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

June 6, 2018

Mark Roberts
QC Development
P.O. Box 916
Storrs, CT 06268

RE: **EM-CING-084-180403** - New Cingular Wireless PCS, LLC (AT&T) notice of intent to modify an existing telecommunications facility located at 111 Schoolhouse Road, Milford, Connecticut.

Dear Mr. Roberts:

The Connecticut Siting Council (Council) is in receipt of your email correspondence of June 6, 2018 submitted in response to the Council's April 12, 2018 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

MB/CMW/jmb

From: Mark Roberts [mailto:mark.roberts@qcdevelopment.net]
Sent: Wednesday, June 06, 2018 1:57 PM
To: CSC-DL Siting Council <Siting.Council@ct.gov>
Subject: RE: Incomplete - EM-CING-084-180403 - Schoolhouse Rd.
Importance: High

Hello – Please find attached a revised Tower Structural Analysis which specifically calls out the Platform Reinforcement Kit noted in your 4/12 incomplete letter.

Please let me know if you need anything further.

Thanks

Mark Roberts
QC Development
860-670-9068

PAUL J. FORD & COMPANY

Date: **May 09, 2018**

Cheryl Schultz
Crown Castle
3530 Toringdon Way,Suite 300
Charlotte, NC 28277

Paul J. Ford and Company
250 East Broad St., Suite 600
Columbus, OH 43215
(614) 221-6679
gaustin@pauljford.com

Subject: **Structural Analysis Report**

Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Carrier Site Number:	CT5098
	Carrier Site Name:	MILFORD NAUGATUCK GARDENS
Crown Castle Designation:	**Crown Castle BU Number:**	876342
	Crown Castle Site Name:	BIC DRIVE (SSUSA)
	Crown Castle JDE Job Number:	477813
	Crown Castle Work Order Number:	1568956
	Crown Castle Order Number:	420721 Rev. 2
Engineering Firm Designation:	**Paul J. Ford and Company Project Number:**	37518-0321.002.7805
Site Data:	**111 School House Road, a/k/a Bic Drive, MILFORD, New Haven County, CT** **Latitude *41° 12' 46.06"*, Longitude *-73° 5' 7.1"*** **140 Foot - Monopole Tower**	

Dear Cheryl Schultz,

Paul J. Ford and Company is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower. This analysis has been performed in accordance with the Crown Castle Structural 'Statement of Work' and the terms of Crown Castle Purchase Order Number 1184055, in accordance with order 420721, revision 2.

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

LC7: Existing + Reserved + Proposed Equipment **Sufficient Capacity**
Note: See Table I and Table II for the proposed and existing/reserved loading, respectively.

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3 and Appendix N as required for use in the ANSI/TIA-222-G-2005 Standard, "Structural Standard for Antenna Supporting Structures and Antennas", with ANSI/TIA-222-G-1-2007 and ANSI/TIA-222-G-2-2009 Addenda per Exception #5 of Section 1609.1.1. Risk Category II, Exposure Category C and Topographic Category 1 were used in this analysis.

We at *Paul J. Ford and Company* appreciate the opportunity of providing our continuing professional services to you and Crown Castle. If you have any questions or need further assistance on this or any other projects please give us a call.

Respectfully submitted by:

Grant J. Austin SJT
Structural Designer

STATE OF CONNECTICUT
JUSTIN T. KLINE
No. 30301
LICENSED
PROFESSIONAL ENGINEER
5.10.18

tnxTower Report - version 7.0.5.1

PAUL J. FORD & COMPANY

Date: **May 09, 2018**

Cheryl Schultz
Crown Castle
3530 Toringdon Way,Suite 300
Charlotte, NC 28277

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250 East Broad St., Suite 600
Columbus, OH 43215
(614) 221-6679
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Subject: **Structural Analysis Report**

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Respectfully submitted by:

Grant J. Austin
Structural Designer

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 140 ft Monopole tower designed by SUMMIT in October of 1999. The tower was originally designed for a wind speed of 85 mph per TIA/EIA-222-F.

2) ANALYSIS CRITERIA

This analysis has been performed in accordance with the 2016 Connecticut State Building Code based upon an ultimate 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3 and Appendix N as required for use in the ANSI/TIA-222-G-2005 Standard, “Structural Standard for Antenna Supporting Structures and Antennas”, with ANSI/TIA-222-G-1-2007 and ANSI/TIA-222-G-2-2009 Addenda per Exception #5 of Section 1609.1.1. Risk Category II, Exposure Category C and Topographic Category 1 were used in this analysis.

Table 1 - Proposed Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
121.0	123.0	3	cci antennas	HPA-65R-BUU-H6 w/ MP	1 2	3/8 3/4	--
		3	ericsson	RRUS 11			
		3	ericsson	RRUS 32			
		3	ericsson	RRUS12/RRUS A2			
		3	kaelus	DBC0061F1V51-2			
		3	quintel tech.	QS66512-6 w/ MP			
		1	raycap	DC6-48-60-18-8C			
	121.0	2	site pro	PRK-SFS			

Table 2 - Existing and Reserved Antenna and Cable Information

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
140.0	140.0	3	alcatel lucent	TD-RRH8X20-25	1 3 1	1/2 1-1/4 1-5/8	1
		9	rfs celwave	ACU-A20-N			
		3	rfs celwave	APXVSPP18-C-A20 w/ MP			
		3	rfs celwave	APXVTM14-C-120 w/ MP			
		1	tower mounts	Platform Mount [LP 1201-1]			
137.0	137.0	3	alcatel lucent	TME-1900MHz RRH (65MHz)	--	--	1
		3	alcatel lucent	TME-800MHZ RRH			
		3	alcatel lucent	800MHz 2X50W RRH W/FILTER			
		1	tower mounts	Side Arm Mount [SO 103-3]			

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)	Note
121.0	125.0	3	kmw comm.	AM-X-CD-16-65-00T-RET w/ MP	--	--	3
	123.0	3	powerwave tech.	7770.00 w/ MP			
		6	powerwave tech.	LGP21901			
		3	powerwave tech.	7770.00 w/ MP	1 2 12	3/8 7/16 1-5/8	1
		2	powerwave tech.	LGP21401			
	121.0	4	powerwave tech.	LGP21401			
		1	raycap	DC6-48-60-18-8F			
		1	tower mounts	Platform Mount [LP 1201-1]			
118.0	118.0	1	tower mounts	T-Arm Mount [TA 702-3]	--	--	1
115.0	116.0	3	andrew	ETW200VS12UB	11 6	1-1/4 1-5/8	1
		6	ems wireless	RR90-17-02DP w/ MP			
		6	remec	S20070A1			
		3	rfs celwave	APX16DWV-16DWV-S-E-A20 w/ MP			
	115.0	1	tower mounts	Platform Mount [LP 1201-1]			
104.0	107.0	1	trimble	ACUTIME 2000	6	1-5/8	1
	104.0	3	alcatel lucent	RRH2X60-700	1 2	1/2 1-5/8	2
		3	alcatel lucent	RRH2X60-PCS			
		3	alcatel lucent	RRH4X45-AWS4 B66			
		9	commscope	SBNHH-1D65B w/ MP			
		1	rfs celwave	DB-T1-6Z-8AB-0Z			
		3	andrew	LNX-6514DS-VTM w/ MP	--	--	1
		1	rfs celwave	DB-T1-6Z-8AB-0Z			
		6	rfs celwave	FD9R6004/2C-3L			
		1	tower mounts	Platform Mount [LP 1201-1]			
95.0	95.0	3	rfs celwave	APXV18-206517S-C w/ MP	6	1-5/8	1
		1	tower mounts	Pipe Mount [PM 601-3]			
80.0	82.0	1	kathrein	OG-860/1920/GPS-A	1	1/2	1
	80.0	1	tower mounts	Side Arm Mount [SO 901-1]			

Notes:
1) Existing Equipment
2) Reserved Equipment
3) Equipment To Be Removed

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-GEOTECHNICAL REPORTS	FDH, 08-12040E G1, 12/05/2008	1531894	CCISITES
4-POST-MODIFICATION INSPECTION	PJF, 41709-0132, 12/04/2009	2547672	CCISITES
4-POST-MODIFICATION INSPECTION	TEP, 25566, 04/21/2016	6234048	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	PJF, 29299-549, 09/29/1999	1631615	CCISITES
4-TOWER MANUFACTURER DRAWINGS	PJF, 29299-549, 10/29/1999	1630877	CCISITES

3.1) Analysis Method

tnxTower (version 7.0.5.1), 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) Monopole was 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 and Company should be notified to determine the effect on the structural integrity of the tower.

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	140 - 135	Pole	TP17.015x16x0.25	Pole	8.3%	Pass
L2	135 - 130	Pole	TP18.03x17.015x0.25	Pole	16.1%	Pass
L3	130 - 125	Pole	TP19.045x18.03x0.25	Pole	22.7%	Pass
L4	125 - 120	Pole	TP20.061x19.045x0.25	Pole	32.3%	Pass
L5	120 - 115	Pole	TP21.076x20.061x0.25	Pole	44.8%	Pass
L6	115 - 110	Pole	TP22.091x21.076x0.25	Pole	59.0%	Pass
L7	110 - 105	Pole	TP23.106x22.091x0.25	Pole	71.5%	Pass
L8	105 - 104	Pole	TP23.309x23.106x0.25	Pole	73.9%	Pass
L9	104 - 103.75	Pole + Reinf.	TP23.36x23.309x0.4625	Reinf. 9 Tension Rupture	69.8%	Pass
L10	103.75 - 98.75	Pole + Reinf.	TP24.375x23.36x0.45	Reinf. 9 Tension Rupture	84.9%	Pass
L11	98.75 - 98.5	Pole + Reinf.	TP24.426x24.375x0.45	Reinf. 9 Tension Rupture	85.6%	Pass
L12	98.5 - 98.25	Pole + Reinf.	TP24.476x24.426x0.725	Reinf. 9 Tension Rupture	55.2%	Pass
L13	98.25 - 97	Pole + Reinf.	TP24.73x24.476x0.725	Reinf. 9 Tension Rupture	57.6%	Pass
L14	97 - 96.75	Pole + Reinf.	TP24.781x24.73x0.5125	Reinf. 5 Tension Rupture	68.5%	Pass
L15	96.75 - 91.75	Pole + Reinf.	TP26.456x24.781x0.5	Reinf. 5 Tension Rupture	78.9%	Pass
L16	91.75 - 88	Pole + Reinf.	TP26.058x25.296x0.5625	Reinf. 5 Tension Rupture	78.8%	Pass
L17	88 - 87.75	Pole + Reinf.	TP26.108x26.058x0.7625	Reinf. 5 Tension Rupture	61.6%	Pass
L18	87.75 - 82.75	Pole + Reinf.	TP27.124x26.108x0.7375	Reinf. 5 Tension Rupture	68.1%	Pass
L19	82.75 - 77.75	Pole + Reinf.	TP28.139x27.124x0.725	Reinf. 5 Tension Rupture	74.2%	Pass
L20	77.75 - 72.75	Pole + Reinf.	TP29.154x28.139x0.7125	Reinf. 5 Tension Rupture	79.7%	Pass
L21	72.75 - 68.08	Pole + Reinf.	TP30.102x29.154x0.6875	Reinf. 5 Tension Rupture	84.6%	Pass
L22	68.08 - 67.83	Pole + Reinf.	TP30.153x30.102x0.8125	Reinf. 7 Tension Rupture	72.2%	Pass
L23	67.83 - 62.83	Pole + Reinf.	TP31.168x30.153x0.7875	Reinf. 7 Tension Rupture	76.7%	Pass
L24	62.83 - 57.83	Pole + Reinf.	TP32.184x31.168x0.7625	Reinf. 7 Tension Rupture	80.8%	Pass
L25	57.83 - 52.83	Pole + Reinf.	TP33.199x32.184x0.75	Reinf. 7 Tension Rupture	84.8%	Pass
L26	52.83 - 51.5	Pole + Reinf.	TP34.332x33.199x0.75	Reinf. 7 Tension Rupture	85.8%	Pass
L27	51.5 - 46.5	Pole + Reinf.	TP33.859x32.844x0.8	Reinf. 7 Tension Rupture	84.8%	Pass
L28	46.5 - 41.5	Pole + Reinf.	TP34.874x33.859x0.8	Reinf. 7 Tension Rupture	87.9%	Pass
L29	41.5 - 37.75	Pole + Reinf.	TP35.636x34.874x0.775	Reinf. 7 Tension Rupture	90.1%	Pass
L30	37.75 - 37.5	Pole + Reinf.	TP35.686x35.636x0.85	Reinf. 7 Tension Rupture	84.3%	Pass
L31	37.5 - 32.5	Pole + Reinf.	TP36.702x35.686x0.825	Reinf. 7 Tension Rupture	86.9%	Pass
L32	32.5 - 32.25	Pole + Reinf.	TP36.752x36.702x0.875	Reinf. 2 Tension Rupture	80.5%	Pass
L33	32.25 - 27.25	Pole + Reinf.	TP37.767x36.752x0.8625	Reinf. 6 Tension Rupture	82.8%	Pass
L34	27.25 - 23.5	Pole + Reinf.	TP38.529x37.767x0.85	Reinf. 6 Tension Rupture	84.5%	Pass
L35	23.5 - 23.25	Pole + Reinf.	TP38.58x38.529x0.95	Reinf. 2 Tension Rupture	79.5%	Pass
L36	23.25 - 20.75	Pole + Reinf.	TP39.087x38.58x0.95	Reinf. 2 Tension Rupture	80.5%	Pass
L37	20.75 - 20.5	Pole + Reinf.	TP39.138x39.087x0.9	Reinf. 2 Tension Rupture	81.7%	Pass
L38	20.5 - 15.5	Pole + Reinf.	TP40.153x39.138x0.875	Reinf. 2 Tension Rupture	83.6%	Pass
L39	15.5 - 10.5	Pole + Reinf.	TP41.168x40.153x0.8625	Reinf. 2 Tension Rupture	85.5%	Pass
L40	10.5 - 5.5	Pole + Reinf.	TP42.183x41.168x0.85	Reinf. 2 Tension Rupture	87.2%	Pass
L41	5.5 - 3	Pole + Reinf.	TP42.691x42.183x0.8375	Reinf. 2 Tension Rupture	88.0%	Pass
L42	3 - 2.75	Pole + Reinf.	TP42.742x42.691x0.9	Reinf. 2 Tension Rupture	82.6%	Pass
L43	2.75 - 0	Pole + Reinf.	TP43.3x42.742x0.9	Reinf. 2 Tension Rupture	83.6%	Pass
					Summary	

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
				Pole	73.9%	Pass
				Reinforcement	90.1%	Pass
				Overall	90.1%	Pass

Table 6 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Anchor Rods	0	84.3	Pass
1	Base Plate	0	74.0	Pass
1	Base Foundation Structural Steel	0	61.4	Pass
1	Base Foundation Soil Interaction	0	57.0	Pass

Structure Rating (max from all components) =	90.1%

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

4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Tower Input Data

There is a pole section.
This tower is designed using the TIA-222-G standard.
The following design criteria apply:

1) Tower is located in New Haven County, Connecticut.
2) ASCE 7-10 Wind Data is used (wind speeds converted to nominal values).
3) Basic wind speed of 97 mph.
4) Structure Class II.
5) Exposure Category C.
6) Topographic Category 1.
7) Crest Height 0.0000 ft.
8) Nominal ice thickness of 0.7500 in.
9) Ice thickness is considered to increase with height.
10) Ice density of 56.00 pcf.
11) A wind speed of 50 mph is used in combination with ice.
12) Temperature drop of 50 °F.
13) Deflections calculated using a wind speed of 60 mph.
14) A non-linear (P-delta) analysis was used.
15) Pressures are calculated at each section.
16) Stress ratio used in pole design is 1.
17) Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

	Consider Moments - Legs		Distribute Leg Loads As Uniform		Use ASCE 10 X-Brace Ly Rules
	Consider Moments - Horizontals		Assume Legs Pinned		Calculate Redundant Bracing Forces
	Consider Moments - Diagonals	√	Assume Rigid Index Plate		Ignore Redundant Members in FEA
	Use Moment Magnification	√	Use Clear Spans For Wind Area		SR Leg Bolts Resist Compression
√	Use Code Stress Ratios		Use Clear Spans For KL/r		All Leg Panels Have Same Allowable
√	Use Code Safety Factors - Guys		Retension Guys To Initial Tension		Offset Girt At Foundation
	Escalate Ice	√	Bypass Mast Stability Checks	√	Consider Feed Line Torque
	Always Use Max Kz	√	Use Azimuth Dish Coefficients		Include Angle Block Shear Check
	Use Special Wind Profile	√	Project Wind Area of Appurt.		Use TIA-222-G Bracing Resist. Exemption
	Include Bolts In Member Capacity		Autocalc Torque Arm Areas		Use TIA-222-G Tension Splice Exemption
	Leg Bolts Are At Top Of Section		Add IBC .6D+W Combination		Poles
	Secondary Horizontal Braces Leg		Sort Capacity Reports By Component	√	Include Shear-Torsion Interaction
	Use Diamond Inner Bracing (4 Sided)		Triangulate Diamond Inner Bracing		Always Use Sub-Critical Flow
	SR Members Have Cut Ends		Treat Feed Line Bundles As Cylinder		Use Top Mounted Sockets
	SR Members Are Concentric				

Tapered Pole Section Geometry

Section	*Elevation*	*Section Length*	*Splice Length*	*Number of Sides*	*Top Diameter*	*Bottom Diameter*	*Wall Thickness*	*Bend Radius*	*Pole Grade*
	ft	*ft*	*ft*		*in*	*in*	*in*	*in*	
L1	140.0000-135.0000	5.0000	0.00	12	16.0000	17.0151	0.2500	1.0000	A572-65 (65 ksi)
L2	135.0000-130.0000	5.0000	0.00	12	17.0151	18.0303	0.2500	1.0000	A572-65 (65 ksi)
L3	130.0000-125.0000	5.0000	0.00	12	18.0303	19.0454	0.2500	1.0000	A572-65 (65 ksi)
L4	125.0000-120.0000	5.0000	0.00	12	19.0454	20.0606	0.2500	1.0000	A572-65 (65 ksi)
L5	120.0000-115.0000	5.0000	0.00	12	20.0606	21.0757	0.2500	1.0000	A572-65 (65 ksi)
L6	115.0000-110.0000	5.0000	0.00	12	21.0757	22.0909	0.2500	1.0000	A572-65 (65 ksi)
L7	110.0000-	5.0000	0.00	12	22.0909	23.1060	0.2500	1.0000	A572-65

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
	105.0000								(65 ksi)
L8	105.0000-104.0000	1.0000	0.00	12	23.1060	23.3090	0.2500	1.0000	A572-65 (65 ksi)
L9	104.0000-103.7500	0.2500	0.00	12	23.3090	23.3598	0.4625	1.8500	A572-65 (65 ksi)
L10	103.7500-98.7500	5.0000	0.00	12	23.3598	24.3750	0.4500	1.8000	A572-65 (65 ksi)
L11	98.7500-98.5000	0.2500	0.00	12	24.3750	24.4257	0.4500	1.8000	A572-65 (65 ksi)
L12	98.5000-98.2500	0.2500	0.00	12	24.4257	24.4765	0.7250	2.9000	A572-65 (65 ksi)
L13	98.2500-97.0000	1.2500	0.00	12	24.4765	24.7303	0.7250	2.9000	A572-65 (65 ksi)
L14	97.0000-96.7500	0.2500	0.00	12	24.7303	24.7810	0.5125	2.0500	A572-65 (65 ksi)
L15	96.7500-88.5000	8.2500	3.25	12	24.7810	26.4560	0.5000	2.0000	A572-65 (65 ksi)
L16	88.5000-88.0000	3.7500	0.00	12	25.2962	26.0576	0.5625	2.2500	A572-65 (65 ksi)
L17	88.0000-87.7500	0.2500	0.00	12	26.0576	26.1084	0.7625	3.0500	A572-65 (65 ksi)
L18	87.7500-82.7500	5.0000	0.00	12	26.1084	27.1236	0.7375	2.9500	A572-65 (65 ksi)
L19	82.7500-77.7500	5.0000	0.00	12	27.1236	28.1389	0.7250	2.9000	A572-65 (65 ksi)
L20	77.7500-72.7500	5.0000	0.00	12	28.1389	29.1542	0.7125	2.8500	A572-65 (65 ksi)
L21	72.7500-68.0800	4.6700	0.00	12	29.1542	30.1024	0.6875	2.7500	A572-65 (65 ksi)
L22	68.0800-67.8300	0.2500	0.00	12	30.1024	30.1532	0.8125	3.2500	A572-65 (65 ksi)
L23	67.8300-62.8300	5.0000	0.00	12	30.1532	31.1684	0.7875	3.1500	A572-65 (65 ksi)
L24	62.8300-57.8300	5.0000	0.00	12	31.1684	32.1837	0.7625	3.0500	A572-65 (65 ksi)
L25	57.8300-52.8300	5.0000	0.00	12	32.1837	33.1990	0.7500	3.0000	A572-65 (65 ksi)
L26	52.8300-47.2500	5.5800	4.25	12	33.1990	34.3320	0.7500	3.0000	A572-65 (65 ksi)
L27	47.2500-46.5000	5.0000	0.00	12	32.8440	33.8592	0.8000	3.2000	A572-65 (65 ksi)
L28	46.5000-41.5000	5.0000	0.00	12	33.8592	34.8743	0.8000	3.2000	A572-65 (65 ksi)
L29	41.5000-37.7500	3.7500	0.00	12	34.8743	35.6357	0.7750	3.1000	A572-65 (65 ksi)
L30	37.7500-37.5000	0.2500	0.00	12	35.6357	35.6864	0.8500	3.4000	A572-65 (65 ksi)
L31	37.5000-32.5000	5.0000	0.00	12	35.6864	36.7016	0.8250	3.3000	A572-65 (65 ksi)
L32	32.5000-32.2500	0.2500	0.00	12	36.7016	36.7523	0.8750	3.5000	A572-65 (65 ksi)
L33	32.2500-27.2500	5.0000	0.00	12	36.7523	37.7675	0.8625	3.4500	A572-65 (65 ksi)
L34	27.2500-23.5000	3.7500	0.00	12	37.7675	38.5288	0.8500	3.4000	A572-65 (65 ksi)
L35	23.5000-23.2500	0.2500	0.00	12	38.5288	38.5796	0.9500	3.8000	A572-65 (65 ksi)
L36	23.2500-20.7500	2.5000	0.00	12	38.5796	39.0872	0.9500	3.8000	A572-65 (65 ksi)
L37	20.7500-20.5000	0.2500	0.00	12	39.0872	39.1379	0.9000	3.6000	A572-65 (65 ksi)
L38	20.5000-15.5000	5.0000	0.00	12	39.1379	40.1531	0.8750	3.5000	A572-65 (65 ksi)
L39	15.5000-10.5000	5.0000	0.00	12	40.1531	41.1682	0.8625	3.4500	A572-65 (65 ksi)
L40	10.5000-5.5000	5.0000	0.00	12	41.1682	42.1833	0.8500	3.4000	A572-65 (65 ksi)
L41	5.5000-3.0000	2.5000	0.00	12	42.1833	42.6909	0.8375	3.3500	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
L42	3.0000-2.7500	0.2500	0.00	12	42.6909	42.7417	0.9000	3.6000	A572-65 (65 ksi)
L43	2.7500-0.0000	2.7500		12	42.7417	43.3000	0.9000	3.6000	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	It/Q in^2	w in	w/t
L1	16.5644	12.6788	401.4426	5.6385	8.2880	48.4366	813.4316	6.2401	3.6180	14.472
	17.6154	13.4959	484.1767	6.0019	8.8138	54.9336	981.0732	6.6423	3.8901	15.56
L2	17.6154	13.4959	484.1767	6.0019	8.8138	54.9336	981.0732	6.6423	3.8901	15.56
	18.6663	14.3131	577.5618	6.3653	9.3397	61.8395	1170.2967	7.0445	4.1621	16.648
L3	18.6663	14.3131	577.5618	6.3653	9.3397	61.8395	1170.2967	7.0445	4.1621	16.648
	19.7173	15.1303	682.2430	6.7288	9.8655	69.1542	1382.4094	7.4467	4.4342	17.737
L4	19.7173	15.1303	682.2430	6.7288	9.8655	69.1542	1382.4094	7.4467	4.4342	17.737
	20.7682	15.9475	798.8654	7.0922	10.3914	76.8777	1618.7178	7.8489	4.7062	18.825
L5	20.7682	15.9475	798.8654	7.0922	10.3914	76.8777	1618.7178	7.8489	4.7062	18.825
	21.8192	16.7647	928.0736	7.4556	10.9172	85.0100	1880.5287	8.2511	4.9783	19.913
L6	21.8192	16.7647	928.0736	7.4556	10.9172	85.0100	1880.5287	8.2511	4.9783	19.913
	22.8702	17.5819	1070.5128	7.8190	11.4431	93.5512	2169.1492	8.6533	5.2504	21.001
L7	22.8702	17.5819	1070.5128	7.8190	11.4431	93.5512	2169.1492	8.6533	5.2504	21.001
	23.9211	18.3991	1226.8278	8.1825	11.9689	102.5011	2485.8857	9.0555	5.5224	22.09
L8	23.9211	18.3991	1226.8278	8.1825	11.9689	102.5011	2485.8857	9.0555	5.5224	22.09
	24.1313	18.5625	1259.8128	8.2551	12.0741	104.3402	2552.7222	9.1359	5.5768	22.307
L9	24.1313	34.0242	2266.8114	8.1791	12.0741	187.7418	4593.1744	16.7457	5.0073	10.827
	24.1839	34.0998	2281.9531	8.1972	12.1004	188.5853	4623.8557	16.7829	5.0209	10.856
L10	24.1839	33.1963	2223.9170	8.2017	12.1004	183.7890	4506.2587	16.3382	5.0544	11.232
	25.2348	34.6673	2532.8385	8.5651	12.6262	200.6014	5132.2176	17.0622	5.3265	11.837
L11	25.2348	34.6673	2532.8385	8.5651	12.6262	200.6014	5132.2176	17.0622	5.3265	11.837
	25.2874	34.7408	2548.9934	8.5833	12.6525	201.4614	5164.9517	17.0984	5.3401	11.867
L12	25.2874	55.3293	3967.0150	8.4849	12.6525	313.5356	8038.2479	27.2314	4.6031	6.349
	25.3399	55.4478	3992.5567	8.5030	12.6788	314.9000	8090.0023	27.2897	4.6167	6.368
L13	25.3399	55.4478	3992.5567	8.5030	12.6788	314.9000	8090.0023	27.2897	4.6167	6.368
	25.6026	56.0403	4121.9113	8.5939	12.8103	321.7661	8352.1097	27.5813	4.6847	6.462
L14	25.6026	39.9653	2991.8318	8.6700	12.8103	233.5495	6062.2624	19.6697	5.2542	10.252
	25.6552	40.0491	3010.6830	8.6881	12.8366	234.5396	6100.4600	19.7110	5.2678	10.279
L15	25.6552	39.0924	2941.7927	8.6926	12.8366	229.1729	5960.8696	19.2401	5.3013	10.603
	27.3893	41.7892	3593.5618	9.2922	13.7042	262.2232	7281.5305	20.5674	5.7502	11.5
L16	26.8717	44.7988	3498.0760	8.8546	13.1034	266.9592	7088.0504	22.0486	5.2719	9.372
	26.9768	46.1780	3831.1986	9.1272	13.4978	283.8379	7763.0470	22.7274	5.4759	9.735
L17	26.9768	62.1058	5072.1376	9.0556	13.4978	375.7741	10277.5259	30.5666	4.9399	6.479
	27.0294	62.2304	5102.7357	9.0738	13.5241	377.3059	10339.5259	30.6279	4.9535	6.496
L18	27.0294	60.2495	4950.0515	9.0828	13.5241	366.0162	10030.1465	29.6530	5.0205	6.808
	28.0804	62.6605	5568.4066	9.4462	14.0500	396.3267	11283.1015	30.8396	5.2926	7.176
L19	28.0804	61.6276	5481.8102	9.4507	14.0500	390.1633	11107.6337	30.3312	5.3261	7.346
	29.1315	63.9977	6138.9199	9.8142	14.5759	421.1678	12439.1161	31.4977	5.5982	7.722
L20	29.1315	62.9230	6041.3330	9.8186	14.5759	414.4728	12241.3786	30.9688	5.6317	7.904
	30.1826	65.2523	6737.3844	10.1821	15.1019	446.1297	13651.7675	32.1152	5.9038	8.286
L21	30.1826	63.0181	6518.1430	10.1911	15.1019	431.6121	13207.5249	31.0156	5.9708	8.685
	31.1643	65.1173	7191.4619	10.5305	15.5930	461.1966	14571.8515	32.0487	6.2249	9.054
L22	31.1643	76.6297	8391.1096	10.4858	15.5930	538.1314	17002.6629	37.7148	5.8899	7.249
	31.2169	76.7625	8434.8145	10.5040	15.6193	540.0236	17091.2211	37.7802	5.9036	7.266
L23	31.2169	74.4640	8196.1971	10.5129	15.6193	524.7465	16607.7174	36.6489	5.9706	7.582

