2x1/8	198	-0.01	3.24	0.2	Pass
T7	140 - 120	Inner Bracing	L2 1/2x2 1/2x3/16	225	-0.01	6.84	0.2	Pass
T8	120 - 100	Inner Bracing	L3x3x3/16	252	-0.01	9.02	0.2	Pass
T9	100 - 80	Inner Bracing	L3 1/2x3 1/2x1/4	279	-0.01	14.69	0.2	Pass
T10	80 - 60	Inner Bracing	L3 1/2x3 1/2x1/4	306	-0.01	11.72	0.2	Pass
T11	60 - 40	Inner Bracing	ROHN 3 STD	351	-0.01	30.98	0.2	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T12	40 - 20	Inner Bracing	ROHN 3 STD	383	-0.01	25.66	0.3	Pass
T13	20 - 0	Inner Bracing	ROHN 3 STD	416	-0.01	21.61	0.3	Pass
							Summary	
						Leg (T13)	38.0	Pass
						Diagonal (T13)	52.1	Pass
						Horizontal (T13)	40.8	Pass
						Top Girt (T1)	7.2	Pass
						Redund Horz 1 Bracing (T13)	50.0	Pass
						Redund Diag 1 Bracing (T13)	95.1	Pass
						Redund Hip 1 Bracing (T13)	0.2	Pass
						Redund Hip Diagonal 1 Bracing (T12)	0.6	Pass
						Inner Bracing (T13)	0.3	Pass
						Bolt Checks	49.3	Pass
						Rating =	95.1	Pass

Table 5 - Tower Component Stresses vs. Capacity (Self Support Tower)

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	25.1	Pass
1, 2	Base Foundation (Compared w/ Design Loads)	0	36.6	Pass

Structure Rating (max from all components) =	95.1%

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity. Rating per TIA-222-H Section 15.5.
2) Foundation capacity determined by comparing analysis reactions to original design reactions.

4.1) Recommendations

The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

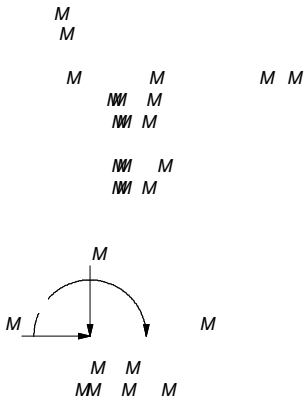
APPENDIX A

TNXTOWER OUTPUT

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13
Legs	A	ROHN 3 STD	ROHN 4 X-STR	ROHN 5 EH	ROHN 6 EH	ROHN 8 EHS		ROHN 8 X-STR		ROHN 10 EH	ROHN 10 X-STR		ROHN 10 EH
Leg Grade						A572-50							
Diagonals		ROHN 2 STD		ROHN 2 X-STR		ROHN 2.5 X-STR				ROHN 3 STD			
Diagonal Grade						A572-50							
Top Girts	B					N.A.							
Horizontals			ROHN 1.5 STD			ROHN 2 STD			ROHN 2.5 STD			ROHN 3 STD	
Red. Horizontals						N.A.						ROHN 1.5 STD	
Red. Diagonals						N.A.					ROHN 1.5 STD		ROHN 2.25 TUBE
Red. Hips						N.A.						ROHN 1.5 STD	
Inner Bracing				L2x2x1/8			L2 1/2x2 1/2x3/16	L3x3x3/16	L3 1/2x3 1/2x1/4			ROHN 3 STD	
Face Width (ft)	8.5	8.54167	8.625	8.70833	10.7917	12.9271	15.1771	17.6771	20.1771	22.8333	25.3333	27.8333	30.3333
# Panels @ (ft)	2 @ 5			12 @ 6.66667				10 @ 10			2 @ 20		1 @ 19.9167
Weight (K)	0.7	1.3	2.0	2.4	3.2	3.7	3.9	5.0	5.3	6.3	6.2	6.3	6.5

52.6

250.0 ft
240.0 ft
220.0 ft
200.0 ft
180.0 ft
160.0 ft
140.0 ft
120.0 ft
100.0 ft
80.0 ft
60.0 ft
40.0 ft
20.0 ft
0.0 ft



SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	ROHN 2.5 STD	B	ROHN 1.5 STD

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi			

TOWER DESIGN NOTES

1. Tower is located in Columbia County, Florida.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 118 mph basic wind in accordance with the TIA-222-H Standard.
4. Deflections are based upon a 60 mph wind.
5. Tower Risk Category II.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. TOWER RATING: 95.1%

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Overland Park, KS 66211
Phone: (913) 458-6909
FAX:

Job:			
Project:			
Client: Crown Castle	Drawn by: Thanyaporn Yakhasem		App'd:
Code: TIA-222-H	Date: 06/23/21		Scale: NTS
Path:			Dwg No. E-1

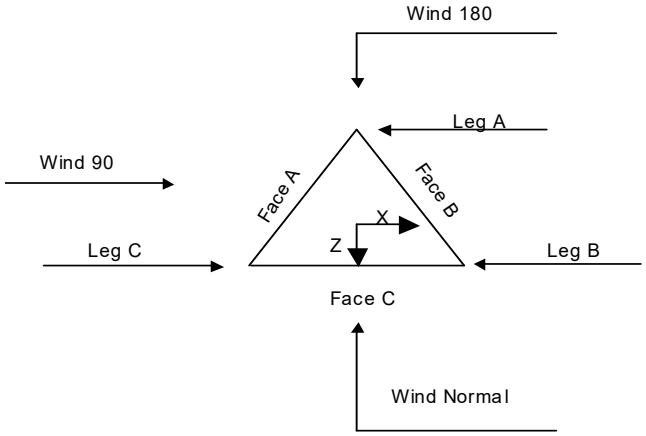
Tower Input Data

The main tower is a 3x free standing tower with an overall height of 250.00 ft above the ground line.
The base of the tower is set at an elevation of 0.00 ft above the ground line.
The face width of the tower is 8.50 ft at the top and 32.83 ft at the base.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower is located in Columbia County, Florida.
- Tower base elevation above sea level: 166.00 ft.
- Basic wind speed of 118 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.00 ft.
- Deflections calculated using a wind speed of 60 mph.
- Pressures are calculated at each section.
- Stress ratio used in tower member design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned	√	Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area	√	SR Leg Bolts Resist Compression
√	Use Code Stress Ratios	√	Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients	√	Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-H Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-H Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
√	Secondary Horizontal Braces Leg	√	Sort Capacity Reports By Component		Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
√	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric		Ignore KL/ry For 60 Deg. Angle Legs		Pole Without Linear Attachments
					Pole With Shroud Or No Appurtenances
					Outside and Inside Corner Radii Are Known



5 5

Tower Section Geometry

N N N# N	N q N	- N q N	N NW N	NW NW N	N N
T1	250.00-240.00		8.50	1	10.00
T2	240.00-220.00		8.54	1	20.00
T3	220.00-200.00		8.63	1	20.00
T4	200.00-180.00		8.71	1	20.00
T5	180.00-160.00		10.79	1	20.00
T6	160.00-140.00		12.93	1	20.00
T7	140.00-120.00		15.18	1	20.00
T8	120.00-100.00		17.68	1	20.00
T9	100.00-80.00		20.18	1	20.00
T10	80.00-60.00		22.83	1	20.00
T11	60.00-40.00		25.33	1	20.00
T12	40.00-20.00		27.83	1	20.00
T13	20.00-0.00		30.33	1	20.00

Tower Section Geometry *6 O*

N N N# N	N N	q N	V N	° N # N	° NW N	NZ N	V NZ N
T1	250.00-240.00	5.00	K Brace Down	No	Yes	0.0000	0.0000
T2	240.00-220.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T3	220.00-200.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T4	200.00-180.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T5	180.00-160.00	6.67	K Brace Down	No	Yes	0.0000	0.0000
T6	160.00-140.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T7	140.00-120.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T8	120.00-100.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T9	100.00-80.00	10.00	K Brace Down	No	Yes	0.0000	0.0000
T10	80.00-60.00	10.00	K Brace Down	No	Yes	0.0000	0.0000

N	N	q N	V N	° N	° NW	NZ N	V NZ N
N N	N# N	N	N	NV N	° N	N	N
	N	N		# N		N	N
	Λ	Λ		Λ		Λ	Λ
T11	60.00-40.00	20.00	K1 Down	No	Yes	0.0000	0.0000
T12	40.00-20.00	20.00	K1 Down	No	Yes	0.0000	0.0000
T13	20.00-0.00	19.92	K1 Down	No	Yes	0.0000	1.0000

Tower Section Geometry *6* *O*

N	N	NW	NW q N	q NW	q N
N# N	N	N	Z N	N	N	Z N
Λ	Λ	Λ		Λ		
T1 250.00-240.00	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T2 240.00-220.00	Pipe	ROHN 3 STD	A572-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T3 220.00-200.00	Pipe	ROHN 4 X-STR	A572-50 (50 ksi)	Pipe	ROHN 2 X-STR	A572-50 (50 ksi)
T4 200.00-180.00	Pipe	ROHN 5 EH	A572-50 (50 ksi)	Pipe	ROHN 2 X-STR	A572-50 (50 ksi)
T5 180.00-160.00	Pipe	ROHN 6 EH	A572-50 (50 ksi)	Pipe	ROHN 2 X-STR	A572-50 (50 ksi)
T6 160.00-140.00	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Pipe	ROHN 2.5 X-STR	A572-50 (50 ksi)
T7 140.00-120.00	Pipe	ROHN 8 EHS	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T8 120.00-100.00	Pipe	ROHN 8 X-STR	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T9 100.00-80.00	Pipe	ROHN 8 X-STR	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T10 80.00-60.00	Pipe	ROHN 10 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T11 60.00-40.00	Pipe	ROHN 10 X-STR	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T12 40.00-20.00	Pipe	ROHN 10 X-STR	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)
T13 20.00-0.00	Pipe	ROHN 10 EH	A572-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)

Tower Section Geometry *6* *O*

N	TN	NZ N	NZ NW	NZ NW	° N	° N	° NW
N# N	NW	N	N	Z N	N	N	Z N
N	N	N	N		N	N	
Λ	Z Λ				Λ		
T1 250.00-240.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T2 240.00-220.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T3 220.00-200.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T4 200.00-180.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 1.5 STD	A572-50 (50 ksi)
T5 180.00-160.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T6 160.00-140.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T7 140.00-120.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2 STD	A572-50 (50 ksi)
T8 120.00-100.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)
T9 100.00-80.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)

N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	N
N	N	N	N	N	N	N	N	N
T10 80.00-60.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 2.5 STD	A572-50 (50 ksi)	
T11 60.00-40.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)	
T12 40.00-20.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)	
T13 20.00-0.00	None	Pipe		A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)	

Tower Section Geometry *6 O*

N	N	N	N	N % NW	N % NW	N	N % NW	I
N	N	N	N	N	N	N	N	N
T1 250.00-240.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T2 240.00-220.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T3 220.00-200.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T4 200.00-180.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T5 180.00-160.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T6 160.00-140.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2x2x1/8	A36 (36 ksi)			
T7 140.00-120.00	Pipe	A618-50 (50 ksi)	Equal Angle	L2 1/2x2 1/2x3/16	A36 (36 ksi)			
T8 120.00-100.00	Pipe	A618-50 (50 ksi)	Equal Angle	L3x3x3/16	A36 (36 ksi)			
T9 100.00-80.00	Pipe	A618-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)			
T10 80.00-60.00	Pipe	A618-50 (50 ksi)	Equal Angle	L3 1/2x3 1/2x1/4	A572-50 (50 ksi)			
T11 60.00-40.00	Pipe	A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)			
T12 40.00-20.00	Pipe	A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)			
T13 20.00-0.00	Pipe	A618-50 (50 ksi)	Pipe	ROHN 3 STD	A572-50 (50 ksi)			

Tower Section Geometry *6 O*

N	N	N	N	N	M N
N	V N	N	N	N	N
N	Z N	N	N	N	
T11 60.00-40.00	A572-50 (50 ksi)	Horizontal (1)	Pipe	ROHN 1.5 STD	1
		Diagonal (1)	Pipe	ROHN 1.5 STD	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
T12 40.00-20.00	A572-50 (50 ksi)	Horizontal (1)	Pipe	ROHN 1.5 STD	1
		Diagonal (1)	Pipe	ROHN 2.25 TUBE	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 2.5 STD	1
T13 20.00-	A572-50	Horizontal (1)	Pipe	ROHN 1.5 STD	1

0.00	(50 ksi)	Diagonal (1)	Pipe	ROHN 2.25 TUBE	1
		Hip (1)	Pipe	ROHN 1.5 STD	1
		Hip Diagonal (1)	Pipe	ROHN 3 STD	1

Tower Section Geometry

T1 250.00-240.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T2 240.00-220.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T3 220.00-200.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T4 200.00-180.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T5 180.00-160.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T6 160.00-140.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T7 140.00-120.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T8 120.00-100.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T9 100.00-80.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T10 80.00-60.00	0.00	0.2500	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T11 60.00-40.00	0.00	0.3750	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T12 40.00-20.00	0.00	0.3750	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000
T13 20.00-0.00	0.00	0.3750	A36 (36 ksi)	1	1.05	1.05	36.0000	36.0000	36.0000

