

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

www.ct.gov/csc

VIA ELECTRONIC MAIL

March 18, 2019

Anne Marie Zsamba
Real Estate Specialist
Crown Castle
3 Corporate Drive, Suite 101
Clifton Park, NY 12065

RE: **EM-AT&T-134-190225** – AT&T notice of intent to modify an existing telecommunications facility located at 46 Brendan Street, Stafford Springs, Connecticut.

Dear Ms. Zsamba:

The Connecticut Siting Council (Council) is in receipt of your correspondence of March 15, 2019 submitted in response to the Council's March 1, 2019 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/IN/emr



CONNECTICUT SITING COUNCIL

Affirmative Action / Equal Opportunity Employer

Robidoux, Evan

From: Zsamba, Anne Marie <AnneMarie.Zsamba@crowncastle.com>
Sent: Friday, March 15, 2019 9:13 AM
To: Robidoux, Evan
Cc: CSC-DL Siting Council
Subject: RE: Council Incomplete Letter for EM-AT&T-134-190225-BrendanSt-Stafford Springs
Attachments: CSC AT&T 806365 Response to Notice of Incomplete 3.15.19.pdf

Follow Up Flag: Follow up
Flag Status: Flagged

Good morning,

Attached please find my response to the Council's notice of incomplete. Hardcopy to arrive Monday morning. Thank you!

Best,
Anne Marie

ANNE MARIE ZSAMBA
Real Estate Specialist
T: (201) 236-9224
F: (724) 416-6112

CROWN CASTLE
3 Corporate Park Drive, Suite 101,
Clifton Park, NY 12065
CrownCastle.com

From: Robidoux, Evan <Evan.Robidoux@ct.gov>
Sent: Wednesday, March 6, 2019 9:19 AM
To: Zsamba, Anne Marie <AnneMarie.Zsamba@crowncastle.com>
Cc: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: Council Incomplete Letter for EM-AT&T-134-190225-BrendanSt-Stafford Springs

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Please see the attached correspondence.

Evan Robidoux
Clerk Typist
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051



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

March 15, 2019

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

RE: Notice of Exempt Modification for Sprint Crown Site BU: 806365
AT&T Site ID: 10035240
46 Brendan Street, Brendan & Quinn Streets, Stafford, Tolland County, CT 06076
Latitude: 41° 57' 51.20"/ Longitude: -72° 18' 17.80"

Dear Ms. Bachman:

I am in receipt of the Council's Notice of Incomplete Letter dated March 1, 2019. Attached please find a structural analysis that has been revised per the Council's request to reflect the 2018 Connecticut State Building Code. It is our hope that submission of this report will deem our application complete. Please confirm. Thank you kindly.

Sincerely,

Anne Marie Zsamba, Esq.
Real Estate Specialist
3 Corporate Park Drive, Suite 101, Clifton Park, NY 12065
(201) 236-9224
annemarie.zsamba@crowncastle.com

Enclosure

Date: **March 14, 2019**

Heather Simeone
Crown Castle
3530 Toringdon Way Suite 300
Charlotte, NC 28277

Paul J. Ford & Company
250 East Broad st., Suite 600
Columbus, OH 43215
(614) 221-6679

Subject: Structural Analysis Report

Carrier Designation: *AT&T Mobility Co-Locate*
Carrier Site Number: 10035263
Carrier Site Name: CTL01049

Crown Castle Designation:
Crown Castle BU Number: 806365
Crown Castle Site Name: HRT 303 943203
Crown Castle JDE Job Number: 548510
Crown Castle Work Order Number: 1692600
Crown Castle Order Number: 471524 Rev. 0

Engineering Firm Designation: Paul J. Ford & Company Project Number: 37519-0549.001.7805
(Revised Wording)

Site Data: BRENDON & QUINN STREETS, STAFFORD, Tolland County, CT
Latitude 41° 57' 51.2", Longitude -72° 18' 17.8"
129 Foot - Monopole Tower

Dear Heather Simeone,

Paul J. Ford & 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:

LC4.7: Modified Structure w/ Proposed Equipment Configuration

Sufficient Capacity

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2018 Connecticut State Building Code per section 1609.3 and Appendix N. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

All modifications and equipment proposed in this report shall be installed in accordance with the proposed modifications drawings, referenced in Table 3 of this report, for the determined available structural capacity to be effective.

Respectfully submitted by:


Jaime Acuna
Structural Designer
jacuna@pauljford.com

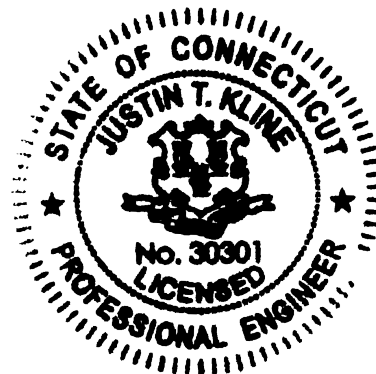


TABLE OF CONTENTS

1) INTRODUCTION

2) ANALYSIS CRITERIA

Table 1 - Proposed Equipment Configuration

Table 2 - Other Considered Equipment

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

3.1) Analysis Method

3.2) Assumptions

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Table 5 – Tower Component Stresses vs. Capacity

4.1) Recommendations

5) APPENDIX A

tnxTower Output

6) APPENDIX B

Base Level Drawing

7) APPENDIX C

Additional Calculations

1) INTRODUCTION

This tower is a 129 ft Monopole tower designed by VALMONT.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	125 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	2.0 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)	
94.0	95.0	3	cci antennas	HPA65R-BU8A w/ Mount Pipe	12 4 2	1-1/4 3/4 3/8	
		3	ericsson	RRUS 4449 B5/B12			
		3	ericsson	RRUS 8843 B2/B66A			
		3	kathrein	80010966 w/ Mount Pipe			
		3	powerwave technologies	7770.00 w/ Mount Pipe			
		2	raycap	DC6-48-60-18-8F			
	94.0	94.0	9	SitePro			Crossover Plate Kit, SitePro #SCX1-K
			1	SitePro			SitePro #1 PRK -1245LW
			1	tower mounts			Handrail Kit Pipe 2" STD
			1	tower mounts			Platform Mount [LP 714-1]
	90.0	3	communication components inc.	DTMABP7819VG12A			

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)
125.0	126.0	4	ericsson	AIR 32 B2A/B66AA w/ Mount Pipe	4	1-5/8
		4	ericsson	ERICSSON AIR 21 B2A B4P w/ Mount Pipe		
		4	ericsson	RADIO 4449 B12/B71		
		4	rfs celwave	APXVAARR24_43-U-NA20 w/ Mount Pipe		
	125.0	1	tower mounts	Platform Mount [LP 701-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
116.0	117.0	3	alcatel lucent	AWS4 (B66) 4X45 RRH	12 2	7/8 1-1/4
		3	alcatel lucent	B13 RRH 4X30		
		3	alcatel lucent	PCS B25 RRH4X30		
		6	andrew	LNx-8513DS-VTM w/ Mount Pipe		
		6	commscope	SBNH-1D8585C w/ Mount Pipe		
		2	rfs celwave	DB-B1-6C-12AB-0Z		
	116.0	1	tower mounts	Platform Mount [LP 602-1]		
105.0	105.0	1	tower mounts	Miscellaneous [NA 510-1]	3 1	1-1/4 7/8
		1	tower mounts	Platform Mount [LP 1201-1]		
	104.0	3	alcatel lucent	PCS 1900MHZ 4X45W-65MHZ		
		6	alcatel lucent	RRH2X50-800		
		3	alcatel lucent	TD-RRH8X20-25		
		3	commscope	NNVV-65B-R4 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-ALU-I20 w/ Mount Pipe		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	Dr. Clarence Welti, P.E., P.C., 01/09/1994	262167	CCISITES
4-POST-MODIFICATION INSPECTION	FDH, Velocitel, 15BORF1500, 06/02/2015	5734218	CCISITES
4-POST-MODIFICATION INSPECTION	ETS, 151790, 03/10/2016	6133277	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	TEP, 081976, 07/31/2008	2294383	CCISITES
4-TOWER MANUFACTURER DRAWINGS	Valmont, 11298-94, 01/03/1995	2046046	CCISITES
4-TOWER STRUCTURAL ANALYSIS REPORTS	Crown Castle, 606069, 05/09/2013	3833112	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37515-0530.002.7700, 03/03/2015	5577072	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	PJF, 37515-0530.005.7700, 05/04/2015	5664687	CCISITES
4-PROPOSED TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	B&V, 194393, 07/29/18	7700293	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.4.0), 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.

3.2) Assumptions

- 1) Tower and structures were built in accordance with the manufacturer's specifications.
- 2) The tower and structures have been maintained in accordance with the manufacturer's specification.
- 3) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.
- 4) Pier foundation vertical steel information was assumed based on the Crown Castle structural analysis referenced in Table 4 (CCi Doc #3833112).
- 5) Monopole was modified in conformance with the referenced modification drawings.
- 6) Monopole will be modified in conformance with the referenced modification drawings.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	129 - 124	Pole	TP16x16x0.375	Pole	7.6%	Pass
L2	124 - 119	Pole	TP16x16x0.375	Pole	25.3%	Pass
L3	119 - 115.5	Pole	TP16x16x0.375	Pole	42.4%	Pass
L4	115.5 - 115	Pole	TP17.81x16x0.375	Pole	36.9%	Pass
L5	115 - 110	Pole	TP18.96x17.81x0.2188	Pole	51.8%	Pass
L6	110 - 105	Pole	TP20.111x18.96x0.2188	Pole	67.3%	Pass
L7	105 - 100	Pole	TP21.261x20.111x0.2188	Pole	85.1%	Pass
L8	100 - 99.25	Pole	TP21.433x21.261x0.2188	Pole	87.6%	Pass
L9	99.25 - 99	Pole + Reinf.	TP21.491x21.433x0.4563	Reinf. 15 Tension Rupture	71.6%	Pass
L10	99 - 94	Pole + Reinf.	TP22.641x21.491x0.4376	Reinf. 15 Tension Rupture	85.3%	Pass
L11	94 - 92.08	Pole + Reinf.	TP23.083x22.641x0.4313	Reinf. 15 Tension Rupture	91.8%	Pass
L12	92.08 - 91.83	Pole + Reinf.	TP23.141x23.083x0.6563	Reinf. 9 Tension Rupture	62.7%	Pass
L13	91.83 - 86.83	Pole + Reinf.	TP24.291x23.141x0.6313	Reinf. 9 Tension Rupture	73.7%	Pass
L14	86.83 - 81.83	Pole + Reinf.	TP25.441x24.291x0.6063	Reinf. 9 Tension Rupture	83.5%	Pass
L15	81.83 - 78	Pole + Reinf.	TP27.3x25.441x0.5938	Reinf. 9 Tension Rupture	90.3%	Pass
L16	78 - 73	Pole + Reinf.	TP27.033x25.885x0.6875	Reinf. 9 Tension Rupture	86.5%	Pass
L17	73 - 71.5	Pole + Reinf.	TP27.378x27.033x0.675	Reinf. 9 Tension Rupture	88.4%	Pass
L18	71.5 - 71.25	Pole + Reinf.	TP27.435x27.378x0.7375	Reinf. 15 Tension Rupture	81.4%	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L19	71.25 - 67.92	Pole + Reinf.	TP28.2x27.435x0.725	Reinf. 15 Tension Rupture	85.2%	Pass
L20	67.92 - 67.67	Pole + Reinf.	TP28.258x28.2x0.8875	Reinf. 8 Tension Rupture	65.0%	Pass
L21	67.67 - 66.33	Pole + Reinf.	TP28.565x28.258x0.875	Reinf. 8 Tension Rupture	66.2%	Pass
L22	66.33 - 66.08	Pole + Reinf.	TP28.623x28.565x1.0375	Reinf. 8 Tension Rupture	61.9%	Pass
L23	66.08 - 61.08	Pole + Reinf.	TP29.771x28.623x0.9875	Reinf. 8 Tension Rupture	65.8%	Pass
L24	61.08 - 56.5	Pole + Reinf.	TP30.823x29.771x0.9625	Reinf. 8 Tension Rupture	69.0%	Pass
L25	56.5 - 56.25	Pole + Reinf.	TP30.881x30.823x0.9625	Reinf. 2 Tension Rupture	69.2%	Pass
L26	56.25 - 51.25	Pole + Reinf.	TP32.029x30.881x0.9375	Reinf. 2 Tension Rupture	72.4%	Pass
L27	51.25 - 46.25	Pole + Reinf.	TP33.178x32.029x0.9125	Reinf. 2 Tension Rupture	75.4%	Pass
L28	46.25 - 42	Pole + Reinf.	TP35.36x33.178x0.8875	Reinf. 2 Tension Rupture	77.7%	Pass
L29	42 - 35.75	Pole + Reinf.	TP34.968x33.529x0.8125	Reinf. 6 Tension Rupture	82.4%	Pass
L30	35.75 - 35.08	Pole + Reinf.	TP35.122x34.968x0.8125	Reinf. 6 Tension Rupture	82.7%	Pass
L31	35.08 - 34.83	Pole + Reinf.	TP35.18x35.122x0.8125	Reinf. 6 Tension Rupture	82.8%	Pass
L32	34.83 - 31.25	Pole + Reinf.	TP36.004x35.18x0.8	Reinf. 6 Tension Rupture	84.1%	Pass
L33	31.25 - 31	Pole + Reinf.	TP36.062x36.004x0.8625	Reinf. 6 Tension Rupture	79.1%	Pass
L34	31 - 26	Pole + Reinf.	TP37.213x36.062x0.8375	Reinf. 6 Tension Rupture	80.9%	Pass
L35	26 - 22	Pole + Reinf.	TP38.134x37.213x0.825	Reinf. 6 Tension Rupture	82.3%	Pass
L36	22 - 21.75	Pole + Reinf.	TP38.192x38.134x0.9375	Reinf. 6 Tension Rupture	77.9%	Pass
L37	21.75 - 20.5	Pole + Reinf.	TP38.48x38.192x0.925	Reinf. 6 Tension Rupture	78.3%	Pass
L38	20.5 - 20.25	Pole + Reinf.	TP38.537x38.48x0.925	Reinf. 4 Tension Rupture	78.4%	Pass
L39	20.25 - 19.08	Pole + Reinf.	TP38.807x38.537x0.925	Reinf. 4 Tension Rupture	78.8%	Pass
L40	19.08 - 18.83	Pole + Reinf.	TP38.864x38.807x0.875	Reinf. 4 Tension Rupture	79.2%	Pass
L41	18.83 - 18	Pole + Reinf.	TP39.055x38.864x0.875	Reinf. 4 Tension Rupture	79.4%	Pass
L42	18 - 17.75	Pole + Reinf.	TP39.113x39.055x1	Reinf. 1 Tension Rupture	70.5%	Pass
L43	17.75 - 12.75	Pole + Reinf.	TP40.264x39.113x0.975	Reinf. 1 Tension Rupture	71.9%	Pass
L44	12.75 - 7.75	Pole + Reinf.	TP41.415x40.264x0.95	Reinf. 1 Tension Rupture	73.2%	Pass
L45	7.75 - 4	Pole + Reinf.	TP42.279x41.415x0.95	Reinf. 1 Tension Rupture	74.1%	Pass
L46	4 - 3.75	Pole + Reinf.	TP42.337x42.279x0.95	Reinf. 1 Tension Rupture	73.0%	Pass
L47	3.75 - 3	Pole + Reinf.	TP42.509x42.337x0.95	Reinf. 1 Tension Rupture	73.2%	Pass
L48	3 - 2.75	Pole + Reinf.	TP42.567x42.509x1.025	Reinf. 3 Tension Yield	63.3%	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L49	2.75 - 0	Pole + Reinf.	TP43.2x42.567x1	Reinf. 3 Tension Yield	63.9%	Pass
L50					Summary	
				Pole	87.6%	Pass
				Reinforcement	91.8%	Pass
				Overall	91.8%	Pass

Table 5 - Tower Component Stresses vs. Capacity - LC4.7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	89.1	Pass
1	Base Plate	0	51.4	Pass
1	Base Foundation Structural Steel	0	85.8	Pass
1	Base Foundation Soil Interaction	0	28.0	Pass
1	Extension Connection	115	31.2	Pass

Structure Rating (max from all components) =	91.8%
---	--------------

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 monopole and its foundation will have sufficient capacity to carry the proposed loading configuration once the proposed modifications are installed.

- Install the modifications as per the proposed modification drawings referenced in Table 3.

APPENDIX A
TNXTOWER OUTPUT

Tower Input Data

The tower is a monopole.

This tower is designed using the TIA-222-H standard.

The following design criteria apply:

- 1) Tower is located in Tolland County, Connecticut.
- 2) Tower base elevation above sea level: 754.0000 ft.
- 3) Basic wind speed of 125.00 mph.
- 4) Risk Category II.
- 5) Exposure Category C.
- 6) Simplified Topographic Factor Procedure for wind speed-up calculations is used.
- 7) Topographic Category: 1.
- 8) Crest Height 0.0000 ft.
- 9) Nominal ice thickness of 1.7000 in.
- 10) Ice thickness is considered to increase with height.
- 11) Ice density of 56.000 pcf.
- 12) A wind speed of 50.00 mph is used in combination with ice.
- 13) Temperature drop of 50.000 °F.
- 14) Deflections calculated using a wind speed of 60.00 mph.
- 15) TIA-222-H Annex S.
- 16) A non-linear (P-delta) analysis was used.
- 17) Pressures are calculated at each section.
- 18) Stress ratio used in pole design is 1.05.
- 19) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

Consider Moments - Legs Consider Moments - Horizontals Consider Moments - Diagonals Use Moment Magnification Use Code Stress Ratios ✓ Use Code Safety Factors - Guys Escalate Ice Always Use Max Kz Use Special Wind Profile Include Bolts In Member Capacity Leg Bolts Are At Top Of Section Secondary Horizontal Braces Leg Use Diamond Inner Bracing (4 Sided) SR Members Have Cut Ends SR Members Are Concentric	Distribute Leg Loads As Uniform Assume Legs Pinned ✓ Assume Rigid Index Plate ✓ Use Clear Spans For Wind Area Use Clear Spans For KL/r Retension Guys To Initial Tension ✓ Bypass Mast Stability Checks ✓ Use Azimuth Dish Coefficients ✓ Project Wind Area of Appurt. Autocalc Torque Arm Areas Add IBC .6D+W Combination Sort Capacity Reports By Component Triangulate Diamond Inner Bracing Treat Feed Line Bundles As Cylinder Ignore KL/ry For 60 Deg. Angle Legs	Use ASCE 10 X-Brace Ly Rules Calculate Redundant Bracing Forces Ignore Redundant Members in FEA SR Leg Bolts Resist Compression All Leg Panels Have Same Allowable Offset Girt At Foundation ✓ Consider Feed Line Torque Include Angle Block Shear Check Use TIA-222-H Bracing Resist. Exemption Use TIA-222-H Tension Splice Exemption <div style="text-align: center; background-color: #e0e0e0; padding: 2px;">Poles</div> ✓ Include Shear-Torsion Interaction Always Use Sub-Critical Flow Use Top Mounted Sockets Pole Without Linear Attachments Pole With Shroud Or No Appurtenances Outside and Inside Corner Radii Are Known
--	---	---

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	129.0000- 124.0000	5.0000	0.000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L2	124.0000- 119.0000	5.0000	0.000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L3	119.0000- 115.5000	3.5000	0.000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L4	115.5000- 115.0000	0.5000	0.000	Round	16.0000	17.8100	0.3750		A53-B-35 (35 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L5	115.0000- 110.0000	5.0000	0.000	12	17.8100	18.9603	0.2188	0.8752	A572-65 (65 ksi)
L6	110.0000- 105.0000	5.0000	0.000	12	18.9603	20.1106	0.2188	0.8752	A572-65 (65 ksi)
L7	105.0000- 100.0000	5.0000	0.000	12	20.1106	21.2609	0.2188	0.8752	A572-65 (65 ksi)
L8	100.0000- 99.2500	0.7500	0.000	12	21.2609	21.4335	0.2188	0.8752	A572-65 (65 ksi)
L9	99.2500- 99.0000	0.2500	0.000	12	21.4335	21.4910	0.4563	1.8252	A572-65 (65 ksi)
L10	99.0000- 94.0000	5.0000	0.000	12	21.4910	22.6413	0.4375	1.7502	A572-65 (65 ksi)
L11	94.0000- 92.0800	1.9200	0.000	12	22.6413	23.0830	0.4313	1.7252	A572-65 (65 ksi)
L12	92.0800- 91.8300	0.2500	0.000	12	23.0830	23.1405	0.6563	2.6252	A572-65 (65 ksi)
L13	91.8300- 86.8300	5.0000	0.000	12	23.1405	24.2908	0.6313	2.5252	A572-65 (65 ksi)
L14	86.8300- 81.8300	5.0000	0.000	12	24.2908	25.4411	0.6063	2.4252	A572-65 (65 ksi)
L15	81.8300- 73.7500	8.0800	4.250	12	25.4411	27.3000	0.5938	2.3752	A572-65 (65 ksi)
L16	73.7500- 73.0000	5.0000	0.000	12	25.8846	27.0332	0.6875	2.7500	A572-65 (65 ksi)
L17	73.0000- 71.5000	1.5000	0.000	12	27.0332	27.3777	0.6750	2.7000	A572-65 (65 ksi)
L18	71.5000- 71.2500	0.2500	0.000	12	27.3777	27.4352	0.7375	2.9500	A572-65 (65 ksi)
L19	71.2500- 67.9200	3.3300	0.000	12	27.4352	28.2001	0.7250	2.9000	A572-65 (65 ksi)
L20	67.9200- 67.6700	0.2500	0.000	12	28.2001	28.2575	0.8875	3.5500	A572-65 (65 ksi)
L21	67.6700- 66.3300	1.3400	0.000	12	28.2575	28.5653	0.8750	3.5000	A572-65 (65 ksi)
L22	66.3300- 66.0800	0.2500	0.000	12	28.5653	28.6227	1.0375	4.1500	A572-65 (65 ksi)
L23	66.0800- 61.0800	5.0000	0.000	12	28.6227	29.7713	0.9875	3.9500	A572-65 (65 ksi)
L24	61.0800- 56.5000	4.5800	0.000	12	29.7713	30.8233	0.9625	3.8500	A572-65 (65 ksi)
L25	56.5000- 56.2500	0.2500	0.000	12	30.8233	30.8807	0.9625	3.8500	A572-65 (65 ksi)
L26	56.2500- 51.2500	5.0000	0.000	12	30.8807	32.0293	0.9375	3.7500	A572-65 (65 ksi)
L27	51.2500- 46.2500	5.0000	0.000	12	32.0293	33.1778	0.9125	3.6500	A572-65 (65 ksi)
L28	46.2500- 36.7500	9.5000	5.250	12	33.1778	35.3600	0.8875	3.5500	A572-65 (65 ksi)
L29	36.7500- 35.7500	6.2500	0.000	12	33.5290	34.9682	0.8125	3.2500	A572-65 (65 ksi)
L30	35.7500- 35.0800	0.6700	0.000	12	34.9682	35.1225	0.8125	3.2500	A572-65 (65 ksi)
L31	35.0800- 34.8300	0.2500	0.000	12	35.1225	35.1800	0.8125	3.2500	A572-65 (65 ksi)
L32	34.8300- 31.2500	3.5800	0.000	12	35.1800	36.0043	0.8000	3.2000	A572-65 (65 ksi)
L33	31.2500- 31.0000	0.2500	0.000	12	36.0043	36.0619	0.8625	3.4500	A572-65 (65 ksi)
L34	31.0000- 26.0000	5.0000	0.000	12	36.0619	37.2132	0.8375	3.3500	A572-65 (65 ksi)
L35	26.0000- 22.0000	4.0000	0.000	12	37.2132	38.1343	0.8250	3.3000	A572-65 (65 ksi)
L36	22.0000- 21.7500	0.2500	0.000	12	38.1343	38.1918	0.9375	3.7500	A572-65 (65 ksi)
L37	21.7500- 20.5000	1.2500	0.000	12	38.1918	38.4797	0.9250	3.7000	A572-65 (65 ksi)
L38	20.5000- 20.2500	0.2500	0.000	12	38.4797	38.5372	0.9250	3.7000	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L39	20.2500- 19.0800	1.1700	0.000	12	38.5372	38.8066	0.9250	3.7000	A572-65 (65 ksi)
L40	19.0800- 18.8300	0.2500	0.000	12	38.8066	38.8642	0.8750	3.5000	A572-65 (65 ksi)
L41	18.8300- 18.0000	0.8300	0.000	12	38.8642	39.0553	0.8750	3.5000	A572-65 (65 ksi)
L42	18.0000- 17.7500	0.2500	0.000	12	39.0553	39.1129	1.0000	4.0000	A572-65 (65 ksi)
L43	17.7500- 12.7500	5.0000	0.000	12	39.1129	40.2642	0.9750	3.9000	A572-65 (65 ksi)
L44	12.7500- 7.7500	5.0000	0.000	12	40.2642	41.4155	0.9500	3.8000	A572-65 (65 ksi)
L45	7.7500-4.0000	3.7500	0.000	12	41.4155	42.2790	0.9500	3.8000	A572-65 (65 ksi)
L46	4.0000-3.7500	0.2500	0.000	12	42.2790	42.3365	0.9500	3.8000	A572-65 (65 ksi)
L47	3.7500-3.0000	0.7500	0.000	12	42.3365	42.5092	0.9500	3.8000	A572-65 (65 ksi)
L48	3.0000-2.7500	0.2500	0.000	12	42.5092	42.5668	1.0250	4.1000	A572-65 (65 ksi)
L49	2.7500-0.0000	2.7500		12	42.5668	43.2000	1.0000	4.0000	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L1	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L2	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L3	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L4	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L5	17.8100	20.5401	780.8325	6.1656	8.9050	87.6847	1561.6650	10.2639	0.0000	0
L6	18.3611	12.3936	489.5257	6.2976	9.2256	53.0618	991.9119	6.0998	4.1867	19.135
L7	19.5520	13.2041	591.9737	6.7095	9.8214	60.2736	1199.4992	6.4986	4.4950	20.544
L8	20.7428	14.0145	707.8020	7.1213	10.4173	67.9449	1434.1988	6.8975	4.8033	21.953
L9	21.9337	14.8249	837.8320	7.5331	11.0132	76.0756	1697.6748	7.2964	5.1115	23.362
L10	22.1124	14.9465	858.6122	7.5948	11.1025	77.3348	1739.7810	7.3562	5.1578	23.573
L11	22.0286	30.8214	1731.1393	7.5098	11.1323	155.9230	3507.7576	15.1694	4.5213	9.909
L12	22.0881	30.9059	1745.4177	7.5304	11.7282	156.7883	3536.6895	15.2110	4.5367	9.942
L13	22.0947	29.6624	1678.1758	7.5371	11.7282	150.7480	3400.4392	14.5989	4.5869	10.483
L14	23.2856	31.2831	1968.5520	7.9489	11.9570	167.8481	3988.8201	15.3966	4.8952	11.188
L15	23.2878	30.8449	1942.0721	7.9512	11.9570	165.5902	3935.1647	15.1809	4.9120	11.389
L16	23.7451	31.4583	2060.2649	8.1093	11.9570	172.3063	4174.6552	15.4828	5.0304	11.663
L17	23.6658	47.3940	3042.5639	8.0288	11.9868	254.4591	6165.0594	23.3259	4.4274	6.746
L18	23.7253	47.5156	3066.0328	8.0493	11.9868	255.7845	6212.6136	23.3857	4.4428	6.769
L19	23.7341	45.7564	2959.0891	8.0583	11.9868	246.8627	5995.9167	22.5199	4.5098	7.144
L20	24.9250	48.0947	3436.3287	8.4701	12.5826	273.1008	6962.9336	23.6708	4.8181	7.632
L21	24.9338	46.2389	3310.7200	8.4791	12.5826	263.1181	6708.4163	22.7574	4.8851	8.057
L22	26.1247	48.4847	3816.9101	8.8909	13.1785	289.6317	7734.0947	23.8627	5.1933	8.566
L23	26.1291	47.5090	3743.8649	8.8953	13.1785	284.0890	7586.0853	23.3825	5.2268	8.802
L24	28.0536	51.0632	4648.5586	9.5608	14.1414	328.7198	9419.2399	25.1318	5.7250	9.641
L25	27.5659	55.7802	4520.3118	9.0206	13.4082	337.1293	9159.3773	27.4533	5.0946	7.41
L26	27.7443	58.3227	5167.0456	9.4318	14.0032	368.9908	10469.835	28.7047	5.4024	7.858
L27	27.7487	57.2895	5080.3238	9.4362	14.0032	362.7978	10294.113	28.1961	5.4359	8.053
L28	28.1054	58.0384	5282.1721	9.5596	14.1817	372.4649	10703.112	28.5647	5.5282	8.19
L29	28.0833	63.2639	5730.8324	9.5372	14.1817	404.1016	11612.220	31.1366	5.3607	7.269

