STATE OF CONNECTICUT
CONNECTICUT SITING COUNCIL
Ten Franklin Square, New Britain, CT 06051
Phone: (860) 827-2935 Fax: (860) 827-2950
E-Mail: siting.council@ct.gov
Web Site: portal.ct.gov/csc

VIA ELECTRONIC MAIL

August 19, 2021

Sarah Snell
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581

RE: **EM-VER-084-210716** – Cellco Partnership d/b/a Verizon Wireless notice of intent to modify an existing telecommunications facilty located at Old Gate Lane, Milford, Connecticut.

The Connecticut Siting Council (Council) is in receipt of your correspondence of August 18, 2021 submitted in response to the Council's August 11, 2021 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman
Executive Director

MAB/CMW/emr

Crown Castle
3 Corporate Park Drive, Suite 101
Clifton Park, NY 12065

August 18, 2021

Melanie A. Bachman
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **Notice of Exempt Modification for Verizon**
EM-VER-084_210716
Crown Site BU 876309
311 Old Gate Lane, Milford, CT 06460
Latitude: 41° 14′ 2.59″/ Longitude: -73° 1′ 22.40″

Dear Ms. Bachman:

In response to the above-referenced matter, attached is the structural analysis report for the subject tower. A hard copy of the analysis is also being overnighted to the Council for delivery by 10:30am tomorrow morning.

Please do not hesitate to contact me with any questions or if you need anything additional.

Sincerely,

Sarah Snell
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
T: 508-621-9146
Sarah.Snell@crowncastle.com

Attachments

PAUL J. FORD & COMPANY

Date: **June 15, 2021**

Paul J. Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
614-221-6679

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Co-Locate**	
	Site Number:	467591
	Site Name:	Old Gate CT
Crown Castle Designation:	**BU Number:**	876309
	Site Name:	MILFORD JAI-ALAI
	JDE Job Number:	644625
	Work Order Number:	1976732
	Order Number:	552677 Rev. 0
Engineering Firm Designation:	**Paul J. Ford and Company Project Number:**	37521-0073.006.7805
Site Data:	**311 Old Gate Lane, Milford, New Haven County, CT**	
	Latitude *41° 14' 2.59"*, Longitude *-73° 1' 22.4"*	
	120 Foot - Monopole Tower	

Paul J. Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

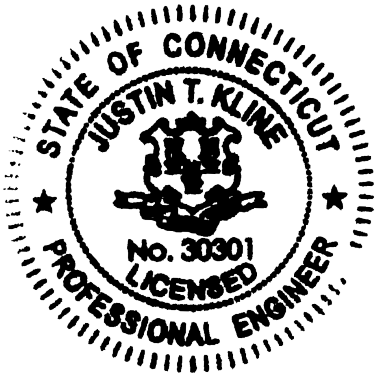
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity (84.8 %)**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code and Appendix N. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

Ryan. Ferrante, PE
Project Engineer
rferrante@pauljford.com



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1) INTRODUCTION

This tower is a 120 ft Monopole tower designed by ROHN in December of 1996.

The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	125 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1.5 in
Wind Speed with Ice:	50 mph
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)
103.0	103.0	1	tower mounts	Platform Mount [LP 301-1_KCKR]	1 12	1-1/4 1-5/8
	100.0	3	antel	BXA-70063-6BF-EDIN-0		
		3	commscope	CBC78T-DS-43-2X		
		6	commscope	JAHH-65A-R3B w/ Mount Pipe		
		1	raycap	RVZDC-6627-PF-48		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		

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)
117.0	123.0	1	lucent	KS24019-L112A	4 1	1-5/8 1/2
	120.0	3	ericsson	AIR6449 B41_T-MOBILE w/ Mount Pipe		
		3	ericsson	RADIO 4415 B66A		
		3	ericsson	RADIO 4424 B25_TMO		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	rfs celwave	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe		
		3	rfs celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
	117.0	1	tower mounts	Platform Mount [LP 501-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	2221322	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	2068407	CCISITES
4-TOWER MANUFACTURER DRAWINGS	2068406	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2217524	CCISITES
4-POST-MODIFICATION INSPECTION	2217525	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2638364	CCISITES
4-POST-MODIFICATION INSPECTION	2638363	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3088811	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3139251	CCISITES
4-POST-MODIFICATION INSPECTION	3158394	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	3265183	CCISITES
4-POST-MODIFICATION INSPECTION	3334396	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	5461972	CCISITES
4-POST-MODIFICATION INSPECTION	6078054	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.9.0), 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.

tnxTower was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

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.
3) The modification referenced in Doc #3088811 does not have a post modification inspection. It was assumed the structure was modified in conformance with the referenced modification drawings.
4) The structure was modified in conformance with the referenced modification drawings as shown in the referenced post modification inspection.

This analysis may be affected if any assumptions are not valid or have been made in error. Paul J. Ford and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
120 - 115	Pole	TP24x24x0.25	Pole	5.7%	Pass
115 - 110	Pole	TP24x24x0.25	Pole	12.3%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
110 - 105	Pole	TP24x24x0.25	Pole	19.4%	Pass
105 - 100	Pole	TP24x24x0.25	Pole	29.1%	Pass
100 - 98.5	Pole	TP24x24x0.25	Pole	33.0%	Pass
98.5 - 98.25	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	23.7%	Pass
98.25 - 93.25	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	33.4%	Pass
93.25 - 90	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	40.0%	Pass
90 - 89.75	Pole	TP24x24x0.375	Pole	36.4%	Pass
89.75 - 84.75	Pole	TP24x24x0.375	Pole	46.1%	Pass
84.75 - 79.75	Pole	TP24x24x0.375	Pole	56.0%	Pass
79.75 - 79	Pole	TP24x24x0.375	Pole	57.5%	Pass
79 - 78.75	Pole + Reinf.	TP24x24x0.5188	Reinf. 12 Tension Rupture	49.2%	Pass
78.75 - 75.17	Pole + Reinf.	TP24x24x0.5188	Reinf. 12 Tension Rupture	55.5%	Pass
75.17 - 74.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	44.2%	Pass
74.92 - 69.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	51.4%	Pass
69.92 - 64.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	58.9%	Pass
64.92 - 60	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	66.6%	Pass
60 - 59.75	Pole + Reinf.	TP30x30x0.5313	Pole	47.3%	Pass
59.75 - 54.75	Pole + Reinf.	TP30x30x0.5313	Pole	53.6%	Pass
54.75 - 49.75	Pole + Reinf.	TP30x30x0.5313	Pole	60.2%	Pass
49.75 - 47.83	Pole + Reinf.	TP30x30x0.5313	Pole	62.8%	Pass
47.83 - 47.58	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	58.1%	Pass
47.58 - 43	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	64.0%	Pass
43 - 42.75	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	59.1%	Pass
42.75 - 37.75	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	65.2%	Pass
37.75 - 34.5	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	69.3%	Pass
34.5 - 34.25	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	75.7%	Pass
34.25 - 30	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	81.5%	Pass
30 - 29.75	Pole + Reinf.	TP36x36x0.55	Pole	60.9%	Pass
29.75 - 25.58	Pole + Reinf.	TP36x36x0.55	Pole	65.8%	Pass
25.58 - 25.33	Pole + Reinf.	TP36x36x0.65	Reinf. 10 Tension Rupture	61.3%	Pass
25.33 - 20.75	Pole + Reinf.	TP36x36x0.65	Reinf. 10 Tension Rupture	66.4%	Pass
20.75 - 20.5	Pole + Reinf.	TP36x36x0.7875	Reinf. 1 Tension Rupture	59.9%	Pass
20.5 - 17.58	Pole + Reinf.	TP36x36x0.7875	Reinf. 1 Tension Rupture	62.9%	Pass
17.58 - 17.33	Pole + Reinf.	TP36x36x0.6875	Reinf. 1 Tension Rupture	71.2%	Pass
17.33 - 13.5	Pole + Reinf.	TP36x36x0.6875	Reinf. 1 Tension Rupture	75.7%	Pass
13.5 - 13.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	76.3%	Pass
13.25 - 8.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	82.3%	Pass
8.25 - 6.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	84.8%	Pass
6.25 - 6	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	68.0%	Pass
6 - 1	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	73.0%	Pass
1 - 0	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	74.0%	Pass
				Summary	
			Pole	73.8%	Pass
			Reinforcement	84.8%	Pass

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
			Overall	84.8%	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Flange Bolts	90	18.5	Pass
1	Flange Plates	90	22.4	Pass
1	Flange Jump Plates	90	44.3	Pass
1	Flange Connection	60	78.4	Pass
1	Flange Connection	30	39.0	Pass
1	Anchor Rods	0	58.2	Pass
1	Base Plate	0	24.7	Pass
1	Base Foundation Structural Steel	0	23.5	Pass
1	Base Foundation Soil Interaction	0	80.7	Pass

Structure Rating (max from all components) =	84.8%

Notes:

- All structural ratings are per TIA-222-H Section 15.5

1) See additional documentation in “Appendix C – Additional Calculations” for calculations supporting the % capacity consumed.

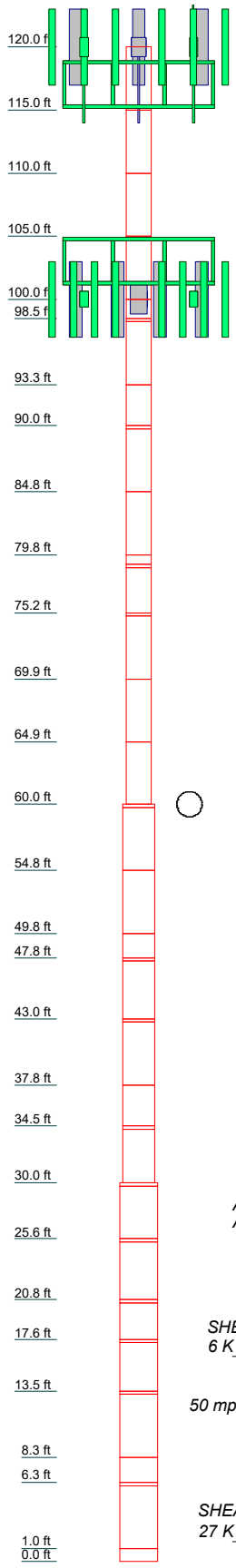
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	Size	Length (ft)	Grade	Weight (K)
1	P24x0.25	5.0000	A53-B-42	0.3
2	P24x0.25	5.0000		0.3
3	P24x0.25	5.0000		0.3
4	P24x0.25	5.0000		0.3
5	P24x0.25	2.5000		0.1
6	P24x0.25	2.5000		0.1
7	P24x0.25	5.0000		0.5
8	P24x0.25	2.5000		0.3
9	P24x0.25	2.5000		0.0
10	P24x0.375	5.0000		0.5
11	P24x0.375	5.0000		0.5
12	P24x0.375	2.5000		0.1
13	P24x0.375	2.5000		0.1
14	P24x0.375	5.0000		0.4
15	P24x0.375	2.5000		0.0
16	P24x0.375	5.0000		0.8
17	P24x0.675	5.0000		0.8
18	P24x0.675	8.9200		0.8
19	P24x0.675	2.5000		0.0
20	P30x0.5312	5.0000		0.8
21	P30x0.5312	5.0000		0.8
22	P30x0.5312	2.5000		0.3
23	P30x0.5312	2.5000		0.0
24	P30x0.5312	5.5800		0.9
25	P30x0.5312	2.5000		0.1
26	P30x0.8	5.0000		1.2
27	P30x0.8	2.5000		0.8
28	P30x0.8	2.5000		0.0
29	P30x0.8	2.5000		0.8
30	P30x0.8	4.2500		0.1
31	P30x0.8	5.0000		0.8
32	P30x0.8	2.5000		0.1
33	P36x0.8	5.5800		1.1
34	P36x0.8	2.5000		0.1
35	P36x0.8	2.5000		0.8
36	P36x0.8	2.5000		0.1
37	P36x0.8	2.5000		0.9
38	P36x0.8	2.5000		0.1
39	P36x0.8	5.0000		1.3
40	P36x0.8	2.5000		0.5
41	P36x0.8	2.5000		0.5
42	P36x0.8	5.0000		1.5
43	P36x0.8	1.0000		0.3
				19.4



ALL REACTIONS ARE FACTORED

AXIAL 63 K

SHEAR 6 K *MOMENT 480 kip-ft*

TORQUE 0 kip-ft
50 mph WIND - 1.5000 in ICE

AXIAL 41 K

SHEAR 27 K *MOMENT 1965 kip-ft*

TORQUE 0 kip-ft
REACTIONS - 125 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-42	42 ksi	63 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.50 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Risk Category II.
7. Topographic Category 1 with Crest Height of 0.0000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 84.8%

PJFLogo

Paul J. Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
Phone: 614-221-6679
FAX:

Job:	***120-Ft Monopole / Milford JAI-ALAI***		
Project:	***PJF 37521-0073.006 / BU# 876309***		
Client: Crown Castle	Drawn by: rferrante		App'd:
Code: TIA-222-H	Date: 06/15/21		Scale: NTS
Path: G:\TOWER\375_Crown_Castle\2021\37521-0073_876309_MILFORD JAI-ALAI\37521-0073.006.7805_SA_197673237521-0073.006_CCIpole.eri			Dwg No. E-1

Tower Input Data

The tower is a monopole.
This tower is designed using the TIA-222-H standard.
The following design criteria apply:

- Tower is located in New Haven County, Connecticut.
- Tower base elevation above sea level: 56.6000 ft.
- Basic wind speed of 125 mph.
- Risk Category II.
- Exposure Category C.
- Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- Topographic Category: 1.
- Crest Height: 0.0000 ft.
- Nominal ice thickness of 1.5000 in.
- Ice thickness is considered to increase with height.
- Ice density of 56.00 pcf.
- A wind speed of 50 mph is used in combination with ice.
- Temperature drop of 50 °F.
- Deflections calculated using a wind speed of 60 mph.
- TIA-222-H Annex S.
- A non-linear (P-delta) analysis was used.
- Pressures are calculated at each section.
- Stress ratio used in pole design is 1.
- Tower analysis based on target reliabilities in accordance with Annex S.
- Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
- Maximum demand-capacity ratio is: 1.05.
- Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

Pole Section Geometry

Section	*Elevation* *ft*	*Section Length* *ft*	*Pole Size*	*Pole Grade*
L1	120.0000-115.0000	5.0000	P24x0.25	A53-B-42 (42 ksi)
L2	115.0000-110.0000	5.0000	P24x0.25	A53-B-42 (42 ksi)
L3	110.0000-105.0000	5.0000	P24x0.25	A53-B-42 (42 ksi)

Section	Elevation ft	Section Length ft	Pole Size	Pole Grade
L4	105.0000-100.0000	5.0000	P24x0.25	A53-B-42 (42 ksi)
L5	100.0000-98.5000	1.5000	P24x0.25	A53-B-42 (42 ksi)
L6	98.5000-98.2500	0.2500	P24x0.3875	A53-B-42 (42 ksi)
L7	98.2500-93.2500	5.0000	P24x0.3875	A53-B-42 (42 ksi)
L8	93.2500-90.0000	3.2500	P24x0.3875	A53-B-42 (42 ksi)
L9	90.0000-89.7500	0.2500	P24x0.375	A53-B-42 (42 ksi)
L10	89.7500-84.7500	5.0000	P24x0.375	A53-B-42 (42 ksi)
L11	84.7500-79.7500	5.0000	P24x0.375	A53-B-42 (42 ksi)
L12	79.7500-79.0000	0.7500	P24x0.375	A53-B-42 (42 ksi)
L13	79.0000-78.7500	0.2500	P24x0.51875	A53-B-42 (42 ksi)
L14	78.7500-75.1700	3.5800	P24x0.51875	A53-B-42 (42 ksi)
L15	75.1700-74.9200	0.2500	P24x0.675	A53-B-42 (42 ksi)
L16	74.9200-69.9200	5.0000	P24x0.675	A53-B-42 (42 ksi)
L17	69.9200-64.9200	5.0000	P24x0.675	A53-B-42 (42 ksi)
L18	64.9200-60.0000	4.9200	P24x0.675	A53-B-42 (42 ksi)
L19	60.0000-59.7500	0.2500	P30x0.53125	A53-B-42 (42 ksi)
L20	59.7500-54.7500	5.0000	P30x0.53125	A53-B-42 (42 ksi)
L21	54.7500-49.7500	5.0000	P30x0.53125	A53-B-42 (42 ksi)
L22	49.7500-47.8300	1.9200	P30x0.53125	A53-B-42 (42 ksi)
L23	47.8300-47.5800	0.2500	P30x0.65	A53-B-42 (42 ksi)
L24	47.5800-43.0000	4.5800	P30x0.65	A53-B-42 (42 ksi)
L25	43.0000-42.7500	0.2500	P30x0.8	A53-B-42 (42 ksi)
L26	42.7500-37.7500	5.0000	P30x0.8	A53-B-42 (42 ksi)
L27	37.7500-34.5000	3.2500	P30x0.8	A53-B-42 (42 ksi)
L28	34.5000-34.2500	0.2500	P30x0.65	A53-B-42 (42 ksi)
L29	34.2500-30.0000	4.2500	P30x0.65	A53-B-42 (42 ksi)
L30	30.0000-29.7500	0.2500	P36x0.55	A53-B-42 (42 ksi)
L31	29.7500-25.5800	4.1700	P36x0.55	A53-B-42 (42 ksi)
L32	25.5800-25.3300	0.2500	P36x0.65	A53-B-42 (42 ksi)
L33	25.3300-20.7500	4.5800	P36x0.65	A53-B-42 (42 ksi)
L34	20.7500-20.5000	0.2500	P36x0.7875	A53-B-42 (42 ksi)
L35	20.5000-17.5800	2.9200	P36x0.7875	A53-B-42 (42 ksi)
L36	17.5800-17.3300	0.2500	P36x0.6875	A53-B-42 (42 ksi)
L37	17.3300-13.5000	3.8300	P36x0.6875	A53-B-42 (42 ksi)
L38	13.5000-13.2500	0.2500	P36x0.7	A53-B-42

Section	*Elevation* *ft*	*Section Length* *ft*	*Pole Size*	*Pole Grade*
L39	13.2500-8.2500	5.0000	P36x0.7	(42 ksi) A53-B-42 (42 ksi)
L40	8.2500-6.2500	2.0000	P36x0.7	A53-B-42 (42 ksi)
L41	6.2500-6.0000	0.2500	P36x0.8875	A53-B-42 (42 ksi)
L42	6.0000-1.0000	5.0000	P36x0.8875	A53-B-42 (42 ksi)
L43	1.0000-0.0000	1.0000	P36x0.8875	A53-B-42 (42 ksi)

Tower Elevation *ft*	*Gusset Area (per face)* ft^2	*Gusset Thickness* *in*	*Gusset Grade*	*Adjust. Factor* A_f	*Adjust. Factor* A_r	*Weight Mult.*
L1 120.0000-115.0000				1	1	1
L2 115.0000-110.0000				1	1	1
L3 110.0000-105.0000				1	1	1
L4 105.0000-100.0000				1	1	1
L5 100.0000-98.5000				1	1	1
L6 98.5000-98.2500				1	1	0.962015
L7 98.2500-93.2500				1	1	0.962015
L8 93.2500-90.0000				1	1	0.962015
L9 90.0000-89.7500				1	1	1
L10 89.7500-84.7500				1	1	1
L11 84.7500-79.7500				1	1	1
L12 79.7500-79.0000				1	1	1
L13 79.0000-78.7500				1	1	0.962504
L14 78.7500-75.1700				1	1	0.962504
L15 75.1700-74.9200				1	1	0.921761
L16 74.9200-69.9200				1	1	0.921761
L17 69.9200-64.9200				1	1	0.921761
L18 64.9200-60.0000				1	1	0.921761
L19 60.0000-59.7500				1	1	0.961544
L20 59.7500-54.7500				1	1	0.961544
L21 54.7500-49.7500				1	1	0.961544
L22 49.7500-47.8300				1	1	0.961544
L23 47.8300-47.5800				1	1	0.939223
L24 47.5800-43.0000				1	1	0.939223
L25 43.0000-42.7500				1	1	0.933109
L26 42.7500-37.7500				1	1	0.933109
L27 37.7500-34.5000				1	1	0.933109
L28 34.5000-34.2500				1	1	0.939223
L29 34.2500-30.0000				1	1	0.939223
L30 30.0000-29.7500				1	1	0.961904
L31 29.7500-25.5800				1	1	0.961904
L32 25.5800-25.3300				1	1	0.940899
L33 25.3300-20.7500				1	1	0.940899
L34 20.7500-20.5000				1	1	0.930309
L35 20.5000-17.5800				1	1	0.930309
L36 17.5800-17.3300				1	1	0.944607
L37 17.3300-13.5000				1	1	0.944607
L38 13.5000-13.2500				1	1	0.961689
L39 13.2500-8.2500				1	1	0.961689
L40 8.2500-6.2500				1	1	0.961689
L41 6.2500-6.0000				1	1	0.8987
L42 6.0000-1.0000				1	1	0.8987
L43 1.0000-0.0000				1	1	0.8987

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
HB158-21U6S24-xxM_TMO(1-5/8)	C	No	Surface Ar (CaAa)	117.0000 - 0.0000	4	4	0.050 0.250	1.9960		2.50
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FP 3.50 x 1.25 Reinforcement	B	No	Surface Af (CaAa)	22.0000 - 0.0000	1	1	0.058 0.058	3.5000	9.5000	0.00
FP 3.50 x 1.25 Reinforcement	A	No	Surface Af (CaAa)	22.0000 - 0.0000	1	1	0.067 0.067	3.5000	9.5000	0.00
FP 3.50 x 1.25 Reinforcement	C	No	Surface Af (CaAa)	22.0000 - 0.0000	1	1	0.058 0.058	3.5000	9.5000	0.00
FP 3.25 x 1.25 Reinforcement	B	No	Surface Af (CaAa)	44.0000 - 30.0000	1	1	0.058 0.058	3.2500	9.0000	0.00
FP 3.25 x 1.25 Reinforcement	A	No	Surface Af (CaAa)	44.0000 - 30.0000	1	1	0.067 0.067	3.2500	9.0000	0.00
FP 3.25 x 1.25 Reinforcement	C	No	Surface Af (CaAa)	44.0000 - 30.0000	1	1	0.058 0.058	3.2500	9.0000	0.00
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MP3-05 Reinforcement	B	No	Surface Af (CaAa)	8.5000 - 0.0000	1	1	-0.500 -0.500	5.3300	14.8400	0.00
MP3-04 Reinforcement	B	No	Surface Af (CaAa)	14.8750 - 4.8750	1	1	-0.250 -0.250	4.7800	12.7800	0.00
MP3-04 Reinforcement	A	No	Surface Af (CaAa)	14.8750 - 4.8750	1	1	0.250 0.250	4.7800	12.7800	0.00
MP3-05 Reinforcement	B	No	Surface Af (CaAa)	30.0000 - 11.2500	1	1	-0.500 -0.500	5.3300	14.8400	0.00
MP3-05 Reinforcement	C	No	Surface Af (CaAa)	30.0000 - 0.0000	1	1	-0.500 -0.500	5.3300	14.8400	0.00
MP3-05 Reinforcement	A	No	Surface Af (CaAa)	30.0000 - 0.0000	1	1	-0.500 -0.500	5.3300	14.8400	0.00
MP3-04 Reinforcement	C	No	Surface Af (CaAa)	60.0000 - 30.0000	1	1	-0.500 -0.500	4.7800	12.7800	0.00
MP3-04 Reinforcement	B	No	Surface Af (CaAa)	60.0000 - 30.0000	1	1	-0.500 -0.500	4.7800	12.7800	0.00
MP3-04 Reinforcement	A	No	Surface Af (CaAa)	60.0000 - 30.0000	1	1	-0.500 -0.500	4.7800	12.7800	0.00
MP3-03 Reinforcement	C	No	Surface Af (CaAa)	75.2080 - 60.0000	1	1	-0.500 -0.500	4.0600	11.2600	0.00
MP3-03 Reinforcement	B	No	Surface Af (CaAa)	76.2080 - 60.0000	1	1	-0.500 -0.500	4.0600	11.2600	0.00
MP3-03 Reinforcement	A	No	Surface Af (CaAa)	76.2080 - 60.0000	1	1	-0.500 -0.500	4.0600	11.2600	0.00
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CCI-040075 Reinforcement	C	No	Surface Af (CaAa)	27.0000 - 17.0000	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	B	No	Surface Af (CaAa)	27.0000 - 17.0000	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	A	No	Surface Af (CaAa)	27.0000 - 17.0000	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	C	No	Surface Af (CaAa)	50.2500 - 30.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	B	No	Surface Af (CaAa)	50.2500 - 30.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	A	No	Surface Af (CaAa)	50.2500 - 30.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	C	No	Surface Af (CaAa)	80.2500 - 60.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	B	No	Surface Af (CaAa)	80.2500 - 60.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
CCI-040075 Reinforcement	A	No	Surface Af (CaAa)	80.2500 - 60.2500	1	1	-0.125 -0.125	4.0000	9.5000	0.00
FP 5.00 X 4.75 Reinforcement	C	No	Surface Af (CaAa)	92.6700 - 87.3300	1	1	-0.500 -0.500	5.0000	19.5000	0.00
FP 5.00 X 4.75 Reinforcement	B	No	Surface Af (CaAa)	92.6700 - 87.3300	1	1	-0.500 -0.500	5.0000	19.5000	0.00
FP 5.00 X 4.75	A	No	Surface Af	92.6700 -	1	1	-0.500	5.0000	19.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
Reinforcement			(CaAa)	87.3300			-0.500			
CCI-040075	C	No	Surface Af	100.4200 -	1	1	-0.500	4.0000	9.5000	0.00
Reinforcement			(CaAa)	92.6700			-0.500			
CCI-040075	B	No	Surface Af	100.4200 -	1	1	-0.500	4.0000	9.5000	0.00
Reinforcement			(CaAa)	92.6700			-0.500			
CCI-040075	A	No	Surface Af	100.4200 -	1	1	-0.500	4.0000	9.5000	0.00
Reinforcement			(CaAa)	92.6700			-0.500			
**										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
LDF4-50A(1/2)	C	No	No	Inside Pole	117.0000 - 0.0000	1	No Ice	0.0000	0.15
							1/2" Ice	0.0000	0.15
							1" Ice	0.0000	0.15
							2" Ice	0.0000	0.15
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561(1-5/8)	C	No	No	Inside Pole	103.0000 - 0.0000	11	No Ice	0.0000	1.35
							1/2" Ice	0.0000	1.35
							1" Ice	0.0000	1.35
							2" Ice	0.0000	1.35
HB158-21U6S12-XXXM-01(1-5/8)	C	No	No	Inside Pole	103.0000 - 0.0000	1	No Ice	0.0000	1.90
							1/2" Ice	0.0000	1.90
							1" Ice	0.0000	1.90
							2" Ice	0.0000	1.90
HFT1208-24S26(1-1/4)	C	No	No	Inside Pole	103.0000 - 0.0000	1	No Ice	0.0000	1.17
							1/2" Ice	0.0000	1.17
							1" Ice	0.0000	1.17
							2" Ice	0.0000	1.17
**									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	120.0000-115.0000	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	1.597	0.000	0.02
L2	115.0000-110.0000	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	3.992	0.000	0.05
L3	110.0000-105.0000	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	3.992	0.000	0.05
L4	105.0000-100.0000	A	0.000	0.000	0.270	0.000	0.00
		B	0.000	0.000	0.270	0.000	0.00
		C	0.000	0.000	4.262	0.000	0.10
L5	100.0000-98.5000	A	0.000	0.000	0.964	0.000	0.00
		B	0.000	0.000	0.964	0.000	0.00
		C	0.000	0.000	2.162	0.000	0.04
L6	98.5000-98.2500	A	0.000	0.000	0.161	0.000	0.00
		B	0.000	0.000	0.161	0.000	0.00
		C	0.000	0.000	0.360	0.000	0.01
L7	98.2500-93.2500	A	0.000	0.000	3.214	0.000	0.00
		B	0.000	0.000	3.214	0.000	0.00
		C	0.000	0.000	7.206	0.000	0.14
L8	93.2500-90.0000	A	0.000	0.000	2.015	0.000	0.00
		B	0.000	0.000	2.015	0.000	0.00
		C	0.000	0.000	4.610	0.000	0.09
L9	90.0000-89.7500	A	0.000	0.000	0.154	0.000	0.00
		B	0.000	0.000	0.154	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	0.353	0.000	0.01
L10	89.7500-	A	0.000	0.000	1.489	0.000	0.00
	84.7500	B	0.000	0.000	1.489	0.000	0.00
		C	0.000	0.000	5.481	0.000	0.14
L11	84.7500-	A	0.000	0.000	0.333	0.000	0.00
	79.7500	B	0.000	0.000	0.333	0.000	0.00
		C	0.000	0.000	4.325	0.000	0.14
L12	79.7500-	A	0.000	0.000	0.500	0.000	0.00
	79.0000	B	0.000	0.000	0.500	0.000	0.00
		C	0.000	0.000	1.099	0.000	0.02
L13	79.0000-	A	0.000	0.000	0.167	0.000	0.00
	78.7500	B	0.000	0.000	0.167	0.000	0.00
		C	0.000	0.000	0.366	0.000	0.01
L14	78.7500-	A	0.000	0.000	3.089	0.000	0.00
	75.1700	B	0.000	0.000	3.089	0.000	0.00
		C	0.000	0.000	5.271	0.000	0.10
L15	75.1700-	A	0.000	0.000	0.336	0.000	0.00
	74.9200	B	0.000	0.000	0.336	0.000	0.00
		C	0.000	0.000	0.535	0.000	0.01
L16	74.9200-	A	0.000	0.000	6.717	0.000	0.00
	69.9200	B	0.000	0.000	6.717	0.000	0.00
		C	0.000	0.000	10.709	0.000	0.14
L17	69.9200-	A	0.000	0.000	6.717	0.000	0.00
	64.9200	B	0.000	0.000	6.717	0.000	0.00
		C	0.000	0.000	10.709	0.000	0.14
L18	64.9200-	A	0.000	0.000	6.443	0.000	0.00
	60.0000	B	0.000	0.000	6.443	0.000	0.00
		C	0.000	0.000	10.371	0.000	0.14
L19	60.0000-	A	0.000	0.000	0.199	0.000	0.00
	59.7500	B	0.000	0.000	0.199	0.000	0.00
		C	0.000	0.000	0.399	0.000	0.01
L20	59.7500-	A	0.000	0.000	3.983	0.000	0.00
	54.7500	B	0.000	0.000	3.983	0.000	0.00
		C	0.000	0.000	7.975	0.000	0.14
L21	54.7500-	A	0.000	0.000	4.317	0.000	0.00
	49.7500	B	0.000	0.000	4.317	0.000	0.00
		C	0.000	0.000	8.309	0.000	0.14
L22	49.7500-	A	0.000	0.000	2.810	0.000	0.00
	47.8300	B	0.000	0.000	2.810	0.000	0.00
		C	0.000	0.000	4.343	0.000	0.05
L23	47.8300-	A	0.000	0.000	0.366	0.000	0.00
	47.5800	B	0.000	0.000	0.366	0.000	0.00
		C	0.000	0.000	0.565	0.000	0.01
L24	47.5800-	A	0.000	0.000	7.244	0.000	0.00
	43.0000	B	0.000	0.000	7.244	0.000	0.00
		C	0.000	0.000	10.900	0.000	0.13
L25	43.0000-	A	0.000	0.000	0.501	0.000	0.00
	42.7500	B	0.000	0.000	0.501	0.000	0.00
		C	0.000	0.000	0.701	0.000	0.01
L26	42.7500-	A	0.000	0.000	10.025	0.000	0.00
	37.7500	B	0.000	0.000	10.025	0.000	0.00
		C	0.000	0.000	14.017	0.000	0.14
L27	37.7500-	A	0.000	0.000	6.516	0.000	0.00
	34.5000	B	0.000	0.000	6.516	0.000	0.00
		C	0.000	0.000	9.111	0.000	0.09
L28	34.5000-	A	0.000	0.000	0.501	0.000	0.00
	34.2500	B	0.000	0.000	0.501	0.000	0.00
		C	0.000	0.000	0.701	0.000	0.01
L29	34.2500-	A	0.000	0.000	8.355	0.000	0.00
	30.0000	B	0.000	0.000	8.355	0.000	0.00
		C	0.000	0.000	11.748	0.000	0.12
L30	30.0000-	A	0.000	0.000	0.222	0.000	0.00
	29.7500	B	0.000	0.000	0.222	0.000	0.00
		C	0.000	0.000	0.422	0.000	0.01
L31	29.7500-	A	0.000	0.000	4.651	0.000	0.00
	25.5800	B	0.000	0.000	4.651	0.000	0.00
		C	0.000	0.000	7.980	0.000	0.12
L32	25.5800-	A	0.000	0.000	0.389	0.000	0.00
	25.3300	B	0.000	0.000	0.389	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	0.588	0.000	0.01
L33	25.3300-	A	0.000	0.000	7.851	0.000	0.00
	20.7500	B	0.000	0.000	7.851	0.000	0.00
		C	0.000	0.000	11.508	0.000	0.13
L34	20.7500-	A	0.000	0.000	0.535	0.000	0.00
	20.5000	B	0.000	0.000	0.535	0.000	0.00
		C	0.000	0.000	0.734	0.000	0.01
L35	20.5000-	A	0.000	0.000	6.244	0.000	0.00
	17.5800	B	0.000	0.000	6.244	0.000	0.00
		C	0.000	0.000	8.575	0.000	0.08
L36	17.5800-	A	0.000	0.000	0.535	0.000	0.00
	17.3300	B	0.000	0.000	0.535	0.000	0.00
		C	0.000	0.000	0.734	0.000	0.01
L37	17.3300-	A	0.000	0.000	6.930	0.000	0.00
	13.5000	B	0.000	0.000	6.930	0.000	0.00
		C	0.000	0.000	8.914	0.000	0.11
L38	13.5000-	A	0.000	0.000	0.563	0.000	0.00
	13.2500	B	0.000	0.000	0.563	0.000	0.00
		C	0.000	0.000	0.568	0.000	0.01
L39	13.2500-	A	0.000	0.000	11.261	0.000	0.00
	8.2500	B	0.000	0.000	8.792	0.000	0.00
		C	0.000	0.000	11.350	0.000	0.14
L40	8.2500-6.2500	A	0.000	0.000	4.505	0.000	0.00
		B	0.000	0.000	4.292	0.000	0.00
		C	0.000	0.000	4.540	0.000	0.06
L41	6.2500-6.0000	A	0.000	0.000	0.563	0.000	0.00
		B	0.000	0.000	0.536	0.000	0.00
		C	0.000	0.000	0.568	0.000	0.01
L42	6.0000-1.0000	A	0.000	0.000	8.237	0.000	0.00
		B	0.000	0.000	7.705	0.000	0.00
		C	0.000	0.000	11.350	0.000	0.14
L43	1.0000-0.0000	A	0.000	0.000	1.472	0.000	0.00
		B	0.000	0.000	1.365	0.000	0.00
		C	0.000	0.000	2.270	0.000	0.03