Tower Section Geometry

T1 250.00-240.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T2 240.00-220.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T3 220.00-200.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T4 200.00-180.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 180.00-160.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 160.00-140.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 140.00-120.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

T8 120.00-100.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 100.00-80.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 80.00-60.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T11 60.00-40.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T12 40.00-20.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T13 20.00-0.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

[illegible]

Tower Section Geometry [illegible]

	in		in		in		in		in		in		in	
T1 250.00-240.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T2 240.00-220.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T3 220.00-200.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T4 200.00-180.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 180.00-160.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 160.00-140.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T7 140.00-120.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T8 120.00-100.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T9 100.00-80.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 80.00-60.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T11 60.00-40.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T12 40.00-20.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1
T13 20.00-0.00	0.0000	1	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	1	0.0000	0.75	0.0000	1

	in		in		in		in		in		in		in	
T1 250.00-240.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

	in		in		in		in		in		in		in	
T2 240.00-220.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T3 220.00-200.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T4 200.00-180.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T5 180.00-160.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T6 160.00-140.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T7 140.00-120.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T8 120.00-100.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T9 100.00-80.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T10 80.00-60.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T11 60.00-40.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T12 40.00-20.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75
T13 20.00-0.00	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75	0.0000	0.75

Tower Section Geometry

		in		in		in		in		in		in		in	
T1 250.00-240.00	Flange	0.7500 A325N	4	0.6250 A325N	3	0.6250 A325N	2	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T2 240.00-220.00	Flange	0.8750 A325N	4	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T3 220.00-200.00	Flange	1.0000 A325N	4	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T4 200.00-180.00	Flange	1.0000 A325N	6	0.6250 A325N	3	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	2	0.6250 A325N	0
T5 180.00-160.00	Flange	1.0000 A325N	8	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T6 160.00-140.00	Flange	1.0000 A325N	8	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T7 140.00-120.00	Flange	1.0000 A325N	8	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T8 120.00-100.00	Flange	1.0000 A325N	8	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T9 100.00-80.00	Flange	1.0000 A325N	12	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T10 80.00-60.00	Flange	1.0000 A325N	12	0.6250 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.6250 A325N	2	0.0000 A325N	0
T11 60.00-40.00	Flange	1.0000 A325N	12	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.7500 A325N	2	0.6250 A325N	1
T12 40.00-20.00	Flange	1.0000 A325N	12	0.7500 A325N	3	0.0000 A325N	0	0.0000 A325N	0	0.0000 A325N	0	0.7500 A325N	2	0.6250 A325N	1
T13 20.00-0.00	Flange	1.0000 A354-BC	0	0.7500 A325N	3	0.7500 A325N	0	0.7500 A325N	0	0.7500 A325N	0	0.7500 A325N	2	0.6250 A325N	1

Tower Section Geometry 6 O

Section														
	in		in		in		in		in		in		in	
T1 250.00-240.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T2 240.00-220.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T3 220.00-200.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T4 200.00-180.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T5 180.00-160.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T6 160.00-140.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T7 140.00-120.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T8 120.00-100.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T9 100.00-80.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T10 80.00-60.00	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0
T11 60.00-40.00	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1	0.6250 A325N	1
T12 40.00-20.00	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1	0.6250 A325N	1
T13 20.00-0.00	0.6250 A325N	1	0.6250 A325N	1	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	0	0.6250 A325N	1	0.6250 A325N	1

N

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Safety Line 3/8 ***	B	No	No	Ar (CaAa)	250.00 - 0.00	0.0000	0.5	1	1	0.3750	0.3750	0.22
Feedline Ladder (Af)	C	No	No	Af (CaAa)	250.00 - 0.00	0.0000	-0.45	1	1	3.0000	3.0000	8.40
Feedline Ladder (Af)	C	No	No	Af (CaAa)	220.00 - 0.00	0.0000	0.45	1	1	3.0000	3.0000	8.40
Feedline Ladder (Af) ***	A	No	No	Af (CaAa)	180.00 - 0.00	0.0000	0.45	1	1	3.0000	3.0000	8.40
Feedline Ladder (Af)	B	No	No	Af (CaAa)	250.00 - 0.00	0.0000	0.45	1	1	3.0000	3.0000	8.40
LDF7-50A(1-5/8)	B	No	No	Ar (CaAa)	250.00 - 0.00	0.0000	0.46	10	10	0.5000	1.9800	0.82
ASU9323TY P01(1-1/4) ***	B	No	No	Ar (CaAa)	250.00 - 0.00	0.0000	0.417	3	3	0.5000	1.2400	1.05
Feedline Ladder (Af)	B	No	No	Af (CaAa)	231.00 - 0.00	0.0000	-0.45	1	1	3.0000	3.0000	8.40
MLE HYBRID 9POWER/18 FIBER RL 2(1-5/8) *** ***	B	No	No	Ar (CaAa)	231.00 - 0.00	0.0000	-0.45	3	3	0.5000	1.6250	1.07

Feed Line/Linear Appurtenances - Entered As Area

q N / I - N # N x N N N x - - N N
N N / N N N N N N
N x I hE N N
***
1/8" Detuning Wire A No No CaAa (Out Of Face) 213.00 - 0.00 1 No Ice 0.01 0.07
1/8" Detuning Wire B No No CaAa (Out Of Face) 213.00 - 0.00 1 No Ice 0.01 0.07
1/8" Detuning Wire C No No CaAa (Out Of Face) 213.00 - 0.00 1 No Ice 0.01 0.07
***
***

Feed Line/Linear Appurtenances Section Areas

N N / N - N -/N x - - N x - - N N
N# N %N NN NN N
Λ Λ / hΛ hΛ hΛ hΛ Λ
T1 250.00-240.00 A 0.000 0.000 0.000 0.000 0.00
B 0.000 0.000 28.895 0.000 0.20
C 0.000 0.000 5.000 0.000 0.08
T2 240.00-220.00 A 0.000 0.000 0.000 0.000 0.00
B 0.000 0.000 68.653 0.000 0.53
C 0.000 0.000 10.000 0.000 0.17
T3 220.00-200.00 A 0.000 0.000 0.000 0.163 0.00
B 0.000 0.000 77.540 0.163 0.63
C 0.000 0.000 20.000 0.163 0.34
T4 200.00-180.00 A 0.000 0.000 0.000 0.250 0.00
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T5 180.00-160.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T6 160.00-140.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T7 140.00-120.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T8 120.00-100.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T9 100.00-80.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T10 80.00-60.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T11 60.00-40.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T12 40.00-20.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34
T13 20.00-0.00 A 0.000 0.000 10.000 0.250 0.17
B 0.000 0.000 77.540 0.250 0.63
C 0.000 0.000 20.000 0.250 0.34

Feed Line Center of Pressure

T1	250.00-240.00	17.9684	12.2372	17.9684	12.2372
T2	240.00-220.00	17.2845	7.8101	17.1819	7.7719
T3	220.00-200.00	12.5260	5.6446	12.1757	5.5117
T4	200.00-180.00	13.3431	6.0905	12.5812	5.7939
T5	180.00-160.00	14.0005	3.5795	12.8237	3.3173
T6	160.00-140.00	15.3036	3.9820	13.7190	3.6182
T7	140.00-120.00	16.6876	4.4034	14.9919	4.0056
T8	120.00-100.00	18.2333	4.8619	16.4296	4.4321
T9	100.00-80.00	19.9199	5.3530	17.9399	4.8755
T10	80.00-60.00	20.2916	5.5231	18.0739	4.9759
T11	60.00-40.00	22.9378	6.2403	20.2171	5.5702
T12	40.00-20.00	24.3173	6.6485	21.4513	5.9371
T13	20.00-0.00	25.8094	7.0829	22.7636	6.3224

Shielding Factor Ka

T1	1	Safety Line 3/8	240.00 - 250.00	0.6000	0.6000
T1	7	Feedline Ladder (Af)	240.00 - 250.00	0.6000	0.6000
T1	11	Feedline Ladder (Af)	240.00 - 250.00	0.6000	0.6000
T1	12	LDF7-50A(1-5/8)	240.00 - 250.00	0.6000	0.6000
T1	13	ASU9323TYP01(1-1/4)	240.00 - 250.00	0.6000	0.6000
T2	1	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T2	7	Feedline Ladder (Af)	220.00 - 240.00	0.6000	0.6000
T2	11	Feedline Ladder (Af)	220.00 - 240.00	0.6000	0.6000
T2	12	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.6000
T2	13	ASU9323TYP01(1-1/4)	220.00 - 240.00	0.6000	0.6000
T2	15	Feedline Ladder (Af)	220.00 - 231.00	0.6000	0.6000
T2	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	220.00 - 231.00	0.6000	0.6000
T3	1	Safety Line 3/8	200.00 - 220.00	0.6000	0.6000
T3	7	Feedline Ladder (Af)	200.00 - 220.00	0.6000	0.6000
T3	8	Feedline Ladder (Af)	200.00 - 220.00	0.6000	0.6000
T3	11	Feedline Ladder (Af)	200.00 - 220.00	0.6000	0.6000
T3	12	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.6000
T3	13	ASU9323TYP01(1-1/4)	200.00 - 220.00	0.6000	0.6000
T3	15	Feedline Ladder (Af)	200.00 - 220.00	0.6000	0.6000
T3	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	200.00 - 220.00	0.6000	0.6000
T4	1	Safety Line 3/8	180.00 -	0.6000	0.6000

N	/ N N N 7	q	/ N N N # ;	N N%	N %
T4	7	Feedline Ladder (Af)	200.00 180.00 - 200.00	0.6000	0.6000
T4	8	Feedline Ladder (Af)	180.00 - 200.00	0.6000	0.6000
T4	11	Feedline Ladder (Af)	180.00 - 200.00	0.6000	0.6000
T4	12	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.6000
T4	13	ASU9323TYP01(1-1/4)	180.00 - 200.00	0.6000	0.6000
T4	15	Feedline Ladder (Af)	180.00 - 200.00	0.6000	0.6000
T4	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	180.00 - 200.00	0.6000	0.6000
T5	1	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T5	7	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T5	8	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T5	9	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T5	11	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T5	12	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.6000
T5	13	ASU9323TYP01(1-1/4)	160.00 - 180.00	0.6000	0.6000
T5	15	Feedline Ladder (Af)	160.00 - 180.00	0.6000	0.6000
T5	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	160.00 - 180.00	0.6000	0.6000
T6	1	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T6	7	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T6	8	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T6	9	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T6	11	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T6	12	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T6	13	ASU9323TYP01(1-1/4)	140.00 - 160.00	0.6000	0.6000
T6	15	Feedline Ladder (Af)	140.00 - 160.00	0.6000	0.6000
T6	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	140.00 - 160.00	0.6000	0.6000
T7	1	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T7	7	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T7	8	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T7	9	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T7	11	Feedline Ladder (Af)	120.00 - 140.00	0.6000	0.6000
T7	12	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.6000
T7	13	ASU9323TYP01(1-1/4)	120.00 - 140.00	0.6000	0.6000
T7	15	Feedline Ladder (Af)	120.00 -	0.6000	0.6000

N	/ N N N 7	q	/ N N N # ;	N N%	N %
			140.00		
T7	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	120.00 - 140.00	0.6000	0.6000
T8	1	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T8	7	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T8	8	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T8	9	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T8	11	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T8	12	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.6000
T8	13	ASU9323TYP01(1-1/4)	100.00 - 120.00	0.6000	0.6000
T8	15	Feedline Ladder (Af)	100.00 - 120.00	0.6000	0.6000
T8	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	100.00 - 120.00	0.6000	0.6000
T9	1	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T9	7	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T9	8	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T9	9	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T9	11	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T9	12	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T9	13	ASU9323TYP01(1-1/4)	80.00 - 100.00	0.6000	0.6000
T9	15	Feedline Ladder (Af)	80.00 - 100.00	0.6000	0.6000
T9	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	80.00 - 100.00	0.6000	0.6000
T10	1	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T10	7	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T10	8	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T10	9	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T10	11	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T10	12	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T10	13	ASU9323TYP01(1-1/4)	60.00 - 80.00	0.6000	0.6000
T10	15	Feedline Ladder (Af)	60.00 - 80.00	0.6000	0.6000
T10	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	60.00 - 80.00	0.6000	0.6000
T11	1	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T11	7	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T11	8	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T11	9	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000

N	/ N N N 7	q	/ N N N # ;	N N%	N %
T11	11	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T11	12	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T11	13	ASU9323TYP01(1-1/4)	40.00 - 60.00	0.6000	0.6000
T11	15	Feedline Ladder (Af)	40.00 - 60.00	0.6000	0.6000
T11	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	40.00 - 60.00	0.6000	0.6000
T12	1	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T12	7	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T12	8	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T12	9	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T12	11	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T12	12	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T12	13	ASU9323TYP01(1-1/4)	20.00 - 40.00	0.6000	0.6000
T12	15	Feedline Ladder (Af)	20.00 - 40.00	0.6000	0.6000
T12	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	20.00 - 40.00	0.6000	0.6000
T13	1	Safety Line 3/8	0.00 - 20.00	0.6000	0.6000
T13	7	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T13	8	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T13	9	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T13	11	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T13	12	LDF7-50A(1-5/8)	0.00 - 20.00	0.6000	0.6000
T13	13	ASU9323TYP01(1-1/4)	0.00 - 20.00	0.6000	0.6000
T13	15	Feedline Ladder (Af)	0.00 - 20.00	0.6000	0.6000
T13	16	MLE HYBRID 9POWER/18FIBER RL 2(1-5/8)	0.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

q N	/ N N N	N	N - N N N	N N	x - N / N N h N	x - N N N h N	N N N N
Flash Beacon Lighting	C	From Leg	0.00 0.00 1.00	0.0000	250.00	No Ice	2.70	2.70	0.05
Lighting Rod 4'x5/8" on 7' Extension	C	From Leg	0.00 0.00 4.50	0.0000	250.00	No Ice	2.26	2.26	0.06
7'x2" Mount Pipe	B	From Leg	0.00 0.00 3.50	0.0000	250.00	No Ice	1.66	1.66	0.03
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Sector Mount [SM 504-3]	C	None		0.0000	252.00	No Ice	31.05	31.05	1.71
5'x2" Mount Pipe	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	1.19	1.19	0.02

