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

December 10, 2018

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

RE: **Notice of Exempt Modification for Verizon Wireless: 876334**
Verizon Site ID: 469273
625 Spring Street, Southington CT 06489
Latitude: 41° -37' 56.9"/ Longitude: -72° -53' 39.3"

Dear Ms. Bachman:

Verizon currently maintains twelve (12) antennas at the 133-foot level of the existing 158-foot monopole tower at 625 Spring Street, Southington, CT 06489. The tower is owned by Crown Castle as well the property. Verizon now intends to replace six (6) RRH's. Verizon also intends to add one (1) hybrid cable and (1) OVP.

This facility was approved by the Town of Southington Planning and Zoning Department on May 18, 1998. There were no conditions listed in the approval.

Please accept this letter as notification pursuant to Regulations of Connecticut State Agencies § 16-50j-73, for construction that constitutes an exempt modification pursuant to R.C.S.A. § 16-50j-72(b)(2). In accordance with R.S.C.A. § 16-50j-73, a copy of this letter is being sent to Town Manager Mr. Mark J. Sciota, Town of Southington and Planning & Zoning Department in the Town of Southington, CT. Crown Castle is the tower and property owner.

1. The proposed modifications will not result in an increase in the height of the existing tower.
2. The proposed modifications will not require the extension of the site boundary.
3. The proposed modification will not increase noise levels at the facility by six decibels or more, or to levels that exceed state and local criteria.

4. The operation of the replacement antennas will not increase radio frequency emissions at the facility to a level at or above the Federal Communication Commission safety standard.

5. The proposed modifications will not cause a change or alteration in the physical or environmental characteristics of the site.

6. The existing structure and its foundation can support the proposed loading.

For the foregoing reasons, Verizon respectfully submits that the proposed modifications to the above-reference telecommunications facility constitutes an exempt modification under R.C.S.A. § 16-50j-72(b)(2). Please send approval/rejection letter to Attn: Jeffrey Barbadora.

Sincerely,

Jeffrey Barbadora
Real Estate Specialist
12 Gill Street, Suite 5800, Woburn, MA 01801
781-729-0053
Jeff.Barbadora@crowncastle.com

Attachments:

Tab 1: Exhibit-1: Compound plan and elevation depicting the planned changes
Tab 2: Exhibit-2: Structural Modification Report
Tab 3: Exhibit-3: General Power Density Table Report (RF Emissions Analysis Report)

cc: Mr. Mark J. Sciota-Town
Manager
75 Main Street
Southington, CT

Planning and Zoning
Municipal Center
196 North Main Street
Southington, CT 06489

Rec'd 5/11/98
Ck# 1803
5/11/98
Smm

PLANNING AND ZONING DEPARTMENT

P.O. BOX 610 • SOUTHINGTON, CONN. 06489 • 203/276-6248

TOWN FEE: $10.00
STATE FEE: $10.00
TOTAL FEE: $20.00

Z.P. # 5625

ZONING PERMIT APPLICATION

Applicant (please print):

Sprint PCS
9 Barnes Industrial Road
Wallingford, CT. 06492
Telephone: 203-294-5676

Owner (please print):

Josephine Smoron
55 Smoron Drive
Southington, CT. 06489
Telephone: 860-628-6243

Address of Property: 625 Spring Street Zone: R-40
Utilities: Sewer N/A Septic System N/A Well N/A Town Water N/A

Proposed Activity: install Telecommunication Facility
Does proposed activity entail construction or land alteration within 50 feet of a wetland/wet area/waterbody? Yes X No ____

Date of following approvals: Special Permit* 12/9/97 Subdivision ____
Site Plan ~~12/9/97~~ Inland/Wetland ~~12/2/97~~ Filling of Floodplain ____
Variance ____ Special Exception* ____ Home Occupation* ____
Expansion of Non-Conforming Use* ____

Submit 7 set of plans. * NOTE: Provide one copy each of certain approval letters stamped by the Town Clerk and noting the volume and page number of the approval in the land records.

OFFICE USE ONLY	Approved	Denied
Planner/Inland Wetlands:	5/18/98	
Zoning Officer:	5/18/98	
Town Engineer:	5/15/98	
Water Department:		
Health Department:		

Approved for Zoning Permit. A copy of this approval shall be presented to the Building Official prior to issuance of a Building Permit.

Zoning Enforcement Officer 5/18/98 Date

CERTIFICATE OF ZONING COMPLIANCE Z.P. #____

I hereby certify that all improvements were installed in compliance with the Zoning Permit.

	Approved	Denied
Planner/Inland Wetlands:		
Zoning Officer:		
Town Engineer:		
Water Department:		
Health Department:		

Approved for Certificate of Zoning Compliance. A copy of this approval shall be presented to the Building Official prior to issuance of a Certificate of Occupancy.

1/94

Zoning Enforcement Officer Date

** I have received a copy of the ordinance requiring the fencing of pools

Signed ____
Print ____

625 SPRING ST

Location	625 SPRING ST	**Mblu**	168/ / 020/ /
Acct#	19111	**Owner**	GLOBAL SIGNAL ACQUISITIONS II LLC
Assessment	$160,910	**Appraisal**	$229,870
PID	15908	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$23,750	$206,120	$229,870
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2016	$16,630	$144,280	$160,910

Owner of Record

Owner	GLOBAL SIGNAL ACQUISITIONS II LLC	**Sale Price**	$0
Co-Owner		**Certificate**	
Address	4017 WASHINGTON RD PMB 331 CANONSBURG, PA 15317	**Book & Page**	788/ 214
		Sale Date	04/25/2001

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
GLOBAL SIGNAL ACQUISITIONS II LLC	$0		788/ 214	04/25/2001

Building Information

Building 1 : Section 1

Year Built:
Living Area: 0
Building Percent Good:

Building Attributes	
Field	**Description**
Style	Vacant w/OB
Model	

Building Photo

Building Photo
(http://images.vgsi.com/photos2/SouthingtonCTPhotos//\00\05\

Building Layout

(http://images.vgsi.com/photos2/SouthingtonCTPhotos//Sketche

Building Sub-Areas (sq ft)	Legend

Grade:	
Stories	
Occupancy	
Exterior Wall 1	
Exterior Wall 2	
Roof Structure	
Roof Cover	
Interior Wall 1	
Interior Wall 2	
Interior Flr 1	
Interior Flr 2	
Heat Fuel	
Heat Type:	
AC Type:	
Total Bedrooms:	
Full Bthrms:	
Half Baths:	
Extra Fixtures	
Total Rooms:	
Bath Style:	
Kitchen Style:	
Total Kitchens	
Fireplaces	
Whirlpool Tubs	
Fin Bsmt Area	
Fin Bsmt Quality	
Bsmt Garages	
Attic Type	
Cath Ceiling	

No Data for Building Sub-Areas

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code 438

Land Line Valuation

Size (Acres) 1.62

Description	Cell Site	**Depth**	
Zone	R-40		
Alt Land Appr	No		
Category			

Outbuildings

Outbuildings					Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Bldg #**
FN5	Fence-10'Chain			233 L.F.	1
SHD5	Cell Shed			360 units	1
SHD5	Cell Shed			240 units	1
SHD5	Cell Shed			180 units	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$3,500	$206,120	$209,620
2016	$3,500	$206,120	$209,620
2015	$3,500	$206,120	$209,620
2014	$3,500	$181,770	$185,270
2013	$3,500	$181,770	$185,270

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2017	$2,450	$144,280	$146,730
2016	$2,450	$144,280	$146,730
2015	$2,450	$144,280	$146,730
2014	$2,450	$127,240	$129,690
2013	$2,450	$127,240	$129,690

Site Name: Southington, CT
Cumulative Power Density

Operator	Operating Frequency	Number of Trans.	ERP Per Trans.	Total ERP	Distance to Target	Calculated Power Density	Maximum Permissable Exposure*	Fraction of MPE
	(MHz)		(watts)	(watts)	(feet)	(mW/cm^2)	(mW/cm^2)	(%)
VZW PCS	1970	1	5200	5200	132	0.1073	1.0	10.73%
VZW Cellular LTE	869	1	3150	3150	132	0.0650	0.579333333	11.22%
VZW Cellular	869	3	389	1167	132	0.0241	0.579333333	4.16%
VZW AWS	2145	1	5800	5800	132	0.1197	1.0	11.97%
VZW 700	746	1	2100	2100	132	0.0433	0.497333333	8.72%

Total Percentage of Maximum Permissible Exposure 46.80%

*Guidelines adopted by the FCC on August 1, 1996, 47 CFR Section 1.13101 based on NCRP Report 86, 1986 and generally on ANSI/IEEE C95.1

MHz = Megahertz
mW/cm^2 = milliwatts per square centimeter
ERP = Effective Radiated Power

Absolute worst case maximum values used, including the following assumptions:
1. closest accessible point is distance from antenna to base of pole;
2. continuous transmission from all available channels at full power for indefinite time period; and,
3. all RF energy is assumed to be directed solely to the base of the pole.

-1992

Barbadora, Jeff

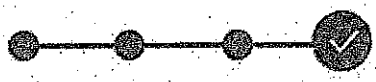
From: TrackingUpdates@fedex.com
Sent: Wednesday, December 12, 2018 10:53 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 773942144810 Delivered

Your package has been delivered

Tracking # 773942144810

Ship date:
Tue, 12/11/2018

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US



Delivered

Delivery date:
Wed, 12/12/2018 10:51 am

Planning & Zoning
Town of Southington
196 North Main Street
Municipal Center
SOUTHINGTON, CT 06489
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	773942144810
Status:	Delivered: 12/12/2018 10:51 AM Signed for By: D.LAVALEE
Reference:	1766.6680
Signed for by:	D.LAVALEE
Delivery location:	SOUTHINGTON, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Priority Overnight®
Packaging type:	FedEx® Envelope
Number of pieces:	1

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Wednesday, December 12, 2018 10:39 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 773942086641 Delivered

Your package has been delivered

Tracking # 773942086641

Ship date:
Tue, 12/11/2018

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US

Delivered

Delivery date:
Wed, 12/12/2018 10:35 am

Mark Sciota-Town Manager
Town of Southington
75 Main Street
SOUTHINGTON, CT 06489
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	773942086641
Status:	Delivered: 12/12/2018 10:35 AM Signed for By: P.BERARDINELLI
Reference:	1766.6680
Signed for by:	P.BERARDINELLI
Delivery location:	SOUTHINGTON, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Priority Overnight®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	0.50 lb.

Barbadora, Jeff

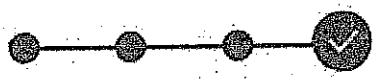
From: TrackingUpdates@fedex.com
Sent: Wednesday, December 12, 2018 10:15 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 773940236190 Delivered

Your package has been delivered

Tracking # 773940236190

Ship date:
Tue, 12/11/2018

Jeff Barbadora
Crown Castle
WOBURN, MA 01801
US



Delivered

Delivery date:
Wed, 12/12/2018 10:12 am

Building Department
City of Bristol
111 N. Main Street
BRISTOL, CT 06010
US

Shipment Facts

Our records indicate that the following package has been delivered.

Tracking number:	773940236190
Status:	Delivered: 12/12/2018 10:12 AM Signed for By: D.ROSA
Reference:	1766.6680
Signed for by:	D.ROSA
Delivery location:	BRISTOL, CT
Delivered to:	Receptionist/Front Desk
Service type:	FedEx Priority Overnight®
Packaging type:	FedEx® Envelope
Number of pieces:	1
Weight:	1.00 lb.
Special handling/Services:	Deliver Weekday

Date: **January 14, 2019**

Amanda D Brown
Crown Castle
3530 Toringdon Way, Suite 300
Charlotte, NC 28277

Crown Castle
2000 Corporate Drive
Canonsburg, PA
(724) 416-2000

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Verizon Wireless* Equipment Swap**	
	Carrier Site Number:	20702
	Carrier Site Name:	Southington CT
Crown Castle Designation:	**Crown Castle BU Number:**	876334
	Crown Castle Site Name:	SOUTHINGTON, SMORON
	Crown Castle JDE Job Number:	518917
	Crown Castle Work Order Number:	1681343
	Crown Castle Order Number:	450298 Rev. 0
Engineering Firm Designation:	**Crown Castle Project Number:**	1681343
Site Data:	**625 Spring Street, SOUTHINGTON, Hartford County, CT** **Latitude *41° 37' 56.9"*, Longitude *-72° 53' 39.3"*** **160 Foot - Monopole Tower**	

Dear Amanda D Brown,

Crown Castle is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above mentioned tower.

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

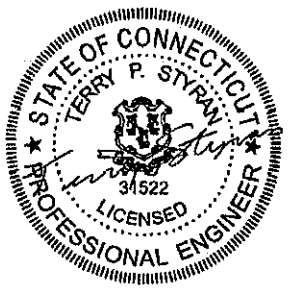
LC6.5: Existing Equipment + Maintenance Configuration Change (MCC) **Sufficient Capacity**

The analysis has been performed in accordance with the TIA-222-G Standard as allowed by Section 101.4.7, Existing Buildings, of the 2015 IBC and Section 301.1 Exception of the 2015 IEBC based upon a nominal 3-second gust wind speed of 125 mph converted to a nominal 3-second gust wind speed of 97 mph per Section 1609.3.1 and Appendix N. Applicable standard references and design criteria are listed in Section 2 - ANALYSIS CRITERIA.

This proposed configuration change is considered maintenance and does not increase the loading or stress rating of the tower and foundation. Therefore, conformance to TIA-222-H is not required.

Structural analysis prepared by: Nicholas Cvetic, E.I.T. / MEH

Respectfully submitted by:



Terry P. Styran, P.E.
Senior Project Engineer

1/15/2019

tnxTower Report - version 8.0.4.0

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 160ft monopole tower designed by Summit.

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

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-G
Risk Category:	II
Wind Speed:	97 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Seismic Ss:	0.185
Seismic S1:	0.064
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
132.0	134.0	3	antel	BXA-80080-6CF-EDIN-X w/ Mount Pipe	7 1	1-5/8 1-1/4
	133.0	3	tower mounts	Side-by-Side Mounting Kit [PN. BSAMNT-SBS-2-2]		
		6	andrew	SBNHH-1D65B w/ Mount Pipe		
		3	antel	BXA-70063/6CFx2		
		1	rfs celwave	DB-C1-12C-24AB-0Z		
		1	rfs celwave	DB-T1-6Z-8AB-0Z		
		3	samsung telecommunications	RFV01U-D1A		
		3	samsung telecommunications	RFV01U-D2A		
	132.0	1	tower mounts	Pipe Mount [PM 602-3]		
		1	tower mounts	Sector Mount [SM 503-3]		

Table 2 - Equipment to be Removed, Not Considered in Analysis

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
132.0	133.0	3	alcatel lucent	RRH2X60-AWS	13	1-5/8
		3	alcatel lucent	RRH2X60-PCS		
		3	alcatel lucent	RRH2x60-700		
		1	rfs celwave	DB-T1-6Z-8AB-0Z		
	132.0	1	tower mounts	Platform Mount [LP 712-1]		

Table 3 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
156.0	157.0	4	andrew	SBNH-1D6565C w/ Mount Pipe	6 2 1	1-5/8 3/4 3/8
		3	communication components inc.	DTMABP7819VG12A		
		3	ericsson	RRUS 11 B12		
		3	ericsson	RRUS 11 B2		
		2	kmw communications	AM-X-CD-16-65-00T-RET w/ Mount Pipe		
		1	raycap	DC6-48-60-18-8F		
	156.0	1	tower mounts	T-Arm Mount [TA 703-3]		
148.0	148.0	3	alcatel lucent	800MHz 2X50W RRH W/FILTER	-	-
		6	alcatel lucent	PCS 1900MHz 4x45W-65MHz		
		1	tower mounts	Side Arm Mount [SO 103-3]		
146.0	147.0	3	alcatel lucent	TD-RRH8x20-25	4	1-1/4
		1	rfs celwave	APXV9ERR18-C-A20 w/ Mount Pipe		
		2	rfs celwave	APXVSPP18-C-A20 w/ Mount Pipe		
		3	rfs celwave	APXVTM14-C-120 w/ Mount Pipe		
	146.0	1	crown mounts	Platform Mount [LP 1201-1]		
		3	rfs celwave	IBC1900BB-1		
		3	rfs celwave	IBC1900HG-2A		
		1	tower mounts	Miscellaneous [NA 510-1]		
139.0	139.0	3	rfs celwave	APXV18-206517S-C	6	1-5/8
		1	tower mounts	Pipe Mount [PM 501-3]		
129.0	130.0	3	dragonwave	HORIZON COMPACT	3	1/2
	129.0	1	tower mounts	Side Arm Mount [SO 104-3]		
	127.0	1	andrew	VHLP2-18		
		2	andrew	VHLP800-11		
101.0	102.0	1	symmetricom	58532A	1	1/2
	101.0	1	tower mounts	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 4 - Documents Provided

Document	Remarks	Reference	Source
4-TOWER MANUFACTURER DRAWINGS	Paul J. Ford and Company	1614569	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	Paul J. Ford and Company	1999756	CCISITES
4-GEOTECHNICAL REPORTS	FDH	1530919	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Paul J. Ford and Company	2588177	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Paul J. Ford and Company	3363885	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	FDH	5288062	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	FDH	5755362	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	FDH	6249238	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	Jacobs	6962729	CCISITES
4-POST-MODIFICATION INSPECTION	Paul J. Ford and Company	2588175	CCISITES
4-POST-MODIFICATION INSPECTION	TEP	3794196	CCISITES
4-POST-MODIFICATION INSPECTION	TEP	5570676	CCISITES
4-POST-MODIFICATION INSPECTION	FDH	5888770	CCISITES
4-POST-MODIFICATION INSPECTION	ETS	6544953	CCISITES
4-POST-MODIFICATION INSPECTION	ETS	7104038	CCISITES

3.1) Analysis Method

tnxTower (version 8.0.4.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A.

3.2) Assumptions

1) Tower and structures were built and maintained in accordance with the manufacturer's specifications.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

4) ANALYSIS RESULTS

Table 5 - Section Capacity (Summary)

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
160 - 155	Pole	TP16x16x0.375	Pole	4.2%	Pass
155 - 150	Pole	TP16x16x0.375	Pole	15.1%	Pass
150 - 146	Pole	TP16x16x0.375	Pole	25.8%	Pass
146 - 141	Pole	TP22.924x22x0.25	Pole	22.0%	Pass
141 - 136	Pole	TP23.848x22.924x0.25	Pole	31.3%	Pass
136 - 131	Pole	TP24.772x23.848x0.25	Pole	42.2%	Pass
131 - 126	Pole	TP25.696x24.772x0.25	Pole	55.6%	Pass
126 - 121	Pole	TP26.62x25.696x0.25	Pole	68.5%	Pass
121 - 120.1	Pole	TP26.786x26.62x0.25	Pole	70.7%	Pass
120.1 - 119.85	Pole + Reinf.	TP26.833x26.786x0.4875	Reinf. 21 Tension Rupture	50.4%	Pass
119.85 - 117.5	Pole + Reinf.	TP27.267x26.833x0.4875	Reinf. 21 Tension Rupture	54.4%	Pass
117.5 - 117.25	Pole + Reinf.	TP27.313x27.267x0.5	Reinf. 22 Tension Rupture	50.8%	Pass
117.25 - 115.5	Pole + Reinf.	TP27.637x27.313x0.5	Reinf. 22 Tension Rupture	53.5%	Pass
115.5 - 115.25	Pole + Reinf.	TP27.683x27.637x0.6625	Reinf. 1 Tension Rupture	47.2%	Pass
115.25 - 110.25	Pole + Reinf.	TP28.607x27.683x0.65	Reinf. 1 Tension Rupture	53.9%	Pass
110.25 - 107.5	Pole + Reinf.	TP29.808x28.607x0.6375	Reinf. 1 Tension Rupture	57.4%	Pass
107.5 - 102.5	Pole + Reinf.	TP29.074x28.082x0.7125	Reinf. 1 Tension Rupture	60.6%	Pass
102.5 - 100.5	Pole + Reinf.	TP29.471x29.074x0.7	Reinf. 1 Tension Rupture	62.6%	Pass
100.5 - 100.25	Pole + Reinf.	TP29.521x29.471x0.6375	Reinf. 21 Tension Rupture	64.1%	Pass
100.25 - 98.5	Pole + Reinf.	TP29.868x29.521x0.6375	Reinf. 21 Tension Rupture	65.8%	Pass
98.5 - 98.25	Pole + Reinf.	TP29.917x29.868x0.6625	Reinf. 23 Tension Rupture	63.0%	Pass
98.25 - 93.25	Pole + Reinf.	TP30.909x29.917x0.65	Reinf. 23 Tension Rupture	67.6%	Pass
93.25 - 90.5	Pole + Reinf.	TP31.455x30.909x0.65	Reinf. 23 Tension Rupture	69.9%	Pass
90.5 - 90.25	Pole + Reinf.	TP31.504x31.455x0.6875	Reinf. 23 Tension Rupture	69.0%	Pass
90.25 - 85.25	Pole + Reinf.	TP32.496x31.504x0.675	Reinf. 23 Tension Rupture	73.1%	Pass
85.25 - 83.5	Pole + Reinf.	TP32.843x32.496x0.6625	Reinf. 23 Tension Rupture	74.4%	Pass
83.5 - 83.25	Pole + Reinf.	TP32.893x32.843x0.9125	Reinf. 6 Tension Rupture	56.4%	Pass
83.25 - 80.75	Pole + Reinf.	TP33.389x32.893x0.9	Reinf. 6 Tension Rupture	57.9%	Pass
80.75 - 80.5	Pole + Reinf.	TP33.439x33.389x1.0625	Reinf. 6 Tension Rupture	47.6%	Pass
80.5 - 80.25	Pole + Reinf.	TP33.488x33.439x0.9875	Reinf. 11 Tension Rupture	51.2%	Pass
80.25 - 77.5	Pole + Reinf.	TP34.034x33.488x0.9625	Reinf. 11 Tension Rupture	52.7%	Pass
77.5 - 77.25	Pole + Reinf.	TP34.083x34.034x0.6875	Reinf. 11 Tension Rupture	73.8%	Pass
77.25 - 73	Pole + Reinf.	TP35.819x34.083x0.6875	Reinf. 11 Tension Rupture	76.7%	Pass
73 - 68	Pole + Reinf.	TP35.233x34.301x0.75	Reinf. 11 Tension Rupture	74.9%	Pass
68 - 64.25	Pole + Reinf.	TP35.932x35.233x0.7375	Reinf. 11 Tension Rupture	77.1%	Pass
64.25 - 64	Pole + Reinf.	TP35.978x35.932x0.875	Reinf. 7 Tension Rupture	68.0%	Pass

64 - 60.5	Pole + Reinf.	TP36.63x35.978x0.8625	Reinf. 7 Tension Rupture	69.8%	Pass
60.5 - 60.25	Pole + Reinf.	TP36.677x36.63x0.925	Reinf. 7 Tension Rupture	65.8%	Pass
60.25 - 60.1	Pole + Reinf.	TP36.705x36.677x0.925	Reinf. 7 Tension Rupture	65.9%	Pass
60.1 - 59.85	Pole + Reinf.	TP36.751x36.705x0.975	Reinf. 7 Tension Rupture	63.8%	Pass
59.85 - 59.1	Pole + Reinf.	TP36.891x36.751x0.975	Reinf. 7 Tension Rupture	64.1%	Pass
59.1 - 58.85	Pole + Reinf.	TP36.938x36.891x1.05	Reinf. 7 Tension Rupture	58.4%	Pass
58.85 - 55.4	Pole + Reinf.	TP37.581x36.938x1.025	Reinf. 7 Tension Rupture	59.9%	Pass
55.4 - 55.15	Pole + Reinf.	TP37.627x37.581x1.025	Reinf. 7 Tension Rupture	60.0%	Pass
55.15 - 54.75	Pole + Reinf.	TP37.702x37.627x1.025	Reinf. 7 Tension Rupture	60.2%	Pass
54.75 - 54.5	Pole + Reinf.	TP37.748x37.702x0.825	Reinf. 10 Tension Rupture	73.0%	Pass
54.5 - 49.5	Pole + Reinf.	TP38.68x37.748x0.8125	Reinf. 10 Tension Rupture	75.3%	Pass
49.5 - 44.5	Pole + Reinf.	TP39.612x38.68x0.8	Reinf. 10 Tension Rupture	77.5%	Pass
44.5 - 41.3	Pole + Reinf.	TP40.208x39.612x0.7875	Reinf. 10 Tension Rupture	78.8%	Pass
41.3 - 41.05	Pole + Reinf.	TP40.254x40.208x0.875	Reinf. 10 Tension Rupture	69.2%	Pass
41.05 - 39	Pole + Reinf.	TP41.568x40.254x0.875	Reinf. 10 Tension Rupture	69.9%	Pass
39 - 33	Pole + Reinf.	TP40.996x39.886x1.175	Reinf. 10 Tension Rupture	54.7%	Pass
33 - 31.5	Pole + Reinf.	TP41.274x40.996x1.175	Reinf. 10 Tension Rupture	55.2%	Pass
31.5 - 31.25	Pole + Reinf.	TP41.32x41.274x1.175	Reinf. 10 Tension Rupture	54.9%	Pass
31.25 - 30.5	Pole + Reinf.	TP41.459x41.32x1.175	Reinf. 10 Tension Rupture	55.1%	Pass
30.5 - 30.25	Pole + Reinf.	TP41.505x41.459x1.125	Reinf. 9 Tension Rupture	57.8%	Pass
30.25 - 25.75	Pole + Reinf.	TP42.337x41.505x1.1	Reinf. 9 Tension Rupture	59.2%	Pass
25.75 - 25.5	Pole + Reinf.	TP42.383x42.337x1.075	Reinf. 9 Tension Rupture	62.5%	Pass
25.5 - 24.7	Pole + Reinf.	TP42.531x42.383x1.075	Reinf. 9 Tension Rupture	62.8%	Pass
24.7 - 24.45	Pole + Reinf.	TP42.578x42.531x0.95	Reinf. 9 Tension Rupture	68.8%	Pass
24.45 - 24	Pole + Reinf.	TP42.661x42.578x0.95	Reinf. 9 Tension Rupture	68.9%	Pass
24 - 23.75	Pole + Reinf.	TP42.707x42.661x1.2	Reinf. 9 Tension Rupture	55.6%	Pass
23.75 - 18.75	Pole + Reinf.	TP43.632x42.707x1.175	Reinf. 9 Tension Rupture	57.0%	Pass
18.75 - 14.1	Pole + Reinf.	TP44.492x43.632x1.15	Reinf. 9 Tension Rupture	58.4%	Pass
14.1 - 13.8	Pole + Reinf.	TP44.547x44.492x1.175	Reinf. 9 Tension Rupture	56.9%	Pass
13.8 - 13.65	Pole + Reinf.	TP44.575x44.547x1.175	Reinf. 9 Tension Rupture	57.0%	Pass
13.65 - 10.5	Pole + Reinf.	TP45.158x44.575x1.175	Reinf. 9 Tension Rupture	57.8%	Pass
10.5 - 10.25	Pole + Reinf.	TP45.204x45.158x1.175	Reinf. 9 Tension Rupture	57.9%	Pass
10.25 - 5.25	Pole + Reinf.	TP46.129x45.204x1.15	Reinf. 9 Tension Rupture	59.2%	Pass
5.25 - 3	Pole + Reinf.	TP46.545x46.129x1.125	Reinf. 9 Tension Rupture	59.8%	Pass
3 - 2.9	Pole + Reinf.	TP46.564x46.545x1.0875	Reinf. 9 Tension Rupture	61.7%	Pass
2.9 - 2.75	Pole + Reinf.	TP46.591x46.564x1.025	Reinf. 9 Tension Rupture	68.1%	Pass
2.75 - 2.65	Pole + Reinf.	TP46.61x46.591x1.025	Reinf. 9 Tension Rupture	68.1%	Pass
2.65 - 2.5	Pole + Reinf.	TP46.638x46.61x1.025	Reinf. 9 Tension Rupture	68.2%	Pass
2.5 - 2.25	Pole + Reinf.	TP46.684x46.638x1	Reinf. 18 Compression	62.1%	Pass

2.25 - 1.9	Pole + Reinf.	TP46.749x46.684x1	Reinf. 18 Compression	62.2%	Pass
1.9 - 1.65	Pole + Reinf.	TP46.795x46.749x0.95	Reinf. 18 Compression	63.6%	Pass
1.65 - 0	Pole + Reinf.	TP47.1x46.795x0.95	Reinf. 18 Compression	63.9%	Pass
				Summary	
			Pole	70.7%	Pass
			Reinforcement	78.8%	Pass
			Overall	78.8%	Pass

Table 6 - Tower Component Stresses vs. Capacity - LC6.5

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Original Anchor Rods	0	63.7	Pass
1	Additional Anchor Rods	0	60.5	Pass
1	Base Plate	0	56.8	Pass
1	Base Foundation Structure	0	60.2	Pass
1	Base Foundation Soil Interaction	0	74.3	Pass

Structure Rating (max from all components) =	**78.8%**

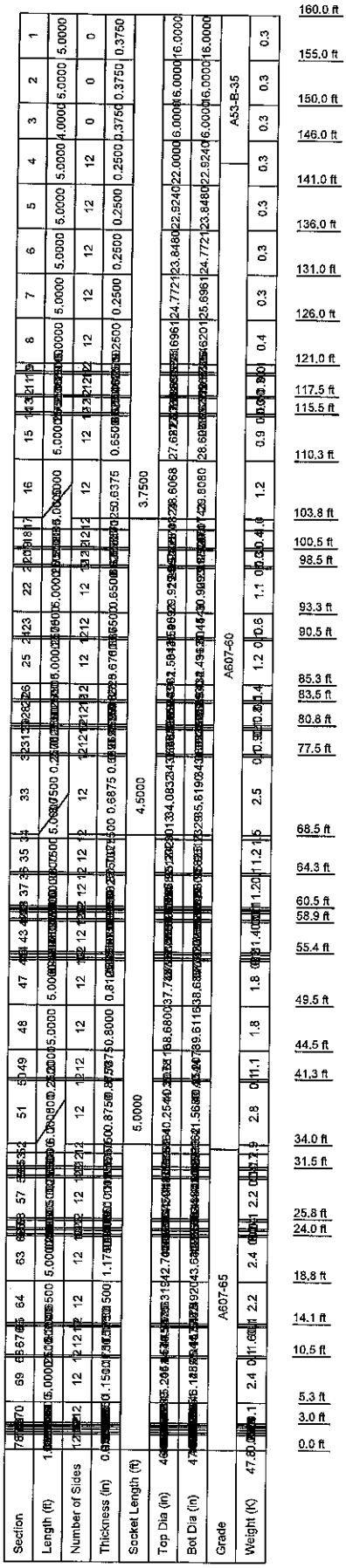
Notes:
1) See additional documentation in "Appendix C - Additional Calculations" for calculations supporting the % capacity consumed.

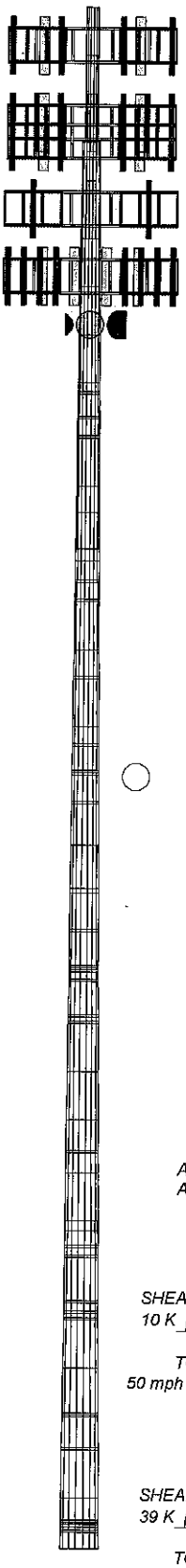
4.1) Recommendations

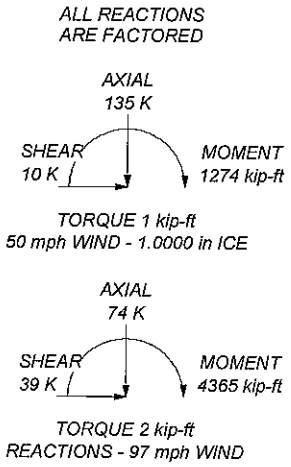
The tower and its foundation have sufficient capacity to carry the proposed load configuration. No modifications are required at this time.

APPENDIX A

TNXTOWER OUTPUT







MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	60 ksi	A607-65	65 ksi	80 ksi
A607-60	60 ksi	75 ksi			

TOWER DESIGN NOTES

1. Tower is located in Hartford 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 1.00 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
8. TOWER RATING: 78.8%

CROWN CASTLE The Pathway to Possible	*Crown Castle* 2000 Corporate Drive Canonsburg, PA 15317 Phone: (724) 416-2000 FAX:
Job:	***BU# 876334***
Project:	
Client: Crown Castle	Drawn by: Matt Hussak — App'd:
Code: TIA-222-G	Date: 01/15/19 — Scale: NTS
Path: R:\SA Models - Letters\Work Area\NCvetki\1_WIP\876334 WO 1681343\QA MEH\876334 Reinforced.eri	Dwg No. E-1

Tower Input Data

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

1) Tower is located in Hartford County, Connecticut.
2) Basic wind speed of 97 mph.
3) Structure Class II.
4) Exposure Category C.
5) Topographic Category 1.
6) Crest Height 0.0000 ft.
7) Nominal ice thickness of 1.0000 in.
8) Ice thickness is considered to increase with height.
9) Ice density of 56.0000 pcf.
10) A wind speed of 50 mph is used in combination with ice.
11) Deflections calculated using a wind speed of 60 mph.
12) A non-linear (P-delta) analysis was used.
13) Pressures are calculated at each section.
14) Stress ratio used in pole design is 1.
15) 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	Ignore KL/ry For 60 Deg. Angle Legs	Pole Without Linear Attachments
		Pole With Shroud Or No Appurtenances
		Outside and Inside Corner Radii Are Known

Tapered Pole Section Geometry

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L1	160.0000-155.0000	5.0000	0.0000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L2	155.0000-150.0000	5.0000	0.0000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L3	150.0000-146.0000	4.0000	0.0000	Round	16.0000	16.0000	0.3750		A53-B-35 (35 ksi)
L4	146.0000-141.0000	5.0000	0.0000	12	22.0000	22.9240	0.2500	1.0000	A607-60 (60 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L5	141.0000-136.0000	5.0000	0.0000	12	22.9240	23.8480	0.2500	1.0000	A607-60 (60 ksi)
L6	136.0000-131.0000	5.0000	0.0000	12	23.8480	24.7721	0.2500	1.0000	A607-60 (60 ksi)
L7	131.0000-126.0000	5.0000	0.0000	12	24.7721	25.6961	0.2500	1.0000	A607-60 (60 ksi)
L8	126.0000-121.0000	5.0000	0.0000	12	25.6961	26.6201	0.2500	1.0000	A607-60 (60 ksi)
L9	121.0000-120.1000	0.9000	0.0000	12	26.6201	26.7864	0.2500	1.0000	A607-60 (60 ksi)
L10	120.1000-119.8500	0.2500	0.0000	12	26.7864	26.8326	0.4875	1.9500	A607-60 (60 ksi)
L11	119.8500-117.5000	2.3500	0.0000	12	26.8326	27.2669	0.4875	1.9500	A607-60 (60 ksi)
L12	117.5000-117.2500	0.2500	0.0000	12	27.2669	27.3131	0.5000	2.0000	A607-60 (60 ksi)
L13	117.2500-115.5000	1.7500	0.0000	12	27.3131	27.6365	0.5000	2.0000	A607-60 (60 ksi)
L14	115.5000-115.2500	0.2500	0.0000	12	27.6365	27.6827	0.6625	2.6500	A607-60 (60 ksi)
L15	115.2500-110.2500	5.0000	0.0000	12	27.6827	28.6068	0.6500	2.6000	A607-60 (60 ksi)
L16	110.2500-103.7500	6.5000	3.7500	12	28.6068	29.8080	0.6375	2.5500	A607-60 (60 ksi)
L17	103.7500-102.5000	5.0000	0.0000	12	28.0824	29.0743	0.7125	2.8500	A607-60 (60 ksi)
L18	102.5000-100.5000	2.0000	0.0000	12	29.0743	29.4711	0.7000	2.8000	A607-60 (60 ksi)
L19	100.5000-100.2500	0.2500	0.0000	12	29.4711	29.5206	0.6375	2.5500	A607-60 (60 ksi)
L20	100.2500-98.5000	1.7500	0.0000	12	29.5206	29.8678	0.6375	2.5500	A607-60 (60 ksi)
L21	98.5000-98.2500	0.2500	0.0000	12	29.8678	29.9174	0.6625	2.6500	A607-60 (60 ksi)
L22	98.2500-93.2500	5.0000	0.0000	12	29.9174	30.9093	0.6500	2.6000	A607-60 (60 ksi)
L23	93.2500-90.5000	2.7500	0.0000	12	30.9093	31.4548	0.6500	2.6000	A607-60 (60 ksi)
L24	90.5000-90.2500	0.2500	0.0000	12	31.4548	31.5044	0.6875	2.7500	A607-60 (60 ksi)
L25	90.2500-85.2500	5.0000	0.0000	12	31.5044	32.4962	0.6750	2.7000	A607-60 (60 ksi)
L26	85.2500-83.5000	1.7500	0.0000	12	32.4962	32.8434	0.6625	2.6500	A607-60 (60 ksi)
L27	83.5000-83.2500	0.2500	0.0000	12	32.8434	32.8930	0.9125	3.6500	A607-60 (60 ksi)
L28	83.2500-80.7500	2.5000	0.0000	12	32.8930	33.3889	0.9000	3.6000	A607-60 (60 ksi)
L29	80.7500-80.5000	0.2500	0.0000	12	33.3889	33.4385	1.0625	4.2500	A607-60 (60 ksi)
L30	80.5000-80.2500	0.2500	0.0000	12	33.4385	33.4881	0.9875	3.9500	A607-60 (60 ksi)
L31	80.2500-77.5000	2.7500	0.0000	12	33.4881	34.0336	0.9625	3.8500	A607-60 (60 ksi)
L32	77.5000-77.2500	0.2500	0.0000	12	34.0336	34.0832	0.6875	2.7500	A607-60 (60 ksi)
L33	77.2500-68.5000	8.7500	4.5000	12	34.0832	35.8190	0.6875	2.7500	A607-60 (60 ksi)
L34	68.5000-68.0000	5.0000	0.0000	12	34.3013	35.2329	0.7500	3.0000	A607-60 (60 ksi)
L35	68.0000-64.2500	3.7500	0.0000	12	35.2329	35.9317	0.7375	2.9500	A607-60 (60 ksi)
L36	64.2500-64.0000	0.2500	0.0000	12	35.9317	35.9782	0.8750	3.5000	A607-60 (60 ksi)
L37	64.0000-60.5000	3.5000	0.0000	12	35.9782	36.6304	0.8625	3.4500	A607-60 (60 ksi)
L38	60.5000-60.2500	0.2500	0.0000	12	36.6304	36.6770	0.9250	3.7000	A607-60 (60 ksi)
L39	60.2500-	0.1500	0.0000	12	36.6770	36.7049	0.9250	3.7000	A607-60

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
	60.1000								(60 ksi)
L40	60.1000-59.8500	0.2500	0.0000	12	36.7049	36.7515	0.9750	3.9000	A607-60 (60 ksi)
L41	59.8500-59.1000	0.7500	0.0000	12	36.7515	36.8912	0.9750	3.9000	A607-60 (60 ksi)
L42	59.1000-58.8500	0.2500	0.0000	12	36.8912	36.9378	1.0500	4.2000	A607-60 (60 ksi)
L43	58.8500-55.4000	3.4500	0.0000	12	36.9378	37.5806	1.0250	4.1000	A607-60 (60 ksi)
L44	55.4000-55.1500	0.2500	0.0000	12	37.5806	37.6272	1.0250	4.1000	A607-60 (60 ksi)
L45	55.1500-54.7500	0.4000	0.0000	12	37.6272	37.7018	1.0250	4.1000	A607-60 (60 ksi)
L46	54.7500-54.5000	0.2500	0.0000	12	37.7018	37.7483	0.8250	3.3000	A607-60 (60 ksi)
L47	54.5000-49.5000	5.0000	0.0000	12	37.7483	38.6800	0.8125	3.2500	A607-60 (60 ksi)
L48	49.5000-44.5000	5.0000	0.0000	12	38.6800	39.6116	0.8000	3.2000	A607-60 (60 ksi)
L49	44.5000-41.3000	3.2000	0.0000	12	39.6116	40.2078	0.7875	3.1500	A607-60 (60 ksi)
L50	41.3000-41.0500	0.2500	0.0000	12	40.2078	40.2544	0.8750	3.5000	A607-60 (60 ksi)
L51	41.0500-34.0000	7.0500	5.0000	12	40.2544	41.5680	0.8750	3.5000	A607-60 (60 ksi)
L52	34.0000-33.0000	6.0000	0.0000	12	39.8864	40.9962	1.1750	4.7000	A607-65 (65 ksi)
L53	33.0000-31.5000	1.5000	0.0000	12	40.9962	41.2736	1.1750	4.7000	A607-65 (65 ksi)
L54	31.5000-31.2500	0.2500	0.0000	12	41.2736	41.3199	1.1750	4.7000	A607-65 (65 ksi)
L55	31.2500-30.5000	0.7500	0.0000	12	41.3199	41.4586	1.1750	4.7000	A607-65 (65 ksi)
L56	30.5000-30.2500	0.2500	0.0000	12	41.4586	41.5048	1.1250	4.5000	A607-65 (65 ksi)
L57	30.2500-25.7500	4.5000	0.0000	12	41.5048	42.3372	1.1000	4.4000	A607-65 (65 ksi)
L58	25.7500-25.5000	0.2500	0.0000	12	42.3372	42.3834	1.0750	4.3000	A607-65 (65 ksi)
L59	25.5000-24.7000	0.8000	0.0000	12	42.3834	42.5314	1.0750	4.3000	A607-65 (65 ksi)
L60	24.7000-24.4500	0.2500	0.0000	12	42.5314	42.5776	0.9500	3.8000	A607-65 (65 ksi)
L61	24.4500-24.0000	0.4500	0.0000	12	42.5776	42.6608	0.9500	3.8000	A607-65 (65 ksi)
L62	24.0000-23.7500	0.2500	0.0000	12	42.6608	42.7071	1.2000	4.8000	A607-65 (65 ksi)
L63	23.7500-18.7500	5.0000	0.0000	12	42.7071	43.6319	1.1750	4.7000	A607-65 (65 ksi)
L64	18.7500-14.1000	4.6500	0.0000	12	43.6319	44.4920	1.1500	4.6000	A607-65 (65 ksi)
L65	14.1000-13.8000	0.3000	0.0000	12	44.4920	44.5475	1.1750	4.7000	A607-65 (65 ksi)
L66	13.8000-13.6500	0.1500	0.0000	12	44.5475	44.5752	1.1750	4.7000	A607-65 (65 ksi)
L67	13.6500-10.5000	3.1500	0.0000	12	44.5752	45.1579	1.1750	4.7000	A607-65 (65 ksi)
L68	10.5000-10.2500	0.2500	0.0000	12	45.1579	45.2041	1.1750	4.7000	A607-65 (65 ksi)
L69	10.2500-5.2500	5.0000	0.0000	12	45.2041	46.1289	1.1500	4.6000	A607-65 (65 ksi)
L70	5.2500-3.0000	2.2500	0.0000	12	46.1289	46.5451	1.1250	4.5000	A607-65 (65 ksi)
L71	3.0000-2.9000	0.1000	0.0000	12	46.5451	46.5636	1.0875	4.3500	A607-65 (65 ksi)
L72	2.9000-2.7500	0.1500	0.0000	12	46.5636	46.5913	1.0250	4.1000	A607-65 (65 ksi)
L73	2.7500-2.6500	0.1000	0.0000	12	46.5913	46.6098	1.0250	4.1000	A607-65 (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
L74	2.6500-2.5000	0.1500	0.0000	12	46.6098	46.6376	1.0250	4.1000	A607-65 (65 ksi)
L75	2.5000-2.2500	0.2500	0.0000	12	46.6376	46.6838	1.0000	4.0000	A607-65 (65 ksi)
L76	2.2500-1.9000	0.3500	0.0000	12	46.6838	46.7486	1.0000	4.0000	A607-65 (65 ksi)
L77	1.9000-1.6500	0.2500	0.0000	12	46.7486	46.7948	0.9500	3.8000	A607-65 (65 ksi)
L78	1.6500-0.0000	1.6500		12	46.7948	47.1000	0.9500	3.8000	A607-65 (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	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L2	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L3	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
	16.0000	18.4078	562.0841	5.5259	8.0000	70.2605	1124.1682	9.1984	0.0000	0
L4	22.6879	17.5087	1057.2060	7.7865	11.3960	92.7699	2142.1860	8.6173	5.2260	20.904
	23.6445	18.2526	1197.7540	8.1173	11.8746	100.8665	2426.9743	8.9834	5.4736	21.895
L5	23.6445	18.2526	1197.7540	8.1173	11.8746	100.8665	2426.9743	8.9834	5.4736	21.895
	24.6011	18.9964	1350.2371	8.4481	12.3533	109.3018	2735.9464	9.3495	5.7213	22.885
L6	24.6011	18.9964	1350.2371	8.4481	12.3533	109.3018	2735.9464	9.3495	5.7213	22.885
	25.5577	19.7403	1515.1418	8.7789	12.8319	118.0759	3070.0880	9.7156	5.9689	23.876
L7	25.5577	19.7403	1515.1418	8.7789	12.8319	118.0759	3070.0880	9.7156	5.9689	23.876
	26.5144	20.4841	1692.9543	9.1097	13.3106	127.1887	3430.3845	10.0817	6.2166	24.866
L8	26.5144	20.4841	1692.9543	9.1097	13.3106	127.1887	3430.3845	10.0817	6.2166	24.866
	27.4710	21.2279	1884.1612	9.4405	13.7892	136.6401	3817.8215	10.4477	6.4642	25.857
L9	27.4710	21.2279	1884.1612	9.4405	13.7892	136.6401	3817.8215	10.4477	6.4642	25.857
	27.6432	21.3618	1920.0385	9.5000	13.8754	138.3774	3890.5185	10.5136	6.5088	26.035
L10	27.5594	41.2828	3644.4442	9.4150	13.8754	262.6555	7384.6320	20.3181	5.8723	12.046
	27.6072	41.3553	3663.6853	9.4316	13.8993	263.5876	7423.6197	20.3538	5.8846	12.071
L11	27.6072	41.3553	3663.6853	9.4316	13.8993	263.5876	7423.6197	20.3538	5.8846	12.071
	28.0568	42.0370	3847.8724	9.5870	14.1243	272.4298	7796.8328	20.6893	6.0010	12.31
L12	28.0524	43.0948	3941.0120	9.5826	14.1243	279.0241	7985.5587	21.2099	5.9675	11.935
	28.1003	43.1691	3961.4544	9.5991	14.1482	279.9970	8026.9807	21.2465	5.9799	11.96
L13	28.1003	43.1691	3961.4544	9.5991	14.1482	279.9970	8026.9807	21.2465	5.9799	11.96
	28.4351	43.6898	4106.5343	9.7149	14.3157	286.8547	8320.9518	21.5028	6.0666	12.133
L14	28.3778	57.5424	5343.9933	9.6567	14.3157	373.2952	10828.379 3	28.3206	5.6311	8.5
	28.4256	57.6409	5371.5000	9.6732	14.3397	374.5904	10884.115 3	28.3691	5.6435	8.518
L15	28.4300	56.5795	5277.4685	9.6777	14.3397	368.0330	10693.581 9	27.8467	5.6770	8.734
	29.3866	58.5135	5837.3552	10.0085	14.8183	393.9286	11828.064 3	28.7986	5.9246	9.115
L16	29.3910	57.4139	5732.7812	10.0130	14.8183	386.8716	11616.169 0	28.2574	5.9581	9.346
	30.6346	59.8797	6503.5971	10.4430	15.4405	421.2026	13178.051 0	29.4710	6.2800	9.851
L17	29.5919	62.7935	6004.1029	9.7984	14.5467	412.7467	12165.940 2	30.9050	5.6166	7.883
	29.8486	65.0691	6680.7971	10.1535	15.0605	443.5976	13537.106 2	32.0250	5.8824	8.256
L18	29.8530	63.9557	6572.2723	10.1580	15.0605	436.3917	13317.205 6	31.4770	5.9159	8.451
	30.2637	64.8500	6851.8377	10.3000	15.2660	448.8298	13883.680 9	31.9172	6.0222	8.603
L19	30.2858	59.1881	6280.8212	10.3224	15.2660	411.4253	12726.646 6	29.1306	6.1897	9.709
	30.3371	59.2899	6313.2858	10.3402	15.2917	412.8572	12792.428 6	29.1807	6.2030	9.73

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
L20	30.3371	59.2899	6313.2858	10.3402	15.2917	412.8572	12792.4286	29.1807	6.2030	9.73
	30.6965	60.0025	6543.6755	10.4644	15.4715	422.9498	13259.2607	29.5314	6.2961	9.876
L21	30.6877	62.3022	6782.8568	10.4555	15.4715	438.4092	13743.9067	30.6632	6.2291	9.402
	30.7391	62.4080	6817.4693	10.4733	15.4972	439.9159	13814.0410	30.7153	6.2424	9.422
L22	30.7435	61.2567	6697.4154	10.4777	15.4972	432.1691	13570.7794	30.1487	6.2759	9.655
	31.7703	63.3326	7401.6753	10.8328	16.0110	462.2870	14997.8009	31.1704	6.5417	10.064
L23	31.7703	63.3326	7401.6753	10.8328	16.0110	462.2870	14997.8009	31.1704	6.5417	10.064
	32.3351	64.4744	7809.2575	11.0281	16.2936	479.2844	15823.6729	31.7323	6.6879	10.289
L24	32.3219	68.1111	8229.6633	11.0147	16.2936	505.0863	16675.5290	33.5222	6.5874	9.582
	32.3732	68.2209	8269.5233	11.0324	16.3193	506.7337	16756.2962	33.5762	6.6007	9.601
L25	32.3776	67.0077	8129.0523	11.0369	16.3193	498.1260	16471.6638	32.9791	6.6342	9.828
	33.4045	69.1635	8939.1686	11.3920	16.8331	531.0485	18113.1791	34.0402	6.9000	10.222
L26	33.4089	67.9093	8783.9718	11.3965	16.8331	521.8287	17798.7084	33.4229	6.9335	10.466
	33.7683	68.6499	9074.4900	11.5208	17.0129	533.3894	18387.3771	33.7874	7.0265	10.606
L27	33.6801	93.8210	12209.7885	11.4313	17.0129	717.6791	24740.3417	46.1758	6.3565	6.966
	33.7314	93.9667	12266.7676	11.4490	17.0386	719.9411	24855.7969	46.2475	6.3698	6.981
L28	33.7358	92.7157	12112.9221	11.4535	17.0386	710.9119	24544.0642	45.6318	6.4033	7.115
	34.2493	94.1529	12684.9978	11.6310	17.2955	733.4292	25703.2446	46.3392	6.5362	7.262
L29	34.1920	110.5968	14751.7599	11.5729	17.2955	852.9265	29891.0650	54.4324	6.1007	5.742
	34.2433	110.7665	14819.7580	11.5906	17.3212	855.5873	30028.8476	54.5159	6.1140	5.754
L30	34.2698	103.1861	13869.6006	11.6175	17.3212	800.7320	28103.5711	50.7851	6.3150	6.395
	34.3211	103.3438	13933.2866	11.6352	17.3468	803.2175	28232.6162	50.8627	6.3283	6.408
L31	34.3299	100.8050	13611.9084	11.6442	17.3468	784.6908	27581.4168	49.6132	6.3953	6.644
	34.8947	102.4957	14308.3659	11.8395	17.6294	811.6184	28992.6285	50.4453	6.5415	6.796
L32	34.9917	73.8200	10477.3442	11.9379	17.6294	594.3100	21229.9400	36.3320	7.2785	10.587
	35.0430	73.9298	10524.1604	11.9557	17.6551	596.0970	21324.8022	36.3860	7.2918	10.606
L33	35.0430	73.9298	10524.1604	11.9557	17.6551	596.0970	21324.8022	36.3860	7.2918	10.606
	36.8400	77.7724	12251.9327	12.5771	18.5542	660.3305	24825.7374	38.2772	7.7570	11.283
L34	36.1148	81.0264	11642.1157	12.0114	17.7681	655.2263	23590.0826	39.8787	7.1828	9.577
	36.2113	83.2763	12639.1000	12.3449	18.2507	692.5282	25610.2432	40.9861	7.4324	9.91
L35	36.2157	81.9181	12441.9691	12.3494	18.2507	681.7269	25210.8026	40.3176	7.4659	10.123
	36.9390	83.5773	13213.4380	12.5995	18.6126	709.9189	26774.0078	41.1342	7.6532	10.377
L36	36.8905	98.7722	15493.9325	12.5503	18.6126	832.4431	31394.9078	48.6126	7.2847	8.325
	36.9388	98.9034	15555.7769	12.5670	18.6367	834.6838	31520.2214	48.6772	7.2972	8.34
L37	36.9432	97.5252	15349.9378	12.5714	18.6367	823.6389	31103.1357	47.9989	7.3307	8.499