Section	Tip Dia. in	Area in²	I in⁴	r in	C in	I/C in³	J in⁴	It/Q in²	w in	w/t
	32.2679	77.0385	9076.0308	10.8764	16.1453	562.1486	18390.4991	37.9160	6.2426	7.927
L24	32.2679	74.6542	8809.6150	10.8853	16.1453	545.6474	17850.6684	36.7425	6.3096	8.275
	33.3190	77.1469	9721.8764	11.2488	16.6712	583.1554	19699.1573	37.9694	6.5817	8.632
L25	33.3190	75.9124	9573.9184	11.2533	16.6712	574.2803	19399.3543	37.3618	6.6152	8.82
	34.3701	78.3643	10531.8744	11.6167	17.1971	612.4228	21340.4329	38.5685	6.8873	9.183
L26	34.3701	78.3643	10531.8744	11.6167	17.1971	612.4228	21340.4329	38.5685	6.8873	9.183
	35.5431	81.1005	11674.0825	12.0224	17.7840	656.4383	23654.8561	39.9152	7.1910	9.588
L27	34.8959	82.5454	10818.6491	11.4718	17.0132	635.8972	21921.5162	40.6263	6.6582	8.323
	35.0536	85.1604	11879.7584	11.8352	17.5390	677.3319	24071.6112	41.9134	6.9303	8.663
L28	35.0536	85.1604	11879.7584	11.8352	17.5390	677.3319	24071.6112	41.9134	6.9303	8.663
	36.1045	87.7754	13008.0769	12.1986	18.0649	720.0749	26357.8905	43.2004	7.2023	9.003
L29	36.1045	85.0948	12629.3318	12.2076	18.0649	699.1091	25590.4503	41.8811	7.2693	9.38
	36.8928	86.9948	13494.3110	12.4801	18.4593	731.0314	27343.1325	42.8162	7.4734	9.643
L30	36.8928	95.2084	14704.8929	12.4533	18.4593	796.6126	29796.0997	46.8587	7.2724	8.556
	36.9453	95.3473	14769.3561	12.4714	18.4856	798.9668	29926.7197	46.9270	7.2860	8.572
L31	36.9453	92.6094	14365.8475	12.4804	18.4856	777.1385	29109.1018	45.5795	7.3530	8.913
	37.9963	95.3061	15657.7198	12.8438	19.0114	823.5958	31726.7853	46.9068	7.6250	9.242
L32	37.9963	100.9414	16537.3367	12.8259	19.0114	869.8636	33509.1276	49.6803	7.4910	8.561
	38.0488	101.0844	16607.7237	12.8441	19.0377	872.3595	33651.7509	49.7507	7.5046	8.577
L33	38.0488	99.6750	16387.5874	12.8486	19.0377	860.7964	33205.6949	49.0570	7.5381	8.74
	39.0998	102.4943	17817.8581	13.2120	19.5635	910.7682	36103.8111	50.4446	7.8102	9.055
L34	39.0998	101.0431	17577.4770	13.2165	19.5635	898.4810	35616.7340	49.7303	7.8437	9.228
	39.8880	103.1269	18687.5716	13.4890	19.9579	936.3481	37866.0865	50.7559	8.0477	9.468
L35	39.8880	114.9536	20720.2545	13.4532	19.9579	1038.1964	41984.8533	56.5767	7.7797	8.189
	39.9405	115.1089	20804.3290	13.4714	19.9842	1041.0376	42155.2109	56.6531	7.7933	8.204
L36	39.9405	115.1089	20804.3290	13.4714	19.9842	1041.0376	42155.2109	56.6531	7.7933	8.204
	40.4660	116.6616	21657.6004	13.6531	20.2471	1069.6618	43884.1701	57.4173	7.9294	8.347
L37	40.4660	110.6664	20598.5323	13.6710	20.2471	1017.3548	41738.2110	54.4666	8.0634	8.959
	40.5185	110.8135	20680.7780	13.6892	20.2734	1020.0923	41904.8632	54.5390	8.0770	8.974
L38	40.5185	107.8058	20145.7744	13.6981	20.2734	993.7029	40820.8007	53.0587	8.1440	9.307
	41.5695	110.6659	21792.1375	14.0615	20.7993	1047.7350	44156.7787	54.4664	8.4160	9.618
L39	41.5695	109.1197	21501.3362	14.0660	20.7993	1033.7537	43567.5364	53.7054	8.4495	9.797
	42.6205	111.9390	23211.3445	14.4294	21.3251	1088.4505	47032.4769	55.0930	8.7216	10.112
L40	42.6205	110.3509	22896.2374	14.4339	21.3251	1073.6741	46393.9845	54.3114	8.7551	10.3
	43.6714	113.1294	24669.6134	14.7973	21.8510	1128.9939	49987.3250	55.6788	9.0271	10.62

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L41	43.6714	111.4994	24328.8842	14.8018	21.8510	1113.4006	49296.9153	54.8766	9.0606	10.819
	44.1969	112.8682	25235.9295	14.9835	22.1139	1141.1798	51134.8350	55.5503	9.1967	10.981
L42	44.1969	121.1101	26997.8972	14.9611	22.1139	1220.8568	54705.0593	59.6067	9.0292	10.032
	44.2494	121.2572	27096.3874	14.9793	22.1402	1223.8555	54904.6270	59.6791	9.0428	10.048
L43	44.2494	121.2572	27096.3874	14.9793	22.1402	1223.8555	54904.6270	59.6791	9.0428	10.048
	44.8275	122.8752	28195.6364	15.1792	22.4294	1257.0838	57132.0035	60.4754	9.1924	10.214

Tower Elevation ft	Gusset Area (per face) ft^2	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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 140.0000-135.0000				1	1	1			
L2 135.0000-130.0000				1	1	1			
L3 130.0000-125.0000				1	1	1			
L4 125.0000-120.0000				1	1	1			
L5 120.0000-115.0000				1	1	1			
L6 115.0000-110.0000				1	1	1			
L7 110.0000-105.0000				1	1	1			
L8 105.0000-104.0000				1	1	1			
L9 104.0000-103.7500				1	1	0.942021			
L10 103.7500-98.7500				1	1	0.950174			
L11 98.7500-98.5000				1	1	0.949339			
L12 98.5000-98.2500				1	1	0.901676			
L13 98.2500-97.0000				1	1	0.895789			
L14 97.0000-96.7500				1	1	0.916918			
L15 96.7500-88.5000				1	1	0.921726			
L16 88.5000-88.0000				1	1	0.928587			
L17 88.0000-87.7500				1	1	0.97954			
L18 87.7500-82.7500				1	1	0.989121			
L19 82.7500-77.7500				1	1	0.984416			
L20 77.7500-72.7500				1	1	0.981146			
L21 72.7500-68.0800				1	1	0.997834			
L22 68.0800-67.8300				1	1	0.957491			
L23 67.8300-62.8300				1	1	0.967322			
L24 62.8300-57.8300				1	1	0.979205			
L25 57.8300-52.8300				1	1	0.97703			

Tower Elevation ft	Gusset Area (per face) ft²	Gusset Thickness in	Gusset Grade	Adjust. Factor A_f	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
L26 52.8300-47.2500				1	1	0.972405			
L27 47.2500-46.5000				1	1	0.985251			
L28 46.5000-41.5000				1	1	0.969863			
L29 41.5000-37.7500				1	1	0.989134			
L30 37.7500-37.5000				1	1	0.961419			
L31 37.5000-32.5000				1	1	0.974696			
L32 32.5000-32.2500				1	1	0.982743			
L33 32.2500-27.2500				1	1	0.981183			
L34 27.2500-23.5000				1	1	0.984079			
L35 23.5000-23.2500				1	1	1.02955			
L36 23.2500-20.7500				1	1	1.0211			
L37 20.7500-20.5000				1	1	0.982282			
L38 20.5000-15.5000				1	1	0.994668			
L39 15.5000-10.5000				1	1	0.994306			
L40 10.5000-5.5000				1	1	0.994679			
L41 5.5000-3.0000				1	1	1.00241			
L42 3.0000-2.7500				1	1	0.956794			
L43 2.7500-0.0000				1	1	0.949681			

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft²/ft	Weight klf
LDF4-50A(1/2)	C	No	Inside Pole	140.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
LDF7-50A(1-5/8)	C	No	Inside Pole	140.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
HB114-1-0813U4-M5J(1-1/4)	C	No	Inside Pole	140.0000 - 0.0000	3	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
***								
LDF7-50A(1-5/8)	C	No	Inside Pole	121.0000 - 0.0000	12	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
FB-L98B-002-75000(3/8)	C	No	Inside Pole	121.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
WR-VG122ST-BRDA(7/16)	C	No	Inside Pole	121.0000 - 0.0000	2	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
FB-L98B-034-XXX(3/8)	C	No	CaAa (Out Of Face)	121.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
WR-VG86ST-BRD(3/4)	C	No	CaAa (Out Of	121.0000 - 0.0000	1	No Ice	0.0000	0.00

Description	Face or Leg	Allow Shield	Component Type	Placement ft	Total Number		C_AA_A ft²/ft	Weight klf
			Face)			1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
WR-VG86ST-BRD(3/4)	C	No	CaAa (Out Of Face)	121.0000 - 0.0000	1	No Ice	0.0795	0.00
						1/2" Ice	0.1795	0.00
						1" Ice	0.2795	0.00
***								
HJ7-50A(1-5/8)	C	No	CaAa (Out Of Face)	115.0000 - 0.0000	1	No Ice	0.1980	0.00
						1/2" Ice	0.2980	0.00
						1" Ice	0.3980	0.00
HJ7-50A(1-5/8)	C	No	CaAa (Out Of Face)	115.0000 - 0.0000	5	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
LDF6-50A(1-1/4)	C	No	Inside Pole	115.0000 - 0.0000	11	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
***								
LDF7-50A(1-5/8)	C	No	Inside Pole	104.0000 - 0.0000	6	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
LDF4-50A(1/2)	C	No	Inside Pole	104.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
HB158-1-08U8-S8J18(1-5/8)	C	No	Inside Pole	104.0000 - 0.0000	2	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
***								
CR 50 1873(1-5/8)	C	No	CaAa (Out Of Face)	95.0000 - 0.0000	6	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
***								
LDF4-50A(1/2)	C	No	Inside Pole	80.0000 - 0.0000	1	No Ice	0.0000	0.00
						1/2" Ice	0.0000	0.00
						1" Ice	0.0000	0.00
***								
Aero MP3-08	C	No	CaAa (Out Of Face)	41.7500 - 0.0000	1	No Ice	0.4667	0.00
						1/2" Ice	0.5778	0.00
						1" Ice	0.6889	0.00
Aero MP3-06	C	No	CaAa (Out Of Face)	71.7500 - 41.7500	1	No Ice	0.4343	0.00
						1/2" Ice	0.5454	0.00
						1" Ice	0.6566	0.00
Aero MP3-05	C	No	CaAa (Out Of Face)	100.7500 - 71.7500	1	No Ice	0.3478	0.00
						1/2" Ice	0.4001	0.00
						1" Ice	0.6566	0.00
***								
1 1/4" Flat Reinforcement	C	No	CaAa (Out Of Face)	35.5000 - 0.0000	1	No Ice	0.2083	0.00
						1/2" Ice	0.3194	0.00
						1" Ice	0.4306	0.00
1" Flat Reinforcement	C	No	CaAa (Out Of Face)	90.6700 - 35.5000	1	No Ice	0.1667	0.00
						1/2" Ice	0.2778	0.00
						1" Ice	0.3889	0.00
1" Flat Reinforcement	C	No	CaAa (Out Of Face)	105.5000 - 95.5000	1	No Ice	0.1667	0.00
						1/2" Ice	0.2778	0.00
						1" Ice	0.3889	0.00

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L1	140.0000-135.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.02
L2	135.0000-130.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.000	0.02
L3	130.0000-125.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
		C	0.000	0.000	0.000	0.000	0.02
L4	125.0000-120.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.080	0.03
L5	120.0000-115.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.398	0.08
L6	115.0000-110.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.388	0.14
L7	110.0000-105.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	1.471	0.14
L8	105.0000-104.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.444	0.03
L9	104.0000-103.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.111	0.01
L10	103.7500-98.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.916	0.18
L11	98.7500-98.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.198	0.01
L12	98.5000-98.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.198	0.01
L13	98.2500-97.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.990	0.05
L14	97.0000-96.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.198	0.01
L15	96.7500-88.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	5.729	0.33
L16	88.5000-88.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.396	0.02
L17	88.0000-87.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.198	0.01
L18	87.7500-82.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.960	0.21
L19	82.7500-77.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.960	0.21
L20	77.7500-72.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.960	0.21
L21	72.7500-68.0800	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.016	0.19
L22	68.0800-67.8300	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.220	0.01
L23	67.8300-62.8300	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.392	0.21
L24	62.8300-57.8300	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.392	0.21
L25	57.8300-52.8300	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.392	0.21
L26	52.8300-47.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00

Tower Section	Tower Elevation ft	Face	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
		C	0.000	0.000	0.000	4.902	0.23
L27	47.2500-46.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.659	0.03
L28	46.5000-41.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.401	0.21
L29	41.5000-37.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.416	0.16
L30	37.7500-37.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.228	0.01
L31	37.5000-32.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.679	0.21
L32	32.5000-32.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.238	0.01
L33	32.2500-27.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.763	0.21
L34	27.2500-23.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	3.572	0.16
L35	23.5000-23.2500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.238	0.01
L36	23.2500-20.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.381	0.10
L37	20.7500-20.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.238	0.01
L38	20.5000-15.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.763	0.21
L39	15.5000-10.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.763	0.21
L40	10.5000-5.5000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	4.763	0.21
L41	5.5000-3.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.381	0.10
L42	3.0000-2.7500	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	0.238	0.01
L43	2.7500-0.0000	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.000	2.619	0.11

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L1	140.0000-135.0000	A	1.730	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.02
L2	135.0000-130.0000	A	1.724	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.02
L3	130.0000-125.0000	A	1.717	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.000	0.02

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L4	125.0000-120.0000	A	1.710	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.422	0.05
L5	120.0000-115.0000	A	1.703	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	2.101	0.16
L6	115.0000-110.0000	A	1.696	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.779	0.46
L7	110.0000-105.0000	A	1.688	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	5.034	0.46
L8	105.0000-104.0000	A	1.683	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	1.492	0.09
L9	104.0000-103.7500	A	1.682	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.373	0.02
L10	103.7500-98.7500	A	1.678	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	9.055	0.49
L11	98.7500-98.5000	A	1.674	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.573	0.02
L12	98.5000-98.2500	A	1.673	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.573	0.02
L13	98.2500-97.0000	A	1.672	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	2.863	0.12
L14	97.0000-96.7500	A	1.671	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.572	0.02
L15	96.7500-88.5000	A	1.663	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	16.243	1.14
L16	88.5000-88.0000	A	1.655	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	1.141	0.07
L17	88.0000-87.7500	A	1.654	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.569	0.04
L18	87.7500-82.7500	A	1.649	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.356	0.74
L19	82.7500-77.7500	A	1.639	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.314	0.73
L20	77.7500-72.7500	A	1.629	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.270	0.73
L21	72.7500-68.0800	A	1.618	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.484	0.68
L22	68.0800-67.8300	A	1.612	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.560	0.04
L23	67.8300-62.8300	A	1.606	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.173	0.72
L24	62.8300-57.8300	A	1.593	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.120	0.71
L25	57.8300-52.8300	A	1.580	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.062	0.71
L26	52.8300-47.2500	A	1.564	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	12.270	0.78

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft²	A_F ft²	C_AA_A In Face ft²	C_AA_A Out Face ft²	Weight K
L27	47.2500-46.5000	A	1.554	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	1.649	0.11
L28	46.5000-41.5000	A	1.544	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.919	0.69
L29	41.5000-37.7500	A	1.528	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	8.253	0.51
L30	37.7500-37.5000	A	1.520	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.549	0.03
L31	37.5000-32.5000	A	1.509	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.050	0.68
L32	32.5000-32.2500	A	1.497	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.554	0.03
L33	32.2500-27.2500	A	1.484	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	11.030	0.67
L34	27.2500-23.5000	A	1.461	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	8.199	0.49
L35	23.5000-23.2500	A	1.449	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.544	0.03
L36	23.2500-20.7500	A	1.440	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	5.422	0.32
L37	20.7500-20.5000	A	1.431	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.540	0.03
L38	20.5000-15.5000	A	1.412	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.723	0.63
L39	15.5000-10.5000	A	1.366	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.532	0.62
L40	10.5000-5.5000	A	1.302	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	10.258	0.59
L41	5.5000-3.0000	A	1.222	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	4.961	0.28
L42	3.0000-2.7500	A	1.175	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	0.486	0.03
L43	2.7500-0.0000	A	1.091	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	0.000	5.154	0.27

Feed Line Center of Pressure

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L1	140.0000-135.0000	0.0000	0.0000	0.0000	0.0000
L2	135.0000-130.0000	0.0000	0.0000	0.0000	0.0000
L3	130.0000-125.0000	0.0000	0.0000	0.0000	0.0000
L4	125.0000-120.0000	-0.0202	0.0116	-0.0886	0.0511
L5	120.0000-115.0000	-0.0955	0.0551	-0.3774	0.2179