5'x2" Mount Pipe	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	1.19	1.19	0.02
5'x2" Mount Pipe	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	1.19	1.19	0.02
TMBXX-6517-A2M w/ Mount Pipe	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	7.97	5.97	0.08
TMBXX-6517-A2M w/ Mount Pipe	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	7.97	5.97	0.08
TMBXX-6517-A2M w/ Mount Pipe	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	7.97	5.97	0.08
FASB w/ Mount Pipe	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	13.92	14.71	0.24
FASB w/ Mount Pipe	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	13.92	14.71	0.24
FASB w/ Mount Pipe	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	13.92	14.71	0.24
ASU9338TYP01	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	3.20	1.03	0.02
ASU9338TYP01	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	3.20	1.03	0.02
ASU9338TYP01	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	3.20	1.03	0.02
FRBG	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.40	1.25	0.05
FRBG	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.40	1.25	0.05
FRBG	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.40	1.25	0.05
FRIG	A	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.39	0.97	0.06
FRIG	B	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.39	0.97	0.06
FRIG	C	From Leg	4.00 0.00 -2.00	0.0000	252.00	No Ice	2.39	0.97	0.06
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Site Pro 1 VFA12-HD 12' Heavy Duty V-Frame	A	From Leg	0.00 0.00 0.00	0.0000	231.00	No Ice	13.20	9.20	0.66
Site Pro 1 VFA12-HD 12' Heavy Duty V-Frame	B	From Leg	0.00 0.00 0.00	0.0000	231.00	No Ice	13.20	9.20	0.66
Site Pro 1 VFA12-HD 12' Heavy Duty V-Frame	C	From Leg	0.00 0.00 0.00	0.0000	231.00	No Ice	13.20	9.20	0.66
(2) MX06FRO860-02 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	8.84	7.49	0.11
(2) MX06FRO860-02 w/	B	From Leg	4.00	0.0000	231.00	No Ice	8.84	7.49	0.11

Mount Pipe			0.00 0.00						
(2) MX06FRO860-02 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	8.84	7.49	0.11
AIR 6449 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	5.18	2.72	0.12
AIR 6449 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	5.18	2.72	0.12
AIR 6449 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	5.18	2.72	0.12
RRUS 4449 B5/B12	A	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.97	1.41	0.07
RRUS 4449 B5/B12	B	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.97	1.41	0.07
RRUS 4449 B5/B12	C	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.97	1.41	0.07
RRUS 8843 B2/B66A	A	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.64	1.35	0.07
RRUS 8843 B2/B66A	B	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.64	1.35	0.07
RRUS 8843 B2/B66A	C	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	1.64	1.35	0.07
RVZDC-6627-PF-48_CCIV2	A	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	4.06	3.10	0.03
RVZDC-6627-PF-48_CCIV2	B	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	4.06	3.10	0.03
RVZDC-6627-PF-48_CCIV2	C	From Leg	4.00 0.00 0.00	0.0000	231.00	No Ice	4.06	3.10	0.03
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Load Combinations

1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice

15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	Dead+Wind 0 deg - Service
27	Dead+Wind 30 deg - Service
28	Dead+Wind 60 deg - Service
29	Dead+Wind 90 deg - Service
30	Dead+Wind 120 deg - Service
31	Dead+Wind 150 deg - Service
32	Dead+Wind 180 deg - Service
33	Dead+Wind 210 deg - Service
34	Dead+Wind 240 deg - Service
35	Dead+Wind 270 deg - Service
36	Dead+Wind 300 deg - Service
37	Dead+Wind 330 deg - Service

Maximum Member Forces

T1	250 - 240	Leg	Max Tension	15	2.27	0.10	0.03
			Max. Compression	10	-5.04	-0.10	0.00
			Max. Mx	6	1.80	0.10	-0.04
			Max. My	18	0.27	0.05	0.12
			Max. Vy	6	-1.43	0.00	0.00
			Max. Vx	24	1.47	-0.00	-0.00
		Diagonal	Max Tension	21	2.79	0.00	0.00
			Max. Compression	20	-2.86	0.00	0.00
			Max. Mx	2	2.28	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Horizontal	Max Tension	20	1.85	-0.01	-0.00
			Max. Compression	21	-1.81	-0.01	-0.00
			Max. Mx	14	-0.06	-0.01	-0.00
			Max. My	6	-0.30	-0.01	-0.00
			Max. Vy	14	-0.01	-0.01	-0.00
			Max. Vx	6	-0.00	-0.01	-0.00
		Top Girt	Max Tension	7	1.70	0.00	0.00
			Max. Compression	18	-1.70	-0.01	-0.00
			Max. Mx	14	-0.83	-0.01	-0.00
			Max. My	2	0.81	-0.01	0.00
			Max. Vy	14	-0.01	-0.01	-0.00
			Max. Vx	18	-0.00	-0.01	0.00
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.00	0.00	0.00
			Max. Mx	2	-0.00	-0.00	0.00
			Max. Vy	2	0.00	0.00	0.00
T2	240 - 220	Leg	Max Tension	7	17.23	0.08	-0.06
			Max. Compression	10	-23.34	-0.08	0.01
			Max. Mx	22	9.07	1.15	-0.01
			Max. My	4	-2.28	-0.00	1.18
			Max. Vy	22	-0.79	-0.67	-0.01
			Max. Vx	16	0.86	-0.00	0.73
		Diagonal	Max Tension	21	7.47	0.00	0.00
			Max. Compression	20	-7.54	0.00	0.00
			Max. Mx	2	6.26	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Horizontal	Max Tension	20	4.08	-0.01	-0.00
			Max. Compression	21	-4.05	-0.01	-0.00

N	# N	x N	x N	Z 7N	- N	N N	N N
N	N	N		N	N	N	N
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			Max. Mx	6	-0.90	-0.02	-0.01
			Max. My	6	-0.90	-0.02	-0.01
			Max. Vy	6	-0.01	-0.02	-0.01
			Max. Vx	6	0.00	-0.02	-0.01
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.00	0.00	0.00
			Max. Mx	2	-0.00	-0.00	0.00
			Max. Vy	2	0.00	0.00	0.00
T3	220 - 200	Leg	Max Tension	7	49.32	-0.13	-0.02
			Max. Compression	18	-56.83	0.42	0.15
			Max. Mx	18	-56.83	0.42	0.15
			Max. My	4	-5.67	0.01	-0.48
			Max. Vy	6	0.09	-0.22	-0.05
			Max. Vx	4	0.14	0.01	-0.48
		Diagonal	Max Tension	21	9.36	0.00	0.00
			Max. Compression	20	-9.45	0.00	0.00
			Max. Mx	2	7.81	0.03	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Horizontal	Max Tension	20	5.15	-0.01	-0.00
			Max. Compression	21	-5.11	-0.01	-0.00
			Max. Mx	6	0.51	-0.03	-0.01
			Max. My	6	0.51	-0.03	-0.01
			Max. Vy	6	0.01	-0.03	-0.01
			Max. Vx	6	-0.00	0.00	0.00
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.00	-0.00	0.00
			Max. Vy	2	0.00	0.00	0.00
T4	200 - 180	Leg	Max Tension	7	77.20	-0.38	-0.04
			Max. Compression	18	-86.86	0.35	0.05
			Max. Mx	18	-69.89	0.42	0.15
			Max. My	4	-5.95	0.01	-0.48
			Max. Vy	22	-0.07	-0.38	-0.03
			Max. Vx	4	0.12	-0.01	-0.45
		Diagonal	Max Tension	20	6.44	0.00	0.00
			Max. Compression	20	-6.53	0.00	0.00
			Max. Mx	2	5.37	0.04	0.00
			Max. Vy	2	0.02	0.00	0.00
		Horizontal	Max Tension	7	4.19	0.00	0.00
			Max. Compression	18	-4.50	-0.02	-0.00
			Max. Mx	6	-1.08	-0.02	-0.01
			Max. My	18	0.32	0.00	0.01
			Max. Vy	6	-0.01	-0.02	-0.01
			Max. Vx	18	-0.00	0.00	0.01
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.00	-0.01	0.00
			Max. Vy	2	0.01	0.00	0.00
T5	180 - 160	Leg	Max Tension	7	98.65	-0.38	-0.01
			Max. Compression	18	-110.97	1.05	0.11
			Max. Mx	6	96.77	-1.08	-0.12
			Max. My	4	-8.90	-0.01	-1.16
			Max. Vy	6	0.17	-1.08	-0.12
			Max. Vx	4	0.21	-0.01	-1.16
		Diagonal	Max Tension	21	6.41	0.00	0.00
			Max. Compression	20	-6.55	0.00	0.00
			Max. Mx	2	5.32	0.05	0.00
			Max. Vy	2	-0.02	0.00	0.00
		Horizontal	Max Tension	7	4.47	0.00	0.00
			Max. Compression	18	-4.47	-0.03	-0.00
			Max. Mx	6	-1.09	-0.04	-0.01
			Max. My	18	1.14	-0.00	0.01
			Max. Vy	6	0.02	-0.04	-0.01
			Max. Vx	18	0.00	-0.00	0.01
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.00	-0.01	0.00
			Max. Vy	2	0.01	0.00	0.00
T6	160 - 140	Leg	Max Tension	7	115.09	-0.99	-0.06

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			Max. Compression	18	-130.09	1.14	0.09
			Max. Mx	6	112.71	-1.17	-0.10
			Max. My	4	-10.71	-0.01	-1.18
			Max. Vy	22	0.14	-1.08	-0.04
			Max. Vx	4	0.19	-0.01	-1.18
		Diagonal	Max Tension	21	8.11	0.00	0.00
			Max. Compression	20	-8.33	0.00	0.00
			Max. Mx	2	6.88	0.12	0.00
			Max. Vy	2	-0.04	0.00	0.00
		Horizontal	Max Tension	7	5.07	0.00	0.00
			Max. Compression	18	-5.09	-0.04	-0.00
			Max. Mx	6	-1.38	-0.05	-0.01
			Max. My	18	1.36	-0.01	0.01
			Max. Vy	6	0.02	-0.05	-0.01
			Max. Vx	18	0.00	-0.01	0.01
		Inner Bracing	Max Tension	19	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.00	-0.01	0.00
			Max. Vy	2	0.01	0.00	0.00
T7	140 - 120	Leg	Max Tension	7	133.33	-1.01	-0.05
			Max. Compression	18	-151.60	0.90	0.12
			Max. Mx	6	122.44	-1.17	-0.10
			Max. My	4	-11.19	-0.01	-1.18
			Max. Vy	22	-0.14	-1.08	-0.04
			Max. Vx	16	0.19	-0.01	1.17
		Diagonal	Max Tension	21	7.72	0.00	0.00
			Max. Compression	18	-7.99	0.00	0.00
			Max. Mx	2	6.58	0.14	0.00
			Max. Vy	2	-0.04	0.00	0.00
		Horizontal	Max Tension	7	5.32	0.00	0.00
			Max. Compression	18	-5.33	-0.05	-0.00
			Max. Mx	6	-1.41	-0.06	-0.01
			Max. My	18	1.62	-0.02	0.01
			Max. Vy	6	-0.03	-0.06	-0.01
			Max. Vx	18	0.00	-0.02	0.01
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.01	-0.03	0.00
			Max. Vy	2	0.02	0.00	0.00
T8	120 - 100	Leg	Max Tension	7	150.37	-0.93	-0.04
			Max. Compression	18	-172.51	0.98	0.06
			Max. Mx	6	146.86	-1.03	-0.07
			Max. My	4	-13.29	-0.03	-1.13
			Max. Vy	22	0.13	-0.95	-0.03
			Max. Vx	16	0.19	-0.03	1.12
		Diagonal	Max Tension	21	8.15	0.00	0.00
			Max. Compression	20	-8.51	0.00	0.00
			Max. Mx	2	6.93	0.17	0.00
			Max. Vy	2	-0.05	0.00	0.00
		Horizontal	Max Tension	6	6.01	0.00	0.00
			Max. Compression	19	-5.97	-0.08	-0.01
			Max. Mx	6	-1.44	-0.11	-0.01
			Max. My	18	-0.60	-0.05	0.01
			Max. Vy	6	-0.05	-0.11	-0.01
			Max. Vx	18	0.00	-0.05	0.01
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.01	-0.05	0.00
			Max. Vy	2	0.02	0.00	0.00
T9	100 - 80	Leg	Max Tension	7	166.74	-0.97	-0.05
			Max. Compression	18	-193.11	0.51	0.03
			Max. Mx	6	155.50	-1.03	-0.07
			Max. My	4	-15.82	-0.03	-1.03
			Max. Vy	22	-0.15	-0.90	-0.02
			Max. Vx	4	-0.18	-0.03	-0.97
		Diagonal	Max Tension	21	8.14	0.00	0.00
			Max. Compression	20	-8.60	0.00	0.00
			Max. Mx	2	6.93	0.21	0.00
			Max. Vy	2	-0.05	0.00	0.00

