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

March 3, 2022

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

RE: **Notice of Exempt Modification for ATT**
Crown#876334; ATT Site ID CTL05250
625 Spring Street, Southington, CT 06489
Latitude: 41° 37′ 56.90" / Longitude: -72° 53' 39.30″

Dear Ms. Bachman:

ATT currently maintains nine (9) antennas at the 157-foot mount on the existing 160-foot monopole tower located at 625 Spring Street, Southington, CT. The property and tower are owned by Crown Castle Global Signal. ATT now intends to add three (3) new antennas, replace six (6) antennas and ancillary equipment at the 157ft level. This modification/proposal includes hardware that is both 4G (LTE) and 5G capable through remote software configuration and either or both services may be turned on or off at various times.

Panned Modification:

Tower:

Installed New:

(1) CCI – TPA65R-BU6DA Antennas
(6) Ericsson - AIR6449 N77D + AIR 6419 N77G Stacked Antennas
(2) CCI – DMP65R-BU8DA Antennas
(2) Quintel QD6616-7 Antenna
(1) Quintel QD8616-7 Antenna
(3) Ericsson – 4449 B5/B12 RRU
(1) Squid Dome
(3) DC Cables
(1) Fiber Cable
(3) Y Cables

Remove:

(1) Kathrein 800-10798 Antenna
(1) Kathrein 800-10965 Antenna
(1) KMW-AM-X-CD-16-65-00T-RET Antenna
(2) Andrew-SBNH-1D6565C
(2) CCI-TPA-65R-LCUUUU-H8 Antennas
(2) Kathrein – 800-10966 Antennas

(1) Squid Dome
(3) Ericsson- 11 B12 RRU
(3) Ericsson- 12 B5 RRU
(2) DC Trunks

Ground:

Install New:
(1.) 6648 W/XCEDE Cable
(1.) 6630
(1) Rectifier
(1) IDLE Cable

Remove:
(6) Triplexers- TPX-070821
(3) Commscope ATSBT-Bottom-FF-4G BIAS T's
(1) Battery
(2) Rectifiers

The facility was approved by the Town of Southington Planning and Zoning Commission on May 18, 1998.

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.C.S.A. § 16-50j-73, a copy of this letter is being sent to Mark J Sciota – Town Manager, Town of Southington, Matthew Reimondo – ZEO, Town of Southington. Crown Castle is the property and tower 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, ATT 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
Site Acquisition Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053 Jeff.Barbadora@crowncastle.com

Attachments
cc:

Mark J Sciota – Town Manager
Town of Southington
75 Main Street
Southington, CT 06489
(860) 276-6200

Matthew Reimondo - ZEO
Town of Southington
146 North Main Street
Southington, CT 06489
(860) 276-6269

Crown Castle, Property Owner and Tower Owner

3Rd 11/19/803 CK#1003 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.

Frank Vinci 5/18/98
Zoning Enforcement Officer / 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	$253,850	**Appraisal**	$362,630
PID	15908	**Building Count**	1

Current Value

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$23,750	$338,880	$362,630
Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2020	$16,630	$237,220	$253,850

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**	0788/0214
		Sale Date	04/25/2001

Ownership History

Ownership History				
Owner	**Sale Price**	**Certificate**	**Book & Page**	**Sale Date**
GLOBAL SIGNAL ACQUISITIONS II LLC	$0		0788/0214	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	
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	
.	
Bsmt Type	
Attic Type	
Cath Ceiling	
Fndtn Cndtn	
Basement	

Building Photo

(http://images.vgsi.com/photos2/SouthingtonCTPhotos//\00\05\81\46.jpg)

Building Layout

(ParcelSketch.ashx?pid=15908&bid=15908)

Building Sub-Areas (sq ft)	Legend
No Data for Building Sub-Areas	

Extra Features

Extra Features	Legend
No Data for Extra Features	

Land

Land Use

Use Code	438
Description	Cell Site
Zone	R-40
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.62
Depth	

Outbuildings

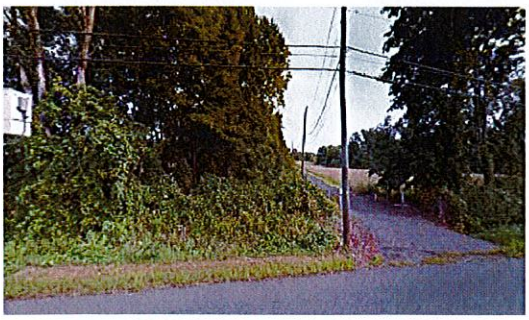
Outbuildings					Legend
Code	**Description**	**Sub Code**	**Sub Description**	**Size**	**Bldg #**
FN5	Fence-10'Chain			233.00 L.F.	1
SHD5	Cell Shed			360.00 units	1
SHD5	Cell Shed			240.00 units	1
SHD5	Cell Shed			180.00 units	1

Valuation History

Appraisal			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$23,750	$338,880	$362,630
2020	$23,750	$338,880	$362,630
2019	$23,750	$206,120	$229,870
2018	$23,750	$206,120	$229,870
2017	$3,500	$206,120	$209,620

Assessment			
Valuation Year	**Improvements**	**Land**	**Total**
2021	$16,630	$237,220	$253,850
2020	$16,630	$237,220	$253,850
2019	$16,630	$144,280	$160,910
2018	$16,630	$144,280	$160,910
2017	$2,450	$144,280	$146,730

625 Spring St



625 Spring St

Southington, CT 06489

Directions Save Nearby Send to your phone Share

J4H4+G5 Southington, Connecticut

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, March 4, 2022 10:12 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 776198460859: Your package has been delivered

Hi. Your package was delivered Fri, 03/04/2022 at 10:10am.

Delivered to 75 MAIN ST, SOUTHINGTON, CT 06489
Received by R.DEBBIE

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER 776198460859

FROM	Jeff Barbadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Southington Mark j Sciota Town Manager 75 Main Street SOUTHINGTON, CT, US, 06489
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 3/03/2022 06:46 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	SOUTHINGTON, CT, US, 06489
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight

Barbadora, Jeff

From: TrackingUpdates@fedex.com
Sent: Friday, March 4, 2022 10:54 AM
To: Barbadora, Jeff
Subject: FedEx Shipment 776198496460: Your package has been delivered

Hi. Your package was delivered Fri, 03/04/2022 at 10:45am.

Delivered to 146 N MAIN ST, SOUTHINGTON, CT 06489
Received by R.MCDONALD

OBTAIN PROOF OF DELIVERY

TRACKING NUMBER 776198496460

FROM	Jeff Barbadora 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Southington Matthew Reimondo ZEO 146 North Main Street SOUTHINGTON, CT, US, 06489
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 3/03/2022 06:46 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	SOUTHINGTON, CT, US, 06489
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	FedEx Priority Overnight

Date: **December 30, 2021**

B+T Group
1717 S Boulder Ave, Suite 300
Tulsa, OK 74119
(918) 587-4630

Subject:	**Structural Analysis Report**	
Carrier Designation:	***AT&T Mobility* Co-Locate**	
	Site Number:	CTL05250
	Site Name:	Southington Florians Pond
	FA Number:	10071248
Crown Castle Designation:	**BU Number:**	876334
	Site Name:	SOUTHINGTON, SMORON
	JDE Job Number:	686297
	Work Order Number:	2054466
	Order Number:	586272 Rev. 0
Engineering Firm Designation:	**B+T Group Project Number:**	127834.007.01
Site Data:	**625 Spring Street, SOUTHINGTON, Hartford County, CT** **Latitude *41° 37' 56.9"*, Longitude *-72° 53' 39.3"*** **160.333 Foot - Monopole**	

B+T Group is pleased to submit this **"Structural Analysis Report"** to determine the structural integrity of the above-mentioned tower.

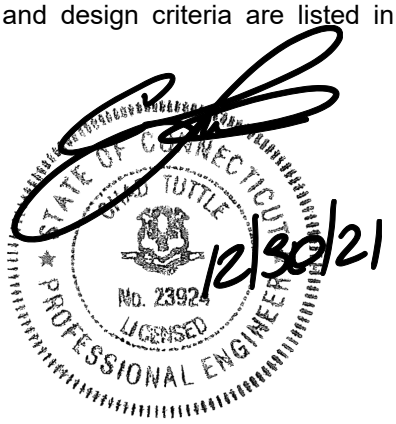
The purpose of the analysis is to determine acceptability of the tower stress level. Based on our analysis we have determined the tower stress level for the structure and foundation, under the following load case, to be:

LC7: Proposed Equipment Configuration **Sufficient Capacity-99.7%**

This analysis utilizes an ultimate 3-second gust wind speed of 117 mph as required by the 2018 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Structural analysis prepared by: Mahsa Abdeveis

Respectfully submitted by: B+T Engineering, Inc.
COA: PEC.0001564; Expires: 02/10/2022



Chad E. Tuttle, P.E.

TABLE OF CONTENTS

1) INTRODUCTION

This is a 146 ft. Monopole designed by SUMMIT in July of 1998. A 14-ft tower extension has been considered in this analysis, bringing the total tower height to 160 ft. The tower has been modified multiple times to accommodate additional loading.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	117 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Service Wind Speed:	60 mph

Table 1 - Proposed Equipment Configuration

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
156.0	159.0	3	Ericsson	AIR 6419 B77G	8 3 4 3	1-5/8 7/8 13/16 3/8
	157.0	1	CCI Antennas	DMP65R-BU6D		
		2	CCI Antennas	DMP65R-BU8D		
		3	Ericsson	RRUS 32 B2		
		3	Ericsson	RRUS 32 B66		
		3	Ericsson	RRUS 4449 B5/B12		
		3	Ericsson	RRUS 4478 B14		
		3	Ericsson	RRUS-32 B30		
		1	Quintel Tech.	QD6616-7		
		2	Quintel Tech.	QD8616-7		
		2	Raycap	DC6-48-60-18-8F		
		1	Raycap	DC9-48-60-24-8C-EV_CCIV2		
	156.0	1	--	Sector Mount [SM 503-3]		
	155.0	3	Ericsson	AIR 6449 B77D		

Table 2 - Other Considered Equipment

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
146.0	147.0	3	Ericsson	AIR6449 B41_T-MOBILE	4	1-5/8
		3	Ericsson	RADIO 4415 B66A		
		3	Ericsson	RADIO 4424 B25_TMO		
		3	Ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	RFS Celwave	APX16DWV-16DWV-S-E-A20		
		3	RFS Celwave	APXVAALL24_43-U-NA20_TMO		
	146.0	1	--	Platform Mount [LP 1201-1_HR-1]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
139.0	139.0	3	RFS Celwave	APXV18-206517S-C	6	1-5/8
		1	--	Pipe Mount [PM 601-3]		
132.0	134.0	3	Antel	BXA-80080-6CF-EDIN-X	20	1-5/8
	133.0	3	Commscope	NHH-65B-R2B		
		3	Commscope	NHHSS-65B-R2B		
		2	RFS Celwave	DB-T1-6Z-8AB-0Z		
		3	Samsung Telecom.	MT6407-77A		
		3	Samsung Telecom.	RFV01U-D1A		
		3	Samsung Telecom.	RFV01U-D2A		
	132.0	6	--	BASMNT_SBS-1-2		
		1	--	Platform Mount [LP 1201-1_HR-1]		
114.0	114.0	3	Fujitsu	TA08025-B604	1	1-1/2
		3	Fujitsu	TA08025-B605		
		3	JMA Wireless	MX08FRO665-21		
		1	Raycap	RDIDC-9181-PF-48		
		1	--	Commscope MC-PK8-DSH		
101.0	102.0	1	Symmetricom	58532A	1	1/2
	101.0	1	--	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
Tower Manufacturing Drawing	1614569	CCI Sites
Mount Analysis Report	10121487	CCI Sites
Tower Modification drawing	2588177	CCI Sites
Post Modification Inspection	2588175	CCI Sites
Tower Modification drawing	3363885	CCI Sites
Post Modification Inspection	3794196	CCI Sites
Tower Modification drawing	5288062	CCI Sites
Post Modification Inspection	5570676	CCI Sites
Tower Modification drawing	5755362	CCI Sites
Post Modification Inspection	5888770	CCI Sites
Tower Modification drawing	6249238	CCI Sites
Post Modification Inspection	6544953	CCI Sites
Tower Modification drawing	6962729	CCI Sites
Post Modification Inspection	7104038	CCI Sites
Foundation Drawing	1999756	CCI Sites
Geotech Report	1530919	CCI Sites
Crown CAD Package	Date: 12/13/2021	CCI Sites

3.1) Analysis Method

tnxTower (version 8.1.1.0), a commercially available analysis software package, was used to create a three-dimensional model of the tower and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A. When applicable, Crown Castle has calculated and provided the effective area for panel antennas using approved methods following the intent of the TIA-222 standard.

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

3.2) Assumptions

1) The tower and structures were maintained in accordance with the - TIA-222 standard.
2) The configuration of antennas, transmission cables, mounts and other appurtenances are as specified in Tables 1 and 2 and the referenced drawings.

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L1	160.33 - 155.33	Pole	TP16x16x0.375	1	-4.980	--	5.5	Pass
L2	155.33 - 150.33	Pole	TP16x16x0.375	2	-5.419	--	21.5	Pass
L3	150.33 - 146.83	Pole	TP16x16x0.375	3	-5.737	--	33.3	Pass
L4	146.83 - 146.33	Pole	TP22x22x0.375	4	-5.797	--	18.5	Pass
L5	146.33 - 141.33	Pole	TP22.924x22x0.25	5	-10.799	--	27.7	Pass
L6	141.33 - 136.33	Pole	TP23.848x22.924x0.25	6	-11.625	--	37.8	Pass
L7	136.33 - 131.33	Pole	TP24.772x23.848x0.25	7	-16.746	--	48.9	Pass
L8	131.33 - 126.33	Pole	TP25.696x24.772x0.25	8	-17.569	--	61.3	Pass
L9	126.33 - 121.33	Pole	TP26.62x25.696x0.25	9	-18.438	--	72.7	Pass
L10	121.33 - 120.08	Pole	TP26.851x26.62x0.25	10	-18.657	--	75.5	Pass
L11	120.08 - 119.83	Pole + Reinf.	TP26.897x26.851x0.4875	11	-18.735	--	52.5	Pass
L12	119.83 - 117.5	Pole + Reinf.	TP27.328x26.897x0.4875	12	-19.282	--	56.0	Pass
L13	117.5 - 117.25	Pole + Reinf.	TP27.375x27.328x0.5	13	-19.356	--	52.2	Pass
L14	117.25 - 115.5	Pole + Reinf.	TP27.698x27.375x0.5	14	-19.794	--	54.6	Pass
L15	115.5 - 115.25	Pole + Reinf.	TP27.744x27.698x0.6625	15	-19.882	--	48.2	Pass
L16	115.25 - 110.25	Pole + Reinf.	TP28.668x27.744x0.65	16	-24.342	--	55.2	Pass
L17	110.25 - 107.82	Pole + Reinf.	TP29.808x28.668x0.6375	17	-25.079	--	58.5	Pass
L18	107.82 - 102.82	Pole + Reinf.	TP29.541x28.617x0.7	18	-27.526	--	60.7	Pass
L19	102.82 - 100.5	Pole + Reinf.	TP29.969x29.541x0.6875	19	-28.376	--	63.4	Pass
L20	100.5 - 100.25	Pole + Reinf.	TP30.015x29.969x0.6375	20	-28.469	--	64.8	Pass
L21	100.25 - 98.5	Pole + Reinf.	TP30.338x30.015x0.625	21	-29.027	--	66.8	Pass
L22	98.5 - 98.25	Pole + Reinf.	TP30.385x30.338x0.6625	22	-29.132	--	63.9	Pass
L23	98.25 - 93.25	Pole + Reinf.	TP31.308x30.385x0.65	23	-30.848	--	69.2	Pass
L24	93.25 - 90.5	Pole + Reinf.	TP31.816x31.308x0.6375	24	-31.808	--	71.9	Pass
L25	90.5 - 90.25	Pole + Reinf.	TP31.862x31.816x0.6875	25	-31.921	--	71.0	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L26	90.25 - 85.25	Pole + Reinf.	TP32.785x31.862x0.675	26	-33.866	--	75.7	Pass
L27	85.25 - 83.5	Pole + Reinf.	TP33.108x32.785x0.6625	27	-34.548	--	77.3	Pass
L28	83.5 - 83.25	Pole + Reinf.	TP33.154x33.108x0.9125	28	-34.687	--	58.6	Pass
L29	83.25 - 80.75	Pole + Reinf.	TP33.616x33.154x0.8875	29	-35.838	--	60.5	Pass
L30	80.75 - 80.5	Pole + Reinf.	TP33.662x33.616x1.0625	30	-35.977	--	49.7	Pass
L31	80.5 - 80.25	Pole + Reinf.	TP33.708x33.662x0.975	31	-36.102	--	53.5	Pass
L32	80.25 - 77.5	Pole + Reinf.	TP34.216x33.708x0.9625	32	-37.467	--	55.3	Pass
L33	77.5 - 77.25	Pole + Reinf.	TP34.262x34.216x0.6875	33	-37.588	--	77.4	Pass
L34	77.25 - 73.29	Pole + Reinf.	TP35.819x34.262x0.6875	34	-39.312	--	80.6	Pass
L35	73.29 - 68.29	Pole + Reinf.	TP35.291x34.368x0.75	35	-43.165	--	79.0	Pass
L36	68.29 - 64.25	Pole + Reinf.	TP36.037x35.291x0.7375	36	-45.077	--	81.8	Pass
L37	64.25 - 64	Pole + Reinf.	TP36.084x36.037x0.875	37	-45.216	--	72.1	Pass
L38	64 - 60.5	Pole + Reinf.	TP36.73x36.084x0.8625	38	-46.974	--	74.2	Pass
L39	60.5 - 60.25	Pole + Reinf.	TP36.776x36.73x0.925	39	-47.121	--	70.0	Pass
L40	60.25 - 60.08	Pole + Reinf.	TP36.807x36.776x0.925	40	-47.211	--	70.1	Pass
L41	60.08 - 59.83	Pole + Reinf.	TP36.853x36.807x0.975	41	-47.348	--	67.9	Pass
L42	59.83 - 59.08	Pole + Reinf.	TP36.991x36.853x0.975	42	-47.755	--	68.3	Pass
L43	59.08 - 58.83	Pole + Reinf.	TP37.037x36.991x1.05	43	-47.907	--	62.2	Pass
L44	58.83 - 55.42	Pole + Reinf.	TP37.668x37.037x1.025	44	-49.892	--	63.9	Pass
L45	55.42 - 55.17	Pole + Reinf.	TP37.714x37.668x1.025	45	-50.050	--	64.0	Pass
L46	55.17 - 54.75	Pole + Reinf.	TP37.791x37.714x1.025	46	-50.293	--	64.2	Pass
L47	54.75 - 54.5	Pole + Reinf.	TP37.837x37.791x0.825	47	-50.425	--	78.0	Pass
L48	54.5 - 49.5	Pole + Reinf.	TP38.76x37.837x0.8125	48	-53.024	--	80.6	Pass
L49	49.5 - 44.5	Pole + Reinf.	TP39.683x38.76x0.8	49	-55.666	--	83.2	Pass
L50	44.5 - 41.25	Pole + Reinf.	TP40.283x39.683x0.7875	50	-57.403	--	84.8	Pass
L51	41.25 - 41	Pole + Reinf.	TP40.329x40.283x0.875	51	-57.561	--	74.4	Pass
L52	41 - 39	Pole + Reinf.	TP41.568x40.329x0.875	52	-58.708	--	75.3	Pass
L53	39 - 33.29	Pole + Reinf.	TP40.996x39.949x1.175	53	-64.765	--	59.1	Pass
L54	33.29 - 31.5	Pole + Reinf.	TP41.324x40.996x1.175	54	-65.968	--	59.7	Pass
L55	31.5 - 31.25	Pole + Reinf.	TP41.37x41.324x1.175	55	-66.158	--	59.4	Pass
L56	31.25 - 30.5	Pole + Reinf.	TP41.507x41.37x1.175	56	-66.666	--	59.6	Pass
L57	30.5 - 30.25	Pole + Reinf.	TP41.553x41.507x1.125	57	-66.841	--	62.6	Pass
L58	30.25 - 25.75	Pole + Reinf.	TP42.378x41.553x1.1	58	-69.860	--	64.2	Pass
L59	25.75 - 25.5	Pole + Reinf.	TP42.424x42.378x1.05	59	-70.036	--	69.5	Pass
L60	25.5 - 24.67	Pole + Reinf.	TP42.577x42.424x1.0375	60	-70.578	--	69.9	Pass
L61	24.67 - 24.42	Pole + Reinf.	TP42.623x42.577x0.925	61	-70.730	--	76.8	Pass
L62	24.42 - 24	Pole + Reinf.	TP42.699x42.623x0.925	62	-70.968	--	76.9	Pass
L63	24 - 23.75	Pole + Reinf.	TP42.745x42.699x1.025	63	-71.121	--	72.5	Pass
L64	23.75 - 18.75	Pole + Reinf.	TP43.662x42.745x1.025	64	-74.118	--	74.4	Pass
L65	18.75 - 14.08	Pole + Reinf.	TP44.518x43.662x1	65	-76.951	--	76.2	Pass
L66	14.08 - 13.82	Pole + Reinf.	TP44.566x44.518x0.975	66	-77.130	--	74.6	Pass
L67	13.82 - 13.67	Pole + Reinf.	TP44.594x44.566x0.975	67	-77.225	--	74.7	Pass
L68	13.67 - 10.5	Pole + Reinf.	TP45.175x44.594x0.975	68	-79.189	--	75.7	Pass
L69	10.5 - 10.25	Pole + Reinf.	TP45.22x45.175x0.9	69	-79.354	--	78.4	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	P (K)	SF*P_allow (K)	% Capacity	Pass / Fail
L70	10.25 - 5.25	Pole + Reinf.	TP46.137x45.22x0.9	70	-82.400	--	80.2	Pass
L71	5.25 - 2.9	Pole + Reinf.	TP46.568x46.137x0.75	71	-83.692	--	92.6	Pass
L72	2.9 - 2.65	Pole + Reinf.	TP46.614x46.568x0.75	72	-83.848	--	92.7	Pass
L73	2.65 - 2.5	Pole + Reinf.	TP46.642x46.614x0.75	73	-83.934	--	92.8	Pass
L74	2.5 - 2.25	Pole + Reinf.	TP46.687x46.642x0.9	74	-84.078	--	78.3	Pass
L75	2.25 - 1.92	Pole + Reinf.	TP46.748x46.687x0.9	75	-84.270	--	78.4	Pass
L76	1.92 - 1.67	Pole + Reinf.	TP46.794x46.748x0.8	76	-84.408	--	84.4	Pass
L77	1.67 - 0	Pole + Reinf.	TP47.1x46.794x0.7875	77	-85.302	--	84.9	Pass
							Summary	
						Pole	83.3	Pass
						Reinforcement	92.8	Pass
						Rating =	92.8	Pass

Table 5 - Tower Component Stresses vs. Capacity- LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1,2	Flange Connections	146’	60.5	Pass
1,2	Anchor Rod Bracket	Base	80.2	Pass
1,2	Anchor Rods	Base	69.4	Pass
1,2	Base Plate	Base	62.8	Pass
1,2	Base Foundation (Structure)	Base	99.7	Pass
1,2	Base Foundation (Soil Interaction)	Base	89.0	Pass

Structure Rating (max from all components) =	99.7%

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

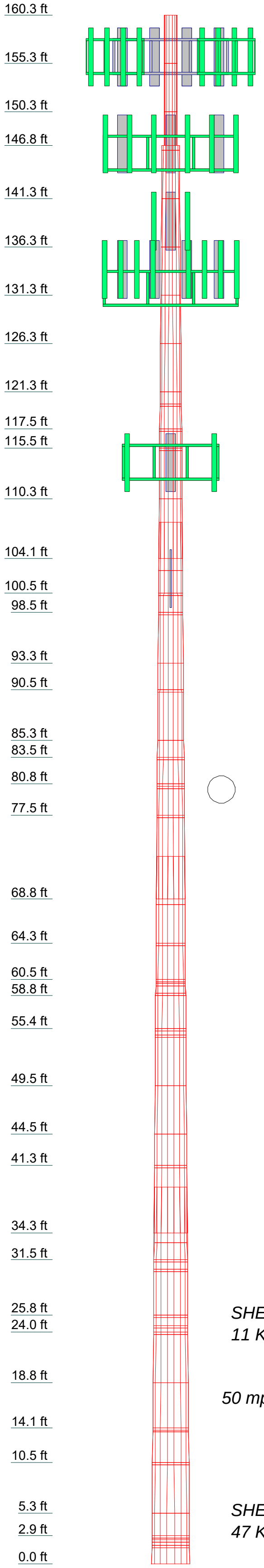
4.1) Recommendations

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

APPENDIX A

TNXTOWER OUTPUT

Section	Length (ft)	Number of Sides	Thickness (in)	Socket Length (ft)	Top Dia (in)	Bot Dia (in)	Grade	Weight (K)
1	5.000	0	0.375		16.000	16.000	A53-B-35	0.3
2	5.000	0	0.375		16.000	16.000	A53-B-35	0.3
3	[illegible]	0	[illegible]		[illegible]	[illegible]	A53-B-35	0.2
4	[illegible]	0	[illegible]		[illegible]	[illegible]	A53-B-35	0.0
5	5.000	12	0.250		22.000	22.924		0.3
6	5.000	12	0.250		22.924	23.848		0.3
7	5.000	12	0.250		23.848	24.772		0.3
8	5.000	12	0.250		24.772	25.696		0.3
9	5.000	12	0.250		25.696	26.620		0.4
10–15	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
16	5.000	12	0.650		[illegible]	[illegible]		0.9
17	[illegible]	12	0.637	3.737	28.668	29.808		1.2
18–22	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
23	5.000	12	0.650		[illegible]	[illegible]		1.1
24–25	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
26	5.000	12	[illegible]		[illegible]	[illegible]		1.2
27–33	[illegible]	12	[illegible]		[illegible]	[illegible]		[illegible]
34	[illegible]	12	0.688	4.471	34.262	35.819	A607-60	2.4
35–47	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
48	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	1.8
49	5.000	12	0.800		38.760	39.683	A607-60	1.8
50–51	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
52	[illegible]	12	0.875	4.709	[illegible]	[illegible]	A607-60	2.7
53–57	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
58	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	2.2
59–63	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
64	5.000	12	[illegible]		[illegible]	[illegible]	A607-60	2.1
65	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	2.0
66–69	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
70	5.000	12	0.900		[illegible]	[illegible]	A607-60	2.1
71–77	[illegible]	12	[illegible]		[illegible]	[illegible]	A607-60	[illegible]
								46.20



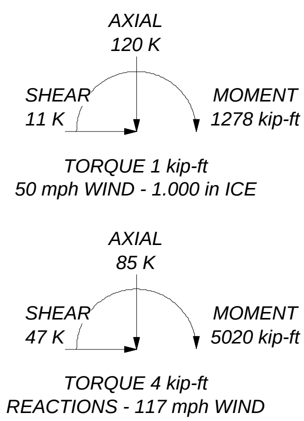
MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A53-B-35	35 ksi	63 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-H Standard.
3. Tower designed for a 117 mph basic wind in accordance with the TIA-222-H 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 Risk Category II.
7. Topographic Category 1 with Crest Height of 0.000 ft
8. TIA-222-H Annex S
9. TOWER RATING: 92.8%

ALL REACTIONS ARE FACTORED

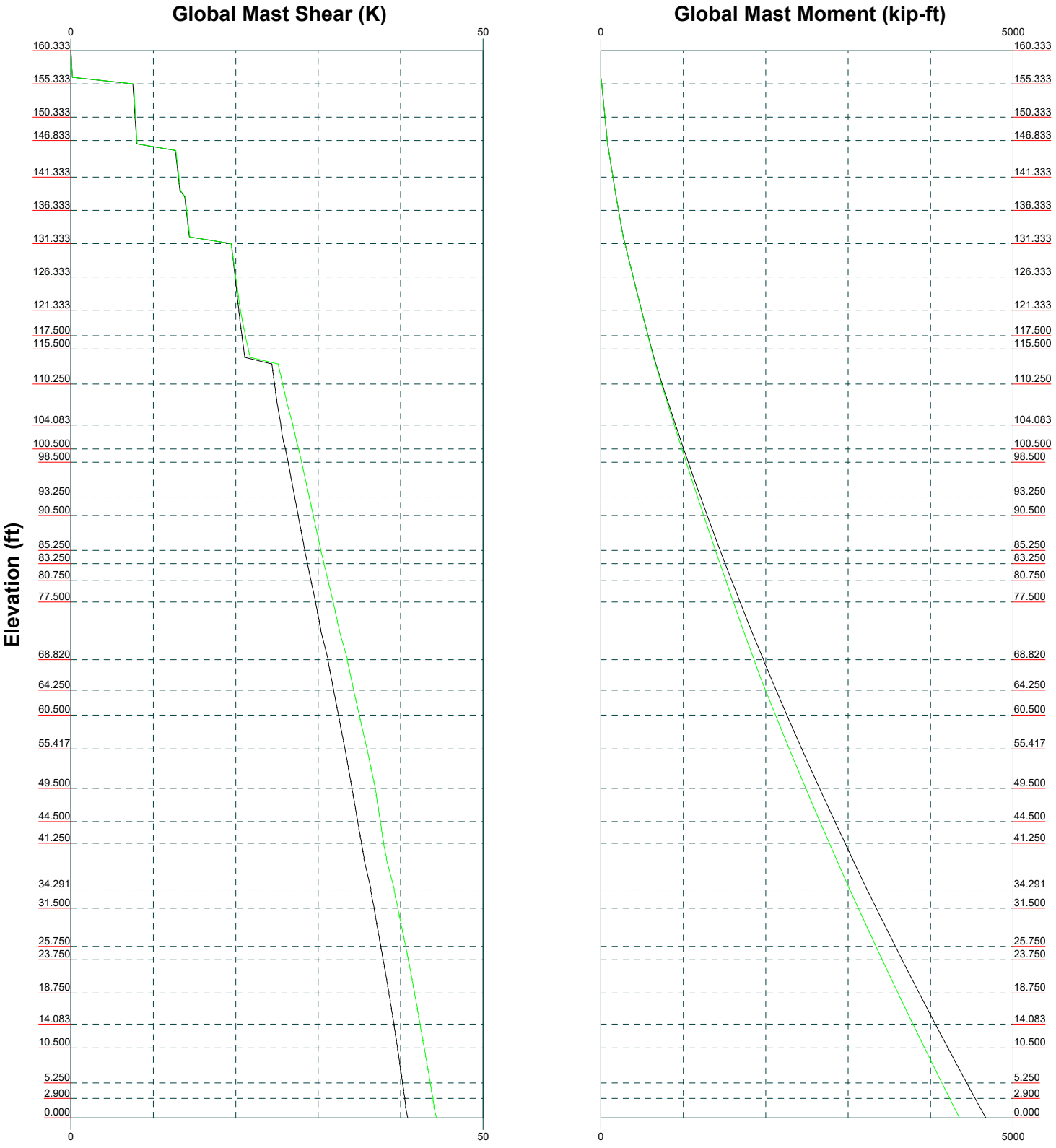


B+T Group 1717 S Boulder Ave, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 587-4630	Job: ***127834.007.01 - SOUTHINGTON_SMORON, CT (BU# 87633***
	Project:
	Client: Crown Castle · Drawn by: GURUPRASAD · App'd:
	Code: TIA-222-H · Date: 12/30/21 · Scale: NTS
	Path: C:\Users\IND-AD-707\Desktop\30 December\127834_876334_Southington, Smoron----Guruprasad-----Akshay\127834_007_01_CCI Pole\CCIPole.eri · Dwg No. E-1

TIA-222-H - 117 mph/50 mph 1.000 in Ice Exposure C

Maximum Values

Vx Vz Mx Mz



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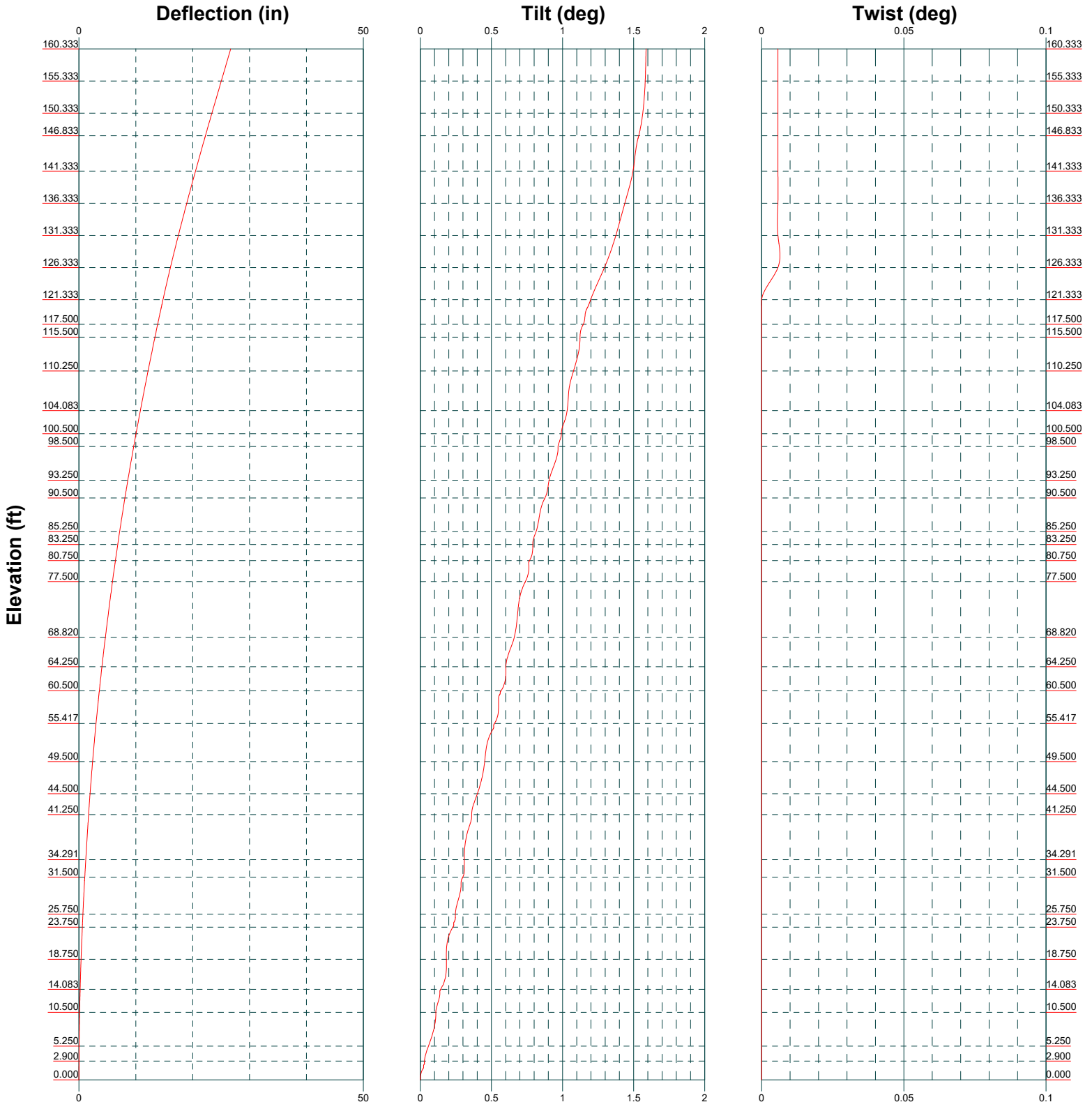
FAX: (918) 587-4630

Job: 127834.007.01 - SOUTHINGTON_SMORON, CT (BU# 87633			
Project:			
Client: Crown Castle	Drawn by: GURUPRASAD	App'd:	
Code: TIA-222-H	Date: 12/30/21	Scale: NTS	
Path:		Dwg No. E-4	

TIA-222-H - Service - 60 mph

Maximum Values



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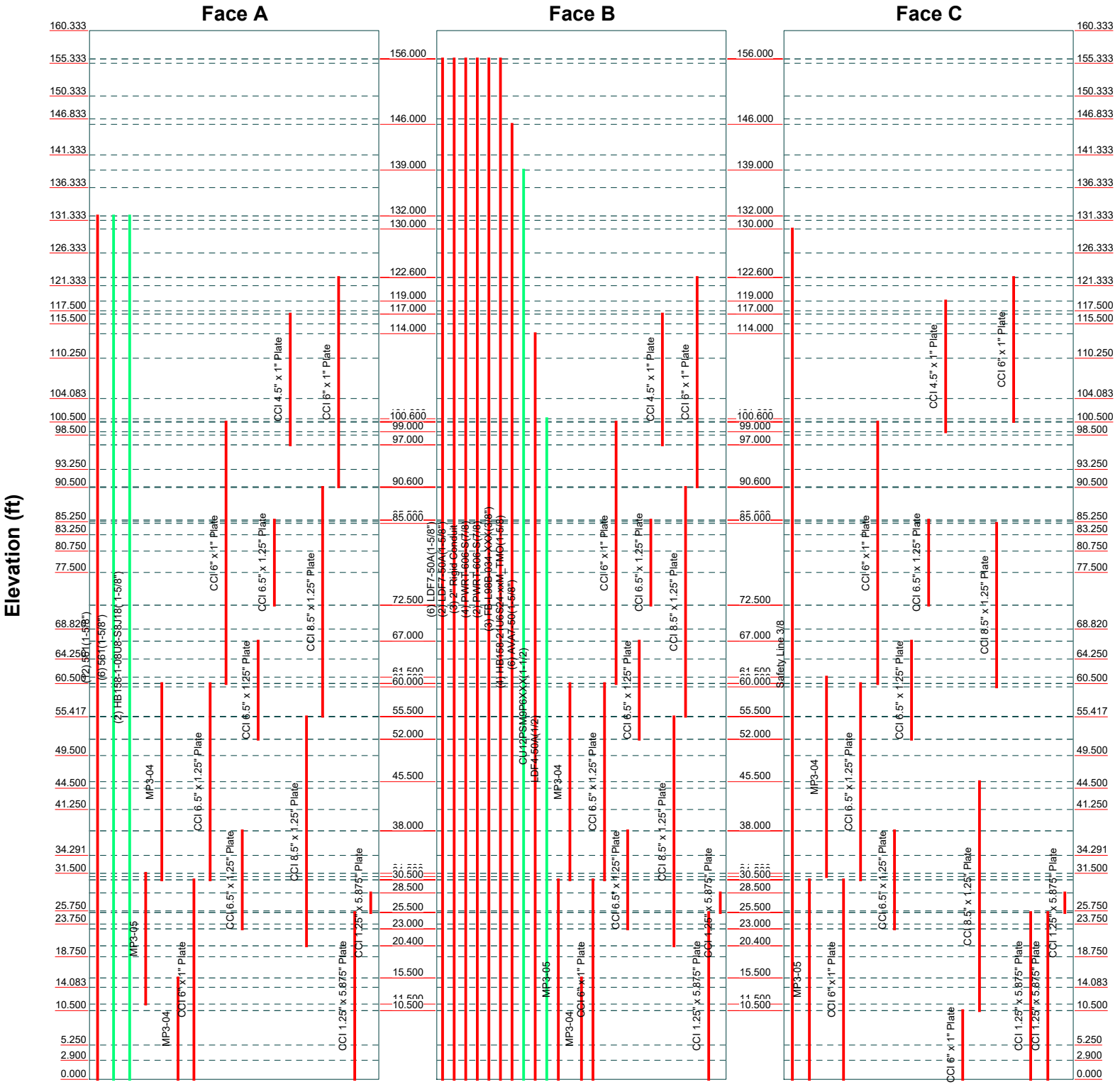
Phone: (918) 587-4630
FAX: (918) 587-4630

Job: *127834.007.01 - SOUTHINGTON_SMORON, CT (BU# 87633*			
Project:			
Client: Crown Castle	Drawn by: GURUPRASAD	App'd:	
Code: TIA-222-H	Date: 12/30/21	Scale: NTS	
Path:		Dwg No. E-5	

Feed Line Distribution Chart
0' - 160'4"

Round | Flat | App In Face | App Out Face | Truss Leg



B+T Group 1717 S Boulder Ave, Suite 300 Tulsa, OK 74119 Phone: (918) 587-4630 FAX: (918) 587-4630	Job: *127834.007.01 - SOUTHINGTON_SMORON, CT (BU# 87633* Project:	
	Client: Crown Castle Drawn by: GURUPRASAD App'd:	
	Code: TIA-222-H Date: 12/30/21 Scale: NTS	
	Path: Dwg No. E-7	

Tower Input Data

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

Tower is located in Hartford County, Connecticut.
Tower base elevation above sea level: 296.000 ft.
Basic wind speed of 117 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.000 ft.
Nominal ice thickness of 1.000 in.
Ice thickness is considered to increase with height.
Ice density of 56.000 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50.000 °F.
Deflections calculated using a wind speed of 60 mph.
TIA-222-H Annex S.
TOWER RATING: 92.8%.
A non-linear (P-delta) analysis was used.
Pressures are calculated at each section.
Stress ratio used in pole design is 1.
Tower analysis based on target reliabilities in accordance with Annex S.
Load Modification Factors used: $K_{es}(F_w) = 0.95$, $K_{es}(t_i) = 0.85$.
Maximum demand-capacity ratio is: 1.05.
Local bending stresses due to climbing loads, feed line supports, and appurtenance mounts are not considered.