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
	28.1428	63.4003	5767.9730	9.5578	14.2114	405.8691	11687.477	31.2037	5.3761	7.29
L19	28.1472	62.3549	5678.1790	9.5622	14.2114	399.5507	11505.530	30.6892	5.4096	7.462
	28.9391	64.1406	6180.1142	9.8361	14.6076	423.0741	12522.586	31.5680	5.6146	7.744
L20	28.8818	78.0525	7431.8706	9.7779	14.6076	508.7660	15058.984	38.4151	5.1791	5.836
	28.9412	78.2166	7478.8471	9.7985	14.6374	510.9414	15154.171	38.4958	5.1945	5.853
L21	28.9457	77.1502	7383.6184	9.8029	14.6374	504.4356	14961.212	37.9710	5.2280	5.975
	29.2643	78.0174	7635.4247	9.9131	14.7968	516.0176	15471.440	38.3978	5.3105	6.069
L22	29.2070	91.9635	8894.9760	9.8550	14.7968	601.1407	18023.633	45.2616	4.8750	4.699
	29.2664	92.1554	8950.7603	9.8755	14.8266	603.6971	18136.667	45.3561	4.8904	4.714
L23	29.2841	87.8731	8565.8082	9.8934	14.8266	577.7334	17356.649	43.2485	5.0244	5.088
	30.4731	91.5252	9678.8015	10.3046	15.4215	627.6168	19611.875	45.0459	5.3322	5.4
L24	30.4819	89.2856	9458.3709	10.3135	15.4215	613.3231	19165.223	43.9436	5.3992	5.61
	31.5711	92.5461	10532.888	10.6902	15.9665	659.6877	21342.487	45.5484	5.6811	5.902
L25	31.5711	92.5461	10532.888	10.6902	15.9665	659.6877	21342.487	45.5484	5.6811	5.902
	31.6306	92.7241	10593.773	10.7107	15.9962	662.2672	21465.857	45.6360	5.6965	5.918
L26	31.6394	90.3912	10344.499	10.7197	15.9962	646.6838	20960.760	44.4878	5.7635	6.148
	32.8284	93.8583	11581.088	11.1309	16.5912	698.0276	23466.424	46.1942	6.0713	6.476
L27	32.8372	91.4288	11299.472	11.1398	16.5912	681.0537	22895.793	44.9985	6.1383	6.727
	34.0263	94.8035	12597.421	11.5510	17.1861	733.0007	25525.792	46.6594	6.4461	7.064
L28	34.0351	92.2776	12280.789	11.5599	17.1861	714.5769	24884.208	45.4162	6.5131	7.339
	36.2943	98.5138	14942.681	12.3412	18.3165	815.8053	30277.922	48.4855	7.0980	7.998
L29	35.6767	85.5947	11694.119	11.7125	17.3680	673.3123	23695.455	42.1271	6.8083	8.379
	35.9151	89.3598	13306.193	12.2277	18.1135	734.6003	26961.955	43.9802	7.1940	8.854
L30	35.9151	89.3598	13306.193	12.2277	18.1135	734.6003	26961.955	43.9802	7.1940	8.854
	36.0748	89.7634	13487.313	12.2830	18.1934	741.3288	27328.954	44.1788	7.2353	8.905
L31	36.0748	89.7634	13487.313	12.2830	18.1934	741.3288	27328.954	44.1788	7.2353	8.905
	36.1344	89.9140	13555.314	12.3036	18.2232	743.8473	27466.742	44.2529	7.2507	8.924
L32	36.1388	88.5629	13361.339	12.3080	18.2232	733.2030	27073.697	43.5880	7.2842	9.105
	36.9922	90.6864	14345.667	12.6032	18.6503	769.1943	29068.212	44.6331	7.5052	9.381
L33	36.9702	97.5977	15384.194	12.5808	18.6503	824.8786	31172.548	48.0346	7.3377	8.507
	37.0298	97.7576	15459.920	12.6014	18.6801	827.6157	31325.989	48.1133	7.3531	8.525
L34	37.0386	94.9914	15043.815	12.6103	18.6801	805.3403	30482.847	46.7519	7.4201	8.86
	38.2305	98.0962	16567.667	13.0225	19.2764	859.4773	33570.587	48.2800	7.7286	9.228
L35	38.2349	96.6653	16337.219	13.0270	19.2764	847.5224	33103.636	47.5757	7.7621	9.409
	39.1885	99.1121	17609.448	13.3567	19.7535	891.4575	35681.515	48.7799	8.0090	9.708

Section	Tip Dia. in	Area in ²	I in ⁴	r in	C in	I/C in ³	J in ⁴	I/Q in ²	w in	w/t
L36	39.1488	112.2877	19830.264 3	13.3164	19.7535	1003.8837	40181.491 6	55.2646	7.7075	8.221
	39.2084	112.4615	19922.474 0	13.3370	19.7834	1007.0315	40368.333 5	55.3501	7.7229	8.238
L37	39.2128	110.9992	19676.634 1	13.3415	19.7834	994.6049	39870.195 3	54.6305	7.7564	8.385
	39.5108	111.8565	20136.074 9	13.4446	19.9325	1010.2152	40801.147 0	55.0524	7.8335	8.469
L38	39.5108	111.8565	20136.074 9	13.4446	19.9325	1010.2152	40801.147 0	55.0524	7.8335	8.469
	39.5704	112.0280	20228.813 0	13.4652	19.9623	1013.3519	40989.059 4	55.1368	7.8490	8.485
L39	39.5704	112.0280	20228.813 0	13.4652	19.9623	1013.3519	40989.059 4	55.1368	7.8490	8.485
	39.8493	112.8304	20666.612 9	13.5616	20.1018	1028.0960	41876.160 7	55.5317	7.9212	8.563
L40	39.8669	106.8723	19627.011 1	13.5795	20.1018	976.3793	39769.645 6	52.5993	8.0552	9.206
	39.9265	107.0345	19716.504 9	13.6001	20.1316	979.3785	39950.984 3	52.6791	8.0706	9.224
L41	39.9265	107.0345	19716.504 9	13.6001	20.1316	979.3785	39950.984 3	52.6791	8.0706	9.224
	40.1244	107.5730	20015.574 5	13.6685	20.2306	989.3689	40556.980 5	52.9442	8.1218	9.282
L42	40.0803	122.5381	22651.003 6	13.6238	20.2306	1119.6381	45897.074 3	60.3095	7.7868	7.787
	40.1399	122.7234	22753.949 8	13.6444	20.2605	1123.0713	46105.671 2	60.4007	7.8022	7.802
L43	40.1487	119.7338	22228.786 4	13.6534	20.2605	1097.1507	45041.547 8	58.9294	7.8692	8.071
	41.3406	123.3484	24303.294 5	14.0655	20.8568	1165.2432	49245.063 6	60.7083	8.1778	8.387
L44	41.3494	120.2621	23725.365 4	14.0745	20.8568	1137.5339	48074.022 6	59.1893	8.2448	8.679
	42.5413	123.7839	25871.372 7	14.4866	21.4532	1205.9437	52422.415 1	60.9227	8.5533	9.004
L45	42.5413	123.7839	25871.372 7	14.4866	21.4532	1205.9437	52422.415 1	60.9227	8.5533	9.004
	43.4353	126.4253	27563.144 0	14.7958	21.9005	1258.5623	55850.402 5	62.2227	8.7848	9.247
L46	43.4353	126.4253	27563.144 0	14.7958	21.9005	1258.5623	55850.402 5	62.2227	8.7848	9.247
	43.4949	126.6014	27678.478 8	14.8164	21.9303	1262.1102	56084.102 1	62.3093	8.8002	9.263
L47	43.4949	126.6014	27678.478 8	14.8164	21.9303	1262.1102	56084.102 1	62.3093	8.8002	9.263
	43.6737	127.1296	28026.412 7	14.8782	22.0198	1272.7838	56789.110 6	62.5693	8.8465	9.312
L48	43.6472	136.9187	30075.606 6	14.8513	22.0198	1365.8453	60941.332 9	67.3872	8.6455	8.435
	43.7068	137.1087	30200.982 9	14.8720	22.0496	1369.6843	61195.379 2	67.4807	8.6609	8.45
L49	43.7156	133.8450	29517.600 9	14.8809	22.0496	1338.6914	59810.662 0	65.8745	8.7279	8.728
	44.3712	135.8840	30887.245 1	15.1076	22.3776	1380.2751	62585.932 6	66.8780	8.8976	8.898

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L1 129.0000- 124.0000				1	1	1			
L2 124.0000- 119.0000				1	1	1			
L3 119.0000- 115.5000				1	1	1			

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontals in	Double Angle Stitch Bolt Spacing Redundants in
L4 115.5000-115.0000				1	1	1			
L5 115.0000-110.0000				1	1	1			
L6 110.0000-105.0000				1	1	1			
L7 105.0000-100.0000				1	1	1			
L8 100.0000-99.2500				1	1	1			
L9 99.2500-99.0000				1	1	0.922359			
L10 99.0000-94.0000				1	1	0.937146			
L11 94.0000-92.0800				1	1	0.941817			
L12 92.0800-91.8300				1	1	0.908921			
L13 91.8300-86.8300				1	1	0.914826			
L14 86.8300-81.8300				1	1	0.924184			
L15 81.8300-73.7500				1	1	0.923482			
L16 73.7500-73.0000				1	1	0.92462			
L17 73.0000-71.5000				1	1	0.935124			
L18 71.5000-71.2500				1	1	0.92803			
L19 71.2500-67.9200				1	1	0.929319			
L20 67.9200-67.6700				1	1	0.902051			
L21 67.6700-66.3300				1	1	0.908324			
L22 66.3300-66.0800				1	1	1.00052			
L23 66.0800-61.0800				1	1	1.02004			
L24 61.0800-56.5000				1	1	1.02022			
L25 56.5000-56.2500				1	1	1.01889			
L26 56.2500-51.2500				1	1	1.01889			
L27 51.2500-46.2500				1	1	1.02092			
L28 46.2500-36.7500				1	1	1.02842			
L29 36.7500-35.7500				1	1	0.978759			
L30 35.7500-35.0800				1	1	0.976433			
L31 35.0800-34.8300				1	1	0.975571			
L32 34.8300-31.2500				1	1	0.978238			
L33 31.2500-31.0000				1	1	1.01703			
L34 31.0000-26.0000				1	1	1.02769			
L35 26.0000-22.0000				1	1	1.02838			
L36 22.0000-21.7500				1	1	0.979278			

Tower Elevation ft	Gusset Area (per face) ft ²	Gusset Thickness in	Gusset Grade	Adjust. Factor A _r	Adjust. Factor A _r	Weight Mult.	Double Angle Stitch Bolt Spacing Diagonals in	Double Angle Stitch Bolt Spacing Horizontal in	Double Angle Stitch Bolt Spacing Redundants in
L37 21.7500-20.5000				1	1	0.987682			
L38 20.5000-20.2500				1	1	0.986791			
L39 20.2500-19.0800				1	1	0.982656			
L40 19.0800-18.8300				1	1	0.960497			
L41 18.8300-18.0000				1	1	0.957834			
L42 18.0000-17.7500				1	1	0.987036			
L43 17.7500-12.7500				1	1	0.993306			
L44 12.7500-7.7500				1	1	1.00104			
L45 7.7500-4.0000				1	1	0.988374			
L46 4.0000-3.7500				1	1	0.972717			
L47 3.7500-3.0000				1	1	0.970315			
L48 3.0000-2.7500				1	1	0.912526			
L49 2.7500-0.0000				1	1	0.926377			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Clear Spacing in	Width or Diameter r in	Perimeter r in	Weight klf

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C _A A _A ft ² /ft	Weight klf
HCS 6X12 4AWG(1-5/8)	C	No	No	CaAa (Out Of Face)	125.0000 - 0.0000	1	No Ice	0.1660
							1/2" Ice	0.2660
							1" Ice	0.3660
							2" Ice	0.5660
HCS 6X12 4AWG(1-5/8)	C	No	No	CaAa (Out Of Face)	125.0000 - 0.0000	3	No Ice	0.0000
							1/2" Ice	0.0000
							1" Ice	0.0000
							2" Ice	0.0000

LDF5-50A(7/8)	C	No	No	Inside Pole	116.0000 - 0.0000	12	No Ice	0.0000
							1/2" Ice	0.0000
							1" Ice	0.0000
							2" Ice	0.0000
HB114-1-05U3-S3J(1-1/4)	C	No	No	Inside Pole	116.0000 - 0.0000	2	No Ice	0.0000
							1/2" Ice	0.0000
							1" Ice	0.0000
							2" Ice	0.0000

HB114-1-08U4-M5F(1-1/4)	C	No	No	Inside Pole	105.0000 - 0.0000	3	No Ice	0.0000
							1/2" Ice	0.0000
							1" Ice	0.0000
							2" Ice	0.0000

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C _{AA} ft ² /ft	Weight klf
HB114-08U3M12-XXXF(7/8)	C	No	No	Inside Pole	105.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.001 0.001 0.001 0.001

LDF6-50A(1-1/4)	C	No	No	Inside Pole	94.0000 - 0.0000	12	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.001 0.001 0.001 0.001
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	94.0000 - 0.0000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.001 0.001 0.001 0.001
FB-L98B-002-75000(3/8)	C	No	No	Inside Pole	94.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.000 0.000 0.000 0.000
WR-VG86ST-BRD(3/4)	C	No	No	Inside Pole	94.0000 - 0.0000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.001 0.001 0.001 0.001
FB-L98B-034-XXX(3/8)	C	No	No	Inside Pole	94.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.000 0.000 0.000 0.000
1 1/2" Rigid Conduit (1 1/4" EMT)	C	No	No	Inside Pole	94.0000 - 0.0000	2	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.001 0.001 0.001 0.001

FLC 12-50J(1/2)	C	No	No	Inside Pole	60.0000 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.0000 0.0000 0.0000 0.0000	0.000 0.000 0.000 0.000
*									
1 1/4" Flat Reinforcement	C	No	No	CaAa (Out Of Face)	70.6600 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.2083 0.3194 0.4306 0.6528	0.000 0.000 0.000 0.000
1" Flat Reinforcement	C	No	No	CaAa (Out Of Face)	100.7500 - 70.6600	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.1667 0.2778 0.3889 0.6111	0.000 0.000 0.000 0.000
1 1/4" Flat Reinforcement	C	No	No	CaAa (Out Of Face)	40.5830 - 0.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.2083 0.3194 0.4306 0.6528	0.000 0.000 0.000 0.000
1" Flat Reinforcement	C	No	No	CaAa (Out Of Face)	94.0830 - 54.0000	1	No Ice 1/2" Ice 1" Ice 2" Ice	0.1667 0.2778 0.3889 0.6111	0.000 0.000 0.000 0.000

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L1	129.0000-124.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.166	0.010
L2	124.0000-119.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.830	0.048
L3	119.0000-115.5000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.581	0.036

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L4	115.5000- 115.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.083	0.008
L5	115.0000- 110.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.830	0.077
L6	110.0000- 105.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.830	0.077
L7	105.0000- 100.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.955	0.096
L8	100.0000- 99.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.250	0.014
L9	99.2500-99.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.083	0.005
L10	99.0000-94.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.677	0.096
L11	94.0000-92.0800	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.959	0.059
L12	92.0800-91.8300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.125	0.008
L13	91.8300-86.8300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.497	0.155
L14	86.8300-81.8300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.497	0.155
L15	81.8300-73.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	4.035	0.250
L16	73.7500-73.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.375	0.023
L17	73.0000-71.5000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.749	0.046
L18	71.5000-71.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.125	0.008
L19	71.2500-67.9200	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.777	0.103
L20	67.9200-67.6700	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.135	0.008
L21	67.6700-66.3300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.725	0.041
L22	66.3300-66.0800	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.135	0.008
L23	66.0800-61.0800	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.705	0.155
L24	61.0800-56.5000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.478	0.142
L25	56.5000-56.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.135	0.008
L26	56.2500-51.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.247	0.156

Tower Sectio n	Tower Elevation ft	Face	A _R ft ²	A _F ft ²	C _{AA} In Face ft ²	C _{AA} Out Face ft ²	Weight K
L27	51.2500-46.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.872	0.156
L28	46.2500-36.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	4.355	0.296
L29	36.7500-35.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.583	0.031
L30	35.7500-35.0800	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.390	0.021
L31	35.0800-34.8300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L32	34.8300-31.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.086	0.111
L33	31.2500-31.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L34	31.0000-26.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.913	0.156
L35	26.0000-22.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.331	0.124
L36	22.0000-21.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L37	21.7500-20.5000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.728	0.039
L38	20.5000-20.2500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L39	20.2500-19.0800	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.682	0.036
L40	19.0800-18.8300	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L41	18.8300-18.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.484	0.026
L42	18.0000-17.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L43	17.7500-12.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.913	0.156
L44	12.7500-7.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.913	0.156
L45	7.7500-4.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	2.185	0.117
L46	4.0000-3.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L47	3.7500-3.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.437	0.023
L48	3.0000-2.7500	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	0.146	0.008
L49	2.7500-0.0000	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	0.000	0.000	0.000
		C	0.000	0.000	0.000	1.602	0.086

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation	Face or Leg	Ice Thickness	A _R	A _F	C _{AA}	C _{AA}	Weight
n	ft		in	ft ²	ft ²	In Face	Out Face	K
L1	129.0000-124.0000	A	1.944	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.555	0.044
L2	124.0000-119.0000	A	1.937	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	2.767	0.220
L3	119.0000-115.5000	A	1.930	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	1.932	0.156
L4	115.5000-115.0000	A	1.926	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.276	0.025
L5	115.0000-110.0000	A	1.922	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	2.752	0.247
L6	110.0000-105.0000	A	1.913	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	2.743	0.246
L7	105.0000-100.0000	A	1.904	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	3.176	0.264
L8	100.0000-99.2500	A	1.899	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.851	0.040
L9	99.2500-99.0000	A	1.898	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.283	0.013
L10	99.0000-94.0000	A	1.893	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	5.707	0.263
L11	94.0000-92.0800	A	1.886	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	3.292	0.123
L12	92.0800-91.8300	A	1.883	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.428	0.016
L13	91.8300-86.8300	A	1.878	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	8.548	0.320
L14	86.8300-81.8300	A	1.867	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	8.513	0.318
L15	81.8300-73.7500	A	1.852	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	13.679	0.512
L16	73.7500-73.0000	A	1.841	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	1.270	0.048
L17	73.0000-71.5000	A	1.839	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	2.526	0.095
L18	71.5000-71.2500	A	1.836	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.421	0.016
L19	71.2500-67.9200	A	1.832	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	5.708	0.209
L20	67.9200-67.6700	A	1.827	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	0.430	0.016
L21	67.6700-66.3300	A	1.825	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	2.301	0.084
L22	66.3300-66.0800	A	1.823	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft ²	A_F ft ²	C_{AA} In Face ft ²	C_{AA} Out Face ft ²	Weight K
L23	66.0800-61.0800	C	1.815	0.000	0.000	0.000	0.429	0.016
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L24	61.0800-56.5000	C	1.801	0.000	0.000	0.000	8.554	0.313
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L25	56.5000-56.2500	C	1.794	0.000	0.000	0.000	7.794	0.285
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L26	56.2500-51.2500	C	1.785	0.000	0.000	0.000	0.424	0.016
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L27	51.2500-46.2500	C	1.768	0.000	0.000	0.000	6.907	0.310
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L28	46.2500-36.7500	C	1.739	0.000	0.000	0.000	5.603	0.308
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L29	36.7500-35.7500	C	1.716	0.000	0.000	0.000	12.812	0.579
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L30	35.7500-35.0800	C	1.712	0.000	0.000	0.000	1.703	0.061
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L31	35.0800-34.8300	C	1.710	0.000	0.000	0.000	1.130	0.040
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L32	34.8300-31.2500	C	1.700	0.000	0.000	0.000	0.421	0.015
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L33	31.2500-31.0000	C	1.690	0.000	0.000	0.000	6.008	0.215
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L34	31.0000-26.0000	C	1.675	0.000	0.000	0.000	0.418	0.015
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L35	26.0000-22.0000	C	1.647	0.000	0.000	0.000	8.311	0.297
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L36	22.0000-21.7500	C	1.632	0.000	0.000	0.000	6.575	0.235
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L37	21.7500-20.5000	C	1.626	0.000	0.000	0.000	0.409	0.015
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L38	20.5000-20.2500	C	1.620	0.000	0.000	0.000	2.038	0.073
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L39	20.2500-19.0800	C	1.614	0.000	0.000	0.000	0.407	0.015
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L40	19.0800-18.8300	C	1.608	0.000	0.000	0.000	1.899	0.068
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L41	18.8300-18.0000	C	1.604	0.000	0.000	0.000	0.405	0.014
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L42	18.0000-17.7500	C	1.599	0.000	0.000	0.000	1.341	0.048
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L43	17.7500-12.7500	C	1.574	0.000	0.000	0.000	0.403	0.014
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L44	12.7500-7.7500	C	1.512	0.000	0.000	0.000	7.984	0.286
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L45	7.7500-4.0000	C	1.430	0.000	0.000	0.000	7.786	0.279
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A _R ft ²	A _F ft ²	C _A A _A In Face ft ²	C _A A _A Out Face ft ²	Weight K
L46	4.0000-3.7500	C	1.372	0.000	0.000	0.000	5.642	0.202
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L47	3.7500-3.0000	C	1.353	0.000	0.000	0.000	0.367	0.013
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L48	3.0000-2.7500	C	1.332	0.000	0.000	0.000	1.091	0.039
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
L49	2.7500-0.0000	C	1.237	0.000	0.000	0.000	0.360	0.013
		A		0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	0.000	0.000	0.000
		C		0.000	0.000	0.000	3.794	0.136

Feed Line Center of Pressure

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L1	129.0000-124.0000	-0.2761	0.1594	-0.3662	0.2114
L2	124.0000-119.0000	-1.1906	0.6874	-1.5089	0.8712
L3	119.0000-115.5000	-1.1906	0.6874	-1.5068	0.8699
L4	115.5000-115.0000	-1.2016	0.6938	-1.5361	0.8869
L5	115.0000-110.0000	-0.7929	0.4578	-1.5480	0.8937
L6	110.0000-105.0000	-0.7974	0.4604	-1.5753	0.9095
L7	105.0000-100.0000	-0.9127	0.5269	-1.8124	1.0464
L8	100.0000-99.2500	-1.4811	0.8551	-2.8213	1.6289
L9	99.2500-99.0000	-1.4871	0.8586	-2.8333	1.6358
L10	99.0000-94.0000	-1.5038	0.8682	-2.8792	1.6623
L11	94.0000-92.0800	-2.0936	1.2088	-3.8199	2.2054
L12	92.0800-91.8300	-2.1039	1.2147	-3.8446	2.2197
L13	91.8300-86.8300	-2.1142	1.2206	-3.8857	2.2434
L14	86.8300-81.8300	-2.1332	1.2316	-3.9604	2.2865
L15	81.8300-73.7500	-2.1565	1.2450	-4.0505	2.3386
L16	73.7500-73.0000	-2.1670	1.2511	-4.0907	2.3618
L17	73.0000-71.5000	-2.1704	1.2531	-4.0953	2.3644
L18	71.5000-71.2500	-2.1746	1.2555	-4.1079	2.3717
L19	71.2500-67.9200	-2.3015	1.3287	-4.1841	2.4157
L20	67.9200-67.6700	-2.3368	1.3492	-4.2220	2.4376
L21	67.6700-66.3300	-2.3393	1.3506	-4.2310	2.4428
L22	66.3300-66.0800	-2.3457	1.3543	-4.2451	2.4509
L23	66.0800-61.0800	-2.3533	1.3587	-4.2731	2.4670
L24	61.0800-56.5000	-2.3680	1.3671	-4.3226	2.4957
L25	56.5000-56.2500	-2.3753	1.3714	-4.3463	2.5093
L26	56.2500-51.2500	-2.0358	1.1754	-3.7852	2.1854
L27	51.2500-46.2500	-1.7493	1.0100	-3.2842	1.8961
L28	46.2500-36.7500	-2.1052	1.2154	-3.8520	2.2239
L29	36.7500-35.7500	-2.5738	1.4860	-4.5656	2.6360
L30	35.7500-35.0800	-2.5761	1.4873	-4.5461	2.6247
L31	35.0800-34.8300	-2.5774	1.4881	-4.5486	2.6261
L32	34.8300-31.2500	-2.5823	1.4909	-4.5580	2.6316
L33	31.2500-31.0000	-2.5887	1.4946	-4.5685	2.6376
L34	31.0000-26.0000	-2.5950	1.4982	-4.5776	2.6429
L35	26.0000-22.0000	-2.6060	1.5046	-4.5884	2.6491
L36	22.0000-21.7500	-2.6134	1.5088	-4.5938	2.6522
L37	21.7500-20.5000	-2.6149	1.5097	-4.5937	2.6522
L38	20.5000-20.2500	-2.6167	1.5108	-4.5936	2.6521
L39	20.2500-19.0800	-2.6184	1.5117	-4.5932	2.6519
L40	19.0800-18.8300	-2.6190	1.5121	-4.5912	2.6507
L41	18.8300-18.0000	-2.6203	1.5128	-4.5904	2.6503
L42	18.0000-17.7500	-2.6240	1.5149	-4.5929	2.6517

