Date: **March 16, 2023**

MORRISON HERSHFIELD

Morrison Hershfield
1455 Lincoln Parkway, Suite 500
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(770) 379-8500

Structural Analysis Report

4 ***4***

Co-Locate

Site Number:	9JK2819A
Site Name:	SE Lake City

4 ***4***

BU Number:	846221
Site Name:	SE Lake City
JDE Job Number:	737849
Work Order Number:	2212446
Order Number:	640916 Rev. 0

4 ***4*** **Morrison Hershfield Project Number:** CN12-319 / 2300001

4 **603 Southwest Wendy Terrace, Lake City, Columbia Co., FL 32025**
Latitude ***4 4*** **, Longitude** ***4 4***
300 Foot - Cellxion Guyed Tower

Morrison Hershfield 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 119 mph as required by the 2020 Florida Building Code 7th Edition. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

G. Lance Cooke, P.E. (FL License No. 68787)
Senior Engineer

Certificate of Authorization # 8508

G. LANCE COOKE LICENSE No 68787 STATE OF FLORIDA PROFESSIONAL ENGINEER
EXP 2/28/25

Digitally signed by G. Lance Cooke
Date: 2023.03.16 20:14:35+05'30'

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1) INTRODUCTION

This tower is a 300 ft guyed tower designed by Cellxion.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	119 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)
260.0	260.0	3	commscope	FFVV-65C-R3-V1_TMO w/ Mount Pipe	2	1-5/8
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		3	ericsson	Radio 4480_TMOV2		
		3	Sabre	12' V-Boom Mount [#C10857111]		

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)
270.0	272.0	3	andrew	DBXLH-9090C-R2M w/ Mount Pipe	18 6 3 3	1-5/8 3/4 3/8 5/16
		6	commscope	NNHH-65B-R4 w/ Mount Pipe		
		3	commscope	SBNHH-1D65B w/ Mount Pipe		
		6	andrew	E15Z01P06		
		6	ericsson	RRUS 11		
		3	ericsson	RRUS 32 B30		
		3	ericsson	RRUS 4426 B66		
		3	ericsson	RRUS 4478 B14		
		3	ericsson	RRUS 4478 B5		
		1	raycap	DC6-48-60-18-8C		
		2	raycap	DC6-48-60-18-8F		
	270.0	6	andrew	CBC819-DF		
		1	-	Sector Mount [SM 502-3]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	4552457	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	5167325	CCISITES
4-TOWER MANUFACTURER DRAWINGS	4720742	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. Morrison Hershfield should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T1	300 - 280	Leg	2	1	-36.40	96.63	37.7	Pass
T2	280 - 260	Leg	2	49	-58.44	96.63	60.5	Pass
T3	260 - 240	Leg	2	97	-52.66	96.63	54.5	Pass
T4	240 - 220	Leg	2 1/2	145	-45.93	176.22	26.1	Pass
T5	220 - 200	Leg	2 1/4	194	-40.09	133.83	30.0	Pass
T6	200 - 180	Leg	2 1/4	242	-47.33	133.83	35.4	Pass
T7	180 - 160	Leg	2 1/4	290	-55.72	133.83	41.6	Pass
T8	160 - 140	Leg	2 1/4	338	-42.97	133.83	32.1	Pass
T9	140 - 120	Leg	2 1/4	386	-49.49	133.83	37.0	Pass
T10	120 - 100	Leg	2 1/4	433	-57.75	133.83	43.2	Pass
T11	100 - 80	Leg	2 1/4	481	-61.37	133.83	45.9	Pass
T12	80 - 60	Leg	2 1/4	529	-64.64	133.83	48.3	Pass
T13	60 - 40	Leg	2 1/4	577	-66.02	133.83	49.3	Pass
T14	40 - 20	Leg	2 1/2	625	-67.88	176.22	38.5	Pass
T15	20 - 6.8125	Leg	2 1/2	673	-63.29	176.26	35.9	Pass
T16	6.8125 - 0	Leg	2 1/2	704	-59.66	220.92	27.0	Pass
T1	300 - 280	Diagonal	1 1/4	11	-7.75	21.77	35.6	Pass
T2	280 - 260	Diagonal	1 1/8	94	-7.47	15.13	49.4	Pass
T3	260 - 240	Diagonal	1 3/8	106	-8.74	29.49	29.6	Pass
T4	240 - 220	Diagonal	1 3/8	189	-10.02	29.96	33.4	Pass
T5	220 - 200	Diagonal	1 1/4	238	-6.71	21.98	30.5	Pass
T6	200 - 180	Diagonal	1 3/8	250	-7.42	29.73	25.0	Pass
T7	180 - 160	Diagonal	1 3/8	333	-7.75	29.73	26.1	Pass
T8	160 - 140	Diagonal	1 1/8	382	-5.32	15.31	34.7	Pass
T9	140 - 120	Diagonal	1 1/4	394	-6.35	21.98	28.9	Pass
T10	120 - 100	Diagonal	1 3/8	442	-7.23	29.73	24.3	Pass
T11	100 - 80	Diagonal	1 1/4	525	-6.91	21.98	31.4	Pass

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Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T12	80 - 60	Diagonal	1 1/8	539	-4.73	15.31	30.9	Pass
T13	60 - 40	Diagonal	1 1/8	607	-5.19	15.31	33.9	Pass
T14	40 - 20	Diagonal	1 1/8	636	-5.33	15.49	34.4	Pass
T15	20 - 6.8125	Diagonal	1 1/8	680	-5.84	15.50	37.7	Pass
T1	300 - 280	Horizontal	1	23	-3.64	16.58	21.9	Pass
T2	280 - 260	Horizontal	7/8	91	-2.61	10.97	23.8	Pass
T3	260 - 240	Horizontal	1	110	-3.52	16.58	21.2	Pass
T4	240 - 220	Horizontal	1 1/4	173	9.96	41.75	23.9	Pass
T5	220 - 200	Horizontal	7/8	235	4.15	20.46	20.3	Pass
T6	200 - 180	Horizontal	7/8	254	4.46	20.46	21.8	Pass
T7	180 - 160	Horizontal	7/8	330	4.86	20.46	23.8	Pass
T8	160 - 140	Horizontal	7/8	379	3.21	20.46	15.7	Pass
T9	140 - 120	Horizontal	7/8	398	3.82	20.46	18.7	Pass
T10	120 - 100	Horizontal	1	460	4.69	26.72	17.5	Pass
T11	100 - 80	Horizontal	7/8	522	4.14	20.46	20.3	Pass
T12	80 - 60	Horizontal	7/8	544	2.92	20.46	14.3	Pass
T13	60 - 40	Horizontal	7/8	604	3.47	20.46	16.9	Pass
T14	40 - 20	Horizontal	7/8	640	3.30	20.46	16.1	Pass
T15	20 - 6.8125	Horizontal	7/8	685	4.15	20.46	20.3	Pass
T16	6.8125 - 0	Horizontal	L4x4x3/8	712	-1.06	94.71	29.5	Pass
T1	300 - 280	Secondary Horizontal	3/4	13	-0.00	10.42	0.0	Pass
T2	280 - 260	Secondary Horizontal	3/4	61	-0.00	10.42	0.0	Pass
T3	260 - 240	Secondary Horizontal	3/4	144	-0.00	10.42	0.0	Pass
T4	240 - 220	Secondary Horizontal	3/4	157	-0.00	10.45	0.0	Pass
T5	220 - 200	Secondary Horizontal	3/4	205	-0.00	10.43	0.0	Pass
T6	200 - 180	Secondary Horizontal	3/4	288	-0.00	10.43	0.0	Pass
T7	180 - 160	Secondary Horizontal	3/4	301	0.00	15.03	0.0	Pass
T8	160 - 140	Secondary Horizontal	3/4	384	-0.00	10.43	0.0	Pass
T9	140 - 120	Secondary Horizontal	3/4	432	-0.00	10.43	0.0	Pass
T10	120 - 100	Secondary Horizontal	3/4	445	0.00	15.03	0.0	Pass
T11	100 - 80	Secondary Horizontal	3/4	528	0.00	15.03	0.0	Pass
T12	80 - 60	Secondary Horizontal	3/4	576	0.00	15.03	0.0	Pass
T13	60 - 40	Secondary Horizontal	3/4	624	-0.00	10.43	0.0	Pass
T14	40 - 20	Secondary Horizontal	3/4	672	-0.00	10.45	0.0	Pass
T15	20 - 6.8125	Secondary Horizontal	3/4	703	-0.00	10.45	0.0	Pass
T1	300 - 280	Top Girt	1	6	-0.64	16.58	3.9	Pass
T2	280 - 260	Top Girt	7/8	54	-1.86	10.97	16.9	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
T3	260 - 240	Top Girt	1	100	2.70	26.72	10.1	Pass
T4	240 - 220	Top Girt	1 1/4	150	-2.69	28.46	9.5	Pass
T5	220 - 200	Top Girt	7/8	198	2.43	20.46	11.9	Pass
T6	200 - 180	Top Girt	7/8	244	1.84	20.46	9.0	Pass
T7	180 - 160	Top Girt	7/8	292	2.64	20.46	12.9	Pass
T8	160 - 140	Top Girt	7/8	342	1.98	20.46	9.7	Pass
T9	140 - 120	Top Girt	7/8	388	-1.00	11.07	9.0	Pass
T10	120 - 100	Top Girt	1	438	2.43	26.72	9.1	Pass
T11	100 - 80	Top Girt	7/8	484	2.38	20.46	11.6	Pass
T12	80 - 60	Top Girt	7/8	534	-1.22	11.07	11.0	Pass
T13	60 - 40	Top Girt	7/8	582	-1.30	11.07	11.7	Pass
T14	40 - 20	Top Girt	7/8	630	-1.21	11.17	10.8	Pass
T15	20 - 6.8125	Top Girt	7/8	678	2.15	20.46	10.5	Pass
T16	6.8125 - 0	Top Girt	L4x4x3/8	709	10.49	97.30	10.8	Pass
T1	300 - 280	Bottom Girt	1	8	3.33	26.72	12.5	Pass
T2	280 - 260	Bottom Girt	7/8	57	-1.23	10.97	11.2	Pass
T3	260 - 240	Bottom Girt	1	103	-2.10	16.58	12.7	Pass
T4	240 - 220	Bottom Girt	1 1/4	152	2.92	41.75	7.0	Pass
T5	220 - 200	Bottom Girt	7/8	199	1.73	20.46	8.5	Pass
T6	200 - 180	Bottom Girt	7/8	247	2.57	20.46	12.5	Pass
T7	180 - 160	Bottom Girt	7/8	296	2.14	20.46	10.4	Pass
T8	160 - 140	Bottom Girt	7/8	343	-0.86	11.07	7.8	Pass
T9	140 - 120	Bottom Girt	7/8	391	2.14	20.46	10.4	Pass
T10	120 - 100	Bottom Girt	1	439	2.54	26.72	9.5	Pass
T11	100 - 80	Bottom Girt	7/8	489	-1.22	11.07	11.0	Pass
T12	80 - 60	Bottom Girt	7/8	537	-1.22	11.07	11.0	Pass
T13	60 - 40	Bottom Girt	7/8	585	-1.30	11.07	11.7	Pass
T14	40 - 20	Bottom Girt	7/8	633	-1.21	11.17	10.8	Pass
T1	300 - 280	Guy A@290	3/4 [ECP-24000]	735	14.60	36.73	39.8	Pass
T4	240 - 220	Guy A@230	3/4 [ECP-24000]	752	14.30	36.73	38.9	Pass
T7	180 - 160	Guy A@173.193	3/4 [ECP-24000]	763	12.51	36.73	34.1	Pass
T10	120 - 100	Guy A@113.193	3/4 [ECP-24000]	769	12.30	36.73	33.5	Pass
T13	60 - 40	Guy A@53.1927	1/2 [ECP-23000]	775	5.63	16.95	33.2	Pass
T1	300 - 280	Guy B@290	3/4 [ECP-24000]	729	14.92	36.73	40.6	Pass
T4	240 - 220	Guy B@230	3/4 [ECP-24000]	747	15.37	36.73	41.8	Pass
T7	180 - 160	Guy B@173.193	3/4 [ECP-24000]	762	13.28	36.73	36.1	Pass
T10	120 - 100	Guy B@113.193	3/4 [ECP-24000]	768	13.32	36.73	36.3	Pass
T13	60 - 40	Guy B@53.1927	1/2 [ECP-23000]	774	6.06	16.95	35.8	Pass
T1	300 - 280	Guy C@290	3/4 [ECP-24000]	723	14.92	36.73	40.6	Pass
T4	240 - 220	Guy C@230	3/4 [ECP-24000]	741	15.48	36.73	42.2	Pass
T7	180 - 160	Guy C@173.193	3/4 [ECP-24000]	758	13.98	36.73	38.1	Pass
T10	120 - 100	Guy C@113.193	3/4 [ECP-24000]	764	13.98	36.73	38.1	Pass
T13	60 - 40	Guy C@53.1927	1/2 [ECP-23000]	770	6.38	16.95	37.6	Pass
T7	180 - 160	Top Guy Pull-	2x3/8	760	4.17	25.51	16.4	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
		Off@173.193						
T10	120 - 100	Top Guy Pull-Off@113.193	2x3/8	766	3.69	25.51	14.4	Pass
T13	60 - 40	Top Guy Pull-Off@53.1927	2x3/8	773	2.88	25.51	11.3	Pass
T1	300 - 280	Torque Arm Top@290	L3 1/2x3 1/2x3/8	737	13.93	72.11	19.3	Pass
T4	240 - 220	Torque Arm Top@230	L3 1/2x3 1/2x3/8	755	15.65	72.11	21.7	Pass
T1	300 - 280	Torque Arm Bottom@290	L3 1/2x3 1/2x3/8	727	-19.07	74.43	25.6	Pass
T4	240 - 220	Torque Arm Bottom@230	L3 1/2x3 1/2x3/8	745	-16.62	74.67	22.3	Pass
							Summary	
						Leg (T2)	60.5	Pass
						Diagonal (T2)	49.4	Pass
						Horizontal (T16)	29.5	Pass
						Secondary Horizontal (T10)	0.0	Pass
						Top Girt (T2)	16.9	Pass
						Bottom Girt (T3)	12.7	Pass
						Guy A (T1)	39.8	Pass
						Guy B (T4)	41.8	Pass
						Guy C (T4)	42.2	Pass
						Top Guy Pull-Off (T7)	16.4	Pass
						Torque Arm Top (T4)	21.7	Pass
						Torque Arm Bottom (T1)	25.6	Pass
						Bolt Checks	37.1	Pass
						Rating =	60.5	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Base Foundation (Structure)	0	25.2	Pass
1	Base Foundation (Soil Interaction)		61.2	Pass
1	Guy Anchor Shaft	0	75.7	Pass
1	Guy Anchor Foundation Structural		9.2	Pass
1	Guy Anchor Foundation Soil Interaction		22.9	Pass

Structure Rating (max from all components) =	**75.7%***

Notes:
1) See additional documentation in "Appendix C – Additional Calculations" for calculations supporting the % capacity consumed.
2) *Rating per TIA-222-H, Section 15.5.

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4.1) Recommendations

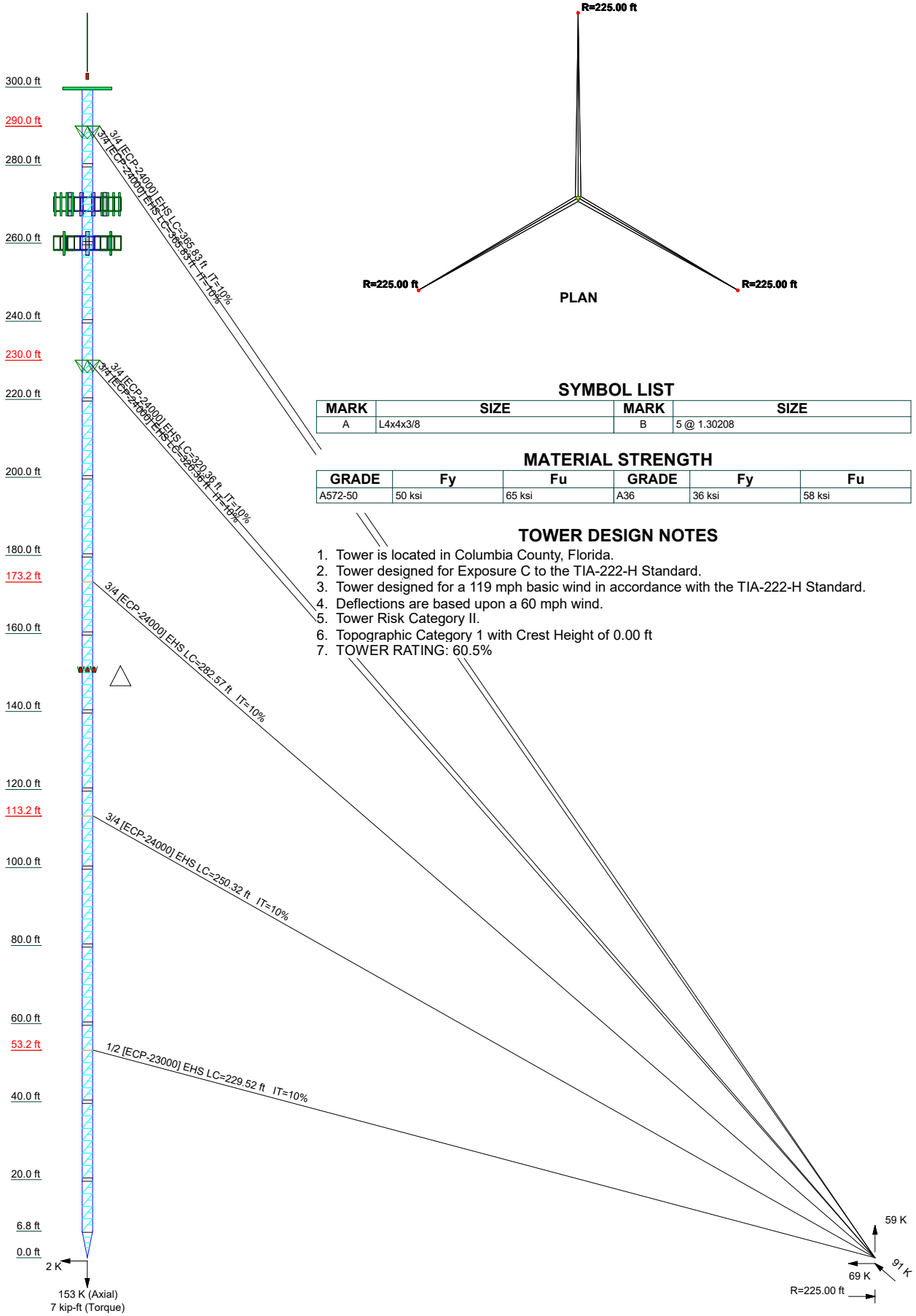
The tower and its base and anchor foundations have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT

Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16
Legs	SR 2			SR 2 1/2					SR 2 1/4					SR 2 1/2		
Leg Grade	A572-50															
Diagonals	SR 1 1/4	SR 1 1/8	SR 1 3/8		SR 1 1/4	SR 1 3/8		SR 1 1/8	SR 1 1/4	SR 1 3/8	SR 1 1/4		SR 1 1/8			N.A.
Diagonal Grade	A36															N.A.
Top Girts	SR 1	SR 7/8		SR 1 1/4			SR 7/8			SR 1		SR 7/8				A
Bottom Girts	SR 1	SR 7/8		SR 1 1/4			SR 7/8			SR 1		SR 7/8			N.A.	
Horizontals	SR 1	SR 7/8		SR 1 1/4			SR 7/8			SR 1		SR 7/8				A
Sec. Horizontals	SR 1	SR 7/8		SR 1			SR 3/4									N.A.
Top Guy Pull-Offs			N.A.			2x3/8			N.A.	2x3/8	N.A.	2x3/8	2x3/8	N.A.		
Face Width (ft)	3															
# Panels @ (ft)	84 @ 3.19271														B 4 @ 3.19141	
Weight (K)	1.6	1.1	1.3	2.2	1.3	1.4	1.4	1.3	1.3	1.5	1.3	1.3	1.3	1.5	1.0	0.6

21.6



PLAN

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	L4x4x3/8	B	5 @ 1.30208

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-50	50 ksi	65 ksi	A36	36 ksi	58 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 119 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: 60.5%

ALL REACTIONS ARE FACTORED

Consulting Engineers
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
Phone: (770) 379-8500
FAX: (770) 379-8501

Job:			
Project:			
Client: Crown Castle USA	Drawn by: NN	App'd:	
Code: TIA-222-H	Date: 03/16/23	Scale: NTS	
Path: C:\Users\NNaidu\Desktop\Daily Jobs\GT\CN12-319\CN12-319 BU_846221 WO_2212446.eri		Dwg No. E-1	

Tower Input Data

The main tower is a 3x guyed tower with an overall height of 300.00 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 3.00 ft at the top and tapered 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: 87.00 ft.
Basic wind speed of 119 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.
Safety factor used in guy 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
Consider Moments - Horizontals
Consider Moments - Diagonals
Use Moment Magnification
√ Use Code Stress Ratios
√ Use Code Safety Factors - Guys
Escalate Ice
Always Use Max Kz
Use Special Wind Profile

Include Bolts In Member Capacity

Leg Bolts Are At Top Of Section
Secondary Horizontal Braces Leg
Use Diamond Inner Bracing (4 Sided)
√ SR Members Have Cut Ends
SR Members Are Concentric

Distribute Leg Loads As Uniform
Assume Legs Pinned
√ Assume Rigid Index Plate
√ Use Clear Spans For Wind Area
√ Use Clear Spans For KL/r
√ Retension Guys To Initial Tension
√ Bypass Mast Stability Checks
√ Use Azimuth Dish Coefficients
√ Project Wind Area of Appurt.