Options

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

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	160.333-155.333	5.000	0.000	Round	16.000	16.000	0.375		A53-B-35 (35 ksi)
L2	155.333-150.333	5.000	0.000	Round	16.000	16.000	0.375		A53-B-35 (35 ksi)
L3	150.333-146.833	3.500	0.000	Round	16.000	16.000	0.375		A53-B-35 (35 ksi)
L4	146.833-146.333	0.500	0.000	Round	22.000	22.000	0.375		A53-B-35 (35 ksi)
L5	146.333-141.333	5.000	0.000	12	22.000	22.924	0.250	1.000	A607-60 (60 ksi)
L6	141.333-136.333	5.000	0.000	12	22.924	23.848	0.250	1.000	A607-60 (60 ksi)
L7	136.333-131.333	5.000	0.000	12	23.848	24.772	0.250	1.000	A607-60 (60 ksi)
L8	131.333-126.333	5.000	0.000	12	24.772	25.696	0.250	1.000	A607-60 (60 ksi)
L9	126.333-121.333	5.000	0.000	12	25.696	26.620	0.250	1.000	A607-60 (60 ksi)
L10	121.333-120.083	1.250	0.000	12	26.620	26.851	0.250	1.000	A607-60 (60 ksi)
L11	120.083-119.833	0.250	0.000	12	26.851	26.897	0.487	1.950	A607-60 (60 ksi)
L12	119.833-117.500	2.333	0.000	12	26.897	27.328	0.487	1.950	A607-60 (60 ksi)
L13	117.500-117.250	0.250	0.000	12	27.328	27.375	0.500	2.000	A607-60 (60 ksi)
L14	117.250-115.500	1.750	0.000	12	27.375	27.698	0.500	2.000	A607-60 (60 ksi)
L15	115.500-115.250	0.250	0.000	12	27.698	27.744	0.662	2.650	A607-60 (60 ksi)
L16	115.250-110.250	5.000	0.000	12	27.744	28.668	0.650	2.600	A607-60 (60 ksi)
L17	110.250-104.083	6.167	3.737	12	28.668	29.808	0.637	2.550	A607-60 (60 ksi)
L18	104.083-102.820	5.000	0.000	12	28.617	29.541	0.700	2.800	A607-60 (60 ksi)
L19	102.820-100.500	2.320	0.000	12	29.541	29.969	0.688	2.750	A607-60 (60 ksi)
L20	100.500-100.250	0.250	0.000	12	29.969	30.015	0.637	2.550	A607-60 (60 ksi)
L21	100.250-98.500	1.750	0.000	12	30.015	30.338	0.625	2.500	A607-60 (60 ksi)
L22	98.500-98.250	0.250	0.000	12	30.338	30.385	0.662	2.650	A607-60 (60 ksi)
L23	98.250-93.250	5.000	0.000	12	30.385	31.308	0.650	2.600	A607-60 (60 ksi)
L24	93.250-90.500	2.750	0.000	12	31.308	31.816	0.637	2.550	A607-60 (60 ksi)
L25	90.500-90.250	0.250	0.000	12	31.816	31.862	0.688	2.750	A607-60 (60 ksi)
L26	90.250-85.250	5.000	0.000	12	31.862	32.785	0.675	2.700	A607-60 (60 ksi)
L27	85.250-83.500	1.750	0.000	12	32.785	33.108	0.662	2.650	A607-60 (60 ksi)
L28	83.500-83.250	0.250	0.000	12	33.108	33.154	0.912	3.650	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
L29	83.250-80.750	2.500	0.000	12	33.154	33.616	0.887	3.550	A607-60 (60 ksi)
L30	80.750-80.500	0.250	0.000	12	33.616	33.662	1.063	4.250	A607-60 (60 ksi)
L31	80.500-80.250	0.250	0.000	12	33.662	33.708	0.975	3.900	A607-60 (60 ksi)
L32	80.250-77.500	2.750	0.000	12	33.708	34.216	0.963	3.850	A607-60 (60 ksi)
L33	77.500-77.250	0.250	0.000	12	34.216	34.262	0.688	2.750	A607-60 (60 ksi)
L34	77.250-68.820	8.430	4.471	12	34.262	35.819	0.688	2.750	A607-60 (60 ksi)
L35	68.820-68.291	5.000	0.000	12	34.368	35.291	0.750	3.000	A607-60 (60 ksi)
L36	68.291-64.250	4.041	0.000	12	35.291	36.037	0.738	2.950	A607-60 (60 ksi)
L37	64.250-64.000	0.250	0.000	12	36.037	36.084	0.875	3.500	A607-60 (60 ksi)
L38	64.000-60.500	3.500	0.000	12	36.084	36.730	0.863	3.450	A607-60 (60 ksi)
L39	60.500-60.250	0.250	0.000	12	36.730	36.776	0.925	3.700	A607-60 (60 ksi)
L40	60.250-60.083	0.167	0.000	12	36.776	36.807	0.925	3.700	A607-60 (60 ksi)
L41	60.083-59.833	0.250	0.000	12	36.807	36.853	0.975	3.900	A607-60 (60 ksi)
L42	59.833-59.083	0.750	0.000	12	36.853	36.991	0.975	3.900	A607-60 (60 ksi)
L43	59.083-58.833	0.250	0.000	12	36.991	37.037	1.050	4.200	A607-60 (60 ksi)
L44	58.833-55.417	3.416	0.000	12	37.037	37.668	1.025	4.100	A607-60 (60 ksi)
L45	55.417-55.167	0.250	0.000	12	37.668	37.714	1.025	4.100	A607-60 (60 ksi)
L46	55.167-54.750	0.417	0.000	12	37.714	37.791	1.025	4.100	A607-60 (60 ksi)
L47	54.750-54.500	0.250	0.000	12	37.791	37.837	0.825	3.300	A607-60 (60 ksi)
L48	54.500-49.500	5.000	0.000	12	37.837	38.760	0.813	3.250	A607-60 (60 ksi)
L49	49.500-44.500	5.000	0.000	12	38.760	39.683	0.800	3.200	A607-60 (60 ksi)
L50	44.500-41.250	3.250	0.000	12	39.683	40.283	0.787	3.150	A607-60 (60 ksi)
L51	41.250-41.000	0.250	0.000	12	40.283	40.329	0.875	3.500	A607-60 (60 ksi)
L52	41.000-34.291	6.709	4.709	12	40.329	41.568	0.875	3.500	A607-60 (60 ksi)
L53	34.291-33.291	5.709	0.000	12	39.949	40.996	1.175	4.700	A607-60 (60 ksi)
L54	33.291-31.500	1.791	0.000	12	40.996	41.324	1.175	4.700	A607-60 (60 ksi)
L55	31.500-31.250	0.250	0.000	12	41.324	41.370	1.175	4.700	A607-60 (60 ksi)
L56	31.250-30.500	0.750	0.000	12	41.370	41.507	1.175	4.700	A607-60 (60 ksi)
L57	30.500-30.250	0.250	0.000	12	41.507	41.553	1.125	4.500	A607-60 (60 ksi)
L58	30.250-25.750	4.500	0.000	12	41.553	42.378	1.100	4.400	A607-60 (60 ksi)
L59	25.750-25.500	0.250	0.000	12	42.378	42.424	1.050	4.200	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
L60	25.500-24.667	0.833	0.000	12	42.424	42.577	1.038	4.150	(60 ksi) A607-60 (60 ksi)
L61	24.667-24.417	0.250	0.000	12	42.577	42.623	0.925	3.700	A607-60 (60 ksi)
L62	24.417-24.000	0.417	0.000	12	42.623	42.699	0.925	3.700	A607-60 (60 ksi)
L63	24.000-23.750	0.250	0.000	12	42.699	42.745	1.025	4.100	A607-60 (60 ksi)
L64	23.750-18.750	5.000	0.000	12	42.745	43.662	1.025	4.100	A607-60 (60 ksi)
L65	18.750-14.083	4.667	0.000	12	43.662	44.518	1.000	4.000	A607-60 (60 ksi)
L66	14.083-13.817	0.266	0.000	12	44.518	44.566	0.975	3.900	A607-60 (60 ksi)
L67	13.817-13.667	0.150	0.000	12	44.566	44.594	0.975	3.900	A607-60 (60 ksi)
L68	13.667-10.500	3.167	0.000	12	44.594	45.175	0.975	3.900	A607-60 (60 ksi)
L69	10.500-10.250	0.250	0.000	12	45.175	45.220	0.900	3.600	A607-60 (60 ksi)
L70	10.250-5.250	5.000	0.000	12	45.220	46.137	0.900	3.600	A607-60 (60 ksi)
L71	5.250-2.900	2.350	0.000	12	46.137	46.568	0.750	3.000	A607-60 (60 ksi)
L72	2.900-2.650	0.250	0.000	12	46.568	46.614	0.750	3.000	A607-60 (60 ksi)
L73	2.650-2.500	0.150	0.000	12	46.614	46.642	0.750	3.000	A607-60 (60 ksi)
L74	2.500-2.250	0.250	0.000	12	46.642	46.687	0.900	3.600	A607-60 (60 ksi)
L75	2.250-1.917	0.333	0.000	12	46.687	46.748	0.900	3.600	A607-60 (60 ksi)
L76	1.917-1.667	0.250	0.000	12	46.748	46.794	0.800	3.200	A607-60 (60 ksi)
L77	1.667-0.000	1.667		12	46.794	47.100	0.787	3.150	A607-60 (60 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	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
L2	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
L3	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
	16.000	18.408	562.084	5.526	8.000	70.261	1124.168	9.198	0.000	0
L4	22.000	25.476	1489.670	7.647	11.000	135.425	2979.340	12.731	0.000	0
	22.000	25.476	1489.670	7.647	11.000	135.425	2979.340	12.731	0.000	0
L5	22.688	17.509	1057.206	7.786	11.396	92.770	2142.186	8.617	5.226	20.904
	23.645	18.253	1197.754	8.117	11.875	100.867	2426.974	8.983	5.474	21.895
L6	23.645	18.253	1197.754	8.117	11.875	100.867	2426.974	8.983	5.474	21.895
	24.601	18.996	1350.237	8.448	12.353	109.302	2735.946	9.349	5.721	22.885
L7	24.601	18.996	1350.237	8.448	12.353	109.302	2735.946	9.349	5.721	22.885
	25.558	19.740	1515.142	8.779	12.832	118.076	3070.088	9.716	5.969	23.876

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
L8	25.558	19.740	1515.142	8.779	12.832	118.076	3070.088	9.716	5.969	23.876
	26.514	20.484	1692.954	9.110	13.311	127.189	3430.385	10.082	6.217	24.866
L9	26.514	20.484	1692.954	9.110	13.311	127.189	3430.385	10.082	6.217	24.866
	27.471	21.228	1884.161	9.441	13.789	136.640	3817.821	10.448	6.464	25.857
L10	27.471	21.228	1884.161	9.441	13.789	136.640	3817.821	10.448	6.464	25.857
	27.710	21.414	1934.113	9.523	13.909	139.056	3919.037	10.539	6.526	26.104
L11	27.626	41.384	3671.401	9.438	13.909	263.961	7439.253	20.368	5.890	12.081
	27.674	41.457	3690.736	9.455	13.933	264.895	7478.432	20.404	5.902	12.107
L12	27.674	41.457	3690.736	9.455	13.933	264.895	7478.432	20.404	5.902	12.107
	28.121	42.134	3874.461	9.609	14.156	273.695	7850.709	20.737	6.018	12.344
L13	28.116	43.194	3968.257	9.605	14.156	280.320	8040.764	21.259	5.984	11.968
	28.164	43.268	3988.793	9.621	14.180	281.296	8082.377	21.295	5.996	11.993
L14	28.164	43.268	3988.793	9.621	14.180	281.296	8082.377	21.295	5.996	11.993
	28.499	43.789	4134.536	9.737	14.348	288.169	8377.690	21.552	6.083	12.166
L15	28.441	57.674	5380.653	9.679	14.348	375.021	10902.661	28.385	5.648	8.525
	28.489	57.772	5408.286	9.695	14.372	376.319	10958.653	28.434	5.660	8.543
L16	28.494	56.708	5313.593	9.700	14.372	369.730	10766.781	27.910	5.693	8.759
	29.450	58.642	5875.989	10.031	14.850	395.685	11906.346	28.862	5.941	9.14
L17	29.455	57.540	5770.705	10.035	14.850	388.595	11693.014	28.320	5.975	9.372
	30.635	59.880	6503.597	10.443	15.441	421.203	13178.051	29.471	6.280	9.851
L18	30.094	62.926	6259.852	9.994	14.824	422.284	12684.157	30.970	5.793	8.276
	30.336	65.007	6901.696	10.325	15.302	451.030	13984.708	31.994	6.041	8.63
L19	30.340	63.874	6787.269	10.329	15.302	443.552	13752.848	31.437	6.074	8.835
	30.784	64.822	7094.106	10.483	15.524	456.977	14374.583	31.903	6.189	9.002
L20	30.801	60.210	6611.927	10.501	15.524	425.917	13397.556	29.634	6.323	9.919
	30.849	60.305	6643.195	10.517	15.548	427.273	13460.915	29.680	6.336	9.938
L21	30.854	59.148	6521.254	10.522	15.548	419.430	13213.828	29.111	6.369	10.191
	31.188	59.798	6738.733	10.637	15.715	428.801	13654.501	29.431	6.456	10.329
L22	31.175	63.306	7116.047	10.624	15.715	452.811	14419.040	31.157	6.355	9.593
	31.223	63.405	7149.308	10.640	15.739	454.236	14486.436	31.206	6.368	9.611
L23	31.227	62.234	7023.269	10.645	15.739	446.228	14231.047	30.630	6.401	9.848
	32.183	64.167	7698.030	10.976	16.217	474.675	15598.295	31.581	6.648	10.228
L24	32.187	62.959	7559.229	10.980	16.217	466.117	15317.048	30.986	6.682	10.482
	32.713	64.001	7940.954	11.162	16.481	481.839	16090.525	31.499	6.818	10.695
L25	32.695	68.910	8522.639	11.144	16.481	517.135	17269.177	33.915	6.684	9.722
	32.743	69.012	8560.613	11.160	16.504	518.686	17346.123	33.966	6.696	9.74
L26	32.748	67.785	8415.080	11.165	16.504	509.868	17051.234	33.361	6.730	9.97
	33.704	69.791	9184.809	11.495	16.983	540.834	18610.913	34.349	6.977	10.337
L27	33.708	68.526	9025.252	11.500	16.983	531.439	18287.607	33.726	7.011	10.582
	34.042	69.215	9300.380	11.616	17.150	542.294	18845.091	34.065	7.098	10.713
L28	33.954	94.599	12516.124	11.526	17.150	729.800	25361.060	46.559	6.428	7.044
	34.002	94.735	12570.040	11.543	17.174	731.924	25470.309	46.626	6.440	7.057
L29	34.011	92.211	12254.116	11.552	17.174	713.528	24830.162	45.383	6.507	7.332
	34.489	93.530	12787.635	11.717	17.413	734.368	25911.216	46.033	6.631	7.471
L30	34.427	111.374	15064.877	11.654	17.413	865.146	30525.525	54.815	6.162	5.799
	34.475	111.532	15129.058	11.671	17.437	867.640	30655.573	54.893	6.174	5.811
L31	34.506	102.621	13995.226	11.702	17.437	802.616	28358.122	50.507	6.408	6.573
	34.554	102.766	14054.607	11.719	17.461	804.917	28478.445	50.579	6.421	6.585
L32	34.558	101.488	13890.321	11.723	17.461	795.508	28145.556	49.949	6.454	6.706
	35.084	103.061	14546.605	11.905	17.724	820.730	29475.366	50.724	6.590	6.847
L33	35.181	74.224	10650.349	12.003	17.724	600.901	21580.495	36.531	7.327	10.658
	35.228	74.326	10694.402	12.020	17.748	602.573	21669.757	36.581	7.340	10.676
L34	35.228	74.326	10694.402	12.020	17.748	602.573	21669.757	36.581	7.340	10.676
	36.840	77.772	12251.933	12.577	18.554	660.331	24825.737	38.277	7.757	11.283
L35	36.171	81.188	11712.084	12.035	17.803	657.878	23731.857	39.958	7.201	9.601
	36.272	83.418	12703.513	12.366	18.281	694.904	25740.761	41.056	7.448	9.931
L36	36.276	82.057	12505.354	12.370	18.281	684.064	25339.238	40.386	7.482	10.145
	37.049	83.828	13332.905	12.637	18.667	714.235	27016.081	41.258	7.682	10.416
L37	37.000	99.070	15634.569	12.588	18.667	837.534	31679.876	48.759	7.313	8.358
	37.048	99.200	15696.213	12.605	18.691	839.761	31804.783	48.823	7.325	8.372
L38	37.052	97.818	15488.466	12.609	18.691	828.646	31383.832	48.143	7.359	8.532
	37.721	99.612	16356.590	12.840	19.026	859.698	33142.886	49.026	7.532	8.733

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
L39	37.699	106.644	17450.308	12.818	19.026	917.183	35359.054	52.487	7.365	7.962
	37.747	106.782	17517.873	12.835	19.050	919.579	35495.961	52.555	7.377	7.975
L40	37.747	106.782	17517.873	12.835	19.050	919.579	35495.961	52.555	7.377	7.975
	37.779	106.874	17563.104	12.846	19.066	921.181	35587.611	52.600	7.385	7.984
L41	37.761	112.494	18435.179	12.828	19.066	966.921	37354.672	55.366	7.251	7.437
	37.809	112.638	18506.504	12.844	19.090	969.447	37499.195	55.437	7.264	7.45
L42	37.809	112.638	18506.504	12.844	19.090	969.447	37499.195	55.437	7.264	7.45
	37.952	113.073	18721.584	12.894	19.161	977.043	37935.006	55.651	7.301	7.488
L43	37.926	121.517	20036.015	12.867	19.161	1045.640	40598.398	59.807	7.100	6.762
	37.974	121.673	20113.298	12.883	19.185	1048.366	40754.995	59.884	7.112	6.773
L44	37.982	118.859	19675.358	12.892	19.185	1025.539	39867.610	58.499	7.179	7.004
	38.635	120.941	20727.268	13.118	19.512	1062.279	41999.064	59.523	7.348	7.169
L45	38.635	120.941	20727.268	13.118	19.512	1062.279	41999.064	59.523	7.348	7.169
	38.683	121.093	20805.683	13.135	19.536	1064.993	42157.954	59.598	7.360	7.181
L46	38.683	121.093	20805.683	13.135	19.536	1064.993	42157.954	59.598	7.360	7.181
	38.763	121.347	20936.815	13.162	19.576	1069.524	42423.663	59.723	7.381	7.201
L47	38.833	98.201	17128.088	13.234	19.576	874.961	34706.151	48.331	7.917	9.596
	38.881	98.323	17192.321	13.250	19.600	877.171	34836.304	48.392	7.929	9.611
L48	38.885	96.866	16948.992	13.255	19.600	864.756	34343.254	47.675	7.963	9.8
	39.841	99.281	18248.466	13.585	20.078	908.885	36976.340	48.863	8.210	10.105
L49	39.845	97.786	17985.482	13.590	20.078	895.787	36443.463	48.127	8.244	10.305
	40.801	100.164	19329.622	13.920	20.556	940.340	39167.055	49.297	8.491	10.614
L50	40.805	98.630	19045.954	13.925	20.556	926.541	38592.265	48.543	8.525	10.825
	41.427	100.152	19940.967	14.140	20.867	955.633	40405.806	49.292	8.685	11.029
L51	41.396	111.033	22009.697	14.108	20.867	1054.773	44597.614	54.647	8.451	9.658
	41.443	111.163	22087.114	14.125	20.891	1057.272	44754.482	54.711	8.463	9.672
L52	41.443	111.163	22087.114	14.125	20.891	1057.272	44754.482	54.711	8.463	9.672
	42.726	114.653	24233.101	14.568	21.532	1125.434	49102.833	56.428	8.795	10.052
L53	41.837	146.700	28150.831	13.881	20.693	1360.376	57041.216	72.201	7.557	6.432
	42.027	150.661	30493.059	14.256	21.236	1435.935	61787.204	74.151	7.838	6.67
L54	42.027	150.661	30493.059	14.256	21.236	1435.935	61787.204	74.151	7.838	6.67
	42.367	151.904	31253.750	14.373	21.406	1460.060	63328.571	74.762	7.926	6.745
L55	42.367	151.904	31253.750	14.373	21.406	1460.060	63328.571	74.762	7.926	6.745
	42.415	152.077	31360.926	14.390	21.430	1463.443	63545.739	74.848	7.938	6.756
L56	42.415	152.077	31360.926	14.390	21.430	1463.443	63545.739	74.848	7.938	6.756
	42.557	152.597	31683.930	14.439	21.501	1473.617	64200.232	75.104	7.975	6.787
L57	42.575	146.285	30448.639	14.457	21.501	1416.164	61697.197	71.997	8.109	7.208
	42.622	146.451	30552.453	14.473	21.525	1419.425	61907.552	72.079	8.121	7.219
L58	42.631	143.285	29928.963	14.482	21.525	1390.458	60644.193	70.521	8.188	7.444
	43.485	146.208	31798.020	14.778	21.952	1448.527	64431.409	71.959	8.409	7.645
L59	43.503	139.731	30463.086	14.796	21.952	1387.716	61726.472	68.771	8.543	8.137
	43.550	139.886	30564.567	14.812	21.976	1390.834	61932.099	68.848	8.556	8.148
L60	43.555	138.262	30228.084	14.816	21.976	1375.523	61250.294	68.049	8.589	8.279
	43.713	138.773	30564.129	14.871	22.055	1385.823	61931.212	68.300	8.630	8.318
L61	43.753	124.060	27471.947	14.911	22.055	1245.619	55665.613	61.059	8.932	9.656
	43.800	124.197	27562.754	14.928	22.079	1248.392	55849.612	61.126	8.944	9.669
L62	43.800	124.197	27562.754	14.928	22.079	1248.392	55849.612	61.126	8.944	9.669
	43.879	124.424	27714.551	14.955	22.118	1253.021	56157.195	61.238	8.964	9.691
L63	43.844	137.546	30490.699	14.919	22.118	1378.535	61782.422	67.696	8.696	8.484
	43.891	137.697	30591.430	14.936	22.142	1381.606	61986.530	67.770	8.709	8.496
L64	43.891	137.697	30591.430	14.936	22.142	1381.606	61986.530	67.770	8.709	8.496
	44.841	140.723	32652.895	15.264	22.617	1443.742	66163.618	69.260	8.954	8.736
L65	44.849	137.371	31912.553	15.273	22.617	1411.008	64663.484	67.610	9.021	9.021
	45.735	140.127	33871.777	15.579	23.060	1468.845	68633.403	68.966	9.251	9.251
L66	45.744	136.702	33081.931	15.588	23.060	1434.594	67032.962	67.281	9.318	9.557
	45.795	136.855	33193.230	15.606	23.085	1437.845	67258.483	67.356	9.331	9.57
L67	45.795	136.855	33193.230	15.606	23.085	1437.845	67258.483	67.356	9.331	9.57
	45.823	136.942	33256.102	15.616	23.100	1439.680	67385.879	67.398	9.338	9.578
L68	45.823	136.942	33256.102	15.616	23.100	1439.680	67385.879	67.398	9.338	9.578
	46.424	138.765	34602.135	15.823	23.400	1478.694	70113.307	68.296	9.494	9.737
L69	46.451	128.308	32103.303	15.850	23.400	1371.909	65049.995	63.149	9.695	10.772
	46.498	128.441	32203.123	15.867	23.424	1374.779	65252.258	63.215	9.707	10.786

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
L70	46.498	128.441	32203.123	15.867	23.424	1374.779	65252.258	63.215	9.707	10.786
	47.447	131.098	34243.256	16.195	23.899	1432.824	69386.120	64.522	9.953	11.059
L71	47.500	109.610	28820.852	16.249	23.899	1205.937	58398.860	53.947	10.355	13.806
	47.946	110.651	29649.555	16.403	24.122	1229.132	60078.037	54.459	10.470	13.96
L72	47.946	110.651	29649.555	16.403	24.122	1229.132	60078.037	54.459	10.470	13.96
	47.994	110.762	29738.639	16.419	24.146	1231.613	60258.545	54.514	10.483	13.977
L73	47.994	110.762	29738.639	16.419	24.146	1231.613	60258.545	54.514	10.483	13.977
	48.022	110.828	29792.174	16.429	24.160	1233.102	60367.022	54.546	10.490	13.987
L74	47.969	132.559	35401.193	16.375	24.160	1465.261	71732.416	65.242	10.088	11.209
	48.017	132.692	35507.737	16.392	24.184	1468.227	71948.301	65.307	10.100	11.222
L75	48.017	132.692	35507.737	16.392	24.184	1468.227	71948.301	65.307	10.100	11.222
	48.080	132.869	35649.983	16.414	24.216	1472.184	72236.531	65.394	10.117	11.241
L76	48.115	118.363	31896.676	16.450	24.216	1317.189	64631.313	58.255	10.385	12.981
	48.163	118.481	31992.240	16.466	24.239	1319.841	64824.951	58.313	10.397	12.996
L77	48.167	116.662	31518.044	16.470	24.239	1300.278	63864.102	57.417	10.430	13.245
	48.484	117.437	32150.450	16.580	24.398	1317.760	65145.529	57.799	10.512	13.349

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 160.333-155.333				1	1	1			
L2 155.333-150.333				1	1	1			
L3 150.333-146.833				1	1	1			
L4 146.833-146.333				1	1	1			
L5 146.333-141.333				1	1	1			
L6 141.333-136.333				1	1	1			
L7 136.333-131.333				1	1	1			
L8 131.333-126.333				1	1	1			
L9 126.333-121.333				1	1	1			
L10 121.333-120.083				1	1	1			
L11 120.083-119.833				1	1	0.952241			
L12 119.833-117.500				1	1	0.945183			
L13 117.500-117.250				1	1	1.02541			

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
L14 117.250-115.500				1	1	1.01916			
L15 115.500-115.250				1	1	0.929133			
L16 115.250-110.250				1	1	0.928031			
L17 110.250-104.083				1	1	0.937076			
L18 104.083-102.820				1	1	0.937686			
L19 102.820-100.500				1	1	0.947009			
L20 100.500-100.250				1	1	0.979272			
L21 100.250-98.500				1	1	0.993012			
L22 98.500-98.250				1	1	0.984646			
L23 98.250-93.250				1	1	0.987428			
L24 93.250-90.500				1	1	0.997971			
L25 90.500-90.250				1	1	1.06041			
L26 90.250-85.250				1	1	1.06188			
L27 85.250-83.500				1	1	1.07542			
L28 83.500-83.250				1	1	0.976487			
L29 83.250-80.750				1	1	0.994032			
L30 80.750-80.500				1	1	0.929408			
L31 80.500-80.250				1	1	0.988425			
L32 80.250-77.500				1	1	0.990553			
L33 77.500-77.250				1	1	1.13161			
L34 77.250-68.820				1	1	1.11718			
L35 68.820-68.291				1	1	1.10418			
L36 68.291-64.250				1	1	1.10951			
L37 64.250-64.000				1	1	1.0126			
L38 64.000-60.500				1	1	1.01625			
L39				1	1	1.00832			

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
60.500-60.250									
L40				1	1	1.0078			
60.250-60.083									
L41				1	1	0.993436			
60.083-59.833									
L42				1	1	0.991096			
59.833-59.083									
L43				1	1	0.989483			
59.083-58.833									
L44				1	1	1.00178			
58.833-55.417									
L45				1	1	1.00098			
55.417-55.167									
L46				1	1	0.999648			
55.167-54.750									
L47				1	1	1.05096			
54.750-54.500									
L48				1	1	1.05205			
54.500-49.500									
L49				1	1	1.05391			
49.500-44.500									
L50				1	1	1.06127			
44.500-41.250									
L51				1	1	1.05236			
41.250-41.000									
L52				1	1	1.04658			
41.000-34.291									
L53				1	1	0.943825			
34.291-33.291									
L54				1	1	0.938715			
33.291-31.500									
L55				1	1	0.948018			
31.500-31.250									
L56				1	1	0.945874			
31.250-30.500									
L57				1	1	0.963144			
30.500-30.250									
L58				1	1	0.971561			
30.250-25.750									
L59				1	1	0.97895			
25.750-25.500									
L60				1	1	0.988132			
25.500-24.667									
L61				1	1	0.933203			
24.667-24.417									
L62				1	1	0.932237			
24.417-24.000									
L63				1	1	0.889372			
24.000-23.750									
L64				1	1	0.878115			
23.750-18.750									
L65				1	1	0.889225			
18.750-14.083									
L66				1	1	0.930011			
14.083-13.817									
L67				1	1	0.929667			
13.817-13.667									
L68				1	1	0.922506			
13.667-10.500									

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
L69 10.500-10.250				1	1	0.961027			
L70 10.250-5.250				1	1	0.949995			
L71 5.250-2.900				1	1	0.973671			
L72 2.900-2.650				1	1	0.973198			
L73 2.650-2.500				1	1	0.972914			
L74 2.500-2.250				1	1	0.870569			
L75 2.250-1.917				1	1	0.869965			
L76 1.917-1.667				1	1	0.906259			
L77 1.667-0.000				1	1	0.917462			

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 klf
LDF7-50A(1-5/8")	B	No	Surface Ar (CaAa)	156.000 - 0.000	6	6	-0.300 -0.100	1.980		0.001
LDF7-50A(1-5/8")	B	No	Surface Ar (CaAa)	156.000 - 0.000	2	2	-0.400 -0.350	1.980		0.001
2" Rigid Conduit	B	No	Surface Ar (CaAa)	156.000 - 0.000	3	3	-0.160 -0.100	2.000		0.003
PWRT-606-S(7/8)	B	No	Surface Ar (CaAa)	156.000 - 0.000	4	4	-0.090 -0.010	0.920		0.001
PWRT-606-S(7/8)	B	No	Surface Ar (CaAa)	156.000 - 0.000	2	1	-0.330 -0.320	0.920		0.001
FB-L98B-034-XXX(3/8")	B	No	Surface Ar (CaAa)	156.000 - 0.000	3	3	-0.350 -0.330	0.394		0.000
HB158-21U6S24-xxM_TMO(1-5/8) *	B	No	Surface Ar (CaAa)	146.000 - 0.000	4	4	0.030 0.200	1.996		0.003
561(1-5/8") *	A	No	Surface Ar (CaAa)	132.000 - 0.000	12	6	-0.300 -0.050	1.625		0.001
CU12PSM9P6XXX(1-1/2) *	B	No	Surface Ar (CaAa)	114.000 - 0.000	1	1	0.210 0.240	1.600		0.002
Safety Line 3/8 *	C	No	Surface Ar (CaAa)	130.000 - 0.000	1	1	0.000 0.000	0.375		0.000
Flat Plate										
MP3-05	A	No	Surface Af (CaAa)	31.500 - 11.500	1	1	0.500 0.500	5.330	14.840	0.000
MP3-05	B	No	Surface Af (CaAa)	30.500 - 0.000	1	1	0.500 0.500	5.330	14.840	0.000
MP3-05	C	No	Surface Af	30.500 -	1	1	0.500	5.330	14.840	0.000

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 klf
			(CaAa)	0.000			0.500			
MP3-04	A	No	Surface Af (CaAa)	60.500 - 30.500	1	1	0.500 0.500	4.780	12.780	0.000
MP3-04	B	No	Surface Af (CaAa)	60.500 - 30.500	1	1	0.500 0.500	4.780	12.780	0.000
MP3-04	C	No	Surface Af (CaAa)	61.500 - 31.000	1	1	0.500 0.500	4.780	12.780	0.000
MP3-04	A	No	Surface Af (CaAa)	15.500 - 0.000	1	1	-0.250 -0.250	4.780	12.780	0.000
MP3-04	B	No	Surface Af (CaAa)	15.500 - 0.000	1	1	0.250 0.250	4.780	12.780	0.000
*										
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	30.500 - 0.000	1	1	0.000 0.000	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	30.500 - 0.000	1	1	0.000 0.000	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	30.500 - 0.000	1	1	-0.250 -0.250	6.000	14.000	0.000
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	60.500 - 30.500	1	1	0.000 0.000	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	60.500 - 30.500	1	1	0.000 0.000	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	60.500 - 30.500	1	1	-0.250 -0.250	6.500	15.500	0.000
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	100.500 - 60.500	1	1	0.000 0.000	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	100.500 - 60.500	1	1	0.000 0.000	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	100.500 - 60.500	1	1	-0.250 -0.250	6.000	14.000	0.000
*										
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	38.000 - 23.000	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	38.000 - 23.000	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	38.000 - 23.000	1	1	0.000 0.000	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	67.000 - 52.000	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	67.000 - 52.000	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	67.000 - 52.000	1	1	0.000 0.000	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	A	No	Surface Af (CaAa)	85.500 - 72.500	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	B	No	Surface Af (CaAa)	85.500 - 72.500	1	1	0.250 0.250	6.500	15.500	0.000
CCI 6.5" x 1.25" Plate	C	No	Surface Af (CaAa)	85.500 - 72.500	1	1	0.000 0.000	6.500	15.500	0.000
*										
CCI 4.5" x 1" Plate	A	No	Surface Af (CaAa)	117.000 - 97.000	1	1	0.250 0.250	4.500	11.000	0.000
CCI 4.5" x 1" Plate	B	No	Surface Af (CaAa)	117.000 - 97.000	1	1	0.250 0.250	4.500	11.000	0.000
CCI 4.5" x 1" Plate	C	No	Surface Af (CaAa)	119.000 - 99.000	1	1	0.250 0.250	4.500	11.000	0.000
*										
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	10.500 - 0.000	1	1	0.250 0.250	6.000	14.000	0.000
CCI 8.5" x 1.25" Plate	C	No	Surface Af	45.500 -	1	1	0.250	8.500	19.500	0.000

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 klf
			(CaAa)	10.500			0.250			
CCI 8.5" x 1.25" Plate	C	No	Surface Af (CaAa)	85.000 - 60.000	1	1	0.250 0.250	8.500	19.500	0.000
*										
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	55.400 - 20.400	1	1	-0.250 -0.250	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	55.400 - 20.400	1	1	-0.250 -0.250	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	A	No	Surface Af (CaAa)	90.500 - 55.500	1	1	-0.250 -0.250	8.500	19.500	0.000
CCI 8.5" x 1.25" Plate	B	No	Surface Af (CaAa)	90.500 - 55.500	1	1	-0.250 -0.250	8.500	19.500	0.000
CCI 6" x 1" Plate	A	No	Surface Af (CaAa)	122.600 - 90.600	1	1	-0.250 -0.250	6.000	14.000	0.000
CCI 6" x 1" Plate	B	No	Surface Af (CaAa)	122.600 - 90.600	1	1	-0.250 -0.250	6.000	14.000	0.000
CCI 6" x 1" Plate	C	No	Surface Af (CaAa)	122.600 - 100.600	1	1	-0.250 -0.250	6.000	14.000	0.000
*										
CCI 1.25" x 5.875" Plate	A	No	Surface Af (CaAa)	25.500 - 0.000	1	1	0.000 0.000	1.250	14.250	0.000
CCI 1.25" x 5.875" Plate	B	No	Surface Af (CaAa)	25.500 - 0.000	1	1	0.000 0.000	1.250	14.250	0.000
CCI 1.25" x 5.875" Plate	C	No	Surface Af (CaAa)	25.500 - 0.000	1	1	0.000 0.000	1.250	14.250	0.000
CCI 1.25" x 5.875" Plate	C	No	Surface Af (CaAa)	25.500 - 0.000	1	1	0.000 0.000	1.250	14.250	0.000
*										
CCI 1.25" x 5.875" Plate	A	No	Surface Af (CaAa)	28.500 - 25.500	1	1	0.000 0.000	1.250	14.250	0.000
CCI 1.25" x 5.875" Plate	B	No	Surface Af (CaAa)	28.500 - 25.500	1	1	0.000 0.000	1.250	14.250	0.000
CCI 1.25" x 5.875" Plate	C	No	Surface Af (CaAa)	28.500 - 25.500	1	1	0.000 0.000	1.250	14.250	0.000
*										

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 klf
*									
*									
AVA7-50(1-5/8")	B	No	No	Inside Pole	139.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
561(1-5/8")	A	No	No	Inside Pole	132.000 - 0.000	6	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
HB158-1-08U8-S8J 18(1-5/8")	A	No	No	Inside Pole	132.000 - 0.000	2	No Ice	0.000	0.001
							1/2" Ice	0.000	0.001
							1" Ice	0.000	0.001
*									
LDF4-50A(1/2)	B	No	No	Inside Pole	101.000 - 0.000	1	No Ice	0.000	0.000
							1/2" Ice	0.000	0.000
							1" Ice	0.000	0.000

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	C_AA_A ft^2/ft	Weight klf
*								
*								

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	160.333-155.333	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	1.842	0.000	0.014
		C	0.000	0.000	0.000	0.000	0.000
L2	155.333-150.333	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	13.811	0.000	0.102
		C	0.000	0.000	0.000	0.000	0.000
L3	150.333-146.833	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	9.667	0.000	0.072
		C	0.000	0.000	0.000	0.000	0.000
L4	146.833-146.333	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	1.381	0.000	0.010
		C	0.000	0.000	0.000	0.000	0.000
L5	146.333-141.333	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	17.537	0.000	0.149
		C	0.000	0.000	0.000	0.000	0.000
L6	141.333-136.333	A	0.000	0.000	0.000	0.000	0.000
		B	0.000	0.000	17.803	0.000	0.164
		C	0.000	0.000	0.000	0.000	0.000
L7	136.333-131.333	A	0.000	0.000	0.650	0.000	0.018
		B	0.000	0.000	17.803	0.000	0.173
		C	0.000	0.000	0.000	0.000	0.000
L8	131.333-126.333	A	0.000	0.000	4.875	0.000	0.135
		B	0.000	0.000	17.803	0.000	0.173
		C	0.000	0.000	0.138	0.000	0.001
L9	126.333-121.333	A	0.000	0.000	6.142	0.000	0.135
		B	0.000	0.000	19.070	0.000	0.173
		C	0.000	0.000	1.454	0.000	0.001
L10	121.333-120.083	A	0.000	0.000	2.469	0.000	0.034
		B	0.000	0.000	5.701	0.000	0.043
		C	0.000	0.000	1.297	0.000	0.000
L11	120.083-119.833	A	0.000	0.000	0.494	0.000	0.007
		B	0.000	0.000	1.140	0.000	0.009
		C	0.000	0.000	0.259	0.000	0.000
L12	119.833-117.500	A	0.000	0.000	4.608	0.000	0.063
		B	0.000	0.000	10.640	0.000	0.081
		C	0.000	0.000	3.545	0.000	0.001
L13	117.500-117.250	A	0.000	0.000	0.494	0.000	0.007
		B	0.000	0.000	1.140	0.000	0.009
		C	0.000	0.000	0.447	0.000	0.000
L14	117.250-115.500	A	0.000	0.000	4.581	0.000	0.047
		B	0.000	0.000	9.106	0.000	0.061
		C	0.000	0.000	3.128	0.000	0.000
L15	115.500-115.250	A	0.000	0.000	0.681	0.000	0.007
		B	0.000	0.000	1.328	0.000	0.009
		C	0.000	0.000	0.447	0.000	0.000
L16	115.250-110.250	A	0.000	0.000	13.625	0.000	0.135