Section	Elevation ft	CP _x in	CP _z in	CP _x Ice in	CP _z Ice in
L43	17.7500-12.7500	-2.6294	1.5181	-4.5843	2.6467
L44	12.7500-7.7500	-2.6398	1.5241	-4.5486	2.6261
L45	7.7500-4.0000	-2.6489	1.5293	-4.4769	2.5847
L46	4.0000-3.7500	-2.6529	1.5316	-4.4145	2.5487
L47	3.7500-3.0000	-2.6539	1.5322	-4.3927	2.5361
L48	3.0000-2.7500	-2.6562	1.5336	-4.3690	2.5225
L49	2.7500-0.0000	-2.6587	1.5350	-4.2479	2.4525

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
---------------	----------------------	-------------	-------------------------	-----------------------	--------------------

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustmen t °	Placement ft		C _A A _A Front ft ²	C _A A _A Side ft ²	Weight K
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	50.000	125.0000	No Ice	6.7474	6.0700	0.153
						1/2" Ice	7.2017	6.8671	0.214
						Ice	7.6475	7.5828	0.282
						1" Ice	8.5651	9.0629	0.441
AIR 32 B2A/B66AA w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	20.000	125.0000	No Ice	6.7474	6.0700	0.153
						1/2" Ice	7.2017	6.8671	0.214
						Ice	7.6475	7.5828	0.282
						1" Ice	8.5651	9.0629	0.441
AIR 32 B2A/B66AA w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	-10.000	125.0000	No Ice	6.7474	6.0700	0.153
						1/2" Ice	7.2017	6.8671	0.214
						Ice	7.6475	7.5828	0.282
						1" Ice	8.5651	9.0629	0.441
AIR 32 B2A/B66AA w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	-40.000	125.0000	No Ice	6.7474	6.0700	0.153
						1/2" Ice	7.2017	6.8671	0.214
						Ice	7.6475	7.5828	0.282
						1" Ice	8.5651	9.0629	0.441
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	50.000	125.0000	No Ice	6.3292	5.6424	0.112
						1/2" Ice	6.7751	6.4259	0.169
						Ice	7.2137	7.1313	0.233
						1" Ice	8.1168	8.5907	0.383
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	20.000	125.0000	No Ice	6.3292	5.6424	0.112
						1/2" Ice	6.7751	6.4259	0.169
						Ice	7.2137	7.1313	0.233
						1" Ice	8.1168	8.5907	0.383
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	-10.000	125.0000	No Ice	6.3292	5.6424	0.112
						1/2" Ice	6.7751	6.4259	0.169
						Ice	7.2137	7.1313	0.233
						1" Ice	8.1168	8.5907	0.383
ERICSSON AIR 21 B2A B4P w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	-40.000	125.0000	No Ice	6.3292	5.6424	0.112
						1/2" Ice	6.7751	6.4259	0.169
						Ice	7.2137	7.1313	0.233
						1" Ice	8.1168	8.5907	0.383
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.0000 0.000	50.000	125.0000	No Ice	20.4801	11.0240	0.161
						2" Ice	21.2306	12.5496	0.297

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft	Azimuth Adjustment t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			1.000				1/2" Ice 23.4441	14.0992 16.4509	0.444 0.775
APXVAARR24_43-U-NA20 w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	20.000	125.0000	No Ice 1" 2" Ice	20.4801 21.2306 21.9900 23.4441	11.0240 12.5496 14.0992 16.4509	0.161 0.297 0.444 0.775
APXVAARR24_43-U-NA20 w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	-10.000	125.0000	No Ice 1" 2" Ice	20.4801 21.2306 21.9900 23.4441	11.0240 12.5496 14.0992 16.4509	0.161 0.297 0.444 0.775
APXVAARR24_43-U-NA20 w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	-40.000	125.0000	No Ice 1" 2" Ice	20.4801 21.2306 21.9900 23.4441	11.0240 12.5496 14.0992 16.4509	0.161 0.297 0.444 0.775
RADIO 4449 B12/B71	A	From Leg	4.0000 0.000 1.000	50.000	125.0000	No Ice 1" Ice	1.6500 1.8104 1.9781	1.1625 1.3012 1.4473	0.074 0.090 0.109
RADIO 4449 B12/B71	B	From Leg	4.0000 0.000 1.000	20.000	125.0000	No Ice 1" Ice	1.6500 1.8104 1.9781	1.1625 1.3012 1.4473	0.074 0.090 0.109
RADIO 4449 B12/B71	C	From Leg	4.0000 0.000 1.000	-10.000	125.0000	No Ice 1" Ice	1.6500 1.8104 1.9781	1.1625 1.3012 1.4473	0.074 0.090 0.109
RADIO 4449 B12/B71	A	From Leg	4.0000 0.000 1.000	-40.000	125.0000	No Ice 1" Ice	1.6500 1.8104 1.9781	1.1625 1.3012 1.4473	0.074 0.090 0.109
Platform Mount [LP 701-1]	C	None		0.000	125.0000	No Ice 1" Ice	59.1500 71.1200 83.0900	59.1500 71.1200 83.0900	2.750 3.424 4.099
***						1" 2" Ice	107.0300 107.0300	107.0300 107.0300	5.448
(2) LNX-8513DS-VTM w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice 1" Ice	8.4106 8.9745 9.5048	7.0817 8.2729 9.1847	0.065 0.134 0.211
(2) LNX-8513DS-VTM w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice 1" Ice	8.4106 8.9745 9.5048	7.0817 8.2729 9.1847	0.065 0.134 0.211
(2) LNX-8513DS-VTM w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice 1" Ice	8.4106 8.9745 9.5048	7.0817 8.2729 9.1847	0.065 0.134 0.211
(2) SBNH-1D8585C w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice 1" Ice	11.6828 12.4043 13.1351	9.8418 11.3657 12.9138	0.088 0.178 0.278
						1" 2" Ice	14.5120 15.2672	15.2672	0.511

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment t °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
(2) SBNH-1D8585C w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	11.6828	9.8418	0.088
						1/2"	12.4043	11.3657	0.178
						Ice	13.1351	12.9138	0.278
						1" Ice	14.5120	15.2672	0.511
						2" Ice			
(2) SBNH-1D8585C w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	11.6828	9.8418	0.088
						1/2"	12.4043	11.3657	0.178
						Ice	13.1351	12.9138	0.278
						1" Ice	14.5120	15.2672	0.511
						2" Ice			
AWS4 (B66) 4X45 RRH	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.6600	1.5861	0.064
						1/2"	2.8781	1.7690	0.084
						Ice	3.1037	1.9588	0.108
						1" Ice	3.5770	2.3594	0.165
						2" Ice			
AWS4 (B66) 4X45 RRH	B	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.6600	1.5861	0.064
						1/2"	2.8781	1.7690	0.084
						Ice	3.1037	1.9588	0.108
						1" Ice	3.5770	2.3594	0.165
						2" Ice			
AWS4 (B66) 4X45 RRH	C	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.6600	1.5861	0.064
						1/2"	2.8781	1.7690	0.084
						Ice	3.1037	1.9588	0.108
						1" Ice	3.5770	2.3594	0.165
						2" Ice			
B13 RRH 4X30	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.0552	1.3201	0.056
						1/2"	2.2405	1.4754	0.073
						Ice	2.4333	1.6376	0.093
						1" Ice	2.8411	1.9966	0.142
						2" Ice			
B13 RRH 4X30	B	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.0552	1.3201	0.056
						1/2"	2.2405	1.4754	0.073
						Ice	2.4333	1.6376	0.093
						1" Ice	2.8411	1.9966	0.142
						2" Ice			
B13 RRH 4X30	C	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.0552	1.3201	0.056
						1/2"	2.2405	1.4754	0.073
						Ice	2.4333	1.6376	0.093
						1" Ice	2.8411	1.9966	0.142
						2" Ice			
PCS B25 RRH4X30	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.2000	1.7417	0.055
						1/2"	2.3926	1.9204	0.075
						Ice	2.5926	2.1065	0.099
						1" Ice	3.0148	2.5009	0.156
						2" Ice			
PCS B25 RRH4X30	B	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.2000	1.7417	0.055
						1/2"	2.3926	1.9204	0.075
						Ice	2.5926	2.1065	0.099
						1" Ice	3.0148	2.5009	0.156
						2" Ice			
PCS B25 RRH4X30	C	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	2.2000	1.7417	0.055
						1/2"	2.3926	1.9204	0.075
						Ice	2.5926	2.1065	0.099
						1" Ice	3.0148	2.5009	0.156
						2" Ice			
(2) DB-B1-6C-12AB-OZ	A	From Leg	4.0000 0.000 1.000	0.000	116.0000	No Ice	3.3636	2.1921	0.032
						1/2"	3.5972	2.3950	0.061
						Ice	3.8383	2.6056	0.093
						1" Ice	4.3426	3.0491	0.168
						2" Ice			
Platform Mount [LP 602-1]	C	None		0.000	116.0000	No Ice	32.0300	32.0300	1.343
						1/2"	38.7100	38.7100	1.800
						Ice	45.3900	45.3900	2.257
						1" Ice	58.7500	58.7500	3.170
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K

APXVTM14-ALU-I20 w/ Mount Pipe	A	From Leg	4.0000	0.000	105.0000	No Ice	6.5799	4.9591	0.077
			0.000			1/2"	7.0306	5.7544	0.132
			-1.000			Ice	7.4733	6.4723	0.193
						1" Ice	8.3846	7.9407	0.339
						2" Ice			
APXVTM14-ALU-I20 w/ Mount Pipe	B	From Leg	4.0000	0.000	105.0000	No Ice	6.5799	4.9591	0.077
			0.000			1/2"	7.0306	5.7544	0.132
			-1.000			Ice	7.4733	6.4723	0.193
						1" Ice	8.3846	7.9407	0.339
						2" Ice			
APXVTM14-ALU-I20 w/ Mount Pipe	C	From Leg	4.0000	0.000	105.0000	No Ice	6.5799	4.9591	0.077
			0.000			1/2"	7.0306	5.7544	0.132
			-1.000			Ice	7.4733	6.4723	0.193
						1" Ice	8.3846	7.9407	0.339
						2" Ice			
NNVV-65B-R4 w/ Mount Pipe	A	From Leg	4.0000	0.000	105.0000	No Ice	12.5086	7.4125	0.103
			0.000			1/2"	13.1075	8.5976	0.194
			-1.000			Ice	13.6715	9.4965	0.293
						1" Ice	14.8221	11.3279	0.520
						2" Ice			
NNVV-65B-R4 w/ Mount Pipe	B	From Leg	4.0000	0.000	105.0000	No Ice	12.5086	7.4125	0.103
			0.000			1/2"	13.1075	8.5976	0.194
			-1.000			Ice	13.6715	9.4965	0.293
						1" Ice	14.8221	11.3279	0.520
						2" Ice			
NNVV-65B-R4 w/ Mount Pipe	C	From Leg	4.0000	0.000	105.0000	No Ice	12.5086	7.4125	0.103
			0.000			1/2"	13.1075	8.5976	0.194
			-1.000			Ice	13.6715	9.4965	0.293
						1" Ice	14.8221	11.3279	0.520
						2" Ice			
PCS 1900MHZ 4X45W-65MHZ	A	From Leg	4.0000	0.000	105.0000	No Ice	2.3218	2.2381	0.060
			0.000			1/2"	2.5266	2.4407	0.083
			-1.000			Ice	2.7388	2.6507	0.110
						1" Ice	3.1855	3.0929	0.173
						2" Ice			
PCS 1900MHZ 4X45W-65MHZ	B	From Leg	4.0000	0.000	105.0000	No Ice	2.3218	2.2381	0.060
			0.000			1/2"	2.5266	2.4407	0.083
			-1.000			Ice	2.7388	2.6507	0.110
						1" Ice	3.1855	3.0929	0.173
						2" Ice			
PCS 1900MHZ 4X45W-65MHZ	C	From Leg	4.0000	0.000	105.0000	No Ice	2.3218	2.2381	0.060
			0.000			1/2"	2.5266	2.4407	0.083
			-1.000			Ice	2.7388	2.6507	0.110
						1" Ice	3.1855	3.0929	0.173
						2" Ice			
(2) RRH2X50-800	A	From Leg	4.0000	0.000	105.0000	No Ice	1.7008	1.2822	0.053
			0.000			1/2"	1.8640	1.4275	0.070
			-1.000			Ice	2.0345	1.5803	0.090
						1" Ice	2.3979	1.9081	0.138
						2" Ice			
(2) RRH2X50-800	B	From Leg	4.0000	0.000	105.0000	No Ice	1.7008	1.2822	0.053
			0.000			1/2"	1.8640	1.4275	0.070
			-1.000			Ice	2.0345	1.5803	0.090
						1" Ice	2.3979	1.9081	0.138
						2" Ice			
(2) RRH2X50-800	C	From Leg	4.0000	0.000	105.0000	No Ice	1.7008	1.2822	0.053
			0.000			1/2"	1.8640	1.4275	0.070
			-1.000			Ice	2.0345	1.5803	0.090
						1" Ice	2.3979	1.9081	0.138
						2" Ice			
TD-RRH8X20-25	A	From Leg	4.0000	0.000	105.0000	No Ice	4.0455	1.5345	0.070
			0.000			1/2"	4.2975	1.7142	0.097
			-1.000			Ice	4.5570	1.9008	0.128
						1" Ice	5.0981	2.2951	0.201
						2" Ice			

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
TD-RRH8X20-25	B	From Leg	4.0000 0.000 -1.000	0.000	105.0000	2" Ice			
						No Ice	4.0455	1.5345	0.070
						1/2"	4.2975	1.7142	0.097
						Ice	4.5570	1.9008	0.128
						1" Ice	5.0981	2.2951	0.201
TD-RRH8X20-25	C	From Leg	4.0000 0.000 -1.000	0.000	105.0000	2" Ice			
						No Ice	4.0455	1.5345	0.070
						1/2"	4.2975	1.7142	0.097
						Ice	4.5570	1.9008	0.128
						1" Ice	5.0981	2.2951	0.201
Platform Mount [LP 1201-1]	C	None		0.000	105.0000	2" Ice			
						No Ice	23.1000	23.1000	2.100
						1/2"	26.8000	26.8000	2.500
						Ice	30.5000	30.5000	2.900
						1" Ice	37.9000	37.9000	3.700
Miscellaneous [NA 510-1]	C	None		0.000	105.0000	2" Ice			
						No Ice	6.0000	6.0000	0.256
						1/2"	8.5000	8.5000	0.340
						Ice	11.0000	11.0000	0.423
						1" Ice	16.0000	16.0000	0.591
*** *****									
7770.00 w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	5.7460	4.2543	0.055
						1/2"	6.1791	5.0137	0.103
						Ice	6.6067	5.7109	0.157
						1" Ice	7.4880	7.1553	0.287
7770.00 w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	5.7460	4.2543	0.055
						1/2"	6.1791	5.0137	0.103
						Ice	6.6067	5.7109	0.157
						1" Ice	7.4880	7.1553	0.287
7770.00 w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	5.7460	4.2543	0.055
						1/2"	6.1791	5.0137	0.103
						Ice	6.6067	5.7109	0.157
						1" Ice	7.4880	7.1553	0.287
80010966 w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	17.6005	9.6375	0.147
						1/2"	18.3314	11.1547	0.263
						Ice	19.0711	12.6961	0.390
						1" Ice	20.4862	15.0321	0.678
80010966 w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	17.6005	9.6375	0.147
						1/2"	18.3314	11.1547	0.263
						Ice	19.0711	12.6961	0.390
						1" Ice	20.4862	15.0321	0.678
80010966 w/ Mount Pipe	C	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	17.6005	9.6375	0.147
						1/2"	18.3314	11.1547	0.263
						Ice	19.0711	12.6961	0.390
						1" Ice	20.4862	15.0321	0.678
HPA65R-BU8A w/ Mount Pipe	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	11.4708	10.1819	0.087
						1/2"	12.1890	11.7030	0.177
						Ice	12.9164	13.2481	0.278
						1" Ice	14.2936	15.5917	0.513
HPA65R-BU8A w/ Mount Pipe	B	From Leg	4.0000 0.000 1.000	0.000	94.0000	2" Ice			
						No Ice	11.4708	10.1819	0.087
						1/2"	12.1890	11.7030	0.177
						Ice	12.9164	13.2481	0.278
						1" Ice	14.2936	15.5917	0.513
HPA65R-BU8A w/ Mount Pipe	C	From Leg	4.0000 0.000	0.000	94.0000	2" Ice			
						No Ice	11.4708	10.1819	0.087

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K
			1.000			1/2" Ice 12.9164 14.2936	13.2481 15.5917	0.278 0.513
(2) DC6-48-60-18-8F	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.2117 1/2" 1.8924 Ice 2.1051 1" Ice 2.5703 2" Ice 2.5703	1.2117 1.8924 2.1051 2.5703	0.033 0.055 0.080 0.138
DTMABP7819VG12A	A	From Leg	4.0000 0.000 -4.000	0.000	94.0000	No Ice 0.9762 1/2" 1.1002 Ice 1.2316 1" Ice 1.5166 2" Ice 1.5166	0.3387 0.4192 0.5098 0.7143	0.019 0.026 0.036 0.060
DTMABP7819VG12A	B	From Leg	4.0000 0.000 -4.000	0.000	94.0000	No Ice 0.9762 1/2" 1.1002 Ice 1.2316 1" Ice 1.5166 2" Ice 1.5166	0.3387 0.4192 0.5098 0.7143	0.019 0.026 0.036 0.060
DTMABP7819VG12A	C	From Leg	4.0000 0.000 -4.000	0.000	94.0000	No Ice 0.9762 1/2" 1.1002 Ice 1.2316 1" Ice 1.5166 2" Ice 1.5166	0.3387 0.4192 0.5098 0.7143	0.019 0.026 0.036 0.060
RRUS 4449 B5/B12	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.9675 1/2" 2.1439 Ice 2.3278 1" Ice 2.7177 2" Ice 2.7177	1.4081 1.5637 1.7267 2.0749	0.071 0.090 0.111 0.163
RRUS 4449 B5/B12	B	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.9675 1/2" 2.1439 Ice 2.3278 1" Ice 2.7177 2" Ice 2.7177	1.4081 1.5637 1.7267 2.0749	0.071 0.090 0.111 0.163
RRUS 4449 B5/B12	C	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.9675 1/2" 2.1439 Ice 2.3278 1" Ice 2.7177 2" Ice 2.7177	1.4081 1.5637 1.7267 2.0749	0.071 0.090 0.111 0.163
RRUS 8843 B2/B66A	A	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.6390 1/2" 1.7988 Ice 1.9660 1" Ice 2.3227 2" Ice 2.3227	1.3534 1.5005 1.6549 1.9860	0.072 0.090 0.110 0.159
RRUS 8843 B2/B66A	B	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.6390 1/2" 1.7988 Ice 1.9660 1" Ice 2.3227 2" Ice 2.3227	1.3534 1.5005 1.6549 1.9860	0.072 0.090 0.110 0.159
RRUS 8843 B2/B66A	C	From Leg	4.0000 0.000 1.000	0.000	94.0000	No Ice 1.6390 1/2" 1.7988 Ice 1.9660 1" Ice 2.3227 2" Ice 2.3227	1.3534 1.5005 1.6549 1.9860	0.072 0.090 0.110 0.159
Platform Mount [LP 714-1]	C	None		0.000	94.0000	No Ice 37.4700 1/2" 44.2300 Ice 50.9900 1" Ice 64.5100 2" Ice 64.5100	37.4700 44.2300 50.9900 64.5100	1.600 2.040 2.480 3.360
2.375" OD x 6' Mount Pipe	A	From Leg	4.0000 0.000 0.000	0.000	94.0000	No Ice 1.4250 1/2" 1.9250 Ice 2.2939 1" Ice 3.0596 2" Ice 3.0596	1.4250 1.9250 2.2939 3.0596	0.025 0.036 0.051 0.093
2.375" OD x 6' Mount Pipe	B	From Leg	4.0000	0.000	94.0000	No Ice 1.4250	1.4250	0.025

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C _{AA} Front ft ²	C _{AA} Side ft ²	Weight K	
			0.000			1/2"	1.9250	1.9250	0.036
			0.000			Ice	2.2939	2.2939	0.051
						1" Ice	3.0596	3.0596	0.093
						2" Ice			
2.375" OD x 6' Mount Pipe	C	From Leg	4.0000	0.000	94.0000	No Ice	1.4250	1.4250	0.025
			0.000			1/2"	1.9250	1.9250	0.036
			0.000			Ice	2.2939	2.2939	0.051
						1" Ice	3.0596	3.0596	0.093
						2" Ice			
SitePro #1 PRK -1245LW	C	None		0.000	94.0000	No Ice	11.8400	11.8400	0.275
						1/2"	16.9600	16.9600	0.296
						Ice	22.0800	22.0800	0.317
						1" Ice	32.3200	32.3200	0.360
						2" Ice			
Handrail Kit Pipe 2" STD	C	None		0.000	94.0000	No Ice	6.0000	6.0000	0.256
						1/2"	8.5000	8.5000	0.340
						Ice	11.0000	11.0000	0.423
						1" Ice	16.0000	16.0000	0.591
						2" Ice			
(3) Crossover Plate Kit, SitePro #SCX1-K	A	From Leg	4.0000	0.000	94.0000	No Ice	0.0000	0.0000	0.000
			0.000			1/2"	0.0000	0.0000	0.000
			0.000			Ice	0.0000	0.0000	0.000
						1" Ice	0.0000	0.0000	0.000
						2" Ice			
(3) Crossover Plate Kit, SitePro #SCX1-K	B	From Leg	4.0000	0.000	94.0000	No Ice	0.0000	0.0000	0.000
			0.000			1/2"	0.0000	0.0000	0.000
			0.000			Ice	0.0000	0.0000	0.000
						1" Ice	0.0000	0.0000	0.000
						2" Ice			
(3) Crossover Plate Kit, SitePro #SCX1-K	C	From Leg	4.0000	0.000	94.0000	No Ice	0.0000	0.0000	0.000
			0.000			1/2"	0.0000	0.0000	0.000
			0.000			Ice	0.0000	0.0000	0.000
						1" Ice	0.0000	0.0000	0.000
						2" Ice			

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K _Z	q _Z ksf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _{AA} In Face ft ²	C _{AA} Out Face ft ²
L1 129.0000-124.0000	126.5000	1.33	0.047	6.667	A	0.000	6.667	6.667	100.00	0.000	0.000
					B	0.000	6.667	6.667	100.00	0.000	0.000
					C	0.000	6.667	6.667	100.00	0.000	0.166
L2 124.0000-119.0000	121.5000	1.319	0.046	6.667	A	0.000	6.667	6.667	100.00	0.000	0.000
					B	0.000	6.667	6.667	100.00	0.000	0.000
					C	0.000	6.667	6.667	100.00	0.000	0.830
L3 119.0000-115.5000	117.2500	1.309	0.046	4.667	A	0.000	4.667	4.667	100.00	0.000	0.000
					B	0.000	4.667	4.667	100.00	0.000	0.000
					C	0.000	4.667	4.667	100.00	0.000	0.581
L4 115.5000-115.0000	115.2455	1.304	0.046	0.704	A	0.000	0.704	0.704	100.00	0.000	0.000
					B	0.000	0.704	0.704	100.00	0.000	0.000
					C	0.000	0.704	0.704	100.00	0.000	0.083
L5 115.0000-110.0000	112.4739	1.297	0.046	7.899	A	0.000	7.899	7.899	100.00	0.000	0.000
					B	0.000	7.899	7.899	100.00	0.000	0.000
					C	0.000	7.899	7.899	100.00	0.000	0.830
L6 110.0000-105.0000	107.4755	1.285	0.045	8.395	A	0.000	8.395	8.395	100.00	0.000	0.000
					B	0.000	8.395	8.395	100.00	0.000	0.000
					C	0.000	8.395	8.395	100.00	0.000	0.830
L7 105.0000-100.0000	102.4768	1.272	0.045	8.891	A	0.000	8.891	8.891	100.00	0.000	0.000
					B	0.000	8.891	8.891	100.00	0.000	0.000