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	120.0000-	A	1.448	0.000	0.000	0.000	0.000	0.00
	115.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	2.720	0.000	0.05
L2	115.0000-	A	1.441	0.000	0.000	0.000	0.000	0.00
	110.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	6.792	0.000	0.12
L3	110.0000-	A	1.435	0.000	0.000	0.000	0.000	0.00
	105.0000	B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	6.784	0.000	0.12
L4	105.0000-	A	1.428	0.000	0.000	0.333	0.000	0.00
	100.0000	B		0.000	0.000	0.333	0.000	0.00
		C		0.000	0.000	7.108	0.000	0.18
L5	100.0000-	A	1.423	0.000	0.000	1.187	0.000	0.01
	98.5000	B		0.000	0.000	1.187	0.000	0.01
		C		0.000	0.000	3.218	0.000	0.07
L6	98.5000-	A	1.422	0.000	0.000	0.198	0.000	0.00
	98.2500	B		0.000	0.000	0.198	0.000	0.00
		C		0.000	0.000	0.536	0.000	0.01
L7	98.2500-	A	1.418	0.000	0.000	3.955	0.000	0.04
	93.2500	B		0.000	0.000	3.955	0.000	0.04
		C		0.000	0.000	10.718	0.000	0.25
L8	93.2500-	A	1.412	0.000	0.000	2.536	0.000	0.04
	90.0000	B		0.000	0.000	2.536	0.000	0.04
		C		0.000	0.000	6.927	0.000	0.18
L9	90.0000-	A	1.409	0.000	0.000	0.194	0.000	0.00
	89.7500	B		0.000	0.000	0.194	0.000	0.00
		C		0.000	0.000	0.532	0.000	0.01

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L10	89.7500-84.7500	A	1.405	0.000	0.000	1.881	0.000	0.03
		B		0.000	0.000	1.881	0.000	0.03
		C		0.000	0.000	8.628	0.000	0.24
L11	84.7500-79.7500	A	1.397	0.000	0.000	0.473	0.000	0.00
		B		0.000	0.000	0.473	0.000	0.00
		C		0.000	0.000	7.209	0.000	0.21
L12	79.7500-79.0000	A	1.392	0.000	0.000	0.709	0.000	0.01
		B		0.000	0.000	0.709	0.000	0.01
		C		0.000	0.000	1.718	0.000	0.04
L13	79.0000-78.7500	A	1.391	0.000	0.000	0.236	0.000	0.00
		B		0.000	0.000	0.236	0.000	0.00
		C		0.000	0.000	0.573	0.000	0.01
L14	78.7500-75.1700	A	1.388	0.000	0.000	4.371	0.000	0.04
		B		0.000	0.000	4.371	0.000	0.04
		C		0.000	0.000	8.231	0.000	0.18
L15	75.1700-74.9200	A	1.384	0.000	0.000	0.474	0.000	0.00
		B		0.000	0.000	0.474	0.000	0.00
		C		0.000	0.000	0.810	0.000	0.01
L16	74.9200-69.9200	A	1.379	0.000	0.000	9.475	0.000	0.08
		B		0.000	0.000	9.475	0.000	0.08
		C		0.000	0.000	16.189	0.000	0.29
L17	69.9200-64.9200	A	1.369	0.000	0.000	9.456	0.000	0.08
		B		0.000	0.000	9.456	0.000	0.08
		C		0.000	0.000	16.157	0.000	0.29
L18	64.9200-60.0000	A	1.359	0.000	0.000	9.049	0.000	0.08
		B		0.000	0.000	9.049	0.000	0.08
		C		0.000	0.000	15.631	0.000	0.28
L19	60.0000-59.7500	A	1.353	0.000	0.000	0.267	0.000	0.00
		B		0.000	0.000	0.267	0.000	0.00
		C		0.000	0.000	0.601	0.000	0.01
L20	59.7500-54.7500	A	1.347	0.000	0.000	5.331	0.000	0.05
		B		0.000	0.000	5.331	0.000	0.05
		C		0.000	0.000	12.005	0.000	0.25
L21	54.7500-49.7500	A	1.335	0.000	0.000	5.785	0.000	0.05
		B		0.000	0.000	5.785	0.000	0.05
		C		0.000	0.000	12.444	0.000	0.25
L22	49.7500-47.8300	A	1.326	0.000	0.000	3.828	0.000	0.03
		B		0.000	0.000	3.828	0.000	0.03
		C		0.000	0.000	6.380	0.000	0.11
L23	47.8300-47.5800	A	1.323	0.000	0.000	0.498	0.000	0.00
		B		0.000	0.000	0.498	0.000	0.00
		C		0.000	0.000	0.830	0.000	0.01
L24	47.5800-43.0000	A	1.316	0.000	0.000	9.918	0.000	0.08
		B		0.000	0.000	9.918	0.000	0.08
		C		0.000	0.000	15.996	0.000	0.27
L25	43.0000-42.7500	A	1.309	0.000	0.000	0.698	0.000	0.01
		B		0.000	0.000	0.698	0.000	0.01
		C		0.000	0.000	1.029	0.000	0.02
L26	42.7500-37.7500	A	1.301	0.000	0.000	13.927	0.000	0.12
		B		0.000	0.000	13.927	0.000	0.12
		C		0.000	0.000	20.542	0.000	0.32
L27	37.7500-34.5000	A	1.287	0.000	0.000	9.025	0.000	0.07
		B		0.000	0.000	9.025	0.000	0.07
		C		0.000	0.000	13.314	0.000	0.21
L28	34.5000-34.2500	A	1.280	0.000	0.000	0.693	0.000	0.01
		B		0.000	0.000	0.693	0.000	0.01
		C		0.000	0.000	1.023	0.000	0.02
L29	34.2500-30.0000	A	1.272	0.000	0.000	11.534	0.000	0.09
		B		0.000	0.000	11.534	0.000	0.09
		C		0.000	0.000	17.126	0.000	0.26
L30	30.0000-29.7500	A	1.262	0.000	0.000	0.285	0.000	0.00
		B		0.000	0.000	0.285	0.000	0.00
		C		0.000	0.000	0.614	0.000	0.01
L31	29.7500-25.5800	A	1.253	0.000	0.000	5.950	0.000	0.05
		B		0.000	0.000	5.950	0.000	0.05
		C		0.000	0.000	11.417	0.000	0.22
L32	25.5800-25.3300	A	1.242	0.000	0.000	0.495	0.000	0.00
		B		0.000	0.000	0.495	0.000	0.00
		C		0.000	0.000	0.822	0.000	0.01

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L33	25.3300-20.7500	A	1.230	0.000	0.000	10.094	0.000	0.08
		B		0.000	0.000	10.094	0.000	0.08
		C		0.000	0.000	16.073	0.000	0.26
L34	20.7500-20.5000	A	1.216	0.000	0.000	0.700	0.000	0.01
		B		0.000	0.000	0.700	0.000	0.01
		C		0.000	0.000	1.026	0.000	0.02
L35	20.5000-17.5800	A	1.207	0.000	0.000	8.162	0.000	0.07
		B		0.000	0.000	8.162	0.000	0.07
		C		0.000	0.000	11.957	0.000	0.18
L36	17.5800-17.3300	A	1.196	0.000	0.000	0.697	0.000	0.01
		B		0.000	0.000	0.697	0.000	0.01
		C		0.000	0.000	1.022	0.000	0.02
L37	17.3300-13.5000	A	1.182	0.000	0.000	8.971	0.000	0.07
		B		0.000	0.000	8.971	0.000	0.07
		C		0.000	0.000	12.677	0.000	0.21
L38	13.5000-13.2500	A	1.165	0.000	0.000	0.711	0.000	0.01
		B		0.000	0.000	0.711	0.000	0.01
		C		0.000	0.000	0.807	0.000	0.01
L39	13.2500-8.2500	A	1.140	0.000	0.000	14.155	0.000	0.11
		B		0.000	0.000	11.033	0.000	0.09
		C		0.000	0.000	16.052	0.000	0.27
L40	8.2500-6.2500	A	1.096	0.000	0.000	5.618	0.000	0.04
		B		0.000	0.000	5.208	0.000	0.04
		C		0.000	0.000	6.364	0.000	0.10
L41	6.2500-6.0000	A	1.077	0.000	0.000	0.700	0.000	0.01
		B		0.000	0.000	0.649	0.000	0.01
		C		0.000	0.000	0.792	0.000	0.01
L42	6.0000-1.0000	A	1.019	0.000	0.000	10.398	0.000	0.07
		B		0.000	0.000	9.409	0.000	0.07
		C		0.000	0.000	15.659	0.000	0.25
L43	1.0000-0.0000	A	0.839	0.000	0.000	1.807	0.000	0.01
		B		0.000	0.000	1.626	0.000	0.01
		C		0.000	0.000	3.015	0.000	0.05

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	120.0000-115.0000	-0.8443	2.5984	-0.6282	1.9334
L2	115.0000-110.0000	-1.6047	4.9388	-1.1717	3.6061
L3	110.0000-105.0000	-1.6047	4.9388	-1.1714	3.6053
L4	105.0000-100.0000	-1.4844	4.5685	-1.1229	3.4560
L5	100.0000-98.5000	-0.6236	1.9193	-0.7729	2.3787
L6	98.5000-98.2500	-0.6236	1.9193	-0.7728	2.3786
L7	98.2500-93.2500	-0.6236	1.9193	-0.7727	2.3782
L8	93.2500-90.0000	-0.6076	1.8700	-0.7514	2.3126
L9	90.0000-89.7500	-0.6042	1.8597	-0.7469	2.2987
L10	89.7500-84.7500	-0.7743	2.3830	-0.9319	2.8680
L11	84.7500-79.7500	-1.4587	4.4895	-1.1023	3.3925
L12	79.7500-79.0000	-0.8020	2.4684	-0.7250	2.2313
L13	79.0000-78.7500	-0.8020	2.4684	-0.7250	2.2313
L14	78.7500-75.1700	-1.1475	1.8952	-1.2402	2.2047
L15	75.1700-74.9200	-0.4324	1.3307	-0.5133	1.5797
L16	74.9200-69.9200	-0.4324	1.3307	-0.5133	1.5796
L17	69.9200-64.9200	-0.4324	1.3307	-0.5132	1.5796
L18	64.9200-60.0000	-0.4388	1.3503	-0.5207	1.6025
L19	60.0000-59.7500	-0.6328	1.9475	-0.7818	2.4061
L20	59.7500-54.7500	-0.6328	1.9475	-0.7816	2.4056
L21	54.7500-49.7500	-0.6119	1.8833	-0.7550	2.3236
L22	49.7500-47.8300	-0.4719	1.4523	-0.5792	1.7825
L23	47.8300-47.5800	-0.4719	1.4523	-0.5791	1.7824
L24	47.5800-43.0000	-0.4468	1.3842	-0.5471	1.6935
L25	43.0000-42.7500	-0.3725	1.1822	-0.4534	1.4339
L26	42.7500-37.7500	-0.3725	1.1822	-0.4534	1.4338
L27	37.7500-34.5000	-0.3725	1.1822	-0.4533	1.4337
L28	34.5000-34.2500	-0.3725	1.1822	-0.4533	1.4337

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L29	34.2500-30.0000	-0.3772	1.1970	-0.4590	1.4516
L30	30.0000-29.7500	-0.6585	2.0266	-0.8371	2.5764
L31	29.7500-25.5800	-0.5977	1.8395	-0.7614	2.3434
L32	25.5800-25.3300	-0.5070	1.5604	-0.6480	1.9945
L33	25.3300-20.7500	-0.4738	1.4713	-0.6034	1.8715
L34	20.7500-20.5000	-0.4003	1.2739	-0.5067	1.6052
L35	20.5000-17.5800	-0.4003	1.2739	-0.5066	1.6046
L36	17.5800-17.3300	-0.4003	1.2739	-0.5064	1.6039
L37	17.3300-13.5000	-0.4573	0.2571	-0.5774	0.7507
L38	13.5000-13.2500	-0.4218	-1.7359	-0.5371	-1.0959
L39	13.2500-8.2500	0.4422	-0.8851	0.3160	-0.2243
L40	8.2500-6.2500	-0.2427	-1.5595	-0.2628	-0.8280
L41	6.2500-6.0000	-0.2427	-1.5595	-0.2639	-0.8330
L42	6.0000-1.0000	-0.2745	0.9619	-0.2996	1.5285
L43	1.0000-0.0000	-0.2854	1.8226	-0.3243	2.2963

Note: For pole sections, center of pressure calculations do not consider feed line shielding.