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
		B	0.000	0.000	27.153	0.000	0.182
		C	0.000	0.000	8.938	0.000	0.001
L17	110.250-104.083	A	0.000	0.000	16.805	0.000	0.166
		B	0.000	0.000	33.737	0.000	0.228
		C	0.000	0.000	11.024	0.000	0.001
L18	104.083-102.820	A	0.000	0.000	3.442	0.000	0.034
		B	0.000	0.000	6.909	0.000	0.047
		C	0.000	0.000	2.258	0.000	0.000
L19	102.820-100.500	A	0.000	0.000	6.322	0.000	0.062
		B	0.000	0.000	12.692	0.000	0.086
		C	0.000	0.000	4.047	0.000	0.001
L20	100.500-100.250	A	0.000	0.000	0.931	0.000	0.007
		B	0.000	0.000	1.618	0.000	0.009
		C	0.000	0.000	0.447	0.000	0.000
L21	100.250-98.500	A	0.000	0.000	6.519	0.000	0.047
		B	0.000	0.000	11.323	0.000	0.065
		C	0.000	0.000	2.753	0.000	0.000
L22	98.500-98.250	A	0.000	0.000	0.931	0.000	0.007
		B	0.000	0.000	1.618	0.000	0.009
		C	0.000	0.000	0.259	0.000	0.000
L23	98.250-93.250	A	0.000	0.000	15.813	0.000	0.135
		B	0.000	0.000	29.540	0.000	0.186
		C	0.000	0.000	5.188	0.000	0.001
L24	93.250-90.500	A	0.000	0.000	8.081	0.000	0.074
		B	0.000	0.000	15.631	0.000	0.102
		C	0.000	0.000	2.853	0.000	0.001
L25	90.500-90.250	A	0.000	0.000	0.848	0.000	0.007
		B	0.000	0.000	1.534	0.000	0.009
		C	0.000	0.000	0.259	0.000	0.000
L26	90.250-85.250	A	0.000	0.000	17.223	0.000	0.135
		B	0.000	0.000	30.950	0.000	0.186
		C	0.000	0.000	5.452	0.000	0.001
L27	85.250-83.500	A	0.000	0.000	7.786	0.000	0.047
		B	0.000	0.000	12.591	0.000	0.065
		C	0.000	0.000	5.791	0.000	0.000
L28	83.500-83.250	A	0.000	0.000	1.112	0.000	0.007
		B	0.000	0.000	1.799	0.000	0.009
		C	0.000	0.000	0.878	0.000	0.000
L29	83.250-80.750	A	0.000	0.000	11.123	0.000	0.067
		B	0.000	0.000	17.987	0.000	0.093
		C	0.000	0.000	8.779	0.000	0.001
L30	80.750-80.500	A	0.000	0.000	1.112	0.000	0.007
		B	0.000	0.000	1.799	0.000	0.009
		C	0.000	0.000	0.878	0.000	0.000
L31	80.500-80.250	A	0.000	0.000	1.112	0.000	0.007
		B	0.000	0.000	1.799	0.000	0.009
		C	0.000	0.000	0.878	0.000	0.000
L32	80.250-77.500	A	0.000	0.000	12.235	0.000	0.074
		B	0.000	0.000	19.785	0.000	0.102
		C	0.000	0.000	9.657	0.000	0.001
L33	77.500-77.250	A	0.000	0.000	1.112	0.000	0.007
		B	0.000	0.000	1.799	0.000	0.009
		C	0.000	0.000	0.878	0.000	0.000
L34	77.250-68.820	A	0.000	0.000	33.615	0.000	0.227
		B	0.000	0.000	56.759	0.000	0.313
		C	0.000	0.000	25.712	0.000	0.002
L35	68.820-68.291	A	0.000	0.000	1.794	0.000	0.014
		B	0.000	0.000	3.247	0.000	0.020
		C	0.000	0.000	1.298	0.000	0.000
L36	68.291-64.250	A	0.000	0.000	16.685	0.000	0.109
		B	0.000	0.000	27.779	0.000	0.150

Tower Section	Tower Elevation ft	Face	A_R ft^2	A_F ft^2	C_AA_A In Face ft^2	C_AA_A Out Face ft^2	Weight K
		C	0.000	0.000	12.896	0.000	0.001
L37	64.250-64.000	A	0.000	0.000	1.119	0.000	0.007
		B	0.000	0.000	1.805	0.000	0.009
		C	0.000	0.000	0.884	0.000	0.000
L38	64.000-60.500	A	0.000	0.000	15.663	0.000	0.094
		B	0.000	0.000	25.272	0.000	0.130
		C	0.000	0.000	13.178	0.000	0.001
L39	60.500-60.250	A	0.000	0.000	1.339	0.000	0.007
		B	0.000	0.000	2.025	0.000	0.009
		C	0.000	0.000	1.104	0.000	0.000
L40	60.250-60.083	A	0.000	0.000	0.894	0.000	0.004
		B	0.000	0.000	1.353	0.000	0.006
		C	0.000	0.000	0.738	0.000	0.000
L41	60.083-59.833	A	0.000	0.000	1.339	0.000	0.007
		B	0.000	0.000	2.025	0.000	0.009
		C	0.000	0.000	0.868	0.000	0.000
L42	59.833-59.083	A	0.000	0.000	4.016	0.000	0.020
		B	0.000	0.000	6.075	0.000	0.028
		C	0.000	0.000	2.251	0.000	0.000
L43	59.083-58.833	A	0.000	0.000	1.339	0.000	0.007
		B	0.000	0.000	2.025	0.000	0.009
		C	0.000	0.000	0.750	0.000	0.000
L44	58.833-55.417	A	0.000	0.000	18.176	0.000	0.092
		B	0.000	0.000	27.556	0.000	0.127
		C	0.000	0.000	10.252	0.000	0.001
L45	55.417-55.167	A	0.000	0.000	1.315	0.000	0.007
		B	0.000	0.000	2.002	0.000	0.009
		C	0.000	0.000	0.750	0.000	0.000
L46	55.167-54.750	A	0.000	0.000	2.231	0.000	0.011
		B	0.000	0.000	3.375	0.000	0.015
		C	0.000	0.000	1.250	0.000	0.000
L47	54.750-54.500	A	0.000	0.000	1.339	0.000	0.007
		B	0.000	0.000	2.025	0.000	0.009
		C	0.000	0.000	0.750	0.000	0.000
L48	54.500-49.500	A	0.000	0.000	24.067	0.000	0.135
		B	0.000	0.000	37.794	0.000	0.186
		C	0.000	0.000	12.296	0.000	0.001
L49	49.500-44.500	A	0.000	0.000	21.358	0.000	0.135
		B	0.000	0.000	35.086	0.000	0.186
		C	0.000	0.000	11.004	0.000	0.001
L50	44.500-41.250	A	0.000	0.000	13.883	0.000	0.087
		B	0.000	0.000	22.806	0.000	0.121
		C	0.000	0.000	10.836	0.000	0.001
L51	41.250-41.000	A	0.000	0.000	1.068	0.000	0.007
		B	0.000	0.000	1.754	0.000	0.009
		C	0.000	0.000	0.834	0.000	0.000
L52	41.000-34.291	A	0.000	0.000	32.677	0.000	0.180
		B	0.000	0.000	51.096	0.000	0.249
		C	0.000	0.000	26.387	0.000	0.001
L53	34.291-33.291	A	0.000	0.000	5.355	0.000	0.027
		B	0.000	0.000	8.101	0.000	0.037
		C	0.000	0.000	4.418	0.000	0.000
L54	33.291-31.500	A	0.000	0.000	9.591	0.000	0.048
		B	0.000	0.000	14.508	0.000	0.067
		C	0.000	0.000	7.912	0.000	0.000
L55	31.500-31.250	A	0.000	0.000	1.561	0.000	0.007
		B	0.000	0.000	2.025	0.000	0.009
		C	0.000	0.000	1.104	0.000	0.000
L56	31.250-30.500	A	0.000	0.000	4.683	0.000	0.020
		B	0.000	0.000	6.075	0.000	0.028
		C	0.000	0.000	2.915	0.000	0.000

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
L57	30.500-30.250	A	0.000	0.000	1.341	0.000	0.007
		B	0.000	0.000	2.027	0.000	0.009
		C	0.000	0.000	1.106	0.000	0.000
L58	30.250-25.750	A	0.000	0.000	24.523	0.000	0.121
		B	0.000	0.000	36.878	0.000	0.167
		C	0.000	0.000	20.304	0.000	0.001
L59	25.750-25.500	A	0.000	0.000	1.376	0.000	0.007
		B	0.000	0.000	2.063	0.000	0.009
		C	0.000	0.000	1.142	0.000	0.000
L60	25.500-24.667	A	0.000	0.000	4.643	0.000	0.022
		B	0.000	0.000	6.931	0.000	0.031
		C	0.000	0.000	4.035	0.000	0.000
L61	24.667-24.417	A	0.000	0.000	1.393	0.000	0.007
		B	0.000	0.000	2.079	0.000	0.009
		C	0.000	0.000	1.211	0.000	0.000
L62	24.417-24.000	A	0.000	0.000	2.322	0.000	0.011
		B	0.000	0.000	3.466	0.000	0.015
		C	0.000	0.000	2.018	0.000	0.000
L63	24.000-23.750	A	0.000	0.000	1.393	0.000	0.007
		B	0.000	0.000	2.079	0.000	0.009
		C	0.000	0.000	1.211	0.000	0.000
L64	23.750-18.750	A	0.000	0.000	20.917	0.000	0.135
		B	0.000	0.000	34.644	0.000	0.186
		C	0.000	0.000	19.608	0.000	0.001
L65	18.750-14.083	A	0.000	0.000	15.464	0.000	0.126
		B	0.000	0.000	28.278	0.000	0.173
		C	0.000	0.000	17.544	0.000	0.001
L66	14.083-13.817	A	0.000	0.000	1.029	0.000	0.007
		B	0.000	0.000	1.759	0.000	0.010
		C	0.000	0.000	1.000	0.000	0.000
L67	13.817-13.667	A	0.000	0.000	0.580	0.000	0.004
		B	0.000	0.000	0.992	0.000	0.006
		C	0.000	0.000	0.564	0.000	0.000
L68	13.667-10.500	A	0.000	0.000	11.363	0.000	0.085
		B	0.000	0.000	20.946	0.000	0.118
		C	0.000	0.000	11.905	0.000	0.001
L69	10.500-10.250	A	0.000	0.000	0.745	0.000	0.007
		B	0.000	0.000	1.653	0.000	0.009
		C	0.000	0.000	0.818	0.000	0.000
L70	10.250-5.250	A	0.000	0.000	14.900	0.000	0.135
		B	0.000	0.000	33.069	0.000	0.186
		C	0.000	0.000	16.355	0.000	0.001
L71	5.250-2.900	A	0.000	0.000	7.003	0.000	0.063
		B	0.000	0.000	15.543	0.000	0.087
		C	0.000	0.000	7.687	0.000	0.001
L72	2.900-2.650	A	0.000	0.000	0.745	0.000	0.007
		B	0.000	0.000	1.653	0.000	0.009
		C	0.000	0.000	0.818	0.000	0.000
L73	2.650-2.500	A	0.000	0.000	0.447	0.000	0.004
		B	0.000	0.000	0.992	0.000	0.006
		C	0.000	0.000	0.491	0.000	0.000
L74	2.500-2.250	A	0.000	0.000	0.745	0.000	0.007
		B	0.000	0.000	1.653	0.000	0.009
		C	0.000	0.000	0.818	0.000	0.000
L75	2.250-1.917	A	0.000	0.000	0.992	0.000	0.009
		B	0.000	0.000	2.202	0.000	0.012
		C	0.000	0.000	1.089	0.000	0.000
L76	1.917-1.667	A	0.000	0.000	0.745	0.000	0.007
		B	0.000	0.000	1.653	0.000	0.009
		C	0.000	0.000	0.818	0.000	0.000
L77	1.667-0.000	A	0.000	0.000	4.968	0.000	0.045

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
		B	0.000	0.000	11.025	0.000	0.062
		C	0.000	0.000	5.453	0.000	0.000

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	160.333-155.333	A	0.994	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	3.249	0.000	0.039
		C		0.000	0.000	0.000	0.000	0.000
L2	155.333-150.333	A	0.991	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	24.332	0.000	0.289
		C		0.000	0.000	0.000	0.000	0.000
L3	150.333-146.833	A	0.988	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	17.018	0.000	0.202
		C		0.000	0.000	0.000	0.000	0.000
L4	146.833-146.333	A	0.987	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	2.430	0.000	0.029
		C		0.000	0.000	0.000	0.000	0.000
L5	146.333-141.333	A	0.985	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	30.095	0.000	0.377
		C		0.000	0.000	0.000	0.000	0.000
L6	141.333-136.333	A	0.981	0.000	0.000	0.000	0.000	0.000
		B		0.000	0.000	30.479	0.000	0.394
		C		0.000	0.000	0.000	0.000	0.000
L7	136.333-131.333	A	0.978	0.000	0.000	0.976	0.000	0.027
		B		0.000	0.000	30.449	0.000	0.402
		C		0.000	0.000	0.000	0.000	0.000
L8	131.333-126.333	A	0.974	0.000	0.000	7.311	0.000	0.199
		B		0.000	0.000	30.417	0.000	0.401
		C		0.000	0.000	0.852	0.000	0.007
L9	126.333-121.333	A	0.970	0.000	0.000	8.819	0.000	0.207
		B		0.000	0.000	31.897	0.000	0.409
		C		0.000	0.000	2.671	0.000	0.018
L10	121.333-120.083	A	0.968	0.000	0.000	3.318	0.000	0.058
		B		0.000	0.000	9.083	0.000	0.108
		C		0.000	0.000	1.781	0.000	0.011
L11	120.083-119.833	A	0.967	0.000	0.000	0.663	0.000	0.012
		B		0.000	0.000	1.816	0.000	0.022
		C		0.000	0.000	0.356	0.000	0.002
L12	119.833-117.500	A	0.966	0.000	0.000	6.191	0.000	0.108
		B		0.000	0.000	16.945	0.000	0.202
		C		0.000	0.000	4.737	0.000	0.028
L13	117.500-117.250	A	0.965	0.000	0.000	0.663	0.000	0.012
		B		0.000	0.000	1.815	0.000	0.022
		C		0.000	0.000	0.592	0.000	0.003
L14	117.250-115.500	A	0.964	0.000	0.000	6.056	0.000	0.089
		B		0.000	0.000	14.118	0.000	0.159
		C		0.000	0.000	4.141	0.000	0.024
L15	115.500-115.250	A	0.963	0.000	0.000	0.899	0.000	0.013
		B		0.000	0.000	2.050	0.000	0.023
		C		0.000	0.000	0.591	0.000	0.003
L16	115.250-110.250	A	0.961	0.000	0.000	17.967	0.000	0.259
		B		0.000	0.000	42.301	0.000	0.478
		C		0.000	0.000	11.821	0.000	0.069
L17	110.250-104.083	A	0.956	0.000	0.000	22.141	0.000	0.318
		B		0.000	0.000	52.648	0.000	0.596

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
		C		0.000	0.000	14.562	0.000	0.085
L18	104.083-102.820	A	0.953	0.000	0.000	4.535	0.000	0.065
		B		0.000	0.000	10.782	0.000	0.122
		C		0.000	0.000	2.982	0.000	0.017
L19	102.820-100.500	A	0.951	0.000	0.000	8.322	0.000	0.119
		B		0.000	0.000	19.779	0.000	0.224
		C		0.000	0.000	5.352	0.000	0.031
L20	100.500-100.250	A	0.950	0.000	0.000	1.194	0.000	0.014
		B		0.000	0.000	2.428	0.000	0.026
		C		0.000	0.000	0.589	0.000	0.003
L21	100.250-98.500	A	0.949	0.000	0.000	8.357	0.000	0.101
		B		0.000	0.000	16.993	0.000	0.180
		C		0.000	0.000	3.655	0.000	0.021
L22	98.500-98.250	A	0.948	0.000	0.000	1.194	0.000	0.014
		B		0.000	0.000	2.427	0.000	0.026
		C		0.000	0.000	0.354	0.000	0.002
L23	98.250-93.250	A	0.946	0.000	0.000	20.341	0.000	0.269
		B		0.000	0.000	44.986	0.000	0.493
		C		0.000	0.000	7.079	0.000	0.041
L24	93.250-90.500	A	0.942	0.000	0.000	10.416	0.000	0.143
		B		0.000	0.000	23.953	0.000	0.266
		C		0.000	0.000	3.889	0.000	0.022
L25	90.500-90.250	A	0.940	0.000	0.000	1.062	0.000	0.014
		B		0.000	0.000	2.292	0.000	0.025
		C		0.000	0.000	0.353	0.000	0.002
L26	90.250-85.250	A	0.937	0.000	0.000	21.513	0.000	0.273
		B		0.000	0.000	46.090	0.000	0.495
		C		0.000	0.000	7.352	0.000	0.042
L27	85.250-83.500	A	0.934	0.000	0.000	9.450	0.000	0.107
		B		0.000	0.000	18.041	0.000	0.184
		C		0.000	0.000	6.900	0.000	0.039
L28	83.500-83.250	A	0.933	0.000	0.000	1.350	0.000	0.015
		B		0.000	0.000	2.577	0.000	0.026
		C		0.000	0.000	1.043	0.000	0.006
L29	83.250-80.750	A	0.931	0.000	0.000	13.495	0.000	0.152
		B		0.000	0.000	25.757	0.000	0.262
		C		0.000	0.000	10.425	0.000	0.058
L30	80.750-80.500	A	0.929	0.000	0.000	1.349	0.000	0.015
		B		0.000	0.000	2.575	0.000	0.026
		C		0.000	0.000	1.042	0.000	0.006
L31	80.500-80.250	A	0.929	0.000	0.000	1.349	0.000	0.015
		B		0.000	0.000	2.575	0.000	0.026
		C		0.000	0.000	1.042	0.000	0.006
L32	80.250-77.500	A	0.927	0.000	0.000	14.837	0.000	0.167
		B		0.000	0.000	28.309	0.000	0.288
		C		0.000	0.000	11.461	0.000	0.064
L33	77.500-77.250	A	0.926	0.000	0.000	1.348	0.000	0.015
		B		0.000	0.000	2.572	0.000	0.026
		C		0.000	0.000	1.042	0.000	0.006
L34	77.250-68.820	A	0.920	0.000	0.000	41.181	0.000	0.485
		B		0.000	0.000	82.381	0.000	0.853
		C		0.000	0.000	30.835	0.000	0.168
L35	68.820-68.291	A	0.914	0.000	0.000	2.240	0.000	0.028
		B		0.000	0.000	4.825	0.000	0.051
		C		0.000	0.000	1.590	0.000	0.009
L36	68.291-64.250	A	0.911	0.000	0.000	20.440	0.000	0.234
		B		0.000	0.000	40.130	0.000	0.409
		C		0.000	0.000	15.482	0.000	0.083
L37	64.250-64.000	A	0.908	0.000	0.000	1.361	0.000	0.015
		B		0.000	0.000	2.578	0.000	0.026
		C		0.000	0.000	1.055	0.000	0.006

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
L38	64.000-60.500	A	0.906	0.000	0.000	19.053	0.000	0.210
		B		0.000	0.000	36.074	0.000	0.360
		C		0.000	0.000	15.738	0.000	0.085
L39	60.500-60.250	A	0.903	0.000	0.000	1.626	0.000	0.016
		B		0.000	0.000	2.840	0.000	0.027
		C		0.000	0.000	1.319	0.000	0.007
L40	60.250-60.083	A	0.903	0.000	0.000	1.086	0.000	0.011
		B		0.000	0.000	1.897	0.000	0.018
		C		0.000	0.000	0.881	0.000	0.005
L41	60.083-59.833	A	0.902	0.000	0.000	1.625	0.000	0.016
		B		0.000	0.000	2.840	0.000	0.027
		C		0.000	0.000	1.052	0.000	0.006
L42	59.833-59.083	A	0.902	0.000	0.000	4.876	0.000	0.049
		B		0.000	0.000	8.518	0.000	0.082
		C		0.000	0.000	2.758	0.000	0.015
L43	59.083-58.833	A	0.901	0.000	0.000	1.625	0.000	0.016
		B		0.000	0.000	2.839	0.000	0.027
		C		0.000	0.000	0.919	0.000	0.005
L44	58.833-55.417	A	0.898	0.000	0.000	22.064	0.000	0.224
		B		0.000	0.000	38.635	0.000	0.370
		C		0.000	0.000	12.555	0.000	0.070
L45	55.417-55.167	A	0.895	0.000	0.000	1.597	0.000	0.016
		B		0.000	0.000	2.808	0.000	0.027
		C		0.000	0.000	0.918	0.000	0.005
L46	55.167-54.750	A	0.894	0.000	0.000	2.706	0.000	0.027
		B		0.000	0.000	4.725	0.000	0.045
		C		0.000	0.000	1.530	0.000	0.008
L47	54.750-54.500	A	0.894	0.000	0.000	1.623	0.000	0.016
		B		0.000	0.000	2.834	0.000	0.027
		C		0.000	0.000	0.918	0.000	0.005
L48	54.500-49.500	A	0.890	0.000	0.000	29.402	0.000	0.310
		B		0.000	0.000	53.585	0.000	0.522
		C		0.000	0.000	15.301	0.000	0.085
L49	49.500-44.500	A	0.881	0.000	0.000	26.320	0.000	0.292
		B		0.000	0.000	50.429	0.000	0.502
		C		0.000	0.000	13.822	0.000	0.076
L50	44.500-41.250	A	0.873	0.000	0.000	17.085	0.000	0.189
		B		0.000	0.000	32.713	0.000	0.324
		C		0.000	0.000	13.105	0.000	0.069
L51	41.250-41.000	A	0.869	0.000	0.000	1.313	0.000	0.015
		B		0.000	0.000	2.514	0.000	0.025
		C		0.000	0.000	1.007	0.000	0.005
L52	41.000-34.291	A	0.861	0.000	0.000	39.712	0.000	0.411
		B		0.000	0.000	71.847	0.000	0.687
		C		0.000	0.000	31.498	0.000	0.163
L53	34.291-33.291	A	0.852	0.000	0.000	6.463	0.000	0.064
		B		0.000	0.000	11.253	0.000	0.105
		C		0.000	0.000	5.239	0.000	0.027
L54	33.291-31.500	A	0.848	0.000	0.000	11.552	0.000	0.114
		B		0.000	0.000	20.093	0.000	0.186
		C		0.000	0.000	9.361	0.000	0.048
L55	31.500-31.250	A	0.846	0.000	0.000	1.876	0.000	0.017
		B		0.000	0.000	2.803	0.000	0.026
		C		0.000	0.000	1.306	0.000	0.007
L56	31.250-30.500	A	0.844	0.000	0.000	5.628	0.000	0.052
		B		0.000	0.000	8.406	0.000	0.078
		C		0.000	0.000	3.434	0.000	0.017
L57	30.500-30.250	A	0.843	0.000	0.000	1.613	0.000	0.016
		B		0.000	0.000	2.803	0.000	0.026
		C		0.000	0.000	1.308	0.000	0.007
L58	30.250-25.750	A	0.836	0.000	0.000	29.678	0.000	0.299

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
		B		0.000	0.000	51.046	0.000	0.480
		C		0.000	0.000	24.174	0.000	0.134
L59	25.750-25.500	A	0.829	0.000	0.000	1.670	0.000	0.017
		B		0.000	0.000	2.854	0.000	0.027
		C		0.000	0.000	1.365	0.000	0.008
L60	25.500-24.667	A	0.827	0.000	0.000	5.676	0.000	0.057
		B		0.000	0.000	9.621	0.000	0.090
		C		0.000	0.000	4.969	0.000	0.031
L61	24.667-24.417	A	0.825	0.000	0.000	1.702	0.000	0.017
		B		0.000	0.000	2.885	0.000	0.027
		C		0.000	0.000	1.490	0.000	0.009
L62	24.417-24.000	A	0.824	0.000	0.000	2.837	0.000	0.028
		B		0.000	0.000	4.808	0.000	0.045
		C		0.000	0.000	2.483	0.000	0.015
L63	24.000-23.750	A	0.823	0.000	0.000	1.702	0.000	0.017
		B		0.000	0.000	2.883	0.000	0.027
		C		0.000	0.000	1.489	0.000	0.009
L64	23.750-18.750	A	0.813	0.000	0.000	26.232	0.000	0.301
		B		0.000	0.000	49.787	0.000	0.496
		C		0.000	0.000	24.584	0.000	0.157
L65	18.750-14.083	A	0.793	0.000	0.000	19.971	0.000	0.258
		B		0.000	0.000	41.797	0.000	0.436
		C		0.000	0.000	21.983	0.000	0.138
L66	14.083-13.817	A	0.780	0.000	0.000	1.312	0.000	0.015
		B		0.000	0.000	2.550	0.000	0.025
		C		0.000	0.000	1.249	0.000	0.008
L67	13.817-13.667	A	0.779	0.000	0.000	0.739	0.000	0.009
		B		0.000	0.000	1.438	0.000	0.014
		C		0.000	0.000	0.704	0.000	0.004
L68	13.667-10.500	A	0.769	0.000	0.000	14.537	0.000	0.177
		B		0.000	0.000	30.266	0.000	0.300
		C		0.000	0.000	14.827	0.000	0.091
L69	10.500-10.250	A	0.757	0.000	0.000	0.967	0.000	0.013
		B		0.000	0.000	2.381	0.000	0.023
		C		0.000	0.000	1.027	0.000	0.007
L70	10.250-5.250	A	0.735	0.000	0.000	19.244	0.000	0.256
		B		0.000	0.000	47.331	0.000	0.460
		C		0.000	0.000	20.428	0.000	0.128
L71	5.250-2.900	A	0.690	0.000	0.000	8.953	0.000	0.117
		B		0.000	0.000	21.955	0.000	0.208
		C		0.000	0.000	9.483	0.000	0.056
L72	2.900-2.650	A	0.664	0.000	0.000	0.947	0.000	0.012
		B		0.000	0.000	2.318	0.000	0.022
		C		0.000	0.000	1.002	0.000	0.006
L73	2.650-2.500	A	0.659	0.000	0.000	0.568	0.000	0.007
		B		0.000	0.000	1.389	0.000	0.013
		C		0.000	0.000	0.600	0.000	0.003
L74	2.500-2.250	A	0.653	0.000	0.000	0.945	0.000	0.012
		B		0.000	0.000	2.311	0.000	0.021
		C		0.000	0.000	0.999	0.000	0.006
L75	2.250-1.917	A	0.645	0.000	0.000	1.256	0.000	0.016
		B		0.000	0.000	3.071	0.000	0.028
		C		0.000	0.000	1.327	0.000	0.007
L76	1.917-1.667	A	0.635	0.000	0.000	0.941	0.000	0.012
		B		0.000	0.000	2.299	0.000	0.021
		C		0.000	0.000	0.994	0.000	0.005
L77	1.667-0.000	A	0.588	0.000	0.000	6.208	0.000	0.077
		B		0.000	0.000	15.119	0.000	0.134
		C		0.000	0.000	6.540	0.000	0.033

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	160.333-155.333	1.611	-2.220	1.172	-1.682
L2	155.333-150.333	3.961	-5.460	2.724	-3.911
L3	150.333-146.833	3.961	-5.460	2.724	-3.911
L4	146.833-146.333	4.888	-6.734	3.416	-4.902
L5	146.333-141.333	5.244	-5.440	4.165	-4.573
L6	141.333-136.333	5.431	-5.548	4.331	-4.684
L7	136.333-131.333	5.110	-5.593	4.125	-4.747
L8	131.333-126.333	2.536	-4.799	2.359	-4.267
L9	126.333-121.333	2.343	-4.411	2.264	-4.036
L10	121.333-120.083	1.860	-3.500	1.948	-3.471
L11	120.083-119.833	1.868	-3.515	1.958	-3.486
L12	119.833-117.500	1.221	-2.987	1.469	-3.095
L13	117.500-117.250	0.888	-2.720	1.214	-2.897
L14	117.250-115.500	1.477	-2.911	1.652	-3.038
L15	115.500-115.250	1.571	-2.952	1.727	-3.074
L16	115.250-110.250	1.716	-2.968	1.921	-3.086
L17	110.250-104.083	1.804	-3.037	2.034	-3.165
L18	104.083-102.820	1.813	-3.051	2.045	-3.182
L19	102.820-100.500	1.786	-3.118	2.033	-3.242
L20	100.500-100.250	1.594	-3.710	1.863	-3.694
L21	100.250-98.500	1.832	-3.922	2.063	-3.871
L22	98.500-98.250	2.446	-4.451	2.571	-4.303
L23	98.250-93.250	2.063	-4.462	2.284	-4.316
L24	93.250-90.500	1.998	-4.517	2.251	-4.378
L25	90.500-90.250	1.378	-4.594	1.838	-4.448
L26	90.250-85.250	1.436	-4.567	1.887	-4.448
L27	85.250-83.500	0.940	-2.503	1.409	-2.882
L28	83.500-83.250	0.763	-2.371	1.267	-2.778
L29	83.250-80.750	0.768	-2.385	1.275	-2.795
L30	80.750-80.500	0.772	-2.399	1.283	-2.813
L31	80.500-80.250	0.773	-2.401	1.284	-2.816
L32	80.250-77.500	0.778	-2.416	1.293	-2.834
L33	77.500-77.250	0.783	-2.430	1.300	-2.852
L34	77.250-68.820	0.412	-2.853	1.065	-3.219
L35	68.820-68.291	-0.172	-3.453	0.693	-3.699
L36	68.291-64.250	0.550	-2.764	1.179	-3.145
L37	64.250-64.000	0.835	-2.508	1.385	-2.934
L38	64.000-60.500	0.526	-2.570	1.116	-2.990
L39	60.500-60.250	0.814	-2.262	1.307	-2.683
L40	60.250-60.083	0.815	-2.264	1.308	-2.686
L41	60.083-59.833	1.653	-2.913	2.002	-3.225
L42	59.833-59.083	2.102	-3.263	2.370	-3.514
L43	59.083-58.833	2.106	-3.269	2.376	-3.521
L44	58.833-55.417	2.159	-3.283	2.424	-3.540
L45	55.417-55.167	2.240	-3.289	2.496	-3.554
L46	55.167-54.750	2.139	-3.319	2.414	-3.578
L47	54.750-54.500	2.141	-3.322	2.417	-3.581
L48	54.500-49.500	1.822	-3.860	2.192	-4.037
L49	49.500-44.500	1.122	-4.258	1.683	-4.382
L50	44.500-41.250	-0.075	-3.280	0.717	-3.620
L51	41.250-41.000	-0.076	-3.301	0.720	-3.644
L52	41.000-34.291	0.497	-2.816	1.134	-3.241
L53	34.291-33.291	0.886	-2.457	1.419	-2.922
L54	33.291-31.500	0.891	-2.469	1.422	-2.935
L55	31.500-31.250	1.658	-3.220	2.080	-3.582

Section	Elevation ft	CP_X in	CP_Z in	CP_X Ice in	CP_Z Ice in
L56	31.250-30.500	2.386	-3.132	2.738	-3.512
L57	30.500-30.250	0.819	-2.452	1.373	-2.930
L58	30.250-25.750	0.816	-2.443	1.363	-2.911
L59	25.750-25.500	0.817	-2.444	1.360	-2.907
L60	25.500-24.667	0.804	-2.186	1.329	-2.556
L61	24.667-24.417	0.805	-2.190	1.331	-2.560
L62	24.417-24.000	0.806	-2.192	1.332	-2.563
L63	24.000-23.750	0.807	-2.195	1.334	-2.566
L64	23.750-18.750	0.494	-2.697	1.169	-3.028
L65	18.750-14.083	1.484	-2.050	1.994	-2.551
L66	14.083-13.817	1.406	-1.288	1.907	-1.890
L67	13.817-13.667	1.407	-1.289	1.908	-1.892
L68	13.667-10.500	1.095	-0.959	1.657	-1.630
L69	10.500-10.250	0.986	-0.613	1.585	-1.376
L70	10.250-5.250	0.994	-0.618	1.590	-1.384
L71	5.250-2.900	1.003	-0.624	1.591	-1.394
L72	2.900-2.650	1.007	-0.626	1.588	-1.396
L73	2.650-2.500	1.007	-0.626	1.587	-1.397
L74	2.500-2.250	1.008	-0.627	1.586	-1.397
L75	2.250-1.917	1.009	-0.627	1.584	-1.397
L76	1.917-1.667	1.010	-0.628	1.582	-1.397
L77	1.667-0.000	1.012	-0.629	1.568	-1.395