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L6	115.0000-110.0000	-0.3030	0.1750	-0.7203	0.4158
L7	110.0000-105.0000	-0.3211	0.1854	-0.7616	0.4397
L8	105.0000-104.0000	-0.4561	0.2634	-0.9928	0.5732
L9	104.0000-103.7500	-0.4566	0.2636	-0.9951	0.5745
L10	103.7500-98.7500	-0.5721	0.3303	-1.1302	0.6525
L11	98.7500-98.5000	-0.7221	0.4169	-1.2946	0.7475
L12	98.5000-98.2500	-0.7225	0.4171	-1.2960	0.7483
L13	98.2500-97.0000	-0.7237	0.4178	-1.3002	0.7507
L14	97.0000-96.7500	-0.7249	0.4185	-1.3043	0.7531
L15	96.7500-88.5000	-0.6633	0.3830	-1.2260	0.7078
L16	88.5000-88.0000	-0.7345	0.4241	-1.3379	0.7724
L17	88.0000-87.7500	-0.7350	0.4244	-1.3381	0.7726
L18	87.7500-82.7500	-0.7389	0.4266	-1.3514	0.7802
L19	82.7500-77.7500	-0.7459	0.4307	-1.3758	0.7943
L20	77.7500-72.7500	-0.7526	0.4345	-1.3988	0.8076
L21	72.7500-68.0800	-0.8076	0.4663	-1.4199	0.8198
L22	68.0800-67.8300	-0.8239	0.4757	-1.4303	0.8258
L23	67.8300-62.8300	-0.8275	0.4778	-1.4409	0.8319
L24	62.8300-57.8300	-0.8342	0.4816	-1.4603	0.8431
L25	57.8300-52.8300	-0.8405	0.4853	-1.4783	0.8535
L26	52.8300-47.2500	-0.8469	0.4890	-1.4960	0.8637
L27	47.2500-46.5000	-0.8470	0.4890	-1.4964	0.8639
L28	46.5000-41.5000	-0.8516	0.4917	-1.5028	0.8677
L29	41.5000-37.7500	-0.8795	0.5078	-1.5280	0.8822
L30	37.7500-37.5000	-0.8818	0.5091	-1.5334	0.8853
L31	37.5000-32.5000	-0.9036	0.5217	-1.5507	0.8953
L32	32.5000-32.2500	-0.9189	0.5305	-1.5641	0.9030
L33	32.2500-27.2500	-0.9220	0.5323	-1.5699	0.9064
L34	27.2500-23.5000	-0.9269	0.5352	-1.5782	0.9112
L35	23.5000-23.2500	-0.9291	0.5364	-1.5813	0.9129
L36	23.2500-20.7500	-0.9306	0.5373	-1.5831	0.9140
L37	20.7500-20.5000	-0.9321	0.5381	-1.5847	0.9149
L38	20.5000-15.5000	-0.9348	0.5397	-1.5869	0.9162
L39	15.5000-10.5000	-0.9399	0.5427	-1.5870	0.9163
L40	10.5000-5.5000	-0.9449	0.5455	-1.5784	0.9113
L41	5.5000-3.0000	-0.9484	0.5476	-1.5585	0.8998
L42	3.0000-2.7500	-0.9497	0.5483	-1.5437	0.8912
L43	2.7500-0.0000	-0.9511	0.5491	-1.5133	0.8737

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	Azimuth Adjustment	Placement		C_AA_A Front	C_AA_A Side	Weight
			ft ft ft	°	ft		ft^2	ft^2	K
APXVSPP18-C-A20 w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.9458 8.1266 9.0212	0.08 0.15 0.23
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.9458 8.1266 9.0212	0.08 0.15 0.23

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft²	C_AA_A Side ft²	Weight K
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.9458 8.1266 9.0212	0.08 0.15 0.23
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	6.5799 7.0306 7.4733	4.9591 5.7544 6.4723	0.08 0.13 0.19
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	6.5799 7.0306 7.4733	4.9591 5.7544 6.4723	0.08 0.13 0.19
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	6.5799 7.0306 7.4733	4.9591 5.7544 6.4723	0.08 0.13 0.19
(3) ACU-A20-N	A	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	0.0667 0.1037 0.1481	0.1167 0.1620 0.2148	0.00 0.00 0.00
(3) ACU-A20-N	B	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	0.0667 0.1037 0.1481	0.1167 0.1620 0.2148	0.00 0.00 0.00
(3) ACU-A20-N	C	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	0.0667 0.1037 0.1481	0.1167 0.1620 0.2148	0.00 0.00 0.00
TD-RRH8X20-25	A	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.07 0.10 0.13
TD-RRH8X20-25	B	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.07 0.10 0.13
TD-RRH8X20-25	C	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.07 0.10 0.13
(2) 2.375" OD x 6' Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	1.4250 1.9250 2.2939	1.4250 1.9250 2.2939	0.03 0.04 0.05
(2) 2.375" OD x 6' Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	1.4250 1.9250 2.2939	1.4250 1.9250 2.2939	0.03 0.04 0.05
(2) 2.375" OD x 6' Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	140.0000	No Ice 1/2" Ice 1" Ice	1.4250 1.9250 2.2939	1.4250 1.9250 2.2939	0.03 0.04 0.05
Platform Mount [LP 1201-1]	C	None		0.00	140.0000	No Ice 1/2" Ice 1" Ice	23.1000 26.8000 30.5000	23.1000 26.8000 30.5000	2.10 2.50 2.90
***									
TME-1900MHz RRH (65 MHz)	A	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.3125 2.5168 2.7284	2.3750 2.5809 2.7943	0.06 0.08 0.11
TME-1900MHz RRH (65 MHz)	B	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.3125 2.5168 2.7284	2.3750 2.5809 2.7943	0.06 0.08 0.11

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft²	C_AA_A Side ft²	Weight K
TME-1900MHz RRH (65 MHz)	C	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.3125 2.5168 2.7284	2.3750 2.5809 2.7943	0.06 0.08 0.11
TME-800MHZ RRH	A	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.1342 2.3195 2.5123	1.7730 1.9461 2.1267	0.05 0.07 0.10
TME-800MHZ RRH	B	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.1342 2.3195 2.5123	1.7730 1.9461 2.1267	0.05 0.07 0.10
TME-800MHZ RRH	C	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.1342 2.3195 2.5123	1.7730 1.9461 2.1267	0.05 0.07 0.10
800MHz 2X50W RRH W/FILTER	A	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.0583 2.2398 2.4287	1.9317 2.1087 2.2931	0.06 0.09 0.11
800MHz 2X50W RRH W/FILTER	B	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.0583 2.2398 2.4287	1.9317 2.1087 2.2931	0.06 0.09 0.11
800MHz 2X50W RRH W/FILTER	C	From Leg	4.0000 0.00 0.00	0.00	137.0000	No Ice 1/2" Ice 1" Ice	2.0583 2.2398 2.4287	1.9317 2.1087 2.2931	0.06 0.09 0.11
Side Arm Mount [SO 103-3]	C	None		0.00	137.0000	No Ice 1/2" Ice 1" Ice	9.5000 11.8000 14.1000	9.5000 11.8000 14.1000	0.22 0.32 0.41
***									
7770.00 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	5.7460 6.1791 6.6067	4.2543 5.0137 5.7109	0.06 0.10 0.16
7770.00 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	5.7460 6.1791 6.6067	4.2543 5.0137 5.7109	0.06 0.10 0.16
7770.00 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	5.7460 6.1791 6.6067	4.2543 5.0137 5.7109	0.06 0.10 0.16
(2) LGP21401	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	1.1040 1.2388 1.3810	0.3471 0.4422 0.5444	0.01 0.02 0.03
(2) LGP21401	B	From Leg	4.0000 0.00 0.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	1.1040 1.2388 1.3810	0.3471 0.4422 0.5444	0.01 0.02 0.03
(2) LGP21401	C	From Leg	4.0000 0.00 0.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	1.1040 1.2388 1.3810	0.3471 0.4422 0.5444	0.01 0.02 0.03
DC6-48-60-18-8F	B	From Leg	4.0000 0.00 0.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	0.9167 1.4583 1.6431	0.9167 1.4583 1.6431	0.02 0.04 0.06
QS66512-6 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	8.3708 8.9314 9.4571	8.4625 9.6573 10.5478	0.14 0.21 0.30

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
QS66512-6 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	8.3708 8.9314 9.4571	8.4625 9.6573 10.5478	0.14 0.21 0.30
QS66512-6 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	8.3708 8.9314 9.4571	8.4625 9.6573 10.5478	0.14 0.21 0.30
HPA-65R-BUU-H6 w/ Mount Pipe	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	9.8953 10.4700 11.0098	8.1125 9.3041 10.2095	0.08 0.16 0.25
HPA-65R-BUU-H6 w/ Mount Pipe	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	9.8953 10.4700 11.0098	8.1125 9.3041 10.2095	0.08 0.16 0.25
HPA-65R-BUU-H6 w/ Mount Pipe	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	9.8953 10.4700 11.0098	8.1125 9.3041 10.2095	0.08 0.16 0.25
RRUS 11	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.7908 2.9984 3.2134	1.1923 1.3395 1.4957	0.05 0.07 0.10
RRUS 11	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.7908 2.9984 3.2134	1.1923 1.3395 1.4957	0.05 0.07 0.10
RRUS 11	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.7908 2.9984 3.2134	1.1923 1.3395 1.4957	0.05 0.07 0.10
RRUS 32	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.8571 3.0830 3.3163	1.7766 1.9677 2.1658	0.06 0.08 0.10
RRUS 32	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.8571 3.0830 3.3163	1.7766 1.9677 2.1658	0.06 0.08 0.10
RRUS 32	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	2.8571 3.0830 3.3163	1.7766 1.9677 2.1658	0.06 0.08 0.10
RRUS12/RRUS A2	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	3.1435 3.3632 3.5904	1.8351 2.0121 2.1965	0.07 0.10 0.13
RRUS12/RRUS A2	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	3.1435 3.3632 3.5904	1.8351 2.0121 2.1965	0.07 0.10 0.13
RRUS12/RRUS A2	C	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	3.1435 3.3632 3.5904	1.8351 2.0121 2.1965	0.07 0.10 0.13
DBC0061F1V51-2	A	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	0.2133 0.2793 0.3526	0.4133 0.4959 0.5859	0.01 0.02 0.02
DBC0061F1V51-2	B	From Leg	4.0000 0.00 2.00	0.00	121.0000	No Ice 1/2" Ice 1" Ice	0.2133 0.2793 0.3526	0.4133 0.4959 0.5859	0.01 0.02 0.02
DBC0061F1V51-2	C	From Leg	4.0000	0.00	121.0000	No Ice	0.2133	0.4133	0.01

Description	*Face or Leg*	*Offset Type*	*Offsets: Horz Lateral Vert* *ft* *ft* *ft*	*Azimuth Adjustment* *°*	*Placement* *ft*		*C_AA_A Front* *ft²*	*C_AA_A Side* *ft²*	*Weight* *K*
			0.00			1/2" Ice	0.2793	0.4959	0.02
			2.00			1" Ice	0.3526	0.5859	0.02
DC6-48-60-18-8C	C	From Leg	4.0000	0.00	121.0000	No Ice	2.7366	2.7366	0.03
			0.00			1/2" Ice	2.9630	2.9630	0.05
			2.00			1" Ice	3.1964	3.1964	0.08
Platform Mount [LP 1201-1]	C	None		0.00	121.0000	No Ice	23.1000	23.1000	2.10
						1/2" Ice	26.8000	26.8000	2.50
						1" Ice	30.5000	30.5000	2.90
Miscellaneous [NA 510-1]	C	None		0.00	121.0000	No Ice	6.0000	6.0000	0.26
						1/2" Ice	8.5000	8.5000	0.34
						1" Ice	11.0000	11.0000	0.42
(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	A	None		0.00	121.0000	No Ice	2.7778	0.2217	0.02
						1/2" Ice	3.1457	0.7859	0.03
						1" Ice	3.5210	1.3624	0.04
(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	B	None		0.00	121.0000	No Ice	2.7778	0.2217	0.02
						1/2" Ice	3.1457	0.7859	0.03
						1" Ice	3.5210	1.3624	0.04
(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	C	None		0.00	121.0000	No Ice	2.7778	0.2217	0.02
						1/2" Ice	3.1457	0.7859	0.03
						1" Ice	3.5210	1.3624	0.04
3' x 2" Sch 40 Pipe Mount	A	None		0.00	121.0000	No Ice	0.5826	0.5826	0.01
						1/2" Ice	0.7701	0.7701	0.02
						1" Ice	0.9669	0.9669	0.02
3' x 2" Sch 40 Pipe Mount	B	None		0.00	121.0000	No Ice	0.5826	0.5826	0.01
						1/2" Ice	0.7701	0.7701	0.02
						1" Ice	0.9669	0.9669	0.02
3' x 2" Sch 40 Pipe Mount	C	None		0.00	121.0000	No Ice	0.5826	0.5826	0.01
						1/2" Ice	0.7701	0.7701	0.02
						1" Ice	0.9669	0.9669	0.02
***									
T-Arm Mount [TA 702-3]	C	None		0.00	118.0000	No Ice	5.6400	5.6400	0.34
						1/2" Ice	6.5500	6.5500	0.43
						1" Ice	7.4600	7.4600	0.52
***									
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	A	From Leg	4.0000	0.00	115.0000	No Ice	6.8239	3.4938	0.06
			0.00			1/2" Ice	7.2751	4.2631	0.11
			1.00			1" Ice	7.7192	4.9598	0.16
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	B	From Leg	4.0000	0.00	115.0000	No Ice	6.8239	3.4938	0.06
			0.00			1/2" Ice	7.2751	4.2631	0.11
			1.00			1" Ice	7.7192	4.9598	0.16
APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	C	From Leg	4.0000	0.00	115.0000	No Ice	6.8239	3.4938	0.06
			0.00			1/2" Ice	7.2751	4.2631	0.11
			1.00			1" Ice	7.7192	4.9598	0.16
(2) RR90-17-02DP w/ Mount Pipe	A	From Leg	4.0000	0.00	115.0000	No Ice	4.5931	3.3194	0.03
			0.00			1/2" Ice	5.0183	4.0888	0.07
			1.00			1" Ice	5.4362	4.7844	0.12
(2) RR90-17-02DP w/ Mount Pipe	B	From Leg	4.0000	0.00	115.0000	No Ice	4.5931	3.3194	0.03
			0.00			1/2" Ice	5.0183	4.0888	0.07
			1.00			1" Ice	5.4362	4.7844	0.12

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft²	C_AA_A Side ft²	Weight K
(2) RR90-17-02DP w/ Mount Pipe	C	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	4.5931 5.0183 5.4362	3.3194 4.0888 4.7844	0.03 0.07 0.12
ETW200VS12UB	A	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.4043 0.4857 0.5746	0.1628 0.2187 0.2820	0.01 0.01 0.02
ETW200VS12UB	B	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.4043 0.4857 0.5746	0.1628 0.2187 0.2820	0.01 0.01 0.02
ETW200VS12UB	C	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.4043 0.4857 0.5746	0.1628 0.2187 0.2820	0.01 0.01 0.02
(2) S20070A1	A	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.6560 0.7636 0.8786	0.3257 0.4114 0.5041	0.01 0.01 0.02
(2) S20070A1	B	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.6560 0.7636 0.8786	0.3257 0.4114 0.5041	0.01 0.01 0.02
(2) S20070A1	C	From Leg	4.0000 0.00 1.00	0.00	115.0000	No Ice 1/2" Ice 1" Ice	0.6560 0.7636 0.8786	0.3257 0.4114 0.5041	0.01 0.01 0.02
Platform Mount [LP 1201-1]	C	None		0.00	115.0000	No Ice 1/2" Ice 1" Ice	23.1000 26.8000 30.5000	23.1000 26.8000 30.5000	2.10 2.50 2.90
***									
LNX-6514DS-VTM w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3968 8.9546 9.4800	7.0679 8.2532 9.1523	0.06 0.13 0.21
LNX-6514DS-VTM w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3968 8.9546 9.4800	7.0679 8.2532 9.1523	0.06 0.13 0.21
LNX-6514DS-VTM w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3968 8.9546 9.4800	7.0679 8.2532 9.1523	0.06 0.13 0.21
(2) FD9R6004/2C-3L	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	0.3142 0.3862 0.4656	0.0762 0.1189 0.1685	0.00 0.01 0.01
(2) FD9R6004/2C-3L	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	0.3142 0.3862 0.4656	0.0762 0.1189 0.1685	0.00 0.01 0.01
(2) FD9R6004/2C-3L	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	0.3142 0.3862 0.4656	0.0762 0.1189 0.1685	0.00 0.01 0.01
DB-T1-6Z-8AB-0Z	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	4.8000 5.0704 5.3481	2.0000 2.1926 2.3926	0.04 0.08 0.12
ACUTIME 2000	B	From Leg	4.0000 0.00 3.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	0.2550 0.3205 0.3934	0.2550 0.3205 0.3934	0.00 0.00 0.01

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft²	C_AA_A Side ft²	Weight K
(3) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3995 8.9639 9.4943	7.0730 8.2637 9.1753	0.07 0.14 0.21
(3) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3995 8.9639 9.4943	7.0730 8.2637 9.1753	0.07 0.14 0.21
(3) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	8.3995 8.9639 9.4943	7.0730 8.2637 9.1753	0.07 0.14 0.21
RRH2X60-700	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	3.5002 3.7609 4.0285	1.8157 2.0519 2.2894	0.06 0.08 0.11
RRH2X60-700	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	3.5002 3.7609 4.0285	1.8157 2.0519 2.2894	0.06 0.08 0.11
RRH2X60-700	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	3.5002 3.7609 4.0285	1.8157 2.0519 2.2894	0.06 0.08 0.11
RRH2X60-PCS	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.2000 2.3926 2.5926	1.7233 1.9015 2.0870	0.06 0.08 0.10
RRH2X60-PCS	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.2000 2.3926 2.5926	1.7233 1.9015 2.0870	0.06 0.08 0.10
RRH2X60-PCS	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.2000 2.3926 2.5926	1.7233 1.9015 2.0870	0.06 0.08 0.10
RRH4X45-AWS4 B66	A	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.6600 2.8781 3.1037	1.5861 1.7690 1.9588	0.06 0.08 0.11
RRH4X45-AWS4 B66	B	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.6600 2.8781 3.1037	1.5861 1.7690 1.9588	0.06 0.08 0.11
RRH4X45-AWS4 B66	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	2.6600 2.8781 3.1037	1.5861 1.7690 1.9588	0.06 0.08 0.11
DB-T1-6Z-8AB-0Z	C	From Leg	4.0000 0.00 0.00	0.00	104.0000	No Ice 1/2" Ice 1" Ice	4.8000 5.0704 5.3481	2.0000 2.1926 2.3926	0.04 0.08 0.12
Platform Mount [LP 1201-1]	C	None		0.00	104.0000	No Ice 1/2" Ice 1" Ice	23.1000 26.8000 30.5000	23.1000 26.8000 30.5000	2.10 2.50 2.90
***									
APXV18-206517S-C w/ Mount Pipe	A	From Leg	1.0000 0.00 0.00	0.00	95.0000	No Ice 1/2" Ice 1" Ice	5.4042 5.9597 6.4808	4.7000 5.8600 6.7338	0.05 0.10 0.15
APXV18-206517S-C w/ Mount Pipe	B	From Leg	1.0000 0.00 0.00	0.00	95.0000	No Ice 1/2" Ice 1" Ice	5.4042 5.9597 6.4808	4.7000 5.8600 6.7338	0.05 0.10 0.15

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft²	C_AA_A Side ft²	Weight K
APXV18-206517S-C w/ Mount Pipe	C	From Leg	1.0000 0.00 0.00	0.00	95.0000	No Ice 1/2" Ice 1" Ice	5.4042 5.9597 6.4808	4.7000 5.8600 6.7338	0.05 0.10 0.15
Pipe Mount [PM 601-3]	C	None		0.00	95.0000	No Ice 1/2" Ice 1" Ice	4.3900 5.4800 6.5700	4.3900 5.4800 6.5700	0.20 0.24 0.28
***									
OG-860/1920/GPS-A	A	From Leg	4.0000 0.00 2.00	0.00	80.0000	No Ice 1/2" Ice 1" Ice	0.3077 0.3952 0.4897	0.3667 0.4572 0.5548	0.00 0.01 0.01
Side Arm Mount [SO 901-1]	A	None		0.00	80.0000	No Ice 1/2" Ice 1" Ice	0.5000 0.6800 0.8600	0.8800 1.1300 1.3800	0.11 0.11 0.11

Tower Pressures - No Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg % 	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 140.0000-135.0000	137.4744	1.353	0.03	7.121	A	0.000	7.121	7.121	100.00	0.000	0.000
					B	0.000	7.121		100.00	0.000	0.000
					C	0.000	7.121		100.00	0.000	0.000
L2 135.0000-130.0000	132.4759	1.343	0.03	7.559	A	0.000	7.559	7.559	100.00	0.000	0.000
					B	0.000	7.559		100.00	0.000	0.000
					C	0.000	7.559		100.00	0.000	0.000
L3 130.0000-125.0000	127.4772	1.332	0.03	7.997	A	0.000	7.997	7.997	100.00	0.000	0.000
					B	0.000	7.997		100.00	0.000	0.000
					C	0.000	7.997		100.00	0.000	0.000
L4 125.0000-120.0000	122.4784	1.321	0.03	8.434	A	0.000	8.434	8.434	100.00	0.000	0.000
					B	0.000	8.434		100.00	0.000	0.000
					C	0.000	8.434		100.00	0.000	0.080
L5 120.0000-115.0000	117.4794	1.309	0.03	8.872	A	0.000	8.872	8.872	100.00	0.000	0.000
					B	0.000	8.872		100.00	0.000	0.000
					C	0.000	8.872		100.00	0.000	0.398
L6 115.0000-110.0000	112.4804	1.297	0.03	9.310	A	0.000	9.310	9.310	100.00	0.000	0.000
					B	0.000	9.310		100.00	0.000	0.000
					C	0.000	9.310		100.00	0.000	1.388
L7 110.0000-105.0000	107.4813	1.285	0.03	9.748	A	0.000	9.748	9.748	100.00	0.000	0.000
					B	0.000	9.748		100.00	0.000	0.000
					C	0.000	9.748		100.00	0.000	1.471
L8 105.0000-104.0000	104.4993	1.277	0.03	2.002	A	0.000	2.002	2.002	100.00	0.000	0.000
					B	0.000	2.002		100.00	0.000	0.000
					C	0.000	2.002		100.00	0.000	0.444
L9 104.0000-103.7500	103.8750	1.276	0.03	0.503	A	0.000	0.503	0.503	100.00	0.000	0.000
					B	0.000	0.503		100.00	0.000	0.000
					C	0.000	0.503		100.00	0.000	0.111
L10 103.7500-98.7500	101.2323	1.269	0.03	10.296	A	0.000	10.296	10.296	100.00	0.000	0.000
					B	0.000	10.296		100.00	0.000	0.000
					C	0.000	10.296		100.00	0.000	2.916
L11 98.7500-98.5000	98.6250	1.262	0.03	0.526	A	0.000	0.526	0.526	100.00	0.000	0.000
					B	0.000	0.526		100.00	0.000	0.000
					C	0.000	0.526		100.00	0.000	0.198
L12 98.5000-98.2500	98.3750	1.261	0.03	0.527	A	0.000	0.527	0.527	100.00	0.000	0.000
					B	0.000	0.527		100.00	0.000	0.000
					C	0.000	0.527		100.00	0.000	0.198
L13 98.2500-	97.6239	1.259	0.03	2.653	A	0.000	2.653	2.653	100.00	0.000	0.000