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
	37.6183	99.3364	16221.1137	12.8049	18.9745	854.8884	32868.3741	48.8903	7.5054	8.702
L38	37.5963	106.3485	17305.5209	12.7825	18.9745	912.0391	35065.6771	52.3415	7.3379	7.933
	37.6445	106.4872	17373.3397	12.7992	18.9987	914.4504	35203.0964	52.4098	7.3504	7.946
L39	37.6445	106.4872	17373.3397	12.7992	18.9987	914.4504	35203.0964	52.4098	7.3504	7.946
	37.6734	106.5705	17414.1159	12.8092	19.0131	915.8987	35285.7201	52.4507	7.3579	7.955
L40	37.6558	112.1741	18278.5756	12.7913	19.0131	961.3652	37037.3498	55.2087	7.2239	7.409
	37.7040	112.3203	18350.1585	12.8080	19.0373	963.9068	37182.3961	55.2806	7.2364	7.422
L41	37.7040	112.3203	18350.1585	12.8080	19.0373	963.9068	37182.3961	55.2806	7.2364	7.422
	37.8487	112.7590	18566.0280	12.8580	19.1097	971.5519	37619.8062	55.4966	7.2739	7.46
L42	37.8222	121.1792	19869.1903	12.8312	19.1097	1039.7458	40260.3663	59.6407	7.0729	6.736
	37.8704	121.3367	19946.7603	12.8478	19.1338	1042.4887	40417.5443	59.7182	7.0853	6.748
L43	37.8793	118.5303	19512.5590	12.8568	19.1338	1019.7958	39537.7346	58.3370	7.1523	6.978
	38.5448	120.6519	20579.2213	13.0869	19.4668	1057.1460	41699.0817	59.3812	7.3246	7.146
L44	38.5448	120.6519	20579.2213	13.0869	19.4668	1057.1460	41699.0817	59.3812	7.3246	7.146
	38.5930	120.8056	20657.9913	13.1036	19.4909	1059.8787	41858.6910	59.4569	7.3371	7.158
L45	38.5930	120.8056	20657.9913	13.1036	19.4909	1059.8787	41858.6910	59.4569	7.3371	7.158
	38.6701	121.0516	20784.4408	13.1303	19.5295	1064.2583	42114.9121	59.5779	7.3571	7.178
L46	38.7407	97.9631	17004.1062	13.2019	19.5295	870.6879	34454.9293	48.2145	7.8931	9.567
	38.7889	98.0868	17068.6245	13.2186	19.5536	872.9130	34585.6607	48.2754	7.9056	9.582
L47	38.7933	96.6334	16827.0873	13.2230	19.5536	860.5605	34096.2408	47.5600	7.9391	9.771
	39.7578	99.0707	18132.7524	13.5566	20.0362	904.9987	36741.8724	48.7596	8.1887	10.078
L48	39.7622	97.5788	17871.4734	13.5610	20.0362	891.9584	36212.4502	48.0253	8.2222	10.278
	40.7267	99.9786	19222.7706	13.8945	20.5188	936.8369	38950.5447	49.2064	8.4719	10.59
L49	40.7311	98.4482	18940.7036	13.8990	20.5188	923.0901	38379.0006	48.4532	8.5054	10.801
	41.3484	99.9601	19826.8187	14.1125	20.8277	951.9468	40174.5101	49.1973	8.6652	11.003
L50	41.3175	110.8202	21883.4275	14.0812	20.8277	1050.6909	44341.7570	54.5424	8.4307	9.635
	41.3658	110.9515	21961.2683	14.0978	20.8518	1053.2082	44499.4835	54.6069	8.4432	9.649
L51	41.3658	110.9515	21961.2683	14.0978	20.8518	1053.2082	44499.4835	54.6069	8.4432	9.649
	42.7257	114.6525	24233.1014	14.5681	21.5322	1125.4342	49102.8334	56.4285	8.7952	10.052
L52	41.8364	146.4645	28015.3117	13.8587	20.6611	1355.9421	56766.6167	72.0854	7.5405	6.417
	42.0279	150.6634	30494.4991	14.2560	21.2360	1435.9805	61790.1226	74.1519	7.8380	6.671
L53	42.0279	150.6634	30494.4991	14.2560	21.2360	1435.9805	61790.1226	74.1519	7.8380	6.671
	42.3151	151.7131	31136.3460	14.3553	21.3797	1456.3489	63090.6784	74.6686	7.9123	6.734
L54	42.3151	151.7131	31136.3460	14.3553	21.3797	1456.3489	63090.6784	74.6686	7.9123	6.734
	42.3630	151.8880	31244.1883	14.3719	21.4037	1459.7576	63309.1963	74.7547	7.9247	6.744

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
L55	42.3630	151.8880	31244.1883	14.3719	21.4037	1459.7576	63309.1963	74.7547	7.9247	6.744
	42.5066	152.4129	31569.2088	14.4215	21.4755	1470.0076	63967.7759	75.0130	7.9619	6.776
L56	42.5242	146.1084	30338.5270	14.4394	21.4755	1412.7014	61474.0809	71.9101	8.0959	7.196
	42.5721	146.2759	30442.9932	14.4560	21.4995	1415.9865	61685.7577	71.9925	8.1083	7.207
L57	42.5809	143.1139	29821.8037	14.4649	21.4995	1387.0932	60427.0593	70.4363	8.1753	7.432
	43.4426	146.0620	31703.0225	14.7629	21.9306	1445.6036	64238.9187	71.8873	8.3984	7.635
L58	43.4514	142.8290	31038.8828	14.7719	21.9306	1415.3199	62893.1915	70.2961	8.4654	7.875
	43.4993	142.9890	31143.3526	14.7884	21.9546	1418.5342	63104.8758	70.3748	8.4778	7.886
L59	43.4993	142.9890	31143.3526	14.7884	21.9546	1418.5342	63104.8758	70.3748	8.4778	7.886
	43.6525	143.5012	31479.2310	14.8414	22.0312	1428.8445	63785.4564	70.6269	8.5174	7.923
L60	43.6966	127.1974	28071.2545	14.8861	22.0312	1274.1562	56879.9722	62.6027	8.8524	9.318
	43.7445	127.3389	28165.0099	14.9027	22.0552	1277.0234	57069.9460	62.6723	8.8648	9.331
L61	43.7445	127.3389	28165.0099	14.9027	22.0552	1277.0234	57069.9460	62.6723	8.8648	9.331
	43.8306	127.5935	28334.2952	14.9325	22.0983	1282.1924	57412.9639	62.7976	8.8871	9.355
L62	43.7424	160.2047	35150.9882	14.8430	22.0983	1590.6635	71225.4319	78.8479	8.2171	6.848
	43.7903	160.3834	35268.7308	14.8595	22.1223	1594.2636	71464.0105	78.9358	8.2295	6.858
L63	43.7991	157.1367	34596.4033	14.8685	22.1223	1563.8721	70101.6927	77.3379	8.2965	7.061
	44.7566	160.6357	36959.3956	15.1996	22.6013	1635.2753	74889.7557	79.0600	8.5444	7.272
L64	44.7654	157.3105	36236.9626	15.2085	22.6013	1603.3111	73425.9107	77.4235	8.6114	7.488
	45.6558	160.4954	38482.7777	15.5164	23.0469	1669.7627	77976.5407	78.9910	8.8419	7.689
L65	45.6470	163.8899	39251.3599	15.5075	23.0469	1703.1114	79533.8967	80.6616	8.7749	7.468
	45.7045	164.0998	39402.3971	15.5274	23.0756	1707.5353	79839.9391	80.7649	8.7897	7.481
L66	45.7045	164.0998	39402.3971	15.5274	23.0756	1707.5353	79839.9391	80.7649	8.7897	7.481
	45.7332	164.2048	39478.0609	15.5373	23.0900	1709.7494	79993.2543	80.8166	8.7972	7.487
L67	45.7332	164.2048	39478.0609	15.5373	23.0900	1709.7494	79993.2543	80.8166	8.7972	7.487
	46.3364	166.4092	41089.4552	15.7459	23.3918	1756.5769	83258.3762	81.9015	8.9533	7.62
L68	46.3364	166.4092	41089.4552	15.7459	23.3918	1756.5769	83258.3762	81.9015	8.9533	7.62
	46.3842	166.5841	41219.1892	15.7624	23.4157	1760.3205	83521.2523	81.9876	8.9657	7.63
L69	46.3931	163.1324	40410.9438	15.7714	23.4157	1725.8033	81883.5281	80.2888	9.0327	7.855
	47.3505	166.5570	43009.7746	16.1025	23.8948	1799.9647	87149.4639	81.9743	9.2806	8.07
L70	47.3593	163.0268	42144.9760	16.1114	23.8948	1763.7727	85397.1474	80.2368	9.3476	8.309
	47.7902	164.5343	43325.0195	16.2604	24.1104	1796.9458	87788.2354	80.9788	9.4591	8.408
L71	47.8034	159.1812	41984.6715	16.2738	24.1104	1741.3536	85072.3271	78.3441	9.5596	8.79
	47.8226	159.2459	42035.9424	16.2804	24.1199	1742.7876	85176.2159	78.3760	9.5645	8.795
L72	47.8446	150.3002	39783.6637	16.3028	24.1199	1649.4093	80612.4885	73.9732	9.7320	9.495

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
	47.8733	150.3917	39856.4234	16.3128	24.1343	1651.4419	80759.9195	74.0182	9.7395	9.502
L73	47.8733	150.3917	39856.4234	16.3128	24.1343	1651.4419	80759.9195	74.0182	9.7395	9.502
	47.8925	150.4528	39904.9792	16.3194	24.1439	1652.7976	80858.3066	74.0483	9.7444	9.507
L74	47.8925	150.4528	39904.9792	16.3194	24.1439	1652.7976	80858.3066	74.0483	9.7444	9.507
	47.9212	150.5443	39977.8867	16.3293	24.1583	1654.8323	81006.0370	74.0933	9.7519	9.514
L75	47.9300	146.9530	39066.9831	16.3383	24.1583	1617.1266	79160.2994	72.3258	9.8189	9.819
	47.9779	147.1019	39185.8545	16.3548	24.1822	1620.4405	79401.1651	72.3991	9.8313	9.831
L76	47.9779	147.1019	39185.8545	16.3548	24.1822	1620.4405	79401.1651	72.3991	9.8313	9.831
	48.0449	147.3104	39352.6792	16.3780	24.2158	1625.0856	79739.1972	72.5017	9.8486	9.849
L77	48.0626	140.0978	37507.7571	16.3959	24.2158	1548.8988	76000.8847	68.9519	9.9826	10.508
	48.1104	140.2393	37621.4826	16.4124	24.2397	1552.0599	76231.3234	69.0215	9.9950	10.521
L78	48.1104	140.2393	37621.4826	16.4124	24.2397	1552.0599	76231.3234	69.0215	9.9950	10.521
	48.4264	141.1729	38377.8414	16.5217	24.3978	1573.0042	77763.9113	69.4810	10.0768	10.607

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 160.0000-155.0000				1	1	1			
L2 155.0000-150.0000				1	1	1			
L3 150.0000-146.0000				1	1	1			
L4 146.0000-141.0000				1	1	1			
L5 141.0000-136.0000				1	1	1			
L6 136.0000-131.0000				1	1	1			
L7 131.0000-126.0000				1	1	1			
L8 126.0000-121.0000				1	1	1			
L9 121.0000-120.1000				1	1	1			
L10 120.1000-119.8500				1	1	0.95332			
L11 119.8500-117.5000				1	1	0.946176			
L12 117.5000-117.2500				1	1	1.02661			
L13 117.2500-115.5000				1	1	1.02034			
L14 115.5000-115.2500				1	1	0.930389			
L15 115.2500-110.2500				1	1	0.929227			
L16				1	1	0.937122			

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
110.2500-103.7500									
L17 103.7500-102.5000				1	1	0.929577			
L18 102.5000-100.5000				1	1	0.938874			
L19 100.5000-100.2500				1	1	0.987647			
L20 100.2500-98.5000				1	1	0.981739			
L21 98.5000-98.2500				1	1	0.992837			
L22 98.2500-93.2500				1	1	0.994101			
L23 93.2500-90.5000				1	1	0.985011			
L24 90.5000-90.2500				1	1	1.06743			
L25 90.2500-85.2500				1	1	1.06731			
L26 85.2500-83.5000				1	1	1.08039			
L27 83.5000-83.2500				1	1	0.98167			
L28 83.2500-80.7500				1	1	0.985028			
L29 80.7500-80.5000				1	1	0.933797			
L30 80.5000-80.2500				1	1	0.980758			
L31 80.2500-77.5000				1	1	0.994229			
L32 77.5000-77.2500				1	1	1.13524			
L33 77.2500-68.5000				1	1	1.11848			
L34 68.5000-68.0000				1	1	1.10521			
L35 68.0000-64.2500				1	1	1.11132			
L36 64.2500-64.0000				1	1	1.01435			
L37 64.0000-60.5000				1	1	1.01786			
L38 60.5000-60.2500				1	1	1.00999			
L39 60.2500-60.1000				1	1	1.00952			
L40 60.1000-59.8500				1	1	0.995161			
L41 59.8500-59.1000				1	1	0.992785			
L42 59.1000-58.8500				1	1	0.991238			
L43 58.8500-55.4000				1	1	1.0033			
L44 55.4000-55.1500				1	1	1.00249			
L45 55.1500-54.7500				1	1	1.00119			
L46 54.7500-54.5000				1	1	1.0524			
L47 54.5000-				1	1	1.0533			

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
49.5000									
L48 49.5000-44.5000				1	1	1.05499			
L49 44.5000-41.3000				1	1	1.06239			
L50 41.3000-41.0500				1	1	1.05355			
L51 41.0500-34.0000				1	1	1.04754			
L52 34.0000-33.0000				1	1	0.943815			
L53 33.0000-31.5000				1	1	0.939493			
L54 31.5000-31.2500				1	1	0.9488			
L55 31.2500-30.5000				1	1	0.946632			
L56 30.5000-30.2500				1	1	0.963898			
L57 30.2500-25.7500				1	1	0.97219			
L58 25.7500-25.5000				1	1	0.977059			
L59 25.5000-24.7000				1	1	0.974817			
L60 24.7000-24.4500				1	1	0.931867			
L61 24.4500-24.0000				1	1	0.930795			
L62 24.0000-23.7500				1	1	0.878408			
L63 23.7500-18.7500				1	1	0.88398			
L64 18.7500-14.1000				1	1	0.891223			
L65 14.1000-13.8000				1	1	0.887984			
L66 13.8000-13.6500				1	1	0.887621			
L67 13.6500-10.5000				1	1	0.88009			
L68 10.5000-10.2500				1	1	0.851697			
L69 10.2500-5.2500				1	1	0.858541			
L70 5.2500-3.0000				1	1	0.872149			
L71 3.0000-2.9000				1	1	0.863521			
L72 2.9000-2.7500				1	1	0.839338			
L73 2.7500-2.6500				1	1	0.839146			
L74 2.6500-2.5000				1	1	0.838858			
L75 2.5000-2.2500				1	1	0.872484			
L76 2.2500-1.9000				1	1	0.87178			
L77 1.9000-1.6500				1	1	0.857151			
L78 1.6500-0.0000				1	1	0.854093			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
LDF7-50A(1-5/8")	B	No	Surface Ar (CaAa)	156.0000 - 0.0000	6	6	-0.400 -0.200	0.0000		0.8200
2" Rigid Conduit	B	No	Surface Ar (CaAa)	156.0000 - 0.0000	1	1	-0.200 -0.100	0.0000		2.8000
**										
HB114-1-08U4-M5J(1-1/4")	B	No	Surface Ar (CaAa)	146.0000 - 0.0000	4	4	-0.100 0.100	0.0000		1.0800
**										
561(1-5/8")	A	No	Surface Ar (CaAa)	132.0000 - 0.0000	4	4	-0.150 0.000	0.0000		1.3500
**										
LDF4P-50A(1/2")	A	No	Surface Ar (CaAa)	129.0000 - 0.0000	3	3	-0.300 -0.150	0.0000		0.1500
**										
**										
**										
Aero MP305	A	No	Surface Af (CaAa)	31.5000 - 11.5000	1	1	0.500 0.500	5.3300	14.8400	0.0000
Aero MP305	B	No	Surface Af (CaAa)	30.5000 - 0.0000	1	1	0.500 0.500	5.3300	14.8400	0.0000
Aero MP305	C	No	Surface Af (CaAa)	30.5000 - 0.0000	1	1	0.500 0.500	5.3300	14.8400	0.0000
Aero MP304	A	No	Surface Af (CaAa)	15.5000 - 0.0000	1	1	-0.250 -0.250	4.7800	12.7800	0.0000
Aero MP304	B	No	Surface Af (CaAa)	15.5000 - 0.0000	1	1	0.250 0.250	4.7800	12.7800	0.0000
Aero MP304	B	No	Surface Af (CaAa)	60.5000 - 30.5000	1	1	0.500 0.500	4.7800	12.7800	0.0000
Aero MP304	C	No	Surface Af (CaAa)	60.5000 - 30.5000	1	1	0.500 0.500	4.7800	12.7800	0.0000
Aero MP304	A	No	Surface Af (CaAa)	61.5000 - 31.0000	1	1	0.500 0.500	4.7800	12.7800	0.0000
**										
6" x 1" Flat Plate (G)	C	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	-0.250 -0.250	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	B	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	0.000 0.000	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	A	No	Surface Af (CaAa)	30.5000 - 0.5000	1	1	0.000 0.000	6.0000	14.0000	0.0000
6.5" x 1.25" Flat Plate (G)	C	No	Surface Af (CaAa)	60.5000 - 30.5000	1	1	-0.250 -0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	60.5000 - 30.5000	1	1	0.000 0.000	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	60.5000 - 30.5000	1	1	0.000 0.000	6.5000	15.5000	0.0000
6" x 1" Flat Plate (G)	C	No	Surface Af (CaAa)	100.5000 - 60.5000	1	1	-0.250 -0.250	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	B	No	Surface Af (CaAa)	100.5000 - 60.5000	1	1	0.000 0.000	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	A	No	Surface Af (CaAa)	100.5000 - 60.5000	1	1	0.000 0.000	6.0000	14.0000	0.0000
**										
6.5" x 1.25" Flat Plate (G)	C	No	Surface Af (CaAa)	38.0000 - 23.0000	1	1	0.000 0.000	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	38.0000 - 23.0000	1	1	0.250 0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	38.0000 - 23.0000	1	1	0.250 0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	C	No	Surface Af (CaAa)	67.0000 - 52.0000	1	1	0.000 0.000	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	67.0000 - 52.0000	1	1	0.250 0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	67.0000 - 52.0000	1	1	0.250 0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate	C	No	Surface Af	85.5000 -	1	1	0.000	6.5000	15.5000	0.0000

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
(G)			(CaAa)	72.5000			0.000			
6.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	85.5000 - 72.5000	1	1	0.250 0.250	6.5000	15.5000	0.0000
6.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	85.5000 - 72.5000	1	1	0.250 0.250	6.5000	15.5000	0.0000
**										
6" x 1" Flat Plate (G)	C	No	Surface Af (CaAa)	10.5000 - 0.5000	1	1	0.250 0.250	6.0000	14.0000	0.0000
8.5" x 1.25" Flat Plate (G)	C	No	Surface Af (CaAa)	45.5000 - 10.5000	1	1	0.250 0.250	8.5000	19.5000	0.0000
8.5" x 1.25" Flat Plate (G)	C	No	Surface Af (CaAa)	85.0000 - 60.0000	1	1	0.250 0.250	8.5000	19.5000	0.0000
4.5" x 1" Flat Plate (G)	C	No	Surface Af (CaAa)	117.0000 - 97.0000	1	1	0.250 0.250	4.5000	11.0000	0.0000
4.5" x 1" Flat Plate (G)	A	No	Surface Af (CaAa)	117.0000 - 97.0000	1	1	0.250 0.250	4.5000	11.0000	0.0000
4.5" x 1" Flat Plate (G)	B	No	Surface Af (CaAa)	119.0000 - 99.0000	1	1	0.250 0.250	4.5000	11.0000	0.0000
**										
8.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	55.4000 - 20.4000	1	1	-0.250 -0.250	8.5000	19.5000	0.0000
8.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	55.4000 - 20.4000	1	1	-0.250 -0.250	8.5000	19.5000	0.0000
8.5" x 1.25" Flat Plate (G)	A	No	Surface Af (CaAa)	90.5000 - 55.5000	1	1	-0.250 -0.250	8.5000	19.5000	0.0000
8.5" x 1.25" Flat Plate (G)	B	No	Surface Af (CaAa)	90.5000 - 55.5000	1	1	-0.250 -0.250	8.5000	19.5000	0.0000
6" x 1" Flat Plate (G)	A	No	Surface Af (CaAa)	122.6000 - 90.6000	1	1	-0.250 -0.250	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	B	No	Surface Af (CaAa)	122.6000 - 90.6000	1	1	-0.250 -0.250	6.0000	14.0000	0.0000
6" x 1" Flat Plate (G)	C	No	Surface Af (CaAa)	122.6000 - 100.6000	1	1	-0.250 -0.250	6.0000	14.0000	0.0000
**										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
FB-L98B-002-75000(3/8")	B	No	No	Inside Pole	156.0000 - 0.0000	1	No Ice	0.0000	0.0586
							1/2" Ice	0.0000	0.0586
							1" Ice	0.0000	0.0586
WR-VG86ST-BRD(3/4")	B	No	No	Inside Pole	156.0000 - 0.0000	2	No Ice	0.0000	0.5840
							1/2" Ice	0.0000	0.5840
							1" Ice	0.0000	0.5840
AVA7-50(1-5/8")	B	No	No	Inside Pole	139.0000 - 0.0000	6	No Ice	0.0000	0.7000
							1/2" Ice	0.0000	0.7000
							1" Ice	0.0000	0.7000
LDF4-50A(1/2")	B	No	No	Inside Pole	101.0000 - 0.0000	1	No Ice	0.0000	0.1500
							1/2" Ice	0.0000	0.1500
							1" Ice	0.0000	0.1500
561(1-5/8")	A	No	No	Inside Pole	132.0000 - 0.0000	3	No Ice	0.0000	1.3500
							1/2" Ice	0.0000	1.3500
							1" Ice	0.0000	1.3500
HB114-U6S12-xxx-LI(1-1/4")	A	No	No	Inside Pole	132.0000 - 0.0000	1	No Ice	0.0000	1.7000
							1/2" Ice	0.0000	1.7000
							1" Ice	0.0000	1.7000
**									
**									
**									

Feed Line/Linear Appurtenances Section Areas

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	160.0000-155.0000	A	0.000	0.000	0.000	0.000	0.0000
		B	0.000	0.000	0.000	0.000	0.0089
		C	0.000	0.000	0.000	0.000	0.0000
L2	155.0000-150.0000	A	0.000	0.000	0.000	0.000	0.0000
		B	0.000	0.000	0.000	0.000	0.0447
		C	0.000	0.000	0.000	0.000	0.0000
L3	150.0000-146.0000	A	0.000	0.000	0.000	0.000	0.0000
		B	0.000	0.000	0.000	0.000	0.0358
		C	0.000	0.000	0.000	0.000	0.0000
L4	146.0000-141.0000	A	0.000	0.000	0.000	0.000	0.0000
		B	0.000	0.000	0.000	0.000	0.0663
		C	0.000	0.000	0.000	0.000	0.0000
L5	141.0000-136.0000	A	0.000	0.000	0.000	0.000	0.0000
		B	0.000	0.000	0.000	0.000	0.0789
		C	0.000	0.000	0.000	0.000	0.0000
L6	136.0000-131.0000	A	0.000	0.000	0.000	0.000	0.0112
		B	0.000	0.000	0.000	0.000	0.0873
		C	0.000	0.000	0.000	0.000	0.0000
L7	131.0000-126.0000	A	0.000	0.000	0.000	0.000	0.0571
		B	0.000	0.000	0.000	0.000	0.0873
		C	0.000	0.000	0.000	0.000	0.0000
L8	126.0000-121.0000	A	0.000	0.000	1.600	0.000	0.0580
		B	0.000	0.000	1.600	0.000	0.0873
		C	0.000	0.000	1.600	0.000	0.0000
L9	121.0000-120.1000	A	0.000	0.000	0.900	0.000	0.0104
		B	0.000	0.000	0.900	0.000	0.0157
		C	0.000	0.000	0.900	0.000	0.0000
L10	120.1000-119.8500	A	0.000	0.000	0.250	0.000	0.0029
		B	0.000	0.000	0.250	0.000	0.0044
		C	0.000	0.000	0.250	0.000	0.0000
L11	119.8500-117.5000	A	0.000	0.000	2.350	0.000	0.0273
		B	0.000	0.000	3.475	0.000	0.0410
		C	0.000	0.000	2.350	0.000	0.0000
L12	117.5000-117.2500	A	0.000	0.000	0.250	0.000	0.0029
		B	0.000	0.000	0.438	0.000	0.0044
		C	0.000	0.000	0.250	0.000	0.0000
L13	117.2500-115.5000	A	0.000	0.000	2.875	0.000	0.0203
		B	0.000	0.000	3.063	0.000	0.0306
		C	0.000	0.000	2.875	0.000	0.0000
L14	115.5000-115.2500	A	0.000	0.000	0.438	0.000	0.0029
		B	0.000	0.000	0.438	0.000	0.0044
		C	0.000	0.000	0.438	0.000	0.0000
L15	115.2500-110.2500	A	0.000	0.000	8.750	0.000	0.0580
		B	0.000	0.000	8.750	0.000	0.0873
		C	0.000	0.000	8.750	0.000	0.0000
L16	110.2500-103.7500	A	0.000	0.000	11.375	0.000	0.0754
		B	0.000	0.000	11.375	0.000	0.1135
		C	0.000	0.000	11.375	0.000	0.0000
L17	103.7500-102.5000	A	0.000	0.000	2.188	0.000	0.0145
		B	0.000	0.000	2.188	0.000	0.0218
		C	0.000	0.000	2.188	0.000	0.0000
L18	102.5000-100.5000	A	0.000	0.000	3.500	0.000	0.0232
		B	0.000	0.000	3.500	0.000	0.0350
		C	0.000	0.000	3.400	0.000	0.0000
L19	100.5000-100.2500	A	0.000	0.000	0.688	0.000	0.0029
		B	0.000	0.000	0.688	0.000	0.0044
		C	0.000	0.000	0.438	0.000	0.0000
L20	100.2500-98.5000	A	0.000	0.000	4.813	0.000	0.0203
		B	0.000	0.000	4.438	0.000	0.0308
		C	0.000	0.000	3.063	0.000	0.0000
L21	98.5000-98.2500	A	0.000	0.000	0.688	0.000	0.0029
		B	0.000	0.000	0.500	0.000	0.0044
		C	0.000	0.000	0.438	0.000	0.0000

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L22	98.2500-93.2500	A	0.000	0.000	10.938	0.000	0.0580
		B	0.000	0.000	10.000	0.000	0.0881
		C	0.000	0.000	5.938	0.000	0.0000
L23	93.2500-90.5000	A	0.000	0.000	5.400	0.000	0.0319
		B	0.000	0.000	5.400	0.000	0.0484
		C	0.000	0.000	2.750	0.000	0.0000
L24	90.5000-90.2500	A	0.000	0.000	0.604	0.000	0.0029
		B	0.000	0.000	0.604	0.000	0.0044
		C	0.000	0.000	0.250	0.000	0.0000
L25	90.2500-85.2500	A	0.000	0.000	12.348	0.000	0.0580
		B	0.000	0.000	12.348	0.000	0.0881
		C	0.000	0.000	5.264	0.000	0.0000
L26	85.2500-83.5000	A	0.000	0.000	6.080	0.000	0.0203
		B	0.000	0.000	6.080	0.000	0.0308
		C	0.000	0.000	5.726	0.000	0.0000
L27	83.5000-83.2500	A	0.000	0.000	0.869	0.000	0.0029
		B	0.000	0.000	0.869	0.000	0.0044
		C	0.000	0.000	0.869	0.000	0.0000
L28	83.2500-80.7500	A	0.000	0.000	8.685	0.000	0.0290
		B	0.000	0.000	8.685	0.000	0.0440
		C	0.000	0.000	8.685	0.000	0.0000
L29	80.7500-80.5000	A	0.000	0.000	0.869	0.000	0.0029
		B	0.000	0.000	0.869	0.000	0.0044
		C	0.000	0.000	0.869	0.000	0.0000
L30	80.5000-80.2500	A	0.000	0.000	0.869	0.000	0.0029
		B	0.000	0.000	0.869	0.000	0.0044
		C	0.000	0.000	0.869	0.000	0.0000
L31	80.2500-77.5000	A	0.000	0.000	9.554	0.000	0.0319
		B	0.000	0.000	9.554	0.000	0.0484
		C	0.000	0.000	9.554	0.000	0.0000
L32	77.5000-77.2500	A	0.000	0.000	0.869	0.000	0.0029
		B	0.000	0.000	0.869	0.000	0.0044
		C	0.000	0.000	0.869	0.000	0.0000
L33	77.2500-68.5000	A	0.000	0.000	26.169	0.000	0.1015
		B	0.000	0.000	26.169	0.000	0.1541
		C	0.000	0.000	26.169	0.000	0.0000
L34	68.5000-68.0000	A	0.000	0.000	1.208	0.000	0.0058
		B	0.000	0.000	1.208	0.000	0.0088
		C	0.000	0.000	1.208	0.000	0.0000
L35	68.0000-64.2500	A	0.000	0.000	12.042	0.000	0.0435
		B	0.000	0.000	12.042	0.000	0.0661
		C	0.000	0.000	12.042	0.000	0.0000
L36	64.2500-64.0000	A	0.000	0.000	0.875	0.000	0.0029
		B	0.000	0.000	0.875	0.000	0.0044
		C	0.000	0.000	0.875	0.000	0.0000
L37	64.0000-60.5000	A	0.000	0.000	13.047	0.000	0.0406
		B	0.000	0.000	12.250	0.000	0.0617
		C	0.000	0.000	12.250	0.000	0.0000
L38	60.5000-60.2500	A	0.000	0.000	1.095	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	1.095	0.000	0.0000
L39	60.2500-60.1000	A	0.000	0.000	0.657	0.000	0.0017
		B	0.000	0.000	0.657	0.000	0.0026
		C	0.000	0.000	0.657	0.000	0.0000
L40	60.1000-59.8500	A	0.000	0.000	1.095	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	0.882	0.000	0.0000
L41	59.8500-59.1000	A	0.000	0.000	3.285	0.000	0.0087
		B	0.000	0.000	3.285	0.000	0.0132
		C	0.000	0.000	2.223	0.000	0.0000
L42	59.1000-58.8500	A	0.000	0.000	1.095	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	0.741	0.000	0.0000
L43	58.8500-55.4000	A	0.000	0.000	14.969	0.000	0.0400
		B	0.000	0.000	14.969	0.000	0.0608
		C	0.000	0.000	10.224	0.000	0.0000
L44	55.4000-55.1500	A	0.000	0.000	1.095	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	0.741	0.000	0.0000

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L45	55.1500-54.7500	A	0.000	0.000	1.752	0.000	0.0046
		B	0.000	0.000	1.752	0.000	0.0070
		C	0.000	0.000	1.185	0.000	0.0000
L46	54.7500-54.5000	A	0.000	0.000	1.095	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	0.741	0.000	0.0000
L47	54.5000-49.5000	A	0.000	0.000	19.192	0.000	0.0580
		B	0.000	0.000	19.192	0.000	0.0881
		C	0.000	0.000	12.108	0.000	0.0000
L48	49.5000-44.5000	A	0.000	0.000	16.483	0.000	0.0580
		B	0.000	0.000	16.483	0.000	0.0881
		C	0.000	0.000	10.817	0.000	0.0000
L49	44.5000-41.3000	A	0.000	0.000	10.549	0.000	0.0371
		B	0.000	0.000	10.549	0.000	0.0564
		C	0.000	0.000	10.549	0.000	0.0000
L50	41.3000-41.0500	A	0.000	0.000	0.824	0.000	0.0029
		B	0.000	0.000	0.824	0.000	0.0044
		C	0.000	0.000	0.824	0.000	0.0000
L51	41.0500-34.0000	A	0.000	0.000	27.575	0.000	0.0818
		B	0.000	0.000	27.575	0.000	0.1242
		C	0.000	0.000	27.575	0.000	0.0000
L52	34.0000-33.0000	A	0.000	0.000	4.380	0.000	0.0116
		B	0.000	0.000	4.380	0.000	0.0176
		C	0.000	0.000	4.380	0.000	0.0000
L53	33.0000-31.5000	A	0.000	0.000	6.570	0.000	0.0174
		B	0.000	0.000	6.570	0.000	0.0264
		C	0.000	0.000	6.570	0.000	0.0000
L54	31.5000-31.2500	A	0.000	0.000	1.317	0.000	0.0029
		B	0.000	0.000	1.095	0.000	0.0044
		C	0.000	0.000	1.095	0.000	0.0000
L55	31.2500-30.5000	A	0.000	0.000	3.553	0.000	0.0087
		B	0.000	0.000	3.285	0.000	0.0132
		C	0.000	0.000	3.285	0.000	0.0000
L56	30.5000-30.2500	A	0.000	0.000	1.097	0.000	0.0029
		B	0.000	0.000	1.097	0.000	0.0044
		C	0.000	0.000	1.097	0.000	0.0000
L57	30.2500-25.7500	A	0.000	0.000	19.747	0.000	0.0522
		B	0.000	0.000	19.747	0.000	0.0793
		C	0.000	0.000	19.747	0.000	0.0000
L58	25.7500-25.5000	A	0.000	0.000	1.097	0.000	0.0029
		B	0.000	0.000	1.097	0.000	0.0044
		C	0.000	0.000	1.097	0.000	0.0000
L59	25.5000-24.7000	A	0.000	0.000	3.511	0.000	0.0093
		B	0.000	0.000	3.511	0.000	0.0141
		C	0.000	0.000	3.511	0.000	0.0000
L60	24.7000-24.4500	A	0.000	0.000	1.097	0.000	0.0029
		B	0.000	0.000	1.097	0.000	0.0044
		C	0.000	0.000	1.097	0.000	0.0000
L61	24.4500-24.0000	A	0.000	0.000	1.975	0.000	0.0052
		B	0.000	0.000	1.975	0.000	0.0079
		C	0.000	0.000	1.975	0.000	0.0000
L62	24.0000-23.7500	A	0.000	0.000	1.097	0.000	0.0029
		B	0.000	0.000	1.097	0.000	0.0044
		C	0.000	0.000	1.097	0.000	0.0000
L63	23.7500-18.7500	A	0.000	0.000	15.000	0.000	0.0580
		B	0.000	0.000	15.000	0.000	0.0881
		C	0.000	0.000	17.337	0.000	0.0000
L64	18.7500-14.1000	A	0.000	0.000	9.896	0.000	0.0539
		B	0.000	0.000	9.896	0.000	0.0819
		C	0.000	0.000	15.368	0.000	0.0000
L65	14.1000-13.8000	A	0.000	0.000	0.805	0.000	0.0035
		B	0.000	0.000	0.805	0.000	0.0053
		C	0.000	0.000	0.992	0.000	0.0000
L66	13.8000-13.6500	A	0.000	0.000	0.403	0.000	0.0017
		B	0.000	0.000	0.403	0.000	0.0026
		C	0.000	0.000	0.496	0.000	0.0000
L67	13.6500-10.5000	A	0.000	0.000	7.569	0.000	0.0365
		B	0.000	0.000	8.458	0.000	0.0555
		C	0.000	0.000	10.411	0.000	0.0000

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L68	10.5000-10.2500	A	0.000	0.000	0.449	0.000	0.0029
		B	0.000	0.000	0.671	0.000	0.0044
		C	0.000	0.000	0.700	0.000	0.0000
L69	10.2500-5.2500	A	0.000	0.000	8.983	0.000	0.0580
		B	0.000	0.000	13.425	0.000	0.0881
		C	0.000	0.000	14.002	0.000	0.0000
L70	5.2500-3.0000	A	0.000	0.000	4.043	0.000	0.0261
		B	0.000	0.000	6.041	0.000	0.0396
		C	0.000	0.000	6.301	0.000	0.0000
L71	3.0000-2.9000	A	0.000	0.000	0.180	0.000	0.0012
		B	0.000	0.000	0.269	0.000	0.0018
		C	0.000	0.000	0.280	0.000	0.0000
L72	2.9000-2.7500	A	0.000	0.000	0.270	0.000	0.0017
		B	0.000	0.000	0.403	0.000	0.0026
		C	0.000	0.000	0.420	0.000	0.0000
L73	2.7500-2.6500	A	0.000	0.000	0.180	0.000	0.0012
		B	0.000	0.000	0.269	0.000	0.0018
		C	0.000	0.000	0.280	0.000	0.0000
L74	2.6500-2.5000	A	0.000	0.000	0.270	0.000	0.0017
		B	0.000	0.000	0.403	0.000	0.0026
		C	0.000	0.000	0.420	0.000	0.0000
L75	2.5000-2.2500	A	0.000	0.000	0.449	0.000	0.0029
		B	0.000	0.000	0.671	0.000	0.0044
		C	0.000	0.000	0.700	0.000	0.0000
L76	2.2500-1.9000	A	0.000	0.000	0.629	0.000	0.0041
		B	0.000	0.000	0.940	0.000	0.0062
		C	0.000	0.000	0.980	0.000	0.0000
L77	1.9000-1.6500	A	0.000	0.000	0.449	0.000	0.0029
		B	0.000	0.000	0.671	0.000	0.0044
		C	0.000	0.000	0.700	0.000	0.0000
L78	1.6500-0.0000	A	0.000	0.000	2.465	0.000	0.0191
		B	0.000	0.000	3.930	0.000	0.0291
		C	0.000	0.000	3.665	0.000	0.0000

Feed Line/Linear Appurtenances Section Areas - With Ice

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L1	160.0000-155.0000	A	2.338	0.000	0.000	0.000	0.000	0.0000
		B		0.000	0.000	1.052	0.000	0.0223
		C		0.000	0.000	0.000	0.000	0.0000
L2	155.0000-150.0000	A	2.331	0.000	0.000	0.000	0.000	0.0000
		B		0.000	0.000	5.244	0.000	0.1111
		C		0.000	0.000	0.000	0.000	0.0000
L3	150.0000-146.0000	A	2.324	0.000	0.000	0.000	0.000	0.0000
		B		0.000	0.000	4.183	0.000	0.0886
		C		0.000	0.000	0.000	0.000	0.0000
L4	146.0000-141.0000	A	2.317	0.000	0.000	0.000	0.000	0.0000
		B		0.000	0.000	8.108	0.000	0.1647
		C		0.000	0.000	0.000	0.000	0.0000
L5	141.0000-136.0000	A	2.308	0.000	0.000	0.000	0.000	0.0000
		B		0.000	0.000	8.080	0.000	0.1766
		C		0.000	0.000	0.000	0.000	0.0000
L6	136.0000-131.0000	A	2.300	0.000	0.000	0.575	0.000	0.0176
		B		0.000	0.000	8.050	0.000	0.1843
		C		0.000	0.000	0.000	0.000	0.0000
L7	131.0000-126.0000	A	2.291	0.000	0.000	4.582	0.000	0.1084
		B		0.000	0.000	8.019	0.000	0.1835
		C		0.000	0.000	0.000	0.000	0.0000
L8	126.0000-121.0000	A	2.282	0.000	0.000	8.036	0.000	0.1538
		B		0.000	0.000	10.318	0.000	0.2149
		C		0.000	0.000	2.330	0.000	0.0321
L9	121.0000-120.1000	A	2.277	0.000	0.000	2.334	0.000	0.0399
		B		0.000	0.000	2.744	0.000	0.0508
		C		0.000	0.000	1.310	0.000	0.0180

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L10	120.1000-119.8500	A	2.276	0.000	0.000	0.648	0.000	0.0111
		B		0.000	0.000	0.762	0.000	0.0141
		C		0.000	0.000	0.364	0.000	0.0050
L11	119.8500-117.5000	A	2.273	0.000	0.000	6.089	0.000	0.1039
		B		0.000	0.000	8.964	0.000	0.1585
		C		0.000	0.000	3.418	0.000	0.0470
L12	117.5000-117.2500	A	2.271	0.000	0.000	0.647	0.000	0.0110
		B		0.000	0.000	1.062	0.000	0.0184
		C		0.000	0.000	0.364	0.000	0.0050
L13	117.2500-115.5000	A	2.269	0.000	0.000	6.335	0.000	0.1031
		B		0.000	0.000	7.430	0.000	0.1287
		C		0.000	0.000	4.350	0.000	0.0608
L14	115.5000-115.2500	A	2.267	0.000	0.000	0.948	0.000	0.0153
		B		0.000	0.000	1.061	0.000	0.0184
		C		0.000	0.000	0.664	0.000	0.0093
L15	115.2500-110.2500	A	2.261	0.000	0.000	18.926	0.000	0.3057
		B		0.000	0.000	21.188	0.000	0.3663
		C		0.000	0.000	13.273	0.000	0.1852
L16	110.2500-103.7500	A	2.250	0.000	0.000	24.535	0.000	0.3948
		B		0.000	0.000	27.460	0.000	0.4731
		C		0.000	0.000	17.224	0.000	0.2390
L17	103.7500-102.5000	A	2.241	0.000	0.000	4.718	0.000	0.0759
		B		0.000	0.000	5.281	0.000	0.0910
		C		0.000	0.000	3.312	0.000	0.0460
L18	102.5000-100.5000	A	2.238	0.000	0.000	7.528	0.000	0.1207
		B		0.000	0.000	8.423	0.000	0.1447
		C		0.000	0.000	5.145	0.000	0.0710
L19	100.5000-100.2500	A	2.235	0.000	0.000	1.302	0.000	0.0199
		B		0.000	0.000	1.414	0.000	0.0230
		C		0.000	0.000	0.661	0.000	0.0091
L20	100.2500-98.5000	A	2.233	0.000	0.000	9.111	0.000	0.1394
		B		0.000	0.000	9.294	0.000	0.1522
		C		0.000	0.000	4.626	0.000	0.0637
L21	98.5000-98.2500	A	2.231	0.000	0.000	1.301	0.000	0.0199
		B		0.000	0.000	1.113	0.000	0.0187
		C		0.000	0.000	0.661	0.000	0.0091
L22	98.2500-93.2500	A	2.225	0.000	0.000	21.505	0.000	0.3335
		B		0.000	0.000	22.236	0.000	0.3728
		C		0.000	0.000	8.718	0.000	0.1180
L23	93.2500-90.5000	A	2.216	0.000	0.000	10.839	0.000	0.1690
		B		0.000	0.000	12.058	0.000	0.2021
		C		0.000	0.000	3.969	0.000	0.0530
L24	90.5000-90.2500	A	2.212	0.000	0.000	1.102	0.000	0.0167
		B		0.000	0.000	1.212	0.000	0.0197
		C		0.000	0.000	0.361	0.000	0.0048
L25	90.2500-85.2500	A	2.205	0.000	0.000	22.330	0.000	0.3378
		B		0.000	0.000	24.535	0.000	0.3976
		C		0.000	0.000	7.527	0.000	0.1010
L26	85.2500-83.5000	A	2.197	0.000	0.000	9.941	0.000	0.1515
		B		0.000	0.000	10.710	0.000	0.1723
		C		0.000	0.000	7.536	0.000	0.1046
L27	83.5000-83.2500	A	2.194	0.000	0.000	1.420	0.000	0.0216
		B		0.000	0.000	1.529	0.000	0.0246
		C		0.000	0.000	1.142	0.000	0.0158
L28	83.2500-80.7500	A	2.191	0.000	0.000	14.186	0.000	0.2157
		B		0.000	0.000	15.281	0.000	0.2453
		C		0.000	0.000	11.417	0.000	0.1573
L29	80.7500-80.5000	A	2.187	0.000	0.000	1.418	0.000	0.0215
		B		0.000	0.000	1.527	0.000	0.0245
		C		0.000	0.000	1.141	0.000	0.0157
L30	80.5000-80.2500	A	2.186	0.000	0.000	1.418	0.000	0.0215
		B		0.000	0.000	1.527	0.000	0.0245
		C		0.000	0.000	1.141	0.000	0.0157
L31	80.2500-77.5000	A	2.182	0.000	0.000	15.581	0.000	0.2361
		B		0.000	0.000	16.782	0.000	0.2686
		C		0.000	0.000	12.548	0.000	0.1722
L32	77.5000-77.2500	A	2.178	0.000	0.000	1.415	0.000	0.0214
		B		0.000	0.000	1.524	0.000	0.0244
		C		0.000	0.000	1.140	0.000	0.0156

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L33	77.2500-68.5000	A	2.165	0.000	0.000	44.291	0.000	0.6639
		B		0.000	0.000	48.079	0.000	0.7667
		C		0.000	0.000	34.719	0.000	0.4622
L34	68.5000-68.0000	A	2.151	0.000	0.000	2.182	0.000	0.0325
		B		0.000	0.000	2.399	0.000	0.0384
		C		0.000	0.000	1.636	0.000	0.0210
L35	68.0000-64.2500	A	2.144	0.000	0.000	19.996	0.000	0.2953
		B		0.000	0.000	21.604	0.000	0.3389
		C		0.000	0.000	15.936	0.000	0.2096
L36	64.2500-64.0000	A	2.137	0.000	0.000	1.421	0.000	0.0209
		B		0.000	0.000	1.528	0.000	0.0238
		C		0.000	0.000	1.151	0.000	0.0152
L37	64.0000-60.5000	A	2.131	0.000	0.000	21.096	0.000	0.3090
		B		0.000	0.000	21.365	0.000	0.3322
		C		0.000	0.000	16.107	0.000	0.2123
L38	60.5000-60.2500	A	2.125	0.000	0.000	1.744	0.000	0.0254
		B		0.000	0.000	1.850	0.000	0.0283
		C		0.000	0.000	1.476	0.000	0.0197
L39	60.2500-60.1000	A	2.124	0.000	0.000	1.046	0.000	0.0152
		B		0.000	0.000	1.110	0.000	0.0169
		C		0.000	0.000	0.886	0.000	0.0118
L40	60.1000-59.8500	A	2.123	0.000	0.000	1.744	0.000	0.0254
		B		0.000	0.000	1.850	0.000	0.0282
		C		0.000	0.000	1.201	0.000	0.0163
L41	59.8500-59.1000	A	2.121	0.000	0.000	5.229	0.000	0.0760
		B		0.000	0.000	5.548	0.000	0.0846
		C		0.000	0.000	3.053	0.000	0.0420
L42	59.1000-58.8500	A	2.120	0.000	0.000	1.743	0.000	0.0253
		B		0.000	0.000	1.849	0.000	0.0282
		C		0.000	0.000	1.018	0.000	0.0140
L43	58.8500-55.4000	A	2.113	0.000	0.000	23.836	0.000	0.3455
		B		0.000	0.000	25.294	0.000	0.3850
		C		0.000	0.000	14.030	0.000	0.1921
L44	55.4000-55.1500	A	2.106	0.000	0.000	1.739	0.000	0.0251
		B		0.000	0.000	1.844	0.000	0.0280
		C		0.000	0.000	1.016	0.000	0.0139
L45	55.1500-54.7500	A	2.105	0.000	0.000	2.781	0.000	0.0401
		B		0.000	0.000	2.949	0.000	0.0447
		C		0.000	0.000	1.625	0.000	0.0222
L46	54.7500-54.5000	A	2.103	0.000	0.000	1.738	0.000	0.0251
		B		0.000	0.000	1.843	0.000	0.0279
		C		0.000	0.000	1.016	0.000	0.0138
L47	54.5000-49.5000	A	2.093	0.000	0.000	31.344	0.000	0.4504
		B		0.000	0.000	33.437	0.000	0.5072
		C		0.000	0.000	16.935	0.000	0.2272
L48	49.5000-44.5000	A	2.072	0.000	0.000	27.879	0.000	0.3977
		B		0.000	0.000	29.951	0.000	0.4540
		C		0.000	0.000	15.375	0.000	0.1992
L49	44.5000-41.3000	A	2.053	0.000	0.000	17.776	0.000	0.2517
		B		0.000	0.000	19.090	0.000	0.2875
		C		0.000	0.000	14.491	0.000	0.1817
L50	41.3000-41.0500	A	2.045	0.000	0.000	1.386	0.000	0.0196
		B		0.000	0.000	1.489	0.000	0.0223
		C		0.000	0.000	1.131	0.000	0.0141
L51	41.0500-34.0000	A	2.026	0.000	0.000	44.283	0.000	0.6186
		B		0.000	0.000	47.139	0.000	0.6964
		C		0.000	0.000	37.142	0.000	0.4661
L52	34.0000-33.0000	A	2.003	0.000	0.000	6.860	0.000	0.0956
		B		0.000	0.000	7.265	0.000	0.1067
		C		0.000	0.000	5.847	0.000	0.0740
L53	33.0000-31.5000	A	1.995	0.000	0.000	10.232	0.000	0.1408
		B		0.000	0.000	10.831	0.000	0.1571
		C		0.000	0.000	8.736	0.000	0.1088
L54	31.5000-31.2500	A	1.990	0.000	0.000	2.025	0.000	0.0277
		B		0.000	0.000	1.803	0.000	0.0261
		C		0.000	0.000	1.455	0.000	0.0181
L55	31.2500-30.5000	A	1.987	0.000	0.000	5.476	0.000	0.0751
		B		0.000	0.000	5.406	0.000	0.0782
		C		0.000	0.000	4.363	0.000	0.0541

Tower Section	Tower Elevation ft	Face or Leg	Ice Thickness in	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
L56	30.5000-30.2500	A	1.983	0.000	0.000	1.704	0.000	0.0234
		B		0.000	0.000	1.803	0.000	0.0261
		C		0.000	0.000	1.456	0.000	0.0181
L57	30.2500-25.7500	A	1.967	0.000	0.000	30.582	0.000	0.4171
		B		0.000	0.000	32.353	0.000	0.4655
		C		0.000	0.000	26.156	0.000	0.3224
L58	25.7500-25.5000	A	1.950	0.000	0.000	1.694	0.000	0.0229
		B		0.000	0.000	1.791	0.000	0.0256
		C		0.000	0.000	1.450	0.000	0.0177
L59	25.5000-24.7000	A	1.946	0.000	0.000	5.416	0.000	0.0732
		B		0.000	0.000	5.728	0.000	0.0817
		C		0.000	0.000	4.638	0.000	0.0565
L60	24.7000-24.4500	A	1.942	0.000	0.000	1.691	0.000	0.0228
		B		0.000	0.000	1.788	0.000	0.0255
		C		0.000	0.000	1.449	0.000	0.0176
L61	24.4500-24.0000	A	1.939	0.000	0.000	3.043	0.000	0.0410
		B		0.000	0.000	3.218	0.000	0.0458
		C		0.000	0.000	2.607	0.000	0.0316
L62	24.0000-23.7500	A	1.936	0.000	0.000	1.690	0.000	0.0227
		B		0.000	0.000	1.787	0.000	0.0254
		C		0.000	0.000	1.448	0.000	0.0175
L63	23.7500-18.7500	A	1.914	0.000	0.000	25.073	0.000	0.3434
		B		0.000	0.000	26.987	0.000	0.3958
		C		0.000	0.000	23.258	0.000	0.2735
L64	18.7500-14.1000	A	1.865	0.000	0.000	18.191	0.000	0.2585
		B		0.000	0.000	19.926	0.000	0.3062
		C		0.000	0.000	20.572	0.000	0.2345
L65	14.1000-13.8000	A	1.835	0.000	0.000	1.404	0.000	0.0193
		B		0.000	0.000	1.515	0.000	0.0224
		C		0.000	0.000	1.322	0.000	0.0148
L66	13.8000-13.6500	A	1.832	0.000	0.000	0.702	0.000	0.0096
		B		0.000	0.000	0.757	0.000	0.0112
		C		0.000	0.000	0.661	0.000	0.0074
L67	13.6500-10.5000	A	1.809	0.000	0.000	13.409	0.000	0.1842
		B		0.000	0.000	15.799	0.000	0.2310
		C		0.000	0.000	13.829	0.000	0.1526
L68	10.5000-10.2500	A	1.781	0.000	0.000	0.845	0.000	0.0118
		B		0.000	0.000	1.245	0.000	0.0180
		C		0.000	0.000	0.925	0.000	0.0109
L69	10.2500-5.2500	A	1.730	0.000	0.000	16.681	0.000	0.2287
		B		0.000	0.000	24.583	0.000	0.3490
		C		0.000	0.000	18.377	0.000	0.2102
L70	5.2500-3.0000	A	1.624	0.000	0.000	7.302	0.000	0.0962
		B		0.000	0.000	10.763	0.000	0.1468
		C		0.000	0.000	8.150	0.000	0.0871
L71	3.0000-2.9000	A	1.571	0.000	0.000	0.320	0.000	0.0041
		B		0.000	0.000	0.472	0.000	0.0063
		C		0.000	0.000	0.360	0.000	0.0037
L72	2.9000-2.7500	A	1.564	0.000	0.000	0.479	0.000	0.0062
		B		0.000	0.000	0.706	0.000	0.0094
		C		0.000	0.000	0.539	0.000	0.0055
L73	2.7500-2.6500	A	1.557	0.000	0.000	0.319	0.000	0.0041
		B		0.000	0.000	0.470	0.000	0.0062
		C		0.000	0.000	0.359	0.000	0.0037
L74	2.6500-2.5000	A	1.550	0.000	0.000	0.477	0.000	0.0061
		B		0.000	0.000	0.703	0.000	0.0093
		C		0.000	0.000	0.538	0.000	0.0055
L75	2.5000-2.2500	A	1.537	0.000	0.000	0.793	0.000	0.0101
		B		0.000	0.000	1.168	0.000	0.0154
		C		0.000	0.000	0.895	0.000	0.0090
L76	2.2500-1.9000	A	1.517	0.000	0.000	1.103	0.000	0.0139
		B		0.000	0.000	1.627	0.000	0.0213
		C		0.000	0.000	1.249	0.000	0.0124
L77	1.9000-1.6500	A	1.493	0.000	0.000	0.783	0.000	0.0098
		B		0.000	0.000	1.154	0.000	0.0150
		C		0.000	0.000	0.889	0.000	0.0087
L78	1.6500-0.0000	A	1.383	0.000	0.000	4.373	0.000	0.0547
		B		0.000	0.000	6.751	0.000	0.0863
		C		0.000	0.000	4.608	0.000	0.0416