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")	155.33 - 156.00	1.0000	1.0000
L1	2	LDF7-50A(1-5/8")	155.33 - 156.00	1.0000	1.0000
L1	5	2" Rigid Conduit	155.33 - 156.00	1.0000	1.0000
L1	7	PWRT-606-S(7/8)	155.33 - 156.00	1.0000	1.0000
L1	8	PWRT-606-S(7/8)	155.33 - 156.00	1.0000	1.0000
L1	9	FB-L98B-034-XXX(3/8")	155.33 - 156.00	1.0000	1.0000
L2	1	LDF7-50A(1-5/8")	150.33 - 155.33	1.0000	1.0000
L2	2	LDF7-50A(1-5/8")	150.33 - 155.33	1.0000	1.0000
L2	5	2" Rigid Conduit	150.33 - 155.33	1.0000	1.0000
L2	7	PWRT-606-S(7/8)	150.33 - 155.33	1.0000	1.0000
L2	8	PWRT-606-S(7/8)	150.33 - 155.33	1.0000	1.0000
L2	9	FB-L98B-034-XXX(3/8")	150.33 - 155.33	1.0000	1.0000
L3	1	LDF7-50A(1-5/8")	146.83 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L3	2	LDF7-50A(1-5/8")	150.33 146.83 - 150.33	1.0000	1.0000
L3	5	2" Rigid Conduit	146.83 - 150.33	1.0000	1.0000
L3	7	PWRT-606-S(7/8)	146.83 - 150.33	1.0000	1.0000
L3	8	PWRT-606-S(7/8)	146.83 - 150.33	1.0000	1.0000
L3	9	FB-L98B-034-XXX(3/8")	146.83 - 150.33	1.0000	1.0000
L4	1	LDF7-50A(1-5/8")	146.33 - 146.83	1.0000	1.0000
L4	2	LDF7-50A(1-5/8")	146.33 - 146.83	1.0000	1.0000
L4	5	2" Rigid Conduit	146.33 - 146.83	1.0000	1.0000
L4	7	PWRT-606-S(7/8)	146.33 - 146.83	1.0000	1.0000
L4	8	PWRT-606-S(7/8)	146.33 - 146.83	1.0000	1.0000
L4	9	FB-L98B-034-XXX(3/8")	146.33 - 146.83	1.0000	1.0000
L5	1	LDF7-50A(1-5/8")	141.33 - 146.33	1.0000	1.0000
L5	2	LDF7-50A(1-5/8")	141.33 - 146.33	1.0000	1.0000
L5	5	2" Rigid Conduit	141.33 - 146.33	1.0000	1.0000
L5	7	PWRT-606-S(7/8)	141.33 - 146.33	1.0000	1.0000
L5	8	PWRT-606-S(7/8)	141.33 - 146.33	1.0000	1.0000
L5	9	FB-L98B-034-XXX(3/8")	141.33 - 146.33	1.0000	1.0000
L5	13	HB158-21U6S24-xxM_TMO (1-5/8)	141.33 - 146.00	1.0000	1.0000
L6	1	LDF7-50A(1-5/8")	136.33 - 141.33	1.0000	1.0000
L6	2	LDF7-50A(1-5/8")	136.33 - 141.33	1.0000	1.0000
L6	5	2" Rigid Conduit	136.33 - 141.33	1.0000	1.0000
L6	7	PWRT-606-S(7/8)	136.33 - 141.33	1.0000	1.0000
L6	8	PWRT-606-S(7/8)	136.33 - 141.33	1.0000	1.0000
L6	9	FB-L98B-034-XXX(3/8")	136.33 - 141.33	1.0000	1.0000
L6	13	HB158-21U6S24-xxM_TMO (1-5/8)	136.33 - 141.33	1.0000	1.0000
L7	1	LDF7-50A(1-5/8")	131.33 - 136.33	1.0000	1.0000
L7	2	LDF7-50A(1-5/8")	131.33 - 136.33	1.0000	1.0000
L7	5	2" Rigid Conduit	131.33 - 136.33	1.0000	1.0000
L7	7	PWRT-606-S(7/8)	131.33 - 136.33	1.0000	1.0000
L7	8	PWRT-606-S(7/8)	131.33 - 136.33	1.0000	1.0000
L7	9	FB-L98B-034-XXX(3/8")	131.33 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			136.33		
L7	13	HB158-21U6S24-xxM_TMO (1-5/8)	131.33 - 136.33	1.0000	1.0000
L7	17	561(1-5/8")	131.33 - 132.00	1.0000	1.0000
L8	1	LDF7-50A(1-5/8")	126.33 - 131.33	1.0000	1.0000
L8	2	LDF7-50A(1-5/8")	126.33 - 131.33	1.0000	1.0000
L8	5	2" Rigid Conduit	126.33 - 131.33	1.0000	1.0000
L8	7	PWRT-606-S(7/8)	126.33 - 131.33	1.0000	1.0000
L8	8	PWRT-606-S(7/8)	126.33 - 131.33	1.0000	1.0000
L8	9	FB-L98B-034-XXX(3/8")	126.33 - 131.33	1.0000	1.0000
L8	13	HB158-21U6S24-xxM_TMO (1-5/8)	126.33 - 131.33	1.0000	1.0000
L8	17	561(1-5/8")	126.33 - 131.33	1.0000	1.0000
L8	25	Safety Line 3/8	126.33 - 130.00	1.0000	1.0000
L9	1	LDF7-50A(1-5/8")	121.33 - 126.33	1.0000	1.0000
L9	2	LDF7-50A(1-5/8")	121.33 - 126.33	1.0000	1.0000
L9	5	2" Rigid Conduit	121.33 - 126.33	1.0000	1.0000
L9	7	PWRT-606-S(7/8)	121.33 - 126.33	1.0000	1.0000
L9	8	PWRT-606-S(7/8)	121.33 - 126.33	1.0000	1.0000
L9	9	FB-L98B-034-XXX(3/8")	121.33 - 126.33	1.0000	1.0000
L9	13	HB158-21U6S24-xxM_TMO (1-5/8)	121.33 - 126.33	1.0000	1.0000
L9	17	561(1-5/8")	121.33 - 126.33	1.0000	1.0000
L9	25	Safety Line 3/8	121.33 - 126.33	1.0000	1.0000
L9	69	CCI 6" x 1" Plate	121.33 - 122.60	1.0000	1.0000
L9	70	CCI 6" x 1" Plate	121.33 - 122.60	1.0000	1.0000
L9	71	CCI 6" x 1" Plate	121.33 - 122.60	1.0000	1.0000
L10	1	LDF7-50A(1-5/8")	120.08 - 121.33	1.0000	1.0000
L10	2	LDF7-50A(1-5/8")	120.08 - 121.33	1.0000	1.0000
L10	5	2" Rigid Conduit	120.08 - 121.33	1.0000	1.0000
L10	7	PWRT-606-S(7/8)	120.08 - 121.33	1.0000	1.0000
L10	8	PWRT-606-S(7/8)	120.08 - 121.33	1.0000	1.0000
L10	9	FB-L98B-034-XXX(3/8")	120.08 - 121.33	1.0000	1.0000
L10	13	HB158-21U6S24-xxM_TMO (1-5/8)	120.08 - 121.33	1.0000	1.0000
L10	17	561(1-5/8")	120.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L10	25	Safety Line 3/8	121.33 120.08 - 121.33	1.0000	1.0000
L10	69	CCI 6" x 1" Plate	120.08 - 121.33	1.0000	1.0000
L10	70	CCI 6" x 1" Plate	120.08 - 121.33	1.0000	1.0000
L10	71	CCI 6" x 1" Plate	120.08 - 121.33	1.0000	1.0000
L11	1	LDF7-50A(1-5/8")	119.83 - 120.08	1.0000	1.0000
L11	2	LDF7-50A(1-5/8")	119.83 - 120.08	1.0000	1.0000
L11	5	2" Rigid Conduit	119.83 - 120.08	1.0000	1.0000
L11	7	PWRT-606-S(7/8)	119.83 - 120.08	1.0000	1.0000
L11	8	PWRT-606-S(7/8)	119.83 - 120.08	1.0000	1.0000
L11	9	FB-L98B-034-XXX(3/8")	119.83 - 120.08	1.0000	1.0000
L11	13	HB158-21U6S24-xxM_TMO (1-5/8)	119.83 - 120.08	1.0000	1.0000
L11	17	561(1-5/8")	119.83 - 120.08	1.0000	1.0000
L11	25	Safety Line 3/8	119.83 - 120.08	1.0000	1.0000
L11	69	CCI 6" x 1" Plate	119.83 - 120.08	1.0000	1.0000
L11	70	CCI 6" x 1" Plate	119.83 - 120.08	1.0000	1.0000
L11	71	CCI 6" x 1" Plate	119.83 - 120.08	1.0000	1.0000
L12	1	LDF7-50A(1-5/8")	117.50 - 119.83	1.0000	1.0000
L12	2	LDF7-50A(1-5/8")	117.50 - 119.83	1.0000	1.0000
L12	5	2" Rigid Conduit	117.50 - 119.83	1.0000	1.0000
L12	7	PWRT-606-S(7/8)	117.50 - 119.83	1.0000	1.0000
L12	8	PWRT-606-S(7/8)	117.50 - 119.83	1.0000	1.0000
L12	9	FB-L98B-034-XXX(3/8")	117.50 - 119.83	1.0000	1.0000
L12	13	HB158-21U6S24-xxM_TMO (1-5/8)	117.50 - 119.83	1.0000	1.0000
L12	17	561(1-5/8")	117.50 - 119.83	1.0000	1.0000
L12	25	Safety Line 3/8	117.50 - 119.83	1.0000	1.0000
L12	59	CCI 4.5" x 1" Plate	117.50 - 119.00	1.0000	1.0000
L12	69	CCI 6" x 1" Plate	117.50 - 119.83	1.0000	1.0000
L12	70	CCI 6" x 1" Plate	117.50 - 119.83	1.0000	1.0000
L12	71	CCI 6" x 1" Plate	117.50 - 119.83	1.0000	1.0000
L13	1	LDF7-50A(1-5/8")	117.25 - 117.50	1.0000	1.0000
L13	2	LDF7-50A(1-5/8")	117.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
			117.50		
L13	5	2" Rigid Conduit	117.25 - 117.50	1.0000	1.0000
L13	7	PWRT-606-S(7/8)	117.25 - 117.50	1.0000	1.0000
L13	8	PWRT-606-S(7/8)	117.25 - 117.50	1.0000	1.0000
L13	9	FB-L98B-034-XXX(3/8")	117.25 - 117.50	1.0000	1.0000
L13	13	HB158-21U6S24-xxM_TMO (1-5/8)	117.25 - 117.50	1.0000	1.0000
L13	17	561(1-5/8")	117.25 - 117.50	1.0000	1.0000
L13	25	Safety Line 3/8	117.25 - 117.50	1.0000	1.0000
L13	59	CCI 4.5" x 1" Plate	117.25 - 117.50	1.0000	1.0000
L13	69	CCI 6" x 1" Plate	117.25 - 117.50	1.0000	1.0000
L13	70	CCI 6" x 1" Plate	117.25 - 117.50	1.0000	1.0000
L13	71	CCI 6" x 1" Plate	117.25 - 117.50	1.0000	1.0000
L14	1	LDF7-50A(1-5/8")	115.50 - 117.25	1.0000	1.0000
L14	2	LDF7-50A(1-5/8")	115.50 - 117.25	1.0000	1.0000
L14	5	2" Rigid Conduit	115.50 - 117.25	1.0000	1.0000
L14	7	PWRT-606-S(7/8)	115.50 - 117.25	1.0000	1.0000
L14	8	PWRT-606-S(7/8)	115.50 - 117.25	1.0000	1.0000
L14	9	FB-L98B-034-XXX(3/8")	115.50 - 117.25	1.0000	1.0000
L14	13	HB158-21U6S24-xxM_TMO (1-5/8)	115.50 - 117.25	1.0000	1.0000
L14	17	561(1-5/8")	115.50 - 117.25	1.0000	1.0000
L14	25	Safety Line 3/8	115.50 - 117.25	1.0000	1.0000
L14	57	CCI 4.5" x 1" Plate	115.50 - 117.00	1.0000	1.0000
L14	58	CCI 4.5" x 1" Plate	115.50 - 117.00	1.0000	1.0000
L14	59	CCI 4.5" x 1" Plate	115.50 - 117.25	1.0000	1.0000
L14	69	CCI 6" x 1" Plate	115.50 - 117.25	1.0000	1.0000
L14	70	CCI 6" x 1" Plate	115.50 - 117.25	1.0000	1.0000
L14	71	CCI 6" x 1" Plate	115.50 - 117.25	1.0000	1.0000
L15	1	LDF7-50A(1-5/8")	115.25 - 115.50	1.0000	1.0000
L15	2	LDF7-50A(1-5/8")	115.25 - 115.50	1.0000	1.0000
L15	5	2" Rigid Conduit	115.25 - 115.50	1.0000	1.0000
L15	7	PWRT-606-S(7/8)	115.25 - 115.50	1.0000	1.0000
L15	8	PWRT-606-S(7/8)	115.25 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L15	9	FB-L98B-034-XXX(3/8")	115.50 115.25 - 115.50	1.0000	1.0000
L15	13	HB158-21U6S24-xxM_TMO (1-5/8)	115.25 - 115.50	1.0000	1.0000
L15	17	561(1-5/8")	115.25 - 115.50	1.0000	1.0000
L15	25	Safety Line 3/8	115.25 - 115.50	1.0000	1.0000
L15	57	CCI 4.5" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L15	58	CCI 4.5" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L15	59	CCI 4.5" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L15	69	CCI 6" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L15	70	CCI 6" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L15	71	CCI 6" x 1" Plate	115.25 - 115.50	1.0000	1.0000
L16	1	LDF7-50A(1-5/8")	110.25 - 115.25	1.0000	1.0000
L16	2	LDF7-50A(1-5/8")	110.25 - 115.25	1.0000	1.0000
L16	5	2" Rigid Conduit	110.25 - 115.25	1.0000	1.0000
L16	7	PWRT-606-S(7/8)	110.25 - 115.25	1.0000	1.0000
L16	8	PWRT-606-S(7/8)	110.25 - 115.25	1.0000	1.0000
L16	9	FB-L98B-034-XXX(3/8")	110.25 - 115.25	1.0000	1.0000
L16	13	HB158-21U6S24-xxM_TMO (1-5/8)	110.25 - 115.25	1.0000	1.0000
L16	17	561(1-5/8")	110.25 - 115.25	1.0000	1.0000
L16	21	CU12PSM9P6XXX(1-1/2)	110.25 - 114.00	1.0000	1.0000
L16	25	Safety Line 3/8	110.25 - 115.25	1.0000	1.0000
L16	57	CCI 4.5" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L16	58	CCI 4.5" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L16	59	CCI 4.5" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L16	69	CCI 6" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L16	70	CCI 6" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L16	71	CCI 6" x 1" Plate	110.25 - 115.25	1.0000	1.0000
L17	1	LDF7-50A(1-5/8")	104.08 - 110.25	1.0000	1.0000
L17	2	LDF7-50A(1-5/8")	104.08 - 110.25	1.0000	1.0000
L17	5	2" Rigid Conduit	104.08 - 110.25	1.0000	1.0000
L17	7	PWRT-606-S(7/8)	104.08 - 110.25	1.0000	1.0000
L17	8	PWRT-606-S(7/8)	104.08 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L17	9	FB-L98B-034-XXX(3/8")	104.08 - 110.25	1.0000	1.0000
L17	13	HB158-21U6S24-xxM_TMO (1-5/8)	104.08 - 110.25	1.0000	1.0000
L17	17	561(1-5/8")	104.08 - 110.25	1.0000	1.0000
L17	21	CU12PSM9P6XXX(1-1/2)	104.08 - 110.25	1.0000	1.0000
L17	25	Safety Line 3/8	104.08 - 110.25	1.0000	1.0000
L17	57	CCI 4.5" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L17	58	CCI 4.5" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L17	59	CCI 4.5" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L17	69	CCI 6" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L17	70	CCI 6" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L17	71	CCI 6" x 1" Plate	104.08 - 110.25	1.0000	1.0000
L18	1	LDF7-50A(1-5/8")	102.82 - 104.08	1.0000	1.0000
L18	2	LDF7-50A(1-5/8")	102.82 - 104.08	1.0000	1.0000
L18	5	2" Rigid Conduit	102.82 - 104.08	1.0000	1.0000
L18	7	PWRT-606-S(7/8)	102.82 - 104.08	1.0000	1.0000
L18	8	PWRT-606-S(7/8)	102.82 - 104.08	1.0000	1.0000
L18	9	FB-L98B-034-XXX(3/8")	102.82 - 104.08	1.0000	1.0000
L18	13	HB158-21U6S24-xxM_TMO (1-5/8)	102.82 - 104.08	1.0000	1.0000
L18	17	561(1-5/8")	102.82 - 104.08	1.0000	1.0000
L18	21	CU12PSM9P6XXX(1-1/2)	102.82 - 104.08	1.0000	1.0000
L18	25	Safety Line 3/8	102.82 - 104.08	1.0000	1.0000
L18	57	CCI 4.5" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L18	58	CCI 4.5" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L18	59	CCI 4.5" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L18	69	CCI 6" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L18	70	CCI 6" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L18	71	CCI 6" x 1" Plate	102.82 - 104.08	1.0000	1.0000
L19	1	LDF7-50A(1-5/8")	100.50 - 102.82	1.0000	1.0000
L19	2	LDF7-50A(1-5/8")	100.50 - 102.82	1.0000	1.0000
L19	5	2" Rigid Conduit	100.50 - 102.82	1.0000	1.0000
L19	7	PWRT-606-S(7/8)	100.50 -	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	8	PWRT-606-S(7/8)	102.82 100.50 - 102.82	1.0000	1.0000
L19	9	FB-L98B-034-XXX(3/8")	100.50 - 102.82	1.0000	1.0000
L19	13	HB158-21U6S24-xxM_TMO (1-5/8)	100.50 - 102.82	1.0000	1.0000
L19	17	561(1-5/8")	100.50 - 102.82	1.0000	1.0000
L19	21	CU12PSM9P6XXX(1-1/2)	100.50 - 102.82	1.0000	1.0000
L19	25	Safety Line 3/8	100.50 - 102.82	1.0000	1.0000
L19	57	CCI 4.5" x 1" Plate	100.50 - 102.82	1.0000	1.0000
L19	58	CCI 4.5" x 1" Plate	100.50 - 102.82	1.0000	1.0000
L19	59	CCI 4.5" x 1" Plate	100.50 - 102.82	1.0000	1.0000
L19	69	CCI 6" x 1" Plate	100.50 - 102.82	1.0000	1.0000
L19	70	CCI 6" x 1" Plate	100.50 - 102.82	1.0000	1.0000
L19	71	CCI 6" x 1" Plate	100.60 - 102.82	1.0000	1.0000
L20	1	LDF7-50A(1-5/8")	100.25 - 100.50	1.0000	1.0000
L20	2	LDF7-50A(1-5/8")	100.25 - 100.50	1.0000	1.0000
L20	5	2" Rigid Conduit	100.25 - 100.50	1.0000	1.0000
L20	7	PWRT-606-S(7/8)	100.25 - 100.50	1.0000	1.0000
L20	8	PWRT-606-S(7/8)	100.25 - 100.50	1.0000	1.0000
L20	9	FB-L98B-034-XXX(3/8")	100.25 - 100.50	1.0000	1.0000
L20	13	HB158-21U6S24-xxM_TMO (1-5/8)	100.25 - 100.50	1.0000	1.0000
L20	17	561(1-5/8")	100.25 - 100.50	1.0000	1.0000
L20	21	CU12PSM9P6XXX(1-1/2)	100.25 - 100.50	1.0000	1.0000
L20	25	Safety Line 3/8	100.25 - 100.50	1.0000	1.0000
L20	43	CCI 6" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	44	CCI 6" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	45	CCI 6" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	57	CCI 4.5" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	58	CCI 4.5" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	59	CCI 4.5" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	69	CCI 6" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L20	70	CCI 6" x 1" Plate	100.25 - 100.50	1.0000	1.0000
L21	1	LDF7-50A(1-5/8")	98.50 - 100.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L21	2	LDF7-50A(1-5/8")	98.50 - 100.25	1.0000	1.0000
L21	5	2" Rigid Conduit	98.50 - 100.25	1.0000	1.0000
L21	7	PWRT-606-S(7/8)	98.50 - 100.25	1.0000	1.0000
L21	8	PWRT-606-S(7/8)	98.50 - 100.25	1.0000	1.0000
L21	9	FB-L98B-034-XXX(3/8")	98.50 - 100.25	1.0000	1.0000
L21	13	HB158-21U6S24-xxM_TMO (1-5/8)	98.50 - 100.25	1.0000	1.0000
L21	17	561(1-5/8")	98.50 - 100.25	1.0000	1.0000
L21	21	CU12PSM9P6XXX(1-1/2)	98.50 - 100.25	1.0000	1.0000
L21	25	Safety Line 3/8	98.50 - 100.25	1.0000	1.0000
L21	43	CCI 6" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	44	CCI 6" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	45	CCI 6" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	57	CCI 4.5" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	58	CCI 4.5" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	59	CCI 4.5" x 1" Plate	99.00 - 100.25	1.0000	1.0000
L21	69	CCI 6" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L21	70	CCI 6" x 1" Plate	98.50 - 100.25	1.0000	1.0000
L22	1	LDF7-50A(1-5/8")	98.25 - 98.50	1.0000	1.0000
L22	2	LDF7-50A(1-5/8")	98.25 - 98.50	1.0000	1.0000
L22	5	2" Rigid Conduit	98.25 - 98.50	1.0000	1.0000
L22	7	PWRT-606-S(7/8)	98.25 - 98.50	1.0000	1.0000
L22	8	PWRT-606-S(7/8)	98.25 - 98.50	1.0000	1.0000
L22	9	FB-L98B-034-XXX(3/8")	98.25 - 98.50	1.0000	1.0000
L22	13	HB158-21U6S24-xxM_TMO (1-5/8)	98.25 - 98.50	1.0000	1.0000
L22	17	561(1-5/8")	98.25 - 98.50	1.0000	1.0000
L22	21	CU12PSM9P6XXX(1-1/2)	98.25 - 98.50	1.0000	1.0000
L22	25	Safety Line 3/8	98.25 - 98.50	1.0000	1.0000
L22	43	CCI 6" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	44	CCI 6" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	45	CCI 6" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	57	CCI 4.5" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	58	CCI 4.5" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	69	CCI 6" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L22	70	CCI 6" x 1" Plate	98.25 - 98.50	1.0000	1.0000
L23	1	LDF7-50A(1-5/8")	93.25 - 98.25	1.0000	1.0000
L23	2	LDF7-50A(1-5/8")	93.25 - 98.25	1.0000	1.0000
L23	5	2" Rigid Conduit	93.25 - 98.25	1.0000	1.0000
L23	7	PWRT-606-S(7/8)	93.25 - 98.25	1.0000	1.0000
L23	8	PWRT-606-S(7/8)	93.25 - 98.25	1.0000	1.0000
L23	9	FB-L98B-034-XXX(3/8")	93.25 - 98.25	1.0000	1.0000
L23	13	HB158-21U6S24-xxM_TMO (1-5/8)	93.25 - 98.25	1.0000	1.0000
L23	17	561(1-5/8")	93.25 - 98.25	1.0000	1.0000
L23	21	CU12PSM9P6XXX(1-1/2)	93.25 - 98.25	1.0000	1.0000
L23	25	Safety Line 3/8	93.25 - 98.25	1.0000	1.0000
L23	43	CCI 6" x 1" Plate	93.25 - 98.25	1.0000	1.0000
L23	44	CCI 6" x 1" Plate	93.25 - 98.25	1.0000	1.0000
L23	45	CCI 6" x 1" Plate	93.25 - 98.25	1.0000	1.0000
L23	57	CCI 4.5" x 1" Plate	97.00 - 98.25	1.0000	1.0000
L23	58	CCI 4.5" x 1" Plate	97.00 - 98.25	1.0000	1.0000
L23	69	CCI 6" x 1" Plate	93.25 - 98.25	1.0000	1.0000
L23	70	CCI 6" x 1" Plate	93.25 - 98.25	1.0000	1.0000
L24	1	LDF7-50A(1-5/8")	90.50 - 93.25	1.0000	1.0000
L24	2	LDF7-50A(1-5/8")	90.50 - 93.25	1.0000	1.0000
L24	5	2" Rigid Conduit	90.50 - 93.25	1.0000	1.0000
L24	7	PWRT-606-S(7/8)	90.50 - 93.25	1.0000	1.0000
L24	8	PWRT-606-S(7/8)	90.50 - 93.25	1.0000	1.0000
L24	9	FB-L98B-034-XXX(3/8")	90.50 - 93.25	1.0000	1.0000
L24	13	HB158-21U6S24-xxM_TMO (1-5/8)	90.50 - 93.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	17	561(1-5/8")	90.50 - 93.25	1.0000	1.0000
L24	21	CU12PSM9P6XXX(1-1/2)	90.50 - 93.25	1.0000	1.0000
L24	25	Safety Line 3/8	90.50 - 93.25	1.0000	1.0000
L24	43	CCI 6" x 1" Plate	90.50 - 93.25	1.0000	1.0000
L24	44	CCI 6" x 1" Plate	90.50 - 93.25	1.0000	1.0000
L24	45	CCI 6" x 1" Plate	90.50 - 93.25	1.0000	1.0000
L24	69	CCI 6" x 1" Plate	90.60 - 93.25	1.0000	1.0000
L24	70	CCI 6" x 1" Plate	90.60 - 93.25	1.0000	1.0000
L25	1	LDF7-50A(1-5/8")	90.25 - 90.50	1.0000	1.0000
L25	2	LDF7-50A(1-5/8")	90.25 - 90.50	1.0000	1.0000
L25	5	2" Rigid Conduit	90.25 - 90.50	1.0000	1.0000
L25	7	PWRT-606-S(7/8)	90.25 - 90.50	1.0000	1.0000
L25	8	PWRT-606-S(7/8)	90.25 - 90.50	1.0000	1.0000
L25	9	FB-L98B-034-XXX(3/8")	90.25 - 90.50	1.0000	1.0000
L25	13	HB158-21U6S24-xxM_TMO (1-5/8)	90.25 - 90.50	1.0000	1.0000
L25	17	561(1-5/8")	90.25 - 90.50	1.0000	1.0000
L25	21	CU12PSM9P6XXX(1-1/2)	90.25 - 90.50	1.0000	1.0000
L25	25	Safety Line 3/8	90.25 - 90.50	1.0000	1.0000
L25	43	CCI 6" x 1" Plate	90.25 - 90.50	1.0000	1.0000
L25	44	CCI 6" x 1" Plate	90.25 - 90.50	1.0000	1.0000
L25	45	CCI 6" x 1" Plate	90.25 - 90.50	1.0000	1.0000
L25	67	CCI 8.5" x 1.25" Plate	90.25 - 90.50	1.0000	1.0000
L25	68	CCI 8.5" x 1.25" Plate	90.25 - 90.50	1.0000	1.0000
L26	1	LDF7-50A(1-5/8")	85.25 - 90.25	1.0000	1.0000
L26	2	LDF7-50A(1-5/8")	85.25 - 90.25	1.0000	1.0000
L26	5	2" Rigid Conduit	85.25 - 90.25	1.0000	1.0000
L26	7	PWRT-606-S(7/8)	85.25 - 90.25	1.0000	1.0000
L26	8	PWRT-606-S(7/8)	85.25 - 90.25	1.0000	1.0000
L26	9	FB-L98B-034-XXX(3/8")	85.25 - 90.25	1.0000	1.0000
L26	13	HB158-21U6S24-xxM_TMO (1-5/8)	85.25 - 90.25	1.0000	1.0000
L26	17	561(1-5/8")	85.25 - 90.25	1.0000	1.0000
L26	21	CU12PSM9P6XXX(1-1/2)	85.25 - 90.25	1.0000	1.0000
L26	25	Safety Line 3/8	85.25 - 90.25	1.0000	1.0000
L26	43	CCI 6" x 1" Plate	85.25 - 90.25	1.0000	1.0000
L26	44	CCI 6" x 1" Plate	85.25 - 90.25	1.0000	1.0000
L26	45	CCI 6" x 1" Plate	85.25 - 90.25	1.0000	1.0000
L26	53	CCI 6.5" x 1.25" Plate	85.25 - 85.50	1.0000	1.0000
L26	54	CCI 6.5" x 1.25" Plate	85.25 - 85.50	1.0000	1.0000
L26	55	CCI 6.5" x 1.25" Plate	85.25 - 85.50	1.0000	1.0000
L26	67	CCI 8.5" x 1.25" Plate	85.25 - 90.25	1.0000	1.0000
L26	68	CCI 8.5" x 1.25" Plate	85.25 - 90.25	1.0000	1.0000
L27	1	LDF7-50A(1-5/8")	83.50 - 85.25	1.0000	1.0000
L27	2	LDF7-50A(1-5/8")	83.50 - 85.25	1.0000	1.0000
L27	5	2" Rigid Conduit	83.50 - 85.25	1.0000	1.0000
L27	7	PWRT-606-S(7/8)	83.50 - 85.25	1.0000	1.0000
L27	8	PWRT-606-S(7/8)	83.50 - 85.25	1.0000	1.0000
L27	9	FB-L98B-034-XXX(3/8")	83.50 - 85.25	1.0000	1.0000
L27	13	HB158-21U6S24-xxM_TMO (1-5/8)	83.50 - 85.25	1.0000	1.0000
L27	17	561(1-5/8")	83.50 - 85.25	1.0000	1.0000
L27	21	CU12PSM9P6XXX(1-1/2)	83.50 - 85.25	1.0000	1.0000
L27	25	Safety Line 3/8	83.50 - 85.25	1.0000	1.0000
L27	43	CCI 6" x 1" Plate	83.50 - 85.25	1.0000	1.0000
L27	44	CCI 6" x 1" Plate	83.50 - 85.25	1.0000	1.0000
L27	45	CCI 6" x 1" Plate	83.50 - 85.25	1.0000	1.0000
L27	53	CCI 6.5" x 1.25" Plate	83.50 - 85.25	1.0000	1.0000
L27	54	CCI 6.5" x 1.25" Plate	83.50 - 85.25	1.0000	1.0000
L27	55	CCI 6.5" x 1.25" Plate	83.50 - 85.25	1.0000	1.0000
L27	63	CCI 8.5" x 1.25" Plate	83.50 - 85.00	1.0000	1.0000
L27	67	CCI 8.5" x 1.25" Plate	83.50 - 85.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L27	68	CCI 8.5" x 1.25" Plate	83.50 - 85.25	1.0000	1.0000
L28	1	LDF7-50A(1-5/8")	83.25 - 83.50	1.0000	1.0000
L28	2	LDF7-50A(1-5/8")	83.25 - 83.50	1.0000	1.0000
L28	5	2" Rigid Conduit	83.25 - 83.50	1.0000	1.0000
L28	7	PWRT-606-S(7/8)	83.25 - 83.50	1.0000	1.0000
L28	8	PWRT-606-S(7/8)	83.25 - 83.50	1.0000	1.0000
L28	9	FB-L98B-034-XXX(3/8")	83.25 - 83.50	1.0000	1.0000
L28	13	HB158-21U6S24-xxM_TMO (1-5/8)	83.25 - 83.50	1.0000	1.0000
L28	17	561(1-5/8")	83.25 - 83.50	1.0000	1.0000
L28	21	CU12PSM9P6XXX(1-1/2)	83.25 - 83.50	1.0000	1.0000
L28	25	Safety Line 3/8	83.25 - 83.50	1.0000	1.0000
L28	43	CCI 6" x 1" Plate	83.25 - 83.50	1.0000	1.0000
L28	44	CCI 6" x 1" Plate	83.25 - 83.50	1.0000	1.0000
L28	45	CCI 6" x 1" Plate	83.25 - 83.50	1.0000	1.0000
L28	53	CCI 6.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L28	54	CCI 6.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L28	55	CCI 6.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L28	63	CCI 8.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L28	67	CCI 8.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L28	68	CCI 8.5" x 1.25" Plate	83.25 - 83.50	1.0000	1.0000
L29	1	LDF7-50A(1-5/8")	80.75 - 83.25	1.0000	1.0000
L29	2	LDF7-50A(1-5/8")	80.75 - 83.25	1.0000	1.0000
L29	5	2" Rigid Conduit	80.75 - 83.25	1.0000	1.0000
L29	7	PWRT-606-S(7/8)	80.75 - 83.25	1.0000	1.0000
L29	8	PWRT-606-S(7/8)	80.75 - 83.25	1.0000	1.0000
L29	9	FB-L98B-034-XXX(3/8")	80.75 - 83.25	1.0000	1.0000
L29	13	HB158-21U6S24-xxM_TMO (1-5/8)	80.75 - 83.25	1.0000	1.0000
L29	17	561(1-5/8")	80.75 - 83.25	1.0000	1.0000
L29	21	CU12PSM9P6XXX(1-1/2)	80.75 - 83.25	1.0000	1.0000
L29	25	Safety Line 3/8	80.75 - 83.25	1.0000	1.0000
L29	43	CCI 6" x 1" Plate	80.75 - 83.25	1.0000	1.0000
L29	44	CCI 6" x 1" Plate	80.75 - 83.25	1.0000	1.0000
L29	45	CCI 6" x 1" Plate	80.75 - 83.25	1.0000	1.0000
L29	53	CCI 6.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L29	54	CCI 6.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L29	55	CCI 6.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L29	63	CCI 8.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L29	67	CCI 8.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L29	68	CCI 8.5" x 1.25" Plate	80.75 - 83.25	1.0000	1.0000
L30	1	LDF7-50A(1-5/8")	80.50 - 80.75	1.0000	1.0000
L30	2	LDF7-50A(1-5/8")	80.50 - 80.75	1.0000	1.0000
L30	5	2" Rigid Conduit	80.50 - 80.75	1.0000	1.0000
L30	7	PWRT-606-S(7/8)	80.50 - 80.75	1.0000	1.0000
L30	8	PWRT-606-S(7/8)	80.50 - 80.75	1.0000	1.0000
L30	9	FB-L98B-034-XXX(3/8")	80.50 - 80.75	1.0000	1.0000
L30	13	HB158-21U6S24-xxM_TMO (1-5/8)	80.50 - 80.75	1.0000	1.0000
L30	17	561(1-5/8")	80.50 - 80.75	1.0000	1.0000
L30	21	CU12PSM9P6XXX(1-1/2)	80.50 - 80.75	1.0000	1.0000
L30	25	Safety Line 3/8	80.50 - 80.75	1.0000	1.0000
L30	43	CCI 6" x 1" Plate	80.50 - 80.75	1.0000	1.0000
L30	44	CCI 6" x 1" Plate	80.50 - 80.75	1.0000	1.0000
L30	45	CCI 6" x 1" Plate	80.50 - 80.75	1.0000	1.0000
L30	53	CCI 6.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L30	54	CCI 6.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L30	55	CCI 6.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L30	63	CCI 8.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L30	67	CCI 8.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L30	68	CCI 8.5" x 1.25" Plate	80.50 - 80.75	1.0000	1.0000
L31	1	LDF7-50A(1-5/8")	80.25 - 80.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L31	2	LDF7-50A(1-5/8")	80.25 - 80.50	1.0000	1.0000
L31	5	2" Rigid Conduit	80.25 - 80.50	1.0000	1.0000
L31	7	PWRT-606-S(7/8)	80.25 - 80.50	1.0000	1.0000
L31	8	PWRT-606-S(7/8)	80.25 - 80.50	1.0000	1.0000
L31	9	FB-L98B-034-XXX(3/8")	80.25 - 80.50	1.0000	1.0000
L31	13	HB158-21U6S24-xxM_TMO (1-5/8)	80.25 - 80.50	1.0000	1.0000
L31	17	561(1-5/8")	80.25 - 80.50	1.0000	1.0000
L31	21	CU12PSM9P6XXX(1-1/2)	80.25 - 80.50	1.0000	1.0000
L31	25	Safety Line 3/8	80.25 - 80.50	1.0000	1.0000
L31	43	CCI 6" x 1" Plate	80.25 - 80.50	1.0000	1.0000
L31	44	CCI 6" x 1" Plate	80.25 - 80.50	1.0000	1.0000
L31	45	CCI 6" x 1" Plate	80.25 - 80.50	1.0000	1.0000
L31	53	CCI 6.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L31	54	CCI 6.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L31	55	CCI 6.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L31	63	CCI 8.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L31	67	CCI 8.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L31	68	CCI 8.5" x 1.25" Plate	80.25 - 80.50	1.0000	1.0000
L32	1	LDF7-50A(1-5/8")	77.50 - 80.25	1.0000	1.0000
L32	2	LDF7-50A(1-5/8")	77.50 - 80.25	1.0000	1.0000
L32	5	2" Rigid Conduit	77.50 - 80.25	1.0000	1.0000
L32	7	PWRT-606-S(7/8)	77.50 - 80.25	1.0000	1.0000
L32	8	PWRT-606-S(7/8)	77.50 - 80.25	1.0000	1.0000
L32	9	FB-L98B-034-XXX(3/8")	77.50 - 80.25	1.0000	1.0000
L32	13	HB158-21U6S24-xxM_TMO (1-5/8)	77.50 - 80.25	1.0000	1.0000
L32	17	561(1-5/8")	77.50 - 80.25	1.0000	1.0000
L32	21	CU12PSM9P6XXX(1-1/2)	77.50 - 80.25	1.0000	1.0000
L32	25	Safety Line 3/8	77.50 - 80.25	1.0000	1.0000
L32	43	CCI 6" x 1" Plate	77.50 - 80.25	1.0000	1.0000
L32	44	CCI 6" x 1" Plate	77.50 - 80.25	1.0000	1.0000
L32	45	CCI 6" x 1" Plate	77.50 - 80.25	1.0000	1.0000
L32	53	CCI 6.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L32	54	CCI 6.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L32	55	CCI 6.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L32	63	CCI 8.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L32	67	CCI 8.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L32	68	CCI 8.5" x 1.25" Plate	77.50 - 80.25	1.0000	1.0000
L33	1	LDF7-50A(1-5/8")	77.25 - 77.50	1.0000	1.0000
L33	2	LDF7-50A(1-5/8")	77.25 - 77.50	1.0000	1.0000
L33	5	2" Rigid Conduit	77.25 - 77.50	1.0000	1.0000
L33	7	PWRT-606-S(7/8)	77.25 - 77.50	1.0000	1.0000
L33	8	PWRT-606-S(7/8)	77.25 - 77.50	1.0000	1.0000
L33	9	FB-L98B-034-XXX(3/8")	77.25 - 77.50	1.0000	1.0000
L33	13	HB158-21U6S24-xxM_TMO (1-5/8)	77.25 - 77.50	1.0000	1.0000
L33	17	561(1-5/8")	77.25 - 77.50	1.0000	1.0000
L33	21	CU12PSM9P6XXX(1-1/2)	77.25 - 77.50	1.0000	1.0000
L33	25	Safety Line 3/8	77.25 - 77.50	1.0000	1.0000
L33	43	CCI 6" x 1" Plate	77.25 - 77.50	1.0000	1.0000
L33	44	CCI 6" x 1" Plate	77.25 - 77.50	1.0000	1.0000
L33	45	CCI 6" x 1" Plate	77.25 - 77.50	1.0000	1.0000
L33	53	CCI 6.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L33	54	CCI 6.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L33	55	CCI 6.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L33	63	CCI 8.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L33	67	CCI 8.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L33	68	CCI 8.5" x 1.25" Plate	77.25 - 77.50	1.0000	1.0000
L34	1	LDF7-50A(1-5/8")	68.82 - 77.25	1.0000	1.0000
L34	2	LDF7-50A(1-5/8")	68.82 - 77.25	1.0000	1.0000
L34	5	2" Rigid Conduit	68.82 - 77.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L34	7	PWRT-606-S(7/8)	68.82 - 77.25	1.0000	1.0000
L34	8	PWRT-606-S(7/8)	68.82 - 77.25	1.0000	1.0000
L34	9	FB-L98B-034-XXX(3/8")	68.82 - 77.25	1.0000	1.0000
L34	13	HB158-21U6S24-xxM_TMO (1-5/8)	68.82 - 77.25	1.0000	1.0000
L34	17	561(1-5/8")	68.82 - 77.25	1.0000	1.0000
L34	21	CU12PSM9P6XXX(1-1/2)	68.82 - 77.25	1.0000	1.0000
L34	25	Safety Line 3/8	68.82 - 77.25	1.0000	1.0000
L34	43	CCI 6" x 1" Plate	68.82 - 77.25	1.0000	1.0000
L34	44	CCI 6" x 1" Plate	68.82 - 77.25	1.0000	1.0000
L34	45	CCI 6" x 1" Plate	68.82 - 77.25	1.0000	1.0000
L34	53	CCI 6.5" x 1.25" Plate	72.50 - 77.25	1.0000	1.0000
L34	54	CCI 6.5" x 1.25" Plate	72.50 - 77.25	1.0000	1.0000
L34	55	CCI 6.5" x 1.25" Plate	72.50 - 77.25	1.0000	1.0000
L34	63	CCI 8.5" x 1.25" Plate	68.82 - 77.25	1.0000	1.0000
L34	67	CCI 8.5" x 1.25" Plate	68.82 - 77.25	1.0000	1.0000
L34	68	CCI 8.5" x 1.25" Plate	68.82 - 77.25	1.0000	1.0000
L35	1	LDF7-50A(1-5/8")	68.29 - 68.82	1.0000	1.0000
L35	2	LDF7-50A(1-5/8")	68.29 - 68.82	1.0000	1.0000
L35	5	2" Rigid Conduit	68.29 - 68.82	1.0000	1.0000
L35	7	PWRT-606-S(7/8)	68.29 - 68.82	1.0000	1.0000
L35	8	PWRT-606-S(7/8)	68.29 - 68.82	1.0000	1.0000
L35	9	FB-L98B-034-XXX(3/8")	68.29 - 68.82	1.0000	1.0000
L35	13	HB158-21U6S24-xxM_TMO (1-5/8)	68.29 - 68.82	1.0000	1.0000
L35	17	561(1-5/8")	68.29 - 68.82	1.0000	1.0000
L35	21	CU12PSM9P6XXX(1-1/2)	68.29 - 68.82	1.0000	1.0000
L35	25	Safety Line 3/8	68.29 - 68.82	1.0000	1.0000
L35	43	CCI 6" x 1" Plate	68.29 - 68.82	1.0000	1.0000
L35	44	CCI 6" x 1" Plate	68.29 - 68.82	1.0000	1.0000
L35	45	CCI 6" x 1" Plate	68.29 - 68.82	1.0000	1.0000
L35	63	CCI 8.5" x 1.25" Plate	68.29 - 68.82	1.0000	1.0000
L35	67	CCI 8.5" x 1.25" Plate	68.29 - 68.82	1.0000	1.0000
L35	68	CCI 8.5" x 1.25" Plate	68.29 - 68.82	1.0000	1.0000
L36	1	LDF7-50A(1-5/8")	64.25 - 68.29	1.0000	1.0000
L36	2	LDF7-50A(1-5/8")	64.25 - 68.29	1.0000	1.0000
L36	5	2" Rigid Conduit	64.25 - 68.29	1.0000	1.0000
L36	7	PWRT-606-S(7/8)	64.25 - 68.29	1.0000	1.0000
L36	8	PWRT-606-S(7/8)	64.25 - 68.29	1.0000	1.0000
L36	9	FB-L98B-034-XXX(3/8")	64.25 - 68.29	1.0000	1.0000
L36	13	HB158-21U6S24-xxM_TMO (1-5/8)	64.25 - 68.29	1.0000	1.0000
L36	17	561(1-5/8")	64.25 - 68.29	1.0000	1.0000
L36	21	CU12PSM9P6XXX(1-1/2)	64.25 - 68.29	1.0000	1.0000
L36	25	Safety Line 3/8	64.25 - 68.29	1.0000	1.0000
L36	43	CCI 6" x 1" Plate	64.25 - 68.29	1.0000	1.0000
L36	44	CCI 6" x 1" Plate	64.25 - 68.29	1.0000	1.0000
L36	45	CCI 6" x 1" Plate	64.25 - 68.29	1.0000	1.0000
L36	50	CCI 6.5" x 1.25" Plate	64.25 - 67.00	1.0000	1.0000
L36	51	CCI 6.5" x 1.25" Plate	64.25 - 67.00	1.0000	1.0000
L36	52	CCI 6.5" x 1.25" Plate	64.25 - 67.00	1.0000	1.0000
L36	63	CCI 8.5" x 1.25" Plate	64.25 - 68.29	1.0000	1.0000
L36	67	CCI 8.5" x 1.25" Plate	64.25 - 68.29	1.0000	1.0000
L36	68	CCI 8.5" x 1.25" Plate	64.25 - 68.29	1.0000	1.0000
L37	1	LDF7-50A(1-5/8")	64.00 - 64.25	1.0000	1.0000
L37	2	LDF7-50A(1-5/8")	64.00 - 64.25	1.0000	1.0000
L37	5	2" Rigid Conduit	64.00 - 64.25	1.0000	1.0000
L37	7	PWRT-606-S(7/8)	64.00 - 64.25	1.0000	1.0000
L37	8	PWRT-606-S(7/8)	64.00 - 64.25	1.0000	1.0000
L37	9	FB-L98B-034-XXX(3/8")	64.00 - 64.25	1.0000	1.0000
L37	13	HB158-21U6S24-xxM_TMO (1-5/8)	64.00 - 64.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L37	17	561(1-5/8")	64.00 - 64.25	1.0000	1.0000
L37	21	CU12PSM9P6XXX(1-1/2)	64.00 - 64.25	1.0000	1.0000
L37	25	Safety Line 3/8	64.00 - 64.25	1.0000	1.0000
L37	43	CCI 6" x 1" Plate	64.00 - 64.25	1.0000	1.0000
L37	44	CCI 6" x 1" Plate	64.00 - 64.25	1.0000	1.0000
L37	45	CCI 6" x 1" Plate	64.00 - 64.25	1.0000	1.0000
L37	50	CCI 6.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L37	51	CCI 6.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L37	52	CCI 6.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L37	63	CCI 8.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L37	67	CCI 8.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L37	68	CCI 8.5" x 1.25" Plate	64.00 - 64.25	1.0000	1.0000
L38	1	LDF7-50A(1-5/8")	60.50 - 64.00	1.0000	1.0000
L38	2	LDF7-50A(1-5/8")	60.50 - 64.00	1.0000	1.0000
L38	5	2" Rigid Conduit	60.50 - 64.00	1.0000	1.0000
L38	7	PWRT-606-S(7/8)	60.50 - 64.00	1.0000	1.0000
L38	8	PWRT-606-S(7/8)	60.50 - 64.00	1.0000	1.0000
L38	9	FB-L98B-034-XXX(3/8")	60.50 - 64.00	1.0000	1.0000
L38	13	HB158-21U6S24-xxM_TMO (1-5/8)	60.50 - 64.00	1.0000	1.0000
L38	17	561(1-5/8")	60.50 - 64.00	1.0000	1.0000
L38	21	CU12PSM9P6XXX(1-1/2)	60.50 - 64.00	1.0000	1.0000
L38	25	Safety Line 3/8	60.50 - 64.00	1.0000	1.0000
L38	33	MP3-04	60.50 - 61.50	1.0000	1.0000
L38	43	CCI 6" x 1" Plate	60.50 - 64.00	1.0000	1.0000
L38	44	CCI 6" x 1" Plate	60.50 - 64.00	1.0000	1.0000
L38	45	CCI 6" x 1" Plate	60.50 - 64.00	1.0000	1.0000
L38	50	CCI 6.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L38	51	CCI 6.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L38	52	CCI 6.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L38	63	CCI 8.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L38	67	CCI 8.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L38	68	CCI 8.5" x 1.25" Plate	60.50 - 64.00	1.0000	1.0000
L39	1	LDF7-50A(1-5/8")	60.25 - 60.50	1.0000	1.0000
L39	2	LDF7-50A(1-5/8")	60.25 - 60.50	1.0000	1.0000
L39	5	2" Rigid Conduit	60.25 - 60.50	1.0000	1.0000
L39	7	PWRT-606-S(7/8)	60.25 - 60.50	1.0000	1.0000
L39	8	PWRT-606-S(7/8)	60.25 - 60.50	1.0000	1.0000
L39	9	FB-L98B-034-XXX(3/8")	60.25 - 60.50	1.0000	1.0000
L39	13	HB158-21U6S24-xxM_TMO (1-5/8)	60.25 - 60.50	1.0000	1.0000
L39	17	561(1-5/8")	60.25 - 60.50	1.0000	1.0000
L39	21	CU12PSM9P6XXX(1-1/2)	60.25 - 60.50	1.0000	1.0000
L39	25	Safety Line 3/8	60.25 - 60.50	1.0000	1.0000
L39	31	MP3-04	60.25 - 60.50	1.0000	1.0000
L39	32	MP3-04	60.25 - 60.50	1.0000	1.0000
L39	33	MP3-04	60.25 - 60.50	1.0000	1.0000
L39	40	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	41	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	42	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	50	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	51	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	52	CCI 6.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	63	CCI 8.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	67	CCI 8.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L39	68	CCI 8.5" x 1.25" Plate	60.25 - 60.50	1.0000	1.0000
L40	1	LDF7-50A(1-5/8")	60.08 - 60.25	1.0000	1.0000
L40	2	LDF7-50A(1-5/8")	60.08 - 60.25	1.0000	1.0000
L40	5	2" Rigid Conduit	60.08 - 60.25	1.0000	1.0000
L40	7	PWRT-606-S(7/8)	60.08 - 60.25	1.0000	1.0000
L40	8	PWRT-606-S(7/8)	60.08 - 60.25	1.0000	1.0000
L40	9	FB-L98B-034-XXX(3/8")	60.08 - 60.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L40	13	HB158-21U6S24-xxM_TMO (1-5/8)	60.08 - 60.25	1.0000	1.0000
L40	17	561(1-5/8")	60.08 - 60.25	1.0000	1.0000
L40	21	CU12PSM9P6XXX(1-1/2)	60.08 - 60.25	1.0000	1.0000
L40	25	Safety Line 3/8	60.08 - 60.25	1.0000	1.0000
L40	31	MP3-04	60.08 - 60.25	1.0000	1.0000
L40	32	MP3-04	60.08 - 60.25	1.0000	1.0000
L40	33	MP3-04	60.08 - 60.25	1.0000	1.0000
L40	40	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	41	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	42	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	50	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	51	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	52	CCI 6.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	63	CCI 8.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	67	CCI 8.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L40	68	CCI 8.5" x 1.25" Plate	60.08 - 60.25	1.0000	1.0000
L41	1	LDF7-50A(1-5/8")	59.83 - 60.08	1.0000	1.0000
L41	2	LDF7-50A(1-5/8")	59.83 - 60.08	1.0000	1.0000
L41	5	2" Rigid Conduit	59.83 - 60.08	1.0000	1.0000
L41	7	PWRT-606-S(7/8)	59.83 - 60.08	1.0000	1.0000
L41	8	PWRT-606-S(7/8)	59.83 - 60.08	1.0000	1.0000
L41	9	FB-L98B-034-XXX(3/8")	59.83 - 60.08	1.0000	1.0000
L41	13	HB158-21U6S24-xxM_TMO (1-5/8)	59.83 - 60.08	1.0000	1.0000
L41	17	561(1-5/8")	59.83 - 60.08	1.0000	1.0000
L41	21	CU12PSM9P6XXX(1-1/2)	59.83 - 60.08	1.0000	1.0000
L41	25	Safety Line 3/8	59.83 - 60.08	1.0000	1.0000
L41	31	MP3-04	59.83 - 60.08	1.0000	1.0000
L41	32	MP3-04	59.83 - 60.08	1.0000	1.0000
L41	33	MP3-04	59.83 - 60.08	1.0000	1.0000
L41	40	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	41	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	42	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	50	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	51	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	52	CCI 6.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	63	CCI 8.5" x 1.25" Plate	60.00 - 60.08	1.0000	1.0000
L41	67	CCI 8.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L41	68	CCI 8.5" x 1.25" Plate	59.83 - 60.08	1.0000	1.0000
L42	1	LDF7-50A(1-5/8")	59.08 - 59.83	1.0000	1.0000
L42	2	LDF7-50A(1-5/8")	59.08 - 59.83	1.0000	1.0000
L42	5	2" Rigid Conduit	59.08 - 59.83	1.0000	1.0000
L42	7	PWRT-606-S(7/8)	59.08 - 59.83	1.0000	1.0000
L42	8	PWRT-606-S(7/8)	59.08 - 59.83	1.0000	1.0000
L42	9	FB-L98B-034-XXX(3/8")	59.08 - 59.83	1.0000	1.0000
L42	13	HB158-21U6S24-xxM_TMO (1-5/8)	59.08 - 59.83	1.0000	1.0000
L42	17	561(1-5/8")	59.08 - 59.83	1.0000	1.0000
L42	21	CU12PSM9P6XXX(1-1/2)	59.08 - 59.83	1.0000	1.0000
L42	25	Safety Line 3/8	59.08 - 59.83	1.0000	1.0000
L42	31	MP3-04	59.08 - 59.83	1.0000	1.0000
L42	32	MP3-04	59.08 - 59.83	1.0000	1.0000
L42	33	MP3-04	59.08 - 59.83	1.0000	1.0000
L42	40	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	41	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	42	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	50	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	51	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	52	CCI 6.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	67	CCI 8.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000
L42	68	CCI 8.5" x 1.25" Plate	59.08 - 59.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L43	1	LDF7-50A(1-5/8")	58.83 - 59.08	1.0000	1.0000
L43	2	LDF7-50A(1-5/8")	58.83 - 59.08	1.0000	1.0000
L43	5	2" Rigid Conduit	58.83 - 59.08	1.0000	1.0000
L43	7	PWRT-606-S(7/8)	58.83 - 59.08	1.0000	1.0000
L43	8	PWRT-606-S(7/8)	58.83 - 59.08	1.0000	1.0000
L43	9	FB-L98B-034-XXX(3/8")	58.83 - 59.08	1.0000	1.0000
L43	13	HB158-21U6S24-xxM_TMO (1-5/8)	58.83 - 59.08	1.0000	1.0000
L43	17	561(1-5/8")	58.83 - 59.08	1.0000	1.0000
L43	21	CU12PSM9P6XXX(1-1/2)	58.83 - 59.08	1.0000	1.0000
L43	25	Safety Line 3/8	58.83 - 59.08	1.0000	1.0000
L43	31	MP3-04	58.83 - 59.08	1.0000	1.0000
L43	32	MP3-04	58.83 - 59.08	1.0000	1.0000
L43	33	MP3-04	58.83 - 59.08	1.0000	1.0000
L43	40	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	41	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	42	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	50	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	51	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	52	CCI 6.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	67	CCI 8.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L43	68	CCI 8.5" x 1.25" Plate	58.83 - 59.08	1.0000	1.0000
L44	1	LDF7-50A(1-5/8")	55.42 - 58.83	1.0000	1.0000
L44	2	LDF7-50A(1-5/8")	55.42 - 58.83	1.0000	1.0000
L44	5	2" Rigid Conduit	55.42 - 58.83	1.0000	1.0000
L44	7	PWRT-606-S(7/8)	55.42 - 58.83	1.0000	1.0000
L44	8	PWRT-606-S(7/8)	55.42 - 58.83	1.0000	1.0000
L44	9	FB-L98B-034-XXX(3/8")	55.42 - 58.83	1.0000	1.0000
L44	13	HB158-21U6S24-xxM_TMO (1-5/8)	55.42 - 58.83	1.0000	1.0000
L44	17	561(1-5/8")	55.42 - 58.83	1.0000	1.0000
L44	21	CU12PSM9P6XXX(1-1/2)	55.42 - 58.83	1.0000	1.0000
L44	25	Safety Line 3/8	55.42 - 58.83	1.0000	1.0000
L44	31	MP3-04	55.42 - 58.83	1.0000	1.0000
L44	32	MP3-04	55.42 - 58.83	1.0000	1.0000
L44	33	MP3-04	55.42 - 58.83	1.0000	1.0000
L44	40	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	41	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	42	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	50	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	51	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	52	CCI 6.5" x 1.25" Plate	55.42 - 58.83	1.0000	1.0000
L44	67	CCI 8.5" x 1.25" Plate	55.50 - 58.83	1.0000	1.0000
L44	68	CCI 8.5" x 1.25" Plate	55.50 - 58.83	1.0000	1.0000
L45	1	LDF7-50A(1-5/8")	55.17 - 55.42	1.0000	1.0000
L45	2	LDF7-50A(1-5/8")	55.17 - 55.42	1.0000	1.0000
L45	5	2" Rigid Conduit	55.17 - 55.42	1.0000	1.0000
L45	7	PWRT-606-S(7/8)	55.17 - 55.42	1.0000	1.0000
L45	8	PWRT-606-S(7/8)	55.17 - 55.42	1.0000	1.0000
L45	9	FB-L98B-034-XXX(3/8")	55.17 - 55.42	1.0000	1.0000
L45	13	HB158-21U6S24-xxM_TMO (1-5/8)	55.17 - 55.42	1.0000	1.0000
L45	17	561(1-5/8")	55.17 - 55.42	1.0000	1.0000
L45	21	CU12PSM9P6XXX(1-1/2)	55.17 - 55.42	1.0000	1.0000
L45	25	Safety Line 3/8	55.17 - 55.42	1.0000	1.0000
L45	31	MP3-04	55.17 - 55.42	1.0000	1.0000
L45	32	MP3-04	55.17 - 55.42	1.0000	1.0000
L45	33	MP3-04	55.17 - 55.42	1.0000	1.0000
L45	40	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000
L45	41	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000