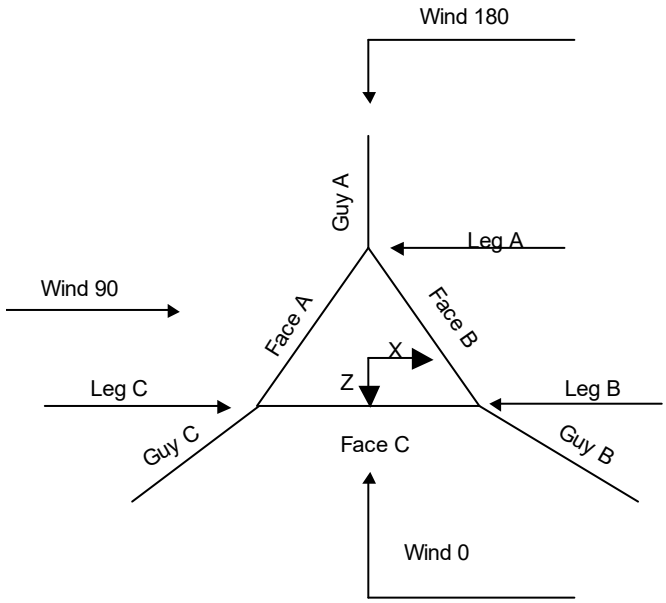
√ Autocalc Torque Arm Areas

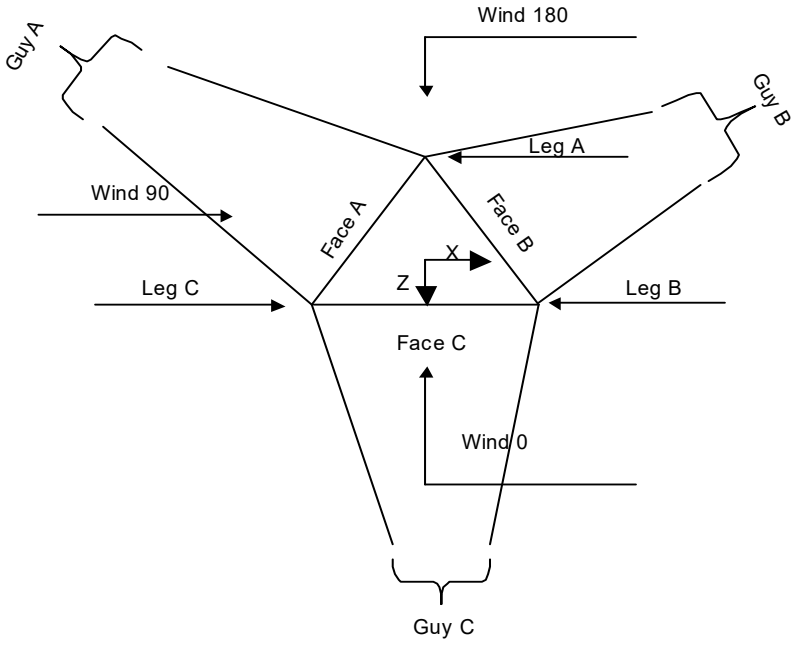
Add IBC .6D+W Combination
√ Sort Capacity Reports By Component
Triangulate Diamond Inner Bracing
Treat Feed Line Bundles As Cylinder
Ignore KL/ry For 60 Deg. Angle Legs

Use ASCE 10 X-Brace Ly Rules
√ Calculate Redundant Bracing Forces
Ignore Redundant Members in FEA
SR Leg Bolts Resist Compression
All Leg Panels Have Same Allowable
Offset Girt At Foundation
√ Consider Feed Line Torque
√ Include Angle Block Shear Check
Use TIA-222-H Bracing Resist. Exemption
Use TIA-222-H Tension Splice Exemption

Poles

Include Shear-Torsion Interaction
Always Use Sub-Critical Flow
Use Top Mounted Sockets
Pole Without Linear Attachments
Pole With Shroud Or No Appurtenances
Outside and Inside Corner Radii Are Known


Wind 180
Guy A
Leg A
Wind 90
Face A
Face B
X
Z
Leg C
Leg B
Guy C
Face C
Guy B
Wind 0


Wind 180
Guy A
Guy B
Leg A
Wind 90
Face A
Face B
X
Z
Leg C
Leg B
Face C
Wind 0
Guy C

Tower Section Geometry

U	U	7	U	°	U	U	UW	U
U U Uq	U	°	U			UW	UW	U
	U					U	U	U
	L					L		L
T1	300.00-280.00					3.00	1	20.00
T2	280.00-260.00					3.00	1	20.00
T3	260.00-240.00					3.00	1	20.00
T4	240.00-220.00					3.00	1	20.00
T5	220.00-200.00					3.00	1	20.00
T6	200.00-180.00					3.00	1	20.00
T7	180.00-160.00					3.00	1	20.00
T8	160.00-140.00					3.00	1	20.00
T9	140.00-120.00					3.00	1	20.00
T10	120.00-100.00					3.00	1	20.00
T11	100.00-80.00					3.00	1	20.00
T12	80.00-60.00					3.00	1	20.00
T13	60.00-40.00					3.00	1	20.00
T14	40.00-20.00					3.00	1	20.00
T15	20.00-6.81					3.00	1	13.19
T16	6.81-0.00					3.00	1	6.81

Tower Section Geometry - 9

U	U	°	U	V	U	Z U	Z UW	U# U	V U# U
U U Uq	U	U	U		UV U	Z U		U	U
	U	U			q U			U	U
	L	L				L		L	L
T1	300.00-280.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T2	280.00-260.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T3	260.00-240.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T4	240.00-220.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T5	220.00-200.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T6	200.00-180.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T7	180.00-160.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T8	160.00-140.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T9	140.00-120.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T10	120.00-100.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T11	100.00-80.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T12	80.00-60.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T13	60.00-40.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T14	40.00-20.00	3.19	Diag Up		No		Yes+Steps	5.0625	5.0625
T15	20.00-6.81	3.19	Diag Up		No		Yes+Steps	5.0625	0.0000
T16	6.81-0.00	1.30	X Brace		No		Yes	3.6250	0.0000

Tower Section Geometry - 9

U	U	UW	UW	° U	° UW	° U
Uq U	U	U	# U	U	U	# U
L	L	L		L	L	
T1 300.00-280.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T2 280.00-260.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T3 260.00-240.00	Solid Round	2	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
T4 240.00-220.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
T5 220.00-200.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T6 200.00-180.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
T7 180.00-160.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)

U Uq U L	U U L	UW U L	UW #U L	°U U L	°UW U L	°U #U L
T8 160.00-140.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T9 140.00-120.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T10 120.00-100.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 3/8	A36 (36 ksi)
T11 100.00-80.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T12 80.00-60.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T13 60.00-40.00	Solid Round	2 1/4	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T14 40.00-20.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T15 20.00-6.81	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round	1 1/8	A36 (36 ksi)
T16 6.81-0.00	Solid Round	2 1/2	A572-50 (50 ksi)	Solid Round		A36 (36 ksi)

Tower Section Geometry - 9

U Uq U L	U#U U L	U#UW U L	U#UW V #U L	U#U V U L	U#UW V U L	U#U #U L
T1 300.00-280.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 280.00-260.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T3 260.00-240.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T4 240.00-220.00	Solid Round	1 1/4	A36 (36 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T5 220.00-200.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T6 200.00-180.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T7 180.00-160.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T8 160.00-140.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T9 140.00-120.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T10 120.00-100.00	Solid Round	1	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T11 100.00-80.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T12 80.00-60.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T13 60.00-40.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T14 40.00-20.00	Solid Round	7/8	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T15 20.00-6.81	Solid Round	7/8	A36 (36 ksi)	Solid Round		A36 (36 ksi)
T16 6.81-0.00	Equal Angle	L4x4x3/8	A36 (36 ksi)	Equal Angle	L4x4x3/8	A36 (36 ksi)

Tower Section Geometry - 9

U gU U# U U# UW U# UW Z U Z U Z UW Uq U UW U U # U U U # U U U U U U U L # L L
T1 300.00-280.00	None	Flat Bar	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T2 280.00-260.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T3 260.00-240.00	None	Flat Bar	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T4 240.00-220.00	None	Flat Bar	A36 (36 ksi)	Solid Round	1 1/4	A36 (36 ksi)
T5 220.00-200.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T6 200.00-180.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T7 180.00-160.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T8 160.00-140.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T9 140.00-120.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T10 120.00-100.00	None	Flat Bar	A36 (36 ksi)	Solid Round	1	A36 (36 ksi)
T11 100.00-80.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T12 80.00-60.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T13 60.00-40.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T14 40.00-20.00	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T15 20.00-6.81	None	Flat Bar	A36 (36 ksi)	Solid Round	7/8	A36 (36 ksi)
T16 6.81-0.00	None	Flat Bar	A36 (36 ksi)	Equal Angle	L4x4x3/8	A36 (36 ksi)

Tower Section Geometry - 9

U U UZ UW U ? UV U ? UV U U ? UV Uq U Z U U Z UW U U # U U U U # U U L
T1 300.00-280.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T2 280.00-260.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T3 260.00-240.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T4 240.00-220.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T5 220.00-200.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T6 200.00-180.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T7 180.00-160.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T8 160.00-140.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T9 140.00-120.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T10 120.00-100.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T11 100.00-80.00	Solid Round	3/4	A36 (36 ksi)	Solid Round	A36 (36 ksi)
T12 80.00-	Solid Round	3/4	A36	Solid Round	A36

| U U UZ UU U ? UV U ? UV U U ? UV
Ud U Z U U Z UU U U # U
U U U # U U
L |
|---|---|---|---|---|---|
| 60.00 | | | (36 ksi) | | (36 ksi) |
| T13 60.00-40.00 | Solid Round | 3/4 | A36 (36 ksi) | Solid Round | A36 (36 ksi) |
| T14 40.00-20.00 | Solid Round | 3/4 | A36 (36 ksi) | Solid Round | A36 (36 ksi) |
| T15 20.00-6.81 | Solid Round | 3/4 | A36 (36 ksi) | Solid Round | A572-50 (50 ksi) |

Tower Section Geometry - 9

| U # U # U # U# 7 gUx 7 gU U gL° U7 ° U7 ° U7
Ud U 7 U U 7U x UU U UV U UV U UV U
U - U gU U U U U U U
U U U ° U Z U U
L PL L L L L L |
|---|---|---|---|---|---|---|---|---|---|
| T1 300.00-280.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T2 280.00-260.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T3 260.00-240.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T4 240.00-220.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T5 220.00-200.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T6 200.00-180.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T7 180.00-160.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T8 160.00-140.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T9 140.00-120.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T10 120.00-100.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T11 100.00-80.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T12 80.00-60.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T13 60.00-40.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T14 40.00-20.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T15 20.00-6.81 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |
| T16 6.81-0.00 | 0.00 | 0.0000 | A36 (36 ksi) | 1 | 1 | 1.05 | 0.0000 | 0.0000 | 0.0000 |

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Tower Section Geometry - 9

| L L L Ux DU
U % U % U U U U U # U Z gU gU ? U
Ud U U U V U V U ° U U U Z gU V U
U U U ° U ° U U U U U U
U 7 U U U U U U U U U
L L L L L L L |
|---|---|---|---|---|---|---|---|---|---|---|
| T1 300.00-280.00 | No | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T2 280.00-260.00 | No | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| T3 260.00-240.00 | No | Yes | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 |

T4 240.00-220.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T5 220.00-200.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T6 200.00-180.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T7 180.00-160.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T8 160.00-140.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T9 140.00-120.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T10 120.00-100.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T11 100.00-80.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T12 80.00-60.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T13 60.00-40.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T14 40.00-20.00	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T15 20.00-6.81	No	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1
T16 6.81-0.00	Yes	Yes	1	1 1	1 1	1 1	1 1	1 1	1 1	1 1

Tower Section Geometry - 9

	in		in		in		in		in		in		in	
T1 300.00-280.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T2 280.00-260.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T3 260.00-240.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T4 240.00-220.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T5 220.00-200.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T6 200.00-180.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T7 180.00-160.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T8 160.00-140.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T9 140.00-120.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T10 120.00-100.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T11 100.00-80.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T12 80.00-60.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T13 60.00-40.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1

U Ud U U	U		° U		U# U		V U# U		U# U		UZ U		UZ U	
	U U ° U U in U		U U U U ° U in U		U U ° U U in U		U U U U ° U in U		U U U U ° U in U		U U U U ° U in U		U U U U ° U in U	
T14 40.00-20.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T15 20.00-6.81	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1
T16 6.81-0.00	0.0000	1	0.0000	1	0.0000	1	0.0000	1	0.0000	0.75	0.0000	1	0.0000	1

U

U Ud U U	U Z U		U ° U		U v ° U		U v Z U		U U		UZ U		UZ U ° U	
	U U ° U U in U		U U U U ° U in U		U U ° U U in U		U U U U ° U in U		U U U U ° U in U		U U U U ° U in U		U U U U ° U in U	
T1 300.00-280.00	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
T2 280.00-260.00	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 260.00-240.00	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
T4 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
T5 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
T6 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
T7 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
T8 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
T9 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
T10 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
T11 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
T12 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
T13 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
T14 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
T15 20.00-6.81	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
T16 6.81-0.00	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

U

Tower Section Geometry - 9

U Ud U U % U U U U	U		U V U l g U in U		° U V U l g U in U		U# U V U l g U in U		V U# U V U l g U in U		U# U V U l g U in U		UZ V U l g U in U		U Z U V U l g U in U	
T1 300.00-280.00	Flange	A325N	0.7500	4	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0
T2 280.00-260.00	Flange	A325N	0.7500	4	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0
T3 260.00-240.00	Flange	A325N	0.7500	4	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0
T4 240.00-220.00	Flange	A325N	0.7500	4	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0	A325N	0.6250	0

U U U	° U	U# U	V U# U	U# U	UZ	U Z U
U % l U U						
U U V U l gU	V U l gU	V U l gU	V U l gU	V U l gU	V U l gU	V U l gU
	in	in	in	in	in	in
T5 220.00-200.00 Flange	0.7500 A325N 4	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 200.00-180.00 Flange	0.7500 A325N 4	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 180.00-160.00 Flange	0.7500 A325N 4	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 160.00-140.00 Flange	0.7500 A325N 4	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 140.00-120.00 Flange	0.7500 A325N 4	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 120.00-100.00 Flange	0.7500 A325N 4	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 100.00-80.00 Flange	0.7500 A325N 4	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0
T12 80.00-60.00 Flange	0.7500 A325N 4	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0
T13 60.00-40.00 Flange	0.7500 A325N 4	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0
T14 40.00-20.00 Flange	0.7500 A325N 4	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0	0.6250 A325N 0
T15 20.00-6.81 Flange	0.0000 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
T16 6.81-0.00 Flange	0.0000 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

Guy Data

U U l # U ? U j U # U # U U 7 U 7 U 7 U q U
U # U U U U l U U U 7 U 7 l q U x U
U U U U U U U 7 gU U q l
l l l l l l l j l

290	EHS	A	3/4 [ECP-24000]	5.83	10%	24000	1.155	365.59	225.00	0.0000	0.00	100%
		B	3/4 [ECP-24000]	5.83	10%	24000	1.155	365.59	225.00	0.0000	0.00	100%
		C	3/4 [ECP-24000]	5.83	10%	24000	1.155	365.59	225.00	0.0000	0.00	100%
230	EHS	A	3/4 [ECP-24000]	5.83	10%	24000	1.155	320.15	225.00	0.0000	0.00	100%
		B	3/4 [ECP-24000]	5.83	10%	24000	1.155	320.15	225.00	0.0000	0.00	100%
		C	3/4 [ECP-24000]	5.83	10%	24000	1.155	320.15	225.00	0.0000	0.00	100%
173.193	EHS	A	3/4 [ECP-24000]	5.83	10%	24000	1.155	282.38	225.00	0.0000	0.00	100%
		B	3/4 [ECP-24000]	5.83	10%	24000	1.155	282.38	225.00	0.0000	0.00	100%
		C	3/4 [ECP-24000]	5.83	10%	24000	1.155	282.38	225.00	0.0000	0.00	100%
113.193	EHS	A	3/4 [ECP-24000]	5.83	10%	24000	1.155	250.16	225.00	0.0000	0.00	100%
		B	3/4 [ECP-24000]	5.83	10%	24000	1.155	250.16	225.00	0.0000	0.00	100%
		C	3/4 [ECP-24000]	5.83	10%	24000	1.155	250.16	225.00	0.0000	0.00	100%
53.1927	EHS	A	1/2 [ECP-23000]	2.69	10%	23000	0.517	229.35	225.00	0.0000	0.00	100%
		B	1/2 [ECP-23000]	2.69	10%	23000	0.517	229.35	225.00	0.0000	0.00	100%
		C	1/2 [ECP-23000]	2.69	10%	23000	0.517	229.35	225.00	0.0000	0.00	100%

U
W f U x U # U U U 7 U
U U % D p W D K U E p W f f f D R U U L f K D R U U f U
U D R p f p W
% % ? U U U H L p p D
U D K

Guy Data- 9

# U U	U	v7 U	v7 U	v7 U	v7 U	v7 U	v7 U U
U U U	U	U U	U 7 U	U	# U	U	
U		U	U				
		U	U				
290	Torque Arm	7.00	20.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x3/8
230	Torque Arm	7.00	20.0000	Bat Ear	A36 (36 ksi)	Equal Angle	L3 1/2x3 1/2x3/8
173.193	Corner						
113.193	Corner						
53.1927	Corner						

Guy Data - 9

# U	° U	° U	U	U	U	? U	v U	v U U	v U U
U U	# U	U	U	U		g	# U		
U									
290.00	A36 (36 ksi)	Solid Round					A36 (36 ksi)	Solid Round	
230.00	A36 (36 ksi)	Solid Round					A36 (36 ksi)	Solid Round	
173.19	A36 (36 ksi)	Solid Round				Yes	A36 (36 ksi)	Flat Bar	2x3/8
113.19	A36 (36 ksi)	Solid Round				Yes	A36 (36 ksi)	Flat Bar	2x3/8
53.19	A36 (36 ksi)	Solid Round				Yes	A36 (36 ksi)	Flat Bar	2x3/8

Guy Data - 9

# U	% U	% U	% U	% U	U	U	U	U
U U	U	U	U	U	? U	? U	? U	? U
U	7 U	V U	% U	° U	7 U	V U	% U	° U
U	U	U	U	U	U	U	U	U
290	0.42	0.42	0.42		12.88 6.2 sec/pulse	12.88 6.2 sec/pulse	12.88 6.2 sec/pulse	
230	0.37	0.37	0.37		9.94 5.4 sec/pulse	9.94 5.4 sec/pulse	9.94 5.4 sec/pulse	
173.193	0.33	0.33	0.33		7.77 4.8 sec/pulse	7.77 4.8 sec/pulse	7.77 4.8 sec/pulse	
113.193	0.29	0.29	0.29		6.14 4.3 sec/pulse	6.14 4.3 sec/pulse	6.14 4.3 sec/pulse	
53.1927	0.12	0.12	0.12		5.03 3.9 sec/pulse	5.03 3.9 sec/pulse	5.03 3.9 sec/pulse	

Guy Data - 9

U	U	U	U 7 U		U U		° U	
# U	% U	% U	U	U	U	U	U	U
U U	U	U						
U	U	U						
	7 U	U						
290	No	No	1	1	0.7	0.7	1	1
230	No	No	1	1	0.7	0.7	1	1
173.193	No	No			0.7	0.7	1	1

113.193	No	No		0.7	0.7	1	1
53.1927	No	No		0.7	0.7	1	1

Guy Data - 9

290	0.8750 A325N	2	0.0000	0.75	0.6250 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75
230	0.8750 A325N	2	0.0000	0.75	0.6250 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75
173.193	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75
113.193	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75
53.1927	0.6250 A325N	0	0.0000	0.75	0.6250 A325N	0	0.0000	1	0.6250 A325N	0	0.0000	0.75

Guy Pressures

290	A	145.00	40
	B	145.00	40
	C	145.00	40
230	A	115.00	38
	B	115.00	38
	C	115.00	38
173.193	A	86.60	36
	B	86.60	36
	C	86.60	36
113.193	A	56.60	33
	B	56.60	33
	C	56.60	33
53.1927	A	26.60	28
	B	26.60	28
	C	26.60	28

Guy-Mast Forces (Excluding Wind) - No Ice

290	A	52.4401	6.16 5.83	-0.06	4.96	-3.65	-10.03	12.90	-17.38
	A	52.4401	6.16 5.83	0.06	4.96	-3.65	-10.03	-12.90	17.38
	B	52.4401	6.16 5.83	3.19	4.96	1.78	20.07	12.90	0.00
	B	52.4401	6.16 5.83	3.14	4.96	1.88	-10.03	-12.90	-17.38
	C	52.4401	6.16 5.83	-3.14	4.96	1.88	-10.03	12.90	17.38

# U	# U	% U	# U	x U	x U	x U	U	U	U
Wq U	U	7 U	U	U	U	U	U	U	U
U		U	U	U	U	U	U	U	U
U		U	V U	U	U	U	U	U	U
L		L	L	L	L	L	L	L	L
	C	52.4401	6.16	-3.19	4.96	1.78	20.07	-12.90	0.00
			5.83						
			Sum:	0.00	29.79	0.00	-0.00	0.00	0.00
230	A	45.8844	6.10	-0.07	4.47	-4.15	-9.02	14.65	-15.63
			5.83						
	A	45.8844	6.10	0.07	4.47	-4.15	-9.02	-14.65	15.63
			5.83						
	B	45.8844	6.10	3.63	4.47	2.02	18.05	14.65	0.00
			5.83						
	B	45.8844	6.10	3.56	4.47	2.13	-9.02	-14.65	-15.63
			5.83						
	C	45.8844	6.10	-3.56	4.47	2.13	-9.02	14.65	15.63
			5.83						
	C	45.8844	6.10	-3.63	4.47	2.02	18.05	-14.65	0.00
			5.83						
			Sum:	0.00	26.79	0.00	-0.00	0.00	0.00
173.193	A	37.8013	6.03	0.00	3.80	-4.68	-6.58	0.00	0.00
			5.83						
	B	37.8013	6.03	4.06	3.80	2.34	3.29	0.00	-5.70
			5.83						
	C	37.8013	6.03	-4.06	3.80	2.34	3.29	-0.00	5.70
			5.83						
			Sum:	0.00	11.39	0.00	0.00	0.00	0.00
113.193	A	26.8842	5.96	0.00	2.81	-5.26	-4.87	0.00	0.00
			5.83						
	B	26.8842	5.96	4.55	2.81	2.63	2.43	0.00	-4.22
			5.83						
	C	26.8842	5.96	-4.55	2.81	2.63	2.43	-0.00	4.22
			5.83						
			Sum:	0.00	8.43	0.00	0.00	0.00	0.00
53.1927	A	13.4007	2.72	0.00	0.69	-2.63	-1.19	0.00	0.00
			2.69						
	B	13.4007	2.72	2.28	0.69	1.31	0.59	0.00	-1.03
			2.69						
	C	13.4007	2.72	-2.28	0.69	1.31	0.59	0.00	1.03
			2.69						
			Sum:	0.00	2.06	0.00	0.00	0.00	0.00

Guy-Mast Forces (Excluding Wind) - Service

# U	# U	% U	# U	x U	x U	x U	U	U	U
Wq U	U	7 U	U	U	U	U	U	U	U
U		U	U	U	U	U	U	U	U
U		U	V U	U	U	U	U	U	U
L		L	L	L	L	L	L	L	L
290	A	52.4401	6.16	-0.06	4.96	-3.65	-10.03	12.90	-17.38
			5.83						
	A	52.4401	6.16	0.06	4.96	-3.65	-10.03	-12.90	17.38
			5.83						
	B	52.4401	6.16	3.19	4.96	1.78	20.07	12.90	0.00
			5.83						
	B	52.4401	6.16	3.14	4.96	1.88	-10.03	-12.90	-17.38
			5.83						
	C	52.4401	6.16	-3.14	4.96	1.88	-10.03	12.90	17.38
			5.83						
	C	52.4401	6.16	-3.19	4.96	1.78	20.07	-12.90	0.00
			5.83						
			Sum:	0.00	29.79	0.00	-0.00	0.00	0.00
230	A	45.8844	6.10	-0.07	4.47	-4.15	-9.02	14.65	-15.63
			5.83						
	A	45.8844	6.10	0.07	4.47	-4.15	-9.02	-14.65	15.63
			5.83						
	B	45.8844	6.10	3.63	4.47	2.02	18.05	14.65	0.00
			5.83						

# U	# U	% U	# U	x U	x U	x U	U	U	U
lq U	U 7 U	U	U	U	U	U	U	U	U
U	U	U	U	U	U	U	U	U	U
U	U	V U	U	U	U	U	U	U	U
L	L	L	L	L	L	L	\ L	\ L	\ L
	B	45.8844	6.10	3.56	4.47	2.13	-9.02	-14.65	-15.63
			5.83						
	C	45.8844	6.10	-3.56	4.47	2.13	-9.02	14.65	15.63
			5.83						
	C	45.8844	6.10	-3.63	4.47	2.02	18.05	-14.65	0.00
			5.83						
			Sum:	0.00	26.79	0.00	-0.00	0.00	0.00
173.193	A	37.8013	6.03	0.00	3.80	-4.68	-6.58	0.00	0.00
			5.83						
	B	37.8013	6.03	4.06	3.80	2.34	3.29	0.00	-5.70
			5.83						
	C	37.8013	6.03	-4.06	3.80	2.34	3.29	-0.00	5.70
			5.83						
			Sum:	0.00	11.39	0.00	0.00	0.00	0.00
113.193	A	26.8842	5.96	0.00	2.81	-5.26	-4.87	0.00	0.00
			5.83						
	B	26.8842	5.96	4.55	2.81	2.63	2.43	0.00	-4.22
			5.83						
	C	26.8842	5.96	-4.55	2.81	2.63	2.43	-0.00	4.22
			5.83						
			Sum:	0.00	8.43	0.00	0.00	0.00	0.00
53.1927	A	13.4007	2.72	0.00	0.69	-2.63	-1.19	0.00	0.00
			2.69						
	B	13.4007	2.72	2.28	0.69	1.31	0.59	0.00	-1.03
			2.69						
	C	13.4007	2.72	-2.28	0.69	1.31	0.59	0.00	1.03
			2.69						
			Sum:	0.00	2.06	0.00	0.00	0.00	0.00