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	160.0000-155.0000	0.0000	0.0000	0.3679	-0.5889
L2	155.0000-150.0000	0.0000	0.0000	1.1876	-1.9012
L3	150.0000-146.0000	0.0000	0.0000	1.1861	-1.8987
L4	146.0000-141.0000	0.0000	0.0000	2.1153	-2.3492
L5	141.0000-136.0000	0.0000	0.0000	2.1617	-2.4009
L6	136.0000-131.0000	0.0000	0.0000	1.8986	-2.4410
L7	131.0000-126.0000	0.0000	0.0000	0.2561	-2.2672
L8	126.0000-121.0000	0.0000	0.0000	-0.0968	-1.8851
L9	121.0000-120.1000	0.0000	0.0000	-0.0750	-1.4605
L10	120.1000-119.8500	0.0000	0.0000	-0.0752	-1.4656
L11	119.8500-117.5000	1.1612	0.5600	0.7374	-1.0003
L12	117.5000-117.2500	1.7421	0.8403	1.1626	-0.7610
L13	117.2500-115.5000	0.2054	0.0991	0.0924	-1.1113
L14	115.5000-115.2500	0.0000	0.0000	-0.0599	-1.1665
L15	115.2500-110.2500	0.0000	0.0000	-0.0607	-1.1819
L16	110.2500-103.7500	0.0000	0.0000	-0.0624	-1.2150
L17	103.7500-102.5000	0.0000	0.0000	-0.0619	-1.2065
L18	102.5000-100.5000	-0.0908	-0.0617	-0.1250	-1.2620
L19	100.5000-100.2500	0.0000	-1.5597	-0.0532	-2.1849
L20	100.2500-98.5000	-0.3447	-1.7690	-0.3333	-2.3713
L21	98.5000-98.2500	-1.2787	-2.3237	-1.0810	-2.8500
L22	98.2500-93.2500	-0.3647	-2.1448	-0.3491	-2.7872
L23	93.2500-90.5000	0.0714	-2.0693	-0.0185	-2.7875
L24	90.5000-90.2500	-0.7400	-2.4169	-0.4473	-2.9477
L25	90.2500-85.2500	-0.6407	-2.3597	-0.3890	-2.9260
L26	85.2500-83.5000	-0.6910	-0.1348	-0.5547	-1.1564
L27	83.5000-83.2500	-0.9222	0.0290	-0.7346	-1.0233
L28	83.2500-80.7500	-0.9279	0.0292	-0.7398	-1.0293
L29	80.7500-80.5000	-0.9341	0.0294	-0.7452	-1.0356
L30	80.5000-80.2500	-0.9350	0.0294	-0.7461	-1.0366
L31	80.2500-77.5000	-0.9412	0.0296	-0.7518	-1.0430
L32	77.5000-77.2500	-0.9469	0.0298	-0.7571	-1.0489
L33	77.2500-68.5000	-1.7627	-0.2441	-1.3168	-1.3534
L34	68.5000-68.0000	-2.9940	-0.6647	-2.0910	-1.7660
L35	68.0000-64.2500	-1.3877	-0.1096	-1.0487	-1.2149
L36	64.2500-64.0000	-0.9485	0.0441	-0.7398	-1.0556
L37	64.0000-60.5000	-0.6390	-0.2701	-0.4573	-1.3353
L38	60.5000-60.2500	-0.7132	0.0000	-0.5835	-0.9342
L39	60.2500-60.1000	-0.7138	0.0000	-0.5841	-0.9348
L40	60.1000-59.8500	0.2075	-0.6532	0.1422	-1.4868
L41	59.8500-59.1000	0.8821	-1.1320	0.6638	-1.8847
L42	59.1000-58.8500	0.8839	-1.1343	0.6654	-1.8884
L43	58.8500-55.4000	0.9445	-1.1148	0.7124	-1.8832

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L44	55.4000-55.1500	0.8965	-1.1498	0.6765	-1.9139
L45	55.1500-54.7500	0.8976	-1.1512	0.6775	-1.9161
L46	54.7500-54.5000	0.8983	-1.1521	0.6783	-1.9177
L47	54.5000-49.5000	0.2782	-1.6068	0.2102	-2.3256
L48	49.5000-44.5000	-0.9499	-1.8561	-0.6768	-2.5680
L49	44.5000-41.3000	-2.4890	-0.6305	-1.8647	-1.6070
L50	41.3000-41.0500	-2.5040	-0.6343	-1.8782	-1.6152
L51	41.0500-34.0000	-1.4400	-0.2420	-1.1387	-1.2395
L52	34.0000-33.0000	-0.7773	0.0000	-0.6468	-0.9880
L53	33.0000-31.5000	-0.7807	0.0000	-0.6515	-0.9833
L54	31.5000-31.2500	0.3014	-1.0976	0.3335	-1.9444
L55	31.2500-30.5000	-0.3343	-0.4630	-0.2675	-1.3692
L56	30.5000-30.2500	-0.8863	0.0411	-0.7207	-0.9590
L57	30.2500-25.7500	-0.8934	0.0415	-0.7273	-0.9619
L58	25.7500-25.5000	-0.9005	0.0418	-0.7339	-0.9642
L59	25.5000-24.7000	-0.9021	0.0419	-0.7354	-0.9647
L60	24.7000-24.4500	-0.9035	0.0419	-0.7367	-0.9649
L61	24.4500-24.0000	-0.9045	0.0420	-0.7377	-0.9651
L62	24.0000-23.7500	-0.9060	0.0420	-0.7389	-0.9657
L63	23.7500-18.7500	-1.8723	-0.0375	-1.3972	-1.2215
L64	18.7500-14.1000	-0.7730	1.4818	-0.5189	-0.1878
L65	14.1000-13.8000	-0.7088	2.3485	-0.4849	0.6870
L66	13.8000-13.6500	-0.7092	2.3500	-0.4854	0.6892
L67	13.6500-10.5000	-1.2485	2.9589	-0.9365	1.1773
L68	10.5000-10.2500	-1.6324	3.8886	-1.2692	1.8378
L69	10.2500-5.2500	-1.6437	3.9142	-1.2840	1.8867
L70	5.2500-3.0000	-1.6592	3.9494	-1.3080	1.9809
L71	3.0000-2.9000	-1.6640	3.9604	-1.3176	2.0265
L72	2.9000-2.7500	-1.6643	3.9609	-1.3186	2.0320
L73	2.7500-2.6500	-1.6648	3.9622	-1.3198	2.0379
L74	2.6500-2.5000	-1.6653	3.9634	-1.3210	2.0441
L75	2.5000-2.2500	-1.6661	3.9650	-1.3229	2.0545
L76	2.2500-1.9000	-1.6674	3.9679	-1.3261	2.0718
L77	1.9000-1.6500	-1.6684	3.9703	-1.3295	2.0912
L78	1.6500-0.0000	-1.9268	4.3105	-1.5603	2.3057

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	1	LDF7-50A(1-5/8")	155.00 - 156.00	1.0000	1.0000
L1	4	2" Rigid Conduit	155.00 - 156.00	1.0000	1.0000
L2	1	LDF7-50A(1-5/8")	150.00 - 155.00	1.0000	1.0000
L2	4	2" Rigid Conduit	150.00 - 155.00	1.0000	1.0000
L3	1	LDF7-50A(1-5/8")	146.00 - 150.00	1.0000	1.0000
L3	4	2" Rigid Conduit	146.00 - 150.00	1.0000	1.0000
L4	1	LDF7-50A(1-5/8")	141.00 - 146.00	1.0000	1.0000
L4	4	2" Rigid Conduit	141.00 - 146.00	1.0000	1.0000
L4	6	HB114-1-08U4-M5J(1-1/4")	141.00 - 146.00	1.0000	1.0000
L5	1	LDF7-50A(1-5/8")	136.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L5	4	2" Rigid Conduit	141.00 - 136.00	1.0000	1.0000
L5	6	HB114-1-08U4-M5J(1-1/4")	141.00 - 136.00	1.0000	1.0000
L6	1	LDF7-50A(1-5/8")	141.00 - 131.00	1.0000	1.0000
L6	4	2" Rigid Conduit	136.00 - 131.00	1.0000	1.0000
L6	6	HB114-1-08U4-M5J(1-1/4")	136.00 - 131.00	1.0000	1.0000
L6	10	561(1-5/8")	136.00 - 131.00	1.0000	1.0000
L7	1	LDF7-50A(1-5/8")	132.00 - 126.00	1.0000	1.0000
L7	4	2" Rigid Conduit	131.00 - 126.00	1.0000	1.0000
L7	6	HB114-1-08U4-M5J(1-1/4")	131.00 - 126.00	1.0000	1.0000
L7	10	561(1-5/8")	131.00 - 126.00	1.0000	1.0000
L7	14	LDF4P-50A(1/2")	131.00 - 126.00	1.0000	1.0000
L8	1	LDF7-50A(1-5/8")	129.00 - 121.00	1.0000	1.0000
L8	4	2" Rigid Conduit	126.00 - 121.00	1.0000	1.0000
L8	6	HB114-1-08U4-M5J(1-1/4")	126.00 - 121.00	1.0000	1.0000
L8	10	561(1-5/8")	126.00 - 121.00	1.0000	1.0000
L8	14	LDF4P-50A(1/2")	126.00 - 121.00	1.0000	1.0000
L8	58	6" x 1" Flat Plate (G)	126.00 - 121.00	1.0000	1.0000
L8	59	6" x 1" Flat Plate (G)	122.60 - 121.00	1.0000	1.0000
L8	60	6" x 1" Flat Plate (G)	122.60 - 121.00	1.0000	1.0000
L9	1	LDF7-50A(1-5/8")	122.60 - 120.10	1.0000	1.0000
L9	4	2" Rigid Conduit	121.00 - 120.10	1.0000	1.0000
L9	6	HB114-1-08U4-M5J(1-1/4")	121.00 - 120.10	1.0000	1.0000
L9	10	561(1-5/8")	121.00 - 120.10	1.0000	1.0000
L9	14	LDF4P-50A(1/2")	121.00 - 120.10	1.0000	1.0000
L9	58	6" x 1" Flat Plate (G)	121.00 - 120.10	1.0000	1.0000
L9	59	6" x 1" Flat Plate (G)	121.00 - 120.10	1.0000	1.0000
L9	60	6" x 1" Flat Plate (G)	121.00 - 120.10	1.0000	1.0000
L10	1	LDF7-50A(1-5/8")	121.00 - 119.85	1.0000	1.0000
L10	4	2" Rigid Conduit	120.10 - 119.85	1.0000	1.0000
L10	6	HB114-1-08U4-M5J(1-1/4")	120.10 - 119.85	1.0000	1.0000
L10	10	561(1-5/8")	120.10 - 119.85	1.0000	1.0000
L10	14	LDF4P-50A(1/2")	120.10 - 119.85	1.0000	1.0000
L10	58	6" x 1" Flat Plate (G)	120.10 - 119.85	1.0000	1.0000
L10	59	6" x 1" Flat Plate (G)	120.10 - 119.85	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L10	60	6" x 1" Flat Plate (G)	119.85 - 120.10	1.0000	1.0000
L11	1	LDF7-50A(1-5/8")	117.50 - 119.85	1.0000	1.0000
L11	4	2" Rigid Conduit	117.50 - 119.85	1.0000	1.0000
L11	6	HB114-1-08U4-M5J(1-1/4")	117.50 - 119.85	1.0000	1.0000
L11	10	561(1-5/8")	117.50 - 119.85	1.0000	1.0000
L11	14	LDF4P-50A(1/2")	117.50 - 119.85	1.0000	1.0000
L11	52	4.5" x 1" Flat Plate (G)	117.50 - 119.00	1.0000	1.0000
L11	58	6" x 1" Flat Plate (G)	117.50 - 119.85	1.0000	1.0000
L11	59	6" x 1" Flat Plate (G)	117.50 - 119.85	1.0000	1.0000
L11	60	6" x 1" Flat Plate (G)	117.50 - 119.85	1.0000	1.0000
L12	1	LDF7-50A(1-5/8")	117.25 - 117.50	1.0000	1.0000
L12	4	2" Rigid Conduit	117.25 - 117.50	1.0000	1.0000
L12	6	HB114-1-08U4-M5J(1-1/4")	117.25 - 117.50	1.0000	1.0000
L12	10	561(1-5/8")	117.25 - 117.50	1.0000	1.0000
L12	14	LDF4P-50A(1/2")	117.25 - 117.50	1.0000	1.0000
L12	52	4.5" x 1" Flat Plate (G)	117.25 - 117.50	1.0000	1.0000
L12	58	6" x 1" Flat Plate (G)	117.25 - 117.50	1.0000	1.0000
L12	59	6" x 1" Flat Plate (G)	117.25 - 117.50	1.0000	1.0000
L12	60	6" x 1" Flat Plate (G)	117.25 - 117.50	1.0000	1.0000
L13	1	LDF7-50A(1-5/8")	115.50 - 117.25	1.0000	1.0000
L13	4	2" Rigid Conduit	115.50 - 117.25	1.0000	1.0000
L13	6	HB114-1-08U4-M5J(1-1/4")	115.50 - 117.25	1.0000	1.0000
L13	10	561(1-5/8")	115.50 - 117.25	1.0000	1.0000
L13	14	LDF4P-50A(1/2")	115.50 - 117.25	1.0000	1.0000
L13	50	4.5" x 1" Flat Plate (G)	115.50 - 117.00	1.0000	1.0000
L13	51	4.5" x 1" Flat Plate (G)	115.50 - 117.00	1.0000	1.0000
L13	52	4.5" x 1" Flat Plate (G)	115.50 - 117.25	1.0000	1.0000
L13	58	6" x 1" Flat Plate (G)	115.50 - 117.25	1.0000	1.0000
L13	59	6" x 1" Flat Plate (G)	115.50 - 117.25	1.0000	1.0000
L13	60	6" x 1" Flat Plate (G)	115.50 - 117.25	1.0000	1.0000
L14	1	LDF7-50A(1-5/8")	115.25 - 115.50	1.0000	1.0000
L14	4	2" Rigid Conduit	115.25 - 115.50	1.0000	1.0000
L14	6	HB114-1-08U4-M5J(1-1/4")	115.25 - 115.50	1.0000	1.0000
L14	10	561(1-5/8")	115.25 - 115.50	1.0000	1.0000
L14	14	LDF4P-50A(1/2")	115.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L14	50	4.5" x 1" Flat Plate (G)	115.50 115.25 - 115.50	1.0000	1.0000
L14	51	4.5" x 1" Flat Plate (G)	115.25 - 115.50	1.0000	1.0000
L14	52	4.5" x 1" Flat Plate (G)	115.25 - 115.50	1.0000	1.0000
L14	58	6" x 1" Flat Plate (G)	115.25 - 115.50	1.0000	1.0000
L14	59	6" x 1" Flat Plate (G)	115.25 - 115.50	1.0000	1.0000
L14	60	6" x 1" Flat Plate (G)	115.25 - 115.50	1.0000	1.0000
L15	1	LDF7-50A(1-5/8")	110.25 - 115.25	1.0000	1.0000
L15	4	2" Rigid Conduit	110.25 - 115.25	1.0000	1.0000
L15	6	HB114-1-08U4-M5J(1-1/4")	110.25 - 115.25	1.0000	1.0000
L15	10	561(1-5/8")	110.25 - 115.25	1.0000	1.0000
L15	14	LDF4P-50A(1/2")	110.25 - 115.25	1.0000	1.0000
L15	50	4.5" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L15	51	4.5" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L15	52	4.5" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L15	58	6" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L15	59	6" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L15	60	6" x 1" Flat Plate (G)	110.25 - 115.25	1.0000	1.0000
L16	1	LDF7-50A(1-5/8")	103.75 - 110.25	1.0000	1.0000
L16	4	2" Rigid Conduit	103.75 - 110.25	1.0000	1.0000
L16	6	HB114-1-08U4-M5J(1-1/4")	103.75 - 110.25	1.0000	1.0000
L16	10	561(1-5/8")	103.75 - 110.25	1.0000	1.0000
L16	14	LDF4P-50A(1/2")	103.75 - 110.25	1.0000	1.0000
L16	50	4.5" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L16	51	4.5" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L16	52	4.5" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L16	58	6" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L16	59	6" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L16	60	6" x 1" Flat Plate (G)	103.75 - 110.25	1.0000	1.0000
L18	1	LDF7-50A(1-5/8")	100.50 - 102.50	1.0000	1.0000
L18	4	2" Rigid Conduit	100.50 - 102.50	1.0000	1.0000
L18	6	HB114-1-08U4-M5J(1-1/4")	100.50 - 102.50	1.0000	1.0000
L18	10	561(1-5/8")	100.50 - 102.50	1.0000	1.0000
L18	14	LDF4P-50A(1/2")	100.50 - 102.50	1.0000	1.0000
L18	50	4.5" x 1" Flat Plate (G)	100.50 - 102.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L18	51	4.5" x 1" Flat Plate (G)	100.50 - 102.50	1.0000	1.0000
L18	52	4.5" x 1" Flat Plate (G)	100.50 - 102.50	1.0000	1.0000
L18	58	6" x 1" Flat Plate (G)	100.50 - 102.50	1.0000	1.0000
L18	59	6" x 1" Flat Plate (G)	100.50 - 102.50	1.0000	1.0000
L18	60	6" x 1" Flat Plate (G)	100.60 - 102.50	1.0000	1.0000
L19	1	LDF7-50A(1-5/8")	100.25 - 100.50	1.0000	1.0000
L19	4	2" Rigid Conduit	100.25 - 100.50	1.0000	1.0000
L19	6	HB114-1-08U4-M5J(1-1/4")	100.25 - 100.50	1.0000	1.0000
L19	10	561(1-5/8")	100.25 - 100.50	1.0000	1.0000
L19	14	LDF4P-50A(1/2")	100.25 - 100.50	1.0000	1.0000
L19	33	6" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	34	6" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	35	6" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	50	4.5" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	51	4.5" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	52	4.5" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	58	6" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L19	59	6" x 1" Flat Plate (G)	100.25 - 100.50	1.0000	1.0000
L20	1	LDF7-50A(1-5/8")	98.50 - 100.25	1.0000	1.0000
L20	4	2" Rigid Conduit	98.50 - 100.25	1.0000	1.0000
L20	6	HB114-1-08U4-M5J(1-1/4")	98.50 - 100.25	1.0000	1.0000
L20	10	561(1-5/8")	98.50 - 100.25	1.0000	1.0000
L20	14	LDF4P-50A(1/2")	98.50 - 100.25	1.0000	1.0000
L20	33	6" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	34	6" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	35	6" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	50	4.5" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	51	4.5" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	52	4.5" x 1" Flat Plate (G)	99.00 - 100.25	1.0000	1.0000
L20	58	6" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L20	59	6" x 1" Flat Plate (G)	98.50 - 100.25	1.0000	1.0000
L21	1	LDF7-50A(1-5/8")	98.25 - 98.50	1.0000	1.0000
L21	4	2" Rigid Conduit	98.25 - 98.50	1.0000	1.0000
L21	6	HB114-1-08U4-M5J(1-1/4")	98.25 - 98.50	1.0000	1.0000
L21	10	561(1-5/8")	98.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L21	14	LDF4P-50A(1/2")	98.50 - 98.25	1.0000	1.0000
L21	33	6" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	34	6" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	35	6" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	50	4.5" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	51	4.5" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	58	6" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L21	59	6" x 1" Flat Plate (G)	98.25 - 98.50	1.0000	1.0000
L22	1	LDF7-50A(1-5/8")	93.25 - 98.25	1.0000	1.0000
L22	4	2" Rigid Conduit	93.25 - 98.25	1.0000	1.0000
L22	6	HB114-1-08U4-M5J(1-1/4")	93.25 - 98.25	1.0000	1.0000
L22	10	561(1-5/8")	93.25 - 98.25	1.0000	1.0000
L22	14	LDF4P-50A(1/2")	93.25 - 98.25	1.0000	1.0000
L22	33	6" x 1" Flat Plate (G)	93.25 - 98.25	1.0000	1.0000
L22	34	6" x 1" Flat Plate (G)	93.25 - 98.25	1.0000	1.0000
L22	35	6" x 1" Flat Plate (G)	93.25 - 98.25	1.0000	1.0000
L22	50	4.5" x 1" Flat Plate (G)	97.00 - 98.25	1.0000	1.0000
L22	51	4.5" x 1" Flat Plate (G)	97.00 - 98.25	1.0000	1.0000
L22	58	6" x 1" Flat Plate (G)	93.25 - 98.25	1.0000	1.0000
L22	59	6" x 1" Flat Plate (G)	93.25 - 98.25	1.0000	1.0000
L23	1	LDF7-50A(1-5/8")	90.50 - 93.25	1.0000	1.0000
L23	4	2" Rigid Conduit	90.50 - 93.25	1.0000	1.0000
L23	6	HB114-1-08U4-M5J(1-1/4")	90.50 - 93.25	1.0000	1.0000
L23	10	561(1-5/8")	90.50 - 93.25	1.0000	1.0000
L23	14	LDF4P-50A(1/2")	90.50 - 93.25	1.0000	1.0000
L23	33	6" x 1" Flat Plate (G)	90.50 - 93.25	1.0000	1.0000
L23	34	6" x 1" Flat Plate (G)	90.50 - 93.25	1.0000	1.0000
L23	35	6" x 1" Flat Plate (G)	90.50 - 93.25	1.0000	1.0000
L23	58	6" x 1" Flat Plate (G)	90.60 - 93.25	1.0000	1.0000
L23	59	6" x 1" Flat Plate (G)	90.60 - 93.25	1.0000	1.0000
L24	1	LDF7-50A(1-5/8")	90.25 - 90.50	1.0000	1.0000
L24	4	2" Rigid Conduit	90.25 - 90.50	1.0000	1.0000
L24	6	HB114-1-08U4-M5J(1-1/4")	90.25 - 90.50	1.0000	1.0000
L24	10	561(1-5/8")	90.25 - 90.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	14	LDF4P-50A(1/2")	90.25 - 90.50	1.0000	1.0000
L24	33	6" x 1" Flat Plate (G)	90.25 - 90.50	1.0000	1.0000
L24	34	6" x 1" Flat Plate (G)	90.25 - 90.50	1.0000	1.0000
L24	35	6" x 1" Flat Plate (G)	90.25 - 90.50	1.0000	1.0000
L24	56	8.5" x 1.25" Flat Plate (G)	90.25 - 90.50	1.0000	1.0000
L24	57	8.5" x 1.25" Flat Plate (G)	90.25 - 90.50	1.0000	1.0000
L25	1	LDF7-50A(1-5/8")	85.25 - 90.25	1.0000	1.0000
L25	4	2" Rigid Conduit	85.25 - 90.25	1.0000	1.0000
L25	6	HB114-1-08U4-M5J(1-1/4")	85.25 - 90.25	1.0000	1.0000
L25	10	561(1-5/8")	85.25 - 90.25	1.0000	1.0000
L25	14	LDF4P-50A(1/2")	85.25 - 90.25	1.0000	1.0000
L25	33	6" x 1" Flat Plate (G)	85.25 - 90.25	1.0000	1.0000
L25	34	6" x 1" Flat Plate (G)	85.25 - 90.25	1.0000	1.0000
L25	35	6" x 1" Flat Plate (G)	85.25 - 90.25	1.0000	1.0000
L25	43	6.5" x 1.25" Flat Plate (G)	85.25 - 85.50	1.0000	1.0000
L25	44	6.5" x 1.25" Flat Plate (G)	85.25 - 85.50	1.0000	1.0000
L25	45	6.5" x 1.25" Flat Plate (G)	85.25 - 85.50	1.0000	1.0000
L25	56	8.5" x 1.25" Flat Plate (G)	85.25 - 90.25	1.0000	1.0000
L25	57	8.5" x 1.25" Flat Plate (G)	85.25 - 90.25	1.0000	1.0000
L26	1	LDF7-50A(1-5/8")	83.50 - 85.25	1.0000	1.0000
L26	4	2" Rigid Conduit	83.50 - 85.25	1.0000	1.0000
L26	6	HB114-1-08U4-M5J(1-1/4")	83.50 - 85.25	1.0000	1.0000
L26	10	561(1-5/8")	83.50 - 85.25	1.0000	1.0000
L26	14	LDF4P-50A(1/2")	83.50 - 85.25	1.0000	1.0000
L26	33	6" x 1" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	34	6" x 1" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	35	6" x 1" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	43	6.5" x 1.25" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	44	6.5" x 1.25" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	45	6.5" x 1.25" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	49	8.5" x 1.25" Flat Plate (G)	83.50 - 85.00	1.0000	1.0000
L26	56	8.5" x 1.25" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L26	57	8.5" x 1.25" Flat Plate (G)	83.50 - 85.25	1.0000	1.0000
L27	1	LDF7-50A(1-5/8")	83.25 - 83.50	1.0000	1.0000
L27	4	2" Rigid Conduit	83.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			83.50		
L27	6	HB114-1-08U4-M5J(1-1/4")	83.25 - 83.50	1.0000	1.0000
L27	10	561(1-5/8")	83.25 - 83.50	1.0000	1.0000
L27	14	LDF4P-50A(1/2")	83.25 - 83.50	1.0000	1.0000
L27	33	6" x 1" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	34	6" x 1" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	35	6" x 1" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	43	6.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	44	6.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	45	6.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	49	8.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	56	8.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L27	57	8.5" x 1.25" Flat Plate (G)	83.25 - 83.50	1.0000	1.0000
L28	1	LDF7-50A(1-5/8")	80.75 - 83.25	1.0000	1.0000
L28	4	2" Rigid Conduit	80.75 - 83.25	1.0000	1.0000
L28	6	HB114-1-08U4-M5J(1-1/4")	80.75 - 83.25	1.0000	1.0000
L28	10	561(1-5/8")	80.75 - 83.25	1.0000	1.0000
L28	14	LDF4P-50A(1/2")	80.75 - 83.25	1.0000	1.0000
L28	33	6" x 1" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	34	6" x 1" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	35	6" x 1" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	43	6.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	44	6.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	45	6.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	49	8.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	56	8.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L28	57	8.5" x 1.25" Flat Plate (G)	80.75 - 83.25	1.0000	1.0000
L29	1	LDF7-50A(1-5/8")	80.50 - 80.75	1.0000	1.0000
L29	4	2" Rigid Conduit	80.50 - 80.75	1.0000	1.0000
L29	6	HB114-1-08U4-M5J(1-1/4")	80.50 - 80.75	1.0000	1.0000
L29	10	561(1-5/8")	80.50 - 80.75	1.0000	1.0000
L29	14	LDF4P-50A(1/2")	80.50 - 80.75	1.0000	1.0000
L29	33	6" x 1" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	34	6" x 1" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	35	6" x 1" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L29	43	6.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	44	6.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	45	6.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	49	8.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	56	8.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L29	57	8.5" x 1.25" Flat Plate (G)	80.50 - 80.75	1.0000	1.0000
L30	1	LDF7-50A(1-5/8")	80.25 - 80.50	1.0000	1.0000
L30	4	2" Rigid Conduit	80.25 - 80.50	1.0000	1.0000
L30	6	HB114-1-08U4-M5J(1-1/4")	80.25 - 80.50	1.0000	1.0000
L30	10	561(1-5/8")	80.25 - 80.50	1.0000	1.0000
L30	14	LDF4P-50A(1/2")	80.25 - 80.50	1.0000	1.0000
L30	33	6" x 1" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	34	6" x 1" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	35	6" x 1" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	43	6.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	44	6.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	45	6.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	49	8.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	56	8.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L30	57	8.5" x 1.25" Flat Plate (G)	80.25 - 80.50	1.0000	1.0000
L31	1	LDF7-50A(1-5/8")	77.50 - 80.25	1.0000	1.0000
L31	4	2" Rigid Conduit	77.50 - 80.25	1.0000	1.0000
L31	6	HB114-1-08U4-M5J(1-1/4")	77.50 - 80.25	1.0000	1.0000
L31	10	561(1-5/8")	77.50 - 80.25	1.0000	1.0000
L31	14	LDF4P-50A(1/2")	77.50 - 80.25	1.0000	1.0000
L31	33	6" x 1" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	34	6" x 1" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	35	6" x 1" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	43	6.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	44	6.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	45	6.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	49	8.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	56	8.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L31	57	8.5" x 1.25" Flat Plate (G)	77.50 - 80.25	1.0000	1.0000
L32	1	LDF7-50A(1-5/8")	77.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			77.50		
L32	4	2" Rigid Conduit	77.25 - 77.50	1.0000	1.0000
L32	6	HB114-1-08U4-M5J(1-1/4")	77.25 - 77.50	1.0000	1.0000
L32	10	561(1-5/8")	77.25 - 77.50	1.0000	1.0000
L32	14	LDF4P-50A(1/2")	77.25 - 77.50	1.0000	1.0000
L32	33	6" x 1" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	34	6" x 1" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	35	6" x 1" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	43	6.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	44	6.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	45	6.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	49	8.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	56	8.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L32	57	8.5" x 1.25" Flat Plate (G)	77.25 - 77.50	1.0000	1.0000
L33	1	LDF7-50A(1-5/8")	68.50 - 77.25	1.0000	1.0000
L33	4	2" Rigid Conduit	68.50 - 77.25	1.0000	1.0000
L33	6	HB114-1-08U4-M5J(1-1/4")	68.50 - 77.25	1.0000	1.0000
L33	10	561(1-5/8")	68.50 - 77.25	1.0000	1.0000
L33	14	LDF4P-50A(1/2")	68.50 - 77.25	1.0000	1.0000
L33	33	6" x 1" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L33	34	6" x 1" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L33	35	6" x 1" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L33	43	6.5" x 1.25" Flat Plate (G)	72.50 - 77.25	1.0000	1.0000
L33	44	6.5" x 1.25" Flat Plate (G)	72.50 - 77.25	1.0000	1.0000
L33	45	6.5" x 1.25" Flat Plate (G)	72.50 - 77.25	1.0000	1.0000
L33	49	8.5" x 1.25" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L33	56	8.5" x 1.25" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L33	57	8.5" x 1.25" Flat Plate (G)	68.50 - 77.25	1.0000	1.0000
L35	1	LDF7-50A(1-5/8")	64.25 - 68.00	1.0000	1.0000
L35	4	2" Rigid Conduit	64.25 - 68.00	1.0000	1.0000
L35	6	HB114-1-08U4-M5J(1-1/4")	64.25 - 68.00	1.0000	1.0000
L35	10	561(1-5/8")	64.25 - 68.00	1.0000	1.0000
L35	14	LDF4P-50A(1/2")	64.25 - 68.00	1.0000	1.0000
L35	33	6" x 1" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000
L35	34	6" x 1" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L35	35	6" x 1" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000
L35	40	6.5" x 1.25" Flat Plate (G)	64.25 - 67.00	1.0000	1.0000
L35	41	6.5" x 1.25" Flat Plate (G)	64.25 - 67.00	1.0000	1.0000
L35	42	6.5" x 1.25" Flat Plate (G)	64.25 - 67.00	1.0000	1.0000
L35	49	8.5" x 1.25" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000
L35	56	8.5" x 1.25" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000
L35	57	8.5" x 1.25" Flat Plate (G)	64.25 - 68.00	1.0000	1.0000
L36	1	LDF7-50A(1-5/8")	64.00 - 64.25	1.0000	1.0000
L36	4	2" Rigid Conduit	64.00 - 64.25	1.0000	1.0000
L36	6	HB114-1-08U4-M5J(1-1/4")	64.00 - 64.25	1.0000	1.0000
L36	10	561(1-5/8")	64.00 - 64.25	1.0000	1.0000
L36	14	LDF4P-50A(1/2")	64.00 - 64.25	1.0000	1.0000
L36	33	6" x 1" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	34	6" x 1" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	35	6" x 1" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	40	6.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	41	6.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	42	6.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	49	8.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	56	8.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L36	57	8.5" x 1.25" Flat Plate (G)	64.00 - 64.25	1.0000	1.0000
L37	1	LDF7-50A(1-5/8")	60.50 - 64.00	1.0000	1.0000
L37	4	2" Rigid Conduit	60.50 - 64.00	1.0000	1.0000
L37	6	HB114-1-08U4-M5J(1-1/4")	60.50 - 64.00	1.0000	1.0000
L37	10	561(1-5/8")	60.50 - 64.00	1.0000	1.0000
L37	14	LDF4P-50A(1/2")	60.50 - 64.00	1.0000	1.0000
L37	25	Aero MP304	60.50 - 61.50	1.0000	1.0000
L37	33	6" x 1" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	34	6" x 1" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	35	6" x 1" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	40	6.5" x 1.25" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	41	6.5" x 1.25" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	42	6.5" x 1.25" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	49	8.5" x 1.25" Flat Plate (G)	60.50 - 64.00	1.0000	1.0000
L37	56	8.5" x 1.25" Flat Plate (G)	60.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L37	57	8.5" x 1.25" Flat Plate (G)	64.00 - 60.50	1.0000	1.0000
L38	1	LDF7-50A(1-5/8")	64.00 - 60.25	1.0000	1.0000
L38	4	2" Rigid Conduit	60.50 - 60.25	1.0000	1.0000
L38	6	HB114-1-08U4-M5J(1-1/4")	60.50 - 60.25	1.0000	1.0000
L38	10	561(1-5/8")	60.50 - 60.25	1.0000	1.0000
L38	14	LDF4P-50A(1/2")	60.50 - 60.25	1.0000	1.0000
L38	23	Aero MP304	60.50 - 60.25	1.0000	1.0000
L38	24	Aero MP304	60.50 - 60.25	1.0000	1.0000
L38	25	Aero MP304	60.50 - 60.25	1.0000	1.0000
L38	30	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	31	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	32	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	40	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	41	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	42	6.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	49	8.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	56	8.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L38	57	8.5" x 1.25" Flat Plate (G)	60.50 - 60.25	1.0000	1.0000
L39	1	LDF7-50A(1-5/8")	60.25 - 60.10	1.0000	1.0000
L39	4	2" Rigid Conduit	60.25 - 60.10	1.0000	1.0000
L39	6	HB114-1-08U4-M5J(1-1/4")	60.25 - 60.10	1.0000	1.0000
L39	10	561(1-5/8")	60.25 - 60.10	1.0000	1.0000
L39	14	LDF4P-50A(1/2")	60.25 - 60.10	1.0000	1.0000
L39	23	Aero MP304	60.25 - 60.10	1.0000	1.0000
L39	24	Aero MP304	60.25 - 60.10	1.0000	1.0000
L39	25	Aero MP304	60.25 - 60.10	1.0000	1.0000
L39	30	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	31	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	32	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	40	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	41	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	42	6.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	49	8.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000
L39	56	8.5" x 1.25" Flat Plate (G)	60.25 - 60.10	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L39	57	8.5" x 1.25" Flat Plate (G)	60.10 - 60.25	1.0000	1.0000
L40	1	LDF7-50A(1-5/8")	59.85 - 60.10	1.0000	1.0000
L40	4	2" Rigid Conduit	59.85 - 60.10	1.0000	1.0000
L40	6	HB114-1-08U4-M5J(1-1/4")	59.85 - 60.10	1.0000	1.0000
L40	10	561(1-5/8")	59.85 - 60.10	1.0000	1.0000
L40	14	LDF4P-50A(1/2")	59.85 - 60.10	1.0000	1.0000
L40	23	Aero MP304	59.85 - 60.10	1.0000	1.0000
L40	24	Aero MP304	59.85 - 60.10	1.0000	1.0000
L40	25	Aero MP304	59.85 - 60.10	1.0000	1.0000
L40	30	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	31	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	32	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	40	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	41	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	42	6.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	49	8.5" x 1.25" Flat Plate (G)	60.00 - 60.10	1.0000	1.0000
L40	56	8.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L40	57	8.5" x 1.25" Flat Plate (G)	59.85 - 60.10	1.0000	1.0000
L41	1	LDF7-50A(1-5/8")	59.10 - 59.85	1.0000	1.0000
L41	4	2" Rigid Conduit	59.10 - 59.85	1.0000	1.0000
L41	6	HB114-1-08U4-M5J(1-1/4")	59.10 - 59.85	1.0000	1.0000
L41	10	561(1-5/8")	59.10 - 59.85	1.0000	1.0000
L41	14	LDF4P-50A(1/2")	59.10 - 59.85	1.0000	1.0000
L41	23	Aero MP304	59.10 - 59.85	1.0000	1.0000
L41	24	Aero MP304	59.10 - 59.85	1.0000	1.0000
L41	25	Aero MP304	59.10 - 59.85	1.0000	1.0000
L41	30	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	31	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	32	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	40	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	41	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	42	6.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	56	8.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L41	57	8.5" x 1.25" Flat Plate (G)	59.10 - 59.85	1.0000	1.0000
L42	1	LDF7-50A(1-5/8")	58.85 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L42	4	2" Rigid Conduit	59.10 58.85 -	1.0000	1.0000
L42	6	HB114-1-08U4-M5J(1-1/4")	59.10 58.85 -	1.0000	1.0000
L42	10	561(1-5/8")	59.10 58.85 -	1.0000	1.0000
L42	14	LDF4P-50A(1/2")	59.10 58.85 -	1.0000	1.0000
L42	23	Aero MP304	59.10 58.85 -	1.0000	1.0000
L42	24	Aero MP304	59.10 58.85 -	1.0000	1.0000
L42	25	Aero MP304	59.10 58.85 -	1.0000	1.0000
L42	30	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	31	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	32	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	40	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	41	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	42	6.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	56	8.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L42	57	8.5" x 1.25" Flat Plate (G)	59.10 58.85 -	1.0000	1.0000
L43	1	LDF7-50A(1-5/8")	59.10 55.40 -	1.0000	1.0000
L43	4	2" Rigid Conduit	58.85 55.40 -	1.0000	1.0000
L43	6	HB114-1-08U4-M5J(1-1/4")	58.85 55.40 -	1.0000	1.0000
L43	10	561(1-5/8")	58.85 55.40 -	1.0000	1.0000
L43	14	LDF4P-50A(1/2")	58.85 55.40 -	1.0000	1.0000
L43	23	Aero MP304	58.85 55.40 -	1.0000	1.0000
L43	24	Aero MP304	58.85 55.40 -	1.0000	1.0000
L43	25	Aero MP304	58.85 55.40 -	1.0000	1.0000
L43	30	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	31	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	32	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	40	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	41	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	42	6.5" x 1.25" Flat Plate (G)	58.85 55.40 -	1.0000	1.0000
L43	56	8.5" x 1.25" Flat Plate (G)	58.85 55.50 -	1.0000	1.0000
L43	57	8.5" x 1.25" Flat Plate (G)	58.85 55.50 -	1.0000	1.0000
L44	1	LDF7-50A(1-5/8")	58.85 55.15 -	1.0000	1.0000
L44	4	2" Rigid Conduit	55.40 55.15 -	1.0000	1.0000
L44	6	HB114-1-08U4-M5J(1-1/4")	55.40 55.15 -	1.0000	1.0000
			55.40		