Section Elevation ft	z ft	K _Z	q _z ksf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L8 100.0000- 99.2500	99.6245	1.265	0.044	1.376	C	0.000	8.891	1.376	100.00	0.000	0.955
					A	0.000	1.376		100.00	0.000	0.000
					B	0.000	1.376		100.00	0.000	0.000
L9 99.2500- 99.0000	99.1249	1.263	0.044	0.460	C	0.000	1.376	0.460	100.00	0.000	0.250
					A	0.000	0.460		100.00	0.000	0.000
					B	0.000	0.460		100.00	0.000	0.000
L10 99.0000- 94.0000	96.4783	1.256	0.044	9.454	C	0.000	9.454	9.454	100.00	0.000	0.083
					A	0.000	0.460		100.00	0.000	0.000
					B	0.000	0.460		100.00	0.000	0.000
L11 94.0000- 92.0800	93.0369	1.247	0.044	3.763	C	0.000	9.454	3.763	100.00	0.000	1.677
					A	0.000	3.763		100.00	0.000	0.000
					B	0.000	3.763		100.00	0.000	0.000
L12 92.0800- 91.8300	91.9549	1.243	0.044	0.494	C	0.000	3.763	0.494	100.00	0.000	0.959
					A	0.000	0.494		100.00	0.000	0.000
					B	0.000	0.494		100.00	0.000	0.000
L13 91.8300- 86.8300	89.3098	1.236	0.043	10.137	C	0.000	0.494	10.137	100.00	0.000	0.125
					A	0.000	10.137		100.00	0.000	0.000
					B	0.000	10.137		100.00	0.000	0.000
L14 86.8300- 81.8300	84.3107	1.221	0.043	10.637	C	0.000	10.137	10.637	100.00	0.000	2.497
					A	0.000	10.637		100.00	0.000	0.000
					B	0.000	10.637		100.00	0.000	0.000
L15 81.8300- 73.7500	77.7425	1.2	0.042	18.242	C	0.000	10.637	18.242	100.00	0.000	4.035
					A	0.000	18.242		100.00	0.000	0.000
					B	0.000	18.242		100.00	0.000	0.000
L16 73.7500- 73.0000	73.3746	1.186	0.042	1.728	C	0.000	18.242	1.728	100.00	0.000	0.749
					A	0.000	1.728		100.00	0.000	0.000
					B	0.000	1.728		100.00	0.000	0.000
L17 73.0000- 71.5000	72.2484	1.182	0.042	3.491	C	0.000	1.728	3.491	100.00	0.000	0.375
					A	0.000	3.491		100.00	0.000	0.000
					B	0.000	3.491		100.00	0.000	0.000
L18 71.5000- 71.2500	71.3750	1.179	0.041	0.586	C	0.000	3.491	0.586	100.00	0.000	0.125
					A	0.000	0.586		100.00	0.000	0.000
					B	0.000	0.586		100.00	0.000	0.000
L19 71.2500- 67.9200	69.5774	1.173	0.041	7.921	C	0.000	0.586	7.921	100.00	0.000	1.777
					A	0.000	7.921		100.00	0.000	0.000
					B	0.000	7.921		100.00	0.000	0.000
L20 67.9200- 67.6700	67.7950	1.166	0.041	0.602	C	0.000	7.921	0.602	100.00	0.000	0.135
					A	0.000	0.602		100.00	0.000	0.000
					B	0.000	0.602		100.00	0.000	0.000
L21 67.6700- 66.3300	66.9988	1.163	0.041	3.250	C	0.000	0.602	3.250	100.00	0.000	0.725
					A	0.000	3.250		100.00	0.000	0.000
					B	0.000	3.250		100.00	0.000	0.000
L22 66.3300- 66.0800	66.2050	1.16	0.041	0.609	C	0.000	3.250	0.609	100.00	0.000	0.135
					A	0.000	0.609		100.00	0.000	0.000
					B	0.000	0.609		100.00	0.000	0.000
L23 66.0800- 61.0800	63.5636	1.15	0.040	12.449	C	0.000	0.609	12.449	100.00	0.000	2.705
					A	0.000	12.449		100.00	0.000	0.000
					B	0.000	12.449		100.00	0.000	0.000
L24 61.0800- 56.5000	58.7767	1.132	0.040	11.842	C	0.000	12.449	11.842	100.00	0.000	2.478
					A	0.000	11.842		100.00	0.000	0.000
					B	0.000	11.842		100.00	0.000	0.000
L25 56.5000- 56.2500	56.3750	1.122	0.039	0.658	C	0.000	11.842	0.658	100.00	0.000	0.135
					A	0.000	0.658		100.00	0.000	0.000
					B	0.000	0.658		100.00	0.000	0.000
L26 56.2500- 51.2500	53.7348	1.11	0.039	13.431	C	0.000	0.658	13.431	100.00	0.000	2.247
					A	0.000	13.431		100.00	0.000	0.000
					B	0.000	13.431		100.00	0.000	0.000
L27 51.2500- 46.2500	48.7353	1.088	0.038	13.930	C	0.000	13.431	13.930	100.00	0.000	1.872
					A	0.000	13.930		100.00	0.000	0.000
					B	0.000	13.930		100.00	0.000	0.000
L28 46.2500- 36.7500	41.4496	1.051	0.037	27.839	C	0.000	13.930	27.839	100.00	0.000	4.355
					A	0.000	27.839		100.00	0.000	0.000
					B	0.000	27.839		100.00	0.000	0.000
L29 36.7500- 35.7500	36.2494	1.022	0.036	2.983	C	0.000	27.839	2.983	100.00	0.000	0.583
					A	0.000	2.983		100.00	0.000	0.000
					B	0.000	2.983		100.00	0.000	0.000

Section Elevation ft	z ft	K_z	q_z ksf	A_G ft ²	F a c e	A_F ft ²	A_R ft ²	A_{leg} ft ²	Leg %	$C_A A_A$ In Face ft ²	$C_A A_A$ Out Face ft ²
L30 35.7500- 35.0800	35.4148	1.017	0.036	2.010	A	0.000	2.010	2.010	100.00	0.000	0.000
					B	0.000	2.010	100.00	0.000	0.000	
					C	0.000	2.010	100.00	0.000	0.390	
L31 35.0800- 34.8300	34.9550	1.014	0.036	0.752	A	0.000	0.752	0.752	100.00	0.000	0.000
					B	0.000	0.752	100.00	0.000	0.000	
					C	0.000	0.752	100.00	0.000	0.146	
L32 34.8300- 31.2500	33.0331	1.002	0.035	10.909	A	0.000	10.909	10.909	100.00	0.000	0.000
					B	0.000	10.909	100.00	0.000	0.000	
					C	0.000	10.909	100.00	0.000	2.086	
L33 31.2500- 31.0000	31.1250	0.99	0.035	0.771	A	0.000	0.771	0.771	100.00	0.000	0.000
					B	0.000	0.771	100.00	0.000	0.000	
					C	0.000	0.771	100.00	0.000	0.146	
L34 31.0000- 26.0000	28.4869	0.972	0.034	15.681	A	0.000	15.681	15.681	100.00	0.000	0.000
					B	0.000	15.681	100.00	0.000	0.000	
					C	0.000	15.681	100.00	0.000	2.913	
L35 26.0000- 22.0000	23.9919	0.937	0.033	12.904	A	0.000	12.904	12.904	100.00	0.000	0.000
					B	0.000	12.904	100.00	0.000	0.000	
					C	0.000	12.904	100.00	0.000	2.331	
L36 22.0000- 21.7500	21.8750	0.919	0.032	0.816	A	0.000	0.816	0.816	100.00	0.000	0.000
					B	0.000	0.816	100.00	0.000	0.000	
					C	0.000	0.816	100.00	0.000	0.146	
L37 21.7500- 20.5000	21.1242	0.912	0.032	4.100	A	0.000	4.100	4.100	100.00	0.000	0.000
					B	0.000	4.100	100.00	0.000	0.000	
					C	0.000	4.100	100.00	0.000	0.728	
L38 20.5000- 20.2500	20.3750	0.905	0.032	0.824	A	0.000	0.824	0.824	100.00	0.000	0.000
					B	0.000	0.824	100.00	0.000	0.000	
					C	0.000	0.824	100.00	0.000	0.146	
L39 20.2500- 19.0800	19.6643	0.899	0.032	3.872	A	0.000	3.872	3.872	100.00	0.000	0.000
					B	0.000	3.872	100.00	0.000	0.000	
					C	0.000	3.872	100.00	0.000	0.682	
L40 19.0800- 18.8300	18.9550	0.892	0.031	0.831	A	0.000	0.831	0.831	100.00	0.000	0.000
					B	0.000	0.831	100.00	0.000	0.000	
					C	0.000	0.831	100.00	0.000	0.146	
L41 18.8300- 18.0000	18.4147	0.886	0.031	2.768	A	0.000	2.768	2.768	100.00	0.000	0.000
					B	0.000	2.768	100.00	0.000	0.000	
					C	0.000	2.768	100.00	0.000	0.484	
L42 18.0000- 17.7500	17.8750	0.881	0.031	0.836	A	0.000	0.836	0.836	100.00	0.000	0.000
					B	0.000	0.836	100.00	0.000	0.000	
					C	0.000	0.836	100.00	0.000	0.146	
L43 17.7500- 12.7500	15.2379	0.852	0.030	16.977	A	0.000	16.977	16.977	100.00	0.000	0.000
					B	0.000	16.977	100.00	0.000	0.000	
					C	0.000	16.977	100.00	0.000	2.913	
L44 12.7500- 7.7500	10.2383	0.85	0.030	17.477	A	0.000	17.477	17.477	100.00	0.000	0.000
					B	0.000	17.477	100.00	0.000	0.000	
					C	0.000	17.477	100.00	0.000	2.913	
L45 7.7500- 4.0000	5.8686	0.85	0.030	13.434	A	0.000	13.434	13.434	100.00	0.000	0.000
					B	0.000	13.434	100.00	0.000	0.000	
					C	0.000	13.434	100.00	0.000	2.185	
L46 4.0000- 3.7500	3.8750	0.85	0.030	0.906	A	0.000	0.906	0.906	100.00	0.000	0.000
					B	0.000	0.906	100.00	0.000	0.000	
					C	0.000	0.906	100.00	0.000	0.146	
L47 3.7500- 3.0000	3.3747	0.85	0.030	2.724	A	0.000	2.724	2.724	100.00	0.000	0.000
					B	0.000	2.724	100.00	0.000	0.000	
					C	0.000	2.724	100.00	0.000	0.437	
L48 3.0000- 2.7500	2.8750	0.85	0.030	0.910	A	0.000	0.910	0.910	100.00	0.000	0.000
					B	0.000	0.910	100.00	0.000	0.000	
					C	0.000	0.910	100.00	0.000	0.146	
L49 2.7500- 0.0000	1.3716	0.85	0.030	10.093	A	0.000	10.093	10.093	100.00	0.000	0.000
					B	0.000	10.093	100.00	0.000	0.000	
					C	0.000	10.093	100.00	0.000	1.602	

Tower Pressure - With Ice

$G_H = 1.100$

Section Elevation ft	z ft	K _Z	q _z ksf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 129.0000- 124.0000	126.5000	1.33	0.007	1.9445	8.287	A	0.000	8.287	8.287	100.00	0.000	0.000
						B	0.000	8.287	8.287	100.00	0.000	0.000
						C	0.000	8.287	8.287	100.00	0.000	0.555
L2 124.0000- 119.0000	121.5000	1.319	0.007	1.9367	8.281	A	0.000	8.281	8.281	100.00	0.000	0.000
						B	0.000	8.281	8.281	100.00	0.000	0.000
						C	0.000	8.281	8.281	100.00	0.000	2.767
L3 119.0000- 115.5000	117.2500	1.309	0.007	1.9298	5.792	A	0.000	5.792	5.792	100.00	0.000	0.000
						B	0.000	5.792	5.792	100.00	0.000	0.000
						C	0.000	5.792	5.792	100.00	0.000	1.932
L4 115.5000- 115.0000	115.2455	1.304	0.007	1.9265	0.865	A	0.000	0.865	0.865	100.00	0.000	0.000
						B	0.000	0.865	0.865	100.00	0.000	0.000
						C	0.000	0.865	0.865	100.00	0.000	0.276
L5 115.0000- 110.0000	112.4739	1.297	0.007	1.9218	9.500	A	0.000	9.500	9.500	100.00	0.000	0.000
						B	0.000	9.500	9.500	100.00	0.000	0.000
						C	0.000	9.500	9.500	100.00	0.000	2.752
L6 110.0000- 105.0000	107.4755	1.285	0.007	1.9131	9.989	A	0.000	9.989	9.989	100.00	0.000	0.000
						B	0.000	9.989	9.989	100.00	0.000	0.000
						C	0.000	9.989	9.989	100.00	0.000	2.743
L7 105.0000- 100.0000	102.4768	1.272	0.007	1.9040	10.478	A	0.000	10.478	10.478	100.00	0.000	0.000
						B	0.000	10.478	10.478	100.00	0.000	0.000
						C	0.000	10.478	10.478	100.00	0.000	3.176
L8 100.0000- 99.2500	99.6245	1.265	0.007	1.8986	1.614	A	0.000	1.614	1.614	100.00	0.000	0.000
						B	0.000	1.614	1.614	100.00	0.000	0.000
						C	0.000	1.614	1.614	100.00	0.000	0.851
L9 99.2500- 99.0000	99.1249	1.263	0.007	1.8976	0.539	A	0.000	0.539	0.539	100.00	0.000	0.000
						B	0.000	0.539	0.539	100.00	0.000	0.000
						C	0.000	0.539	0.539	100.00	0.000	0.283
L10 99.0000- 94.0000	96.4783	1.256	0.007	1.8925	11.031	A	0.000	11.031	11.031	100.00	0.000	0.000
						B	0.000	11.031	11.031	100.00	0.000	0.000
						C	0.000	11.031	11.031	100.00	0.000	5.707
L11 94.0000- 92.0800	93.0369	1.247	0.007	1.8857	4.366	A	0.000	4.366	4.366	100.00	0.000	0.000
						B	0.000	4.366	4.366	100.00	0.000	0.000
						C	0.000	4.366	4.366	100.00	0.000	3.292
L12 92.0800- 91.8300	91.9549	1.243	0.007	1.8835	0.572	A	0.000	0.572	0.572	100.00	0.000	0.000
						B	0.000	0.572	0.572	100.00	0.000	0.000
						C	0.000	0.572	0.572	100.00	0.000	0.428
L13 91.8300- 86.8300	89.3098	1.236	0.007	1.8780	11.702	A	0.000	11.702	11.702	100.00	0.000	0.000
						B	0.000	11.702	11.702	100.00	0.000	0.000
						C	0.000	11.702	11.702	100.00	0.000	8.548
L14 86.8300- 81.8300	84.3107	1.221	0.007	1.8672	12.193	A	0.000	12.193	12.193	100.00	0.000	0.000
						B	0.000	12.193	12.193	100.00	0.000	0.000
						C	0.000	12.193	12.193	100.00	0.000	8.513
L15 81.8300- 73.7500	77.7425	1.2	0.007	1.8521	20.736	A	0.000	20.736	20.736	100.00	0.000	0.000
						B	0.000	20.736	20.736	100.00	0.000	0.000
						C	0.000	20.736	20.736	100.00	0.000	13.679
L16 73.7500- 73.0000	73.3746	1.186	0.007	1.8414	1.960	A	0.000	1.960	1.960	100.00	0.000	0.000
						B	0.000	1.960	1.960	100.00	0.000	0.000
						C	0.000	1.960	1.960	100.00	0.000	1.270
L17 73.0000- 71.5000	72.2484	1.182	0.007	1.8386	3.951	A	0.000	3.951	3.951	100.00	0.000	0.000
						B	0.000	3.951	3.951	100.00	0.000	0.000
						C	0.000	3.951	3.951	100.00	0.000	2.526
L18 71.5000- 71.2500	71.3750	1.179	0.007	1.8363	0.662	A	0.000	0.662	0.662	100.00	0.000	0.000
						B	0.000	0.662	0.662	100.00	0.000	0.000
						C	0.000	0.662	0.662	100.00	0.000	0.421
L19 71.2500- 67.9200	69.5774	1.173	0.007	1.8317	8.937	A	0.000	8.937	8.937	100.00	0.000	0.000
						B	0.000	8.937	8.937	100.00	0.000	0.000
						C	0.000	8.937	8.937	100.00	0.000	5.708
L20 67.9200- 67.6700	67.7950	1.166	0.007	1.8269	0.678	A	0.000	0.678	0.678	100.00	0.000	0.000
						B	0.000	0.678	0.678	100.00	0.000	0.000
						C	0.000	0.678	0.678	100.00	0.000	0.430
L21 67.6700- 66.3300	66.9988	1.163	0.007	1.8248	3.658	A	0.000	3.658	3.658	100.00	0.000	0.000
						B	0.000	3.658	3.658	100.00	0.000	0.000
						C	0.000	3.658	3.658	100.00	0.000	2.301
L22 66.3300- 66.0800	66.2050	1.16	0.007	1.8226	0.685	A	0.000	0.685	0.685	100.00	0.000	0.000
						B	0.000	0.685	0.685	100.00	0.000	0.000
						C	0.000	0.685	0.685	100.00	0.000	0.429
L23 66.0800- 61.0800	63.5636	1.15	0.006	1.8152	13.962	A	0.000	13.962	13.962	100.00	0.000	0.000
						B	0.000	13.962	13.962	100.00	0.000	0.000
						C	0.000	13.962	13.962	100.00	0.000	0.000

Section Elevation ft	z ft	K _Z	q _Z ksf	t _Z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L24 61.0800- 56.5000	58.7767	1.132	0.006	1.8010	13.217	C	0.000	13.962	13.217	100.00	0.000	8.554
						A	0.000	13.217		100.00	0.000	0.000
						B	0.000	13.217		100.00	0.000	0.000
L25 56.5000- 56.2500	56.3750	1.122	0.006	1.7935	0.733	C	0.000	13.217	0.733	100.00	0.000	7.794
						A	0.000	0.733		100.00	0.000	0.000
						B	0.000	0.733		100.00	0.000	0.000
L26 56.2500- 51.2500	53.7348	1.11	0.006	1.7849	14.918	C	0.000	0.733	14.918	100.00	0.000	0.424
						A	0.000	14.918		100.00	0.000	0.000
						B	0.000	14.918		100.00	0.000	0.000
L27 51.2500- 46.2500	48.7353	1.088	0.006	1.7676	15.403	C	0.000	14.918	15.403	100.00	0.000	6.907
						A	0.000	15.403		100.00	0.000	0.000
						B	0.000	15.403		100.00	0.000	0.000
L28 46.2500- 36.7500	41.4496	1.051	0.006	1.7392	30.592	C	0.000	15.403	30.592	100.00	0.000	5.603
						A	0.000	30.592		100.00	0.000	0.000
						B	0.000	30.592		100.00	0.000	0.000
L29 36.7500- 35.7500	36.2494	1.022	0.006	1.7160	3.273	C	0.000	30.592	3.273	100.00	0.000	12.812
						A	0.000	3.273		100.00	0.000	0.000
						B	0.000	3.273		100.00	0.000	0.000
L30 35.7500- 35.0800	35.4148	1.017	0.006	1.7120	2.201	C	0.000	3.273	2.201	100.00	0.000	1.703
						A	0.000	2.201		100.00	0.000	0.000
						B	0.000	2.201		100.00	0.000	0.000
L31 35.0800- 34.8300	34.9550	1.014	0.006	1.7098	0.823	C	0.000	2.201	0.823	100.00	0.000	1.130
						A	0.000	0.823		100.00	0.000	0.000
						B	0.000	0.823		100.00	0.000	0.000
L32 34.8300- 31.2500	33.0331	1.002	0.006	1.7002	11.923	C	0.000	0.823	11.923	100.00	0.000	0.421
						A	0.000	11.923		100.00	0.000	0.000
						B	0.000	11.923		100.00	0.000	0.000
L33 31.2500- 31.0000	31.1250	0.99	0.006	1.6901	0.841	C	0.000	11.923	0.841	100.00	0.000	6.008
						A	0.000	0.841		100.00	0.000	0.000
						B	0.000	0.841		100.00	0.000	0.000
L34 31.0000- 26.0000	28.4869	0.972	0.005	1.6752	17.077	C	0.000	0.841	17.077	100.00	0.000	0.418
						A	0.000	17.077		100.00	0.000	0.000
						B	0.000	17.077		100.00	0.000	0.000
L35 26.0000- 22.0000	23.9919	0.937	0.005	1.6467	14.002	C	0.000	17.077	14.002	100.00	0.000	8.311
						A	0.000	14.002		100.00	0.000	0.000
						B	0.000	14.002		100.00	0.000	0.000
L36 22.0000- 21.7500	21.8750	0.919	0.005	1.6315	0.884	C	0.000	14.002	0.884	100.00	0.000	6.575
						A	0.000	0.884		100.00	0.000	0.000
						B	0.000	0.884		100.00	0.000	0.000
L37 21.7500- 20.5000	21.1242	0.912	0.005	1.6258	4.439	C	0.000	0.884	4.439	100.00	0.000	0.409
						A	0.000	4.439		100.00	0.000	0.000
						B	0.000	4.439		100.00	0.000	0.000
L38 20.5000- 20.2500	20.3750	0.905	0.005	1.6200	0.891	C	0.000	4.439	0.891	100.00	0.000	2.038
						A	0.000	0.891		100.00	0.000	0.000
						B	0.000	0.891		100.00	0.000	0.000
L39 20.2500- 19.0800	19.6643	0.899	0.005	1.6142	4.186	C	0.000	0.891	4.186	100.00	0.000	0.407
						A	0.000	4.186		100.00	0.000	0.000
						B	0.000	4.186		100.00	0.000	0.000
L40 19.0800- 18.8300	18.9550	0.892	0.005	1.6083	0.898	C	0.000	4.186	0.898	100.00	0.000	1.899
						A	0.000	0.898		100.00	0.000	0.000
						B	0.000	0.898		100.00	0.000	0.000
L41 18.8300- 18.0000	18.4147	0.886	0.005	1.6037	2.990	C	0.000	0.898	2.990	100.00	0.000	0.405
						A	0.000	2.990		100.00	0.000	0.000
						B	0.000	2.990		100.00	0.000	0.000
L42 18.0000- 17.7500	17.8750	0.881	0.005	1.5989	0.902	C	0.000	2.990	0.902	100.00	0.000	1.341
						A	0.000	0.902		100.00	0.000	0.000
						B	0.000	0.902		100.00	0.000	0.000
L43 17.7500- 12.7500	15.2379	0.852	0.005	1.5736	18.288	C	0.000	0.902	18.288	100.00	0.000	0.403
						A	0.000	18.288		100.00	0.000	0.000
						B	0.000	18.288		100.00	0.000	0.000
L44 12.7500- 7.7500	10.2383	0.85	0.005	1.5122	18.737	C	0.000	18.288	18.288	100.00	0.000	7.984
						A	0.000	18.737		100.00	0.000	0.000
						B	0.000	18.737		100.00	0.000	0.000
L45 7.7500- 4.0000	5.8686	0.85	0.005	1.4304	14.328	C	0.000	18.737	14.328	100.00	0.000	7.786
						A	0.000	14.328		100.00	0.000	0.000
						B	0.000	14.328		100.00	0.000	0.000

Section Elevation ft	z ft	K _Z	q _z ksf	t _z in	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L46 4.0000-3.7500	3.8750	0.85	0.005	1.3722	0.963	A	0.000	0.963	0.963	100.00	0.000	0.000
						B	0.000	0.963				
						C	0.000	0.963				
L47 3.7500-3.0000	3.3747	0.85	0.005	1.3534	2.893	A	0.000	2.893	2.893	100.00	0.000	0.000
						B	0.000	2.893				
						C	0.000	2.893				
L48 3.0000-2.7500	2.8750	0.85	0.005	1.3319	0.965	A	0.000	0.965	0.965	100.00	0.000	0.000
						B	0.000	0.965				
						C	0.000	0.965				
L49 2.7500-0.0000	1.3716	0.85	0.005	1.2369	10.660	A	0.000	10.660	10.660	100.00	0.000	0.000
						B	0.000	10.660				
						C	0.000	10.660				

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K _Z	q _z ksf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L1 129.0000-124.0000	126.5000	1.33	0.010	6.667	A	0.000	6.667	6.667	100.00	0.000	0.000
					B	0.000	6.667				
					C	0.000	6.667				
L2 124.0000-119.0000	121.5000	1.319	0.010	6.667	A	0.000	6.667	6.667	100.00	0.000	0.000
					B	0.000	6.667				
					C	0.000	6.667				
L3 119.0000-115.5000	117.2500	1.309	0.009	4.667	A	0.000	4.667	4.667	100.00	0.000	0.000
					B	0.000	4.667				
					C	0.000	4.667				
L4 115.5000-115.0000	115.2455	1.304	0.009	0.704	A	0.000	0.704	0.704	100.00	0.000	0.000
					B	0.000	0.704				
					C	0.000	0.704				
L5 115.0000-110.0000	112.4739	1.297	0.009	7.899	A	0.000	7.899	7.899	100.00	0.000	0.000
					B	0.000	7.899				
					C	0.000	7.899				
L6 110.0000-105.0000	107.4755	1.285	0.009	8.395	A	0.000	8.395	8.395	100.00	0.000	0.000
					B	0.000	8.395				
					C	0.000	8.395				
L7 105.0000-100.0000	102.4768	1.272	0.009	8.891	A	0.000	8.891	8.891	100.00	0.000	0.000
					B	0.000	8.891				
					C	0.000	8.891				
L8 100.0000-99.2500	99.6245	1.265	0.009	1.376	A	0.000	1.376	1.376	100.00	0.000	0.000
					B	0.000	1.376				
					C	0.000	1.376				
L9 99.2500-99.0000	99.1249	1.263	0.009	0.460	A	0.000	0.460	0.460	100.00	0.000	0.000
					B	0.000	0.460				
					C	0.000	0.460				
L10 99.0000-94.0000	96.4783	1.256	0.009	9.454	A	0.000	9.454	9.454	100.00	0.000	0.000
					B	0.000	9.454				
					C	0.000	9.454				
L11 94.0000-92.0800	93.0369	1.247	0.009	3.763	A	0.000	3.763	3.763	100.00	0.000	0.000
					B	0.000	3.763				
					C	0.000	3.763				
L12 92.0800-91.8300	91.9549	1.243	0.009	0.494	A	0.000	0.494	0.494	100.00	0.000	0.000
					B	0.000	0.494				
					C	0.000	0.494				
L13 91.8300-86.8300	89.3098	1.236	0.009	10.137	A	0.000	10.137	10.137	100.00	0.000	0.000
					B	0.000	10.137				
					C	0.000	10.137				
L14 86.8300-81.8300	84.3107	1.221	0.009	10.637	A	0.000	10.637	10.637	100.00	0.000	0.000
					B	0.000	10.637				
					C	0.000	10.637				
L15 81.8300-73.7500	77.7425	1.2	0.009	18.242	A	0.000	18.242	18.242	100.00	0.000	0.000
					B	0.000	18.242				
					C	0.000	18.242				