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		Horizontal	Max Tension	6	6.41	0.00	0.00
			Max. Compression	19	-6.31	-0.09	-0.01
			Max. Mx	6	-1.44	-0.13	-0.01
			Max. My	18	-0.42	-0.07	0.01
			Max. Vy	6	-0.05	-0.13	-0.01
			Max. Vx	18	0.00	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.01	-0.10	0.00
			Max. Vy	2	0.04	0.00	0.00
T10	80 - 60	Leg	Max Tension	7	182.85	-1.98	0.04
			Max. Compression	18	-214.02	-2.32	0.41
			Max. Mx	18	-214.02	-2.32	0.41
			Max. My	4	-20.79	-0.78	-4.46
			Max. Vy	18	0.54	2.13	-0.05
			Max. Vx	16	-0.54	-0.78	4.45
		Diagonal	Max Tension	21	9.25	0.00	0.00
			Max. Compression	20	-9.78	0.00	0.00
			Max. Mx	2	7.79	0.24	0.00
			Max. Vy	2	-0.06	0.00	0.00
		Horizontal	Max Tension	20	7.61	-0.13	-0.00
			Max. Compression	21	-7.25	-0.10	-0.00
			Max. Mx	6	-0.97	-0.15	-0.01
			Max. My	6	1.15	-0.13	-0.01
			Max. Vy	6	-0.06	-0.15	-0.01
			Max. Vx	6	0.00	-0.13	-0.01
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-0.01	0.00	0.00
			Max. Mx	2	-0.01	-0.13	0.00
			Max. Vy	2	0.04	0.00	0.00
T11	60 - 40	Leg	Max Tension	7	189.26	1.11	-0.41
			Max. Compression	18	-223.30	-6.49	0.86
			Max. Mx	18	-222.90	8.51	-0.79
			Max. My	16	-23.05	-1.51	6.23
			Max. Vy	18	1.58	8.51	-0.79
			Max. Vx	16	-1.14	-1.51	6.23
		Diagonal	Max Tension	7	14.15	-0.12	0.06
			Max. Compression	18	-15.32	0.00	0.00
			Max. Mx	6	10.15	-0.15	0.02
			Max. My	20	-14.21	-0.05	-0.07
			Max. Vy	6	-0.05	-0.15	0.02
			Max. Vx	20	-0.01	-0.05	-0.07
		Horizontal	Max Tension	7	8.05	0.00	0.00
			Max. Compression	18	-8.09	-0.22	-0.01
			Max. Mx	6	0.55	-0.25	-0.02
			Max. My	18	-0.44	-0.15	0.02
			Max. Vy	6	0.08	-0.25	-0.02
			Max. Vx	18	0.00	-0.16	0.02
		Redund Horz 1 Bracing	Max Tension	6	2.13	0.00	0.00
			Max. Compression	19	-1.70	0.00	0.00
			Max. Mx	2	0.66	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	19	1.66	0.00	0.00
			Max. Compression	6	-1.84	0.00	0.00
			Max. Mx	2	-1.04	0.03	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	21	0.01	0.00	0.00
			Max. Compression	8	-0.02	0.00	0.00
			Max. Mx	2	-0.02	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	4	0.06	0.00	0.00
			Max. Compression	16	-0.06	0.00	0.00
			Max. Mx	2	0.06	0.16	0.00
			Max. Vy	2	-0.04	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00

			Max. Compression	4	-0.01	0.00	0.00
			Max. Mx	2	-0.01	0.19	0.00
			Max. Vy	2	-0.06	0.00	0.00
T12	40 - 20	Leg	Max Tension	7	205.76	4.19	-0.83
			Max. Compression	18	-244.61	-6.44	0.82
			Max. Mx	18	-244.02	8.89	-0.73
			Max. My	16	-26.02	-1.57	6.23
			Max. Vy	18	-1.61	8.89	-0.73
			Max. Vx	16	-1.09	-1.57	6.23
		Diagonal	Max Tension	7	14.35	-0.12	0.05
			Max. Compression	18	-15.64	0.00	0.00
			Max. Mx	6	8.98	-0.16	0.02
			Max. My	20	-15.26	-0.07	-0.07
			Max. Vy	6	-0.05	-0.16	0.02
			Max. Vx	20	-0.01	0.00	0.00
		Horizontal	Max Tension	7	8.60	0.00	0.00
			Max. Compression	18	-8.73	-0.26	-0.01
			Max. Mx	6	-2.15	-0.28	-0.02
			Max. My	18	2.10	-0.20	0.02
			Max. Vy	6	-0.09	-0.28	-0.02
			Max. Vx	18	0.00	-0.20	0.02
		Redund Horz 1 Bracing	Max Tension	6	2.40	0.00	0.00
			Max. Compression	19	-1.87	0.00	0.00
			Max. Mx	2	0.72	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Diag 1 Bracing	Max Tension	9	1.72	0.00	0.00
			Max. Compression	6	-1.94	0.00	0.00
			Max. Mx	2	-1.15	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Hip 1 Bracing	Max Tension	21	0.01	0.00	0.00
			Max. Compression	8	-0.02	0.00	0.00
			Max. Mx	2	-0.02	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Hip Diagonal 1 Bracing	Max Tension	4	0.06	0.00	0.00
			Max. Compression	16	-0.06	0.00	0.00
			Max. Mx	2	0.05	0.18	0.00
			Max. Vy	2	-0.05	0.00	0.00
		Inner Bracing	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-0.01	0.00	0.00
			Max. Mx	2	-0.01	0.23	0.00
			Max. Vy	2	-0.07	0.00	0.00
T13	20 - 0	Leg	Max Tension	7	240.95	1.05	0.11
			Max. Compression	18	-289.09	0.00	-0.00
			Max. Mx	18	-266.23	8.18	-0.72
			Max. My	16	-27.70	-1.57	6.23
			Max. Vy	18	-13.48	0.00	-0.00
			Max. Vx	16	-6.40	0.00	-0.00
		Diagonal	Max Tension	21	14.41	-0.12	-0.01
			Max. Compression	18	-15.55	0.00	0.00
			Max. Mx	6	10.13	-0.17	0.02
			Max. My	20	-14.68	-0.09	-0.06
			Max. Vy	6	0.05	-0.17	0.02
			Max. Vx	20	-0.00	0.00	0.00
		Horizontal	Max Tension	7	9.20	0.00	0.00
			Max. Compression	18	-9.37	-0.30	-0.01
			Max. Mx	6	0.40	-0.32	-0.02
			Max. My	18	-0.39	-0.24	0.02
			Max. Vy	6	0.09	-0.32	-0.02
			Max. Vx	18	-0.00	-0.24	0.02
		Redund Horz 1 Bracing	Max Tension	8	1.71	0.00	0.00
			Max. Compression	9	-1.37	0.00	0.00
			Max. Mx	2	0.29	0.02	0.00
			Max. Vy	2	-0.01	0.00	0.00
		Redund Diag 1	Max Tension	8	1.26	0.00	0.00

# N	x N	x N	Z 7N	- N	N N	N N
N N	N		N	N	N	N
Vi			x Vi	V	ç V	ç V
	Bracing					
		Max. Compression	8	-1.26	0.00	0.00
		Max. Mx	2	-0.80	0.03	0.00
		Max. Vy	2	-0.01	0.00	0.00
	Redund Hip 1 Bracing	Max Tension	21	0.01	0.00	0.00
		Max. Compression	8	-0.02	0.00	0.00
		Max. Mx	2	-0.02	0.02	0.00
		Max. Vy	2	-0.01	0.00	0.00
	Redund Hip Diagonal 1 Bracing	Max Tension	4	0.06	0.00	0.00
		Max. Compression	16	-0.07	0.00	0.00
		Max. Mx	2	0.06	0.27	0.00
		Max. Vy	2	-0.06	0.00	0.00
	Inner Bracing	Max Tension	1	0.00	0.00	0.00
		Max. Compression	2	-0.01	0.00	0.00
		Max. Mx	2	-0.01	0.27	0.00
		Max. Vy	2	-0.07	0.00	0.00

Maximum Reactions

N	x N	Z 7N	N	° vN N	° vN N
		N	N	N	N
		x Vi			
Leg C	Max. Vert	18	287.37	30.31	-16.00
	Max. H_x	18	287.37	30.31	-16.00
	Max. H_z	7	-239.42	-26.48	13.83
	Min. Vert	7	-239.42	-26.48	13.83
	Min. H_x	7	-239.42	-26.48	13.83
	Min. H_z	18	287.37	30.31	-16.00
Leg B	Max. Vert	10	263.40	-26.50	-15.83
	Max. H_x	21	-202.16	23.48	10.44
	Max. H_z	23	-209.78	22.61	13.55
	Min. Vert	23	-209.78	22.61	13.55
	Min. H_x	8	255.78	-27.37	-12.71
	Min. H_z	10	263.40	-26.50	-15.83
Leg A	Max. Vert	2	261.83	1.13	30.83
	Max. H_x	20	29.07	4.20	2.54
	Max. H_z	2	261.83	1.13	30.83
	Min. Vert	15	-210.96	-1.07	-26.38
	Min. H_x	9	21.80	-4.15	1.91
	Min. H_z	15	-210.96	-1.07	-26.38

Tower Mast Reaction Summary

N x	NW N	N N	N N	N N vN ç	N N vN ç	N N ç
Dead Only	72.59	0.00	0.00	-0.72	-44.31	-0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	87.11	0.00	-48.50	-6619.37	-53.17	62.26
0.9 Dead+1.0 Wind 0 deg - No Ice	65.33	0.00	-48.50	-6619.16	-39.88	62.26
1.2 Dead+1.0 Wind 30 deg - No Ice	87.11	27.23	-47.17	-6402.59	-3749.21	103.05
0.9 Dead+1.0 Wind 30 deg - No Ice	65.33	27.23	-47.17	-6402.38	-3735.92	103.05
1.2 Dead+1.0 Wind 60 deg - No Ice	87.11	47.17	-27.23	-3696.90	-6454.90	72.74
0.9 Dead+1.0 Wind 60 deg - No Ice	65.33	47.17	-27.23	-3696.69	-6441.61	72.74

N	NW	N	N	N	N	N	N	N
x	N	N	N		vN	vN	N	
					ç	ç	ç	
1.2 Dead+1.0 Wind 90 deg - No Ice	87.11	54.46	0.00		-0.86	-7445.25	22.95	
0.9 Dead+1.0 Wind 90 deg - No Ice	65.33	54.46	0.00		-0.64	-7431.96	22.95	
1.2 Dead+1.0 Wind 120 deg - No Ice	87.11	42.00	24.25		3308.40	-5784.97	-25.24	
0.9 Dead+1.0 Wind 120 deg - No Ice	65.33	42.00	24.25		3308.61	-5771.68	-25.24	
1.2 Dead+1.0 Wind 150 deg - No Ice	87.11	22.09	38.26		5247.03	-3083.04	-29.09	
0.9 Dead+1.0 Wind 150 deg - No Ice	65.33	22.09	38.26		5247.25	-3069.75	-29.09	
1.2 Dead+1.0 Wind 180 deg - No Ice	87.11	0.00	48.50		6617.65	-53.17	-62.26	
0.9 Dead+1.0 Wind 180 deg - No Ice	65.33	0.00	48.50		6617.87	-39.88	-62.26	
1.2 Dead+1.0 Wind 210 deg - No Ice	87.11	-27.23	47.17		6400.87	3642.87	-103.05	
0.9 Dead+1.0 Wind 210 deg - No Ice	65.33	-27.23	47.17		6401.09	3656.17	-103.05	
1.2 Dead+1.0 Wind 240 deg - No Ice	87.11	-47.17	27.23		3695.18	6348.57	-72.74	
0.9 Dead+1.0 Wind 240 deg - No Ice	65.33	-47.17	27.23		3695.40	6361.86	-72.74	
1.2 Dead+1.0 Wind 270 deg - No Ice	87.11	-54.46	0.00		-0.86	7338.92	-22.95	
0.9 Dead+1.0 Wind 270 deg - No Ice	65.33	-54.46	0.00		-0.64	7352.21	-22.95	
1.2 Dead+1.0 Wind 300 deg - No Ice	87.11	-42.00	-24.25		-3310.12	5678.63	25.24	
0.9 Dead+1.0 Wind 300 deg - No Ice	65.33	-42.00	-24.25		-3309.90	5691.92	25.24	
1.2 Dead+1.0 Wind 330 deg - No Ice	87.11	-22.09	-38.26		-5248.75	2976.70	29.09	
0.9 Dead+1.0 Wind 330 deg - No Ice	65.33	-22.09	-38.26		-5248.54	2990.00	29.09	
Dead+Wind 0 deg - Service	72.59	0.00	-13.97		-1878.51	-44.31	16.94	
Dead+Wind 30 deg - Service	72.59	7.80	-13.50		-1809.26	-1088.47	28.04	
Dead+Wind 60 deg - Service	72.59	13.50	-7.80		-1044.88	-1852.85	19.80	
Dead+Wind 90 deg - Service	72.59	15.59	0.00		-0.72	-2132.63	6.25	
Dead+Wind 120 deg - Service	72.59	12.10	6.98		938.18	-1670.53	-6.87	
Dead+Wind 150 deg - Service	72.59	6.40	11.08		1493.80	-907.17	-7.92	
Dead+Wind 180 deg - Service	72.59	0.00	13.97		1877.08	-44.31	-16.94	
Dead+Wind 210 deg - Service	72.59	-7.80	13.50		1807.83	999.86	-28.04	
Dead+Wind 240 deg - Service	72.59	-13.50	7.80		1043.45	1764.24	-19.80	
Dead+Wind 270 deg - Service	72.59	-15.59	0.00		-0.72	2044.02	-6.25	
Dead+Wind 300 deg - Service	72.59	-12.10	-6.98		-939.61	1581.91	6.87	
Dead+Wind 330 deg - Service	72.59	-6.40	-11.08		-1495.24	818.56	7.92	