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L44	10	561(1-5/8")	55.15 - 55.40	1.0000	1.0000
L44	14	LDF4P-50A(1/2")	55.15 - 55.40	1.0000	1.0000
L44	23	Aero MP304	55.15 - 55.40	1.0000	1.0000
L44	24	Aero MP304	55.15 - 55.40	1.0000	1.0000
L44	25	Aero MP304	55.15 - 55.40	1.0000	1.0000
L44	30	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	31	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	32	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	40	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	41	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	42	6.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	54	8.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L44	55	8.5" x 1.25" Flat Plate (G)	55.15 - 55.40	1.0000	1.0000
L45	1	LDF7-50A(1-5/8")	54.75 - 55.15	1.0000	1.0000
L45	4	2" Rigid Conduit	54.75 - 55.15	1.0000	1.0000
L45	6	HB114-1-08U4-M5J(1-1/4")	54.75 - 55.15	1.0000	1.0000
L45	10	561(1-5/8")	54.75 - 55.15	1.0000	1.0000
L45	14	LDF4P-50A(1/2")	54.75 - 55.15	1.0000	1.0000
L45	23	Aero MP304	54.75 - 55.15	1.0000	1.0000
L45	24	Aero MP304	54.75 - 55.15	1.0000	1.0000
L45	25	Aero MP304	54.75 - 55.15	1.0000	1.0000
L45	30	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	31	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	32	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	40	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	41	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	42	6.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	54	8.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L45	55	8.5" x 1.25" Flat Plate (G)	54.75 - 55.15	1.0000	1.0000
L46	1	LDF7-50A(1-5/8")	54.50 - 54.75	1.0000	1.0000
L46	4	2" Rigid Conduit	54.50 - 54.75	1.0000	1.0000
L46	6	HB114-1-08U4-M5J(1-1/4")	54.50 - 54.75	1.0000	1.0000
L46	10	561(1-5/8")	54.50 - 54.75	1.0000	1.0000
L46	14	LDF4P-50A(1/2")	54.50 - 54.75	1.0000	1.0000
L46	23	Aero MP304	54.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L46	24	Aero MP304	54.75 - 54.50	1.0000	1.0000
L46	25	Aero MP304	54.75 - 54.50	1.0000	1.0000
L46	30	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	31	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	32	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	40	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	41	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	42	6.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	54	8.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L46	55	8.5" x 1.25" Flat Plate (G)	54.75 - 54.50	1.0000	1.0000
L47	1	LDF7-50A(1-5/8")	54.75 - 49.50	1.0000	1.0000
L47	4	2" Rigid Conduit	54.50 - 49.50	1.0000	1.0000
L47	6	HB114-1-08U4-M5J(1-1/4")	54.50 - 49.50	1.0000	1.0000
L47	10	561(1-5/8")	54.50 - 49.50	1.0000	1.0000
L47	14	LDF4P-50A(1/2")	54.50 - 49.50	1.0000	1.0000
L47	23	Aero MP304	54.50 - 49.50	1.0000	1.0000
L47	24	Aero MP304	54.50 - 49.50	1.0000	1.0000
L47	25	Aero MP304	54.50 - 49.50	1.0000	1.0000
L47	30	6.5" x 1.25" Flat Plate (G)	54.50 - 49.50	1.0000	1.0000
L47	31	6.5" x 1.25" Flat Plate (G)	54.50 - 49.50	1.0000	1.0000
L47	32	6.5" x 1.25" Flat Plate (G)	54.50 - 49.50	1.0000	1.0000
L47	40	6.5" x 1.25" Flat Plate (G)	54.50 - 52.00	1.0000	1.0000
L47	41	6.5" x 1.25" Flat Plate (G)	54.50 - 52.00	1.0000	1.0000
L47	42	6.5" x 1.25" Flat Plate (G)	54.50 - 52.00	1.0000	1.0000
L47	54	8.5" x 1.25" Flat Plate (G)	54.50 - 49.50	1.0000	1.0000
L47	55	8.5" x 1.25" Flat Plate (G)	54.50 - 49.50	1.0000	1.0000
L48	1	LDF7-50A(1-5/8")	54.50 - 44.50	1.0000	1.0000
L48	4	2" Rigid Conduit	49.50 - 44.50	1.0000	1.0000
L48	6	HB114-1-08U4-M5J(1-1/4")	49.50 - 44.50	1.0000	1.0000
L48	10	561(1-5/8")	49.50 - 44.50	1.0000	1.0000
L48	14	LDF4P-50A(1/2")	49.50 - 44.50	1.0000	1.0000
L48	23	Aero MP304	49.50 - 44.50	1.0000	1.0000
L48	24	Aero MP304	49.50 - 44.50	1.0000	1.0000
L48	25	Aero MP304	49.50 - 44.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L48	30	6.5" x 1.25" Flat Plate (G)	44.50 - 49.50	1.0000	1.0000
L48	31	6.5" x 1.25" Flat Plate (G)	44.50 - 49.50	1.0000	1.0000
L48	32	6.5" x 1.25" Flat Plate (G)	44.50 - 49.50	1.0000	1.0000
L48	48	8.5" x 1.25" Flat Plate (G)	44.50 - 45.50	1.0000	1.0000
L48	54	8.5" x 1.25" Flat Plate (G)	44.50 - 49.50	1.0000	1.0000
L48	55	8.5" x 1.25" Flat Plate (G)	44.50 - 49.50	1.0000	1.0000
L49	1	LDF7-50A(1-5/8")	41.30 - 44.50	1.0000	1.0000
L49	4	2" Rigid Conduit	41.30 - 44.50	1.0000	1.0000
L49	6	HB114-1-08U4-M5J(1-1/4")	41.30 - 44.50	1.0000	1.0000
L49	10	561(1-5/8")	41.30 - 44.50	1.0000	1.0000
L49	14	LDF4P-50A(1/2")	41.30 - 44.50	1.0000	1.0000
L49	23	Aero MP304	41.30 - 44.50	1.0000	1.0000
L49	24	Aero MP304	41.30 - 44.50	1.0000	1.0000
L49	25	Aero MP304	41.30 - 44.50	1.0000	1.0000
L49	30	6.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L49	31	6.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L49	32	6.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L49	48	8.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L49	54	8.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L49	55	8.5" x 1.25" Flat Plate (G)	41.30 - 44.50	1.0000	1.0000
L50	1	LDF7-50A(1-5/8")	41.05 - 41.30	1.0000	1.0000
L50	4	2" Rigid Conduit	41.05 - 41.30	1.0000	1.0000
L50	6	HB114-1-08U4-M5J(1-1/4")	41.05 - 41.30	1.0000	1.0000
L50	10	561(1-5/8")	41.05 - 41.30	1.0000	1.0000
L50	14	LDF4P-50A(1/2")	41.05 - 41.30	1.0000	1.0000
L50	23	Aero MP304	41.05 - 41.30	1.0000	1.0000
L50	24	Aero MP304	41.05 - 41.30	1.0000	1.0000
L50	25	Aero MP304	41.05 - 41.30	1.0000	1.0000
L50	30	6.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L50	31	6.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L50	32	6.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L50	48	8.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L50	54	8.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L50	55	8.5" x 1.25" Flat Plate (G)	41.05 - 41.30	1.0000	1.0000
L51	1	LDF7-50A(1-5/8")	34.00 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L51	4	2" Rigid Conduit	34.00 - 41.05	1.0000	1.0000
L51	6	HB114-1-08U4-M5J(1-1/4")	34.00 - 41.05	1.0000	1.0000
L51	10	561(1-5/8")	34.00 - 41.05	1.0000	1.0000
L51	14	LDF4P-50A(1/2")	34.00 - 41.05	1.0000	1.0000
L51	23	Aero MP304	34.00 - 41.05	1.0000	1.0000
L51	24	Aero MP304	34.00 - 41.05	1.0000	1.0000
L51	25	Aero MP304	34.00 - 41.05	1.0000	1.0000
L51	30	6.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L51	31	6.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L51	32	6.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L51	37	6.5" x 1.25" Flat Plate (G)	34.00 - 38.00	1.0000	1.0000
L51	38	6.5" x 1.25" Flat Plate (G)	34.00 - 38.00	1.0000	1.0000
L51	39	6.5" x 1.25" Flat Plate (G)	34.00 - 38.00	1.0000	1.0000
L51	48	8.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L51	54	8.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L51	55	8.5" x 1.25" Flat Plate (G)	34.00 - 41.05	1.0000	1.0000
L53	1	LDF7-50A(1-5/8")	31.50 - 33.00	1.0000	1.0000
L53	4	2" Rigid Conduit	31.50 - 33.00	1.0000	1.0000
L53	6	HB114-1-08U4-M5J(1-1/4")	31.50 - 33.00	1.0000	1.0000
L53	10	561(1-5/8")	31.50 - 33.00	1.0000	1.0000
L53	14	LDF4P-50A(1/2")	31.50 - 33.00	1.0000	1.0000
L53	23	Aero MP304	31.50 - 33.00	1.0000	1.0000
L53	24	Aero MP304	31.50 - 33.00	1.0000	1.0000
L53	25	Aero MP304	31.50 - 33.00	1.0000	1.0000
L53	30	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	31	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	32	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	37	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	38	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	39	6.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	48	8.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	54	8.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L53	55	8.5" x 1.25" Flat Plate (G)	31.50 - 33.00	1.0000	1.0000
L54	1	LDF7-50A(1-5/8")	31.25 - 31.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L54	4	2" Rigid Conduit	31.25 - 31.50	1.0000	1.0000
L54	6	HB114-1-08U4-M5J(1-1/4")	31.25 - 31.50	1.0000	1.0000
L54	10	561(1-5/8")	31.25 - 31.50	1.0000	1.0000
L54	14	LDF4P-50A(1/2")	31.25 - 31.50	1.0000	1.0000
L54	18	Aero MP305	31.25 - 31.50	1.0000	1.0000
L54	23	Aero MP304	31.25 - 31.50	1.0000	1.0000
L54	24	Aero MP304	31.25 - 31.50	1.0000	1.0000
L54	25	Aero MP304	31.25 - 31.50	1.0000	1.0000
L54	30	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	31	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	32	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	37	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	38	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	39	6.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	48	8.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	54	8.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L54	55	8.5" x 1.25" Flat Plate (G)	31.25 - 31.50	1.0000	1.0000
L55	1	LDF7-50A(1-5/8")	30.50 - 31.25	1.0000	1.0000
L55	4	2" Rigid Conduit	30.50 - 31.25	1.0000	1.0000
L55	6	HB114-1-08U4-M5J(1-1/4")	30.50 - 31.25	1.0000	1.0000
L55	10	561(1-5/8")	30.50 - 31.25	1.0000	1.0000
L55	14	LDF4P-50A(1/2")	30.50 - 31.25	1.0000	1.0000
L55	18	Aero MP305	30.50 - 31.25	1.0000	1.0000
L55	23	Aero MP304	30.50 - 31.25	1.0000	1.0000
L55	24	Aero MP304	30.50 - 31.25	1.0000	1.0000
L55	25	Aero MP304	31.00 - 31.25	1.0000	1.0000
L55	30	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	31	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	32	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	37	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	38	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	39	6.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	48	8.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	54	8.5" x 1.25" Flat Plate (G)	30.50 - 31.25	1.0000	1.0000
L55	55	8.5" x 1.25" Flat Plate (G)	30.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L56	1	LDF7-50A(1-5/8")	31.25 30.25 - 30.50	1.0000	1.0000
L56	4	2" Rigid Conduit	30.25 - 30.50	1.0000	1.0000
L56	6	HB114-1-08U4-M5J(1-1/4")	30.25 - 30.50	1.0000	1.0000
L56	10	561(1-5/8")	30.25 - 30.50	1.0000	1.0000
L56	14	LDF4P-50A(1/2")	30.25 - 30.50	1.0000	1.0000
L56	18	Aero MP305	30.25 - 30.50	1.0000	1.0000
L56	19	Aero MP305	30.25 - 30.50	1.0000	1.0000
L56	20	Aero MP305	30.25 - 30.50	1.0000	1.0000
L56	27	6" x 1" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	28	6" x 1" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	29	6" x 1" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	37	6.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	38	6.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	39	6.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	48	8.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	54	8.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L56	55	8.5" x 1.25" Flat Plate (G)	30.25 - 30.50	1.0000	1.0000
L57	1	LDF7-50A(1-5/8")	25.75 - 30.25	1.0000	1.0000
L57	4	2" Rigid Conduit	25.75 - 30.25	1.0000	1.0000
L57	6	HB114-1-08U4-M5J(1-1/4")	25.75 - 30.25	1.0000	1.0000
L57	10	561(1-5/8")	25.75 - 30.25	1.0000	1.0000
L57	14	LDF4P-50A(1/2")	25.75 - 30.25	1.0000	1.0000
L57	18	Aero MP305	25.75 - 30.25	1.0000	1.0000
L57	19	Aero MP305	25.75 - 30.25	1.0000	1.0000
L57	20	Aero MP305	25.75 - 30.25	1.0000	1.0000
L57	27	6" x 1" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	28	6" x 1" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	29	6" x 1" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	37	6.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	38	6.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	39	6.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	48	8.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	54	8.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000
L57	55	8.5" x 1.25" Flat Plate (G)	25.75 - 30.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L58	1	LDF7-50A(1-5/8")	25.50 - 25.75	1.0000	1.0000
L58	4	2" Rigid Conduit	25.50 - 25.75	1.0000	1.0000
L58	6	HB114-1-08U4-M5J(1-1/4")	25.50 - 25.75	1.0000	1.0000
L58	10	561(1-5/8")	25.50 - 25.75	1.0000	1.0000
L58	14	LDF4P-50A(1/2")	25.50 - 25.75	1.0000	1.0000
L58	18	Aero MP305	25.50 - 25.75	1.0000	1.0000
L58	19	Aero MP305	25.50 - 25.75	1.0000	1.0000
L58	20	Aero MP305	25.50 - 25.75	1.0000	1.0000
L58	27	6" x 1" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	28	6" x 1" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	29	6" x 1" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	37	6.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	38	6.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	39	6.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	48	8.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	54	8.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L58	55	8.5" x 1.25" Flat Plate (G)	25.50 - 25.75	1.0000	1.0000
L59	1	LDF7-50A(1-5/8")	24.70 - 25.50	1.0000	1.0000
L59	4	2" Rigid Conduit	24.70 - 25.50	1.0000	1.0000
L59	6	HB114-1-08U4-M5J(1-1/4")	24.70 - 25.50	1.0000	1.0000
L59	10	561(1-5/8")	24.70 - 25.50	1.0000	1.0000
L59	14	LDF4P-50A(1/2")	24.70 - 25.50	1.0000	1.0000
L59	18	Aero MP305	24.70 - 25.50	1.0000	1.0000
L59	19	Aero MP305	24.70 - 25.50	1.0000	1.0000
L59	20	Aero MP305	24.70 - 25.50	1.0000	1.0000
L59	27	6" x 1" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	28	6" x 1" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	29	6" x 1" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	37	6.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	38	6.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	39	6.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	48	8.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	54	8.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L59	55	8.5" x 1.25" Flat Plate (G)	24.70 - 25.50	1.0000	1.0000
L60	1	LDF7-50A(1-5/8")	24.45 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L60	4	2" Rigid Conduit	24.70 - 24.45	1.0000	1.0000
L60	6	HB114-1-08U4-M5J(1-1/4")	24.70 - 24.45	1.0000	1.0000
L60	10	561(1-5/8")	24.70 - 24.45	1.0000	1.0000
L60	14	LDF4P-50A(1/2")	24.70 - 24.45	1.0000	1.0000
L60	18	Aero MP305	24.70 - 24.45	1.0000	1.0000
L60	19	Aero MP305	24.70 - 24.45	1.0000	1.0000
L60	20	Aero MP305	24.70 - 24.45	1.0000	1.0000
L60	27	6" x 1" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	28	6" x 1" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	29	6" x 1" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	37	6.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	38	6.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	39	6.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	48	8.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	54	8.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L60	55	8.5" x 1.25" Flat Plate (G)	24.70 - 24.45	1.0000	1.0000
L61	1	LDF7-50A(1-5/8")	24.00 - 24.45	1.0000	1.0000
L61	4	2" Rigid Conduit	24.00 - 24.45	1.0000	1.0000
L61	6	HB114-1-08U4-M5J(1-1/4")	24.00 - 24.45	1.0000	1.0000
L61	10	561(1-5/8")	24.00 - 24.45	1.0000	1.0000
L61	14	LDF4P-50A(1/2")	24.00 - 24.45	1.0000	1.0000
L61	18	Aero MP305	24.00 - 24.45	1.0000	1.0000
L61	19	Aero MP305	24.00 - 24.45	1.0000	1.0000
L61	20	Aero MP305	24.00 - 24.45	1.0000	1.0000
L61	27	6" x 1" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	28	6" x 1" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	29	6" x 1" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	37	6.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	38	6.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	39	6.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	48	8.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	54	8.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L61	55	8.5" x 1.25" Flat Plate (G)	24.00 - 24.45	1.0000	1.0000
L62	1	LDF7-50A(1-5/8")	23.75 - 24.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L62	4	2" Rigid Conduit	23.75 - 24.00	1.0000	1.0000
L62	6	HB114-1-08U4-M5J(1-1/4")	23.75 - 24.00	1.0000	1.0000
L62	10	561(1-5/8")	23.75 - 24.00	1.0000	1.0000
L62	14	LDF4P-50A(1/2")	23.75 - 24.00	1.0000	1.0000
L62	18	Aero MP305	23.75 - 24.00	1.0000	1.0000
L62	19	Aero MP305	23.75 - 24.00	1.0000	1.0000
L62	20	Aero MP305	23.75 - 24.00	1.0000	1.0000
L62	27	6" x 1" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	28	6" x 1" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	29	6" x 1" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	37	6.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	38	6.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	39	6.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	48	8.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	54	8.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L62	55	8.5" x 1.25" Flat Plate (G)	23.75 - 24.00	1.0000	1.0000
L63	1	LDF7-50A(1-5/8")	18.75 - 23.75	1.0000	1.0000
L63	4	2" Rigid Conduit	18.75 - 23.75	1.0000	1.0000
L63	6	HB114-1-08U4-M5J(1-1/4")	18.75 - 23.75	1.0000	1.0000
L63	10	561(1-5/8")	18.75 - 23.75	1.0000	1.0000
L63	14	LDF4P-50A(1/2")	18.75 - 23.75	1.0000	1.0000
L63	18	Aero MP305	18.75 - 23.75	1.0000	1.0000
L63	19	Aero MP305	18.75 - 23.75	1.0000	1.0000
L63	20	Aero MP305	18.75 - 23.75	1.0000	1.0000
L63	27	6" x 1" Flat Plate (G)	18.75 - 23.75	1.0000	1.0000
L63	28	6" x 1" Flat Plate (G)	18.75 - 23.75	1.0000	1.0000
L63	29	6" x 1" Flat Plate (G)	18.75 - 23.75	1.0000	1.0000
L63	37	6.5" x 1.25" Flat Plate (G)	23.00 - 23.75	1.0000	1.0000
L63	38	6.5" x 1.25" Flat Plate (G)	23.00 - 23.75	1.0000	1.0000
L63	39	6.5" x 1.25" Flat Plate (G)	23.00 - 23.75	1.0000	1.0000
L63	48	8.5" x 1.25" Flat Plate (G)	18.75 - 23.75	1.0000	1.0000
L63	54	8.5" x 1.25" Flat Plate (G)	20.40 - 23.75	1.0000	1.0000
L63	55	8.5" x 1.25" Flat Plate (G)	20.40 - 23.75	1.0000	1.0000
L64	1	LDF7-50A(1-5/8")	14.10 - 18.75	1.0000	1.0000
L64	4	2" Rigid Conduit	14.10 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L64	6	HB114-1-08U4-M5J(1-1/4")	18.75 14.10 - 18.75	1.0000	1.0000
L64	10	561(1-5/8")	14.10 - 18.75	1.0000	1.0000
L64	14	LDF4P-50A(1/2")	14.10 - 18.75	1.0000	1.0000
L64	18	Aero MP305	14.10 - 18.75	1.0000	1.0000
L64	19	Aero MP305	14.10 - 18.75	1.0000	1.0000
L64	20	Aero MP305	14.10 - 18.75	1.0000	1.0000
L64	21	Aero MP304	14.10 - 15.50	1.0000	1.0000
L64	22	Aero MP304	14.10 - 15.50	1.0000	1.0000
L64	27	6" x 1" Flat Plate (G)	14.10 - 18.75	1.0000	1.0000
L64	28	6" x 1" Flat Plate (G)	14.10 - 18.75	1.0000	1.0000
L64	29	6" x 1" Flat Plate (G)	14.10 - 18.75	1.0000	1.0000
L64	48	8.5" x 1.25" Flat Plate (G)	14.10 - 18.75	1.0000	1.0000
L65	1	LDF7-50A(1-5/8")	13.80 - 14.10	1.0000	1.0000
L65	4	2" Rigid Conduit	13.80 - 14.10	1.0000	1.0000
L65	6	HB114-1-08U4-M5J(1-1/4")	13.80 - 14.10	1.0000	1.0000
L65	10	561(1-5/8")	13.80 - 14.10	1.0000	1.0000
L65	14	LDF4P-50A(1/2")	13.80 - 14.10	1.0000	1.0000
L65	18	Aero MP305	13.80 - 14.10	1.0000	1.0000
L65	19	Aero MP305	13.80 - 14.10	1.0000	1.0000
L65	20	Aero MP305	13.80 - 14.10	1.0000	1.0000
L65	21	Aero MP304	13.80 - 14.10	1.0000	1.0000
L65	22	Aero MP304	13.80 - 14.10	1.0000	1.0000
L65	27	6" x 1" Flat Plate (G)	13.80 - 14.10	1.0000	1.0000
L65	28	6" x 1" Flat Plate (G)	13.80 - 14.10	1.0000	1.0000
L65	29	6" x 1" Flat Plate (G)	13.80 - 14.10	1.0000	1.0000
L65	48	8.5" x 1.25" Flat Plate (G)	13.80 - 14.10	1.0000	1.0000
L66	1	LDF7-50A(1-5/8")	13.65 - 13.80	1.0000	1.0000
L66	4	2" Rigid Conduit	13.65 - 13.80	1.0000	1.0000
L66	6	HB114-1-08U4-M5J(1-1/4")	13.65 - 13.80	1.0000	1.0000
L66	10	561(1-5/8")	13.65 - 13.80	1.0000	1.0000
L66	14	LDF4P-50A(1/2")	13.65 - 13.80	1.0000	1.0000
L66	18	Aero MP305	13.65 - 13.80	1.0000	1.0000
L66	19	Aero MP305	13.65 - 13.80	1.0000	1.0000
L66	20	Aero MP305	13.65 - 13.80	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L66	21	Aero MP304	13.65 - 13.80	1.0000	1.0000
L66	22	Aero MP304	13.65 - 13.80	1.0000	1.0000
L66	27	6" x 1" Flat Plate (G)	13.65 - 13.80	1.0000	1.0000
L66	28	6" x 1" Flat Plate (G)	13.65 - 13.80	1.0000	1.0000
L66	29	6" x 1" Flat Plate (G)	13.65 - 13.80	1.0000	1.0000
L66	48	8.5" x 1.25" Flat Plate (G)	13.65 - 13.80	1.0000	1.0000
L67	1	LDF7-50A(1-5/8")	10.50 - 13.65	1.0000	1.0000
L67	4	2" Rigid Conduit	10.50 - 13.65	1.0000	1.0000
L67	6	HB114-1-08U4-M5J(1-1/4")	10.50 - 13.65	1.0000	1.0000
L67	10	561(1-5/8")	10.50 - 13.65	1.0000	1.0000
L67	14	LDF4P-50A(1/2")	10.50 - 13.65	1.0000	1.0000
L67	18	Aero MP305	11.50 - 13.65	1.0000	1.0000
L67	19	Aero MP305	10.50 - 13.65	1.0000	1.0000
L67	20	Aero MP305	10.50 - 13.65	1.0000	1.0000
L67	21	Aero MP304	10.50 - 13.65	1.0000	1.0000
L67	22	Aero MP304	10.50 - 13.65	1.0000	1.0000
L67	27	6" x 1" Flat Plate (G)	10.50 - 13.65	1.0000	1.0000
L67	28	6" x 1" Flat Plate (G)	10.50 - 13.65	1.0000	1.0000
L67	29	6" x 1" Flat Plate (G)	10.50 - 13.65	1.0000	1.0000
L67	48	8.5" x 1.25" Flat Plate (G)	10.50 - 13.65	1.0000	1.0000
L68	1	LDF7-50A(1-5/8")	10.25 - 10.50	1.0000	1.0000
L68	4	2" Rigid Conduit	10.25 - 10.50	1.0000	1.0000
L68	6	HB114-1-08U4-M5J(1-1/4")	10.25 - 10.50	1.0000	1.0000
L68	10	561(1-5/8")	10.25 - 10.50	1.0000	1.0000
L68	14	LDF4P-50A(1/2")	10.25 - 10.50	1.0000	1.0000
L68	19	Aero MP305	10.25 - 10.50	1.0000	1.0000
L68	20	Aero MP305	10.25 - 10.50	1.0000	1.0000
L68	21	Aero MP304	10.25 - 10.50	1.0000	1.0000
L68	22	Aero MP304	10.25 - 10.50	1.0000	1.0000
L68	27	6" x 1" Flat Plate (G)	10.25 - 10.50	1.0000	1.0000
L68	28	6" x 1" Flat Plate (G)	10.25 - 10.50	1.0000	1.0000
L68	29	6" x 1" Flat Plate (G)	10.25 - 10.50	1.0000	1.0000
L68	47	6" x 1" Flat Plate (G)	10.25 - 10.50	1.0000	1.0000
L69	1	LDF7-50A(1-5/8")	5.25 - 10.25	1.0000	1.0000
L69	4	2" Rigid Conduit	5.25 - 10.25	1.0000	1.0000
L69	6	HB114-1-08U4-M5J(1-	5.25 - 10.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		1/4")			
L69	10	561(1-5/8")	5.25 - 10.25	1.0000	1.0000
L69	14	LDF4P-50A(1/2")	5.25 - 10.25	1.0000	1.0000
L69	19	Aero MP305	5.25 - 10.25	1.0000	1.0000
L69	20	Aero MP305	5.25 - 10.25	1.0000	1.0000
L69	21	Aero MP304	5.25 - 10.25	1.0000	1.0000
L69	22	Aero MP304	5.25 - 10.25	1.0000	1.0000
L69	27	6" x 1" Flat Plate (G)	5.25 - 10.25	1.0000	1.0000
L69	28	6" x 1" Flat Plate (G)	5.25 - 10.25	1.0000	1.0000
L69	29	6" x 1" Flat Plate (G)	5.25 - 10.25	1.0000	1.0000
L69	47	6" x 1" Flat Plate (G)	5.25 - 10.25	1.0000	1.0000
L70	1	LDF7-50A(1-5/8")	3.00 - 5.25	1.0000	1.0000
L70	4	2" Rigid Conduit	3.00 - 5.25	1.0000	1.0000
L70	6	HB114-1-08U4-M5J(1-1/4")	3.00 - 5.25	1.0000	1.0000
L70	10	561(1-5/8")	3.00 - 5.25	1.0000	1.0000
L70	14	LDF4P-50A(1/2")	3.00 - 5.25	1.0000	1.0000
L70	19	Aero MP305	3.00 - 5.25	1.0000	1.0000
L70	20	Aero MP305	3.00 - 5.25	1.0000	1.0000
L70	21	Aero MP304	3.00 - 5.25	1.0000	1.0000
L70	22	Aero MP304	3.00 - 5.25	1.0000	1.0000
L70	27	6" x 1" Flat Plate (G)	3.00 - 5.25	1.0000	1.0000
L70	28	6" x 1" Flat Plate (G)	3.00 - 5.25	1.0000	1.0000
L70	29	6" x 1" Flat Plate (G)	3.00 - 5.25	1.0000	1.0000
L70	47	6" x 1" Flat Plate (G)	3.00 - 5.25	1.0000	1.0000
L71	1	LDF7-50A(1-5/8")	2.90 - 3.00	1.0000	1.0000
L71	4	2" Rigid Conduit	2.90 - 3.00	1.0000	1.0000
L71	6	HB114-1-08U4-M5J(1-1/4")	2.90 - 3.00	1.0000	1.0000
L71	10	561(1-5/8")	2.90 - 3.00	1.0000	1.0000
L71	14	LDF4P-50A(1/2")	2.90 - 3.00	1.0000	1.0000
L71	19	Aero MP305	2.90 - 3.00	1.0000	1.0000
L71	20	Aero MP305	2.90 - 3.00	1.0000	1.0000
L71	21	Aero MP304	2.90 - 3.00	1.0000	1.0000
L71	22	Aero MP304	2.90 - 3.00	1.0000	1.0000
L71	27	6" x 1" Flat Plate (G)	2.90 - 3.00	1.0000	1.0000
L71	28	6" x 1" Flat Plate (G)	2.90 - 3.00	1.0000	1.0000
L71	29	6" x 1" Flat Plate (G)	2.90 - 3.00	1.0000	1.0000
L71	47	6" x 1" Flat Plate (G)	2.90 - 3.00	1.0000	1.0000
L72	1	LDF7-50A(1-5/8")	2.75 - 2.90	1.0000	1.0000
L72	4	2" Rigid Conduit	2.75 - 2.90	1.0000	1.0000
L72	6	HB114-1-08U4-M5J(1-1/4")	2.75 - 2.90	1.0000	1.0000
L72	10	561(1-5/8")	2.75 - 2.90	1.0000	1.0000
L72	14	LDF4P-50A(1/2")	2.75 - 2.90	1.0000	1.0000
L72	19	Aero MP305	2.75 - 2.90	1.0000	1.0000
L72	20	Aero MP305	2.75 - 2.90	1.0000	1.0000
L72	21	Aero MP304	2.75 - 2.90	1.0000	1.0000
L72	22	Aero MP304	2.75 - 2.90	1.0000	1.0000
L72	27	6" x 1" Flat Plate (G)	2.75 - 2.90	1.0000	1.0000
L72	28	6" x 1" Flat Plate (G)	2.75 - 2.90	1.0000	1.0000
L72	29	6" x 1" Flat Plate (G)	2.75 - 2.90	1.0000	1.0000
L72	47	6" x 1" Flat Plate (G)	2.75 - 2.90	1.0000	1.0000
L73	1	LDF7-50A(1-5/8")	2.65 - 2.75	1.0000	1.0000
L73	4	2" Rigid Conduit	2.65 - 2.75	1.0000	1.0000
L73	6	HB114-1-08U4-M5J(1-1/4")	2.65 - 2.75	1.0000	1.0000
L73	10	561(1-5/8")	2.65 - 2.75	1.0000	1.0000
L73	14	LDF4P-50A(1/2")	2.65 - 2.75	1.0000	1.0000
L73	19	Aero MP305	2.65 - 2.75	1.0000	1.0000
L73	20	Aero MP305	2.65 - 2.75	1.0000	1.0000
L73	21	Aero MP304	2.65 - 2.75	1.0000	1.0000
L73	22	Aero MP304	2.65 - 2.75	1.0000	1.0000
L73	27	6" x 1" Flat Plate (G)	2.65 - 2.75	1.0000	1.0000
L73	28	6" x 1" Flat Plate (G)	2.65 - 2.75	1.0000	1.0000
L73	29	6" x 1" Flat Plate (G)	2.65 - 2.75	1.0000	1.0000
L73	47	6" x 1" Flat Plate (G)	2.65 - 2.75	1.0000	1.0000
L74	1	LDF7-50A(1-5/8")	2.50 - 2.65	1.0000	1.0000
L74	4	2" Rigid Conduit	2.50 - 2.65	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L74	6	HB114-1-08U4-M5J(1-1/4")	2.50 - 2.65	1.0000	1.0000
L74	10	561(1-5/8")	2.50 - 2.65	1.0000	1.0000
L74	14	LDF4P-50A(1/2")	2.50 - 2.65	1.0000	1.0000
L74	19	Aero MP305	2.50 - 2.65	1.0000	1.0000
L74	20	Aero MP305	2.50 - 2.65	1.0000	1.0000
L74	21	Aero MP304	2.50 - 2.65	1.0000	1.0000
L74	22	Aero MP304	2.50 - 2.65	1.0000	1.0000
L74	27	6" x 1" Flat Plate (G)	2.50 - 2.65	1.0000	1.0000
L74	28	6" x 1" Flat Plate (G)	2.50 - 2.65	1.0000	1.0000
L74	29	6" x 1" Flat Plate (G)	2.50 - 2.65	1.0000	1.0000
L74	47	6" x 1" Flat Plate (G)	2.50 - 2.65	1.0000	1.0000
L75	1	LDF7-50A(1-5/8")	2.25 - 2.50	1.0000	1.0000
L75	4	2" Rigid Conduit	2.25 - 2.50	1.0000	1.0000
L75	6	HB114-1-08U4-M5J(1-1/4")	2.25 - 2.50	1.0000	1.0000
L75	10	561(1-5/8")	2.25 - 2.50	1.0000	1.0000
L75	14	LDF4P-50A(1/2")	2.25 - 2.50	1.0000	1.0000
L75	19	Aero MP305	2.25 - 2.50	1.0000	1.0000
L75	20	Aero MP305	2.25 - 2.50	1.0000	1.0000
L75	21	Aero MP304	2.25 - 2.50	1.0000	1.0000
L75	22	Aero MP304	2.25 - 2.50	1.0000	1.0000
L75	27	6" x 1" Flat Plate (G)	2.25 - 2.50	1.0000	1.0000
L75	28	6" x 1" Flat Plate (G)	2.25 - 2.50	1.0000	1.0000
L75	29	6" x 1" Flat Plate (G)	2.25 - 2.50	1.0000	1.0000
L75	47	6" x 1" Flat Plate (G)	2.25 - 2.50	1.0000	1.0000
L76	1	LDF7-50A(1-5/8")	1.90 - 2.25	1.0000	1.0000
L76	4	2" Rigid Conduit	1.90 - 2.25	1.0000	1.0000
L76	6	HB114-1-08U4-M5J(1-1/4")	1.90 - 2.25	1.0000	1.0000
L76	10	561(1-5/8")	1.90 - 2.25	1.0000	1.0000
L76	14	LDF4P-50A(1/2")	1.90 - 2.25	1.0000	1.0000
L76	19	Aero MP305	1.90 - 2.25	1.0000	1.0000
L76	20	Aero MP305	1.90 - 2.25	1.0000	1.0000
L76	21	Aero MP304	1.90 - 2.25	1.0000	1.0000
L76	22	Aero MP304	1.90 - 2.25	1.0000	1.0000
L76	27	6" x 1" Flat Plate (G)	1.90 - 2.25	1.0000	1.0000
L76	28	6" x 1" Flat Plate (G)	1.90 - 2.25	1.0000	1.0000
L76	29	6" x 1" Flat Plate (G)	1.90 - 2.25	1.0000	1.0000
L76	47	6" x 1" Flat Plate (G)	1.90 - 2.25	1.0000	1.0000
L77	1	LDF7-50A(1-5/8")	1.65 - 1.90	1.0000	1.0000
L77	4	2" Rigid Conduit	1.65 - 1.90	1.0000	1.0000
L77	6	HB114-1-08U4-M5J(1-1/4")	1.65 - 1.90	1.0000	1.0000
L77	10	561(1-5/8")	1.65 - 1.90	1.0000	1.0000
L77	14	LDF4P-50A(1/2")	1.65 - 1.90	1.0000	1.0000
L77	19	Aero MP305	1.65 - 1.90	1.0000	1.0000
L77	20	Aero MP305	1.65 - 1.90	1.0000	1.0000
L77	21	Aero MP304	1.65 - 1.90	1.0000	1.0000
L77	22	Aero MP304	1.65 - 1.90	1.0000	1.0000
L77	27	6" x 1" Flat Plate (G)	1.65 - 1.90	1.0000	1.0000
L77	28	6" x 1" Flat Plate (G)	1.65 - 1.90	1.0000	1.0000
L77	29	6" x 1" Flat Plate (G)	1.65 - 1.90	1.0000	1.0000
L77	47	6" x 1" Flat Plate (G)	1.65 - 1.90	1.0000	1.0000
L78	1	LDF7-50A(1-5/8")	0.00 - 1.65	1.0000	1.0000
L78	4	2" Rigid Conduit	0.00 - 1.65	1.0000	1.0000
L78	6	HB114-1-08U4-M5J(1-1/4")	0.00 - 1.65	1.0000	1.0000
L78	10	561(1-5/8")	0.00 - 1.65	1.0000	1.0000
L78	14	LDF4P-50A(1/2")	0.00 - 1.65	1.0000	1.0000
L78	19	Aero MP305	0.00 - 1.65	1.0000	1.0000
L78	20	Aero MP305	0.00 - 1.65	1.0000	1.0000
L78	21	Aero MP304	0.00 - 1.65	1.0000	1.0000
L78	22	Aero MP304	0.00 - 1.65	1.0000	1.0000
L78	27	6" x 1" Flat Plate (G)	0.50 - 1.65	1.0000	1.0000
L78	28	6" x 1" Flat Plate (G)	0.50 - 1.65	1.0000	1.0000
L78	29	6" x 1" Flat Plate (G)	0.50 - 1.65	1.0000	1.0000
L78	47	6" x 1" Flat Plate (G)	0.50 - 1.65	1.0000	1.0000

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft Vert ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
Lightning Rod	A	From Leg	1.0000 0.0000 0.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	0.2500 0.6635 0.9732	0.2500 0.6635 0.9732	0.0300 0.0338 0.0393
**									
(2) SBNH-1D6565C w/ Mount Pipe	A	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	11.6828 12.4043 13.1351	9.8418 11.3657 12.9138	0.0938 0.1834 0.2831
(2) AM-X-CD-16-65-00T-RET w/ Mount Pipe	B	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.3042 7.4790 8.3676	0.0741 0.1390 0.2119
(2) SBNH-1D6565C w/ Mount Pipe	C	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	11.6828 12.4043 13.1351	9.8418 11.3657 12.9138	0.0938 0.1834 0.2831
DTMABP7819VG12A	A	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	0.9762 1.1002 1.2316	0.3387 0.4192 0.5098	0.0192 0.0265 0.0356
DTMABP7819VG12A	B	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	0.9762 1.1002 1.2316	0.3387 0.4192 0.5098	0.0192 0.0265 0.0356
DTMABP7819VG12A	C	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	0.9762 1.1002 1.2316	0.3387 0.4192 0.5098	0.0192 0.0265 0.0356
RRUS 11 B12	A	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
RRUS 11 B12	B	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
RRUS 11 B12	C	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
RRUS 11 B2	A	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
RRUS 11 B2	B	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
RRUS 11 B2	C	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	2.8333 3.0426 3.2593	1.1821 1.3299 1.4848	0.0507 0.0716 0.0955
DC6-48-60-18-8F	A	From Leg	4.0000 0.0000 1.0000	0.0000	156.0000	No Ice 1/2" Ice 1" Ice	0.7915 1.2743 1.4503	0.7915 1.2743 1.4503	0.0200 0.0351 0.0526

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
T-Arm Mount [TA 703-3]	C	None		0.0000	156.0000	No Ice	14.2000	14.2000	0.4470
						1/2" Ice	18.5000	18.5000	0.6450
						1" Ice	22.8000	22.8000	0.8430
6' x 2" Mount Pipe	A	From Leg	4.0000 0.0000 0.0000	0.0000	156.0000	No Ice	1.4250	1.4250	0.0220
						1/2" Ice	1.9250	1.9250	0.0328
						1" Ice	2.2939	2.2939	0.0477
6' x 2" Mount Pipe	B	From Leg	4.0000 0.0000 0.0000	0.0000	156.0000	No Ice	1.4250	1.4250	0.0220
						1/2" Ice	1.9250	1.9250	0.0328
						1" Ice	2.2939	2.2939	0.0477
6' x 2" Mount Pipe	C	From Leg	4.0000 0.0000 0.0000	0.0000	156.0000	No Ice	1.4250	1.4250	0.0220
						1/2" Ice	1.9250	1.9250	0.0328
						1" Ice	2.2939	2.2939	0.0477
**									
(2) PCS 1900MHz 4x45W-65MHz	A	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.3218	2.2381	0.0600
						1/2" Ice	2.5266	2.4407	0.0831
						1" Ice	2.7388	2.6507	0.1095
(2) PCS 1900MHz 4x45W-65MHz	B	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.3218	2.2381	0.0600
						1/2" Ice	2.5266	2.4407	0.0831
						1" Ice	2.7388	2.6507	0.1095
(2) PCS 1900MHz 4x45W-65MHz	C	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.3218	2.2381	0.0600
						1/2" Ice	2.5266	2.4407	0.0831
						1" Ice	2.7388	2.6507	0.1095
800MHz 2X50W RRH W/FILTER	A	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.0583	1.9317	0.0640
						1/2" Ice	2.2398	2.1087	0.0861
						1" Ice	2.4287	2.2931	0.1113
800MHz 2X50W RRH W/FILTER	B	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.0583	1.9317	0.0640
						1/2" Ice	2.2398	2.1087	0.0861
						1" Ice	2.4287	2.2931	0.1113
800MHz 2X50W RRH W/FILTER	C	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	2.0583	1.9317	0.0640
						1/2" Ice	2.2398	2.1087	0.0861
						1" Ice	2.4287	2.2931	0.1113
Side Arm Mount [SO 103-3]	C	None		0.0000	148.0000	No Ice	9.5000	9.5000	0.2240
						1/2" Ice	11.8000	11.8000	0.3170
						1" Ice	14.1000	14.1000	0.4100
(2) 4' x 2" Pipe Mount	A	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	0.7852	0.7852	0.0290
						1/2" Ice	1.0284	1.0284	0.0353
						1" Ice	1.2809	1.2809	0.0445
(2) 4' x 2" Pipe Mount	B	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	0.7852	0.7852	0.0290
						1/2" Ice	1.0284	1.0284	0.0353
						1" Ice	1.2809	1.2809	0.0445
(2) 4' x 2" Pipe Mount	C	From Leg	1.0000 0.0000 0.0000	0.0000	148.0000	No Ice	0.7852	0.7852	0.0290
						1/2" Ice	1.0284	1.0284	0.0353
						1" Ice	1.2809	1.2809	0.0445
**									
APXVTM14-C-120 w/ Mount Pipe	A	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	No Ice	6.5799	4.9591	0.0738
						1/2" Ice	7.0306	5.7544	0.1284
						1" Ice	7.4733	6.4723	0.1897
APXVTM14-C-120 w/ Mount Pipe	B	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	No Ice	6.5799	4.9591	0.0738
						1/2" Ice	7.0306	5.7544	0.1284
						1" Ice	7.4733	6.4723	0.1897

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
APXVTM14-C-120 w/ Mount Pipe	C	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	6.5799 7.0306 7.4733	4.9591 5.7544 6.4723	0.0738 0.1284 0.1897
APXV9ERR18-C-A20 w/ Mount Pipe	A	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	7.4708 8.6564 9.5559	0.0876 0.1580 0.2365
APXVSPP18-C-A20 w/ Mount Pipe	B	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.9458 8.1266 9.0212	0.0826 0.1506 0.2265
APXVSPP18-C-A20 w/ Mount Pipe	C	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	8.2619 8.8215 9.3462	6.9458 8.1266 9.0212	0.0826 0.1506 0.2265
TD-RRH8x20-25	A	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.0700 0.0972 0.1278
TD-RRH8x20-25	B	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.0700 0.0972 0.1278
TD-RRH8x20-25	C	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	4.0455 4.2975 4.5570	1.5345 1.7142 1.9008	0.0700 0.0972 0.1278
IBC1900HG-2A	A	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
IBC1900HG-2A	B	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
IBC1900HG-2A	C	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
IBC1900BB-1	A	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
IBC1900BB-1	B	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
IBC1900BB-1	C	From Leg	4.0000 0.0000 0.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.9660 1.0908 1.2230	0.4635 0.5576 0.6599	0.0220 0.0297 0.0393
Platform Mount [LP 1201-1]	C	None		0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	23.1000 26.8000 30.5000	23.1000 26.8000 30.5000	2.1000 2.5000 2.9000
Miscellaneous [NA 510-1]	C	None		0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	6.0000 8.5000 11.0000	6.0000 8.5000 11.0000	0.2557 0.3395 0.4233
5' x 2" Pipe Mount	A	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.1875 1.4956 1.8071	1.1875 1.4956 1.8071	0.0183 0.0273 0.0398

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
5' x 2" Pipe Mount	B	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	No Ice 1/2" Ice 1" Ice	1.1875 1.4956 1.8071	1.1875 1.4956 1.8071	0.0183 0.0273 0.0398
5' x 2" Pipe Mount	C	From Leg	4.0000 0.0000 1.0000	0.0000	146.0000	No Ice 1/2" Ice 1" Ice	1.1875 1.4956 1.8071	1.1875 1.4956 1.8071	0.0183 0.0273 0.0398
**									
APXV18-206517S-C	A	From Leg	2.0000 0.0000 0.0000	30.0000	139.0000	No Ice 1/2" Ice 1" Ice	5.1667 5.6182 6.0772	3.0375 3.4693 3.9086	0.0264 0.0530 0.0851
APXV18-206517S-C	B	From Leg	2.0000 0.0000 0.0000	30.0000	139.0000	No Ice 1/2" Ice 1" Ice	5.1667 5.6182 6.0772	3.0375 3.4693 3.9086	0.0264 0.0530 0.0851
APXV18-206517S-C	C	From Leg	2.0000 0.0000 0.0000	30.0000	139.0000	No Ice 1/2" Ice 1" Ice	5.1667 5.6182 6.0772	3.0375 3.4693 3.9086	0.0264 0.0530 0.0851
Pipe Mount [PM 501-3]	C	None		0.0000	139.0000	No Ice 1/2" Ice 1" Ice	5.7800 7.3700 8.9600	5.7800 7.3700 8.9600	0.1560 0.1769 0.1979
**									
BXA-80080-6CF-EDIN-X w/ Mount Pipe	A	From Leg	4.0000 0.0000 2.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	6.0062 6.5619 7.0826	6.2035 7.3594 8.2293	0.0432 0.0978 0.1600
BXA-80080-6CF-EDIN-X w/ Mount Pipe	B	From Leg	4.0000 0.0000 2.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	6.0062 6.5619 7.0826	6.2035 7.3594 8.2293	0.0432 0.0978 0.1600
BXA-80080-6CF-EDIN-X w/ Mount Pipe	C	From Leg	4.0000 0.0000 2.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	6.0062 6.5619 7.0826	6.2035 7.3594 8.2293	0.0432 0.0978 0.1600
(2) SBNHH-1D65B w/ Mount Pipe	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	8.3858 8.9496 9.4797	7.0840 8.2754 9.1876	0.0765 0.1455 0.2226
(2) SBNHH-1D65B w/ Mount Pipe	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	8.3858 8.9496 9.4797	7.0840 8.2754 9.1876	0.0765 0.1455 0.2226
(2) SBNHH-1D65B w/ Mount Pipe	C	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	8.3858 8.9496 9.4797	7.0840 8.2754 9.1876	0.0765 0.1455 0.2226
BXA-70063/6CFx2	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	7.5690 8.0160 8.4701	3.7554 4.1889 4.6297	0.0170 0.0576 0.1040
BXA-70063/6CFx2	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	7.5690 8.0160 8.4701	3.7554 4.1889 4.6297	0.0170 0.0576 0.1040
BXA-70063/6CFx2	C	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice 1" Ice	7.5690 8.0160 8.4701	3.7554 4.1889 4.6297	0.0170 0.0576 0.1040
RFV01U-D1A	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	No Ice 1/2" Ice	1.8750 2.0454 2.2231	1.2500 1.3926 1.5426	0.0844 0.1027 0.1239

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
RFV01U-D1A	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.8750 2.0454 2.2231	1.2500 1.3926 1.5426	0.0844 0.1027 0.1239
RFV01U-D1A	C	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.8750 2.0454 2.2231	1.2500 1.3926 1.5426	0.0844 0.1027 0.1239
RFV01U-D2A	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.8750 2.0454 2.2231	1.0125 1.1445 1.2840	0.0703 0.0867 0.1058
RFV01U-D2A	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.8750 2.0454 2.2231	1.0125 1.1445 1.2840	0.0703 0.0867 0.1058
RFV01U-D2A	C	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	1.8750 2.0454 2.2231	1.0125 1.1445 1.2840	0.0703 0.0867 0.1058
DB-C1-12C-24AB-0Z	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	4.0563 4.3155 4.5822	3.0975 3.3351 3.5801	0.0320 0.0685 0.1090
DB-T1-6Z-8AB-0Z	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	4.8000 5.0704 5.3481	2.0000 2.1926 2.3926	0.0440 0.0801 0.1202
Sector Mount [SM 503-3]	C	None		0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	33.6400 48.1700 62.7000	33.6400 48.1700 62.7000	1.6905 2.2551 2.8197
Pipe Mount [PM 602-3]	C	None		0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	7.6800 9.5000 11.3200	7.6800 9.5000 11.3200	0.2790 0.3532 0.4274
Side-by-Side Mounting Kit [PN. BSAMNT-SBS-2-2]	A	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.0000 0.0000 0.0000	0.1106 0.1792 0.2520	0.0700 0.0799 0.0957
Side-by-Side Mounting Kit [PN. BSAMNT-SBS-2-2]	B	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.0000 0.0000 0.0000	0.1106 0.1792 0.2520	0.0700 0.0799 0.0957
Side-by-Side Mounting Kit [PN. BSAMNT-SBS-2-2]	C	From Leg	4.0000 0.0000 1.0000	0.0000	132.0000	1" Ice No Ice 1/2" Ice 1" Ice	0.0000 0.0000 0.0000	0.1106 0.1792 0.2520	0.0700 0.0799 0.0957
**									
HORIZON COMPACT	A	From Leg	1.0000 0.0000 1.0000	0.0000	129.0000	No Ice 1/2" Ice 1" Ice	0.7208 0.8278 0.9422	0.3681 0.4499 0.5391	0.0115 0.0180 0.0261
HORIZON COMPACT	B	From Leg	1.0000 0.0000 1.0000	0.0000	129.0000	No Ice 1/2" Ice 1" Ice	0.7208 0.8278 0.9422	0.3681 0.4499 0.5391	0.0115 0.0180 0.0261
HORIZON COMPACT	C	From Leg	1.0000 0.0000 1.0000	0.0000	129.0000	No Ice 1/2" Ice 1" Ice	0.7208 0.8278 0.9422	0.3681 0.4499 0.5391	0.0115 0.0180 0.0261
Side Arm Mount [SO 104-3]	C	None		0.0000	129.0000	No Ice 1/2" Ice 1" Ice	3.3000 4.1300 4.9600	3.3000 4.1300 4.9600	0.2870 0.3170 0.3470

Description	Face or Leg	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
7'x2 1/2" Pipe Mount	A	From Leg	0.5000	0.0000	0.0000	129.0000	1" Ice	2.0125	2.0125	0.0405
			0.0000				No Ice	2.5890	2.5890	0.0553
			0.0000				1/2" Ice	3.0176	3.0176	0.0748
7'x2 1/2" Pipe Mount	B	From Leg	0.5000	0.0000	0.0000	129.0000	1" Ice	2.0125	2.0125	0.0405
			0.0000				No Ice	2.5890	2.5890	0.0553
			0.0000				1/2" Ice	3.0176	3.0176	0.0748
7'x2 1/2" Pipe Mount	C	From Leg	0.5000	0.0000	0.0000	129.0000	1" Ice	2.0125	2.0125	0.0405
			0.0000				No Ice	2.5890	2.5890	0.0553
			0.0000				1/2" Ice	3.0176	3.0176	0.0748
**							1" Ice			
58532A	A	From Leg	3.0000	0.0000	0.0000	101.0000	No Ice	0.1893	0.1893	0.0004
			0.0000				1/2" Ice	0.2483	0.2483	0.0028
			1.0000				1" Ice	0.3147	0.3147	0.0062
Side Arm Mount [SO 701-1]	A	From Leg	1.5000	0.0000	0.0000	101.0000	No Ice	0.8500	1.6700	0.0650
			0.0000				1/2" Ice	1.1400	2.3400	0.0790
			0.0000				1" Ice	1.4300	3.0100	0.0930
**										

Dishes

Description	Face or Leg	Dish Type	Offset Type	Offsets: Horz Lateral ft	Vert ft	Azimuth Adjustment °	3 dB Beam Width °	Elevation ft	Outside Diameter ft		Aperture Area ft^2	Weight K
VHLP800-11	A	Paraboloid w/Shroud (HP)	From Leg	1.0000	0.0000	0.0000		129.0000	2.9167	No Ice	6.6800	0.0200
				0.0000	-2.0000					1/2" Ice	7.0700	0.0300
										1" Ice	7.4600	0.0300
VHLP800-11	B	Paraboloid w/Shroud (HP)	From Leg	1.0000	0.0000	30.0000		129.0000	2.9167	No Ice	6.6800	0.0200
				0.0000	-2.0000					1/2" Ice	7.0700	0.0300
										1" Ice	7.4600	0.0300
VHLP2-18	C	Paraboloid w/o Radome	From Leg	1.0000	0.0000	90.0000		129.0000	2.1750	No Ice	3.7200	0.0310
				0.0000	-2.0000					1/2" Ice	4.0100	0.0500
**										1" Ice	4.3000	0.0700

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

Comb. No.	Description
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
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice
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	160 - 155	Pole	Max Tension	27	0.0000	-0.0004	0.0000
			Max. Compression	26	-7.5926	1.2958	1.4542
			Max. Mx	20	-1.6483	9.2647	0.2029
			Max. My	2	-1.6456	0.0605	9.3538
			Max. Vy	8	5.0470	-8.8917	0.1764
			Max. Vx	2	-5.0419	0.0605	9.3538
			Max. Torque	16			-1.7856
L2	155 - 150	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-8.3495	1.2332	1.5128
			Max. Mx	20	-2.0590	35.1247	0.2635
			Max. My	2	-2.0562	0.0718	35.2324
			Max. Vy	8	5.3083	-34.8068	0.1641
			Max. Vx	2	-5.3033	0.0718	35.2324
			Max. Torque	16			-1.7856
L3	150 - 146	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-12.1236	1.1818	1.5618
			Max. Mx	20	-3.3778	60.1547	0.3153
			Max. My	2	-3.3737	0.0816	60.2795
			Max. Vy	8	7.2187	-59.8818	0.1506
			Max. Vx	2	-7.2143	0.0816	60.2795
			Max. Torque	16			-1.7855

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L4	146 - 141	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-22.4084	1.0412	1.7720
			Max. Mx	20	-7.2658	122.2081	0.4451
			Max. My	2	-7.2608	0.0766	122.3071
			Max. Vy	8	12.2395	-122.0592	0.1539
			Max. Vx	14	12.2136	-0.1697	-121.5552
			Max. Torque	16			-1.8443
L5	141 - 136	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-24.2622	0.8928	1.8997
			Max. Mx	20	-7.9314	187.3651	0.5593
			Max. My	2	-7.9254	0.0680	187.4390
			Max. Vy	8	13.6823	-187.3460	0.1368
			Max. Vx	14	13.6568	-0.2822	-186.6178
			Max. Torque	16			-1.8440
L6	136 - 131	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-37.6964	-0.3747	2.6252
			Max. Mx	8	-11.9092	-269.3114	0.0350
			Max. My	2	-11.9046	-0.0267	269.0528
			Max. Vy	8	21.0607	-269.3114	0.0350
			Max. Vx	14	21.0180	-0.6986	-268.0334
			Max. Torque	18			-1.9344
L7	131 - 126	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-40.2977	-0.4044	2.7858
			Max. Mx	8	-13.0654	-378.4335	-0.6010
			Max. My	2	-13.0390	0.4564	378.2511
			Max. Vy	8	22.8762	-378.4335	-0.6010
			Max. Vx	14	23.1856	-1.3286	-377.2423
			Max. Torque	20			-2.1653
L8	126 - 121	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-41.5598	-0.4803	2.9858
			Max. Mx	8	-13.7554	-494.2187	-2.7019
			Max. My	2	-13.7301	1.5162	495.1467
			Max. Vy	8	23.4402	-494.2187	-2.7019
			Max. Vx	14	23.7503	-3.0876	-494.4830
			Max. Torque	20			-2.1651
L9	121 - 120.1	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-41.8264	-0.4941	3.0216
			Max. Mx	8	-13.8856	-515.3587	-3.0802
			Max. My	2	-13.8606	1.7067	516.4869
			Max. Vy	8	23.5406	-515.3587	-3.0802
			Max. Vx	14	23.8507	-3.4046	-515.8850
			Max. Torque	20			-2.1637
L10	120.1 - 119.85	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-41.9190	-0.4980	3.0317
			Max. Mx	8	-13.9482	-521.2476	-3.1853
			Max. My	2	-13.9234	1.7598	522.4313
			Max. Vy	8	23.5654	-521.2476	-3.1853
			Max. Vx	14	23.8756	-3.4927	-521.8466
			Max. Torque	20			-2.1635
L11	119.85 - 117.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-42.8167	-0.5679	3.1276
			Max. Mx	8	-14.4192	-576.9868	-4.1729
			Max. My	2	-14.3946	2.2571	578.6935
			Max. Vy	8	23.8660	-576.9868	-4.1729
			Max. Vx	14	24.1764	-4.3207	-578.2696
			Max. Torque	20			-2.1634
L12	117.5 - 117.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-42.9188	-0.5775	3.1383
			Max. Mx	8	-14.4834	-582.9576	-4.2780
			Max. My	2	-14.4589	2.3102	584.7200
			Max. Vy	8	23.8934	-582.9576	-4.2780
			Max. Vx	14	24.2038	-4.4089	-584.3131
			Max. Torque	20			-2.1631
L13	117.25 - 115.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-43.6861	-0.6104	3.2086

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	8	-14.8623	-624.9767	-5.0136
			Max. My	2	-14.8379	2.6805	627.1290
			Max. Vy	8	24.1252	-624.9767	-5.0136
			Max. Vx	14	24.4358	-5.0260	-626.8412
			Max. Torque	20			-2.1630
L14	115.5 - 115.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-43.8064	-0.6144	3.2189
			Max. Mx	8	-14.9407	-631.0117	-5.1188
			Max. My	2	-14.9166	2.7336	633.2196
			Max. Vy	8	24.1504	-631.0117	-5.1188
			Max. Vx	14	24.4609	-5.1143	-632.9489
			Max. Torque	20			-2.1628
L15	115.25 - 110.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-46.2150	-0.6936	3.4215
			Max. Mx	8	-16.2311	-753.4519	-7.2217
			Max. My	14	-16.1994	-6.8809	-756.8429
			Max. Vy	8	24.8194	-753.4519	-7.2217
			Max. Vx	14	25.1304	-6.8809	-756.8429
			Max. Torque	20			-2.1627
L16	110.25 - 103.75	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-47.5526	-0.7384	3.5353
			Max. Mx	8	-16.9543	-822.2151	-8.3784
			Max. My	14	-16.9232	-7.8545	-826.4045
			Max. Vy	8	25.1881	-822.2151	-8.3784
			Max. Vx	14	25.4994	-7.8545	-826.4045
			Max. Torque	20			-2.1620
L17	103.75 - 102.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-51.2656	-0.8199	3.7427
			Max. Mx	8	-19.2016	-950.0826	-10.4864
			Max. My	14	-19.1711	-9.6287	-955.7268
			Max. Vy	8	25.9369	-950.0826	-10.4864
			Max. Vx	14	26.2490	-9.6287	-955.7268
			Max. Torque	20			-2.1613
L18	102.5 - 100.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-52.4469	-0.8513	4.3051
			Max. Mx	8	-19.8613	-1002.2702	-11.1313
			Max. My	14	-19.8336	-10.3398	-1008.2645
			Max. Vy	8	26.2876	-1002.2702	-11.1313
			Max. Vx	14	26.5623	-10.3398	-1008.2645
			Max. Torque	20			-2.4000
L19	100.5 - 100.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-52.5824	-0.8554	4.3219
			Max. Mx	8	-19.9399	-1008.8464	-11.2369
			Max. My	14	-19.9124	-10.4288	-1014.9041
			Max. Vy	8	26.3153	-1008.8464	-11.2369
			Max. Vx	14	26.5899	-10.4288	-1014.9041
			Max. Torque	20			-2.3999
L20	100.25 - 98.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-53.5226	-0.8721	4.4374
			Max. Mx	8	-20.4258	-1055.1061	-11.9758
			Max. My	14	-20.3986	-11.0512	-1061.6074
			Max. Vy	8	26.5539	-11.9758	

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	14	26.8286	1055.1061	-11.0512
			Max. Torque	20			-1061.6074
L21	98.5 - 98.25	Pole	Max Tension	1	0.0000	0.0000	-2.3997
			Max. Compression	26	-53.6573	-0.8703	0.0000
			Max. Mx	8	-20.5166	1061.7472	4.4540
			Max. My	14	-20.4897	-11.1404	-12.0816
			Max. Vy	8	26.5750	1061.7472	-1068.3119
			Max. Vx	14	26.8497	-11.1404	-12.0816
			Max. Torque	20			-1068.3119
L22	98.25 - 93.25	Pole	Max Tension	1	0.0000	0.0000	-2.3995
			Max. Compression	26	-56.2298	-0.9235	0.0000
			Max. Mx	8	-22.0153	1196.2801	4.7887
			Max. My	14	-21.9898	-12.9209	-14.1926
			Max. Vy	8	27.2350	1196.2801	-1204.1102
			Max. Vx	14	27.5099	-12.9209	-14.1926
			Max. Torque	20			-1204.1102
L23	93.25 - 90.5	Pole	Max Tension	1	0.0000	0.0000	-2.3994
			Max. Compression	26	-57.6317	-0.9714	0.0000
			Max. Mx	8	-22.8540	1271.6702	4.9736
			Max. My	14	-22.8292	-13.9008	-15.3529
			Max. Vy	8	27.5994	1271.6702	-1280.1950
			Max. Vx	14	27.8744	-13.9008	-15.3529
			Max. Torque	20			-1280.1950
L24	90.5 - 90.25	Pole	Max Tension	1	0.0000	0.0000	-2.3985
			Max. Compression	26	-57.7720	-0.9749	0.0000
			Max. Mx	8	-22.9532	1278.5732	4.9927
			Max. My	14	-22.9287	-13.9901	-15.4585
			Max. Vy	8	27.6230	1278.5732	-1287.1611
			Max. Vx	14	27.8979	-13.9901	-15.4585
			Max. Torque	20			-1287.1611
L25	90.25 - 85.25	Pole	Max Tension	1	0.0000	0.0000	-2.3981
			Max. Compression	26	-60.5935	-1.0485	0.0000
			Max. Mx	8	-24.6771	1418.3850	5.3710
			Max. My	14	-24.6540	-15.7729	-17.5666
			Max. Vy	8	28.2987	1418.3850	-1428.2333
			Max. Vx	14	28.5737	-15.7729	-17.5666
			Max. Torque	20			-1428.2333
L26	85.25 - 83.5	Pole	Max Tension	1	0.0000	0.0000	-2.3980
			Max. Compression	26	-61.7272	-1.0733	0.0000
			Max. Mx	8	-25.2840	1468.1108	5.4543
			Max. My	14	-25.2614	-16.3971	-18.3038
			Max. Vy	8	28.5406	1468.1108	-1478.3994
							-18.3038

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	14	28.8156	-16.3971	-
L27	83.5 - 83.25	Pole	Max. Torque	20			1478.3994
			Max Tension	1	0.0000	0.0000	-2.3972
			Max. Compression	26	-61.9088	-1.0764	0.0000
			Max. Mx	8	-25.4071	-	5.4654
			Max. My	14	-25.3848	1475.2483 -16.4865	-18.4093 -
			Max. Vy	8	28.5610	-	1485.5997 -18.4093
			Max. Vx	14	28.8360	1475.2483 -16.4865	-
L28	83.25 - 80.75	Pole	Max. Torque	20			1485.5997
			Max Tension	1	0.0000	0.0000	-2.3970 0.0000
			Max. Compression	26	-63.7236	-1.1062	5.5728
			Max. Mx	8	-26.4519	-	-19.4620
			Max. My	14	-26.4300	1547.1085 -17.3785	-
			Max. Vy	8	28.9224	-	1558.0883 -19.4620
			Max. Vx	14	29.1975	1547.1085 -17.3785	-
L29	80.75 - 80.5	Pole	Max. Torque	20			1558.0883
			Max Tension	1	0.0000	0.0000	-2.3969 0.0000
			Max. Compression	26	-63.9166	-1.1093	5.5839
			Max. Mx	8	-26.5773	-	-19.5674
			Max. My	14	-26.5557	1554.3434 -17.4678	-
			Max. Vy	8	28.9512	-	1565.3860 -19.5674
			Max. Vx	14	29.2262	1554.3434 -17.4678	-
L30	80.5 - 80.25	Pole	Max. Torque	20			1565.3860
			Max Tension	1	0.0000	0.0000	-2.3967 0.0000
			Max. Compression	26	-64.1075	-1.1123	5.5947
			Max. Mx	8	-26.6917	-	-19.6726
			Max. My	14	-26.6701	1561.5874 -17.5571	-
			Max. Vy	8	28.9874	-	1572.6927 -19.6726
			Max. Vx	14	29.2625	1561.5874 -17.5571	-
L31	80.25 - 77.5	Pole	Max. Torque	20			1572.6927
			Max Tension	1	0.0000	0.0000	-2.3966 0.0000
			Max. Compression	26	-66.2054	-1.1456	5.7139
			Max. Mx	8	-27.9409	-	-20.8304
			Max. My	14	-27.9198	1641.8644 -18.5392	-
			Max. Vy	8	29.3918	-	1653.6601 -20.8304
			Max. Vx	14	29.6670	1641.8644 -18.5392	-
L32	77.5 - 77.25	Pole	Max. Torque	20			1653.6601
			Max Tension	1	0.0000	0.0000	-2.3966 0.0000
			Max. Compression	26	-66.3786	-1.1487	5.7252
			Max. Mx	8	-28.0481	-	-20.9358
			Max. My	14	-28.0272	1649.2162 -18.6287	-
			Max. Vy	8	29.4180	-	1661.0746 -20.9358
			Max. Vx	14	29.6932	1649.2162 -18.6287	-
							1661.0746

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	20			-2.3963
L33	77.25 - 68.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-69.2035	-1.1725	5.9122
			Max. Mx	8	-29.7126	-1775.4772	-22.7230
			Max. My	14	-29.6929	-20.1480	-1788.3988
			Max. Vy	8	29.9968	-1775.4772	-22.7230
			Max. Vx	14	30.2720	-20.1480	-1788.3988
			Max. Torque	20			-2.3962
L34	68.5 - 68	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-74.6855	-1.1966	6.1321
			Max. Mx	8	-33.3594	-1927.4677	-24.8272
			Max. My	14	-33.3406	-21.9368	-1941.6413
			Max. Vy	8	30.7857	-1927.4677	-24.8272
			Max. Vx	14	31.0614	-21.9368	-1941.6413
			Max. Torque	20			-2.3954
L35	68 - 64.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-77.3391	-1.2248	6.2789
			Max. Mx	8	-34.9587	-2043.8461	-26.4053
			Max. My	14	-34.9411	-23.2797	-2058.9575
			Max. Vy	8	31.2873	-2043.8461	-26.4053
			Max. Vx	14	31.5628	-23.2797	-2058.9575
			Max. Torque	20			-2.3952
L36	64.25 - 64	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-77.5283	-1.2276	6.2886
			Max. Mx	8	-35.0861	-2051.6704	-26.5106
			Max. My	14	-35.0688	-23.3694	-2066.8442
			Max. Vy	8	31.3079	-2051.6704	-26.5106
			Max. Vx	14	31.5833	-23.3694	-2066.8442
			Max. Torque	20			-2.3948
L37	64 - 60.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-80.1932	-1.2556	6.4550
			Max. Mx	8	-36.6864	-2162.0920	-27.9806
			Max. My	14	-36.6699	-24.6219	-2178.1384
			Max. Vy	8	31.7889	-2162.0920	-27.9806
			Max. Vx	14	32.0642	-24.6219	-2178.1384
			Max. Torque	20			-2.3947
L38	60.5 - 60.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-80.4035	-1.2586	6.4647
			Max. Mx	8	-36.8184	-2170.0425	-28.0856
			Max. My	14	-36.8022	-24.7114	-2186.1511
			Max. Vy	8	31.8123	-2170.0425	-28.0856
			Max. Vx	14	32.0875	-24.7114	-2186.1511
			Max. Torque	20			-2.3944
L39	60.25 - 60.1	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-80.5297	-1.2605	6.4706