Section Elevation ft	z ft	K_z	q_z ksf	A_G ft ²	F a c e	A_F ft ²	A_R ft ²	A_{leg} ft ²	Leg %	C_{AA} In Face ft ²	C_{AA} Out Face ft ²
L16 73.7500- 73.0000	73.3746	1.186	0.009	1.728	A	0.000	1.728	1.728	100.00	0.000	0.000
					B	0.000	1.728	100.00	0.000	0.000	
					C	0.000	1.728	100.00	0.000	0.375	
L17 73.0000- 71.5000	72.2484	1.182	0.009	3.491	A	0.000	3.491	3.491	100.00	0.000	0.000
					B	0.000	3.491	100.00	0.000	0.000	
					C	0.000	3.491	100.00	0.000	0.749	
L18 71.5000- 71.2500	71.3750	1.179	0.009	0.586	A	0.000	0.586	0.586	100.00	0.000	0.000
					B	0.000	0.586	100.00	0.000	0.000	
					C	0.000	0.586	100.00	0.000	0.125	
L19 71.2500- 67.9200	69.5774	1.173	0.008	7.921	A	0.000	7.921	7.921	100.00	0.000	0.000
					B	0.000	7.921	100.00	0.000	0.000	
					C	0.000	7.921	100.00	0.000	1.777	
L20 67.9200- 67.6700	67.7950	1.166	0.008	0.602	A	0.000	0.602	0.602	100.00	0.000	0.000
					B	0.000	0.602	100.00	0.000	0.000	
					C	0.000	0.602	100.00	0.000	0.135	
L21 67.6700- 66.3300	66.9988	1.163	0.008	3.250	A	0.000	3.250	3.250	100.00	0.000	0.000
					B	0.000	3.250	100.00	0.000	0.000	
					C	0.000	3.250	100.00	0.000	0.725	
L22 66.3300- 66.0800	66.2050	1.16	0.008	0.609	A	0.000	0.609	0.609	100.00	0.000	0.000
					B	0.000	0.609	100.00	0.000	0.000	
					C	0.000	0.609	100.00	0.000	0.135	
L23 66.0800- 61.0800	63.5636	1.15	0.008	12.449	A	0.000	12.449	12.449	100.00	0.000	0.000
					B	0.000	12.449	100.00	0.000	0.000	
					C	0.000	12.449	100.00	0.000	2.705	
L24 61.0800- 56.5000	58.7767	1.132	0.008	11.842	A	0.000	11.842	11.842	100.00	0.000	0.000
					B	0.000	11.842	100.00	0.000	0.000	
					C	0.000	11.842	100.00	0.000	2.478	
L25 56.5000- 56.2500	56.3750	1.122	0.008	0.658	A	0.000	0.658	0.658	100.00	0.000	0.000
					B	0.000	0.658	100.00	0.000	0.000	
					C	0.000	0.658	100.00	0.000	0.135	
L26 56.2500- 51.2500	53.7348	1.11	0.008	13.431	A	0.000	13.431	13.431	100.00	0.000	0.000
					B	0.000	13.431	100.00	0.000	0.000	
					C	0.000	13.431	100.00	0.000	2.247	
L27 51.2500- 46.2500	48.7353	1.088	0.008	13.930	A	0.000	13.930	13.930	100.00	0.000	0.000
					B	0.000	13.930	100.00	0.000	0.000	
					C	0.000	13.930	100.00	0.000	1.872	
L28 46.2500- 36.7500	41.4496	1.051	0.008	27.839	A	0.000	27.839	27.839	100.00	0.000	0.000
					B	0.000	27.839	100.00	0.000	0.000	
					C	0.000	27.839	100.00	0.000	4.355	
L29 36.7500- 35.7500	36.2494	1.022	0.007	2.983	A	0.000	2.983	2.983	100.00	0.000	0.000
					B	0.000	2.983	100.00	0.000	0.000	
					C	0.000	2.983	100.00	0.000	0.583	
L30 35.7500- 35.0800	35.4148	1.017	0.007	2.010	A	0.000	2.010	2.010	100.00	0.000	0.000
					B	0.000	2.010	100.00	0.000	0.000	
					C	0.000	2.010	100.00	0.000	0.390	
L31 35.0800- 34.8300	34.9550	1.014	0.007	0.752	A	0.000	0.752	0.752	100.00	0.000	0.000
					B	0.000	0.752	100.00	0.000	0.000	
					C	0.000	0.752	100.00	0.000	0.146	
L32 34.8300- 31.2500	33.0331	1.002	0.007	10.909	A	0.000	10.909	10.909	100.00	0.000	0.000
					B	0.000	10.909	100.00	0.000	0.000	
					C	0.000	10.909	100.00	0.000	2.086	
L33 31.2500- 31.0000	31.1250	0.99	0.007	0.771	A	0.000	0.771	0.771	100.00	0.000	0.000
					B	0.000	0.771	100.00	0.000	0.000	
					C	0.000	0.771	100.00	0.000	0.146	
L34 31.0000- 26.0000	28.4869	0.972	0.007	15.681	A	0.000	15.681	15.681	100.00	0.000	0.000
					B	0.000	15.681	100.00	0.000	0.000	
					C	0.000	15.681	100.00	0.000	2.913	
L35 26.0000- 22.0000	23.9919	0.937	0.007	12.904	A	0.000	12.904	12.904	100.00	0.000	0.000
					B	0.000	12.904	100.00	0.000	0.000	
					C	0.000	12.904	100.00	0.000	2.331	
L36 22.0000- 21.7500	21.8750	0.919	0.007	0.816	A	0.000	0.816	0.816	100.00	0.000	0.000
					B	0.000	0.816	100.00	0.000	0.000	
					C	0.000	0.816	100.00	0.000	0.146	
L37 21.7500- 20.5000	21.1242	0.912	0.007	4.100	A	0.000	4.100	4.100	100.00	0.000	0.000
					B	0.000	4.100	100.00	0.000	0.000	
					C	0.000	4.100	100.00	0.000	0.728	
L38 20.5000- 20.2500	20.3750	0.905	0.007	0.824	A	0.000	0.824	0.824	100.00	0.000	0.000
					B	0.000	0.824	100.00	0.000	0.000	
					C	0.000	0.824	100.00	0.000	0.000	

Section Elevation ft	z ft	K _Z	q _z ksf	A _G ft ²	F a c e	A _F ft ²	A _R ft ²	A _{leg} ft ²	Leg %	C _A A _A In Face ft ²	C _A A _A Out Face ft ²
L39 20.2500- 19.0800	19.6643	0.899	0.007	3.872	C	0.000	0.824	3.872	100.00	0.000	0.146
					A	0.000	3.872		100.00	0.000	0.000
					B	0.000	3.872		100.00	0.000	0.000
L40 19.0800- 18.8300	18.9550	0.892	0.006	0.831	C	0.000	3.872	0.831	100.00	0.000	0.682
					A	0.000	0.831		100.00	0.000	0.000
					B	0.000	0.831		100.00	0.000	0.000
L41 18.8300- 18.0000	18.4147	0.886	0.006	2.768	C	0.000	2.768	2.768	100.00	0.000	0.000
					A	0.000	2.768		100.00	0.000	0.000
					B	0.000	2.768		100.00	0.000	0.000
L42 18.0000- 17.7500	17.8750	0.881	0.006	0.836	C	0.000	2.768	0.836	100.00	0.000	0.484
					A	0.000	0.836		100.00	0.000	0.000
					B	0.000	0.836		100.00	0.000	0.000
L43 17.7500- 12.7500	15.2379	0.852	0.006	16.977	C	0.000	0.836	16.977	100.00	0.000	0.146
					A	0.000	16.977		100.00	0.000	0.000
					B	0.000	16.977		100.00	0.000	0.000
L44 12.7500- 7.7500	10.2383	0.85	0.006	17.477	C	0.000	16.977	17.477	100.00	0.000	2.913
					A	0.000	17.477		100.00	0.000	0.000
					B	0.000	17.477		100.00	0.000	0.000
L45 7.7500- 4.0000	5.8686	0.85	0.006	13.434	C	0.000	17.477	13.434	100.00	0.000	2.913
					A	0.000	13.434		100.00	0.000	0.000
					B	0.000	13.434		100.00	0.000	0.000
L46 4.0000- 3.7500	3.8750	0.85	0.006	0.906	C	0.000	13.434	0.906	100.00	0.000	2.185
					A	0.000	0.906		100.00	0.000	0.000
					B	0.000	0.906		100.00	0.000	0.000
L47 3.7500- 3.0000	3.3747	0.85	0.006	2.724	C	0.000	0.906	2.724	100.00	0.000	0.146
					A	0.000	2.724		100.00	0.000	0.000
					B	0.000	2.724		100.00	0.000	0.000
L48 3.0000- 2.7500	2.8750	0.85	0.006	0.910	C	0.000	2.724	0.910	100.00	0.000	0.437
					A	0.000	0.910		100.00	0.000	0.000
					B	0.000	0.910		100.00	0.000	0.000
L49 2.7500- 0.0000	1.3716	0.85	0.006	10.093	C	0.000	0.910	10.093	100.00	0.000	0.146
					A	0.000	10.093		100.00	0.000	0.000
					B	0.000	10.093		100.00	0.000	0.000
					C	0.000	10.093		100.00	0.000	1.602

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

Comb. No.	Description
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
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	129 - 124	Pole	Max Tension	39	0.000	0.000	-0.000
			Max. Compression	26	-13.819	0.030	8.501
			Max. Mx	20	-5.088	14.011	1.932
			Max. My	2	-5.077	0.045	16.809
			Max. Vy	20	-8.764	14.011	1.932
			Max. Vx	2	-8.770	0.045	16.809
			Max. Torque	20			-7.787
L2	124 - 119	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-14.636	0.179	8.607
			Max. Mx	20	-5.502	58.583	2.038
			Max. My	2	-5.492	0.076	61.358
			Max. Vy	20	-9.052	58.583	2.038
			Max. Vx	2	-9.057	0.076	61.358
			Max. Torque	20			-7.787
L3	119 - 115.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.816	0.284	10.261
			Max. Mx	20	-8.403	99.605	2.383
			Max. My	2	-8.376	0.098	102.860
			Max. Vy	20	-16.576	99.605	2.383
			Max. Vx	2	-16.679	0.098	102.860
			Max. Torque	20			-8.564
L4	115.5 - 115	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-25.904	0.300	10.280
			Max. Mx	20	-8.459	107.902	2.399
			Max. My	2	-8.432	0.102	111.202
			Max. Vy	20	-16.602	107.902	2.399
			Max. Vx	2	-16.705	0.102	111.202
			Max. Torque	20			-8.563
L5	115 - 110	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-26.672	0.479	10.431
			Max. Mx	20	-8.869	191.930	2.527
			Max. My	2	-8.845	0.140	195.678
			Max. Vy	20	-17.003	191.930	2.527
			Max. Vx	2	-17.104	0.140	195.678
			Max. Torque	20			-8.561
L6	110 - 105	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-27.468	0.664	10.525
			Max. Mx	20	-9.343	277.925	2.611
			Max. My	2	-9.322	0.182	282.111
			Max. Vy	20	-17.396	277.925	2.611
			Max. Vx	2	-17.496	0.182	282.111

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L7	105 - 100	Pole	Max. Torque	20			-8.538
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-37.593	0.863	10.615
			Max. Mx	20	-13.822	386.257	2.681
			Max. My	2	-13.801	0.228	390.885
			Max. Vy	20	-22.413	386.257	2.681
			Max. Vx	2	-22.515	0.228	390.885
L8	100 - 99.25	Pole	Max. Torque	20			-8.512
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-37.722	0.893	10.624
			Max. Mx	20	-13.922	403.083	2.687
			Max. My	2	-13.903	0.235	407.777
			Max. Vy	20	-22.467	403.083	2.687
			Max. Vx	2	-22.568	0.235	407.777
L9	99.25 - 99	Pole	Max. Torque	20			-8.482
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-37.779	0.903	10.628
			Max. Mx	20	-13.978	408.702	2.689
			Max. My	2	-13.958	0.238	413.417
			Max. Vy	20	-22.481	408.702	2.689
			Max. Vx	2	-22.585	0.238	413.417
L10	99 - 94	Pole	Max. Torque	20			-8.476
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-38.929	1.109	10.660
			Max. Mx	20	-14.763	522.343	2.737
			Max. My	2	-14.746	0.285	527.488
			Max. Vy	20	-22.971	522.343	2.737
			Max. Vx	2	-23.071	0.285	527.488
L11	94 - 92.08	Pole	Max. Torque	20			-8.474
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.168	1.192	12.047
			Max. Mx	20	-18.898	583.875	3.117
			Max. My	2	-18.878	0.303	589.579
			Max. Vy	20	-30.295	583.875	3.117
			Max. Vx	2	-30.397	0.303	589.579
L12	92.08 - 91.83	Pole	Max. Torque	20			-8.901
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.245	1.204	12.052
			Max. Mx	20	-18.992	591.449	3.118
			Max. My	2	-18.972	0.307	597.175
			Max. Vy	20	-30.301	591.449	3.118
			Max. Vx	2	-30.406	0.307	597.175
L13	91.83 - 86.83	Pole	Max. Torque	20			-8.900
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-51.773	1.425	12.076
			Max. Mx	20	-20.154	744.370	3.167
			Max. My	2	-20.136	0.356	750.525
			Max. Vy	20	-30.863	744.370	3.167
			Max. Vx	2	-30.965	0.356	750.525
L14	86.83 - 81.83	Pole	Max. Torque	20			-8.896
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.328	1.653	12.078
			Max. Mx	20	-21.366	900.050	3.201
			Max. My	2	-21.350	0.409	906.628
			Max. Vy	20	-31.413	900.050	3.201
			Max. Vx	2	-31.514	0.409	906.628
L15	81.83 - 73.75	Pole	Max. Torque	20			-8.833
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-54.543	1.835	12.062
			Max. Mx	20	-22.316	1021.144	3.218
			Max. My	2	-22.301	0.452	1028.039
			Max. Vy	20	-31.830	1021.144	3.218
			Max. Vx	2	-31.931	0.452	1028.039
L16	73.75 - 73	Pole	Max. Torque	20			-8.767
			Max Tension	1	0.000	0.000	0.000

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L17	73 - 71.5	Pole	Max. Compression	26	-57.382	2.072	12.034
			Max. Mx	20	-24.460	1181.967	3.238
			Max. My	2	-24.446	0.508	1189.277
			Max. Vy	20	-32.488	1181.967	3.238
			Max. Vx	2	-32.589	0.508	1189.277
			Max. Torque	20			-8.658
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.916	2.144	12.022
			Max. Mx	20	-24.876	1230.825	3.242
			Max. My	2	-24.863	0.525	1238.259
L18	71.5 - 71.25	Pole	Max. Vy	20	-32.664	1230.825	3.242
			Max. Vx	2	-32.765	0.525	1238.259
			Max. Torque	20			-8.648
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-58.010	2.156	12.024
			Max. Mx	20	-24.976	1238.992	3.241
			Max. My	2	-24.963	0.530	1246.447
			Max. Vy	20	-32.675	1238.992	3.241
			Max. Vx	2	-32.781	0.530	1246.447
			Max. Torque	20			-8.628
L19	71.25 - 67.92	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.266	2.318	11.990
L20	67.92 - 67.67	Pole	Max. Mx	20	-25.978	1348.455	3.246
			Max. My	2	-25.965	0.567	1356.181
			Max. Vy	20	-33.066	1348.455	3.246
			Max. Vx	2	-33.166	0.567	1356.181
			Max. Torque	20			-8.624
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.372	2.331	11.992
			Max. Mx	20	-26.081	1356.724	3.246
			Max. My	2	-26.069	0.572	1364.471
			Max. Vy	20	-33.083	1356.724	3.246
L21	67.67 - 66.33	Pole	Max. Vx	2	-33.189	0.572	1364.471
			Max. Torque	20			-8.575
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.943	2.396	11.973
			Max. Mx	20	-26.530	1401.176	3.248
			Max. My	2	-26.518	0.586	1409.031
			Max. Vy	20	-33.258	1401.176	3.248
			Max. Vx	2	-33.358	0.586	1409.031
			Max. Torque	20			-8.571
			Max Tension	1	0.000	0.000	0.000
L22	66.33 - 66.08	Pole	Max. Compression	26	-60.071	2.410	11.975
			Max. Mx	20	-26.655	1409.493	3.248
			Max. My	2	-26.643	0.591	1417.369
			Max. Vy	20	-33.277	1409.493	3.248
			Max. Vx	2	-33.382	0.591	1417.369
			Max. Torque	20			-8.551
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-62.635	2.659	11.909
			Max. Mx	20	-28.801	1577.498	3.249
			Max. My	2	-28.790	0.651	1585.775
L23	66.08 - 61.08	Pole	Max. Vy	20	-33.917	1577.498	3.249
			Max. Vx	2	-34.017	0.651	1585.775
			Max. Torque	20			-8.547
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-65.015	2.894	11.842
			Max. Mx	20	-30.805	1734.150	3.244
			Max. My	2	-30.795	0.709	1742.791
			Max. Vy	20	-34.492	1734.150	3.244
			Max. Vx	2	-34.592	0.709	1742.791
			Max. Torque	20			-8.471
L25	56.5 - 56.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-65.147	2.908	11.843

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L26	56.25 - 51.25	Pole	Max. Mx	20	-30.929	1742.776	3.243
			Max. My	2	-30.919	0.714	1751.438
			Max. Vy	20	-34.512	1742.776	3.243
			Max. Vx	2	-34.618	0.714	1751.438
			Max. Torque	20			-8.400
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-67.776	3.169	11.755
			Max. Mx	20	-33.137	1916.870	3.232
			Max. My	2	-33.128	0.780	1925.924
			Max. Vy	20	-35.118	1916.870	3.232
L27	51.25 - 46.25	Pole	Max. Vx	2	-35.217	0.780	1925.924
			Max. Torque	20			-8.396
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.436	3.436	11.661
			Max. Mx	20	-35.388	2093.876	3.215
			Max. My	2	-35.380	0.850	2103.317
			Max. Vy	20	-35.687	2093.876	3.215
			Max. Vx	2	-35.786	0.850	2103.317
			Max. Torque	20			-8.330
			Max Tension	1	0.000	0.000	0.000
L28	46.25 - 36.75	Pole	Max. Compression	26	-72.727	3.668	11.572
			Max. Mx	20	-37.326	2246.561	3.195
			Max. My	2	-37.319	0.911	2256.325
			Max. Vy	20	-36.168	2246.561	3.195
			Max. Vx	2	-36.267	0.911	2256.325
			Max. Torque	20			-8.275
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-78.369	4.010	11.436
			Max. Mx	20	-41.970	2475.311	3.168
			Max. My	2	-41.963	1.002	2485.549
L29	36.75 - 35.75	Pole	Max. Vy	20	-37.011	2475.311	3.168
			Max. Vx	2	-37.110	1.002	2485.549
			Max. Torque	20			-8.145
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-78.705	4.047	11.422
			Max. Mx	20	-42.260	2500.129	3.164
			Max. My	2	-42.254	1.012	2510.418
			Max. Vy	20	-37.076	2500.129	3.164
			Max. Vx	2	-37.175	1.012	2510.418
			Max. Torque	20			-8.128
L30	35.75 - 35.08	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-78.831	4.062	11.420
			Max. Mx	20	-42.373	2509.402	3.162
			Max. My	2	-42.367	1.016	2519.710
			Max. Vy	20	-37.095	2509.402	3.162
			Max. Vx	2	-37.200	1.016	2519.710
			Max. Torque	20			-8.116
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.634	4.250	11.316
			Max. Mx	20	-43.883	2642.905	3.140
L31	35.08 - 34.83	Pole	Max. My	2	-43.878	1.069	2653.480
			Max. Vy	20	-37.488	2642.905	3.140
			Max. Vx	2	-37.586	1.069	2653.480
			Max. Torque	20			-8.112
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.772	4.265	11.313
			Max. Mx	20	-44.018	2652.278	3.138
			Max. My	2	-44.012	1.073	2662.872
			Max. Vy	20	-37.496	2652.278	3.138
			Max. Vx	2	-37.601	1.073	2662.872
L32	34.83 - 31.25	Pole	Max. Torque	20			-8.051
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.772	4.265	11.313
			Max. Mx	20	-44.018	2652.278	3.138
L33	31.25 - 31	Pole	Max. My	2	-44.012	1.073	2662.872
			Max. Vy	20	-37.496	2652.278	3.138
			Max. Vx	2	-37.601	1.073	2662.872
			Max. Torque	20			-8.051
L34	31 - 26	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-80.772	4.265	11.313

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L35	26 - 22	Pole	Max. Compression	26	-83.528	4.527	11.155
			Max. Mx	20	-46.366	2841.104	3.103
			Max. My	2	-46.362	1.148	2852.064
			Max. Vy	20	-38.030	2841.104	3.103
			Max. Vx	2	-38.128	1.148	2852.064
			Max. Torque	20			-8.046
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-85.757	4.740	11.031
			Max. Mx	20	-48.281	2994.000	3.070
			Max. My	2	-48.278	1.211	3005.248
L36	22 - 21.75	Pole	Max. Vy	20	-38.427	2994.000	3.070
			Max. Vx	2	-38.525	1.211	3005.248
			Max. Torque	20			-7.961
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-85.906	4.755	11.027
			Max. Mx	20	-48.422	3003.609	3.067
			Max. My	2	-48.419	1.215	3014.876
			Max. Vy	20	-38.437	3003.609	3.067
			Max. Vx	2	-38.540	1.215	3014.876
			Max. Torque	20			-7.894
L37	21.75 - 20.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-86.650	4.821	10.984
			Max. Mx	20	-49.050	3051.748	3.058
			Max. My	2	-49.046	1.234	3063.104
			Max. Vy	20	-38.582	3051.748	3.058
			Max. Vx	2	-38.679	1.234	3063.104
			Max. Torque	20			-7.890
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-86.799	4.835	10.980
			Max. Mx	20	-49.193	3061.395	3.055
L38	20.5 - 20.25	Pole	Max. My	2	-49.190	1.238	3072.769
			Max. Vy	20	-38.589	3061.395	3.055
			Max. Vx	2	-38.690	1.238	3072.769
			Max. Torque	20			-7.869
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-87.498	4.897	10.940
			Max. Mx	20	-49.783	3106.625	3.045
			Max. My	2	-49.780	1.257	3118.082
			Max. Vy	20	-38.722	3106.625	3.045
			Max. Vx	2	-38.818	1.257	3118.082
L39	20.25 - 19.08	Pole	Max. Torque	20			-7.865
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-87.639	4.911	10.935
			Max. Mx	20	-49.917	3116.307	3.043
			Max. My	2	-49.914	1.261	3127.782
			Max. Vy	20	-38.729	3116.307	3.043
			Max. Vx	2	-38.830	1.261	3127.782
			Max. Torque	20			-7.846
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.108	4.955	10.907
L40	19.08 - 18.83	Pole	Max. Mx	20	-50.311	3148.494	3.036
			Max. My	2	-50.308	1.274	3160.027
			Max. Vy	20	-38.819	3148.494	3.036
			Max. Vx	2	-38.916	1.274	3160.027
			Max. Torque	20			-7.842
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.268	4.969	10.902
			Max. Mx	20	-50.460	3158.202	3.033
			Max. My	2	-50.457	1.278	3169.753
			Max. Vy	20	-38.832	3158.202	3.033
L41	18.83 - 18	Pole	Max. Vx	2	-38.933	1.278	3169.753
			Max. Torque	20			-7.828
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-91.456	5.237	10.742
			Max. Mx	20	-53.230	3353.606	2.987
			Max. My	2	-53.228	1.360	3365.506

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L44	12.75 - 7.75	Pole	Max. Vy	20	-39.320	3353.606	2.987
			Max. Vx	2	-39.416	1.360	3365.506
			Max. Torque	20			-7.824
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-94.661	5.504	10.587
			Max. Mx	20	-56.043	3551.371	2.936
			Max. My	2	-56.042	1.444	3563.614
			Max. Vy	20	-39.791	3551.371	2.936
L45	7.75 - 4	Pole	Max. Vx	2	-39.886	1.444	3563.614
			Max. Torque	20			-7.744
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-97.071	5.698	10.474
			Max. Mx	20	-58.172	3701.244	2.895
			Max. My	2	-58.172	1.508	3713.739
			Max. Vy	20	-40.150	3701.244	2.895
			Max. Vx	2	-40.245	1.508	3713.739
L46	4 - 3.75	Pole	Max. Torque	20			-7.662
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-97.230	5.711	10.467
			Max. Mx	20	-58.328	3711.283	2.892
			Max. My	2	-58.327	1.512	3723.795
			Max. Vy	20	-40.154	3711.283	2.892
			Max. Vx	2	-40.250	1.512	3723.795
			Max. Torque	18			-7.636
L47	3.75 - 3	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-97.706	5.748	10.445
			Max. Mx	20	-58.746	3741.435	2.884
			Max. My	2	-58.745	1.525	3753.997
			Max. Vy	20	-40.235	3741.435	2.884
			Max. Vx	2	-40.330	1.525	3753.997
			Max. Torque	18			-7.636
			Max Tension	1	0.000	0.000	0.000
L48	3 - 2.75	Pole	Max. Compression	26	-97.867	5.760	10.438
			Max. Mx	20	-58.896	3751.498	2.881
			Max. My	2	-58.895	1.529	3764.076
			Max. Vy	20	-40.250	3751.498	2.881
			Max. Vx	2	-40.345	1.529	3764.076
			Max. Torque	18			-7.636
			Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-99.611	5.887	10.363
L49	2.75 - 0	Pole	Max. Mx	20	-60.456	3862.587	2.850
			Max. My	2	-60.456	1.578	3875.347
			Max. Vy	20	-40.537	3862.587	2.850
			Max. Vx	2	-40.631	1.578	3875.347
			Max. Torque	18			-7.636

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	99.611	-0.000	-0.000
	Max. H _x	20	60.473	40.511	0.000
	Max. H _z	3	45.355	0.000	40.606
	Max. M _x	2	3875.347	0.000	40.605
	Max. M _z	8	3859.431	-40.511	0.000
	Max. Torsion	6	7.630	-35.084	20.303
	Min. Vert	3	45.355	0.000	40.606
	Min. H _x	8	60.473	-40.511	0.000
	Min. H _z	15	45.355	0.000	-40.606
	Min. M _x	14	-3869.507	0.000	-40.605
	Min. M _z	20	-3862.587	40.511	0.000
	Min. Torsion	18	-7.636	35.084	-20.303

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	50.395	0.000	0.001	-2.205	1.271	0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	60.473	-0.000	-40.605	-3875.347	1.577	-2.221
0.9 Dead+1.0 Wind 0 deg - No Ice	45.355	-0.000	-40.606	-3838.654	1.172	-2.221
1.2 Dead+1.0 Wind 30 deg - No Ice	60.473	20.256	-35.166	-3356.596	-1928.945	-5.686
0.9 Dead+1.0 Wind 30 deg - No Ice	45.355	20.256	-35.166	-3324.694	-1911.433	-5.645
1.2 Dead+1.0 Wind 60 deg - No Ice	60.473	35.084	-20.303	-1939.132	-3342.179	-7.630
0.9 Dead+1.0 Wind 60 deg - No Ice	45.355	35.084	-20.303	-1920.393	-3311.557	-7.557
1.2 Dead+1.0 Wind 90 deg - No Ice	60.473	40.511	-0.000	-2.849	-3859.431	-7.531
0.9 Dead+1.0 Wind 90 deg - No Ice	45.355	40.511	-0.000	-2.083	-3824.016	-7.447
1.2 Dead+1.0 Wind 120 deg - No Ice	60.473	35.084	20.303	1933.399	-3342.116	-5.414
0.9 Dead+1.0 Wind 120 deg - No Ice	45.355	35.084	20.303	1916.201	-3311.512	-5.341
1.2 Dead+1.0 Wind 150 deg - No Ice	60.473	20.256	35.166	3350.791	-1928.882	-1.844
0.9 Dead+1.0 Wind 150 deg - No Ice	45.355	20.256	35.166	3320.450	-1911.388	-1.802
1.2 Dead+1.0 Wind 180 deg - No Ice	60.473	-0.000	40.605	3869.507	1.577	2.222
0.9 Dead+1.0 Wind 180 deg - No Ice	45.355	-0.000	40.606	3834.383	1.172	2.222
1.2 Dead+1.0 Wind 210 deg - No Ice	60.473	-20.256	35.166	3350.791	1932.037	5.692
0.9 Dead+1.0 Wind 210 deg - No Ice	45.355	-20.256	35.166	3320.450	1913.732	5.650
1.2 Dead+1.0 Wind 240 deg - No Ice	60.473	-35.084	20.303	1933.399	3345.272	7.636
0.9 Dead+1.0 Wind 240 deg - No Ice	45.355	-35.084	20.303	1916.201	3313.856	7.563
1.2 Dead+1.0 Wind 270 deg - No Ice	60.473	-40.511	-0.000	-2.849	3862.587	7.531
0.9 Dead+1.0 Wind 270 deg - No Ice	45.355	-40.511	-0.000	-2.083	3826.360	7.447
1.2 Dead+1.0 Wind 300 deg - No Ice	60.473	-35.084	-20.303	-1939.132	3345.334	5.409
0.9 Dead+1.0 Wind 300 deg - No Ice	45.355	-35.084	-20.303	-1920.393	3313.902	5.336
1.2 Dead+1.0 Wind 330 deg - No Ice	60.473	-20.256	-35.166	-3356.596	1932.100	1.839
0.9 Dead+1.0 Wind 330 deg - No Ice	45.355	-20.256	-35.166	-3324.694	1913.778	1.797
1.2 Dead+1.0 Ice+1.0 Temp	99.611	0.000	0.000	-10.363	5.887	0.002
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	99.611	0.000	-10.829	-1095.214	5.942	-1.192
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	99.611	5.406	-9.378	-949.885	-535.356	-1.865
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	99.611	9.364	-5.414	-552.843	-931.610	-2.038
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	99.611	10.812	0.000	-10.478	-1076.646	-1.665
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	99.611	9.364	5.414	531.884	-931.603	-0.845
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	99.611	5.406	9.378	928.918	-535.348	0.202
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	99.611	0.000	10.829	1074.242	5.943	1.196
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	99.611	-5.406	9.378	928.919	547.234	1.870