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		ksf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
97.0000					B	0.000	2.653		100.00	0.000	0.000
					C	0.000	2.653		100.00	0.000	0.990
L14 97.0000-96.7500	96.8750	1.257	0.03	0.534	A	0.000	0.534	0.534	100.00	0.000	0.000
					B	0.000	0.534		100.00	0.000	0.000
					C	0.000	0.534		100.00	0.000	0.198
L15 96.7500-88.5000	92.5800	1.245	0.03	18.234	A	0.000	18.234	18.234	100.00	0.000	0.000
					B	0.000	18.234		100.00	0.000	0.000
					C	0.000	18.234		100.00	0.000	5.729
L16 88.5000-88.0000	88.2498	1.233	0.03	1.122	A	0.000	1.122	1.122	100.00	0.000	0.000
					B	0.000	1.122		100.00	0.000	0.000
					C	0.000	1.122		100.00	0.000	0.396
L17 88.0000-87.7500	87.8750	1.232	0.03	0.563	A	0.000	0.563	0.563	100.00	0.000	0.000
					B	0.000	0.563		100.00	0.000	0.000
					C	0.000	0.563		100.00	0.000	0.198
L18 87.7500-82.7500	85.2341	1.224	0.03	11.481	A	0.000	11.481	11.481	100.00	0.000	0.000
					B	0.000	11.481		100.00	0.000	0.000
					C	0.000	11.481		100.00	0.000	3.960
L19 82.7500-77.7500	80.2347	1.208	0.03	11.919	A	0.000	11.919	11.919	100.00	0.000	0.000
					B	0.000	11.919		100.00	0.000	0.000
					C	0.000	11.919		100.00	0.000	3.960
L20 77.7500-72.7500	75.2352	1.192	0.03	12.357	A	0.000	12.357	12.357	100.00	0.000	0.000
					B	0.000	12.357		100.00	0.000	0.000
					C	0.000	12.357		100.00	0.000	3.960
L21 72.7500-68.0800	70.4025	1.175	0.03	11.937	A	0.000	11.937	11.937	100.00	0.000	0.000
					B	0.000	11.937		100.00	0.000	0.000
					C	0.000	11.937		100.00	0.000	4.016
L22 68.0800-67.8300	67.9550	1.167	0.03	0.650	A	0.000	0.650	0.650	100.00	0.000	0.000
					B	0.000	0.650		100.00	0.000	0.000
					C	0.000	0.650		100.00	0.000	0.220
L23 67.8300-62.8300	65.3162	1.157	0.03	13.226	A	0.000	13.226	13.226	100.00	0.000	0.000
					B	0.000	13.226		100.00	0.000	0.000
					C	0.000	13.226		100.00	0.000	4.392
L24 62.8300-57.8300	60.3166	1.138	0.03	13.664	A	0.000	13.664	13.664	100.00	0.000	0.000
					B	0.000	13.664		100.00	0.000	0.000
					C	0.000	13.664		100.00	0.000	4.392
L25 57.8300-52.8300	55.3171	1.117	0.03	14.102	A	0.000	14.102	14.102	100.00	0.000	0.000
					B	0.000	14.102		100.00	0.000	0.000
					C	0.000	14.102		100.00	0.000	4.392
L26 52.8300-47.2500	50.0244	1.094	0.03	16.255	A	0.000	16.255	16.255	100.00	0.000	0.000
					B	0.000	16.255		100.00	0.000	0.000
					C	0.000	16.255		100.00	0.000	4.902
L27 47.2500-46.5000	46.8747	1.079	0.02	2.186	A	0.000	2.186	2.186	100.00	0.000	0.000
					B	0.000	2.186		100.00	0.000	0.000
					C	0.000	2.186		100.00	0.000	0.659
L28 46.5000-41.5000	43.9877	1.065	0.02	14.825	A	0.000	14.825	14.825	100.00	0.000	0.000
					B	0.000	14.825		100.00	0.000	0.000
					C	0.000	14.825		100.00	0.000	4.401
L29 41.5000-37.7500	39.6183	1.041	0.02	11.406	A	0.000	11.406	11.406	100.00	0.000	0.000
					B	0.000	11.406		100.00	0.000	0.000
					C	0.000	11.406		100.00	0.000	3.416
L30 37.7500-37.5000	37.6250	1.03	0.02	0.769	A	0.000	0.769	0.769	100.00	0.000	0.000
					B	0.000	0.769		100.00	0.000	0.000
					C	0.000	0.769		100.00	0.000	0.228
L31 37.5000-32.5000	34.9883	1.015	0.02	15.613	A	0.000	15.613	15.613	100.00	0.000	0.000
					B	0.000	15.613		100.00	0.000	0.000
					C	0.000	15.613		100.00	0.000	4.679
L32 32.5000-32.2500	32.3750	0.998	0.02	0.792	A	0.000	0.792	0.792	100.00	0.000	0.000
					B	0.000	0.792		100.00	0.000	0.000
					C	0.000	0.792		100.00	0.000	0.238
L33 32.2500-27.2500	29.7386	0.98	0.02	16.073	A	0.000	16.073	16.073	100.00	0.000	0.000
					B	0.000	16.073		100.00	0.000	0.000
					C	0.000	16.073		100.00	0.000	4.763
L34 27.2500-23.5000	25.3688	0.948	0.02	12.342	A	0.000	12.342	12.342	100.00	0.000	0.000
					B	0.000	12.342		100.00	0.000	0.000
					C	0.000	12.342		100.00	0.000	3.572
L35 23.5000-23.2500	23.3750	0.932	0.02	0.832	A	0.000	0.832	0.832	100.00	0.000	0.000
					B	0.000	0.832		100.00	0.000	0.000
					C	0.000	0.832		100.00	0.000	0.238

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L36 23.2500-20.7500	21.9973	0.92	0.02	8.376	A	0.000	8.376	8.376	100.00	0.000	0.000
					B	0.000	8.376		100.00	0.000	0.000
					C	0.000	8.376		100.00	0.000	2.381
L37 20.7500-20.5000	20.6250	0.908	0.02	0.844	A	0.000	0.844	0.844	100.00	0.000	0.000
					B	0.000	0.844		100.00	0.000	0.000
					C	0.000	0.844		100.00	0.000	0.238
L38 20.5000-15.5000	17.9893	0.882	0.02	17.102	A	0.000	17.102	17.102	100.00	0.000	0.000
					B	0.000	17.102		100.00	0.000	0.000
					C	0.000	17.102		100.00	0.000	4.763
L39 15.5000-10.5000	12.9896	0.85	0.02	17.540	A	0.000	17.540	17.540	100.00	0.000	0.000
					B	0.000	17.540		100.00	0.000	0.000
					C	0.000	17.540		100.00	0.000	4.763
L40 10.5000-5.5000	7.9899	0.85	0.02	17.977	A	0.000	17.977	17.977	100.00	0.000	0.000
					B	0.000	17.977		100.00	0.000	0.000
					C	0.000	17.977		100.00	0.000	4.763
L41 5.5000-3.0000	4.2475	0.85	0.02	9.153	A	0.000	9.153	9.153	100.00	0.000	0.000
					B	0.000	9.153		100.00	0.000	0.000
					C	0.000	9.153		100.00	0.000	2.381
L42 3.0000-2.7500	2.8750	0.85	0.02	0.921	A	0.000	0.921	0.921	100.00	0.000	0.000
					B	0.000	0.921		100.00	0.000	0.000
					C	0.000	0.921		100.00	0.000	0.238
L43 2.7500-0.0000	1.3720	0.85	0.02	10.207	A	0.000	10.207	10.207	100.00	0.000	0.000
					B	0.000	10.207		100.00	0.000	0.000
					C	0.000	10.207		100.00	0.000	2.619

Tower Pressure - With Ice

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 140.0000-135.0000	137.4744	1.353	0.01	1.7301	8.563	A	0.000	8.563	8.563	100.00	0.000	0.000
						B	0.000	8.563		100.00	0.000	0.000
						C	0.000	8.563		100.00	0.000	0.000
L2 135.0000-130.0000	132.4759	1.343	0.01	1.7237	8.995	A	0.000	8.995	8.995	100.00	0.000	0.000
						B	0.000	8.995		100.00	0.000	0.000
						C	0.000	8.995		100.00	0.000	0.000
L3 130.0000-125.0000	127.4772	1.332	0.01	1.7171	9.427	A	0.000	9.427	9.427	100.00	0.000	0.000
						B	0.000	9.427		100.00	0.000	0.000
						C	0.000	9.427		100.00	0.000	0.000
L4 125.0000-120.0000	122.4784	1.321	0.01	1.7102	9.860	A	0.000	9.860	9.860	100.00	0.000	0.000
						B	0.000	9.860		100.00	0.000	0.000
						C	0.000	9.860		100.00	0.000	0.422
L5 120.0000-115.0000	117.4794	1.309	0.01	1.7031	10.292	A	0.000	10.292	10.292	100.00	0.000	0.000
						B	0.000	10.292		100.00	0.000	0.000
						C	0.000	10.292		100.00	0.000	2.101
L6 115.0000-110.0000	112.4804	1.297	0.01	1.6957	10.723	A	0.000	10.723	10.723	100.00	0.000	0.000
						B	0.000	10.723		100.00	0.000	0.000
						C	0.000	10.723		100.00	0.000	4.779
L7 110.0000-105.0000	107.4813	1.285	0.01	1.6880	11.155	A	0.000	11.155	11.155	100.00	0.000	0.000
						B	0.000	11.155		100.00	0.000	0.000
						C	0.000	11.155		100.00	0.000	5.034
L8 105.0000-104.0000	104.4993	1.277	0.01	1.6833	2.283	A	0.000	2.283	2.283	100.00	0.000	0.000
						B	0.000	2.283		100.00	0.000	0.000
						C	0.000	2.283		100.00	0.000	1.492
L9 104.0000-103.7500	103.8750	1.276	0.01	1.6823	0.573	A	0.000	0.573	0.573	100.00	0.000	0.000
						B	0.000	0.573		100.00	0.000	0.000
						C	0.000	0.573		100.00	0.000	0.373
L10 103.7500-98.7500	101.2323	1.269	0.01	1.6779	11.694	A	0.000	11.694	11.694	100.00	0.000	0.000
						B	0.000	11.694		100.00	0.000	0.000
						C	0.000	11.694		100.00	0.000	9.055
L11 98.7500-98.5000	98.6250	1.262	0.01	1.6735	0.596	A	0.000	0.596	0.596	100.00	0.000	0.000
						B	0.000	0.596		100.00	0.000	0.000
						C	0.000	0.596		100.00	0.000	0.573

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L12 98.5000-98.2500	98.3750	1.261	0.01	1.6731	0.597	A	0.000	0.597	0.597	100.00	0.000	0.000
						B	0.000	0.597		100.00	0.000	0.000
						C	0.000	0.597		100.00	0.000	0.573
L13 98.2500-97.0000	97.6239	1.259	0.01	1.6718	3.002	A	0.000	3.002	3.002	100.00	0.000	0.000
						B	0.000	3.002		100.00	0.000	0.000
						C	0.000	3.002		100.00	0.000	2.863
L14 97.0000-96.7500	96.8750	1.257	0.01	1.6706	0.604	A	0.000	0.604	0.604	100.00	0.000	0.000
						B	0.000	0.604		100.00	0.000	0.000
						C	0.000	0.604		100.00	0.000	0.572
L15 96.7500-88.5000	92.5800	1.245	0.01	1.6630	20.521	A	0.000	20.521	20.521	100.00	0.000	0.000
						B	0.000	20.521		100.00	0.000	0.000
						C	0.000	20.521		100.00	0.000	16.243
L16 88.5000-88.0000	88.2498	1.233	0.01	1.6551	1.260	A	0.000	1.260	1.260	100.00	0.000	0.000
						B	0.000	1.260		100.00	0.000	0.000
						C	0.000	1.260		100.00	0.000	1.141
L17 88.0000-87.7500	87.8750	1.232	0.01	1.6543	0.631	A	0.000	0.631	0.631	100.00	0.000	0.000
						B	0.000	0.631		100.00	0.000	0.000
						C	0.000	0.631		100.00	0.000	0.569
L18 87.7500-82.7500	85.2341	1.224	0.01	1.6493	12.856	A	0.000	12.856	12.856	100.00	0.000	0.000
						B	0.000	12.856		100.00	0.000	0.000
						C	0.000	12.856		100.00	0.000	11.356
L19 82.7500-77.7500	80.2347	1.208	0.01	1.6394	13.285	A	0.000	13.285	13.285	100.00	0.000	0.000
						B	0.000	13.285		100.00	0.000	0.000
						C	0.000	13.285		100.00	0.000	11.314
L20 77.7500-72.7500	75.2352	1.192	0.01	1.6289	13.714	A	0.000	13.714	13.714	100.00	0.000	0.000
						B	0.000	13.714		100.00	0.000	0.000
						C	0.000	13.714		100.00	0.000	11.270
L21 72.7500-68.0800	70.4025	1.175	0.01	1.6181	13.196	A	0.000	13.196	13.196	100.00	0.000	0.000
						B	0.000	13.196		100.00	0.000	0.000
						C	0.000	13.196		100.00	0.000	10.484
L22 68.0800-67.8300	67.9550	1.167	0.01	1.6124	0.717	A	0.000	0.717	0.717	100.00	0.000	0.000
						B	0.000	0.717		100.00	0.000	0.000
						C	0.000	0.717		100.00	0.000	0.560
L23 67.8300-62.8300	65.3162	1.157	0.01	1.6060	14.564	A	0.000	14.564	14.564	100.00	0.000	0.000
						B	0.000	14.564		100.00	0.000	0.000
						C	0.000	14.564		100.00	0.000	11.173
L24 62.8300-57.8300	60.3166	1.138	0.01	1.5932	14.992	A	0.000	14.992	14.992	100.00	0.000	0.000
						B	0.000	14.992		100.00	0.000	0.000
						C	0.000	14.992		100.00	0.000	11.120
L25 57.8300-52.8300	55.3171	1.117	0.01	1.5795	15.418	A	0.000	15.418	15.418	100.00	0.000	0.000
						B	0.000	15.418		100.00	0.000	0.000
						C	0.000	15.418		100.00	0.000	11.062
L26 52.8300-47.2500	50.0244	1.094	0.01	1.5637	17.709	A	0.000	17.709	17.709	100.00	0.000	0.000
						B	0.000	17.709		100.00	0.000	0.000
						C	0.000	17.709		100.00	0.000	12.270
L27 47.2500-46.5000	46.8747	1.079	0.01	1.5536	2.381	A	0.000	2.381	2.381	100.00	0.000	0.000
						B	0.000	2.381		100.00	0.000	0.000
						C	0.000	2.381		100.00	0.000	1.649
L28 46.5000-41.5000	43.9877	1.065	0.01	1.5437	16.111	A	0.000	16.111	16.111	100.00	0.000	0.000
						B	0.000	16.111		100.00	0.000	0.000
						C	0.000	16.111		100.00	0.000	10.919
L29 41.5000-37.7500	39.6183	1.041	0.01	1.5277	12.361	A	0.000	12.361	12.361	100.00	0.000	0.000
						B	0.000	12.361		100.00	0.000	0.000
						C	0.000	12.361		100.00	0.000	8.253
L30 37.7500-37.5000	37.6250	1.03	0.01	1.5198	0.832	A	0.000	0.832	0.832	100.00	0.000	0.000
						B	0.000	0.832		100.00	0.000	0.000
						C	0.000	0.832		100.00	0.000	0.549
L31 37.5000-32.5000	34.9883	1.015	0.01	1.5088	16.870	A	0.000	16.870	16.870	100.00	0.000	0.000
						B	0.000	16.870		100.00	0.000	0.000
						C	0.000	16.870		100.00	0.000	11.050
L32 32.5000-32.2500	32.3750	0.998	0.01	1.4971	0.855	A	0.000	0.855	0.855	100.00	0.000	0.000
						B	0.000	0.855		100.00	0.000	0.000
						C	0.000	0.855		100.00	0.000	0.554
L33 32.2500-27.2500	29.7386	0.98	0.01	1.4845	17.310	A	0.000	17.310	17.310	100.00	0.000	0.000
						B	0.000	17.310		100.00	0.000	0.000
						C	0.000	17.310		100.00	0.000	11.030
L34 27.2500-23.5000	25.3688	0.948	0.01	1.4611	13.255	A	0.000	13.255	13.255	100.00	0.000	0.000
						B	0.000	13.255		100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	t_Z in	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
						C	0.000	13.255		100.00	0.000	8.199
L35 23.5000-23.2500	23.3750	0.932	0.01	1.4492	0.892	A	0.000	0.892	0.892	100.00	0.000	0.000
						B	0.000	0.892		100.00	0.000	0.000
						C	0.000	0.892		100.00	0.000	0.544
L36 23.2500-20.7500	21.9973	0.92	0.01	1.4404	8.976	A	0.000	8.976	8.976	100.00	0.000	0.000
						B	0.000	8.976		100.00	0.000	0.000
						C	0.000	8.976		100.00	0.000	5.422
L37 20.7500-20.5000	20.6250	0.908	0.01	1.4311	0.903	A	0.000	0.903	0.903	100.00	0.000	0.000
						B	0.000	0.903		100.00	0.000	0.000
						C	0.000	0.903		100.00	0.000	0.540
L38 20.5000-15.5000	17.9893	0.882	0.01	1.4117	18.278	A	0.000	18.278	18.278	100.00	0.000	0.000
						B	0.000	18.278		100.00	0.000	0.000
						C	0.000	18.278		100.00	0.000	10.723
L39 15.5000-10.5000	12.9896	0.85	0.01	1.3665	18.678	A	0.000	18.678	18.678	100.00	0.000	0.000
						B	0.000	18.678		100.00	0.000	0.000
						C	0.000	18.678		100.00	0.000	10.532
L40 10.5000-5.5000	7.9899	0.85	0.01	1.3016	19.062	A	0.000	19.062	19.062	100.00	0.000	0.000
						B	0.000	19.062		100.00	0.000	0.000
						C	0.000	19.062		100.00	0.000	10.258
L41 5.5000-3.0000	4.2475	0.85	0.01	1.2219	9.662	A	0.000	9.662	9.662	100.00	0.000	0.000
						B	0.000	9.662		100.00	0.000	0.000
						C	0.000	9.662		100.00	0.000	4.961
L42 3.0000-2.7500	2.8750	0.85	0.01	1.1752	0.970	A	0.000	0.970	0.970	100.00	0.000	0.000
						B	0.000	0.970		100.00	0.000	0.000
						C	0.000	0.970		100.00	0.000	0.486
L43 2.7500-0.0000	1.3720	0.85	0.01	1.0914	10.707	A	0.000	10.707	10.707	100.00	0.000	0.000
						B	0.000	10.707		100.00	0.000	0.000
						C	0.000	10.707		100.00	0.000	5.154

Tower Pressure - Service

G_H = 1.100

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
L1 140.0000-135.0000	137.4744	1.353	0.01	7.121	A	0.000	7.121	7.121	100.00	0.000	0.000
					B	0.000	7.121		100.00	0.000	0.000
					C	0.000	7.121		100.00	0.000	0.000
L2 135.0000-130.0000	132.4759	1.343	0.01	7.559	A	0.000	7.559	7.559	100.00	0.000	0.000
					B	0.000	7.559		100.00	0.000	0.000
					C	0.000	7.559		100.00	0.000	0.000
L3 130.0000-125.0000	127.4772	1.332	0.01	7.997	A	0.000	7.997	7.997	100.00	0.000	0.000
					B	0.000	7.997		100.00	0.000	0.000
					C	0.000	7.997		100.00	0.000	0.000
L4 125.0000-120.0000	122.4784	1.321	0.01	8.434	A	0.000	8.434	8.434	100.00	0.000	0.000
					B	0.000	8.434		100.00	0.000	0.000
					C	0.000	8.434		100.00	0.000	0.080
L5 120.0000-115.0000	117.4794	1.309	0.01	8.872	A	0.000	8.872	8.872	100.00	0.000	0.000
					B	0.000	8.872		100.00	0.000	0.000
					C	0.000	8.872		100.00	0.000	0.398
L6 115.0000-110.0000	112.4804	1.297	0.01	9.310	A	0.000	9.310	9.310	100.00	0.000	0.000
					B	0.000	9.310		100.00	0.000	0.000
					C	0.000	9.310		100.00	0.000	1.388
L7 110.0000-105.0000	107.4813	1.285	0.01	9.748	A	0.000	9.748	9.748	100.00	0.000	0.000
					B	0.000	9.748		100.00	0.000	0.000
					C	0.000	9.748		100.00	0.000	1.471
L8 105.0000-104.0000	104.4993	1.277	0.01	2.002	A	0.000	2.002	2.002	100.00	0.000	0.000
					B	0.000	2.002		100.00	0.000	0.000
					C	0.000	2.002		100.00	0.000	0.444
L9 104.0000-103.7500	103.8750	1.276	0.01	0.503	A	0.000	0.503	0.503	100.00	0.000	0.000
					B	0.000	0.503		100.00	0.000	0.000
					C	0.000	0.503		100.00	0.000	0.111
L10 103.7500-	101.2323	1.269	0.01	10.296	A	0.000	10.296	10.296	100.00	0.000	0.000
					B	0.000	10.296		100.00	0.000	0.000

Section Elevation	z	K_Z	q_z	A_G	Face	A_F	A_R	A_{leg}	Leg %	C_AA_A In Face	C_AA_A Out Face
ft	ft		ksf	ft^2		ft^2	ft^2	ft^2		ft^2	ft^2
98.7500					C	0.000	10.296		100.00	0.000	2.916
L11 98.7500-98.5000	98.6250	1.262	0.01	0.526	A	0.000	0.526	0.526	100.00	0.000	0.000
					B	0.000	0.526		100.00	0.000	0.000
					C	0.000	0.526		100.00	0.000	0.198
L12 98.5000-98.2500	98.3750	1.261	0.01	0.527	A	0.000	0.527	0.527	100.00	0.000	0.000
					B	0.000	0.527		100.00	0.000	0.000
					C	0.000	0.527		100.00	0.000	0.198
L13 98.2500-97.0000	97.6239	1.259	0.01	2.653	A	0.000	2.653	2.653	100.00	0.000	0.000
					B	0.000	2.653		100.00	0.000	0.000
					C	0.000	2.653		100.00	0.000	0.990
L14 97.0000-96.7500	96.8750	1.257	0.01	0.534	A	0.000	0.534	0.534	100.00	0.000	0.000
					B	0.000	0.534		100.00	0.000	0.000
					C	0.000	0.534		100.00	0.000	0.198
L15 96.7500-88.5000	92.5800	1.245	0.01	18.234	A	0.000	18.234	18.234	100.00	0.000	0.000
					B	0.000	18.234		100.00	0.000	0.000
					C	0.000	18.234		100.00	0.000	5.729
L16 88.5000-88.0000	88.2498	1.233	0.01	1.122	A	0.000	1.122	1.122	100.00	0.000	0.000
					B	0.000	1.122		100.00	0.000	0.000
					C	0.000	1.122		100.00	0.000	0.396
L17 88.0000-87.7500	87.8750	1.232	0.01	0.563	A	0.000	0.563	0.563	100.00	0.000	0.000
					B	0.000	0.563		100.00	0.000	0.000
					C	0.000	0.563		100.00	0.000	0.198
L18 87.7500-82.7500	85.2341	1.224	0.01	11.481	A	0.000	11.481	11.481	100.00	0.000	0.000
					B	0.000	11.481		100.00	0.000	0.000
					C	0.000	11.481		100.00	0.000	3.960
L19 82.7500-77.7500	80.2347	1.208	0.01	11.919	A	0.000	11.919	11.919	100.00	0.000	0.000
					B	0.000	11.919		100.00	0.000	0.000
					C	0.000	11.919		100.00	0.000	3.960
L20 77.7500-72.7500	75.2352	1.192	0.01	12.357	A	0.000	12.357	12.357	100.00	0.000	0.000
					B	0.000	12.357		100.00	0.000	0.000
					C	0.000	12.357		100.00	0.000	3.960
L21 72.7500-68.0800	70.4025	1.175	0.01	11.937	A	0.000	11.937	11.937	100.00	0.000	0.000
					B	0.000	11.937		100.00	0.000	0.000
					C	0.000	11.937		100.00	0.000	4.016
L22 68.0800-67.8300	67.9550	1.167	0.01	0.650	A	0.000	0.650	0.650	100.00	0.000	0.000
					B	0.000	0.650		100.00	0.000	0.000
					C	0.000	0.650		100.00	0.000	0.220
L23 67.8300-62.8300	65.3162	1.157	0.01	13.226	A	0.000	13.226	13.226	100.00	0.000	0.000
					B	0.000	13.226		100.00	0.000	0.000
					C	0.000	13.226		100.00	0.000	4.392
L24 62.8300-57.8300	60.3166	1.138	0.01	13.664	A	0.000	13.664	13.664	100.00	0.000	0.000
					B	0.000	13.664		100.00	0.000	0.000
					C	0.000	13.664		100.00	0.000	4.392
L25 57.8300-52.8300	55.3171	1.117	0.01	14.102	A	0.000	14.102	14.102	100.00	0.000	0.000
					B	0.000	14.102		100.00	0.000	0.000
					C	0.000	14.102		100.00	0.000	4.392
L26 52.8300-47.2500	50.0244	1.094	0.01	16.255	A	0.000	16.255	16.255	100.00	0.000	0.000
					B	0.000	16.255		100.00	0.000	0.000
					C	0.000	16.255		100.00	0.000	4.902
L27 47.2500-46.5000	46.8747	1.079	0.01	2.186	A	0.000	2.186	2.186	100.00	0.000	0.000
					B	0.000	2.186		100.00	0.000	0.000
					C	0.000	2.186		100.00	0.000	0.659
L28 46.5000-41.5000	43.9877	1.065	0.01	14.825	A	0.000	14.825	14.825	100.00	0.000	0.000
					B	0.000	14.825		100.00	0.000	0.000
					C	0.000	14.825		100.00	0.000	4.401
L29 41.5000-37.7500	39.6183	1.041	0.01	11.406	A	0.000	11.406	11.406	100.00	0.000	0.000
					B	0.000	11.406		100.00	0.000	0.000
					C	0.000	11.406		100.00	0.000	3.416
L30 37.7500-37.5000	37.6250	1.03	0.01	0.769	A	0.000	0.769	0.769	100.00	0.000	0.000
					B	0.000	0.769		100.00	0.000	0.000
					C	0.000	0.769		100.00	0.000	0.228
L31 37.5000-32.5000	34.9883	1.015	0.01	15.613	A	0.000	15.613	15.613	100.00	0.000	0.000
					B	0.000	15.613		100.00	0.000	0.000
					C	0.000	15.613		100.00	0.000	4.679
L32 32.5000-32.2500	32.3750	0.998	0.01	0.792	A	0.000	0.792	0.792	100.00	0.000	0.000
					B	0.000	0.792		100.00	0.000	0.000
					C	0.000	0.792		100.00	0.000	0.238
L33 32.2500-	29.7386	0.98	0.01	16.073	A	0.000	16.073	16.073	100.00	0.000	0.000