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Mx	8	-36.8927	-2174.8168	-28.1486
			Max. My	14	-36.8766	-24.7651	-2190.9629
			Max. Vy	8	31.8329	-2174.8168	-28.1486
			Max. Vx	14	32.1081	-24.7651	-2190.9629
			Max. Torque	20			-2.3944
L40	60.1 - 59.85	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-80.7409	-1.2661	6.4851
			Max. Mx	8	-37.0181	-2182.7808	-28.2535
			Max. My	14	-37.0020	-24.8546	-2198.9891
			Max. Vy	8	31.8670	-2182.7808	-28.2535
			Max. Vx	14	32.1422	-24.8546	-2198.9891
			Max. Torque	20			-2.3944
L41	59.85 - 59.1	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-81.3676	-1.2882	6.5400
			Max. Mx	8	-37.3923	-2206.7246	-28.5681
			Max. My	14	-37.3763	-25.1229	-2223.1194
			Max. Vy	8	31.9751	-2206.7246	-28.5681
			Max. Vx	14	32.2502	-25.1229	-2223.1194
			Max. Torque	20			-2.3943
L42	59.1 - 58.85	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-81.5851	-1.2956	6.5587
			Max. Mx	8	-37.5318	-2214.7231	-28.6730
			Max. My	14	-37.5160	-25.2123	-2231.1802
			Max. Vy	8	32.0050	-2214.7231	-28.6730
			Max. Vx	14	32.2801	-25.2123	-2231.1802
			Max. Torque	20			-2.3943
L43	58.85 - 55.4	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-84.5776	-1.4000	6.8103
			Max. Mx	8	-39.3813	-2325.9877	-30.1190
			Max. My	14	-39.3662	-26.4465	-2343.3017
			Max. Vy	8	32.4927	-2325.9877	-30.1190
			Max. Vx	14	32.7677	-26.4465	-2343.3017
			Max. Torque	20			-2.3942
L44	55.4 - 55.15	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-84.7957	-1.4075	6.8292
			Max. Mx	8	-39.5253	-2334.1146	-30.2238
			Max. My	14	-39.5104	-26.5360	-2351.4906
			Max. Vy	8	32.5179	-2334.1146	-30.2238
			Max. Vx	14	32.7929	-26.5360	-2351.4906
			Max. Torque	20			-2.3940
L45	55.15 - 54.75	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-85.1447	-1.4195	6.8589
			Max. Mx	8	-39.7412	-2347.1354	-30.3914

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	14	-39.7263	-26.6791	-2364.6106
			Max. Vy	8	32.5743	-2347.1354	-30.3914
			Max. Vx	14	32.8493	-26.6791	-2364.6106
			Max. Torque	20			-2.3940
L46	54.75 - 54.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-85.3445	-1.4270	6.8777
			Max. Mx	8	-39.8606	-2355.2844	-30.4961
			Max. My	14	-39.8458	-26.7685	-2372.8216
			Max. Vy	8	32.6065	-2355.2844	-30.4961
			Max. Vx	14	32.8814	-26.7685	-2372.8216
			Max. Torque	20			-2.3939
L47	54.5 - 49.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-89.1910	-1.5398	7.2528
			Max. Mx	8	-42.2248	-2519.9625	-32.5865
			Max. My	14	-42.2116	-28.5556	-2538.7364
			Max. Vy	8	33.2637	-2519.9625	-32.5865
			Max. Vx	14	33.5381	-28.5556	-2538.7364
			Max. Torque	20			-2.3939
L48	49.5 - 44.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-92.9335	-1.5980	7.5953
			Max. Mx	8	-44.6264	-2687.8397	-34.6696
			Max. My	14	-44.6149	-30.3392	-2707.8438
			Max. Vy	8	33.8970	-2687.8397	-34.6696
			Max. Vx	14	34.1707	-30.3392	-2707.8438
			Max. Torque	20			-2.3934
L49	44.5 - 41.3	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-95.3955	-1.5896	7.7209
			Max. Mx	8	-46.1812	-2796.9275	-35.9984
			Max. My	14	-46.1708	-31.4784	-2817.7153
			Max. Vy	8	34.2945	-2796.9275	-35.9984
			Max. Vx	14	34.5678	-31.4784	-2817.7153
			Max. Torque	20			-2.3930
L50	41.3 - 41.05	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-95.5993	-1.5890	7.7310
			Max. Mx	8	-46.3241	-2805.5036	-36.1021
			Max. My	14	-46.3139	-31.5674	-2826.3524
			Max. Vy	8	34.3131	-2805.5036	-36.1021
			Max. Vx	14	34.5863	-31.5674	-2826.3524
			Max. Torque	20			-2.3928
L51	41.05 - 34	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-97.3301	-1.6019	7.8121
			Max. Mx	8	-47.4040	-2876.1190	-36.9507
			Max. My	14	-47.3943	-32.2963	-2897.4675
			Max. Vy	8	34.5778	-36.9507	

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	14	34.8508	2876.1190	-
			Max. Torque	20		-32.2963	2897.4675
L52	34 - 33	Pole	Max Tension	1	0.0000	0.0000	-2.3927
			Max. Compression	26	-105.9544	-1.6465	0.0000
			Max. Mx	8	-53.5266	-	8.0500
			Max. My	14	-53.5178	3086.2707 -34.4289	-39.4336 -
			Max. Vy	8	35.4568	-	3109.0815 -39.4336
			Max. Vx	14	35.7298	3086.2707 -34.4289	-
			Max. Torque	20			3109.0815 -2.3925
L53	33 - 31.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-107.4016	-1.6659	8.1089
			Max. Mx	8	-54.4677	-	-40.0539
			Max. My	14	-54.4593	3139.5921 -34.9619	-
			Max. Vy	8	35.6500	-	3162.7680 -40.0539
			Max. Vx	14	35.9229	3139.5921 -34.9619	-
			Max. Torque	20			3162.7680 -2.3924
L54	31.5 - 31.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-107.6490	-1.6661	8.1293
			Max. Mx	8	-54.6385	-	-40.1574
			Max. My	14	-54.6302	3148.5064 -35.0508	-
			Max. Vy	8	35.6663	-	3171.7429 -40.1574
			Max. Vx	14	35.9372	3148.5064 -35.0508	-
			Max. Torque	20			3171.7429 -2.3924
L55	31.25 - 30.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-108.3828	-1.6721	8.1709
			Max. Mx	8	-55.1130	-	-40.4672
			Max. My	14	-55.1049	3175.2960 -35.3171	-
			Max. Vy	8	35.7649	-	3198.7134 -40.4672
			Max. Vx	14	36.0358	3175.2960 -35.3171	-
			Max. Torque	20			3198.7134 -2.3924
L56	30.5 - 30.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-108.6227	-1.6751	8.1810
			Max. Mx	8	-55.2741	-	-40.5705
			Max. My	14	-55.2661	3184.2413 -35.4059	-
			Max. Vy	8	35.7890	-	3207.7190 -40.5705
			Max. Vx	14	36.0599	3184.2413 -35.4059	-
			Max. Torque	20			3207.7190 -2.3924
L57	30.25 - 25.75	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-112.9234	-1.7292	8.3580
			Max. Mx	8	-58.0829	-	-42.4253
			Max. My	14	-58.0760	3346.5216 -37.0019	-
			Max. Vy	8	36.3346	-	3371.0814 -42.4253
			Max. Vx	14	36.6048	3346.5216 -37.0019	-

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	20			3371.0814
L58	25.75 - 25.5	Pole	Max Tension	1	0.0000	0.0000	-2.3923
			Max. Compression	26	-113.1607	-1.7323	0.0000
			Max. Mx	8	-58.2469	-	8.3681
						3355.6074	-42.5283
			Max. My	14	-58.2402	-37.0905	-
							3380.2272
			Max. Vy	8	36.3506	-	-42.5283
						3355.6074	
			Max. Vx	14	36.6207	-37.0905	-
			Max. Torque	20			3380.2272
L59	25.5 - 24.7	Pole	Max Tension	1	0.0000	0.0000	-2.3922
			Max. Compression	26	-113.9194	-1.7419	0.0000
			Max. Mx	8	-58.7398	-	8.3995
						3384.7302	-42.8572
			Max. My	14	-58.7333	-37.3738	-
							3409.5416
			Max. Vy	8	36.4506	-	-42.8572
						3384.7302	
			Max. Vx	14	36.7206	-37.3738	-
			Max. Torque	20			3409.5416
L60	24.7 - 24.45	Pole	Max Tension	1	0.0000	0.0000	-2.3922
			Max. Compression	26	-114.1349	-1.7450	0.0000
			Max. Mx	8	-58.8797	-	8.4095
						3393.8460	-42.9600
			Max. My	14	-58.8733	-37.4623	-
							3418.7173
			Max. Vy	8	36.4703	-	-42.9600
						3393.8460	
			Max. Vx	14	36.7401	-37.4623	-
			Max. Torque	20			3418.7173
L61	24.45 - 24	Pole	Max Tension	1	0.0000	0.0000	-2.3921
			Max. Compression	26	-114.5226	-1.7504	0.0000
			Max. Mx	8	-59.1204	-	8.4271
						3410.2716	-43.1448
			Max. My	14	-59.1141	-37.6216	-
							3435.2505
			Max. Vy	8	36.5225	-	-43.1448
						3410.2716	
			Max. Vx	14	36.7923	-37.6216	-
			Max. Torque	20			3435.2505
L62	24 - 23.75	Pole	Max Tension	1	0.0000	0.0000	-2.3921
			Max. Compression	26	-114.7605	-1.7535	0.0000
			Max. Mx	8	-59.2795	-	8.4371
						3419.4067	-43.2475
			Max. My	14	-59.2733	-37.7101	-
							3444.4455
			Max. Vy	8	36.5475	-	-43.2475
						3419.4067	
			Max. Vx	14	36.8172	-37.7101	-
			Max. Torque	20			3444.4455
L63	23.75 - 18.75	Pole	Max Tension	1	0.0000	0.0000	-2.3921
							0.0000
			Max. Compression	26	-119.2101	-1.7793	8.5728
			Max. Mx	8	-62.3981	-	-45.2960
						3603.5863	
			Max. My	14	-62.3931	-39.4766	-
							3629.8172
			Max. Vy	8	37.1207	-	-45.2960
						3603.5863	
			Max. Vx	14	37.3897	-39.4766	-
			Max. Torque	20			3629.8172
							-2.3921

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L64	18.75 - 14.1	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-123.2243	-1.8486	8.5924
			Max. Mx	8	-65.3286	-	-47.1924
			Max. My	14	-65.3248	3777.3159 -41.1146	-
			Max. Vy	8	37.6119	-	3804.6486 -47.1924
			Max. Vx	14	37.8800	3777.3159 -41.1146	-
			Max. Torque	20			3804.6486 -2.3920
L65	14.1 - 13.8	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-123.4929	-1.8531	8.5947
			Max. Mx	8	-65.5307	-	-47.3146
			Max. My	14	-65.5270	3788.6021 -41.2201	-
			Max. Vy	8	37.6292	-	3816.0057 -47.3146
			Max. Vx	14	37.8972	3788.6021 -41.2201	-
			Max. Torque	20			3816.0057 -2.3919
L66	13.8 - 13.65	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-123.6272	-1.8554	8.5960
			Max. Mx	8	-65.6291	-	-47.3756
			Max. My	14	-65.6255	3794.2488 -41.2729	-
			Max. Vy	8	37.6431	-	3821.6877 -47.3756
			Max. Vx	14	37.9110	3794.2488 -41.2729	-
			Max. Torque	20			3821.6877 -2.3919
L67	13.65 - 10.5	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-126.4176	-1.9138	8.5796
			Max. Mx	8	-67.6568	-	-48.6545
			Max. My	14	-67.6538	3913.3652 -42.3792	-
			Max. Vy	8	37.9825	-	3941.5461 -48.6545
			Max. Vx	14	38.2499	3913.3652 -42.3792	-
			Max. Torque	20			3941.5461 -2.3918
L68	10.5 - 10.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-126.6308	-1.9213	8.5737
			Max. Mx	8	-67.8218	-	-48.7559
			Max. My	14	-67.8190	3922.8629 -42.4669	-
			Max. Vy	8	37.9957	-	3951.1025 -48.7559
			Max. Vx	14	38.2630	3922.8629 -42.4669	-
			Max. Torque	20			3951.1025 -2.3918
L69	10.25 - 5.25	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-130.8509	-2.0682	8.4591
			Max. Mx	8	-70.9686	-	-50.7765
			Max. My	14	-70.9670	4114.1675 -44.2173	-
			Max. Vy	8	38.5229	-	4143.5772 -50.7765
			Max. Vx	14	38.7892	4114.1675 -44.2173	-
			Max. Torque	20			4143.5772 -2.3918
L70	5.25 - 3	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-132.7260	-2.1316	8.4130
			Max. Mx	8	-72.3998	-	-51.6820

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	14	-72.3987	4201.0933	-
			Max. Vy	8	38.7561	-45.0026	4231.0266
			Max. Vx	14	39.0219	-	-51.6820
						4201.0933	
						-45.0026	-
			Max. Torque	20			4231.0266
L71	3 - 2.9	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-132.8063	-2.1343	0.0000
			Max. Mx	8	-72.4709	-	8.4112
						4204.9687	-51.7223
			Max. My	14	-72.4700	-45.0375	-
			Max. Vy	8	38.7490	-	4234.9253
			Max. Vx	14	39.0146	4204.9687	-51.7223
						-45.0375	-
			Max. Torque	20			4234.9253
L72	2.9 - 2.75	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-132.9197	-2.1385	0.0000
			Max. Mx	8	-72.5559	-	8.4083
						4210.7837	-51.7826
			Max. My	14	-72.5551	-45.0898	-
			Max. Vy	8	38.7646	-	4240.7751
			Max. Vx	14	39.0302	4210.7837	-51.7826
						-45.0898	-
			Max. Torque	20			4240.7751
L73	2.75 - 2.65	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-132.9952	-2.1412	0.0000
			Max. Mx	8	-72.6135	-	8.4065
						4214.6616	-51.8227
			Max. My	14	-72.6127	-45.1247	-
			Max. Vy	8	38.7739	-	4244.6762
			Max. Vx	14	39.0394	4214.6616	-51.8227
						-45.1247	-
			Max. Torque	20			4244.6762
L74	2.65 - 2.5	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-133.1083	-2.1453	0.0000
			Max. Mx	8	-72.6986	-	8.4036
						4220.4803	-51.8830
			Max. My	14	-72.6978	-45.1770	-
			Max. Vy	8	38.7894	-	4250.5297
			Max. Vx	14	39.0549	4220.4803	-51.8830
						-45.1770	-
			Max. Torque	20			4250.5297
L75	2.5 - 2.25	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-133.2984	-2.1520	0.0000
			Max. Mx	8	-72.8424	-	8.3990
						4230.1831	-51.9834
			Max. My	14	-72.8416	-45.2641	-
			Max. Vy	8	38.8159	-	4260.2905
			Max. Vx	14	39.0814	4230.1831	-51.9834
						-45.2641	-
			Max. Torque	20			4260.2905
L76	2.25 - 1.9	Pole	Max Tension	1	0.0000	0.0000	-2.3917
			Max. Compression	26	-133.5635	-2.1614	0.0000
			Max. Mx	8	-73.0442	-	8.3928
						4243.7773	-52.1239
			Max. My	14	-73.0436	-45.3860	-
							4273.9660

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	8	38.8524	-4243.7773	-52.1239
			Max. Vx	14	39.1177	-45.3860	-4273.9660
			Max. Torque	20			-2.3917
L77	1.9 - 1.65	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-133.7436	-2.1681	8.3885
			Max. Mx	8	-73.1819	-4253.4949	-52.2242
			Max. My	14	-73.1814	-45.4731	-4283.7415
			Max. Vy	8	38.8749	-4253.4949	-52.2242
			Max. Vx	14	39.1401	-45.4731	-4283.7415
			Max. Torque	20			-2.3917
L78	1.65 - 0	Pole	Max Tension	1	0.0000	0.0000	0.0000
			Max. Compression	26	-134.8837	-2.2094	8.3751
			Max. Mx	8	-74.0698	-4317.7830	-52.8852
			Max. My	14	-74.0696	-46.0471	-4348.4115
			Max. Vy	8	39.0639	-4317.7830	-52.8852
			Max. Vx	14	39.3289	-46.0471	-4348.4115
			Max. Torque	20			-2.3917

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	27	134.8837	0.0502	10.2843
	Max. H_x	20	74.0877	38.9684	0.3575
	Max. H_z	2	74.0877	0.2114	39.2029
	Max. M_x	2	4342.2297	0.2114	39.2029
	Max. M_z	8	4317.7830	-39.0299	-0.4211
	Max. Torsion	6	2.1470	-33.5987	19.4436
	Min. Vert	19	55.5658	33.5367	-19.5913
	Min. H_x	8	74.0877	-39.0299	-0.4211
	Min. H_z	14	74.0877	-0.3348	-39.2947
	Min. M_x	14	-4348.4115	-0.3348	-39.2947
	Min. M_z	20	-4306.6003	38.9684	0.3575
	Min. Torsion	20	-2.3917	38.9684	0.3575

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	61.7398	0.0000	0.0000	-2.3453	-1.2557	-0.0000
1.2 Dead+1.6 Wind 0 deg - No Ice	74.0877	-0.2114	-39.2029	-4342.2297	26.6896	-0.8770
0.9 Dead+1.6 Wind 0 deg - No Ice	55.5658	-0.2114	-39.2029	-4303.4601	26.8428	-0.8771
1.2 Dead+1.6 Wind 30 deg - No Ice	74.0877	19.1586	-33.9221	-3756.9143	-2112.5541	-1.6943
0.9 Dead+1.6 Wind 30 deg - No Ice	55.5658	19.1586	-33.9221	-3723.2743	-2093.6558	-1.6914
1.2 Dead+1.6 Wind 60 deg -	74.0877	33.5987	-19.4436	-2151.4507	-3712.9250	-2.1470

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						
0.9 Dead+1.6 Wind 60 deg - No Ice	55.5658	33.5987	-19.4436	-2131.8785	-3680.0040	-2.1417
1.2 Dead+1.6 Wind 90 deg - No Ice	74.0877	39.0299	0.4211	52.8854	-4317.7830	-1.5712
0.9 Dead+1.6 Wind 90 deg - No Ice	55.5658	39.0299	0.4211	53.1460	-4279.5649	-1.5647
1.2 Dead+1.6 Wind 120 deg - No Ice	74.0877	33.7350	20.0499	2226.0514	-3731.2209	-0.8616
0.9 Dead+1.6 Wind 120 deg - No Ice	55.5658	33.7350	20.0499	2207.2754	-3698.1400	-0.8559
1.2 Dead+1.6 Wind 150 deg - No Ice	74.0877	19.6378	34.1700	3784.0221	-2176.2913	0.1294
0.9 Dead+1.6 Wind 150 deg - No Ice	55.5658	19.6378	34.1700	3751.5991	-2156.8319	0.1327
1.2 Dead+1.6 Wind 180 deg - No Ice	74.0877	0.3348	39.2947	4348.4115	-46.0472	1.1479
0.9 Dead+1.6 Wind 180 deg - No Ice	55.5658	0.3348	39.2947	4311.0438	-45.2498	1.1480
1.2 Dead+1.6 Wind 210 deg - No Ice	74.0877	-19.0875	34.1372	3779.3063	2100.0476	1.9533
0.9 Dead+1.6 Wind 210 deg - No Ice	55.5658	-19.0875	34.1372	3746.9235	2082.0405	1.9500
1.2 Dead+1.6 Wind 240 deg - No Ice	74.0877	-33.5367	19.5913	2165.0235	3701.6472	1.9036
0.9 Dead+1.6 Wind 240 deg - No Ice	55.5658	-33.5367	19.5913	2146.7832	3669.6026	1.8980
1.2 Dead+1.6 Wind 270 deg - No Ice	74.0877	-38.9684	-0.3575	-50.3654	4306.6003	2.3917
0.9 Dead+1.6 Wind 270 deg - No Ice	55.5658	-38.9684	-0.3575	-49.1963	4269.2541	2.3856
1.2 Dead+1.6 Wind 300 deg - No Ice	74.0877	-33.8187	-19.8572	-2206.5968	3739.1086	1.5670
0.9 Dead+1.6 Wind 300 deg - No Ice	55.5658	-33.8187	-19.8572	-2186.5351	3706.7338	1.5617
1.2 Dead+1.6 Wind 330 deg - No Ice	74.0877	-19.6115	-34.0697	-3776.7267	2169.7072	0.2261
0.9 Dead+1.6 Wind 330 deg - No Ice	55.5658	-19.6115	-34.0697	-3742.9094	2151.0835	0.2230
1.2 Dead+1.0 Ice	134.8837	0.0000	-0.0000	-8.3751	-2.2094	-0.0003
1.2 Dead+1.0 Wind 0 deg+1.0 Ice	134.8837	-0.0502	-10.2843	-1271.4483	5.0087	-0.2430
1.2 Dead+1.0 Wind 30 deg+1.0 Ice	134.8837	5.0524	-8.8973	-1100.8315	-620.9229	-0.5077
1.2 Dead+1.0 Wind 60 deg+1.0 Ice	134.8837	8.8439	-5.1034	-634.3932	-1086.9739	-0.6539
1.2 Dead+1.0 Wind 90 deg+1.0 Ice	134.8837	10.2661	0.0980	5.2435	-1262.4241	-0.5194
1.2 Dead+1.0 Wind 120 deg+1.0 Ice	134.8837	8.8795	5.2441	637.1359	-1092.2431	-0.3168
1.2 Dead+1.0 Wind 150 deg+1.0 Ice	134.8837	5.1647	8.9571	1092.1567	-637.0295	-0.0171
1.2 Dead+1.0 Wind 180 deg+1.0 Ice	134.8837	0.0784	10.3050	1257.0134	-13.4476	0.3027
1.2 Dead+1.0 Wind 210 deg+1.0 Ice	134.8837	-5.0351	8.9453	1090.1702	613.9911	0.5644
1.2 Dead+1.0 Wind 240 deg+1.0 Ice	134.8837	-8.8309	5.1344	621.3822	1080.6415	0.5996
1.2 Dead+1.0 Wind 270 deg+1.0 Ice	134.8837	-10.2519	-0.0812	-20.2129	1255.9465	0.7035
1.2 Dead+1.0 Wind 300 deg+1.0 Ice	134.8837	-8.8970	-5.2009	-648.4681	1090.1258	0.4748
1.2 Dead+1.0 Wind 330 deg+1.0 Ice	134.8837	-5.1584	-8.9348	-1106.3614	631.6209	0.0966
Dead+Wind 0 deg - Service	61.7398	-0.0452	-8.3879	-926.3329	4.7201	-0.1900
Dead+Wind 30 deg - Service	61.7398	4.0992	-7.2580	-801.7007	-450.7527	-0.3674
Dead+Wind 60 deg - Service	61.7398	7.1888	-4.1602	-459.8742	-791.4866	-0.4639
Dead+Wind 90 deg - Service	61.7398	8.3509	0.0901	9.4540	-920.2787	-0.3374
Dead+Wind 120 deg -	61.7398	7.2180	4.2899	472.1584	-795.4025	-0.1831

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
Service						
Dead+Wind 150 deg - Service	61.7398	4.2017	7.3110	803.8851	-464.3349	0.0297
Dead+Wind 180 deg - Service	61.7398	0.0716	8.4075	924.0459	-10.7645	0.2476
Dead+Wind 210 deg - Service	61.7398	-4.0840	7.3040	802.8644	446.1710	0.4194
Dead+Wind 240 deg - Service	61.7398	-7.1755	4.1918	459.1529	787.1609	0.4090
Dead+Wind 270 deg - Service	61.7398	-8.3377	-0.0765	-12.5281	915.9671	0.5163
Dead+Wind 300 deg - Service	61.7398	-7.2359	-4.2487	-471.6238	795.1531	0.3386
Dead+Wind 330 deg - Service	61.7398	-4.1961	-7.2896	-805.9339	461.0053	0.0489

Solution Summary

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
1	0.0000	-61.7398	0.0000	0.0000	61.7398	0.0000	0.000%
2	-0.2114	-74.0877	-39.2029	0.2114	74.0877	39.2029	0.000%
3	-0.2114	-55.5658	-39.2029	0.2114	55.5658	39.2029	0.000%
4	19.1586	-74.0877	-33.9221	-19.1586	74.0877	33.9221	0.000%
5	19.1586	-55.5658	-33.9221	-19.1586	55.5658	33.9221	0.000%
6	33.5987	-74.0877	-19.4436	-33.5987	74.0877	19.4436	0.000%
7	33.5987	-55.5658	-19.4436	-33.5987	55.5658	19.4436	0.000%
8	39.0299	-74.0877	0.4211	-39.0299	74.0877	-0.4211	0.000%
9	39.0299	-55.5658	0.4211	-39.0299	55.5658	-0.4211	0.000%
10	33.7350	-74.0877	20.0499	-33.7350	74.0877	-20.0499	0.000%
11	33.7350	-55.5658	20.0499	-33.7350	55.5658	-20.0499	0.000%
12	19.6378	-74.0877	34.1700	-19.6378	74.0877	-34.1700	0.000%
13	19.6378	-55.5658	34.1700	-19.6378	55.5658	-34.1700	0.000%
14	0.3348	-74.0877	39.2947	-0.3348	74.0877	-39.2947	0.000%
15	0.3348	-55.5658	39.2947	-0.3348	55.5658	-39.2947	0.000%
16	-19.0875	-74.0877	34.1372	19.0875	74.0877	-34.1372	0.000%
17	-19.0875	-55.5658	34.1372	19.0875	55.5658	-34.1372	0.000%
18	-33.5367	-74.0877	19.5913	33.5367	74.0877	-19.5913	0.000%
19	-33.5367	-55.5658	19.5913	33.5367	55.5658	-19.5913	0.000%
20	-38.9684	-74.0877	-0.3575	38.9684	74.0877	0.3575	0.000%
21	-38.9684	-55.5658	-0.3575	38.9684	55.5658	0.3575	0.000%
22	-33.8187	-74.0877	-19.8572	33.8187	74.0877	19.8572	0.000%
23	-33.8187	-55.5658	-19.8572	33.8187	55.5658	19.8572	0.000%
24	-19.6115	-74.0877	-34.0697	19.6115	74.0877	34.0697	0.000%
25	-19.6115	-55.5658	-34.0697	19.6115	55.5658	34.0697	0.000%
26	0.0000	-134.8837	0.0000	-0.0000	134.8837	0.0000	0.000%
27	-0.0502	-134.8837	-10.2843	0.0502	134.8837	10.2843	0.000%
28	5.0524	-134.8837	-8.8973	-5.0524	134.8837	8.8973	0.000%
29	8.8439	-134.8837	-5.1034	-8.8439	134.8837	5.1034	0.000%
30	10.2661	-134.8837	0.0980	-10.2661	134.8837	-0.0980	0.000%
31	8.8795	-134.8837	5.2441	-8.8795	134.8837	-5.2441	0.000%
32	5.1647	-134.8837	8.9571	-5.1647	134.8837	-8.9571	0.000%
33	0.0784	-134.8837	10.3050	-0.0784	134.8837	-10.3050	0.000%
34	-5.0351	-134.8837	8.9453	5.0351	134.8837	-8.9453	0.000%
35	-8.8309	-134.8837	5.1344	8.8309	134.8837	-5.1344	0.000%
36	-10.2519	-134.8837	-0.0812	10.2519	134.8837	0.0812	0.000%
37	-8.8970	-134.8837	-5.2009	8.8970	134.8837	5.2009	0.000%
38	-5.1584	-134.8837	-8.9348	5.1584	134.8837	8.9348	0.000%
39	-0.0452	-61.7398	-8.3879	0.0452	61.7398	8.3879	0.000%
40	4.0992	-61.7398	-7.2580	-4.0992	61.7398	7.2580	0.000%
41	7.1888	-61.7398	-4.1602	-7.1888	61.7398	4.1602	0.000%
42	8.3509	-61.7398	0.0901	-8.3509	61.7398	-0.0901	0.000%
43	7.2180	-61.7398	4.2899	-7.2180	61.7398	-4.2899	0.000%
44	4.2017	-61.7398	7.3110	-4.2017	61.7398	-7.3110	0.000%
45	0.0716	-61.7398	8.4075	-0.0716	61.7398	-8.4075	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
46	-4.0840	-61.7398	7.3040	4.0840	61.7398	-7.3040	0.000%
47	-7.1755	-61.7398	4.1918	7.1755	61.7398	-4.1918	0.000%
48	-8.3377	-61.7398	-0.0765	8.3377	61.7398	0.0765	0.000%
49	-7.2359	-61.7398	-4.2487	7.2359	61.7398	4.2487	0.000%
50	-4.1961	-61.7398	-7.2896	4.1961	61.7398	7.2896	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00035348
3	Yes	5	0.00000001	0.00016291
4	Yes	6	0.00000001	0.00030810
5	Yes	6	0.00000001	0.00010092
6	Yes	6	0.00000001	0.00032931
7	Yes	6	0.00000001	0.00010866
8	Yes	5	0.00000001	0.00017376
9	Yes	5	0.00000001	0.00007114
10	Yes	6	0.00000001	0.00032538
11	Yes	6	0.00000001	0.00010623
12	Yes	6	0.00000001	0.00032688
13	Yes	6	0.00000001	0.00010680
14	Yes	5	0.00000001	0.00014563
15	Yes	5	0.00000001	0.00005565
16	Yes	6	0.00000001	0.00032769
17	Yes	6	0.00000001	0.00010809
18	Yes	6	0.00000001	0.00030936
19	Yes	6	0.00000001	0.00010143
20	Yes	5	0.00000001	0.00078461
21	Yes	5	0.00000001	0.00036822
22	Yes	6	0.00000001	0.00033569
23	Yes	6	0.00000001	0.00011008
24	Yes	6	0.00000001	0.00032523
25	Yes	6	0.00000001	0.00010634
26	Yes	4	0.00000001	0.00008757
27	Yes	5	0.00000001	0.00087362
28	Yes	6	0.00000001	0.00032942
29	Yes	6	0.00000001	0.00036713
30	Yes	5	0.00000001	0.00090588
31	Yes	6	0.00000001	0.00033639
32	Yes	6	0.00000001	0.00034525
33	Yes	5	0.00000001	0.00084915
34	Yes	6	0.00000001	0.00034925
35	Yes	6	0.00000001	0.00031504
36	Yes	6	0.00000001	0.00011499
37	Yes	6	0.00000001	0.00037020
38	Yes	6	0.00000001	0.00034967
39	Yes	4	0.00000001	0.00070941
40	Yes	5	0.00000001	0.00009212
41	Yes	5	0.00000001	0.00010952
42	Yes	4	0.00000001	0.00075115
43	Yes	5	0.00000001	0.00009905
44	Yes	5	0.00000001	0.00010117
45	Yes	4	0.00000001	0.00070167
46	Yes	5	0.00000001	0.00010731
47	Yes	5	0.00000001	0.00009127
48	Yes	4	0.00000001	0.00097538
49	Yes	5	0.00000001	0.00010958
50	Yes	5	0.00000001	0.00010063

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160 - 155	19.5951	50	1.1850	0.0064
L2	155 - 150	18.3545	50	1.1841	0.0061
L3	150 - 146	17.1200	50	1.1715	0.0049
L4	146 - 141	16.1466	50	1.1508	0.0039
L5	141 - 136	14.9536	50	1.1258	0.0034
L6	136 - 131	13.7931	50	1.0890	0.0030
L7	131 - 126	12.6767	50	1.0415	0.0027
L8	126 - 121	11.6169	50	0.9805	0.0023
L9	121 - 120.1	10.6279	50	0.9064	0.0018
L10	120.1 - 119.85	10.4584	50	0.8920	0.0017
L11	119.85 - 117.5	10.4118	50	0.8898	0.0017
L12	117.5 - 117.25	9.9789	50	0.8689	0.0016
L13	117.25 - 115.5	9.9335	50	0.8667	0.0016
L14	115.5 - 115.25	9.6187	50	0.8510	0.0015
L15	115.25 - 110.25	9.5742	50	0.8492	0.0015
L16	110.25 - 103.75	8.7046	50	0.8112	0.0013
L17	107.5 - 102.5	8.2439	50	0.7887	0.0013
L18	102.5 - 100.5	7.4296	50	0.7620	0.0012
L19	100.5 - 100.25	7.1142	50	0.7442	0.0011
L20	100.25 - 98.5	7.0753	50	0.7418	0.0011
L21	98.5 - 98.25	6.8065	50	0.7249	0.0011
L22	98.25 - 93.25	6.7686	50	0.7226	0.0011
L23	93.25 - 90.5	6.0375	50	0.6736	0.0009
L24	90.5 - 90.25	5.6574	50	0.6463	0.0009
L25	90.25 - 85.25	5.6236	50	0.6439	0.0009
L26	85.25 - 83.5	4.9746	50	0.5956	0.0007
L27	83.5 - 83.25	4.7594	50	0.5786	0.0007
L28	83.25 - 80.75	4.7291	50	0.5767	0.0007
L29	80.75 - 80.5	4.4320	50	0.5581	0.0007
L30	80.5 - 80.25	4.4029	50	0.5565	0.0007
L31	80.25 - 77.5	4.3738	50	0.5548	0.0007
L32	77.5 - 77.25	4.0598	50	0.5355	0.0006
L33	77.25 - 68.5	4.0318	50	0.5331	0.0006
L34	73 - 68	3.5754	50	0.4924	0.0005
L35	68 - 64.25	3.0722	50	0.4665	0.0005
L36	64.25 - 64	2.7197	50	0.4310	0.0005
L37	64 - 60.5	2.6972	50	0.4290	0.0004
L38	60.5 - 60.25	2.3933	50	0.4004	0.0004
L39	60.25 - 60.1	2.3723	50	0.3985	0.0004
L40	60.1 - 59.85	2.3598	50	0.3973	0.0004
L41	59.85 - 59.1	2.3391	50	0.3955	0.0004
L42	59.1 - 58.85	2.2774	50	0.3901	0.0004
L43	58.85 - 55.4	2.2570	50	0.3884	0.0004
L44	55.4 - 55.15	1.9850	50	0.3645	0.0004
L45	55.15 - 54.75	1.9659	50	0.3628	0.0004
L46	54.75 - 54.5	1.9357	50	0.3600	0.0004
L47	54.5 - 49.5	1.9169	50	0.3579	0.0003
L48	49.5 - 44.5	1.5644	50	0.3153	0.0003
L49	44.5 - 41.3	1.2567	50	0.2724	0.0002
L50	41.3 - 41.05	1.0835	50	0.2447	0.0002
L51	41.05 - 34	1.0707	50	0.2427	0.0002
L52	39 - 33	0.9699	50	0.2267	0.0002
L53	33 - 31.5	0.6982	50	0.2033	0.0002
L54	31.5 - 31.25	0.6358	50	0.1941	0.0002
L55	31.25 - 30.5	0.6257	50	0.1926	0.0002
L56	30.5 - 30.25	0.5958	50	0.1880	0.0002
L57	30.25 - 25.75	0.5860	50	0.1864	0.0002
L58	25.75 - 25.5	0.4241	50	0.1572	0.0001
L59	25.5 - 24.7	0.4160	50	0.1555	0.0001
L60	24.7 - 24.45	0.3903	50	0.1503	0.0001
L61	24.45 - 24	0.3825	50	0.1484	0.0001
L62	24 - 23.75	0.3687	50	0.1451	0.0001
L63	23.75 - 18.75	0.3611	50	0.1437	0.0001
L64	18.75 - 14.1	0.2264	50	0.1136	0.0001
L65	14.1 - 13.8	0.1295	50	0.0855	0.0001
L66	13.8 - 13.65	0.1241	50	0.0838	0.0001

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L67	13.65 - 10.5	0.1215	50	0.0829	0.0001
L68	10.5 - 10.25	0.0729	50	0.0645	0.0000
L69	10.25 - 5.25	0.0696	50	0.0630	0.0000
L70	5.25 - 3	0.0191	50	0.0335	0.0000
L71	3 - 2.9	0.0064	50	0.0201	0.0000
L72	2.9 - 2.75	0.0060	50	0.0195	0.0000
L73	2.75 - 2.65	0.0054	50	0.0186	0.0000
L74	2.65 - 2.5	0.0050	50	0.0179	0.0000
L75	2.5 - 2.25	0.0045	50	0.0170	0.0000
L76	2.25 - 1.9	0.0036	50	0.0153	0.0000
L77	1.9 - 1.65	0.0026	50	0.0130	0.0000
L78	1.65 - 0	0.0020	50	0.0113	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.0000	Lightning Rod	50	18.6024	1.1848	0.0063	48377
148.0000	(2) PCS 1900MHz 4x45W-65MHz	50	16.6314	1.1616	0.0045	12624
146.0000	APXVTM14-C-120 w/ Mount Pipe	50	16.1466	1.1508	0.0041	11521
139.0000	APXV18-206517S-C	50	14.4849	1.1127	0.0033	8167
132.0000	BXA-80080-6CF-EDIN-X w/ Mount Pipe	50	12.8959	1.0521	0.0028	5561
129.0000	HORIZON COMPACT	50	12.2452	1.0184	0.0025	4824
127.0000	VHLP800-11	50	11.8236	0.9934	0.0024	4410
101.0000	58532A	50	7.1923	0.7491	0.0011	6683

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160 - 155	91.9753	12	5.5547	0.0285
L2	155 - 150	86.1747	12	5.5513	0.0274
L3	150 - 146	80.4000	12	5.4967	0.0216
L4	146 - 141	75.8428	12	5.4031	0.0182
L5	141 - 136	70.2539	12	5.2880	0.0163
L6	136 - 131	64.8144	12	5.1169	0.0146
L7	131 - 126	59.5790	12	4.8956	0.0129
L8	126 - 121	54.6061	12	4.6100	0.0107
L9	121 - 120.1	49.9635	12	4.2628	0.0084
L10	120.1 - 119.85	49.1676	12	4.1952	0.0080
L11	119.85 - 117.5	48.9485	12	4.1851	0.0079
L12	117.5 - 117.25	46.9157	12	4.0869	0.0074
L13	117.25 - 115.5	46.7023	12	4.0764	0.0074
L14	115.5 - 115.25	45.2237	12	4.0028	0.0070
L15	115.25 - 110.25	45.0146	12	3.9944	0.0070
L16	110.25 - 103.75	40.9294	12	3.8160	0.0062
L17	107.5 - 102.5	38.7645	12	3.7105	0.0059
L18	102.5 - 100.5	34.9384	12	3.5849	0.0055
L19	100.5 - 100.25	33.4559	12	3.5013	0.0052
L20	100.25 - 98.5	33.2731	12	3.4899	0.0052
L21	98.5 - 98.25	32.0098	12	3.4105	0.0050
L22	98.25 - 93.25	31.8317	12	3.3994	0.0049
L23	93.25 - 90.5	28.3952	12	3.1692	0.0043
L24	90.5 - 90.25	26.6083	12	3.0408	0.0040
L25	90.25 - 85.25	26.4495	12	3.0298	0.0040
L26	85.25 - 83.5	23.3978	12	2.8025	0.0035

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L27	83.5 - 83.25	22.3860	12	2.7224	0.0033
L28	83.25 - 80.75	22.2437	12	2.7138	0.0033
L29	80.75 - 80.5	20.8466	12	2.6261	0.0031
L30	80.5 - 80.25	20.7094	12	2.6186	0.0031
L31	80.25 - 77.5	20.5726	12	2.6105	0.0031
L32	77.5 - 77.25	19.0960	12	2.5198	0.0029
L33	77.25 - 68.5	18.9644	12	2.5085	0.0029
L34	73 - 68	16.8179	12	2.3169	0.0025
L35	68 - 64.25	14.4509	12	2.1950	0.0023
L36	64.25 - 64	12.7931	12	2.0279	0.0021
L37	64 - 60.5	12.6872	12	2.0185	0.0021
L38	60.5 - 60.25	11.2574	12	1.8840	0.0019
L39	60.25 - 60.1	11.1590	12	1.8750	0.0019
L40	60.1 - 59.85	11.1002	12	1.8697	0.0019
L41	59.85 - 59.1	11.0025	12	1.8611	0.0018
L42	59.1 - 58.85	10.7123	12	1.8356	0.0018
L43	58.85 - 55.4	10.6164	12	1.8276	0.0018
L44	55.4 - 55.15	9.3368	12	1.7151	0.0017
L45	55.15 - 54.75	9.2473	12	1.7070	0.0016
L46	54.75 - 54.5	9.1048	12	1.6941	0.0016
L47	54.5 - 49.5	9.0164	12	1.6842	0.0016
L48	49.5 - 44.5	7.3583	12	1.4834	0.0014
L49	44.5 - 41.3	5.9111	12	1.2814	0.0011
L50	41.3 - 41.05	5.0961	12	1.1511	0.0010
L51	41.05 - 34	5.0361	12	1.1419	0.0010
L52	39 - 33	4.5620	12	1.0667	0.0009
L53	33 - 31.5	3.2839	12	0.9562	0.0008
L54	31.5 - 31.25	2.9903	12	0.9131	0.0007
L55	31.25 - 30.5	2.9427	12	0.9058	0.0007
L56	30.5 - 30.25	2.8021	12	0.8842	0.0007
L57	30.25 - 25.75	2.7560	12	0.8767	0.0007
L58	25.75 - 25.5	1.9947	12	0.7392	0.0006
L59	25.5 - 24.7	1.9561	12	0.7315	0.0006
L60	24.7 - 24.45	1.8357	12	0.7068	0.0006
L61	24.45 - 24	1.7989	12	0.6982	0.0005
L62	24 - 23.75	1.7338	12	0.6826	0.0005
L63	23.75 - 18.75	1.6982	12	0.6757	0.0005
L64	18.75 - 14.1	1.0648	12	0.5344	0.0004
L65	14.1 - 13.8	0.6088	12	0.4023	0.0003
L66	13.8 - 13.65	0.5838	12	0.3940	0.0003
L67	13.65 - 10.5	0.5715	12	0.3898	0.0003
L68	10.5 - 10.25	0.3429	12	0.3031	0.0002
L69	10.25 - 5.25	0.3272	12	0.2963	0.0002
L70	5.25 - 3	0.0896	12	0.1577	0.0001
L71	3 - 2.9	0.0302	12	0.0947	0.0001
L72	2.9 - 2.75	0.0282	12	0.0919	0.0001
L73	2.75 - 2.65	0.0254	12	0.0873	0.0001
L74	2.65 - 2.5	0.0236	12	0.0843	0.0001
L75	2.5 - 2.25	0.0210	12	0.0797	0.0001
L76	2.25 - 1.9	0.0170	12	0.0720	0.0001
L77	1.9 - 1.65	0.0122	12	0.0611	0.0000
L78	1.65 - 0	0.0092	12	0.0530	0.0000

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.0000	Lightning Rod	12	87.3342	5.5545	0.0294	11230
148.0000	(2) PCS 1900MHz 4x45W-65MHz	12	78.1127	5.4519	0.0211	2804
146.0000	APXVTM14-C-120 w/ Mount Pipe	12	75.8428	5.4031	0.0192	2543
139.0000	APXV18-206517S-C	12	68.0574	5.2270	0.0156	1780
132.0000	BXA-80080-6CF-EDIN-X w/	12	60.6070	4.9450	0.0132	1206

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
	Mount Pipe					
129.0000	HORIZON COMPACT	12	57.5546	4.7874	0.0121	1044
127.0000	VHLP800-11	12	55.5765	4.6703	0.0112	954
101.0000	58532A	12	33.8233	3.5240	0.0053	1434

Compression Checks

Pole Design Data

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L1	160 - 155 (1)	TP16x16x0.375	5.0000	0.0000	0.0	18.407 8	-1.6437	579.8450	0.003
L2	155 - 150 (2)	TP16x16x0.375	5.0000	0.0000	0.0	18.407 8	-2.0543	579.8450	0.004
L3	150 - 146 (3)	TP16x16x0.375	4.0000	0.0000	0.0	18.407 8	-3.3713	579.8450	0.006
L4	146 - 141 (4)	TP22.924x22x0.25	5.0000	0.0000	0.0	18.252 6	-7.2566	1239.9700	0.006
L5	141 - 136 (5)	TP23.848x22.924x0.25	5.0000	0.0000	0.0	18.996 4	-7.9230	1274.1200	0.006
L6	136 - 131 (6)	TP24.7721x23.848x0.25	5.0000	0.0000	0.0	19.740 3	-11.9092	1306.9900	0.009
L7	131 - 126 (7)	TP25.6961x24.7721x0.25	5.0000	0.0000	0.0	20.484 1	-13.0256	1338.5700	0.010
L8	126 - 121 (8)	TP26.6201x25.6961x0.25	5.0000	0.0000	0.0	21.227 9	-13.7174	1368.8800	0.010
L9	121 - 120.1 (9)	TP26.7864x26.6201x0.25	0.9000	0.0000	0.0	21.361 8	-13.8480	1374.2000	0.010
L10	120.1 - 119.85 (10)	TP26.8326x26.7864x0.4875	0.2500	0.0000	0.0	41.355 3	-13.9109	2813.8100	0.005
L11	119.85 - 117.5 (11)	TP27.2669x26.8326x0.4875	2.3500	0.0000	0.0	42.037 0	-14.3717	2860.2000	0.005
L12	117.5 - 117.25 (12)	TP27.3131x27.2669x0.5	0.2500	0.0000	0.0	43.169 1	-14.4362	2937.2300	0.005
L13	117.25 - 115.5 (13)	TP27.6365x27.3131x0.5	1.7500	0.0000	0.0	43.689 8	-14.8153	2972.6600	0.005
L14	115.5 - 115.25 (14)	TP27.6827x27.6365x0.6625	0.2500	0.0000	0.0	57.640 9	-14.8942	3921.8900	0.004
L15	115.25 - 110.25 (15)	TP28.6068x27.6827x0.65	5.0000	0.0000	0.0	58.513 5	-16.1857	3981.2600	0.004
L16	110.25 - 103.75 (16)	TP29.808x28.6068x0.6375	6.5000	0.0000	0.0	58.457 2	-16.9097	3977.4200	0.004
L17	103.75 - 102.5 (17)	TP29.0743x28.0824x0.7125	5.0000	0.0000	0.0	65.069 1	-19.1579	4427.3000	0.004
L18	102.5 - 100.5 (18)	TP29.4711x29.0743x0.7	2.0000	0.0000	0.0	64.850 0	-19.8201	4412.3900	0.004
L19	100.5 - 100.25 (19)	TP29.5206x29.4711x0.6375	0.2500	0.0000	0.0	59.289 9	-19.8989	4034.0800	0.005
L20	100.25 - 98.5 (20)	TP29.8678x29.5206x0.6375	1.7500	0.0000	0.0	60.002 5	-20.3852	4082.5700	0.005
L21	98.5 - 98.25 (21)	TP29.9174x29.8678x0.6625	0.2500	0.0000	0.0	62.408 0	-20.4766	4246.2400	0.005
L22	98.25 - 93.25 (22)	TP30.9093x29.9174x0.65	5.0000	0.0000	0.0	63.332 6	-21.9772	4309.1500	0.005
L23	93.25 - 90.5 (23)	TP31.4548x30.9093x0.65	2.7500	0.0000	0.0	64.474 4	-22.8171	4386.8400	0.005
L24	90.5 - 90.25 (24)	TP31.5044x31.4548x0.6875	0.2500	0.0000	0.0	68.220 9	-22.9167	4641.7500	0.005
L25	90.25 - 85.25 (25)	TP32.4962x31.5044x0.675	5.0000	0.0000	0.0	69.163 5	-24.6427	4705.8800	0.005

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L26	85.25 - 83.5 (26)	TP32.8434x32.4962x0.6625	1.7500	0.0000	0.0	68.6499	-25.2503	4670.9400	0.005
L27	83.5 - 83.25 (27)	TP32.893x32.8434x0.9125	0.2500	0.0000	0.0	93.9667	-25.3739	6393.4900	0.004
L28	83.25 - 80.75 (28)	TP33.3889x32.893x0.9	2.5000	0.0000	0.0	94.1529	-26.4193	6406.1600	0.004
L29	80.75 - 80.5 (29)	TP33.4385x33.3889x1.0625	0.2500	0.0000	0.0	110.7660	-26.5451	7536.5500	0.004
L30	80.5 - 80.25 (30)	TP33.4881x33.4385x0.9875	0.2500	0.0000	0.0	103.3440	-26.6595	7031.5100	0.004
L31	80.25 - 77.5 (31)	TP34.0336x33.4881x0.9625	2.7500	0.0000	0.0	102.4960	-27.9094	6973.8100	0.004
L32	77.5 - 77.25 (32)	TP34.0832x34.0336x0.6875	0.2500	0.0000	0.0	73.9298	-28.0169	5030.1800	0.006
L33	77.25 - 68.5 (33)	TP35.819x34.0832x0.6875	8.7500	0.0000	0.0	75.7962	-29.6833	5157.1700	0.006
L34	68.5 - 68 (34)	TP35.2329x34.3013x0.75	5.0000	0.0000	0.0	83.2763	-33.3314	5666.1200	0.006
L35	68 - 64.25 (35)	TP35.9317x35.2329x0.7375	3.7500	0.0000	0.0	83.5773	-34.9325	5686.6000	0.006
L36	64.25 - 64 (36)	TP35.9782x35.9317x0.875	0.2500	0.0000	0.0	98.9034	-35.0603	6729.3900	0.005
L37	64 - 60.5 (37)	TP36.6304x35.9782x0.8625	3.5000	0.0000	0.0	99.3364	-36.6619	6758.8500	0.005
L38	60.5 - 60.25 (38)	TP36.677x36.6304x0.925	0.2500	0.0000	0.0	106.484	-36.7942	7245.3900	0.005
L39	60.25 - 60.1 (39)	TP36.7049x36.677x0.925	0.1500	0.0000	0.0	106.5770	-36.8686	7251.0600	0.005
L40	60.1 - 59.85 (40)	TP36.7515x36.7049x0.975	0.2500	0.0000	0.0	112.3200	-36.9941	7642.2700	0.005
L41	59.85 - 59.1 (41)	TP36.8912x36.7515x0.975	0.7500	0.0000	0.0	112.7590	-37.3685	7672.1200	0.005
L42	59.1 - 58.85 (42)	TP36.9378x36.8912x1.05	0.2500	0.0000	0.0	121.3370	-37.5082	8255.7500	0.005
L43	58.85 - 55.4 (43)	TP37.5806x36.9378x1.025	3.4500	0.0000	0.0	120.6520	-39.3588	8209.1600	0.005
L44	55.4 - 55.15 (44)	TP37.6272x37.5806x1.025	0.2500	0.0000	0.0	120.8060	-39.5031	8219.6200	0.005
L45	55.15 - 54.75 (45)	TP37.7018x37.6272x1.025	0.4000	0.0000	0.0	121.0520	-39.7191	8236.3500	0.005
L46	54.75 - 54.5 (46)	TP37.7483x37.7018x0.825	0.2500	0.0000	0.0	98.0868	-39.8386	6673.8300	0.006
L47	54.5 - 49.5 (47)	TP38.68x37.7483x0.8125	5.0000	0.0000	0.0	99.0707	-42.2051	6740.7700	0.006
L48	49.5 - 44.5 (48)	TP39.6116x38.68x0.8	5.0000	0.0000	0.0	99.9786	-44.6092	6802.5500	0.007
L49	44.5 - 41.3 (49)	TP40.2078x39.6116x0.7875	3.2000	0.0000	0.0	99.9601	-46.1657	6801.2800	0.007
L50	41.3 - 41.05 (50)	TP40.2544x40.2078x0.875	0.2500	0.0000	0.0	110.9510	-46.3088	7549.1400	0.006
L51	41.05 - 34 (51)	TP41.568x40.2544x0.875	7.0500	0.0000	0.0	112.0280	-47.3895	7622.3600	0.006
L52	34 - 33 (52)	TP40.9962x39.8864x1.175	6.0000	0.0000	0.0	150.6630	-53.5135	11105.4000	0.005
L53	33 - 31.5 (53)	TP41.2736x40.9962x1.175	1.5000	0.0000	0.0	151.7130	-54.4551	11182.8000	0.005
L54	31.5 - 31.25 (54)	TP41.3199x41.2736x1.175	0.2500	0.0000	0.0	151.8830	-54.6262	11195.7000	0.005
L55	31.25 - 30.5 (55)	TP41.4586x41.3199x1.175	0.7500	0.0000	0.0	152.4180	-55.1010	11234.4000	0.005
L56	30.5 - 30.25 (56)	TP41.5048x41.4586x1.125	0.2500	0.0000	0.0	146.2760	-55.2622	10782.0000	0.005
L57	30.25 - 25.75 (57)	TP42.3372x41.5048x1.1	4.5000	0.0000	0.0	146.0620	-58.0726	10766.2000	0.005
L58	25.75 - 25.5 (58)	TP42.3834x42.3372x1.075	0.2500	0.0000	0.0	142.9820	-58.2369	10539.7000	0.006
L59	25.5 - 24.7 (59)	TP42.5314x42.3834x1.075	0.8000	0.0000	0.0	143.5090	-58.7300	10577.5000	0.006
L60	24.7 - 24.45	TP42.5776x42.5314x0.95	0.2500	0.0000	0.0	127.3310	-58.8702	9386.1500	0.006