Guy-Tensioning Information

U U U U				U7 U U U U													
U U U U				U fixU		U pfixU		U LfixU		U 'fixU		U HfixU		U DffixU		U DpfixU	
# U U ZU U				? U ?	L ? U ?	L	L ? U ?	L	L ? U ?	L	L ? U ?	L	L ? U ?	L	L ? U ?	L	L ? U ?	L
lq l U U				U U		U U		U U		U U		U U		U U		U U	
U U				U U		U U		U U		U U		U U		U U		U U	
290	A	223.01	290.00	6.835	11.03	6.493	11.60	6.157	12.21	5.830	12.88	5.512	13.61	5.204	14.39	4.907	15.23
	B	223.01	290.00	6.835	11.03	6.493	11.60	6.157	12.21	5.830	12.88	5.512	13.61	5.204	14.39	4.907	15.23
	C	223.01	290.00	6.835	11.03	6.493	11.60	6.157	12.21	5.830	12.88	5.512	13.61	5.204	14.39	4.907	15.23
230	A	223.01	230.00	7.151	8.13	6.699	8.67	6.258	9.27	5.830	9.94	5.418	10.68	5.024	11.49	4.652	12.39
	B	223.01	230.00	7.151	8.13	6.699	8.67	6.258	9.27	5.830	9.94	5.418	10.68	5.024	11.49	4.652	12.39
	C	223.01	230.00	7.151	8.13	6.699	8.67	6.258	9.27	5.830	9.94	5.418	10.68	5.024	11.49	4.652	12.39
173.193	A	223.27	173.19	7.542	6.03	6.953	6.53	6.381	7.11	5.830	7.77	5.305	8.53	4.812	9.39	4.357	10.35
	B	223.27	173.19	7.542	6.03	6.953	6.53	6.381	7.11	5.830	7.77	5.305	8.53	4.812	9.39	4.357	10.35
	C	223.27	173.19	7.542	6.03	6.953	6.53	6.381	7.11	5.830	7.77	5.305	8.53	4.812	9.39	4.357	10.35
113.193	A	223.27	113.19	8.031	4.47	7.271	4.93	6.534	5.48	5.830	6.14	5.169	6.91	4.562	7.82	4.023	8.85
	B	223.27	113.19	8.031	4.47	7.271	4.93	6.534	5.48	5.830	6.14	5.169	6.91	4.562	7.82	4.023	8.85
	C	223.27	113.19	8.031	4.47	7.271	4.93	6.534	5.48	5.830	6.14	5.169	6.91	4.562	7.82	4.023	8.85
53.1927	A	223.27	53.19	3.830	3.54	3.437	3.94	3.056	4.43	2.690	5.03	2.347	5.77	2.036	6.64	1.763	7.67
	B	223.27	53.19	3.830	3.54	3.437	3.94	3.056	4.43	2.690	5.03	2.347	5.77	2.036	6.64	1.763	7.67
	C	223.27	53.19	3.830	3.54	3.437	3.94	3.056	4.43	2.690	5.03	2.347	5.77	2.036	6.64	1.763	7.67

Feed Line/Linear Appurtenances - Entered As Round Or Flat

° Ux l 7 L q U % l x U U 4U 4U % U U U U																	
U l x U U U L U U U ° l U U																	
W U U U																	
% l L L																	
*** misc ***																	
Safety Line 3/8	C	No	No	Ar (CaAa)	300.00 - 7.00	0.0000	-0.3	1	1	0.3750	0.3750					0.22	
1/2" Light Cable	A	No	No	Ar (CaAa)	300.00 - 7.00	0.0000	0.49	1	1	0.8500 0.7500	0.5800					0.25	
1/2" Light Cable	B	No	No	Ar (CaAa)	300.00 - 7.00	0.0000	-0.49	1	1	0.8500 0.7500	0.5800					0.25	

°	Ux	l 7	l q	U %	l x	U	U	4U	4U	%	U	U U	U
	U		i x	U	U	U	L	U	U	U	°	l	U	U
	W			U	U	U	U -x	lx	9L	l	WW	U	U	U
			%	l							L		L	
waveguide bracket	A	No	No	Af (CaAa)	300.00 - 7.00	0.0000	0	1	1	1.7500	1.7500		1.27
waveguide bracket ***	B	No	No	Af (CaAa)	300.00 - 7.00	0.0000	0	1	1	1.7500	1.7500		1.27
ATCB-B01(5/16)	A	No	No	Ar (CaAa)	270.00 - 7.00	1.0000	-0.03	2	2	0.3150	0.3150		0.07
LDF7-50A(1-5/8)	A	No	No	Ar (CaAa)	270.00 - 7.00	0.0000	0.2	6	6	0.5000	1.9800		0.82
FB-L98-002-XXX(3/8)	A	No	No	Ar (CaAa)	270.00 - 7.00	2.0000	-0.03	1	1	0.3937	0.3937		0.06
WR-VG86ST-BRD(3/4)	A	No	No	Ar (CaAa)	270.00 - 7.00	0.0000	-0.03	2	2	0.5000	0.7950		0.58
LDF7-50A(1-5/8)	B	No	No	Ar (CaAa)	270.00 - 7.00	0.0000	0.07	12	8	0.5000	1.9800		0.82
WR-VG86ST-BRD(3/4)	B	No	No	Ar (CaAa)	270.00 - 7.00	0.0000	0.35	4	1	0.5000	0.7950		0.58
FB-L98B-002-XXX(3/8)	B	No	No	Ar (CaAa)	270.00 - 7.00	0.0000	0.37	2	1	0.3937	0.3937		0.06
ATCB-B01(5/16) *****	B	No	No	Ar (CaAa)	270.00 - 7.00	2.0000	0.37	1	1	0.3150	0.3150		0.07
HB158-21U6S24-xxM_TMO(1-5/8) ******	C	No	No	Ar (CaAa)	260.00 - 7.00	0.0000	0	2	2	0.5000	1.9960		2.50

Feed Line/Linear Appurtenances Section Areas

U	U	x U	7 U	7 xU	%7 7U	%7 7U	U
	lq U		U	WW	? lx WW	lx WW	U
L	L		l PL	PL	PL	PL	L
T1	300.00-280.00	A	0.000	0.000	6.993	0.000	0.03
		B	0.000	0.000	6.993	0.000	0.03
		C	0.000	0.000	0.750	0.000	0.00
T2	280.00-260.00	A	0.000	0.000	21.487	0.000	0.09
		B	0.000	0.000	35.036	0.000	0.15
		C	0.000	0.000	0.750	0.000	0.00
T3	260.00-240.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T4	240.00-220.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T5	220.00-200.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T6	200.00-180.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T7	180.00-160.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T8	160.00-140.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T9	140.00-120.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T10	120.00-100.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28

U	U	x U	7 U	7 xU	%7 7U	%7 7U	U
Uq U			U	UW	? Ux UW	Ux UW	U
U	U		U P U	P U	P U	P U	U
		C	0.000	0.000	8.734	0.000	0.10
T11	100.00-80.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T12	80.00-60.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T13	60.00-40.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T14	40.00-20.00	A	0.000	0.000	35.981	0.000	0.16
		B	0.000	0.000	63.078	0.000	0.28
		C	0.000	0.000	8.734	0.000	0.10
T15	20.00-6.81	A	0.000	0.000	23.387	0.000	0.10
		B	0.000	0.000	41.001	0.000	0.18
		C	0.000	0.000	5.677	0.000	0.07
T16	6.81-0.00	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.00

Feed Line Center of Pressure

U	U q UW	% U U U	% U U U	% U ? U U	% U ? U U
T1	300.00-280.00	0.2302	-1.9532	0.2302	-1.9532
T2	280.00-260.00	2.4679	-3.9127	2.4679	-3.9127
T3	260.00-240.00	3.0554	-3.8314	3.0554	-3.8314
T4	240.00-220.00	2.9231	-3.7044	2.9231	-3.7044
T5	220.00-200.00	3.0312	-3.8084	3.0312	-3.8084
T6	200.00-180.00	3.0140	-3.7920	3.0140	-3.7920
T7	180.00-160.00	2.9557	-3.7453	2.9557	-3.7453
T8	160.00-140.00	3.0488	-3.8251	3.0488	-3.8251
T9	140.00-120.00	3.0312	-3.8084	3.0312	-3.8084
T10	120.00-100.00	2.9429	-3.7329	2.9429	-3.7329
T11	100.00-80.00	3.0312	-3.8084	3.0312	-3.8084
T12	80.00-60.00	3.0488	-3.8251	3.0488	-3.8251
T13	60.00-40.00	2.9884	-3.7770	2.9884	-3.7770
T14	40.00-20.00	2.9937	-3.7725	2.9937	-3.7725
T15	20.00-6.81	2.9896	-3.7686	2.9896	-3.7686
T16	6.81-0.00	0.0000	0.0000	0.0000	0.0000

Shielding Factor Ka

U	x U U U g	°	x U U U q ς	U U7	U ?
T1	2	Safety Line 3/8	280.00 - 300.00	0.6000	0.6000
T1	3	1/2" Light Cable	280.00 - 300.00	0.6000	0.6000
T1	4	1/2" Light Cable	280.00 - 300.00	0.6000	0.6000
T1	5	waveguide bracket	280.00 - 300.00	0.6000	0.6000
T1	6	waveguide bracket	280.00 - 300.00	0.6000	0.6000
T2	2	Safety Line 3/8	260.00 - 280.00	0.6000	0.6000
T2	3	1/2" Light Cable	260.00 - 280.00	0.6000	0.6000
T2	4	1/2" Light Cable	260.00 - 280.00	0.6000	0.6000

U
Wf f Ux U# U U U7 U
U U% DpwDKUEpWf f f DRU U'Lf KD' RU UfU
UD' Rpf pW
%%?U U UHL' ppD
Up(

U	x U U U g	°	x U U U q g	U U?	U ?
T2	5	waveguide bracket	260.00 - 280.00	0.6000	0.6000
T2	6	waveguide bracket	260.00 - 280.00	0.6000	0.6000
T2	8	ATCB-B01(5/16)	260.00 - 270.00	0.6000	0.6000
T2	9	LDF7-50A(1-5/8)	260.00 - 270.00	0.6000	0.6000
T2	10	FB-L98-002-XXX(3/8)	260.00 - 270.00	0.6000	0.6000
T2	11	WR-VG86ST-BRD(3/4)	260.00 - 270.00	0.6000	0.6000
T2	12	LDF7-50A(1-5/8)	260.00 - 270.00	0.6000	0.6000
T2	13	WR-VG86ST-BRD(3/4)	260.00 - 270.00	0.6000	0.6000
T2	14	FB-L98B-002-XXX(3/8)	260.00 - 270.00	0.6000	0.6000
T2	15	ATCB-B01(5/16)	260.00 - 270.00	0.6000	0.6000
T3	2	Safety Line 3/8	240.00 - 260.00	0.6000	0.6000
T3	3	1/2" Light Cable	240.00 - 260.00	0.6000	0.6000
T3	4	1/2" Light Cable	240.00 - 260.00	0.6000	0.6000
T3	5	waveguide bracket	240.00 - 260.00	0.6000	0.6000
T3	6	waveguide bracket	240.00 - 260.00	0.6000	0.6000
T3	8	ATCB-B01(5/16)	240.00 - 260.00	0.6000	0.6000
T3	9	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.6000
T3	10	FB-L98-002-XXX(3/8)	240.00 - 260.00	0.6000	0.6000
T3	11	WR-VG86ST-BRD(3/4)	240.00 - 260.00	0.6000	0.6000
T3	12	LDF7-50A(1-5/8)	240.00 - 260.00	0.6000	0.6000
T3	13	WR-VG86ST-BRD(3/4)	240.00 - 260.00	0.6000	0.6000
T3	14	FB-L98B-002-XXX(3/8)	240.00 - 260.00	0.6000	0.6000
T3	15	ATCB-B01(5/16)	240.00 - 260.00	0.6000	0.6000
T3	17	HB158-21U6S24-xxM_TMO(1-5/8)	240.00 - 260.00	0.6000	0.6000
T4	2	Safety Line 3/8	220.00 - 240.00	0.6000	0.6000
T4	3	1/2" Light Cable	220.00 - 240.00	0.6000	0.6000
T4	4	1/2" Light Cable	220.00 - 240.00	0.6000	0.6000
T4	5	waveguide bracket	220.00 - 240.00	0.6000	0.6000
T4	6	waveguide bracket	220.00 - 240.00	0.6000	0.6000
T4	8	ATCB-B01(5/16)	220.00 - 240.00	0.6000	0.6000
T4	9	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.6000
T4	10	FB-L98-002-XXX(3/8)	220.00 - 240.00	0.6000	0.6000
T4	11	WR-VG86ST-BRD(3/4)	220.00 - 240.00	0.6000	0.6000
T4	12	LDF7-50A(1-5/8)	220.00 - 240.00	0.6000	0.6000
T4	13	WR-VG86ST-BRD(3/4)	220.00 -	0.6000	0.6000

U	x U U U g	°	x U U U q ç	U U?	U ?
T4	14	FB-L98B-002-XXX(3/8)	240.00 220.00 - 240.00	0.6000	0.6000
T4	15	ATCB-B01(5/16)	240.00 220.00 - 240.00	0.6000	0.6000
T4	17	HB158-21U6S24-xxM_TMO(1-5/8)	240.00 220.00 - 240.00	0.6000	0.6000
T5	2	Safety Line 3/8	200.00 - 220.00	0.6000	0.6000
T5	3	1/2" Light Cable	200.00 - 220.00	0.6000	0.6000
T5	4	1/2" Light Cable	200.00 - 220.00	0.6000	0.6000
T5	5	waveguide bracket	200.00 - 220.00	0.6000	0.6000
T5	6	waveguide bracket	200.00 - 220.00	0.6000	0.6000
T5	8	ATCB-B01(5/16)	200.00 - 220.00	0.6000	0.6000
T5	9	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.6000
T5	10	FB-L98-002-XXX(3/8)	200.00 - 220.00	0.6000	0.6000
T5	11	WR-VG86ST-BRD(3/4)	200.00 - 220.00	0.6000	0.6000
T5	12	LDF7-50A(1-5/8)	200.00 - 220.00	0.6000	0.6000
T5	13	WR-VG86ST-BRD(3/4)	200.00 - 220.00	0.6000	0.6000
T5	14	FB-L98B-002-XXX(3/8)	200.00 - 220.00	0.6000	0.6000
T5	15	ATCB-B01(5/16)	200.00 - 220.00	0.6000	0.6000
T5	17	HB158-21U6S24-xxM_TMO(1-5/8)	200.00 - 220.00	0.6000	0.6000
T6	2	Safety Line 3/8	180.00 - 200.00	0.6000	0.6000
T6	3	1/2" Light Cable	180.00 - 200.00	0.6000	0.6000
T6	4	1/2" Light Cable	180.00 - 200.00	0.6000	0.6000
T6	5	waveguide bracket	180.00 - 200.00	0.6000	0.6000
T6	6	waveguide bracket	180.00 - 200.00	0.6000	0.6000
T6	8	ATCB-B01(5/16)	180.00 - 200.00	0.6000	0.6000
T6	9	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.6000
T6	10	FB-L98-002-XXX(3/8)	180.00 - 200.00	0.6000	0.6000
T6	11	WR-VG86ST-BRD(3/4)	180.00 - 200.00	0.6000	0.6000
T6	12	LDF7-50A(1-5/8)	180.00 - 200.00	0.6000	0.6000
T6	13	WR-VG86ST-BRD(3/4)	180.00 - 200.00	0.6000	0.6000
T6	14	FB-L98B-002-XXX(3/8)	180.00 - 200.00	0.6000	0.6000
T6	15	ATCB-B01(5/16)	180.00 - 200.00	0.6000	0.6000
T6	17	HB158-21U6S24-xxM_TMO(1-5/8)	180.00 - 200.00	0.6000	0.6000
T7	2	Safety Line 3/8	160.00 - 180.00	0.6000	0.6000
T7	3	1/2" Light Cable	160.00 - 180.00	0.6000	0.6000
T7	4	1/2" Light Cable	160.00 - 180.00	0.6000	0.6000

U
Wf f Ux U# U U U7 U
U U% DpwDKUEpWf f f DRU U'Lf KD' RU UfU
UD' Rpf pW
%%?U U UHL' ppD
(p)

U	x U U U g	°	x U U U q g	U U?	U ?
T7	5	waveguide bracket	160.00 - 180.00	0.6000	0.6000
T7	6	waveguide bracket	160.00 - 180.00	0.6000	0.6000
T7	8	ATCB-B01(5/16)	160.00 - 180.00	0.6000	0.6000
T7	9	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.6000
T7	10	FB-L98-002-XXX(3/8)	160.00 - 180.00	0.6000	0.6000
T7	11	WR-VG86ST-BRD(3/4)	160.00 - 180.00	0.6000	0.6000
T7	12	LDF7-50A(1-5/8)	160.00 - 180.00	0.6000	0.6000
T7	13	WR-VG86ST-BRD(3/4)	160.00 - 180.00	0.6000	0.6000
T7	14	FB-L98B-002-XXX(3/8)	160.00 - 180.00	0.6000	0.6000
T7	15	ATCB-B01(5/16)	160.00 - 180.00	0.6000	0.6000
T7	17	HB158-21U6S24-xxM_TMO(1-5/8)	160.00 - 180.00	0.6000	0.6000
T8	2	Safety Line 3/8	140.00 - 160.00	0.6000	0.6000
T8	3	1/2" Light Cable	140.00 - 160.00	0.6000	0.6000
T8	4	1/2" Light Cable	140.00 - 160.00	0.6000	0.6000
T8	5	waveguide bracket	140.00 - 160.00	0.6000	0.6000
T8	6	waveguide bracket	140.00 - 160.00	0.6000	0.6000
T8	8	ATCB-B01(5/16)	140.00 - 160.00	0.6000	0.6000
T8	9	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T8	10	FB-L98-002-XXX(3/8)	140.00 - 160.00	0.6000	0.6000
T8	11	WR-VG86ST-BRD(3/4)	140.00 - 160.00	0.6000	0.6000
T8	12	LDF7-50A(1-5/8)	140.00 - 160.00	0.6000	0.6000
T8	13	WR-VG86ST-BRD(3/4)	140.00 - 160.00	0.6000	0.6000
T8	14	FB-L98B-002-XXX(3/8)	140.00 - 160.00	0.6000	0.6000
T8	15	ATCB-B01(5/16)	140.00 - 160.00	0.6000	0.6000
T8	17	HB158-21U6S24-xxM_TMO(1-5/8)	140.00 - 160.00	0.6000	0.6000
T9	2	Safety Line 3/8	120.00 - 140.00	0.6000	0.6000
T9	3	1/2" Light Cable	120.00 - 140.00	0.6000	0.6000
T9	4	1/2" Light Cable	120.00 - 140.00	0.6000	0.6000
T9	5	waveguide bracket	120.00 - 140.00	0.6000	0.6000
T9	6	waveguide bracket	120.00 - 140.00	0.6000	0.6000
T9	8	ATCB-B01(5/16)	120.00 - 140.00	0.6000	0.6000
T9	9	LDF7-50A(1-5/8)	120.00 - 140.00	0.6000	0.6000
T9	10	FB-L98-002-XXX(3/8)	120.00 - 140.00	0.6000	0.6000
T9	11	WR-VG86ST-BRD(3/4)	120.00 - 140.00	0.6000	0.6000
T9	12	LDF7-50A(1-5/8)	120.00 -	0.6000	0.6000

U	x U U U g	°	x U U U q ç	U U?	U ?
T9	13	WR-VG86ST-BRD(3/4)	140.00 120.00 - 140.00	0.6000	0.6000
T9	14	FB-L98B-002-XXX(3/8)	140.00 120.00 - 140.00	0.6000	0.6000
T9	15	ATCB-B01(5/16)	140.00 120.00 - 140.00	0.6000	0.6000
T9	17	HB158-21U6S24-xxM_TMO(1-5/8)	140.00 120.00 - 140.00	0.6000	0.6000
T10	2	Safety Line 3/8	100.00 - 120.00	0.6000	0.6000
T10	3	1/2" Light Cable	100.00 - 120.00	0.6000	0.6000
T10	4	1/2" Light Cable	100.00 - 120.00	0.6000	0.6000
T10	5	waveguide bracket	100.00 - 120.00	0.6000	0.6000
T10	6	waveguide bracket	100.00 - 120.00	0.6000	0.6000
T10	8	ATCB-B01(5/16)	100.00 - 120.00	0.6000	0.6000
T10	9	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.6000
T10	10	FB-L98-002-XXX(3/8)	100.00 - 120.00	0.6000	0.6000
T10	11	WR-VG86ST-BRD(3/4)	100.00 - 120.00	0.6000	0.6000
T10	12	LDF7-50A(1-5/8)	100.00 - 120.00	0.6000	0.6000
T10	13	WR-VG86ST-BRD(3/4)	100.00 - 120.00	0.6000	0.6000
T10	14	FB-L98B-002-XXX(3/8)	100.00 - 120.00	0.6000	0.6000
T10	15	ATCB-B01(5/16)	100.00 - 120.00	0.6000	0.6000
T10	17	HB158-21U6S24-xxM_TMO(1-5/8)	100.00 - 120.00	0.6000	0.6000
T11	2	Safety Line 3/8	80.00 - 100.00	0.6000	0.6000
T11	3	1/2" Light Cable	80.00 - 100.00	0.6000	0.6000
T11	4	1/2" Light Cable	80.00 - 100.00	0.6000	0.6000
T11	5	waveguide bracket	80.00 - 100.00	0.6000	0.6000
T11	6	waveguide bracket	80.00 - 100.00	0.6000	0.6000
T11	8	ATCB-B01(5/16)	80.00 - 100.00	0.6000	0.6000
T11	9	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T11	10	FB-L98-002-XXX(3/8)	80.00 - 100.00	0.6000	0.6000
T11	11	WR-VG86ST-BRD(3/4)	80.00 - 100.00	0.6000	0.6000
T11	12	LDF7-50A(1-5/8)	80.00 - 100.00	0.6000	0.6000
T11	13	WR-VG86ST-BRD(3/4)	80.00 - 100.00	0.6000	0.6000
T11	14	FB-L98B-002-XXX(3/8)	80.00 - 100.00	0.6000	0.6000
T11	15	ATCB-B01(5/16)	80.00 - 100.00	0.6000	0.6000
T11	17	HB158-21U6S24-xxM_TMO(1-5/8)	80.00 - 100.00	0.6000	0.6000
T12	2	Safety Line 3/8	60.00 - 80.00	0.6000	0.6000
T12	3	1/2" Light Cable	60.00 - 80.00	0.6000	0.6000

U
Wf f Ux U# U U U7 U
U U% DpwDKUEpWf f f DRU U'Lf KD' RU UfU
UD' Rpf pW
%%?U U UHL' ppD
UpK