Section Elevation ft	z ft	K_Z	q_z ksf	A_G ft²	Face	A_F ft²	A_R ft²	A_{leg} ft²	Leg %	C_AA_A In Face ft²	C_AA_A Out Face ft²
27.2500					B	0.000	16.073		100.00	0.000	0.000
					C	0.000	16.073		100.00	0.000	4.763
L34 27.2500-23.5000	25.3688	0.948	0.01	12.342	A	0.000	12.342	12.342	100.00	0.000	0.000
					B	0.000	12.342		100.00	0.000	0.000
					C	0.000	12.342		100.00	0.000	3.572
L35 23.5000-23.2500	23.3750	0.932	0.01	0.832	A	0.000	0.832	0.832	100.00	0.000	0.000
					B	0.000	0.832		100.00	0.000	0.000
					C	0.000	0.832		100.00	0.000	0.238
L36 23.2500-20.7500	21.9973	0.92	0.01	8.376	A	0.000	8.376	8.376	100.00	0.000	0.000
					B	0.000	8.376		100.00	0.000	0.000
					C	0.000	8.376		100.00	0.000	2.381
L37 20.7500-20.5000	20.6250	0.908	0.01	0.844	A	0.000	0.844	0.844	100.00	0.000	0.000
					B	0.000	0.844		100.00	0.000	0.000
					C	0.000	0.844		100.00	0.000	0.238
L38 20.5000-15.5000	17.9893	0.882	0.01	17.102	A	0.000	17.102	17.102	100.00	0.000	0.000
					B	0.000	17.102		100.00	0.000	0.000
					C	0.000	17.102		100.00	0.000	4.763
L39 15.5000-10.5000	12.9896	0.85	0.01	17.540	A	0.000	17.540	17.540	100.00	0.000	0.000
					B	0.000	17.540		100.00	0.000	0.000
					C	0.000	17.540		100.00	0.000	4.763
L40 10.5000-5.5000	7.9899	0.85	0.01	17.977	A	0.000	17.977	17.977	100.00	0.000	0.000
					B	0.000	17.977		100.00	0.000	0.000
					C	0.000	17.977		100.00	0.000	4.763
L41 5.5000-3.0000	4.2475	0.85	0.01	9.153	A	0.000	9.153	9.153	100.00	0.000	0.000
					B	0.000	9.153		100.00	0.000	0.000
					C	0.000	9.153		100.00	0.000	2.381
L42 3.0000-2.7500	2.8750	0.85	0.01	0.921	A	0.000	0.921	0.921	100.00	0.000	0.000
					B	0.000	0.921		100.00	0.000	0.000
					C	0.000	0.921		100.00	0.000	0.238
L43 2.7500-0.0000	1.3720	0.85	0.01	10.207	A	0.000	10.207	10.207	100.00	0.000	0.000
					B	0.000	10.207		100.00	0.000	0.000
					C	0.000	10.207		100.00	0.000	2.619

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.6 Wind 0 deg - No Ice
3	0.9 Dead+1.6 Wind 0 deg - No Ice
4	1.2 Dead+1.6 Wind 30 deg - No Ice
5	0.9 Dead+1.6 Wind 30 deg - No Ice
6	1.2 Dead+1.6 Wind 60 deg - No Ice
7	0.9 Dead+1.6 Wind 60 deg - No Ice
8	1.2 Dead+1.6 Wind 90 deg - No Ice
9	0.9 Dead+1.6 Wind 90 deg - No Ice
10	1.2 Dead+1.6 Wind 120 deg - No Ice
11	0.9 Dead+1.6 Wind 120 deg - No Ice
12	1.2 Dead+1.6 Wind 150 deg - No Ice
13	0.9 Dead+1.6 Wind 150 deg - No Ice
14	1.2 Dead+1.6 Wind 180 deg - No Ice
15	0.9 Dead+1.6 Wind 180 deg - No Ice
16	1.2 Dead+1.6 Wind 210 deg - No Ice
17	0.9 Dead+1.6 Wind 210 deg - No Ice
18	1.2 Dead+1.6 Wind 240 deg - No Ice
19	0.9 Dead+1.6 Wind 240 deg - No Ice
20	1.2 Dead+1.6 Wind 270 deg - No Ice
21	0.9 Dead+1.6 Wind 270 deg - No Ice
22	1.2 Dead+1.6 Wind 300 deg - No Ice
23	0.9 Dead+1.6 Wind 300 deg - No Ice
24	1.2 Dead+1.6 Wind 330 deg - No Ice
25	0.9 Dead+1.6 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp

Comb. No.	Description
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	140 - 135	Pole	Max Tension	26	0.00	-0.00	0.00
			Max. Compression	26	-9.73	0.02	-0.01
			Max. Mx	20	-3.96	26.62	-0.01
			Max. My	14	-3.96	0.01	-26.62
			Max. Vy	20	-6.40	26.62	-0.01
			Max. Vx	14	6.40	0.01	-26.62
			Max. Torque	12			0.00
L2	135 - 130	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-10.25	0.04	-0.02
			Max. Mx	20	-4.23	59.70	-0.01
			Max. My	14	-4.23	0.02	-59.71
			Max. Vy	20	-6.84	59.70	-0.01
			Max. Vx	14	6.84	0.02	-59.71
			Max. Torque	12			0.00
L3	130 - 125	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-10.79	0.06	-0.04
			Max. Mx	20	-4.53	95.01	-0.02
			Max. My	14	-4.53	0.03	-95.02
			Max. Vy	20	-7.29	95.01	-0.02
			Max. Vx	14	7.29	0.03	-95.02
			Max. Torque	12			0.00
L4	125 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-22.44	0.28	-0.62
			Max. Mx	20	-8.90	148.59	-0.13
			Max. My	14	-8.90	0.06	-148.83
			Max. Vy	20	-15.83	148.59	-0.13
			Max. Vx	14	15.83	0.06	-148.83
			Max. Torque	10			-0.51
L5	120 - 115	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-23.90	0.39	-0.69
			Max. Mx	20	-9.72	229.95	-0.15
			Max. My	14	-9.72	0.08	-230.19
			Max. Vy	20	-16.66	229.95	-0.15
			Max. Vx	14	16.66	0.08	-230.19
			Max. Torque	10			-0.53
L6	115 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.15	0.73	-0.88
			Max. Mx	20	-12.99	333.18	-0.18
			Max. My	14	-12.98	0.14	-333.41
			Max. Vy	20	-20.57	333.18	-0.18
			Max. Vx	14	20.57	0.14	-333.41

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	10			-0.58
L7	110 - 105	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.26	1.08	-1.08
			Max. Mx	20	-13.63	437.40	-0.22
			Max. My	14	-13.63	0.20	-437.63
			Max. Vy	20	-21.13	437.40	-0.22
			Max. Vx	14	21.13	0.20	-437.63
			Max. Torque	10			-0.64
L8	105 - 104	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-32.48	1.15	-1.12
			Max. Mx	20	-13.76	458.59	-0.22
			Max. My	14	-13.76	0.21	-458.82
			Max. Vy	20	-21.26	458.59	-0.22
			Max. Vx	14	21.26	0.21	-458.82
			Max. Torque	12			-0.66
L9	104 - 103.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-42.54	1.91	-0.71
			Max. Mx	20	-17.47	465.78	-0.14
			Max. My	14	-17.46	0.39	-465.70
			Max. Vy	20	-27.82	465.78	-0.14
			Max. Vx	14	27.88	0.39	-465.70
			Max. Torque	12			-0.85
L10	103.75 - 98.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-43.99	2.29	-0.92
			Max. Mx	20	-18.42	606.78	-0.42
			Max. My	14	-18.41	0.70	-606.98
			Max. Vy	20	-28.58	606.78	-0.42
			Max. Vx	14	28.64	0.70	-606.98
			Max. Torque	12			-1.00
L11	98.75 - 98.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.07	2.31	-0.93
			Max. Mx	20	-18.48	613.93	-0.44
			Max. My	14	-18.47	0.72	-614.14
			Max. Vy	20	-28.62	613.93	-0.44
			Max. Vx	14	28.68	0.72	-614.14
			Max. Torque	12			-1.01
L12	98.5 - 98.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.16	2.33	-0.94
			Max. Mx	20	-18.54	621.09	-0.45
			Max. My	14	-18.54	0.74	-621.32
			Max. Vy	20	-28.66	621.09	-0.45
			Max. Vx	14	28.72	0.74	-621.32
			Max. Torque	12			-1.02
L13	98.25 - 97	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.61	2.43	-1.00
			Max. Mx	20	-18.85	657.06	-0.52
			Max. My	14	-18.84	0.81	-657.36
			Max. Vy	20	-28.89	657.06	-0.52
			Max. Vx	14	28.95	0.81	-657.36
			Max. Torque	12			-1.07
L14	97 - 96.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.69	2.45	-1.01
			Max. Mx	20	-18.91	664.28	-0.54
			Max. My	14	-18.90	0.83	-664.60
			Max. Vy	20	-28.92	664.28	-0.54
			Max. Vx	14	28.98	0.83	-664.60
			Max. Torque	12			-1.08
L15	96.75 - 88.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.57	3.04	-1.34
			Max. Mx	20	-20.33	813.74	-0.84
			Max. My	14	-20.32	1.16	-814.33
			Max. Vy	20	-30.59	813.74	-0.84
			Max. Vx	14	30.65	1.16	-814.33
			Max. Torque	12			-1.26
L16	88.5 - 88	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.67	3.49	-1.60
			Max. Mx	20	-21.70	929.79	-1.06
			Max. My	14	-21.69	1.41	-930.58

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	20	-31.28	929.79	-1.06
			Max. Vx	14	31.34	1.41	-930.58
			Max. Torque	12			-1.41
L17	88 - 87.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-49.79	3.52	-1.62
			Max. Mx	20	-21.78	937.61	-1.08
			Max. My	14	-21.77	1.43	-938.42
			Max. Vy	20	-31.33	937.61	-1.08
			Max. Vx	14	31.38	1.43	-938.42
			Max. Torque	12			-1.42
L18	87.75 - 82.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-52.10	4.18	-1.99
			Max. Mx	20	-23.34	1096.48	-1.38
			Max. My	14	-23.33	1.76	-1097.55
			Max. Vy	20	-32.21	1096.48	-1.38
			Max. Vx	14	32.27	1.76	-1097.55
			Max. Torque	12			-1.63
L19	82.75 - 77.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-54.60	4.85	-2.27
			Max. Mx	20	-25.07	1259.91	-1.68
			Max. My	14	-25.06	2.11	-1261.24
			Max. Vy	20	-33.15	1259.91	-1.68
			Max. Vx	14	33.21	2.11	-1261.24
			Max. Torque	12			-1.82
L20	77.75 - 72.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-56.96	5.54	-2.67
			Max. Mx	20	-26.71	1427.86	-1.99
			Max. My	14	-26.70	2.45	-1429.44
			Max. Vy	20	-34.02	1427.86	-1.99
			Max. Vx	14	34.08	2.45	-1429.44
			Max. Torque	12			-2.04
L21	72.75 - 68.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.19	6.19	-3.04
			Max. Mx	20	-28.28	1588.67	-2.28
			Max. My	14	-28.27	2.77	-1590.49
			Max. Vy	20	-34.85	1588.67	-2.28
			Max. Vx	14	34.90	2.77	-1590.49
			Max. Torque	12			-2.27
L22	68.08 - 67.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-59.32	6.23	-3.06
			Max. Mx	20	-28.39	1597.39	-2.29
			Max. My	14	-28.38	2.79	-1599.22
			Max. Vy	20	-34.88	1597.39	-2.29
			Max. Vx	14	34.94	2.79	-1599.22
			Max. Torque	12			-2.29
L23	67.83 - 62.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-61.90	6.94	-3.47
			Max. Mx	20	-30.23	1774.08	-2.60
			Max. My	14	-30.23	3.14	-1776.16
			Max. Vy	20	-35.79	1774.08	-2.60
			Max. Vx	14	35.85	3.14	-1776.16
			Max. Torque	12			-2.55
L24	62.83 - 57.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64.51	7.67	-3.89
			Max. Mx	20	-32.13	1955.25	-2.91
			Max. My	14	-32.12	3.49	-1957.59
			Max. Vy	20	-36.68	1955.25	-2.91
			Max. Vx	14	36.74	3.49	-1957.59
			Max. Torque	12			-2.81
L25	57.83 - 52.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67.13	8.41	-4.31

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	20	-34.05	2140.84	-3.22
			Max. My	14	-34.05	3.84	-2143.43
			Max. Vy	20	-37.56	2140.84	-3.22
			Max. Vx	14	37.61	3.84	-2143.43
			Max. Torque	12			-3.08
L26	52.83 - 47.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67.84	8.60	-4.42
			Max. Mx	20	-34.57	2190.94	-3.31
			Max. My	14	-34.56	3.93	-2193.60
			Max. Vy	20	-37.79	2190.94	-3.31
			Max. Vx	14	37.85	3.93	-2193.60
			Max. Torque	12			-3.15
L27	47.25 - 46.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-72.25	9.35	-4.85
			Max. Mx	20	-37.93	2382.43	-3.62
			Max. My	14	-37.93	4.28	-2385.33
			Max. Vy	20	-38.78	2382.43	-3.62
			Max. Vx	14	38.84	4.28	-2385.33
			Max. Torque	12			-3.42
L28	46.5 - 41.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-75.05	10.10	-5.28
			Max. Mx	20	-40.05	2578.43	-3.93
			Max. My	14	-40.04	4.64	-2581.58
			Max. Vy	20	-39.62	2578.43	-3.93
			Max. Vx	14	39.68	4.64	-2581.58
			Max. Torque	12			-3.69
L29	41.5 - 37.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-77.16	10.66	-5.61
			Max. Mx	20	-41.66	2728.14	-4.17
			Max. My	14	-41.65	4.90	-2731.48
			Max. Vy	20	-40.24	2728.14	-4.17
			Max. Vx	14	40.30	4.90	-2731.48
			Max. Torque	12			-3.90
L30	37.75 - 37.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-77.31	10.70	-5.63
			Max. Mx	20	-41.79	2738.21	-4.18
			Max. My	14	-41.79	4.92	-2741.56
			Max. Vy	20	-40.26	2738.21	-4.18
			Max. Vx	14	40.32	4.92	-2741.56
			Max. Torque	12			-3.91
L31	37.5 - 32.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.25	11.45	-6.06
			Max. Mx	20	-44.06	2941.61	-4.50
			Max. My	14	-44.05	5.28	-2945.21
			Max. Vy	20	-41.09	2941.61	-4.50
			Max. Vx	14	41.15	5.28	-2945.21
			Max. Torque	12			-4.20
L32	32.5 - 32.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.41	11.49	-6.08
			Max. Mx	20	-44.19	2951.89	-4.51
			Max. My	14	-44.19	5.29	-2955.50
			Max. Vy	20	-41.12	2951.89	-4.51
			Max. Vx	14	41.18	5.29	-2955.50
			Max. Torque	12			-4.21
L33	32.25 - 27.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-83.50	12.24	-6.51
			Max. Mx	20	-46.61	3159.56	-4.83
			Max. My	14	-46.61	5.65	-3163.41
			Max. Vy	20	-41.94	3159.56	-4.83
			Max. Vx	14	41.99	5.65	-3163.41
			Max. Torque	12			-4.50
L34	27.25 - 23.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-85.83	12.78	-6.82
			Max. Mx	20	-48.46	3317.92	-5.06
			Max. My	14	-48.46	5.92	-3321.95
			Max. Vy	20	-42.52	3317.92	-5.06
			Max. Vx	14	42.58	5.92	-3321.95

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	12			-4.72
L35	23.5 - 23.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-86.01	12.81	-6.85
			Max. Mx	20	-48.62	3328.55	-5.08
			Max. My	14	-48.62	5.94	-3332.59
			Max. Vy	20	-42.55	3328.55	-5.08
			Max. Vx	14	42.60	5.94	-3332.59
			Max. Torque	12			-4.73
L36	23.25 - 20.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-87.74	13.17	-7.05
			Max. Mx	20	-50.01	3435.43	-5.23
			Max. My	14	-50.01	6.12	-3439.59
			Max. Vy	20	-42.95	3435.43	-5.23
			Max. Vx	14	43.01	6.12	-3439.59
			Max. Torque	12			-4.87
L37	20.75 - 20.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-87.90	13.21	-7.07
			Max. Mx	20	-50.16	3446.17	-5.25
			Max. My	14	-50.16	6.13	-3450.34
			Max. Vy	20	-42.97	3446.17	-5.25
			Max. Vx	14	43.02	6.13	-3450.34
			Max. Torque	12			-4.89
L38	20.5 - 15.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-91.16	13.93	-7.49
			Max. Mx	20	-52.78	3662.87	-5.56
			Max. My	14	-52.78	6.49	-3667.29
			Max. Vy	20	-43.70	3662.87	-5.56
			Max. Vx	14	43.76	6.49	-3667.29
			Max. Torque	12			-5.17
L39	15.5 - 10.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-94.42	14.63	-7.89
			Max. Mx	20	-55.45	3883.09	-5.88
			Max. My	14	-55.45	6.85	-3887.74
			Max. Vy	20	-44.39	3883.09	-5.88
			Max. Vx	14	44.44	6.85	-3887.74
			Max. Torque	12			-5.44
L40	10.5 - 5.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-97.67	15.31	-8.29
			Max. Mx	20	-58.15	4106.71	-6.19
			Max. My	14	-58.15	7.21	-4111.59
			Max. Vy	20	-45.07	4106.71	-6.19
			Max. Vx	14	45.12	7.21	-4111.59
			Max. Torque	12			-5.73
L41	5.5 - 3	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-99.28	15.63	-8.47
			Max. Mx	20	-59.51	4219.80	-6.35
			Max. My	14	-59.51	7.39	-4224.80
			Max. Vy	20	-45.41	4219.80	-6.35
			Max. Vx	14	45.47	7.39	-4224.80
			Max. Torque	12			-5.87
L42	3 - 2.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-99.45	15.67	-8.49
			Max. Mx	20	-59.67	4231.15	-6.37
			Max. My	14	-59.67	7.41	-4236.16
			Max. Vy	20	-45.42	4231.15	-6.37
			Max. Vx	14	45.48	7.41	-4236.16
			Max. Torque	12			-5.88
L43	2.75 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-101.21	15.97	-8.67
			Max. Mx	20	-61.19	4356.64	-6.54
			Max. My	14	-61.19	7.61	-4361.78
			Max. Vy	20	-45.83	4356.64	-6.54
			Max. Vx	14	45.89	7.61	-4361.78
			Max. Torque	12			-6.04

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	101.21	-0.00	0.00
	Max. H_x	21	45.91	45.80	-0.05
	Max. H_z	2	61.21	-0.05	45.85
	Max. M_x	2	4359.47	-0.05	45.85
	Max. M_z	8	4352.17	-45.80	0.05
	Max. Torsion	24	6.03	22.86	39.69
	Min. Vert	9	45.91	-45.80	0.05
	Min. H_x	8	61.21	-45.80	0.05
	Min. H_z	15	45.91	0.05	-45.86
	Min. M_x	14	-4361.78	0.05	-45.85
	Min. M_z	20	-4356.64	45.80	-0.05
	Min. Torsion	12	-6.04	-22.86	-39.69

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	51.01	-0.00	0.00	0.93	1.79	0.00
1.2 Dead+1.6 Wind 0 deg - No Ice	61.21	0.05	-45.85	-4359.47	-3.18	-5.34
0.9 Dead+1.6 Wind 0 deg - No Ice	45.91	0.05	-45.85	-4311.73	-3.70	-5.33
1.2 Dead+1.6 Wind 30 deg - No Ice	61.21	22.94	-39.74	-3777.96	-2179.67	-3.21
0.9 Dead+1.6 Wind 30 deg - No Ice	45.91	22.94	-39.74	-3736.64	-2156.21	-3.21
1.2 Dead+1.6 Wind 60 deg - No Ice	61.21	39.69	-22.97	-2183.84	-3771.52	-0.22
0.9 Dead+1.6 Wind 60 deg - No Ice	45.91	39.69	-22.97	-2160.08	-3730.54	-0.22
1.2 Dead+1.6 Wind 90 deg - No Ice	61.21	45.80	-0.05	-4.25	-4352.17	2.83
0.9 Dead+1.6 Wind 90 deg - No Ice	45.91	45.80	-0.05	-4.49	-4304.76	2.83
1.2 Dead+1.6 Wind 120 deg - No Ice	61.21	39.64	22.88	2176.80	-3766.17	5.13
0.9 Dead+1.6 Wind 120 deg - No Ice	45.91	39.64	22.88	2152.55	-3725.23	5.12
1.2 Dead+1.6 Wind 150 deg - No Ice	61.21	22.86	39.69	3774.90	-2170.35	6.04
0.9 Dead+1.6 Wind 150 deg - No Ice	45.91	22.86	39.69	3733.04	-2146.99	6.04
1.2 Dead+1.6 Wind 180 deg - No Ice	61.21	-0.05	45.85	4361.78	7.61	5.34
0.9 Dead+1.6 Wind 180 deg - No Ice	45.91	-0.05	45.86	4313.46	6.98	5.33
1.2 Dead+1.6 Wind 210 deg - No Ice	61.21	-22.94	39.74	3780.28	2184.11	3.20
0.9 Dead+1.6 Wind 210 deg - No Ice	45.91	-22.94	39.74	3738.36	2159.51	3.20
1.2 Dead+1.6 Wind 240 deg - No Ice	61.21	-39.69	22.97	2186.15	3775.99	0.21
0.9 Dead+1.6 Wind 240 deg - No Ice	45.91	-39.69	22.97	2161.79	3733.85	0.21
1.2 Dead+1.6 Wind 270 deg - No Ice	61.21	-45.80	0.05	6.54	4356.64	-2.83
0.9 Dead+1.6 Wind 270 deg - No Ice	45.91	-45.80	0.05	6.19	4308.13	-2.83
1.2 Dead+1.6 Wind 300 deg - No Ice	61.21	-39.64	-22.88	-2174.53	3770.61	-5.12
0.9 Dead+1.6 Wind 300 deg	45.91	-39.64	-22.88	-2150.86	3728.53	-5.11