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	HB158-21U6S24-xxM_TMO(1-5/8)	115.00 - 117.00	1.0000	1.0000
L2	2	HB158-21U6S24-xxM_TMO(1-5/8)	110.00 - 115.00	1.0000	1.0000
L3	2	HB158-21U6S24-xxM_TMO(1-5/8)	105.00 - 110.00	1.0000	1.0000
L4	2	HB158-21U6S24-xxM_TMO(1-5/8)	100.00 - 105.00	1.0000	1.0000
L4	48	CCI-040075 Reinforcement	100.00 - 100.42	1.0000	1.0000
L4	49	CCI-040075 Reinforcement	100.00 - 100.42	1.0000	1.0000
L4	50	CCI-040075 Reinforcement	100.00 - 100.42	1.0000	1.0000
L5	2	HB158-21U6S24-xxM_TMO(1-5/8)	98.50 - 100.00	1.0000	1.0000
L5	48	CCI-040075 Reinforcement	98.50 - 100.00	1.0000	1.0000
L5	49	CCI-040075 Reinforcement	98.50 - 100.00	1.0000	1.0000
L5	50	CCI-040075 Reinforcement	98.50 - 100.00	1.0000	1.0000
L6	2	HB158-21U6S24-xxM_TMO(1-5/8)	98.25 - 98.50	1.0000	1.0000
L6	48	CCI-040075 Reinforcement	98.25 - 98.50	1.0000	1.0000
L6	49	CCI-040075 Reinforcement	98.25 - 98.50	1.0000	1.0000
L6	50	CCI-040075 Reinforcement	98.25 - 98.50	1.0000	1.0000
L7	2	HB158-21U6S24-xxM_TMO(1-5/8)	93.25 - 98.25	1.0000	1.0000
L7	48	CCI-040075 Reinforcement	93.25 - 98.25	1.0000	1.0000
L7	49	CCI-040075 Reinforcement	93.25 - 98.25	1.0000	1.0000
L7	50	CCI-040075 Reinforcement	93.25 - 98.25	1.0000	1.0000
L8	2	HB158-21U6S24-xxM_TMO(1-5/8)	90.00 - 93.25	1.0000	1.0000
L8	45	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	1.0000	1.0000
L8	46	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	1.0000	1.0000
L8	47	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	1.0000	1.0000
L8	48	CCI-040075 Reinforcement	92.67 - 93.25	1.0000	1.0000
L8	49	CCI-040075 Reinforcement	92.67 - 93.25	1.0000	1.0000
L8	50	CCI-040075 Reinforcement	92.67 - 93.25	1.0000	1.0000
L9	2	HB158-21U6S24-xxM_TMO(1-5/8)	89.75 - 90.00	1.0000	1.0000
L9	45	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	1.0000	1.0000
L9	46	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	1.0000	1.0000
L9	47	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	1.0000	1.0000
L10	2	HB158-21U6S24-xxM_TMO(1-5/8)	84.75 - 89.75	1.0000	1.0000
L10	45	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	1.0000	1.0000
L10	46	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	1.0000	1.0000
L10	47	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	1.0000	1.0000
L11	2	HB158-21U6S24-xxM_TMO(1-5/8)	79.75 - 84.75	1.0000	1.0000
L11	42	CCI-040075 Reinforcement	79.75 - 80.25	1.0000	1.0000
L11	43	CCI-040075 Reinforcement	79.75 - 80.25	1.0000	1.0000
L11	44	CCI-040075 Reinforcement	79.75 - 80.25	1.0000	1.0000
L12	2	HB158-21U6S24-xxM_TMO(1-5/8)	79.00 - 79.75	1.0000	1.0000
L12	42	CCI-040075 Reinforcement	79.00 - 79.75	1.0000	1.0000
L12	43	CCI-040075 Reinforcement	79.00 - 79.75	1.0000	1.0000
L12	44	CCI-040075 Reinforcement	79.00 - 79.75	1.0000	1.0000
L13	2	HB158-21U6S24-xxM_TMO(1-5/8)	78.75 - 79.00	1.0000	1.0000
L13	42	CCI-040075 Reinforcement	78.75 - 79.00	1.0000	1.0000
L13	43	CCI-040075 Reinforcement	78.75 - 79.00	1.0000	1.0000
L13	44	CCI-040075 Reinforcement	78.75 - 79.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	2	HB158-21U6S24-xxM_TMO(1-5/8)	75.17 - 78.75	1.0000	1.0000
L14	32	MP3-03 Reinforcement	75.17 - 75.21	1.0000	1.0000
L14	33	MP3-03 Reinforcement	75.17 - 76.21	1.0000	1.0000
L14	34	MP3-03 Reinforcement	75.17 - 76.21	1.0000	1.0000
L14	42	CCI-040075 Reinforcement	75.17 - 78.75	1.0000	1.0000
L14	43	CCI-040075 Reinforcement	75.17 - 78.75	1.0000	1.0000
L14	44	CCI-040075 Reinforcement	75.17 - 78.75	1.0000	1.0000
L15	2	HB158-21U6S24-xxM_TMO(1-5/8)	74.92 - 75.17	1.0000	1.0000
L15	32	MP3-03 Reinforcement	74.92 - 75.17	1.0000	1.0000
L15	33	MP3-03 Reinforcement	74.92 - 75.17	1.0000	1.0000
L15	34	MP3-03 Reinforcement	74.92 - 75.17	1.0000	1.0000
L15	42	CCI-040075 Reinforcement	74.92 - 75.17	1.0000	1.0000
L15	43	CCI-040075 Reinforcement	74.92 - 75.17	1.0000	1.0000
L15	44	CCI-040075 Reinforcement	74.92 - 75.17	1.0000	1.0000
L16	2	HB158-21U6S24-xxM_TMO(1-5/8)	69.92 - 74.92	1.0000	1.0000
L16	32	MP3-03 Reinforcement	69.92 - 74.92	1.0000	1.0000
L16	33	MP3-03 Reinforcement	69.92 - 74.92	1.0000	1.0000
L16	34	MP3-03 Reinforcement	69.92 - 74.92	1.0000	1.0000
L16	42	CCI-040075 Reinforcement	69.92 - 74.92	1.0000	1.0000
L16	43	CCI-040075 Reinforcement	69.92 - 74.92	1.0000	1.0000
L16	44	CCI-040075 Reinforcement	69.92 - 74.92	1.0000	1.0000
L17	2	HB158-21U6S24-xxM_TMO(1-5/8)	64.92 - 69.92	1.0000	1.0000
L17	32	MP3-03 Reinforcement	64.92 - 69.92	1.0000	1.0000
L17	33	MP3-03 Reinforcement	64.92 - 69.92	1.0000	1.0000
L17	34	MP3-03 Reinforcement	64.92 - 69.92	1.0000	1.0000
L17	42	CCI-040075 Reinforcement	64.92 - 69.92	1.0000	1.0000
L17	43	CCI-040075 Reinforcement	64.92 - 69.92	1.0000	1.0000
L17	44	CCI-040075 Reinforcement	64.92 - 69.92	1.0000	1.0000
L18	2	HB158-21U6S24-xxM_TMO(1-5/8)	60.00 - 64.92	1.0000	1.0000
L18	32	MP3-03 Reinforcement	60.00 - 64.92	1.0000	1.0000
L18	33	MP3-03 Reinforcement	60.00 - 64.92	1.0000	1.0000
L18	34	MP3-03 Reinforcement	60.00 - 64.92	1.0000	1.0000
L18	42	CCI-040075 Reinforcement	60.25 - 64.92	1.0000	1.0000
L18	43	CCI-040075 Reinforcement	60.25 - 64.92	1.0000	1.0000
L18	44	CCI-040075 Reinforcement	60.25 - 64.92	1.0000	1.0000
L19	2	HB158-21U6S24-xxM_TMO(1-5/8)	59.75 - 60.00	1.0000	1.0000
L19	29	MP3-04 Reinforcement	59.75 - 60.00	1.0000	1.0000
L19	30	MP3-04 Reinforcement	59.75 - 60.00	1.0000	1.0000
L19	31	MP3-04 Reinforcement	59.75 - 60.00	1.0000	1.0000
L20	2	HB158-21U6S24-xxM_TMO(1-5/8)	54.75 - 59.75	1.0000	1.0000
L20	29	MP3-04 Reinforcement	54.75 - 59.75	1.0000	1.0000
L20	30	MP3-04 Reinforcement	54.75 - 59.75	1.0000	1.0000
L20	31	MP3-04 Reinforcement	54.75 - 59.75	1.0000	1.0000
L21	2	HB158-21U6S24-xxM_TMO(1-5/8)	49.75 - 54.75	1.0000	1.0000
L21	29	MP3-04 Reinforcement	49.75 - 54.75	1.0000	1.0000
L21	30	MP3-04 Reinforcement	49.75 - 54.75	1.0000	1.0000
L21	31	MP3-04 Reinforcement	49.75 - 54.75	1.0000	1.0000
L21	39	CCI-040075 Reinforcement	49.75 - 50.25	1.0000	1.0000
L21	40	CCI-040075 Reinforcement	49.75 - 50.25	1.0000	1.0000
L21	41	CCI-040075 Reinforcement	49.75 - 50.25	1.0000	1.0000
L22	2	HB158-21U6S24-xxM_TMO(1-5/8)	47.83 - 49.75	1.0000	1.0000
L22	29	MP3-04 Reinforcement	47.83 - 49.75	1.0000	1.0000
L22	30	MP3-04 Reinforcement	47.83 - 49.75	1.0000	1.0000
L22	31	MP3-04 Reinforcement	47.83 - 49.75	1.0000	1.0000
L22	39	CCI-040075 Reinforcement	47.83 - 49.75	1.0000	1.0000
L22	40	CCI-040075 Reinforcement	47.83 - 49.75	1.0000	1.0000
L22	41	CCI-040075 Reinforcement	47.83 - 49.75	1.0000	1.0000
L23	2	HB158-21U6S24-xxM_TMO(1-5/8)	47.58 - 47.83	1.0000	1.0000
L23	29	MP3-04 Reinforcement	47.58 - 47.83	1.0000	1.0000
L23	30	MP3-04 Reinforcement	47.58 - 47.83	1.0000	1.0000
L23	31	MP3-04 Reinforcement	47.58 - 47.83	1.0000	1.0000
L23	39	CCI-040075 Reinforcement	47.58 - 47.83	1.0000	1.0000
L23	40	CCI-040075 Reinforcement	47.58 - 47.83	1.0000	1.0000
L23	41	CCI-040075 Reinforcement	47.58 - 47.83	1.0000	1.0000
L24	2	HB158-21U6S24-xxM_TMO(1-5/8)	43.00 - 47.58	1.0000	1.0000
L24	19	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	1.0000	1.0000
L24	20	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	1.0000	1.0000
L24	21	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	1.0000	1.0000
L24	29	MP3-04 Reinforcement	43.00 - 47.58	1.0000	1.0000
L24	30	MP3-04 Reinforcement	43.00 - 47.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	31	MP3-04 Reinforcement	43.00 - 47.58	1.0000	1.0000
L24	39	CCI-040075 Reinforcement	43.00 - 47.58	1.0000	1.0000
L24	40	CCI-040075 Reinforcement	43.00 - 47.58	1.0000	1.0000
L24	41	CCI-040075 Reinforcement	43.00 - 47.58	1.0000	1.0000
L25	2	HB158-21U6S24-xxM_TMO(1-5/8)	42.75 - 43.00	1.0000	1.0000
L25	19	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	20	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	21	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	29	MP3-04 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	30	MP3-04 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	31	MP3-04 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	39	CCI-040075 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	40	CCI-040075 Reinforcement	42.75 - 43.00	1.0000	1.0000
L25	41	CCI-040075 Reinforcement	42.75 - 43.00	1.0000	1.0000
L26	2	HB158-21U6S24-xxM_TMO(1-5/8)	37.75 - 42.75	1.0000	1.0000
L26	19	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	20	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	21	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	29	MP3-04 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	30	MP3-04 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	31	MP3-04 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	39	CCI-040075 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	40	CCI-040075 Reinforcement	37.75 - 42.75	1.0000	1.0000
L26	41	CCI-040075 Reinforcement	37.75 - 42.75	1.0000	1.0000
L27	2	HB158-21U6S24-xxM_TMO(1-5/8)	34.50 - 37.75	1.0000	1.0000
L27	19	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	20	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	21	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	29	MP3-04 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	30	MP3-04 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	31	MP3-04 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	39	CCI-040075 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	40	CCI-040075 Reinforcement	34.50 - 37.75	1.0000	1.0000
L27	41	CCI-040075 Reinforcement	34.50 - 37.75	1.0000	1.0000
L28	2	HB158-21U6S24-xxM_TMO(1-5/8)	34.25 - 34.50	1.0000	1.0000
L28	19	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	20	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	21	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	29	MP3-04 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	30	MP3-04 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	31	MP3-04 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	39	CCI-040075 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	40	CCI-040075 Reinforcement	34.25 - 34.50	1.0000	1.0000
L28	41	CCI-040075 Reinforcement	34.25 - 34.50	1.0000	1.0000
L29	2	HB158-21U6S24-xxM_TMO(1-5/8)	30.00 - 34.25	1.0000	1.0000
L29	19	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	20	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	21	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	29	MP3-04 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	30	MP3-04 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	31	MP3-04 Reinforcement	30.00 - 34.25	1.0000	1.0000
L29	39	CCI-040075 Reinforcement	30.25 - 34.25	1.0000	1.0000
L29	40	CCI-040075 Reinforcement	30.25 - 34.25	1.0000	1.0000
L29	41	CCI-040075 Reinforcement	30.25 - 34.25	1.0000	1.0000
L30	2	HB158-21U6S24-xxM_TMO(1-5/8)	29.75 - 30.00	1.0000	1.0000
L30	26	MP3-05 Reinforcement	29.75 - 30.00	1.0000	1.0000
L30	27	MP3-05 Reinforcement	29.75 - 30.00	1.0000	1.0000
L30	28	MP3-05 Reinforcement	29.75 - 30.00	1.0000	1.0000
L31	2	HB158-21U6S24-xxM_TMO(1-5/8)	25.58 - 29.75	1.0000	1.0000
L31	26	MP3-05 Reinforcement	25.58 - 29.75	1.0000	1.0000
L31	27	MP3-05 Reinforcement	25.58 - 29.75	1.0000	1.0000
L31	28	MP3-05 Reinforcement	25.58 - 29.75	1.0000	1.0000
L31	36	CCI-040075 Reinforcement	25.58 - 27.00	1.0000	1.0000
L31	37	CCI-040075 Reinforcement	25.58 - 27.00	1.0000	1.0000
L31	38	CCI-040075 Reinforcement	25.58 - 27.00	1.0000	1.0000
L32	2	HB158-21U6S24-xxM_TMO(1-5/8)	25.33 - 25.58	1.0000	1.0000
L32	26	MP3-05 Reinforcement	25.33 - 25.58	1.0000	1.0000
L32	27	MP3-05 Reinforcement	25.33 - 25.58	1.0000	1.0000
L32	28	MP3-05 Reinforcement	25.33 - 25.58	1.0000	1.0000
L32	36	CCI-040075 Reinforcement	25.33 - 25.58	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L32	37	CCI-040075 Reinforcement	25.33 - 25.58	1.0000	1.0000
L32	38	CCI-040075 Reinforcement	25.33 - 25.58	1.0000	1.0000
L33	2	HB158-21U6S24-xxM_TMO(1-5/8)	20.75 - 25.33	1.0000	1.0000
L33	16	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	1.0000	1.0000
L33	17	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	1.0000	1.0000
L33	18	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	1.0000	1.0000
L33	26	MP3-05 Reinforcement	20.75 - 25.33	1.0000	1.0000
L33	27	MP3-05 Reinforcement	20.75 - 25.33	1.0000	1.0000
L33	28	MP3-05 Reinforcement	20.75 - 25.33	1.0000	1.0000
L33	36	CCI-040075 Reinforcement	20.75 - 25.33	1.0000	1.0000
L33	37	CCI-040075 Reinforcement	20.75 - 25.33	1.0000	1.0000
L33	38	CCI-040075 Reinforcement	20.75 - 25.33	1.0000	1.0000
L34	2	HB158-21U6S24-xxM_TMO(1-5/8)	20.50 - 20.75	1.0000	1.0000
L34	16	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	17	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	18	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	26	MP3-05 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	27	MP3-05 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	28	MP3-05 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	36	CCI-040075 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	37	CCI-040075 Reinforcement	20.50 - 20.75	1.0000	1.0000
L34	38	CCI-040075 Reinforcement	20.50 - 20.75	1.0000	1.0000
L35	2	HB158-21U6S24-xxM_TMO(1-5/8)	17.58 - 20.50	1.0000	1.0000
L35	16	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	17	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	18	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	26	MP3-05 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	27	MP3-05 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	28	MP3-05 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	36	CCI-040075 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	37	CCI-040075 Reinforcement	17.58 - 20.50	1.0000	1.0000
L35	38	CCI-040075 Reinforcement	17.58 - 20.50	1.0000	1.0000
L36	2	HB158-21U6S24-xxM_TMO(1-5/8)	17.33 - 17.58	1.0000	1.0000
L36	16	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	17	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	18	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	26	MP3-05 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	27	MP3-05 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	28	MP3-05 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	36	CCI-040075 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	37	CCI-040075 Reinforcement	17.33 - 17.58	1.0000	1.0000
L36	38	CCI-040075 Reinforcement	17.33 - 17.58	1.0000	1.0000
L37	2	HB158-21U6S24-xxM_TMO(1-5/8)	13.50 - 17.33	1.0000	1.0000
L37	16	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	17	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	18	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	24	MP3-04 Reinforcement	13.50 - 14.88	1.0000	1.0000
L37	25	MP3-04 Reinforcement	13.50 - 14.88	1.0000	1.0000
L37	26	MP3-05 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	27	MP3-05 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	28	MP3-05 Reinforcement	13.50 - 17.33	1.0000	1.0000
L37	36	CCI-040075 Reinforcement	17.00 - 17.33	1.0000	1.0000
L37	37	CCI-040075 Reinforcement	17.00 - 17.33	1.0000	1.0000
L37	38	CCI-040075 Reinforcement	17.00 - 17.33	1.0000	1.0000
L38	2	HB158-21U6S24-xxM_TMO(1-5/8)	13.25 - 13.50	1.0000	1.0000
L38	16	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	17	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	18	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	24	MP3-04 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	25	MP3-04 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	26	MP3-05 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	27	MP3-05 Reinforcement	13.25 - 13.50	1.0000	1.0000
L38	28	MP3-05 Reinforcement	13.25 - 13.50	1.0000	1.0000
L39	2	HB158-21U6S24-xxM_TMO(1-5/8)	8.25 - 13.25	1.0000	1.0000
L39	16	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	1.0000	1.0000
L39	17	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	1.0000	1.0000
L39	18	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	1.0000	1.0000
L39	23	MP3-05 Reinforcement	8.25 - 8.50	1.0000	1.0000
L39	24	MP3-04 Reinforcement	8.25 - 13.25	1.0000	1.0000
L39	25	MP3-04 Reinforcement	8.25 - 13.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L39	26	MP3-05 Reinforcement	11.25 - 13.25	1.0000	1.0000
L39	27	MP3-05 Reinforcement	8.25 - 13.25	1.0000	1.0000
L39	28	MP3-05 Reinforcement	8.25 - 13.25	1.0000	1.0000
L40	2	HB158-21U6S24-xxM_TMO(1-5/8)	6.25 - 8.25	1.0000	1.0000
L40	16	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	17	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	18	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	23	MP3-05 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	24	MP3-04 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	25	MP3-04 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	27	MP3-05 Reinforcement	6.25 - 8.25	1.0000	1.0000
L40	28	MP3-05 Reinforcement	6.25 - 8.25	1.0000	1.0000
L41	2	HB158-21U6S24-xxM_TMO(1-5/8)	6.00 - 6.25	1.0000	1.0000
L41	16	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	17	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	18	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	23	MP3-05 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	24	MP3-04 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	25	MP3-04 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	27	MP3-05 Reinforcement	6.00 - 6.25	1.0000	1.0000
L41	28	MP3-05 Reinforcement	6.00 - 6.25	1.0000	1.0000
L42	2	HB158-21U6S24-xxM_TMO(1-5/8)	1.00 - 6.00	1.0000	1.0000
L42	16	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	1.0000	1.0000
L42	17	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	1.0000	1.0000
L42	18	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	1.0000	1.0000
L42	23	MP3-05 Reinforcement	1.00 - 6.00	1.0000	1.0000
L42	24	MP3-04 Reinforcement	4.88 - 6.00	1.0000	1.0000
L42	25	MP3-04 Reinforcement	4.88 - 6.00	1.0000	1.0000
L42	27	MP3-05 Reinforcement	1.00 - 6.00	1.0000	1.0000
L42	28	MP3-05 Reinforcement	1.00 - 6.00	1.0000	1.0000
L43	2	HB158-21U6S24-xxM_TMO(1-5/8)	0.00 - 1.00	1.0000	1.0000
L43	16	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	1.0000	1.0000
L43	17	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	1.0000	1.0000
L43	18	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	1.0000	1.0000
L43	23	MP3-05 Reinforcement	0.00 - 1.00	1.0000	1.0000
L43	27	MP3-05 Reinforcement	0.00 - 1.00	1.0000	1.0000
L43	28	MP3-05 Reinforcement	0.00 - 1.00	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L4	48	CCI-040075 Reinforcement	100.00 - 100.42	Manual	1.0000
L4	49	CCI-040075 Reinforcement	100.00 - 100.42	Manual	1.0000
L4	50	CCI-040075 Reinforcement	100.00 - 100.42	Manual	1.0000
L5	48	CCI-040075 Reinforcement	98.50 - 100.00	Manual	1.0000
L5	49	CCI-040075 Reinforcement	98.50 - 100.00	Manual	1.0000
L5	50	CCI-040075 Reinforcement	98.50 - 100.00	Manual	1.0000
L6	48	CCI-040075 Reinforcement	98.25 - 98.50	Manual	1.0000
L6	49	CCI-040075 Reinforcement	98.25 - 98.50	Manual	1.0000
L6	50	CCI-040075 Reinforcement	98.25 - 98.50	Manual	1.0000
L7	48	CCI-040075 Reinforcement	93.25 - 98.25	Manual	1.0000
L7	49	CCI-040075 Reinforcement	93.25 - 98.25	Manual	1.0000
L7	50	CCI-040075 Reinforcement	93.25 - 98.25	Manual	1.0000
L8	45	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	Manual	1.0000
L8	46	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	Manual	1.0000
L8	47	FP 5.00 X 4.75 Reinforcement	90.00 - 92.67	Manual	1.0000
L8	48	CCI-040075 Reinforcement	92.67 - 93.25	Manual	1.0000
L8	49	CCI-040075 Reinforcement	92.67 - 93.25	Manual	1.0000
L8	50	CCI-040075 Reinforcement	92.67 - 93.25	Manual	1.0000
L9	45	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	Manual	1.0000
L9	46	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	Manual	1.0000
L9	47	FP 5.00 X 4.75 Reinforcement	89.75 - 90.00	Manual	1.0000
L10	45	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	Manual	1.0000
L10	46	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	Manual	1.0000
L10	47	FP 5.00 X 4.75 Reinforcement	87.33 - 89.75	Manual	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L11	42	CCI-040075 Reinforcement	79.75 - 80.25	Manual	1.0000
L11	43	CCI-040075 Reinforcement	79.75 - 80.25	Manual	1.0000
L11	44	CCI-040075 Reinforcement	79.75 - 80.25	Manual	1.0000
L12	42	CCI-040075 Reinforcement	79.00 - 79.75	Manual	1.0000
L12	43	CCI-040075 Reinforcement	79.00 - 79.75	Manual	1.0000
L12	44	CCI-040075 Reinforcement	79.00 - 79.75	Manual	1.0000
L13	42	CCI-040075 Reinforcement	78.75 - 79.00	Manual	1.0000
L13	43	CCI-040075 Reinforcement	78.75 - 79.00	Manual	1.0000
L13	44	CCI-040075 Reinforcement	78.75 - 79.00	Manual	1.0000
L14	32	MP3-03 Reinforcement	75.17 - 75.21	Manual	1.0000
L14	33	MP3-03 Reinforcement	75.17 - 76.21	Manual	1.0000
L14	34	MP3-03 Reinforcement	75.17 - 76.21	Manual	1.0000
L14	42	CCI-040075 Reinforcement	75.17 - 78.75	Manual	1.0000
L14	43	CCI-040075 Reinforcement	75.17 - 78.75	Manual	1.0000
L14	44	CCI-040075 Reinforcement	75.17 - 78.75	Manual	1.0000
L15	32	MP3-03 Reinforcement	74.92 - 75.17	Manual	1.0000
L15	33	MP3-03 Reinforcement	74.92 - 75.17	Manual	1.0000
L15	34	MP3-03 Reinforcement	74.92 - 75.17	Manual	1.0000
L15	42	CCI-040075 Reinforcement	74.92 - 75.17	Manual	1.0000
L15	43	CCI-040075 Reinforcement	74.92 - 75.17	Manual	1.0000
L15	44	CCI-040075 Reinforcement	74.92 - 75.17	Manual	1.0000
L16	32	MP3-03 Reinforcement	69.92 - 74.92	Manual	1.0000
L16	33	MP3-03 Reinforcement	69.92 - 74.92	Manual	1.0000
L16	34	MP3-03 Reinforcement	69.92 - 74.92	Manual	1.0000
L16	42	CCI-040075 Reinforcement	69.92 - 74.92	Manual	1.0000
L16	43	CCI-040075 Reinforcement	69.92 - 74.92	Manual	1.0000
L16	44	CCI-040075 Reinforcement	69.92 - 74.92	Manual	1.0000
L17	32	MP3-03 Reinforcement	64.92 - 69.92	Manual	1.0000
L17	33	MP3-03 Reinforcement	64.92 - 69.92	Manual	1.0000
L17	34	MP3-03 Reinforcement	64.92 - 69.92	Manual	1.0000
L17	42	CCI-040075 Reinforcement	64.92 - 69.92	Manual	1.0000
L17	43	CCI-040075 Reinforcement	64.92 - 69.92	Manual	1.0000
L17	44	CCI-040075 Reinforcement	64.92 - 69.92	Manual	1.0000
L18	32	MP3-03 Reinforcement	60.00 - 64.92	Manual	1.0000
L18	33	MP3-03 Reinforcement	60.00 - 64.92	Manual	1.0000
L18	34	MP3-03 Reinforcement	60.00 - 64.92	Manual	1.0000
L18	42	CCI-040075 Reinforcement	60.25 - 64.92	Manual	1.0000
L18	43	CCI-040075 Reinforcement	60.25 - 64.92	Manual	1.0000
L18	44	CCI-040075 Reinforcement	60.25 - 64.92	Manual	1.0000
L19	29	MP3-04 Reinforcement	59.75 - 60.00	Manual	1.0000
L19	30	MP3-04 Reinforcement	59.75 - 60.00	Manual	1.0000
L19	31	MP3-04 Reinforcement	59.75 - 60.00	Manual	1.0000
L20	29	MP3-04 Reinforcement	54.75 - 59.75	Manual	1.0000
L20	30	MP3-04 Reinforcement	54.75 - 59.75	Manual	1.0000
L20	31	MP3-04 Reinforcement	54.75 - 59.75	Manual	1.0000
L21	29	MP3-04 Reinforcement	49.75 - 54.75	Manual	1.0000
L21	30	MP3-04 Reinforcement	49.75 - 54.75	Manual	1.0000
L21	31	MP3-04 Reinforcement	49.75 - 54.75	Manual	1.0000
L21	39	CCI-040075 Reinforcement	49.75 - 50.25	Manual	1.0000
L21	40	CCI-040075 Reinforcement	49.75 - 50.25	Manual	1.0000
L21	41	CCI-040075 Reinforcement	49.75 - 50.25	Manual	1.0000
L22	29	MP3-04 Reinforcement	47.83 - 49.75	Manual	1.0000
L22	30	MP3-04 Reinforcement	47.83 - 49.75	Manual	1.0000
L22	31	MP3-04 Reinforcement	47.83 - 49.75	Manual	1.0000
L22	39	CCI-040075 Reinforcement	47.83 - 49.75	Manual	1.0000
L22	40	CCI-040075 Reinforcement	47.83 - 49.75	Manual	1.0000
L22	41	CCI-040075 Reinforcement	47.83 - 49.75	Manual	1.0000
L23	29	MP3-04 Reinforcement	47.58 - 47.83	Manual	1.0000
L23	30	MP3-04 Reinforcement	47.58 - 47.83	Manual	1.0000
L23	31	MP3-04 Reinforcement	47.58 - 47.83	Manual	1.0000
L23	39	CCI-040075 Reinforcement	47.58 - 47.83	Manual	1.0000
L23	40	CCI-040075 Reinforcement	47.58 - 47.83	Manual	1.0000
L23	41	CCI-040075 Reinforcement	47.58 - 47.83	Manual	1.0000
L24	19	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	Manual	1.0000
L24	20	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	Manual	1.0000
L24	21	FP 3.25 x 1.25 Reinforcement	43.00 - 44.00	Manual	1.0000
L24	29	MP3-04 Reinforcement	43.00 - 47.58	Manual	1.0000
L24	30	MP3-04 Reinforcement	43.00 - 47.58	Manual	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L24	31	MP3-04 Reinforcement	43.00 - 47.58	Manual	1.0000
L24	39	CCI-040075 Reinforcement	43.00 - 47.58	Manual	1.0000
L24	40	CCI-040075 Reinforcement	43.00 - 47.58	Manual	1.0000
L24	41	CCI-040075 Reinforcement	43.00 - 47.58	Manual	1.0000
L25	19	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	20	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	21	FP 3.25 x 1.25 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	29	MP3-04 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	30	MP3-04 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	31	MP3-04 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	39	CCI-040075 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	40	CCI-040075 Reinforcement	42.75 - 43.00	Manual	1.0000
L25	41	CCI-040075 Reinforcement	42.75 - 43.00	Manual	1.0000
L26	19	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	20	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	21	FP 3.25 x 1.25 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	29	MP3-04 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	30	MP3-04 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	31	MP3-04 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	39	CCI-040075 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	40	CCI-040075 Reinforcement	37.75 - 42.75	Manual	1.0000
L26	41	CCI-040075 Reinforcement	37.75 - 42.75	Manual	1.0000
L27	19	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	20	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	21	FP 3.25 x 1.25 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	29	MP3-04 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	30	MP3-04 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	31	MP3-04 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	39	CCI-040075 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	40	CCI-040075 Reinforcement	34.50 - 37.75	Manual	1.0000
L27	41	CCI-040075 Reinforcement	34.50 - 37.75	Manual	1.0000
L28	19	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	20	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	21	FP 3.25 x 1.25 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	29	MP3-04 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	30	MP3-04 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	31	MP3-04 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	39	CCI-040075 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	40	CCI-040075 Reinforcement	34.25 - 34.50	Manual	1.0000
L28	41	CCI-040075 Reinforcement	34.25 - 34.50	Manual	1.0000
L29	19	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	20	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	21	FP 3.25 x 1.25 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	29	MP3-04 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	30	MP3-04 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	31	MP3-04 Reinforcement	30.00 - 34.25	Manual	1.0000
L29	39	CCI-040075 Reinforcement	30.25 - 34.25	Manual	1.0000
L29	40	CCI-040075 Reinforcement	30.25 - 34.25	Manual	1.0000
L29	41	CCI-040075 Reinforcement	30.25 - 34.25	Manual	1.0000
L30	26	MP3-05 Reinforcement	29.75 - 30.00	Manual	1.0000
L30	27	MP3-05 Reinforcement	29.75 - 30.00	Manual	1.0000
L30	28	MP3-05 Reinforcement	29.75 - 30.00	Manual	1.0000
L31	26	MP3-05 Reinforcement	25.58 - 29.75	Manual	1.0000
L31	27	MP3-05 Reinforcement	25.58 - 29.75	Manual	1.0000
L31	28	MP3-05 Reinforcement	25.58 - 29.75	Manual	1.0000
L31	36	CCI-040075 Reinforcement	25.58 - 27.00	Manual	1.0000
L31	37	CCI-040075 Reinforcement	25.58 - 27.00	Manual	1.0000
L31	38	CCI-040075 Reinforcement	25.58 - 27.00	Manual	1.0000
L32	26	MP3-05 Reinforcement	25.33 - 25.58	Manual	1.0000
L32	27	MP3-05 Reinforcement	25.33 - 25.58	Manual	1.0000
L32	28	MP3-05 Reinforcement	25.33 - 25.58	Manual	1.0000
L32	36	CCI-040075 Reinforcement	25.33 - 25.58	Manual	1.0000
L32	37	CCI-040075 Reinforcement	25.33 - 25.58	Manual	1.0000
L32	38	CCI-040075 Reinforcement	25.33 - 25.58	Manual	1.0000
L33	16	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	Manual	1.0000
L33	17	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	Manual	1.0000
L33	18	FP 3.50 x 1.25 Reinforcement	20.75 - 22.00	Manual	1.0000
L33	26	MP3-05 Reinforcement	20.75 - 25.33	Manual	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L33	27	MP3-05 Reinforcement	20.75 - 25.33	Manual	1.0000
L33	28	MP3-05 Reinforcement	20.75 - 25.33	Manual	1.0000
L33	36	CCI-040075 Reinforcement	20.75 - 25.33	Manual	1.0000
L33	37	CCI-040075 Reinforcement	20.75 - 25.33	Manual	1.0000
L33	38	CCI-040075 Reinforcement	20.75 - 25.33	Manual	1.0000
L34	16	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	17	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	18	FP 3.50 x 1.25 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	26	MP3-05 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	27	MP3-05 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	28	MP3-05 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	36	CCI-040075 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	37	CCI-040075 Reinforcement	20.50 - 20.75	Manual	1.0000
L34	38	CCI-040075 Reinforcement	20.50 - 20.75	Manual	1.0000
L35	16	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	17	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	18	FP 3.50 x 1.25 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	26	MP3-05 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	27	MP3-05 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	28	MP3-05 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	36	CCI-040075 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	37	CCI-040075 Reinforcement	17.58 - 20.50	Manual	1.0000
L35	38	CCI-040075 Reinforcement	17.58 - 20.50	Manual	1.0000
L36	16	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	17	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	18	FP 3.50 x 1.25 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	26	MP3-05 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	27	MP3-05 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	28	MP3-05 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	36	CCI-040075 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	37	CCI-040075 Reinforcement	17.33 - 17.58	Manual	1.0000
L36	38	CCI-040075 Reinforcement	17.33 - 17.58	Manual	1.0000
L37	16	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	17	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	18	FP 3.50 x 1.25 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	24	MP3-04 Reinforcement	13.50 - 14.88	Manual	1.0000
L37	25	MP3-04 Reinforcement	13.50 - 14.88	Manual	1.0000
L37	26	MP3-05 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	27	MP3-05 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	28	MP3-05 Reinforcement	13.50 - 17.33	Manual	1.0000
L37	36	CCI-040075 Reinforcement	17.00 - 17.33	Manual	1.0000
L37	37	CCI-040075 Reinforcement	17.00 - 17.33	Manual	1.0000
L37	38	CCI-040075 Reinforcement	17.00 - 17.33	Manual	1.0000
L38	16	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	17	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	18	FP 3.50 x 1.25 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	24	MP3-04 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	25	MP3-04 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	26	MP3-05 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	27	MP3-05 Reinforcement	13.25 - 13.50	Manual	1.0000
L38	28	MP3-05 Reinforcement	13.25 - 13.50	Manual	1.0000
L39	16	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	17	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	18	FP 3.50 x 1.25 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	23	MP3-05 Reinforcement	8.25 - 8.50	Manual	1.0000
L39	24	MP3-04 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	25	MP3-04 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	26	MP3-05 Reinforcement	11.25 - 13.25	Manual	1.0000
L39	27	MP3-05 Reinforcement	8.25 - 13.25	Manual	1.0000
L39	28	MP3-05 Reinforcement	8.25 - 13.25	Manual	1.0000
L40	16	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	17	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	18	FP 3.50 x 1.25 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	23	MP3-05 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	24	MP3-04 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	25	MP3-04 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	27	MP3-05 Reinforcement	6.25 - 8.25	Manual	1.0000
L40	28	MP3-05 Reinforcement	6.25 - 8.25	Manual	1.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L41	16	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	17	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	18	FP 3.50 x 1.25 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	23	MP3-05 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	24	MP3-04 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	25	MP3-04 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	27	MP3-05 Reinforcement	6.00 - 6.25	Manual	1.0000
L41	28	MP3-05 Reinforcement	6.00 - 6.25	Manual	1.0000
L42	16	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	Manual	1.0000
L42	17	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	Manual	1.0000
L42	18	FP 3.50 x 1.25 Reinforcement	1.00 - 6.00	Manual	1.0000
L42	23	MP3-05 Reinforcement	1.00 - 6.00	Manual	1.0000
L42	24	MP3-04 Reinforcement	4.88 - 6.00	Manual	1.0000
L42	25	MP3-04 Reinforcement	4.88 - 6.00	Manual	1.0000
L42	27	MP3-05 Reinforcement	1.00 - 6.00	Manual	1.0000
L42	28	MP3-05 Reinforcement	1.00 - 6.00	Manual	1.0000
L43	16	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	Manual	1.0000
L43	17	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	Manual	1.0000
L43	18	FP 3.50 x 1.25 Reinforcement	0.00 - 1.00	Manual	1.0000
L43	23	MP3-05 Reinforcement	0.00 - 1.00	Manual	1.0000
L43	27	MP3-05 Reinforcement	0.00 - 1.00	Manual	1.0000
L43	28	MP3-05 Reinforcement	0.00 - 1.00	Manual	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
KS24019-L112A	B	From Leg	4.0000 0.00 6.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	0.1407 0.1979 0.2621 0.4148	0.1407 0.1979 0.2621 0.4148	0.01 0.01 0.01 0.02
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.2900 6.8600 7.4500 8.6800	2.7600 3.2700 3.7900 4.9000	0.06 0.11 0.16 0.29
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	B	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.2900 6.8600 7.4500 8.6800	2.7600 3.2700 3.7900 4.9000	0.06 0.11 0.16 0.29
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	6.2900 6.8600 7.4500 8.6800	2.7600 3.2700 3.7900 4.9000	0.06 0.11 0.16 0.29
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.18 0.31 0.45 0.78
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	B	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.18 0.31 0.45 0.78
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	14.6900 15.4600 16.2300 17.8200	6.8700 7.5500 8.2500 9.6700	0.18 0.31 0.45 0.78
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.1900 5.5900 6.0200 6.9000	2.7100 3.0400 3.3800 4.1200	0.13 0.17 0.23 0.35
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.0000 0.00	0.00	117.0000	No Ice 1/2" Ice	5.1900 5.5900	2.7100 3.0400	0.13 0.17