Load Combination	Vertical K	Shear _x K	Shear _z K	Overturing Moment, M _x kip-ft	Overturing Moment, M _z kip-ft	Torque kip-ft
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	99.611	-9.364	5.414	531.885	943.490	2.043
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	99.611	-10.812	0.000	-10.477	1088.534	1.669
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	99.611	-9.364	-5.414	-552.844	943.497	0.848
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	99.611	-5.406	-9.378	-949.886	547.241	-0.199
Dead+Wind 0 deg - Service	50.394	0.000	-8.370	-796.744	1.312	-0.459
Dead+Wind 30 deg - Service	50.395	4.175	-7.249	-690.375	-394.698	-1.181
Dead+Wind 60 deg - Service	50.395	7.232	-4.185	-399.621	-684.617	-1.587
Dead+Wind 90 deg - Service	50.395	8.351	0.000	-2.417	-790.707	-1.568
Dead+Wind 120 deg - Service	50.395	7.232	4.185	394.773	-684.595	-1.128
Dead+Wind 150 deg - Service	50.395	4.176	7.249	685.555	-394.707	-0.386
Dead+Wind 180 deg - Service	50.394	0.000	8.370	791.906	1.312	0.459
Dead+Wind 210 deg - Service	50.395	-4.176	7.249	685.555	397.331	1.182
Dead+Wind 240 deg - Service	50.395	-7.232	4.185	394.774	687.220	1.588
Dead+Wind 270 deg - Service	50.395	-8.351	0.000	-2.417	793.331	1.568
Dead+Wind 300 deg - Service	50.395	-7.232	-4.185	-399.621	687.241	1.128
Dead+Wind 330 deg - Service	50.395	-4.175	-7.249	-690.375	397.323	0.386

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
1	0.000	-50.395	0.000	-0.000	50.395	-0.001	0.003%
2	0.000	-60.473	-40.606	0.000	60.473	40.605	0.001%
3	0.000	-45.355	-40.606	0.000	45.355	40.606	0.001%
4	20.256	-60.473	-35.166	-20.256	60.473	35.166	0.000%
5	20.256	-45.355	-35.166	-20.256	45.355	35.166	0.000%
6	35.084	-60.473	-20.303	-35.084	60.473	20.303	0.000%
7	35.084	-45.355	-20.303	-35.084	45.355	20.303	0.000%
8	40.511	-60.473	0.000	-40.511	60.473	0.000	0.000%
9	40.511	-45.355	0.000	-40.511	45.355	0.000	0.000%
10	35.084	-60.473	20.303	-35.084	60.473	-20.303	0.000%
11	35.084	-45.355	20.303	-35.084	45.355	-20.303	0.000%
12	20.256	-60.473	35.166	-20.256	60.473	-35.166	0.000%
13	20.256	-45.355	35.166	-20.256	45.355	-35.166	0.000%
14	0.000	-60.473	40.606	0.000	60.473	-40.605	0.001%
15	0.000	-45.355	40.606	0.000	45.355	-40.606	0.001%
16	-20.256	-60.473	35.166	20.256	60.473	-35.166	0.000%
17	-20.256	-45.355	35.166	20.256	45.355	-35.166	0.000%
18	-35.084	-60.473	20.303	35.084	60.473	-20.303	0.000%
19	-35.084	-45.355	20.303	35.084	45.355	-20.303	0.000%
20	-40.511	-60.473	0.000	40.511	60.473	0.000	0.000%
21	-40.511	-45.355	0.000	40.511	45.355	0.000	0.000%
22	-35.084	-60.473	-20.303	35.084	60.473	20.303	0.000%
23	-35.084	-45.355	-20.303	35.084	45.355	20.303	0.000%
24	-20.256	-60.473	-35.166	20.256	60.473	35.166	0.000%
25	-20.256	-45.355	-35.166	20.256	45.355	35.166	0.000%
26	0.000	-99.611	0.000	-0.000	99.611	-0.000	0.000%
27	0.000	-99.611	-10.829	-0.000	99.611	10.829	0.000%
28	5.406	-99.611	-9.378	-5.406	99.611	9.378	0.000%
29	9.364	-99.611	-5.414	-9.364	99.611	5.414	0.000%
30	10.812	-99.611	0.000	-10.812	99.611	-0.000	0.000%
31	9.364	-99.611	5.414	-9.364	99.611	-5.414	0.000%
32	5.406	-99.611	9.378	-5.406	99.611	-9.378	0.000%
33	0.000	-99.611	10.829	-0.000	99.611	-10.829	0.000%
34	-5.406	-99.611	9.378	5.406	99.611	-9.378	0.000%

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX K	PY K	PZ K	PX K	PY K	PZ K	
35	-9.364	-99.611	5.414	9.364	99.611	-5.414	0.000%
36	-10.812	-99.611	0.000	10.812	99.611	-0.000	0.000%
37	-9.364	-99.611	-5.414	9.364	99.611	5.414	0.000%
38	-5.406	-99.611	-9.378	5.406	99.611	9.378	0.000%
39	0.000	-50.395	-8.371	-0.000	50.394	8.370	0.002%
40	4.176	-50.395	-7.249	-4.175	50.395	7.249	0.001%
41	7.232	-50.395	-4.185	-7.232	50.395	4.185	0.000%
42	8.351	-50.395	0.000	-8.351	50.395	-0.000	0.001%
43	7.232	-50.395	4.185	-7.232	50.395	-4.185	0.001%
44	4.176	-50.395	7.249	-4.176	50.395	-7.249	0.000%
45	0.000	-50.395	8.371	-0.000	50.394	-8.370	0.002%
46	-4.176	-50.395	7.249	4.176	50.395	-7.249	0.000%
47	-7.232	-50.395	4.185	7.232	50.395	-4.185	0.001%
48	-8.351	-50.395	0.000	8.351	50.395	-0.000	0.001%
49	-7.232	-50.395	-4.185	7.232	50.395	4.185	0.000%
50	-4.176	-50.395	-7.249	4.175	50.395	7.249	0.001%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00002075
2	Yes	15	0.00000001	0.00013464
3	Yes	15	0.00000001	0.00009990
4	Yes	19	0.00000001	0.00008837
5	Yes	19	0.00000001	0.00006093
6	Yes	19	0.00000001	0.00010527
7	Yes	19	0.00000001	0.00007300
8	Yes	18	0.00000001	0.00005855
9	Yes	17	0.00000001	0.00011637
10	Yes	19	0.00000001	0.00008603
11	Yes	19	0.00000001	0.00005948
12	Yes	19	0.00000001	0.00009796
13	Yes	19	0.00000001	0.00006788
14	Yes	15	0.00000001	0.00013402
15	Yes	15	0.00000001	0.00009956
16	Yes	19	0.00000001	0.00010035
17	Yes	19	0.00000001	0.00006958
18	Yes	19	0.00000001	0.00008546
19	Yes	19	0.00000001	0.00005906
20	Yes	18	0.00000001	0.00005859
21	Yes	17	0.00000001	0.00011643
22	Yes	19	0.00000001	0.00010403
23	Yes	19	0.00000001	0.00007207
24	Yes	19	0.00000001	0.00009010
25	Yes	19	0.00000001	0.00006212
26	Yes	13	0.00000001	0.00014819
27	Yes	18	0.00000001	0.00009126
28	Yes	18	0.00000001	0.00010543
29	Yes	18	0.00000001	0.00010788
30	Yes	18	0.00000001	0.00008887
31	Yes	18	0.00000001	0.00009959
32	Yes	18	0.00000001	0.00010026
33	Yes	18	0.00000001	0.00008545
34	Yes	18	0.00000001	0.00010243
35	Yes	18	0.00000001	0.00010075
36	Yes	18	0.00000001	0.00008994
37	Yes	18	0.00000001	0.00010835
38	Yes	18	0.00000001	0.00010691
39	Yes	13	0.00000001	0.00008289
40	Yes	14	0.00000001	0.00013921
41	Yes	15	0.00000001	0.00009831
42	Yes	14	0.00000001	0.00014746
43	Yes	14	0.00000001	0.00014299
44	Yes	15	0.00000001	0.00007440
45	Yes	13	0.00000001	0.00008111
46	Yes	15	0.00000001	0.00008190
47	Yes	14	0.00000001	0.00014869
48	Yes	14	0.00000001	0.00014798
49	Yes	15	0.00000001	0.00009415
50	Yes	14	0.00000001	0.00014029

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	129 - 124	17.693	39	1.435	0.034
L2	124 - 119	16.190	39	1.433	0.033
L3	119 - 115.5	14.700	39	1.408	0.028
L4	115.5 - 115	13.679	39	1.377	0.025
L5	115 - 110	13.535	39	1.372	0.024
L6	110 - 105	12.141	39	1.285	0.018
L7	105 - 100	10.852	39	1.174	0.013
L8	100 - 99.25	9.689	39	1.044	0.009
L9	99.25 - 99	9.527	39	1.023	0.009
L10	99 - 94	9.473	39	1.019	0.009
L11	94 - 92.08	8.445	39	0.943	0.007
L12	92.08 - 91.83	8.073	39	0.912	0.006

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L13	91.83 - 86.83	8.025	39	0.909	0.006
L14	86.83 - 81.83	7.105	39	0.847	0.005
L15	81.83 - 73.75	6.255	39	0.778	0.004
L16	78 - 73	5.653	39	0.723	0.004
L17	73 - 71.5	4.914	39	0.683	0.003
L18	71.5 - 71.25	4.703	39	0.662	0.003
L19	71.25 - 67.92	4.668	39	0.659	0.003
L20	67.92 - 67.67	4.224	39	0.616	0.003
L21	67.67 - 66.33	4.191	39	0.614	0.003
L22	66.33 - 66.08	4.021	39	0.599	0.003
L23	66.08 - 61.08	3.990	39	0.597	0.003
L24	61.08 - 56.5	3.390	39	0.549	0.002
L25	56.5 - 56.25	2.885	39	0.504	0.002
L26	56.25 - 51.25	2.859	39	0.502	0.002
L27	51.25 - 46.25	2.359	39	0.452	0.002
L28	46.25 - 36.75	1.912	39	0.403	0.001
L29	42 - 35.75	1.572	39	0.361	0.001
L30	35.75 - 35.08	1.121	39	0.323	0.001
L31	35.08 - 34.83	1.076	39	0.315	0.001
L32	34.83 - 31.25	1.060	39	0.313	0.001
L33	31.25 - 31	0.840	39	0.273	0.001
L34	31 - 26	0.826	39	0.271	0.001
L35	26 - 22	0.569	39	0.220	0.001
L36	22 - 21.75	0.402	39	0.180	0.001
L37	21.75 - 20.5	0.392	39	0.177	0.001
L38	20.5 - 20.25	0.347	39	0.166	0.000
L39	20.25 - 19.08	0.339	39	0.164	0.000
L40	19.08 - 18.83	0.300	39	0.154	0.000
L41	18.83 - 18	0.292	39	0.152	0.000
L42	18 - 17.75	0.266	39	0.144	0.000
L43	17.75 - 12.75	0.259	39	0.142	0.000
L44	12.75 - 7.75	0.132	39	0.101	0.000
L45	7.75 - 4	0.048	39	0.060	0.000
L46	4 - 3.75	0.012	39	0.030	0.000
L47	3.75 - 3	0.011	39	0.028	0.000
L48	3 - 2.75	0.007	39	0.022	0.000
L49	2.75 - 0	0.006	39	0.020	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125.0000	AIR 32 B2A/B66AA w/ Mount Pipe	39	16.490	1.435	0.034	23091
116.0000	(2) LNX-8513DS-VTM w/ Mount Pipe	39	13.823	1.381	0.025	5102
105.0000	APXVTM14-ALU-I20 w/ Mount Pipe	39	10.852	1.174	0.013	2380
94.0000	7770.00 w/ Mount Pipe	39	8.445	0.943	0.007	3805

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	129 - 124	85.398	2	6.856	0.166
L2	124 - 119	78.236	2	6.849	0.161
L3	119 - 115.5	71.122	2	6.751	0.136
L4	115.5 - 115	66.232	2	6.612	0.118
L5	115 - 110	65.542	2	6.592	0.116
L6	110 - 105	58.850	2	6.191	0.088
L7	105 - 100	52.643	2	5.669	0.065
L8	100 - 99.25	47.029	2	5.052	0.045
L9	99.25 - 99	46.244	2	4.953	0.043

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L10	99 - 94	45.985	2	4.936	0.042
L11	94 - 92.08	41.011	2	4.569	0.034
L12	92.08 - 91.83	39.205	2	4.421	0.031
L13	91.83 - 86.83	38.974	2	4.407	0.031
L14	86.83 - 81.83	34.518	2	4.107	0.026
L15	81.83 - 73.75	30.391	2	3.777	0.021
L16	78 - 73	27.470	2	3.510	0.018
L17	73 - 71.5	23.887	2	3.316	0.016
L18	71.5 - 71.25	22.861	2	3.218	0.015
L19	71.25 - 67.92	22.693	2	3.203	0.015
L20	67.92 - 67.67	20.532	2	2.995	0.013
L21	67.67 - 66.33	20.376	2	2.982	0.013
L22	66.33 - 66.08	19.549	2	2.913	0.013
L23	66.08 - 61.08	19.397	2	2.902	0.013
L24	61.08 - 56.5	16.482	2	2.667	0.011
L25	56.5 - 56.25	14.029	2	2.450	0.010
L26	56.25 - 51.25	13.901	2	2.438	0.010
L27	51.25 - 46.25	11.473	2	2.200	0.008
L28	46.25 - 36.75	9.296	2	1.960	0.007
L29	42 - 35.75	7.644	2	1.755	0.006
L30	35.75 - 35.08	5.452	2	1.569	0.005
L31	35.08 - 34.83	5.235	2	1.534	0.005
L32	34.83 - 31.25	5.155	2	1.520	0.005
L33	31.25 - 31	4.086	2	1.330	0.004
L34	31 - 26	4.017	2	1.318	0.004
L35	26 - 22	2.767	2	1.070	0.003
L36	22 - 21.75	1.954	2	0.873	0.003
L37	21.75 - 20.5	1.908	2	0.863	0.002
L38	20.5 - 20.25	1.690	2	0.809	0.002
L39	20.25 - 19.08	1.647	2	0.798	0.002
L40	19.08 - 18.83	1.458	2	0.748	0.002
L41	18.83 - 18	1.419	2	0.737	0.002
L42	18 - 17.75	1.294	2	0.700	0.002
L43	17.75 - 12.75	1.258	2	0.690	0.002
L44	12.75 - 7.75	0.640	2	0.490	0.001
L45	7.75 - 4	0.232	2	0.291	0.001
L46	4 - 3.75	0.060	2	0.146	0.000
L47	3.75 - 3	0.053	2	0.136	0.000
L48	3 - 2.75	0.034	2	0.108	0.000
L49	2.75 - 0	0.028	2	0.099	0.000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
125.0000	AIR 32 B2A/B66AA w/ Mount Pipe	2	79.667	6.855	0.163	6424
116.0000	(2) LNX-8513DS-VTM w/ Mount Pipe	2	66.924	6.631	0.121	1171
105.0000	APXVTM14-ALU-I20 w/ Mount Pipe	2	52.643	5.669	0.065	514
94.0000	7770.00 w/ Mount Pipe	2	41.011	4.569	0.034	804

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L _u ft	KI/r	A in ²	P _u K
L1	129 - 124 (1)	TP16x16x0.375	5.0000	0.0000	0.0	18.407	-5.079

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K
L2	124 - 119 (2)	TP16x16x0.375	5.0000	0.0000	0.0	18.407	-5.494
L3	119 - 115.5 (3)	TP16x16x0.375	3.5000	0.0000	0.0	18.407	-8.381
L4	115.5 - 115 (4)	TP17.81x16x0.375	0.5000	0.0000	0.0	18.407	-8.392
L5	115 - 110 (5)	TP18.9603x17.81x0.2188	5.0000	0.0000	0.0	13.204	-8.849
L6	110 - 105 (6)	TP20.1106x18.9603x0.2188	5.0000	0.0000	0.0	14.014	-9.322
L7	105 - 100 (7)	TP21.2609x20.1106x0.2188	5.0000	0.0000	0.0	14.824	-13.801
L8	100 - 99.25 (8)	TP21.4335x21.2609x0.2188	0.7500	0.0000	0.0	14.946	-13.903
L9	99.25 - 99 (9)	TP21.491x21.4335x0.456	0.2500	0.0000	0.0	30.905	-13.958
L10	99 - 94 (10)	TP22.6413x21.491x0.437	5.0000	0.0000	0.0	31.283	-14.746
L11	94 - 92.08 (11)	TP23.083x22.6413x0.431	1.9200	0.0000	0.0	31.458	-18.878
L12	92.08 - 91.83 (12)	TP23.1405x23.083x0.656	0.2500	0.0000	0.0	47.515	-18.972
L13	91.83 - 86.83 (13)	TP24.2908x23.1405x0.63	5.0000	0.0000	0.0	48.094	-20.136
L14	86.83 - 81.83 (14)	TP25.4411x24.2908x0.60	5.0000	0.0000	0.0	48.484	-21.350
L15	81.83 - 73.75 (15)	TP27.3x25.4411x0.5938	8.0800	0.0000	0.0	49.193	-22.301
L16	73.75 - 73 (16)	TP27.0332x25.8846x0.68	5.0000	0.0000	0.0	58.322	-24.446
L17	73 - 71.5 (17)	TP27.3777x27.0332x0.67	1.5000	0.0000	0.0	58.038	-24.863
L18	71.5 - 71.25 (18)	TP27.4352x27.3777x0.73	0.2500	0.0000	0.0	63.400	-24.963
L19	71.25 - 67.92 (19)	TP28.2001x27.4352x0.72	3.3300	0.0000	0.0	64.140	-25.965
L20	67.92 - 67.67 (20)	TP28.2575x28.2001x0.88	0.2500	0.0000	0.0	78.216	-26.069
L21	67.67 - 66.33 (21)	TP28.5653x28.2575x0.87	1.3400	0.0000	0.0	78.017	-26.518
L22	66.33 - 66.08 (22)	TP28.6227x28.5653x1.03	0.2500	0.0000	0.0	92.155	-26.643
L23	66.08 - 61.08 (23)	TP29.7713x28.6227x0.98	5.0000	0.0000	0.0	91.525	-28.790
L24	61.08 - 56.5 (24)	TP30.8233x29.7713x0.96	4.5800	0.0000	0.0	92.546	-30.795
L25	56.5 - 56.25 (25)	TP30.8807x30.8233x0.96	0.2500	0.0000	0.0	92.724	-30.919
L26	56.25 - 51.25 (26)	TP32.0293x30.8807x0.93	5.0000	0.0000	0.0	93.858	-33.128
L27	51.25 - 46.25 (27)	TP33.1778x32.0293x0.91	5.0000	0.0000	0.0	94.803	-35.380
L28	46.25 - 36.75 (28)	TP35.36x33.1778x0.8875	9.5000	0.0000	0.0	95.067	-37.319
L29	36.75 - 35.75 (29)	TP34.9682x33.529x0.812	6.2500	0.0000	0.0	89.359	-41.963
L30	35.75 - 35.08 (30)	TP35.1225x34.9682x0.81	0.6700	0.0000	0.0	89.763	-42.254
L31	35.08 - 34.83 (31)	TP35.18x35.1225x0.8125	0.2500	0.0000	0.0	89.914	-42.367
L32	34.83 - 31.25 (32)	TP36.0043x35.18x0.8	3.5800	0.0000	0.0	90.686	-43.878
L33	31.25 - 31 (33)	TP36.0619x36.0043x0.86	0.2500	0.0000	0.0	97.757	-44.012
L34	31 - 26 (34)	TP37.2132x36.0619x0.83	5.0000	0.0000	0.0	98.096	-46.362
L35	26 - 22 (35)	TP38.1343x37.2132x0.82	4.0000	0.0000	0.0	99.112	-48.278
L36	22 - 21.75 (36)	TP38.1918x38.1343x0.93	0.2500	0.0000	0.0	112.46	-48.419

Section No.	Elevation ft	Size	L ft	L _u ft	Kl/r	A in ²	P _u K
L37	21.75 - 20.5 (37)	TP38.4797x38.1918x0.92 5	1.2500	0.0000	0.0	111.85 70	-49.046
L38	20.5 - 20.25 (38)	TP38.5372x38.4797x0.92 5	0.2500	0.0000	0.0	112.02 80	-49.190
L39	20.25 - 19.08 (39)	TP38.8066x38.5372x0.92 5	1.1700	0.0000	0.0	112.83 00	-49.780
L40	19.08 - 18.83 (40)	TP38.8642x38.8066x0.87 5	0.2500	0.0000	0.0	107.03 50	-49.914
L41	18.83 - 18 (41)	TP39.0553x38.8642x0.87 5	0.8300	0.0000	0.0	107.57 30	-50.309
L42	18 - 17.75 (42)	TP39.1129x39.0553x1	0.2500	0.0000	0.0	122.72 30	-50.457
L43	17.75 - 12.75 (43)	TP40.2642x39.1129x0.97 5	5.0000	0.0000	0.0	121.18 00	-51.578
L44	12.75 - 7.75 (44)	TP41.4155x40.2642x0.95	5.0000	0.0000	0.0	120.26 20	-53.256
L45	7.75 - 4 (45)	TP42.279x41.4155x0.95	3.7500	0.0000	0.0	123.78 40	-56.072
L46	4 - 3.75 (46)	TP42.3365x42.279x0.95	0.2500	0.0000	0.0	126.42 50	-58.192
L47	3.75 - 3 (47)	TP42.5092x42.3365x0.95	0.7500	0.0000	0.0	126.60 10	-58.340
L48	3 - 2.75 (48)	TP42.5668x42.5092x1.02 5	0.2500	0.0000	0.0	136.91 90	-58.758
L49	2.75 - 0 (49)	TP43.2x42.5668x1	2.7500	0.0000	0.0	133.84 50	-58.916

Pole Bending Design Data

Section No.	Elevation ft	Size	M _{ux} kip-ft	M _{uy} kip-ft
L1	129 - 124 (1)	TP16x16x0.375	16.464	0.000
L2	124 - 119 (2)	TP16x16x0.375	61.009	0.000
L3	119 - 115.5 (3)	TP16x16x0.375	102.438	0.000
L4	115.5 - 115 (4)	TP17.81x16x0.375	102.438	0.000
L5	115 - 110 (5)	TP18.9603x17.81x0.2188	195.144	0.000
L6	110 - 105 (6)	TP20.1106x18.9603x0.21 88	282.112	0.000
L7	105 - 100 (7)	TP21.2609x20.1106x0.21 88	390.885	0.000
L8	100 - 99.25 (8)	TP21.4335x21.2609x0.21 88	407.777	0.000
L9	99.25 - 99 (9)	TP21.491x21.4335x0.456 3	413.418	0.000
L10	99 - 94 (10)	TP22.6413x21.491x0.437 6	527.488	0.000
L11	94 - 92.08 (11)	TP23.083x22.6413x0.431 3	589.579	0.000
L12	92.08 - 91.83 (12)	TP23.1405x23.083x0.656 3	597.175	0.000
L13	91.83 - 86.83 (13)	TP24.2908x23.1405x0.63 13	750.525	0.000
L14	86.83 - 81.83 (14)	TP25.4411x24.2908x0.60 63	906.625	0.000
L15	81.83 - 73.75 (15)	TP27.3x25.4411x0.5938	1028.042	0.000
L16	73.75 - 73 (16)	TP27.0332x25.8846x0.68 75	1189.275	0.000
L17	73 - 71.5 (17)	TP27.3777x27.0332x0.67 5	1238.258	0.000
L18	71.5 - 71.25 (18)	TP27.4352x27.3777x0.73 75	1246.450	0.000
L19	71.25 - 67.92 (19)	TP28.2001x27.4352x0.72 5	1356.183	0.000
L20	67.92 - 67.67 (20)	TP28.2575x28.2001x0.88 75	1364.475	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{uy} kip-ft
L21	67.67 - 66.33 (21)	TP28.5653x28.2575x0.87 5	1409.033	0.000
L22	66.33 - 66.08 (22)	TP28.6227x28.5653x1.03 75	1417.367	0.000
L23	66.08 - 61.08 (23)	TP29.7713x28.6227x0.98 75	1585.775	0.000
L24	61.08 - 56.5 (24)	TP30.8233x29.7713x0.96 25	1742.792	0.000
L25	56.5 - 56.25 (25)	TP30.8807x30.8233x0.96 25	1751.442	0.000
L26	56.25 - 51.25 (26)	TP32.0293x30.8807x0.93 75	1925.925	0.000
L27	51.25 - 46.25 (27)	TP33.1778x32.0293x0.91 25	2103.317	0.000
L28	46.25 - 36.75 (28)	TP35.36x33.1778x0.8875	2256.325	0.000
L29	36.75 - 35.75 (29)	TP34.9682x33.529x0.812 5	2485.550	0.000
L30	35.75 - 35.08 (30)	TP35.1225x34.9682x0.81 25	2510.417	0.000
L31	35.08 - 34.83 (31)	TP35.18x35.1225x0.8125	2519.708	0.000
L32	34.83 - 31.25 (32)	TP36.0043x35.18x0.8	2653.483	0.000
L33	31.25 - 31 (33)	TP36.0619x36.0043x0.86 25	2662.875	0.000
L34	31 - 26 (34)	TP37.2132x36.0619x0.83 75	2852.067	0.000
L35	26 - 22 (35)	TP38.1343x37.2132x0.82 5	3005.250	0.000
L36	22 - 21.75 (36)	TP38.1918x38.1343x0.93 75	3014.875	0.000
L37	21.75 - 20.5 (37)	TP38.4797x38.1918x0.92 5	3063.108	0.000
L38	20.5 - 20.25 (38)	TP38.5372x38.4797x0.92 5	3072.767	0.000
L39	20.25 - 19.08 (39)	TP38.8066x38.5372x0.92 5	3118.083	0.000
L40	19.08 - 18.83 (40)	TP38.8642x38.8066x0.87 5	3127.783	0.000
L41	18.83 - 18 (41)	TP39.0553x38.8642x0.87 5	3160.025	0.000
L42	18 - 17.75 (42)	TP39.1129x39.0553x1	3169.750	0.000
L43	17.75 - 12.75 (43)	TP40.2642x39.1129x0.97 5	3247.767	0.000
L44	12.75 - 7.75 (44)	TP41.4155x40.2642x0.95	3365.508	0.000
L45	7.75 - 4 (45)	TP42.279x41.4155x0.95	3563.617	0.000
L46	4 - 3.75 (46)	TP42.3365x42.279x0.95	3713.742	0.000
L47	3.75 - 3 (47)	TP42.5092x42.3365x0.95	3723.792	0.000
L48	3 - 2.75 (48)	TP42.5668x42.5092x1.02 5	3754.000	0.000
L49	2.75 - 0 (49)	TP43.2x42.5668x1	3764.075	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	Actual T_u kip-ft
L1	129 - 124 (1)	TP16x16x0.375	8.769	4.170
L2	124 - 119 (2)	TP16x16x0.375	9.057	4.146
L3	119 - 115.5 (3)	TP16x16x0.375	16.654	4.520
L4	115.5 - 115 (4)	TP17.81x16x0.375	16.682	4.519
L5	115 - 110 (5)	TP18.9603x17.81x0.2188	17.080	4.488