Load Combination	Vertical	$Shear_x$	$Shear_z$	Overturning Moment, M_x	Overturning Moment, M_z	Torque
	K	K	K	kip-ft	kip-ft	kip-ft
- No Ice 1.2 Dead+1.6 Wind 330 deg	61.21	-22.86	-39.69	-3772.61	2174.77	-6.03
- No Ice 0.9 Dead+1.6 Wind 330 deg	45.91	-22.86	-39.69	-3731.34	2150.27	-6.03
- No Ice 1.2 Dead+1.0 Ice+1.0 Temp	101.21	0.00	-0.00	8.67	15.97	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	101.21	0.01	-10.89	-1097.70	15.07	-2.11
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	101.21	5.45	-9.44	-949.97	-537.42	-1.24
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	101.21	9.43	-5.45	-545.37	-941.59	-0.03
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	101.21	10.88	-0.01	7.71	-1089.16	1.18
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	101.21	9.42	5.44	561.06	-940.57	2.08
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	101.21	5.43	9.43	966.42	-535.65	2.42
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	101.21	-0.01	10.89	1115.17	17.12	2.11
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	101.21	-5.45	9.44	967.45	569.61	1.24
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	101.21	-9.43	5.45	562.84	973.79	0.03
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	101.21	-10.88	0.01	9.76	1121.35	-1.18
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	101.21	-9.42	-5.44	-543.60	972.76	-2.08
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	101.21	-5.43	-9.43	-948.95	567.84	-2.42
Dead+Wind 0 deg - Service	51.01	0.01	-9.81	-926.65	0.71	-0.14
Dead+Wind 30 deg - Service	51.01	4.91	-8.50	-803.03	-462.33	-0.11
Dead+Wind 60 deg - Service	51.01	8.49	-4.91	-463.89	-800.99	-0.05
Dead+Wind 90 deg - Service	51.01	9.80	-0.01	-0.19	-924.43	0.03
Dead+Wind 120 deg - Service	51.01	8.48	4.90	463.82	-799.84	0.09
Dead+Wind 150 deg - Service	51.01	4.89	8.49	803.80	-460.34	0.13
Dead+Wind 180 deg - Service	51.01	-0.01	9.81	928.57	3.00	0.14
Dead+Wind 210 deg - Service	51.01	-4.91	8.50	804.95	466.04	0.11
Dead+Wind 240 deg - Service	51.01	-8.49	4.91	465.81	804.70	0.05
Dead+Wind 270 deg - Service	51.01	-9.80	0.01	2.11	928.15	-0.03
Dead+Wind 300 deg - Service	51.01	-8.48	-4.90	-461.90	803.56	-0.09
Dead+Wind 330 deg - Service	51.01	-4.89	-8.49	-801.88	464.06	-0.13

Solution Summary

	Sum of Applied Forces			Sum of Reactions			
Load Comb.	PX	PY	PZ	PX	PY	PZ	% Error
	K	K	K	K	K	K	
1	0.00	-51.01	0.00	0.00	51.01	-0.00	0.000%
2	0.05	-61.21	-45.86	-0.05	61.21	45.85	0.000%
3	0.05	-45.91	-45.86	-0.05	45.91	45.85	0.001%
4	22.94	-61.21	-39.74	-22.94	61.21	39.74	0.000%
5	22.94	-45.91	-39.74	-22.94	45.91	39.74	0.000%
6	39.69	-61.21	-22.97	-39.69	61.21	22.97	0.000%
7	39.69	-45.91	-22.97	-39.69	45.91	22.97	0.000%
8	45.80	-61.21	-0.05	-45.80	61.21	0.05	0.001%
9	45.80	-45.91	-0.05	-45.80	45.91	0.05	0.001%
10	39.64	-61.21	22.88	-39.64	61.21	-22.88	0.000%
11	39.64	-45.91	22.88	-39.64	45.91	-22.88	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
12	22.86	-61.21	39.69	-22.86	61.21	-39.69	0.000%
13	22.86	-45.91	39.69	-22.86	45.91	-39.69	0.000%
14	-0.05	-61.21	45.86	0.05	61.21	-45.85	0.000%
15	-0.05	-45.91	45.86	0.05	45.91	-45.86	0.000%
16	-22.94	-61.21	39.74	22.94	61.21	-39.74	0.000%
17	-22.94	-45.91	39.74	22.94	45.91	-39.74	0.000%
18	-39.69	-61.21	22.97	39.69	61.21	-22.97	0.000%
19	-39.69	-45.91	22.97	39.69	45.91	-22.97	0.000%
20	-45.80	-61.21	0.05	45.80	61.21	-0.05	0.001%
21	-45.80	-45.91	0.05	45.80	45.91	-0.05	0.001%
22	-39.64	-61.21	-22.88	39.64	61.21	22.88	0.000%
23	-39.64	-45.91	-22.88	39.64	45.91	22.88	0.000%
24	-22.86	-61.21	-39.69	22.86	61.21	39.69	0.000%
25	-22.86	-45.91	-39.69	22.86	45.91	39.69	0.000%
26	0.00	-101.21	0.00	-0.00	101.21	0.00	0.000%
27	0.01	-101.21	-10.89	-0.01	101.21	10.89	0.000%
28	5.45	-101.21	-9.44	-5.45	101.21	9.44	0.000%
29	9.43	-101.21	-5.45	-9.43	101.21	5.45	0.000%
30	10.88	-101.21	-0.01	-10.88	101.21	0.01	0.000%
31	9.42	-101.21	5.44	-9.42	101.21	-5.44	0.000%
32	5.43	-101.21	9.43	-5.43	101.21	-9.43	0.000%
33	-0.01	-101.21	10.89	0.01	101.21	-10.89	0.000%
34	-5.45	-101.21	9.44	5.45	101.21	-9.44	0.000%
35	-9.43	-101.21	5.45	9.43	101.21	-5.45	0.000%
36	-10.88	-101.21	0.01	10.88	101.21	-0.01	0.000%
37	-9.42	-101.21	-5.44	9.42	101.21	5.44	0.000%
38	-5.43	-101.21	-9.43	5.43	101.21	9.43	0.000%
39	0.01	-51.01	-9.81	-0.01	51.01	9.81	0.002%
40	4.91	-51.01	-8.50	-4.91	51.01	8.50	0.000%
41	8.49	-51.01	-4.91	-8.49	51.01	4.91	0.000%
42	9.80	-51.01	-0.01	-9.80	51.01	0.01	0.002%
43	8.48	-51.01	4.90	-8.48	51.01	-4.90	0.000%
44	4.89	-51.01	8.49	-4.89	51.01	-8.49	0.000%
45	-0.01	-51.01	9.81	0.01	51.01	-9.81	0.002%
46	-4.91	-51.01	8.50	4.91	51.01	-8.50	0.000%
47	-8.49	-51.01	4.91	8.49	51.01	-4.91	0.000%
48	-9.80	-51.01	0.01	9.80	51.01	-0.01	0.002%
49	-8.48	-51.01	-4.90	8.48	51.01	4.90	0.000%
50	-4.89	-51.01	-8.49	4.89	51.01	8.49	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	6	0.00000001	0.00000001
2	Yes	19	0.00000001	0.00008370
3	Yes	18	0.00000001	0.00013526
4	Yes	23	0.00000001	0.00006679
5	Yes	22	0.00000001	0.00010203
6	Yes	23	0.00000001	0.00006797
7	Yes	22	0.00000001	0.00010390
8	Yes	18	0.00000001	0.00008629
9	Yes	17	0.00000001	0.00013793
10	Yes	23	0.00000001	0.00006917
11	Yes	22	0.00000001	0.00010582
12	Yes	23	0.00000001	0.00006568
13	Yes	22	0.00000001	0.00010031
14	Yes	19	0.00000001	0.00009369
15	Yes	19	0.00000001	0.00006806
16	Yes	23	0.00000001	0.00006915
17	Yes	22	0.00000001	0.00010567
18	Yes	23	0.00000001	0.00006790
19	Yes	22	0.00000001	0.00010371
20	Yes	18	0.00000001	0.00010732
21	Yes	18	0.00000001	0.00007884
22	Yes	23	0.00000001	0.00006606
23	Yes	22	0.00000001	0.00010087

24	Yes	23	0.00000001	0.00006961
25	Yes	22	0.00000001	0.00010648
26	Yes	14	0.00000001	0.00008885
27	Yes	20	0.00000001	0.00010395
28	Yes	20	0.00000001	0.00013142
29	Yes	20	0.00000001	0.00013239
30	Yes	20	0.00000001	0.00010255
31	Yes	20	0.00000001	0.00013644
32	Yes	20	0.00000001	0.00013266
33	Yes	20	0.00000001	0.00010558
34	Yes	20	0.00000001	0.00014031
35	Yes	20	0.00000001	0.00013886
36	Yes	20	0.00000001	0.00010554
37	Yes	20	0.00000001	0.00013479
38	Yes	20	0.00000001	0.00013906
39	Yes	15	0.00000001	0.00006202
40	Yes	17	0.00000001	0.00011256
41	Yes	17	0.00000001	0.00011557
42	Yes	15	0.00000001	0.00005578
43	Yes	17	0.00000001	0.00011651
44	Yes	17	0.00000001	0.00011153
45	Yes	15	0.00000001	0.00006335
46	Yes	17	0.00000001	0.00011851
47	Yes	17	0.00000001	0.00011527
48	Yes	15	0.00000001	0.00005635
49	Yes	17	0.00000001	0.00011280
50	Yes	17	0.00000001	0.00011800

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	140 - 135	23.20	46	1.57	0.00
L2	135 - 130	21.55	46	1.56	0.00
L3	130 - 125	19.93	46	1.54	0.00
L4	125 - 120	18.33	46	1.50	0.00
L5	120 - 115	16.79	46	1.46	0.00
L6	115 - 110	15.29	46	1.39	0.00
L7	110 - 105	13.88	46	1.30	0.00
L8	105 - 104	12.57	46	1.20	0.00
L9	104 - 103.75	12.32	46	1.18	0.00
L10	103.75 - 98.75	12.26	46	1.18	0.00
L11	98.75 - 98.5	11.06	46	1.11	0.00
L12	98.5 - 98.25	11.00	46	1.11	0.00
L13	98.25 - 97	10.94	46	1.10	0.00
L14	97 - 96.75	10.66	46	1.09	0.00
L15	96.75 - 88.5	10.60	46	1.09	0.00
L16	91.75 - 88	9.50	46	1.02	0.00
L17	88 - 87.75	8.71	46	0.99	0.00
L18	87.75 - 82.75	8.66	46	0.98	0.00
L19	82.75 - 77.75	7.66	46	0.92	0.00
L20	77.75 - 72.75	6.72	46	0.86	0.00
L21	72.75 - 68.08	5.85	46	0.80	0.00
L22	68.08 - 67.83	5.10	46	0.74	0.00
L23	67.83 - 62.83	5.06	46	0.73	0.00
L24	62.83 - 57.83	4.32	46	0.68	0.00
L25	57.83 - 52.83	3.65	46	0.61	0.00
L26	52.83 - 47.25	3.04	46	0.55	0.00
L27	51.5 - 46.5	2.88	46	0.54	0.00
L28	46.5 - 41.5	2.34	46	0.50	0.00
L29	41.5 - 37.75	1.85	46	0.44	0.00
L30	37.75 - 37.5	1.52	46	0.39	0.00
L31	37.5 - 32.5	1.50	46	0.39	0.00
L32	32.5 - 32.25	1.12	46	0.33	0.00
L33	32.25 - 27.25	1.10	46	0.33	0.00
L34	27.25 - 23.5	0.78	46	0.28	0.00
L35	23.5 - 23.25	0.58	46	0.24	0.00
L36	23.25 - 20.75	0.57	46	0.23	0.00
L37	20.75 - 20.5	0.45	46	0.21	0.00
L38	20.5 - 15.5	0.44	46	0.21	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L39	15.5 - 10.5	0.25	46	0.16	0.00
L40	10.5 - 5.5	0.11	46	0.10	0.00
L41	5.5 - 3	0.03	46	0.05	0.00
L42	3 - 2.75	0.01	46	0.03	0.00
L43	2.75 - 0	0.01	46	0.03	0.00

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
140.0000	APXVSPP18-C-A20 w/ Mount Pipe	46	23.20	1.57	0.00	17573
137.0000	TME-1900MHz RRH (65 MHz)	46	22.21	1.57	0.00	17573
121.0000	7770.00 w/ Mount Pipe	46	17.09	1.47	0.00	5432
118.0000	T-Arm Mount [TA 702-3]	46	16.18	1.43	0.00	4502
115.0000	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	46	15.29	1.39	0.00	3787
104.0000	LNX-6514DS-VTM w/ Mount Pipe	46	12.32	1.18	0.00	3342
95.0000	APXV18-206517S-C w/ Mount Pipe	46	10.21	1.06	0.00	4485
80.0000	OG-860/1920/GPS-A	46	7.13	0.89	0.00	4664

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	140 - 135	108.82	14	7.39	0.01
L2	135 - 130	101.11	14	7.35	0.01
L3	130 - 125	93.49	14	7.24	0.01
L4	125 - 120	86.02	14	7.07	0.01
L5	120 - 115	78.76	16	6.84	0.01
L6	115 - 110	71.78	16	6.53	0.01
L7	110 - 105	65.16	16	6.13	0.01
L8	105 - 104	59.01	16	5.65	0.01
L9	104 - 103.75	57.84	16	5.55	0.01
L10	103.75 - 98.75	57.55	16	5.54	0.01
L11	98.75 - 98.5	51.93	16	5.22	0.01
L12	98.5 - 98.25	51.65	16	5.20	0.01
L13	98.25 - 97	51.38	16	5.19	0.01
L14	97 - 96.75	50.03	16	5.13	0.01
L15	96.75 - 88.5	49.77	16	5.12	0.01
L16	91.75 - 88	44.59	16	4.78	0.01
L17	88 - 87.75	40.89	16	4.64	0.01
L18	87.75 - 82.75	40.65	16	4.62	0.01
L19	82.75 - 77.75	35.96	16	4.35	0.01
L20	77.75 - 72.75	31.56	16	4.06	0.01
L21	72.75 - 68.08	27.48	16	3.76	0.01
L22	68.08 - 67.83	23.95	16	3.47	0.01
L23	67.83 - 62.83	23.76	16	3.45	0.01
L24	62.83 - 57.83	20.30	16	3.17	0.01
L25	57.83 - 52.83	17.13	16	2.89	0.01
L26	52.83 - 47.25	14.26	16	2.60	0.00
L27	51.5 - 46.5	13.55	16	2.52	0.00
L28	46.5 - 41.5	10.99	16	2.35	0.00
L29	41.5 - 37.75	8.67	16	2.07	0.00
L30	37.75 - 37.5	7.13	16	1.85	0.00
L31	37.5 - 32.5	7.03	16	1.84	0.00
L32	32.5 - 32.25	5.25	16	1.57	0.00
L33	32.25 - 27.25	5.17	16	1.56	0.00
L34	27.25 - 23.5	3.67	16	1.30	0.00
L35	23.5 - 23.25	2.72	16	1.11	0.00
L36	23.25 - 20.75	2.66	16	1.10	0.00

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L37	20.75 - 20.5	2.12	16	0.99	0.00
L38	20.5 - 15.5	2.07	16	0.97	0.00
L39	15.5 - 10.5	1.17	16	0.73	0.00
L40	10.5 - 5.5	0.53	16	0.49	0.00
L41	5.5 - 3	0.14	16	0.25	0.00
L42	3 - 2.75	0.04	16	0.13	0.00
L43	2.75 - 0	0.04	16	0.12	0.00

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
140.0000	APXVSPP18-C-A20 w/ Mount Pipe	14	108.82	7.39	0.01	3841
137.0000	TME-1900MHz RRH (65 MHz)	14	104.19	7.38	0.01	3841
121.0000	7770.00 w/ Mount Pipe	16	80.19	6.89	0.01	1186
118.0000	T-Arm Mount [TA 702-3]	16	75.93	6.73	0.01	982
115.0000	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	16	71.78	6.53	0.01	825
104.0000	LNX-6514DS-VTM w/ Mount Pipe	16	57.84	5.55	0.01	723
95.0000	APXV18-206517S-C w/ Mount Pipe	16	47.92	5.00	0.01	968
80.0000	OG-860/1920/GPS-A	16	33.50	4.19	0.01	1002

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K
L1	140 - 135 (1)	TP17.0151x16x0.25	5.0000	0.0000	0.0	13.4959	-3.96
L2	135 - 130 (2)	TP18.0303x17.0151x0.25	5.0000	0.0000	0.0	14.3131	-4.23
L3	130 - 125 (3)	TP19.0454x18.0303x0.25	5.0000	0.0000	0.0	15.1303	-4.52
L4	125 - 120 (4)	TP20.0606x19.0454x0.25	5.0000	0.0000	0.0	15.9475	-8.90
L5	120 - 115 (5)	TP21.0757x20.0606x0.25	5.0000	0.0000	0.0	16.7647	-9.72
L6	115 - 110 (6)	TP22.0909x21.0757x0.25	5.0000	0.0000	0.0	17.5819	-12.98
L7	110 - 105 (7)	TP23.106x22.0909x0.25	5.0000	0.0000	0.0	18.3991	-13.63
L8	105 - 104 (8)	TP23.309x23.106x0.25	1.0000	0.0000	0.0	18.5625	-13.76
L9	104 - 103.75 (9)	TP23.3598x23.309x0.4625	0.2500	0.0000	0.0	34.0998	-17.46
L10	103.75 - 98.75 (10)	TP24.375x23.3598x0.45	5.0000	0.0000	0.0	34.6673	-18.40
L11	98.75 - 98.5 (11)	TP24.4257x24.375x0.45	0.2500	0.0000	0.0	34.7408	-18.47
L12	98.5 - 98.25 (12)	TP24.4765x24.4257x0.725	0.2500	0.0000	0.0	55.4478	-18.53
L13	98.25 - 97 (13)	TP24.7303x24.4765x0.725	1.2500	0.0000	0.0	56.0403	-18.84
L14	97 - 96.75 (14)	TP24.781x24.7303x0.5125	0.2500	0.0000	0.0	40.0491	-18.90
L15	96.75 - 88.5 (15)	TP26.456x24.781x0.5	8.2500	0.0000	0.0	40.7268	-20.32
L16	88.5 - 88 (16)	TP26.0576x25.2962x0.56	3.7500	0.0000	0.0	46.178	-21.68

Section No.	Elevation	Size	L	L_u	Kl/r	A	P_u
	ft		ft	ft		in^2	K
		25				0	
L17	88 - 87.75 (17)	TP26.1084x26.0576x0.76 25	0.2500	0.0000	0.0	62.230 4	-21.77
L18	87.75 - 82.75 (18)	TP27.1236x26.1084x0.73 75	5.0000	0.0000	0.0	62.660 5	-23.32
L19	82.75 - 77.75 (19)	TP28.1389x27.1236x0.72 5	5.0000	0.0000	0.0	63.997 7	-25.06
L20	77.75 - 72.75 (20)	TP29.1542x28.1389x0.71 25	5.0000	0.0000	0.0	65.252 3	-26.70
L21	72.75 - 68.08 (21)	TP30.1024x29.1542x0.68 75	4.6700	0.0000	0.0	65.117 3	-28.27
L22	68.08 - 67.83 (22)	TP30.1532x30.1024x0.81 25	0.2500	0.0000	0.0	76.762 5	-28.38
L23	67.83 - 62.83 (23)	TP31.1684x30.1532x0.78 75	5.0000	0.0000	0.0	77.038 5	-30.22
L24	62.83 - 57.83 (24)	TP32.1837x31.1684x0.76 25	5.0000	0.0000	0.0	77.146 9	-32.12
L25	57.83 - 52.83 (25)	TP33.199x32.1837x0.75	5.0000	0.0000	0.0	78.364 3	-34.05
L26	52.83 - 47.25 (26)	TP34.332x33.199x0.75	5.5800	0.0000	0.0	79.016 4	-34.56
L27	47.25 - 46.5 (27)	TP33.8592x32.844x0.8	5.0000	0.0000	0.0	85.160 4	-37.93
L28	46.5 - 41.5 (28)	TP34.8743x33.8592x0.8	5.0000	0.0000	0.0	87.775 4	-40.04
L29	41.5 - 37.75 (29)	TP35.6357x34.8743x0.77 5	3.7500	0.0000	0.0	86.994 8	-41.65
L30	37.75 - 37.5 (30)	TP35.6864x35.6357x0.85	0.2500	0.0000	0.0	95.347 3	-41.79
L31	37.5 - 32.5 (31)	TP36.7016x35.6864x0.82 5	5.0000	0.0000	0.0	95.306 1	-44.05
L32	32.5 - 32.25 (32)	TP36.7523x36.7016x0.87 5	0.2500	0.0000	0.0	101.08 40	-44.19
L33	32.25 - 27.25 (33)	TP37.7675x36.7523x0.86 25	5.0000	0.0000	0.0	102.49 40	-46.61
L34	27.25 - 23.5 (34)	TP38.5288x37.7675x0.85	3.7500	0.0000	0.0	103.12 70	-48.46
L35	23.5 - 23.25 (35)	TP38.5796x38.5288x0.95	0.2500	0.0000	0.0	115.10 90	-48.62
L36	23.25 - 20.75 (36)	TP39.0872x38.5796x0.95	2.5000	0.0000	0.0	116.66 20	-50.01
L37	20.75 - 20.5 (37)	TP39.1379x39.0872x0.9	0.2500	0.0000	0.0	110.81 30	-50.16
L38	20.5 - 15.5 (38)	TP40.1531x39.1379x0.87 5	5.0000	0.0000	0.0	110.66 60	-52.78
L39	15.5 - 10.5 (39)	TP41.1682x40.1531x0.86 25	5.0000	0.0000	0.0	111.93 90	-55.45
L40	10.5 - 5.5 (40)	TP42.1833x41.1682x0.85	5.0000	0.0000	0.0	113.12 90	-58.15
L41	5.5 - 3 (41)	TP42.6909x42.1833x0.83 75	2.5000	0.0000	0.0	112.86 80	-59.51
L42	3 - 2.75 (42)	TP42.7417x42.6909x0.9	0.2500	0.0000	0.0	121.25 70	-59.67
L43	2.75 - 0 (43)	TP43.3x42.7417x0.9	2.7500	0.0000	0.0	122.87 50	-61.19

Pole Bending Design Data

Section No.	Elevation	Size	M_{ux}	M_{uy}
	ft		kip-ft	kip-ft
L1	140 - 135 (1)	TP17.0151x16x0.25	26.62	0.00
L2	135 - 130 (2)	TP18.0303x17.0151x0.25	59.71	0.00
L3	130 - 125 (3)	TP19.0454x18.0303x0.25	95.03	0.00
L4	125 - 120 (4)	TP20.0606x19.0454x0.25	148.83	0.00
L5	120 - 115 (5)	TP21.0757x20.0606x0.25	230.19	0.00
L6	115 - 110 (6)	TP22.0909x21.0757x0.25	333.41	0.00
L7	110 - 105 (7)	TP23.106x22.0909x0.25	437.66	0.00
L8	105 - 104 (8)	TP23.309x23.106x0.25	458.85	0.00
L9	104 - 103.75 (9)	TP23.3598x23.309x0.4625	465.86	0.00
L10	103.75 - 98.75 (10)	TP24.375x23.3598x0.45	607.31	0.00
L11	98.75 - 98.5 (11)	TP24.4257x24.375x0.45	614.48	0.00
L12	98.5 - 98.25 (12)	TP24.4765x24.4257x0.725	621.66	0.00
L13	98.25 - 97 (13)	TP24.7303x24.4765x0.725	657.74	0.00
L14	97 - 96.75 (14)	TP24.781x24.7303x0.5125	664.99	0.00
L15	96.75 - 88.5 (15)	TP26.456x24.781x0.5	814.90	0.00
L16	88.5 - 88 (16)	TP26.0576x25.2962x0.5625	931.28	0.00
L17	88 - 87.75 (17)	TP26.1084x26.0576x0.7625	939.14	0.00
L18	87.75 - 82.75 (18)	TP27.1236x26.1084x0.7375	1098.45	0.00
L19	82.75 - 77.75 (19)	TP28.1389x27.1236x0.725	1262.33	0.00
L20	77.75 - 72.75 (20)	TP29.1542x28.1389x0.7125	1430.72	0.00
L21	72.75 - 68.08 (21)	TP30.1024x29.1542x0.6875	1591.94	0.00
L22	68.08 - 67.83 (22)	TP30.1532x30.1024x0.8125	1600.68	0.00
L23	67.83 - 62.83 (23)	TP31.1684x30.1532x0.7875	1777.82	0.00
L24	62.83 - 57.83 (24)	TP32.1837x31.1684x0.7625	1959.43	0.00
L25	57.83 - 52.83 (25)	TP33.199x32.1837x0.75	2145.46	0.00
L26	52.83 - 47.25 (26)	TP34.332x33.199x0.75	2195.68	0.00
L27	47.25 - 46.5 (27)	TP33.8592x32.844x0.8	2387.61	0.00
L28	46.5 - 41.5 (28)	TP34.8743x33.8592x0.8	2584.05	0.00
L29	41.5 - 37.75 (29)	TP35.6357x34.8743x0.775	2734.10	0.00
L30	37.75 - 37.5 (30)	TP35.6864x35.6357x0.85	2744.18	0.00
L31	37.5 - 32.5 (31)	TP36.7016x35.6864x0.825	2948.03	0.00
L32	32.5 - 32.25 (32)	TP36.7523x36.7016x0.875	2958.33	0.00
L33	32.25 - 27.25 (33)	TP37.7675x36.7523x0.8625	3166.44	0.00
L34	27.25 - 23.5 (34)	TP38.5288x37.7675x0.85	3325.13	0.00
L35	23.5 - 23.25 (35)	TP38.5796x38.5288x0.95	3335.78	0.00
L36	23.25 - 20.75 (36)	TP39.0872x38.5796x0.95	3442.88	0.00
L37	20.75 - 20.5	TP39.1379x39.0872x0.9	3453.64	0.00