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			3.00			1" Ice	6.0200	3.3800	0.23
						2" Ice	6.9000	4.1200	0.35
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	5.1900 5.5900 6.0200 6.9000	2.7100 3.0400 3.3800 4.1200	0.13 0.17 0.23 0.35
RADIO 4424 B25_TMO	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.0520 2.2307 2.4168 2.8113	1.6103 1.7717 1.9406 2.3006	0.09 0.11 0.13 0.19
RADIO 4424 B25_TMO	B	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.0520 2.2307 2.4168 2.8113	1.6103 1.7717 1.9406 2.3006	0.09 0.11 0.13 0.19
RADIO 4424 B25_TMO	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	2.0520 2.2307 2.4168 2.8113	1.6103 1.7717 1.9406 2.3006	0.09 0.11 0.13 0.19
RADIO 4415 B66A	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8563 2.0266 2.2044 2.5822	0.8701 0.9966 1.1344 1.4322	0.05 0.06 0.08 0.12
RADIO 4415 B66A	B	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8563 2.0266 2.2044 2.5822	0.8701 0.9966 1.1344 1.4322	0.05 0.06 0.08 0.12
RADIO 4415 B66A	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.8563 2.0266 2.2044 2.5822	0.8701 0.9966 1.1344 1.4322	0.05 0.06 0.08 0.12
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.9701 2.1466 2.3306 2.7207	1.5865 1.7488 1.9185 2.2800	0.07 0.09 0.12 0.17
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.9701 2.1466 2.3306 2.7207	1.5865 1.7488 1.9185 2.2800	0.07 0.09 0.12 0.17
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.0000 0.00 3.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.9701 2.1466 2.3306 2.7207	1.5865 1.7488 1.9185 2.2800	0.07 0.09 0.12 0.17
(2) 2.375" OD x 6' Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09
(2) 2.375" OD x 6' Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09
(2) 2.375" OD x 6' Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	1.4250 1.9250 2.2939 3.0596	1.4250 1.9250 2.2939 3.0596	0.03 0.04 0.05 0.09
Platform Mount [LP 501-1]	C	None		0.00	117.0000	No Ice 1/2" Ice 1" Ice 2" Ice	18.2800 23.5400 28.5300 38.8500	18.2800 23.5400 28.5300 38.8500	0.98 1.28 1.68 2.77
***									
***									
BXA-70063-6BF-EDIN-0	A	From Leg	4.0000 0.00 -3.00	0.00	103.0000	No Ice 1/2" Ice 1" Ice 2" Ice	7.2623 7.6963 8.1373 9.0403	4.0350 4.4590 4.8905 5.7756	0.02 0.06 0.11 0.22
BXA-70063-6BF-EDIN-0	B	From Leg	4.0000	0.00	103.0000	No Ice	7.2623	4.0350	0.02

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			0.00			1/2" Ice	7.6963	4.4590	0.06
			-3.00			1" Ice	8.1373	4.8905	0.11
						2" Ice	9.0403	5.7756	0.22
BXA-70063-6BF-EDIN-0	C	From Leg	4.0000	0.00	103.0000	No Ice	7.2623	4.0350	0.02
			0.00			1/2" Ice	7.6963	4.4590	0.06
			-3.00			1" Ice	8.1373	4.8905	0.11
						2" Ice	9.0403	5.7756	0.22
Platform Mount [LP 301-1_KCKR]	C	None		0.00	103.0000	No Ice	35.0300	35.0300	1.86
						1/2" Ice	44.4600	44.4600	2.52
						1" Ice	53.7200	53.7200	3.33
						2" Ice	72.2900	72.2900	5.42
(2) JAHH-65A-R3B w/ Mount Pipe	A	From Leg	4.0000	0.00	103.0000	No Ice	3.3500	2.6100	0.07
			0.00			1/2" Ice	3.6400	2.8900	0.13
			-3.00			1" Ice	3.9500	3.1800	0.19
						2" Ice	4.5900	3.7900	0.35
(2) JAHH-65A-R3B w/ Mount Pipe	B	From Leg	4.0000	0.00	103.0000	No Ice	3.3500	2.6100	0.07
			0.00			1/2" Ice	3.6400	2.8900	0.13
			-3.00			1" Ice	3.9500	3.1800	0.19
						2" Ice	4.5900	3.7900	0.35
(2) JAHH-65A-R3B w/ Mount Pipe	C	From Leg	4.0000	0.00	103.0000	No Ice	3.3500	2.6100	0.07
			0.00			1/2" Ice	3.6400	2.8900	0.13
			-3.00			1" Ice	3.9500	3.1800	0.19
						2" Ice	4.5900	3.7900	0.35
MT6407-77A w/ Mount Pipe	A	From Leg	4.0000	0.00	103.0000	No Ice	4.9069	2.6821	0.10
			0.00			1/2" Ice	5.2559	3.1450	0.14
			-3.00			1" Ice	5.6147	3.6241	0.18
						2" Ice	6.3615	4.6310	0.29
MT6407-77A w/ Mount Pipe	B	From Leg	4.0000	0.00	103.0000	No Ice	4.9069	2.6821	0.10
			0.00			1/2" Ice	5.2559	3.1450	0.14
			-3.00			1" Ice	5.6147	3.6241	0.18
						2" Ice	6.3615	4.6310	0.29
MT6407-77A w/ Mount Pipe	C	From Leg	4.0000	0.00	103.0000	No Ice	4.9069	2.6821	0.10
			0.00			1/2" Ice	5.2559	3.1450	0.14
			-3.00			1" Ice	5.6147	3.6241	0.18
						2" Ice	6.3615	4.6310	0.29
CBC78T-DS-43-2X	A	From Leg	4.0000	0.00	103.0000	No Ice	0.3680	0.5120	0.02
			0.00			1/2" Ice	0.4456	0.6046	0.03
			-3.00			1" Ice	0.5306	0.7046	0.04
						2" Ice	0.7228	0.9268	0.06
CBC78T-DS-43-2X	B	From Leg	4.0000	0.00	103.0000	No Ice	0.3680	0.5120	0.02
			0.00			1/2" Ice	0.4456	0.6046	0.03
			-3.00			1" Ice	0.5306	0.7046	0.04
						2" Ice	0.7228	0.9268	0.06
CBC78T-DS-43-2X	C	From Leg	4.0000	0.00	103.0000	No Ice	0.3680	0.5120	0.02
			0.00			1/2" Ice	0.4456	0.6046	0.03
			-3.00			1" Ice	0.5306	0.7046	0.04
						2" Ice	0.7228	0.9268	0.06
RFV01U-D1A	A	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.2500	0.08
			0.00			1/2" Ice	2.0454	1.3926	0.10
			-3.00			1" Ice	2.2231	1.5426	0.12
						2" Ice	2.6009	1.8648	0.18
RFV01U-D1A	B	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.2500	0.08
			0.00			1/2" Ice	2.0454	1.3926	0.10
			-3.00			1" Ice	2.2231	1.5426	0.12
						2" Ice	2.6009	1.8648	0.18
RFV01U-D1A	C	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.2500	0.08
			0.00			1/2" Ice	2.0454	1.3926	0.10
			-3.00			1" Ice	2.2231	1.5426	0.12
						2" Ice	2.6009	1.8648	0.18
RFV01U-D2A	A	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.0125	0.07
			0.00			1/2" Ice	2.0454	1.1445	0.09
			-3.00			1" Ice	2.2231	1.2840	0.11
						2" Ice	2.6009	1.5851	0.15
RFV01U-D2A	B	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.0125	0.07
			0.00			1/2" Ice	2.0454	1.1445	0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
			-3.00			1" Ice	2.2231	1.2840	0.11
						2" Ice	2.6009	1.5851	0.15
RFV01U-D2A	C	From Leg	4.0000	0.00	103.0000	No Ice	1.8750	1.0125	0.07
			0.00			1/2" Ice	2.0454	1.1445	0.09
			-3.00			1" Ice	2.2231	1.2840	0.11
						2" Ice	2.6009	1.5851	0.15
RVZDC-6627-PF-48	A	From Leg	4.0000	0.00	103.0000	No Ice	3.7922	2.5137	0.03
			0.00			1/2" Ice	4.0441	2.7270	0.06
			-3.00			1" Ice	4.3033	2.9472	0.10
						2" Ice	4.8439	3.4168	0.18
**********									
**********									
Bridge Stiffener (96" x 16"	A	From Leg	0.0000	30.00	30.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
Bridge Stiffener (96" x 16"	B	From Leg	0.0000	30.00	30.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
Bridge Stiffener (96" x 16"	C	From Leg	0.0000	30.00	30.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
Bridge Stiffener (96" x 16"	A	From Leg	0.0000	30.00	60.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
Bridge Stiffener (96" x 16"	B	From Leg	0.0000	30.00	60.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
Bridge Stiffener (96" x 16"	C	From Leg	0.0000	30.00	60.0000	No Ice	14.4593	1.6667	0.51
x 1.25")			0.00			1/2" Ice	15.0669	2.5733	0.57
			0.00			1" Ice	15.6815	3.4923	0.63
						2" Ice	16.9317	5.3673	0.79
**									
Bridge Stiffener (58.75" x	A	From Leg	0.0000	60.00	30.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
Bridge Stiffener (58.75" x	B	From Leg	0.0000	60.00	30.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
Bridge Stiffener (58.75" x	C	From Leg	0.0000	60.00	30.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
Bridge Stiffener (58.75" x	A	From Leg	0.0000	60.00	60.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
Bridge Stiffener (58.75" x	B	From Leg	0.0000	60.00	60.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
Bridge Stiffener (58.75" x	C	From Leg	0.0000	60.00	60.0000	No Ice	7.4236	1.0200	0.22
14.3125" x 1.25")			0.00			1/2" Ice	7.8196	1.5817	0.25
			0.00			1" Ice	8.2226	2.0932	0.29
						2" Ice	9.0496	2.8220	0.38
**									
Bridge Stiffener (93" x 16"	A	From Leg	0.0000	-30.00	30.0000	No Ice	13.9213	1.6146	0.35
x 1.25")			0.00			1/2" Ice	14.5126	2.4934	0.41
			0.00			1" Ice	15.1108	3.3846	0.47

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Bridge Stiffener (93" x 16" x 1.25")	B	From Leg	0.0000 0.00 0.00	-30.00	30.0000	2" Ice No Ice 1/2" Ice 1" Ice 2" Ice	16.3283 13.9213 14.5126 15.1108 16.3283	5.1543 1.6146 2.4934 3.3846 5.1543	0.62 0.35 0.41 0.47 0.62
Bridge Stiffener (93" x 16" x 1.25")	C	From Leg	0.0000 0.00 0.00	-30.00	30.0000	No Ice 1/2" Ice 1" Ice 2" Ice	13.9213 14.5126 15.1108 16.3283	1.6146 2.4934 3.3846 5.1543	0.35 0.41 0.47 0.62

**

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft^2	Face	A_F ft^2	A_R ft^2	A_{leg} ft^2	Leg % %	C_AA_A In Face ft^2	C_AA_A Out Face ft^2
L1 120.0000-115.0000	117.5000	1.309	47.17	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	1.597	0.000
L2 115.0000-110.0000	112.5000	1.297	46.74	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	3.992	0.000
L3 110.0000-105.0000	107.5000	1.285	46.29	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	3.992	0.000
L4 105.0000-100.0000	102.5000	1.272	45.83	10.000	A	0.000	10.000	10.000	100.00	0.270	0.000
					B	0.000	10.000		100.00	0.270	0.000
					C	0.000	10.000		100.00	4.262	0.000
L5 100.0000-98.5000	99.2500	1.264	45.52	3.000	A	0.000	3.000	3.000	100.00	0.964	0.000
					B	0.000	3.000		100.00	0.964	0.000
					C	0.000	3.000		100.00	2.162	0.000
L6 98.5000-98.2500	98.3750	1.261	45.44	0.500	A	0.000	0.500	0.500	100.00	0.161	0.000
					B	0.000	0.500		100.00	0.161	0.000
					C	0.000	0.500		100.00	0.360	0.000
L7 98.2500-93.2500	95.7500	1.254	45.18	10.000	A	0.000	10.000	10.000	100.00	3.214	0.000
					B	0.000	10.000		100.00	3.214	0.000
					C	0.000	10.000		100.00	7.206	0.000
L8 93.2500-90.0000	91.6250	1.243	44.76	6.500	A	0.000	6.500	6.500	100.00	2.015	0.000
					B	0.000	6.500		100.00	2.015	0.000
					C	0.000	6.500		100.00	4.610	0.000
L9 90.0000-89.7500	89.8750	1.237	44.58	0.500	A	0.000	0.500	0.500	100.00	0.154	0.000
					B	0.000	0.500		100.00	0.154	0.000
					C	0.000	0.500		100.00	0.353	0.000
L10 89.7500-84.7500	87.2500	1.23	44.30	10.000	A	0.000	10.000	10.000	100.00	1.489	0.000
					B	0.000	10.000		100.00	1.489	0.000
					C	0.000	10.000		100.00	5.481	0.000
L11 84.7500-79.7500	82.2500	1.215	43.76	10.000	A	0.000	10.000	10.000	100.00	0.333	0.000
					B	0.000	10.000		100.00	0.333	0.000
					C	0.000	10.000		100.00	4.325	0.000
L12 79.7500-79.0000	79.3750	1.206	43.43	1.500	A	0.000	1.500	1.500	100.00	0.500	0.000
					B	0.000	1.500		100.00	0.500	0.000
					C	0.000	1.500		100.00	1.099	0.000
L13 79.0000-78.7500	78.8750	1.204	43.37	0.500	A	0.000	0.500	0.500	100.00	0.167	0.000
					B	0.000	0.500		100.00	0.167	0.000
					C	0.000	0.500		100.00	0.366	0.000
L14 78.7500-75.1700	76.9600	1.198	43.15	7.160	A	0.000	7.160	7.160	100.00	3.089	0.000
					B	0.000	7.160		100.00	3.089	0.000
					C	0.000	7.160		100.00	5.271	0.000
L15 75.1700-74.9200	75.0450	1.191	42.92	0.500	A	0.000	0.500	0.500	100.00	0.336	0.000
					B	0.000	0.500		100.00	0.336	0.000

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
					C	0.000	0.500		100.00	0.535	0.000
L16 74.9200-69.9200	72.4200	1.182	42.60	10.000	A	0.000	10.000	10.000	100.00	6.717	0.000
					B	0.000	10.000		100.00	6.717	0.000
					C	0.000	10.000		100.00	10.709	0.000
L17 69.9200-64.9200	67.4200	1.165	41.96	10.000	A	0.000	10.000	10.000	100.00	6.717	0.000
					B	0.000	10.000		100.00	6.717	0.000
					C	0.000	10.000		100.00	10.709	0.000
L18 64.9200-60.0000	62.4600	1.146	41.29	9.840	A	0.000	9.840	9.840	100.00	6.443	0.000
					B	0.000	9.840		100.00	6.443	0.000
					C	0.000	9.840		100.00	10.371	0.000
L19 60.0000-59.7500	59.8750	1.136	40.93	0.625	A	0.000	0.625	0.625	100.00	0.199	0.000
					B	0.000	0.625		100.00	0.199	0.000
					C	0.000	0.625		100.00	0.399	0.000
L20 59.7500-54.7500	57.2500	1.125	40.54	12.500	A	0.000	12.500	12.500	100.00	3.983	0.000
					B	0.000	12.500		100.00	3.983	0.000
					C	0.000	12.500		100.00	7.975	0.000
L21 54.7500-49.7500	52.2500	1.104	39.77	12.500	A	0.000	12.500	12.500	100.00	4.317	0.000
					B	0.000	12.500		100.00	4.317	0.000
					C	0.000	12.500		100.00	8.309	0.000
L22 49.7500-47.8300	48.7900	1.088	39.20	4.800	A	0.000	4.800	4.800	100.00	2.810	0.000
					B	0.000	4.800		100.00	2.810	0.000
					C	0.000	4.800		100.00	4.343	0.000
L23 47.8300-47.5800	47.7050	1.083	39.02	0.625	A	0.000	0.625	0.625	100.00	0.366	0.000
					B	0.000	0.625		100.00	0.366	0.000
					C	0.000	0.625		100.00	0.565	0.000
L24 47.5800-43.0000	45.2900	1.071	38.59	11.450	A	0.000	11.450	11.450	100.00	7.244	0.000
					B	0.000	11.450		100.00	7.244	0.000
					C	0.000	11.450		100.00	10.900	0.000
L25 43.0000-42.7500	42.8750	1.059	38.15	0.625	A	0.000	0.625	0.625	100.00	0.501	0.000
					B	0.000	0.625		100.00	0.501	0.000
					C	0.000	0.625		100.00	0.701	0.000
L26 42.7500-37.7500	40.2500	1.045	37.65	12.500	A	0.000	12.500	12.500	100.00	10.025	0.000
					B	0.000	12.500		100.00	10.025	0.000
					C	0.000	12.500		100.00	14.017	0.000
L27 37.7500-34.5000	36.1250	1.021	36.80	8.125	A	0.000	8.125	8.125	100.00	6.516	0.000
					B	0.000	8.125		100.00	6.516	0.000
					C	0.000	8.125		100.00	9.111	0.000
L28 34.5000-34.2500	34.3750	1.011	36.42	0.625	A	0.000	0.625	0.625	100.00	0.501	0.000
					B	0.000	0.625		100.00	0.501	0.000
					C	0.000	0.625		100.00	0.701	0.000
L29 34.2500-30.0000	32.1250	0.997	35.90	10.625	A	0.000	10.625	10.625	100.00	8.355	0.000
					B	0.000	10.625		100.00	8.355	0.000
					C	0.000	10.625		100.00	11.748	0.000
L30 30.0000-29.7500	29.8750	0.981	35.36	0.750	A	0.000	0.750	0.750	100.00	0.222	0.000
					B	0.000	0.750		100.00	0.222	0.000
					C	0.000	0.750		100.00	0.422	0.000
L31 29.7500-25.5800	27.6650	0.966	34.79	12.510	A	0.000	12.510	12.510	100.00	4.651	0.000
					B	0.000	12.510		100.00	4.651	0.000
					C	0.000	12.510		100.00	7.980	0.000
L32 25.5800-25.3300	25.4550	0.949	34.18	0.750	A	0.000	0.750	0.750	100.00	0.389	0.000
					B	0.000	0.750		100.00	0.389	0.000
					C	0.000	0.750		100.00	0.588	0.000
L33 25.3300-20.7500	23.0400	0.929	33.47	13.740	A	0.000	13.740	13.740	100.00	7.851	0.000
					B	0.000	13.740		100.00	7.851	0.000
					C	0.000	13.740		100.00	11.508	0.000
L34 20.7500-20.5000	20.6250	0.908	32.70	0.750	A	0.000	0.750	0.750	100.00	0.535	0.000
					B	0.000	0.750		100.00	0.535	0.000
					C	0.000	0.750		100.00	0.734	0.000
L35 20.5000-17.5800	19.0400	0.893	32.16	8.760	A	0.000	8.760	8.760	100.00	6.244	0.000
					B	0.000	8.760		100.00	6.244	0.000
					C	0.000	8.760		100.00	8.575	0.000
L36 17.5800-17.3300	17.4550	0.876	31.57	0.750	A	0.000	0.750	0.750	100.00	0.535	0.000
					B	0.000	0.750		100.00	0.535	0.000
					C	0.000	0.750		100.00	0.734	0.000
L37 17.3300-13.5000	15.4150	0.854	30.76	11.490	A	0.000	11.490	11.490	100.00	6.930	0.000
					B	0.000	11.490		100.00	6.930	0.000
					C	0.000	11.490		100.00	8.914	0.000
L38 13.5000-	13.3750	0.85	30.62	0.750	A	0.000	0.750	0.750	100.00	0.563	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
13.2500					B	0.000	0.750		100.00	0.563	0.000
					C	0.000	0.750		100.00	0.568	0.000
L39 13.2500-8.2500	10.7500	0.85	30.62	15.000	A	0.000	15.000	15.000	100.00	11.261	0.000
					B	0.000	15.000		100.00	8.792	0.000
					C	0.000	15.000		100.00	11.350	0.000
L40 8.2500-6.2500	7.2500	0.85	30.62	6.000	A	0.000	6.000	6.000	100.00	4.505	0.000
					B	0.000	6.000		100.00	4.292	0.000
					C	0.000	6.000		100.00	4.540	0.000
L41 6.2500-6.0000	6.1250	0.85	30.62	0.750	A	0.000	0.750	0.750	100.00	0.563	0.000
					B	0.000	0.750		100.00	0.536	0.000
					C	0.000	0.750		100.00	0.568	0.000
L42 6.0000-1.0000	3.5000	0.85	30.62	15.000	A	0.000	15.000	15.000	100.00	8.237	0.000
					B	0.000	15.000		100.00	7.705	0.000
					C	0.000	15.000		100.00	11.350	0.000
L43 1.0000-0.0000	0.5000	0.85	30.62	3.000	A	0.000	3.000	3.000	100.00	1.472	0.000
					B	0.000	3.000		100.00	1.365	0.000
					C	0.000	3.000		100.00	2.270	0.000

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 120.0000-115.0000	117.5000	1.309	7.55	1.4476	11.206	A	0.000	11.206	11.206	100.00	0.000	0.000
						B	0.000	11.206		100.00	0.000	0.000
						C	0.000	11.206		100.00	2.720	0.000
L2 115.0000-110.0000	112.5000	1.297	7.48	1.4414	11.201	A	0.000	11.201	11.201	100.00	0.000	0.000
						B	0.000	11.201		100.00	0.000	0.000
						C	0.000	11.201		100.00	6.792	0.000
L3 110.0000-105.0000	107.5000	1.285	7.41	1.4348	11.196	A	0.000	11.196	11.196	100.00	0.000	0.000
						B	0.000	11.196		100.00	0.000	0.000
						C	0.000	11.196		100.00	6.784	0.000
L4 105.0000-100.0000	102.5000	1.272	7.33	1.4280	11.190	A	0.000	11.190	11.190	100.00	0.333	0.000
						B	0.000	11.190		100.00	0.333	0.000
						C	0.000	11.190		100.00	7.108	0.000
L5 100.0000-98.5000	99.2500	1.264	7.28	1.4234	3.356	A	0.000	3.356	3.356	100.00	1.187	0.000
						B	0.000	3.356		100.00	1.187	0.000
						C	0.000	3.356		100.00	3.218	0.000
L6 98.5000-98.2500	98.3750	1.261	7.27	1.4222	0.559	A	0.000	0.559	0.559	100.00	0.198	0.000
						B	0.000	0.559		100.00	0.198	0.000
						C	0.000	0.559		100.00	0.536	0.000
L7 98.2500-93.2500	95.7500	1.254	7.23	1.4183	11.182	A	0.000	11.182	11.182	100.00	3.955	0.000
						B	0.000	11.182		100.00	3.955	0.000
						C	0.000	11.182		100.00	10.718	0.000
L8 93.2500-90.0000	91.6250	1.243	7.16	1.4121	7.265	A	0.000	7.265	7.265	100.00	2.536	0.000
						B	0.000	7.265		100.00	2.536	0.000
						C	0.000	7.265		100.00	6.927	0.000
L9 90.0000-89.7500	89.8750	1.237	7.13	1.4094	0.559	A	0.000	0.559	0.559	100.00	0.194	0.000
						B	0.000	0.559		100.00	0.194	0.000
						C	0.000	0.559		100.00	0.532	0.000
L10 89.7500-84.7500	87.2500	1.23	7.09	1.4052	11.171	A	0.000	11.171	11.171	100.00	1.881	0.000
						B	0.000	11.171		100.00	1.881	0.000
						C	0.000	11.171		100.00	8.628	0.000
L11 84.7500-79.7500	82.2500	1.215	7.00	1.3969	11.164	A	0.000	11.164	11.164	100.00	0.473	0.000
						B	0.000	11.164		100.00	0.473	0.000
						C	0.000	11.164		100.00	7.209	0.000
L12 79.7500-79.0000	79.3750	1.206	6.95	1.3920	1.674	A	0.000	1.674	1.674	100.00	0.709	0.000
						B	0.000	1.674		100.00	0.709	0.000
						C	0.000	1.674		100.00	1.718	0.000
L13 79.0000-78.7500	78.8750	1.204	6.94	1.3911	0.558	A	0.000	0.558	0.558	100.00	0.236	0.000
						B	0.000	0.558		100.00	0.236	0.000
						C	0.000	0.558		100.00	0.573	0.000
L14 78.7500-	76.9600	1.198	6.90	1.3877	7.988	A	0.000	7.988	7.988	100.00	4.371	0.000

Section Elevation	z	K_Z	q_z	t_Z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	in	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
75.1700						B	0.000	7.988		100.00	4.371	0.000
						C	0.000	7.988		100.00	8.231	0.000
L15 75.1700-74.9200	75.0450	1.191	6.87	1.3842	0.558	A	0.000	0.558	0.558	100.00	0.474	0.000
						B	0.000	0.558		100.00	0.474	0.000
						C	0.000	0.558		100.00	0.810	0.000
L16 74.9200-69.9200	72.4200	1.182	6.82	1.3793	11.149	A	0.000	11.149	11.149	100.00	9.475	0.000
						B	0.000	11.149		100.00	9.475	0.000
						C	0.000	11.149		100.00	16.189	0.000
L17 69.9200-64.9200	67.4200	1.165	6.71	1.3694	11.141	A	0.000	11.141	11.141	100.00	9.456	0.000
						B	0.000	11.141		100.00	9.456	0.000
						C	0.000	11.141		100.00	16.157	0.000
L18 64.9200-60.0000	62.4600	1.146	6.61	1.3590	10.954	A	0.000	10.954	10.954	100.00	9.049	0.000
						B	0.000	10.954		100.00	9.049	0.000
						C	0.000	10.954		100.00	15.631	0.000
L19 60.0000-59.7500	59.8750	1.136	6.55	1.3533	0.681	A	0.000	0.681	0.681	100.00	0.267	0.000
						B	0.000	0.681		100.00	0.267	0.000
						C	0.000	0.681		100.00	0.601	0.000
L20 59.7500-54.7500	57.2500	1.125	6.49	1.3472	13.623	A	0.000	13.623	13.623	100.00	5.331	0.000
						B	0.000	13.623		100.00	5.331	0.000
						C	0.000	13.623		100.00	12.005	0.000
L21 54.7500-49.7500	52.2500	1.104	6.36	1.3350	13.612	A	0.000	13.612	13.612	100.00	5.785	0.000
						B	0.000	13.612		100.00	5.785	0.000
						C	0.000	13.612		100.00	12.444	0.000
L22 49.7500-47.8300	48.7900	1.088	6.27	1.3258	5.224	A	0.000	5.224	5.224	100.00	3.828	0.000
						B	0.000	5.224		100.00	3.828	0.000
						C	0.000	5.224		100.00	6.380	0.000
L23 47.8300-47.5800	47.7050	1.083	6.24	1.3229	0.680	A	0.000	0.680	0.680	100.00	0.498	0.000
						B	0.000	0.680		100.00	0.498	0.000
						C	0.000	0.680		100.00	0.830	0.000
L24 47.5800-43.0000	45.2900	1.071	6.17	1.3160	12.455	A	0.000	12.455	12.455	100.00	9.918	0.000
						B	0.000	12.455		100.00	9.918	0.000
						C	0.000	12.455		100.00	15.996	0.000
L25 43.0000-42.7500	42.8750	1.059	6.10	1.3088	0.680	A	0.000	0.680	0.680	100.00	0.698	0.000
						B	0.000	0.680		100.00	0.698	0.000
						C	0.000	0.680		100.00	1.029	0.000
L26 42.7500-37.7500	40.2500	1.045	6.02	1.3006	13.584	A	0.000	13.584	13.584	100.00	13.927	0.000
						B	0.000	13.584		100.00	13.927	0.000
						C	0.000	13.584		100.00	20.542	0.000
L27 37.7500-34.5000	36.1250	1.021	5.89	1.2866	8.822	A	0.000	8.822	8.822	100.00	9.025	0.000
						B	0.000	8.822		100.00	9.025	0.000
						C	0.000	8.822		100.00	13.314	0.000
L28 34.5000-34.2500	34.3750	1.011	5.83	1.2802	0.678	A	0.000	0.678	0.678	100.00	0.693	0.000
						B	0.000	0.678		100.00	0.693	0.000
						C	0.000	0.678		100.00	1.023	0.000
L29 34.2500-30.0000	32.1250	0.997	5.74	1.2716	11.526	A	0.000	11.526	11.526	100.00	11.534	0.000
						B	0.000	11.526		100.00	11.534	0.000
						C	0.000	11.526		100.00	17.126	0.000
L30 30.0000-29.7500	29.8750	0.981	5.66	1.2624	0.803	A	0.000	0.803	0.803	100.00	0.285	0.000
						B	0.000	0.803		100.00	0.285	0.000
						C	0.000	0.803		100.00	0.614	0.000
L31 29.7500-25.5800	27.6650	0.966	5.57	1.2527	13.381	A	0.000	13.381	13.381	100.00	5.950	0.000
						B	0.000	13.381		100.00	5.950	0.000
						C	0.000	13.381		100.00	11.417	0.000
L32 25.5800-25.3300	25.4550	0.949	5.47	1.2423	0.802	A	0.000	0.802	0.802	100.00	0.495	0.000
						B	0.000	0.802		100.00	0.495	0.000
						C	0.000	0.802		100.00	0.822	0.000
L33 25.3300-20.7500	23.0400	0.929	5.36	1.2300	14.679	A	0.000	14.679	14.679	100.00	10.094	0.000
						B	0.000	14.679		100.00	10.094	0.000
						C	0.000	14.679		100.00	16.073	0.000
L34 20.7500-20.5000	20.6250	0.908	5.23	1.2165	0.801	A	0.000	0.801	0.801	100.00	0.700	0.000
						B	0.000	0.801		100.00	0.700	0.000
						C	0.000	0.801		100.00	1.026	0.000
L35 20.5000-17.5800	19.0400	0.893	5.15	1.2068	9.347	A	0.000	9.347	9.347	100.00	8.162	0.000
						B	0.000	9.347		100.00	8.162	0.000
						C	0.000	9.347		100.00	11.957	0.000
L36 17.5800-17.3300	17.4550	0.876	5.05	1.1963	0.800	A	0.000	0.800	0.800	100.00	0.697	0.000
						B	0.000	0.800		100.00	0.697	0.000
						C	0.000	0.800		100.00	1.022	0.000