Solution Summary

N	N N	M	N	N N	N	N	N
x iN	N	N	N	N	N	N	mN# N
1	0.00	-72.59	0.00	0.00	72.59	0.00	0.000%
2	0.00	-87.11	-48.50	-0.00	87.11	48.50	0.000%
3	0.00	-65.33	-48.50	-0.00	65.33	48.50	0.000%
4	27.23	-87.11	-47.17	-27.23	87.11	47.17	0.000%

N	N N	W	N	N	N N	N	N
x i	N	N	N	N	N	N	mN# N
5	27.23	-65.33	-47.17	-27.23	65.33	47.17	0.000%
6	47.17	-87.11	-27.23	-47.17	87.11	27.23	0.000%
7	47.17	-65.33	-27.23	-47.17	65.33	27.23	0.000%
8	54.46	-87.11	0.00	-54.46	87.11	0.00	0.000%
9	54.46	-65.33	0.00	-54.46	65.33	0.00	0.000%
10	42.00	-87.11	24.25	-42.00	87.11	-24.25	0.000%
11	42.00	-65.33	24.25	-42.00	65.33	-24.25	0.000%
12	22.09	-87.11	38.26	-22.09	87.11	-38.26	0.000%
13	22.09	-65.33	38.26	-22.09	65.33	-38.26	0.000%
14	0.00	-87.11	48.50	0.00	87.11	-48.50	0.000%
15	0.00	-65.33	48.50	0.00	65.33	-48.50	0.000%
16	-27.23	-87.11	47.17	27.23	87.11	-47.17	0.000%
17	-27.23	-65.33	47.17	27.23	65.33	-47.17	0.000%
18	-47.17	-87.11	27.23	47.17	87.11	-27.23	0.000%
19	-47.17	-65.33	27.23	47.17	65.33	-27.23	0.000%
20	-54.46	-87.11	0.00	54.46	87.11	0.00	0.000%
21	-54.46	-65.33	0.00	54.46	65.33	0.00	0.000%
22	-42.00	-87.11	-24.25	42.00	87.11	24.25	0.000%
23	-42.00	-65.33	-24.25	42.00	65.33	24.25	0.000%
24	-22.09	-87.11	-38.26	22.09	87.11	38.26	0.000%
25	-22.09	-65.33	-38.26	22.09	65.33	38.26	0.000%
26	0.00	-72.59	-13.97	0.00	72.59	13.97	0.000%
27	7.80	-72.59	-13.50	-7.80	72.59	13.50	0.000%
28	13.50	-72.59	-7.80	-13.50	72.59	7.80	0.000%
29	15.59	-72.59	0.00	-15.59	72.59	0.00	0.000%
30	12.10	-72.59	6.98	-12.10	72.59	-6.98	0.000%
31	6.40	-72.59	11.08	-6.40	72.59	-11.08	0.000%
32	0.00	-72.59	13.97	-0.00	72.59	-13.97	0.000%
33	-7.80	-72.59	13.50	7.80	72.59	-13.50	0.000%
34	-13.50	-72.59	7.80	13.50	72.59	-7.80	0.000%
35	-15.59	-72.59	0.00	15.59	72.59	0.00	0.000%
36	-12.10	-72.59	-6.98	12.10	72.59	6.98	0.000%
37	-6.40	-72.59	-11.08	6.40	72.59	11.08	0.000%

Maximum Tower Deflections - Service Wind

N	# N	° N	Z N	N	N
N	N	q N	N	N	N
			x i		
T1	250 - 240	4.125	29	0.1703	0.0881
T2	240 - 220	3.763	29	0.1690	0.0873
T3	220 - 200	3.056	29	0.1557	0.0792
T4	200 - 180	2.422	29	0.1348	0.0674
T5	180 - 160	1.897	29	0.1113	0.0539
T6	160 - 140	1.457	29	0.0931	0.0434
T7	140 - 120	1.095	29	0.0770	0.0355
T8	120 - 100	0.801	29	0.0608	0.0286
T9	100 - 80	0.563	29	0.0485	0.0232
T10	80 - 60	0.374	29	0.0364	0.0181
T11	60 - 40	0.221	29	0.0272	0.0134
T12	40 - 20	0.112	35	0.0181	0.0086
T13	20 - 0	0.039	35	0.0091	0.0042

Critical Deflections and Radius of Curvature - Service Wind

# N	- N	Z N	q N	N	N	N N
N		N	N	N	N	x N
		x i				
252.00	Sector Mount [SM 504-3]	29	4.125	0.1703	0.0881	623406
250.00	Flash Beacon Lighting	29	4.125	0.1703	0.0881	623406
231.00	Site Pro 1 VFA12-HD 12' Heavy	29	3.439	0.1647	0.0845	117056

	Duty V-Frame					

Maximum Tower Deflections - Design Wind

T1	250 - 240	14.588	8	0.6032	0.3234
T2	240 - 220	13.303	8	0.5987	0.3204
T3	220 - 200	10.794	8	0.5523	0.2907
T4	200 - 180	8.543	8	0.4778	0.2475
T5	180 - 160	6.680	8	0.3940	0.1979
T6	160 - 140	5.121	8	0.3288	0.1591
T7	140 - 120	3.845	8	0.2714	0.1303
T8	120 - 100	2.810	8	0.2137	0.1048
T9	100 - 80	1.973	8	0.1702	0.0849
T10	80 - 60	1.310	8	0.1275	0.0663
T11	60 - 40	0.775	8	0.0951	0.0488
T12	40 - 20	0.388	20	0.0634	0.0312
T13	20 - 0	0.132	20	0.0317	0.0152

Critical Deflections and Radius of Curvature - Design Wind

252.00	Sector Mount [SM 504-3]	8	14.588	0.6032	0.3234	212388
250.00	Flash Beacon Lighting	8	14.588	0.6032	0.3234	212388
231.00	Site Pro 1 VFA12-HD 12' Heavy Duty V-Frame	8	12.156	0.5834	0.3103	34476

Bolt Design Data

T1	250	Leg	A325N	0.7500	4	0.57	30.10	0.019	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	0.95	13.81	0.069	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	0.93	13.81	0.067	1.05	Bolt Shear
		Top Girt	A325N	0.6250	2	0.85	13.81	0.062	1.05	Bolt Shear
T2	240	Leg	A325N	0.8750	4	4.31	41.56	0.104	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.51	13.81	0.182	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.04	13.81	0.148	1.05	Bolt Shear
T3	220	Leg	A325N	1.0000	4	12.33	54.52	0.226	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	3.15	13.81	0.228	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.58	13.81	0.187	1.05	Bolt Shear
T4	200	Leg	A325N	1.0000	6	12.87	54.52	0.236	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.18	13.81	0.158	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.25	13.81	0.163	1.05	Bolt Shear
T5	180	Leg	A325N	1.0000	8	12.33	54.52	0.226	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.18	13.81	0.158	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.24	13.81	0.162	1.05	Bolt Shear
T6	160	Leg	A325N	1.0000	8	14.39	54.52	0.264	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.78	13.81	0.201	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.54	13.81	0.184	1.05	Bolt Shear

N # N x N V N V N I Λ Λ - Λ N - N x N 7N N N Z N N N V N NV N NV N - N
T7	140	Leg	A325N	1.0000	8	16.67	54.52	0.306	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.66	13.81	0.193	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	2.66	13.81	0.193	1.05	Bolt Shear
T8	120	Leg	A325N	1.0000	8	18.80	54.52	0.345	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.84	13.81	0.206	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	3.01	13.81	0.218	1.05	Bolt Shear
T9	100	Leg	A325N	1.0000	12	13.90	54.52	0.255	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	2.87	13.81	0.208	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	3.21	13.81	0.232	1.05	Bolt Shear
T10	80	Leg	A325N	1.0000	12	15.24	54.52	0.279	1.05	Bolt Tension
		Diagonal	A325N	0.6250	3	3.26	13.81	0.236	1.05	Bolt Shear
		Horizontal	A325N	0.6250	2	3.81	13.81	0.276	1.05	Bolt Shear
T11	60	Leg	A325N	1.0000	12	15.72	54.52	0.288	1.05	Bolt Tension
		Diagonal	A325N	0.7500	3	5.11	19.88	0.257	1.05	Bolt Shear
		Horizontal	A325N	0.7500	2	4.05	19.88	0.203	1.05	Bolt Shear
		Redund Horz 1 Bracing	A325N	0.6250	1	3.88	13.57	0.286	1.05	Member Bearing
		Redund Diag 1 Bracing	A325N	0.6250	1	3.52	13.57	0.260	1.05	Member Bearing
		Redund Hip 1 Bracing	A325N	0.6250	1	0.02	13.81	0.001	1.05	Bolt Shear
		Redund Hip Diagonal 1 Bracing	A325N	0.6250	1	0.06	13.81	0.005	1.05	Bolt Shear
T12	40	Leg	A325N	1.0000	12	17.10	54.52	0.314	1.05	Bolt Tension
		Diagonal	A325N	0.7500	3	5.21	19.88	0.262	1.05	Bolt Shear
		Horizontal	A325N	0.7500	2	4.36	19.88	0.219	1.05	Bolt Shear
		Redund Horz 1 Bracing	A325N	0.6250	1	4.24	13.57	0.313	1.05	Member Bearing
		Redund Diag 1 Bracing	A325N	0.6250	1	3.61	7.77	0.465	1.05	Member Bearing
		Redund Hip 1 Bracing	A325N	0.6250	1	0.02	13.81	0.001	1.05	Bolt Shear
		Redund Hip Diagonal 1 Bracing	A325N	0.6250	1	0.06	13.81	0.004	1.05	Bolt Shear
T13	20	Diagonal	A325N	0.7500	3	5.18	19.88	0.261	1.05	Bolt Shear
		Horizontal	A325N	0.7500	2	4.68	19.88	0.236	1.05	Bolt Shear
		Redund Horz 1 Bracing	A325N	0.6250	1	5.02	13.57	0.370	1.05	Member Bearing
		Redund Diag 1 Bracing	A325N	0.6250	1	4.02	7.77	0.518	1.05	Member Bearing
		Redund Hip 1 Bracing	A325N	0.6250	1	0.02	13.81	0.001	1.05	Bolt Shear
		Redund Hip Diagonal 1 Bracing	A325N	0.6250	1	0.07	13.81	0.005	1.05	Bolt Shear

5

Leg Design Data (Compression)

N # N N N N N EN - N N □ N N 7N N N N N N N hN N N N N □ N
T1	250 - 240	ROHN 2.5 STD	10.00	5.00	63.3 K=1.00	1.7040	-5.04	57.19	0.088 [1]
T2	240 - 220	ROHN 3 STD	20.00	6.67	68.8 K=1.00	2.2285	-23.34	70.98	0.329 [1]
T3	220 - 200	ROHN 4 X-STR	20.00	6.67	54.2 K=1.00	4.4074	-56.83	160.03	0.355 [1]
T4	200 - 180	ROHN 5 EH	20.04	6.68	43.6	6.1120	-86.86	239.38	0.363 [1]

N 7N	# N N N	N N	N N N	N N	EN N	- N N hN	N N	N N	N N
T5	180 - 160	ROHN 6 EH	20.04	6.68	36.5 K=1.00	8.4049	-110.97	343.08	0.323 [1]
T6	160 - 140	ROHN 8 EHS	20.04	10.02	40.6 K=1.00	9.8666	-130.09	393.65	0.330 [1]
T7	140 - 120	ROHN 8 EHS	20.05	10.03	40.6 K=1.00	9.8666	-151.60	393.60	0.385 [1]
T8	120 - 100	ROHN 8 X-STR	20.05	10.03	41.8 K=1.00	12.762 7	-172.51	505.43	0.341 [1]
T9	100 - 80	ROHN 8 X-STR	20.06	10.03	41.8 K=1.00	12.762 7	-193.11	505.39	0.382 [1]
T10	80 - 60	ROHN 10 EH	20.05	10.03	33.2 K=1.00	16.100 7	-214.03	668.56	0.320 [1]
T11	60 - 40	ROHN 10 X-STR	20.05	10.03	33.2 K=1.00	16.100 7	-223.30	668.56	0.334 [1]
T12	40 - 20	ROHN 10 X-STR	20.05	10.03	33.2 K=1.00	16.100 7	-244.60	668.56	0.366 [1]
T13	20 - 0	ROHN 10 EH	20.05	0.08	0.3 K=1.00	16.100 7	-289.09	724.53	0.399 [1]