L45	42	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000
L45	50	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L45	51	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000
L45	52	CCI 6.5" x 1.25" Plate	55.17 - 55.42	1.0000	1.0000
L45	65	CCI 8.5" x 1.25" Plate	55.17 - 55.40	1.0000	1.0000
L45	66	CCI 8.5" x 1.25" Plate	55.17 - 55.40	1.0000	1.0000
L46	1	LDF7-50A(1-5/8")	54.75 - 55.17	1.0000	1.0000
L46	2	LDF7-50A(1-5/8")	54.75 - 55.17	1.0000	1.0000
L46	5	2" Rigid Conduit	54.75 - 55.17	1.0000	1.0000
L46	7	PWRT-606-S(7/8)	54.75 - 55.17	1.0000	1.0000
L46	8	PWRT-606-S(7/8)	54.75 - 55.17	1.0000	1.0000
L46	9	FB-L98B-034-XXX(3/8")	54.75 - 55.17	1.0000	1.0000
L46	13	HB158-21U6S24-xxM_TMO (1-5/8)	54.75 - 55.17	1.0000	1.0000
L46	17	561(1-5/8")	54.75 - 55.17	1.0000	1.0000
L46	21	CU12PSM9P6XXX(1-1/2)	54.75 - 55.17	1.0000	1.0000
L46	25	Safety Line 3/8	54.75 - 55.17	1.0000	1.0000
L46	31	MP3-04	54.75 - 55.17	1.0000	1.0000
L46	32	MP3-04	54.75 - 55.17	1.0000	1.0000
L46	33	MP3-04	54.75 - 55.17	1.0000	1.0000
L46	40	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	41	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	42	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	50	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	51	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	52	CCI 6.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	65	CCI 8.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L46	66	CCI 8.5" x 1.25" Plate	54.75 - 55.17	1.0000	1.0000
L47	1	LDF7-50A(1-5/8")	54.50 - 54.75	1.0000	1.0000
L47	2	LDF7-50A(1-5/8")	54.50 - 54.75	1.0000	1.0000
L47	5	2" Rigid Conduit	54.50 - 54.75	1.0000	1.0000
L47	7	PWRT-606-S(7/8)	54.50 - 54.75	1.0000	1.0000
L47	8	PWRT-606-S(7/8)	54.50 - 54.75	1.0000	1.0000
L47	9	FB-L98B-034-XXX(3/8")	54.50 - 54.75	1.0000	1.0000
L47	13	HB158-21U6S24-xxM_TMO (1-5/8)	54.50 - 54.75	1.0000	1.0000
L47	17	561(1-5/8")	54.50 - 54.75	1.0000	1.0000
L47	21	CU12PSM9P6XXX(1-1/2)	54.50 - 54.75	1.0000	1.0000
L47	25	Safety Line 3/8	54.50 - 54.75	1.0000	1.0000
L47	31	MP3-04	54.50 - 54.75	1.0000	1.0000
L47	32	MP3-04	54.50 - 54.75	1.0000	1.0000
L47	33	MP3-04	54.50 - 54.75	1.0000	1.0000
L47	40	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	41	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	42	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	50	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	51	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	52	CCI 6.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	65	CCI 8.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L47	66	CCI 8.5" x 1.25" Plate	54.50 - 54.75	1.0000	1.0000
L48	1	LDF7-50A(1-5/8")	49.50 - 54.50	1.0000	1.0000
L48	2	LDF7-50A(1-5/8")	49.50 - 54.50	1.0000	1.0000
L48	5	2" Rigid Conduit	49.50 - 54.50	1.0000	1.0000
L48	7	PWRT-606-S(7/8)	49.50 - 54.50	1.0000	1.0000
L48	8	PWRT-606-S(7/8)	49.50 - 54.50	1.0000	1.0000
L48	9	FB-L98B-034-XXX(3/8")	49.50 - 54.50	1.0000	1.0000
L48	13	HB158-21U6S24-xxM_TMO (1-5/8)	49.50 - 54.50	1.0000	1.0000
L48	17	561(1-5/8")	49.50 - 54.50	1.0000	1.0000
L48	21	CU12PSM9P6XXX(1-1/2)	49.50 - 54.50	1.0000	1.0000
L48	25	Safety Line 3/8	49.50 - 54.50	1.0000	1.0000
L48	31	MP3-04	49.50 - 54.50	1.0000	1.0000
L48	32	MP3-04	49.50 - 54.50	1.0000	1.0000
L48	33	MP3-04	49.50 - 54.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L48	40	CCI 6.5" x 1.25" Plate	49.50 - 54.50	1.0000	1.0000
L48	41	CCI 6.5" x 1.25" Plate	49.50 - 54.50	1.0000	1.0000
L48	42	CCI 6.5" x 1.25" Plate	49.50 - 54.50	1.0000	1.0000
L48	50	CCI 6.5" x 1.25" Plate	52.00 - 54.50	1.0000	1.0000
L48	51	CCI 6.5" x 1.25" Plate	52.00 - 54.50	1.0000	1.0000
L48	52	CCI 6.5" x 1.25" Plate	52.00 - 54.50	1.0000	1.0000
L48	65	CCI 8.5" x 1.25" Plate	49.50 - 54.50	1.0000	1.0000
L48	66	CCI 8.5" x 1.25" Plate	49.50 - 54.50	1.0000	1.0000
L49	1	LDF7-50A(1-5/8")	44.50 - 49.50	1.0000	1.0000
L49	2	LDF7-50A(1-5/8")	44.50 - 49.50	1.0000	1.0000
L49	5	2" Rigid Conduit	44.50 - 49.50	1.0000	1.0000
L49	7	PWRT-606-S(7/8)	44.50 - 49.50	1.0000	1.0000
L49	8	PWRT-606-S(7/8)	44.50 - 49.50	1.0000	1.0000
L49	9	FB-L98B-034-XXX(3/8")	44.50 - 49.50	1.0000	1.0000
L49	13	HB158-21U6S24-xxM_TMO (1-5/8)	44.50 - 49.50	1.0000	1.0000
L49	17	561(1-5/8")	44.50 - 49.50	1.0000	1.0000
L49	21	CU12PSM9P6XXX(1-1/2)	44.50 - 49.50	1.0000	1.0000
L49	25	Safety Line 3/8	44.50 - 49.50	1.0000	1.0000
L49	31	MP3-04	44.50 - 49.50	1.0000	1.0000
L49	32	MP3-04	44.50 - 49.50	1.0000	1.0000
L49	33	MP3-04	44.50 - 49.50	1.0000	1.0000
L49	40	CCI 6.5" x 1.25" Plate	44.50 - 49.50	1.0000	1.0000
L49	41	CCI 6.5" x 1.25" Plate	44.50 - 49.50	1.0000	1.0000
L49	42	CCI 6.5" x 1.25" Plate	44.50 - 49.50	1.0000	1.0000
L49	62	CCI 8.5" x 1.25" Plate	44.50 - 45.50	1.0000	1.0000
L49	65	CCI 8.5" x 1.25" Plate	44.50 - 49.50	1.0000	1.0000
L49	66	CCI 8.5" x 1.25" Plate	44.50 - 49.50	1.0000	1.0000
L50	1	LDF7-50A(1-5/8")	41.25 - 44.50	1.0000	1.0000
L50	2	LDF7-50A(1-5/8")	41.25 - 44.50	1.0000	1.0000
L50	5	2" Rigid Conduit	41.25 - 44.50	1.0000	1.0000
L50	7	PWRT-606-S(7/8)	41.25 - 44.50	1.0000	1.0000
L50	8	PWRT-606-S(7/8)	41.25 - 44.50	1.0000	1.0000
L50	9	FB-L98B-034-XXX(3/8")	41.25 - 44.50	1.0000	1.0000
L50	13	HB158-21U6S24-xxM_TMO (1-5/8)	41.25 - 44.50	1.0000	1.0000
L50	17	561(1-5/8")	41.25 - 44.50	1.0000	1.0000
L50	21	CU12PSM9P6XXX(1-1/2)	41.25 - 44.50	1.0000	1.0000
L50	25	Safety Line 3/8	41.25 - 44.50	1.0000	1.0000
L50	31	MP3-04	41.25 - 44.50	1.0000	1.0000
L50	32	MP3-04	41.25 - 44.50	1.0000	1.0000
L50	33	MP3-04	41.25 - 44.50	1.0000	1.0000
L50	40	CCI 6.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L50	41	CCI 6.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L50	42	CCI 6.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L50	62	CCI 8.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L50	65	CCI 8.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L50	66	CCI 8.5" x 1.25" Plate	41.25 - 44.50	1.0000	1.0000
L51	1	LDF7-50A(1-5/8")	41.00 - 41.25	1.0000	1.0000
L51	2	LDF7-50A(1-5/8")	41.00 - 41.25	1.0000	1.0000
L51	5	2" Rigid Conduit	41.00 - 41.25	1.0000	1.0000
L51	7	PWRT-606-S(7/8)	41.00 - 41.25	1.0000	1.0000
L51	8	PWRT-606-S(7/8)	41.00 - 41.25	1.0000	1.0000
L51	9	FB-L98B-034-XXX(3/8")	41.00 - 41.25	1.0000	1.0000
L51	13	HB158-21U6S24-xxM_TMO (1-5/8)	41.00 - 41.25	1.0000	1.0000
L51	17	561(1-5/8")	41.00 - 41.25	1.0000	1.0000
L51	21	CU12PSM9P6XXX(1-1/2)	41.00 - 41.25	1.0000	1.0000
L51	25	Safety Line 3/8	41.00 - 41.25	1.0000	1.0000
L51	31	MP3-04	41.00 - 41.25	1.0000	1.0000
L51	32	MP3-04	41.00 - 41.25	1.0000	1.0000
L51	33	MP3-04	41.00 - 41.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L51	40	CCI 6.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L51	41	CCI 6.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L51	42	CCI 6.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L51	62	CCI 8.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L51	65	CCI 8.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L51	66	CCI 8.5" x 1.25" Plate	41.00 - 41.25	1.0000	1.0000
L52	1	LDF7-50A(1-5/8")	34.29 - 41.00	1.0000	1.0000
L52	2	LDF7-50A(1-5/8")	34.29 - 41.00	1.0000	1.0000
L52	5	2" Rigid Conduit	34.29 - 41.00	1.0000	1.0000
L52	7	PWRT-606-S(7/8)	34.29 - 41.00	1.0000	1.0000
L52	8	PWRT-606-S(7/8)	34.29 - 41.00	1.0000	1.0000
L52	9	FB-L98B-034-XXX(3/8")	34.29 - 41.00	1.0000	1.0000
L52	13	HB158-21U6S24-xxM_TMO (1-5/8)	34.29 - 41.00	1.0000	1.0000
L52	17	561(1-5/8")	34.29 - 41.00	1.0000	1.0000
L52	21	CU12PSM9P6XXX(1-1/2)	34.29 - 41.00	1.0000	1.0000
L52	25	Safety Line 3/8	34.29 - 41.00	1.0000	1.0000
L52	31	MP3-04	34.29 - 41.00	1.0000	1.0000
L52	32	MP3-04	34.29 - 41.00	1.0000	1.0000
L52	33	MP3-04	34.29 - 41.00	1.0000	1.0000
L52	40	CCI 6.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L52	41	CCI 6.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L52	42	CCI 6.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L52	47	CCI 6.5" x 1.25" Plate	34.29 - 38.00	1.0000	1.0000
L52	48	CCI 6.5" x 1.25" Plate	34.29 - 38.00	1.0000	1.0000
L52	49	CCI 6.5" x 1.25" Plate	34.29 - 38.00	1.0000	1.0000
L52	62	CCI 8.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L52	65	CCI 8.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L52	66	CCI 8.5" x 1.25" Plate	34.29 - 41.00	1.0000	1.0000
L53	1	LDF7-50A(1-5/8")	33.29 - 34.29	1.0000	1.0000
L53	2	LDF7-50A(1-5/8")	33.29 - 34.29	1.0000	1.0000
L53	5	2" Rigid Conduit	33.29 - 34.29	1.0000	1.0000
L53	7	PWRT-606-S(7/8)	33.29 - 34.29	1.0000	1.0000
L53	8	PWRT-606-S(7/8)	33.29 - 34.29	1.0000	1.0000
L53	9	FB-L98B-034-XXX(3/8")	33.29 - 34.29	1.0000	1.0000
L53	13	HB158-21U6S24-xxM_TMO (1-5/8)	33.29 - 34.29	1.0000	1.0000
L53	17	561(1-5/8")	33.29 - 34.29	1.0000	1.0000
L53	21	CU12PSM9P6XXX(1-1/2)	33.29 - 34.29	1.0000	1.0000
L53	25	Safety Line 3/8	33.29 - 34.29	1.0000	1.0000
L53	31	MP3-04	33.29 - 34.29	1.0000	1.0000
L53	32	MP3-04	33.29 - 34.29	1.0000	1.0000
L53	33	MP3-04	33.29 - 34.29	1.0000	1.0000
L53	40	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	41	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	42	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	47	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	48	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	49	CCI 6.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	62	CCI 8.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	65	CCI 8.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L53	66	CCI 8.5" x 1.25" Plate	33.29 - 34.29	1.0000	1.0000
L54	1	LDF7-50A(1-5/8")	31.50 - 33.29	1.0000	1.0000
L54	2	LDF7-50A(1-5/8")	31.50 - 33.29	1.0000	1.0000
L54	5	2" Rigid Conduit	31.50 - 33.29	1.0000	1.0000
L54	7	PWRT-606-S(7/8)	31.50 - 33.29	1.0000	1.0000
L54	8	PWRT-606-S(7/8)	31.50 - 33.29	1.0000	1.0000
L54	9	FB-L98B-034-XXX(3/8")	31.50 - 33.29	1.0000	1.0000
L54	13	HB158-21U6S24-xxM_TMO (1-5/8)	31.50 - 33.29	1.0000	1.0000
L54	17	561(1-5/8")	31.50 - 33.29	1.0000	1.0000
L54	21	CU12PSM9P6XXX(1-1/2)	31.50 - 33.29	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L54	25	Safety Line 3/8	31.50 - 33.29	1.0000	1.0000
L54	31	MP3-04	31.50 - 33.29	1.0000	1.0000
L54	32	MP3-04	31.50 - 33.29	1.0000	1.0000
L54	33	MP3-04	31.50 - 33.29	1.0000	1.0000
L54	40	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	41	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	42	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	47	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	48	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	49	CCI 6.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	62	CCI 8.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	65	CCI 8.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L54	66	CCI 8.5" x 1.25" Plate	31.50 - 33.29	1.0000	1.0000
L55	1	LDF7-50A(1-5/8")	31.25 - 31.50	1.0000	1.0000
L55	2	LDF7-50A(1-5/8")	31.25 - 31.50	1.0000	1.0000
L55	5	2" Rigid Conduit	31.25 - 31.50	1.0000	1.0000
L55	7	PWRT-606-S(7/8)	31.25 - 31.50	1.0000	1.0000
L55	8	PWRT-606-S(7/8)	31.25 - 31.50	1.0000	1.0000
L55	9	FB-L98B-034-XXX(3/8")	31.25 - 31.50	1.0000	1.0000
L55	13	HB158-21U6S24-xxM_TMO (1-5/8)	31.25 - 31.50	1.0000	1.0000
L55	17	561(1-5/8")	31.25 - 31.50	1.0000	1.0000
L55	21	CU12PSM9P6XXX(1-1/2)	31.25 - 31.50	1.0000	1.0000
L55	25	Safety Line 3/8	31.25 - 31.50	1.0000	1.0000
L55	28	MP3-05	31.25 - 31.50	1.0000	1.0000
L55	31	MP3-04	31.25 - 31.50	1.0000	1.0000
L55	32	MP3-04	31.25 - 31.50	1.0000	1.0000
L55	33	MP3-04	31.25 - 31.50	1.0000	1.0000
L55	40	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	41	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	42	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	47	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	48	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	49	CCI 6.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	62	CCI 8.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	65	CCI 8.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L55	66	CCI 8.5" x 1.25" Plate	31.25 - 31.50	1.0000	1.0000
L56	1	LDF7-50A(1-5/8")	30.50 - 31.25	1.0000	1.0000
L56	2	LDF7-50A(1-5/8")	30.50 - 31.25	1.0000	1.0000
L56	5	2" Rigid Conduit	30.50 - 31.25	1.0000	1.0000
L56	7	PWRT-606-S(7/8)	30.50 - 31.25	1.0000	1.0000
L56	8	PWRT-606-S(7/8)	30.50 - 31.25	1.0000	1.0000
L56	9	FB-L98B-034-XXX(3/8")	30.50 - 31.25	1.0000	1.0000
L56	13	HB158-21U6S24-xxM_TMO (1-5/8)	30.50 - 31.25	1.0000	1.0000
L56	17	561(1-5/8")	30.50 - 31.25	1.0000	1.0000
L56	21	CU12PSM9P6XXX(1-1/2)	30.50 - 31.25	1.0000	1.0000
L56	25	Safety Line 3/8	30.50 - 31.25	1.0000	1.0000
L56	28	MP3-05	30.50 - 31.25	1.0000	1.0000
L56	31	MP3-04	30.50 - 31.25	1.0000	1.0000
L56	32	MP3-04	30.50 - 31.25	1.0000	1.0000
L56	33	MP3-04	31.00 - 31.25	1.0000	1.0000
L56	40	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	41	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	42	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	47	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	48	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	49	CCI 6.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	62	CCI 8.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	65	CCI 8.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L56	66	CCI 8.5" x 1.25" Plate	30.50 - 31.25	1.0000	1.0000
L57	1	LDF7-50A(1-5/8")	30.25 - 30.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L57	2	LDF7-50A(1-5/8")	30.25 - 30.50	1.0000	1.0000
L57	5	2" Rigid Conduit	30.25 - 30.50	1.0000	1.0000
L57	7	PWRT-606-S(7/8)	30.25 - 30.50	1.0000	1.0000
L57	8	PWRT-606-S(7/8)	30.25 - 30.50	1.0000	1.0000
L57	9	FB-L98B-034-XXX(3/8")	30.25 - 30.50	1.0000	1.0000
L57	13	HB158-21U6S24-xxM_TMO (1-5/8)	30.25 - 30.50	1.0000	1.0000
L57	17	561(1-5/8")	30.25 - 30.50	1.0000	1.0000
L57	21	CU12PSM9P6XXX(1-1/2)	30.25 - 30.50	1.0000	1.0000
L57	25	Safety Line 3/8	30.25 - 30.50	1.0000	1.0000
L57	28	MP3-05	30.25 - 30.50	1.0000	1.0000
L57	29	MP3-05	30.25 - 30.50	1.0000	1.0000
L57	30	MP3-05	30.25 - 30.50	1.0000	1.0000
L57	37	CCI 6" x 1" Plate	30.25 - 30.50	1.0000	1.0000
L57	38	CCI 6" x 1" Plate	30.25 - 30.50	1.0000	1.0000
L57	39	CCI 6" x 1" Plate	30.25 - 30.50	1.0000	1.0000
L57	47	CCI 6.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L57	48	CCI 6.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L57	49	CCI 6.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L57	62	CCI 8.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L57	65	CCI 8.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L57	66	CCI 8.5" x 1.25" Plate	30.25 - 30.50	1.0000	1.0000
L58	1	LDF7-50A(1-5/8")	25.75 - 30.25	1.0000	1.0000
L58	2	LDF7-50A(1-5/8")	25.75 - 30.25	1.0000	1.0000
L58	5	2" Rigid Conduit	25.75 - 30.25	1.0000	1.0000
L58	7	PWRT-606-S(7/8)	25.75 - 30.25	1.0000	1.0000
L58	8	PWRT-606-S(7/8)	25.75 - 30.25	1.0000	1.0000
L58	9	FB-L98B-034-XXX(3/8")	25.75 - 30.25	1.0000	1.0000
L58	13	HB158-21U6S24-xxM_TMO (1-5/8)	25.75 - 30.25	1.0000	1.0000
L58	17	561(1-5/8")	25.75 - 30.25	1.0000	1.0000
L58	21	CU12PSM9P6XXX(1-1/2)	25.75 - 30.25	1.0000	1.0000
L58	25	Safety Line 3/8	25.75 - 30.25	1.0000	1.0000
L58	28	MP3-05	25.75 - 30.25	1.0000	1.0000
L58	29	MP3-05	25.75 - 30.25	1.0000	1.0000
L58	30	MP3-05	25.75 - 30.25	1.0000	1.0000
L58	37	CCI 6" x 1" Plate	25.75 - 30.25	1.0000	1.0000
L58	38	CCI 6" x 1" Plate	25.75 - 30.25	1.0000	1.0000
L58	39	CCI 6" x 1" Plate	25.75 - 30.25	1.0000	1.0000
L58	47	CCI 6.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	48	CCI 6.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	49	CCI 6.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	62	CCI 8.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	65	CCI 8.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	66	CCI 8.5" x 1.25" Plate	25.75 - 30.25	1.0000	1.0000
L58	78	CCI 1.25" x 5.875" Plate	25.75 - 28.50	1.0000	1.0000
L58	79	CCI 1.25" x 5.875" Plate	25.75 - 28.50	1.0000	1.0000
L58	80	CCI 1.25" x 5.875" Plate	25.75 - 28.50	1.0000	1.0000
L59	1	LDF7-50A(1-5/8")	25.50 - 25.75	1.0000	1.0000
L59	2	LDF7-50A(1-5/8")	25.50 - 25.75	1.0000	1.0000
L59	5	2" Rigid Conduit	25.50 - 25.75	1.0000	1.0000
L59	7	PWRT-606-S(7/8)	25.50 - 25.75	1.0000	1.0000
L59	8	PWRT-606-S(7/8)	25.50 - 25.75	1.0000	1.0000
L59	9	FB-L98B-034-XXX(3/8")	25.50 - 25.75	1.0000	1.0000
L59	13	HB158-21U6S24-xxM_TMO (1-5/8)	25.50 - 25.75	1.0000	1.0000
L59	17	561(1-5/8")	25.50 - 25.75	1.0000	1.0000
L59	21	CU12PSM9P6XXX(1-1/2)	25.50 - 25.75	1.0000	1.0000
L59	25	Safety Line 3/8	25.50 - 25.75	1.0000	1.0000
L59	28	MP3-05	25.50 - 25.75	1.0000	1.0000
L59	29	MP3-05	25.50 - 25.75	1.0000	1.0000
L59	30	MP3-05	25.50 - 25.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L59	37	CCI 6" x 1" Plate	25.50 - 25.75	1.0000	1.0000
L59	38	CCI 6" x 1" Plate	25.50 - 25.75	1.0000	1.0000
L59	39	CCI 6" x 1" Plate	25.50 - 25.75	1.0000	1.0000
L59	47	CCI 6.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	48	CCI 6.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	49	CCI 6.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	62	CCI 8.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	65	CCI 8.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	66	CCI 8.5" x 1.25" Plate	25.50 - 25.75	1.0000	1.0000
L59	78	CCI 1.25" x 5.875" Plate	25.50 - 25.75	1.0000	1.0000
L59	79	CCI 1.25" x 5.875" Plate	25.50 - 25.75	1.0000	1.0000
L59	80	CCI 1.25" x 5.875" Plate	25.50 - 25.75	1.0000	1.0000
L60	1	LDF7-50A(1-5/8")	24.67 - 25.50	1.0000	1.0000
L60	2	LDF7-50A(1-5/8")	24.67 - 25.50	1.0000	1.0000
L60	5	2" Rigid Conduit	24.67 - 25.50	1.0000	1.0000
L60	7	PWRT-606-S(7/8)	24.67 - 25.50	1.0000	1.0000
L60	8	PWRT-606-S(7/8)	24.67 - 25.50	1.0000	1.0000
L60	9	FB-L98B-034-XXX(3/8")	24.67 - 25.50	1.0000	1.0000
L60	13	HB158-21U6S24-xxM_TMO (1-5/8)	24.67 - 25.50	1.0000	1.0000
L60	17	561(1-5/8")	24.67 - 25.50	1.0000	1.0000
L60	21	CU12PSM9P6XXX(1-1/2)	24.67 - 25.50	1.0000	1.0000
L60	25	Safety Line 3/8	24.67 - 25.50	1.0000	1.0000
L60	28	MP3-05	24.67 - 25.50	1.0000	1.0000
L60	29	MP3-05	24.67 - 25.50	1.0000	1.0000
L60	30	MP3-05	24.67 - 25.50	1.0000	1.0000
L60	37	CCI 6" x 1" Plate	24.67 - 25.50	1.0000	1.0000
L60	38	CCI 6" x 1" Plate	24.67 - 25.50	1.0000	1.0000
L60	39	CCI 6" x 1" Plate	24.67 - 25.50	1.0000	1.0000
L60	47	CCI 6.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	48	CCI 6.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	49	CCI 6.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	62	CCI 8.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	65	CCI 8.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	66	CCI 8.5" x 1.25" Plate	24.67 - 25.50	1.0000	1.0000
L60	73	CCI 1.25" x 5.875" Plate	24.67 - 25.50	1.0000	1.0000
L60	74	CCI 1.25" x 5.875" Plate	24.67 - 25.50	1.0000	1.0000
L60	75	CCI 1.25" x 5.875" Plate	24.67 - 25.50	1.0000	1.0000
L60	76	CCI 1.25" x 5.875" Plate	24.67 - 25.50	1.0000	1.0000
L61	1	LDF7-50A(1-5/8")	24.42 - 24.67	1.0000	1.0000
L61	2	LDF7-50A(1-5/8")	24.42 - 24.67	1.0000	1.0000
L61	5	2" Rigid Conduit	24.42 - 24.67	1.0000	1.0000
L61	7	PWRT-606-S(7/8)	24.42 - 24.67	1.0000	1.0000
L61	8	PWRT-606-S(7/8)	24.42 - 24.67	1.0000	1.0000
L61	9	FB-L98B-034-XXX(3/8")	24.42 - 24.67	1.0000	1.0000
L61	13	HB158-21U6S24-xxM_TMO (1-5/8)	24.42 - 24.67	1.0000	1.0000
L61	17	561(1-5/8")	24.42 - 24.67	1.0000	1.0000
L61	21	CU12PSM9P6XXX(1-1/2)	24.42 - 24.67	1.0000	1.0000
L61	25	Safety Line 3/8	24.42 - 24.67	1.0000	1.0000
L61	28	MP3-05	24.42 - 24.67	1.0000	1.0000
L61	29	MP3-05	24.42 - 24.67	1.0000	1.0000
L61	30	MP3-05	24.42 - 24.67	1.0000	1.0000
L61	37	CCI 6" x 1" Plate	24.42 - 24.67	1.0000	1.0000
L61	38	CCI 6" x 1" Plate	24.42 - 24.67	1.0000	1.0000
L61	39	CCI 6" x 1" Plate	24.42 - 24.67	1.0000	1.0000
L61	47	CCI 6.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000
L61	48	CCI 6.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000
L61	49	CCI 6.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000
L61	62	CCI 8.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000
L61	65	CCI 8.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000
L61	66	CCI 8.5" x 1.25" Plate	24.42 - 24.67	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L61	73	CCI 1.25" x 5.875" Plate	24.42 - 24.67	1.0000	1.0000
L61	74	CCI 1.25" x 5.875" Plate	24.42 - 24.67	1.0000	1.0000
L61	75	CCI 1.25" x 5.875" Plate	24.42 - 24.67	1.0000	1.0000
L61	76	CCI 1.25" x 5.875" Plate	24.42 - 24.67	1.0000	1.0000
L62	1	LDF7-50A(1-5/8")	24.00 - 24.42	1.0000	1.0000
L62	2	LDF7-50A(1-5/8")	24.00 - 24.42	1.0000	1.0000
L62	5	2" Rigid Conduit	24.00 - 24.42	1.0000	1.0000
L62	7	PWRT-606-S(7/8)	24.00 - 24.42	1.0000	1.0000
L62	8	PWRT-606-S(7/8)	24.00 - 24.42	1.0000	1.0000
L62	9	FB-L98B-034-XXX(3/8")	24.00 - 24.42	1.0000	1.0000
L62	13	HB158-21U6S24-xxM_TMO (1-5/8)	24.00 - 24.42	1.0000	1.0000
L62	17	561(1-5/8")	24.00 - 24.42	1.0000	1.0000
L62	21	CU12PSM9P6XXX(1-1/2)	24.00 - 24.42	1.0000	1.0000
L62	25	Safety Line 3/8	24.00 - 24.42	1.0000	1.0000
L62	28	MP3-05	24.00 - 24.42	1.0000	1.0000
L62	29	MP3-05	24.00 - 24.42	1.0000	1.0000
L62	30	MP3-05	24.00 - 24.42	1.0000	1.0000
L62	37	CCI 6" x 1" Plate	24.00 - 24.42	1.0000	1.0000
L62	38	CCI 6" x 1" Plate	24.00 - 24.42	1.0000	1.0000
L62	39	CCI 6" x 1" Plate	24.00 - 24.42	1.0000	1.0000
L62	47	CCI 6.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	48	CCI 6.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	49	CCI 6.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	62	CCI 8.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	65	CCI 8.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	66	CCI 8.5" x 1.25" Plate	24.00 - 24.42	1.0000	1.0000
L62	73	CCI 1.25" x 5.875" Plate	24.00 - 24.42	1.0000	1.0000
L62	74	CCI 1.25" x 5.875" Plate	24.00 - 24.42	1.0000	1.0000
L62	75	CCI 1.25" x 5.875" Plate	24.00 - 24.42	1.0000	1.0000
L62	76	CCI 1.25" x 5.875" Plate	24.00 - 24.42	1.0000	1.0000
L63	1	LDF7-50A(1-5/8")	23.75 - 24.00	1.0000	1.0000
L63	2	LDF7-50A(1-5/8")	23.75 - 24.00	1.0000	1.0000
L63	5	2" Rigid Conduit	23.75 - 24.00	1.0000	1.0000
L63	7	PWRT-606-S(7/8)	23.75 - 24.00	1.0000	1.0000
L63	8	PWRT-606-S(7/8)	23.75 - 24.00	1.0000	1.0000
L63	9	FB-L98B-034-XXX(3/8")	23.75 - 24.00	1.0000	1.0000
L63	13	HB158-21U6S24-xxM_TMO (1-5/8)	23.75 - 24.00	1.0000	1.0000
L63	17	561(1-5/8")	23.75 - 24.00	1.0000	1.0000
L63	21	CU12PSM9P6XXX(1-1/2)	23.75 - 24.00	1.0000	1.0000
L63	25	Safety Line 3/8	23.75 - 24.00	1.0000	1.0000
L63	28	MP3-05	23.75 - 24.00	1.0000	1.0000
L63	29	MP3-05	23.75 - 24.00	1.0000	1.0000
L63	30	MP3-05	23.75 - 24.00	1.0000	1.0000
L63	37	CCI 6" x 1" Plate	23.75 - 24.00	1.0000	1.0000
L63	38	CCI 6" x 1" Plate	23.75 - 24.00	1.0000	1.0000
L63	39	CCI 6" x 1" Plate	23.75 - 24.00	1.0000	1.0000
L63	47	CCI 6.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	48	CCI 6.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	49	CCI 6.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	62	CCI 8.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	65	CCI 8.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	66	CCI 8.5" x 1.25" Plate	23.75 - 24.00	1.0000	1.0000
L63	73	CCI 1.25" x 5.875" Plate	23.75 - 24.00	1.0000	1.0000
L63	74	CCI 1.25" x 5.875" Plate	23.75 - 24.00	1.0000	1.0000
L63	75	CCI 1.25" x 5.875" Plate	23.75 - 24.00	1.0000	1.0000
L63	76	CCI 1.25" x 5.875" Plate	23.75 - 24.00	1.0000	1.0000
L64	1	LDF7-50A(1-5/8")	18.75 - 23.75	1.0000	1.0000
L64	2	LDF7-50A(1-5/8")	18.75 - 23.75	1.0000	1.0000
L64	5	2" Rigid Conduit	18.75 - 23.75	1.0000	1.0000
L64	7	PWRT-606-S(7/8)	18.75 - 23.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L64	8	PWRT-606-S(7/8)	18.75 - 23.75	1.0000	1.0000
L64	9	FB-L98B-034-XXX(3/8")	18.75 - 23.75	1.0000	1.0000
L64	13	HB158-21U6S24-xxM_TMO (1-5/8)	18.75 - 23.75	1.0000	1.0000
L64	17	561(1-5/8")	18.75 - 23.75	1.0000	1.0000
L64	21	CU12PSM9P6XXX(1-1/2)	18.75 - 23.75	1.0000	1.0000
L64	25	Safety Line 3/8	18.75 - 23.75	1.0000	1.0000
L64	28	MP3-05	18.75 - 23.75	1.0000	1.0000
L64	29	MP3-05	18.75 - 23.75	1.0000	1.0000
L64	30	MP3-05	18.75 - 23.75	1.0000	1.0000
L64	37	CCI 6" x 1" Plate	18.75 - 23.75	1.0000	1.0000
L64	38	CCI 6" x 1" Plate	18.75 - 23.75	1.0000	1.0000
L64	39	CCI 6" x 1" Plate	18.75 - 23.75	1.0000	1.0000
L64	47	CCI 6.5" x 1.25" Plate	23.00 - 23.75	1.0000	1.0000
L64	48	CCI 6.5" x 1.25" Plate	23.00 - 23.75	1.0000	1.0000
L64	49	CCI 6.5" x 1.25" Plate	23.00 - 23.75	1.0000	1.0000
L64	62	CCI 8.5" x 1.25" Plate	18.75 - 23.75	1.0000	1.0000
L64	65	CCI 8.5" x 1.25" Plate	20.40 - 23.75	1.0000	1.0000
L64	66	CCI 8.5" x 1.25" Plate	20.40 - 23.75	1.0000	1.0000
L64	73	CCI 1.25" x 5.875" Plate	18.75 - 23.75	1.0000	1.0000
L64	74	CCI 1.25" x 5.875" Plate	18.75 - 23.75	1.0000	1.0000
L64	75	CCI 1.25" x 5.875" Plate	18.75 - 23.75	1.0000	1.0000
L64	76	CCI 1.25" x 5.875" Plate	18.75 - 23.75	1.0000	1.0000
L65	1	LDF7-50A(1-5/8")	14.08 - 18.75	1.0000	1.0000
L65	2	LDF7-50A(1-5/8")	14.08 - 18.75	1.0000	1.0000
L65	5	2" Rigid Conduit	14.08 - 18.75	1.0000	1.0000
L65	7	PWRT-606-S(7/8)	14.08 - 18.75	1.0000	1.0000
L65	8	PWRT-606-S(7/8)	14.08 - 18.75	1.0000	1.0000
L65	9	FB-L98B-034-XXX(3/8")	14.08 - 18.75	1.0000	1.0000
L65	13	HB158-21U6S24-xxM_TMO (1-5/8)	14.08 - 18.75	1.0000	1.0000
L65	17	561(1-5/8")	14.08 - 18.75	1.0000	1.0000
L65	21	CU12PSM9P6XXX(1-1/2)	14.08 - 18.75	1.0000	1.0000
L65	25	Safety Line 3/8	14.08 - 18.75	1.0000	1.0000
L65	28	MP3-05	14.08 - 18.75	1.0000	1.0000
L65	29	MP3-05	14.08 - 18.75	1.0000	1.0000
L65	30	MP3-05	14.08 - 18.75	1.0000	1.0000
L65	34	MP3-04	14.08 - 15.50	1.0000	1.0000
L65	35	MP3-04	14.08 - 15.50	1.0000	1.0000
L65	37	CCI 6" x 1" Plate	14.08 - 18.75	1.0000	1.0000
L65	38	CCI 6" x 1" Plate	14.08 - 18.75	1.0000	1.0000
L65	39	CCI 6" x 1" Plate	14.08 - 18.75	1.0000	1.0000
L65	62	CCI 8.5" x 1.25" Plate	14.08 - 18.75	1.0000	1.0000
L65	73	CCI 1.25" x 5.875" Plate	14.08 - 18.75	1.0000	1.0000
L65	74	CCI 1.25" x 5.875" Plate	14.08 - 18.75	1.0000	1.0000
L65	75	CCI 1.25" x 5.875" Plate	14.08 - 18.75	1.0000	1.0000
L65	76	CCI 1.25" x 5.875" Plate	14.08 - 18.75	1.0000	1.0000
L66	1	LDF7-50A(1-5/8")	13.82 - 14.08	1.0000	1.0000
L66	2	LDF7-50A(1-5/8")	13.82 - 14.08	1.0000	1.0000
L66	5	2" Rigid Conduit	13.82 - 14.08	1.0000	1.0000
L66	7	PWRT-606-S(7/8)	13.82 - 14.08	1.0000	1.0000
L66	8	PWRT-606-S(7/8)	13.82 - 14.08	1.0000	1.0000
L66	9	FB-L98B-034-XXX(3/8")	13.82 - 14.08	1.0000	1.0000
L66	13	HB158-21U6S24-xxM_TMO (1-5/8)	13.82 - 14.08	1.0000	1.0000
L66	17	561(1-5/8")	13.82 - 14.08	1.0000	1.0000
L66	21	CU12PSM9P6XXX(1-1/2)	13.82 - 14.08	1.0000	1.0000
L66	25	Safety Line 3/8	13.82 - 14.08	1.0000	1.0000
L66	28	MP3-05	13.82 - 14.08	1.0000	1.0000
L66	29	MP3-05	13.82 - 14.08	1.0000	1.0000
L66	30	MP3-05	13.82 - 14.08	1.0000	1.0000
L66	34	MP3-04	13.82 - 14.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L66	35	MP3-04	13.82 - 14.08	1.0000	1.0000
L66	37	CCI 6" x 1" Plate	13.82 - 14.08	1.0000	1.0000
L66	38	CCI 6" x 1" Plate	13.82 - 14.08	1.0000	1.0000
L66	39	CCI 6" x 1" Plate	13.82 - 14.08	1.0000	1.0000
L66	62	CCI 8.5" x 1.25" Plate	13.82 - 14.08	1.0000	1.0000
L66	73	CCI 1.25" x 5.875" Plate	13.82 - 14.08	1.0000	1.0000
L66	74	CCI 1.25" x 5.875" Plate	13.82 - 14.08	1.0000	1.0000
L66	75	CCI 1.25" x 5.875" Plate	13.82 - 14.08	1.0000	1.0000
L66	76	CCI 1.25" x 5.875" Plate	13.82 - 14.08	1.0000	1.0000
L67	1	LDF7-50A(1-5/8")	13.67 - 13.82	1.0000	1.0000
L67	2	LDF7-50A(1-5/8")	13.67 - 13.82	1.0000	1.0000
L67	5	2" Rigid Conduit	13.67 - 13.82	1.0000	1.0000
L67	7	PWRT-606-S(7/8)	13.67 - 13.82	1.0000	1.0000
L67	8	PWRT-606-S(7/8)	13.67 - 13.82	1.0000	1.0000
L67	9	FB-L98B-034-XXX(3/8")	13.67 - 13.82	1.0000	1.0000
L67	13	HB158-21U6S24-xxM_TMO (1-5/8)	13.67 - 13.82	1.0000	1.0000
L67	17	561(1-5/8")	13.67 - 13.82	1.0000	1.0000
L67	21	CU12PSM9P6XXX(1-1/2)	13.67 - 13.82	1.0000	1.0000
L67	25	Safety Line 3/8	13.67 - 13.82	1.0000	1.0000
L67	28	MP3-05	13.67 - 13.82	1.0000	1.0000
L67	29	MP3-05	13.67 - 13.82	1.0000	1.0000
L67	30	MP3-05	13.67 - 13.82	1.0000	1.0000
L67	34	MP3-04	13.67 - 13.82	1.0000	1.0000
L67	35	MP3-04	13.67 - 13.82	1.0000	1.0000
L67	37	CCI 6" x 1" Plate	13.67 - 13.82	1.0000	1.0000
L67	38	CCI 6" x 1" Plate	13.67 - 13.82	1.0000	1.0000
L67	39	CCI 6" x 1" Plate	13.67 - 13.82	1.0000	1.0000
L67	62	CCI 8.5" x 1.25" Plate	13.67 - 13.82	1.0000	1.0000
L67	73	CCI 1.25" x 5.875" Plate	13.67 - 13.82	1.0000	1.0000
L67	74	CCI 1.25" x 5.875" Plate	13.67 - 13.82	1.0000	1.0000
L67	75	CCI 1.25" x 5.875" Plate	13.67 - 13.82	1.0000	1.0000
L67	76	CCI 1.25" x 5.875" Plate	13.67 - 13.82	1.0000	1.0000
L68	1	LDF7-50A(1-5/8")	10.50 - 13.67	1.0000	1.0000
L68	2	LDF7-50A(1-5/8")	10.50 - 13.67	1.0000	1.0000
L68	5	2" Rigid Conduit	10.50 - 13.67	1.0000	1.0000
L68	7	PWRT-606-S(7/8)	10.50 - 13.67	1.0000	1.0000
L68	8	PWRT-606-S(7/8)	10.50 - 13.67	1.0000	1.0000
L68	9	FB-L98B-034-XXX(3/8")	10.50 - 13.67	1.0000	1.0000
L68	13	HB158-21U6S24-xxM_TMO (1-5/8)	10.50 - 13.67	1.0000	1.0000
L68	17	561(1-5/8")	10.50 - 13.67	1.0000	1.0000
L68	21	CU12PSM9P6XXX(1-1/2)	10.50 - 13.67	1.0000	1.0000
L68	25	Safety Line 3/8	10.50 - 13.67	1.0000	1.0000
L68	28	MP3-05	11.50 - 13.67	1.0000	1.0000
L68	29	MP3-05	10.50 - 13.67	1.0000	1.0000
L68	30	MP3-05	10.50 - 13.67	1.0000	1.0000
L68	34	MP3-04	10.50 - 13.67	1.0000	1.0000
L68	35	MP3-04	10.50 - 13.67	1.0000	1.0000
L68	37	CCI 6" x 1" Plate	10.50 - 13.67	1.0000	1.0000
L68	38	CCI 6" x 1" Plate	10.50 - 13.67	1.0000	1.0000
L68	39	CCI 6" x 1" Plate	10.50 - 13.67	1.0000	1.0000
L68	62	CCI 8.5" x 1.25" Plate	10.50 - 13.67	1.0000	1.0000
L68	73	CCI 1.25" x 5.875" Plate	10.50 - 13.67	1.0000	1.0000
L68	74	CCI 1.25" x 5.875" Plate	10.50 - 13.67	1.0000	1.0000
L68	75	CCI 1.25" x 5.875" Plate	10.50 - 13.67	1.0000	1.0000
L68	76	CCI 1.25" x 5.875" Plate	10.50 - 13.67	1.0000	1.0000
L69	1	LDF7-50A(1-5/8")	10.25 - 10.50	1.0000	1.0000
L69	2	LDF7-50A(1-5/8")	10.25 - 10.50	1.0000	1.0000
L69	5	2" Rigid Conduit	10.25 - 10.50	1.0000	1.0000
L69	7	PWRT-606-S(7/8)	10.25 - 10.50	1.0000	1.0000
L69	8	PWRT-606-S(7/8)	10.25 - 10.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L69	9	FB-L98B-034-XXX(3/8")	10.25 - 10.50	1.0000	1.0000
L69	13	HB158-21U6S24-xxM_TMO (1-5/8)	10.25 - 10.50	1.0000	1.0000
L69	17	561(1-5/8")	10.25 - 10.50	1.0000	1.0000
L69	21	CU12PSM9P6XXX(1-1/2)	10.25 - 10.50	1.0000	1.0000
L69	25	Safety Line 3/8	10.25 - 10.50	1.0000	1.0000
L69	29	MP3-05	10.25 - 10.50	1.0000	1.0000
L69	30	MP3-05	10.25 - 10.50	1.0000	1.0000
L69	34	MP3-04	10.25 - 10.50	1.0000	1.0000
L69	35	MP3-04	10.25 - 10.50	1.0000	1.0000
L69	37	CCI 6" x 1" Plate	10.25 - 10.50	1.0000	1.0000
L69	38	CCI 6" x 1" Plate	10.25 - 10.50	1.0000	1.0000
L69	39	CCI 6" x 1" Plate	10.25 - 10.50	1.0000	1.0000
L69	61	CCI 6" x 1" Plate	10.25 - 10.50	1.0000	1.0000
L69	73	CCI 1.25" x 5.875" Plate	10.25 - 10.50	1.0000	1.0000
L69	74	CCI 1.25" x 5.875" Plate	10.25 - 10.50	1.0000	1.0000
L69	75	CCI 1.25" x 5.875" Plate	10.25 - 10.50	1.0000	1.0000
L69	76	CCI 1.25" x 5.875" Plate	10.25 - 10.50	1.0000	1.0000
L70	1	LDF7-50A(1-5/8")	5.25 - 10.25	1.0000	1.0000
L70	2	LDF7-50A(1-5/8")	5.25 - 10.25	1.0000	1.0000
L70	5	2" Rigid Conduit	5.25 - 10.25	1.0000	1.0000
L70	7	PWRT-606-S(7/8)	5.25 - 10.25	1.0000	1.0000
L70	8	PWRT-606-S(7/8)	5.25 - 10.25	1.0000	1.0000
L70	9	FB-L98B-034-XXX(3/8")	5.25 - 10.25	1.0000	1.0000
L70	13	HB158-21U6S24-xxM_TMO (1-5/8)	5.25 - 10.25	1.0000	1.0000
L70	17	561(1-5/8")	5.25 - 10.25	1.0000	1.0000
L70	21	CU12PSM9P6XXX(1-1/2)	5.25 - 10.25	1.0000	1.0000
L70	25	Safety Line 3/8	5.25 - 10.25	1.0000	1.0000
L70	29	MP3-05	5.25 - 10.25	1.0000	1.0000
L70	30	MP3-05	5.25 - 10.25	1.0000	1.0000
L70	34	MP3-04	5.25 - 10.25	1.0000	1.0000
L70	35	MP3-04	5.25 - 10.25	1.0000	1.0000
L70	37	CCI 6" x 1" Plate	5.25 - 10.25	1.0000	1.0000
L70	38	CCI 6" x 1" Plate	5.25 - 10.25	1.0000	1.0000
L70	39	CCI 6" x 1" Plate	5.25 - 10.25	1.0000	1.0000
L70	61	CCI 6" x 1" Plate	5.25 - 10.25	1.0000	1.0000
L70	73	CCI 1.25" x 5.875" Plate	5.25 - 10.25	1.0000	1.0000
L70	74	CCI 1.25" x 5.875" Plate	5.25 - 10.25	1.0000	1.0000
L70	75	CCI 1.25" x 5.875" Plate	5.25 - 10.25	1.0000	1.0000
L70	76	CCI 1.25" x 5.875" Plate	5.25 - 10.25	1.0000	1.0000
L71	1	LDF7-50A(1-5/8")	2.90 - 5.25	1.0000	1.0000
L71	2	LDF7-50A(1-5/8")	2.90 - 5.25	1.0000	1.0000
L71	5	2" Rigid Conduit	2.90 - 5.25	1.0000	1.0000
L71	7	PWRT-606-S(7/8)	2.90 - 5.25	1.0000	1.0000
L71	8	PWRT-606-S(7/8)	2.90 - 5.25	1.0000	1.0000
L71	9	FB-L98B-034-XXX(3/8")	2.90 - 5.25	1.0000	1.0000
L71	13	HB158-21U6S24-xxM_TMO (1-5/8)	2.90 - 5.25	1.0000	1.0000
L71	17	561(1-5/8")	2.90 - 5.25	1.0000	1.0000
L71	21	CU12PSM9P6XXX(1-1/2)	2.90 - 5.25	1.0000	1.0000
L71	25	Safety Line 3/8	2.90 - 5.25	1.0000	1.0000
L71	29	MP3-05	2.90 - 5.25	1.0000	1.0000
L71	30	MP3-05	2.90 - 5.25	1.0000	1.0000
L71	34	MP3-04	2.90 - 5.25	1.0000	1.0000
L71	35	MP3-04	2.90 - 5.25	1.0000	1.0000
L71	37	CCI 6" x 1" Plate	2.90 - 5.25	1.0000	1.0000
L71	38	CCI 6" x 1" Plate	2.90 - 5.25	1.0000	1.0000
L71	39	CCI 6" x 1" Plate	2.90 - 5.25	1.0000	1.0000
L71	61	CCI 6" x 1" Plate	2.90 - 5.25	1.0000	1.0000
L71	73	CCI 1.25" x 5.875" Plate	2.90 - 5.25	1.0000	1.0000
L71	74	CCI 1.25" x 5.875" Plate	2.90 - 5.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L71	75	CCI 1.25" x 5.875" Plate	2.90 - 5.25	1.0000	1.0000
L71	76	CCI 1.25" x 5.875" Plate	2.90 - 5.25	1.0000	1.0000
L72	1	LDF7-50A(1-5/8")	2.65 - 2.90	1.0000	1.0000
L72	2	LDF7-50A(1-5/8")	2.65 - 2.90	1.0000	1.0000
L72	5	2" Rigid Conduit	2.65 - 2.90	1.0000	1.0000
L72	7	PWRT-606-S(7/8)	2.65 - 2.90	1.0000	1.0000
L72	8	PWRT-606-S(7/8)	2.65 - 2.90	1.0000	1.0000
L72	9	FB-L98B-034-XXX(3/8")	2.65 - 2.90	1.0000	1.0000
L72	13	HB158-21U6S24-xxM_TMO (1-5/8)	2.65 - 2.90	1.0000	1.0000
L72	17	561(1-5/8")	2.65 - 2.90	1.0000	1.0000
L72	21	CU12PSM9P6XXX(1-1/2)	2.65 - 2.90	1.0000	1.0000
L72	25	Safety Line 3/8	2.65 - 2.90	1.0000	1.0000
L72	29	MP3-05	2.65 - 2.90	1.0000	1.0000
L72	30	MP3-05	2.65 - 2.90	1.0000	1.0000
L72	34	MP3-04	2.65 - 2.90	1.0000	1.0000
L72	35	MP3-04	2.65 - 2.90	1.0000	1.0000
L72	37	CCI 6" x 1" Plate	2.65 - 2.90	1.0000	1.0000
L72	38	CCI 6" x 1" Plate	2.65 - 2.90	1.0000	1.0000
L72	39	CCI 6" x 1" Plate	2.65 - 2.90	1.0000	1.0000
L72	61	CCI 6" x 1" Plate	2.65 - 2.90	1.0000	1.0000
L72	73	CCI 1.25" x 5.875" Plate	2.65 - 2.90	1.0000	1.0000
L72	74	CCI 1.25" x 5.875" Plate	2.65 - 2.90	1.0000	1.0000
L72	75	CCI 1.25" x 5.875" Plate	2.65 - 2.90	1.0000	1.0000
L72	76	CCI 1.25" x 5.875" Plate	2.65 - 2.90	1.0000	1.0000
L73	1	LDF7-50A(1-5/8")	2.50 - 2.65	1.0000	1.0000
L73	2	LDF7-50A(1-5/8")	2.50 - 2.65	1.0000	1.0000
L73	5	2" Rigid Conduit	2.50 - 2.65	1.0000	1.0000
L73	7	PWRT-606-S(7/8)	2.50 - 2.65	1.0000	1.0000
L73	8	PWRT-606-S(7/8)	2.50 - 2.65	1.0000	1.0000
L73	9	FB-L98B-034-XXX(3/8")	2.50 - 2.65	1.0000	1.0000
L73	13	HB158-21U6S24-xxM_TMO (1-5/8)	2.50 - 2.65	1.0000	1.0000
L73	17	561(1-5/8")	2.50 - 2.65	1.0000	1.0000
L73	21	CU12PSM9P6XXX(1-1/2)	2.50 - 2.65	1.0000	1.0000
L73	25	Safety Line 3/8	2.50 - 2.65	1.0000	1.0000
L73	29	MP3-05	2.50 - 2.65	1.0000	1.0000
L73	30	MP3-05	2.50 - 2.65	1.0000	1.0000
L73	34	MP3-04	2.50 - 2.65	1.0000	1.0000
L73	35	MP3-04	2.50 - 2.65	1.0000	1.0000
L73	37	CCI 6" x 1" Plate	2.50 - 2.65	1.0000	1.0000
L73	38	CCI 6" x 1" Plate	2.50 - 2.65	1.0000	1.0000
L73	39	CCI 6" x 1" Plate	2.50 - 2.65	1.0000	1.0000
L73	61	CCI 6" x 1" Plate	2.50 - 2.65	1.0000	1.0000
L73	73	CCI 1.25" x 5.875" Plate	2.50 - 2.65	1.0000	1.0000
L73	74	CCI 1.25" x 5.875" Plate	2.50 - 2.65	1.0000	1.0000
L73	75	CCI 1.25" x 5.875" Plate	2.50 - 2.65	1.0000	1.0000
L73	76	CCI 1.25" x 5.875" Plate	2.50 - 2.65	1.0000	1.0000
L74	1	LDF7-50A(1-5/8")	2.25 - 2.50	1.0000	1.0000
L74	2	LDF7-50A(1-5/8")	2.25 - 2.50	1.0000	1.0000
L74	5	2" Rigid Conduit	2.25 - 2.50	1.0000	1.0000
L74	7	PWRT-606-S(7/8)	2.25 - 2.50	1.0000	1.0000
L74	8	PWRT-606-S(7/8)	2.25 - 2.50	1.0000	1.0000
L74	9	FB-L98B-034-XXX(3/8")	2.25 - 2.50	1.0000	1.0000
L74	13	HB158-21U6S24-xxM_TMO (1-5/8)	2.25 - 2.50	1.0000	1.0000
L74	17	561(1-5/8")	2.25 - 2.50	1.0000	1.0000
L74	21	CU12PSM9P6XXX(1-1/2)	2.25 - 2.50	1.0000	1.0000
L74	25	Safety Line 3/8	2.25 - 2.50	1.0000	1.0000
L74	29	MP3-05	2.25 - 2.50	1.0000	1.0000
L74	30	MP3-05	2.25 - 2.50	1.0000	1.0000
L74	34	MP3-04	2.25 - 2.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L74	35	MP3-04	2.25 - 2.50	1.0000	1.0000
L74	37	CCI 6" x 1" Plate	2.25 - 2.50	1.0000	1.0000
L74	38	CCI 6" x 1" Plate	2.25 - 2.50	1.0000	1.0000
L74	39	CCI 6" x 1" Plate	2.25 - 2.50	1.0000	1.0000
L74	61	CCI 6" x 1" Plate	2.25 - 2.50	1.0000	1.0000
L74	73	CCI 1.25" x 5.875" Plate	2.25 - 2.50	1.0000	1.0000
L74	74	CCI 1.25" x 5.875" Plate	2.25 - 2.50	1.0000	1.0000
L74	75	CCI 1.25" x 5.875" Plate	2.25 - 2.50	1.0000	1.0000
L74	76	CCI 1.25" x 5.875" Plate	2.25 - 2.50	1.0000	1.0000
L75	1	LDF7-50A(1-5/8")	1.92 - 2.25	1.0000	1.0000
L75	2	LDF7-50A(1-5/8")	1.92 - 2.25	1.0000	1.0000
L75	5	2" Rigid Conduit	1.92 - 2.25	1.0000	1.0000
L75	7	PWRT-606-S(7/8)	1.92 - 2.25	1.0000	1.0000
L75	8	PWRT-606-S(7/8)	1.92 - 2.25	1.0000	1.0000
L75	9	FB-L98B-034-XXX(3/8")	1.92 - 2.25	1.0000	1.0000
L75	13	HB158-21U6S24-xxM_TMO (1-5/8)	1.92 - 2.25	1.0000	1.0000
L75	17	561(1-5/8")	1.92 - 2.25	1.0000	1.0000
L75	21	CU12PSM9P6XXX(1-1/2)	1.92 - 2.25	1.0000	1.0000
L75	25	Safety Line 3/8	1.92 - 2.25	1.0000	1.0000
L75	29	MP3-05	1.92 - 2.25	1.0000	1.0000
L75	30	MP3-05	1.92 - 2.25	1.0000	1.0000
L75	34	MP3-04	1.92 - 2.25	1.0000	1.0000
L75	35	MP3-04	1.92 - 2.25	1.0000	1.0000
L75	37	CCI 6" x 1" Plate	1.92 - 2.25	1.0000	1.0000
L75	38	CCI 6" x 1" Plate	1.92 - 2.25	1.0000	1.0000
L75	39	CCI 6" x 1" Plate	1.92 - 2.25	1.0000	1.0000
L75	61	CCI 6" x 1" Plate	1.92 - 2.25	1.0000	1.0000
L75	73	CCI 1.25" x 5.875" Plate	1.92 - 2.25	1.0000	1.0000
L75	74	CCI 1.25" x 5.875" Plate	1.92 - 2.25	1.0000	1.0000
L75	75	CCI 1.25" x 5.875" Plate	1.92 - 2.25	1.0000	1.0000
L75	76	CCI 1.25" x 5.875" Plate	1.92 - 2.25	1.0000	1.0000
L76	1	LDF7-50A(1-5/8")	1.67 - 1.92	1.0000	1.0000
L76	2	LDF7-50A(1-5/8")	1.67 - 1.92	1.0000	1.0000
L76	5	2" Rigid Conduit	1.67 - 1.92	1.0000	1.0000
L76	7	PWRT-606-S(7/8)	1.67 - 1.92	1.0000	1.0000
L76	8	PWRT-606-S(7/8)	1.67 - 1.92	1.0000	1.0000
L76	9	FB-L98B-034-XXX(3/8")	1.67 - 1.92	1.0000	1.0000
L76	13	HB158-21U6S24-xxM_TMO (1-5/8)	1.67 - 1.92	1.0000	1.0000
L76	17	561(1-5/8")	1.67 - 1.92	1.0000	1.0000
L76	21	CU12PSM9P6XXX(1-1/2)	1.67 - 1.92	1.0000	1.0000
L76	25	Safety Line 3/8	1.67 - 1.92	1.0000	1.0000
L76	29	MP3-05	1.67 - 1.92	1.0000	1.0000
L76	30	MP3-05	1.67 - 1.92	1.0000	1.0000
L76	34	MP3-04	1.67 - 1.92	1.0000	1.0000
L76	35	MP3-04	1.67 - 1.92	1.0000	1.0000
L76	37	CCI 6" x 1" Plate	1.67 - 1.92	1.0000	1.0000
L76	38	CCI 6" x 1" Plate	1.67 - 1.92	1.0000	1.0000
L76	39	CCI 6" x 1" Plate	1.67 - 1.92	1.0000	1.0000
L76	61	CCI 6" x 1" Plate	1.67 - 1.92	1.0000	1.0000
L76	73	CCI 1.25" x 5.875" Plate	1.67 - 1.92	1.0000	1.0000
L76	74	CCI 1.25" x 5.875" Plate	1.67 - 1.92	1.0000	1.0000
L76	75	CCI 1.25" x 5.875" Plate	1.67 - 1.92	1.0000	1.0000
L76	76	CCI 1.25" x 5.875" Plate	1.67 - 1.92	1.0000	1.0000
L77	1	LDF7-50A(1-5/8")	0.00 - 1.67	1.0000	1.0000
L77	2	LDF7-50A(1-5/8")	0.00 - 1.67	1.0000	1.0000
L77	5	2" Rigid Conduit	0.00 - 1.67	1.0000	1.0000
L77	7	PWRT-606-S(7/8)	0.00 - 1.67	1.0000	1.0000
L77	8	PWRT-606-S(7/8)	0.00 - 1.67	1.0000	1.0000
L77	9	FB-L98B-034-XXX(3/8")	0.00 - 1.67	1.0000	1.0000
L77	13	HB158-21U6S24-xxM_TMO	0.00 - 1.67	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
		(1-5/8)			
L77	17	561(1-5/8")	0.00 - 1.67	1.0000	1.0000
L77	21	CU12PSM9P6XXX(1-1/2)	0.00 - 1.67	1.0000	1.0000
L77	25	Safety Line 3/8	0.00 - 1.67	1.0000	1.0000
L77	29	MP3-05	0.00 - 1.67	1.0000	1.0000
L77	30	MP3-05	0.00 - 1.67	1.0000	1.0000
L77	34	MP3-04	0.00 - 1.67	1.0000	1.0000
L77	35	MP3-04	0.00 - 1.67	1.0000	1.0000
L77	37	CCI 6" x 1" Plate	0.00 - 1.67	1.0000	1.0000
L77	38	CCI 6" x 1" Plate	0.00 - 1.67	1.0000	1.0000
L77	39	CCI 6" x 1" Plate	0.00 - 1.67	1.0000	1.0000
L77	61	CCI 6" x 1" Plate	0.00 - 1.67	1.0000	1.0000
L77	73	CCI 1.25" x 5.875" Plate	0.00 - 1.67	1.0000	1.0000
L77	74	CCI 1.25" x 5.875" Plate	0.00 - 1.67	1.0000	1.0000
L77	75	CCI 1.25" x 5.875" Plate	0.00 - 1.67	1.0000	1.0000
L77	76	CCI 1.25" x 5.875" Plate	0.00 - 1.67	1.0000	1.0000