U	x U U U g	°	x U U U q g	U U?	U ?
T12	4	1/2" Light Cable	60.00 - 80.00	0.6000	0.6000
T12	5	waveguide bracket	60.00 - 80.00	0.6000	0.6000
T12	6	waveguide bracket	60.00 - 80.00	0.6000	0.6000
T12	8	ATCB-B01(5/16)	60.00 - 80.00	0.6000	0.6000
T12	9	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T12	10	FB-L98-002-XXX(3/8)	60.00 - 80.00	0.6000	0.6000
T12	11	WR-VG86ST-BRD(3/4)	60.00 - 80.00	0.6000	0.6000
T12	12	LDF7-50A(1-5/8)	60.00 - 80.00	0.6000	0.6000
T12	13	WR-VG86ST-BRD(3/4)	60.00 - 80.00	0.6000	0.6000
T12	14	FB-L98B-002-XXX(3/8)	60.00 - 80.00	0.6000	0.6000
T12	15	ATCB-B01(5/16)	60.00 - 80.00	0.6000	0.6000
T12	17	HB158-21U6S24-xxM_TMO(1-5/8)	60.00 - 80.00	0.6000	0.6000
T13	2	Safety Line 3/8	40.00 - 60.00	0.6000	0.6000
T13	3	1/2" Light Cable	40.00 - 60.00	0.6000	0.6000
T13	4	1/2" Light Cable	40.00 - 60.00	0.6000	0.6000
T13	5	waveguide bracket	40.00 - 60.00	0.6000	0.6000
T13	6	waveguide bracket	40.00 - 60.00	0.6000	0.6000
T13	8	ATCB-B01(5/16)	40.00 - 60.00	0.6000	0.6000
T13	9	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T13	10	FB-L98-002-XXX(3/8)	40.00 - 60.00	0.6000	0.6000
T13	11	WR-VG86ST-BRD(3/4)	40.00 - 60.00	0.6000	0.6000
T13	12	LDF7-50A(1-5/8)	40.00 - 60.00	0.6000	0.6000
T13	13	WR-VG86ST-BRD(3/4)	40.00 - 60.00	0.6000	0.6000
T13	14	FB-L98B-002-XXX(3/8)	40.00 - 60.00	0.6000	0.6000
T13	15	ATCB-B01(5/16)	40.00 - 60.00	0.6000	0.6000
T13	17	HB158-21U6S24-xxM_TMO(1-5/8)	40.00 - 60.00	0.6000	0.6000
T14	2	Safety Line 3/8	20.00 - 40.00	0.6000	0.6000
T14	3	1/2" Light Cable	20.00 - 40.00	0.6000	0.6000
T14	4	1/2" Light Cable	20.00 - 40.00	0.6000	0.6000
T14	5	waveguide bracket	20.00 - 40.00	0.6000	0.6000
T14	6	waveguide bracket	20.00 - 40.00	0.6000	0.6000
T14	8	ATCB-B01(5/16)	20.00 - 40.00	0.6000	0.6000
T14	9	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T14	10	FB-L98-002-XXX(3/8)	20.00 - 40.00	0.6000	0.6000
T14	11	WR-VG86ST-BRD(3/4)	20.00 -	0.6000	0.6000

			40.00		
T14	12	LDF7-50A(1-5/8)	20.00 - 40.00	0.6000	0.6000
T14	13	WR-VG86ST-BRD(3/4)	20.00 - 40.00	0.6000	0.6000
T14	14	FB-L98B-002-XXX(3/8)	20.00 - 40.00	0.6000	0.6000
T14	15	ATCB-B01(5/16)	20.00 - 40.00	0.6000	0.6000
T14	17	HB158-21U6S24- xxM_TMO(1-5/8)	20.00 - 40.00	0.6000	0.6000
T15	2	Safety Line 3/8	7.00 - 20.00	0.6000	0.6000
T15	3	1/2" Light Cable	7.00 - 20.00	0.6000	0.6000
T15	4	1/2" Light Cable	7.00 - 20.00	0.6000	0.6000
T15	5	waveguide bracket	7.00 - 20.00	0.6000	0.6000
T15	6	waveguide bracket	7.00 - 20.00	0.6000	0.6000
T15	8	ATCB-B01(5/16)	7.00 - 20.00	0.6000	0.6000
T15	9	LDF7-50A(1-5/8)	7.00 - 20.00	0.6000	0.6000
T15	10	FB-L98-002-XXX(3/8)	7.00 - 20.00	0.6000	0.6000
T15	11	WR-VG86ST-BRD(3/4)	7.00 - 20.00	0.6000	0.6000
T15	12	LDF7-50A(1-5/8)	7.00 - 20.00	0.6000	0.6000
T15	13	WR-VG86ST-BRD(3/4)	7.00 - 20.00	0.6000	0.6000
T15	14	FB-L98B-002-XXX(3/8)	7.00 - 20.00	0.6000	0.6000
T15	15	ATCB-B01(5/16)	7.00 - 20.00	0.6000	0.6000
T15	17	HB158-21U6S24- xxM_TMO(1-5/8)	7.00 - 20.00	0.6000	0.6000

Discrete Tower Loads

Flash Beacon Lighting	A	From Leg	0.00 0.00 2.00	0.0000	300.00	No Ice	2.70	2.70	0.05
Lightning Rod 5/8" x 3' on 10' Pole	C	From Face	0.00 0.00 11.50	0.0000	300.00	No Ice	2.56	2.56	0.05
Side Light	A	From Leg	0.50 0.00 0.00	0.0000	150.00	No Ice	0.26	0.26	0.01
Side Light	B	From Leg	0.50 0.00 0.00	0.0000	150.00	No Ice	0.26	0.26	0.01
Side Light	C	From Leg	0.50 0.00 0.00	0.0000	150.00	No Ice	0.26	0.26	0.01
******									
Platform Mount [LP 601-1]	C	None		0.0000	300.00	No Ice	28.50	28.50	1.12
******									
DBXLH-9090C-R2M w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	14.06	6.70	0.10
DBXLH-9090C-R2M w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	14.06	6.70	0.10
DBXLH-9090C-R2M w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	14.06	6.70	0.10
NNHH-65B-R4 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	7.55	4.23	0.11

NNHH-65B-R4 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	7.55	4.23	0.11
NNHH-65B-R4 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	7.55	4.23	0.11
SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	60.0000	270.00	No Ice	4.09	3.30	0.07
SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	70.0000	270.00	No Ice	4.09	3.30	0.07
SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	60.0000	270.00	No Ice	4.09	3.30	0.07
NNHH-65B-R4 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	60.0000	270.00	No Ice	7.55	4.23	0.11
NNHH-65B-R4 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	70.0000	270.00	No Ice	7.55	4.23	0.11
NNHH-65B-R4 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	70.0000	270.00	No Ice	7.55	4.23	0.11
(2) E15Z01P06	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	1.31	0.34	0.02
(2) E15Z01P06	B	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	1.31	0.34	0.02
(2) E15Z01P06	C	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	1.31	0.34	0.02
(2) CBC819-DF	A	From Leg	4.00 0.00 0.00	0.0000	270.00	No Ice	0.45	0.07	0.00
(2) CBC819-DF	B	From Leg	4.00 0.00 0.00	0.0000	270.00	No Ice	0.45	0.07	0.00
(2) CBC819-DF	C	From Leg	4.00 0.00 0.00	0.0000	270.00	No Ice	0.45	0.07	0.00
(2) RRUS 11	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.78	1.19	0.05
(2) RRUS 11	B	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.78	1.19	0.05
(2) RRUS 11	C	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.78	1.19	0.05
RRUS 32 B30	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.69	1.57	0.06
RRUS 32 B30	B	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.69	1.57	0.06
RRUS 32 B30	C	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	2.69	1.57	0.06
DC6-48-60-18-8F	A	From Leg	4.00 0.00 2.00	0.0000	270.00	No Ice	0.92	0.92	0.02
DC6-48-60-18-8F	B	From Leg	4.00 0.00	0.0000	270.00	No Ice	0.92	0.92	0.02

RRUS 4478 B14	A	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
RRUS 4478 B14	B	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
RRUS 4478 B14	C	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
RRUS 4426 B66	A	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.64	0.73	0.05
RRUS 4426 B66	B	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.64	0.73	0.05
RRUS 4426 B66	C	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.64	0.73	0.05
RRUS 4478 B5	A	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
RRUS 4478 B5	B	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
RRUS 4478 B5	C	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	1.84	1.06	0.06
DC6-48-60-18-8C	C	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	2.74	2.74	0.03
10' x 2" Mount Pipe	A	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	2.38	2.38	0.04
10' x 2" Mount Pipe	B	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	2.38	2.38	0.04
10' x 2" Mount Pipe	C	From Leg	2.00 4.00 0.00	0.0000	270.00	No Ice	2.38	2.38	0.04
Sector Mount [SM 502-3] *******	C	None	2.00	0.0000	270.00	No Ice	29.82	29.82	1.67
FFVV-65C-R3-V1_TMO w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	20.0000	260.00	No Ice	12.97	6.20	0.16
FFVV-65C-R3-V1_TMO w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	260.00	No Ice	12.97	6.20	0.16
FFVV-65C-R3-V1_TMO w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	5.0000	260.00	No Ice	12.97	6.20	0.16
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0.00 0.00	0.0000	260.00	No Ice	2.14	1.69	0.11
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0.00 0.00	0.0000	260.00	No Ice	2.14	1.69	0.11
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00 0.00 0.00	0.0000	260.00	No Ice	2.14	1.69	0.11
Radio 4480_TMOV2	A	From Leg	4.00 0.00 0.00	0.0000	260.00	No Ice	2.88	1.40	0.08
Radio 4480_TMOV2	B	From Leg	4.00 0.00	0.0000	260.00	No Ice	2.88	1.40	0.08

			0.00 4.00 0.00 0.00	0.0000	260.00	No Ice	2.88	1.40	0.08
12' V-Boom Mount [#C10857111]	A	From Leg	2.00 0.00 0.00	0.0000	260.00	No Ice	15.40	11.11	0.51
12' V-Boom Mount [#C10857111]	B	From Leg	2.00 0.00 0.00	0.0000	260.00	No Ice	15.40	11.11	0.51
12' V-Boom Mount [#C10857111]	C	From Leg	2.00 0.00 0.00	0.0000	260.00	No Ice	15.40	11.11	0.51
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Load Combinations

1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy
3	1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy
4	1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy
5	1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy
6	1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy
7	1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy
8	1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy
9	1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy
10	1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy
11	1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy
12	1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy
13	1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy
14	Dead+Wind 0 deg - Service+Guy
15	Dead+Wind 30 deg - Service+Guy
16	Dead+Wind 60 deg - Service+Guy
17	Dead+Wind 90 deg - Service+Guy
18	Dead+Wind 120 deg - Service+Guy
19	Dead+Wind 150 deg - Service+Guy
20	Dead+Wind 180 deg - Service+Guy
21	Dead+Wind 210 deg - Service+Guy
22	Dead+Wind 240 deg - Service+Guy
23	Dead+Wind 270 deg - Service+Guy
24	Dead+Wind 300 deg - Service+Guy
25	Dead+Wind 330 deg - Service+Guy

Maximum Member Forces

T1	300 - 280	Leg	Max Tension	10	10.95	0.61	-0.61
			Max. Compression	4	-41.57	0.02	0.00
			Max. Mx	11	-11.61	1.10	0.02
			Max. My	2	-26.48	-0.11	0.91
			Max. Vy	11	2.63	1.10	0.02
			Max. Vx	2	2.18	-0.11	0.91
		Diagonal	Max Tension	11	5.33	0.00	0.00
			Max. Compression	13	-7.75	0.00	0.00
			Max. Mx	11	5.33	0.01	0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
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		Max. My	11	-2.07	0.00	-0.00
		Max. Vy	11	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Horizontal	Max Tension	11	5.19	0.00	0.00
		Max. Compression	4	-3.64	0.00	0.00
		Max. Mx	4	1.09	0.00	0.00
		Max. My	11	-3.25	0.00	0.00
		Max. Vy	4	-0.01	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
	Secondary Horizontal	Max Tension	11	0.00	-0.00	-0.00
		Max. Compression	5	-0.00	-0.00	-0.00
		Max. Mx	9	0.00	-0.00	0.00
		Max. My	11	0.00	-0.00	-0.00
		Max. Vy	9	0.00	-0.00	0.00
		Max. Vx	5	0.00	-0.00	-0.00
	Top Girt	Max Tension	4	0.64	0.00	0.00
		Max. Compression	10	-0.64	0.00	0.00
		Max. Mx	4	-0.29	0.00	0.00
		Max. My	11	0.52	0.00	0.00
		Max. Vy	4	-0.01	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
	Bottom Girt	Max Tension	12	3.33	0.00	0.00
		Max. Compression	6	-2.00	0.00	0.00
		Max. Mx	10	1.70	0.00	0.00
		Max. My	11	-1.25	0.00	0.00
		Max. Vy	10	-0.01	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
	Guy A	Bottom Tension	8	14.27		
		Top Tension	8	14.60		
		Top Cable Vert	8	11.81		
		Top Cable Norm	8	8.58		
		Top Cable Tan	8	0.01		
		Bot Cable Vert	8	-11.04		
		Bot Cable Norm	8	9.04		
		Bot Cable Tan	8	0.01		
	Guy B	Bottom Tension	12	14.59		
		Top Tension	12	14.92		
		Top Cable Vert	12	12.07		
		Top Cable Norm	12	8.78		
		Top Cable Tan	12	0.01		
		Bot Cable Vert	12	-11.29		
		Bot Cable Norm	12	9.24		
		Bot Cable Tan	12	0.01		
	Guy C	Bottom Tension	4	14.59		
		Top Tension	4	14.92		
		Top Cable Vert	4	12.07		
		Top Cable Norm	4	8.78		
		Top Cable Tan	4	0.01		
		Bot Cable Vert	4	-11.29		
		Bot Cable Norm	4	9.24		
		Bot Cable Tan	4	0.01		
	Torque Arm Top	Max Tension	11	13.93	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	6	9.17	-0.02	0.00
		Max. My	11	13.93	0.00	-0.00
		Max. Vy	6	0.02	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Torque Arm Bottom	Max Tension	1	0.00	0.00	0.00
		Max. Compression	4	-19.07	0.00	0.00
		Max. Mx	11	-9.95	-0.02	0.00
		Max. My	11	-3.38	0.00	0.00
		Max. Vy	11	0.02	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
T2	280 - 260 Leg	Max Tension	10	30.60	-0.04	0.03
		Max. Compression	4	-59.72	0.04	-0.02
		Max. Mx	11	-11.74	-1.12	-0.02
		Max. My	2	-26.49	0.11	-0.93

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
ς			% ς	L	v L	v L
		Max. Vy	11	2.63	-0.01	0.00
		Max. Vx	2	2.18	-0.00	-0.01
	Diagonal	Max Tension	7	4.33	0.00	0.00
		Max. Compression	13	-7.47	0.00	0.00
		Max. Mx	11	3.80	0.01	0.00
		Max. My	11	-5.44	0.00	-0.00
		Max. Vy	11	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Horizontal	Max Tension	12	4.54	0.00	0.00
		Max. Compression	6	-2.61	0.00	0.00
		Max. Mx	7	2.35	0.00	0.00
		Max. My	11	-2.26	0.00	0.00
		Max. Vy	7	-0.00	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
	Secondary Horizontal	Max Tension	11	0.00	-0.00	-0.00
		Max. Compression	5	-0.00	-0.00	-0.00
		Max. Mx	9	0.00	-0.00	0.00
		Max. My	11	0.00	-0.00	-0.00
		Max. Vy	9	0.00	-0.00	0.00
		Max. Vx	5	0.00	-0.00	-0.00
	Top Girt	Max Tension	11	2.82	0.00	0.00
		Max. Compression	4	-1.86	0.00	0.00
		Max. Mx	6	-0.67	0.00	0.00
		Max. My	11	-1.45	0.00	0.00
		Max. Vy	6	-0.00	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
	Bottom Girt	Max Tension	2	1.31	0.00	0.00
		Max. Compression	5	-0.42	0.00	0.00
		Max. Mx	6	0.04	0.00	0.00
		Max. My	3	1.23	0.00	-0.00
		Max. Vy	6	-0.00	0.00	0.00
		Max. Vx	3	0.00	0.00	0.00
T3	260 - 240	Leg	Max Tension	10	21.00	-0.15	0.11
			Max. Compression	4	-56.78	-0.24	0.42
			Max. Mx	5	-17.25	0.74	-0.04
			Max. My	2	-17.02	-0.07	-0.70
			Max. Vy	11	-2.73	0.41	0.04
			Max. Vx	2	-2.51	0.02	0.36
		Diagonal	Max Tension	5	5.73	0.00	0.00
			Max. Compression	11	-8.74	0.00	0.00
			Max. Mx	13	4.73	0.01	0.00
			Max. My	11	1.45	0.00	-0.00
			Max. Vy	13	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	11	5.45	0.00	0.00
			Max. Compression	5	-3.52	0.00	0.00
			Max. Mx	10	1.13	0.00	0.00
			Max. My	11	5.45	0.00	-0.00
			Max. Vy	10	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	13	-0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	13	0.00	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	12	2.70	0.00	0.00
			Max. Compression	6	-1.40	0.00	0.00
			Max. Mx	6	1.14	0.00	0.00
			Max. My	3	2.44	0.00	-0.00
			Max. Vy	6	-0.01	0.00	0.00
			Max. Vx	3	0.00	0.00	0.00
		Bottom Girt	Max Tension	10	3.10	0.00	0.00
			Max. Compression	4	-2.10	0.00	0.00
			Max. Mx	12	1.75	0.00	0.00
			Max. My	11	2.92	0.00	-0.00
			Max. Vy	12	-0.01	0.00	0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
ς			% ς	L	v L	v L
		Max. Vx	11	0.00	0.00	0.00
T4 240 - 220	Leg	Max Tension	4	10.59	-0.19	0.08
		Max. Compression	10	-45.93	0.09	-0.03
		Max. Mx	11	-20.60	1.56	0.16
		Max. My	2	-17.03	0.11	1.41
		Max. Vy	11	-2.72	1.56	0.16
		Max. Vx	2	-2.50	0.11	1.41
	Diagonal	Max Tension	5	6.73	0.00	0.00
		Max. Compression	11	-10.02	0.00	0.00
		Max. Mx	13	5.67	0.01	0.00
		Max. My	11	2.57	0.00	-0.00
		Max. Vy	13	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Horizontal	Max Tension	4	9.96	0.00	0.00
		Max. Compression	10	-5.56	0.00	0.00
		Max. Mx	12	1.26	0.01	0.00
		Max. My	11	6.19	0.00	-0.00
		Max. Vy	12	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
		Max. Compression	11	-0.00	-0.00	-0.00
		Max. Mx	13	-0.00	-0.00	0.00
		Max. My	2	-0.00	-0.00	0.00
		Max. Vy	13	0.00	-0.00	0.00
		Max. Vx	2	-0.00	0.00	0.00
	Top Girt	Max Tension	4	3.87	0.00	0.00
		Max. Compression	10	-2.69	0.00	0.00
		Max. Mx	12	-0.75	0.01	0.00
		Max. My	11	3.51	0.00	-0.00
		Max. Vy	12	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Bottom Girt	Max Tension	11	2.92	0.00	0.00
		Max. Compression	5	-0.70	0.00	0.00
		Max. Mx	12	1.36	0.01	0.00
		Max. My	11	0.95	0.00	-0.00
		Max. Vy	12	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Guy A	Bottom Tension	8	14.04		
		Top Tension	8	14.30		
		Top Cable Vert	8	10.48		
		Top Cable Norm	8	9.73		
		Top Cable Tan	8	0.00		
		Bot Cable Vert	8	-9.84		
		Bot Cable Norm	8	10.02		
		Bot Cable Tan	8	0.00		
	Guy B	Bottom Tension	12	15.10		
		Top Tension	12	15.37		
		Top Cable Vert	12	11.25		
		Top Cable Norm	12	10.47		
		Top Cable Tan	12	0.00		
		Bot Cable Vert	12	-10.60		
		Bot Cable Norm	12	10.76		
		Bot Cable Tan	12	0.00		
	Guy C	Bottom Tension	4	15.22		
		Top Tension	4	15.48		
		Top Cable Vert	4	11.33		
		Top Cable Norm	4	10.55		
		Top Cable Tan	4	0.00		
		Bot Cable Vert	4	-10.68		
		Bot Cable Norm	4	10.84		
		Bot Cable Tan	4	0.00		
	Torque Arm Top	Max Tension	11	15.65	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	10	10.16	-0.02	0.00
		Max. My	11	5.90	0.00	-0.00
		Max. Vy	6	0.02	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Torque Arm	Max Tension	1	0.00	0.00	0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
¿U			% ¿U	U	ν U	ν U
	Bottom					
		Max. Compression	4	-16.62	0.00	0.00
		Max. Mx	13	-7.90	-0.02	0.00
		Max. My	11	-15.70	0.00	0.00
		Max. Vy	13	0.02	0.00	0.00
		Max. Vx	11	-0.00	0.00	0.00
T5	220 - 200	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	2	-42.77	-0.46	-0.19
			Max. Mx	11	-29.38	-0.80	-0.02
			Max. My	3	-28.81	0.37	-0.61
			Max. Vy	11	2.40	0.21	0.02
			Max. Vx	3	1.84	-0.11	0.16
		Diagonal	Max Tension	5	0.60	0.00	0.00
			Max. Compression	12	-6.71	0.00	0.00
			Max. Mx	9	-2.86	0.01	0.00
			Max. My	11	-4.90	0.00	-0.00
			Max. Vy	9	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	12	4.15	0.00	0.00
			Max. Compression	6	-0.30	0.00	0.00
			Max. Mx	10	1.79	0.00	0.00
			Max. My	11	2.98	0.00	-0.00
			Max. Vy	10	-0.00	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	6	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	13	-0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	13	0.00	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	11	2.43	0.00	0.00
			Max. Compression	5	-0.52	0.00	0.00
			Max. Mx	12	1.95	0.00	0.00
			Max. My	3	0.96	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	3	0.00	0.00	0.00
		Bottom Girt	Max Tension	11	1.73	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	4	1.02	0.00	0.00
			Max. My	11	1.73	0.00	-0.00
			Max. Vy	4	-0.00	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
T6	200 - 180	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-50.47	-0.01	-0.03
			Max. Mx	11	-39.70	-0.72	-0.43
			Max. My	3	-20.69	-0.10	-0.77
			Max. Vy	11	-1.78	0.03	0.00
			Max. Vx	3	-1.82	-0.01	0.00
		Diagonal	Max Tension	5	1.33	0.00	0.00
			Max. Compression	11	-7.42	0.00	0.00
			Max. Mx	9	-0.96	0.01	0.00
			Max. My	11	-2.60	0.00	-0.00
			Max. Vy	9	-0.01	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Horizontal	Max Tension	11	4.46	0.00	0.00
			Max. Compression	5	-0.68	0.00	0.00
			Max. Mx	4	1.64	0.00	0.00
			Max. My	11	3.46	0.00	-0.00
			Max. Vy	4	-0.00	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	13	-0.00	-0.00	0.00
			Max. My	5	0.00	-0.00	-0.00
			Max. Vy	13	0.00	-0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Top Girt	Max Tension	11	1.84	0.00	0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U U	U	U	U
ς			% ς	L	ν L	ν L
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	4	0.96	0.00	0.00
		Max. My	11	1.84	0.00	-0.00
		Max. Vy	4	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Bottom Girt	Max Tension	11	2.57	0.00	0.00
		Max. Compression	5	-0.42	0.00	0.00
		Max. Mx	10	0.50	0.00	0.00
		Max. My	11	2.57	0.00	-0.00
		Max. Vy	10	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
T7	180 - 160 Leg	Max Tension	1	0.00	0.00	0.00
		Max. Compression	6	-55.72	0.01	-0.01
		Max. Mx	11	-35.80	0.82	-0.02
		Max. My	3	-17.89	0.08	0.77
		Max. Vy	11	1.88	0.82	-0.02
		Max. Vx	3	-1.82	0.08	0.77
	Diagonal	Max Tension	5	1.64	0.00	0.00
		Max. Compression	11	-7.75	0.00	0.00
		Max. Mx	9	0.95	0.01	0.00
		Max. My	11	-2.53	0.00	-0.00
		Max. Vy	9	-0.01	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Horizontal	Max Tension	11	4.86	0.00	0.00
		Max. Compression	5	-1.10	0.00	0.00
		Max. Mx	6	1.17	0.00	0.00
		Max. My	11	4.86	0.00	-0.00
		Max. Vy	6	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
		Max. Compression	11	-0.00	-0.00	-0.00
		Max. Mx	4	0.00	-0.00	-0.00
		Max. My	5	0.00	-0.00	-0.00
		Max. Vy	4	0.00	-0.00	-0.00
		Max. Vx	5	0.00	0.00	0.00
	Top Girt	Max Tension	11	2.64	0.00	0.00
		Max. Compression	5	-0.60	0.00	0.00
		Max. Mx	10	1.59	0.00	0.00
		Max. My	11	2.64	0.00	-0.00
		Max. Vy	10	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Bottom Girt	Max Tension	11	2.14	0.00	0.00
		Max. Compression	6	-0.26	0.00	0.00
		Max. Mx	12	1.03	0.00	0.00
		Max. My	11	0.64	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Guy A	Bottom Tension	8	12.31		
		Top Tension	8	12.51		
		Top Cable Vert	8	7.86		
		Top Cable Norm	8	9.74		
		Top Cable Tan	8	0.00		
		Bot Cable Vert	8	-7.34		
		Bot Cable Norm	8	9.89		
		Bot Cable Tan	8	0.00		
	Guy B	Bottom Tension	12	13.08		
		Top Tension	12	13.27		
		Top Cable Vert	12	8.32		
		Top Cable Norm	12	10.34		
		Top Cable Tan	12	0.00		
		Bot Cable Vert	12	-7.81		
		Bot Cable Norm	12	10.49		
		Bot Cable Tan	12	0.00		
	Guy C	Bottom Tension	4	13.78		
		Top Tension	4	13.98		
		Top Cable Vert	4	8.76		
		Top Cable Norm	4	10.90		
		Top Cable Tan	4	0.00		