[1] NN/ controls

Diagonal Design Data (Compression)

N 7N	# N N N	N N	N N N	N N	EN N	- N N hN	N N	N N	N N
T1	250 - 240	ROHN 2 STD	6.58	6.39	97.4 K=1.00	1.0745	-2.86	24.15	0.119 [1]
T2	240 - 220	ROHN 2 STD	7.94	7.67	117.0 K=1.00	1.0745	-7.54	17.75	0.425 [1]
T3	220 - 200	ROHN 2 X-STR	7.96	7.62	119.3 K=1.00	1.4773	-9.45	23.45	0.403 [1]
T4	200 - 180	ROHN 2 X-STR	8.58	8.21	128.5 K=1.00	1.4773	-6.50	20.20	0.322 [1]
T5	180 - 160	ROHN 2 X-STR	9.29	8.89	139.2 K=1.00	1.4773	-6.47	17.22	0.376 [1]
T6	160 - 140	ROHN 2.5 X-STR	12.56	11.95	155.2 K=1.00	2.2535	-8.33	21.12	0.394 [1]
T7	140 - 120	ROHN 3 STD	13.35	12.80	132.0 K=1.00	2.2285	-7.99	28.89	0.277 [1]
T8	120 - 100	ROHN 3 STD	14.21	13.70	141.3 K=1.00	2.2285	-8.51	25.21	0.338 [1]
T9	100 - 80	ROHN 3 STD	15.18	14.70	151.6 K=1.00	2.2285	-8.60	21.89	0.393 [1]
T10	80 - 60	ROHN 3 STD	16.14	15.57	160.6 K=1.00	2.2285	-9.78	19.52	0.501 [1]
T11	60 - 40	ROHN 3 STD	24.38	12.19	125.7 K=1.00	2.2285	-15.32	31.86	0.481 [1]
T12	40 - 20	ROHN 3 STD	25.11	12.56	129.5 K=1.00	2.2285	-15.64	30.03	0.521 [1]
T13	20 - 0	ROHN 3 STD	25.82	12.91	133.1 K=1.00	2.2285	-15.55	28.41	0.547 [1]

[1] NN/ controls

Horizontal Design Data (Compression)

N	# N	N	N	N	EN	- N	N	□ N	N
7N	N	N	N	N	N	N	N	N	N
	N		N	N		hN		N	□ N
T1	250 - 240	ROHN 1.5 STD	8.52	4.14	79.8 K=1.00	0.7995	-1.81	22.58	0.080 [1]
T2	240 - 220	ROHN 1.5 STD	8.60	4.15	80.0 K=1.00	0.7995	-4.05	22.52	0.180 [1]
T3	220 - 200	ROHN 1.5 STD	8.68	4.15	80.0 K=1.00	0.7995	-5.11	22.52	0.227 [1]
T4	200 - 180	ROHN 1.5 STD	10.10	4.82	92.8 K=1.00	0.7995	-4.10	19.16	0.214 [1]
T5	180 - 160	ROHN 2 STD	12.22	5.83	88.9 K=1.00	1.0745	-4.47	27.13	0.165 [1]
T6	160 - 140	ROHN 2 STD	14.05	6.66	101.6 K=1.00	1.0745	-5.09	22.75	0.224 [1]
T7	140 - 120	ROHN 2 STD	16.43	7.85	119.7 K=1.00	1.0745	-5.33	16.95	0.314 [1]
T8	120 - 100	ROHN 2.5 STD	18.93	9.10	115.3 K=1.00	1.7040	-5.97	28.95	0.206 [1]
T9	100 - 80	ROHN 2.5 STD	21.51	10.39	131.6 K=1.00	1.7040	-6.31	22.21	0.284 [1]
T10	80 - 60	ROHN 2.5 STD	24.08	11.59	146.8 K=1.00	1.7040	-7.25	17.85	0.406 [1]
T11	60 - 40	ROHN 3 STD	25.33	12.22	126.0 K=1.00	2.2285	-8.09	31.70	0.255 [1]
T12	40 - 20	ROHN 3 STD	27.83	13.47	138.9 K=1.00	2.2285	-8.73	26.09	0.334 [1]
T13	20 - 0	ROHN 3 STD	30.33	14.72	151.8 K=1.00	2.2285	-9.37	21.85	0.429 [1]

[1] NN/ □ controls

Top Girt Design Data (Compression)

N	# N	N	N	N	EN	- N	N	□ N	N
7N	N	N	N	N	N	N	N	N	N
	N		N	N		hN		N	□ N
T1	250 - 240	ROHN 1.5 STD	8.50	4.13	79.6 K=1.00	0.7995	-1.70	22.63	0.075 [1]

[1] NN/ □ controls

Redundant Horizontal (1) Design Data (Compression)

N	# N	N	N	N	EN	- N	N	□ N	N
7N	N	N	N	N	N	N	N	N	N
	N		N	N		hN		N	□ N
T11	60 - 40	ROHN 1.5 STD	6.33	5.89	113.4 K=1.00	0.7995	-3.88	14.04	0.276 [1]
T12	40 - 20	ROHN 1.5 STD	6.96	6.51	125.5 K=1.00	0.7995	-4.24	11.47	0.370 [1]
T13	20 - 0	ROHN 1.5 STD	7.58	7.14	137.5 K=1.00	0.7995	-5.02	9.55	0.525 [1]

[1] NN/ □ controls

Redundant Diagonal (1) Design Data (Compression)

N N	# N	N N	N N	N N	N N	EN N	- N N	N N	N N	N N
T11	60 - 40	ROHN 1.5 STD	11.52	10.62	204.7 K=1.00	0.7995	-3.52	4.31	0.817 [1]
T12	40 - 20	ROHN 2.25 TUBE	11.84	11.01	172.3 K=1.00	0.5651	-3.61	4.30	0.840 [1]
T13	20 - 0	ROHN 2.25 TUBE	12.16	11.37	178.0 K=1.00	0.5651	-4.02	4.03	0.998 [1]

[1] N_N/ controls

Redundant Hip (1) Design Data (Compression)

N N	# N	N N	N N	N N	N N	EN N	- N N	N N	N N	N N
T11	60 - 40	ROHN 1.5 STD	6.33	6.33	122.1 K=1.00	0.7995	-0.02	12.12	0.002 [1]
T12	40 - 20	ROHN 1.5 STD	6.96	6.96	134.1 K=1.00	0.7995	-0.02	10.04	0.002 [1]
T13	20 - 0	ROHN 1.5 STD	7.58	7.58	146.2 K=1.00	0.7995	-0.02	8.45	0.002 [1]

[1] N_N/ controls

Redundant Hip Diagonal (1) Design Data (Compression)

N N	# N	N N	N N	N N	N N	EN N	- N N	N N	N N	N N
T11	60 - 40	ROHN 2.5 STD	15.13	15.13	191.6 K=1.00	1.7040	-0.06	10.49	0.006 [1]
T12	40 - 20	ROHN 2.5 STD	15.95	15.95	202.1 K=1.00	1.7040	-0.06	9.43	0.007 [1]
T13	20 - 0	ROHN 3 STD	16.78	16.78	173.1 K=1.00	2.2285	-0.07	16.81	0.004 [1]

[1] N_N/ controls

Inner Bracing Design Data (Compression)

N N	# N	N N	N N	N N	N N	EN N	- N N	N N	N N	N N
T1	250 - 240	L2x2x1/8	4.25	4.25	128.3 K=1.00	0.4844	-0.00	8.42	0.000 [1]
T2	240 - 220	L2x2x1/8	4.30	4.30	129.8 K=1.00	0.4844	-0.00	8.23	0.001 [1]
T3	220 - 200	L2x2x1/8	4.34	4.34	131.0 K=1.00	0.4844	-0.01	8.08	0.001 [1]
T4	200 - 180	L2x2x1/8	4.35	4.35	131.4 K=1.00	0.4844	-0.01	8.03	0.001 [1]
T5	180 - 160	L2x2x1/8	6.11	6.11	184.4 K=1.00	0.4844	-0.01	4.08	0.001 [1]

N	# N	N	N	N	EN	- N	N	N	N
7N	N	N	N	N	N	N	N	N	N
	N			N		hN	N	N	N
T6	160 - 140	L2x2x1/8	7.03	7.03	212.1 K=1.00	0.4844	-0.01	3.08	0.002 [1]
T7	140 - 120	L2 1/2x2 1/2x3/16	8.21	8.21	199.1 K=1.00	0.9020	-0.01	6.51	0.001 [1]
T8	120 - 100	L3x3x3/16	9.46	9.46	190.5 K=1.00	1.0900	-0.01	8.59	0.001 [1]
T9	100 - 80	L3 1/2x3 1/2x1/4	10.75	10.75	185.9 K=1.00	1.6900	-0.01	13.99	0.001 [1]
T10	80 - 60	L3 1/2x3 1/2x1/4	12.04	12.04	208.2 K=1.00	1.6900	-0.01	11.16	0.001 [1]
T11	60 - 40	ROHN 3 STD	12.67	12.67	130.6 K=1.00	2.2285	-0.01	29.50	0.000 [1]
T12	40 - 20	ROHN 3 STD	13.92	13.92	143.5 K=1.00	2.2285	-0.01	24.44	0.001 [1]
T13	20 - 0	ROHN 3 STD	15.17	15.17	156.4 K=1.00	2.2285	-0.01	20.58	0.001 [1]

[1] NN/ controls

5

Leg Design Data (Tension)

N	# N	N	N	N	EN	- N	N	N	N
7N	N	N	N	N	N	N	N	N	N
	N			N		hN	N	N	N
T1	250 - 240	ROHN 2.5 STD	10.00	5.00	63.3	1.7040	2.27	76.68	0.030 [1]
T2	240 - 220	ROHN 3 STD	20.00	6.67	68.8	2.2285	17.23	100.28	0.172 [1]
T3	220 - 200	ROHN 4 X-STR	20.00	6.67	54.2	4.4074	49.32	198.34	0.249 [1]
T4	200 - 180	ROHN 5 EH	20.04	6.68	43.6	6.1120	77.20	275.04	0.281 [1]
T5	180 - 160	ROHN 6 EH	20.04	6.68	36.5	8.4049	98.65	378.22	0.261 [1]
T6	160 - 140	ROHN 8 EHS	20.04	10.02	40.6	9.8666	115.09	444.00	0.259 [1]
T7	140 - 120	ROHN 8 EHS	20.05	10.03	40.6	9.8666	133.33	444.00	0.300 [1]
T8	120 - 100	ROHN 8 X-STR	20.05	10.03	41.8	12.7627	150.37	574.32	0.262 [1]
T9	100 - 80	ROHN 8 X-STR	20.06	10.03	41.8	12.7627	166.74	574.32	0.290 [1]
T10	80 - 60	ROHN 10 EH	20.05	10.03	33.2	16.1007	182.85	724.53	0.252 [1]
T11	60 - 40	ROHN 10 X-STR	20.05	10.03	33.2	16.1007	189.26	724.53	0.261 [1]
T12	40 - 20	ROHN 10 X-STR	20.05	10.03	33.2	16.1007	205.76	724.53	0.284 [1]
T13	20 - 0	ROHN 10 EH	20.05	0.08	0.3	16.1007	240.95	724.53	0.333 [1]

[1] NN/ controls

Diagonal Design Data (Tension)

N	# N	N	N	N	EN	- N	N	N	N
7N	N	N	N	N	N	N	N	N	N
	N			N		hN	N	N	N
T1	250 - 240	ROHN 2 STD	6.58	6.39	97.4	1.0745	2.79	48.35	0.058 [1]
T2	240 - 220	ROHN 2 STD	7.94	7.67	117.0	1.0745	7.47	48.35	0.154 [1]
T3	220 - 200	ROHN 2 X-STR	7.96	7.62	119.3	1.4773	9.36	66.48	0.141 [1]
T4	200 - 180	ROHN 2 X-STR	8.16	7.79	122.0	1.4773	6.44	66.48	0.097 [1]

T5	180 - 160	ROHN 2 X-STR	9.04	8.65	135.4	1.4773	6.41	66.48	0.096 [1]
T6	160 - 140	ROHN 2.5 X-STR	12.56	11.95	155.2	2.2535	8.11	101.41	0.080 [1]
T7	140 - 120	ROHN 3 STD	13.35	12.80	132.0	2.2285	7.72	100.28	0.077 [1]
T8	120 - 100	ROHN 3 STD	14.21	13.70	141.3	2.2285	8.15	100.28	0.081 [1]
T9	100 - 80	ROHN 3 STD	15.18	14.70	151.6	2.2285	8.14	100.28	0.081 [1]
T10	80 - 60	ROHN 3 STD	16.14	15.57	160.6	2.2285	9.25	100.28	0.092 [1]
T11	60 - 40	ROHN 3 STD	24.38	12.19	125.7	2.2285	14.15	100.28	0.141 [1]
T12	40 - 20	ROHN 3 STD	25.11	12.56	129.5	2.2285	14.35	100.28	0.143 [1]
T13	20 - 0	ROHN 3 STD	25.82	12.91	133.1	2.2285	14.41	100.28	0.144 [1]