Effective Width of Flat Linear Attachments / Feed Lines

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L9	69	CCI 6" x 1" Plate	121.33 - 122.60	Auto	0.0000
L9	70	CCI 6" x 1" Plate	121.33 - 122.60	Auto	0.0000
L9	71	CCI 6" x 1" Plate	121.33 - 122.60	Auto	0.0000
L10	69	CCI 6" x 1" Plate	120.08 - 121.33	Auto	0.0000
L10	70	CCI 6" x 1" Plate	120.08 - 121.33	Auto	0.0000
L10	71	CCI 6" x 1" Plate	120.08 - 121.33	Auto	0.0000
L11	69	CCI 6" x 1" Plate	119.83 - 120.08	Auto	0.0174
L11	70	CCI 6" x 1" Plate	119.83 - 120.08	Auto	0.0174
L11	71	CCI 6" x 1" Plate	119.83 - 120.08	Auto	0.0174
L12	59	CCI 4.5" x 1" Plate	117.50 - 119.00	Auto	0.0000
L12	69	CCI 6" x 1" Plate	117.50 - 119.83	Auto	0.0069
L12	70	CCI 6" x 1" Plate	117.50 - 119.83	Auto	0.0069
L12	71	CCI 6" x 1" Plate	117.50 - 119.83	Auto	0.0069
L13	59	CCI 4.5" x 1" Plate	117.25 - 117.50	Auto	0.0000
L13	69	CCI 6" x 1" Plate	117.25 - 117.50	Auto	0.0016
L13	70	CCI 6" x 1" Plate	117.25 - 117.50	Auto	0.0016

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L13	71	CCI 6" x 1" Plate	117.25 - 117.50	Auto	0.0016
L14	57	CCI 4.5" x 1" Plate	115.50 - 117.00	Auto	0.0000
L14	58	CCI 4.5" x 1" Plate	115.50 - 117.00	Auto	0.0000
L14	59	CCI 4.5" x 1" Plate	115.50 - 117.25	Auto	0.0000
L14	69	CCI 6" x 1" Plate	115.50 - 117.25	Auto	0.0000
L14	70	CCI 6" x 1" Plate	115.50 - 117.25	Auto	0.0000
L14	71	CCI 6" x 1" Plate	115.50 - 117.25	Auto	0.0000
L15	57	CCI 4.5" x 1" Plate	115.25 - 115.50	Auto	0.0000
L15	58	CCI 4.5" x 1" Plate	115.25 - 115.50	Auto	0.0000
L15	59	CCI 4.5" x 1" Plate	115.25 - 115.50	Auto	0.0000
L15	69	CCI 6" x 1" Plate	115.25 - 115.50	Auto	0.0577
L15	70	CCI 6" x 1" Plate	115.25 - 115.50	Auto	0.0577
L15	71	CCI 6" x 1" Plate	115.25 - 115.50	Auto	0.0577
L16	57	CCI 4.5" x 1" Plate	110.25 - 115.25	Auto	0.0000
L16	58	CCI 4.5" x 1" Plate	110.25 - 115.25	Auto	0.0000
L16	59	CCI 4.5" x 1" Plate	110.25 - 115.25	Auto	0.0000
L16	69	CCI 6" x 1" Plate	110.25 - 115.25	Auto	0.0305
L16	70	CCI 6" x 1" Plate	110.25 - 115.25	Auto	0.0305
L16	71	CCI 6" x 1" Plate	110.25 - 115.25	Auto	0.0305
L17	57	CCI 4.5" x 1" Plate	104.08 - 110.25	Auto	0.0000
L17	58	CCI 4.5" x 1" Plate	104.08 - 110.25	Auto	0.0000
L17	59	CCI 4.5" x 1" Plate	104.08 - 110.25	Auto	0.0000
L17	69	CCI 6" x 1" Plate	104.08 - 110.25	Auto	0.0002
L17	70	CCI 6" x 1" Plate	104.08 - 110.25	Auto	0.0002
L17	71	CCI 6" x 1" Plate	104.08 - 110.25	Auto	0.0002
L18	57	CCI 4.5" x 1" Plate	102.82 - 104.08	Auto	0.0000
L18	58	CCI 4.5" x 1" Plate	102.82 - 104.08	Auto	0.0000
L18	59	CCI 4.5" x 1" Plate	102.82 - 104.08	Auto	0.0000
L18	69	CCI 6" x 1" Plate	102.82 - 104.08	Auto	0.0006
L18	70	CCI 6" x 1" Plate	102.82 - 104.08	Auto	0.0006
L18	71	CCI 6" x 1" Plate	102.82 -	Auto	0.0006

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
			104.08		
L19	57	CCI 4.5" x 1" Plate	100.50 - 102.82	Auto	0.0000
L19	58	CCI 4.5" x 1" Plate	100.50 - 102.82	Auto	0.0000
L19	59	CCI 4.5" x 1" Plate	100.50 - 102.82	Auto	0.0000
L19	69	CCI 6" x 1" Plate	100.50 - 102.82	Auto	0.0000
L19	70	CCI 6" x 1" Plate	100.50 - 102.82	Auto	0.0000
L19	71	CCI 6" x 1" Plate	100.60 - 102.82	Auto	0.0000
L20	43	CCI 6" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	44	CCI 6" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	45	CCI 6" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	57	CCI 4.5" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	58	CCI 4.5" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	59	CCI 4.5" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	69	CCI 6" x 1" Plate	100.25 - 100.50	Auto	0.0000
L20	70	CCI 6" x 1" Plate	100.25 - 100.50	Auto	0.0000
L21	43	CCI 6" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	44	CCI 6" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	45	CCI 6" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	57	CCI 4.5" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	58	CCI 4.5" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	59	CCI 4.5" x 1" Plate	99.00 - 100.25	Auto	0.0000
L21	69	CCI 6" x 1" Plate	98.50 - 100.25	Auto	0.0000
L21	70	CCI 6" x 1" Plate	98.50 - 100.25	Auto	0.0000
L22	43	CCI 6" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	44	CCI 6" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	45	CCI 6" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	57	CCI 4.5" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	58	CCI 4.5" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	69	CCI 6" x 1" Plate	98.25 - 98.50	Auto	0.0000
L22	70	CCI 6" x 1" Plate	98.25 - 98.50	Auto	0.0000
L23	43	CCI 6" x 1" Plate	93.25 - 98.25	Auto	0.0000
L23	44	CCI 6" x 1" Plate	93.25 - 98.25	Auto	0.0000
L23	45	CCI 6" x 1" Plate	93.25 - 98.25	Auto	0.0000
L23	57	CCI 4.5" x 1" Plate	97.00 - 98.25	Auto	0.0000
L23	58	CCI 4.5" x 1" Plate	97.00 - 98.25	Auto	0.0000
L23	69	CCI 6" x 1" Plate	93.25 - 98.25	Auto	0.0000
L23	70	CCI 6" x 1" Plate	93.25 - 98.25	Auto	0.0000
L24	43	CCI 6" x 1" Plate	90.50 - 93.25	Auto	0.0000
L24	44	CCI 6" x 1" Plate	90.50 - 93.25	Auto	0.0000
L24	45	CCI 6" x 1" Plate	90.50 - 93.25	Auto	0.0000
L24	69	CCI 6" x 1" Plate	90.60 - 93.25	Auto	0.0000
L24	70	CCI 6" x 1" Plate	90.60 - 93.25	Auto	0.0000
L25	43	CCI 6" x 1" Plate	90.25 - 90.50	Auto	0.0000
L25	44	CCI 6" x 1" Plate	90.25 - 90.50	Auto	0.0000
L25	45	CCI 6" x 1" Plate	90.25 - 90.50	Auto	0.0000
L25	67	CCI 8.5" x 1.25" Plate	90.25 - 90.50	Auto	0.2129
L25	68	CCI 8.5" x 1.25" Plate	90.25 - 90.50	Auto	0.2129

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L26	43	CCI 6" x 1" Plate	85.25 - 90.25	Auto	0.0000
L26	44	CCI 6" x 1" Plate	85.25 - 90.25	Auto	0.0000
L26	45	CCI 6" x 1" Plate	85.25 - 90.25	Auto	0.0000
L26	53	CCI 6.5" x 1.25" Plate	85.25 - 85.50	Auto	0.0000
L26	54	CCI 6.5" x 1.25" Plate	85.25 - 85.50	Auto	0.0000
L26	55	CCI 6.5" x 1.25" Plate	85.25 - 85.50	Auto	0.0000
L26	67	CCI 8.5" x 1.25" Plate	85.25 - 90.25	Auto	0.1937
L26	68	CCI 8.5" x 1.25" Plate	85.25 - 90.25	Auto	0.1937
L27	43	CCI 6" x 1" Plate	83.50 - 85.25	Auto	0.0000
L27	44	CCI 6" x 1" Plate	83.50 - 85.25	Auto	0.0000
L27	45	CCI 6" x 1" Plate	83.50 - 85.25	Auto	0.0000
L27	53	CCI 6.5" x 1.25" Plate	83.50 - 85.25	Auto	0.0000
L27	54	CCI 6.5" x 1.25" Plate	83.50 - 85.25	Auto	0.0000
L27	55	CCI 6.5" x 1.25" Plate	83.50 - 85.25	Auto	0.0000
L27	63	CCI 8.5" x 1.25" Plate	83.50 - 85.00	Auto	0.1694
L27	67	CCI 8.5" x 1.25" Plate	83.50 - 85.25	Auto	0.1701
L27	68	CCI 8.5" x 1.25" Plate	83.50 - 85.25	Auto	0.1701
L28	43	CCI 6" x 1" Plate	83.25 - 83.50	Auto	0.0000
L28	44	CCI 6" x 1" Plate	83.25 - 83.50	Auto	0.0000
L28	45	CCI 6" x 1" Plate	83.25 - 83.50	Auto	0.0000
L28	53	CCI 6.5" x 1.25" Plate	83.25 - 83.50	Auto	0.0102
L28	54	CCI 6.5" x 1.25" Plate	83.25 - 83.50	Auto	0.0102
L28	55	CCI 6.5" x 1.25" Plate	83.25 - 83.50	Auto	0.0102
L28	63	CCI 8.5" x 1.25" Plate	83.25 - 83.50	Auto	0.2431
L28	67	CCI 8.5" x 1.25" Plate	83.25 - 83.50	Auto	0.2431
L28	68	CCI 8.5" x 1.25" Plate	83.25 - 83.50	Auto	0.2431
L29	43	CCI 6" x 1" Plate	80.75 - 83.25	Auto	0.0000
L29	44	CCI 6" x 1" Plate	80.75 - 83.25	Auto	0.0000
L29	45	CCI 6" x 1" Plate	80.75 - 83.25	Auto	0.0000
L29	53	CCI 6.5" x 1.25" Plate	80.75 - 83.25	Auto	0.0000
L29	54	CCI 6.5" x 1.25" Plate	80.75 - 83.25	Auto	0.0000
L29	55	CCI 6.5" x 1.25" Plate	80.75 - 83.25	Auto	0.0000
L29	63	CCI 8.5" x 1.25" Plate	80.75 - 83.25	Auto	0.2272
L29	67	CCI 8.5" x 1.25" Plate	80.75 - 83.25	Auto	0.2272
L29	68	CCI 8.5" x 1.25" Plate	80.75 - 83.25	Auto	0.2272
L30	43	CCI 6" x 1" Plate	80.50 - 80.75	Auto	0.0000
L30	44	CCI 6" x 1" Plate	80.50 - 80.75	Auto	0.0000
L30	45	CCI 6" x 1" Plate	80.50 - 80.75	Auto	0.0000
L30	53	CCI 6.5" x 1.25" Plate	80.50 - 80.75	Auto	0.0511
L30	54	CCI 6.5" x 1.25" Plate	80.50 - 80.75	Auto	0.0511
L30	55	CCI 6.5" x 1.25" Plate	80.50 - 80.75	Auto	0.0511
L30	63	CCI 8.5" x 1.25" Plate	80.50 - 80.75	Auto	0.2744
L30	67	CCI 8.5" x 1.25" Plate	80.50 - 80.75	Auto	0.2744
L30	68	CCI 8.5" x 1.25" Plate	80.50 - 80.75	Auto	0.2744
L31	43	CCI 6" x 1" Plate	80.25 - 80.50	Auto	0.0000
L31	44	CCI 6" x 1" Plate	80.25 - 80.50	Auto	0.0000
L31	45	CCI 6" x 1" Plate	80.25 - 80.50	Auto	0.0000
L31	53	CCI 6.5" x 1.25" Plate	80.25 - 80.50	Auto	0.0131
L31	54	CCI 6.5" x 1.25" Plate	80.25 - 80.50	Auto	0.0131
L31	55	CCI 6.5" x 1.25" Plate	80.25 - 80.50	Auto	0.0131
L31	63	CCI 8.5" x 1.25" Plate	80.25 - 80.50	Auto	0.2453
L31	67	CCI 8.5" x 1.25" Plate	80.25 - 80.50	Auto	0.2453
L31	68	CCI 8.5" x 1.25" Plate	80.25 - 80.50	Auto	0.2453
L32	43	CCI 6" x 1" Plate	77.50 - 80.25	Auto	0.0000
L32	44	CCI 6" x 1" Plate	77.50 - 80.25	Auto	0.0000
L32	45	CCI 6" x 1" Plate	77.50 - 80.25	Auto	0.0000
L32	53	CCI 6.5" x 1.25" Plate	77.50 - 80.25	Auto	0.0012
L32	54	CCI 6.5" x 1.25" Plate	77.50 - 80.25	Auto	0.0012
L32	55	CCI 6.5" x 1.25" Plate	77.50 - 80.25	Auto	0.0012
L32	63	CCI 8.5" x 1.25" Plate	77.50 - 80.25	Auto	0.2327
L32	67	CCI 8.5" x 1.25" Plate	77.50 - 80.25	Auto	0.2327