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
¿U			% ¿U	U	ν U	ν U
		Bot Cable Vert	4	-8.24		
		Bot Cable Norm	4	11.05		
		Bot Cable Tan	4	0.00		
	Top Guy Pull-Off	Max Tension	11	4.17	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	10	3.66	0.00	0.00
		Max. My	11	3.24	0.00	-0.00
		Max. Vy	10	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
T8	160 - 140	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-45.75	0.38	-0.08
			Max. Mx	11	-36.17	-0.76	0.03
			Max. My	2	-33.26	0.18	-0.63
			Max. Vy	11	1.87	0.03	0.01
			Max. Vx	2	1.56	-0.01	0.02
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	12	-5.32	0.00	0.00
			Max. Mx	4	-2.58	0.01	0.00
			Max. My	5	-2.82	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	12	3.21	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	12	2.27	0.00	0.00
			Max. My	5	1.38	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	4	0.00	-0.00	-0.00
			Max. My	5	0.00	-0.00	-0.00
			Max. Vy	4	0.00	-0.00	-0.00
			Max. Vx	5	0.00	0.00	0.00
		Top Girt	Max Tension	11	1.98	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	12	1.60	0.00	0.00
			Max. My	11	0.76	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Bottom Girt	Max Tension	11	1.40	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	4	1.17	0.00	0.00
			Max. My	5	0.66	0.00	-0.00
			Max. Vy	4	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T9	140 - 120	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	5	-52.89	-0.02	-0.02
			Max. Mx	5	-41.97	0.80	-0.01
			Max. My	8	-43.27	-0.16	0.63
			Max. Vy	5	2.00	-0.04	0.01
			Max. Vx	8	1.60	0.00	-0.04
		Diagonal	Max Tension	5	0.21	0.00	0.00
			Max. Compression	11	-6.35	0.00	0.00
			Max. Mx	4	-1.46	0.01	0.00
			Max. My	5	-4.60	0.00	0.00
			Max. Vy	4	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	11	3.82	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	4	1.89	0.00	0.00
			Max. My	11	2.90	0.00	-0.00
			Max. Vy	4	-0.00	0.00	0.00
			Max. Vx	11	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	4	0.00	-0.00	-0.00
			Max. My	5	0.00	-0.00	-0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
ς			% ς	U	ν U	ν U
		Max. Vy	4	0.00	-0.00	-0.00
		Max. Vx	5	0.00	0.00	0.00
	Top Girt	Max Tension	11	1.59	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	4	0.91	0.00	0.00
		Max. My	11	1.59	0.00	-0.00
		Max. Vy	4	-0.00	0.00	0.00
		Max. Vx	11	0.00	0.00	0.00
	Bottom Girt	Max Tension	11	2.14	0.00	0.00
		Max. Compression	4	-0.12	0.00	0.00
		Max. Mx	13	1.76	0.00	0.00
		Max. My	5	-0.07	0.00	-0.00
		Max. Vy	13	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
T10	120 - 100	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	11	-57.75	0.00	0.01
			Max. Mx	11	-42.97	0.89	0.02
			Max. My	8	-45.55	-0.19	-0.76
			Max. Vy	11	2.07	0.89	0.02
			Max. Vx	8	-1.74	-0.19	-0.76
		Diagonal	Max Tension	11	1.73	0.00	0.00
			Max. Compression	5	-7.23	0.00	0.00
			Max. Mx	2	0.19	0.01	0.00
			Max. My	5	-0.90	0.00	0.00
			Max. Vy	2	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	5	4.69	0.00	0.00
			Max. Compression	11	-1.14	0.00	0.00
			Max. Mx	8	3.29	0.00	0.00
			Max. My	6	-0.20	0.00	-0.00
			Max. Vy	8	-0.01	0.00	0.00
			Max. Vx	6	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	10	0.00	-0.00	-0.00
			Max. Compression	6	-0.00	-0.00	0.00
			Max. Mx	6	-0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	6	0.00	-0.00	0.00
			Max. Vx	10	0.00	0.00	0.00
		Top Girt	Max Tension	4	2.43	0.00	0.00
			Max. Compression	5	-0.17	0.00	0.00
			Max. Mx	13	1.08	0.00	0.00
			Max. My	5	-0.17	0.00	-0.00
			Max. Vy	13	-0.01	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Bottom Girt	Max Tension	4	2.54	0.00	0.00
			Max. Compression	10	-0.51	0.00	0.00
			Max. Mx	6	1.56	0.00	0.00
			Max. My	6	1.75	0.00	0.00
			Max. Vy	6	-0.01	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
		Guy A	Bottom Tension	8	12.17		
			Top Tension	8	12.30		
			Top Cable Vert	8	5.72		
			Top Cable Norm	8	10.89		
			Top Cable Tan	8	0.00		
			Bot Cable Vert	8	-5.33		
			Bot Cable Norm	8	10.94		
			Bot Cable Tan	8	0.00		
		Guy B	Bottom Tension	11	13.19		
			Top Tension	11	13.32		
			Top Cable Vert	11	6.19		
			Top Cable Norm	11	11.80		
			Top Cable Tan	11	0.08		
			Bot Cable Vert	11	-5.78		
			Bot Cable Norm	11	11.85		
			Bot Cable Tan	11	0.09		
		Guy C	Bottom Tension	4	13.85		
			Top Tension	4	13.98		

q U	% U	% U	# gU	7 U	U7 U	U7 U
U U	U		U	U	U	U
¿U			% ¿U	U	ν L	ν L
		Top Cable Vert	4	6.47		
		Top Cable Norm	4	12.39		
		Top Cable Tan	4	0.00		
		Bot Cable Vert	4	-6.09		
		Bot Cable Norm	4	12.44		
		Bot Cable Tan	4	0.00		
	Top Guy Pull-Off	Max Tension	11	3.69	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	8	3.14	0.00	0.00
		Max. My	6	1.95	0.00	-0.00
		Max. Vy	8	-0.00	0.00	0.00
		Max. Vx	6	0.00	0.00	0.00
T11	100 - 80	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-64.52	0.02	-0.02
			Max. Mx	11	-43.12	-0.85	-0.01
			Max. My	8	-45.56	0.18	0.72
			Max. Vy	11	2.06	0.02	0.00
			Max. Vx	8	-1.74	-0.00	-0.02
		Diagonal	Max Tension	11	0.86	0.00	0.00
			Max. Compression	5	-6.91	0.00	0.00
			Max. Mx	2	-0.27	0.01	0.00
			Max. My	5	-2.95	0.00	0.00
			Max. Vy	2	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	5	4.14	0.00	0.00
			Max. Compression	11	-0.39	0.00	0.00
			Max. Mx	8	2.66	0.00	0.00
			Max. My	6	3.37	0.00	0.00
			Max. Vy	8	-0.00	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
		Secondary Horizontal	Max Tension	10	0.00	-0.00	-0.00
			Max. Compression	6	-0.00	-0.00	-0.00
			Max. Mx	9	0.00	-0.00	0.00
			Max. My	2	0.00	-0.00	0.00
			Max. Vy	9	0.00	-0.00	0.00
			Max. Vx	2	-0.00	-0.00	0.00
		Top Girt	Max Tension	5	2.38	0.00	0.00
			Max. Compression	11	-0.32	0.00	0.00
			Max. Mx	6	0.45	0.00	0.00
			Max. My	6	2.24	0.00	0.00
			Max. Vy	6	-0.00	0.00	0.00
			Max. Vx	6	-0.00	0.00	0.00
		Bottom Girt	Max Tension	5	1.70	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	10	1.20	0.00	0.00
			Max. My	5	1.70	0.00	-0.00
			Max. Vy	10	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T12	80 - 60	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-64.64	0.01	-0.01
			Max. Mx	5	-46.71	0.76	-0.00
			Max. My	9	-45.08	-0.34	0.59
			Max. Vy	5	1.75	0.02	0.01
			Max. Vx	9	1.38	-0.01	0.01
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	6	-4.73	0.00	0.00
			Max. Mx	5	-2.65	0.01	0.00
			Max. My	5	-4.71	0.00	0.00
			Max. Vy	5	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	5	2.92	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	6	2.17	0.00	0.00
			Max. My	5	1.77	0.00	-0.00
			Max. Vy	6	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
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		Max. Compression	11	-0.00	-0.00	-0.00
		Max. Mx	4	0.00	-0.00	-0.00
		Max. My	5	0.00	-0.00	-0.00
		Max. Vy	4	0.00	-0.00	-0.00
		Max. Vx	5	0.00	0.00	0.00
	Top Girt	Max Tension	5	1.58	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	10	0.83	0.00	0.00
		Max. My	5	1.58	0.00	-0.00
		Max. Vy	10	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
	Bottom Girt	Max Tension	5	1.80	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	12	0.95	0.00	0.00
		Max. My	5	0.88	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
T13	60 - 40 Leg	Max Tension	1	0.00	0.00	0.00
		Max. Compression	4	-68.73	0.07	0.02
		Max. Mx	5	-46.72	-0.72	0.02
		Max. My	9	-45.10	0.31	-0.57
		Max. Vy	5	1.76	-0.72	0.02
		Max. Vx	9	1.38	0.31	-0.57
	Diagonal	Max Tension	11	0.26	0.00	0.00
		Max. Compression	5	-5.19	0.00	0.00
		Max. Mx	5	-4.94	0.01	0.00
		Max. My	5	-3.64	0.00	0.00
		Max. Vy	5	-0.01	0.00	0.00
		Max. Vx	5	-0.00	0.00	0.00
	Horizontal	Max Tension	5	3.47	0.00	0.00
		Max. Compression	11	-0.10	0.00	0.00
		Max. Mx	12	1.31	0.00	0.00
		Max. My	5	3.21	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
	Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
		Max. Compression	11	-0.00	-0.00	-0.00
		Max. Mx	4	0.00	-0.00	-0.00
		Max. My	5	0.00	-0.00	-0.00
		Max. Vy	4	0.00	-0.00	-0.00
		Max. Vx	5	0.00	0.00	0.00
	Top Girt	Max Tension	5	2.00	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	12	0.49	0.00	0.00
		Max. My	5	0.82	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
	Bottom Girt	Max Tension	5	1.68	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	12	0.51	0.00	0.00
		Max. My	5	1.68	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
	Guy A	Bottom Tension	8	5.60		
		Top Tension	8	5.63		
		Top Cable Vert	8	1.37		
		Top Cable Norm	8	5.46		
		Top Cable Tan	8	0.00		
		Bot Cable Vert	8	-1.23		
		Bot Cable Norm	8	5.46		
		Bot Cable Tan	8	0.00		
	Guy B	Bottom Tension	11	6.04		
		Top Tension	11	6.06		
		Top Cable Vert	11	1.47		
		Top Cable Norm	11	5.88		
		Top Cable Tan	11	0.03		
		Bot Cable Vert	11	-1.33		
		Bot Cable Norm	11	5.89		

q U	% U	% U	# gU	7 U	U7 U	U7 U
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		Bot Cable Tan	11	0.04		
	Guy C	Bottom Tension	4	6.35		
		Top Tension	4	6.38		
		Top Cable Vert	4	1.54		
		Top Cable Norm	4	6.19		
		Top Cable Tan	4	0.00		
		Bot Cable Vert	4	-1.41		
		Bot Cable Norm	4	6.19		
		Bot Cable Tan	4	0.00		
	Top Guy Pull-Off	Max Tension	5	2.88	0.00	0.00
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	12	1.24	0.00	0.00
		Max. My	5	2.34	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
T14	40 - 20	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-68.73	0.37	0.31
			Max. Mx	5	-49.09	0.82	-0.00
			Max. My	9	-47.89	-0.36	0.64
			Max. Vy	5	1.87	0.03	0.01
			Max. Vx	9	1.48	-0.02	0.01
		Diagonal	Max Tension	1	0.00	0.00	0.00
			Max. Compression	5	-5.33	0.00	0.00
			Max. Mx	5	-3.07	0.01	0.00
			Max. My	5	-5.22	0.00	0.00
			Max. Vy	5	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	5	3.30	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	12	1.05	0.00	0.00
			Max. My	5	2.02	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
			Max. Compression	11	-0.00	-0.00	-0.00
			Max. Mx	4	0.00	-0.00	-0.00
			Max. My	5	0.00	-0.00	-0.00
			Max. Vy	4	0.00	-0.00	-0.00
			Max. Vx	5	0.00	0.00	0.00
		Top Girt	Max Tension	5	1.68	0.00	0.00
			Max. Compression	1	0.00	0.00	0.00
			Max. Mx	12	0.71	0.00	0.00
			Max. My	5	1.68	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
		Bottom Girt	Max Tension	5	1.98	0.00	0.00
			Max. Compression	11	-0.02	0.00	0.00
			Max. Mx	12	0.73	0.00	0.00
			Max. My	5	1.02	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00
			Max. Vx	5	0.00	0.00	0.00
T15	20 - 6.8125	Leg	Max Tension	1	0.00	0.00	0.00
			Max. Compression	4	-66.48	0.03	0.44
			Max. Mx	5	-54.68	-1.37	0.37
			Max. My	8	-53.77	0.31	-1.32
			Max. Vy	5	1.88	-0.76	0.02
			Max. Vx	9	1.48	0.33	-0.61
		Diagonal	Max Tension	12	0.38	0.00	0.00
			Max. Compression	6	-5.84	0.00	0.00
			Max. Mx	5	-2.23	0.01	0.00
			Max. My	5	-5.44	0.00	0.00
			Max. Vy	5	-0.01	0.00	0.00
			Max. Vx	5	-0.00	0.00	0.00
		Horizontal	Max Tension	5	4.15	0.00	0.00
			Max. Compression	12	-0.23	0.00	0.00
			Max. Mx	12	0.93	0.00	0.00
			Max. My	5	1.76	0.00	-0.00
			Max. Vy	12	-0.00	0.00	0.00

q U	% U	% U	# gU	7 U	U7 U	U7 U
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		Max. Vx	5	0.00	0.00	0.00
	Secondary Horizontal	Max Tension	5	0.00	-0.00	-0.00
		Max. Compression	11	-0.00	-0.00	-0.00
		Max. Mx	4	0.00	-0.00	-0.00
		Max. My	11	-0.00	-0.00	-0.00
		Max. Vy	4	0.00	-0.00	-0.00
		Max. Vx	11	0.00	-0.00	-0.00
	Top Girt	Max Tension	5	2.15	0.00	0.00
		Max. Compression	11	-0.17	0.00	0.00
		Max. Mx	12	0.26	0.00	0.00
		Max. My	5	0.98	0.00	-0.00
		Max. Vy	12	-0.00	0.00	0.00
		Max. Vx	5	0.00	0.00	0.00
T16	6.8125 - 0	Leg Max Tension	1	0.00	0.00	0.00
		Max. Compression	4	-59.66	0.42	-0.62
		Max. Mx	5	-47.62	-3.45	-0.17
		Max. My	5	-45.83	-0.10	-2.23
		Max. Vy	5	15.20	-3.45	-0.17
		Max. Vx	5	2.30	0.04	0.89
	Horizontal	Max Tension	5	0.19	-1.97	-0.18
		Max. Compression	5	-1.26	1.63	0.13
		Max. Mx	5	0.06	2.73	0.35
		Max. My	5	-0.18	-2.26	-0.47
		Max. Vy	5	-9.01	2.73	0.35
		Max. Vx	5	-1.39	2.73	0.35
	Top Girt	Max Tension	5	10.49	0.03	-0.73
		Max. Compression	1	0.00	0.00	0.00
		Max. Mx	5	10.49	2.09	-0.32
		Max. My	5	9.43	0.07	-0.75
		Max. Vy	5	-0.74	2.09	-0.32
		Max. Vx	5	-0.17	1.93	-0.26

Maximum Reactions

U	% U	# gU	U	Z RU U	Z RU U
		U	U	U	U
		% ÇU			
Mast	Max. Vert	4	153.04	-1.39	0.83
	Max. H_x	11	151.21	1.70	-0.01
	Max. H_z	2	141.95	0.02	1.50
	Max. M_x	1	0.00	0.01	-0.00
	Max. M_z	1	0.00	0.01	-0.00
	Max. Torsion	5	7.20	-1.69	0.03
	Min. Vert	1	115.07	0.01	-0.00
	Min. H_x	5	151.29	-1.69	0.03
	Min. H_z	8	150.93	-0.00	-1.34
	Min. M_x	1	0.00	0.01	-0.00
	Min. M_z	1	0.00	0.01	-0.00
	Min. Torsion	11	1.58	1.70	-0.01
Guy C @ 225 ft Elev 0 ft Azimuth 240 deg	Max. Vert	10	-6.68	-5.44	3.14
	Max. H_x	10	-6.68	-5.44	3.14
	Max. H_z	4	-59.05	-60.02	34.64
	Min. Vert	4	-59.05	-60.02	34.64
	Min. H_x	4	-59.05	-60.02	34.64
	Min. H_z	10	-6.68	-5.44	3.14
Guy B @ 225 ft Elev 0 ft Azimuth 120 deg	Max. Vert	6	-7.23	6.07	3.50
	Max. H_x	12	-57.25	57.85	33.43
	Max. H_z	12	-57.25	57.85	33.43
	Min. Vert	12	-57.25	57.85	33.43
	Min. H_x	6	-7.23	6.07	3.50

U	%	U	# gU U % ¢U	U U	Z U	RJU U U	Z U	RJU U U
Guy A @ 225 ft Elev 0 ft Azimuth 0 deg	Min. H_z	6	-7.23	6.07		3.50		
	Max. Vert	2	-8.18	0.00		-8.28		
	Max. H_x	11	-33.47	2.52		-38.33		
	Max. H_z	2	-8.18	0.00		-8.28		
	Min. Vert	8	-55.33	0.00		-64.15		
	Min. H_x	5	-33.39	-2.51		-38.31		
	Min. H_z	8	-55.33	0.00		-64.15		

Tower Mast Reaction Summary

U %	UW U	U U	U U	U RJU U	U RJU U	U U
Dead Only	115.07	-0.01	0.00	0.00	0.00	-3.36
1.2 Dead+1.0 Wind 0 deg - No Ice+1.0 Guy	141.95	-0.02	-1.50	0.00	0.00	-2.51
1.2 Dead+1.0 Wind 30 deg - No Ice+1.0 Guy	148.58	0.72	-1.29	0.00	0.00	-1.88
1.2 Dead+1.0 Wind 60 deg - No Ice+1.0 Guy	153.04	1.39	-0.83	0.00	0.00	-4.62
1.2 Dead+1.0 Wind 90 deg - No Ice+1.0 Guy	151.29	1.69	-0.03	0.00	0.00	-7.20
1.2 Dead+1.0 Wind 120 deg - No Ice+1.0 Guy	143.27	1.43	0.82	0.00	0.00	-6.42
1.2 Dead+1.0 Wind 150 deg - No Ice+1.0 Guy	147.70	0.71	1.22	0.00	0.00	-5.26
1.2 Dead+1.0 Wind 180 deg - No Ice+1.0 Guy	150.93	0.00	1.34	0.00	0.00	-5.98
1.2 Dead+1.0 Wind 210 deg - No Ice+1.0 Guy	148.35	-0.73	1.28	0.00	0.00	-6.76
1.2 Dead+1.0 Wind 240 deg - No Ice+1.0 Guy	145.49	-1.53	0.90	0.00	0.00	-4.02
1.2 Dead+1.0 Wind 270 deg - No Ice+1.0 Guy	151.21	-1.70	0.01	0.00	0.00	-1.58
1.2 Dead+1.0 Wind 300 deg - No Ice+1.0 Guy	152.05	-1.31	-0.73	0.00	0.00	-2.18
1.2 Dead+1.0 Wind 330 deg - No Ice+1.0 Guy	147.72	-0.72	-1.21	0.00	0.00	-3.35
Dead+Wind 0 deg - Service+Guy	116.92	-0.01	-0.40	0.00	0.00	-2.98
Dead+Wind 30 deg - Service+Guy	116.79	0.20	-0.36	0.00	0.00	-2.75
Dead+Wind 60 deg - Service+Guy	116.74	0.40	-0.24	0.00	0.00	-3.46
Dead+Wind 90 deg - Service+Guy	116.79	0.49	-0.00	0.00	0.00	-4.17
Dead+Wind 120 deg - Service+Guy	116.90	0.37	0.22	0.00	0.00	-4.02
Dead+Wind 150 deg - Service+Guy	116.77	0.19	0.35	0.00	0.00	-3.67
Dead+Wind 180 deg - Service+Guy	116.66	-0.01	0.39	0.00	0.00	-3.84
Dead+Wind 210 deg - Service+Guy	116.76	-0.22	0.37	0.00	0.00	-4.07
Dead+Wind 240 deg - Service+Guy	116.91	-0.42	0.25	0.00	0.00	-3.36
Dead+Wind 270 deg - Service+Guy	116.82	-0.50	0.01	0.00	0.00	-2.65
Dead+Wind 300 deg - Service+Guy	116.72	-0.39	-0.21	0.00	0.00	-2.80
Dead+Wind 330 deg - Service+Guy	116.77	-0.21	-0.34	0.00	0.00	-3.15

Solution Summary

U %	U ¢U	U U L	U L	U L	U U L	U L	U L	U j Ud U
1	0.00	-43.60	0.00	-0.00	43.60	0.00		0.001%
2	0.07	-51.47	-44.51	-0.07	51.47	44.51		0.002%
3	23.43	-50.93	-40.46	-23.43	50.93	40.46		0.002%
4	43.90	-50.39	-25.36	-43.90	50.39	25.36		0.000%