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L61	24.45 - 24 (60)	TP42.6608x42.5776x0.95	0.4500	0.0000	0.0	90 127.59	-59.1110	9404.9200	0.006
L62	24 - 23.75 (61)	TP42.7071x42.6608x1.2	0.2500	0.0000	0.0	30 160.38	-59.2703	11821.9000	0.005
L63	23.75 - 18.75 (62)	TP43.6319x42.7071x1.175	5.0000	0.0000	0.0	30 160.63	-62.3906	11840.5000	0.005
L64	18.75 - 14.1 (63)	TP44.492x43.6319x1.15	4.6500	0.0000	0.0	60 160.49	-65.3229	11830.1000	0.006
L65	14.1 - 13.8 (64)	TP44.5475x44.492x1.175	0.3000	0.0000	0.0	50 164.10	-65.5252	12095.8000	0.005
L66	13.8 - 13.65 (65)	TP44.5752x44.5475x1.175	0.1500	0.0000	0.0	00 164.20	-65.6237	12103.5000	0.005
L67	13.65 - 10.5 (66)	TP45.1579x44.5752x1.175	3.1500	0.0000	0.0	50 166.40	-67.6524	12266.0000	0.006
L68	10.5 - 10.25 (67)	TP45.2041x45.1579x1.175	0.2500	0.0000	0.0	90 166.58	-67.8177	12278.9000	0.006
L69	10.25 - 5.25 (68)	TP46.1289x45.2041x1.15	5.0000	0.0000	0.0	40 166.55	-70.9662	12276.9000	0.006
L70	5.25 - 3 (69)	TP46.5451x46.1289x1.125	2.2500	0.0000	0.0	70 164.53	-72.3982	12127.8000	0.006
L71	3 - 2.9 (70)	TP46.5636x46.5451x1.075	0.1000	0.0000	0.0	40 159.24	-72.4696	11738.0000	0.006
L72	2.9 - 2.75 (71)	TP46.5913x46.5636x1.025	0.1500	0.0000	0.0	60 150.39	-72.5546	11085.4000	0.007
L73	2.75 - 2.65 (72)	TP46.6098x46.5913x1.025	0.1000	0.0000	0.0	20 150.45	-72.6123	11089.9000	0.007
L74	2.65 - 2.5 (73)	TP46.6376x46.6098x1.025	0.1500	0.0000	0.0	30 150.54	-72.6974	11096.6000	0.007
L75	2.5 - 2.25 (74)	TP46.6838x46.6376x1	0.2500	0.0000	0.0	40 147.10	-72.8413	10842.9000	0.007
L76	2.25 - 1.9 (75)	TP46.7486x46.6838x1	0.3500	0.0000	0.0	20 147.31	-73.0433	10858.2000	0.007
L77	1.9 - 1.65 (76)	TP46.7948x46.7486x0.95	0.2500	0.0000	0.0	00 140.23	-73.1811	10337.0000	0.007
L78	1.65 - 0 (77)	TP47.1x46.7948x0.95	1.6500	0.0000	0.0	90 141.17	-74.0695	10405.9000	0.007
						30			

Pole Bending Design Data

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L1	160 - 155 (1)	TP16x16x0.375	9.4201	240.3717	0.039	0.0000	240.3717	0.000
L2	155 - 150 (2)	TP16x16x0.375	35.3150	240.3717	0.147	0.0000	240.3717	0.000
L3	150 - 146 (3)	TP16x16x0.375	60.3761	240.3717	0.251	0.0000	240.3717	0.000
L4	146 - 141 (4)	TP22.924x22x0.25	122.4392	571.0217	0.214	0.0000	571.0217	0.000
L5	141 - 136 (5)	TP23.848x22.924x0.25	187.6267	610.9208	0.307	0.0000	610.9208	0.000
L6	136 - 131 (6)	TP24.7721x23.848x0.25	269.3117	651.4767	0.413	0.0000	651.4767	0.000
L7	131 - 126 (7)	TP25.6961x24.7721x0.25	378.7783	692.6158	0.547	0.0000	692.6158	0.000
L8	126 - 121 (8)	TP26.6201x25.6961x0.25	496.1558	734.2658	0.676	0.0000	734.2658	0.000
L9	121 - 120.1 (9)	TP26.7864x26.6201x0.25	517.5833	741.8117	0.698	0.0000	741.8117	0.000
L10	120.1 - 119.85 (10)	TP26.8326x26.7864x0.4875	523.5517	1494.5417	0.350	0.0000	1494.5417	0.000
L11	119.85 - 117.5 (11)	TP27.2669x26.8326x0.4875	580.2342	1544.6750	0.376	0.0000	1544.6750	0.000
L12	117.5 - 117.25 (12)	TP27.3131x27.2669x0.5	586.3067	1587.5833	0.369	0.0000	1587.5833	0.000
L13	117.25 - 115.5 (13)	TP27.6365x27.3131x0.5	629.0383	1626.4667	0.387	0.0000	1626.4667	0.000
L14	115.5 - 115.25 (14)	TP27.6827x27.6365x0.6625	635.1750	2123.9250	0.299	0.0000	2123.9250	0.000
L15	115.25 - 110.25 (15)	TP28.6068x27.6827x0.65	759.6508	2233.5750	0.340	0.0000	2233.5750	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L16	110.25 - 103.75 (16)	TP29.808x28.6068x0.6375	829.5333	2274.9083	0.365	0.0000	2274.9083	0.000
L17	103.75 - 102.5 (17)	TP29.0743x28.0824x0.7125	959.4417	2515.2000	0.381	0.0000	2515.2000	0.000
L18	102.5 - 100.5 (18)	TP29.4711x29.0743x0.7	1012.2500	2544.8667	0.398	0.0000	2544.8667	0.000
L19	100.5 - 100.25 (19)	TP29.5206x29.4711x0.6375	1018.9167	2340.9000	0.435	0.0000	2340.9000	0.000
L20	100.25 - 98.5 (20)	TP29.8678x29.5206x0.6375	1065.8417	2398.1250	0.444	0.0000	2398.1250	0.000
L21	98.5 - 98.25 (21)	TP29.9174x29.8678x0.6625	1072.5833	2494.3250	0.430	0.0000	2494.3250	0.000
L22	98.25 - 93.25 (22)	TP30.9093x29.9174x0.65	1209.0167	2621.1667	0.461	0.0000	2621.1667	0.000
L23	93.25 - 90.5 (23)	TP31.4548x30.9093x0.65	1285.4500	2717.5417	0.473	0.0000	2717.5417	0.000
L24	90.5 - 90.25 (24)	TP31.5044x31.4548x0.6875	1292.4500	2873.1833	0.450	0.0000	2873.1833	0.000
L25	90.25 - 85.25 (25)	TP32.4962x31.5044x0.675	1434.1583	3011.0417	0.476	0.0000	3011.0417	0.000
L26	85.25 - 83.5 (26)	TP32.8434x32.4962x0.6625	1484.5417	3024.3167	0.491	0.0000	3024.3167	0.000
L27	83.5 - 83.25 (27)	TP32.893x32.8434x0.9125	1491.7750	4082.0667	0.365	0.0000	4082.0667	0.000
L28	83.25 - 80.75 (28)	TP33.3889x32.893x0.9	1564.5833	4158.5417	0.376	0.0000	4158.5417	0.000
L29	80.75 - 80.5 (29)	TP33.4385x33.3889x1.0625	1571.9167	4851.1833	0.324	0.0000	4851.1833	0.000
L30	80.5 - 80.25 (30)	TP33.4881x33.4385x0.9875	1579.2500	4554.2417	0.347	0.0000	4554.2417	0.000
L31	80.25 - 77.5 (31)	TP34.0336x33.4881x0.9625	1660.5750	4601.8750	0.361	0.0000	4601.8750	0.000
L32	77.5 - 77.25 (32)	TP34.0832x34.0336x0.6875	1668.0167	3379.8667	0.494	0.0000	3379.8667	0.000
L33	77.25 - 68.5 (33)	TP35.819x34.0832x0.6875	1795.8833	3554.4417	0.505	0.0000	3554.4417	0.000
L34	68.5 - 68 (34)	TP35.2329x34.3013x0.75	1949.7667	3926.6333	0.497	0.0000	3926.6333	0.000
L35	68 - 64.25 (35)	TP35.9317x35.2329x0.7375	2067.5667	4025.2417	0.514	0.0000	4025.2417	0.000
L36	64.25 - 64 (36)	TP35.9782x35.9317x0.875	2075.4833	4732.6583	0.439	0.0000	4732.6583	0.000
L37	64 - 60.5 (37)	TP36.6304x35.9782x0.8625	2187.2250	4847.2167	0.451	0.0000	4847.2167	0.000
L38	60.5 - 60.25 (38)	TP36.677x36.6304x0.925	2195.2750	5184.9333	0.423	0.0000	5184.9333	0.000
L39	60.25 - 60.1 (39)	TP36.7049x36.677x0.925	2200.1000	5193.1500	0.424	0.0000	5193.1500	0.000
L40	60.1 - 59.85 (40)	TP36.7515x36.7049x0.975	2208.1583	5465.3500	0.404	0.0000	5465.3500	0.000
L41	59.85 - 59.1 (41)	TP36.8912x36.7515x0.975	2232.3917	5508.7000	0.405	0.0000	5508.7000	0.000
L42	59.1 - 58.85 (42)	TP36.9378x36.8912x1.05	2240.4833	5910.9080	0.379	0.0000	5910.9080	0.000
L43	58.85 - 55.4 (43)	TP37.5806x36.9378x1.025	2353.0500	5994.0167	0.393	0.0000	5994.0167	0.000
L44	55.4 - 55.15 (44)	TP37.6272x37.5806x1.025	2361.2667	6009.5080	0.393	0.0000	6009.5080	0.000
L45	55.15 - 54.75 (45)	TP37.7018x37.6272x1.025	2374.4417	6034.3413	0.393	0.0000	6034.3413	0.000
L46	54.75 - 54.5 (46)	TP37.7483x37.7018x0.825	2382.6833	4949.4167	0.481	0.0000	4949.4167	0.000
L47	54.5 - 49.5 (47)	TP38.68x37.7483x0.8125	2549.2417	5131.3417	0.497	0.0000	5131.3417	0.000
L48	49.5 - 44.5 (48)	TP39.6116x38.68x0.8	2718.9833	5311.8667	0.512	0.0000	5311.8667	0.000
L49	44.5 - 41.3 (49)	TP40.2078x39.6116x0.7875	2829.2667	5397.5417	0.524	0.0000	5397.5417	0.000
L50	41.3 - 41.05 (50)	TP40.2544x40.2078x0.875	2837.9333	5971.6913	0.475	0.0000	5971.6913	0.000

Section No.	Elevation ft	Size	M_{ux} kip-ft	ϕM_{nx} kip-ft	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	M_{uy} kip-ft	ϕM_{ny} kip-ft	Ratio $\frac{M_{uy}}{\phi M_{ny}}$
L51	41.05 - 34 (51)	TP41.568x40.2544x0.875	2909.3167	6089.3667	0.478	0.0000	6089.3667	0.000
L52	34 - 33 (52)	TP40.9962x39.8864x1.175	3121.6917	8820.5000	0.354	0.0000	8820.5000	0.000
L53	33 - 31.5 (53)	TP41.2736x40.9962x1.175	3175.5750	8945.5833	0.355	0.0000	8945.5833	0.000
L54	31.5 - 31.25 (54)	TP41.3199x41.2736x1.175	3184.5750	8966.5833	0.355	0.0000	8966.5833	0.000
L55	31.25 - 30.5 (55)	TP41.4586x41.3199x1.175	3211.6417	9029.5000	0.356	0.0000	9029.5000	0.000
L56	30.5 - 30.25 (56)	TP41.5048x41.4586x1.125	3220.6833	8697.6667	0.370	0.0000	8697.6667	0.000
L57	30.25 - 25.75 (57)	TP42.3372x41.5048x1.1	3384.6167	8879.5833	0.381	0.0000	8879.5833	0.000
L58	25.75 - 25.5 (58)	TP42.3834x42.3372x1.075	3393.8000	8713.3333	0.389	0.0000	8713.3333	0.000
L59	25.5 - 24.7 (59)	TP42.5314x42.3834x1.075	3423.2167	8776.6667	0.390	0.0000	8776.6667	0.000
L60	24.7 - 24.45 (60)	TP42.5776x42.5314x0.95	3432.4250	7844.1167	0.438	0.0000	7844.1167	0.000
L61	24.45 - 24 (61)	TP42.6608x42.5776x0.95	3449.0083	7875.8667	0.438	0.0000	7875.8667	0.000
L62	24 - 23.75 (62)	TP42.7071x42.6608x1.2	3458.2417	9792.7500	0.353	0.0000	9792.7500	0.000
L63	23.75 - 18.75 (63)	TP43.6319x42.7071x1.175	3644.2500	10044.6667	0.363	0.0000	10044.6667	0.000
L64	18.75 - 14.1 (64)	TP44.492x43.6319x1.15	3819.6667	10256.5000	0.372	0.0000	10256.5000	0.000
L65	14.1 - 13.8 (65)	TP44.5475x44.492x1.175	3831.0667	10488.5000	0.365	0.0000	10488.5000	0.000
L66	13.8 - 13.65 (66)	TP44.5752x44.5475x1.175	3836.7667	10502.1667	0.365	0.0000	10502.1667	0.000
L67	13.65 - 10.5 (67)	TP45.1579x44.5752x1.175	3957.0250	10789.7500	0.367	0.0000	10789.7500	0.000
L68	10.5 - 10.25 (68)	TP45.2041x45.1579x1.175	3966.6083	10812.7500	0.367	0.0000	10812.7500	0.000
L69	10.25 - 5.25 (69)	TP46.1289x45.2041x1.15	4159.7167	11056.2500	0.376	0.0000	11056.2500	0.000
L70	5.25 - 3 (70)	TP46.5451x46.1289x1.125	4247.4500	11037.7500	0.385	0.0000	11037.7500	0.000
L71	3 - 2.9 (71)	TP46.5636x46.5451x1.0875	4251.3583	10705.0833	0.397	0.0000	10705.0833	0.000
L72	2.9 - 2.75 (72)	TP46.5913x46.5636x1.025	4257.2250	10144.0000	0.420	0.0000	10144.0000	0.000
L73	2.75 - 2.65 (73)	TP46.6098x46.5913x1.025	4261.1417	10152.3333	0.420	0.0000	10152.3333	0.000
L74	2.65 - 2.5 (74)	TP46.6376x46.6098x1.025	4267.0167	10164.8333	0.420	0.0000	10164.8333	0.000
L75	2.5 - 2.25 (75)	TP46.6838x46.6376x1	4276.8083	9953.5833	0.430	0.0000	9953.5833	0.000
L76	2.25 - 1.9 (76)	TP46.7486x46.6838x1	4290.5250	9982.0833	0.430	0.0000	9982.0833	0.000
L77	1.9 - 1.65 (77)	TP46.7948x46.7486x0.95	4300.3333	9533.5000	0.451	0.0000	9533.5000	0.000
L78	1.65 - 0 (78)	TP47.1x46.7948x0.95	4365.2083	9662.1667	0.452	0.0000	9662.1667	0.000

Pole Shear Design Data

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L1	160 - 155 (1)	TP16x16x0.375	5.0482	289.9220	0.017	0.7384	368.8675	0.002
L2	155 - 150 (2)	TP16x16x0.375	5.3098	289.9220	0.018	0.7383	368.8675	0.002
L3	150 - 146 (3)	TP16x16x0.375	7.2211	289.9220	0.025	0.7383	368.8675	0.002
L4	146 - 141 (4)	TP22.924x22x0.25	12.2271	619.9850	0.020	0.6843	1162.1750	0.001
L5	141 - 136 (5)	TP23.848x22.924x0.25	13.6829	637.0600	0.021	0.2670	1243.2000	0.000
L6	136 - 131 (6)	TP24.7721x23.848x0.25	21.0608	653.4950	0.032	1.6184	1325.5500	0.001
L7	131 - 126 (7)	TP25.6961x24.7721x0.25	23.1951	669.2870	0.035	0.1078	1409.0833	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L8	126 - 121 (8)	TP26.6201x25.6961x0.25	23.7595	684.4380	0.035	0.1077	1493.6417	0.000
L9	121 - 120.1 (9)	TP26.7864x26.6201x0.25	23.8599	687.0980	0.035	0.1077	1508.9583	0.000
L10	120.1 - 119.85 (10)	TP26.8326x26.7864x0.4875	23.8863	1406.9100	0.017	0.1076	3049.3417	0.000
L11	119.85 - 117.5 (11)	TP27.2669x26.8326x0.4875	24.2874	1430.1000	0.017	0.2495	3151.3167	0.000
L12	117.5 - 117.25 (12)	TP27.3131x27.2669x0.5	24.3163	1468.6100	0.017	0.2495	3239.3250	0.000
L13	117.25 - 115.5 (13)	TP27.6365x27.3131x0.5	24.5468	1486.3300	0.017	0.2495	3318.4250	0.000
L14	115.5 - 115.25 (14)	TP27.6827x27.6365x0.6625	24.5741	1960.9400	0.013	0.2495	4342.0667	0.000
L15	115.25 - 110.25 (15)	TP28.6068x27.6827x0.65	25.2418	1990.6300	0.013	0.2494	4564.3333	0.000
L16	110.25 - 103.75 (16)	TP29.808x28.6068x0.6375	25.6108	1988.7100	0.013	0.2494	4647.4750	0.000
L17	103.75 - 102.5 (17)	TP29.0743x28.0824x0.7125	26.3609	2213.6500	0.012	0.2493	5142.9833	0.000
L18	102.5 - 100.5 (18)	TP29.4711x29.0743x0.7	26.6836	2206.2000	0.012	0.2493	5202.2917	0.000
L19	100.5 - 100.25 (19)	TP29.5206x29.4711x0.6375	26.7126	2017.0400	0.013	0.1298	4781.8000	0.000
L20	100.25 - 98.5 (20)	TP29.8678x29.5206x0.6375	26.9499	2041.2800	0.013	0.1299	4898.2750	0.000
L21	98.5 - 98.25 (21)	TP29.9174x29.8678x0.6625	26.9724	2123.1200	0.013	0.1298	5096.1583	0.000
L22	98.25 - 93.25 (22)	TP30.9093x29.9174x0.65	27.6313	2154.5800	0.013	0.1298	5353.2667	0.000
L23	93.25 - 90.5 (23)	TP31.4548x30.9093x0.65	27.9957	2193.4200	0.013	0.1298	5549.4000	0.000
L24	90.5 - 90.25 (24)	TP31.5044x31.4548x0.6875	28.0203	2320.8700	0.012	0.1297	5869.5580	0.000
L25	90.25 - 85.25 (25)	TP32.4962x31.5044x0.675	28.6950	2352.9400	0.012	0.1297	6148.9833	0.000
L26	85.25 - 83.5 (26)	TP32.8434x32.4962x0.6625	28.9369	2335.4700	0.012	0.1297	6174.8167	0.000
L27	83.5 - 83.25 (27)	TP32.893x32.8434x0.9125	28.9584	3196.7500	0.009	0.1297	8356.1667	0.000
L28	83.25 - 80.75 (28)	TP33.3889x32.893x0.9	29.3189	3203.0800	0.009	0.1297	8510.4167	0.000
L29	80.75 - 80.5 (29)	TP33.4385x33.3889x1.0625	29.3488	3768.2700	0.008	0.1296	9944.3333	0.000
L30	80.5 - 80.25 (30)	TP33.4881x33.4385x0.9875	29.3850	3515.7600	0.008	0.1296	9328.3333	0.000
L31	80.25 - 77.5 (31)	TP34.0336x33.4881x0.9625	29.7884	3486.9000	0.009	0.1296	9422.0000	0.000
L32	77.5 - 77.25 (32)	TP34.0832x34.0336x0.6875	29.8151	2515.0900	0.012	0.1296	6900.7500	0.000
L33	77.25 - 68.5 (33)	TP35.819x34.0832x0.6875	30.3932	2578.5900	0.012	0.1296	7255.9667	0.000
L34	68.5 - 68 (34)	TP35.2329x34.3013x0.75	31.1830	2833.0600	0.011	0.1296	8020.1580	0.000
L35	68 - 64.25 (35)	TP35.9317x35.2329x0.7375	31.6843	2843.3000	0.011	0.1296	8219.4167	0.000
L36	64.25 - 64 (36)	TP35.9782x35.9317x0.875	31.7049	3364.6900	0.009	0.1295	9676.5000	0.000
L37	64 - 60.5 (37)	TP36.6304x35.9782x0.8625	32.1855	3379.4200	0.010	0.1295	9908.1667	0.000
L38	60.5 - 60.25 (38)	TP36.677x36.6304x0.925	32.2088	3622.7000	0.009	0.1295	10604.5833	0.000
L39	60.25 - 60.1 (39)	TP36.7049x36.677x0.925	32.2296	3625.5300	0.009	0.1295	10621.2500	0.000
L40	60.1 - 59.85 (40)	TP36.7515x36.7049x0.975	32.2636	3821.1400	0.008	0.1295	11183.0833	0.000
L41	59.85 - 59.1 (41)	TP36.8912x36.7515x0.975	32.3715	3836.0600	0.008	0.1295	11271.4160	0.000
L42	59.1 - 58.85 (42)	TP36.9378x36.8912x1.05	32.4015	4127.8800	0.008	0.1295	12102.6667	0.000
L43	58.85 - 55.4	TP37.5806x36.9378x1.02	32.8889	4104.5800	0.008	0.1295	12268.0000	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
	(43)	5						
L44	55.4 - 55.15 (44)	TP37.6272x37.5806x1.025	32.9140	4109.8100	0.008	0.1295	12299.5827	0.000
L45	55.15 - 54.75 (45)	TP37.7018x37.6272x1.025	32.9704	4118.1800	0.008	0.1295	12350.1667	0.000
L46	54.75 - 54.5 (46)	TP37.7483x37.7018x0.825	33.0024	3336.9100	0.010	0.1295	10111.1667	0.000
L47	54.5 - 49.5 (47)	TP38.68x37.7483x0.8125	33.6590	3370.3900	0.010	0.1295	10479.7500	0.000
L48	49.5 - 44.5 (48)	TP39.6116x38.68x0.8	34.2912	3401.2700	0.010	0.1294	10845.4167	0.000
L49	44.5 - 41.3 (49)	TP40.2078x39.6116x0.7875	34.6880	3400.6400	0.010	0.1294	11018.0833	0.000
L50	41.3 - 41.05 (50)	TP40.2544x40.2078x0.875	34.7060	3774.5700	0.009	0.1294	12199.0827	0.000
L51	41.05 - 34 (51)	TP41.568x40.2544x0.875	34.9707	3811.1800	0.009	0.1294	12438.5827	0.000
L52	34 - 33 (52)	TP40.9962x39.8864x1.175	35.8498	5552.7000	0.006	0.1294	18061.6667	0.000
L53	33 - 31.5 (53)	TP41.2736x40.9962x1.175	36.0428	5591.3900	0.006	0.1294	18316.5827	0.000
L54	31.5 - 31.25 (54)	TP41.3199x41.2736x1.175	36.0566	5597.8300	0.006	0.1294	18359.2493	0.000
L55	31.25 - 30.5 (55)	TP41.4586x41.3199x1.175	36.1556	5617.1800	0.006	0.1294	18487.5827	0.000
L56	30.5 - 30.25 (56)	TP41.5048x41.4586x1.125	36.1792	5391.0000	0.007	0.1294	17800.5827	0.000
L57	30.25 - 25.75 (57)	TP42.3372x41.5048x1.1	36.7242	5383.1200	0.007	0.1294	18165.9160	0.000
L58	25.75 - 25.5 (58)	TP42.3834x42.3372x1.075	36.7396	5269.8600	0.007	0.1294	17822.0000	0.000
L59	25.5 - 24.7 (59)	TP42.5314x42.3834x1.075	36.8398	5288.7400	0.007	0.1294	17951.0000	0.000
L60	24.7 - 24.45 (60)	TP42.5776x42.5314x0.95	36.8590	4693.0700	0.008	0.1294	16027.2493	0.000
L61	24.45 - 24 (61)	TP42.6608x42.5776x0.95	36.9114	4702.4600	0.008	0.1294	16091.9160	0.000
L62	24 - 23.75 (62)	TP42.7071x42.6608x1.2	36.9360	5910.9300	0.006	0.1294	20048.5827	0.000
L63	23.75 - 18.75 (63)	TP43.6319x42.7071x1.175	37.5084	5920.2300	0.006	0.1294	20556.0827	0.000
L64	18.75 - 14.1 (64)	TP44.492x43.6319x1.15	37.9983	5915.0600	0.006	0.1294	20981.8333	0.000
L65	14.1 - 13.8 (65)	TP44.5475x44.492x1.175	38.0152	6047.9000	0.006	0.1294	21460.3333	0.000
L66	13.8 - 13.65 (66)	TP44.5752x44.5475x1.175	38.0283	6051.7700	0.006	0.1294	21488.0827	0.000
L67	13.65 - 10.5 (67)	TP45.1579x44.5752x1.175	38.3677	6133.0100	0.006	0.1294	22074.0000	0.000
L68	10.5 - 10.25 (68)	TP45.2041x45.1579x1.175	38.3805	6139.4600	0.006	0.1294	22120.8333	0.000
L69	10.25 - 5.25 (69)	TP46.1289x45.2041x1.15	38.9064	6138.4600	0.006	0.1294	22610.7493	0.000
L70	5.25 - 3 (70)	TP46.5451x46.1289x1.125	39.1388	6063.9100	0.006	0.1294	22566.9173	0.000
L71	3 - 2.9 (71)	TP46.5636x46.5451x1.0875	39.1309	5869.0100	0.007	0.1294	21880.6667	0.000
L72	2.9 - 2.75 (72)	TP46.5913x46.5636x1.025	39.1468	5542.6900	0.007	0.1294	20724.1667	0.000
L73	2.75 - 2.65 (73)	TP46.6098x46.5913x1.025	39.1557	5544.9400	0.007	0.1294	20741.1667	0.000
L74	2.65 - 2.5 (74)	TP46.6376x46.6098x1.025	39.1715	5548.3100	0.007	0.1294	20766.5827	0.000
L75	2.5 - 2.25 (75)	TP46.6838x46.6376x1	39.1981	5421.4400	0.007	0.1294	20331.0827	0.000
L76	2.25 - 1.9 (76)	TP46.7486x46.6838x1	39.2344	5429.1200	0.007	0.1294	20389.1667	0.000
L77	1.9 - 1.65 (77)	TP46.7948x46.7486x0.95	39.2568	5168.5200	0.008	0.1294	19465.6667	0.000
L78	1.65 - 0 (78)	TP47.1x46.7948x0.95	39.4454	5202.9300	0.008	0.1294	19727.5000	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	160 - 155 (1)	0.003	0.039	0.000	0.017	0.002	0.042	1.000	4.8.2
L2	155 - 150 (2)	0.004	0.147	0.000	0.018	0.002	0.151	1.000	4.8.2
L3	150 - 146 (3)	0.006	0.251	0.000	0.025	0.002	0.258	1.000	4.8.2
L4	146 - 141 (4)	0.006	0.214	0.000	0.020	0.001	0.221	1.000	4.8.2
L5	141 - 136 (5)	0.006	0.307	0.000	0.021	0.000	0.314	1.000	4.8.2
L6	136 - 131 (6)	0.009	0.413	0.000	0.032	0.001	0.424	1.000	4.8.2
L7	131 - 126 (7)	0.010	0.547	0.000	0.035	0.000	0.558	1.000	4.8.2
L8	126 - 121 (8)	0.010	0.676	0.000	0.035	0.000	0.687	1.000	4.8.2
L9	121 - 120.1 (9)	0.010	0.698	0.000	0.035	0.000	0.709	1.000	4.8.2
L10	120.1 - 119.85 (10)	0.005	0.350	0.000	0.017	0.000	0.356	1.000	4.8.2
L11	119.85 - 117.5 (11)	0.005	0.376	0.000	0.017	0.000	0.381	1.000	4.8.2
L12	117.5 - 117.25 (12)	0.005	0.369	0.000	0.017	0.000	0.374	1.000	4.8.2
L13	117.25 - 115.5 (13)	0.005	0.387	0.000	0.017	0.000	0.392	1.000	4.8.2
L14	115.5 - 115.25 (14)	0.004	0.299	0.000	0.013	0.000	0.303	1.000	4.8.2
L15	115.25 - 110.25 (15)	0.004	0.340	0.000	0.013	0.000	0.344	1.000	4.8.2
L16	110.25 - 103.75 (16)	0.004	0.365	0.000	0.013	0.000	0.369	1.000	4.8.2
L17	103.75 - 102.5 (17)	0.004	0.381	0.000	0.012	0.000	0.386	1.000	4.8.2
L18	102.5 - 100.5 (18)	0.004	0.398	0.000	0.012	0.000	0.402	1.000	4.8.2
L19	100.5 - 100.25 (19)	0.005	0.435	0.000	0.013	0.000	0.440	1.000	4.8.2
L20	100.25 - 98.5 (20)	0.005	0.444	0.000	0.013	0.000	0.450	1.000	4.8.2
L21	98.5 - 98.25 (21)	0.005	0.430	0.000	0.013	0.000	0.435	1.000	4.8.2
L22	98.25 - 93.25 (22)	0.005	0.461	0.000	0.013	0.000	0.467	1.000	4.8.2
L23	93.25 - 90.5 (23)	0.005	0.473	0.000	0.013	0.000	0.478	1.000	4.8.2
L24	90.5 - 90.25 (24)	0.005	0.450	0.000	0.012	0.000	0.455	1.000	4.8.2
L25	90.25 - 85.25 (25)	0.005	0.476	0.000	0.012	0.000	0.482	1.000	4.8.2
L26	85.25 - 83.5 (26)	0.005	0.491	0.000	0.012	0.000	0.496	1.000	4.8.2
L27	83.5 - 83.25 (27)	0.004	0.365	0.000	0.009	0.000	0.369	1.000	4.8.2
L28	83.25 - 80.75 (28)	0.004	0.376	0.000	0.009	0.000	0.380	1.000	4.8.2
L29	80.75 - 80.5 (29)	0.004	0.324	0.000	0.008	0.000	0.328	1.000	4.8.2
L30	80.5 - 80.25 (30)	0.004	0.347	0.000	0.008	0.000	0.351	1.000	4.8.2
L31	80.25 - 77.5 (31)	0.004	0.361	0.000	0.009	0.000	0.365	1.000	4.8.2
L32	77.5 - 77.25 (32)	0.006	0.494	0.000	0.012	0.000	0.499	1.000	4.8.2
L33	77.25 - 68.5 (33)	0.006	0.505	0.000	0.012	0.000	0.511	1.000	4.8.2
L34	68.5 - 68 (34)	0.006	0.497	0.000	0.011	0.000	0.503	1.000	4.8.2
L35	68 - 64.25 (35)	0.006	0.514	0.000	0.011	0.000	0.520	1.000	4.8.2
L36	64.25 - 64	0.005	0.439	0.000	0.009	0.000	0.444	1.000	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
	(36)								
L37	64 - 60.5 (37)	0.005	0.451	0.000	0.010	0.000	0.457	1.000	4.8.2
L38	60.5 - 60.25 (38)	0.005	0.423	0.000	0.009	0.000	0.429	1.000	4.8.2
L39	60.25 - 60.1 (39)	0.005	0.424	0.000	0.009	0.000	0.429	1.000	4.8.2
L40	60.1 - 59.85 (40)	0.005	0.404	0.000	0.008	0.000	0.409	1.000	4.8.2
L41	59.85 - 59.1 (41)	0.005	0.405	0.000	0.008	0.000	0.410	1.000	4.8.2
L42	59.1 - 58.85 (42)	0.005	0.379	0.000	0.008	0.000	0.384	1.000	4.8.2
L43	58.85 - 55.4 (43)	0.005	0.393	0.000	0.008	0.000	0.397	1.000	4.8.2
L44	55.4 - 55.15 (44)	0.005	0.393	0.000	0.008	0.000	0.398	1.000	4.8.2
L45	55.15 - 54.75 (45)	0.005	0.393	0.000	0.008	0.000	0.398	1.000	4.8.2
L46	54.75 - 54.5 (46)	0.006	0.481	0.000	0.010	0.000	0.487	1.000	4.8.2
L47	54.5 - 49.5 (47)	0.006	0.497	0.000	0.010	0.000	0.503	1.000	4.8.2
L48	49.5 - 44.5 (48)	0.007	0.512	0.000	0.010	0.000	0.519	1.000	4.8.2
L49	44.5 - 41.3 (49)	0.007	0.524	0.000	0.010	0.000	0.531	1.000	4.8.2
L50	41.3 - 41.05 (50)	0.006	0.475	0.000	0.009	0.000	0.481	1.000	4.8.2
L51	41.05 - 34 (51)	0.006	0.478	0.000	0.009	0.000	0.484	1.000	4.8.2
L52	34 - 33 (52)	0.005	0.354	0.000	0.006	0.000	0.359	1.000	4.8.2
L53	33 - 31.5 (53)	0.005	0.355	0.000	0.006	0.000	0.360	1.000	4.8.2
L54	31.5 - 31.25 (54)	0.005	0.355	0.000	0.006	0.000	0.360	1.000	4.8.2
L55	31.25 - 30.5 (55)	0.005	0.356	0.000	0.006	0.000	0.361	1.000	4.8.2
L56	30.5 - 30.25 (56)	0.005	0.370	0.000	0.007	0.000	0.375	1.000	4.8.2
L57	30.25 - 25.75 (57)	0.005	0.381	0.000	0.007	0.000	0.387	1.000	4.8.2
L58	25.75 - 25.5 (58)	0.006	0.389	0.000	0.007	0.000	0.395	1.000	4.8.2
L59	25.5 - 24.7 (59)	0.006	0.390	0.000	0.007	0.000	0.396	1.000	4.8.2
L60	24.7 - 24.45 (60)	0.006	0.438	0.000	0.008	0.000	0.444	1.000	4.8.2
L61	24.45 - 24 (61)	0.006	0.438	0.000	0.008	0.000	0.444	1.000	4.8.2
L62	24 - 23.75 (62)	0.005	0.353	0.000	0.006	0.000	0.358	1.000	4.8.2
L63	23.75 - 18.75 (63)	0.005	0.363	0.000	0.006	0.000	0.368	1.000	4.8.2
L64	18.75 - 14.1 (64)	0.006	0.372	0.000	0.006	0.000	0.378	1.000	4.8.2
L65	14.1 - 13.8 (65)	0.005	0.365	0.000	0.006	0.000	0.371	1.000	4.8.2
L66	13.8 - 13.65 (66)	0.005	0.365	0.000	0.006	0.000	0.371	1.000	4.8.2
L67	13.65 - 10.5 (67)	0.006	0.367	0.000	0.006	0.000	0.372	1.000	4.8.2
L68	10.5 - 10.25 (68)	0.006	0.367	0.000	0.006	0.000	0.372	1.000	4.8.2
L69	10.25 - 5.25 (69)	0.006	0.376	0.000	0.006	0.000	0.382	1.000	4.8.2
L70	5.25 - 3 (70)	0.006	0.385	0.000	0.006	0.000	0.391	1.000	4.8.2
L71	3 - 2.9 (71)	0.006	0.397	0.000	0.007	0.000	0.403	1.000	4.8.2
L72	2.9 - 2.75 (72)	0.007	0.420	0.000	0.007	0.000	0.426	1.000	4.8.2
L73	2.75 - 2.65 (73)	0.007	0.420	0.000	0.007	0.000	0.426	1.000	4.8.2

Section No.	Elevation ft	Ratio P_u / ϕP_n	Ratio M_{ux} / ϕM_{nx}	Ratio M_{uy} / ϕM_{ny}	Ratio V_u / ϕV_n	Ratio T_u / ϕT_n	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L74	2.65 - 2.5 (74)	0.007	0.420	0.000	0.007	0.000	0.426	1.000	4.8.2
L75	2.5 - 2.25 (75)	0.007	0.430	0.000	0.007	0.000	0.436	1.000	4.8.2
L76	2.25 - 1.9 (76)	0.007	0.430	0.000	0.007	0.000	0.437	1.000	4.8.2
L77	1.9 - 1.65 (77)	0.007	0.451	0.000	0.008	0.000	0.458	1.000	4.8.2
L78	1.65 - 0 (78)	0.007	0.452	0.000	0.008	0.000	0.459	1.000	4.8.2

Section Capacity Table

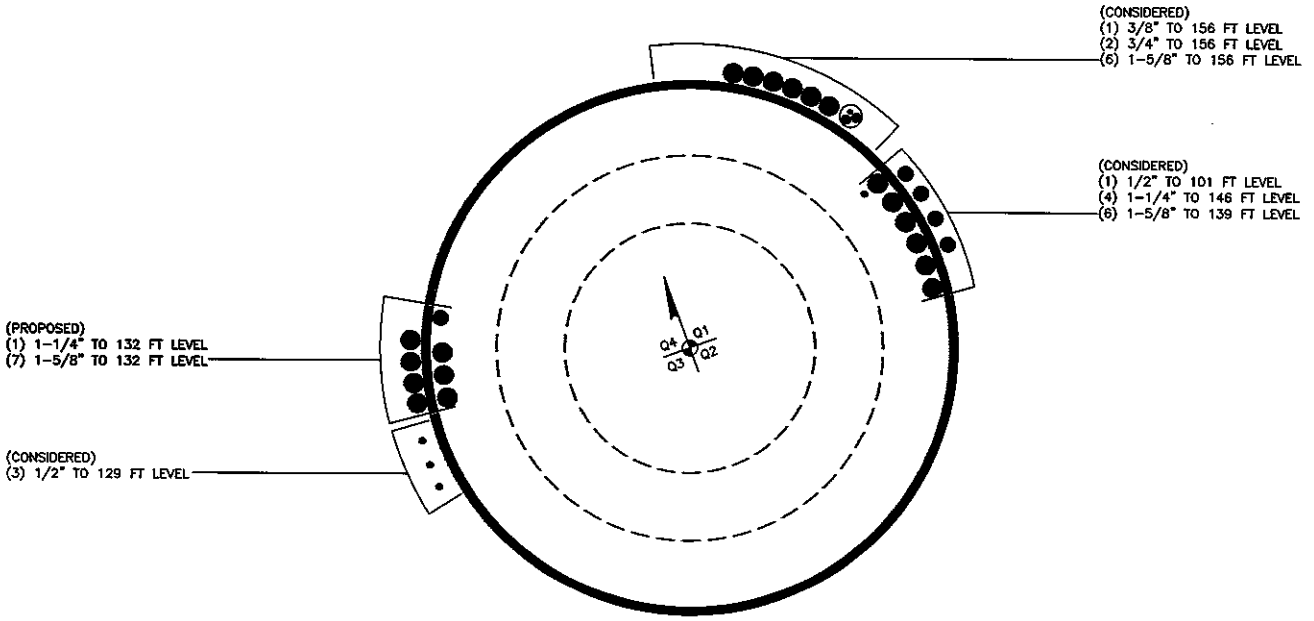
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	160 - 155	Pole	TP16x16x0.375	1	-1.6437	579.8450	4.2	Pass
L2	155 - 150	Pole	TP16x16x0.375	2	-2.0543	579.8450	15.1	Pass
L3	150 - 146	Pole	TP16x16x0.375	3	-3.3713	579.8450	25.8	Pass
L4	146 - 141	Pole	TP22.924x22x0.25	4	-7.2566	1239.9700	22.1	Pass
L5	141 - 136	Pole	TP23.848x22.924x0.25	5	-7.9230	1274.1200	31.4	Pass
L6	136 - 131	Pole	TP24.7721x23.848x0.25	6	-11.9092	1306.9900	42.4	Pass
L7	131 - 126	Pole	TP25.6961x24.7721x0.25	7	-13.0256	1338.5700	55.8	Pass
L8	126 - 121	Pole	TP26.6201x25.6961x0.25	8	-13.7174	1368.8800	68.7	Pass
L9	121 - 120.1	Pole	TP26.7864x26.6201x0.25	9	-13.8480	1374.2000	70.9	Pass
L10	120.1 - 119.85	Pole	TP26.8326x26.7864x0.4875	10	-13.9109	2813.8100	35.6	Pass
L11	119.85 - 117.5	Pole	TP27.2669x26.8326x0.4875	11	-14.3717	2860.2000	38.1	Pass
L12	117.5 - 117.25	Pole	TP27.3131x27.2669x0.5	12	-14.4362	2937.2300	37.4	Pass
L13	117.25 - 115.5	Pole	TP27.6365x27.3131x0.5	13	-14.8153	2972.6600	39.2	Pass
L14	115.5 - 115.25	Pole	TP27.6827x27.6365x0.6625	14	-14.8942	3921.8900	30.3	Pass
L15	115.25 - 110.25	Pole	TP28.6068x27.6827x0.65	15	-16.1857	3981.2600	34.4	Pass
L16	110.25 - 103.75	Pole	TP29.808x28.6068x0.6375	16	-16.9097	3977.4200	36.9	Pass
L17	103.75 - 102.5	Pole	TP29.0743x28.0824x0.7125	17	-19.1579	4427.3000	38.6	Pass
L18	102.5 - 100.5	Pole	TP29.4711x29.0743x0.7	18	-19.8201	4412.3900	40.2	Pass
L19	100.5 - 100.25	Pole	TP29.5206x29.4711x0.6375	19	-19.8989	4034.0800	44.0	Pass
L20	100.25 - 98.5	Pole	TP29.8678x29.5206x0.6375	20	-20.3852	4082.5700	45.0	Pass
L21	98.5 - 98.25	Pole	TP29.9174x29.8678x0.6625	21	-20.4766	4246.2400	43.5	Pass
L22	98.25 - 93.25	Pole	TP30.9093x29.9174x0.65	22	-21.9772	4309.1500	46.7	Pass
L23	93.25 - 90.5	Pole	TP31.4548x30.9093x0.65	23	-22.8171	4386.8400	47.8	Pass
L24	90.5 - 90.25	Pole	TP31.5044x31.4548x0.6875	24	-22.9167	4641.7500	45.5	Pass
L25	90.25 - 85.25	Pole	TP32.4962x31.5044x0.675	25	-24.6427	4705.8800	48.2	Pass
L26	85.25 - 83.5	Pole	TP32.8434x32.4962x0.6625	26	-25.2503	4670.9400	49.6	Pass
L27	83.5 - 83.25	Pole	TP32.893x32.8434x0.9125	27	-25.3739	6393.4900	36.9	Pass
L28	83.25 - 80.75	Pole	TP33.3889x32.893x0.9	28	-26.4193	6406.1600	38.0	Pass
L29	80.75 - 80.5	Pole	TP33.4385x33.3889x1.0625	29	-26.5451	7536.5500	32.8	Pass
L30	80.5 - 80.25	Pole	TP33.4881x33.4385x0.9875	30	-26.6595	7031.5100	35.1	Pass
L31	80.25 - 77.5	Pole	TP34.0336x33.4881x0.9625	31	-27.9094	6973.8100	36.5	Pass
L32	77.5 - 77.25	Pole	TP34.0832x34.0336x0.6875	32	-28.0169	5030.1800	49.9	Pass
L33	77.25 - 68.5	Pole	TP35.819x34.0832x0.6875	33	-29.6833	5157.1700	51.1	Pass
L34	68.5 - 68	Pole	TP35.2329x34.3013x0.75	34	-33.3314	5666.1200	50.3	Pass
L35	68 - 64.25	Pole	TP35.9317x35.2329x0.7375	35	-34.9325	5686.6000	52.0	Pass
L36	64.25 - 64	Pole	TP35.9782x35.9317x0.875	36	-35.0603	6729.3900	44.4	Pass
L37	64 - 60.5	Pole	TP36.6304x35.9782x0.8625	37	-36.6619	6758.8500	45.7	Pass
L38	60.5 - 60.25	Pole	TP36.677x36.6304x0.925	38	-36.7942	7245.3900	42.9	Pass
L39	60.25 - 60.1	Pole	TP36.7049x36.677x0.925	39	-36.8686	7251.0600	42.9	Pass
L40	60.1 - 59.85	Pole	TP36.7515x36.7049x0.975	40	-36.9941	7642.2700	40.9	Pass
L41	59.85 - 59.1	Pole	TP36.8912x36.7515x0.975	41	-37.3685	7672.1200	41.0	Pass
L42	59.1 - 58.85	Pole	TP36.9378x36.8912x1.05	42	-37.5082	8255.7500	38.4	Pass
L43	58.85 - 55.4	Pole	TP37.5806x36.9378x1.025	43	-39.3588	8209.1600	39.7	Pass
L44	55.4 - 55.15	Pole	TP37.6272x37.5806x1.025	44	-39.5031	8219.6200	39.8	Pass
L45	55.15 - 54.75	Pole	TP37.7018x37.6272x1.025	45	-39.7191	8236.3500	39.8	Pass
L46	54.75 - 54.5	Pole	TP37.7483x37.7018x0.825	46	-39.8386	6673.8300	48.7	Pass
L47	54.5 - 49.5	Pole	TP38.68x37.7483x0.8125	47	-42.2051	6740.7700	50.3	Pass
L48	49.5 - 44.5	Pole	TP39.6116x38.68x0.8	48	-44.6092	6802.5500	51.9	Pass
L49	44.5 - 41.3	Pole	TP40.2078x39.6116x0.7875	49	-46.1657	6801.2800	53.1	Pass
L50	41.3 - 41.05	Pole	TP40.2544x40.2078x0.875	50	-46.3088	7549.1400	48.1	Pass
L51	41.05 - 34	Pole	TP41.568x40.2544x0.875	51	-47.3895	7622.3600	48.4	Pass
L52	34 - 33	Pole	TP40.9962x39.8864x1.175	52	-53.5135	11105.400	35.9	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L53	33 - 31.5	Pole	TP41.2736x40.9962x1.175	53	-54.4551	0 11182.800 0	36.0	Pass
L54	31.5 - 31.25	Pole	TP41.3199x41.2736x1.175	54	-54.6262	11195.700 0	36.0	Pass
L55	31.25 - 30.5	Pole	TP41.4586x41.3199x1.175	55	-55.1010	11234.400 0	36.1	Pass
L56	30.5 - 30.25	Pole	TP41.5048x41.4586x1.125	56	-55.2622	10782.000 0	37.5	Pass
L57	30.25 - 25.75	Pole	TP42.3372x41.5048x1.1	57	-58.0726	10766.200 0	38.7	Pass
L58	25.75 - 25.5	Pole	TP42.3834x42.3372x1.075	58	-58.2369	10539.700 0	39.5	Pass
L59	25.5 - 24.7	Pole	TP42.5314x42.3834x1.075	59	-58.7300	10577.500 0	39.6	Pass
L60	24.7 - 24.45	Pole	TP42.5776x42.5314x0.95	60	-58.8702	9386.1500	44.4	Pass
L61	24.45 - 24	Pole	TP42.6608x42.5776x0.95	61	-59.1110	9404.9200	44.4	Pass
L62	24 - 23.75	Pole	TP42.7071x42.6608x1.2	62	-59.2703	11821.900 0	35.8	Pass
L63	23.75 - 18.75	Pole	TP43.6319x42.7071x1.175	63	-62.3906	11840.500 0	36.8	Pass
L64	18.75 - 14.1	Pole	TP44.492x43.6319x1.15	64	-65.3229	11830.100 0	37.8	Pass
L65	14.1 - 13.8	Pole	TP44.5475x44.492x1.175	65	-65.5252	12095.800 0	37.1	Pass
L66	13.8 - 13.65	Pole	TP44.5752x44.5475x1.175	66	-65.6237	12103.500 0	37.1	Pass
L67	13.65 - 10.5	Pole	TP45.1579x44.5752x1.175	67	-67.6524	12266.000 0	37.2	Pass
L68	10.5 - 10.25	Pole	TP45.2041x45.1579x1.175	68	-67.8177	12278.900 0	37.2	Pass
L69	10.25 - 5.25	Pole	TP46.1289x45.2041x1.15	69	-70.9662	12276.900 0	38.2	Pass
L70	5.25 - 3	Pole	TP46.5451x46.1289x1.125	70	-72.3982	12127.800 0	39.1	Pass
L71	3 - 2.9	Pole	TP46.5636x46.5451x1.0875	71	-72.4696	11738.000 0	40.3	Pass
L72	2.9 - 2.75	Pole	TP46.5913x46.5636x1.025	72	-72.5546	11085.400 0	42.6	Pass
L73	2.75 - 2.65	Pole	TP46.6098x46.5913x1.025	73	-72.6123	11089.900 0	42.6	Pass
L74	2.65 - 2.5	Pole	TP46.6376x46.6098x1.025	74	-72.6974	11096.600 0	42.6	Pass
L75	2.5 - 2.25	Pole	TP46.6838x46.6376x1	75	-72.8413	10842.900 0	43.6	Pass
L76	2.25 - 1.9	Pole	TP46.7486x46.6838x1	76	-73.0433	10858.200 0	43.7	Pass
L77	1.9 - 1.65	Pole	TP46.7948x46.7486x0.95	77	-73.1811	10337.000 0	45.8	Pass
L78	1.65 - 0	Pole	TP47.1x46.7948x0.95	78	-74.0695	10405.900 0	45.9	Pass
						Summary		
						Pole (L9)	70.9	Pass
						RATING =	**70.9**	**Pass**

***NOTE: Above stress ratios for reinforced sections are approximate. More exact calculations are presented in Appendix C.**

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876334 TOWER ID: C_BASELEVEL

APPENDIX C

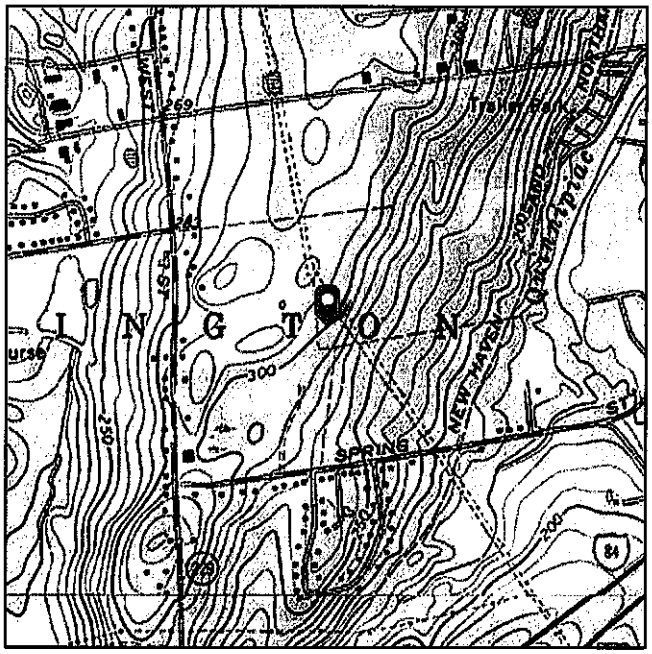
ADDITIONAL CALCULATIONS

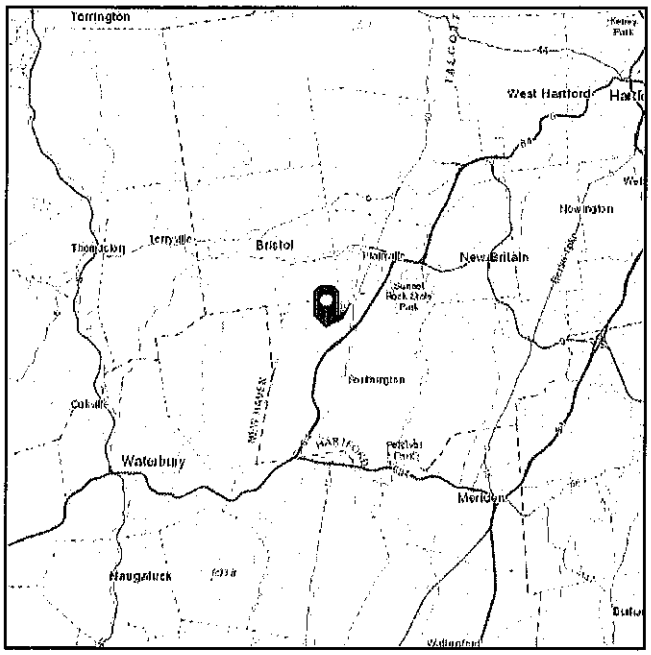
ASCE 7 Hazards Report

Address:
No Address at This Location

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

Elevation: 296.07 ft (NAVD 88)
Latitude: 41.632472
Longitude: -72.89425





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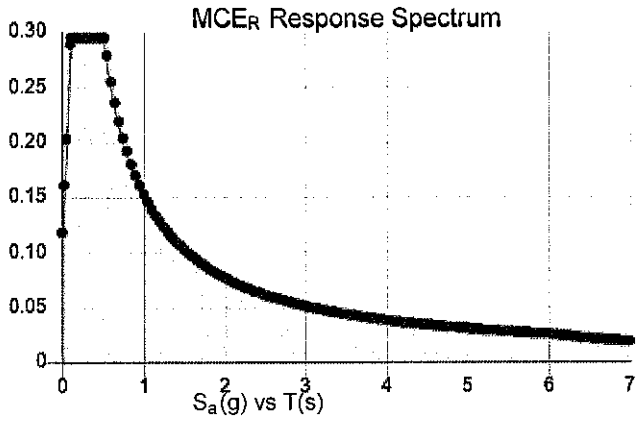
Seismic

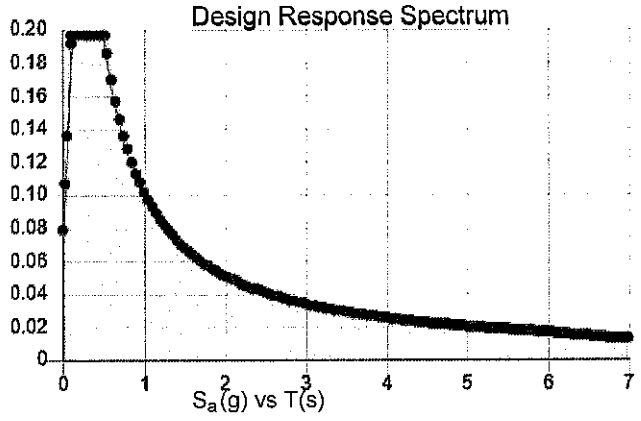
Site Soil Class: D - Stiff Soil

Results:

S_S :	0.185	S_{DS} :	0.197
S_1 :	0.064	S_{D1} :	0.102
F_a :	1.6	T_L :	6
F_v :	2.4	PGA :	0.094
S_{MS} :	0.295	PGA_M :	0.151
S_{M1} :	0.153	F_{PGA} :	1.6
		I_e :	1

Seismic Design Category B





Data Accessed: Mon Jan 14 2019

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

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Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	5 F
Gust Speed:	50 mph
Data Source:	Standard ASCE/SEI 7-10, Figs. 10-2 through 10-8
Date Accessed:	Mon Jan 14 2019

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 50-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