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L32	68	CCI 8.5" x 1.25" Plate	77.50 - 80.25	Auto	0.2327
L33	43	CCI 6" x 1" Plate	77.25 - 77.50	Auto	0.0000
L33	44	CCI 6" x 1" Plate	77.25 - 77.50	Auto	0.0000
L33	45	CCI 6" x 1" Plate	77.25 - 77.50	Auto	0.0000
L33	53	CCI 6.5" x 1.25" Plate	77.25 - 77.50	Auto	0.0000
L33	54	CCI 6.5" x 1.25" Plate	77.25 - 77.50	Auto	0.0000
L33	55	CCI 6.5" x 1.25" Plate	77.25 - 77.50	Auto	0.0000
L33	63	CCI 8.5" x 1.25" Plate	77.25 - 77.50	Auto	0.1372
L33	67	CCI 8.5" x 1.25" Plate	77.25 - 77.50	Auto	0.1372
L33	68	CCI 8.5" x 1.25" Plate	77.25 - 77.50	Auto	0.1372
L34	43	CCI 6" x 1" Plate	68.82 - 77.25	Auto	0.0000
L34	44	CCI 6" x 1" Plate	68.82 - 77.25	Auto	0.0000
L34	45	CCI 6" x 1" Plate	68.82 - 77.25	Auto	0.0000
L34	53	CCI 6.5" x 1.25" Plate	72.50 - 77.25	Auto	0.0000
L34	54	CCI 6.5" x 1.25" Plate	72.50 - 77.25	Auto	0.0000
L34	55	CCI 6.5" x 1.25" Plate	72.50 - 77.25	Auto	0.0000
L34	63	CCI 8.5" x 1.25" Plate	68.82 - 77.25	Auto	0.1120
L34	67	CCI 8.5" x 1.25" Plate	68.82 - 77.25	Auto	0.1120
L34	68	CCI 8.5" x 1.25" Plate	68.82 - 77.25	Auto	0.1120
L35	43	CCI 6" x 1" Plate	68.29 - 68.82	Auto	0.0000
L35	44	CCI 6" x 1" Plate	68.29 - 68.82	Auto	0.0000
L35	45	CCI 6" x 1" Plate	68.29 - 68.82	Auto	0.0000
L35	63	CCI 8.5" x 1.25" Plate	68.29 - 68.82	Auto	0.1253
L35	67	CCI 8.5" x 1.25" Plate	68.29 - 68.82	Auto	0.1253
L35	68	CCI 8.5" x 1.25" Plate	68.29 - 68.82	Auto	0.1253
L36	43	CCI 6" x 1" Plate	64.25 - 68.29	Auto	0.0000
L36	44	CCI 6" x 1" Plate	64.25 - 68.29	Auto	0.0000
L36	45	CCI 6" x 1" Plate	64.25 - 68.29	Auto	0.0000
L36	50	CCI 6.5" x 1.25" Plate	64.25 - 67.00	Auto	0.0000
L36	51	CCI 6.5" x 1.25" Plate	64.25 - 67.00	Auto	0.0000
L36	52	CCI 6.5" x 1.25" Plate	64.25 - 67.00	Auto	0.0000
L36	63	CCI 8.5" x 1.25" Plate	64.25 - 68.29	Auto	0.1081
L36	67	CCI 8.5" x 1.25" Plate	64.25 - 68.29	Auto	0.1081
L36	68	CCI 8.5" x 1.25" Plate	64.25 - 68.29	Auto	0.1081
L37	43	CCI 6" x 1" Plate	64.00 - 64.25	Auto	0.0000
L37	44	CCI 6" x 1" Plate	64.00 - 64.25	Auto	0.0000
L37	45	CCI 6" x 1" Plate	64.00 - 64.25	Auto	0.0000
L37	50	CCI 6.5" x 1.25" Plate	64.00 - 64.25	Auto	0.0000
L37	51	CCI 6.5" x 1.25" Plate	64.00 - 64.25	Auto	0.0000
L37	52	CCI 6.5" x 1.25" Plate	64.00 - 64.25	Auto	0.0000
L37	63	CCI 8.5" x 1.25" Plate	64.00 - 64.25	Auto	0.1389
L37	67	CCI 8.5" x 1.25" Plate	64.00 - 64.25	Auto	0.1389
L37	68	CCI 8.5" x 1.25" Plate	64.00 - 64.25	Auto	0.1389
L38	33	MP3-04	60.50 - 61.50	Auto	0.0000
L38	43	CCI 6" x 1" Plate	60.50 - 64.00	Auto	0.0000
L38	44	CCI 6" x 1" Plate	60.50 - 64.00	Auto	0.0000
L38	45	CCI 6" x 1" Plate	60.50 - 64.00	Auto	0.0000
L38	50	CCI 6.5" x 1.25" Plate	60.50 - 64.00	Auto	0.0000
L38	51	CCI 6.5" x 1.25" Plate	60.50 - 64.00	Auto	0.0000
L38	52	CCI 6.5" x 1.25" Plate	60.50 - 64.00	Auto	0.0000
L38	63	CCI 8.5" x 1.25" Plate	60.50 - 64.00	Auto	0.1241
L38	67	CCI 8.5" x 1.25" Plate	60.50 - 64.00	Auto	0.1241
L38	68	CCI 8.5" x 1.25" Plate	60.50 - 64.00	Auto	0.1241
L39	31	MP3-04	60.25 - 60.50	Auto	0.0000
L39	32	MP3-04	60.25 - 60.50	Auto	0.0000
L39	33	MP3-04	60.25 - 60.50	Auto	0.0000
L39	40	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000
L39	41	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000
L39	42	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000
L39	50	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000
L39	51	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L39	52	CCI 6.5" x 1.25" Plate	60.25 - 60.50	Auto	0.0000
L39	63	CCI 8.5" x 1.25" Plate	60.25 - 60.50	Auto	0.1329
L39	67	CCI 8.5" x 1.25" Plate	60.25 - 60.50	Auto	0.1329
L39	68	CCI 8.5" x 1.25" Plate	60.25 - 60.50	Auto	0.1329
L40	31	MP3-04	60.08 - 60.25	Auto	0.0000
L40	32	MP3-04	60.08 - 60.25	Auto	0.0000
L40	33	MP3-04	60.08 - 60.25	Auto	0.0000
L40	40	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	41	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	42	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	50	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	51	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	52	CCI 6.5" x 1.25" Plate	60.08 - 60.25	Auto	0.0000
L40	63	CCI 8.5" x 1.25" Plate	60.08 - 60.25	Auto	0.1316
L40	67	CCI 8.5" x 1.25" Plate	60.08 - 60.25	Auto	0.1316
L40	68	CCI 8.5" x 1.25" Plate	60.08 - 60.25	Auto	0.1316
L41	31	MP3-04	59.83 - 60.08	Auto	0.0000
L41	32	MP3-04	59.83 - 60.08	Auto	0.0000
L41	33	MP3-04	59.83 - 60.08	Auto	0.0000
L41	40	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	41	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	42	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	50	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	51	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	52	CCI 6.5" x 1.25" Plate	59.83 - 60.08	Auto	0.0000
L41	63	CCI 8.5" x 1.25" Plate	60.00 - 60.08	Auto	0.1467
L41	67	CCI 8.5" x 1.25" Plate	59.83 - 60.08	Auto	0.1462
L41	68	CCI 8.5" x 1.25" Plate	59.83 - 60.08	Auto	0.1462
L42	31	MP3-04	59.08 - 59.83	Auto	0.0000
L42	32	MP3-04	59.08 - 59.83	Auto	0.0000
L42	33	MP3-04	59.08 - 59.83	Auto	0.0000
L42	40	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	41	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	42	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	50	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	51	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	52	CCI 6.5" x 1.25" Plate	59.08 - 59.83	Auto	0.0000
L42	67	CCI 8.5" x 1.25" Plate	59.08 - 59.83	Auto	0.1433
L42	68	CCI 8.5" x 1.25" Plate	59.08 - 59.83	Auto	0.1433
L43	31	MP3-04	58.83 - 59.08	Auto	0.0000
L43	32	MP3-04	58.83 - 59.08	Auto	0.0000
L43	33	MP3-04	58.83 - 59.08	Auto	0.0000
L43	40	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	41	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	42	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	50	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	51	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	52	CCI 6.5" x 1.25" Plate	58.83 - 59.08	Auto	0.0000
L43	67	CCI 8.5" x 1.25" Plate	58.83 - 59.08	Auto	0.1640
L43	68	CCI 8.5" x 1.25" Plate	58.83 - 59.08	Auto	0.1640
L44	31	MP3-04	55.42 - 58.83	Auto	0.0000
L44	32	MP3-04	55.42 - 58.83	Auto	0.0000
L44	33	MP3-04	55.42 - 58.83	Auto	0.0000
L44	40	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	41	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	42	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	50	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	51	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	52	CCI 6.5" x 1.25" Plate	55.42 - 58.83	Auto	0.0000
L44	67	CCI 8.5" x 1.25" Plate	55.50 - 58.83	Auto	0.1457
L44	68	CCI 8.5" x 1.25" Plate	55.50 - 58.83	Auto	0.1457

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L45	31	MP3-04	55.17 - 55.42	Auto	0.0000
L45	32	MP3-04	55.17 - 55.42	Auto	0.0000
L45	33	MP3-04	55.17 - 55.42	Auto	0.0000
L45	40	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	41	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	42	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	50	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	51	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	52	CCI 6.5" x 1.25" Plate	55.17 - 55.42	Auto	0.0000
L45	65	CCI 8.5" x 1.25" Plate	55.17 - 55.40	Auto	0.1347
L45	66	CCI 8.5" x 1.25" Plate	55.17 - 55.40	Auto	0.1347
L46	31	MP3-04	54.75 - 55.17	Auto	0.0000
L46	32	MP3-04	54.75 - 55.17	Auto	0.0000
L46	33	MP3-04	54.75 - 55.17	Auto	0.0000
L46	40	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	41	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	42	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	50	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	51	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	52	CCI 6.5" x 1.25" Plate	54.75 - 55.17	Auto	0.0000
L46	65	CCI 8.5" x 1.25" Plate	54.75 - 55.17	Auto	0.1329
L46	66	CCI 8.5" x 1.25" Plate	54.75 - 55.17	Auto	0.1329
L47	31	MP3-04	54.50 - 54.75	Auto	0.0000
L47	32	MP3-04	54.50 - 54.75	Auto	0.0000
L47	33	MP3-04	54.50 - 54.75	Auto	0.0000
L47	40	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	41	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	42	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	50	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	51	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	52	CCI 6.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0000
L47	65	CCI 8.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0679
L47	66	CCI 8.5" x 1.25" Plate	54.50 - 54.75	Auto	0.0679
L48	31	MP3-04	49.50 - 54.50	Auto	0.0000
L48	32	MP3-04	49.50 - 54.50	Auto	0.0000
L48	33	MP3-04	49.50 - 54.50	Auto	0.0000
L48	40	CCI 6.5" x 1.25" Plate	49.50 - 54.50	Auto	0.0000
L48	41	CCI 6.5" x 1.25" Plate	49.50 - 54.50	Auto	0.0000
L48	42	CCI 6.5" x 1.25" Plate	49.50 - 54.50	Auto	0.0000
L48	50	CCI 6.5" x 1.25" Plate	52.00 - 54.50	Auto	0.0000
L48	51	CCI 6.5" x 1.25" Plate	52.00 - 54.50	Auto	0.0000
L48	52	CCI 6.5" x 1.25" Plate	52.00 - 54.50	Auto	0.0000
L48	65	CCI 8.5" x 1.25" Plate	49.50 - 54.50	Auto	0.0486
L48	66	CCI 8.5" x 1.25" Plate	49.50 - 54.50	Auto	0.0486
L49	31	MP3-04	44.50 - 49.50	Auto	0.0000
L49	32	MP3-04	44.50 - 49.50	Auto	0.0000
L49	33	MP3-04	44.50 - 49.50	Auto	0.0000
L49	40	CCI 6.5" x 1.25" Plate	44.50 - 49.50	Auto	0.0000
L49	41	CCI 6.5" x 1.25" Plate	44.50 - 49.50	Auto	0.0000
L49	42	CCI 6.5" x 1.25" Plate	44.50 - 49.50	Auto	0.0000
L49	62	CCI 8.5" x 1.25" Plate	44.50 - 45.50	Auto	0.0040
L49	65	CCI 8.5" x 1.25" Plate	44.50 - 49.50	Auto	0.0156
L49	66	CCI 8.5" x 1.25" Plate	44.50 - 49.50	Auto	0.0156
L50	31	MP3-04	41.25 - 44.50	Auto	0.0000
L50	32	MP3-04	41.25 - 44.50	Auto	0.0000
L50	33	MP3-04	41.25 - 44.50	Auto	0.0000
L50	40	CCI 6.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000
L50	41	CCI 6.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000
L50	42	CCI 6.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000
L50	62	CCI 8.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000
L50	65	CCI 8.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L50	66	CCI 8.5" x 1.25" Plate	41.25 - 44.50	Auto	0.0000
L51	31	MP3-04	41.00 - 41.25	Auto	0.0000
L51	32	MP3-04	41.00 - 41.25	Auto	0.0000
L51	33	MP3-04	41.00 - 41.25	Auto	0.0000
L51	40	CCI 6.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0000
L51	41	CCI 6.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0000
L51	42	CCI 6.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0000
L51	62	CCI 8.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0050
L51	65	CCI 8.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0050
L51	66	CCI 8.5" x 1.25" Plate	41.00 - 41.25	Auto	0.0050
L52	31	MP3-04	34.29 - 41.00	Auto	0.0000
L52	32	MP3-04	34.29 - 41.00	Auto	0.0000
L52	33	MP3-04	34.29 - 41.00	Auto	0.0000
L52	40	CCI 6.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0000
L52	41	CCI 6.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0000
L52	42	CCI 6.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0000
L52	47	CCI 6.5" x 1.25" Plate	34.29 - 38.00	Auto	0.0000
L52	48	CCI 6.5" x 1.25" Plate	34.29 - 38.00	Auto	0.0000
L52	49	CCI 6.5" x 1.25" Plate	34.29 - 38.00	Auto	0.0000
L52	62	CCI 8.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0002
L52	65	CCI 8.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0002
L52	66	CCI 8.5" x 1.25" Plate	34.29 - 41.00	Auto	0.0002
L53	31	MP3-04	33.29 - 34.29	Auto	0.0000
L53	32	MP3-04	33.29 - 34.29	Auto	0.0000
L53	33	MP3-04	33.29 - 34.29	Auto	0.0000
L53	40	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	41	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	42	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	47	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	48	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	49	CCI 6.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0000
L53	62	CCI 8.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0808
L53	65	CCI 8.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0808
L53	66	CCI 8.5" x 1.25" Plate	33.29 - 34.29	Auto	0.0808
L54	31	MP3-04	31.50 - 33.29	Auto	0.0000
L54	32	MP3-04	31.50 - 33.29	Auto	0.0000
L54	33	MP3-04	31.50 - 33.29	Auto	0.0000
L54	40	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	41	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	42	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	47	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	48	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	49	CCI 6.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0000
L54	62	CCI 8.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0727
L54	65	CCI 8.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0727
L54	66	CCI 8.5" x 1.25" Plate	31.50 - 33.29	Auto	0.0727
L55	28	MP3-05	31.25 - 31.50	Auto	0.0000
L55	31	MP3-04	31.25 - 31.50	Auto	0.0000
L55	32	MP3-04	31.25 - 31.50	Auto	0.0000
L55	33	MP3-04	31.25 - 31.50	Auto	0.0000
L55	40	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	41	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	42	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	47	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	48	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	49	CCI 6.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0000
L55	62	CCI 8.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0668
L55	65	CCI 8.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0668
L55	66	CCI 8.5" x 1.25" Plate	31.25 - 31.50	Auto	0.0668
L56	28	MP3-05	30.50 - 31.25	Auto	0.0000
L56	31	MP3-04	30.50 - 31.25	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L56	32	MP3-04	30.50 - 31.25	Auto	0.0000
L56	33	MP3-04	31.00 - 31.25	Auto	0.0000
L56	40	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	41	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	42	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	47	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	48	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	49	CCI 6.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0000
L56	62	CCI 8.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0639
L56	65	CCI 8.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0639
L56	66	CCI 8.5" x 1.25" Plate	30.50 - 31.25	Auto	0.0639
L57	28	MP3-05	30.25 - 30.50	Auto	0.0000
L57	29	MP3-05	30.25 - 30.50	Auto	0.0000
L57	30	MP3-05	30.25 - 30.50	Auto	0.0000
L57	37	CCI 6" x 1" Plate	30.25 - 30.50	Auto	0.0000
L57	38	CCI 6" x 1" Plate	30.25 - 30.50	Auto	0.0000
L57	39	CCI 6" x 1" Plate	30.25 - 30.50	Auto	0.0000
L57	47	CCI 6.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0000
L57	48	CCI 6.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0000
L57	49	CCI 6.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0000
L57	62	CCI 8.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0453
L57	65	CCI 8.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0453
L57	66	CCI 8.5" x 1.25" Plate	30.25 - 30.50	Auto	0.0453
L58	28	MP3-05	25.75 - 30.25	Auto	0.0000
L58	29	MP3-05	25.75 - 30.25	Auto	0.0000
L58	30	MP3-05	25.75 - 30.25	Auto	0.0000
L58	37	CCI 6" x 1" Plate	25.75 - 30.25	Auto	0.0000
L58	38	CCI 6" x 1" Plate	25.75 - 30.25	Auto	0.0000
L58	39	CCI 6" x 1" Plate	25.75 - 30.25	Auto	0.0000
L58	47	CCI 6.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0000
L58	48	CCI 6.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0000
L58	49	CCI 6.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0000
L58	62	CCI 8.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0237
L58	65	CCI 8.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0237
L58	66	CCI 8.5" x 1.25" Plate	25.75 - 30.25	Auto	0.0237
L58	78	CCI 1.25" x 5.875" Plate	25.75 - 28.50	Auto	0.0000
L58	79	CCI 1.25" x 5.875" Plate	25.75 - 28.50	Auto	0.0000
L58	80	CCI 1.25" x 5.875" Plate	25.75 - 28.50	Auto	0.0000
L59	28	MP3-05	25.50 - 25.75	Auto	0.0000
L59	29	MP3-05	25.50 - 25.75	Auto	0.0000
L59	30	MP3-05	25.50 - 25.75	Auto	0.0000
L59	37	CCI 6" x 1" Plate	25.50 - 25.75	Auto	0.0000
L59	38	CCI 6" x 1" Plate	25.50 - 25.75	Auto	0.0000
L59	39	CCI 6" x 1" Plate	25.50 - 25.75	Auto	0.0000
L59	47	CCI 6.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	48	CCI 6.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	49	CCI 6.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	62	CCI 8.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	65	CCI 8.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	66	CCI 8.5" x 1.25" Plate	25.50 - 25.75	Auto	0.0000
L59	78	CCI 1.25" x 5.875" Plate	25.50 - 25.75	Auto	0.0000
L59	79	CCI 1.25" x 5.875" Plate	25.50 - 25.75	Auto	0.0000
L59	80	CCI 1.25" x 5.875" Plate	25.50 - 25.75	Auto	0.0000
L60	28	MP3-05	24.67 - 25.50	Auto	0.0000
L60	29	MP3-05	24.67 - 25.50	Auto	0.0000
L60	30	MP3-05	24.67 - 25.50	Auto	0.0000
L60	37	CCI 6" x 1" Plate	24.67 - 25.50	Auto	0.0000
L60	38	CCI 6" x 1" Plate	24.67 - 25.50	Auto	0.0000
L60	39	CCI 6" x 1" Plate	24.67 - 25.50	Auto	0.0000
L60	47	CCI 6.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000
L60	48	CCI 6.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L60	49	CCI 6.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000
L60	62	CCI 8.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000
L60	65	CCI 8.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000
L60	66	CCI 8.5" x 1.25" Plate	24.67 - 25.50	Auto	0.0000
L60	73	CCI 1.25" x 5.875" Plate	24.67 - 25.50	Auto	0.0000
L60	74	CCI 1.25" x 5.875" Plate	24.67 - 25.50	Auto	0.0000
L60	75	CCI 1.25" x 5.875" Plate	24.67 - 25.50	Auto	0.0000
L60	76	CCI 1.25" x 5.875" Plate	24.67 - 25.50	Auto	0.0000
L61	28	MP3-05	24.42 - 24.67	Auto	0.0000
L61	29	MP3-05	24.42 - 24.67	Auto	0.0000
L61	30	MP3-05	24.42 - 24.67	Auto	0.0000
L61	37	CCI 6" x 1" Plate	24.42 - 24.67	Auto	0.0000
L61	38	CCI 6" x 1" Plate	24.42 - 24.67	Auto	0.0000
L61	39	CCI 6" x 1" Plate	24.42 - 24.67	Auto	0.0000
L61	47	CCI 6.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	48	CCI 6.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	49	CCI 6.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	62	CCI 8.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	65	CCI 8.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	66	CCI 8.5" x 1.25" Plate	24.42 - 24.67	Auto	0.0000
L61	73	CCI 1.25" x 5.875" Plate	24.42 - 24.67	Auto	0.0000
L61	74	CCI 1.25" x 5.875" Plate	24.42 - 24.67	Auto	0.0000
L61	75	CCI 1.25" x 5.875" Plate	24.42 - 24.67	Auto	0.0000
L61	76	CCI 1.25" x 5.875" Plate	24.42 - 24.67	Auto	0.0000
L62	28	MP3-05	24.00 - 24.42	Auto	0.0000
L62	29	MP3-05	24.00 - 24.42	Auto	0.0000
L62	30	MP3-05	24.00 - 24.42	Auto	0.0000
L62	37	CCI 6" x 1" Plate	24.00 - 24.42	Auto	0.0000
L62	38	CCI 6" x 1" Plate	24.00 - 24.42	Auto	0.0000
L62	39	CCI 6" x 1" Plate	24.00 - 24.42	Auto	0.0000
L62	47	CCI 6.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	48	CCI 6.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	49	CCI 6.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	62	CCI 8.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	65	CCI 8.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	66	CCI 8.5" x 1.25" Plate	24.00 - 24.42	Auto	0.0000
L62	73	CCI 1.25" x 5.875" Plate	24.00 - 24.42	Auto	0.0000
L62	74	CCI 1.25" x 5.875" Plate	24.00 - 24.42	Auto	0.0000
L62	75	CCI 1.25" x 5.875" Plate	24.00 - 24.42	Auto	0.0000
L62	76	CCI 1.25" x 5.875" Plate	24.00 - 24.42	Auto	0.0000
L63	28	MP3-05	23.75 - 24.00	Auto	0.0000
L63	29	MP3-05	23.75 - 24.00	Auto	0.0000
L63	30	MP3-05	23.75 - 24.00	Auto	0.0000
L63	37	CCI 6" x 1" Plate	23.75 - 24.00	Auto	0.0000
L63	38	CCI 6" x 1" Plate	23.75 - 24.00	Auto	0.0000
L63	39	CCI 6" x 1" Plate	23.75 - 24.00	Auto	0.0000
L63	47	CCI 6.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	48	CCI 6.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	49	CCI 6.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	62	CCI 8.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	65	CCI 8.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	66	CCI 8.5" x 1.25" Plate	23.75 - 24.00	Auto	0.0000
L63	73	CCI 1.25" x 5.875" Plate	23.75 - 24.00	Auto	0.0000
L63	74	CCI 1.25" x 5.875" Plate	23.75 - 24.00	Auto	0.0000
L63	75	CCI 1.25" x 5.875" Plate	23.75 - 24.00	Auto	0.0000
L63	76	CCI 1.25" x 5.875" Plate	23.75 - 24.00	Auto	0.0000
L64	28	MP3-05	18.75 - 23.75	Auto	0.0000
L64	29	MP3-05	18.75 - 23.75	Auto	0.0000
L64	30	MP3-05	18.75 - 23.75	Auto	0.0000
L64	37	CCI 6" x 1" Plate	18.75 - 23.75	Auto	0.0000
L64	38	CCI 6" x 1" Plate	18.75 - 23.75	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L64	39	CCI 6" x 1" Plate	18.75 - 23.75	Auto	0.0000
L64	47	CCI 6.5" x 1.25" Plate	23.00 - 23.75	Auto	0.0000
L64	48	CCI 6.5" x 1.25" Plate	23.00 - 23.75	Auto	0.0000
L64	49	CCI 6.5" x 1.25" Plate	23.00 - 23.75	Auto	0.0000
L64	62	CCI 8.5" x 1.25" Plate	18.75 - 23.75	Auto	0.0000
L64	65	CCI 8.5" x 1.25" Plate	20.40 - 23.75	Auto	0.0000
L64	66	CCI 8.5" x 1.25" Plate	20.40 - 23.75	Auto	0.0000
L64	73	CCI 1.25" x 5.875" Plate	18.75 - 23.75	Auto	0.0000
L64	74	CCI 1.25" x 5.875" Plate	18.75 - 23.75	Auto	0.0000
L64	75	CCI 1.25" x 5.875" Plate	18.75 - 23.75	Auto	0.0000
L64	76	CCI 1.25" x 5.875" Plate	18.75 - 23.75	Auto	0.0000
L65	28	MP3-05	14.08 - 18.75	Auto	0.0000
L65	29	MP3-05	14.08 - 18.75	Auto	0.0000
L65	30	MP3-05	14.08 - 18.75	Auto	0.0000
L65	34	MP3-04	14.08 - 15.50	Auto	0.0000
L65	35	MP3-04	14.08 - 15.50	Auto	0.0000
L65	37	CCI 6" x 1" Plate	14.08 - 18.75	Auto	0.0000
L65	38	CCI 6" x 1" Plate	14.08 - 18.75	Auto	0.0000
L65	39	CCI 6" x 1" Plate	14.08 - 18.75	Auto	0.0000
L65	62	CCI 8.5" x 1.25" Plate	14.08 - 18.75	Auto	0.0000
L65	73	CCI 1.25" x 5.875" Plate	14.08 - 18.75	Auto	0.0000
L65	74	CCI 1.25" x 5.875" Plate	14.08 - 18.75	Auto	0.0000
L65	75	CCI 1.25" x 5.875" Plate	14.08 - 18.75	Auto	0.0000
L65	76	CCI 1.25" x 5.875" Plate	14.08 - 18.75	Auto	0.0000
L66	28	MP3-05	13.82 - 14.08	Auto	0.0000
L66	29	MP3-05	13.82 - 14.08	Auto	0.0000
L66	30	MP3-05	13.82 - 14.08	Auto	0.0000
L66	34	MP3-04	13.82 - 14.08	Auto	0.0000
L66	35	MP3-04	13.82 - 14.08	Auto	0.0000
L66	37	CCI 6" x 1" Plate	13.82 - 14.08	Auto	0.0000
L66	38	CCI 6" x 1" Plate	13.82 - 14.08	Auto	0.0000
L66	39	CCI 6" x 1" Plate	13.82 - 14.08	Auto	0.0000
L66	62	CCI 8.5" x 1.25" Plate	13.82 - 14.08	Auto	0.0000
L66	73	CCI 1.25" x 5.875" Plate	13.82 - 14.08	Auto	0.0000
L66	74	CCI 1.25" x 5.875" Plate	13.82 - 14.08	Auto	0.0000
L66	75	CCI 1.25" x 5.875" Plate	13.82 - 14.08	Auto	0.0000
L66	76	CCI 1.25" x 5.875" Plate	13.82 - 14.08	Auto	0.0000
L67	28	MP3-05	13.67 - 13.82	Auto	0.0000
L67	29	MP3-05	13.67 - 13.82	Auto	0.0000
L67	30	MP3-05	13.67 - 13.82	Auto	0.0000
L67	34	MP3-04	13.67 - 13.82	Auto	0.0000
L67	35	MP3-04	13.67 - 13.82	Auto	0.0000
L67	37	CCI 6" x 1" Plate	13.67 - 13.82	Auto	0.0000
L67	38	CCI 6" x 1" Plate	13.67 - 13.82	Auto	0.0000
L67	39	CCI 6" x 1" Plate	13.67 - 13.82	Auto	0.0000
L67	62	CCI 8.5" x 1.25" Plate	13.67 - 13.82	Auto	0.0000
L67	73	CCI 1.25" x 5.875" Plate	13.67 - 13.82	Auto	0.0000
L67	74	CCI 1.25" x 5.875" Plate	13.67 - 13.82	Auto	0.0000
L67	75	CCI 1.25" x 5.875" Plate	13.67 - 13.82	Auto	0.0000
L67	76	CCI 1.25" x 5.875" Plate	13.67 - 13.82	Auto	0.0000
L68	28	MP3-05	11.50 - 13.67	Auto	0.0000
L68	29	MP3-05	10.50 - 13.67	Auto	0.0000
L68	30	MP3-05	10.50 - 13.67	Auto	0.0000
L68	34	MP3-04	10.50 - 13.67	Auto	0.0000
L68	35	MP3-04	10.50 - 13.67	Auto	0.0000
L68	37	CCI 6" x 1" Plate	10.50 - 13.67	Auto	0.0000
L68	38	CCI 6" x 1" Plate	10.50 - 13.67	Auto	0.0000
L68	39	CCI 6" x 1" Plate	10.50 - 13.67	Auto	0.0000
L68	62	CCI 8.5" x 1.25" Plate	10.50 - 13.67	Auto	0.0000
L68	73	CCI 1.25" x 5.875" Plate	10.50 - 13.67	Auto	0.0000
L68	74	CCI 1.25" x 5.875" Plate	10.50 - 13.67	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L68	75	CCI 1.25" x 5.875" Plate	10.50 - 13.67	Auto	0.0000
L68	76	CCI 1.25" x 5.875" Plate	10.50 - 13.67	Auto	0.0000
L69	29	MP3-05	10.25 - 10.50	Auto	0.0000
L69	30	MP3-05	10.25 - 10.50	Auto	0.0000
L69	34	MP3-04	10.25 - 10.50	Auto	0.0000
L69	35	MP3-04	10.25 - 10.50	Auto	0.0000
L69	37	CCI 6" x 1" Plate	10.25 - 10.50	Auto	0.0000
L69	38	CCI 6" x 1" Plate	10.25 - 10.50	Auto	0.0000
L69	39	CCI 6" x 1" Plate	10.25 - 10.50	Auto	0.0000
L69	61	CCI 6" x 1" Plate	10.25 - 10.50	Auto	0.0000
L69	73	CCI 1.25" x 5.875" Plate	10.25 - 10.50	Auto	0.0000
L69	74	CCI 1.25" x 5.875" Plate	10.25 - 10.50	Auto	0.0000
L69	75	CCI 1.25" x 5.875" Plate	10.25 - 10.50	Auto	0.0000
L69	76	CCI 1.25" x 5.875" Plate	10.25 - 10.50	Auto	0.0000
L70	29	MP3-05	5.25 - 10.25	Auto	0.0000
L70	30	MP3-05	5.25 - 10.25	Auto	0.0000
L70	34	MP3-04	5.25 - 10.25	Auto	0.0000
L70	35	MP3-04	5.25 - 10.25	Auto	0.0000
L70	37	CCI 6" x 1" Plate	5.25 - 10.25	Auto	0.0000
L70	38	CCI 6" x 1" Plate	5.25 - 10.25	Auto	0.0000
L70	39	CCI 6" x 1" Plate	5.25 - 10.25	Auto	0.0000
L70	61	CCI 6" x 1" Plate	5.25 - 10.25	Auto	0.0000
L70	73	CCI 1.25" x 5.875" Plate	5.25 - 10.25	Auto	0.0000
L70	74	CCI 1.25" x 5.875" Plate	5.25 - 10.25	Auto	0.0000
L70	75	CCI 1.25" x 5.875" Plate	5.25 - 10.25	Auto	0.0000
L70	76	CCI 1.25" x 5.875" Plate	5.25 - 10.25	Auto	0.0000
L71	29	MP3-05	2.90 - 5.25	Auto	0.0000
L71	30	MP3-05	2.90 - 5.25	Auto	0.0000
L71	34	MP3-04	2.90 - 5.25	Auto	0.0000
L71	35	MP3-04	2.90 - 5.25	Auto	0.0000
L71	37	CCI 6" x 1" Plate	2.90 - 5.25	Auto	0.0000
L71	38	CCI 6" x 1" Plate	2.90 - 5.25	Auto	0.0000
L71	39	CCI 6" x 1" Plate	2.90 - 5.25	Auto	0.0000
L71	61	CCI 6" x 1" Plate	2.90 - 5.25	Auto	0.0000
L71	73	CCI 1.25" x 5.875" Plate	2.90 - 5.25	Auto	0.0000
L71	74	CCI 1.25" x 5.875" Plate	2.90 - 5.25	Auto	0.0000
L71	75	CCI 1.25" x 5.875" Plate	2.90 - 5.25	Auto	0.0000
L71	76	CCI 1.25" x 5.875" Plate	2.90 - 5.25	Auto	0.0000
L72	29	MP3-05	2.65 - 2.90	Auto	0.0000
L72	30	MP3-05	2.65 - 2.90	Auto	0.0000
L72	34	MP3-04	2.65 - 2.90	Auto	0.0000
L72	35	MP3-04	2.65 - 2.90	Auto	0.0000
L72	37	CCI 6" x 1" Plate	2.65 - 2.90	Auto	0.0000
L72	38	CCI 6" x 1" Plate	2.65 - 2.90	Auto	0.0000
L72	39	CCI 6" x 1" Plate	2.65 - 2.90	Auto	0.0000
L72	61	CCI 6" x 1" Plate	2.65 - 2.90	Auto	0.0000
L72	73	CCI 1.25" x 5.875" Plate	2.65 - 2.90	Auto	0.0000
L72	74	CCI 1.25" x 5.875" Plate	2.65 - 2.90	Auto	0.0000
L72	75	CCI 1.25" x 5.875" Plate	2.65 - 2.90	Auto	0.0000
L72	76	CCI 1.25" x 5.875" Plate	2.65 - 2.90	Auto	0.0000
L73	29	MP3-05	2.50 - 2.65	Auto	0.0000
L73	30	MP3-05	2.50 - 2.65	Auto	0.0000
L73	34	MP3-04	2.50 - 2.65	Auto	0.0000
L73	35	MP3-04	2.50 - 2.65	Auto	0.0000
L73	37	CCI 6" x 1" Plate	2.50 - 2.65	Auto	0.0000
L73	38	CCI 6" x 1" Plate	2.50 - 2.65	Auto	0.0000
L73	39	CCI 6" x 1" Plate	2.50 - 2.65	Auto	0.0000
L73	61	CCI 6" x 1" Plate	2.50 - 2.65	Auto	0.0000
L73	73	CCI 1.25" x 5.875" Plate	2.50 - 2.65	Auto	0.0000
L73	74	CCI 1.25" x 5.875" Plate	2.50 - 2.65	Auto	0.0000
L73	75	CCI 1.25" x 5.875" Plate	2.50 - 2.65	Auto	0.0000

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L73	76	CCI 1.25" x 5.875" Plate	2.50 - 2.65	Auto	0.0000
L74	29	MP3-05	2.25 - 2.50	Auto	0.0000
L74	30	MP3-05	2.25 - 2.50	Auto	0.0000
L74	34	MP3-04	2.25 - 2.50	Auto	0.0000
L74	35	MP3-04	2.25 - 2.50	Auto	0.0000
L74	37	CCI 6" x 1" Plate	2.25 - 2.50	Auto	0.0000
L74	38	CCI 6" x 1" Plate	2.25 - 2.50	Auto	0.0000
L74	39	CCI 6" x 1" Plate	2.25 - 2.50	Auto	0.0000
L74	61	CCI 6" x 1" Plate	2.25 - 2.50	Auto	0.0000
L74	73	CCI 1.25" x 5.875" Plate	2.25 - 2.50	Auto	0.0000
L74	74	CCI 1.25" x 5.875" Plate	2.25 - 2.50	Auto	0.0000
L74	75	CCI 1.25" x 5.875" Plate	2.25 - 2.50	Auto	0.0000
L74	76	CCI 1.25" x 5.875" Plate	2.25 - 2.50	Auto	0.0000
L75	29	MP3-05	1.92 - 2.25	Auto	0.0000
L75	30	MP3-05	1.92 - 2.25	Auto	0.0000
L75	34	MP3-04	1.92 - 2.25	Auto	0.0000
L75	35	MP3-04	1.92 - 2.25	Auto	0.0000
L75	37	CCI 6" x 1" Plate	1.92 - 2.25	Auto	0.0000
L75	38	CCI 6" x 1" Plate	1.92 - 2.25	Auto	0.0000
L75	39	CCI 6" x 1" Plate	1.92 - 2.25	Auto	0.0000
L75	61	CCI 6" x 1" Plate	1.92 - 2.25	Auto	0.0000
L75	73	CCI 1.25" x 5.875" Plate	1.92 - 2.25	Auto	0.0000
L75	74	CCI 1.25" x 5.875" Plate	1.92 - 2.25	Auto	0.0000
L75	75	CCI 1.25" x 5.875" Plate	1.92 - 2.25	Auto	0.0000
L75	76	CCI 1.25" x 5.875" Plate	1.92 - 2.25	Auto	0.0000
L76	29	MP3-05	1.67 - 1.92	Auto	0.0000
L76	30	MP3-05	1.67 - 1.92	Auto	0.0000
L76	34	MP3-04	1.67 - 1.92	Auto	0.0000
L76	35	MP3-04	1.67 - 1.92	Auto	0.0000
L76	37	CCI 6" x 1" Plate	1.67 - 1.92	Auto	0.0000
L76	38	CCI 6" x 1" Plate	1.67 - 1.92	Auto	0.0000
L76	39	CCI 6" x 1" Plate	1.67 - 1.92	Auto	0.0000
L76	61	CCI 6" x 1" Plate	1.67 - 1.92	Auto	0.0000
L76	73	CCI 1.25" x 5.875" Plate	1.67 - 1.92	Auto	0.0000
L76	74	CCI 1.25" x 5.875" Plate	1.67 - 1.92	Auto	0.0000
L76	75	CCI 1.25" x 5.875" Plate	1.67 - 1.92	Auto	0.0000
L76	76	CCI 1.25" x 5.875" Plate	1.67 - 1.92	Auto	0.0000
L77	29	MP3-05	0.00 - 1.67	Auto	0.0000
L77	30	MP3-05	0.00 - 1.67	Auto	0.0000
L77	34	MP3-04	0.00 - 1.67	Auto	0.0000
L77	35	MP3-04	0.00 - 1.67	Auto	0.0000
L77	37	CCI 6" x 1" Plate	0.00 - 1.67	Auto	0.0000
L77	38	CCI 6" x 1" Plate	0.00 - 1.67	Auto	0.0000
L77	39	CCI 6" x 1" Plate	0.00 - 1.67	Auto	0.0000
L77	61	CCI 6" x 1" Plate	0.00 - 1.67	Auto	0.0000
L77	73	CCI 1.25" x 5.875" Plate	0.00 - 1.67	Auto	0.0000
L77	74	CCI 1.25" x 5.875" Plate	0.00 - 1.67	Auto	0.0000
L77	75	CCI 1.25" x 5.875" Plate	0.00 - 1.67	Auto	0.0000
L77	76	CCI 1.25" x 5.875" Plate	0.00 - 1.67	Auto	0.0000