U	U U	U	U	U	U U	U	U
U	U	U	U	U	U	U	j Uq U
% ęU	U	U	U	U	U	U	
5	52.06	-50.93	-0.07	-52.06	50.93	0.07	0.005%
6	41.25	-51.47	23.75	-41.25	51.47	-23.75	0.002%
7	22.45	-50.93	38.92	-22.45	50.93	-38.92	0.003%
8	-0.07	-50.39	44.15	0.07	50.39	-44.15	0.001%
9	-23.27	-50.93	40.19	23.27	50.93	-40.18	0.005%
10	-43.67	-51.47	25.23	43.67	51.47	-25.23	0.003%
11	-51.75	-50.93	0.07	51.74	50.93	-0.07	0.002%
12	-41.21	-50.39	-23.72	41.21	50.39	23.73	0.003%
13	-22.45	-50.93	-38.92	22.46	50.93	38.92	0.004%
14	0.02	-43.74	-11.91	-0.02	43.74	11.91	0.005%
15	6.27	-43.60	-10.83	-6.27	43.60	10.83	0.004%
16	11.75	-43.45	-6.79	-11.75	43.45	6.79	0.003%
17	13.93	-43.60	-0.02	-13.93	43.60	0.02	0.005%
18	11.04	-43.74	6.36	-11.04	43.74	-6.35	0.006%
19	6.01	-43.60	10.42	-6.01	43.60	-10.42	0.003%
20	-0.02	-43.45	11.82	0.02	43.45	-11.82	0.002%
21	-6.23	-43.60	10.76	6.23	43.60	-10.75	0.003%
22	-11.69	-43.74	6.75	11.69	43.74	-6.75	0.007%
23	-13.85	-43.60	0.02	13.85	43.60	-0.02	0.006%
24	-11.03	-43.45	-6.35	11.03	43.45	6.35	0.003%
25	-6.01	-43.60	-10.42	6.01	43.60	10.42	0.004%

Non-Linear Convergence Results

U % YU U ° U x U
% U l U% U U U
1 Yes 8 0.00000001 0.00003309
2 Yes 14 0.00000001 0.00005474
3 Yes 15 0.00000001 0.00001964
4 Yes 12 0.00000001 0.00004238
5 Yes 15 0.00009916 0.00005454
6 Yes 15 0.00000001 0.00003137
7 Yes 14 0.00000001 0.00004375
8 Yes 11 0.00000001 0.00006696
9 Yes 14 0.00009845 0.00004907
10 Yes 16 0.00000001 0.00003213
11 Yes 16 0.00000001 0.00002167
12 Yes 11 0.00000001 0.00009541
13 Yes 14 0.00000001 0.00003592
14 Yes 10 0.00000001 0.00006846
15 Yes 10 0.00000001 0.00005420
16 Yes 10 0.00000001 0.00004326
17 Yes 10 0.00000001 0.00008517
18 Yes 10 0.00000001 0.00009376
19 Yes 10 0.00000001 0.00005678
20 Yes 10 0.00000001 0.00003297
21 Yes 10 0.00000001 0.00004840
22 Yes 10 0.00000001 0.00009557
23 Yes 10 0.00000001 0.00007728
24 Yes 10 0.00000001 0.00004359
25 Yes 10 0.00000001 0.00005622

Maximum Tower Deflections - Service Wind

U q U Z gU # gU U U
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U U % ęU U U
T1 300 - 280 1.142 16 0.0833 0.2594
T2 280 - 260 1.439 16 0.0755 0.2669
T3 260 - 240 1.557 16 0.0217 0.3015
T4 240 - 220 1.359 16 0.0541 0.2343
T5 220 - 200 1.178 16 0.0342 0.2416
T6 200 - 180 1.074 16 0.0276 0.3142

U gU	q U	Z gU ° U	# gU %	U U	U U
T7	180 - 160	0.959	16	0.0215	0.3339
T8	160 - 140	0.908	16	0.0073	0.3072
T9	140 - 120	0.885	17	0.0105	0.3474
T10	120 - 100	0.838	17	0.0056	0.4355
T11	100 - 80	0.873	17	0.0135	0.5874
T12	80 - 60	0.911	17	0.0058	0.7091
T13	60 - 40	0.827	17	0.0330	0.7826
T14	40 - 20	0.647	17	0.0551	0.8680
T15	20 - 6.8125	0.366	17	0.0776	0.8755
T16	6.8125 - 0	0.128	17	0.0870	0.8448

Critical Deflections and Radius of Curvature - Service Wind

q U	7 U	# gU %	° U	U	U	U U % U
300.00	Flash Beacon Lighting	16	1.142	0.0833	0.2594	124340
290.00	Guy	16	1.300	0.0891	0.2573	62170
270.00	DBXLH-9090C-R2M w/ Mount Pipe	16	1.537	0.0352	0.2916	15492
260.00	FFVV-65C-R3-V1_TMO w/ Mount Pipe	16	1.557	0.0217	0.3015	11069
230.00	Guy	16	1.254	0.0486	0.2238	43611
173.19	Guy	16	0.934	0.0160	0.3251	60532
150.00	Side Light	17	0.897	0.0084	0.3182	132389
113.19	Guy	17	0.841	0.0077	0.4832	49652
53.19	Guy	17	0.775	0.0417	0.8287	55916

Maximum Tower Deflections - Design Wind

U gU	q U	Z gU ° U	# gU %	U U	U U
T1	300 - 280	7.325	4	0.2123	0.6623
T2	280 - 260	8.111	4	0.1825	0.6921
T3	260 - 240	8.207	4	0.1784	0.8009
T4	240 - 220	7.125	5	0.2949	0.7332
T5	220 - 200	6.187	5	0.2112	0.7856
T6	200 - 180	5.533	5	0.1751	1.0292
T7	180 - 160	4.854	5	0.1407	1.1516
T8	160 - 140	4.479	5	0.0742	1.1892
T9	140 - 120	4.236	5	0.0727	1.2537
T10	120 - 100	3.941	5	0.0416	1.3843
T11	100 - 80	3.998	5	0.0753	1.5811
T12	80 - 60	4.105	10	0.0390	1.7092
T13	60 - 40	3.754	10	0.1518	1.7265
T14	40 - 20	2.928	10	0.2535	1.7346
T15	20 - 6.8125	1.639	10	0.3506	1.6112
T16	6.8125 - 0	0.574	10	0.3897	1.4688

Critical Deflections and Radius of Curvature - Design Wind

q U	7 U	# gU %	° U	U	U	U U % U
300.00	Flash Beacon Lighting	4	7.325	0.2123	0.6623	32024
290.00	Guy	4	7.755	0.2094	0.6640	16012
270.00	DBXLH-9090C-R2M w/ Mount	4	8.306	0.1260	0.7563	4017

| q U 7 U # gU ° U U U U U
U U U U % U
L % L L L L L |
|---|---|---|---|---|---|---|
| | Pipe | | | | | |
| 260.00 | FFVV-65C-R3-V1_TMO w/ Mount Pipe | 4 | 8.207 | 0.1784 | 0.8009 | 2905 |
| 230.00 | Guy | 5 | 6.605 | 0.2657 | 0.7285 | 11051 |
| 173.19 | Guy | 5 | 4.689 | 0.1160 | 1.1650 | 9793 |
| 150.00 | Side Light | 5 | 4.365 | 0.0705 | 1.2247 | 82616 |
| 113.19 | Guy | 5 | 3.922 | 0.0571 | 1.4474 | 11810 |
| 53.19 | Guy | 10 | 3.523 | 0.1938 | 1.7597 | 10983 |

Bolt Design Data

| U q U % U V U V U l L L 7 U U 7 U % U
gU U U # U U U U U U
U U V U UV U UV U 7 U |
|---|---|---|---|---|---|---|---|---|---|---|
| T1 | 300 | Leg | A325N | 0.7500 | 4 | 3.46 | 30.10 | 0.115 | 1.05 | Bolt Tension |
| | | Torque Arm Top@290 | A325N | 0.8750 | 2 | 6.97 | 20.08 | 0.347 | 1.05 | Member Block Shear |
| | | Torque Arm Bottom@290 | A325N | 0.8750 | 2 | 9.53 | 27.06 | 0.352 | 1.05 | Bolt Shear |
| T2 | 280 | Leg | A325N | 0.7500 | 4 | 5.25 | 30.10 | 0.174 | 1.05 | Bolt Tension |
| T3 | 260 | Leg | A325N | 0.7500 | 4 | 1.94 | 30.10 | 0.065 | 1.05 | Bolt Tension |
| T4 | 240 | Leg | A325N | 0.7500 | 4 | 3.56 | 30.10 | 0.118 | 1.05 | Bolt Tension |
| | | Torque Arm Top@230 | A325N | 0.8750 | 2 | 7.82 | 20.08 | 0.390 | 1.05 | Member Block Shear |
| | | Torque Arm Bottom@230 | A325N | 0.8750 | 2 | 8.31 | 27.06 | 0.307 | 1.05 | Bolt Shear |
| T5 | 220 | Leg | A325N | 0.7500 | 4 | 3.23 | 30.10 | 0.107 | 1.05 | Bolt Tension |
| T6 | 200 | Leg | A325N | 0.7500 | 4 | 4.21 | 30.10 | 0.140 | 1.05 | Bolt Tension |
| T7 | 180 | Leg | A325N | 0.7500 | 4 | 3.81 | 30.10 | 0.127 | 1.05 | Bolt Tension |
| T8 | 160 | Leg | A325N | 0.7500 | 4 | 3.46 | 30.10 | 0.115 | 1.05 | Bolt Tension |
| T9 | 140 | Leg | A325N | 0.7500 | 4 | 4.41 | 30.10 | 0.146 | 1.05 | Bolt Tension |
| T10 | 120 | Leg | A325N | 0.7500 | 4 | 3.92 | 30.10 | 0.130 | 1.05 | Bolt Tension |
| T11 | 100 | Leg | A325N | 0.7500 | 4 | 5.38 | 30.10 | 0.179 | 1.05 | Bolt Tension |
| T12 | 80 | Leg | A325N | 0.7500 | 4 | 5.35 | 30.10 | 0.178 | 1.05 | Bolt Tension |
| T13 | 60 | Leg | A325N | 0.7500 | 4 | 5.73 | 30.10 | 0.190 | 1.05 | Bolt Tension |
| T14 | 40 | Leg | A325N | 0.7500 | 4 | 5.54 | 30.10 | 0.184 | 1.05 | Bolt Tension |

Guy Design Data

| U q U U ? U V U 7 U 7 U U 7 U
gU U U U U U U ϕ U gxgU gxgU
U U U L U U |
|---|---|---|---|---|---|---|---|---|
| T1 | 290.00 (A) (734) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.20 | 36.73 | 0.952 | 2.463 |
| | 290.00 (A) (735) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.60 | 36.73 | 0.952 | 2.396 |
| | 290.00 (B) (728) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.18 | 36.73 | 0.952 | 2.467 |
| | 290.00 (B) (729) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.92 | 36.73 | 0.952 | 2.344 |
| | 290.00 (C) (722) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.47 | 36.73 | 0.952 | 2.418 |
| | 290.00 (C) (723) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.92 | 36.73 | 0.952 | 2.344 |
| T4 | 230.00 (A) (752) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.30 | 36.73 | 0.952 | 2.446 |
| | 230.00 (A) (753) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.30 | 36.73 | 0.952 | 2.447 |
| | 230.00 (B) (746) | 3/4 [ECP-24000] EHS | 5.83 | 58.30 | 14.25 | 36.73 | 0.952 | 2.454 |
| | 230.00 (B) | 3/4 [ECP- | 5.83 | 58.30 | 15.37 | 36.73 | 0.952 | 2.276 |

U q U U ? U V U 7 U 7 U U 7 U							
gU U U	U	U U U	U U	ϕ U U	gxgU U	gxgU U
	(747)	24000] EHS					
	230.00 (C)	3/4 [ECP-	5.83	58.30	15.12	36.73	0.952	2.314
	(740)	24000] EHS					
	230.00 (C)	3/4 [ECP-	5.83	58.30	15.48	36.73	0.952	2.259
	(741)	24000] EHS					
T7	173.19 (A)	3/4 [ECP-	5.83	58.30	12.51	36.73	0.952	2.796
	(763)	24000] EHS					
	173.19 (B)	3/4 [ECP-	5.83	58.30	13.28	36.73	0.952	2.635
	(762)	24000] EHS					
	173.19 (C)	3/4 [ECP-	5.83	58.30	13.98	36.73	0.952	2.502
	(758)	24000] EHS					
T10	113.19 (A)	3/4 [ECP-	5.83	58.30	12.30	36.73	0.952	2.844
	(769)	24000] EHS					
	113.19 (B)	3/4 [ECP-	5.83	58.30	13.32	36.73	0.952	2.626
	(768)	24000] EHS					
	113.19 (C)	3/4 [ECP-	5.83	58.30	13.98	36.73	0.952	2.502
	(764)	24000] EHS					
T13	53.19 (A)	1/2 [ECP-	2.69	26.90	5.63	16.95	0.952	2.868
	(775)	23000] EHS					
	53.19 (B)	1/2 [ECP-	2.69	26.90	6.06	16.95	0.952	2.662
	(774)	23000] EHS					
	53.19 (C)	1/2 [ECP-	2.69	26.90	6.38	16.95	0.952	2.530
	(770)	23000] EHS					

Leg Design Data (Compression)

U q U U U U EU 7U U ϕ U U									
gU U U	U	U U U	U U	U	U U U	U U	U
T1	300 - 280	2	20.00	3.19	76.6 K=1.00	3.1416	-36.40	92.03	0.396 [1]
T2	280 - 260	2	20.00	3.19	76.6 K=1.00	3.1416	-58.44	92.03	0.635 [1]
T3	260 - 240	2	20.00	3.19	76.6 K=1.00	3.1416	-52.66	92.03	0.572 [1]
T4	240 - 220	2 1/2	20.00	3.19	61.3 K=1.00	4.9087	-45.93	167.83	0.274 [1]
T5	220 - 200	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-40.09	127.45	0.315 [1]
T6	200 - 180	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-47.33	127.45	0.371 [1]
T7	180 - 160	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-55.72	127.45	0.437 [1]
T8	160 - 140	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-42.97	127.45	0.337 [1]
T9	140 - 120	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-49.49	127.45	0.388 [1]
T10	120 - 100	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-57.75	127.45	0.453 [1]
T11	100 - 80	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-61.37	127.45	0.481 [1]
T12	80 - 60	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-64.64	127.45	0.507 [1]
T13	60 - 40	2 1/4	20.00	3.19	68.1 K=1.00	3.9761	-66.02	127.45	0.518 [1]
T14	40 - 20	2 1/2	20.00	3.19	61.3 K=1.00	4.9087	-67.88	167.83	0.404 [1]
T15	20 - 6.8125	2 1/2	13.19	3.19	61.3 K=1.00	4.9087	-63.29	167.86	0.377 [1]
T16	6.8125 - 0	2 1/2	7.03	1.34	25.8 K=1.00	4.9087	-59.66	210.40	0.284 [1]

U q U U U U EU 7U U ϕ U U
gU U U U U U U U U U U U ϕ U

[1] U_U/ ϕ controls

Diagonal Design Data (Compression)

U q U U U U U EU 7U U ϕ U U
gU U U U U U U U U U U U ϕ U
T1	300 - 280	1 1/4	4.38	4.14	111.2 K=0.70	1.2272	-7.75	20.73	0.374 [1]
T2	280 - 260	1 1/8	4.38	4.14	123.6 K=0.70	0.9940	-7.47	14.41	0.518 [1]
T3	260 - 240	1 3/8	4.38	4.14	101.1 K=0.70	1.4849	-8.74	28.09	0.311 [1]
T4	240 - 220	1 3/8	4.38	4.08	99.6 K=0.70	1.4849	-10.02	28.53	0.351 [1]
T5	220 - 200	1 1/4	4.38	4.11	110.4 K=0.70	1.2272	-6.71	20.93	0.321 [1]
T6	200 - 180	1 3/8	4.38	4.11	100.4 K=0.70	1.4849	-7.42	28.31	0.262 [1]
T7	180 - 160	1 3/8	4.38	4.11	100.4 K=0.70	1.4849	-7.75	28.31	0.274 [1]
T8	160 - 140	1 1/8	4.38	4.11	122.7 K=0.70	0.9940	-5.32	14.58	0.365 [1]
T9	140 - 120	1 1/4	4.38	4.11	110.4 K=0.70	1.2272	-6.35	20.93	0.303 [1]
T10	120 - 100	1 3/8	4.38	4.11	100.4 K=0.70	1.4849	-7.23	28.31	0.255 [1]
T11	100 - 80	1 1/4	4.38	4.11	110.4 K=0.70	1.2272	-6.91	20.93	0.330 [1]
T12	80 - 60	1 1/8	4.38	4.11	122.7 K=0.70	0.9940	-4.73	14.58	0.324 [1]
T13	60 - 40	1 1/8	4.38	4.11	122.7 K=0.70	0.9940	-5.19	14.58	0.356 [1]
T14	40 - 20	1 1/8	4.38	4.08	121.8 K=0.70	0.9940	-5.33	14.76	0.361 [1]
T15	20 - 6.8125	1 1/8	4.38	4.08	121.7 K=0.70	0.9940	-5.84	14.76	0.396 [1]

[1] U_U/ ϕ controls

Horizontal Design Data (Compression)

U q U U U U U EU 7U U ϕ U U
gU U U U U U U U U U U U ϕ U
T1	300 - 280	1	3.00	2.83	95.2 K=0.70	0.7854	-3.64	15.79	0.230 [1]
T2	280 - 260	7/8	3.00	2.83	108.8 K=0.70	0.6013	-2.61	10.45	0.250 [1]
T3	260 - 240	1	3.00	2.83	95.2 K=0.70	0.7854	-3.52	15.79	0.223 [1]
T4	240 - 220	1 1/4	3.00	2.79	85.3 K=0.80	1.2272	-5.56	27.10	0.205 [1]
T5	220 - 200	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.81	10.54	0.077 [1]
T6	200 - 180	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.95	10.54	0.090 [1]
T7	180 - 160	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.10	10.54	0.104 [1]

U	q U	U	U	U	EU	7U	U	ϕ U	U
gU	U	U	U	U	U	U	U	U	U
	U		U	U		PU	U	U	ϕ U
T8	160 - 140	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.86	10.54	0.082 [1]
T9	140 - 120	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.00	10.54	0.095 [1]
T10	120 - 100	1	3.00	2.81	94.5 K=0.70	0.7854	-1.14	15.90	0.071 [1]
T11	100 - 80	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.22	10.54	0.116 [1]
T12	80 - 60	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.22	10.54	0.116 [1]
T13	60 - 40	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.30	10.54	0.123 [1]
T14	40 - 20	7/8	3.00	2.79	107.2 K=0.70	0.6013	-1.21	10.64	0.114 [1]
T15	20 - 6.8125	7/8	3.00	2.79	107.2 K=0.70	0.6013	-1.17	10.64	0.110 [1]
T16	6.8125 - 0	L4x4x3/8	2.29	2.09	75.9 K=2.39	2.8600	-1.26	84.32	0.015 [1]

[1] U_U/ϕ controls

Secondary Horizontal Design Data (Compression)

U	q U	U	U	U	EU	7U	U	ϕ U	U
gU	U	U	U	U	U	U	U	U	U
	U		U	U		PU	U	U	ϕ U
T1	300 - 280	3/4	1.50	1.42	83.4 K=0.92	0.4418	-0.00	9.92	0.000 [1]
T2	280 - 260	3/4	1.50	1.42	83.4 K=0.92	0.4418	-0.00	9.92	0.000 [1]
T3	260 - 240	3/4	1.50	1.42	83.4 K=0.92	0.4418	-0.00	9.92	0.000 [1]
T4	240 - 220	3/4	1.50	1.40	83.1 K=0.93	0.4418	-0.00	9.95	0.000 [1]
T5	220 - 200	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T6	200 - 180	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T7	180 - 160	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T8	160 - 140	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T9	140 - 120	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T10	120 - 100	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T11	100 - 80	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T12	80 - 60	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T13	60 - 40	3/4	1.50	1.41	83.3 K=0.92	0.4418	-0.00	9.94	0.000 [1]
T14	40 - 20	3/4	1.50	1.40	83.1 K=0.93	0.4418	-0.00	9.95	0.000 [1]
T15	20 - 6.8125	3/4	1.50	1.40	83.1 K=0.93	0.4418	-0.00	9.95	0.000 [1]

[1] U_U/ϕ controls

Top Girt Design Data (Compression)

U q U	U	U	U	EU	7U	U	ϕ U	U
gU U U	U	U U U	U U	U	U PU	U U	U U	U / ϕ U
T1	300 - 280	1	3.00	2.83	95.2 K=0.70	0.7854	-0.64	15.79	0.041 [1]
T2	280 - 260	7/8	3.00	2.83	108.8 K=0.70	0.6013	-1.86	10.45	0.178 [1]
T3	260 - 240	1	3.00	2.83	95.2 K=0.70	0.7854	-1.40	15.79	0.088 [1]
T4	240 - 220	1 1/4	3.00	2.79	85.3 K=0.80	1.2272	-2.69	27.10	0.099 [1]
T5	220 - 200	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.81	10.54	0.077 [1]
T6	200 - 180	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.95	10.54	0.090 [1]
T7	180 - 160	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.05	10.54	0.100 [1]
T8	160 - 140	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.86	10.54	0.082 [1]
T9	140 - 120	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.00	10.54	0.095 [1]
T10	120 - 100	1	3.00	2.81	94.5 K=0.70	0.7854	-1.09	15.90	0.069 [1]
T11	100 - 80	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.22	10.54	0.116 [1]
T12	80 - 60	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.22	10.54	0.116 [1]
T13	60 - 40	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.30	10.54	0.123 [1]
T14	40 - 20	7/8	3.00	2.79	107.2 K=0.70	0.6013	-1.21	10.64	0.114 [1]
T15	20 - 6.8125	7/8	3.00	2.79	107.2 K=0.70	0.6013	-1.17	10.64	0.110 [1]
T16	6.8125 - 0	L4x4x3/8	2.87	2.66	80.2 K=1.98	2.8600	-1.06	82.11	0.013 [1]

[1] U / ϕ controls

Bottom Girt Design Data (Compression)

U q U	U	U	U	EU	7U	U	ϕ U	U
gU U U	U	U U U	U U	U	U PU	U U	U U	U / ϕ U
T1	300 - 280	1	3.00	2.83	95.2 K=0.70	0.7854	-2.00	15.79	0.127 [1]
T2	280 - 260	7/8	3.00	2.83	108.8 K=0.70	0.6013	-1.23	10.45	0.117 [1]
T3	260 - 240	1	3.00	2.83	95.2 K=0.70	0.7854	-2.10	15.79	0.133 [1]
T4	240 - 220	1 1/4	3.00	2.79	85.3 K=0.80	1.2272	-0.81	27.10	0.030 [1]
T5	220 - 200	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.81	10.54	0.077 [1]
T6	200 - 180	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.95	10.54	0.090 [1]
T7	180 - 160	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.05	10.54	0.100 [1]
T8	160 - 140	7/8	3.00	2.81	108.0 K=0.70	0.6013	-0.86	10.54	0.082 [1]
T9	140 - 120	7/8	3.00	2.81	108.0 K=0.70	0.6013	-1.00	10.54	0.095 [1]
T10	120 - 100	1	3.00	2.81	94.5 K=0.70	0.7854	-1.09	15.90	0.069 [1]
T11	100 - 80	7/8	3.00	2.81	108.0	0.6013	-1.22	10.54	0.116 [1]

U q U gU U U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U U	U U ϕ U
T12	80 - 60	7/8	3.00	2.81	K=0.70 108.0 K=0.70	0.6013	-1.22	10.54	0.116 [1]
T13	60 - 40	7/8	3.00	2.81	K=0.70 108.0 K=0.70	0.6013	-1.30	10.54	0.123 [1]
T14	40 - 20	7/8	3.00	2.79	K=0.70 107.2 K=0.70	0.6013	-1.21	10.64	0.114 [1]