Section No.	Elevation ft	Size	M_{ux} kip-ft	M_{uy} kip-ft
	(37)			
L38	20.5 - 15.5 (38)	TP40.1531x39.1379x0.875	3670.78	0.00
L39	15.5 - 10.5 (39)	TP41.1682x40.1531x0.8625	3891.43	0.00
L40	10.5 - 5.5 (40)	TP42.1833x41.1682x0.85	4115.48	0.00
L41	5.5 - 3 (41)	TP42.6909x42.1833x0.8375	4228.78	0.00
L42	3 - 2.75 (42)	TP42.7417x42.6909x0.9	4240.16	0.00
L43	2.75 - 0 (43)	TP43.3x42.7417x0.9	4365.88	0.00

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	Actual T_u kip-ft
L1	140 - 135 (1)	TP17.0151x16x0.25	6.40	0.00
L2	135 - 130 (2)	TP18.0303x17.0151x0.25	6.84	0.00
L3	130 - 125 (3)	TP19.0454x18.0303x0.25	7.29	0.00
L4	125 - 120 (4)	TP20.0606x19.0454x0.25	15.83	0.33
L5	120 - 115 (5)	TP21.0757x20.0606x0.25	16.66	0.35
L6	115 - 110 (6)	TP22.0909x21.0757x0.25	20.57	0.40
L7	110 - 105 (7)	TP23.106x22.0909x0.25	21.13	0.16
L8	105 - 104 (8)	TP23.309x23.106x0.25	21.27	0.17
L9	104 - 103.75 (9)	TP23.3598x23.309x0.4625	27.91	0.55
L10	103.75 - 98.75 (10)	TP24.375x23.3598x0.45	28.67	0.62
L11	98.75 - 98.5 (11)	TP24.4257x24.375x0.45	28.71	0.63
L12	98.5 - 98.25 (12)	TP24.4765x24.4257x0.725	28.76	0.63
L13	98.25 - 97 (13)	TP24.7303x24.4765x0.725	28.98	0.66
L14	97 - 96.75 (14)	TP24.781x24.7303x0.5125	29.02	0.67
L15	96.75 - 88.5 (15)	TP26.456x24.781x0.5	30.68	0.76
L16	88.5 - 88 (16)	TP26.0576x25.2962x0.5625	31.38	0.83
L17	88 - 87.75 (17)	TP26.1084x26.0576x0.7625	31.42	0.83
L18	87.75 - 82.75 (18)	TP27.1236x26.1084x0.7375	32.30	0.94
L19	82.75 - 77.75 (19)	TP28.1389x27.1236x0.725	33.24	1.09
L20	77.75 - 72.75 (20)	TP29.1542x28.1389x0.7125	34.11	1.20
L21	72.75 - 68.08 (21)	TP30.1024x29.1542x0.6875	34.94	1.31
L22	68.08 - 67.83 (22)	TP30.1532x30.1024x0.8125	34.97	1.32
L23	67.83 - 62.83 (23)	TP31.1684x30.1532x0.7875	35.88	1.45
L24	62.83 - 57.83 (24)	TP32.1837x31.1684x0.7625	36.77	1.58
L25	57.83 - 52.83 (25)	TP33.199x32.1837x0.75	37.65	1.72
L26	52.83 - 47.25 (26)	TP34.332x33.199x0.75	37.88	1.75
L27	47.25 - 46.5 (27)	TP33.8592x32.844x0.8	38.87	1.89
L28	46.5 - 41.5 (28)	TP34.8743x33.8592x0.8	39.71	2.02
L29	41.5 - 37.75 (29)	TP35.6357x34.8743x0.775	40.33	2.13

Section No.	Elevation ft	Size	Actual V_u K	Actual T_u kip-ft
L30	37.75 - 37.5 (30)	TP35.6864x35.6357x0.85	40.35	2.13
L31	37.5 - 32.5 (31)	TP36.7016x35.6864x0.825	41.18	2.28
L32	32.5 - 32.25 (32)	TP36.7523x36.7016x0.875	41.21	2.28
L33	32.25 - 27.25 (33)	TP37.7675x36.7523x0.8625	42.03	2.43
L34	27.25 - 23.5 (34)	TP38.5288x37.7675x0.85	42.61	2.54
L35	23.5 - 23.25 (35)	TP38.5796x38.5288x0.95	42.63	2.54
L36	23.25 - 20.75 (36)	TP39.0872x38.5796x0.95	43.04	2.61
L37	20.75 - 20.5 (37)	TP39.1379x39.0872x0.9	43.05	2.62
L38	20.5 - 15.5 (38)	TP40.1531x39.1379x0.875	43.79	2.76
L39	15.5 - 10.5 (39)	TP41.1682x40.1531x0.8625	44.47	2.90
L40	10.5 - 5.5 (40)	TP42.1833x41.1682x0.85	45.15	3.04
L41	5.5 - 3 (41)	TP42.6909x42.1833x0.8375	45.50	3.11
L42	3 - 2.75 (42)	TP42.7417x42.6909x0.9	45.51	3.12
L43	2.75 - 0 (43)	TP43.3x42.7417x0.9	45.92	3.20

CCIpole

per TIA-222- G

Site BU: 876342

Work Order:

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	140	51.5	3.25	12	16	26.456	0.25	1	A572-65
2	91.75	44.5	4.25	12	25.30	34.332	0.3125	1.25	A572-65
3	51.5	51.5	0	12	32.84	43.3	0.375	1.5	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	0	23.5	channel	MP3-06 (1.1875")	2						o		o				
2	0	37.75	channel	MP3-08 (1.1875")	2			o								o	
3	20.75	37.75	channel	MP3-08 (1.1875")	1							o					
4	37.75	68.08	channel	MP3-06 (1.1875")	3			o				o				o	
5	68.08	98.5	channel	MP3-05 (1.1875")	3			o				o				o	
6	3	32.5	plate	CI-065125; (1) (1.1875)	3					o				o			o
7	32.5	68.08	plate	CCI-AFP-060100	3					o				o			o
8	68.08	88	plate	CCI-AFP-060100	3					o				o			o
9	97	104	plate	CCI-SFP-045100	3	o				o				o			
10	0	3	plate	FP 1.25 x 7.25_1	3					o				o			o
11																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in^2)	Bolt Hole Size (in)	Reinforcement Material
1	6.89	2.61	8.47	0.93	41.000	41.000	24.000	7.670	1.1875	A572-65
2	7.93	2.8	10.32	0.95	47.000	47.000	24.000	9.370	1.1875	A572-65
3	7.93	2.8	10.32	0.95	47.000	47.000	24.000	9.370	1.1875	A572-65
4	6.89	2.61	8.47	0.93	41.000	41.000	24.000	7.670	1.1875	A572-65
5	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
6	6.5	1.25	8.125	0.625	n/a	36.000	19.000	6.563	1.1875	A572-65
7	6	1	6	0.5	30.000	30.000	16.000	4.750	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	18.000	18.000	20.000	3.250	1.1875	A572-65
10	1.25	7.25	9.0625	3.625	n/a	n/a	0.000	9.063	0.0000	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	140 - 135	5		12	16.000	17.015	0.25	A572-65	1.000
2	135 - 130	5		12	17.015	18.030	0.25	A572-65	1.000
3	130 - 125	5		12	18.030	19.045	0.25	A572-65	1.000
4	125 - 120	5		12	19.045	20.061	0.25	A572-65	1.000
5	120 - 115	5		12	20.061	21.076	0.25	A572-65	1.000
6	115 - 110	5		12	21.076	22.091	0.25	A572-65	1.000
7	110 - 105	5		12	22.091	23.106	0.25	A572-65	1.000
8	105 - 104	1		12	23.106	23.309	0.25	A572-65	1.000
9	104 - 103.75	0.25		12	23.309	23.360	0.4625	A572-65	0.942
10	103.75 - 98.75	5		12	23.360	24.375	0.45	A572-65	0.950
11	98.75 - 98.5	0.25		12	24.375	24.426	0.45	A572-65	0.949
12	98.5 - 98.25	0.25		12	24.426	24.476	0.725	A572-65	0.902
13	98.25 - 97	1.25		12	24.476	24.730	0.725	A572-65	0.896
14	97 - 96.75	0.25		12	24.730	24.781	0.5125	A572-65	0.917
15	96.75 - 91.75	8.25	3.25	12	24.781	26.456	0.5	A572-65	0.922
16	91.75 - 88	3.75		12	25.296	26.058	0.5625	A572-65	0.929
17	88 - 87.75	0.25		12	26.058	26.108	0.7625	A572-65	0.980
18	87.75 - 82.75	5		12	26.108	27.124	0.7375	A572-65	0.989
19	82.75 - 77.75	5		12	27.124	28.139	0.725	A572-65	0.984
20	77.75 - 72.75	5		12	28.139	29.154	0.7125	A572-65	0.981
21	72.75 - 68.08	4.67		12	29.154	30.102	0.6875	A572-65	0.998
22	68.08 - 67.83	0.25		12	30.102	30.153	0.8125	A572-65	0.957
23	67.83 - 62.83	5		12	30.153	31.168	0.7875	A572-65	0.967
24	62.83 - 57.83	5		12	31.168	32.184	0.7625	A572-65	0.979
25	57.83 - 52.83	5		12	32.184	33.199	0.75	A572-65	0.977
26	52.83 - 51.5	5.58	4.25	12	33.199	34.332	0.75	A572-65	0.972
27	51.5 - 46.5	5		12	32.844	33.859	0.8	A572-65	0.985
28	46.5 - 41.5	5		12	33.859	34.874	0.8	A572-65	0.970
29	41.5 - 37.75	3.75		12	34.874	35.636	0.775	A572-65	0.989
30	37.75 - 37.5	0.25		12	35.636	35.686	0.85	A572-65	0.961
31	37.5 - 32.5	5		12	35.686	36.702	0.825	A572-65	0.975
32	32.5 - 32.25	0.25		12	36.702	36.752	0.875	A572-65	0.983
33	32.25 - 27.25	5		12	36.752	37.767	0.8625	A572-65	0.981
34	27.25 - 23.5	3.75		12	37.767	38.529	0.85	A572-65	0.984
35	23.5 - 23.25	0.25		12	38.529	38.580	0.95	A572-65	1.030
36	23.25 - 20.75	2.5		12	38.580	39.087	0.95	A572-65	1.021
37	20.75 - 20.5	0.25		12	39.087	39.138	0.9	A572-65	0.982
38	20.5 - 15.5	5		12	39.138	40.153	0.875	A572-65	0.995
39	15.5 - 10.5	5		12	40.153	41.168	0.8625	A572-65	0.994
40	10.5 - 5.5	5		12	41.168	42.183	0.85	A572-65	0.995
41	5.5 - 3	2.5		12	42.183	42.691	0.8375	A572-65	1.002
42	3 - 2.75	0.25		12	42.691	42.742	0.9	A572-65	0.957
43	2.75 - 0	2.75		12	42.742	43.300	0.9	A572-65	0.950

TNX Section Forces

Increment (ft): 5

	Section Height (ft)	TNX Output P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	140 - 135	3.96	26.62	6.40
2	135 - 130	4.23	59.71	6.84
3	130 - 125	4.52	95.03	7.29
4	125 - 120	8.90	148.83	15.83
5	120 - 115	9.72	230.19	16.66
6	115 - 110	12.98	333.42	20.57
7	110 - 105	13.63	437.66	21.13
8	105 - 104	13.76	458.85	21.27
9	104 - 103.75	17.46	465.86	27.88
10	103.75 - 98.75	18.40	607.31	28.67
11	98.75 - 98.5	18.47	614.48	28.71
12	98.5 - 98.25	18.53	621.66	28.76
13	98.25 - 97	18.84	657.74	28.98
14	97 - 96.75	18.90	664.99	29.02
15	96.75 - 91.75	20.32	814.90	30.68
16	91.75 - 88	21.68	931.29	31.38
17	88 - 87.75	21.77	939.14	31.42
18	87.75 - 82.75	23.32	1098.45	32.30
19	82.75 - 77.75	25.06	1262.32	33.24
20	77.75 - 72.75	26.70	1430.72	34.11
21	72.75 - 68.08	28.27	1591.94	34.93
22	68.08 - 67.83	28.38	1600.68	34.97
23	67.83 - 62.83	30.22	1777.82	35.88
24	62.83 - 57.83	32.12	1959.43	36.77
25	57.83 - 52.83	34.05	2145.46	37.64
26	52.83 - 51.5	34.56	2195.68	37.88
27	51.5 - 46.5	37.93	2387.61	38.87
28	46.5 - 41.5	40.04	2584.05	39.71
29	41.5 - 37.75	41.65	2734.10	40.33
30	37.75 - 37.5	41.79	2744.19	40.35
31	37.5 - 32.5	44.05	2948.03	41.18
32	32.5 - 32.25	44.19	2958.33	41.21
33	32.25 - 27.25	46.61	3166.44	42.03
34	27.25 - 23.5	48.46	3325.12	42.61
35	23.5 - 23.25	48.62	3335.78	42.63
36	23.25 - 20.75	50.01	3442.88	43.04
37	20.75 - 20.5	50.16	3453.64	43.05
38	20.5 - 15.5	52.78	3670.78	43.79
39	15.5 - 10.5	55.45	3891.42	44.47
40	10.5 - 5.5	58.15	4115.48	45.15
41	5.5 - 3	59.51	4228.78	45.50
42	3 - 2.75	59.67	4240.16	45.51
43	2.75 - 0	61.19	4365.88	45.92

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
140 - 135	Pole	TP17.015x16x0.25	Pole	8.3%	Pass
135 - 130	Pole	TP18.03x17.015x0.25	Pole	16.1%	Pass
130 - 125	Pole	TP19.045x18.03x0.25	Pole	22.7%	Pass
125 - 120	Pole	TP20.061x19.045x0.25	Pole	32.3%	Pass
120 - 115	Pole	TP21.076x20.061x0.25	Pole	44.8%	Pass
115 - 110	Pole	TP22.091x21.076x0.25	Pole	59.0%	Pass
110 - 105	Pole	TP23.106x22.091x0.25	Pole	71.5%	Pass
105 - 104	Pole	TP23.309x23.106x0.25	Pole	73.9%	Pass
104 - 103.75	Pole + Reinf.	TP23.36x23.309x0.4625	Reinf. 9 Tension Rupture	69.8%	Pass
103.75 - 98.75	Pole + Reinf.	TP24.375x23.36x0.45	Reinf. 9 Tension Rupture	84.9%	Pass
98.75 - 98.5	Pole + Reinf.	TP24.426x24.375x0.45	Reinf. 9 Tension Rupture	85.6%	Pass
98.5 - 98.25	Pole + Reinf.	TP24.476x24.426x0.725	Reinf. 9 Tension Rupture	55.2%	Pass
98.25 - 97	Pole + Reinf.	TP24.73x24.476x0.725	Reinf. 9 Tension Rupture	57.6%	Pass
97 - 96.75	Pole + Reinf.	TP24.781x24.73x0.5125	Reinf. 5 Tension Rupture	68.5%	Pass
96.75 - 91.75	Pole + Reinf.	TP26.456x24.781x0.5	Reinf. 5 Tension Rupture	78.9%	Pass
91.75 - 88	Pole + Reinf.	TP26.058x25.296x0.5625	Reinf. 5 Tension Rupture	78.8%	Pass
88 - 87.75	Pole + Reinf.	TP26.108x26.058x0.7625	Reinf. 5 Tension Rupture	61.6%	Pass
87.75 - 82.75	Pole + Reinf.	TP27.124x26.108x0.7375	Reinf. 5 Tension Rupture	68.1%	Pass
82.75 - 77.75	Pole + Reinf.	TP28.139x27.124x0.725	Reinf. 5 Tension Rupture	74.2%	Pass
77.75 - 72.75	Pole + Reinf.	TP29.154x28.139x0.7125	Reinf. 5 Tension Rupture	79.7%	Pass
72.75 - 68.08	Pole + Reinf.	TP30.102x29.154x0.6875	Reinf. 5 Tension Rupture	84.6%	Pass
68.08 - 67.83	Pole + Reinf.	TP30.153x30.102x0.8125	Reinf. 7 Tension Rupture	72.2%	Pass
67.83 - 62.83	Pole + Reinf.	TP31.168x30.153x0.7875	Reinf. 7 Tension Rupture	76.7%	Pass
62.83 - 57.83	Pole + Reinf.	TP32.184x31.168x0.7625	Reinf. 7 Tension Rupture	80.8%	Pass
57.83 - 52.83	Pole + Reinf.	TP33.199x32.184x0.75	Reinf. 7 Tension Rupture	84.8%	Pass
52.83 - 51.5	Pole + Reinf.	TP34.332x33.199x0.75	Reinf. 7 Tension Rupture	85.8%	Pass
51.5 - 46.5	Pole + Reinf.	TP33.859x32.844x0.8	Reinf. 7 Tension Rupture	84.8%	Pass
46.5 - 41.5	Pole + Reinf.	TP34.874x33.859x0.8	Reinf. 7 Tension Rupture	87.9%	Pass
41.5 - 37.75	Pole + Reinf.	TP35.636x34.874x0.775	Reinf. 7 Tension Rupture	90.1%	Pass
37.75 - 37.5	Pole + Reinf.	TP35.686x35.636x0.85	Reinf. 7 Tension Rupture	84.3%	Pass
37.5 - 32.5	Pole + Reinf.	TP36.702x35.686x0.825	Reinf. 7 Tension Rupture	86.9%	Pass
32.5 - 32.25	Pole + Reinf.	TP36.752x36.702x0.875	Reinf. 2 Tension Rupture	80.5%	Pass
32.25 - 27.25	Pole + Reinf.	TP37.767x36.752x0.8625	Reinf. 6 Tension Rupture	82.8%	Pass
27.25 - 23.5	Pole + Reinf.	TP38.529x37.767x0.85	Reinf. 6 Tension Rupture	84.5%	Pass
23.5 - 23.25	Pole + Reinf.	TP38.58x38.529x0.95	Reinf. 2 Tension Rupture	79.5%	Pass
23.25 - 20.75	Pole + Reinf.	TP39.087x38.58x0.95	Reinf. 2 Tension Rupture	80.5%	Pass
20.75 - 20.5	Pole + Reinf.	TP39.138x39.087x0.9	Reinf. 2 Tension Rupture	81.7%	Pass
20.5 - 15.5	Pole + Reinf.	TP40.153x39.138x0.875	Reinf. 2 Tension Rupture	83.6%	Pass
15.5 - 10.5	Pole + Reinf.	TP41.168x40.153x0.8625	Reinf. 2 Tension Rupture	85.5%	Pass
10.5 - 5.5	Pole + Reinf.	TP42.183x41.168x0.85	Reinf. 2 Tension Rupture	87.2%	Pass
5.5 - 3	Pole + Reinf.	TP42.691x42.183x0.8375	Reinf. 2 Tension Rupture	88.0%	Pass
3 - 2.75	Pole + Reinf.	TP42.742x42.691x0.9	Reinf. 2 Tension Rupture	82.6%	Pass
2.75 - 0	Pole + Reinf.	TP43.3x42.742x0.9	Reinf. 2 Tension Rupture	83.6%	Pass
				Summary	
			Pole	73.9%	Pass
			Reinforcement	90.1%	Pass
			Overall	90.1%	Pass