1 N_N/ controls

Horizontal Design Data (Tension)

T1	250 - 240	ROHN 1.5 STD	8.52	4.14	79.8	0.7995	1.85	35.98	0.051 [1]
T2	240 - 220	ROHN 1.5 STD	8.60	4.15	80.0	0.7995	4.08	35.98	0.114 [1]
T3	220 - 200	ROHN 1.5 STD	8.68	4.15	80.0	0.7995	5.15	35.98	0.143 [1]
T4	200 - 180	ROHN 1.5 STD	8.71	4.12	79.5	0.7995	4.19	35.98	0.117 [1]
T5	180 - 160	ROHN 2 STD	12.22	5.83	88.9	1.0745	4.47	48.35	0.092 [1]
T6	160 - 140	ROHN 2 STD	14.05	6.66	101.6	1.0745	5.07	48.35	0.105 [1]
T7	140 - 120	ROHN 2 STD	16.43	7.85	119.7	1.0745	5.32	48.35	0.110 [1]
T8	120 - 100	ROHN 2.5 STD	18.93	9.10	115.3	1.7040	6.01	76.68	0.078 [1]
T9	100 - 80	ROHN 2.5 STD	21.51	10.39	131.6	1.7040	6.41	76.68	0.084 [1]
T10	80 - 60	ROHN 2.5 STD	24.08	11.59	146.8	1.7040	7.61	76.68	0.099 [1]
T11	60 - 40	ROHN 3 STD	25.33	12.22	126.0	2.2285	8.05	100.28	0.080 [1]
T12	40 - 20	ROHN 3 STD	27.83	13.47	138.9	2.2285	8.60	100.28	0.086 [1]
T13	20 - 0	ROHN 3 STD	30.33	14.72	151.8	2.2285	9.20	100.28	0.092 [1]

1 N_N/ controls

Top Girt Design Data (Tension)

T1	250 - 240	ROHN 1.5 STD	8.50	4.13	79.6	0.7995	1.70	35.98	0.047 [1]

1 N_N/ controls

Redundant Horizontal (1) Design Data (Tension)

T11	60 - 40	ROHN 1.5 STD	6.33	5.89	113.4	0.7995	3.88	35.98	0.108 [1]
T12	40 - 20	ROHN 1.5 STD	6.96	6.51	125.5	0.7995	4.24	35.98	0.118 [1]
T13	20 - 0	ROHN 1.5 STD	7.58	7.14	137.5	0.7995	5.02	35.98	0.139 [1]

1 N_N/ controls

Redundant Diagonal (1) Design Data (Tension)

T11	60 - 40	ROHN 1.5 STD	11.52	10.62	204.7	0.7995	3.52	35.98	0.098 [1]
T12	40 - 20	ROHN 2.25 TUBE	11.84	11.01	172.3	0.5651	3.61	25.43	0.142 [1]
T13	20 - 0	ROHN 2.25 TUBE	12.16	11.37	178.0	0.5651	4.02	25.43	0.158 [1]

[1] NN/ controls

Redundant Hip (1) Design Data (Tension)

T11	60 - 40	ROHN 1.5 STD	6.33	6.33	122.1	0.7995	0.01	35.98	0.000 [1]
T12	40 - 20	ROHN 1.5 STD	6.96	6.96	134.1	0.7995	0.01	35.98	0.000 [1]
T13	20 - 0	ROHN 1.5 STD	7.58	7.58	146.2	0.7995	0.01	35.98	0.000 [1]

[1] NN/ controls

Redundant Hip Diagonal (1) Design Data (Tension)

T11	60 - 40	ROHN 2.5 STD	15.13	15.13	191.6	1.7040	0.06	76.68	0.001 [1]
T12	40 - 20	ROHN 2.5 STD	15.95	15.95	202.1	1.7040	0.06	76.68	0.001 [1]
T13	20 - 0	ROHN 3 STD	16.78	16.78	173.1	2.2285	0.06	100.28	0.001 [1]

[1] NN/ controls

Inner Bracing Design Data (Tension)

T1	250 - 240	L2x2x1/8	4.25	4.25	81.4	0.4844	0.00	15.69	0.000 [1]
T2	240 - 220	L2x2x1/8	4.30	4.30	82.4	0.4844	0.00	15.69	0.000 [1]
T3	220 - 200	L2x2x1/8	4.34	4.34	83.2	0.4844	0.00	15.69	0.000 [1]
T4	200 - 180	L2x2x1/8	4.35	4.35	83.4	0.4844	0.00	15.69	0.000 [1]
T5	180 - 160	L2x2x1/8	5.40	5.40	103.4	0.4844	0.00	15.69	0.000 [1]
T6	160 - 140	L2x2x1/8	6.46	6.46	123.9	0.4844	0.00	15.69	0.000 [1]

[1] NN/ controls

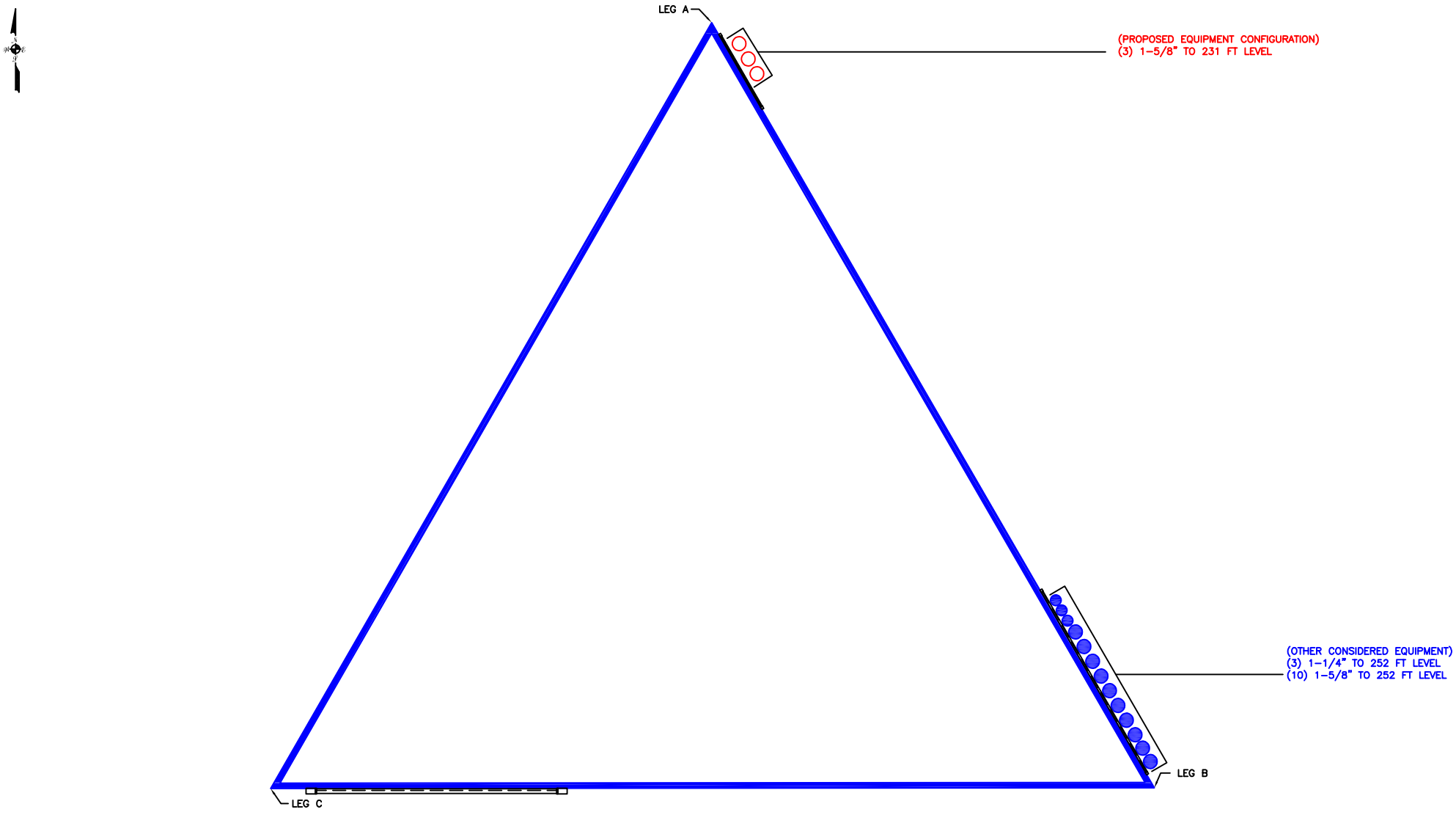
Section Capacity Table

S Λ ïΛ	# N N	x N N	N	x N #	N Λ N	N	mN x	N /
T1	250 - 240	Leg	ROHN 2.5 STD	2	-5.04	60.05	8.4	Pass
T2	240 - 220	Leg	ROHN 3 STD	29	-23.34	74.53	31.3	Pass
T3	220 - 200	Leg	ROHN 4 X-STR	67	-56.83	168.03	33.8	Pass
T4	200 - 180	Leg	ROHN 5 EH	106	-86.86	251.35	34.6	Pass
T5	180 - 160	Leg	ROHN 6 EH	145	-110.97	360.24	30.8	Pass
T6	160 - 140	Leg	ROHN 8 EHS	184	-130.09	413.33	31.5	Pass
T7	140 - 120	Leg	ROHN 8 EHS	211	-151.60	413.28	36.7	Pass
T8	120 - 100	Leg	ROHN 8 X-STR	238	-172.51	530.71	32.5	Pass
T9	100 - 80	Leg	ROHN 8 X-STR	265	-193.11	530.66	36.4	Pass
T10	80 - 60	Leg	ROHN 10 EH	292	-214.03	701.99	30.5	Pass
T11	60 - 40	Leg	ROHN 10 X-STR	319	-223.30	701.99	31.8	Pass
T12	40 - 20	Leg	ROHN 10 X-STR	352	-244.60	701.99	34.8	Pass
T13	20 - 0	Leg	ROHN 10 EH	385	-289.09	760.75	38.0	Pass
T1	250 - 240	Diagonal	ROHN 2 STD	8	-2.86	25.36	11.3	Pass
T2	240 - 220	Diagonal	ROHN 2 STD	32	-7.54	18.63	40.5	Pass
T3	220 - 200	Diagonal	ROHN 2 X-STR	71	-9.45	24.62	38.4	Pass
T4	200 - 180	Diagonal	ROHN 2 X-STR	110	-6.50	21.21	30.7	Pass
T5	180 - 160	Diagonal	ROHN 2 X-STR	149	-6.47	18.08	35.8	Pass
T6	160 - 140	Diagonal	ROHN 2.5 X-STR	188	-8.33	22.18	37.5	Pass
T7	140 - 120	Diagonal	ROHN 3 STD	215	-7.99	30.33	26.4	Pass
T8	120 - 100	Diagonal	ROHN 3 STD	242	-8.51	26.47	32.2	Pass
T9	100 - 80	Diagonal	ROHN 3 STD	269	-8.60	22.99	37.4	Pass
T10	80 - 60	Diagonal	ROHN 3 STD	296	-9.78	20.50	47.7	Pass
T11	60 - 40	Diagonal	ROHN 3 STD	323	-15.32	33.46	45.8	Pass
T12	40 - 20	Diagonal	ROHN 3 STD	356	-15.64	31.53	49.6	Pass
T13	20 - 0	Diagonal	ROHN 3 STD	389	-15.55	29.83	52.1	Pass
T1	250 - 240	Horizontal	ROHN 1.5 STD	7	-1.81	23.71	7.6	Pass
T2	240 - 220	Horizontal	ROHN 1.5 STD	31	-4.05	23.65	17.1	Pass
T3	220 - 200	Horizontal	ROHN 1.5 STD	70	-5.11	23.65	21.6	Pass
T4	200 - 180	Horizontal	ROHN 1.5 STD	109	-4.10	20.11	20.4	Pass
T5	180 - 160	Horizontal	ROHN 2 STD	148	-4.47	28.49	15.7	Pass
T6	160 - 140	Horizontal	ROHN 2 STD	187	-5.09	23.88	21.3	Pass
T7	140 - 120	Horizontal	ROHN 2 STD	214	-5.33	17.80	29.9	Pass
T8	120 - 100	Horizontal	ROHN 2.5 STD	241	-5.97	30.40	19.6	Pass
T9	100 - 80	Horizontal	ROHN 2.5 STD	268	-6.31	23.33	27.0	Pass
T10	80 - 60	Horizontal	ROHN 2.5 STD	295	-7.25	18.74	38.7	Pass
T11	60 - 40	Horizontal	ROHN 3 STD	322	-8.09	33.29	24.3	Pass
T12	40 - 20	Horizontal	ROHN 3 STD	355	-8.73	27.40	31.9	Pass
T13	20 - 0	Horizontal	ROHN 3 STD	388	-9.37	22.94	40.8	Pass
T1	250 - 240	Top Girt	ROHN 1.5 STD	4	-1.70	23.77	7.2	Pass
T11	60 - 40	Redund Horz 1 Bracing	ROHN 1.5 STD	324	-3.88	14.74	26.3	Pass
T12	40 - 20	Redund Horz 1 Bracing	ROHN 1.5 STD	357	-4.24	12.04	35.2	Pass
T13	20 - 0	Redund Horz 1 Bracing	ROHN 1.5 STD	390	-5.02	10.03	50.0	Pass
T11	60 - 40	Redund Diag 1 Bracing	ROHN 1.5 STD	325	-3.52	4.53	77.8	Pass
T12	40 - 20	Redund Diag 1 Bracing	ROHN 2.25 TUBE	358	-3.61	4.52	80.0	Pass
T13	20 - 0	Redund Diag 1 Bracing	ROHN 2.25 TUBE	410	-4.02	4.23	95.1	Pass
T11	60 - 40	Redund Hip 1 Bracing	ROHN 1.5 STD	347	-0.02	12.73	0.2	Pass
T12	40 - 20	Redund Hip 1 Bracing	ROHN 1.5 STD	380	-0.02	10.54	0.2	Pass
T13	20 - 0	Redund Hip 1 Bracing	ROHN 1.5 STD	413	-0.02	8.88	0.2	Pass
T11	60 - 40	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	337	-0.06	11.01	0.6	Pass
T12	40 - 20	Redund Hip Diagonal 1 Bracing	ROHN 2.5 STD	370	-0.06	9.90	0.6	Pass
T13	20 - 0	Redund Hip Diagonal 1 Bracing	ROHN 3 STD	403	-0.07	17.65	0.4	Pass
T1	250 - 240	Inner Bracing	L2x2x1/8	18	-0.00	8.80	0.1	Pass
T2	240 - 220	Inner Bracing	L2x2x1/8	42	-0.00	8.65	0.1	Pass
T3	220 - 200	Inner Bracing	L2x2x1/8	79	-0.00	8.48	0.1	Pass
T4	200 - 180	Inner Bracing	L2x2x1/8	120	-0.00	6.27	0.1	Pass
T5	180 - 160	Inner Bracing	L2x2x1/8	159	-0.01	4.28	0.1	Pass
T6	160 - 140	Inner Bracing	L2x2x1/8	198	-0.01	3.24	0.2	Pass