[1] U_U/ϕ controls

Torque-Arm Bottom Design Data

U q U gU U U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U U	U U ϕ U
T1	300 - 280 (726)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-18.48	70.89	0.261 [1]
T1	300 - 280 (727)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-19.07	70.89	0.269 [1]
T1	300 - 280 (732)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-18.64	70.89	0.263 [1]
T1	300 - 280 (733)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-18.97	70.89	0.268 [1]
T1	300 - 280 (738)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-18.93	70.89	0.267 [1]
T1	300 - 280 (739)	L3 1/2x3 1/2x3/8	4.75	4.63	80.9 K=1.00	2.4800	-18.64	70.89	0.263 [1]
T4	240 - 220 (744)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-14.95	71.11	0.210 [1]
T4	240 - 220 (745)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-16.62	71.11	0.234 [1]
T4	240 - 220 (750)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-15.47	71.11	0.217 [1]
T4	240 - 220 (751)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-16.43	71.11	0.231 [1]
T4	240 - 220 (756)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-16.41	71.11	0.231 [1]
T4	240 - 220 (757)	L3 1/2x3 1/2x3/8	4.75	4.61	80.4 K=1.00	2.4800	-15.71	71.11	0.221 [1]

[1] U_U/ϕ controls

Leg Design Data (Tension)

U q U gU U U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U U	U U ϕ U
T1	300 - 280	2	20.00	0.42	10.1	3.1416	10.95	141.37	0.077 [1]
T2	280 - 260	2	20.00	3.19	76.6	3.1416	28.16	141.37	0.199 [1]
T3	260 - 240	2	20.00	0.42	10.1	3.1416	21.00	141.37	0.149 [1]
T4	240 - 220	2 1/2	20.00	3.19	61.3	4.9087	10.59	220.89	0.048 [1]

[1] U_U/ϕ controls

Diagonal Design Data (Tension)

U q U gU	U U	U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U	U U ϕ U
T1	300 - 280	1 1/4	4.38	4.14	158.9	1.2272	5.33	39.76	0.134 [1]
T2	280 - 260	1 1/8	4.38	4.14	176.5	0.9940	4.33	32.21	0.134 [1]
T3	260 - 240	1 3/8	4.38	4.14	144.4	1.4849	5.73	48.11	0.119 [1]
T4	240 - 220	1 3/8	4.38	4.08	142.3	1.4849	6.73	48.11	0.140 [1]
T5	220 - 200	1 1/4	4.38	4.11	157.7	1.2272	0.60	39.76	0.015 [1]
T6	200 - 180	1 3/8	4.38	4.11	143.4	1.4849	1.33	48.11	0.028 [1]
T7	180 - 160	1 3/8	4.38	4.11	143.4	1.4849	1.64	48.11	0.034 [1]
T9	140 - 120	1 1/4	4.38	4.11	157.7	1.2272	0.21	39.76	0.005 [1]
T10	120 - 100	1 3/8	4.38	4.11	143.4	1.4849	1.73	48.11	0.036 [1]
T11	100 - 80	1 1/4	4.38	4.11	157.7	1.2272	0.86	39.76	0.022 [1]
T13	60 - 40	1 1/8	4.38	4.11	175.2	0.9940	0.26	32.21	0.008 [1]
T15	20 - 6.8125	1 1/8	4.38	4.08	173.9	0.9940	0.38	32.21	0.012 [1]

[1] U_U/ϕ controls

Horizontal Design Data (Tension)

U q U gU	U U	U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U	U U ϕ U
T1	300 - 280	1	3.00	2.83	136.0	0.7854	5.19	25.45	0.204 [1]
T2	280 - 260	7/8	3.00	2.83	155.4	0.6013	4.54	19.48	0.233 [1]
T3	260 - 240	1	3.00	2.83	136.0	0.7854	5.45	25.45	0.214 [1]
T4	240 - 220	1 1/4	3.00	2.79	107.2	1.2272	9.96	39.76	0.251 [1]
T5	220 - 200	7/8	3.00	2.81	154.3	0.6013	4.15	19.48	0.213 [1]
T6	200 - 180	7/8	3.00	2.81	154.3	0.6013	4.46	19.48	0.229 [1]
T7	180 - 160	7/8	3.00	2.81	154.3	0.6013	4.86	19.48	0.250 [1]
T8	160 - 140	7/8	3.00	2.81	154.3	0.6013	3.21	19.48	0.165 [1]
T9	140 - 120	7/8	3.00	2.81	154.3	0.6013	3.82	19.48	0.196 [1]
T10	120 - 100	1	3.00	2.81	135.0	0.7854	4.69	25.45	0.184 [1]
T11	100 - 80	7/8	3.00	2.81	154.3	0.6013	4.14	19.48	0.213 [1]
T12	80 - 60	7/8	3.00	2.81	154.3	0.6013	2.92	19.48	0.150 [1]
T13	60 - 40	7/8	3.00	2.81	154.3	0.6013	3.47	19.48	0.178 [1]
T14	40 - 20	7/8	3.00	2.79	153.1	0.6013	3.30	19.48	0.169 [1]
T15	20 - 6.8125	7/8	3.00	2.79	153.1	0.6013	4.15	19.48	0.213 [1]
T16	6.8125 - 0	L4x4x3/8	2.29	2.09	20.3	2.8600	1.06	92.66	0.011 [1]

[1] U_U/ϕ controls

Secondary Horizontal Design Data (Tension)

U q U gU	U U	U	U U U	U U U	EU U	7U U pU	U U U	ϕ U U	U U ϕ U
T1	300 - 280	3/4	1.50	1.42	90.7	0.4418	0.00	14.31	0.000 [1]
T2	280 - 260	3/4	1.50	1.42	90.7	0.4418	0.00	14.31	0.000 [1]
T3	260 - 240	3/4	1.50	1.42	90.7	0.4418	0.00	14.31	0.000 [1]
T4	240 - 220	3/4	1.50	1.40	89.3	0.4418	0.00	14.31	0.000 [1]
T5	220 - 200	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T6	200 - 180	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T7	180 - 160	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T8	160 - 140	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T9	140 - 120	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T10	120 - 100	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T11	100 - 80	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T12	80 - 60	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]
T13	60 - 40	3/4	1.50	1.41	90.0	0.4418	0.00	14.31	0.000 [1]

U	q U	U	U	U	EU	7U	U	ϕ U	U
gU	U	U	U	U	U	U	U	U	U
	U		U	U		PU	U	U	ϕ U
T14	40 - 20	3/4	1.50	1.40	89.3	0.4418	0.00	14.31	0.000 [1]
T15	20 - 6.8125	3/4	1.50	1.40	89.3	0.4418	0.00	14.31	0.000 [1]

[1] UU/ ϕ controls

Top Girt Design Data (Tension)

U	q U	U	U	U	EU	7U	U	ϕ U	U
gU	U	U	U	U	U	U	U	U	U
	U		U	U		PU	U	U	ϕ U
T1	300 - 280	1	3.00	2.83	136.0	0.7854	0.64	25.45	0.025 [1]
T2	280 - 260	7/8	3.00	2.83	155.4	0.6013	2.82	19.48	0.145 [1]
T3	260 - 240	1	3.00	2.83	136.0	0.7854	2.70	25.45	0.106 [1]
T4	240 - 220	1 1/4	3.00	2.79	107.2	1.2272	3.87	39.76	0.097 [1]
T5	220 - 200	7/8	3.00	2.81	154.3	0.6013	2.43	19.48	0.125 [1]
T6	200 - 180	7/8	3.00	2.81	154.3	0.6013	1.84	19.48	0.095 [1]
T7	180 - 160	7/8	3.00	2.81	154.3	0.6013	2.64	19.48	0.135 [1]
T8	160 - 140	7/8	3.00	2.81	154.3	0.6013	1.98	19.48	0.101 [1]
T9	140 - 120	7/8	3.00	2.81	154.3	0.6013	1.59	19.48	0.082 [1]
T10	120 - 100	1	3.00	2.81	135.0	0.7854	2.43	25.45	0.096 [1]
T11	100 - 80	7/8	3.00	2.81	154.3	0.6013	2.38	19.48	0.122 [1]
T12	80 - 60	7/8	3.00	2.81	154.3	0.6013	1.58	19.48	0.081 [1]
T13	60 - 40	7/8	3.00	2.81	154.3	0.6013	2.00	19.48	0.103 [1]
T14	40 - 20	7/8	3.00	2.79	153.1	0.6013	1.68	19.48	0.086 [1]
T15	20 - 6.8125	7/8	3.00	2.79	153.1	0.6013	2.15	19.48	0.110 [1]
T16	6.8125 - 0	L4x4x3/8	2.87	2.66	25.9	2.8600	10.49	92.66	0.113 [1]

[1] UU/ ϕ controls

Bottom Girt Design Data (Tension)

U	q U	U	U	U	EU	7U	U	ϕ U	U
gU	U	U	U	U	U	U	U	U	U
	U		U	U		PU	U	U	ϕ U
T1	300 - 280	1	3.00	2.83	136.0	0.7854	3.33	25.45	0.131 [1]
T2	280 - 260	7/8	3.00	2.83	155.4	0.6013	1.31	19.48	0.067 [1]
T3	260 - 240	1	3.00	2.83	136.0	0.7854	3.10	25.45	0.122 [1]
T4	240 - 220	1 1/4	3.00	2.79	107.2	1.2272	2.92	39.76	0.073 [1]
T5	220 - 200	7/8	3.00	2.81	154.3	0.6013	1.73	19.48	0.089 [1]
T6	200 - 180	7/8	3.00	2.81	154.3	0.6013	2.57	19.48	0.132 [1]
T7	180 - 160	7/8	3.00	2.81	154.3	0.6013	2.14	19.48	0.110 [1]
T8	160 - 140	7/8	3.00	2.81	154.3	0.6013	1.40	19.48	0.072 [1]
T9	140 - 120	7/8	3.00	2.81	154.3	0.6013	2.14	19.48	0.110 [1]
T10	120 - 100	1	3.00	2.81	135.0	0.7854	2.54	25.45	0.100 [1]
T11	100 - 80	7/8	3.00	2.81	154.3	0.6013	1.70	19.48	0.087 [1]
T12	80 - 60	7/8	3.00	2.81	154.3	0.6013	1.80	19.48	0.092 [1]
T13	60 - 40	7/8	3.00	2.81	154.3	0.6013	1.68	19.48	0.086 [1]
T14	40 - 20	7/8	3.00	2.79	153.1	0.6013	1.98	19.48	0.102 [1]

[1] UU/ ϕ controls

Top Guy Pull-Off Design Data (Tension)

U q U gU U U	U U	U U U U	U U U U	EU U	7U U U pU	U U U	ϕ U U U	U U ϕ U
T7	180 - 160	2x3/8	3.00	2.81	311.8	0.7500	4.17	24.30	0.172 [1]
T10	120 - 100	2x3/8	3.00	2.81	311.8	0.7500	3.69	24.30	0.152 [1]
T13	60 - 40	2x3/8	3.00	2.81	311.8	0.7500	2.88	24.30	0.119 [1]

[1] UU/ϕ controls

Top Guy Pull-Off Bending Design Data

U q U gU U U	U	U U v U	ϕ U U v U	U U ϕ U	U U v U	ϕ U U v U	U U ϕ U
T7	180 - 160	2x3/8	0.00	1.01	0.000	0.00	0.19	0.000
T10	120 - 100	2x3/8	0.00	1.01	0.000	0.00	0.19	0.000
T13	60 - 40	2x3/8	0.00	1.01	0.000	0.00	0.19	0.000

Top Guy Pull-Off Interaction Design Data

U q U gU U U	U	U ϕ U	U ϕ U	U ϕ U	% gU U U	7 gU U U	% U
T7	180 - 160	2x3/8	0.172	0.000	0.000	0.172 [1]	1.050	4.8.1
T10	120 - 100	2x3/8	0.152	0.000	0.000	0.152 [1]	1.050	4.8.1
T13	60 - 40	2x3/8	0.119	0.000	0.000	0.119 [1]	1.050	4.8.1

[1] UU/ϕ controls

Torque-Arm Top Design Data

U q U gU U U	U	U U U U	U U U U	EU U	7U U U pU	U U U	ϕ U U U	U U ϕ U
T1	300 - 280 (724)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	12.61	68.68	0.184 [1]
T1	300 - 280 (725)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	13.70	68.68	0.200 [1]
T1	300 - 280 (730)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	13.75	68.68	0.200 [1]
T1	300 - 280 (731)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	12.51	68.68	0.182 [1]
T1	300 - 280 (736)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	12.53	68.68	0.182 [1]
T1	300 - 280 (737)	L3 1/2x3 1/2x3/8	3.51	3.43	38.5	1.5788	13.93	68.68	0.203 [1]
T4	240 - 220 (742)	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	14.56	68.68	0.212 [1]
T4	240 - 220 (743)	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	14.28	68.68	0.208 [1]
T4	240 - 220 (748)	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	15.07	68.68	0.220 [1]
T4	240 - 220 (749)	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	13.74	68.68	0.200 [1]
T4	240 - 220	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	13.77	68.68	0.201 [1]

U q U	U	U	U	EU	7U	U	ϕ U	U
gU U U	U	U U U	U U	U	U P U	U U	U U	U ϕ U
T4	(754) 240 - 220 (755)	L3 1/2x3 1/2x3/8	3.51	3.41	38.2	1.5788	15.65	68.68	0.228 [1]

[1] UU/ ϕ controls

Section Capacity Table

S L q U	% U	U	% U U	U	j U	U
ζU U	U		q L U	U	% l	x U
T1	300 - 280	Leg	2	1	-36.40	96.63	37.7	Pass
T2	280 - 260	Leg	2	49	-58.44	96.63	60.5	Pass
T3	260 - 240	Leg	2	97	-52.66	96.63	54.5	Pass
T4	240 - 220	Leg	2 1/2	145	-45.93	176.22	26.1	Pass
T5	220 - 200	Leg	2 1/4	194	-40.09	133.83	30.0	Pass
T6	200 - 180	Leg	2 1/4	242	-47.33	133.83	35.4	Pass
T7	180 - 160	Leg	2 1/4	290	-55.72	133.83	41.6	Pass
T8	160 - 140	Leg	2 1/4	338	-42.97	133.83	32.1	Pass
T9	140 - 120	Leg	2 1/4	386	-49.49	133.83	37.0	Pass
T10	120 - 100	Leg	2 1/4	433	-57.75	133.83	43.2	Pass
T11	100 - 80	Leg	2 1/4	481	-61.37	133.83	45.9	Pass
T12	80 - 60	Leg	2 1/4	529	-64.64	133.83	48.3	Pass
T13	60 - 40	Leg	2 1/4	577	-66.02	133.83	49.3	Pass
T14	40 - 20	Leg	2 1/2	625	-67.88	176.22	38.5	Pass
T15	20 - 6.8125	Leg	2 1/2	673	-63.29	176.26	35.9	Pass
T16	6.8125 - 0	Leg	2 1/2	704	-59.66	220.92	27.0	Pass
T1	300 - 280	Diagonal	1 1/4	11	-7.75	21.77	35.6	Pass
T2	280 - 260	Diagonal	1 1/8	94	-7.47	15.13	49.4	Pass
T3	260 - 240	Diagonal	1 3/8	106	-8.74	29.49	29.6	Pass
T4	240 - 220	Diagonal	1 3/8	189	-10.02	29.96	33.4	Pass
T5	220 - 200	Diagonal	1 1/4	238	-6.71	21.98	30.5	Pass
T6	200 - 180	Diagonal	1 3/8	250	-7.42	29.73	25.0	Pass
T7	180 - 160	Diagonal	1 3/8	333	-7.75	29.73	26.1	Pass
T8	160 - 140	Diagonal	1 1/8	382	-5.32	15.31	34.7	Pass
T9	140 - 120	Diagonal	1 1/4	394	-6.35	21.98	28.9	Pass
T10	120 - 100	Diagonal	1 3/8	442	-7.23	29.73	24.3	Pass
T11	100 - 80	Diagonal	1 1/4	525	-6.91	21.98	31.4	Pass
T12	80 - 60	Diagonal	1 1/8	539	-4.73	15.31	30.9	Pass
T13	60 - 40	Diagonal	1 1/8	607	-5.19	15.31	33.9	Pass
T14	40 - 20	Diagonal	1 1/8	636	-5.33	15.49	34.4	Pass
T15	20 - 6.8125	Diagonal	1 1/8	680	-5.84	15.50	37.7	Pass
T1	300 - 280	Horizontal	1	23	-3.64	16.58	21.9	Pass
T2	280 - 260	Horizontal	7/8	91	-2.61	10.97	23.8	Pass
T3	260 - 240	Horizontal	1	110	-3.52	16.58	21.2	Pass
T4	240 - 220	Horizontal	1 1/4	173	9.96	41.75	23.9	Pass
T5	220 - 200	Horizontal	7/8	235	4.15	20.46	20.3	Pass
T6	200 - 180	Horizontal	7/8	254	4.46	20.46	21.8	Pass
T7	180 - 160	Horizontal	7/8	330	4.86	20.46	23.8	Pass
T8	160 - 140	Horizontal	7/8	379	3.21	20.46	15.7	Pass
T9	140 - 120	Horizontal	7/8	398	3.82	20.46	18.7	Pass
T10	120 - 100	Horizontal	1	460	4.69	26.72	17.5	Pass
T11	100 - 80	Horizontal	7/8	522	4.14	20.46	20.3	Pass
T12	80 - 60	Horizontal	7/8	544	2.92	20.46	14.3	Pass
T13	60 - 40	Horizontal	7/8	604	3.47	20.46	16.9	Pass
T14	40 - 20	Horizontal	7/8	640	3.30	20.46	16.1	Pass
T15	20 - 6.8125	Horizontal	7/8	685	4.15	20.46	20.3	Pass
T16	6.8125 - 0	Horizontal	L4x4x3/8	712	-1.06	94.71	29.5	Pass
T1	300 - 280	Secondary Horizontal	3/4	13	-0.00	10.42	0.0	Pass
T2	280 - 260	Secondary Horizontal	3/4	61	-0.00	10.42	0.0	Pass
T3	260 - 240	Secondary Horizontal	3/4	144	-0.00	10.42	0.0	Pass
T4	240 - 220	Secondary	3/4	157	-0.00	10.45	0.0	Pass

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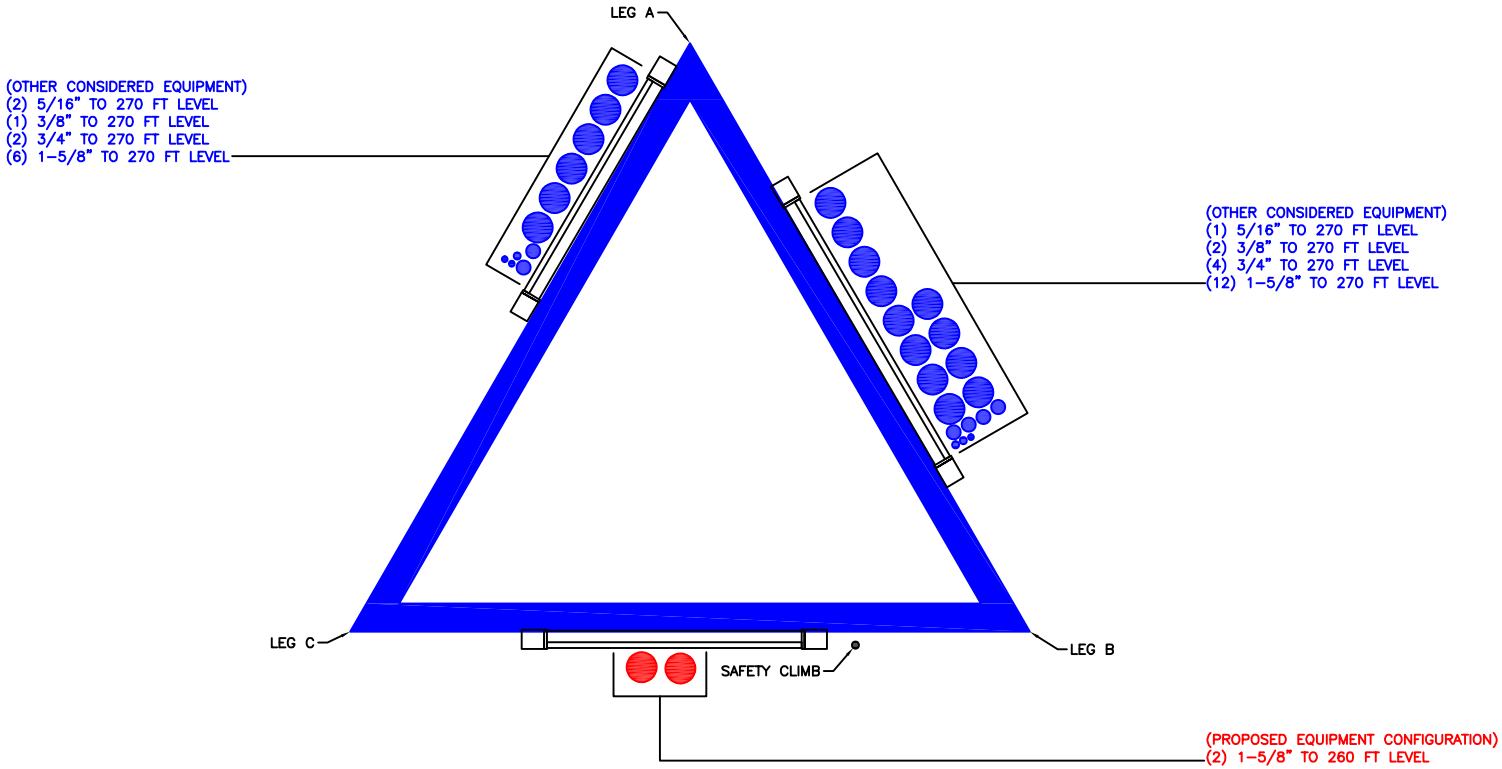
U U U q U U U % U x U
T5	220 - 200	Horizontal Secondary	3/4	205	-0.00	10.43	0.0	Pass
T6	200 - 180	Horizontal Secondary	3/4	288	-0.00	10.43	0.0	Pass
T7	180 - 160	Horizontal Secondary	3/4	301	0.00	15.03	0.0	Pass
T8	160 - 140	Horizontal Secondary	3/4	384	-0.00	10.43	0.0	Pass
T9	140 - 120	Horizontal Secondary	3/4	432	-0.00	10.43	0.0	Pass
T10	120 - 100	Horizontal Secondary	3/4	445	0.00	15.03	0.0	Pass
T11	100 - 80	Horizontal Secondary	3/4	528	0.00	15.03	0.0	Pass
T12	80 - 60	Horizontal Secondary	3/4	576	0.00	15.03	0.0	Pass
T13	60 - 40	Horizontal Secondary	3/4	624	-0.00	10.43	0.0	Pass
T14	40 - 20	Horizontal Secondary	3/4	672	-0.00	10.45	0.0	Pass
T15	20 - 6.8125	Horizontal Secondary	3/4	703	-0.00	10.45	0.0	Pass
T1	300 - 280	Horizontal Top Girt	1	6	-0.64	16.58	3.9	Pass
T2	280 - 260	Top Girt	7/8	54	-1.86	10.97	16.9	Pass
T3	260 - 240	Top Girt	1	100	2.70	26.72	10.1	Pass
T4	240 - 220	Top Girt	1 1/4	150	-2.69	28.46	9.5	Pass
T5	220 - 200	Top Girt	7/8	198	2.43	20.46	11.9	Pass
T6	200 - 180	Top Girt	7/8	244	1.84	20.46	9.0	Pass
T7	180 - 160	Top Girt	7/8	292	2.64	20.46	12.9	Pass
T8	160 - 140	Top Girt	7/8	342	1.98	20.46	9.7	Pass
T9	140 - 120	Top Girt	7/8	388	-1.00	11.07	9.0	Pass
T10	120 - 100	Top Girt	1	438	2.43	26.72	9.1	Pass
T11	100 - 80	Top Girt	7/8	484	2.38	20.46	11.6	Pass
T12	80 - 60	Top Girt	7/8	534	-1.22	11.07	11.0	Pass
T13	60 - 40	Top Girt	7/8	582	-1.30	11.07	11.7	Pass
T14	40 - 20	Top Girt	7/8	630	-1.21	11.17	10.8	Pass
T15	20 - 6.8125	Top Girt	7/8	678	2.15	20.46	10.5	Pass
T16	6.8125 - 0	Top Girt	L4x4x3/8	709	10.49	97.30	10.8	Pass
T1	300 - 280	Bottom Girt	1	8	3.33	26.72	12.5	Pass
T2	280 - 260	Bottom Girt	7/8	57	-1.23	10.97	11.2	Pass
T3	260 - 240	Bottom Girt	1	103	-2.10	16.58	12.7	Pass
T4	240 - 220	Bottom Girt	1 1/4	152	2.92	41.75	7.0	Pass
T5	220 - 200	Bottom Girt	7/8	199	1.73	20.46	8.5	Pass
T6	200 - 180	Bottom Girt	7/8	247	2.57	20.46	12.5	Pass
T7	180 - 160	Bottom Girt	7/8	296	2.14	20.46	10.4	Pass
T8	160 - 140	Bottom Girt	7/8	343	-0.86	11.07	7.8	Pass
T9	140 - 120	Bottom Girt	7/8	391	2.14	20.46	10.4	Pass
T10	120 - 100	Bottom Girt	1	439	2.54	26.72	9.5	Pass
T11	100 - 80	Bottom Girt	7/8	489	-1.22	11.07	11.0	Pass
T12	80 - 60	Bottom Girt	7/8	537	-1.22	11.07	11.0	Pass
T13	60 - 40	Bottom Girt	7/8	585	-1.30	11.07	11.7	Pass
T14	40 - 20	Bottom Girt	7/8	633	-1.21	11.17	10.8	Pass
T1	300 - 280	Guy A@290	3/4 [ECP-24000]	735	14.60	36.73	39.8	Pass
T4	240 - 220	Guy A@230	3/4 [ECP-24000]	752	14.30	36.73	38.9	Pass
T7	180 - 160	Guy A@173.193	3/4 [ECP-24000]	763	12.51	36.73	34.1	Pass
T10	120 - 100	Guy A@113.193	3/4 [ECP-24000]	769	12.30	36.73	33.5	Pass
T13	60 - 40	Guy A@53.1927	1/2 [ECP-23000]	775	5.63	16.95	33.2	Pass
T1	300 - 280	Guy B@290	3/4 [ECP-24000]	729	14.92	36.73	40.6	Pass
T4	240 - 220	Guy B@230	3/4 [ECP-24000]	747	15.37	36.73	41.8	Pass
T7	180 - 160	Guy B@173.193	3/4 [ECP-24000]	762	13.28	36.73	36.1	Pass
T10	120 - 100	Guy B@113.193	3/4 [ECP-24000]	768	13.32	36.73	36.3	Pass
T13	60 - 40	Guy B@53.1927	1/2 [ECP-23000]	774	6.06	16.95	35.8	Pass
T1	300 - 280	Guy C@290	3/4 [ECP-24000]	723	14.92	36.73	40.6	Pass
T4	240 - 220	Guy C@230	3/4 [ECP-24000]	741	15.48	36.73	42.2	Pass
T7	180 - 160	Guy C@173.193	3/4 [ECP-24000]	758	13.98	36.73	38.1	Pass
T10	120 - 100	Guy C@113.193	3/4 [ECP-24000]	764	13.98	36.73	38.1	Pass
T13	60 - 40	Guy C@53.1927	1/2 [ECP-23000]	770	6.38	16.95	37.6	Pass
T7	180 - 160	Top Guy Pull-Off@173.193	2x3/8	760	4.17	25.51	16.4	Pass