Section Elevation ft	z ft	K_Z	q_z psf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L37 17.3300-13.5000	15.4150	0.854	4.92	1.1816	12.244	A	0.000	12.244	12.244	100.00	8.971	0.000
						B	0.000	12.244		100.00	8.971	0.000
						C	0.000	12.244		100.00	12.677	0.000
L38 13.5000-13.2500	13.3750	0.85	4.90	1.1649	0.799	A	0.000	0.799	0.799	100.00	0.711	0.000
						B	0.000	0.799		100.00	0.711	0.000
						C	0.000	0.799		100.00	0.807	0.000
L39 13.2500-8.2500	10.7500	0.85	4.90	1.1397	15.950	A	0.000	15.950	15.950	100.00	14.155	0.000
						B	0.000	15.950		100.00	11.033	0.000
						C	0.000	15.950		100.00	16.052	0.000
L40 8.2500-6.2500	7.2500	0.85	4.90	1.0957	6.365	A	0.000	6.365	6.365	100.00	5.618	0.000
						B	0.000	6.365		100.00	5.208	0.000
						C	0.000	6.365		100.00	6.364	0.000
L41 6.2500-6.0000	6.1250	0.85	4.90	1.0774	0.795	A	0.000	0.795	0.795	100.00	0.700	0.000
						B	0.000	0.795		100.00	0.649	0.000
						C	0.000	0.795		100.00	0.792	0.000
L42 6.0000-1.0000	3.5000	0.85	4.90	1.0187	15.849	A	0.000	15.849	15.849	100.00	10.398	0.000
						B	0.000	15.849		100.00	9.409	0.000
						C	0.000	15.849		100.00	15.659	0.000
L43 1.0000-0.0000	0.5000	0.85	4.90	0.8386	3.140	A	0.000	3.140	3.140	100.00	1.807	0.000
						B	0.000	3.140		100.00	1.626	0.000
						C	0.000	3.140		100.00	3.015	0.000

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 120.0000-115.0000	117.5000	1.309	10.24	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	1.597	0.000
L2 115.0000-110.0000	112.5000	1.297	10.14	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	3.992	0.000
L3 110.0000-105.0000	107.5000	1.285	10.05	10.000	A	0.000	10.000	10.000	100.00	0.000	0.000
					B	0.000	10.000		100.00	0.000	0.000
					C	0.000	10.000		100.00	3.992	0.000
L4 105.0000-100.0000	102.5000	1.272	9.95	10.000	A	0.000	10.000	10.000	100.00	0.270	0.000
					B	0.000	10.000		100.00	0.270	0.000
					C	0.000	10.000		100.00	4.262	0.000
L5 100.0000-98.5000	99.2500	1.264	9.88	3.000	A	0.000	3.000	3.000	100.00	0.964	0.000
					B	0.000	3.000		100.00	0.964	0.000
					C	0.000	3.000		100.00	2.162	0.000
L6 98.5000-98.2500	98.3750	1.261	9.86	0.500	A	0.000	0.500	0.500	100.00	0.161	0.000
					B	0.000	0.500		100.00	0.161	0.000
					C	0.000	0.500		100.00	0.360	0.000
L7 98.2500-93.2500	95.7500	1.254	9.80	10.000	A	0.000	10.000	10.000	100.00	3.214	0.000
					B	0.000	10.000		100.00	3.214	0.000
					C	0.000	10.000		100.00	7.206	0.000
L8 93.2500-90.0000	91.6250	1.243	9.71	6.500	A	0.000	6.500	6.500	100.00	2.015	0.000
					B	0.000	6.500		100.00	2.015	0.000
					C	0.000	6.500		100.00	4.610	0.000
L9 90.0000-89.7500	89.8750	1.237	9.67	0.500	A	0.000	0.500	0.500	100.00	0.154	0.000
					B	0.000	0.500		100.00	0.154	0.000
					C	0.000	0.500		100.00	0.353	0.000
L10 89.7500-84.7500	87.2500	1.23	9.61	10.000	A	0.000	10.000	10.000	100.00	1.489	0.000
					B	0.000	10.000		100.00	1.489	0.000
					C	0.000	10.000		100.00	5.481	0.000
L11 84.7500-79.7500	82.2500	1.215	9.50	10.000	A	0.000	10.000	10.000	100.00	0.333	0.000
					B	0.000	10.000		100.00	0.333	0.000
					C	0.000	10.000		100.00	4.325	0.000
L12 79.7500-79.0000	79.3750	1.206	9.42	1.500	A	0.000	1.500	1.500	100.00	0.500	0.000
					B	0.000	1.500		100.00	0.500	0.000
					C	0.000	1.500		100.00	1.099	0.000

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		psf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
L13 79.0000-78.7500	78.8750	1.204	9.41	0.500	A	0.000	0.500	0.500	100.00	0.167	0.000
					B	0.000	0.500		100.00	0.167	0.000
					C	0.000	0.500		100.00	0.366	0.000
L14 78.7500-75.1700	76.9600	1.198	9.36	7.160	A	0.000	7.160	7.160	100.00	3.089	0.000
					B	0.000	7.160		100.00	3.089	0.000
					C	0.000	7.160		100.00	5.271	0.000
L15 75.1700-74.9200	75.0450	1.191	9.31	0.500	A	0.000	0.500	0.500	100.00	0.336	0.000
					B	0.000	0.500		100.00	0.336	0.000
					C	0.000	0.500		100.00	0.535	0.000
L16 74.9200-69.9200	72.4200	1.182	9.24	10.000	A	0.000	10.000	10.000	100.00	6.717	0.000
					B	0.000	10.000		100.00	6.717	0.000
					C	0.000	10.000		100.00	10.709	0.000
L17 69.9200-64.9200	67.4200	1.165	9.11	10.000	A	0.000	10.000	10.000	100.00	6.717	0.000
					B	0.000	10.000		100.00	6.717	0.000
					C	0.000	10.000		100.00	10.709	0.000
L18 64.9200-60.0000	62.4600	1.146	8.96	9.840	A	0.000	9.840	9.840	100.00	6.443	0.000
					B	0.000	9.840		100.00	6.443	0.000
					C	0.000	9.840		100.00	10.371	0.000
L19 60.0000-59.7500	59.8750	1.136	8.88	0.625	A	0.000	0.625	0.625	100.00	0.199	0.000
					B	0.000	0.625		100.00	0.199	0.000
					C	0.000	0.625		100.00	0.399	0.000
L20 59.7500-54.7500	57.2500	1.125	8.80	12.500	A	0.000	12.500	12.500	100.00	3.983	0.000
					B	0.000	12.500		100.00	3.983	0.000
					C	0.000	12.500		100.00	7.975	0.000
L21 54.7500-49.7500	52.2500	1.104	8.63	12.500	A	0.000	12.500	12.500	100.00	4.317	0.000
					B	0.000	12.500		100.00	4.317	0.000
					C	0.000	12.500		100.00	8.309	0.000
L22 49.7500-47.8300	48.7900	1.088	8.51	4.800	A	0.000	4.800	4.800	100.00	2.810	0.000
					B	0.000	4.800		100.00	2.810	0.000
					C	0.000	4.800		100.00	4.343	0.000
L23 47.8300-47.5800	47.7050	1.083	8.47	0.625	A	0.000	0.625	0.625	100.00	0.366	0.000
					B	0.000	0.625		100.00	0.366	0.000
					C	0.000	0.625		100.00	0.565	0.000
L24 47.5800-43.0000	45.2900	1.071	8.37	11.450	A	0.000	11.450	11.450	100.00	7.244	0.000
					B	0.000	11.450		100.00	7.244	0.000
					C	0.000	11.450		100.00	10.900	0.000
L25 43.0000-42.7500	42.8750	1.059	8.28	0.625	A	0.000	0.625	0.625	100.00	0.501	0.000
					B	0.000	0.625		100.00	0.501	0.000
					C	0.000	0.625		100.00	0.701	0.000
L26 42.7500-37.7500	40.2500	1.045	8.17	12.500	A	0.000	12.500	12.500	100.00	10.025	0.000
					B	0.000	12.500		100.00	10.025	0.000
					C	0.000	12.500		100.00	14.017	0.000
L27 37.7500-34.5000	36.1250	1.021	7.99	8.125	A	0.000	8.125	8.125	100.00	6.516	0.000
					B	0.000	8.125		100.00	6.516	0.000
					C	0.000	8.125		100.00	9.111	0.000
L28 34.5000-34.2500	34.3750	1.011	7.90	0.625	A	0.000	0.625	0.625	100.00	0.501	0.000
					B	0.000	0.625		100.00	0.501	0.000
					C	0.000	0.625		100.00	0.701	0.000
L29 34.2500-30.0000	32.1250	0.997	7.79	10.625	A	0.000	10.625	10.625	100.00	8.355	0.000
					B	0.000	10.625		100.00	8.355	0.000
					C	0.000	10.625		100.00	11.748	0.000
L30 30.0000-29.7500	29.8750	0.981	7.67	0.750	A	0.000	0.750	0.750	100.00	0.222	0.000
					B	0.000	0.750		100.00	0.222	0.000
					C	0.000	0.750		100.00	0.422	0.000
L31 29.7500-25.5800	27.6650	0.966	7.55	12.510	A	0.000	12.510	12.510	100.00	4.651	0.000
					B	0.000	12.510		100.00	4.651	0.000
					C	0.000	12.510		100.00	7.980	0.000
L32 25.5800-25.3300	25.4550	0.949	7.42	0.750	A	0.000	0.750	0.750	100.00	0.389	0.000
					B	0.000	0.750		100.00	0.389	0.000
					C	0.000	0.750		100.00	0.588	0.000
L33 25.3300-20.7500	23.0400	0.929	7.26	13.740	A	0.000	13.740	13.740	100.00	7.851	0.000
					B	0.000	13.740		100.00	7.851	0.000
					C	0.000	13.740		100.00	11.508	0.000
L34 20.7500-20.5000	20.6250	0.908	7.10	0.750	A	0.000	0.750	0.750	100.00	0.535	0.000
					B	0.000	0.750		100.00	0.535	0.000
					C	0.000	0.750		100.00	0.734	0.000
L35 20.5000-17.5800	19.0400	0.893	6.98	8.760	A	0.000	8.760	8.760	100.00	6.244	0.000
					B	0.000	8.760		100.00	6.244	0.000

Section Elevation ft	z ft	K_Z	q_z psf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
					C	0.000	8.760		100.00	8.575	0.000
L36 17.5800-17.3300	17.4550	0.876	6.85	0.750	A	0.000	0.750	0.750	100.00	0.535	0.000
					B	0.000	0.750		100.00	0.535	0.000
					C	0.000	0.750		100.00	0.734	0.000
L37 17.3300-13.5000	15.4150	0.854	6.67	11.490	A	0.000	11.490	11.490	100.00	6.930	0.000
					B	0.000	11.490		100.00	6.930	0.000
					C	0.000	11.490		100.00	8.914	0.000
L38 13.5000-13.2500	13.3750	0.85	6.64	0.750	A	0.000	0.750	0.750	100.00	0.563	0.000
					B	0.000	0.750		100.00	0.563	0.000
					C	0.000	0.750		100.00	0.568	0.000
L39 13.2500-8.2500	10.7500	0.85	6.64	15.000	A	0.000	15.000	15.000	100.00	11.261	0.000
					B	0.000	15.000		100.00	8.792	0.000
					C	0.000	15.000		100.00	11.350	0.000
L40 8.2500-6.2500	7.2500	0.85	6.64	6.000	A	0.000	6.000	6.000	100.00	4.505	0.000
					B	0.000	6.000		100.00	4.292	0.000
					C	0.000	6.000		100.00	4.540	0.000
L41 6.2500-6.0000	6.1250	0.85	6.64	0.750	A	0.000	0.750	0.750	100.00	0.563	0.000
					B	0.000	0.750		100.00	0.536	0.000
					C	0.000	0.750		100.00	0.568	0.000
L42 6.0000-1.0000	3.5000	0.85	6.64	15.000	A	0.000	15.000	15.000	100.00	8.237	0.000
					B	0.000	15.000		100.00	7.705	0.000
					C	0.000	15.000		100.00	11.350	0.000
L43 1.0000-0.0000	0.5000	0.85	6.64	3.000	A	0.000	3.000	3.000	100.00	1.472	0.000
					B	0.000	3.000		100.00	1.365	0.000
					C	0.000	3.000		100.00	2.270	0.000

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	120 - 115	Pole	Max Tension	3	0.00	0.00	-0.00
			Max. Compression	26	-8.34	-0.06	-0.09
			Max. Mx	8	-3.55	-21.12	-0.04
			Max. My	14	-3.55	-0.02	-21.14
			Max. Vy	20	-5.33	21.07	-0.04
			Max. Vx	2	-5.34	-0.02	21.07
			Max. Torque	4			-0.04
L2	115 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-9.07	-0.06	-0.23
			Max. Mx	8	-3.97	-48.61	-0.10
			Max. My	14	-3.97	-0.02	-48.69
			Max. Vy	20	-5.67	48.57	-0.10
			Max. Vx	2	-5.68	-0.02	48.55
			Max. Torque	4			-0.04
L3	110 - 105	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-9.81	-0.06	-0.37
			Max. Mx	8	-4.40	-77.77	-0.17
			Max. My	14	-4.40	-0.02	-77.90
			Max. Vy	20	-6.00	77.72	-0.17
			Max. Vx	2	-6.01	-0.02	77.69
			Max. Torque	4			-0.04
L4	105 - 100	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.26	-0.06	0.19
			Max. Mx	8	-8.46	-114.60	-0.09
			Max. My	2	-8.43	-0.02	114.71
			Max. Vy	20	-10.70	114.56	-0.09
			Max. Vx	2	-10.78	-0.02	114.71
			Max. Torque	20			-0.50
L5	100 - 98.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.55	-0.06	0.15
			Max. Mx	8	-8.62	-130.72	-0.10
			Max. My	2	-8.59	-0.02	130.99
			Max. Vy	20	-10.80	130.69	-0.11
			Max. Vx	2	-10.96	-0.02	130.99
			Max. Torque	20			-0.50
L6	98.5 - 98.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-19.61	-0.06	0.14
			Max. Mx	8	-8.66	-133.42	-0.11
			Max. My	2	-8.63	-0.03	133.74
			Max. Vy	20	-10.82	133.39	-0.11
			Max. Vx	2	-11.00	-0.03	133.74
			Max. Torque	20			-0.50
L7	98.25 - 93.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-20.75	-0.06	0.00
			Max. Mx	8	-9.40	-188.35	-0.17
			Max. My	2	-9.34	-0.03	190.20

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-11.16	188.32	-0.17
			Max. Vx	2	-11.62	-0.03	190.20
			Max. Torque	20			-0.50
L8	93.25 - 90	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.54	-0.06	-0.09
			Max. Mx	8	-9.86	-225.44	-0.21
			Max. My	2	-9.81	-0.03	228.63
			Max. Vy	20	-11.68	225.42	-0.21
			Max. Vx	2	-12.06	-0.03	228.63
			Max. Torque	20			-0.50
L9	90 - 89.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.60	-0.06	-0.09
			Max. Mx	8	-9.90	-228.36	-0.22
			Max. My	2	-9.84	-0.03	231.65
			Max. Vy	20	-11.72	228.34	-0.22
			Max. Vx	2	-12.10	-0.03	231.65
			Max. Torque	20			-0.46
L10	89.75 - 84.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-22.72	-0.06	-0.23
			Max. Mx	8	-10.65	-287.86	-0.28
			Max. My	2	-10.58	-0.03	293.58
			Max. Vy	20	-12.09	287.85	-0.28
			Max. Vx	2	-12.71	-0.03	293.58
			Max. Torque	20			-0.46
L11	84.75 - 79.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.75	-0.06	-0.37
			Max. Mx	8	-11.41	-348.98	-0.35
			Max. My	2	-11.35	-0.03	357.74
			Max. Vy	20	-12.37	348.98	-0.35
			Max. Vx	2	-12.99	-0.03	357.74
			Max. Torque	20			-0.46
L12	79.75 - 79	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.92	-0.06	-0.39
			Max. Mx	20	-11.53	358.29	-0.36
			Max. My	2	-11.47	-0.03	367.48
			Max. Vy	20	-12.46	358.29	-0.36
			Max. Vx	2	-13.03	-0.03	367.48
			Max. Torque	20			-0.46
L13	79 - 78.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.99	-0.06	-0.40
			Max. Mx	20	-11.58	361.41	-0.36
			Max. My	2	-11.52	-0.03	370.74
			Max. Vy	20	-12.49	361.41	-0.36
			Max. Vx	2	-13.05	-0.03	370.74
			Max. Torque	20			-0.46
L14	78.75 - 75.17	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-24.95	-0.05	-0.48
			Max. Mx	20	-12.24	406.83	-0.41
			Max. My	2	-12.19	-0.03	418.12
			Max. Vy	20	-12.90	406.83	-0.41
			Max. Vx	2	-13.46	-0.03	418.12
			Max. Torque	20			-0.46
L15	75.17 - 74.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-25.04	-0.05	-0.49
			Max. Mx	20	-12.30	410.06	-0.41
			Max. My	2	-12.25	-0.03	421.49
			Max. Vy	20	-12.93	410.06	-0.41
			Max. Vx	2	-13.49	-0.03	421.49
			Max. Torque	20			-0.46
L16	74.92 - 69.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-26.67	-0.05	-0.63
			Max. Mx	20	-13.41	476.20	-0.48
			Max. My	2	-13.36	-0.03	490.40
			Max. Vy	20	-13.54	476.20	-0.48

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-14.11	-0.03	490.40
			Max. Torque	20			-0.46
L17	69.92 - 64.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-28.29	-0.05	-0.76
			Max. Mx	20	-14.53	545.32	-0.55
			Max. My	2	-14.48	-0.03	562.34
			Max. Vy	20	-14.12	545.32	-0.55
			Max. Vx	2	-14.70	-0.03	562.34
			Max. Torque	20			-0.46
L18	64.92 - 60	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.88	-0.05	-0.89
			Max. Mx	20	-15.65	616.11	-0.61
			Max. My	2	-15.60	-0.03	635.97
			Max. Vy	20	-14.67	616.11	-0.61
			Max. Vx	2	-15.26	-0.03	635.97
			Max. Torque	20			-0.46
L19	60 - 59.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-33.43	-0.05	-0.90
			Max. Mx	20	-18.28	620.22	-0.61
			Max. My	2	-18.23	-0.03	640.23
			Max. Vy	20	-16.44	620.22	-0.61
			Max. Vx	2	-17.07	-0.03	640.23
			Max. Torque	20			-0.46
L20	59.75 - 54.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-35.03	-0.05	-1.07
			Max. Mx	20	-19.44	703.25	-0.70
			Max. My	2	-19.38	-0.03	727.07
			Max. Vy	20	-16.78	703.25	-0.70
			Max. Vx	2	-17.72	-0.03	727.07
			Max. Torque	20			-0.46
L21	54.75 - 49.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-36.63	-0.05	-1.23
			Max. Mx	20	-20.62	787.91	-0.78
			Max. My	2	-20.56	-0.03	817.18
			Max. Vy	20	-17.10	787.91	-0.78
			Max. Vx	2	-18.36	-0.03	817.18
			Max. Torque	20			-0.46
L22	49.75 - 47.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.28	-0.05	-1.29
			Max. Mx	20	-21.07	820.95	-0.81
			Max. My	2	-21.00	-0.03	852.62
			Max. Vy	20	-17.35	820.95	-0.81
			Max. Vx	2	-18.62	-0.03	852.62
			Max. Torque	20			-0.46
L23	47.83 - 47.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-37.38	-0.05	-1.30
			Max. Mx	20	-21.15	825.29	-0.82
			Max. My	2	-21.08	-0.03	857.27
			Max. Vy	20	-17.37	825.29	-0.82
			Max. Vx	2	-18.64	-0.03	857.27
			Max. Torque	20			-0.46
L24	47.58 - 43	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.12	-0.05	-1.45
			Max. Mx	20	-22.39	906.14	-0.89
			Max. My	2	-22.33	-0.03	943.89
			Max. Vy	20	-17.95	906.14	-0.89
			Max. Vx	2	-19.23	-0.03	943.89
			Max. Torque	20			-0.46
L25	43 - 42.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.23	-0.05	-1.46
			Max. Mx	20	-22.47	910.63	-0.89
			Max. My	2	-22.41	-0.03	948.70
			Max. Vy	20	-17.98	910.63	-0.89
			Max. Vx	2	-19.27	-0.03	948.70

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	20			-0.46
L26	42.75 - 37.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.46	-0.05	-1.62
			Max. Mx	20	-24.07	1002.11	-0.98
			Max. My	2	-24.02	-0.03	1046.52
			Max. Vy	20	-18.62	1002.11	-0.98
			Max. Vx	2	-19.91	-0.03	1046.52
			Max. Torque	20			-0.46
L27	37.75 - 34.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.90	-0.05	-1.73
			Max. Mx	20	-25.12	1063.26	-1.03
			Max. My	2	-25.07	-0.03	1111.80
			Max. Vy	20	-19.02	1063.26	-1.03
			Max. Vx	2	-20.31	-0.03	1111.80
			Max. Torque	20			-0.46
L28	34.5 - 34.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-43.00	-0.05	-1.73
			Max. Mx	20	-25.19	1068.02	-1.03
			Max. My	2	-25.14	-0.03	1116.88
			Max. Vy	20	-19.05	1068.02	-1.03
			Max. Vx	2	-20.34	-0.03	1116.88
			Max. Torque	20			-0.46
L29	34.25 - 30	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.66	-0.05	-1.87
			Max. Mx	20	-26.36	1149.94	-1.10
			Max. My	2	-26.32	-0.03	1204.24
			Max. Vy	20	-19.52	1149.94	-1.10
			Max. Vx	2	-20.82	-0.03	1204.24
			Max. Torque	20			-0.46
L30	30 - 29.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.89	-0.05	-1.88
			Max. Mx	20	-30.29	1155.42	-1.11
			Max. My	2	-30.24	-0.03	1210.05
			Max. Vy	20	-21.94	1155.42	-1.11
			Max. Vx	2	-23.27	-0.03	1210.05
			Max. Torque	20			-0.46
L31	29.75 - 25.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.47	-0.05	-2.04
			Max. Mx	20	-31.47	1247.98	-1.19
			Max. My	2	-31.43	-0.03	1308.04
			Max. Vy	20	-22.46	1247.98	-1.19
			Max. Vx	2	-23.79	-0.03	1308.04
			Max. Torque	20			-0.46
L32	25.58 - 25.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-51.58	-0.05	-2.05
			Max. Mx	20	-31.56	1253.59	-1.20
			Max. My	2	-31.52	-0.03	1313.99
			Max. Vy	20	-22.49	1253.59	-1.20
			Max. Vx	2	-23.83	-0.03	1313.99
			Max. Torque	20			-0.46
L33	25.33 - 20.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.56	-0.05	-2.22
			Max. Mx	20	-33.03	1357.87	-1.28
			Max. My	2	-33.00	-0.03	1424.29
			Max. Vy	20	-23.06	1357.87	-1.28
			Max. Vx	2	-24.40	-0.03	1424.29
			Max. Torque	20			-0.46
L34	20.75 - 20.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.68	-0.05	-2.23
			Max. Mx	20	-33.13	1363.63	-1.29
			Max. My	2	-33.10	-0.03	1430.39
			Max. Vy	20	-23.09	1363.63	-1.29

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-24.43	-0.03	1430.39
			Max. Torque	20			-0.46
L35	20.5 - 17.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55.14	-0.05	-2.33
			Max. Mx	20	-34.22	1431.55	-1.35
			Max. My	2	-34.19	-0.03	1502.17
			Max. Vy	20	-23.45	1431.55	-1.35
			Max. Vx	2	-24.80	-0.03	1502.17
			Max. Torque	20			-0.46
L36	17.58 - 17.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55.25	-0.05	-2.34
			Max. Mx	20	-34.31	1437.42	-1.35
			Max. My	2	-34.28	-0.03	1508.37
			Max. Vy	20	-23.47	1437.42	-1.35
			Max. Vx	2	-24.82	-0.03	1508.37
			Max. Torque	20			-0.46
L37	17.33 - 13.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-56.96	-0.05	-2.45
			Max. Mx	20	-35.61	1528.09	-1.42
			Max. My	2	-35.58	-0.03	1604.13
			Max. Vy	20	-23.89	1528.09	-1.42
			Max. Vx	2	-25.24	-0.03	1604.13
			Max. Torque	20			-0.46
L38	13.5 - 13.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-57.07	-0.05	-2.45
			Max. Mx	20	-35.70	1534.06	-1.43
			Max. My	2	-35.68	-0.03	1610.43
			Max. Vy	20	-23.91	1534.06	-1.43
			Max. Vx	2	-25.26	-0.03	1610.43
			Max. Torque	20			-0.46
L39	13.25 - 8.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.35	-0.04	-2.57
			Max. Mx	20	-37.46	1654.92	-1.53
			Max. My	2	-37.45	-0.03	1737.92
			Max. Vy	20	-24.45	1654.92	-1.53
			Max. Vx	2	-25.79	-0.03	1737.92
			Max. Torque	20			-0.46
L40	8.25 - 6.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.26	-0.04	-2.60
			Max. Mx	20	-38.17	1704.00	-1.56
			Max. My	2	-38.16	-0.03	1789.64
			Max. Vy	20	-24.65	1704.00	-1.56
			Max. Vx	2	-25.99	-0.03	1789.64
			Max. Torque	20			-0.46
L41	6.25 - 6	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.39	-0.04	-2.61
			Max. Mx	20	-38.28	1710.16	-1.57
			Max. My	2	-38.27	-0.03	1796.13
			Max. Vy	20	-24.67	1710.16	-1.57
			Max. Vx	2	-26.01	-0.03	1796.13
			Max. Torque	20			-0.46
L42	6 - 1	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-62.83	-0.04	-2.75
			Max. Mx	20	-40.31	1834.79	-1.66
			Max. My	2	-40.31	-0.03	1927.36
			Max. Vy	20	-25.19	1834.79	-1.66
			Max. Vx	2	-26.54	-0.03	1927.36
			Max. Torque	20			-0.46
L43	1 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-63.30	-0.04	-2.79
			Max. Mx	20	-40.72	1860.02	-1.68
			Max. My	2	-40.72	-0.03	1953.92
			Max. Vy	20	-25.29	1860.02	-1.68
			Max. Vx	2	-26.64	-0.03	1953.92

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	20			-0.46

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	63.30	-0.00	-0.00
	Max. H_x	21	30.55	25.28	0.00
	Max. H_z	2	40.73	-0.00	26.62
	Max. M_x	2	1953.92	-0.00	26.62
	Max. M_z	8	1846.16	-24.95	0.00
	Max. Torsion	8	0.46	-24.95	0.00
	Min. Vert	3	30.55	-0.00	26.62
	Min. H_x	9	30.55	-24.95	0.00
	Min. H_z	14	40.73	-0.00	-24.91
	Min. M_x	14	-1839.70	-0.00	-24.91
	Min. M_z	20	-1860.02	25.28	0.00
	Min. Torsion	20	-0.46	25.28	0.00