CCIpole

per TIA-222-G

Site BU: 876334

Work Order: 1681343

CROWN CASTLE

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	160	14	0	0	16	16	0.375	n/a	A53-B-35
2	146	42.25	3.75	12	22.00	29.808	0.25	1	A607-60
3	107.5	39	4.5	12	28.08	35.819	0.3125	1.25	A607-60
4	73	39	5	12	34.30	41.568	0.375	1.5	A607-60
5	39	39	0	12	39.89	47.1	0.375	1.5	A607-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Pole Flat Width (in)	1	2	3	4	5	6	7	8	9	10	11	12
1	100.5	117.5	plate	CCI-SFP-045100	7.31												
2	98.5	115.5	plate	CCI-SFP-045100	7.41												
3	64.25	80.75	plate	CCI-AFP-085125	8.95												
4	10.5	41.3	plate	CCI-AFP-085125	10.77												
5	3	10.5	plate	CCI-AFP-060100	12.1												
6	77.5	83.5	plate	MS-600 [1.1875"]	8.8												
7	54.75	64.25	plate	MS-600 [1.1875"]	9.63												
8	25.75	35.25	plate	MS-650 [1.1875"]	11.08												
9	2.5	30.5	plate	MS-600 [1.1875"]	11.11												
10	30.5	60.5	plate	MS-650 [1.1875"]	9.82												
11	60.5	80.5	plate	MS-600 [1.1875"]	8.96												
12	80.5	98.5	plate	MS-600 [1.1875"]	8												
13	1.9	14.1	channel	MP3-04 [1.1875"]	11.92												
14	2.9	30.5	channel	MP3-05 [1.1875"]	11.11												
15	30.5	59.1	channel	MP3-04 [1.1875"]	9.88												
16	13.9	31.5	channel	MP3-05 [1.1875"]	11.06												
17	31.5	60.1	channel	MP3-04 [1.1875"]	9.84												
18	0	24	plate	TS-5.875"x1.25"	11.43		-5.5	-5.5			-5.5	-5.5			-5.5	-5.5	
19	24.7	55.4	plate	CCI-AFP-085125	10.07												
20	55.4	90.5	plate	CCI-AFP-085125	8.43												
21	90.5	120.1	plate	CCI-AFP-060100	7.18												
22	100.5	120.1	plate	CCI-AFP-060100	7.18												
23	80.5	100.5	plate	MS-650 [1.1875"]	7.9												
24	0	2.5	plate	1.25" x 4"	12.5												
25	24	25.75	plate	TS-5.875"x1.25"	11.34		-6				-6				-6		
26																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in²)	Pole Face to Centroid (in)	Bottom Termination Length (in)	Top Termination Length (in)	L_u (in)	Net Area (in²)	Bolt Hole Size (in)	Reinforcement Material
1	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
2	4.5	1	4.5	0.5	18.000	18.000	20.000	3.250	1.1875	A572-65
3	8.5	1.25	10.625	0.625	51.000	51.000	17.000	9.063	1.1875	A572-65
4	8.5	1.25	10.625	0.625	51.000	51.000	17.000	9.063	1.1875	A572-65
5	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
6	6	1	6	0.5	24.000	24.000	16.375	4.750	1.1875	A572-65
7	6	1	6	0.5	24.000	24.000	16.375	4.750	1.1875	A572-65
8	6.5	1.25	8.125	0.625	33.000	33.000	19.250	6.563	1.1875	A572-65
9	6	1	6	0.5	24.000	24.000	16.375	4.750	1.1875	A572-65
10	6.5	1.25	8.125	0.625	33.000	33.000	19.250	6.563	1.1875	A572-65
11	6	1	6	0.5	24.000	24.000	16.375	4.750	1.1875	A572-65
12	6	1	6	0.5	24.000	24.000	16.375	4.750	1.1875	A572-65
13	4.78	1.61	4.13	0.61	17.000	17.000	18.000	3.593	1.1875	A572-65
14	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
15	4.78	1.61	4.13	0.61	17.000	17.000	18.000	3.593	1.1875	A572-65
16	5.33	2.09	5.65	0.79	29.000	29.000	18.000	5.025	1.1875	A572-65
17	4.78	1.61	4.13	0.61	17.000	17.000	18.000	3.593	1.1875	A572-65
18	1.25	5.875	7.34375	2.9375	n/a	n/a	0.000	7.344	0.0000	A572-65
19	8.5	1.25	10.625	0.625	51.000	51.000	17.000	9.063	1.1875	A572-65
20	8.5	1.25	10.625	0.625	51.000	51.000	17.000	9.063	1.1875	A572-65
21	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
22	6	1	6	0.5	30.000	30.000	16.000	4.750	1.1875	A572-65
23	6.5	1.25	8.125	0.625	33.000	33.000	19.250	6.563	1.1875	A572-65
24	1.25	4	5	2	n/a	n/a	0.000	5.000	0.0000	A572-65
25	1.25	5.875	7.34375	2.9375	n/a	n/a	0.000	7.344	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	160 - 155	5		0	16.000	16.000	0.375	A53-B-35	1.000
2	155 - 150	5		0	16.000	16.000	0.375	A53-B-35	1.000
3	150 - 146	4	0	0	16.000	16.000	0.375	A53-B-35	1.000
4	146 - 141	5		12	22.000	22.924	0.25	A607-60	1.000
5	141 - 136	5		12	22.924	23.848	0.25	A607-60	1.000
6	136 - 131	5		12	23.848	24.772	0.25	A607-60	1.000
7	131 - 126	5		12	24.772	25.696	0.25	A607-60	1.000
8	126 - 121	5		12	25.696	26.620	0.25	A607-60	1.000
9	121 - 120.1	0.9		12	26.620	26.786	0.25	A607-60	1.000
10	120.1 - 119.85	0.25		12	26.786	26.833	0.4875	A607-60	0.953
11	119.85 - 117.5	2.35		12	26.833	27.267	0.4875	A607-60	0.946
12	117.5 - 117.25	0.25		12	27.267	27.313	0.5	A607-60	1.027
13	117.25 - 115.5	1.75		12	27.313	27.637	0.5	A607-60	1.020
14	115.5 - 115.25	0.25		12	27.637	27.683	0.6625	A607-60	0.930
15	115.25 - 110.25	5		12	27.683	28.607	0.65	A607-60	0.929
16	110.25 - 107.5	6.5	3.75	12	28.607	29.808	0.6375	A607-60	0.937
17	107.5 - 102.5	5		12	29.082	29.074	0.7125	A607-60	0.930
18	102.5 - 100.5	2		12	29.074	29.471	0.7	A607-60	0.939
19	100.5 - 100.25	0.25		12	29.471	29.521	0.6375	A607-60	0.988
20	100.25 - 98.5	1.75		12	29.521	29.868	0.6375	A607-60	0.982
21	98.5 - 98.25	0.25		12	29.868	29.917	0.6625	A607-60	0.993
22	98.25 - 93.25	5		12	29.917	30.909	0.65	A607-60	0.994
23	93.25 - 90.5	2.75		12	30.909	31.455	0.65	A607-60	0.985
24	90.5 - 90.25	0.25		12	31.455	31.504	0.6875	A607-60	1.067
25	90.25 - 85.25	5		12	31.504	32.496	0.675	A607-60	1.067
26	85.25 - 83.5	1.75		12	32.496	32.843	0.6625	A607-60	1.080
27	83.5 - 83.25	0.25		12	32.843	32.893	0.9125	A607-60	0.982
28	83.25 - 80.75	2.5		12	32.893	33.389	0.9	A607-60	0.985
29	80.75 - 80.5	0.25		12	33.389	33.439	1.0625	A607-60	0.934
30	80.5 - 80.25	0.25		12	33.439	33.488	0.9875	A607-60	0.981
31	80.25 - 77.5	2.75		12	33.488	34.034	0.9625	A607-60	0.994
32	77.5 - 77.25	0.25		12	34.034	34.083	0.6875	A607-60	1.135
33	77.25 - 73	8.75	4.5	12	34.083	35.819	0.6875	A607-60	1.118
34	73 - 68	5		12	34.301	35.233	0.75	A607-60	1.105
35	68 - 64.25	3.75		12	35.233	35.932	0.7375	A607-60	1.111
36	64.25 - 64	0.25		12	35.932	35.978	0.875	A607-60	1.014
37	64 - 60.5	3.5		12	35.978	36.630	0.8625	A607-60	1.018
38	60.5 - 60.25	0.25		12	36.630	36.677	0.925	A607-60	1.010
39	60.25 - 60.1	0.15		12	36.677	36.705	0.925	A607-60	1.010
40	60.1 - 59.85	0.25		12	36.705	36.751	0.975	A607-60	0.995
41	59.85 - 59.1	0.75		12	36.751	36.891	0.975	A607-60	0.993
42	59.1 - 58.85	0.25		12	36.891	36.938	1.05	A607-60	0.991
43	58.85 - 55.4	3.45		12	36.938	37.581	1.025	A607-60	1.003
44	55.4 - 55.15	0.25		12	37.581	37.627	1.025	A607-60	1.002
45	55.15 - 54.75	0.4		12	37.627	37.702	1.025	A607-60	1.001
46	54.75 - 54.5	0.25		12	37.702	37.748	0.825	A607-60	1.052
47	54.5 - 49.5	5		12	37.748	38.680	0.8125	A607-60	1.053
48	49.5 - 44.5	5		12	38.680	39.612	0.8	A607-60	1.055
49	44.5 - 41.3	3.2		12	39.612	40.208	0.7875	A607-60	1.062
50	41.3 - 41.05	0.25		12	40.208	40.254	0.875	A607-60	1.054
51	41.05 - 39	7.05	5	12	40.254	41.568	0.875	A607-60	1.048
52	39 - 33	6		12	39.886	40.996	1.175	A607-65	0.944
53	33 - 31.5	1.5		12	40.996	41.274	1.175	A607-65	0.939
54	31.5 - 31.25	0.25		12	41.274	41.320	1.175	A607-65	0.949
55	31.25 - 30.5	0.75		12	41.320	41.459	1.175	A607-65	0.947
56	30.5 - 30.25	0.25		12	41.459	41.505	1.125	A607-65	0.964
57	30.25 - 25.75	4.5		12	41.505	42.337	1.1	A607-65	0.972
58	25.75 - 25.5	0.25		12	42.337	42.383	1.075	A607-65	0.977
59	25.5 - 24.7	0.8		12	42.383	42.531	1.075	A607-65	0.975
60	24.7 - 24.45	0.25		12	42.531	42.578	0.95	A607-65	0.932
61	24.45 - 24	0.45		12	42.578	42.661	0.95	A607-65	0.931
62	24 - 23.75	0.25		12	42.661	42.707	1.2	A607-65	0.878
63	23.75 - 18.75	5		12	42.707	43.632	1.175	A607-65	0.884
64	18.75 - 14.1	4.65		12	43.632	44.492	1.15	A607-65	0.891
65	14.1 - 13.8	0.3		12	44.492	44.547	1.175	A607-65	0.888
66	13.8 - 13.65	0.15		12	44.547	44.575	1.175	A607-65	0.888
67	13.65 - 10.5	3.15		12	44.575	45.158	1.175	A607-65	0.880
68	10.5 - 10.25	0.25		12	45.158	45.204	1.175	A607-65	0.852
69	10.25 - 5.25	5		12	45.204	46.129	1.15	A607-65	0.859
70	5.25 - 3	2.25		12	46.129	46.545	1.125	A607-65	0.872
71	3 - 2.9	0.1		12	46.545	46.564	1.0875	A607-65	0.864
72	2.9 - 2.75	0.15		12	46.564	46.591	1.025	A607-65	0.839
73	2.75 - 2.65	0.1		12	46.591	46.610	1.025	A607-65	0.839
74	2.65 - 2.5	0.15		12	46.610	46.638	1.025	A607-65	0.839
75	2.5 - 2.25	0.25		12	46.638	46.684	1	A607-65	0.872
76	2.25 - 1.9	0.35		12	46.684	46.749	1	A607-65	0.872
77	1.9 - 1.65	0.25		12	46.749	46.795	0.95	A607-65	0.857
78	1.65 - 0	1.65		12	46.795	47.100	0.95	A607-65	0.854

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	160 - 155	1.64	9.42	5.05
2	155 - 150	2.05	35.31	5.31
3	150 - 146	3.37	60.38	7.22
4	146 - 141	7.26	122.44	12.23
5	141 - 136	7.92	187.63	13.68
6	136 - 131	11.91	269.31	21.06
7	131 - 126	13.03	378.78	23.20
8	126 - 121	13.72	496.16	23.76
9	121 - 120.1	13.85	517.58	23.86
10	120.1 - 119.85	13.91	523.55	23.89
11	119.85 - 117.5	14.37	580.23	24.29
12	117.5 - 117.25	14.44	586.31	24.32
13	117.25 - 115.5	14.82	629.04	24.55
14	115.5 - 115.25	14.89	635.17	24.57
15	115.25 - 110.25	16.19	759.65	25.24
16	110.25 - 107.5	16.91	829.53	25.61
17	107.5 - 102.5	19.16	959.44	26.36
18	102.5 - 100.5	19.82	1012.25	26.68
19	100.5 - 100.25	19.90	1018.92	26.71
20	100.25 - 98.5	20.39	1065.84	26.95
21	98.5 - 98.25	20.48	1072.58	26.97
22	98.25 - 93.25	21.98	1209.01	27.63
23	93.25 - 90.5	22.82	1285.45	28.00
24	90.5 - 90.25	22.92	1292.45	28.02
25	90.25 - 85.25	24.64	1434.15	28.69
26	85.25 - 83.5	25.25	1484.54	28.94
27	83.5 - 83.25	25.37	1491.78	28.96
28	83.25 - 80.75	26.42	1564.58	29.32
29	80.75 - 80.5	26.55	1571.91	29.35
30	80.5 - 80.25	26.66	1579.25	29.38
31	80.25 - 77.5	27.91	1660.57	29.79
32	77.5 - 77.25	28.02	1668.02	29.82
33	77.25 - 73	29.68	1795.89	30.39
34	73 - 68	33.33	1949.77	31.18
35	68 - 64.25	34.93	2067.57	31.68
36	64.25 - 64	35.06	2075.48	31.70
37	64 - 60.5	36.66	2187.23	32.19
38	60.5 - 60.25	36.79	2195.27	32.21
39	60.25 - 60.1	36.87	2200.10	32.23
40	60.1 - 59.85	36.99	2208.16	32.26
41	59.85 - 59.1	37.37	2232.39	32.37
42	59.1 - 58.85	37.51	2240.48	32.40
43	58.85 - 55.4	39.36	2353.05	32.89
44	55.4 - 55.15	39.50	2361.27	32.91
45	55.15 - 54.75	39.72	2374.44	32.97
46	54.75 - 54.5	39.84	2382.68	33.00
47	54.5 - 49.5	42.21	2549.24	33.66
48	49.5 - 44.5	44.61	2718.99	34.29
49	44.5 - 41.3	46.17	2829.27	34.69
50	41.3 - 41.05	46.31	2837.94	34.71
51	41.05 - 39	47.39	2909.31	34.97
52	39 - 33	53.51	3121.69	35.85
53	33 - 31.5	54.46	3175.57	36.04
54	31.5 - 31.25	54.63	3184.58	36.06
55	31.25 - 30.5	55.10	3211.65	36.16
56	30.5 - 30.25	55.26	3220.68	36.18
57	30.25 - 25.75	58.07	3384.62	36.72
58	25.75 - 25.5	58.24	3393.80	36.74
59	25.5 - 24.7	58.73	3423.21	36.84
60	24.7 - 24.45	58.87	3432.42	36.86
61	24.45 - 24	59.11	3449.01	36.91
62	24 - 23.75	59.27	3458.24	36.94
63	23.75 - 18.75	62.39	3644.25	37.51
64	18.75 - 14.1	65.32	3819.67	38.00
65	14.1 - 13.8	65.53	3831.06	38.02
66	13.8 - 13.65	65.62	3836.76	38.03
67	13.65 - 10.5	67.65	3957.02	38.37
68	10.5 - 10.25	67.82	3966.61	38.38
69	10.25 - 5.25	70.97	4159.72	38.91
70	5.25 - 3	72.40	4247.45	39.14
71	3 - 2.9	72.47	4251.36	39.13
72	2.9 - 2.75	72.55	4257.23	39.15
73	2.75 - 2.65	72.61	4261.14	39.16
74	2.65 - 2.5	72.70	4267.02	39.17
75	2.5 - 2.25	72.84	4276.81	39.20
76	2.25 - 1.9	73.04	4290.53	39.23
77	1.9 - 1.65	73.18	4300.33	39.26
78	1.65 - 0	74.07	4365.21	39.45

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
160 - 155	Pole	TP16x16x0.375	Pole	4.2%	Pass
155 - 150	Pole	TP16x16x0.375	Pole	15.1%	Pass
150 - 146	Pole	TP16x16x0.375	Pole	25.8%	Pass
146 - 141	Pole	TP22.924x22x0.25	Pole	22.0%	Pass
141 - 136	Pole	TP23.848x22.924x0.25	Pole	31.3%	Pass
136 - 131	Pole	TP24.772x23.848x0.25	Pole	42.2%	Pass
131 - 126	Pole	TP25.696x24.772x0.25	Pole	55.6%	Pass
126 - 121	Pole	TP26.62x25.696x0.25	Pole	68.5%	Pass
121 - 120.1	Pole	TP26.788x26.62x0.25	Pole	70.7%	Pass
120.1 - 119.85	Pole + Reinf.	TP26.833x26.786x0.4875	Reinf. 21 Tension Rupture	50.4%	Pass
119.85 - 117.5	Pole + Reinf.	TP27.267x26.833x0.4875	Reinf. 21 Tension Rupture	54.4%	Pass
117.5 - 117.25	Pole + Reinf.	TP27.313x27.267x0.5	Reinf. 22 Tension Rupture	50.8%	Pass
117.25 - 115.5	Pole + Reinf.	TP27.637x27.313x0.5	Reinf. 22 Tension Rupture	53.5%	Pass
115.5 - 115.25	Pole + Reinf.	TP27.683x27.637x0.6625	Reinf. 1 Tension Rupture	47.2%	Pass
115.25 - 110.25	Pole + Reinf.	TP28.607x27.683x0.65	Reinf. 1 Tension Rupture	53.9%	Pass
110.25 - 107.5	Pole + Reinf.	TP29.808x28.607x0.6375	Reinf. 1 Tension Rupture	57.4%	Pass
107.5 - 102.5	Pole + Reinf.	TP29.074x28.082x0.7125	Reinf. 1 Tension Rupture	60.6%	Pass
102.5 - 100.5	Pole + Reinf.	TP29.471x29.074x0.7	Reinf. 1 Tension Rupture	62.6%	Pass
100.5 - 100.25	Pole + Reinf.	TP29.521x29.471x0.8375	Reinf. 21 Tension Rupture	64.1%	Pass
100.25 - 98.5	Pole + Reinf.	TP29.868x29.521x0.8375	Reinf. 21 Tension Rupture	65.8%	Pass
98.5 - 98.25	Pole + Reinf.	TP29.917x29.868x0.8625	Reinf. 23 Tension Rupture	93.0%	Pass
98.25 - 93.25	Pole + Reinf.	TP30.909x29.917x0.65	Reinf. 23 Tension Rupture	57.6%	Pass
93.25 - 90.5	Pole + Reinf.	TP31.455x30.909x0.65	Reinf. 23 Tension Rupture	69.9%	Pass
90.5 - 90.25	Pole + Reinf.	TP31.504x31.455x0.6875	Reinf. 23 Tension Rupture	69.0%	Pass
90.25 - 85.25	Pole + Reinf.	TP32.496x31.504x0.675	Reinf. 23 Tension Rupture	73.1%	Pass
85.25 - 83.5	Pole + Reinf.	TP32.843x32.496x0.6625	Reinf. 23 Tension Rupture	74.4%	Pass
83.5 - 83.25	Pole + Reinf.	TP32.893x32.843x0.9125	Reinf. 6 Tension Rupture	56.4%	Pass
83.25 - 80.75	Pole + Reinf.	TP33.389x32.893x0.9	Reinf. 6 Tension Rupture	57.9%	Pass
80.75 - 80.5	Pole + Reinf.	TP33.439x33.389x1.0625	Reinf. 6 Tension Rupture	47.6%	Pass
80.5 - 80.25	Pole + Reinf.	TP33.488x33.439x0.9875	Reinf. 11 Tension Rupture	51.2%	Pass
80.25 - 77.5	Pole + Reinf.	TP34.034x33.488x0.9625	Reinf. 11 Tension Rupture	52.7%	Pass
77.5 - 77.25	Pole + Reinf.	TP34.083x34.034x0.6875	Reinf. 11 Tension Rupture	73.8%	Pass
77.25 - 73	Pole + Reinf.	TP35.819x34.083x0.6875	Reinf. 11 Tension Rupture	76.7%	Pass
73 - 68	Pole + Reinf.	TP35.233x34.301x0.75	Reinf. 11 Tension Rupture	74.9%	Pass
68 - 64.25	Pole + Reinf.	TP35.932x35.233x0.7375	Reinf. 11 Tension Rupture	77.1%	Pass
64.25 - 64	Pole + Reinf.	TP35.978x35.932x0.875	Reinf. 7 Tension Rupture	68.0%	Pass
64 - 60.5	Pole + Reinf.	TP36.63x35.978x0.8625	Reinf. 7 Tension Rupture	69.8%	Pass
60.5 - 60.25	Pole + Reinf.	TP36.677x36.63x0.925	Reinf. 7 Tension Rupture	65.8%	Pass
60.25 - 60.1	Pole + Reinf.	TP36.705x36.677x0.925	Reinf. 7 Tension Rupture	65.9%	Pass
60.1 - 59.85	Pole + Reinf.	TP36.751x36.705x0.975	Reinf. 7 Tension Rupture	63.8%	Pass
59.85 - 59.1	Pole + Reinf.	TP36.891x36.751x0.975	Reinf. 7 Tension Rupture	64.1%	Pass
59.1 - 58.85	Pole + Reinf.	TP36.938x36.891x1.05	Reinf. 7 Tension Rupture	58.4%	Pass
58.85 - 55.4	Pole + Reinf.	TP37.581x36.938x1.025	Reinf. 7 Tension Rupture	59.9%	Pass
55.4 - 55.15	Pole + Reinf.	TP37.627x37.581x1.025	Reinf. 7 Tension Rupture	60.0%	Pass
55.15 - 54.75	Pole + Reinf.	TP37.702x37.627x1.025	Reinf. 7 Tension Rupture	60.2%	Pass
54.75 - 54.5	Pole + Reinf.	TP37.748x37.702x0.825	Reinf. 10 Tension Rupture	73.0%	Pass
54.5 - 49.5	Pole + Reinf.	TP38.68x37.748x0.8125	Reinf. 10 Tension Rupture	75.3%	Pass
49.5 - 44.5	Pole + Reinf.	TP39.612x38.68x0.8	Reinf. 10 Tension Rupture	77.5%	Pass
44.5 - 41.3	Pole + Reinf.	TP40.208x39.612x0.7875	Reinf. 10 Tension Rupture	78.8%	Pass
41.3 - 41.05	Pole + Reinf.	TP40.254x40.208x0.875	Reinf. 10 Tension Rupture	69.2%	Pass
41.05 - 39	Pole + Reinf.	TP41.568x40.254x0.875	Reinf. 10 Tension Rupture	69.9%	Pass
39 - 33	Pole + Reinf.	TP40.996x39.886x1.175	Reinf. 10 Tension Rupture	54.7%	Pass
33 - 31.5	Pole + Reinf.	TP41.274x40.996x1.175	Reinf. 10 Tension Rupture	55.2%	Pass
31.5 - 31.25	Pole + Reinf.	TP41.32x41.274x1.175	Reinf. 10 Tension Rupture	54.9%	Pass
31.25 - 30.5	Pole + Reinf.	TP41.459x41.32x1.175	Reinf. 10 Tension Rupture	55.1%	Pass
30.5 - 30.25	Pole + Reinf.	TP41.505x41.459x1.125	Reinf. 9 Tension Rupture	57.8%	Pass
30.25 - 25.75	Pole + Reinf.	TP42.337x41.505x1.1	Reinf. 9 Tension Rupture	59.2%	Pass
25.75 - 25.5	Pole + Reinf.	TP42.383x42.337x1.075	Reinf. 9 Tension Rupture	62.5%	Pass
25.5 - 24.7	Pole + Reinf.	TP42.531x42.383x1.075	Reinf. 9 Tension Rupture	62.8%	Pass
24.7 - 24.45	Pole + Reinf.	TP42.578x42.531x0.95	Reinf. 9 Tension Rupture	68.8%	Pass
24.45 - 24	Pole + Reinf.	TP42.661x42.578x0.95	Reinf. 9 Tension Rupture	68.9%	Pass
24 - 23.75	Pole + Reinf.	TP42.707x42.661x1.2	Reinf. 9 Tension Rupture	55.6%	Pass
23.75 - 18.75	Pole + Reinf.	TP43.632x42.707x1.175	Reinf. 9 Tension Rupture	57.0%	Pass
18.75 - 14.1	Pole + Reinf.	TP44.492x43.632x1.15	Reinf. 9 Tension Rupture	58.4%	Pass
14.1 - 13.8	Pole + Reinf.	TP44.547x44.492x1.175	Reinf. 9 Tension Rupture	56.9%	Pass
13.8 - 13.65	Pole + Reinf.	TP44.575x44.547x1.175	Reinf. 9 Tension Rupture	57.0%	Pass
13.65 - 10.5	Pole + Reinf.	TP45.158x44.575x1.175	Reinf. 9 Tension Rupture	57.8%	Pass
10.5 - 10.25	Pole + Reinf.	TP45.204x45.158x1.175	Reinf. 9 Tension Rupture	57.9%	Pass
10.25 - 5.25	Pole + Reinf.	TP46.129x45.204x1.15	Reinf. 9 Tension Rupture	59.2%	Pass
5.25 - 3	Pole + Reinf.	TP46.545x46.129x1.125	Reinf. 9 Tension Rupture	59.8%	Pass
3 - 2.9	Pole + Reinf.	TP46.564x46.545x1.0875	Reinf. 9 Tension Rupture	61.7%	Pass
2.9 - 2.75	Pole + Reinf.	TP46.591x46.564x1.025	Reinf. 9 Tension Rupture	68.1%	Pass
2.75 - 2.65	Pole + Reinf.	TP46.61x46.591x1.025	Reinf. 9 Tension Rupture	68.1%	Pass
2.65 - 2.5	Pole + Reinf.	TP46.638x46.61x1.025	Reinf. 9 Tension Rupture	68.2%	Pass
2.5 - 2.25	Pole + Reinf.	TP46.684x46.638x1	Reinf. 18 Compression	62.1%	Pass
2.25 - 1.9	Pole + Reinf.	TP46.749x46.684x1	Reinf. 18 Compression	62.2%	Pass
1.9 - 1.65	Pole + Reinf.	TP46.795x46.749x0.95	Reinf. 18 Compression	63.6%	Pass
1.65 - 0	Pole + Reinf.	TP47.1x46.795x0.95	Reinf. 18 Compression	63.9%	Pass
				Summary	
			Pole	70.7%	Pass
			Reinforcement	78.8%	Pass
			Overall	78.8%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in⁴)			Area (in²)			% Capacity																							
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25
160 - 155	552	n/a	552	18.41	n/a	18.41	4.3%																									
155 - 150	552	n/a	552	18.41	n/a	18.41	16.1%																									
150 - 146	552	n/a	552	18.41	n/a	18.41	25.9%																									
146 - 141	1169	n/a	1169	18.23	n/a	18.23	22.0%																									
141 - 136	1351	n/a	1351	18.97	n/a	18.97	31.3%																									
136 - 131	1517	n/a	1517	19.71	n/a	19.71	42.2%																									
131 - 126	1695	n/a	1695	20.45	n/a	20.45	55.6%																									
126 - 121	1887	n/a	1887	21.20	n/a	21.20	68.5%																									
121 - 120.1	1923	n/a	1923	21.33	n/a	21.33	70.7%																									
120.1 - 119.85	1833	1771	3703	21.37	18.00	39.37	38.1%																				50.4%	50.4%				
119.85 - 117.5	2029	1826	3855	21.72	18.06	39.72	39.2%																				54.4%	54.4%				
117.5 - 117.25	2045	1928	3972	21.75	22.69	44.35	41.0%	44.7%																			50.9%	50.9%				
117.25 - 115.5	2119	1971	4090	22.01	22.50	44.51	43.4%	47.2%																			53.9%	53.9%				
115.5 - 115.25	2124	3279	5403	22.06	31.50	53.55	44.3%	47.2%	47.2%																		43.1%	43.1%				
115.25 - 110.25	2346	3491	5837	22.79	31.50	54.29	36.2%	53.9%	53.9%																		49.3%	49.3%				
110.25 - 107.5	2474	3611	6085	23.23	31.50	54.75	38.9%	57.4%	57.4%																		52.5%	52.5%				
107.5 - 102.5	3092	3901	6993	24.29	31.50	55.80	37.7%	60.6%	60.6%																		65.3%	65.3%				
102.5 - 100.5	3188	3696	6884	25.83	31.50	60.82	39.2%	62.6%	62.6%																		67.2%	67.2%				
100.5 - 100.25	3233	3241	6373	29.39	29.33	58.47	46.9%		61.5%																		64.1%		58.2%			
100.25 - 98.5	3349	3212	6561	29.79	29.13	58.82	48.4%		63.5%																		65.8%		57.8%			
98.5 - 98.25	3390	3543	6933	29.75	32.13	61.87	45.9%												55.6%								59.3%		63.0%			
98.25 - 93.25	3708	3770	7478	30.74	32.13	62.87	49.9%												59.8%								63.7%		67.6%			
93.25 - 90.5	3909	3898	7807	31.29	32.13	63.42	52.0%												62.0%								65.9%		69.9%			
90.5 - 90.25	4005	4181	8186	31.34	41.38	72.72	51.3%												52.0%								66.7%		69.0%			
90.25 - 88.25	4367	4647	9044	32.34	41.38	73.71	58.0%												58.3%								53.8%		73.1%			
88.25 - 83.5	4549	4741	9321	32.69	41.38	74.06	56.2%												56.4%								54.9%		74.5%			
83.5 - 83.25	4918	7810	12328	32.74	50.38	82.11	46.2%						68.4%						47.0%								46.4%		62.2%			
83.25 - 80.75	4719	8036	12755	33.24	50.38	82.61	42.6%						67.9%						46.3%								46.7%		63.6%			
80.75 - 80.5	4885	10269	14946	33.29	70.00	103.29	35.0%			58.9%			47.6%						47.0%								41.7%		47.1%			
80.5 - 80.25	4703	9156	13859	33.34	67.88	101.21	37.7%			40.1%			49.3%					51.2%								42.1%					
80.25 - 77.5	4839	9812	14650	33.68	67.88	101.79	39.1%			41.9%			50.7%					53.7%								43.4%					
77.5 - 77.25	4982	5877	10668	33.98	49.88	83.81	54.9%			50.9%								73.9%									51.2%					
77.25 - 73	5074	5944	11018	34.78	49.88	84.66	57.5%			52.9%								78.7%									53.4%					
73 - 68	5579	6059	12629	42.83	49.88	91.51	52.7%			51.9%								74.9%									53.3%					
68 - 64.25	6982	6279	13261	42.87	49.88	92.75	54.6%			53.6%								77.1%									55.0%					
64.25 - 64	7091	8632	15723	42.93	57.25	100.18	47.2%							68.0%				65.9%									52.4%					
64 - 60.5	7485	8936	16421	43.72	57.25	100.97	48.8%							69.8%				68.7%									53.9%					
60.5 - 60.25	7529	9589	17398	43.77	63.63	107.40	47.0%							65.8%			60.9%										51.4%					
60.25 - 60.1	7537	9903	17430	43.81	63.63	107.43	47.1%							65.9%			61.0%										51.5%					
60.1 - 59.85	7658	10004	17662	43.86	67.76	111.61	45.6%							63.8%			59.4%						47.6%				51.2%					
59.85 - 59.1	7736	11075	18830	44.09	67.76	111.79	45.9%							64.1%			59.8%						47.9%				51.5%					
59.1 - 58.85	7646	12343	19989	44.09	76.92	120.19	41.8%							58.4%			54.4%					44.6%					47.8%					
58.85 - 55.4	8055	12759	20814	44.85	76.22	120.88	43.2%							59.9%			55.8%					46.0%					48.9%					
55.4 - 55.15	8096	12789	20875	44.92	76.92	120.83	40.3%							56.0%			52.0%					43.1%					46.0%					
55.15 - 54.75	8134	12838	20972	45.01	76.02	121.02	43.4%							60.2%			56.0%					46.2%					49.1%					
54.75 - 54.5	8231	8990	17220	45.06	58.02	103.08	54.6%										73.6%					63.4%					59.4%					
54.5 - 49.5	8847	9431	18278	46.19	58.02	104.20	56.3%										75.5%					65.4%					61.4%					
49.5 - 44.5	9604	9573	19177	47.31	58.02	105.33	59.0%										77.5%					67.4%					63.3%					
44.5 - 41.3	9941	10162	20103	48.03	58.02	106.04	60.4%										78.8%					68.6%					64.3%					
41.3 - 41.05	9821	12265	22087	48.09	68.64	116.73	61.9%			53.5%							80.2%					68.6%					59.8%					
41.05 - 39	10106	12479	22585	48.55	68.64	117.19	62.7%			54.1%							80.9%					69.2%					60.5%					
39 - 33	10346	20124	30470	48.98	93.02	141.99	38.0%			48.5%					53.5%		64.7%					53.3%					51.2%					
33 - 31.5	10560	20389	30949	49.31	93.02	142.33	38.4%			48.9%					54.3%		65.2%					53.8%					51.6%					
31.5 - 31.25	10673	20527	31419	49.57	94.64	143.91	39.1%			49.6%					54.4%		54.9%					53.8%	49.7%				49.8%					
31.25 - 30.5	10715	20962	31678	49.64	94.64	144.07	39.3%			49.8%					54.7%		55.1%					54.0%	49.9%				50.0%					
30.5 - 30.25	10742	19797	30539	48.59	91.23	140.79	40.7%			48.9%					58.4%	57.9%					54.9%		51.1%				50.9%					
30.25 - 25.75	11407	20567	31974	50.00	91.20	141.80	42.1%			50.1%					67.8%	69.2%					68.9%		62.7%				62.2%					
25.75 - 25.5	11472	19814	31087	50.83	88.56	139.81	44.4%			47.9%						62.5%					58.9%		52.2%				49.4%					56.5%
25.5 - 24.7	11594	19759	31354	50.83	88.56	139.69	44.7%			48.1%						62.8%					59.2%		52.4%				49.6%					56.7%
24.7 - 24.45	11615	16785	28400	50.89	67.61	118.49	49.0%			54.9%						68.5%					61.9%		63.9%									62.6%
24.45 - 24	11684	16844	28528	50.99	67.61	118.59	49.1%			55.0%						68.9%					61.8%		64.1%									63.0%
24 - 23.75	11718	23690	35408	51.04	89.64	140.68	39.6%			45.9%						55.6%					50.1%		51.7%		51.6%							
23.75 - 18.75	12503	24509	37112	52.36	89.64	141.80	41.1%			46.8%						57.0%					51.4%		53.1%		52.8%							
18.75 - 14.1	13253	25480	38744	53.20	89.64	142.83	42.5%			48.0%						58.4%					52.8%		54.3%		53.9%							
14.1 - 13.8	13308	26363	39671	53.26	92.25	145.51	41.4%			47.9%						58.9%			55.3%		51.9%				53.0%							
13.8 - 13.65	13313	26393	39725	53.26	92.25	145.54	41.5%			47.9%						57.9%			55.3%		51.9%				53.0%							
13.65 - 10.5	13567	27814	40881	54.00	92.25	146.25	42.4%			48.7%						57.8%			56.1%		52.9%				53.7%							
10.5 - 10.25	13907	27978	40993	54.05	87.51	141.58	41.5%					56.9%				57.9%			56.2%		52.7%				54.4%							
10.25 - 5.25	14955	28983	43869	55.17	87.62	142.79	42.9%					58.2%				59.2%			57.5%		53.9%				55.5%							
5.25 - 3	15192	28542	43734	55.67	87.62	142.29	43.5%					58.8%				59.8%			58.1%		54.5%				56.0%							
3 - 2.9	15209	26919	42127	55.69	81.62	137.32	46.9%									61.7%			60.4%		56.3%				58.1%							
2.9 - 2.75	15305	24487	39793	55.73	70.32	126.06	50.7%									68.1%			62.3%						67.8%							
2.75 - 2.65	15324	24504	39828	55.75	70.32	126.07	50.8%									68.1%			62.2%						67.9%							
2.65 - 2.5	15352	24530	39882	55.78	70.32	126.10	50.8%									68.2%			62.3%						67.9%							
2.5 - 2.25	15338	23814	39152	55.84	72.32	128.15	51.1%												58.8%						62.1%					58.1%		
2.25 - 1.9	15403	23971	39374	55.92	72.32	128.24	51.2%												58.9%						62.2%					58.2%		
1.9 - 1.65	15437	22477	37914	55.97	64.06	120.03	52.3%																		63.8%					60.1%		
1.65 - 0	15744	23732	39476	56.34	64.06	120.40	52.8%																		63.9%					60.5%		

Note: Section capacity checked in 5 degree increments.

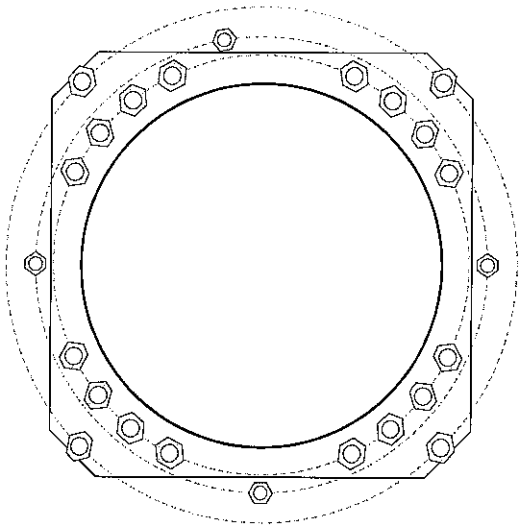
Monopole Base Plate Connection

CROWN CASTLE

Site Info	
BU #	876334
Site Name	OUTHINGTON, SMORO
Order #	450298 Rev. 0

Analysis Considerations	
TIA-222 Revision	G
Grout Considered:	No
l_{ar} (in)	4.75
Eta Factor, η	0.5

Applied Loads	
Moment (kip-ft)	4365.21
Axial Force (kips)	74.07
Shear Force (kips)	39.45



Connection Properties

Anchor Rod Data

GROUP 1: (16) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 54.375" BC
GROUP 2: (4) 1-3/4" ø bolts (F1554-105 N; Fy=105 ksi, Fu=125 ksi) on 59.1" BC
pos. (deg): 0, 100, 180, 270

GROUP 3: (4) 2-1/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 66.8125" BC

Base Plate Data

55" OD x 3" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Stiffener Data

N/A

Pole Data

47.1" x 0.375" 12-sided pole (A607-60; Fy=60 ksi, Fu=75 ksi)

Analysis Results

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

GROUP 1:		
Pu_c = 160.62	ϕPn_t = 260	**Stress Rating**
Vu = 2.47	ϕVn = n/a	**63.7%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_c = 100.89	ϕPn_t = 190	**Stress Rating**
Vu = 0	ϕVn = n/a	**53.1%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 3:		
Pu_c = 196.54	ϕPn_t = 325	**Stress Rating**
Vu = 0	ϕVn = n/a	**60.5%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	25.56	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**56.8%**	**Pass**

Drilled Pier Foundation

BU # :	876334
Site Name:	SOUTHINGTON, SMC
Order Number:	450298 Rev. 0

TIA-222 Revison:	G
Tower Type:	Monopole

Applied Loads	Comp.	Uplift
Moment (kip-ft)	4366	
Axial Force (kips)	74	
Shear Force (kips)	39	

Material Properties		
Concrete Strength, f'c:	3	ksi
Rebar Strength, Fy:	60	ksi

Pier Design Data		
Depth	21	ft
Ext. Above Grade	0.5	ft
Pier Section 1		
From 0.5' above grade to 21' below grade		
Pier Diameter	7	ft
Rebar Quantity	32	
Rebar Size	11	
Clear Cover to Ties	4	in
Tie Size	5	

Analysis Results		
Soil Lateral Capacity	*Compression*	*Uplift*
$D_{v=0}$ (ft from TOC)	5.65	-
Soil Safety Factor	1.79	-
Max Moment (kip-ft)	4557.41	-
Rating	*74.3%*	-
Soil Vertical Capacity	*Compression*	*Uplift*
Skin Friction (kips)	719.75	-
End Bearing (kips)	1665.42	-
Weight of Concrete (kips)	148.94	-
Total Capacity (kips)	2385.17	-
Axial (kips)	222.94	-
Rating	*9.3%*	-
Reinforced Concrete Capacity	*Compression*	*Uplift*
Critical Depth (ft from TOC)	5.47	-
Critical Moment (kip-ft)	4556.92	-
Critical Moment Capacity	7567.89	-
Rating	*60.2%*	-

Soil Interaction Rating	**74.3%**
Structural Foundation Rating	**60.2%**

Check Limitation	
N/A	☐

Soil Profile				
Groundwater Depth	n/a	ft	# of Layers	6

Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Gross Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	2	2	110	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	2	3.5	1.5	130	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
3	3.5	6	2.5	130	150	0	36	0.000	0.000	0.65	0.65			Cohesionless
4	6	8	2	120	150	0	30	0.000	0.000	0.90	0.90			Cohesionless
5	8	12.4	4.4	130	150	0	36	0.000	0.000	1.38	1.38			Cohesionless
6	12.4	21	8.6	145	150	0	40	0.000	0.000	3.97	3.97	57.7		Cohesionless

Date: **January 29, 2019**

Charles McGuirt
Crown Castle
3 Corporate Dr., St 101
Clifton Park, NY 12065

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Infinigy Engineering, PLLC
1033 Watervliet Shaker Road
Albany, NY 12205
518-690-0790
structural@infinigy.com

Subject:	**Mount Replacement Report**	
Carrier Designation:	**Verizon Mount Replacment**	
	Carrier Site Number:	20702
	Carrier Site Name:	Southington CT
Crown Castle Designation:	**Crown Castle BU Number:**	876334
	Crown Castle Site Name:	Southington, Smoron
	Crown Castle JDE Job Number:	518917
	Crown Castle Order Number:	450298, Rev. 0
Engineering Firm Designation:	**Infinigy Report Designation:**	1039-D0001-B
Site Data:	**625 Spring Street, Southington, Hartford County, CT, 06489**	
	Latitude 41°37'56.9" Longitude -72°53'39.30"	
Structure Information:	**Tower Height & Type:**	**158 ft Monopole**
	Mount Elevation:	**132.0 ft**
	Mount Type:	**14.0 ft Platform**

Dear Charles McGuirt,

Infinigy is pleased to submit this **"Mount Replacement Report"** to determine the structural integrity of Verizon's antenna mounting system with the proposed appurtenance and equipment addition on the abovementioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Platform (typical) **Sufficient**

The analysis has been performed in accordance with the TIA-222-H Standard. This analysis utilizes an ultimate 3-second gust wind speed of 125 mph from the 2015 International Building Code and 2018 Connecticut State Building Code. Exposure Category C with a maximum topographic factor, Kzt, of 1.0 and Risk Category II was/were used in this analysis.

We at Infinigy Engineering, PLLC 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.

Mount analysis prepared by: Christopher Kudlacik
Respectfully Submitted by:

Joe Johnston, P.E.
VP Structural Engineering / Principal

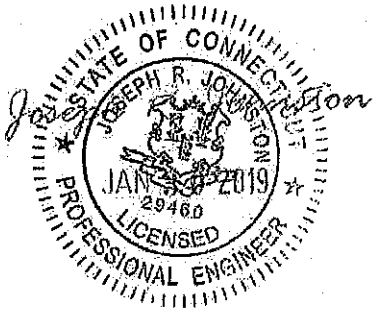


TABLE OF CONTENTS

1) INTRODUCTION

This mount is a proposed 14.0 ft F3P-14W Platform designed by Sitepro1.This mount is to be installed at the 132.0 ft elevation on 3 sector(s) of the 158.0 ft Monopole.

2) ANALYSIS CRITERIA

Building Code:	2015 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	125 mph
Exposure Category:	C
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.7 in
Wind Speed with Ice:	50 mph
Live Loading Wind Speed:	30 mph
Man Live Load at Mid/End-Points:	250 lb
Man Live Load at Mount Pipes:	500 lb

Table 1 - Proposed Equipment Configuration

Mount Centerline (ft)	Antenna Centerline (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Mount / Modification Details
132	134	3	Antel	BXA-80080-6CF-EDIN-X	14 ft Platform
	133	3	Andrew	SBNHH-1D65B	
		3	Antel	BXA-70063/6CFX2	
		1	RFS	DB-T1-6Z-8AB-0Z	
		1	RFS	DB-C1-12C-24AB-0Z	
		3	Samsung	RFV01U-D1A	
		3	Samsung	RFV01U-D2A	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	Verizon Application	450298 Rev, 0	CCI Sites
Mount	--	F3P-14W	Sitepro1
Photos	--	876334	CCI Sites

3.1) Analysis Method

RISA-3D (Version 17.0.02), a commercially available analysis software package, was used to create a three-dimensional model of the antenna mounting system and calculate member stresses for various loading cases.

This analysis was performed in accordance with Crown Castle's ENG-SOW-10208 *Tower Mount Analysis* (Revision B).

3.2) Assumptions

1) The antenna mounting system was properly fabricated, installed and maintained in good condition in accordance with its original design and manufacturer's specifications.
2) The configuration of antennas, mounts, and other appurtenances are as specified in Table 1 and the referenced drawings.
3) All member connections are assumed to have been designed to meet or exceed the load carrying capacity of the connected member unless otherwise specified in this report.
4) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A53 (GR 35)
Pipe	ASTM A53 (GR 35)
Connection Bolts	ASTM A325

This analysis may be affected if any assumptions are not valid or have been made in error. Infinigy should be notified to determine the effect on the structural integrity of the antenna mounting system.

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform, Alpha Sector)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Standoff	M84	133.0	45.8	Pass
	Mount Pipe	MP1		28.3	Pass
	Main Horizontal	M79		24.1	Pass
	Bolt Check	--		34.1	Pass

Structure Rating (max from all components) =	45.8%

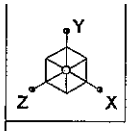
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) All sectors are typical

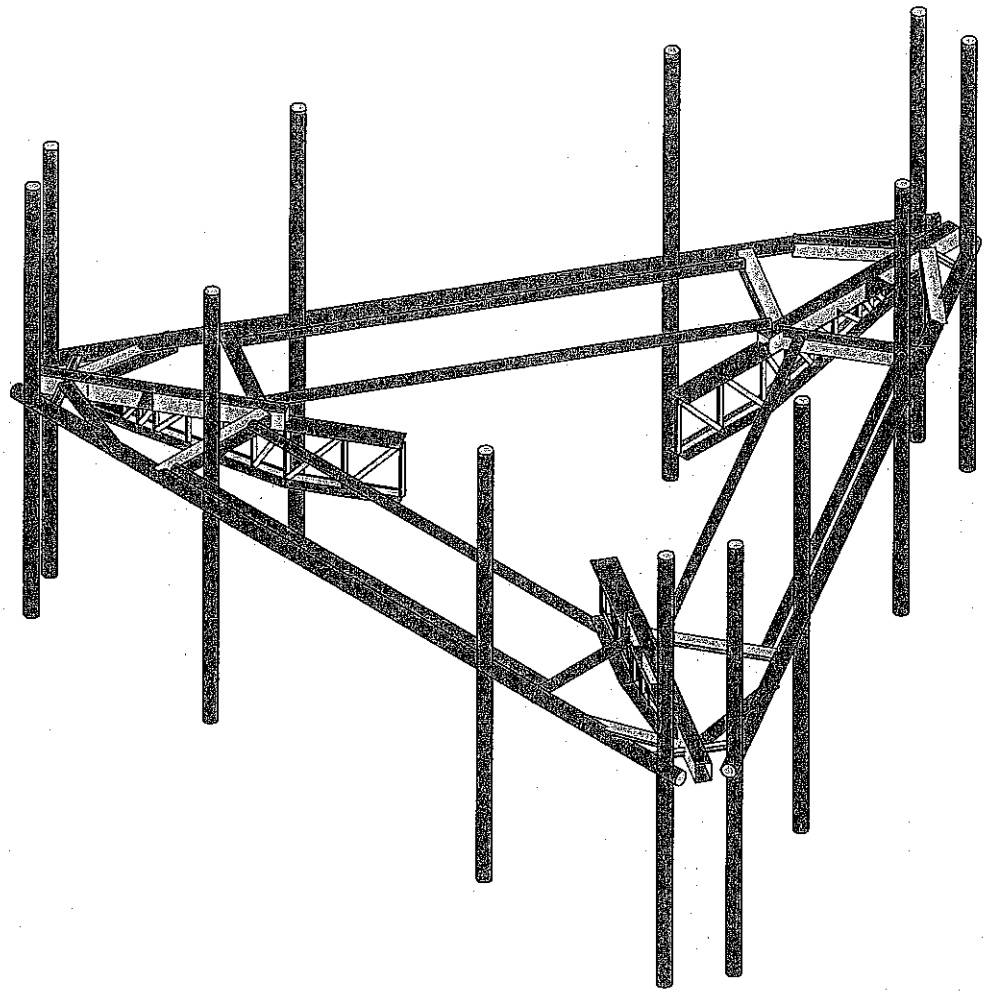
4.1) Recommendations

The Sector Frame Mount has sufficient capacity to support the proposed loading when the mount is replaced with (1) Sitepro1 F3P-14W.