S U	q U	% U	U	% U	U	U	j U	U
U	U	U		q U	U	U	% U	x U
T10	120 - 100	Top Guy Pull-Off@113.193	2x3/8	766	3.69	25.51	14.4	Pass
T13	60 - 40	Top Guy Pull-Off@53.1927	2x3/8	773	2.88	25.51	11.3	Pass
T1	300 - 280	Torque Arm Top@290	L3 1/2x3 1/2x3/8	737	13.93	72.11	19.3	Pass
T4	240 - 220	Torque Arm Top@230	L3 1/2x3 1/2x3/8	755	15.65	72.11	21.7	Pass
T1	300 - 280	Torque Arm Bottom@290	L3 1/2x3 1/2x3/8	727	-19.07	74.43	25.6	Pass
T4	240 - 220	Torque Arm Bottom@230	L3 1/2x3 1/2x3/8	745	-16.62	74.67	22.3	Pass
							Summary	
						Leg (T2)	60.5	Pass
						Diagonal (T2)	49.4	Pass
						Horizontal (T16)	29.5	Pass
						Secondary Horizontal (T10)	0.0	Pass
						Top Girt (T2)	16.9	Pass
						Bottom Girt (T3)	12.7	Pass
						Guy A (T1)	39.8	Pass
						Guy B (T4)	41.8	Pass
						Guy C (T4)	42.2	Pass
						Top Guy Pull-Off (T7)	16.4	Pass
						Torque Arm Top (T4)	21.7	Pass
						Torque Arm Bottom (T1)	25.6	Pass
						Bolt Checks	37.1	Pass
						RATING =	**60.5**	**Pass**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 846221 TOWER ID: C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

Pier and Pad Foundation

BU # :	846221
Site Name:	SE Lake City
App. Number:	640916 Rev. 0

TIA-222 Revision:	H
Tower Type:	Guyed

Top & Bot. Pad Rein. Different?:	☑
Block Foundation?:	☐
Rectangular Pad?:	☐

Superstructure Analysis Reactions

Compression, P_{comp}:	153.04	kips
Base Shear, Vu_comp:	1.772	kips
Moment, M_u:	0	ft-kips
Tower Height, **H**:	300	ft
BP Dist. Above Fdn, bp_{dist}:	1.5	in
Bolt Circle / Bearing Plate Width, **BC**:		in

Pier Properties

Pier Shape:	Square	
Pier Diameter, **dpier**:	3.5	ft
Ext. Above Grade, **E**:	0.5	ft
Pier Rebar Size, **Sc**:	9	
Pier Rebar Quantity, **mc**:	10	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	4	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties

Depth, **D**:	3	ft
Pad Width, W_1:	12	ft
Pad Thickness, **T**:	1.5	ft
Pad Rebar Size (Top dir.2), Sp_{top2}:	0	
Pad Rebar Quantity (Top dir. 2), mp_{top2}:	0	
Pad Rebar Size (Bottom dir. 2), Sp_2:	9	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	13	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties

Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	3	ksi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties

Total Soil Unit Weight, γ:	100	pcf
Ultimate Gross Bearing, Qult:	4.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	32	degrees
SPT Blow Count, N_{blows}:	3	
Base Friction, μ:		
Neglected Depth, **N**:	1.75	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	10	ft

<--Toggle between Gross and Net

Foundation Analysis Checks

	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	45.63	1.77	**3.7%**	**Pass**
Bearing Pressure (ksf)	2.40	1.54	**61.2%**	**Pass**
*Overturning (kip*ft)*	437.29	6.42	**1.5%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	874.69	3.54	**0.4%**	**Pass**
Pier Compression (kip)	5847.66	157.45	**2.6%**	**Pass**
*Pad Flexure (kip*ft)*	716.39	118.68	**15.8%**	**Pass**
Pad Shear - 1-way (kips)	157.44	41.26	**25.0%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.164	0.044	**25.2%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	464.97	2.13	**0.4%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Structural Rating*:	**25.2%**
Soil Rating*:	**61.2%**

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

BU#:	846221
Site Name:	SE Lake City
Order Number:	640916 Rev. 0
Location:	Guy A @ 225 ft (Elev 0 ft)

TIA-222 Revision:	H

Design Reactions		
Shear, **S**:	64.15	kips
Uplift, **Ua**:	55.33	kips
Resultant Force, **Rf**:	84.72	kips
Tower Height, **H**:	300.00	ft
Guy Anchor Radius, **R**:	225.00	ft
Resultant Angle to Horizontal, **θ**:	40.8	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, **Da**:	12	ft
Anchor Width, **Wa**:	5	ft
Anchor Thickness, **Ta**:	4	ft
Anchor Length, **La**:	20	ft
Concrete Volume, **Vc**:	14.8	yd^3
Toe Width, **toe**:	0	ft
Guyed Anchor Top Rebar Size, **Sat**:	9	
No. of Bars in Top of Block:	8	
Guyed Anchor Front Rebar Size, **Saf**:	9	
No. of Bars in Front of Block:	8	
Stirrup Size:	4	
Anchor Shaft Diameter, **ds**:	2.25	in
Anchor Shaft Quantity. **n**:	1	
Anchor Shaft Area Override:		in^2
Shear Lag Factor, **u**:	1	

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Strength, **F'c**:	3	ksi
Wt. Avg.Concrete Density, **δx**:	0.119	kcf
Clear Cover, **cc**:	3	in
Anchor Shaft Grade, **Fy'**:	36	ksi
Anchor Shaft Ultimate Strength, **Fu'**:	58	ksi

Design Checks	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	287.61	64.15	**21.2%**	**Pass**
Uplift Capacity (kips):	297.56	55.33	**17.7%**	**Pass**
*Lateral Flexural Capacity (ft*kips):*	1943.11	160.38	**7.9%**	**Pass**
*Uplift Flexural Capacity (ft*kips):*	1525.23	138.33	**8.6%**	**Pass**
Anchor Shaft (kips):	114.51	84.72	**70.5%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Anchor Shaft Rating:	**70.5%**
Structural Rating:	**8.6%**
Soil Rating:	**21.2%**

Neglect Depth, **Neg**:	0.4167	ft
Groundwater Level, **gw**:	10	ft

Soil Properties:				No. of Soil Layers: 3		
Layer	**φ, deg**	**cu, ksf**	**δ, pcf**		**Ultimate fs (ksf)**	**N (blows/ft)**
1	0	0.000	110	0.42		
2	32	0.000	110	10.00		16
3	32	0.000	47.6	12.00		16

*key: φ = *Internal Angle of Friction*
cu = Cohesion / Undrained Shear Strength
δ = *Buoyant Soil Unit Weight*
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

Version 4.0.0

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

BU#:	846221
Site Name:	SE Lake City
Order Number:	640916 Rev. 0
Location:	Guy B @ 225 ft (Elev 0 ft)

TIA-222 Revision:	H

Design Reactions		
Shear, **S**:	66.81	kips
Uplift, **Ua**:	57.25	kips
Resultant Force, **Rf**:	87.99	kips
Tower Height, **H**:	300.00	ft
Guy Anchor Radius, **R**:	225.00	ft
Resultant Angle to Horizontal, **θ**:	40.6	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, **Da**:	12	ft
Anchor Width, **Wa**:	5	ft
Anchor Thickness, **Ta**:	4	ft
Anchor Length, **La**:	20	ft
Concrete Volume, **Vc**:	14.8	yd^3
Toe Width, **toe**:	0	ft
Guyed Anchor Top Rebar Size, **Sat**:	9	
No. of Bars in Top of Block:	8	
Guyed Anchor Front Rebar Size, **Saf**:	9	
No. of Bars in Front of Block:	8	
Stirrup Size:	4	
Anchor Shaft Diameter, **ds**:	2.25	in
Anchor Shaft Quantity. **n**:	1	
Anchor Shaft Area Override:		in^2
Shear Lag Factor, **u**:	1	

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Strength, **F'c**:	3	ksi
Wt. Avg.Concrete Density, **δx**:	0.119	kcf
Clear Cover, **cc**:	3	in
Anchor Shaft Grade, **Fy'**:	36	ksi
Anchor Shaft Ultimate Strength, **Fu'**:	58	ksi

Design Checks	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	287.63	66.81	**22.1%**	**Pass**
Uplift Capacity (kips):	297.54	57.25	**18.3%**	**Pass**
*Lateral Flexural Capacity (ft*kips):*	1943.11	167.04	**8.2%**	**Pass**
*Uplift Flexural Capacity (ft*kips):*	1525.23	143.13	**8.9%**	**Pass**
Anchor Shaft (kips):	114.51	87.99	**73.2%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Anchor Shaft Rating:	**73.2%**
Structural Rating:	**8.9%**
Soil Rating:	**22.1%**

Neglect Depth, **Neg**:	0.4167	ft
Groundwater Level, **gw**:	10	ft

Soil Properties:				No. of Soil Layers: 3		
Layer	**φ, deg**	**cu, ksf**	**δ, pcf**		**Ultimate fs (ksf)**	**N (blows/ft)**
1	0	0.000	110	0.42		
2	32	0.000	110	10.00		23
3	32	0.000	47.6	12.00		23

*key: φ = *Internal Angle of Friction*
cu = Cohesion / Undrained Shear Strength
δ = *Buoyant Soil Unit Weight*
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

Version 4.0.0

Guyed Anchor Block Foundation

Checks capacity of anchor blocks for a guyed tower.

BU#:	846221
Site Name:	SE Lake City
Order Number:	640916 Rev. 0
Location:	Guy C @ 225 ft (Elev 0 ft)

TIA-222 Revision:	H

Design Reactions		
Shear, **S**:	69.30	kips
Uplift, **Ua**:	59.05	kips
Resultant Force, **Rf**:	91.05	kips
Tower Height, **H**:	300.00	ft
Guy Anchor Radius, **R**:	225.00	ft
Resultant Angle to Horizontal, **θ**:	40.4	deg

Guy Anchor Properties		
Depth to Bottom of Deadman, **Da**:	12	ft
Anchor Width, **Wa**:	5	ft
Anchor Thickness, **Ta**:	4	ft
Anchor Length, **La**:	20	ft
Concrete Volume, **Vc**:	14.8	yd^3
Toe Width, **toe**:	0	ft
Guyed Anchor Top Rebar Size, **Sat**:	9	
No. of Bars in Top of Block:	8	
Guyed Anchor Front Rebar Size, **Saf**:	9	
No. of Bars in Front of Block:	8	
Stirrup Size:	4	
Anchor Shaft Diameter, **ds**:	2.25	in
Anchor Shaft Quantity. **n**:	1	
Anchor Shaft Area Override:		in^2
Shear Lag Factor, **u**:	1	

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Strength, **F'c**:	3	ksi
Wt. Avg.Concrete Density, **δx**:	0.119	kcf
Clear Cover, **cc**:	3	in
Anchor Shaft Grade, **Fy'**:	36	ksi
Anchor Shaft Ultimate Strength, **Fu'**:	58	ksi

Design Checks	Capacity	Demand	Rating*	Check
Lateral Capacity (kips):	287.64	69.30	**22.9%**	**Pass**
Uplift Capacity (kips):	297.52	59.05	**18.9%**	**Pass**
*Lateral Flexural Capacity (ft*kips):*	1943.11	173.25	**8.5%**	**Pass**
*Uplift Flexural Capacity (ft*kips):*	1525.23	147.63	**9.2%**	**Pass**
Anchor Shaft (kips):	114.51	91.05	**75.7%**	**Pass**

**Rating per TIA-222-H Section 15.5*

Anchor Shaft Rating:	**75.7%**
Structural Rating:	**9.2%**
Soil Rating:	**22.9%**

Neglect Depth, **Neg**:	0.4167	ft
Groundwater Level, **gw**:	10	ft

Soil Properties:			No. of Soil Layers:	3		
Layer	**φ, deg**	**cu, ksf**	**δ, pcf**		**Ultimate fs (ksf)**	**N (blows/ft)**
1	0	0.000	110	0.42		
2	32	0.000	110	10.00		32
3	32	0.000	47.6	12.00		32

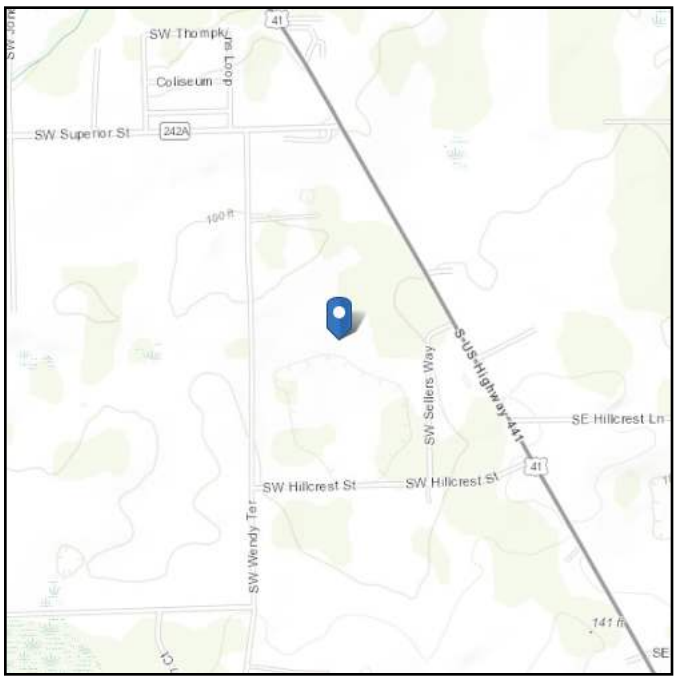
*key: φ = *Internal Angle of Friction*
cu = Cohesion / Undrained Shear Strength
δ = *Buoyant Soil Unit Weight*
d = Depth to Bottom of Layer
Ultimate fs = Geotechnical Report-provided skin friction / adhesion
N = SPT Blow Count

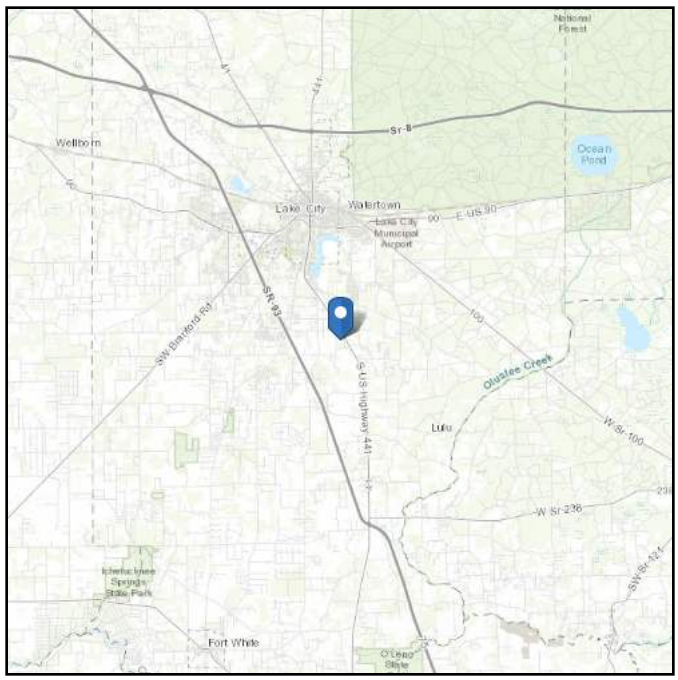
ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Stiff Soil

Latitude: 30.112933
Longitude: -82.618103
Elevation: 86.7660617824194 ft (NAVD 88)





Wind

Results:

Wind Speed	119 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	98 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:	Thu Mar 16 2023

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

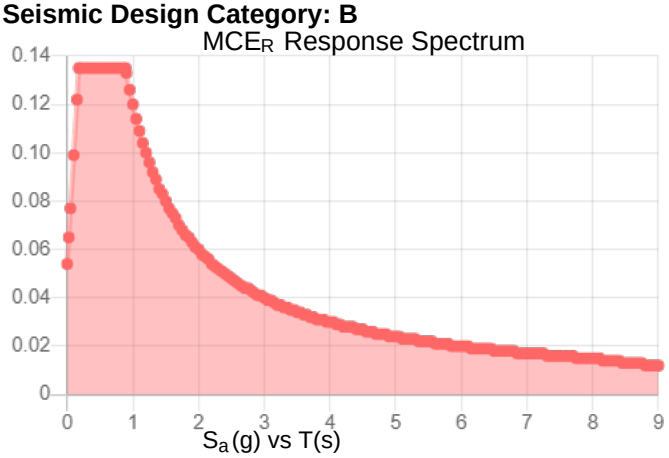
D - Stiff Soil

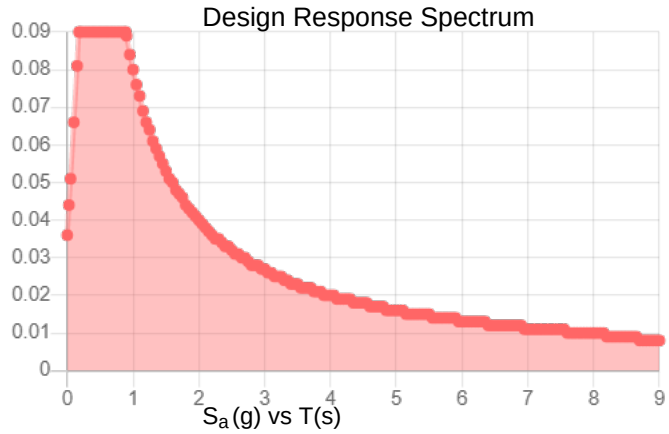
Site Soil Class:

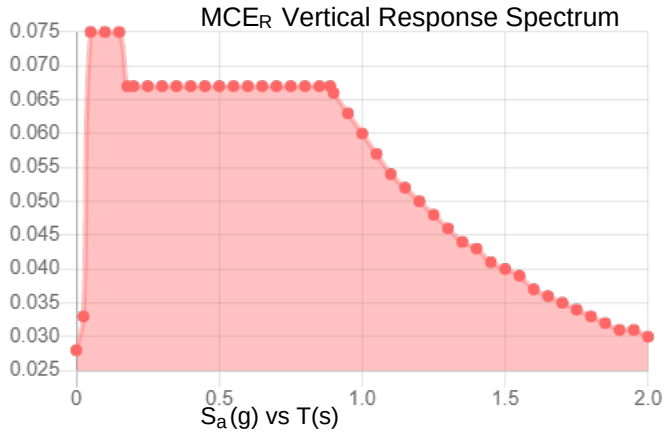
Results:

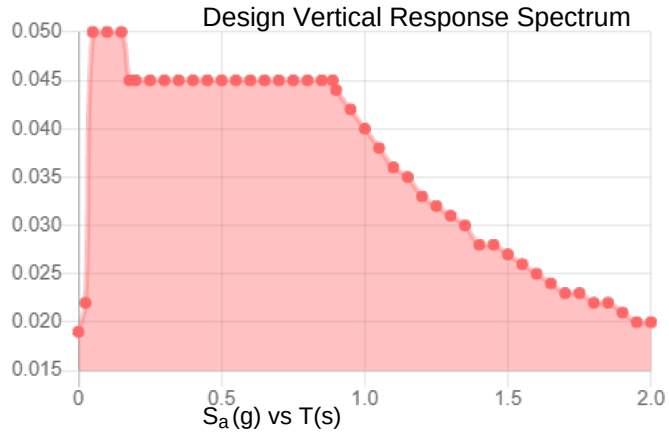
S_S :	0.084	S_{D1} :	0.08
S_1 :	0.05	T_L :	8
F_a :	1.6	PGA :	0.04
F_v :	2.4	PGA_M :	0.064
S_{MS} :	0.135	F_{PGA} :	1.6
S_{M1} :	0.12	I_e :	1
S_{DS} :	0.09	C_v :	0.7

Seismic Design Category: B









Data Accessed: **Thu Mar 16 2023**

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:	Thu Mar 16 2023

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.

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