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	33.94	0.00	0.00	1.35	-0.02	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	40.73	0.00	-26.62	-1953.92	-0.03	0.03
0.9 Dead+1.0 Wind 0 deg - No Ice	30.55	0.00	-26.62	-1938.15	-0.02	0.03
1.2 Dead+1.0 Wind 30 deg - No Ice	40.73	12.50	-21.70	-1595.40	-919.45	-0.22
0.9 Dead+1.0 Wind 30 deg - No Ice	30.55	12.50	-21.70	-1582.56	-911.80	-0.22
1.2 Dead+1.0 Wind 60 deg - No Ice	40.73	21.45	-12.41	-916.93	-1586.52	-0.41
0.9 Dead+1.0 Wind 60 deg - No Ice	30.55	21.45	-12.41	-909.72	-1573.31	-0.41
1.2 Dead+1.0 Wind 90 deg - No Ice	40.73	24.95	-0.00	1.68	-1846.16	-0.46
0.9 Dead+1.0 Wind 90 deg - No Ice	30.55	24.95	-0.00	1.25	-1830.80	-0.45
1.2 Dead+1.0 Wind 120 deg - No Ice	40.73	23.16	13.40	985.87	-1700.09	-0.41
0.9 Dead+1.0 Wind 120 deg - No Ice	30.55	23.16	13.40	977.33	-1686.08	-0.40
1.2 Dead+1.0 Wind 150 deg - No Ice	40.73	12.54	21.76	1599.38	-919.80	-0.28
0.9 Dead+1.0 Wind 150 deg - No Ice	30.55	12.54	21.76	1585.68	-912.16	-0.28
1.2 Dead+1.0 Wind 180 deg - No Ice	40.73	0.00	24.91	1839.70	-0.03	-0.03
0.9 Dead+1.0 Wind 180 deg - No Ice	30.55	0.00	24.91	1823.89	-0.02	-0.03
1.2 Dead+1.0 Wind 210 deg - No Ice	40.73	-12.36	21.46	1586.70	912.42	0.23
0.9 Dead+1.0 Wind 210 deg - No Ice	30.55	-12.36	21.46	1573.06	904.83	0.23
1.2 Dead+1.0 Wind 240 deg - No Ice	40.73	-23.05	13.33	979.74	1689.42	0.42
0.9 Dead+1.0 Wind 240 deg - No Ice	30.55	-23.05	13.33	971.26	1675.51	0.42
1.2 Dead+1.0 Wind 270 deg - No Ice	40.73	-25.28	-0.00	1.68	1860.02	0.46
0.9 Dead+1.0 Wind 270 deg - No Ice	30.55	-25.28	-0.00	1.25	1844.61	0.45
1.2 Dead+1.0 Wind 300 deg - No Ice	40.73	-21.62	-12.51	-925.92	1602.03	0.40
0.9 Dead+1.0 Wind 300 deg - No Ice	30.55	-21.62	-12.51	-918.63	1588.70	0.40
1.2 Dead+1.0 Wind 330 deg - No Ice	40.73	-12.22	-21.22	-1568.53	903.88	0.27
0.9 Dead+1.0 Wind 330 deg - No Ice	30.55	-12.22	-21.22	-1555.86	896.35	0.27
1.2 Dead+1.0 Ice+1.0 Temp	63.30	0.00	0.00	2.79	-0.04	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	63.30	0.00	-5.77	-472.70	-0.05	0.01
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	63.30	2.86	-4.96	-407.20	-236.26	-0.05
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	63.30	4.96	-2.87	-233.95	-409.37	-0.11
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	63.30	5.75	-0.00	2.97	-475.13	-0.12
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	63.30	5.02	2.90	242.41	-413.75	-0.11
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	63.30	2.86	4.97	413.23	-236.32	-0.08
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	63.30	0.00	5.75	476.96	-0.05	-0.01
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	63.30	-2.86	4.97	412.92	236.05	0.05
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	63.30	-4.99	2.89	240.83	410.92	0.11
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	63.30	-5.75	-0.00	2.97	475.31	0.12
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	63.30	-4.98	-2.88	-235.46	411.88	0.11
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	63.30	-2.86	-4.96	-406.85	235.96	0.08
Dead+Wind 0 deg - Service	33.94	-0.00	-5.78	-420.88	-0.02	0.01

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
Dead+Wind 30 deg - Service	33.94	2.71	-4.71	-343.43	-198.53	-0.05
Dead+Wind 60 deg - Service	33.94	4.66	-2.69	-196.94	-342.56	-0.09
Dead+Wind 90 deg - Service	33.94	5.41	-0.00	1.39	-398.60	-0.10
Dead+Wind 120 deg - Service	33.94	5.03	2.91	213.91	-367.12	-0.09
Dead+Wind 150 deg - Service	33.94	2.72	4.72	346.35	-198.61	-0.06
Dead+Wind 180 deg - Service	33.94	-0.00	5.41	398.24	-0.02	-0.01
Dead+Wind 210 deg - Service	33.94	-2.68	4.66	343.61	196.98	0.05
Dead+Wind 240 deg - Service	33.94	-5.00	2.89	212.59	364.78	0.09
Dead+Wind 270 deg - Service	33.94	-5.48	-0.00	1.39	401.57	0.10
Dead+Wind 300 deg - Service	33.94	-4.69	-2.71	-198.88	345.88	0.09
Dead+Wind 330 deg - Service	33.94	-2.65	-4.60	-337.62	195.13	0.06

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-33.94	0.00	0.00	33.94	-0.00	0.000%
2	0.00	-40.73	-26.63	-0.00	40.73	26.62	0.003%
3	0.00	-30.55	-26.63	-0.00	30.55	26.62	0.006%
4	12.50	-40.73	-21.70	-12.50	40.73	21.70	0.000%
5	12.50	-30.55	-21.70	-12.50	30.55	21.70	0.000%
6	21.45	-40.73	-12.41	-21.45	40.73	12.41	0.000%
7	21.45	-30.55	-12.41	-21.45	30.55	12.41	0.000%
8	24.95	-40.73	0.00	-24.95	40.73	0.00	0.001%
9	24.95	-30.55	0.00	-24.95	30.55	0.00	0.001%
10	23.16	-40.73	13.40	-23.16	40.73	-13.40	0.000%
11	23.16	-30.55	13.40	-23.16	30.55	-13.40	0.000%
12	12.54	-40.73	21.76	-12.54	40.73	-21.76	0.000%
13	12.54	-30.55	21.76	-12.54	30.55	-21.76	0.000%
14	0.00	-40.73	24.92	-0.00	40.73	-24.91	0.003%
15	0.00	-30.55	24.92	-0.00	30.55	-24.91	0.006%
16	-12.36	-40.73	21.46	12.36	40.73	-21.46	0.000%
17	-12.36	-30.55	21.46	12.36	30.55	-21.46	0.000%
18	-23.05	-40.73	13.33	23.05	40.73	-13.33	0.000%
19	-23.05	-30.55	13.33	23.05	30.55	-13.33	0.000%
20	-25.28	-40.73	0.00	25.28	40.73	0.00	0.001%
21	-25.28	-30.55	0.00	25.28	30.55	0.00	0.001%
22	-21.62	-40.73	-12.51	21.62	40.73	12.51	0.000%
23	-21.62	-30.55	-12.51	21.62	30.55	12.51	0.000%
24	-12.22	-40.73	-21.22	12.22	40.73	21.22	0.000%
25	-12.22	-30.55	-21.22	12.22	30.55	21.22	0.000%
26	0.00	-63.30	0.00	-0.00	63.30	-0.00	0.000%
27	0.00	-63.30	-5.77	0.00	63.30	5.77	0.000%
28	2.86	-63.30	-4.96	-2.86	63.30	4.96	0.000%
29	4.96	-63.30	-2.87	-4.96	63.30	2.87	0.000%
30	5.75	-63.30	0.00	-5.75	63.30	0.00	0.000%
31	5.02	-63.30	2.90	-5.02	63.30	-2.90	0.000%
32	2.86	-63.30	4.97	-2.86	63.30	-4.97	0.000%
33	0.00	-63.30	5.75	0.00	63.30	-5.75	0.000%
34	-2.86	-63.30	4.97	2.86	63.30	-4.97	0.000%
35	-4.99	-63.30	2.89	4.99	63.30	-2.89	0.000%
36	-5.75	-63.30	0.00	5.75	63.30	0.00	0.000%
37	-4.98	-63.30	-2.88	4.98	63.30	2.88	0.000%
38	-2.86	-63.30	-4.96	2.86	63.30	4.96	0.000%
39	0.00	-33.94	-5.78	0.00	33.94	5.78	0.002%
40	2.71	-33.94	-4.71	-2.71	33.94	4.71	0.001%
41	4.66	-33.94	-2.69	-4.66	33.94	2.69	0.001%
42	5.41	-33.94	0.00	-5.41	33.94	0.00	0.002%
43	5.03	-33.94	2.91	-5.03	33.94	-2.91	0.001%
44	2.72	-33.94	4.72	-2.72	33.94	-4.72	0.001%
45	0.00	-33.94	5.41	0.00	33.94	-5.41	0.002%
46	-2.68	-33.94	4.66	2.68	33.94	-4.66	0.001%
47	-5.00	-33.94	2.89	5.00	33.94	-2.89	0.001%
48	-5.49	-33.94	0.00	5.48	33.94	0.00	0.002%
49	-4.69	-33.94	-2.71	4.69	33.94	2.71	0.001%
50	-2.65	-33.94	-4.60	2.65	33.94	4.60	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	15	0.00004708	0.00010679
3	Yes	14	0.00007291	0.00014139
4	Yes	20	0.00000001	0.00011462
5	Yes	20	0.00000001	0.00008613
6	Yes	20	0.00000001	0.00011725
7	Yes	20	0.00000001	0.00008826
8	Yes	16	0.00000001	0.00011506
9	Yes	16	0.00000001	0.00009170
10	Yes	20	0.00000001	0.00013033
11	Yes	20	0.00000001	0.00009688
12	Yes	20	0.00000001	0.00011732
13	Yes	20	0.00000001	0.00008812
14	Yes	15	0.00004727	0.00010469
15	Yes	14	0.00007321	0.00013988
16	Yes	20	0.00000001	0.00011616
17	Yes	20	0.00000001	0.00008737
18	Yes	20	0.00000001	0.00012824
19	Yes	20	0.00000001	0.00009541
20	Yes	16	0.00000001	0.00011509
21	Yes	16	0.00000001	0.00009161
22	Yes	20	0.00000001	0.00012001
23	Yes	20	0.00000001	0.00009021
24	Yes	20	0.00000001	0.00011155
25	Yes	20	0.00000001	0.00008405
26	Yes	6	0.00000001	0.00000001
27	Yes	19	0.00000001	0.00007423
28	Yes	19	0.00000001	0.00008170
29	Yes	19	0.00000001	0.00008185
30	Yes	19	0.00000001	0.00007469
31	Yes	19	0.00000001	0.00008333
32	Yes	19	0.00000001	0.00008274
33	Yes	19	0.00000001	0.00007491
34	Yes	19	0.00000001	0.00008262
35	Yes	19	0.00000001	0.00008266
36	Yes	19	0.00000001	0.00007468
37	Yes	19	0.00000001	0.00008240
38	Yes	19	0.00000001	0.00008159
39	Yes	14	0.00000001	0.00004931
40	Yes	15	0.00000001	0.00008812
41	Yes	15	0.00000001	0.00009587
42	Yes	14	0.00000001	0.00005394
43	Yes	15	0.00000001	0.00010144
44	Yes	15	0.00000001	0.00009558
45	Yes	14	0.00000001	0.00004739
46	Yes	15	0.00000001	0.00009386
47	Yes	15	0.00000001	0.00009959
48	Yes	14	0.00000001	0.00005411
49	Yes	15	0.00000001	0.00009806
50	Yes	15	0.00000001	0.00008502

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 115	12.55	43	0.89	0.00
L2	115 - 110	11.62	43	0.89	0.00
L3	110 - 105	10.69	43	0.88	0.00
L4	105 - 100	9.78	43	0.86	0.00
L5	100 - 98.5	8.89	43	0.84	0.00
L6	98.5 - 98.25	8.63	43	0.83	0.00
L7	98.25 - 93.25	8.58	43	0.83	0.00
L8	93.25 - 90	7.72	43	0.81	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L9	90 - 89.75	7.18	43	0.79	0.00
L10	89.75 - 84.75	7.14	43	0.78	0.00
L11	84.75 - 79.75	6.34	43	0.74	0.00
L12	79.75 - 79	5.59	43	0.69	0.00
L13	79 - 78.75	5.48	43	0.68	0.00
L14	78.75 - 75.17	5.44	43	0.68	0.00
L15	75.17 - 74.92	4.95	43	0.65	0.00
L16	74.92 - 69.92	4.91	43	0.65	0.00
L17	69.92 - 64.92	4.26	43	0.60	0.00
L18	64.92 - 60	3.65	43	0.56	0.00
L19	60 - 59.75	3.11	43	0.50	0.00
L20	59.75 - 54.75	3.08	43	0.50	0.00
L21	54.75 - 49.75	2.58	43	0.46	0.00
L22	49.75 - 47.83	2.12	43	0.42	0.00
L23	47.83 - 47.58	1.95	43	0.40	0.00
L24	47.58 - 43	1.93	43	0.39	0.00
L25	43 - 42.75	1.57	43	0.36	0.00
L26	42.75 - 37.75	1.55	43	0.35	0.00
L27	37.75 - 34.5	1.20	43	0.31	0.00
L28	34.5 - 34.25	1.00	43	0.29	0.00
L29	34.25 - 30	0.98	43	0.28	0.00
L30	30 - 29.75	0.75	43	0.24	0.00
L31	29.75 - 25.58	0.74	43	0.23	0.00
L32	25.58 - 25.33	0.55	43	0.20	0.00
L33	25.33 - 20.75	0.54	43	0.20	0.00
L34	20.75 - 20.5	0.36	43	0.16	0.00
L35	20.5 - 17.58	0.36	43	0.16	0.00
L36	17.58 - 17.33	0.26	43	0.14	0.00
L37	17.33 - 13.5	0.25	43	0.14	0.00
L38	13.5 - 13.25	0.15	43	0.11	0.00
L39	13.25 - 8.25	0.15	43	0.11	0.00
L40	8.25 - 6.25	0.06	43	0.07	0.00
L41	6.25 - 6	0.03	43	0.05	0.00
L42	6 - 1	0.03	43	0.05	0.00
L43	1 - 0	0.00	43	0.01	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
117.0000	KS24019-L112A	43	11.99	0.89	0.00	59832
103.0000	BXA-70063-6BF-EDIN-0	43	9.42	0.86	0.00	13525
60.0000	Bridge Stiffener (96" x 16" x 1.25")	43	3.11	0.50	0.00	6071
30.0000	Bridge Stiffener (96" x 16" x 1.25")	43	0.75	0.24	0.00	5988

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	120 - 115	58.06	10	4.11	0.00
L2	115 - 110	53.77	10	4.10	0.00
L3	110 - 105	49.49	10	4.07	0.00
L4	105 - 100	45.27	10	4.00	0.00
L5	100 - 98.5	41.14	10	3.90	0.00
L6	98.5 - 98.25	39.92	10	3.86	0.00
L7	98.25 - 93.25	39.72	10	3.85	0.00
L8	93.25 - 90	35.75	10	3.74	0.00
L9	90 - 89.75	33.24	10	3.64	0.00
L10	89.75 - 84.75	33.05	10	3.63	0.00
L11	84.75 - 79.75	29.35	10	3.44	0.00
L12	79.75 - 79	25.87	10	3.20	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	79 - 78.75	25.37	10	3.16	0.00
L14	78.75 - 75.17	25.20	10	3.15	0.00
L15	75.17 - 74.92	22.90	10	3.00	0.00
L16	74.92 - 69.92	22.74	10	2.99	0.00
L17	69.92 - 64.92	19.71	10	2.80	0.00
L18	64.92 - 60	16.90	10	2.57	0.00
L19	60 - 59.75	14.37	10	2.32	0.00
L20	59.75 - 54.75	14.25	10	2.31	0.00
L21	54.75 - 49.75	11.92	10	2.13	0.00
L22	49.75 - 47.83	9.80	10	1.92	0.00
L23	47.83 - 47.58	9.04	10	1.84	0.00
L24	47.58 - 43	8.95	10	1.83	0.00
L25	43 - 42.75	7.28	10	1.65	0.00
L26	42.75 - 37.75	7.19	10	1.64	0.00
L27	37.75 - 34.5	5.57	10	1.46	0.00
L28	34.5 - 34.25	4.63	10	1.33	0.00
L29	34.25 - 30	4.56	10	1.31	0.00
L30	30 - 29.75	3.48	10	1.10	0.00
L31	29.75 - 25.58	3.43	10	1.09	0.00
L32	25.58 - 25.33	2.55	10	0.93	0.00
L33	25.33 - 20.75	2.50	10	0.92	0.00
L34	20.75 - 20.5	1.69	10	0.76	0.00
L35	20.5 - 17.58	1.65	10	0.76	0.00
L36	17.58 - 17.33	1.21	10	0.67	0.00
L37	17.33 - 13.5	1.18	10	0.66	0.00
L38	13.5 - 13.25	0.71	10	0.51	0.00
L39	13.25 - 8.25	0.68	10	0.50	0.00
L40	8.25 - 6.25	0.26	10	0.31	0.00
L41	6.25 - 6	0.15	10	0.22	0.00
L42	6 - 1	0.14	10	0.21	0.00
L43	1 - 0	0.00	10	0.04	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
117.0000	KS24019-L112A	10	55.48	4.11	0.00	13141
103.0000	BXA-70063-6BF-EDIN-0	10	43.61	3.97	0.00	2952
60.0000	Bridge Stiffener (96" x 16" x 1.25")	10	14.37	2.32	0.00	1315
30.0000	Bridge Stiffener (96" x 16" x 1.25")	10	3.48	1.10	0.00	1294

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K
L1	120 - 115 (1)	P24x0.25	5.0000	0.0000	0.0	18.6532	-3.53
L2	115 - 110 (2)	P24x0.25	5.0000	0.0000	0.0	18.6532	-3.95
L3	110 - 105 (3)	P24x0.25	5.0000	0.0000	0.0	18.6532	-4.38
L4	105 - 100 (4)	P24x0.25	5.0000	0.0000	0.0	18.6532	-8.43
L5	100 - 98.5 (5)	P24x0.25	1.5000	0.0000	0.0	18.6532	-8.59
L6	98.5 - 98.25 (6)	P24x0.3875	0.2500	0.0000	0.0	28.7451	-8.62
L7	98.25 - 93.25 (7)	P24x0.3875	5.0000	0.0000	0.0	28.7451	-9.34
L8	93.25 - 90 (8)	P24x0.3875	3.2500	0.0000	0.0	28.7451	-9.80
L9	90 - 89.75 (9)	P24x0.375	0.2500	0.0000	0.0	27.8325	-9.83
L10	89.75 - 84.75 (10)	P24x0.375	5.0000	0.0000	0.0	27.8325	-10.57
L11	84.75 - 79.75 (11)	P24x0.375	5.0000	0.0000	0.0	27.8325	-11.34
L12	79.75 - 79 (12)	P24x0.375	0.7500	0.0000	0.0	27.8325	-11.46
L13	79 - 78.75 (13)	P24x0.51875	0.2500	0.0000	0.0	38.2674	-11.51

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u
	ft		ft	ft		in^2	K
L14	78.75 - 75.17 (14)	P24x0.51875	3.5800	0.0000	0.0	38.2674	-12.18
L15	75.17 - 74.92 (15)	P24x0.675	0.2500	0.0000	0.0	49.4624	-12.24
L16	74.92 - 69.92 (16)	P24x0.675	5.0000	0.0000	0.0	49.4624	-13.35
L17	69.92 - 64.92 (17)	P24x0.675	5.0000	0.0000	0.0	49.4624	-14.47
L18	64.92 - 60 (18)	P24x0.675	4.9200	0.0000	0.0	49.4624	-15.59
L19	60 - 59.75 (19)	P30x0.53125	0.2500	0.0000	0.0	49.1825	-18.22
L20	59.75 - 54.75 (20)	P30x0.53125	5.0000	0.0000	0.0	49.1825	-19.38
L21	54.75 - 49.75 (21)	P30x0.53125	5.0000	0.0000	0.0	49.1825	-20.55
L22	49.75 - 47.83 (22)	P30x0.53125	1.9200	0.0000	0.0	49.1825	-21.00
L23	47.83 - 47.58 (23)	P30x0.65	0.2500	0.0000	0.0	59.9337	-21.08
L24	47.58 - 43 (24)	P30x0.65	4.5800	0.0000	0.0	59.9337	-22.32
L25	43 - 42.75 (25)	P30x0.8	0.2500	0.0000	0.0	73.3876	-22.41
L26	42.75 - 37.75 (26)	P30x0.8	5.0000	0.0000	0.0	73.3876	-24.01
L27	37.75 - 34.5 (27)	P30x0.8	3.2500	0.0000	0.0	73.3876	-25.06
L28	34.5 - 34.25 (28)	P30x0.65	0.2500	0.0000	0.0	59.9337	-25.14
L29	34.25 - 30 (29)	P30x0.65	4.2500	0.0000	0.0	59.9337	-26.32
L30	30 - 29.75 (30)	P36x0.55	0.2500	0.0000	0.0	61.2532	-30.24
L31	29.75 - 25.58 (31)	P36x0.55	4.1700	0.0000	0.0	61.2532	-31.43
L32	25.58 - 25.33 (32)	P36x0.65	0.2500	0.0000	0.0	72.1859	-31.52
L33	25.33 - 20.75 (33)	P36x0.65	4.5800	0.0000	0.0	72.1859	-32.99
L34	20.75 - 20.5 (34)	P36x0.7875	0.2500	0.0000	0.0	87.1159	-33.09
L35	20.5 - 17.58 (35)	P36x0.7875	2.9200	0.0000	0.0	87.1159	-34.18
L36	17.58 - 17.33 (36)	P36x0.6875	0.2500	0.0000	0.0	76.2695	-34.28
L37	17.33 - 13.5 (37)	P36x0.6875	3.8300	0.0000	0.0	76.2695	-35.58
L38	13.5 - 13.25 (38)	P36x0.7	0.2500	0.0000	0.0	77.6288	-35.68
L39	13.25 - 8.25 (39)	P36x0.7	5.0000	0.0000	0.0	77.6288	-37.45
L40	8.25 - 6.25 (40)	P36x0.7	2.0000	0.0000	0.0	77.6288	-38.16
L41	6.25 - 6 (41)	P36x0.8875	0.2500	0.0000	0.0	97.8994	-38.27
L42	6 - 1 (42)	P36x0.8875	5.0000	0.0000	0.0	97.8994	-40.31
L43	1 - 0 (43)	P36x0.8875	1.0000	0.0000	0.0	97.8994	-40.72

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	M_{uy}
	ft		kip-ft	kip-ft
L1	120 - 115 (1)	P24x0.25	21.16	0.00
L2	115 - 110 (2)	P24x0.25	48.74	0.00
L3	110 - 105 (3)	P24x0.25	77.98	0.00
L4	105 - 100 (4)	P24x0.25	114.86	0.00
L5	100 - 98.5 (5)	P24x0.25	131.11	0.00
L6	98.5 - 98.25 (6)	P24x0.3875	133.85	0.00
L7	98.25 - 93.25 (7)	P24x0.3875	190.24	0.00
L8	93.25 - 90 (8)	P24x0.3875	228.82	0.00
L9	90 - 89.75 (9)	P24x0.375	231.87	0.00
L10	89.75 - 84.75 (10)	P24x0.375	294.35	0.00
L11	84.75 - 79.75 (11)	P24x0.375	359.06	0.00
L12	79.75 - 79 (12)	P24x0.375	368.89	0.00
L13	79 - 78.75 (13)	P24x0.51875	372.17	0.00
L14	78.75 - 75.17 (14)	P24x0.51875	419.96	0.00
L15	75.17 - 74.92 (15)	P24x0.675	423.36	0.00
L16	74.92 - 69.92 (16)	P24x0.675	492.85	0.00
L17	69.92 - 64.92 (17)	P24x0.675	565.38	0.00
L18	64.92 - 60 (18)	P24x0.675	639.58	0.00
L19	60 - 59.75 (19)	P30x0.53125	643.86	0.00
L20	59.75 - 54.75 (20)	P30x0.53125	731.32	0.00
L21	54.75 - 49.75 (21)	P30x0.53125	822.03	0.00
L22	49.75 - 47.83 (22)	P30x0.53125	857.71	0.00
L23	47.83 - 47.58 (23)	P30x0.65	862.39	0.00
L24	47.58 - 43 (24)	P30x0.65	949.56	0.00
L25	43 - 42.75 (25)	P30x0.8	954.40	0.00
L26	42.75 - 37.75 (26)	P30x0.8	1052.83	0.00
L27	37.75 - 34.5 (27)	P30x0.8	1118.50	0.00
L28	34.5 - 34.25 (28)	P30x0.65	1123.61	0.00
L29	34.25 - 30 (29)	P30x0.65	1211.48	0.00
L30	30 - 29.75 (30)	P36x0.55	1217.33	0.00

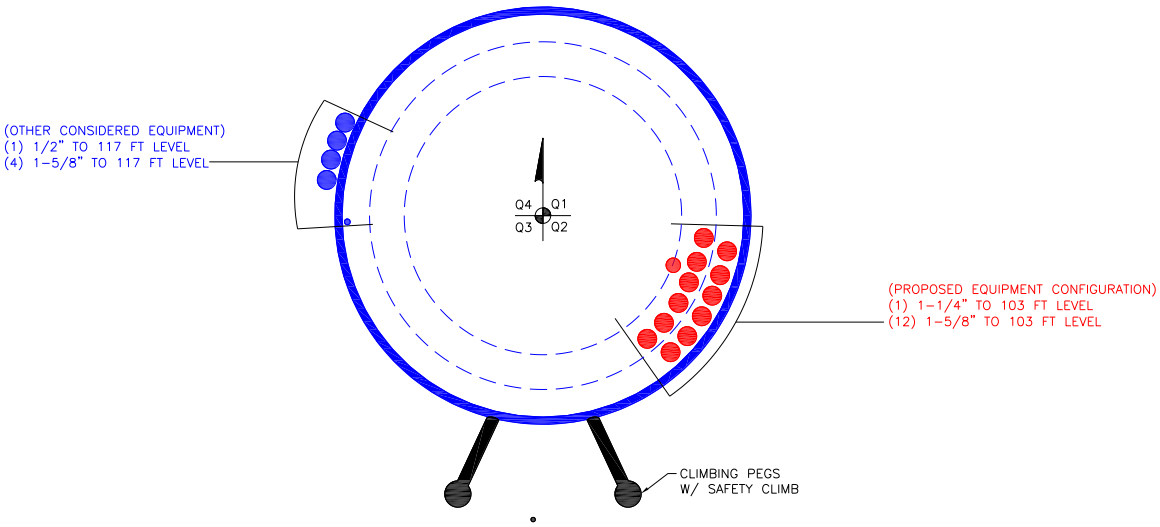
Section No.	Elevation	Size	M_{ux}	M_{uy}
	ft		kip-ft	kip-ft
L31	29.75 - 25.58 (31)	P36x0.55	1315.84	0.00
L32	25.58 - 25.33 (32)	P36x0.65	1321.82	0.00
L33	25.33 - 20.75 (33)	P36x0.65	1432.69	0.00
L34	20.75 - 20.5 (34)	P36x0.7875	1438.83	0.00
L35	20.5 - 17.58 (35)	P36x0.7875	1510.97	0.00
L36	17.58 - 17.33 (36)	P36x0.6875	1517.20	0.00
L37	17.33 - 13.5 (37)	P36x0.6875	1613.45	0.00
L38	13.5 - 13.25 (38)	P36x0.7	1619.78	0.00
L39	13.25 - 8.25 (39)	P36x0.7	1747.97	0.00
L40	8.25 - 6.25 (40)	P36x0.7	1799.98	0.00
L41	6.25 - 6 (41)	P36x0.8875	1806.52	0.00
L42	6 - 1 (42)	P36x0.8875	1938.54	0.00
L43	1 - 0 (43)	P36x0.8875	1965.26	0.00