Section No.	Elevation ft	Size	Actual V_u K	Actual T_u kip-ft
L6	110 - 105 (6)	TP20.1106x18.9603x0.21 88	17.496	0.225
L7	105 - 100 (7)	TP21.2609x20.1106x0.21 88	22.515	0.191
L8	100 - 99.25 (8)	TP21.4335x21.2609x0.21 88	22.568	0.184
L9	99.25 - 99 (9)	TP21.491x21.4335x0.456 3	22.585	0.174
L10	99 - 94 (10)	TP22.6413x21.491x0.437 6	23.071	0.120
L11	94 - 92.08 (11)	TP23.083x22.6413x0.431 3	30.397	0.107
L12	92.08 - 91.83 (12)	TP23.1405x23.083x0.656 3	30.406	0.069
L13	91.83 - 86.83 (13)	TP24.2908x23.1405x0.63 13	30.965	0.038
L14	86.83 - 81.83 (14)	TP25.4411x24.2908x0.60 63	31.514	0.143
L15	81.83 - 73.75 (15)	TP27.3x25.4411x0.5938	31.931	0.225
L16	73.75 - 73 (16)	TP27.0332x25.8846x0.68 75	32.589	0.337
L17	73 - 71.5 (17)	TP27.3777x27.0332x0.67 5	32.765	0.370
L18	71.5 - 71.25 (18)	TP27.4352x27.3777x0.73 75	32.781	0.376
L19	71.25 - 67.92 (19)	TP28.2001x27.4352x0.72 5	33.166	0.456
L20	67.92 - 67.67 (20)	TP28.2575x28.2001x0.88 75	33.189	0.462
L21	67.67 - 66.33 (21)	TP28.5653x28.2575x0.87 5	33.358	0.496
L22	66.33 - 66.08 (22)	TP28.6227x28.5653x1.03 75	33.382	0.502
L23	66.08 - 61.08 (23)	TP29.7713x28.6227x0.98 75	34.017	0.628
L24	61.08 - 56.5 (24)	TP30.8233x29.7713x0.96 25	34.592	0.746
L25	56.5 - 56.25 (25)	TP30.8807x30.8233x0.96 25	34.618	0.752
L26	56.25 - 51.25 (26)	TP32.0293x30.8807x0.93 75	35.217	0.861
L27	51.25 - 46.25 (27)	TP33.1778x32.0293x0.91 25	35.786	0.953
L28	46.25 - 36.75 (28)	TP35.36x33.1778x0.8875	36.267	1.049
L29	36.75 - 35.75 (29)	TP34.9682x33.529x0.812 5	37.110	1.201
L30	35.75 - 35.08 (30)	TP35.1225x34.9682x0.81 25	37.175	1.220
L31	35.08 - 34.83 (31)	TP35.18x35.1225x0.8125	37.200	1.228
L32	34.83 - 31.25 (32)	TP36.0043x35.18x0.8	37.586	1.331
L33	31.25 - 31 (33)	TP36.0619x36.0043x0.86 25	37.601	1.338
L34	31 - 26 (34)	TP37.2132x36.0619x0.83 75	38.128	1.482
L35	26 - 22 (35)	TP38.1343x37.2132x0.82 5	38.525	1.597
L36	22 - 21.75 (36)	TP38.1918x38.1343x0.93 75	38.539	1.604
L37	21.75 - 20.5 (37)	TP38.4797x38.1918x0.92 5	38.679	1.640
L38	20.5 - 20.25 (38)	TP38.5372x38.4797x0.92 5	38.691	1.647
L39	20.25 - 19.08 (39)	TP38.8066x38.5372x0.92 5	38.818	1.680

Section No.	Elevation ft	Size	Actual V_u K	Actual T_u kip-ft
L40	19.08 - 18.83 (40)	TP38.8642x38.8066x0.87 5	38.830	1.687
L41	18.83 - 18 (41)	TP39.0553x38.8642x0.87 5	38.916	1.710
L42	18 - 17.75 (42)	TP39.1129x39.0553x1	38.934	1.717
L43	17.75 - 12.75 (43)	TP40.2642x39.1129x0.97 5	39.226	1.799
L44	12.75 - 7.75 (44)	TP41.4155x40.2642x0.95	39.510	1.882
L45	7.75 - 4 (45)	TP42.279x41.4155x0.95	40.009	2.031
L46	4 - 3.75 (46)	TP42.3365x42.279x0.95	40.250	2.110
L47	3.75 - 3 (47)	TP42.5092x42.3365x0.95	40.330	2.132
L48	3 - 2.75 (48)	TP42.5668x42.5092x1.02 5	40.345	2.140
L49	2.75 - 0 (49)	TP43.2x42.5668x1	40.498	2.180

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	129	13.5	0	0	16	16	0.375		A53-B-35
2	115.5	0.5	0	0	16.00	17.81	0.375		A53-B-35
3	115	41.25	4.25	12	17.81	27.3	0.2188	Auto	A572-65
4	78	41.25	5.25	12	25.88	35.36	0.3125	Auto	A572-65
5	42	42	0	12	33.53	43.2	0.375	Auto	A572-65

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
1	3	18	plate	CCI-AFP-060100	3		o				o				o		
2	41.5	56.5	plate	CCI-AFP-060100	3		o				o				o		
3	0	3	plate	FP 1.25 x 5.25_1	3		c				c				c		
4	4	20.5	plate	CCI-AFP-065125	2			o								o	
5	4	22	plate	CCI-AFP-065125	1							o					
6	20.5	40.5	plate	CCI-AFP-065125	2			o								o	
7	19.08	40.5	plate	CCI-AFP-065125	1							o					
8	56.5	71.5	plate	CCI-AFP-060100	3			o				o					o
9	71.5	92.08	plate	CCI-AFP-045100	3				o			o					o
10	0	4	plate	FP 1.25 x 6_1	3			c				c				c	
11	0	35.08	plate	I-085125; (1) (1.1875)	2					o				o			
12	0	31.25	plate	I-085125; (1) (1.1875)	1												o
13	35.08	66.33	plate	CCI-SFP-085125	2					o				o			
14	40.5	67.92	plate	CCI-SFP-065125	3			o				o				o	
15	67.92	99.25	plate	CCI-SFP-045100	3			o				o				o	
16																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in ²)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L _v (in)	Net Area (in ²)	Bolt Hole Size (in)	Reinforcement Material
1	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
2	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
3	1.25	5.25	6.5625	2.625	n/a	n/a	0.000	6.563	0.0000	A572-65
4	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
5	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
6	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
7	6.5	1.25	8.125	0.625	42.000	42.000	19.000	6.563	1.1875	A572-65
8	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
9	4.5	1	4.5	0.5	24.000	24.000	20.000	3.250	1.1875	A572-65
10	1.25	6	7.5	3	n/a	n/a	0.000	7.500	0.0000	A572-65
11	8.5	1.25	10.625	0.625	n/a	n/a	17.000	9.063	1.1875	A572-65
12	8.5	1.25	10.625	0.625	n/a	n/a	17.000	9.063	1.1875	A572-65
13	8.5	1.25	10.625	0.625	45.000	45.000	17.000	9.063	1.1875	A572-65
14	6.5	1.25	8.125	0.625	33.000	33.000	19.000	6.563	1.1875	A572-65
15	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65

TNX Geometry Input

Increment (ft): 5

	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	129 - 124	5		0	16.000	16.000	0.375	A53-B-35	1.000
2	124 - 119	5		0	16.000	16.000	0.375	A53-B-35	1.000
3	119 - 115.5	3.5	0	0	16.000	16.000	0.375	A53-B-35	1.000
4	115.5 - 115	0.5	0	0	16.000	17.810	0.375	A53-B-35	1.000
5	115 - 110	5		12	17.810	18.960	0.2188	A572-65	1.000
6	110 - 105	5		12	18.960	20.111	0.2188	A572-65	1.000
7	105 - 100	5		12	20.111	21.261	0.2188	A572-65	1.000
8	100 - 99.25	0.75		12	21.261	21.433	0.2188	A572-65	1.000
9	99.25 - 99	0.25		12	21.433	21.491	0.4563	A572-65	0.922
10	99 - 94	5		12	21.491	22.641	0.43755	A572-65	0.937
11	94 - 92.08	1.92		12	22.641	23.083	0.4313	A572-65	0.942
12	92.08 - 91.83	0.25		12	23.083	23.141	0.6563	A572-65	0.909
13	91.83 - 86.83	5		12	23.141	24.291	0.6313	A572-65	0.915
14	86.83 - 81.83	5		12	24.291	25.441	0.6063	A572-65	0.924
15	81.83 - 78	8.08	4.25	12	25.441	27.300	0.5938	A572-65	0.923
16	78 - 73	5		12	25.885	27.033	0.6875	A572-65	0.925
17	73 - 71.5	1.5		12	27.033	27.378	0.675	A572-65	0.935
18	71.5 - 71.25	0.25		12	27.378	27.435	0.7375	A572-65	0.928
19	71.25 - 67.92	3.33		12	27.435	28.200	0.725	A572-65	0.929
20	67.92 - 67.67	0.25		12	28.200	28.258	0.8875	A572-65	0.902
21	67.67 - 66.33	1.34		12	28.258	28.565	0.875	A572-65	0.908
22	66.33 - 66.08	0.25		12	28.565	28.623	1.0375	A572-65	1.001
23	66.08 - 61.08	5		12	28.623	29.771	0.9875	A572-65	1.020
24	61.08 - 56.5	4.58		12	29.771	30.823	0.9625	A572-65	1.020
25	56.5 - 56.25	0.25		12	30.823	30.881	0.9625	A572-65	1.019
26	56.25 - 51.25	5		12	30.881	32.029	0.9375	A572-65	1.019
27	51.25 - 46.25	5		12	32.029	33.178	0.9125	A572-65	1.021
28	46.25 - 42	9.5	5.25	12	33.178	35.360	0.8875	A572-65	1.028
29	42 - 35.75	6.25		12	33.529	34.968	0.8125	A572-65	0.979
30	35.75 - 35.08	0.67		12	34.968	35.122	0.8125	A572-65	0.976
31	35.08 - 34.83	0.25		12	35.122	35.180	0.8125	A572-65	0.976
32	34.83 - 31.25	3.58		12	35.180	36.004	0.8	A572-65	0.978
33	31.25 - 31	0.25		12	36.004	36.062	0.8625	A572-65	1.017
34	31 - 26	5		12	36.062	37.213	0.8375	A572-65	1.028
35	26 - 22	4		12	37.213	38.134	0.825	A572-65	1.028
36	22 - 21.75	0.25		12	38.134	38.192	0.9375	A572-65	0.979
37	21.75 - 20.5	1.25		12	38.192	38.480	0.925	A572-65	0.988
38	20.5 - 20.25	0.25		12	38.480	38.537	0.925	A572-65	0.987
39	20.25 - 19.08	1.17		12	38.537	38.807	0.925	A572-65	0.983
40	19.08 - 18.83	0.25		12	38.807	38.864	0.875	A572-65	0.960
41	18.83 - 18	0.83		12	38.864	39.055	0.875	A572-65	0.958
42	18 - 17.75	0.25		12	39.055	39.113	1	A572-65	0.987
43	17.75 - 12.75	5		12	39.113	40.264	0.975	A572-65	0.993
44	12.75 - 7.75	5		12	40.264	41.415	0.95	A572-65	1.001
45	7.75 - 4	3.75		12	41.415	42.279	0.95	A572-65	0.988
46	4 - 3.75	0.25		12	42.279	42.337	0.95	A572-65	0.973
47	3.75 - 3	0.75		12	42.337	42.509	0.95	A572-65	0.970
48	3 - 2.75	0.25		12	42.509	42.567	1.025	A572-65	0.913
49	2.75 - 0	2.75		12	42.567	43.200	1	A572-65	0.926

TNX Section Forces

Increment (ft):		TNX Output			
	5	Section Height (ft)	P _u (K)	M _{ux} (kip-ft)	V _u (K)
1	129 - 124	5.08	16.81	8.77	
2	124 - 119	5.49	61.36	9.06	
3	119 - 115.5	8.38	102.86	16.68	
4	115.5 - 115	8.43	111.20	16.70	
5	115 - 110	8.84	195.68	17.10	
6	110 - 105	9.32	282.11	17.50	
7	105 - 100	13.80	390.89	22.51	
8	100 - 99.25	13.90	407.78	22.57	
9	99.25 - 99	13.96	413.42	22.58	
10	99 - 94	19.14	531.46	29.84	
11	94 - 92.08	18.88	589.58	30.40	
12	92.08 - 91.83	18.97	597.17	30.41	
13	91.83 - 86.83	20.14	750.52	30.96	
14	86.83 - 81.83	21.35	906.63	31.51	
15	81.83 - 78	22.30	1028.04	31.93	
16	78 - 73	24.45	1189.28	32.59	
17	73 - 71.5	24.86	1238.26	32.76	
18	71.5 - 71.25	24.96	1246.45	32.78	
19	71.25 - 67.92	25.97	1356.18	33.17	
20	67.92 - 67.67	26.07	1364.47	33.19	
21	67.67 - 66.33	26.52	1409.03	33.36	
22	66.33 - 66.08	26.64	1417.37	33.38	
23	66.08 - 61.08	28.79	1585.78	34.02	
24	61.08 - 56.5	30.79	1742.79	34.59	
25	56.5 - 56.25	30.92	1751.44	34.62	
26	56.25 - 51.25	33.13	1925.92	35.22	
27	51.25 - 46.25	35.38	2103.32	35.79	
28	46.25 - 42	37.32	2256.33	36.27	
29	42 - 35.75	41.96	2485.55	37.11	
30	35.75 - 35.08	42.25	2510.42	37.18	
31	35.08 - 34.83	42.37	2519.71	37.20	
32	34.83 - 31.25	43.88	2653.48	37.59	
33	31.25 - 31	44.01	2662.87	37.60	
34	31 - 26	46.36	2852.06	38.13	
35	26 - 22	48.28	3005.25	38.52	
36	22 - 21.75	48.42	3014.88	38.54	
37	21.75 - 20.5	49.05	3063.10	38.68	
38	20.5 - 20.25	49.19	3072.77	38.69	
39	20.25 - 19.08	49.78	3118.08	38.82	
40	19.08 - 18.83	49.91	3127.78	38.83	
41	18.83 - 18	50.31	3160.03	38.92	
42	18 - 17.75	50.46	3169.75	38.93	
43	17.75 - 12.75	53.23	3365.51	39.42	
44	12.75 - 7.75	56.04	3563.61	39.89	
45	7.75 - 4	58.17	3713.74	40.24	
46	4 - 3.75	58.33	3723.80	40.25	
47	3.75 - 3	58.75	3754.00	40.33	
48	3 - 2.75	58.90	3764.08	40.35	
49	2.75 - 0	60.46	3875.35	40.63	

Analysis Results

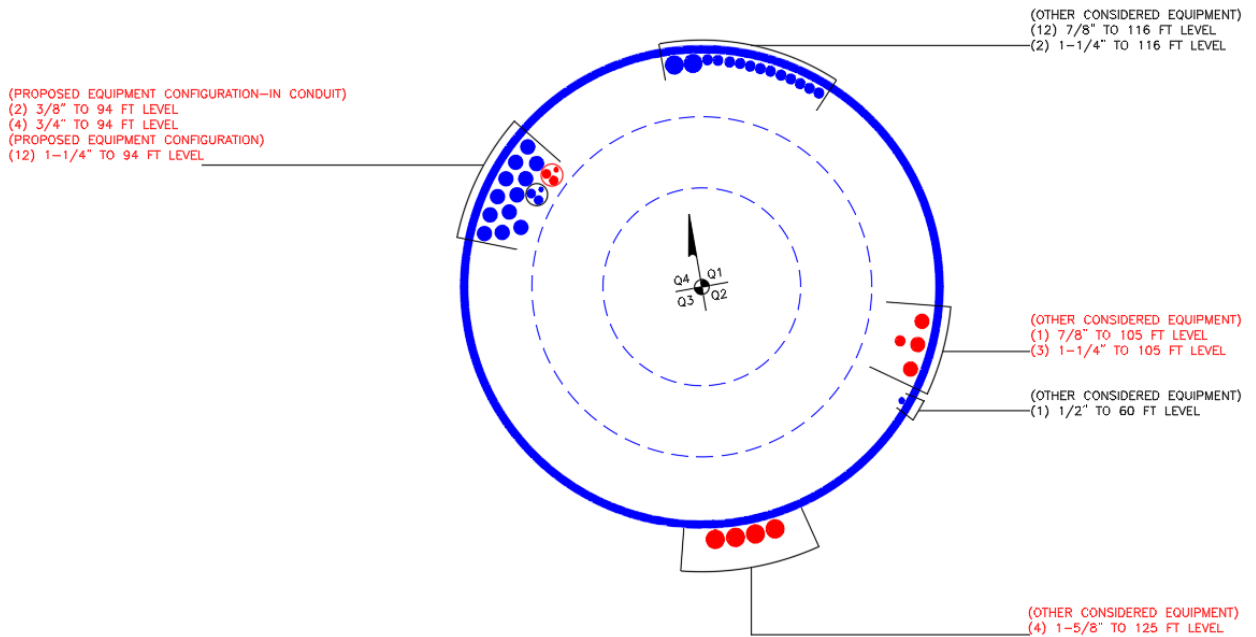
Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
129 - 124	Pole	TP16x16x0.375	Pole	7.6%	Pass
124 - 119	Pole	TP16x16x0.375	Pole	25.3%	Pass
119 - 115.5	Pole	TP16x16x0.375	Pole	42.4%	Pass
115.5 - 115	Pole	TP17.81x16x0.375	Pole	36.9%	Pass
115 - 110	Pole	TP18.96x17.81x0.2188	Pole	51.8%	Pass
110 - 105	Pole	TP20.111x18.96x0.2188	Pole	67.3%	Pass
105 - 100	Pole	TP21.261x20.111x0.2188	Pole	85.1%	Pass
100 - 99.25	Pole	TP21.433x21.261x0.2188	Pole	87.6%	Pass
99.25 - 99	Pole + Reinf.	TP21.491x21.433x0.4563	Reinf. 15 Tension Rupture	71.6%	Pass
99 - 94	Pole + Reinf.	TP22.641x21.491x0.4376	Reinf. 15 Tension Rupture	85.3%	Pass
94 - 92.08	Pole + Reinf.	TP23.083x22.641x0.4313	Reinf. 15 Tension Rupture	91.8%	Pass
92.08 - 91.83	Pole + Reinf.	TP23.141x23.083x0.6563	Reinf. 9 Tension Rupture	62.7%	Pass
91.83 - 86.83	Pole + Reinf.	TP24.291x23.141x0.6313	Reinf. 9 Tension Rupture	73.7%	Pass
86.83 - 81.83	Pole + Reinf.	TP25.441x24.291x0.6063	Reinf. 9 Tension Rupture	83.5%	Pass
81.83 - 78	Pole + Reinf.	TP27.3x25.441x0.5938	Reinf. 9 Tension Rupture	90.3%	Pass
78 - 73	Pole + Reinf.	TP27.033x25.885x0.6875	Reinf. 9 Tension Rupture	86.5%	Pass
73 - 71.5	Pole + Reinf.	TP27.378x27.033x0.675	Reinf. 9 Tension Rupture	88.4%	Pass
71.5 - 71.25	Pole + Reinf.	TP27.435x27.378x0.7375	Reinf. 15 Tension Rupture	81.4%	Pass
71.25 - 67.92	Pole + Reinf.	TP28.2x27.435x0.725	Reinf. 15 Tension Rupture	85.2%	Pass
67.92 - 67.67	Pole + Reinf.	TP28.258x28.2x0.8875	Reinf. 8 Tension Rupture	65.0%	Pass
67.67 - 66.33	Pole + Reinf.	TP28.565x28.258x0.875	Reinf. 8 Tension Rupture	66.2%	Pass
66.33 - 66.08	Pole + Reinf.	TP28.623x28.565x1.0375	Reinf. 8 Tension Rupture	61.9%	Pass
66.08 - 61.08	Pole + Reinf.	TP29.771x28.623x0.9875	Reinf. 8 Tension Rupture	65.8%	Pass
61.08 - 56.5	Pole + Reinf.	TP30.823x29.771x0.9625	Reinf. 8 Tension Rupture	69.0%	Pass
56.5 - 56.25	Pole + Reinf.	TP30.881x30.823x0.9625	Reinf. 2 Tension Rupture	69.2%	Pass
56.25 - 51.25	Pole + Reinf.	TP32.029x30.881x0.9375	Reinf. 2 Tension Rupture	72.4%	Pass
51.25 - 46.25	Pole + Reinf.	TP33.178x32.029x0.9125	Reinf. 2 Tension Rupture	75.4%	Pass
46.25 - 42	Pole + Reinf.	TP35.36x33.178x0.8875	Reinf. 2 Tension Rupture	77.7%	Pass
42 - 35.75	Pole + Reinf.	TP34.968x33.529x0.8125	Reinf. 6 Tension Rupture	82.4%	Pass
35.75 - 35.08	Pole + Reinf.	TP35.122x34.968x0.8125	Reinf. 6 Tension Rupture	82.7%	Pass
35.08 - 34.83	Pole + Reinf.	TP35.18x35.122x0.8125	Reinf. 6 Tension Rupture	82.8%	Pass
34.83 - 31.25	Pole + Reinf.	TP36.004x35.18x0.8	Reinf. 6 Tension Rupture	84.1%	Pass
31.25 - 31	Pole + Reinf.	TP36.062x36.004x0.8625	Reinf. 6 Tension Rupture	79.1%	Pass
31 - 26	Pole + Reinf.	TP37.213x36.062x0.8375	Reinf. 6 Tension Rupture	80.9%	Pass
26 - 22	Pole + Reinf.	TP38.134x37.213x0.825	Reinf. 6 Tension Rupture	82.3%	Pass
22 - 21.75	Pole + Reinf.	TP38.192x38.134x0.9375	Reinf. 6 Tension Rupture	77.9%	Pass
21.75 - 20.5	Pole + Reinf.	TP38.48x38.192x0.925	Reinf. 6 Tension Rupture	78.3%	Pass
20.5 - 20.25	Pole + Reinf.	TP38.537x38.48x0.925	Reinf. 4 Tension Rupture	78.4%	Pass
20.25 - 19.08	Pole + Reinf.	TP38.807x38.537x0.925	Reinf. 4 Tension Rupture	78.8%	Pass
19.08 - 18.83	Pole + Reinf.	TP38.864x38.807x0.875	Reinf. 4 Tension Rupture	79.2%	Pass
18.83 - 18	Pole + Reinf.	TP39.055x38.864x0.875	Reinf. 4 Tension Rupture	79.4%	Pass
18 - 17.75	Pole + Reinf.	TP39.113x39.055x1	Reinf. 1 Tension Rupture	70.5%	Pass
17.75 - 12.75	Pole + Reinf.	TP40.264x39.113x0.975	Reinf. 1 Tension Rupture	71.9%	Pass
12.75 - 7.75	Pole + Reinf.	TP41.415x40.264x0.95	Reinf. 1 Tension Rupture	73.2%	Pass
7.75 - 4	Pole + Reinf.	TP42.279x41.415x0.95	Reinf. 1 Tension Rupture	74.1%	Pass
4 - 3.75	Pole + Reinf.	TP42.337x42.279x0.95	Reinf. 1 Tension Rupture	73.0%	Pass
3.75 - 3	Pole + Reinf.	TP42.509x42.337x0.95	Reinf. 1 Tension Rupture	73.2%	Pass
3 - 2.75	Pole + Reinf.	TP42.567x42.509x1.025	Reinf. 3 Tension Yield	63.3%	Pass
2.75 - 0	Pole + Reinf.	TP43.2x42.567x1	Reinf. 3 Tension Yield	63.9%	Pass
				Summary	
			Pole	87.6%	Pass
			Reinforcement	91.8%	Pass
			Overall	91.8%	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	R14	R15	
129 - 124	562	n/a	562	18.41	n/a	18.41	7.6%																
124 - 119	562	n/a	562	18.41	n/a	18.41	25.3%																
119 - 115.5	562	n/a	562	18.41	n/a	18.41	42.4%																
115.5 - 115	781	n/a	781	20.54	n/a	20.54	36.9%																
115 - 110	593	n/a	593	13.19	n/a	13.19	51.8%																
110 - 105	709	n/a	709	13.99	n/a	13.99	67.3%																
105 - 100	839	n/a	839	14.80	n/a	14.80	85.1%																
100 - 99.25	860	n/a	860	14.93	n/a	14.93	87.6%																
99.25 - 99	867	866	1732	14.97	13.50	28.47	42.9%																71.7%
99 - 94	1015	955	1970	15.77	13.50	29.27	52.3%																85.3%
94 - 92.08	1076	991	2067	16.09	13.50	29.59	56.7%																91.8%
92.08 - 91.83	1084	1991	3075	16.13	27.00	43.13	38.8%									62.7%							62.7%
91.83 - 86.83	1256	2183	3439	16.94	27.00	43.94	46.5%									73.7%							73.7%
86.83 - 81.83	1445	2383	3828	17.74	27.00	44.74	53.9%									83.5%							83.5%
81.83 - 78	1602	2543	4145	18.36	27.00	45.36	59.3%									90.3%							90.3%
78 - 73	2454	2676	5130	26.85	27.00	53.85	50.0%									86.5%							86.5%
73 - 71.5	2550	2742	5292	27.20	27.00	54.20	51.3%									88.4%							88.4%
71.5 - 71.25	2566	3223	5790	27.25	31.50	58.75	47.3%								74.4%								81.4%
71.25 - 67.92	2789	3397	6186	28.02	31.50	59.52	49.9%								77.7%								85.2%
67.92 - 67.67	2807	4651	7458	28.08	42.38	70.45	41.8%								65.0%								64.3%
67.67 - 66.33	2900	4748	7648	28.39	42.38	70.76	42.7%								66.2%								65.4%
66.33 - 66.08	2993	6001	8994	28.45	63.63	92.07	41.8%								61.9%								42.7%
66.08 - 61.08	3370	6462	9832	29.60	63.63	93.23	45.0%								65.8%								53.1%
61.08 - 56.5	3741	6900	10641	30.66	63.63	94.28	47.8%								69.0%								56.4%
56.5 - 56.25	3762	6924	10687	30.72	63.63	94.34	48.0%		69.2%														47.9%
56.25 - 51.25	4200	7420	11620	31.87	63.63	95.49	51.0%		72.4%														59.3%
51.25 - 46.25	4670	7934	12604	33.02	63.63	96.65	53.9%		75.4%														52.7%
46.25 - 42	5096	8384	13480	34.00	63.63	97.63	56.3%		77.7%														50.5%
42 - 35.75	6508	6926	13434	41.71	45.63	87.34	59.5%						82.4%	79.5%									62.2%
35.75 - 35.08	6595	6985	13580	41.90	45.63	87.52	59.7%						82.8%	79.9%									52.7%
35.08 - 34.83	6627	7007	13634	41.97	45.63	87.59	59.9%						84.1%	81.3%									64.8%
34.83 - 31.25	7106	7325	14432	42.96	45.63	88.59	61.4%						84.1%	81.3%									69.8%
31.25 - 31	7052	8414	15466	43.03	56.25	99.28	55.4%						79.1%	73.4%									70.6%
31 - 26	7756	8932	16688	44.42	56.25	100.67	57.4%						80.9%	75.1%									66.6%
26 - 22	8351	9358	17709	45.53	56.25	101.78	58.9%						82.3%	76.4%									72.3%
22 - 21.75	8577	11589	20166	45.60	64.38	109.97	54.7%						83.1%	77.9%									68.3%
21.75 - 20.5	8773	11757	20530	45.95	64.38	110.32	55.1%						83.4%	78.3%									68.4%
20.5 - 20.25	8812	11791	20603	46.01	64.38	110.39	55.2%						83.5%	78.3%									68.4%
20.25 - 19.08	8999	11951	20949	46.34	64.38	110.71	55.6%						83.8%	78.3%									68.7%
19.08 - 18.83	8897	11055	19952	46.41	56.25	102.66	57.2%						79.2%	76.8%									68.7%
18.83 - 18	9029	11160	20189	46.64	56.25	102.89	57.4%						79.4%	77.0%									68.7%
18 - 17.75	9004	13818	22822	46.71	74.25	120.96	48.2%	70.5%					66.7%	64.9%									74.9%
17.75 - 12.75	9830	14608	24438	48.10	74.25	122.35	49.8%	71.9%					68.1%	66.2%									75.1%
12.75 - 7.75	10705	15421	26126	49.49	74.25	123.74	51.3%	73.2%					69.3%	67.5%									74.3%
7.75 - 4	11394	16045	27439	50.53	74.25	124.78	52.5%	74.1%					70.2%	68.3%									73.5%
4 - 3.75	11427	16365	27792	50.60	72.38	122.97	51.8%	73.0%															69.5%
3.75 - 3	11568	16489	28057	50.80	72.38	123.18	52.0%	73.2%															68.4%
3 - 2.75	11623	18367	29990	50.87	74.06	124.94	50.8%																64.1%
2.75 - 0	12154	18863	31017	51.64	74.06	125.70	51.6%																63.9%