S]N	# N	x N	N	x N #	N N	N x	mN I	N / N
T7	140 - 120	Inner Bracing	L2 1/2x2 1/2x3/16	225	-0.01	6.84	0.2	Pass
T8	120 - 100	Inner Bracing	L3x3x3/16	252	-0.01	9.02	0.2	Pass
T9	100 - 80	Inner Bracing	L3 1/2x3 1/2x1/4	279	-0.01	14.69	0.2	Pass
T10	80 - 60	Inner Bracing	L3 1/2x3 1/2x1/4	306	-0.01	11.72	0.2	Pass
T11	60 - 40	Inner Bracing	ROHN 3 STD	351	-0.01	30.98	0.2	Pass
T12	40 - 20	Inner Bracing	ROHN 3 STD	383	-0.01	25.66	0.3	Pass
T13	20 - 0	Inner Bracing	ROHN 3 STD	416	-0.01	21.61	0.3	Pass
							Summary	
						Leg (T13)	38.0	Pass
						Diagonal (T13)	52.1	Pass
						Horizontal (T13)	40.8	Pass
						Top Girt (T1)	7.2	Pass
						Redund Horz 1 Bracing (T13)	50.0	Pass
						Redund Diag 1 Bracing (T13)	95.1	Pass
						Redund Hip 1 Bracing (T13)	0.2	Pass
						Redund Hip Diagonal 1 Bracing (T12)	0.6	Pass
						Inner Bracing (T13)	0.3	Pass
						Bolt Checks	49.3	Pass
						RATING =	**95.1**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 809328 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Self Support Anchor Rod Capacity

Site Info	
BU #	809328
Site Name	AKE CITY W J-FL-012-0
Order #	565094 Rev. 0

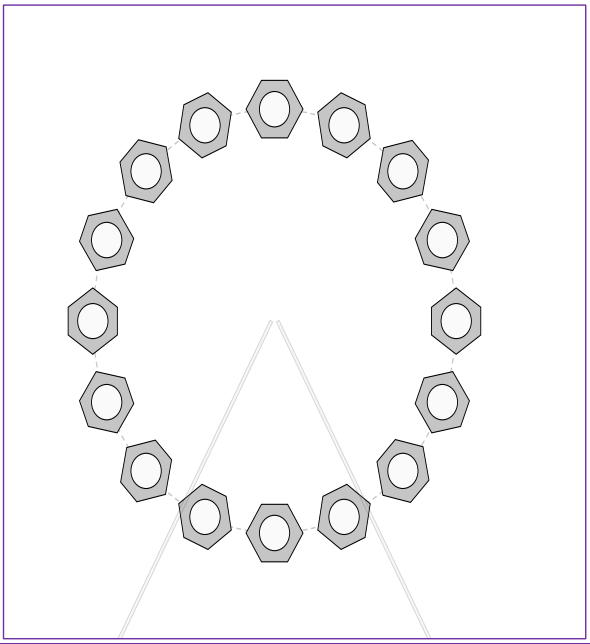
Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	Yes
l_{ar} (in)	1.75

Applied Loads		
	Comp.	Uplift
Axial Force (kips)	287.37	239.42
Shear Force (kips)	34.27	29.87

**TIA-222-H Section 15.5 Applied*

Considered Eccentricity	
Leg Mod Eccentricity (in)	0.000
Anchor Rod N.A Shift (in)	0.000
Total Eccentricity (in)	0.000

**Anchor Rod Eccentricity Applied*



Connection Properties

Anchor Rod Data

(16) 1" ø bolts (A354-BC N; Fy=109 ksi, Fu=125 ksi)

l_{ar} (in): 1.75

Analysis Results

Anchor Rod Summary *(units of kips, kip-in)*

Pu_t = 14.96	ϕPn_t = 56.81	**Stress Rating**
Vu = 1.87	ϕVn = 36.82	**25.1%**
Mu = n/a	ϕMn = n/a	**Pass**

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Phone: (913) 458-6909

Client:	Crown Castle	***Design:***	TYM
Project:	406642 (809328.1982212)	***Date:***	6/23/2021
Site:	LAKE CITY W J-FL-012-058	***Verify:***	
Title:	Foundation Design Reaction Comparison	***Date:***	6/23/2021
		Code:	TIA-222-H

Template Version 1.8

FOUNDATION ANALYSIS:

Original Tower Design Reactions:

Drilled Caisson:

Uplift:	662.0	Kip
Shear:	135.1	Kip
Compression:	747.2	Kip
Shear:	135.1	Kip

Note: Design reactions are multiplied by 1.35 for comparison as allowed by TIA-222-H Section 15.6.2.

TnxTower Reactions:

Drilled Caisson:

Uplift:	239.4	Kip
Shear:	29.9	Kip
Compression:	287.4	Kip
Shear:	34.3	Kip

Stress Ratio:

Drilled Caisson:

Uplift:	**34.4%**
Shear:	**21.1%**
Compression:	**36.6%**
Shear:	**24.2%**

Note: Ratings per TIA-222-H Section 15.5.

Conclusion:

When the calculated reactions are compared to the original design reactions, the existing foundation is considered to have been designed and constructed with adequate capacity to support the existing and proposed loads.

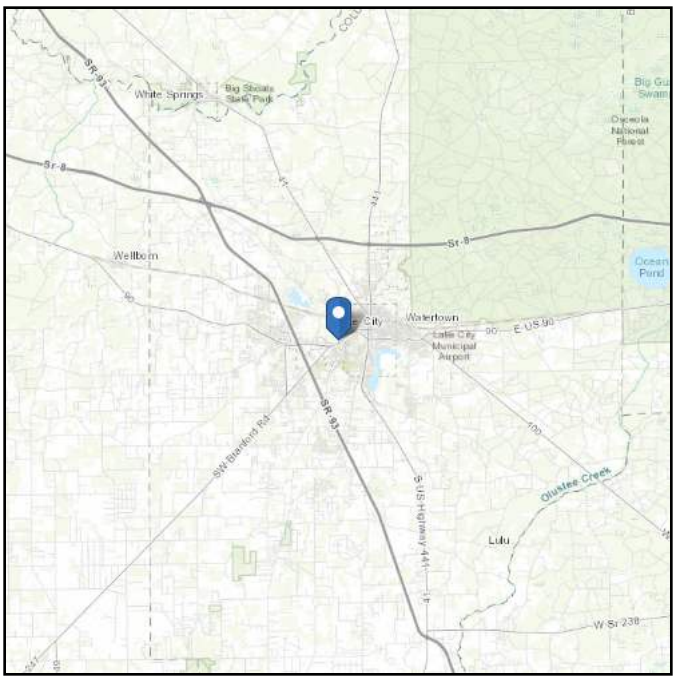
Controlling Foundation Stress Ratio: **36.6%**

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

Elevation: 166.05 ft (NAVD 88)
Latitude: 30.182344
Longitude: -82.660558



Wind

Results:

Wind Speed:	118 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source: ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed: Fri Jun 18 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

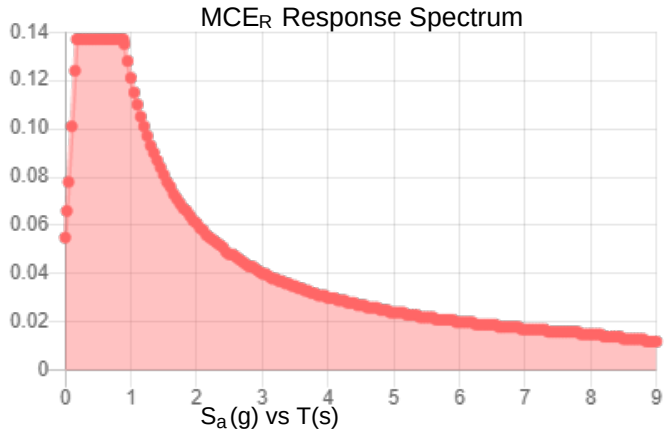
Seismic

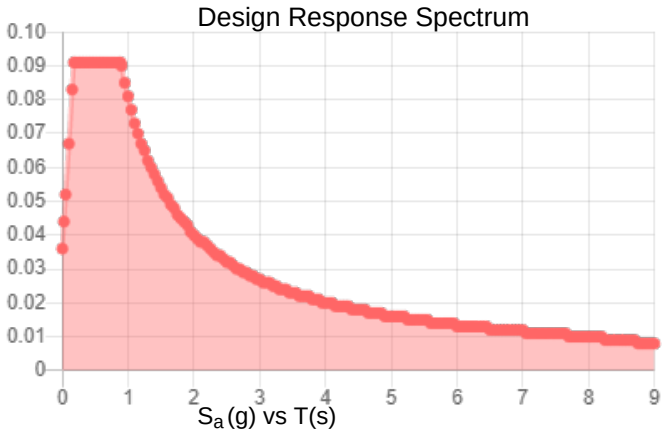
Site Soil Class: D - Default (see Section 11.4.3)

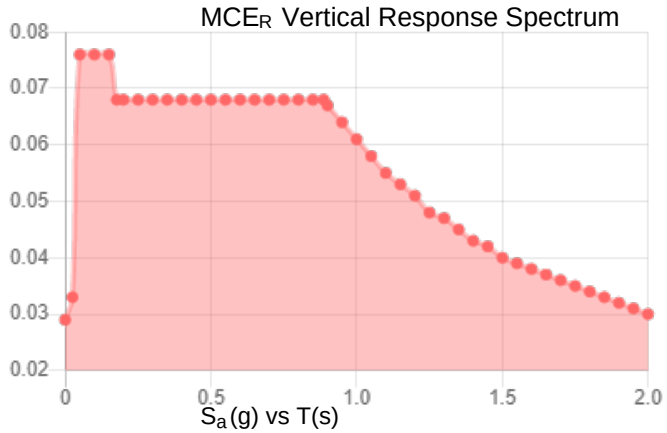
Results:

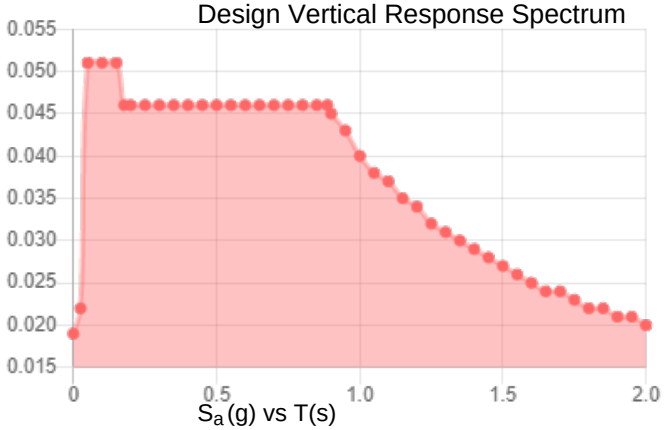
S_S :	0.085	S_{D1} :	0.081
S_1 :	0.051	T_L :	8
F_a :	1.6	PGA :	0.041
F_v :	2.4	PGA_M :	0.065
S_{MS} :	0.137	F_{PGA} :	1.6
S_{M1} :	0.121	I_e :	1
S_{DS} :	0.091	C_v :	0.7

Seismic Design Category B









Data Accessed: Fri Jun 18 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.25 in.
Concurrent Temperature:	25 F
Gust Speed:	30 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Fri Jun 18 2021

Ice thicknesses on structures in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.