Pole Shear Design Data

Section No.	Elevation	Size	Actual V_u	Actual T_u
	ft		K	kip-ft
L1	120 - 115 (1)	P24x0.25	5.34	0.00
L2	115 - 110 (2)	P24x0.25	5.68	0.00
L3	110 - 105 (3)	P24x0.25	6.01	0.00
L4	105 - 100 (4)	P24x0.25	10.74	0.45
L5	100 - 98.5 (5)	P24x0.25	10.93	0.45
L6	98.5 - 98.25 (6)	P24x0.3875	10.97	0.45
L7	98.25 - 93.25 (7)	P24x0.3875	11.59	0.45
L8	93.25 - 90 (8)	P24x0.3875	12.14	0.43
L9	90 - 89.75 (9)	P24x0.375	12.20	0.41
L10	89.75 - 84.75 (10)	P24x0.375	12.80	0.41
L11	84.75 - 79.75 (11)	P24x0.375	13.08	0.41
L12	79.75 - 79 (12)	P24x0.375	13.12	0.41
L13	79 - 78.75 (13)	P24x0.51875	13.14	0.41
L14	78.75 - 75.17 (14)	P24x0.51875	13.56	0.41
L15	75.17 - 74.92 (15)	P24x0.675	13.59	0.41
L16	74.92 - 69.92 (16)	P24x0.675	14.21	0.41
L17	69.92 - 64.92 (17)	P24x0.675	14.80	0.41
L18	64.92 - 60 (18)	P24x0.675	15.36	0.41
L19	60 - 59.75 (19)	P30x0.53125	17.16	0.41
L20	59.75 - 54.75 (20)	P30x0.53125	17.82	0.41
L21	54.75 - 49.75 (21)	P30x0.53125	18.46	0.41
L22	49.75 - 47.83 (22)	P30x0.53125	18.71	0.41
L23	47.83 - 47.58 (23)	P30x0.65	18.74	0.41
L24	47.58 - 43 (24)	P30x0.65	19.33	0.41
L25	43 - 42.75 (25)	P30x0.8	19.36	0.41
L26	42.75 - 37.75 (26)	P30x0.8	20.01	0.41
L27	37.75 - 34.5 (27)	P30x0.8	20.41	0.41
L28	34.5 - 34.25 (28)	P30x0.65	20.43	0.41
L29	34.25 - 30 (29)	P30x0.65	20.92	0.41
L30	30 - 29.75 (30)	P36x0.55	23.36	0.41
L31	29.75 - 25.58 (31)	P36x0.55	23.89	0.41
L32	25.58 - 25.33 (32)	P36x0.65	23.91	0.41
L33	25.33 - 20.75 (33)	P36x0.65	24.50	0.41
L34	20.75 - 20.5 (34)	P36x0.7875	24.52	0.41
L35	20.5 - 17.58 (35)	P36x0.7875	24.89	0.41
L36	17.58 - 17.33 (36)	P36x0.6875	24.91	0.41
L37	17.33 - 13.5 (37)	P36x0.6875	25.35	0.41
L38	13.5 - 13.25 (38)	P36x0.7	25.36	0.41
L39	13.25 - 8.25 (39)	P36x0.7	25.91	0.41
L40	8.25 - 6.25 (40)	P36x0.7	26.12	0.41
L41	6.25 - 6 (41)	P36x0.8875	26.14	0.41
L42	6 - 1 (42)	P36x0.8875	26.67	0.41
L43	1 - 0 (43)	P36x0.8875	26.77	0.41

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876309 TOWER ID:C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876309

Work Order: 1976732

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	120	30		0	24	24	0.25		A53-B-42
2	90	30		0	24.00	24	0.375		A53-B-42
3	60	30		0	30.00	30	0.375		A53-B-42
4	30	30		0	36.00	36	0.375		A53-B-42

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	0	20.75	plate	3.5 x 1.25; (1) (1.1875	3	113	232	353															
2	34.5	43	plate	3.25 x 1.25; (1) (1.1875	3	113	232	353															
3	0	6.25	channel	MP3-05 (1.1875")	1				180														
4	6.25	13.5	channel	MP3-04 (1.1875")	2				150	210													
5	13.5	30	channel	MP3-05 (1.1875")	1				180														
6	0	30	channel	MP3-05 (1.1875")	2						300	60											
7	30	60	channel	MP3-04 (1.1875")	3								60	180	300								
8	60	75.17	channel	MP3-03 (1.1875")	3								60	180	300								
9	0	6.25	plate	FP 1.25 x 4.25_1	3											20	133	246					
10	17.58	25.58	plate	CCI-SFP-040075	3														15	135	255		
11	30	47.83	plate	CCI-SFP-040075	3														15	135	255		
12	60	79	plate	CCI-SFP-040075	3														15	135	255		
13	90	98.5	plate	CI-040075; (1) (1.1875)	3														60	180	300		
14																							

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	3.5	1.25	4.375	0.625	None	n/a	PC 8.8 - M20 (100)	15.000	24.000	2.813	1.1875	A572-65
2	3.25	1.25	4.0625	0.625	PC 8.8 - M20 (100)	15	PC 8.8 - M20 (100)	12.000	24.000	2.500	1.1875	A572-65
3	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
4	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
5	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
6	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
7	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
8	4.06	1.57	2.92	0.59	PC 8.8 - M20 (100)	14	PC 8.8 - M20 (100)	14.000	18.000	2.545	1.1875	A572-65
9	1.25	4.25	5.3125	2.125	None	n/a	None	n/a	0.000	5.313	0.0000	A572-65
10	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
11	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
12	4	0.75	3	0.375	PC 8.8 - M20 (100)	12	PC 8.8 - M20 (100)	12.000	16.000	2.063	1.1875	A572-65
13	4	0.75	3	0.375	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	18.000	16.000	2.063	1.1875	A572-65

Connection Details for Custom Reinforcements

Reinforcement	End	# Bolts	N or X	Bolt Spacing (in)	Edge Dist (in)	Weld Grade (ksi)	Transverse (Horiz.) Weld Type	Horiz. Weld Length (in)	Horiz. Groove Depth (in)	Horiz. Groove Angle (deg)	Horiz. Fillet Size (in)	Vertical Weld Length (in)	Vertical Fillet Size (in)	Rev H Connection Capacity (kip)
FP 3.5 x 1.25; (1) (1.1875)_1	Top	5	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-				-	-		-	-	-
FP 3.25 x 1.25; (1) (1.1875)_1	Top	4	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	5	N	3	3	-	-	-	-	-	-	-	-	-
FP 1.25 x 4.25_1	Top					-	-	-	-	-	-	-	-	-
	Bottom	-	-	-	-				-	-		-	-	-
CCI-040075; (1) (1.1875)_1	Top	6	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	8	N	3	3	-	-	-	-	-	-	-	-	-

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	120 - 115	5		0	24.000	24.000	0.25	A53-B-42	1.000
2	115 - 110	5		0	24.000	24.000	0.25	A53-B-42	1.000
3	110 - 105	5		0	24.000	24.000	0.25	A53-B-42	1.000
4	105 - 100	5		0	24.000	24.000	0.25	A53-B-42	1.000
5	100 - 98.5	1.5		0	24.000	24.000	0.25	A53-B-42	1.000
6	98.5 - 98.25	0.25		0	24.000	24.000	0.3875	A53-B-42	0.962
7	98.25 - 93.25	5		0	24.000	24.000	0.3875	A53-B-42	0.962
8	93.25 - 90	3.25	0	0	24.000	24.000	0.3875	A53-B-42	0.962
9	90 - 89.75	0.25		0	24.000	24.000	0.375	A53-B-42	1.000
10	89.75 - 84.75	5		0	24.000	24.000	0.375	A53-B-42	1.000
11	84.75 - 79.75	5		0	24.000	24.000	0.375	A53-B-42	1.000
12	79.75 - 79	0.75		0	24.000	24.000	0.375	A53-B-42	1.000
13	79 - 78.75	0.25		0	24.000	24.000	0.51875	A53-B-42	0.963
14	78.75 - 75.17	3.58		0	24.000	24.000	0.51875	A53-B-42	0.963
15	75.17 - 74.92	0.25		0	24.000	24.000	0.675	A53-B-42	0.922
16	74.92 - 69.92	5		0	24.000	24.000	0.675	A53-B-42	0.922
17	69.92 - 64.92	5		0	24.000	24.000	0.675	A53-B-42	0.922
18	64.92 - 60	4.92	0	0	24.000	24.000	0.675	A53-B-42	0.922
19	60 - 59.75	0.25		0	30.000	30.000	0.53125	A53-B-42	0.962
20	59.75 - 54.75	5		0	30.000	30.000	0.53125	A53-B-42	0.962
21	54.75 - 49.75	5		0	30.000	30.000	0.53125	A53-B-42	0.962
22	49.75 - 47.83	1.92		0	30.000	30.000	0.53125	A53-B-42	0.962
23	47.83 - 47.58	0.25		0	30.000	30.000	0.65	A53-B-42	0.939
24	47.58 - 43	4.58		0	30.000	30.000	0.65	A53-B-42	0.939
25	43 - 42.75	0.25		0	30.000	30.000	0.8	A53-B-42	0.933
26	42.75 - 37.75	5		0	30.000	30.000	0.8	A53-B-42	0.933
27	37.75 - 34.5	3.25		0	30.000	30.000	0.8	A53-B-42	0.933
28	34.5 - 34.25	0.25		0	30.000	30.000	0.65	A53-B-42	0.939
29	34.25 - 30	4.25	0	0	30.000	30.000	0.65	A53-B-42	0.939
30	30 - 29.75	0.25		0	36.000	36.000	0.55	A53-B-42	0.962
31	29.75 - 25.58	4.17		0	36.000	36.000	0.55	A53-B-42	0.962
32	25.58 - 25.33	0.25		0	36.000	36.000	0.65	A53-B-42	0.941
33	25.33 - 20.75	4.58		0	36.000	36.000	0.65	A53-B-42	0.941
34	20.75 - 20.5	0.25		0	36.000	36.000	0.7875	A53-B-42	0.930
35	20.5 - 17.58	2.92		0	36.000	36.000	0.7875	A53-B-42	0.930
36	17.58 - 17.33	0.25		0	36.000	36.000	0.6875	A53-B-42	0.945
37	17.33 - 13.5	3.83		0	36.000	36.000	0.6875	A53-B-42	0.945
38	13.5 - 13.25	0.25		0	36.000	36.000	0.7	A53-B-42	0.962
39	13.25 - 8.25	5		0	36.000	36.000	0.7	A53-B-42	0.962
40	8.25 - 6.25	2		0	36.000	36.000	0.7	A53-B-42	0.962
41	6.25 - 6	0.25		0	36.000	36.000	0.8875	A53-B-42	0.899
42	6 - 1	5		0	36.000	36.000	0.8875	A53-B-42	0.899
43	1 - 0	1		0	36.000	36.000	0.8875	A53-B-42	0.899

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	120 - 115	3.53	21.16	5.34
2	115 - 110	3.95	48.74	5.68
3	110 - 105	4.38	77.98	6.01
4	105 - 100	8.43	114.85	10.74
5	100 - 98.5	8.59	131.11	10.93
6	98.5 - 98.25	8.62	133.85	10.97
7	98.25 - 93.25	9.34	190.24	11.59
8	93.25 - 90	9.80	228.82	12.14
9	90 - 89.75	9.83	231.87	12.20
10	89.75 - 84.75	10.57	294.35	12.80
11	84.75 - 79.75	11.34	359.06	13.08
12	79.75 - 79	11.46	368.89	13.12
13	79 - 78.75	11.51	372.17	13.14
14	78.75 - 75.17	12.18	419.96	13.56
15	75.17 - 74.92	12.24	423.36	13.59
16	74.92 - 69.92	13.35	492.85	14.21
17	69.92 - 64.92	14.47	565.38	14.80
18	64.92 - 60	15.59	639.58	15.36
19	60 - 59.75	18.22	643.86	17.16
20	59.75 - 54.75	19.38	731.32	17.82
21	54.75 - 49.75	20.55	822.03	18.46
22	49.75 - 47.83	21.00	857.71	18.71
23	47.83 - 47.58	21.08	862.39	18.74
24	47.58 - 43	22.32	949.56	19.33
25	43 - 42.75	22.41	954.40	19.36
26	42.75 - 37.75	24.01	1052.82	20.01
27	37.75 - 34.5	25.06	1118.50	20.41
28	34.5 - 34.25	25.14	1123.61	20.43
29	34.25 - 30	26.32	1211.49	20.92
30	30 - 29.75	30.24	1217.32	23.36
31	29.75 - 25.58	31.43	1315.84	23.89
32	25.58 - 25.33	31.52	1321.82	23.91
33	25.33 - 20.75	32.99	1432.70	24.50
34	20.75 - 20.5	33.09	1438.82	24.52
35	20.5 - 17.58	34.18	1510.97	24.89
36	17.58 - 17.33	34.28	1517.20	24.91
37	17.33 - 13.5	35.58	1613.45	25.35
38	13.5 - 13.25	35.68	1619.78	25.36
39	13.25 - 8.25	37.45	1747.97	25.91
40	8.25 - 6.25	38.16	1799.98	26.12
41	6.25 - 6	38.27	1806.52	26.14
42	6 - 1	40.31	1938.54	26.67
43	1 - 0	40.72	1965.26	26.77

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
120 - 115	Pole	TP24x24x0.25	Pole	5.7%	Pass
115 - 110	Pole	TP24x24x0.25	Pole	12.3%	Pass
110 - 105	Pole	TP24x24x0.25	Pole	19.4%	Pass
105 - 100	Pole	TP24x24x0.25	Pole	29.1%	Pass
100 - 98.5	Pole	TP24x24x0.25	Pole	33.0%	Pass
98.5 - 98.25	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	23.7%	Pass
98.25 - 93.25	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	33.4%	Pass
93.25 - 90	Pole + Reinf.	TP24x24x0.3875	Reinf. 13 Tension Rupture	40.0%	Pass
90 - 89.75	Pole	TP24x24x0.375	Pole	36.4%	Pass
89.75 - 84.75	Pole	TP24x24x0.375	Pole	46.1%	Pass
84.75 - 79.75	Pole	TP24x24x0.375	Pole	56.0%	Pass
79.75 - 79	Pole	TP24x24x0.375	Pole	57.5%	Pass
79 - 78.75	Pole + Reinf.	TP24x24x0.5188	Reinf. 12 Tension Rupture	49.2%	Pass
78.75 - 75.17	Pole + Reinf.	TP24x24x0.5188	Reinf. 12 Tension Rupture	55.5%	Pass
75.17 - 74.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	44.2%	Pass
74.92 - 69.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	51.4%	Pass
69.92 - 64.92	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	58.9%	Pass
64.92 - 60	Pole + Reinf.	TP24x24x0.675	Reinf. 12 Tension Rupture	66.6%	Pass
60 - 59.75	Pole + Reinf.	TP30x30x0.5313	Pole	47.3%	Pass
59.75 - 54.75	Pole + Reinf.	TP30x30x0.5313	Pole	53.6%	Pass
54.75 - 49.75	Pole + Reinf.	TP30x30x0.5313	Pole	60.2%	Pass
49.75 - 47.83	Pole + Reinf.	TP30x30x0.5313	Pole	62.8%	Pass
47.83 - 47.58	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	58.1%	Pass
47.58 - 43	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	64.0%	Pass
43 - 42.75	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	59.1%	Pass
42.75 - 37.75	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	65.2%	Pass
37.75 - 34.5	Pole + Reinf.	TP30x30x0.8	Reinf. 2 Tension Rupture	69.3%	Pass
34.5 - 34.25	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	75.7%	Pass
34.25 - 30	Pole + Reinf.	TP30x30x0.65	Reinf. 11 Tension Rupture	81.5%	Pass
30 - 29.75	Pole + Reinf.	TP36x36x0.55	Pole	60.9%	Pass
29.75 - 25.58	Pole + Reinf.	TP36x36x0.55	Pole	65.8%	Pass
25.58 - 25.33	Pole + Reinf.	TP36x36x0.65	Reinf. 10 Tension Rupture	61.3%	Pass
25.33 - 20.75	Pole + Reinf.	TP36x36x0.65	Reinf. 10 Tension Rupture	66.4%	Pass
20.75 - 20.5	Pole + Reinf.	TP36x36x0.7875	Reinf. 1 Tension Rupture	59.9%	Pass
20.5 - 17.58	Pole + Reinf.	TP36x36x0.7875	Reinf. 1 Tension Rupture	62.9%	Pass
17.58 - 17.33	Pole + Reinf.	TP36x36x0.6875	Reinf. 1 Tension Rupture	71.2%	Pass
17.33 - 13.5	Pole + Reinf.	TP36x36x0.6875	Reinf. 1 Tension Rupture	75.7%	Pass
13.5 - 13.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	76.3%	Pass
13.25 - 8.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	82.3%	Pass
8.25 - 6.25	Pole + Reinf.	TP36x36x0.7	Reinf. 1 Tension Rupture	84.8%	Pass
6.25 - 6	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	68.0%	Pass
6 - 1	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	73.0%	Pass
1 - 0	Pole + Reinf.	TP36x36x0.8875	Reinf. 1 Tension Rupture	74.0%	Pass
				Summary	
			Pole	73.8%	Pass
			Reinforcement	84.8%	Pass
			Overall	84.8%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*												
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13
120 - 115	1315	n/a	1315	18.65	n/a	18.65	5.7%													
115 - 110	1315	n/a	1315	18.65	n/a	18.65	12.3%													
110 - 105	1315	n/a	1315	18.65	n/a	18.65	19.4%													
105 - 100	1315	n/a	1315	18.65	n/a	18.65	29.1%													
100 - 98.5	1315	n/a	1315	18.65	n/a	18.65	33.0%													
98.5 - 98.25	1315	695	2011	18.65	9.00	27.65	21.9%													23.7%
98.25 - 93.25	1315	695	2011	18.65	9.00	27.65	30.8%													33.4%
93.25 - 90	1315	695	2011	18.65	9.00	27.65	36.9%													40.0%
90 - 89.75	1942	n/a	1942	27.83	n/a	27.83	36.4%													
89.75 - 84.75	1942	n/a	1942	27.83	n/a	27.83	46.1%													
84.75 - 79.75	1942	n/a	1942	27.83	n/a	27.83	56.0%													
79.75 - 79	1942	n/a	1942	27.83	n/a	27.83	57.5%													
79 - 78.75	1942	695	2638	27.83	9.00	36.83	42.7%												49.2%	
78.75 - 75.17	1942	695	2638	27.83	9.00	36.83	48.1%												55.5%	
75.17 - 74.92	1942	1392	3335	27.83	17.76	45.59	38.3%								37.4%				44.2%	
74.92 - 69.92	1942	1392	3335	27.83	17.76	45.59	44.5%								43.5%				51.4%	
69.92 - 64.92	1942	1392	3335	27.83	17.76	45.59	51.1%								49.8%				58.9%	
64.92 - 60	1942	1392	3335	27.83	17.76	45.59	57.7%								56.3%				66.6%	
60 - 59.75	3829	1516	5346	34.90	12.39	47.29	47.3%							43.8%						
59.75 - 54.75	3829	1516	5346	34.90	12.39	47.29	53.6%							49.7%						
54.75 - 49.75	3829	1516	5346	34.90	12.39	47.29	60.2%							55.8%						
49.75 - 47.83	3829	1516	5346	34.90	12.39	47.29	62.8%							58.2%						
47.83 - 47.58	3829	2586	6416	34.90	21.39	56.29	52.6%							48.8%				58.1%		
47.58 - 43	3829	2586	6416	34.90	21.39	56.29	57.9%							53.7%				64.0%		
43 - 42.75	3829	4066	7895	34.90	33.58	68.48	47.3%		59.1%					43.9%				52.3%		
42.75 - 37.75	3829	4066	7895	34.90	33.58	68.48	52.2%		65.2%					48.4%				57.6%		
37.75 - 34.5	3829	4066	7895	34.90	33.58	68.48	55.4%		69.3%					51.4%				61.2%		
34.5 - 34.25	3829	2586	6416	34.90	21.39	56.29	68.4%							63.5%				75.7%		
34.25 - 30	3829	2586	6416	34.90	21.39	56.29	73.8%							68.4%				81.5%		
30 - 29.75	6659	3003	9662	41.97	16.95	58.92	60.9%					53.5%	53.5%							
29.75 - 25.58	6659	3003	9662	41.97	16.95	58.92	65.8%					57.8%	57.8%							
25.58 - 25.33	6659	4529	11188	41.97	25.95	67.92	57.1%					50.1%	50.1%				61.3%			
25.33 - 20.75	6659	4529	11188	41.97	25.95	67.92	61.8%					54.3%	54.3%				66.4%			
20.75 - 20.5	6659	6791	13450	41.97	39.08	81.04	51.7%	59.9%				45.1%	45.3%				55.4%			
20.5 - 17.58	6659	6791	13450	41.97	39.08	81.04	54.3%	62.9%				47.4%	47.6%				58.2%			
17.58 - 17.33	6659	5265	11924	41.97	30.08	72.04	61.5%	71.2%				53.6%	53.9%							
17.33 - 13.5	6659	5265	11924	41.97	30.08	72.04	65.3%	75.7%				57.0%	57.3%							
13.5 - 13.25	6665	5451	12116	41.97	32.69	74.65	65.8%	76.3%			56.3%		55.5%							
13.25 - 8.25	6665	5451	12116	41.97	32.69	74.65	70.9%	82.3%			60.8%		59.8%							
8.25 - 6.25	6665	5451	12116	41.97	32.69	74.65	73.0%	84.8%			62.6%		61.6%							
6.25 - 6	6661	8427	15088	41.97	46.01	87.98	58.7%	68.0%		49.9%			52.6%			48.7%				
6 - 1	6661	8427	15088	41.97	46.01	87.98	62.9%	73.0%		53.5%			56.5%			52.2%				
1 - 0	6661	8427	15088	41.97	46.01	87.98	63.8%	74.0%		54.2%			57.2%			52.9%				

Note: Section capacity checked assuming all reinforcements are effective and using 5 degree increments.
Rating per TIA-222-H Section 15.5.

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Project Number:	37521-0073.006.7805
Engineer:	RMF
Date:	6/15/2021
Site Name:	MILFORD JAI-ALAI
BU Number:	876309
WO Number:	1976732
Order Number:	552677 Rev 0

Bolted Flange Jump Analysis

(Version v3.1 - Effective Date 9/10/2020)

Settings

Code:	TIA-222-H
Analysis Elevation:	90.00
Deformation At Bolt Hole Is A Design Consideration:	Yes
Bolt Tension Method:	Case II

Calculation Method / Distributed Load

Generations Considered: 1

		Load To Gen	Override
Generation 1 :	Analysis	48.27 kip	

Pole Definition

	Upper Section	Lower Section	
Number Of Sides:	Round	Round	
Diameter:	24.000	24.000	in (Flat to Flat)
Thickness:	0.2500	0.3750	in
Yield Strength (F_y):	42	42	ksi
Ultimate Strength (F_u):	63	63	ksi

Source: G:\TOWER\375_Crown_Castle\2021\37521-0073_876309_MILFORD JAI-ALAI\37521-0073.006.7805_SA_1976732

Pole Loading Definition

	At 90' Elevation	
Applied Moment:	228.82	kip-ft
Applied Axial:	9.80	kip
Applied Shear:	12.14	kip

Flange Plate Definitions

	Upper Flange	Lower Flange	
Flange Connection Type:	Butt	Butt	
Bolt Groups:	1	1	
Diameter:	32.00	32.00	in
Thickness:	1.50	1.50	in
Stiffeners Present:	No	No	

Flange Bolt Definition

	Bolt Group 1	
Bolt Quantity:	20	
Bolt Diameter:	1.00	in
Bolt Circle:	29.00	in
Start Angle:	0.00	deg

Moment To Group:	131.88 kip-ft
Axial To Group:	6.23 kip
Shear To Group:	12.14 kip

Jump Plate Definition

Generation 1

Graphed Generation: 1

General:

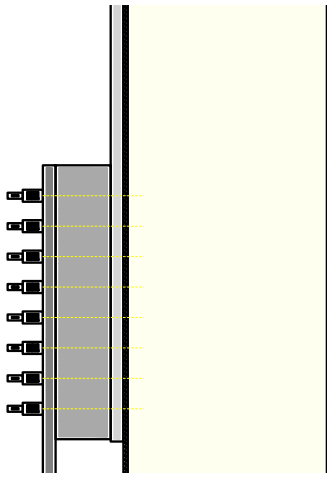
Reference Document:	6078054	
Connected Reinforcement Present:	Yes	

Member:

Crown Standard:	CFP-040075	
Clear Distance (From Flange Edge):	0.00	in
Bar Circle (Diameter):	32.75	in
Top Elevation Increase:	0.23	in
Bottom Elevation Decrease:	0.23	in
Minimum Unbraced Length:	15.54	in
Actual Unbraced Length:	16.00	in
Single Bar Capacity Override:		kip
Calculated Single Bar Capacity:	123.75	kip

Location:

Member 1 (Degree):	90
Member 2 (Degree):	210
Member 3 (Degree):	330
Member 4 (Degree):	
Member 5 (Degree):	
Member 6 (Degree):	
Quantity:	3



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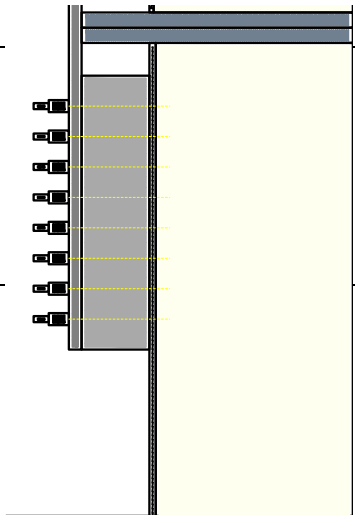
Project Number:	37521-0073.006.7805
Engineer:	RMF
Date:	6/15/2021
Site Name:	MILFORD JAI-ALAI
BU Number:	876309
WO Number:	1976732
Order Number:	552677 Rev 0

Bolted Flange Jump Analysis

(Version v3.1 - Effective Date 9/10/2020)



Reinforcement Definition — Generation 1

Upper Run:

Run Present:	Yes	
Type:	Existing	
Start Elevation:	90.42	ft
Crown Standard:	CCI-SFP-040075	

Lower Run:

Run Present:	No	

Connection Defintion — Generation 1

Blind Bolts:

Bolt Type:	Approved Blind Bolt	
Bolt Diameter:	0.7874	in
Shear Sleeve Diameter:	1.1410	in
Single Bolt Shear Capacity:	37.00	kip
Single Bolt Tensile Capacity:	33.00	kip
Max Available Grip Length:	8.31	in

Top Layout:

Bolt Quantity:	8	
Termination Spacing:	3.00	in
End Spacing:	3.00	in
Hole Diameter:	1.1875	in
Eccentricity:	4.375	in

Bottom Layout:

Bolt Quantity:	8	
Termination Spacing:	3.00	in
End Spacing:	3.00	in
Hole Diameter:	1.1875	in
Eccentricity:	4.375	in

Summary Capacity Results — Generation 1

Jump Plate	**37.15%**	**37.1%**	**Pass**
Applied Axial Load:	48.27 kip		
Available Axial Strength:	123.75 kip		
Upper Connection	**44.34%**	**44.3%**	**Pass**
Lower Connection	**29.56%**	**29.6%**	**Pass**

Generation 1 Upper Connection Controls **44.3% Pass**

Grip Length Check

Sufficient

Notes

1. Allowable capacity is 100% (with values normalized by dividing by 1.05).
2. Bolt hole deformation was a design consideration.
3. AISC shear reduction factor used to discount for connection length.
4. Applied tension based on AISC Case II methodology.
5. TIA methodology used for bearing calculations.

Monopole Flange Plate Connection

Elevation = 90 ft.