Note: Section capacity checked in 5 degree increments.
Rating per TIA-222-H Section 15.5.

APPENDIX B
BASE LEVEL DRAWING



BUSINESS UNIT: 806365 TOWER ID: C_BASELEVEL

APPENDIX C
ADDITIONAL CALCULATIONS

Tube Bypass Analysis

Revision=**LRFD** Passing=**100%**

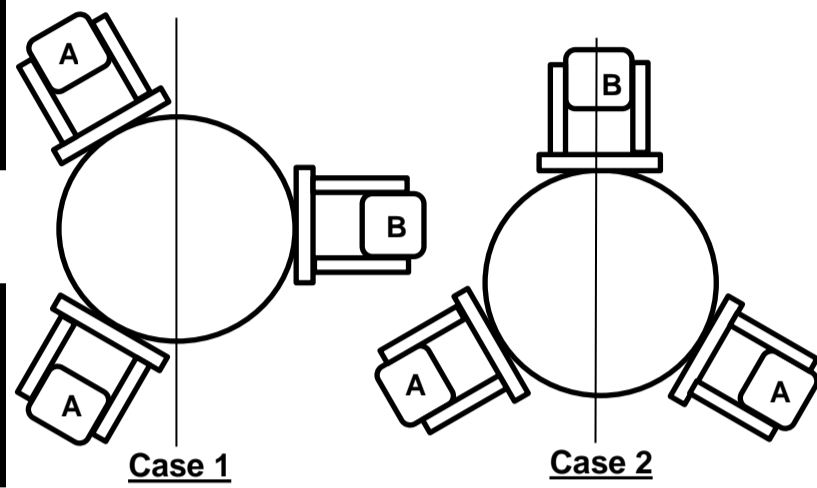
Design/Analysis = **Analysis** @ **115** ft - **0** in elevation

TNX Tower Output @ Connection:

Moment	=	111.20	k-ft
Axial	=	8.43	kips
Shear	=	16.70	kips
Design Capacity	=		

New Port Information

Elevation #1	=	50	ft
Elevation #2	=		ft
Elevation #3	=		ft
Elevation #4	=		ft



Extension Geometry:

Diameter	=	16.00	in
Thickness	=	3/8	in
Height	=	14	ft
Steel Grade	=	A53 Gr. B	
Extension Offset	=		in
Gap Height	=		in
Pole Offset	=		in

Analysis Reactions

Moment	Axial	Shear
k-ft	kips	kips
111.20	8.43	16.70

Pole Geometry:

Diameter	=	17.81	in
Thickness	=	3/16	in
Steel Grade	=	A572 Gr. 65	
Flange/Mount Diam.	=		in

Load Distribution

Moment of Inertia, I	Axial / Leg
in ²	kips
441.44	2.810

Member Forces

Case	d	Tension (kips)	Comp. (kips)	Mx (k-in)	My (k-in)	M (k-in)
1a	8.58	23.12	28.74	231.40	133.60	267.20
1b	17.16	49.05	54.67	0.00	267.20	267.20
2a	14.86	42.10	47.72	133.60	231.40	267.20
2b	0.00	2.81	2.81	267.20	0.00	267.20

Tube Bypass Information:

Number of Legs	=	3	
Unbraced Length	=	48	in
Tube Circle	=	34.31	in
K	=	2.10	

Compression Strength

Case	$4.71 \sqrt{E/F_y}$	KL/r	F _e (ksi)	F _{cr} (ksi)	φP _{nc} (kips)	P _{rc} (kips)	Capacity
1a	118.26	46.45	132.65	39.79	418.94	28.74	6.5%
1b	118.26	46.45	132.65	39.79	418.94	54.67	12.4%
2a	118.26	46.45	132.65	39.79	418.94	47.72	10.8%
2b	118.26	46.45	132.65	39.79	418.94	2.81	0.6%

Type	HSS 6x6x5/8	
	Extension	Pole
Blind Bolt	EXISTING AJAX	EXISTING AJAX
Method	Case 2	Case 2
Bolt Qty.	9	9
Spacing (in)	3	3
End Dist. (in)	3	3

Flexural Strength

Case	∅	I ₃ (in ⁴)	∑I (in ⁴)	M (k-in)	∅bM _n (k-in)	Capacity
1a	60.00	55.10	165.30	267.20	960.48	26.5%
1b	0.00	55.10	165.30	267.20	960.48	26.5%
2a	30.00	55.10	165.30	267.20	960.48	26.5%
2b	90.00	55.10	165.30	267.20	960.48	26.5%

Tensile Strength

Case	P _{n1} (kips)	P _{n2} (kips)	∅tP _{nt} (kips)	P _{rt} (kips)	Capacity
1a	538.20	597.04	447.78	23.12	4.9%
1b	538.20	597.04	447.78	49.05	10.4%
2a	538.20	597.04	447.78	42.10	9.0%
2b	538.20	597.04	447.78	2.81	0.6%

Combined Strength

Case	Flexure + Tension (H1)		
	Prt / Pnt	Mr / Mn	Capacity
1a	0.025	0.265	27.6%
1b	0.052	0.265	30.2%
2a	0.045	0.265	29.5%
2b	0.003	0.265	25.5%
Case	Flexure + Compression (H1)		
	Prc / Pnc	Mr / Mn	Capacity
1a	0.033	0.265	28.3%
1b	0.062	0.265	31.2%
2a	0.054	0.265	30.4%
2b	0.003	0.265	25.5%

Bolt Check

Case	Location	Tube Comp. (kips)	e (in)	Shear on Bolt (kips)	Bearing Capacity (kips)	Shear Capacity (kips)	Tension on Bolt (kips)	Tension Capacity (kips)	Limit Capacity
1a	Ext	28.74	9.155	3.24	45.32	37.00	4.64	30.00	3.0%
	Pole	28.74	8.25	6.51	30.21	37.00	6.49	30.00	8.9%
1b	Ext	54.67	9.155	6.07	45.32	37.00	8.96	30.00	11.1%
	Pole	54.67	8.25	6.07	30.21	37.00	12.59	30.00	20.6%
2a	Ext	47.72	9.155	5.31	45.32	37.00	7.82	30.00	8.4%
	Pole	47.72	8.25	6.23	30.21	37.00	10.95	30.00	16.8%
2b	Ext	2.81	9.155	0.69	45.32	37.00	0.43	30.00	0.1%
	Pole	2.81	8.25	6.56	30.21	37.00	0.39	30.00	4.5%

*TIA-222 H Annex S - All equations based on AISC 13th Edition

Asymmetric Anchor Rod Analysis

Moment = 3875 k-ft
Axial = 60.0 kips (+Comp, -Tension)
Shear = 41.0 kips
Anchor Qty = 15

TIA Ref. = H
ASIF = N/A
Max Ratio = 100.0%
Location = Base Plate

η = 0.50 for Base Plates, Rev. G Sect. 4.9.9
Threads = N-Included for Flange Plates, Rev. G & H
 λ = 0.25 in, for Base Plates, Rev. H Sect 4.9.9 (Max of Original Items)
Grout = 0.00 psi, for Base Plates, Rev. H Sect 4.9.9 (Note)

**** For Post Installed Anchors: Check anchors for embedment, epoxy/grout bond, and capacity based on proof load. ****

Item	Nominal Anchor Dia, in	Spec	Fy, ksi	Fu, ksi	Location, degrees	Anchor Circle, in	Type	Area Override, in ²	Area, in ²	Max Net Comp, kips	Max Net Tension, kips	Tension Override, kips	Comp Override, kips	Tension Cap, kips	Comp Cap, kips	Capacity Ratio
1	2.250	#18J A615 Gr 75	75	100	0.0	51.23	Original	0.00	3.98	225.10	215.10	0.00	0.00	243.75	243.75	88.2%
2	2.250	#18J A615 Gr 75	75	100	30.0	51.23	Original	0.00	3.98	222.95	212.95	0.00	0.00	243.75	243.75	87.3%
3	2.250	#18J A615 Gr 75	75	100	60.0	51.23	Original	0.00	3.98	222.12	212.12	0.00	0.00	243.75	243.75	87.0%
4	2.250	#18J A615 Gr 75	75	100	90.0	51.23	Original	0.00	3.98	223.87	213.87	0.00	0.00	243.75	243.75	87.7%
5	2.250	#18J A615 Gr 75	75	100	120.0	51.23	Original	0.00	3.98	226.68	216.68	0.00	0.00	243.75	243.75	88.8%
6	2.250	#18J A615 Gr 75	75	100	150.0	51.23	Original	0.00	3.98	227.75	217.75	0.00	0.00	243.75	243.75	89.2%
7	2.250	#18J A615 Gr 75	75	100	180.0	51.23	Original	0.00	3.98	225.81	215.81	0.00	0.00	243.75	243.75	88.4%
8	2.250	#18J A615 Gr 75	75	100	210.0	51.23	Original	0.00	3.98	222.35	212.35	0.00	0.00	243.75	243.75	87.1%
9	2.250	#18J A615 Gr 75	75	100	240.0	51.23	Original	0.00	3.98	220.36	210.36	0.00	0.00	243.75	243.75	86.3%
10	2.250	#18J A615 Gr 75	75	100	270.0	51.23	Original	0.00	3.98	221.45	211.45	0.00	0.00	243.75	243.75	86.7%
11	2.250	#18J A615 Gr 75	75	100	300.0	51.23	Original	0.00	3.98	224.25	214.25	0.00	0.00	243.75	243.75	87.8%
12	2.250	#18J A615 Gr 75	75	100	330.0	51.23	Original	0.00	3.98	225.95	215.95	0.00	0.00	243.75	243.75	88.5%
13	2.250	A193 Gr B7	105	125	73.0	63.22	Post-Installed	0.00	3.98	268.00	268.00	0.00	0.00	304.47	341.01	74.8%
14	2.250	A193 Gr B7	105	125	197.0	63.22	Post-Installed	0.00	3.98	269.80	269.80	0.00	0.00	304.47	341.01	75.4%
15	2.250	A193 Gr B7	105	125	313.0	63.22	Post-Installed	0.00	3.98	271.81	271.81	0.00	0.00	304.47	341.01	75.9%
									59.69							

Monopole Base Plate Connection

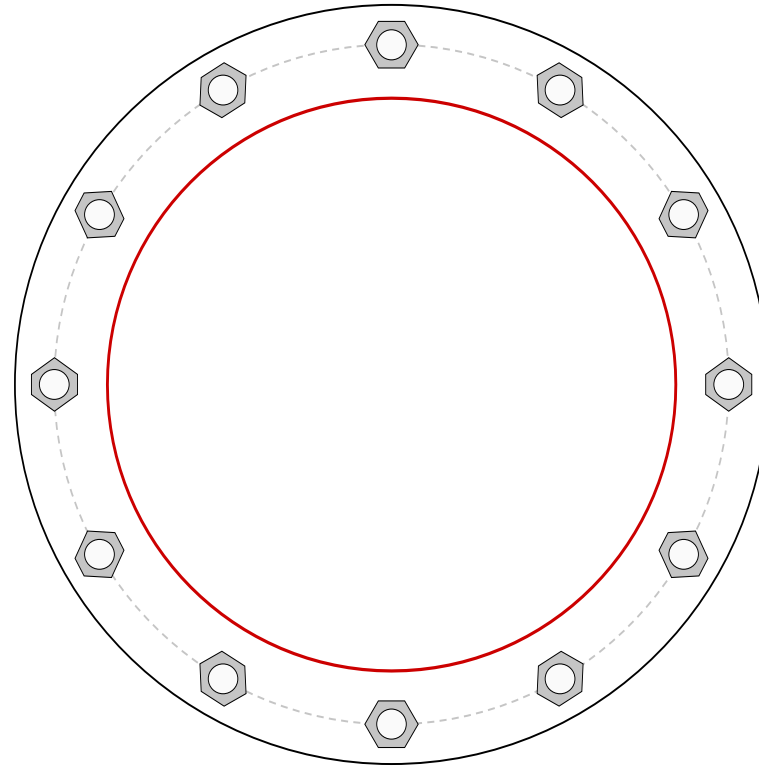


Site Info	
BU #	806365
Site Name	HRT 303 943203
Order #	

Analysis Considerations	
TIA-222 Revision	H
Grout Considered:	No
l_{ar} (in)	0.25

Applied Loads	
Moment (kip-ft)	2852.84
Axial Force (kips)	60.00
Shear Force (kips)	41.00

*TIA-222-H Section 15.5 Applied



Connection Properties	Analysis Results
-----------------------	------------------

Anchor Rod Data
(12) 2-1/4" ϕ bolts (A615-75 N; $F_y=75$ ksi, $F_u=100$ ksi) on 51.23" BC
Base Plate Data
57.23" OD x 2.625" Plate (A572-60; $F_y=60$ ksi, $F_u=75$ ksi)
Stiffener Data
N/A
Pole Data
43.2" x 0.375" 12-sided pole (A572-65; $F_y=65$ ksi, $F_u=80$ ksi)

Anchor Rod Summary	<i>(units of kips, kip-in)</i>
$P_{u,c}$	227.57
V_u	3.42
M_u	n/a
Base Plate Summary	
Max Stress (ksi):	29.14 (Flexural)
Allowable Stress (ksi):	54
Stress Rating:	51.4% Pass

Reactions adjusted to account for additional anchor rods.

Pier and Pad Foundation



BU #: 806365
 Site Name: HRT 303 943203
 App. Number:

TIA-222 Revision: H
 Tower Type: Monopole

Top & Bot. Pad Rein. Different?:
 Block Foundation?:

Superstructure Analysis Reactions		
Compression, P_{comp} :	60	kips
Base Shear, V_{u_comp} :	41	kips
Moment, M_u :	3875	ft-kips
Tower Height, H :	129	ft
BP Dist. Above Fdn, bp_{dist} :	2.5	in

Foundation Analysis Checks				
	Capacity	Demand	Rating*	Check
<i>Lateral (Sliding) (kips)</i>	736.95	41.00	5.3%	Pass
<i>Bearing Pressure (ksf)</i>	15.00	2.66	16.9%	Pass
<i>Overturing (kip*ft)</i>	15457.57	4333.31	28.0%	Pass
<i>Pier Flexure (Comp.) (kip*ft)</i>	4569.17	4115.67	85.8%	Pass
<i>Pier Compression (kip)</i>	18370.97	100.66	0.5%	Pass
<i>Pad Flexure (kip*ft)</i>	9228.34	1505.44	15.5%	Pass
<i>Pad Shear - 1-way (kips)</i>	1548.24	167.21	10.3%	Pass
<i>Pad Shear - 2-way (Comp) (ksi)</i>	0.164	0.017	9.7%	Pass
<i>Flexural 2-way (Comp) (kip*ft)</i>	14411.53	2469.40	16.3%	Pass

Pier Properties		
Pier Shape:	Circular	
Pier Diameter, d_{pier} :	7	ft
Ext. Above Grade, E :	0.67	ft
Pier Rebar Size, S_c :	10	
Pier Rebar Quantity, m_c :	22	
Pier Tie/Spiral Size, S_t :	3	
Pier Tie/Spiral Quantity, m_t :	6	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier} :	3	in

*Rating per TIA-222-H Section 15.5

Soil Rating*:	28.0%
Structural Rating*:	85.8%

Pad Properties		
Depth, D :	10.3	ft
Pad Width, W :	28	ft
Pad Thickness, T :	5.1	ft
Pad Rebar Size (Bottom), S_p :	11	
Pad Rebar Quantity (Bottom), m_p :	24	
Pad Clear Cover, cc_{pad} :	3	in

Material Properties		
Rebar Grade, F_y :	60000	psi
Concrete Compressive Strength, F'_c :	3000	psi
Dry Concrete Density, δ_c :	150	pcf

Soil Properties		
Total Soil Unit Weight, γ :	135	pcf
Ultimate Gross Bearing, Q_{ult} :	20.000	ksf
Cohesion, C_u :	0.000	ksf
Friction Angle, ϕ :	36	degrees
SPT Blow Count, N_{blows} :	60	
Base Friction, μ :	0.35	
Neglected Depth, N :	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, gw :	99	ft

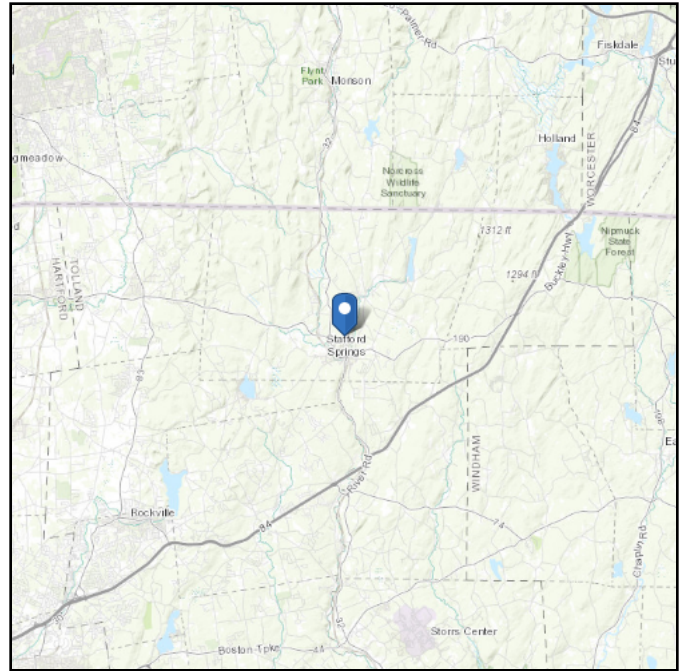
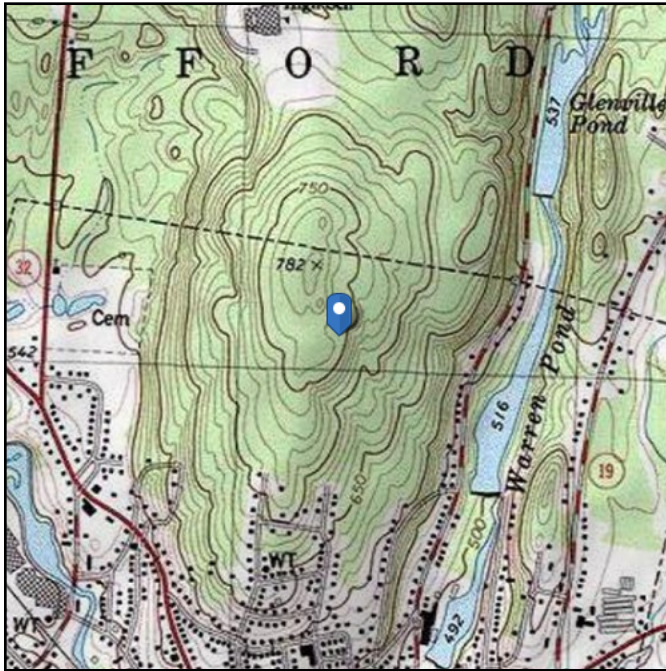
<--Toggle between Gross and Net

ASCE 7 Hazards Report

Address:
No Address at This
Location

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

Elevation: 754.15 ft (NAVD 88)
Latitude: 41.964222
Longitude: -72.304944



Wind

Results:

Wind Speed:	124 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: Fri Feb 08 2019

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.

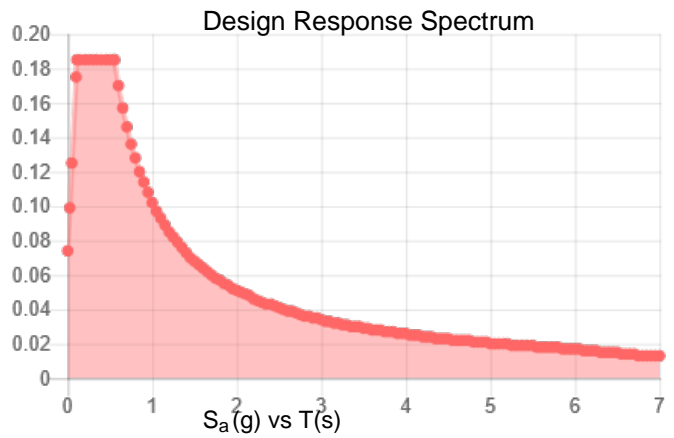
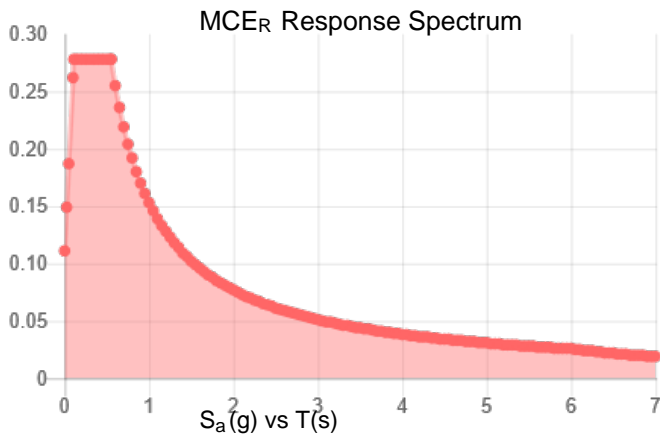
Mountainous terrain, gorges, ocean promontories, and special wind regions should be examined for unusual wind conditions.

Site Soil Class: D - Stiff Soil

Results:

S_S :	0.174	S_{DS} :	0.185
S_1 :	0.064	S_{D1} :	0.102
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.085
S_{MS} :	0.278	PGA _M :	0.137
S_{M1} :	0.153	F _{PGA} :	1.6
		I_e :	1

Seismic Design Category B



Data Accessed:

Fri Feb 08 2019

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: 1.00 in.
Concurrent Temperature: 5 F
Gust Speed: 50 mph

Data Source: Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8

Date Accessed: Fri Feb 08 2019

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.

The ASCE 7 Hazard Tool is provided for your convenience, for informational purposes only, and is provided “as is” and without warranties of any kind. The location data included herein has been obtained from information developed, produced, and maintained by third party providers; or has been extrapolated from maps incorporated in the ASCE 7 standard. While ASCE has made every effort to use data obtained from reliable sources or methodologies, ASCE does not make any representations or warranties as to the accuracy, completeness, reliability, currency, or quality of any data provided herein. Any third-party links provided by this Tool should not be construed as an endorsement, affiliation, relationship, or sponsorship of such third-party content by or from ASCE.

ASCE does not intend, nor should anyone interpret, the results provided by this Tool to replace the sound judgment of a competent professional, having knowledge and experience in the appropriate field(s) of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the contents of this Tool or the ASCE 7 standard.

In using this Tool, you expressly assume all risks associated with your use. Under no circumstances shall ASCE or its officers, directors, employees, members, affiliates, or agents be liable to you or any other person for any direct, indirect, special, incidental, or consequential damages arising from or related to your use of, or reliance on, the Tool or any information obtained therein. To the fullest extent permitted by law, you agree to release and hold harmless ASCE from any and all liability of any nature arising out of or resulting from any use of data provided by the ASCE 7 Hazard Tool.