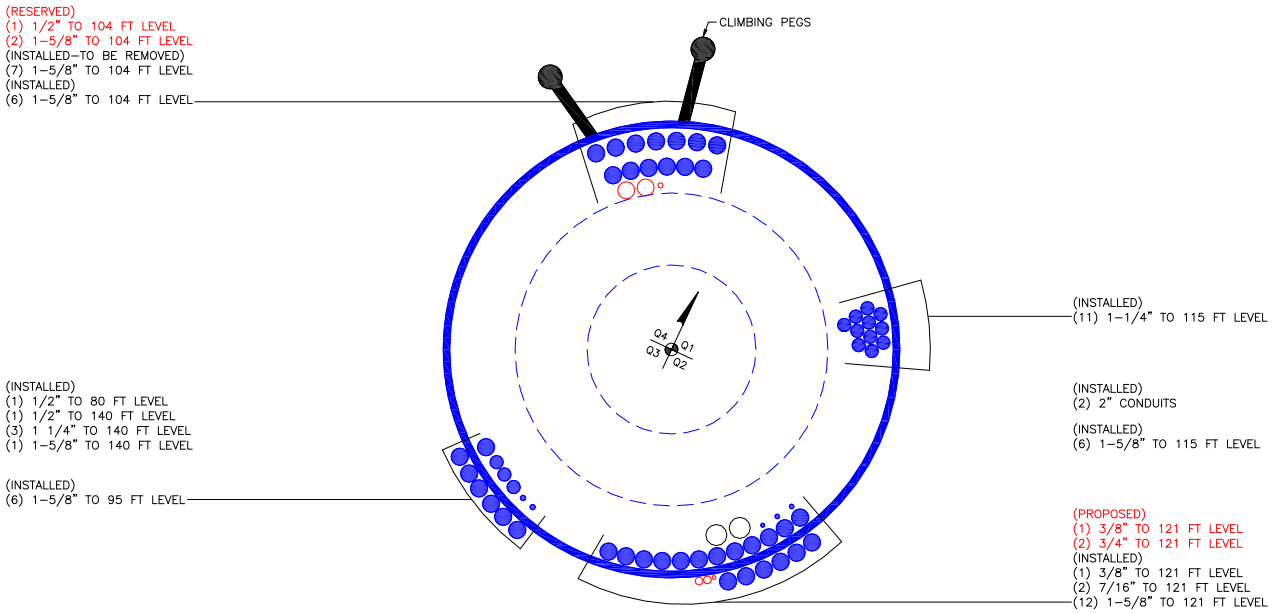
Additional Calculations

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
140 - 135	485	n/a	485	13.48	n/a	13.48	8.3%										
135 - 130	578	n/a	578	14.29	n/a	14.29	16.1%										
130 - 125	683	n/a	683	15.11	n/a	15.11	22.7%										
125 - 120	800	n/a	800	15.92	n/a	15.92	32.3%										
120 - 115	929	n/a	929	16.74	n/a	16.74	44.8%										
115 - 110	1072	n/a	1072	17.56	n/a	17.56	59.0%										
110 - 105	1228	n/a	1228	18.37	n/a	18.37	71.5%										
105 - 104	1262	n/a	1262	18.54	n/a	18.54	73.9%										
104 - 103.75	1270	1013	2283	18.58	13.50	32.08	40.5%									69.8%	
103.75 - 98.75	1445	1099	2543	19.39	13.50	32.89	50.0%									84.9%	
98.75 - 98.5	1454	1103	2557	19.43	13.50	32.93	50.5%									85.6%	
98.5 - 98.25	1463	2557	4020	19.47	30.45	49.92	32.6%					47.3%				55.2%	
98.25 - 97	1509	2607	4116	19.68	30.45	50.13	34.1%					49.4%				57.6%	
97 - 96.75	1519	1483	3002	19.72	16.95	36.67	47.4%					68.5%					
96.75 - 91.75	1715	1599	3314	20.54	16.95	37.49	55.5%					78.9%					
91.75 - 88	2195	1629	3824	25.87	16.95	42.82	52.5%					78.8%					
88 - 87.75	2218	2867	5085	25.92	34.95	60.87	43.0%					61.6%			60.0%		
87.75 - 82.75	2491	3149	5640	26.94	34.95	61.89	46.6%					68.1%			66.5%		
82.75 - 77.75	2784	3375	6159	27.96	34.95	62.91	51.1%					74.2%			72.5%		
77.75 - 72.75	3099	3609	6708	28.98	34.95	63.93	55.7%					79.7%			78.1%		
72.75 - 68.08	3415	3835	7249	29.93	34.95	64.88	59.8%					84.6%			82.9%		
68.08 - 67.83	3429	4990	8419	29.98	43.41	73.39	51.7%				71.9%			72.2%			
67.83 - 62.83	3791	5311	9102	31.00	43.41	74.41	55.5%				76.2%			76.7%			
62.83 - 57.83	4177	5643	9819	32.02	43.41	75.43	59.2%				80.2%			80.8%			
57.83 - 52.83	4588	5984	10572	33.04	43.41	76.45	62.9%				83.9%			84.8%			
52.83 - 51.5	4702	6077	10779	33.32	43.41	76.73	63.8%				84.9%			85.8%			
51.5 - 46.5	5809	6214	12023	40.37	43.41	83.78	59.0%				83.4%			84.8%			
46.5 - 41.5	6353	6572	12925	41.60	43.41	85.01	61.7%				86.3%			87.9%			
41.5 - 37.75	6782	6848	13630	42.52	43.41	85.93	63.7%				88.4%			90.1%			
37.75 - 37.5	6810	7877	14687	42.58	48.96	91.54	59.3%		81.9%	78.4%				84.3%			
37.5 - 32.5	7414	8308	15721	43.80	48.96	92.76	61.8%		84.4%	80.9%				86.9%			
32.5 - 32.25	7455	9253	16708	43.86	55.34	99.20	59.0%		80.5%	76.1%			80.4%				
32.25 - 27.25	8095	9744	17840	45.09	55.34	100.42	61.4%		82.8%	78.4%			82.8%				
27.25 - 23.5	8600	10121	18721	46.00	55.34	101.34	63.1%		84.4%	79.9%			84.5%				
23.5 - 23.25	8810	12398	21208	46.07	72.28	118.34	59.5%	62.1%	79.5%	57.2%			75.1%				
23.25 - 20.75	9163	12712	21875	46.68	72.28	118.95	60.6%	63.0%	80.5%	58.1%			76.1%				
20.75 - 20.5	9060	11536	20596	46.74	61.96	108.69	62.8%	76.2%	81.7%				81.3%				
20.5 - 15.5	9789	12114	21903	47.96	61.96	109.92	65.1%	78.0%	83.6%				83.4%				
15.5 - 10.5	10556	12706	23261	49.19	61.96	111.14	67.2%	79.8%	85.5%				85.3%				
10.5 - 5.5	11361	13312	24673	50.41	61.96	112.37	69.4%	81.5%	87.2%				87.1%				
5.5 - 3	11779	13620	25399	51.02	61.96	112.98	70.4%	82.3%	88.0%				87.9%				
3 - 2.75	11844	15497	27342	51.08	64.77	115.85	66.2%	76.8%	82.6%								75.1%
2.75 - 0	12317	15870	28187	51.76	64.77	116.53	67.3%	77.6%	83.6%								75.9%

Note: Section capacity checked in 5 degree increments.

APPENDIX B

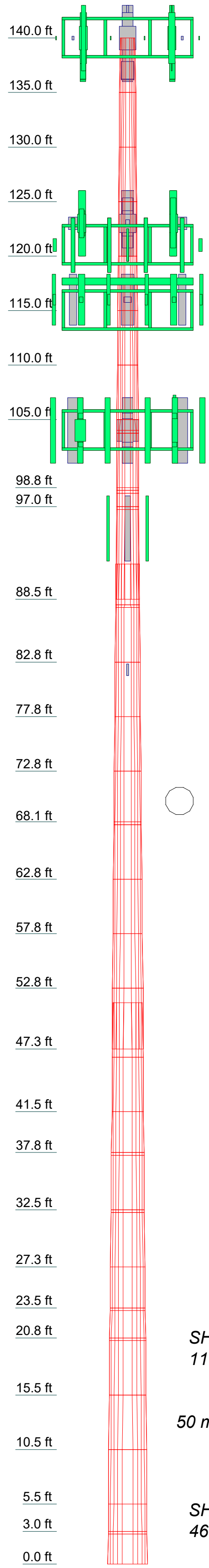
BASE LEVEL DRAWING


(RESERVED)
(1) 1/2" TO 104 FT LEVEL
(2) 1-5/8" TO 104 FT LEVEL
(INSTALLED-TO BE REMOVED)
(7) 1-5/8" TO 104 FT LEVEL
(INSTALLED)
(6) 1-5/8" TO 104 FT LEVEL
CLIMBING PEGS
(INSTALLED)
(11) 1-1/4" TO 115 FT LEVEL
(INSTALLED)
(1) 1/2" TO 80 FT LEVEL
(1) 1/2" TO 140 FT LEVEL
(3) 1 1/4" TO 140 FT LEVEL
(1) 1-5/8" TO 140 FT LEVEL
(INSTALLED)
(6) 1-5/8" TO 95 FT LEVEL
(INSTALLED)
(2) 2" CONDUITS
(INSTALLED)
(6) 1-5/8" TO 115 FT LEVEL
(PROPOSED)
(1) 3/8" TO 121 FT LEVEL
(2) 3/4" TO 121 FT LEVEL
(INSTALLED)
(1) 3/8" TO 121 FT LEVEL
(2) 7/16" TO 121 FT LEVEL
(12) 1-5/8" TO 121 FT LEVEL
Q4
Q1
Q3
Q2

APPENDIX C

ADDITIONAL CALCULATIONS

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.0000	12	0.2500		16.0000	17.0151	A572-65	0.2
2	5.0000	12	0.2500		17.0151	18.0303		0.2
3	5.0000	12	0.2500		18.0303	19.0454		0.3
4	5.0000	12	0.2500		19.0454	20.0606		0.3
5	5.0000	12	0.2500		20.0606	21.0757		0.3
6	5.0000	12	0.2500		21.0757	22.0909		0.3
7	[illegible]	12	[illegible]		22.0909	[illegible]		0.3
8–14	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
15	[illegible]	12	0.5000	3.2500	[illegible]	[illegible]		1.0
16–17	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]		[illegible]
18	5.0000	12	[illegible]		[illegible]	[illegible]		1.0
19	5.0000	12	0.7250		27.1236	28.1389		1.1
20	5.0000	12	0.7125		28.1389	29.1542		1.1
21	[illegible]	12	[illegible]		[illegible]	[illegible]		1.0
22	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
23	[illegible]	12	[illegible]		[illegible]	[illegible]		1.2
24	5.0000	12	0.7625		31.1684	32.1837		1.3
25	5.0000	12	0.7500		32.1837	33.1990		1.3
26	[illegible]	12	[illegible]	4.2500	[illegible]	[illegible]		1.5
27	[illegible]	12	[illegible]		[illegible]	[illegible]		1.4
28	5.0000	12	[illegible]		[illegible]	[illegible]		1.4
29	[illegible]	12	[illegible]		[illegible]	[illegible]		1.1
30	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
31	[illegible]	12	[illegible]		[illegible]	[illegible]		1.6
32	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
33	5.0000	12	[illegible]		[illegible]	[illegible]		1.7
34	[illegible]	12	[illegible]		[illegible]	[illegible]		1.3
35–37	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
38	5.0000	12	[illegible]		[illegible]	[illegible]		1.8
39	5.0000	12	0.8625		40.1531	41.1682		1.9
40	5.0000	12	0.8500		41.1682	42.1833		1.9
41–43	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
								31.5



DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
APXVSPP18-C-A20 w/ Mount Pipe	140	(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	121
APXVSPP18-C-A20 w/ Mount Pipe	140	(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	121
APXVSPP18-C-A20 w/ Mount Pipe	140	(4) L 4 x 4 x 1/4 x 5' Mount Angle (Horiz)	121
APXVTM14-C-120 w/ Mount Pipe	140	3' x 2" Sch 40 Pipe Mount	121
APXVTM14-C-120 w/ Mount Pipe	140	3' x 2" Sch 40 Pipe Mount	121
APXVTM14-C-120 w/ Mount Pipe	140	3' x 2" Sch 40 Pipe Mount	121
(3) ACU-A20-N	140	T-Arm Mount [TA 702-3]	118
(3) ACU-A20-N	140	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	115
(3) ACU-A20-N	140	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	115
TD-RRH8X20-25	140	APX16DWV-16DWV-S-E-A20 w/ Mount Pipe	115
TD-RRH8X20-25	140	(2) RR90-17-02DP w/ Mount Pipe	115
TD-RRH8X20-25	140	(2) RR90-17-02DP w/ Mount Pipe	115
(2) 2.375" OD x 6' Mount Pipe	140	(2) RR90-17-02DP w/ Mount Pipe	115
(2) 2.375" OD x 6' Mount Pipe	140	ETW200VS12UB	115
(2) 2.375" OD x 6' Mount Pipe	140	ETW200VS12UB	115
Platform Mount [LP 1201-1]	140	ETW200VS12UB	115
TME-1900MHz RRH (65 MHz)	137	(2) S20070A1	115
TME-1900MHz RRH (65 MHz)	137	(2) S20070A1	115
TME-1900MHz RRH (65 MHz)	137	(2) S20070A1	115
TME-800MHZ RRH	137	Platform Mount [LP 1201-1]	115
TME-800MHZ RRH	137	LNX-6514DS-VTM w/ Mount Pipe	104
TME-800MHZ RRH	137	LNX-6514DS-VTM w/ Mount Pipe	104
800MHz 2X50W RRH W/FILTER	137	LNX-6514DS-VTM w/ Mount Pipe	104
800MHz 2X50W RRH W/FILTER	137	(2) FD9R6004/2C-3L	104
800MHz 2X50W RRH W/FILTER	137	(2) FD9R6004/2C-3L	104
Side Arm Mount [SO 103-3]	137	(2) FD9R6004/2C-3L	104
7770.00 w/ Mount Pipe	121	DB-T1-6Z-8AB-0Z	104
7770.00 w/ Mount Pipe	121	ACUTIME 2000	104
7770.00 w/ Mount Pipe	121	(3) SBNHH-1D65B w/ Mount Pipe	104
(2) LGP21401	121	(3) SBNHH-1D65B w/ Mount Pipe	104
(2) LGP21401	121	(3) SBNHH-1D65B w/ Mount Pipe	104
(2) LGP21401	121	RRH2X60-700	104
DC6-48-60-18-8F	121	RRH2X60-700	104
QS66512-6 w/ Mount Pipe	121	RRH2X60-700	104
QS66512-6 w/ Mount Pipe	121	RRH2X60-PCS	104
QS66512-6 w/ Mount Pipe	121	RRH2X60-PCS	104
HPA-65R-BUU-H6 w/ Mount Pipe	121	RRH2X60-PCS	104
HPA-65R-BUU-H6 w/ Mount Pipe	121	RRH4X45-AWS4 B66	104
HPA-65R-BUU-H6 w/ Mount Pipe	121	RRH4X45-AWS4 B66	104
RRUS 11	121	RRH4X45-AWS4 B66	104
RRUS 11	121	DB-T1-6Z-8AB-0Z	104
RRUS 11	121	Platform Mount [LP 1201-1]	104
RRUS 32	121	APXV18-206517S-C w/ Mount Pipe	95
RRUS 32	121	APXV18-206517S-C w/ Mount Pipe	95
RRUS 32	121	APXV18-206517S-C w/ Mount Pipe	95
RRUS12/RRUS A2	121	Pipe Mount [PM 601-3]	95
RRUS12/RRUS A2	121	OG-860/1920/GPS-A	80
RRUS12/RRUS A2	121	Side Arm Mount [SO 901-1]	80
DBC0061F1V51-2	121		
DBC0061F1V51-2	121		
DBC0061F1V51-2	121		
DC6-48-60-18-8C	121		
Platform Mount [LP 1201-1]	121		
Miscellaneous [NA 510-1]	121		

ALL REACTIONS ARE FACTORED

AXIAL 101 K
SHEAR 11 K
MOMENT 1125 kip-ft
TORQUE 2 kip-ft
50 mph WIND - 0.7500 in ICE

AXIAL 61 K
SHEAR 46 K
MOMENT 4366 kip-ft
TORQUE 6 kip-ft
REACTIONS - 97 mph WIND

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-65	65 ksi	80 ksi			

TOWER DESIGN NOTES

1. Tower is located in New Haven County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 97 mph basic wind in accordance with the TIA-222-G Standard.
4. Tower is also designed for a 50 mph basic wind with 0.75 in ice. Ice is considered to increase in thickness with height.
5. Deflections are based upon a 60 mph wind.
6. Tower Structure Class II.
7. Topographic Category 1 with Crest Height of 0.0000 ft

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

Job: 140-Ft Monopole / Bic Drive (SSUSA)			
Project: PJF 37518-0321.002.7805 / BU# 876342			
Client: Crown Castle	Drawn by: gaustin	App'd:	
Code: TIA-222-G	Date: 05/10/18	Scale: NTS	
Path:		Dwg No. E-1	

PAUL J. FORD & COMPANY
250 E Broad St, Ste 600 • Columbus, OH 43215
Phone 614.221.6679 www.pauljford.com

v4.4 - Effective 7-12-13

Date: 5/10/2018
PJF Project: 37518-0321.002.7805
Client Ref. # 876342
Site Name: BIC Drive (SSUSA)
Description: 140' Pole
Owner: Crown Castle
Engineer: GJA

Asymmetric Anchor Rod Analysis

Moment =	4366	k-ft	TIA Ref.	G	Location =	Base Plate		
Axial =	61.0	kips	ASIF =	1.0000	η =	0.50	for BP, Rev. G Sect. 4.9.9	
Shear =	46.0	kips	Max Ratio =	105.0%	Threads =	N/A	for FP, Rev. G	
Anchor Qty =	19							

**** 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	Area Override, in^2	Area, in^2	Max Net Compression, kips	Max Net Tension, kips	Load for Capacity Calc, kips	Capacity Override, kips	Capacity, kips	Capacity Ratio
1	2.250	#18J A615 Gr 75	75	100	26.0	54.00	0.00	3.98	212.91	206.49	217.75	0.00	260.00	83.8%
2	2.250	#18J A615 Gr 75	75	100	39.0	54.00	0.00	3.98	214.28	207.86	219.12	0.00	260.00	84.3%
3	2.250	#18J A615 Gr 75	75	100	51.0	54.00	0.00	3.98	212.97	206.55	217.81	0.00	260.00	83.8%
4	2.250	#18J A615 Gr 75	75	100	64.0	54.00	0.00	3.98	209.05	202.63	213.90	0.00	260.00	82.3%
5	2.250	#18J A615 Gr 75	75	100	116.0	54.00	0.00	3.98	185.32	178.90	190.16	0.00	260.00	73.1%
6	2.250	#18J A615 Gr 75	75	100	129.0	54.00	0.00	3.98	183.03	176.61	187.87	0.00	260.00	72.3%
7	2.250	#18J A615 Gr 75	75	100	141.0	54.00	0.00	3.98	183.42	177.00	188.27	0.00	260.00	72.4%
8	2.250	#18J A615 Gr 75	75	100	154.0	54.00	0.00	3.98	186.22	179.80	191.07	0.00	260.00	73.5%
9	2.250	#18J A615 Gr 75	75	100	206.0	54.00	0.00	3.98	201.25	194.83	206.09	0.00	260.00	79.3%
10	2.250	#18J A615 Gr 75	75	100	219.0	54.00	0.00	3.98	201.06	194.64	205.90	0.00	260.00	79.2%
11	2.250	#18J A615 Gr 75	75	100	231.0	54.00	0.00	3.98	198.76	192.33	203.60	0.00	260.00	78.3%
12	2.250	#18J A615 Gr 75	75	100	244.0	54.00	0.00	3.98	194.28	187.86	199.13	0.00	260.00	76.6%
13	2.250	#18J A615 Gr 75	75	100	296.0	54.00	0.00	3.98	175.62	169.20	180.46	0.00	260.00	69.4%
14	2.250	#18J A615 Gr 75	75	100	309.0	54.00	0.00	3.98	176.57	170.15	181.41	0.00	260.00	69.8%
15	2.250	#18J A615 Gr 75	75	100	321.0	54.00	0.00	3.98	180.32	173.90	185.17	0.00	260.00	71.2%
16	2.250	#18J A615 Gr 75	75	100	334.0	54.00	0.00	3.98	186.81	180.39	191.66	0.00	260.00	73.7%
17	2.250	A193 Gr B7	105	125	125.0	66.30	0.00	3.98	223.36	216.95	228.20	0.00	325.00	70.2%
18	2.250	A193 Gr B7	105	125	240.0	66.30	0.00	3.98	241.15	234.73	245.99	0.00	325.00	75.7%
19	2.250	A193 Gr B7	105	125	330.0	66.30	0.00	3.98	225.71	219.29	230.55	0.00	325.00	70.9%

75.61

Square, Stiffened / Unstiffened Base Plate, Any Rod Material - Rev. F /G

Assumptions: 1) Rod groups at corners. Total # rods divisible by 4. Maximum total # of rods = 48 (12 per Corner).
2) Rod Spacing = Straight Center-to-Center distance between any (2) adjacent rods (same corner)
3) Clear space between bottom of leveling nut and top of concrete **not** exceeding (1)*(Rod Diameter)

Site Data

BU#: *846342*
Site Name: *BIC DRIVE (SSUSA)*
App #:

Anchor Rod Data		
Eta Factor, η	0.5	TIA G (Fig. 4-4)
Qty:	16	
Diam:	2.25	in
Rod Material:	A615-J	
Yield, Fy:	75	ksi
Strength, Fu:	100	ksi
Bolt Circle:	54	in
Anchor Spacing:	6	in

Plate Data		
W=Side:	56	in
Thick:	3	in
Grade:	50	ksi
Clip Distance:	6	in

Stiffener Data (Welding at both sides)		
Configuration:	Stiffened	
Weld Type:	Both	**
Groove Depth:	0.5	in **
Groove Angle:	45	degrees
Fillet H. Weld:	0.5	in
Fillet V. Weld:	0.3125	in
Width:	7.75	in
Height:	18	in
Thick:	1.25	in
Notch:	0.75	in
Grade:	65	ksi
Weld str.:	70	ksi

Pole Data		
Diam:	43.3	in
Thick:	0.375	in
Grade:	65	ksi
# of Sides:	12	"0" IF Round

Base Reactions		
TIA Revision:	G	
Factored Moment, Mu:	3799.2	ft-kips
Factored Axial, Pu:	51.4	kips
Factored Shear, Vu:	38.7	kips

Reactions adjusted to account for additional anchor rods.

Anchor Rod Results

TIA G --> Max Rod (Cu+ Vu/η):	219.1	Kips
Axial Design Strength, Φ*Fu*Anet:	260.0	Kips
Anchor Rod Stress Ratio:	84.3%	**Pass**

Base Plate Results Shear Check Only

Base Plate Stress:	4.6	ksi
PL Design Bending Strength, Φ*Fy:	27.0	ksi
Base Plate Stress Ratio:	17.1%	**Pass**

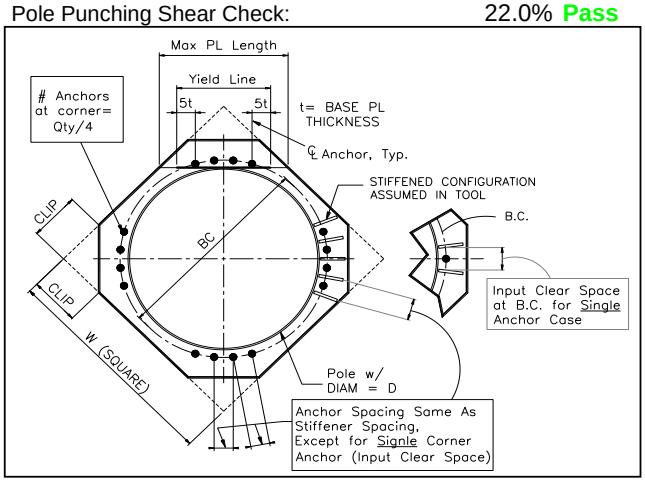
PL Ref. Data
Yield Line (in):
N/A, Roark
Max PL Length:
35.90

Stiffener Results

Horizontal Weld :	66.6%	**Pass**
Vertical Weld:	74.0%	**Pass**
Plate Flex+Shear, fb/Fb+(fv/Fv)^2:	11.7%	**Pass**
Plate Tension+Shear, ft/Ft+(fv/Fv)^2:	31.6%	**Pass**
Plate Comp. (AISC Bracket):	39.4%	**Pass**

Pole Results

Pole Punching Shear Check:	22.0%	**Pass**



** Note: for complete joint penetration groove welds the groove depth must be exactly 1/2 the stiffener thickness for calculation purposes

Pier and Pad Foundation

BU # :	876342
Site Name:	Bic Drive (SSUSA)
App. Number:	

TIA-222 Revision:	G
Tower Type:	Monopole

Block Foundation?:	☐

Superstructure Analysis Reactions		
Compression, P_{comp}:	61	kips
Base Shear, Vu_comp:	46	kips
Moment, M_u:	4366	ft-kips
Tower Height, **H**:	140	ft
BP Dist. Above Fdn, bp_{dist}:	3	in

Pier Properties		
Pier Shape:	Square	
Pier Diameter, **dpier**:	7.0	ft
Ext. Above Grade, **E**:	0.50	ft
Pier Rebar Size, **Sc**:	11	
Pier Rebar Quantity, **mc**:	32	
Pier Tie/Spiral Size, **St**:	5	
Pier Tie/Spiral Quantity, **mt**:		
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	10.0	ft
Pad Width, **W**:	22.5	ft
Pad Thickness, **T**:	4.0	ft
Pad Rebar Size, **Sp**:	11	
Pad Rebar Quantity, **mp**:	23	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties		
Rebar Grade, **Fy**:	60000	psi
Concrete Compressive Strength, **F'c**:	3000	psi
Dry Concrete Density, δ**c**:	150	pcf

Soil Properties		
Total Soil Unit Weight, γ:	130	pcf
Ultimate Net Bearing, Qnet:	20.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, φ:	32	degrees
SPT Blow Count, N_{blows}:	22	
Base Friction, μ:		
Neglected Depth, **N**:	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	N/A	ft

<--Toggle between Gross and Net

Foundation Analysis Checks

	Capacity	Demand	Rating	Check
Lateral (Sliding) (kips)	454.94	46.00	**10.1%**	**Pass**
Bearing Pressure (ksf)	15.98	3.45	**21.6%**	**Pass**
*Overturning (kip*ft)*	8525.00	4860.50	**57.0%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	7595.23	4665.00	**61.4%**	**Pass**
Pier Compression (kip)	23390.64	118.33	**0.5%**	**Pass**
*Pad Flexure (kip*ft)*	6671.79	1779.59	**26.7%**	**Pass**
Pad Shear - 1-way (kips)	951.31	265.84	**27.9%**	**Pass**
Pad Shear - 2-way (ksi)	0.16	0.03	**17.2%**	**Pass**

Soil Rating:	**57.0%**
Structural Rating:	**61.4%**