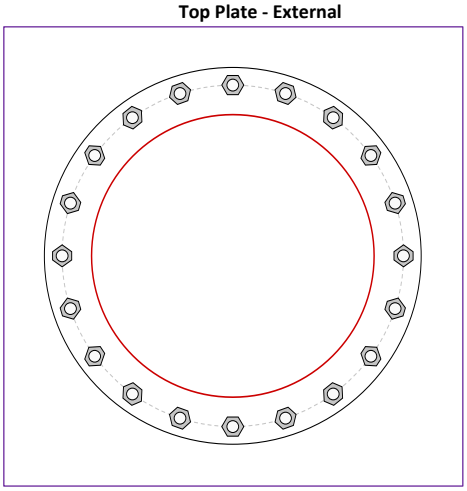
BU #	876309
Site Name	MILFORD JAI-ALAI
Order #	552677 Rev. 0

TIA-222 Revision	H

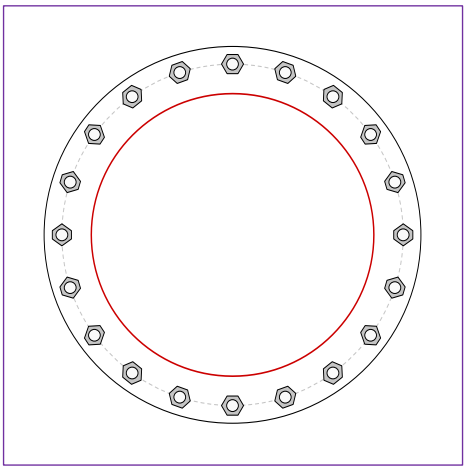
Applied Loads	
Moment (kip-ft)	131.88
Axial Force (kips)	6.23
Shear Force (kips)	12.14

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - External



Connection Properties

Bolt Data

(20) 1" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 29" BC

Top Plate Data

32" OD x 1.5" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Bottom Plate Data

32" OD x 1.5" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

24" x 0.25" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Bottom Pole Data

24" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	10.60	
Allowable (kips)	54.53	
Stress Rating:	**18.5%**	Pass

Top Plate Capacity

Max Stress (ksi):	7.64	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**22.4%**	Pass
Tension Side Stress Rating:	**10.6%**	Pass

Bottom Plate Capacity

Max Stress (ksi):	7.64	(Flexural)
Allowable Stress (ksi):	32.40	
Stress Rating:	**22.4%**	Pass
Tension Side Stress Rating:	**10.6%**	Pass

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v2.1, Effective Date: 05-03-17

Date: 6/15/2021
Project No: 37521-0073.006.7805
Site Name: Milford JAI-ALAI
Site Number/BUN: 876309
Description: 120' Monopole
Owner: CCI
Engineer: RMF

Welded Bridge Stiffener Analysis per TIA-222-G & AISC 13th Ed. (Black)

General Parameters and Loading:

Flange Elevation:	60.00	ft
TIA Reference Standard:	TIA-222-G	
AISC Manual:	13th Ed. (Black)	
Method:	LRFD	
ASD Stress Increase, ASIF:	N/A	
Moment, Muf:	639.6	k-ft
Axial, Puf:	15.6	kips
Shear, Vf:	15.4	kips

Pole Parameters:

	Upper Pole	Lower Pole	
Pole Diameter, Dp:	24.00	30.00	in
Pole Thickness, tp:	0.3750	0.3750	in
Pole Fy:	42	42	ksi
Pole Fu:	63	63	ksi
Flange Diameter, Df:	41.00	41.00	in

Bridge Stiffener Parameters:

	Stiffener Type 1	Stiffener Type 2	
Qty. Stiffeners:	3	3	
Upper Weld Length, L1:	25.00	47.25	in
Lower Weld Length, L2:	22.00	44.13	in
Weld Size, w:	0.3750	0.3750	in
Electrode:	E70	E80	
Effective Stiffener Width, Ws:	7.05	7.00	in
Stiffener Thickness, ts:	1.37	1.25	in
Notch, n:	1.56	0.50	in
Stiffener Fy:	65	65	ksi
Stiffener Fu:	80	80	ksi
Unbraced Length, L:	11.75	4.63	in
K:	0.80	0.80	
Stiffener Spacing:	Symmetric	Symmetric	
Start Angle, for Symmetric:	0	75	degrees
Stiffener Circle:	51.17	49.00	in = Df + 2 n + Ws
Upper Eccentricity, e1:	13.59	12.50	in = (Df - Dp) / 2 + n + Ws / 2
Lower Eccentricity, e2:	10.59	9.50	in = (Df - Dp) / 2 + n + Ws / 2

Flange Bolt Parameters:

Number of Bolt Circles: (1) Bolt Circle

	Bolt Circle 1	Bolt Circle 2	
Qty. Bolts:	0	0	
Bolt Diameter:	1.50	0.00	in
Bolt Circle:	35.00	0.00	in
Bolt Spacing:	Symmetric	Symmetric	
Start Angle, for Symmetric:	0	0	degrees
Bolt Area, Ag:	0.0000	0.0000	in
Max. Tension:	0.00	0.00	kips
Max. Net Tension:	0.00	0.00	kips
Max. Net Compression:	0.00	0.00	kips
Moment to Bolt Circle:	0.00	0.00	k-ft
Axial to Bolt Circle:	0.00	0.00	kips
Shear to Bolt Circle:	0.00	0.00	kips
Equivalent Bolt Circle:	0.00	0.00	in

Weld Analysis per AISC Tables 8-4 & 8-3:

Upper Pole	Stiffener Type 1	Stiffener Type 2	
D:	6	6	Num. of Sixteenths in Weld
a:	0.5434	0.2646	= e1 / L1
k:	0	0	
C:	2.1641	3.2460	Tabulated Cofficient
C1:	1.0000	1.0300	Coefficient for Electrode
Φ:	0.7500	0.7500	
Stiffener Axial, Pu:	112.1	97.3	kips
Axial Capacity, ΦPn:	243.5	710.9	kips = Φ C C1 D L
Ratio:	46.0%	13.7%	

Lower Pole	Stiffener Type 1	Stiffener Type 2	
D:	6	6	Num. of Sixteenths in Weld
a:	0.4811	0.2153	= e2 / L2
k:	0	0	
C:	2.3598	3.4488	Tabulated Cofficient
C1:	1.0000	1.0300	Coefficient for Electrode
Φ:	0.7500	0.7500	
Stiffener Axial, Pu:	112.1	97.3	kips
Axial Capacity, ΦPn:	233.6	705.3	kips = Φ C C1 D L
Ratio:	48.0%	13.8%	

Pole Analysis per AISC Table J2.5 & Sect. J4.2:

Upper Pole	Stiffener Type 1	Stiffener Type 2	
Stiffener Axial, Pu:	112.1	97.3	kips
Effective Throat, te:	0.2651	0.2651	in = 0.707 w
Shear Stress, fuv:	2.2	1.0	kips/in= Pu / (2 L1)
Section Modulus, S:	208.3	744.2	$in^2 = L1^2 / 3$
Bending Stress, fub:	7.3	1.6	kips/in = Pu e1 / S
Combined Stress, fu:	7.6	1.9	kips/in = $(fuv^2 + fub^2)^{1/2}$
Φ:	1.0000	1.0000	
Stress Capacity, ΦFn	9.5	9.5	kips/in = Φ 0.6 Fy tp
Ratio:	80.9%	20.4%	

Lower Pole	Stiffener Type 1	Stiffener Type 2	
Stiffener Axial, Pu:	112.1	97.3	kips
Effective Throat, te:	0.2651	0.2651	in = 0.707 w
Shear Stress, fuv:	2.5	1.1	ksi = Pu / (2 L2)
Section Modulus, S:	161.3	649.0	$in^2 = L2^2 / 3$
Bending Stress, fub:	7.4	1.4	ksi = Pu e2 / S
Combined Stress, fu:	7.8	1.8	kips/in = $(fuv^2 + fub^2)^{1/2}$
Φ:	1.0000	1.0000	
Stress Capacity, ΦFn	9.5	9.5	kips/in = Φ 0.6 Fy tp
Ratio:	82.3%	19.1%	

Stiffener 1 Analysis per AISC Sect. D2, E3 & E7

	Stiffener Type 1	
Gross Area, Ag:	9.6585	in^2
Effective Net Area, Aen:	9.6585	in^2 = Ag U, where U = 1.000
Stiffener Axial, Pu:	112.1	kips
Stiffener Stress, fu:	11.6	ksi = Pu / Ag
b:	17.1100	in = (Df - Dp) / 2 + n + Ws, Upper Pole
b / ts:	12.4891	in
Q, Where Qa = 1.0:	0.8906	= Qa 1.34 - 0.76 (b / ts) (Fy / E)$^{1/2}$
r:	0.3955	in^3
K L / r:	23.7683	
Φ:	0.9000	
Axial Capacity, ΦFcr:	49.67	ksi = Φ Q [0.658$^{Q\,Fy\,/\,Fe}$] Fy
Φ:	0.9000	
Ten. Yielding Cap., ΦFnt:	58.50	ksi = Φ Fy
Φ:	0.7500	
Ten. Rupture Cap., ΦFnr:	60.00	ksi = Φ Fu (Aen / Ag)
Ratio:	23.4%	

Stiffener 2 Analysis per AISC Sect. D2, E3 & E7

	Stiffener Type 2	
Gross Area, Ag:	8.7500	in^2
Effective Net Area, Aen:	8.7500	in^2 = Ag U, where U = 1.000
Stiffener Axial, Pu:	97.3	kips
Stiffener Stress, fu:	11.1	ksi = Pu / Ag
b:	16.0000	in = (Df - Dp) / 2 + n + Ws, Upper Pole
b / ts:	12.8000	in
Q, Where Qa = 1.0:	0.8794	= Qa 1.34 - 0.76 (b / ts) (Fy / E)$^{1/2}$
r:	0.3608	in^3
K L / r:	10.2537	
Φ:	0.9000	
Axial Capacity, ΦFcr:	51.00	ksi = Φ Q [0.658$^{Q\,Fy\,/\,Fe}$] Fy
Φ:	0.9000	
Ten. Yielding Cap., ΦFnt:	58.50	ksi = Φ Fy
Φ:	0.7500	
Ten. Rupture Cap., ΦFnr:	60.00	ksi = Φ Fu (Aen / Ag)
Ratio:	21.8%	

Analysis Summary:

Bridge Stiffener Type 1	Bridge Stiffener Type 2
Weld Analysis Ratio: 45.7% PASS	Weld Analysis Ratio: 13.1% PASS
Pole Analysis Ratio: 78.4% PASS	Pole Analysis Ratio: 19.4% PASS
Stiffener Analysis Ratio: 22.3% PASS	Stiffener Analysis Ratio: 20.8% PASS

*TIA-222-H Section 15.5 Applied

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v2.1, Effective Date: 05-03-17

Date: 6/15/2021
Project No: 37521-0073.006.7805
Site Name: Milford JAI-ALAI
Site Number/BUN: 876309
Description: 120' Monopole
Owner: CCI
Engineer: RMF

Welded Bridge Stiffener Analysis per TIA-222-G & AISC 13th Ed. (Black)

General Parameters and Loading:

Flange Elevation:	30.00	ft
TIA Reference Standard:	TIA-222-G	
AISC Manual:	13th Ed. (Black)	
Method:	LRFD	
ASD Stress Increase, ASIF:	N/A	
Moment, Muf:	1211.5	k-ft
Axial, Puf:	26.3	kips
Shear, Vf:	20.9	kips

Pole Parameters:

	Upper Pole	Lower Pole	
Pole Diameter, Dp:	30.00	36.00	in
Pole Thickness, tp:	0.3750	0.3750	in
Pole Fy:	42	42	ksi
Pole Fu:	63	63	ksi
Flange Diameter, Df:	47.00	47.00	in

Bridge Stiffener Parameters:

	Stiffener Type 1	Stiffener Type 2	
Qty. Stiffeners:	3	3	
Upper Weld Length, L1:	45.25	47.25	in
Lower Weld Length, L2:	42.25	44.13	in
Weld Size, w:	0.3750	0.3750	in
Electrode:	E70	E80	
Effective Stiffener Width, Ws:	7.00	7.00	in
Stiffener Thickness, ts:	1.25	1.25	in
Notch, n:	0.50	0.50	in
Stiffener Fy:	65	65	ksi
Stiffener Fu:	80	80	ksi
Unbraced Length, L:	5.63	4.63	in
K:	0.80	0.80	
Stiffener Spacing:	Symmetric	Symmetric	
Start Angle, for Symmetric:	22.5	75	degrees
Stiffener Circle:	55.00	55.00	in = Df + 2 n + Ws
Upper Eccentricity, e1:	12.50	12.50	in = (Df - Dp) / 2 + n + Ws / 2
Lower Eccentricity, e2:	9.50	9.50	in = (Df - Dp) / 2 + n + Ws / 2

Flange Bolt Parameters:

Number of Bolt Circles: (1) Bolt Circle

	Bolt Circle 1	Bolt Circle 2	
Qty. Bolts:	0	0	
Bolt Diameter:	1.50	0.00	in
Bolt Circle:	41.00	0.00	in
Bolt Spacing:	Symmetric	Symmetric	
Start Angle, for Symmetric:	0	0	degrees
Bolt Area, Ag:	0.0000	0.0000	in
Max. Tension:	0.00	0.00	kips
Max. Net Tension:	0.00	0.00	kips
Max. Net Compression:	0.00	0.00	kips
Moment to Bolt Circle:	0.00	0.00	k-ft
Axial to Bolt Circle:	0.00	0.00	kips
Shear to Bolt Circle:	0.00	0.00	kips
Equivalent Bolt Circle:	0.00	0.00	in

Weld Analysis per AISC Tables 8-4 & 8-3:

Upper Pole	Stiffener Type 1	Stiffener Type 2	
D:	6	6	Num. of Sixteenths in Weld
a:	0.2762	0.2646	= e1 / L1
k:	0	0	
C:	3.1945	3.2460	Tabulated Cofficient
C1:	1.0000	1.0300	Coefficient for Electrode
Φ:	0.7500	0.7500	
Stiffener Axial, Pu:	180.7	180.7	kips
Axial Capacity, ΦPn:	650.5	710.9	kips = Φ C C1 D L
Ratio:	27.8%	25.4%	

Lower Pole			
D:	6	6	Num. of Sixteenths in Weld
a:	0.2249	0.2153	= e2 / L2
k:	0	0	
C:	3.4106	3.4488	Tabulated Cofficient
C1:	1.0000	1.0300	Coefficient for Electrode
Φ:	0.7500	0.7500	
Stiffener Axial, Pu:	180.7	180.7	kips
Axial Capacity, ΦPn:	648.4	705.3	kips = Φ C C1 D L
Ratio:	27.9%	25.6%	

Pole Analysis per AISC Table J2.5 & Sect. J4.2:

Upper Pole	Stiffener Type 1	Stiffener Type 2	
Stiffener Axial, Pu:	180.7	180.7	kips
Effective Throat, te:	0.2651	0.2651	in = 0.707 w
Shear Stress, fuv:	2.0	1.9	kips/in= Pu / (2 L1)
Section Modulus, S:	682.5	744.2	in^2 = $L1^2$ / 3
Bending Stress, fub:	3.3	3.0	kips/in = Pu e1 / S
Combined Stress, fu:	3.9	3.6	kips/in = $(fuv^2 + fub^2)^{1/2}$
Φ:	1.0000	1.0000	
Stress Capacity, ΦFn	9.5	9.5	kips/in = Φ 0.6 Fy tp
Ratio:	40.9%	38.0%	

Lower Pole			
Stiffener Axial, Pu:	180.7	180.7	kips
Effective Throat, te:	0.2651	0.2651	in = 0.707 w
Shear Stress, fuv:	2.1	2.0	ksi = Pu / (2 L2)
Section Modulus, S:	595.0	649.0	in^2 = $L2^2$ / 3
Bending Stress, fub:	2.9	2.6	ksi = Pu e2 / S
Combined Stress, fu:	3.6	3.3	kips/in = $(fuv^2 + fub^2)^{1/2}$
Φ:	1.0000	1.0000	
Stress Capacity, ΦFn	9.5	9.5	kips/in = Φ 0.6 Fy tp
Ratio:	38.0%	35.4%	

Stiffener 1 Analysis per AISC Sect. D2, E3 & E7

	Stiffener Type 1	
Gross Area, Ag:	8.7500	in^2
Effective Net Area, Aen:	8.7500	in^2 = Ag U, where U = 1.000
Stiffener Axial, Pu:	180.7	kips
Stiffener Stress, fu:	20.7	ksi = Pu / Ag
b:	16.0000	in = (Df - Dp) / 2 + n + Ws, Upper Pole
b / ts:	12.8000	in
Q, Where Qa = 1.0:	0.8794	= Qa 1.34 - 0.76 (b / ts) (Fy / E)$^{1/2}$
r:	0.3608	in^3
K L / r:	12.4708	
Φ:	0.9000	
Axial Capacity, ΦFcr:	50.78	ksi = Φ Q [0.658$^{Q\,Fy\,/\,Fe}$] Fy
Φ:	0.9000	
Ten. Yielding Cap., ΦFnt:	58.50	ksi = Φ Fy
Φ:	0.7500	
Ten. Rupture Cap., ΦFnr:	60.00	ksi = Φ Fu (Aen / Ag)
Ratio:	40.7%	

Stiffener 2 Analysis per AISC Sect. D2, E3 & E7

	Stiffener Type 2	
Gross Area, Ag:	8.7500	in^2
Effective Net Area, Aen:	8.7500	in^2 = Ag U, where U = 1.000
Stiffener Axial, Pu:	180.7	kips
Stiffener Stress, fu:	20.7	ksi = Pu / Ag
b:	16.0000	in = (Df - Dp) / 2 + n + Ws, Upper Pole
b / ts:	12.8000	in
Q, Where Qa = 1.0:	0.8794	= Qa 1.34 - 0.76 (b / ts) (Fy / E)$^{1/2}$
r:	0.3608	in^3
K L / r:	10.2537	
Φ:	0.9000	
Axial Capacity, ΦFcr:	51.00	ksi = Φ Q [0.658$^{Q\,Fy\,/\,Fe}$] Fy
Φ:	0.9000	
Ten. Yielding Cap., ΦFnt:	58.50	ksi = Φ Fy
Φ:	0.7500	
Ten. Rupture Cap., ΦFnr:	60.00	ksi = Φ Fu (Aen / Ag)
Ratio:	40.5%	

Analysis Summary:

Bridge Stiffener Type 1	Bridge Stiffener Type 2
Weld Analysis Ratio: 26.6% PASS	Weld Analysis Ratio: 24.4% PASS
Pole Analysis Ratio: 39.0% PASS	Pole Analysis Ratio: 36.2% PASS
Stiffener Analysis Ratio: 38.8% PASS	Stiffener Analysis Ratio: 38.6% PASS

*TIA-222-H Section 15.5 Applied

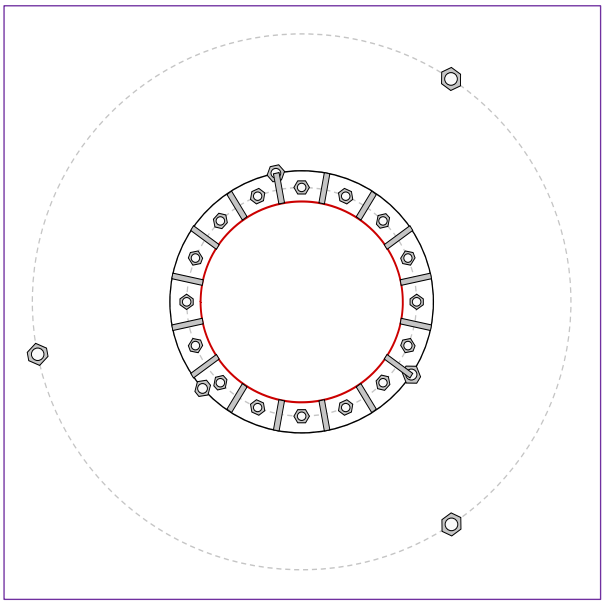
Monopole Base Plate Connection

Site Info	
BU #	876309
Site Name	MILFORD JAI-ALAI
Order #	552677 Rev. 0

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	See Custom Sheet
l_{ar} (in)	See Custom Sheet

Applied Loads	
Moment (kip-ft)	1965.26
Axial Force (kips)	40.72
Shear Force (kips)	26.77

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (16) 1-1/2" ø bolts (A354-BC N; Fy=109 ksi, Fu=125 ksi) on 41" BC
GROUP 2: (2) 1-3/4" ø bolts (Dywidag N; Fy=120 ksi, Fu=125 ksi) on 47" BC
pos. (deg): 101.3, 221.3

GROUP 3: (1) 2" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 47" BC
pos. (deg): 326.3

GROUP 4: (3) 2-1/4" ø bolts (Williams R71 N; Fy=120 ksi, Fu=125 ksi) on 96" BC
pos. (deg): 56.3, 191.3, 303.8

Base Plate Data

47" OD x 2" Plate (A36; Fy=36 ksi, Fu=58 ksi)

Stiffener Data

(16) 18"H x 5.5"W x 1"T, Notch: 0.75"
plate: Fy= 50 ksi ; weld: Fy= 70 ksi
horiz. weld: 0.4375" groove, 45° dbl bevelFALSE
vert. weld: 0.25" fillet

Pole Data

36" x 0.375" round pole (A53-B-42; Fy=42 ksi, Fu=63 ksi)

Analysis Results

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

GROUP 1:		
Pu_t = 34.69	ϕPn_t = 132.19	**Stress Rating**
Vu = 1.67	ϕVn = 82.83	**25.0%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 77.36	ϕPn_t = 245.63	**Stress Rating**
Vu = 0	ϕVn = 122.81	**30.0%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 3:		
Pu_t = 67.71	ϕPn_t = 234.38	**Stress Rating**
Vu = 0	ϕVn = 147.26	**27.5%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 4:		
Pu_t = 233.61	ϕPn_t = 382.5	**Stress Rating**
Vu = 0	ϕVn = 191.25	**58.2%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	8.41	(Roark's Flexural)
Allowable Stress (ksi):	32.4	
Stress Rating:	**24.7%**	**Pass**

Stiffener Summary

Horizontal Weld:	**24.4%**	**Pass**
Vertical Weld:	**12.8%**	**Pass**
Plate Flexure+Shear:	**1.6%**	**Pass**
Plate Tension+Shear:	**10.5%**	**Pass**
Plate Compression:	**10.8%**	**Pass**
Pole Summary		
Punching Shear:	**3.4%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

note: Bending interaction not considered when Grout Considered = "Yes"

Bolt Group	Resist Axial	Resist Shear	Induce Plate Bending	Grout Considered	Apply at BARB Elevation	BARB CL Elevation (ft)
1	Yes	Yes	Yes	No	No	
2	No	No	No	No	No	
3	No	No	No	No	No	
4	No	No	No	No	No	

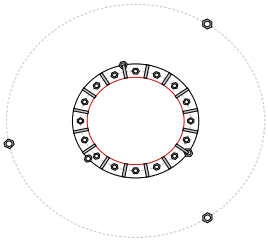
Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_w (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	1.5	A354-BC	41	0.5	0	N-Included		No
2	1	22.5	1.5	A354-BC	41	0.5	0	N-Included		No
3	1	45	1.5	A354-BC	41	0.5	0	N-Included		No
4	1	67.5	1.5	A354-BC	41	0.5	0	N-Included		No
5	1	90	1.5	A354-BC	41	0.5	0	N-Included		No
6	1	112.5	1.5	A354-BC	41	0.5	0	N-Included		No
7	1	135	1.5	A354-BC	41	0.5	0	N-Included		No
8	1	157.5	1.5	A354-BC	41	0.5	0	N-Included		No
9	1	180	1.5	A354-BC	41	0.5	0	N-Included		No
10	1	202.5	1.5	A354-BC	41	0.5	0	N-Included		No
11	1	225	1.5	A354-BC	41	0.5	0	N-Included		No
12	1	247.5	1.5	A354-BC	41	0.5	0	N-Included		No
13	1	270	1.5	A354-BC	41	0.5	0	N-Included		No
14	1	292.5	1.5	A354-BC	41	0.5	0	N-Included		No
15	1	315	1.5	A354-BC	41	0.5	0	N-Included		No
16	1	337.5	1.5	A354-BC	41	0.5	0	N-Included		No
17	2	101.3	1.75	Dywidag	47	0.5	0	N-Included	2.62	No
18	2	221.3	1.75	Dywidag	47	0.5	0	N-Included	2.62	No
19	3	326.3	2	A193 Gr. B7	47	0.5	0	N-Included		No
20	4	56.3	2.25	Williams R71	96	0.5	0	N-Included	4.08	No
21	4	191.3	2.25	Williams R71	96	0.5	0	N-Included	4.08	No
22	4	303.8	2.25	Williams R71	96	0.5	0	N-Included	4.08	No

Custom Stiffener Connection

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	11.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
2	1	33.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
3	1	56.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
4	1	78.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
5	1	101.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
6	1	123.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
7	1	146.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
8	1	168.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
9	1	191.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
10	1	213.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
11	1	236.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
12	1	258.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
13	1	281.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
14	1	303.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
15	1	326.25	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70
16	1	348.75	5.5	18	1	0.75	0.75	50	Groove	0.4375	45		0.25	70

Plot Graphic



Pier and Pad Foundation

BU # :	876309
Site Name:	MILFORD JAI-ALA
App. Number:	533279 Rev. 2

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	40.73	kips
Base Shear, Vu_comp:	26.76	kips
Moment, M_u:	1965.26	ft-kips
Tower Height, **H**:	120	ft
BP Dist. Above Fdn, bp_{dist}:	4	in
Bolt Circle / Bearing Plate Width, **BC**:	41	in

Foundation Analysis Checks	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	178.44	26.76	**14.3%**	**Pass**
Bearing Pressure (ksf)	23.08	4.49	**19.4%**	**Pass**
*Overturning (kip*ft)*	2679.54	2161.50	**80.7%**	**Pass**
*Pad Flexure (kip*ft)*	4766.69	1174.10	**23.5%**	**Pass**
Pad Shear - 1-way (kips)	1254.07	74.57	**5.7%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.164	0.001	**0.6%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	9533.38	0.00	**0.0%**	**Pass**

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

Soil Rating*:	**80.7%**
Structural Rating*:	**23.5%**

Pad Properties		
Depth, **D**:	5.5	ft
Pad Width, W_1:	16	ft
Pad Width, W_2:	21	ft
Pad Thickness, **T**:	7	ft
Pad Rebar Size (Bottom dir. 1), Sp_1:	8	
Pad Rebar Quantity (Bottom dir. 1), mp_1:	17	
Pad Rebar Size (Bottom dir. 2), Sp_2:	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	17	
Pad Clear Cover, cc_{pad}:	3	in

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

Soil Properties		
Total Soil Unit Weight, γ:	140	pcf
Ultimate Net Bearing, Qnet:	30.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	40	degrees
SPT Blow Count, N_{blows}:	100	
Base Friction, μ:	0.4	
Neglected Depth, **N**:	3.33	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	N/A	ft

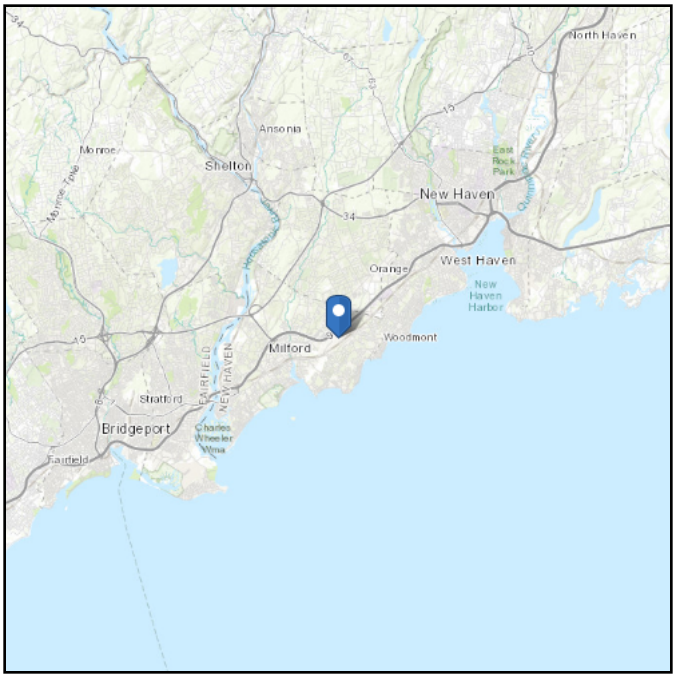
<--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-10
Risk Category: II
Soil Class: D - Stiff Soil

Elevation: 56.6 ft (NAVD 88)
Latitude: 41.234053
Longitude: -73.022889



Wind

Results:

Wind Speed:	125 Vmph
10-year MRI	77 Vmph
25-year MRI	87 Vmph
50-year MRI	94 Vmph
100-year MRI	101 Vmph

Data Source: ASCE/SEI 7-10, Fig. 26.5-1A and Figs. CC-1–CC-4, incorporating errata of March 12, 2014

Date Accessed: Wed Jan 13 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-10 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 7-10 Section 26.2. Glazed openings need not be protected against wind-borne debris.

Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

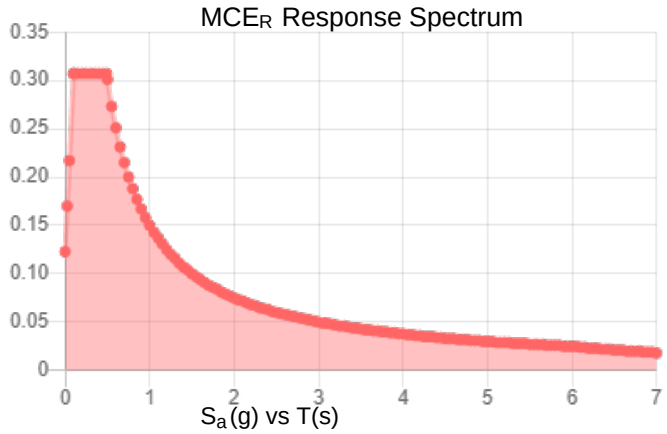
Seismic

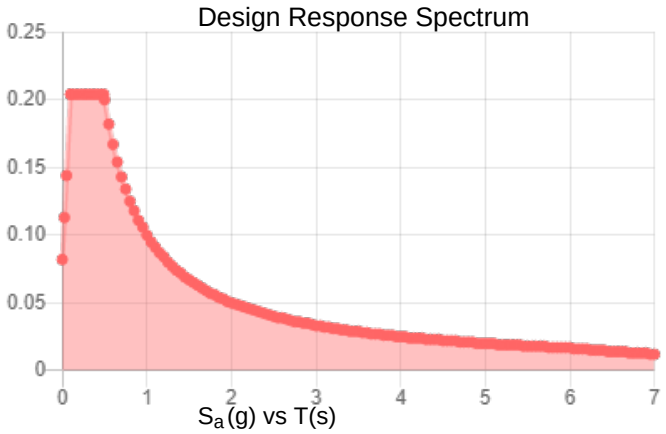
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.192	S_{DS} :	0.204
S_1 :	0.063	S_{D1} :	0.1
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.101
S_{MS} :	0.307	PGA_M :	0.162
S_{M1} :	0.15	F_{PGA} :	1.597
		I_e :	1

Seismic Design Category B





Data Accessed: Wed Jan 13 2021

Date Source: USGS Seismic Design Maps based on ASCE/SEI 7-10, incorporating Supplement 1 and errata of March 31, 2013, and ASCE/SEI 7-10 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-10 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	0.75 in.
Concurrent Temperature:	15 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Wed Jan 13 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-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.