APPENDIX A

WIRE FRAME AND RENDERED MODELS





Envelope Only Solution

Infinigy Engineering, PLLC	MA1334_10071518	Final Configuration
CLK		Jan 29, 2019 at 11:45 AM
555-022		876334-F3P-14W.r3d

APPENDIX B

SOFTWARE INPUT CALCULATIONS

Site Name:	Southington, Smoron
Client:	Crown Castle
Carrier:	Verizon Wireless
Engineer:	CLK
Date:	1/29/2019

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INFINIGY WIND LOAD CALCULATOR 3.0.2

Site Information Inputs:

Adopted Building Code:	2015 IBC
Structure Load Standard:	TIA-222-H
Antenna Load Standard:	TIA-222-H
Structure Risk Category:	II
Structure Type:	Mount - Platform
Number of Sectors:	3
Structure Shape 1:	Flat

Rooftop Inputs:

Rooftop Wind Speed-Up?:	No

Wind Loading Inputs:

Design Wind Velocity:	125	mph (ultimate 3-second gust)
Wind Centerline 1 (z_1):	133.0	ft
Side Face Angle (θ):	60	degrees
Exposure Category:	C	
Topographic Category:	1	

Wind with No Ice		
q_z (psf)	Gh	F_{ST} (psf)
50.58	1.00	**101.16**

Wind with Ice		
q_z (psf)	Gh	F_{ST} (psf)
8.09	1.00	**28.13**

Ice Loading Inputs:

Is Ice Loading Needed?:	Yes	
Ice Wind Velocity:	50	mph (ultimate 3-second gust)
Base Ice Thickness:	1.70	in

Input Appurtenance Information and Load Placements:

Appurtenance Name	Elevation (ft)	Total Quantity	Ka	Front Shape	Side Shape	q_z (psf)	EPA (ft^2)	Fz (lbs)	Fx (lbs)	Fz(60) (lbs)	Fx(30) (lbs)
Andrew SBNHH-1D65B	133.0	3	1.00	Flat	Flat	50.58	8.08	408.62	270.17	304.78	374.00
Andrew SBNHH-1D65B	133.0	3	1.00	Flat	Flat	50.58	8.08	408.62	270.17	304.78	374.00
Antel BXA-70063/6CFX2	133.0	3	1.00	Flat	Flat	50.58	7.57	382.82	189.94	238.16	334.60
Antel BXA-80080-6CF-EDIN-X	134.0	3	1.00	Flat	Flat	50.66	5.77	292.23	231.04	246.34	276.93
Samsung Telecommunications RFV01U-D1A	133.0	3	1.00	Flat	Flat	50.58	1.88	94.83	63.22	71.13	86.93
Samsung Telecommunications RFV01U-D2A	133.0	3	1.00	Flat	Flat	50.58	1.88	94.83	51.21	62.12	83.93
RFS DBT1-6Z-8AB-0Z	133.0	3	1.00	Flat	Flat	50.58	4.80	242.78	101.16	136.56	207.37
RFS DBC1-12C-24AB-0Z	133.0	3	1.00	Flat	Flat	50.58	4.06	205.16	156.67	168.79	193.03

APPENDIX C

SOFTWARE ANALYSIS OUTPUT

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N1	N2			Main Horizontal	Beam	None	A53 Gr.B	Typical
2	M118	N146A	N147A			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
3	MP4	N152B	N156			Mount Pipe	Beam	None	A53 Gr.B	Typical
4	MP3	N153B	N157			Mount Pipe	Beam	None	A53 Gr.B	Typical
5	MP2	N154	N158			Mount Pipe	Beam	None	A53 Gr.B	Typical
6	MP1	N155	N159			Mount Pipe	Beam	None	A53 Gr.B	Typical
7	M133	N177A	N176A			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
8	M40	N66	N67			Main Horizontal	Beam	None	A53 Gr.B	Typical
9	M43	N73	N196		90	Angle	Beam	None	A36 Gr.36	Typical
10	M44A	N197	N74A		180	Angle	Beam	None	A36 Gr.36	Typical
11	M45	N158B	N75			RIGID	None	None	RIGID	Typical
12	M46	N88	N89			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
13	M51	N99	N98			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
14	M79	N131	N132			Main Horizontal	Beam	None	A53 Gr.B	Typical
15	M80	N143A	N196		180	Angle	Beam	None	A36 Gr.36	Typical
16	M81A	N158B	N145			RIGID	None	None	RIGID	Typical
17	M85	N153	N154A			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
18	M90	N164	N163			Pipe 1.875 OD	Beam	None	A53 Gr.B	Typical
19	M91	N171	N141			Standoff	Beam	None	A500 Gr.B...	Typical
20	M92	N175	N171			RIGID	None	None	RIGID	Typical
21	M93	N176	N172			RIGID	None	None	RIGID	Typical
22	M94	N177	N173			RIGID	None	None	RIGID	Typical
23	M95	N178A	N174			RIGID	None	None	RIGID	Typical
24	M96	N179	N170		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
25	M97	N180	N175		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
26	M98	N182	N183		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
27	M99	N182	N170			Truss Verticals	Beam	None	A36 Gr.36	Typical
28	M100	N180	N183			Truss Verticals	Beam	None	A36 Gr.36	Typical
29	M101	N190	N184		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
30	M102	N188B	N176		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
31	M103	N191	N185B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
32	M104	N189A	N177		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
33	M105	N193	N187A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
34	M106	N192	N186A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
35	M107	N175	N190			Truss Verticals	Beam	None	A36 Gr.36	Typical
36	M108B	N184	N188B			Truss Verticals	Beam	None	A36 Gr.36	Typical
37	M109B	N176	N191			Truss Verticals	Beam	None	A36 Gr.36	Typical
38	M110	N185B	N189A			Truss Verticals	Beam	None	A36 Gr.36	Typical
39	M111	N177	N193			Truss Verticals	Beam	None	A36 Gr.36	Typical
40	M112	N187A	N192			Truss Verticals	Beam	None	A36 Gr.36	Typical
41	M113	N181A	N178A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
42	M114	N197	N144		90	Angle	Beam	None	A36 Gr.36	Typical
43	M115	N179	N180		180	WT	Beam	None	A36 Gr.36	Typical
44	M116	N180	N181A		180	WT	Beam	None	A36 Gr.36	Typical
45	M117	N178A	N170			WT	Beam	None	A36 Gr.36	Typical
46	M54	N138	N170A		90	Angle	Beam	None	A36 Gr.36	Typical
47	M55	N171A	N139		180	Angle	Beam	None	A36 Gr.36	Typical
48	M56	N172A	N140			RIGID	None	None	RIGID	Typical
49	M57	N76	N170A		180	Angle	Beam	None	A36 Gr.36	Typical
50	M58	N172A	N103			RIGID	None	None	RIGID	Typical
51	M59	N147B	N142A			Standoff	Beam	None	A500 Gr.B...	Typical
52	M60	N151A	N147B			RIGID	None	None	RIGID	Typical
53	M61	N152A	N148A			RIGID	None	None	RIGID	Typical
54	M62	N153A	N149			RIGID	None	None	RIGID	Typical
55	M63	N154B	N150			RIGID	None	None	RIGID	Typical
56	M64	N155B	N146B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
57	M65	N156B	N151A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
58	M66	N158C	N159B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
59	M67	N158C	N146B			Truss Verticals	Beam	None	A36 Gr.36	Typical
60	M68	N156B	N159B			Truss Verticals	Beam	None	A36 Gr.36	Typical
61	M69	N166A	N160A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
62	M70	N164A	N152A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
63	M71	N167A	N161A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
64	M72	N165A	N153A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
65	M73	N169	N163A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
66	M74	N168A	N162A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
67	M75	N151A	N166A			Truss Verticals	Beam	None	A36 Gr.36	Typical
68	M76	N160A	N164A			Truss Verticals	Beam	None	A36 Gr.36	Typical
69	M77	N161A	N165A			Truss Verticals	Beam	None	A36 Gr.36	Typical
70	M78	N153A	N169			Truss Verticals	Beam	None	A36 Gr.36	Typical
71	M79A	N163A	N168A			Truss Verticals	Beam	None	A36 Gr.36	Typical
72	M80A	N157B	N154B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
73	M81	N171A	N102		90	Angle	Beam	None	A36 Gr.36	Typical
74	M82	N155B	N156B		180	WT	Beam	None	A36 Gr.36	Typical
75	M83	N156B	N157B		180	WT	Beam	None	A36 Gr.36	Typical
76	M84	N154B	N146B			WT	Beam	None	A36 Gr.36	Typical
77	M85A	N27A	N204		90	Angle	Beam	None	A36 Gr.36	Typical
78	M86A	N205	N53		180	Angle	Beam	None	A36 Gr.36	Typical
79	M87A	N206	N54			RIGID	None	None	RIGID	Typical
80	M88A	N78	N204		180	Angle	Beam	None	A36 Gr.36	Typical
81	M89A	N206	N80			RIGID	None	None	RIGID	Typical
82	M90A	N181	N176B			Standoff	Beam	None	A500 Gr.B...	Typical
83	M91A	N185A	N181			RIGID	None	None	RIGID	Typical
84	M92A	N186B	N182B			RIGID	None	None	RIGID	Typical
85	M93A	N187B	N183A			RIGID	None	None	RIGID	Typical
86	M94A	N188A	N184A			RIGID	None	None	RIGID	Typical
87	M95A	N189	N180A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
88	M96A	N190A	N185A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
89	M97A	N192A	N193A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
90	M98A	N192A	N180A			Truss Verticals	Beam	None	A36 Gr.36	Typical
91	M99A	N190A	N193A			Truss Verticals	Beam	None	A36 Gr.36	Typical
92	M100A	N200	N194A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
93	M101A	N198	N186B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
94	M102A	N201	N195A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
95	M103A	N199	N187B		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
96	M104A	N203	N197A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
97	M105A	N202	N196A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
98	M106A	N185A	N200			Truss Verticals	Beam	None	A36 Gr.36	Typical
99	M107A	N194A	N198			Truss Verticals	Beam	None	A36 Gr.36	Typical
100	M108	N195A	N199			Truss Verticals	Beam	None	A36 Gr.36	Typical
101	M109	N187B	N203			Truss Verticals	Beam	None	A36 Gr.36	Typical
102	M110A	N197A	N202			Truss Verticals	Beam	None	A36 Gr.36	Typical
103	M111A	N191A	N188A		90	Truss Verticals	Beam	None	A36 Gr.36	Typical
104	M112A	N205	N79		90	Angle	Beam	None	A36 Gr.36	Typical
105	M113A	N189	N190A		180	WT	Beam	None	A36 Gr.36	Typical
106	M114A	N190A	N191A		180	WT	Beam	None	A36 Gr.36	Typical
107	M115A	N188A	N180A			WT	Beam	None	A36 Gr.36	Typical
108	MP12	N195B	N199A			Mount Pipe	Beam	None	A53 Gr.B	Typical
109	MP11	N196B	N200A			Mount Pipe	Beam	None	A53 Gr.B	Typical
110	MP10	N197B	N201A			Mount Pipe	Beam	None	A53 Gr.B	Typical
111	MP9	N198A	N202A			Mount Pipe	Beam	None	A53 Gr.B	Typical
112	MP8	N203A	N207			Mount Pipe	Beam	None	A53 Gr.B	Typical
113	MP7	N204A	N208			Mount Pipe	Beam	None	A53 Gr.B	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
114	MP6	N205A	N209			Mount Pipe	Beam	None	A53 Gr.B	Typical
115	MP5	N206A	N210			Mount Pipe	Beam	None	A53 Gr.B	Typical

Material Takeoff

	Material	Size	Pieces	Length[in]	Weight[K]
1	General				
2	RIGID		18	73.5	0
3	Total General		18	73.5	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	1.0x0.5"	52	473.9	0
7	A36 Gr.36	5x1.5	9	360.5	.3
8	A36 Gr.36	L3X3X6	12	310.7	.2
9	A500 Gr.B Rect	HSS4X3X4	3	150	.1
10	A53 Gr.B	PIPE_1.5	6	583	.1
11	A53 Gr.B	PIPE_2.5	15	1674	.8
12	Total HR Steel		97	3552.1	1.6
13					
14	Plate Elements	Thickness (in)		Volume (yds^3)	
15	gen_Conc3NW	.5	3	0	0
16	Total Plates		3	0	0

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(Me...	Surface(P...
1	Self Weight	DL		-1			36		9	
2	Wind Load AZI 000	WLZ					36		1	
3	Wind Load AZI 090	WLX					36		1	
4	Ice Weight	OL1					36	115	9	
5	Wind + Ice Load AZI ...	OL2					36		1	
6	Wind + Ice Load AZI ...	OL3					36		1	
7	Service Live 1	LL				6				
8	BLC 1 Transient Area...	None						36		
9	BLC 2 Transient Area...	None						112		
10	BLC 3 Transient Area...	None						106		
12	BLC 5 Transient Area...	None						112		
13	BLC 6 Transient Area...	None						46		

Load Combinations

	Description	S...	PD...	S...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	F...	B...	Fa...	F...	F...	F...	F...	F...
1	1.4D	Yes	Y		DL	1.4													
2	1.2D + 1W AZI 000	Yes	Y		DL	1.2	WLZ	1											
3	1.2D + 1W AZI 030	Yes	Y		DL	1.2	WLZ	.866	WLX	.5									
4	1.2D + 1W AZI 060	Yes	Y		DL	1.2	WLZ	.5	WLX	.866									
5	1.2D + 1W AZI 090	Yes	Y		DL	1.2			WLX	1									
6	1.2D + 1W AZI 120	Yes	Y		DL	1.2	WLZ	-.5	WLX	.866									
7	1.2D + 1W AZI 150	Yes	Y		DL	1.2	WLZ	-.866	WLX	.5									
8	1.2D + 1W AZI 180	Yes	Y		DL	1.2	WLZ	-1											
9	1.2D + 1W AZI 210	Yes	Y		DL	1.2	WLZ	-.866	WLX	-.5									
10	1.2D + 1W AZI 240	Yes	Y		DL	1.2	WLZ	-.5	WLX	-.866									
11	1.2D + 1W AZI 270	Yes	Y		DL	1.2			WLX	-1									
12	1.2D + 1W AZI 300	Yes	Y		DL	1.2	WLZ	.5	WLX	-.866									
13	1.2D + 1W AZI 330	Yes	Y		DL	1.2	WLZ	.866	WLX	-.5									

Load Combinations (Continued)

	Description	S...	PD...	S...	BLC	Factor	BLC	Factor	BLC	Factor	BLC	F...	B...	Fa...	F...	F...	F...	F...	F...
14	0.9D + 1W AZI 000	Yes	Y		DL	.9	WLZ	1											
15	0.9D + 1W AZI 030	Yes	Y		DL	.9	WLZ	.866	WLX	.5									
16	0.9D + 1W AZI 060	Yes	Y		DL	.9	WLZ	.5	WLX	.866									
17	0.9D + 1W AZI 090	Yes	Y		DL	.9			WLX	1									
18	0.9D + 1W AZI 120	Yes	Y		DL	.9	WLZ	-.5	WLX	.866									
19	0.9D + 1W AZI 150	Yes	Y		DL	.9	WLZ	-.866	WLX	.5									
20	0.9D + 1W AZI 180	Yes	Y		DL	.9	WLZ	-1											
21	0.9D + 1W AZI 210	Yes	Y		DL	.9	WLZ	-.866	WLX	-.5									
22	0.9D + 1W AZI 240	Yes	Y		DL	.9	WLZ	-.5	WLX	-.866									
23	0.9D + 1W AZI 270	Yes	Y		DL	.9			WLX	-1									
24	0.9D + 1W AZI 300	Yes	Y		DL	.9	WLZ	.5	WLX	-.866									
25	0.9D + 1W AZI 330	Yes	Y		DL	.9	WLZ	.866	WLX	-.5									
26	1.2D + 1.0Di	Yes	Y		DL	1.2	OL1	1											
27	1.2D + 1.0Di + 1.0Wi AZI 000	Yes	Y		DL	1.2	OL1	1	OL2	1									
28	1.2D + 1.0Di + 1.0Wi AZI 030	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	.5							
29	1.2D + 1.0Di + 1.0Wi AZI 060	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	.8...							
30	1.2D + 1.0Di + 1.0Wi AZI 090	Yes	Y		DL	1.2	OL1	1			OL3	1							
31	1.2D + 1.0Di + 1.0Wi AZI 120	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	.8...							
32	1.2D + 1.0Di + 1.0Wi AZI 150	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	.5							
33	1.2D + 1.0Di + 1.0Wi AZI 180	Yes	Y		DL	1.2	OL1	1	OL2	-1									
34	1.2D + 1.0Di + 1.0Wi AZI 210	Yes	Y		DL	1.2	OL1	1	OL2	-.866	OL3	-.5							
35	1.2D + 1.0Di + 1.0Wi AZI 240	Yes	Y		DL	1.2	OL1	1	OL2	-.5	OL3	-....							
36	1.2D + 1.0Di + 1.0Wi AZI 270	Yes	Y		DL	1.2	OL1	1			OL3	-1							
37	1.2D + 1.0Di + 1.0Wi AZI 300	Yes	Y		DL	1.2	OL1	1	OL2	.5	OL3	-....							
38	1.2D + 1.0Di + 1.0Wi AZI 330	Yes	Y		DL	1.2	OL1	1	OL2	.866	OL3	-.5							
39	1.2D + 1.5L + 1.0WL (30 mph) AZI 000	Yes	Y		DL	1.2	LL	1.5	WLZ	.058									
40	1.2D + 1.5L + 1.0WL (30 mph) AZI 030	Yes	Y		DL	1.2	LL	1.5	WLZ	.05	W...	.0...							
41	1.2D + 1.5L + 1.0WL (30 mph) AZI 060	Yes	Y		DL	1.2	LL	1.5	WLZ	.029	W...	.05							
42	1.2D + 1.5L + 1.0WL (30 mph) AZI 090	Yes	Y		DL	1.2	LL	1.5			W...	.0...							
43	1.2D + 1.5L + 1.0WL (30 mph) AZI 120	Yes	Y		DL	1.2	LL	1.5	WLZ	-.029	W...	.05							
44	1.2D + 1.5L + 1.0WL (30 mph) AZI 150	Yes	Y		DL	1.2	LL	1.5	WLZ	-.05	W...	.0...							
45	1.2D + 1.5L + 1.0WL (30 mph) AZI 180	Yes	Y		DL	1.2	LL	1.5	WLZ	-.058									
46	1.2D + 1.5L + 1.0WL (30 mph) AZI 210	Yes	Y		DL	1.2	LL	1.5	WLZ	-.05	W...	-....							
47	1.2D + 1.5L + 1.0WL (30 mph) AZI 240	Yes	Y		DL	1.2	LL	1.5	WLZ	-.029	W...	-.05							
48	1.2D + 1.5L + 1.0WL (30 mph) AZI 270	Yes	Y		DL	1.2	LL	1.5			W...	-....							
49	1.2D + 1.5L + 1.0WL (30 mph) AZI 300	Yes	Y		DL	1.2	LL	1.5	WLZ	.029	W...	-.05							
50	1.2D + 1.5L + 1.0WL (30 mph) AZI 330	Yes	Y		DL	1.2	LL	1.5	WLZ	.05	W...	-....							

Envelope Joint Reactions

	Joint		X [lb]	LC	Y [lb]	LC	Z [lb]	LC	MX [lb-ft]	LC	MY [lb-ft]	LC	MZ [lb-ft]	LC
1	N179	max	102.012	11	176.586	34	-1722.159	20	159.559	27	281.705	23	38.246	11
2		min	-108.313	5	38.752	14	-14346.474	27	35.456	20	-275.262	17	-38.4	5
3	N170	max	1339.417	5	3720.054	27	11506.586	28	241.686	27	2328.8	23	54.355	23
4		min	-1328.628	11	786.982	20	-5096.79	20	49.176	20	-2344.381	5	-55.429	5
5	N155B	max	-1442.732	24	157.512	28	7163.368	32	2.265	24	1076.073	10	-27.76	17
6		min	-12348.294	31	36.869	19	838.891	25	-82.673	30	-1054.454	16	-140.844	36
7	N189	max	12436.436	35	157.235	28	7135.218	34	2.252	17	1123.812	12	141.908	30
8		min	1389.963	16	36.596	22	849.66	15	-83.836	36	-1110.454	18	27.807	23
9	N180A	max	4374.898	16	3728.678	35	2847.427	16	4.061	25	1131.226	10	210.305	37
10		min	-9560.177	35	787.519	16	-6008.09	35	-119.55	33	-1134.584	4	32.637	18
11	N146B	max	9119.812	32	3725.118	31	2879.384	24	4.657	14	1244.423	24	-32.209	22
12		min	-4300.87	24	787.514	24	-5604.074	32	-122.759	33	-1273.714	6	-209.311	29
13	Totals:	max	9664.674	17	11564.16	36	9868.502	2						
14		min	-9664.674	11	2904.87	17	-9868.502	20						

Envelope AISC 14th(360-10): LRFD Steel Code Checks

	Member	Shape	Code Ch...	Loc[in]	LC	Shear Check	Loc.....		LC	phi*Pnc [lb]	phi*Pn...	phi*M...	phi*M...	...	Eqn
1	M84	5x1.5	.458	59.5	24	.082	48....	z	9	20938.22	97200	8606.25	787.5	2..	H1-1a
2	M115A	5x1.5	.449	59.5	16	.075	48....	z	13	20938.22	97200	8606.25	787.5	2..	H1-1a
3	M98	1.0x0.5"	.441	12	30	.039	0	y	5	11258.738	16200	168.75	337.5	2..	H1-1a
4	M117	5x1.5	.422	59.5	30	.108	48....	z	5	20938.22	97200	8606.25	787.5	2..	H1-1b
5	M66	1.0x0.5"	.416	12	33	.027	12	y	8	11258.738	16200	168.75	337.5	2..	H1-1a
6	M97A	1.0x0.5"	.414	0	36	.022	12	y	8	11258.738	16200	168.75	337.5	2..	H1-1a
7	M68	1.0x0.5"	.371	0	36	.054	0	y	10	8292.778	16200	168.75	337.5	2..	H1-1a
8	M100	1.0x0.5"	.369	0	30	.017	0	y	36	8292.778	16200	168.75	337.5	2..	H1-1a
9	M99A	1.0x0.5"	.369	0	30	.056	16....	y	12	8292.778	16200	168.75	337.5	2..	H1-1a
10	M46	PIPE_1.5	.342	48.486	12	.034	96....		4	7039.06	23593.5	1105.1..	1105.1..	1..	H1-1a
11	M85	PIPE_1.5	.342	48.486	4	.036	96....		6	7039.06	23593.5	1105.1..	1105.1..	1..	H1-1a
12	M118	PIPE_1.5	.338	48.486	8	.025	0		10	7039.06	23593.5	1105.1..	1105.1..	1..	H1-1a
13	M81	L3X3X6	.335	0	34	.098	4.015	y	2	60741.528	68364	2307.3..	5322.3..	2..	H2-1
14	M112A	L3X3X6	.329	0	36	.105	4.015	y	6	60741.528	68364	2307.3..	5322.3..	2..	H2-1
15	M86A	L3X3X6	.329	0	33	.097	4.015	z	2	60741.528	68364	2307.3..	5322.3..	2..	H2-1
16	M67	1.0x0.5"	.328	0	36	.024	0	y	11	8292.778	16200	168.75	337.5	1..	H1-1a
17	M55	L3X3X6	.328	0	30	.106	4.015	z	10	60741.528	68364	2307.3..	5322.3..	2..	H2-1
18	M98A	1.0x0.5"	.327	0	31	.025	0	y	5	8292.778	16200	168.75	337.5	1..	H1-1a
19	M99	1.0x0.5"	.325	0	30	.024	0	y	5	8292.778	16200	168.75	337.5	1..	H1-1a
20	M44A	L3X3X6	.323	0	28	.099	0	z	6	60741.528	68364	2307.3..	5322.3..	2..	H2-1
21	M114	L3X3X6	.322	0	27	.100	0	y	10	60741.528	68364	2307.3..	5322.3..	2..	H2-1
22	MP4	PIPE_2.5	.301	48	8	.036	48		8	30038.461	50715	3596.25	3596.25	1..	H1-1b
23	M101A	1.0x0.5"	.289	8.847	13	.030	8.847	y	13	13293.177	16200	168.75	337.5	1..	H1-1b
24	MP1	PIPE_2.5	.283	48	2	.033	48		2	30038.461	50715	3596.25	3596.25	1..	H1-1b
25	M70	1.0x0.5"	.283	8.847	3	.033	8.847	y	9	13293.177	16200	168.75	337.5	1..	H1-1b
26	MP8	PIPE_2.5	.282	48	5	.033	48		5	30038.461	50715	3596.25	3596.25	1..	H1-1b
27	MP12	PIPE_2.5	.281	48	11	.033	48		11	30038.461	50715	3596.25	3596.25	1..	H1-1b
28	M103A	1.0x0.5"	.281	5.693	12	.048	5.693	y	13	14926.016	16200	168.75	337.5	1..	H1-1b
29	M111A	1.0x0.5"	.277	0	36	.114	0	y	13	16088.803	16200	168.75	337.5	2..	H1-1b
30	M65	1.0x0.5"	.277	12	2	.035	12	y	7	11258.738	16200	168.75	337.5	2..	H1-1b
31	MP9	PIPE_2.5	.275	48	5	.032	48		5	30038.461	50715	3596.25	3596.25	1..	H1-1b
32	MP5	PIPE_2.5	.275	48	5	.032	48		5	30038.461	50715	3596.25	3596.25	1..	H1-1b
33	M96A	1.0x0.5"	.274	12	13	.028	12	y	9	11258.738	16200	168.75	337.5	1..	H1-1b
34	M113A	5x1.5	.271	0	36	.045	22	z	11	76999.862	97200	8606.25	1260	1..	H1-1b
35	M80A	1.0x0.5"	.270	0	30	.111	0	y	3	16088.803	16200	168.75	337.5	2..	H1-1b
36	M72	1.0x0.5"	.268	5.693	3	.049	5.693	y	9	14926.016	16200	168.75	337.5	1..	H1-1b
37	M82	5x1.5	.261	0	35	.045	22	z	5	76999.862	97200	8606.25	1260	1..	H1-1b
38	M97	1.0x0.5"	.257	12	5	.041	0	y	5	11258.738	16200	168.75	337.5	2..	H1-1b
39	M79	PIPE_2.5	.241	39.875	16	.149	9.062		4	10819.554	50715	3596.25	3596.25	1..	H1-1b
40	M115	5x1.5	.240	0	36	.059	11....	y	5	76999.862	97200	8606.25	1260	1..	H1-1b
41	M40	PIPE_2.5	.238	134.125	24	.149	9.062		12	10819.554	50715	3596.25	3596.25	1..	H1-1b
42	MP3	PIPE_2.5	.227	48	8	.025	48		8	30038.461	50715	3596.25	3596.25	1..	H1-1b
43	M113	1.0x0.5"	.226	2.54	29	.101	2.54	y	29	16088.803	16200	168.75	337.5	2..	H1-1b
44	M1	PIPE_2.5	.219	39.875	19	.181	9.063		8	10819.554	50715	3596.25	3596.25	1..	H1-1b
45	MP7	PIPE_2.5	.216	48	5	.024	48		5	30038.461	50715	3596.25	3596.25	1..	H1-1b
46	MP11	PIPE_2.5	.215	48	11	.024	48		11	30038.461	50715	3596.25	3596.25	1..	H1-1b
47	M100A	1.0x0.5"	.215	10.423	13	.021	10....	y	2	12310.828	16200	168.75	337.5	1..	H1-1b
48	M69	1.0x0.5"	.213	10.423	3	.026	10....	y	8	12310.828	16200	168.75	337.5	1..	H1-1b
49	M133	PIPE_1.5	.197	48.684	8	.023	0		10	6982.004	23593.5	1105.1..	1105.1..	1..	H1-1b
50	MP2	PIPE_2.5	.196	48	8	.022	48		8	30038.461	50715	3596.25	3596.25	1..	H1-1b
51	MP10	PIPE_2.5	.195	48	11	.022	48		11	30038.461	50715	3596.25	3596.25	1..	H1-1b
52	MP6	PIPE_2.5	.194	48	5	.022	48		5	30038.461	50715	3596.25	3596.25	1..	H1-1b
53	M102A	1.0x0.5"	.189	7.27	13	.029	7.27	y	7	14174.716	16200	168.75	337.5	1..	H1-1b
54	M43	L3X3X6	.187	0	29	.009	0	z	27	62375.854	68364	2307.3..	5322.3..	1..	H2-1
55	M83	5x1.5	.187	19.337	31	.058	6.446	z	10	47315.576	97200	8606.25	787.5	1..	H1-1b
56	M101	1.0x0.5"	.187	10.423	5	.033	0	y	5	12310.828	16200	168.75	337.5	2..	H1-1b

Envelope AISC 14th(360-10): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Ch...	Loc[in]	LC	Shear Check	Loc.....		LC	phi*Pnc [lb]	phi*Pn...	phi*M...	phi*M...	...	Eqn
57	M102	1.0x0.5"	.187	8.847	5	.029	0	y	5	13293.177	16200	168.75	337.5	2..	H1-1b
58	M54	L3X3X6	.186	0	32	.009	0	z	30	62375.854	68364	2307.3..	5322.3..	1..	H2-1
59	M80	L3X3X6	.184	0	37	.009	0	y	28	62375.854	68364	2307.3..	5322.3..	1..	H2-1
60	M71	1.0x0.5"	.184	7.27	3	.031	7.27	y	9	14174.716	16200	168.75	337.5	1..	H1-1b
61	M90	PIPE_1.5	.183	48.684	4	.033	0		6	6982.004	23593.5	1105.1..	1105.1..	1..	H1-1b
62	M114A	5x1.5	.183	19.337	35	.061	6.446	z	12	47315.576	97200	8606.25	787.5	2..	H1-1b
63	M51	PIPE_1.5	.183	48.684	12	.031	0		4	6982.004	23593.5	1105.1..	1105.1..	1..	H1-1b
64	M88A	L3X3X6	.182	0	34	.009	0	y	36	62375.854	68364	2307.3..	5322.3..	1..	H2-1
65	M85A	L3X3X6	.181	0	37	.010	0	z	34	62375.854	68364	2307.3..	5322.3..	1..	H2-1
66	M57	L3X3X6	.180	0	29	.009	0	y	32	62375.854	68364	2307.3..	5322.3..	1..	H2-1
67	M107	1.0x0.5"	.177	0	4	.058	12....	y	5	11153.731	16200	168.75	337.5	2..	H1-1b
68	M116	5x1.5	.170	0	27	.049	32....	z	5	47315.576	97200	8606.25	787.5	1..	H1-1b*
69	M104A	1.0x0.5"	.159	4.905	12	.038	4.905	y	13	15244.483	16200	168.75	337.5	1..	H1-1b
70	M106A	1.0x0.5"	.157	0	37	.069	12....	y	13	11153.731	16200	168.75	337.5	2..	H1-1b
71	M104	1.0x0.5"	.155	5.693	5	.029	0	y	5	14926.016	16200	168.75	337.5	2..	H1-1b
72	M107A	1.0x0.5"	.153	0	37	.062	10....	y	13	12043.749	16200	168.75	337.5	2..	H1-1b
73	M73	1.0x0.5"	.149	4.905	4	.040	4.905	y	9	15244.483	16200	168.75	337.5	1..	H1-1b
74	M75	1.0x0.5"	.149	0	28	.070	12....	y	9	11153.731	16200	168.75	337.5	2..	H1-1b
75	M76	1.0x0.5"	.147	0	29	.062	10....	y	9	12043.749	16200	168.75	337.5	2..	H1-1b
76	M109	1.0x0.5"	.140	0	37	.075	0	y	12	14872.909	16200	168.75	337.5	2..	H1-1b
77	M103	1.0x0.5"	.138	7.27	5	.027	0	y	5	14174.716	16200	168.75	337.5	2..	H1-1b
78	M78	1.0x0.5"	.132	0	29	.072	5.816	y	9	14872.909	16200	168.75	337.5	2..	H1-1b
79	M74	1.0x0.5"	.128	4.117	34	.045	4.117	y	9	15520.92	16200	168.75	337.5	2..	H1-1b
80	M105A	1.0x0.5"	.125	4.117	32	.042	4.117	y	7	15520.92	16200	168.75	337.5	2..	H1-1b
81	M108B	1.0x0.5"	.123	0	5	.055	10....	y	5	12043.749	16200	168.75	337.5	2..	H1-1b
82	M110A	1.0x0.5"	.115	0	37	.057	0	y	12	15142.609	16200	168.75	337.5	2..	H1-1b
83	M79A	1.0x0.5"	.111	0	29	.054	0	y	4	15142.609	16200	168.75	337.5	2..	H1-1b
84	M111	1.0x0.5"	.111	0	5	.070	5.816	y	5	14872.909	16200	168.75	337.5	2..	H1-1b
85	M109B	1.0x0.5"	.108	0	5	.064	9.587	y	5	12842.431	16200	168.75	337.5	2..	H1-1b
86	M105	1.0x0.5"	.106	4.905	5	.031	0	y	5	15244.483	16200	168.75	337.5	2..	H1-1b
87	M108	1.0x0.5"	.104	0	37	.055	0	y	12	13523.117	16200	168.75	337.5	2..	H1-1b
88	M106	1.0x0.5"	.103	4.117	29	.040	0	y	5	15520.92	16200	168.75	337.5	2..	H1-1b
89	M77	1.0x0.5"	.101	0	29	.052	8.454	y	3	13523.117	16200	168.75	337.5	2..	H1-1b
90	M90A	HSS4X3X4	.099	3.125	6	.096	42....	z	13	106300.969	120474	10764	13144.5	1..	H1-1b
91	M59	HSS4X3X4	.097	3.125	10	.099	42....	z	9	106300.969	120474	10764	13144.5	1..	H1-1b
92	M112	1.0x0.5"	.086	5.168	29	.060	5.168	y	5	15142.609	16200	168.75	337.5	2..	H1-1b
93	M91	HSS4X3X4	.078	3.646	28	.083	42....	z	5	106300.969	120474	10764	13144.5	3..	H1-1b
94	M110	1.0x0.5"	.069	0	5	.054	8.454	y	5	13523.117	16200	168.75	337.5	2..	H1-1b
95	M95A	1.0x0.5"	.005	0	11	.001	0	z	23	11258.738	16200	168.75	337.5	1	H1-1b
96	M96	1.0x0.5"	.005	0	11	.001	0	z	23	11258.738	16200	168.75	337.5	1	H1-1b
97	M64	1.0x0.5"	.005	0	11	.001	0	z	23	11258.738	16200	168.75	337.5	1	H1-1b

APPENDIX D

ADDITIONAL CALCUATIONS

Date:	1/29/2019
Client	Crown Castle
Carrier	Verizon
Engineer:	CLK
Site:	876334
Job #:	1039-D0002-B

Code:	LRFD	
Axial:	3728.00	lbs
Shear:	14346.00	lbs

Bolt Capacity (5/8" A325 Bolt)				
	Ult Load / Bolt	Factored Load (ϕ=0.75)	# of Bolts	Factor Joint Capacity
Axial (lb)	27120.0	20340.0	2	40680
Shear(lb)	16573.3	12430.0	2	24860

Interaction Check	
$T/\phi T_n$	9.2%
$V/\phi Vn$	57.7%
≤1.0	34.1%
	OK

verizon

SOUTHINGTON_CT
625 SPRING ST.
SOUTHINGTON, CT 06489

PROJECT SUMMARY

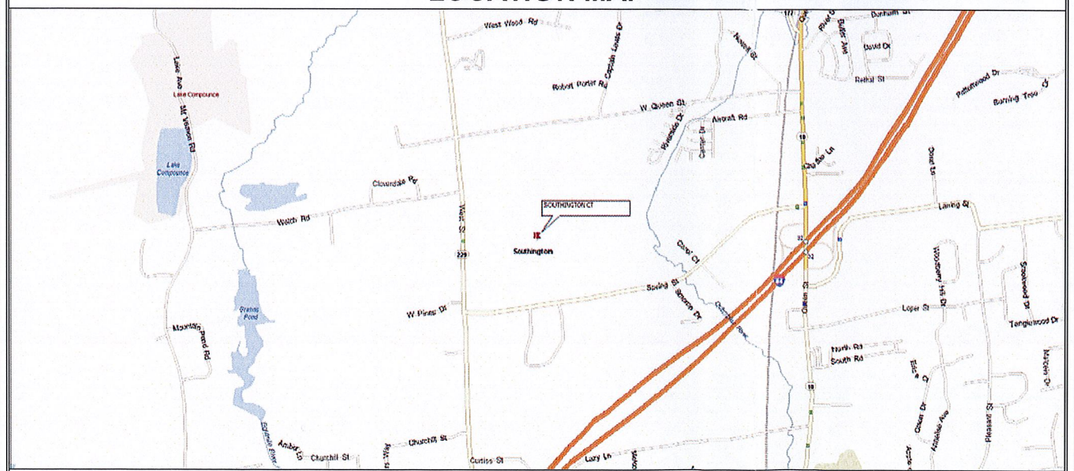
SITE NAME:	SOUTHINGTON_CT
SITE ADDRESS:	625 SPRING ST. SOUTHINGTON, CT 06489
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DR CANONSBURG, PA 15317
BU NUMBER:	876334
PARCEL NUMBER:	168020
CUSTOMER/APPLICANT:	VERIZON WIRELESS 20 ALEXANDER DRIVE, 2ND FLOOR WALLINGFORD, CT 06492
CONTACT:	JIM O'DONNELL (203) 741-7338
NAD83	
LATITUDE:	41° 37' 56.89" N
LONGITUDE:	72° 53' 39.29" W
ELEVATION:	300'
CURRENT ZONING:	R-40
A&E FIRM:	B+T GROUP 1717 S. BOULDER, SUITE 300 TULSA, OK 74119 STEVE THORNHILL (918) 587-4630
OCCUPANCY TYPE:	UNMANNED
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION.

CODE COMPLIANCE

ALL WORK SHALL BE PERFORMED AND MATERIALS INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES:

CODE TYPE	CODE
BUILDING	IBC 2012
STRUCTURAL	IBC 2012
MECHANICAL	IMC 2012
ELECTRICAL	NEC 2014

LOCATION MAP



NO SCALE

DRIVING DIRECTIONS

DEPART FROM BRADLEY INTERNATIONAL: HEAD NORTH ON NORTH ST TOWARD LIGHT LN. TURN RIGHT ONTO ELLA GRASSO TURNPIKE. TURN LEFT ONTO ELM ST. TURN RIGHT ONTO OLD COUNTY RD. CONTINUE ONTO KENNEDY RD. CONTINUE STRAIGHT TO STAY ON KENNEDY RD. TURN RIGHT TO MERGE ONTO I-91 S TOWARD HARTFORD. TAKE EXIT 32A-32B FOR I-84 W TOWARD WATERBURY. MERGE ONTO I-84. KEEP LEFT TO STAY ON I-84. TAKE EXIT 32 FOR CT-10/QUEEN ST. TURN LEFT ONTO CT-10 N/QUEEN ST. TURN LEFT ONTO SPRING ST. TURN RIGHT ONTO ACCESS ROAD AND ARRIVE AT SITE NAME.

DRAWING INDEX

SHEET #	SHEET DESCRIPTION	REV. #
T-1	TITLE SHEET	0
A-1	COMPOUND PLAN AND TOWER ELEVATION	0
A-2	EQUIPMENT DETAILS	0
A-3	MOUNT DETAILS	0

A/E DOCUMENT REVIEW STATUS

TITLE	SIGNATURE	DATE
OWNER:		
R.F. ENGINEER:		
CONSTRUCTION MGR.:		
LEASING & ZONING:		
VERIZON WIRELESS:		

THE FOLLOWING PARTIES HEREBY APPROVE AND ACCEPT THESE DOCUMENTS AND AUTHORIZE THE CONTRACTOR TO PROCEED WITH THE CONSTRUCTION DESCRIBED HEREIN. ALL DOCUMENTS ARE SUBJECT TO REVIEW BY THE LOCAL BUILDING DEPARTMENT AND MAY IMPOSE CHANGES OR MODIFICATIONS.

DO NOT SCALE DRAWINGS

ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR 11x17. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455
CALL 3 WORKING DAYS
BEFORE YOU DIG!

811

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400 FRIBERG PARKWAY
WESTBOROUGH, MA 01581
PH: (508) 330-3300

SOUTHINGTON_CT
625 SPRING ST.
SOUTHINGTON, CT 06489
EXISTING MONOPOLE

PROJECT NO:	127834.001.01
CHECKED BY:	RPS

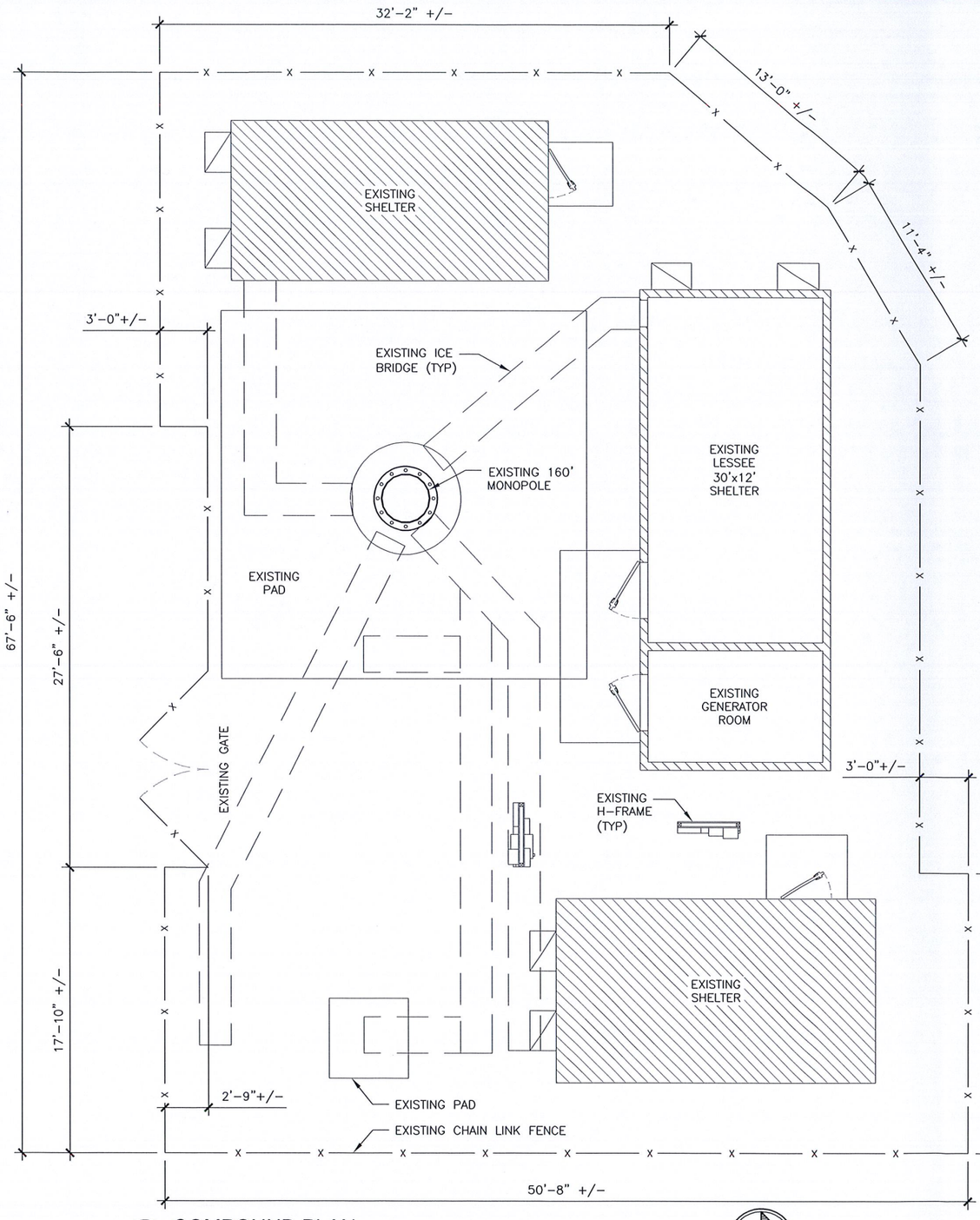
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/22/18	JDP	PRELIMINARY REVIEW
0	12/4/18	GEH	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/19

STATE OF CONNECTICUT
12/4/18
31627
LICENSED
PROFESSIONAL ENGINEER

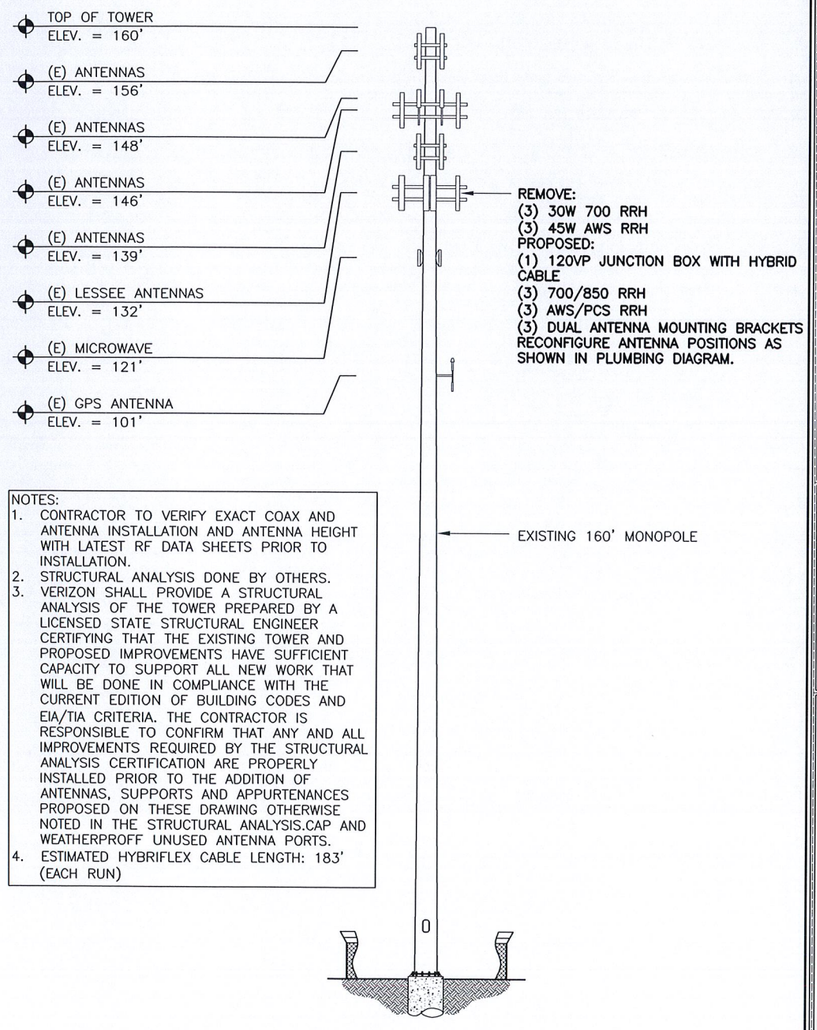
SHEET NUMBER: T-1
REVISION: 0



1 COMPOUND PLAN

SCALE: 0' 1' 4' 8' 20'

N



NOTES:
1. CONTRACTOR TO VERIFY EXACT COAX AND ANTENNA INSTALLATION AND ANTENNA HEIGHT WITH LATEST RF DATA SHEETS PRIOR TO INSTALLATION.
2. STRUCTURAL ANALYSIS DONE BY OTHERS.
3. VERIZON SHALL PROVIDE A STRUCTURAL ANALYSIS OF THE TOWER PREPARED BY A LICENSED STATE STRUCTURAL ENGINEER CERTIFYING THAT THE EXISTING TOWER AND PROPOSED IMPROVEMENTS HAVE SUFFICIENT CAPACITY TO SUPPORT ALL NEW WORK THAT WILL BE DONE IN COMPLIANCE WITH THE CURRENT EDITION OF BUILDING CODES AND EIA/TIA CRITERIA. THE CONTRACTOR IS RESPONSIBLE TO CONFIRM THAT ANY AND ALL IMPROVEMENTS REQUIRED BY THE STRUCTURAL ANALYSIS CERTIFICATION ARE PROPERLY INSTALLED PRIOR TO THE ADDITION OF ANTENNAS, SUPPORTS AND APPURTENANCES PROPOSED ON THESE DRAWING OTHERWISE NOTED IN THE STRUCTURAL ANALYSIS.CAP AND WEATHERPROFF UNUSED ANTENNA PORTS.
4. ESTIMATED HYBRIFLEX CABLE LENGTH: 183' (EACH RUN)

2 FINAL TOWER ELEVATION

SCALE: 0' 4' 8' 16' 32'

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SOUTHINGTON_CT

625 SPRING ST.
SOUTHINGTON, CT 06489

EXISTING MONOPOLE

PROJECT NO:	127834.001.01
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0	12/4/18	GEH	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/19

STATE OF CONNECTICUT
12/4/18
31627
LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER: A-1

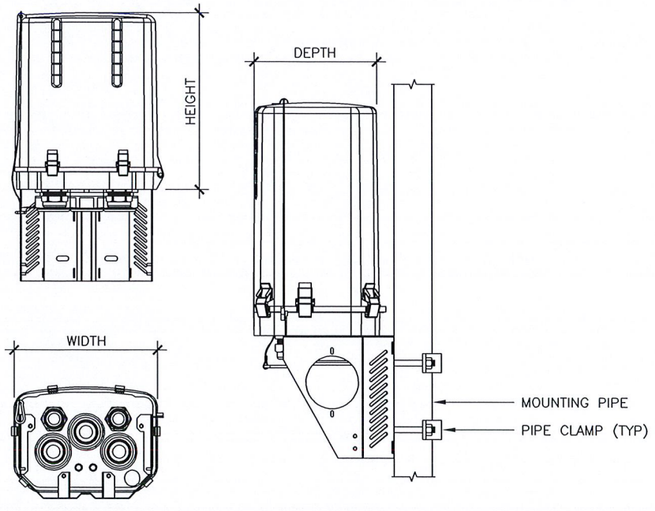
REVISION: 0

PLUMBING DIAGRAM
NOT AVAILIBLE AT
TIME OF ISSUE

1 ANTENNA SYSTEM LAYOUT
SCALE: N.T.S.

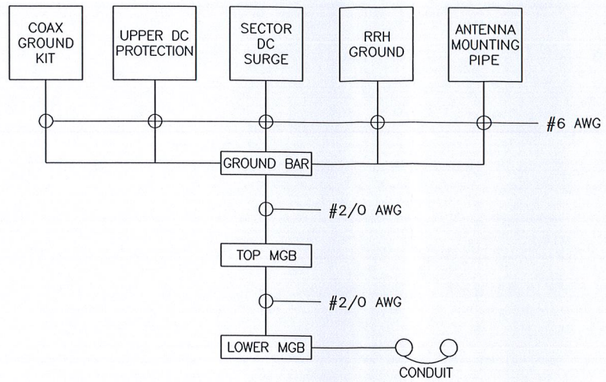
DC SURGE SUPPRESSION DIMENSIONS (INCHES)

MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DB-C1-12C-24AB-0Z	29.5"	16.5"	12.6"	32 LBS



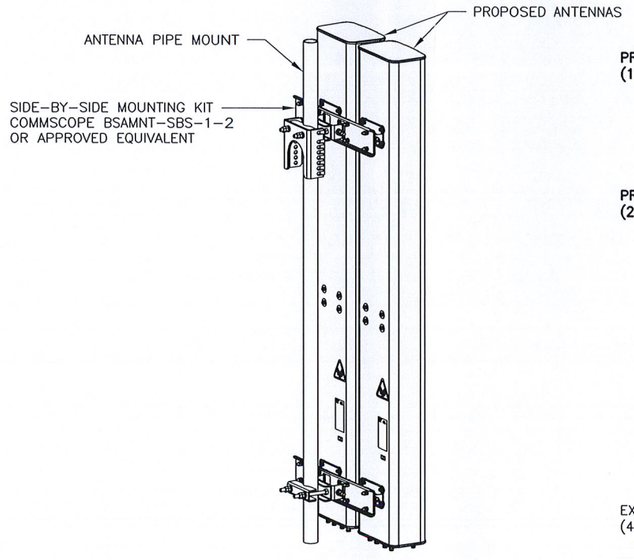
4 RAYCAP SPECIFICATIONS
SCALE: N.T.S.

NOTE:
1. INSTALL ALL EQUIPMENT, MOUNTING BRACKETS AND HARDWARE ACCORDING WITH MANUFACTURE'S RECOMMENDATIONS.
2. GROUND DISTRIBUTION BOXES, MOUNTING PIPES AND RRHs IN ACCORDANCE WITH MANUFACTURE'S RECOMMENDATIONS.
3. INSTALLED EQUIPMENT AND MOUNTING BRACKETS SHALL NOT INTERFERE WITH CLIMBING ACCESS NOR ANT INSTALLED SAFETY DEVICES.
4. EQUIPMENT TO BE INSTALLED AT VERIZON'S RAD. CENTER IN ACCORDANCE WITH TOWER STRUCTURAL ANALYSIS (ANALYSIS BY OTHERS).



NOTE:
1. BOND ANTENNA GROUNDING KIT CABLES TO TOP CIBE.
2. BOND ANTENNA GROUNDING KIT CABLE TO BOTTOM CIBE.
3. TYPICAL FOR ALL SECTORS.

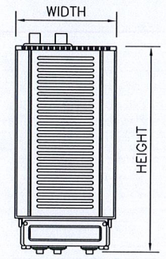
2 GROUNDING SCHEMATIC DIAGRAM
SCALE: N.T.S.



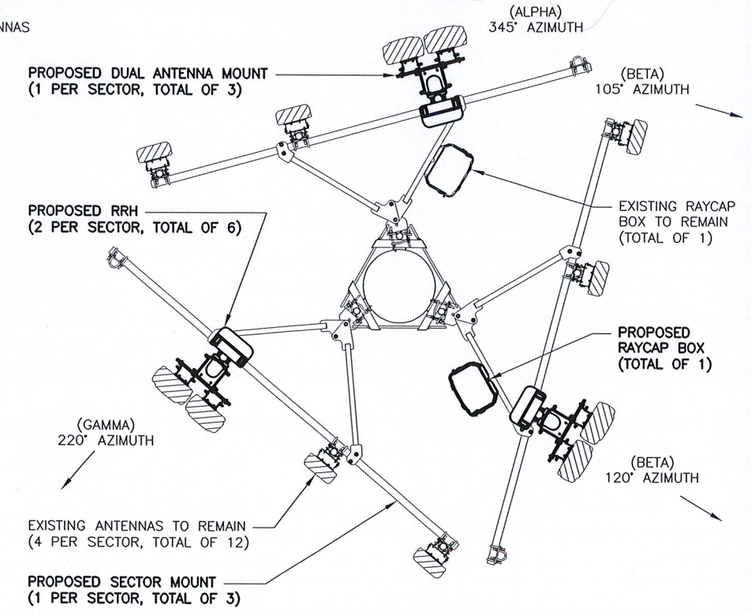
5 ANTENNA MOUNTING DETAIL
SCALE: N.T.S.

REMOTE RADIO HEAD DIMENSIONS (INCHES)

MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
RFV01U-D1A	15.00"	15.00"	10.00"	84.4 LBS
RFV01U-D2A	15.00"	15.00"	8.10"	70.3 LBS



3 RRH SPECIFICATIONS
SCALE: N.T.S.



6 ANTENNA ORIENTATION
SCALE: N.T.S.

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SOUTHINGTON_CT

625 SPRING ST.
SOUTHINGTON, CT 06489

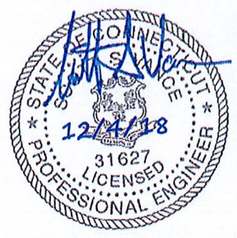
EXISTING MONOPOLE

PROJECT NO:	127834.001.01
CHECKED BY:	RPS

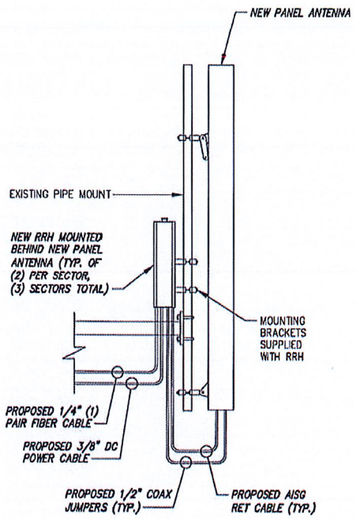
ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/22/18	JDP	PRELIMINARY REVIEW
0	12/4/18	GEH	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/19

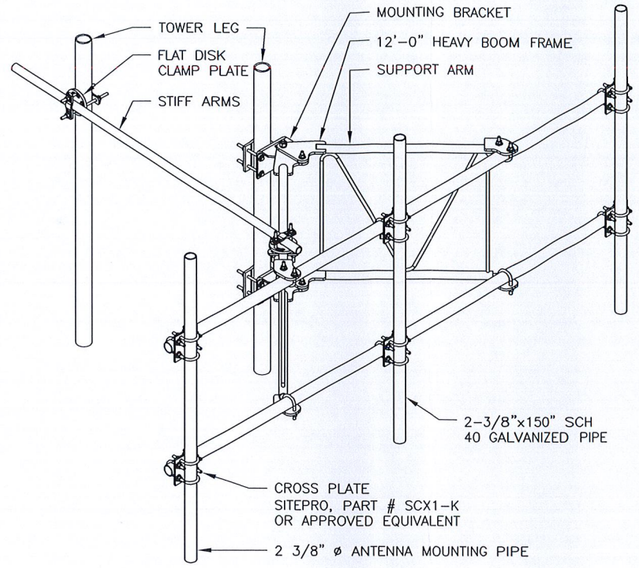


SHEET NUMBER:	REVISION:
A-2	0



1 ANTENNA MOUNTING DETAIL

SCALE: N.T.S.



2 SECTOR MOUNT DETAIL

SCALE: N.T.S.

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verizon

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PH: (508) 330-3300

SOUTHINGTON_CT

625 SPRING ST.
SOUTHINGTON, CT 06489

EXISTING MONOPOLE

PROJECT NO:	127834.001.01
CHECKED BY:	RPS

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION
A	8/22/18	JDP	PRELIMINARY REVIEW
0	12/4/18	GEH	CONSTRUCTION

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/19

STATE OF CONNECTICUT * SCOTT R. LINDER * 12/4/18 31627 LICENSED PROFESSIONAL ENGINEER

SHEET NUMBER:	REVISION:
A-3	0