Discrete Tower Loads

B+T Group
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Tulsa, OK 74119
Phone: (918) 587-4630
FAX: (918) 587-4630

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
*									
RRUS-32 B30	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.314 3.558 3.809	2.424 2.638 2.860	0.077 0.105 0.136
RRUS-32 B30	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.314 3.558 3.809	2.424 2.638 2.860	0.077 0.105 0.136
RRUS-32 B30	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.314 3.558 3.809	2.424 2.638 2.860	0.077 0.105 0.136
RRUS 4478 B14	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.843 2.012 2.190	1.059 1.197 1.342	0.060 0.076 0.094
RRUS 4478 B14	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.843 2.012 2.190	1.059 1.197 1.342	0.060 0.076 0.094
RRUS 4478 B14	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.843 2.012 2.190	1.059 1.197 1.342	0.060 0.076 0.094
RRUS 32 B66	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.743 2.965 3.194	1.668 1.855 2.049	0.053 0.074 0.098
RRUS 32 B66	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.743 2.965 3.194	1.668 1.855 2.049	0.053 0.074 0.098
RRUS 32 B66	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.743 2.965 3.194	1.668 1.855 2.049	0.053 0.074 0.098
RRUS 32 B2	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.731 2.953 3.182	1.668 1.855 2.049	0.053 0.074 0.098
RRUS 32 B2	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.731 2.953 3.182	1.668 1.855 2.049	0.053 0.074 0.098
RRUS 32 B2	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.731 2.953 3.182	1.668 1.855 2.049	0.053 0.074 0.098
(2) DC6-48-60-18-8F	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.212 1.892 2.105	1.212 1.892 2.105	0.033 0.055 0.080
DMP65R-BU8D w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	15.890 16.810 17.760	7.890 8.740 9.600	0.139 0.252 0.380
DMP65R-BU8D w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	15.890 16.810 17.760	7.890 8.740 9.600	0.139 0.252 0.380
DMP65R-BU6D w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	11.960 12.700 13.460	5.970 6.630 7.300	0.115 0.201 0.298
AIR 6419 B77G w/ Mount Pipe	A	From Leg	4.000 0.000 3.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	4.320 4.740 5.170	2.490 2.840 3.210	0.078 0.110 0.147
AIR 6419 B77G w/ Mount Pipe	B	From Leg	4.000 0.000 3.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	4.320 4.740 5.170	2.490 2.840 3.210	0.078 0.110 0.147
AIR 6419 B77G w/ Mount Pipe	C	From Leg	4.000 0.000	0.000	156.000	No Ice 1/2" Ice	4.320 4.740	2.490 2.840	0.078 0.110

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
			3.000			1" Ice	5.170	3.210	0.147
AIR 6449 B77D w/ Mount Pipe	A	From Leg	4.000 0.000 -1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.580 3.920 4.270	2.310 2.600 2.910	0.095 0.130 0.173
AIR 6449 B77D w/ Mount Pipe	B	From Leg	4.000 0.000 -1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.580 3.920 4.270	2.310 2.600 2.910	0.095 0.130 0.173
AIR 6449 B77D w/ Mount Pipe	C	From Leg	4.000 0.000 -1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	3.580 3.920 4.270	2.310 2.600 2.910	0.095 0.130 0.173
QD8616-7 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	16.930 17.870 18.830	9.310 10.170 11.050	0.183 0.308 0.448
QD8616-7 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	16.930 17.870 18.830	9.310 10.170 11.050	0.183 0.308 0.448
QD6616-7 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	12.560 13.300 14.060	6.930 7.600 8.280	0.156 0.252 0.360
RRUS 4449 B5/B12	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.968 2.144 2.328	1.408 1.564 1.727	0.071 0.090 0.111
RRUS 4449 B5/B12	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.968 2.144 2.328	1.408 1.564 1.727	0.071 0.090 0.111
RRUS 4449 B5/B12	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.968 2.144 2.328	1.408 1.564 1.727	0.071 0.090 0.111
DC9-48-60-24-8C-EV_CCIV 2	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	2.736 2.962 3.195	2.736 2.962 3.195	0.016 0.042 0.071
8' x 2.375" Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
8' x 2.375" Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
8' x 2.375" Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	156.000	No Ice 1/2" Ice 1" Ice	1.900 2.728 3.401	1.900 2.728 3.401	0.029 0.044 0.063
Sector Mount [SM 503-3]	C	None		0.000	156.000	No Ice 1/2" Ice 1" Ice	30.430 43.020 55.430	30.430 43.020 55.430	1.690 2.296 3.097
Pipe Mount [PM 602-3]	C	None		0.000	156.000	No Ice 1/2" Ice 1" Ice	6.670 7.700 8.740	6.670 7.700 8.740	0.279 0.344 0.423
* *									
AIR6449 B41_T-MOBILE w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	5.190 5.590 6.020	2.710 3.040 3.380	0.128 0.174 0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	5.190 5.590 6.020	2.710 3.040 3.380	0.128 0.174 0.227
AIR6449 B41_T-MOBILE w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	5.190 5.590 6.020	2.710 3.040 3.380	0.128 0.174 0.227

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
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	6.290 6.860 7.450	2.760 3.270 3.790	0.061 0.105 0.157
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	6.290 6.860 7.450	2.760 3.270 3.790	0.061 0.105 0.157
APX16DWV-16DWV-S-E-A 20 w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	6.290 6.860 7.450	2.760 3.270 3.790	0.061 0.105 0.157
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
APXVAALL24_43-U-NA20 _TMO w/ Mount Pipe	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	14.690 15.460 16.230	6.870 7.550 8.250	0.183 0.311 0.453
RADIO 4415 B66A	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.856 2.027 2.204	0.870 0.997 1.134	0.050 0.064 0.081
RADIO 4415 B66A	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.856 2.027 2.204	0.870 0.997 1.134	0.050 0.064 0.081
RADIO 4415 B66A	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.856 2.027 2.204	0.870 0.997 1.134	0.050 0.064 0.081
RADIO 4424 B25_TMO	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	2.052 2.231 2.417	1.610 1.772 1.941	0.086 0.107 0.131
RADIO 4424 B25_TMO	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	2.052 2.231 2.417	1.610 1.772 1.941	0.086 0.107 0.131
RADIO 4424 B25_TMO	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	2.052 2.231 2.417	1.610 1.772 1.941	0.086 0.107 0.131
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.970 2.147 2.331	1.587 1.749 1.918	0.073 0.093 0.116
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.970 2.147 2.331	1.587 1.749 1.918	0.073 0.093 0.116
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.000 0.000 1.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.970 2.147 2.331	1.587 1.749 1.918	0.073 0.093 0.116
5' x 2" Pipe Mount	A	From Leg	4.000 0.000 0.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.188 1.496 1.807	1.188 1.496 1.807	0.018 0.027 0.040
5' x 2" Pipe Mount	B	From Leg	4.000 0.000 0.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.188 1.496 1.807	1.188 1.496 1.807	0.018 0.027 0.040
5' x 2" Pipe Mount	C	From Leg	4.000 0.000 0.000	0.000	146.000	No Ice 1/2" Ice 1" Ice	1.188 1.496 1.807	1.188 1.496 1.807	0.018 0.027 0.040
Platform Mount [LP 1201-1_HR-1]	C	None		0.000	146.000	No Ice 1/2" Ice 1" Ice	26.390 31.400 36.200	26.390 31.400 36.200	2.356 3.061 3.864

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
*									
APXV18-206517S-C	A	From Leg	1.000	0.000	139.000	No Ice	3.830	1.810	0.026
			0.000			1/2" Ice	4.460	2.410	0.054
			0.000			1" Ice	5.110	3.030	0.087
APXV18-206517S-C	B	From Leg	1.000	0.000	139.000	No Ice	3.830	1.810	0.026
			0.000			1/2" Ice	4.460	2.410	0.054
			0.000			1" Ice	5.110	3.030	0.087
APXV18-206517S-C	C	From Leg	1.000	0.000	139.000	No Ice	3.830	1.810	0.026
			0.000			1/2" Ice	4.460	2.410	0.054
			0.000			1" Ice	5.110	3.030	0.087
Pipe Mount [PM 601-3]	C	None		0.000	139.000	No Ice	3.170	3.170	0.195
						1/2" Ice	3.790	3.790	0.232
						1" Ice	4.420	4.420	0.279
*									
BXA-80080-6CF-EDIN-X w/ Mount Pipe	A	From Leg	4.000	0.000	132.000	No Ice	6.006	6.203	0.043
			0.000			1/2" Ice	6.562	7.359	0.098
			2.000			1" Ice	7.083	8.229	0.160
BXA-80080-6CF-EDIN-X w/ Mount Pipe	B	From Leg	4.000	0.000	132.000	No Ice	6.006	6.203	0.043
			0.000			1/2" Ice	6.562	7.359	0.098
			2.000			1" Ice	7.083	8.229	0.160
BXA-80080-6CF-EDIN-X w/ Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	6.006	6.203	0.043
			0.000			1/2" Ice	6.562	7.359	0.098
			2.000			1" Ice	7.083	8.229	0.160
DB-T1-6Z-8AB-0Z	B	From Leg	4.000	0.000	132.000	No Ice	4.800	2.000	0.044
			0.000			1/2" Ice	5.070	2.193	0.080
			1.000			1" Ice	5.348	2.393	0.120
DB-T1-6Z-8AB-0Z	C	From Leg	4.000	0.000	132.000	No Ice	4.800	2.000	0.044
			0.000			1/2" Ice	5.070	2.193	0.080
			1.000			1" Ice	5.348	2.393	0.120
NHH-65B-R2B w/ Mount Pipe	A	From Leg	4.000	0.000	132.000	No Ice	4.090	3.290	0.069
			0.000			1/2" Ice	4.480	3.670	0.132
			1.000			1" Ice	4.880	4.060	0.205
NHH-65B-R2B w/ Mount Pipe	B	From Leg	4.000	0.000	132.000	No Ice	4.090	3.290	0.069
			0.000			1/2" Ice	4.480	3.670	0.132
			1.000			1" Ice	4.880	4.060	0.205
NHH-65B-R2B w/ Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	4.090	3.290	0.069
			0.000			1/2" Ice	4.480	3.670	0.132
			1.000			1" Ice	4.880	4.060	0.205
NHHSS-65B-R2B	A	From Leg	4.000	0.000	132.000	No Ice	3.970	2.380	0.066
			0.000			1/2" Ice	4.360	2.750	0.116
			1.000			1" Ice	4.760	3.120	0.172
NHHSS-65B-R2B	B	From Leg	4.000	0.000	132.000	No Ice	3.970	2.380	0.066
			0.000			1/2" Ice	4.360	2.750	0.116
			1.000			1" Ice	4.760	3.120	0.172
NHHSS-65B-R2B	C	From Leg	4.000	0.000	132.000	No Ice	3.970	2.380	0.066
			0.000			1/2" Ice	4.360	2.750	0.116
			1.000			1" Ice	4.760	3.120	0.172
MT6407-77A w/ Mount Pipe	A	From Leg	4.000	0.000	132.000	No Ice	4.907	2.682	0.096
			0.000			1/2" Ice	5.256	3.145	0.136
			1.000			1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	B	From Leg	4.000	0.000	132.000	No Ice	4.907	2.682	0.096
			0.000			1/2" Ice	5.256	3.145	0.136
			1.000			1" Ice	5.615	3.624	0.180
MT6407-77A w/ Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	4.907	2.682	0.096
			0.000			1/2" Ice	5.256	3.145	0.136
			1.000			1" Ice	5.615	3.624	0.180
(2) RFV01U-D1A	A	From Leg	4.000	0.000	132.000	No Ice	1.875	1.250	0.084

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
			0.000			1/2" Ice	2.045	1.393	0.103
			1.000			1" Ice	2.223	1.543	0.124
RFV01U-D1A	B	From Leg	4.000	0.000	132.000	No Ice	1.875	1.250	0.084
			0.000			1/2" Ice	2.045	1.393	0.103
			1.000			1" Ice	2.223	1.543	0.124
RFV01U-D2A	B	From Leg	4.000	0.000	132.000	No Ice	1.875	1.013	0.070
			0.000			1/2" Ice	2.045	1.145	0.087
			1.000			1" Ice	2.223	1.284	0.106
(2) RFV01U-D2A	C	From Leg	4.000	0.000	132.000	No Ice	1.875	1.013	0.070
			0.000			1/2" Ice	2.045	1.145	0.087
			1.000			1" Ice	2.223	1.284	0.106
(2) Side By Side Mounting Kit [#BASMNT_SBS-1-2]	A	From Leg	4.000	0.000	132.000	No Ice	1.900	1.900	0.030
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
(2) Side By Side Mounting Kit [#BASMNT_SBS-1-2]	B	From Leg	4.000	0.000	132.000	No Ice	1.900	1.900	0.030
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
(2) Side By Side Mounting Kit [#BASMNT_SBS-1-2]	C	From Leg	4.000	0.000	132.000	No Ice	1.900	1.900	0.030
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
(2) 4' x 2" Pipe Mount	A	From Leg	4.000	0.000	132.000	No Ice	0.785	0.785	0.029
			0.000			1/2" Ice	1.028	1.028	0.035
			0.000			1" Ice	1.281	1.281	0.044
(2) 6' x 2" Mount Pipe	A	From Leg	4.000	0.000	132.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
(2) 6' x 2" Mount Pipe	B	From Leg	4.000	0.000	132.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
(2) 6' x 2" Mount Pipe	C	From Leg	4.000	0.000	132.000	No Ice	1.425	1.425	0.022
			0.000			1/2" Ice	1.925	1.925	0.033
			0.000			1" Ice	2.294	2.294	0.048
Platform Mount [LP 1201-1_HR-1]	C	None		0.000	132.000	No Ice	26.390	26.390	2.356
						1/2" Ice	31.400	31.400	3.061
						1" Ice	36.200	36.200	3.864
6' x 2" Horizontal Mount Pipe	A	From Leg	3.000	0.000	132.000	No Ice	1.140	0.010	0.016
			0.000			1/2" Ice	1.760	0.040	0.025
			-1.000			1" Ice	2.140	0.090	0.038
6' x 2" Horizontal Mount Pipe	B	From Leg	3.000	0.000	132.000	No Ice	1.140	0.010	0.016
			0.000			1/2" Ice	1.760	0.040	0.025
			-1.000			1" Ice	2.140	0.090	0.038
6' x 2" Horizontal Mount Pipe	C	From Leg	3.000	0.000	132.000	No Ice	1.140	0.010	0.016
			0.000			1/2" Ice	1.760	0.040	0.025
			-1.000			1" Ice	2.140	0.090	0.038
*									
MX08FRO665-21 w/ Mount Pipe	A	From Leg	4.000	0.000	114.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	B	From Leg	4.000	0.000	114.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
MX08FRO665-21 w/ Mount Pipe	C	From Leg	4.000	0.000	114.000	No Ice	8.010	4.230	0.108
			0.000			1/2" Ice	8.520	4.690	0.194
			0.000			1" Ice	9.040	5.160	0.292
TA08025-B604	A	From Leg	4.000	0.000	114.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100

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
TA08025-B604	B	From Leg	4.000	0.000	114.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B604	C	From Leg	4.000	0.000	114.000	No Ice	1.964	0.981	0.064
			0.000			1/2" Ice	2.138	1.112	0.081
			0.000			1" Ice	2.320	1.250	0.100
TA08025-B605	A	From Leg	4.000	0.000	114.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
TA08025-B605	B	From Leg	4.000	0.000	114.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
TA08025-B605	C	From Leg	4.000	0.000	114.000	No Ice	1.964	1.129	0.075
			0.000			1/2" Ice	2.138	1.267	0.093
			0.000			1" Ice	2.320	1.411	0.114
RDIDC-9181-PF-48	A	From Leg	4.000	0.000	114.000	No Ice	2.012	1.168	0.022
			0.000			1/2" Ice	2.189	1.311	0.040
			0.000			1" Ice	2.373	1.461	0.060
(2) 8' x 2" Mount Pipe	A	From Leg	4.000	0.000	114.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	B	From Leg	4.000	0.000	114.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
(2) 8' x 2" Mount Pipe	C	From Leg	4.000	0.000	114.000	No Ice	1.900	1.900	0.029
			0.000			1/2" Ice	2.728	2.728	0.044
			0.000			1" Ice	3.401	3.401	0.063
Commscope MC-PK8-DSH	C	None		0.000	114.000	No Ice	34.240	34.240	1.749
						1/2" Ice	62.950	62.950	2.099
						1" Ice	91.660	91.660	2.450
*									
58532A	A	From Leg	3.000	0.000	101.000	No Ice	0.189	0.189	0.000
			0.000			1/2" Ice	0.248	0.248	0.003
			1.000			1" Ice	0.315	0.315	0.006
Side Arm Mount [SO 701-1]	A	From Leg	1.500	0.000	101.000	No Ice	0.850	1.670	0.065
			0.000			1/2" Ice	1.140	2.340	0.079
			0.000			1" Ice	1.430	3.010	0.093
*									

Load Combinations

Comb. No.	Description
1	Dead Only
2	1.2 Dead+1.0 Wind 0 deg - No Ice
3	0.9 Dead+1.0 Wind 0 deg - No Ice
4	1.2 Dead+1.0 Wind 30 deg - No Ice
5	0.9 Dead+1.0 Wind 30 deg - No Ice
6	1.2 Dead+1.0 Wind 60 deg - No Ice
7	0.9 Dead+1.0 Wind 60 deg - No Ice
8	1.2 Dead+1.0 Wind 90 deg - No Ice

Comb. No.	Description
9	0.9 Dead+1.0 Wind 90 deg - No Ice
10	1.2 Dead+1.0 Wind 120 deg - No Ice
11	0.9 Dead+1.0 Wind 120 deg - No Ice
12	1.2 Dead+1.0 Wind 150 deg - No Ice
13	0.9 Dead+1.0 Wind 150 deg - No Ice
14	1.2 Dead+1.0 Wind 180 deg - No Ice
15	0.9 Dead+1.0 Wind 180 deg - No Ice
16	1.2 Dead+1.0 Wind 210 deg - No Ice
17	0.9 Dead+1.0 Wind 210 deg - No Ice
18	1.2 Dead+1.0 Wind 240 deg - No Ice
19	0.9 Dead+1.0 Wind 240 deg - No Ice
20	1.2 Dead+1.0 Wind 270 deg - No Ice
21	0.9 Dead+1.0 Wind 270 deg - No Ice
22	1.2 Dead+1.0 Wind 300 deg - No Ice
23	0.9 Dead+1.0 Wind 300 deg - No Ice
24	1.2 Dead+1.0 Wind 330 deg - No Ice
25	0.9 Dead+1.0 Wind 330 deg - No Ice
26	1.2 Dead+1.0 Ice+1.0 Temp
27	1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp
28	1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp
29	1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp
30	1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp
31	1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp
32	1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp
33	1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp
34	1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp
35	1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp
36	1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp
37	1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp
38	1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp
39	Dead+Wind 0 deg - Service
40	Dead+Wind 30 deg - Service
41	Dead+Wind 60 deg - Service
42	Dead+Wind 90 deg - Service
43	Dead+Wind 120 deg - Service
44	Dead+Wind 150 deg - Service
45	Dead+Wind 180 deg - Service
46	Dead+Wind 210 deg - Service
47	Dead+Wind 240 deg - Service
48	Dead+Wind 270 deg - Service
49	Dead+Wind 300 deg - Service
50	Dead+Wind 330 deg - Service

Maximum Member Forces

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L1	160.333 - 155.333	Pole	Max Tension	8	0.000	0.000	0.000
			Max. Compression	26	-10.219	-1.748	-0.140
			Max. Mx	8	-5.088	-11.275	-0.179
			Max. My	14	-5.047	-0.613	-10.844
			Max. Vy	8	7.521	-11.275	-0.179
			Max. Vx	2	-7.621	-0.388	10.685
			Max. Torque	3			-1.549
L2	155.333 - 150.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.007	-1.985	-0.007

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	-5.571	-49.623	-0.472
			Max. My	14	-5.533	-1.056	-49.482
			Max. Vy	8	7.787	-49.623	-0.472
			Max. Vx	2	-7.856	-0.145	49.422
			Max. Torque	3			-1.549
L3	150.333 - 146.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.558	-2.149	0.086
			Max. Mx	8	-5.918	-77.241	-0.677
			Max. My	2	-5.878	0.028	77.219
			Max. Vy	8	7.966	-77.241	-0.677
			Max. Vx	2	-8.013	0.028	77.219
			Max. Torque	3			-1.548
L4	146.833 - 146.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-11.655	-2.179	0.103
			Max. Mx	8	-5.983	-81.241	-0.705
			Max. My	2	-5.943	0.051	81.238
			Max. Vy	8	7.997	-81.241	-0.705
			Max. Vx	2	-8.042	0.051	81.238
			Max. Torque	3			-1.548
L5	146.333 - 141.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-20.831	-2.594	0.342
			Max. Mx	8	-11.080	-146.661	-0.957
			Max. My	2	-11.017	0.219	146.894
			Max. Vy	8	13.049	-146.661	-0.957
			Max. Vx	2	-13.106	0.219	146.894
			Max. Torque	13			1.564
L6	141.333 - 136.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-22.378	-3.027	0.595
			Max. Mx	8	-11.943	-214.526	-1.203
			Max. My	2	-11.877	0.381	214.964
			Max. Vy	8	14.006	-214.526	-1.203
			Max. Vx	2	-14.059	0.381	214.964
			Max. Torque	13			1.730
L7	136.333 - 131.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-31.947	-3.541	0.888
			Max. Mx	8	-17.149	-292.348	-1.219
			Max. My	2	-17.068	0.475	292.957
			Max. Vy	8	19.478	-292.348	-1.219
			Max. Vx	2	-19.437	0.475	292.957
			Max. Torque	25			-1.918
L8	131.333 - 126.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-33.186	-3.845	1.257
			Max. Mx	8	-17.989	-390.917	-1.384
			Max. My	2	-17.896	0.710	391.687
			Max. Vy	8	19.936	-390.917	-1.384
			Max. Vx	2	-20.010	0.710	391.687
			Max. Torque	25			-2.045
L9	126.333 - 121.333	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-34.472	-4.150	1.633
			Max. Mx	8	-18.867	-491.742	-1.542
			Max. My	2	-18.762	0.944	493.265
			Max. Vy	8	20.384	-491.742	-1.542
			Max. Vx	2	-20.577	0.944	493.265
			Max. Torque	25			-2.156

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L10	121.333 - 120.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-34.815	-4.226	1.728
			Max. Mx	8	-19.088	-517.295	-1.581
			Max. My	2	-18.978	1.003	519.128
			Max. Vy	8	20.497	-517.295	-1.581
			Max. Vx	2	-20.765	1.003	519.128
			Max. Torque	25			-2.175
L11	120.083 - 119.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-34.903	-4.242	1.748
			Max. Mx	8	-19.163	-522.423	-1.588
			Max. My	2	-19.052	1.015	524.329
			Max. Vy	8	20.511	-522.423	-1.588
			Max. Vx	2	-20.792	1.015	524.329
			Max. Torque	25			-2.179
L12	119.833 - 117.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.725	-4.380	1.917
			Max. Mx	8	-19.722	-570.587	-1.659
			Max. My	2	-19.599	1.124	573.358
			Max. Vy	8	20.758	-570.587	-1.659
			Max. Vx	2	-21.182	1.124	573.358
			Max. Torque	25			-2.207
L13	117.5 - 117.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-35.818	-4.395	1.935
			Max. Mx	8	-19.794	-575.782	-1.667
			Max. My	2	-19.671	1.136	578.665
			Max. Vy	8	20.780	-575.782	-1.667
			Max. Vx	2	-21.217	1.136	578.665
			Max. Torque	25			-2.209
L14	117.25 - 115.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-36.490	-4.502	2.070
			Max. Mx	8	-20.242	-612.330	-1.719
			Max. My	2	-20.110	1.217	616.113
			Max. Vy	8	20.972	-612.330	-1.719
			Max. Vx	2	-21.527	1.217	616.113
			Max. Torque	25			-2.230
L15	115.5 - 115.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-36.596	-4.517	2.089
			Max. Mx	8	-20.328	-617.578	-1.726
			Max. My	2	-20.195	1.229	621.505
			Max. Vy	8	20.991	-617.578	-1.726
			Max. Vx	2	-21.560	1.229	621.505
			Max. Torque	25			-2.233
L16	115.25 - 110.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-43.610	-4.859	2.829
			Max. Mx	8	-24.844	-735.885	-1.743
			Max. My	2	-24.667	1.450	743.978
			Max. Vy	8	24.715	-735.885	-1.743
			Max. Vx	2	-25.702	1.450	743.978
			Max. Torque	25			-2.406
L17	110.25 - 104.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-44.662	-5.034	3.039
			Max. Mx	8	-25.589	-796.290	-1.807
			Max. My	2	-25.400	1.554	807.047
			Max. Vy	8	24.977	-796.290	-1.807
			Max. Vx	2	-26.149	1.554	807.047
			Max. Torque	25			-2.439

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L18	104.083 - 102.82	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-47.923	-5.395	3.474
			Max. Mx	8	-28.057	-922.856	-1.937
			Max. My	2	-27.843	1.769	940.538
			Max. Vy	8	25.606	-922.856	-1.937
			Max. Vx	2	-27.169	1.769	940.538
			Max. Torque	25			-2.507
L19	102.82 - 100.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.100	-5.564	3.991
			Max. Mx	8	-28.911	-982.621	-1.795
			Max. My	2	-28.689	1.868	1004.373
			Max. Vy	10	26.048	-949.897	-547.941
			Max. Vx	2	-27.643	1.868	1004.373
			Max. Torque	25			-2.653
L20	100.5 - 100.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-49.216	-5.582	4.016
			Max. Mx	8	-29.002	-989.111	-1.801
			Max. My	2	-28.779	1.878	1011.296
			Max. Vy	10	26.080	-956.416	-551.695
			Max. Vx	2	-27.679	1.878	1011.296
			Max. Torque	25			-2.657
L21	100.25 - 98.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.027	-5.712	4.189
			Max. Mx	8	-29.566	-1034.724	-1.845
			Max. My	2	-29.336	1.953	1060.074
			Max. Vy	10	26.368	-1002.326	-578.126
			Max. Vx	2	-28.012	1.953	1060.074
			Max. Torque	25			-2.686
L22	98.5 - 98.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-50.146	-5.732	4.216
			Max. Mx	8	-29.667	-1041.267	-1.851
			Max. My	2	-29.437	1.963	1067.088
			Max. Vy	10	26.391	-1008.923	-581.925
			Max. Vx	2	-28.040	1.963	1067.088
			Max. Torque	25			-2.691
L23	98.25 - 93.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-52.475	-6.107	4.718
			Max. Mx	8	-31.384	-1173.480	-1.972
			Max. My	2	-31.139	2.174	1209.680
			Max. Vy	10	27.164	-1142.877	-659.048
			Max. Vx	2	-28.933	2.174	1209.680
			Max. Torque	25			-2.790
L24	93.25 - 90.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.758	-6.314	4.992
			Max. Mx	8	-32.342	-1247.307	-2.036
			Max. My	2	-32.091	2.288	1289.984
			Max. Vy	10	27.586	-1218.179	-702.402
			Max. Vx	2	-29.417	2.288	1289.984
			Max. Torque	25			-2.845
L25	90.5 - 90.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-53.886	-6.332	5.018
			Max. Mx	8	-32.452	-1254.058	-2.041
			Max. My	2	-32.202	2.299	1297.349
			Max. Vy	10	27.611	-1225.082	-706.376
			Max. Vx	2	-29.448	2.299	1297.349
			Max. Torque	25			-2.849
L26	90.25 - 85.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-56.446	-6.706	5.541
			Max. Mx	8	-34.392	-1390.452	-2.153
			Max. My	2	-34.132	2.503	1447.005

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	10	28.395	-1365.166	-787.027
			Max. Vx	2	-30.349	2.503	1447.005
			Max. Torque	25			-2.934
L27	85.25 - 83.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.397	-6.837	5.708
			Max. Mx	8	-35.073	-1438.826	-2.191
			Max. My	2	-34.810	2.574	1500.448
			Max. Vy	10	28.682	-1415.119	-815.785
			Max. Vx	2	-30.681	2.574	1500.448
			Max. Torque	25			-2.950
L28	83.5 - 83.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-57.552	-6.856	5.732
			Max. Mx	8	-35.206	-1445.765	-2.196
			Max. My	2	-34.945	2.584	1508.129
			Max. Vy	10	28.705	-1422.295	-819.917
			Max. Vx	2	-30.708	2.584	1508.129
			Max. Torque	25			-2.951
L29	83.25 - 80.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.099	-7.042	5.968
			Max. Mx	8	-36.358	-1515.571	-2.248
			Max. My	2	-36.092	2.684	1585.600
			Max. Vy	10	29.135	-1494.633	-861.562
			Max. Vx	2	-31.200	2.684	1585.600
			Max. Torque	25			-2.972
L30	80.75 - 80.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.266	-7.061	5.992
			Max. Mx	8	-36.494	-1522.594	-2.253
			Max. My	2	-36.228	2.694	1593.414
			Max. Vy	10	29.168	-1501.925	-865.760
			Max. Vx	2	-31.238	2.694	1593.414
			Max. Torque	25			-2.974
L31	80.5 - 80.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-59.430	-7.080	6.016
			Max. Mx	8	-36.619	-1529.624	-2.258
			Max. My	2	-36.353	2.704	1601.240
			Max. Vy	10	29.211	-1509.227	-869.964
			Max. Vx	2	-31.287	2.704	1601.240
			Max. Torque	25			-2.976
L32	80.25 - 77.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.233	-7.287	6.279
			Max. Mx	8	-37.986	-1607.462	-2.314
			Max. My	2	-37.714	2.813	1688.129
			Max. Vy	10	29.689	-1590.257	-916.613
			Max. Vx	2	-31.835	2.813	1688.129
			Max. Torque	25			-2.999
L33	77.5 - 77.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-61.379	-7.306	6.304
			Max. Mx	8	-38.103	-1614.584	-2.319
			Max. My	2	-37.833	2.823	1696.100
			Max. Vy	10	29.719	-1597.687	-920.890
			Max. Vx	2	-31.870	2.823	1696.100
			Max. Torque	25			-3.001
L34	77.25 - 68.82	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-63.658	-7.601	6.690
			Max. Mx	8	-39.818	-1728.238	-2.394
			Max. My	2	-39.545	2.977	1823.828
			Max. Vy	10	30.354	-1716.652	-989.377
			Max. Vx	2	-32.590	2.977	1823.828
			Max. Torque	23			-3.035
L35	68.82 - 68.291	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-68.424	-7.972	7.179

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	-43.669	-1874.484	-2.488
			Max. My	2	-43.390	3.170	1989.546
			Max. Vy	10	31.268	-1870.803	-1078.125
			Max. Vx	2	-33.617	3.170	1989.546
			Max. Torque	23			-3.104
L36	68.291 - 64.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-70.890	-8.276	7.578
			Max. Mx	10	-45.077	-1998.467	-1151.626
			Max. My	2	-45.289	3.326	2126.963
			Max. Vy	10	31.892	-1998.467	-1151.626
			Max. Vx	2	-34.330	3.326	2126.963
			Max. Torque	23			-3.156
L37	64.25 - 64	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-71.052	-8.296	7.603
			Max. Mx	10	-45.216	-2006.447	-1156.220
			Max. My	2	-45.425	3.336	2135.558
			Max. Vy	10	31.918	-2006.447	-1156.220
			Max. Vx	2	-34.361	3.336	2135.558
			Max. Torque	23			-3.159
L38	64 - 60.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.334	-8.558	7.942
			Max. Mx	10	-46.974	-2119.191	-1221.131
			Max. My	2	-47.174	3.468	2257.071
			Max. Vy	10	32.477	-2119.191	-1221.131
			Max. Vx	2	-35.005	3.468	2257.071
			Max. Torque	23			-3.201
L39	60.5 - 60.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.508	-8.578	7.967
			Max. Mx	10	-47.121	-2127.317	-1225.810
			Max. My	2	-47.318	3.478	2265.835
			Max. Vy	10	32.503	-2127.317	-1225.810
			Max. Vx	2	-35.035	3.478	2265.835
			Max. Torque	23			-3.203
L40	60.25 - 60.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.625	-8.592	7.984
			Max. Mx	10	-47.211	-2132.751	-1228.938
			Max. My	2	-47.407	3.484	2271.696
			Max. Vy	10	32.528	-2132.751	-1228.938
			Max. Vx	2	-35.065	3.484	2271.696
			Max. Torque	23			-3.205
L41	60.083 - 59.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-73.802	-8.612	8.011
			Max. Mx	10	-47.348	-2140.894	-1233.626
			Max. My	2	-47.544	3.494	2280.479
			Max. Vy	10	32.568	-2140.894	-1233.626
			Max. Vx	2	-35.111	3.494	2280.479
			Max. Torque	23			-3.209
L42	59.833 - 59.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-74.333	-8.675	8.096
			Max. Mx	10	-47.755	-2165.380	-1247.723
			Max. My	2	-47.949	3.522	2306.896
			Max. Vy	10	32.690	-2165.380	-1247.723
			Max. Vx	2	-35.256	3.522	2306.896
			Max. Torque	23			-3.221
L43	59.083 - 58.833	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-74.518	-8.697	8.124
			Max. Mx	10	-47.907	-2173.561	-1252.434
			Max. My	2	-48.100	3.531	2315.725

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vy	10	32.722	-2173.561	-1252.434
			Max. Vx	2	-35.295	3.531	2315.725
			Max. Torque	23			-3.225
L44	58.833 - 55.4167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.049	-8.987	8.512
			Max. Mx	10	-49.892	-2286.331	-1317.359
			Max. My	2	-50.076	3.659	2437.530
			Max. Vy	10	33.262	-2286.331	-1317.359
			Max. Vx	2	-35.937	3.659	2437.530
			Max. Torque	23			-3.279
L45	55.4167 - 55.1667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.235	-9.009	8.541
			Max. Mx	10	-50.050	-2294.654	-1322.151
			Max. My	2	-50.232	3.669	2446.528
			Max. Vy	10	33.289	-2294.654	-1322.151
			Max. Vx	2	-35.970	3.669	2446.528
			Max. Torque	23			-3.283
L46	55.1667 - 54.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.545	-9.044	8.588
			Max. Mx	10	-50.293	-2308.548	-1330.150
			Max. My	2	-50.475	3.684	2461.550
			Max. Vy	10	33.355	-2308.548	-1330.150
			Max. Vx	2	-36.048	3.684	2461.550
			Max. Torque	23			-3.289
L47	54.75 - 54.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-77.713	-9.066	8.617
			Max. Mx	10	-50.425	-2316.896	-1334.957
			Max. My	2	-50.605	3.693	2470.578
			Max. Vy	10	33.390	-2316.896	-1334.957
			Max. Vx	2	-36.090	3.693	2470.578
			Max. Torque	23			-3.293
L48	54.5 - 49.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-81.019	-9.481	9.194
			Max. Mx	10	-53.024	-2485.744	-1432.168
			Max. My	2	-53.188	3.877	2653.355
			Max. Vy	10	34.118	-2485.744	-1432.168
			Max. Vx	2	-36.947	3.877	2653.355
			Max. Torque	23			-3.380
L49	49.5 - 44.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-84.305	-9.880	9.762
			Max. Mx	10	-55.666	-2658.130	-1531.417
			Max. My	2	-55.817	4.055	2839.797
			Max. Vy	10	34.818	-2658.130	-1531.417
			Max. Vx	2	-37.569	4.055	2839.797
			Max. Torque	23			-3.470
L50	44.5 - 41.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-86.473	-10.122	10.100
			Max. Mx	10	-57.402	-2772.058	-1597.009
			Max. My	2	-57.544	4.169	2962.634
			Max. Vy	10	35.275	-2772.058	-1597.009
			Max. Vx	2	-37.963	4.169	2962.634
			Max. Torque	23			-3.511
L51	41.25 - 41	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-86.652	-10.141	10.126
			Max. Mx	10	-57.561	-2780.883	-1602.090
			Max. My	2	-57.700	4.178	2972.136
			Max. Vy	10	35.294	-2780.883	-1602.090
			Max. Vx	2	-37.977	4.178	2972.136

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	23			-3.515
L52	41 - 34.291	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-88.098	-10.292	10.330
			Max. Mx	10	-58.708	-2851.800	-1642.917
			Max. My	2	-58.841	4.247	3048.503
			Max. Vy	10	35.587	-2851.800	-1642.917
			Max. Vx	2	-38.310	4.247	3048.503
			Max. Torque	23			-3.538
L53	34.291 - 33.291	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-95.273	-10.705	10.894
			Max. Mx	10	-64.765	-3057.826	-1761.531
			Max. My	2	-64.888	4.442	3270.567
			Max. Vy	10	36.538	-3057.826	-1761.531
			Max. Vx	2	-39.390	4.442	3270.567
			Max. Torque	23			-3.604
L54	33.291 - 31.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-96.762	-10.838	11.070
			Max. Mx	10	-65.968	-3123.517	-1799.353
			Max. My	2	-66.087	4.503	3341.440
			Max. Vy	10	36.804	-3123.517	-1799.353
			Max. Vx	2	-39.697	4.503	3341.440
			Max. Torque	23			-3.623
L55	31.5 - 31.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-96.973	-10.856	11.099
			Max. Mx	10	-66.158	-3132.722	-1804.653
			Max. My	2	-66.274	4.512	3351.375
			Max. Vy	10	36.814	-3132.722	-1804.653
			Max. Vx	2	-39.710	4.512	3351.375
			Max. Torque	23			-3.627
L56	31.25 - 30.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-97.604	-10.913	11.188
			Max. Mx	10	-66.666	-3160.391	-1820.583
			Max. My	2	-66.781	4.537	3381.240
			Max. Vy	10	36.926	-3160.391	-1820.583
			Max. Vx	2	-39.840	4.537	3381.240
			Max. Torque	23			-3.639
L57	30.5 - 30.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-97.811	-10.931	11.213
			Max. Mx	10	-66.840	-3169.631	-1825.903
			Max. My	2	-66.954	4.546	3391.215
			Max. Vy	10	36.953	-3169.631	-1825.903
			Max. Vx	2	-39.872	4.546	3391.215
			Max. Torque	23			-3.642
L58	30.25 - 25.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-101.568	-11.265	11.661
			Max. Mx	10	-69.860	-3337.484	-1922.545
			Max. My	2	-69.961	4.696	3572.542
			Max. Vy	10	37.614	-3337.484	-1922.545
			Max. Vx	2	-40.638	4.696	3572.542
			Max. Torque	23			-3.701
L59	25.75 - 25.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-101.774	-11.284	11.686
			Max. Mx	10	-70.036	-3346.895	-1927.963
			Max. My	2	-70.135	4.705	3582.715
			Max. Vy	10	37.634	-3346.895	-1927.963
			Max. Vx	2	-40.664	4.705	3582.715
			Max. Torque	23			-3.705
L60	25.5 - 24.6667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-102.465	-11.346	11.760
			Max. Mx	10	-70.578	-3378.329	-1946.061

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-70.675	4.732	3616.698
			Max. Vy	10	37.770	-3378.329	-1946.061
			Max. Vx	2	-40.813	4.732	3616.698
			Max. Torque	23			-3.717
L61	24.6667 - 24.4167	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-102.651	-11.365	11.783
			Max. Mx	10	-70.730	-3387.779	-1951.503
			Max. My	2	-70.825	4.740	3626.916
			Max. Vy	10	37.795	-3387.779	-1951.503
			Max. Vx	2	-40.842	4.740	3626.916
			Max. Torque	23			-3.721
L62	24.4167 - 24	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-102.961	-11.396	11.820
			Max. Mx	10	-70.968	-3403.552	-1960.584
			Max. My	2	-71.062	4.754	3643.968
			Max. Vy	10	37.858	-3403.552	-1960.584
			Max. Vx	2	-40.911	4.754	3643.968
			Max. Torque	23			-3.727
L63	24 - 23.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-103.154	-11.415	11.842
			Max. Mx	10	-71.121	-3413.026	-1966.039
			Max. My	2	-71.214	4.762	3654.213
			Max. Vy	10	37.891	-3413.026	-1966.039
			Max. Vx	2	-40.948	4.762	3654.213
			Max. Torque	23			-3.731
L64	23.75 - 18.75	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-106.892	-11.777	12.270
			Max. Mx	10	-74.118	-3604.363	-2076.201
			Max. My	2	-74.195	4.924	3861.090
			Max. Vy	10	38.608	-3604.363	-2076.201
			Max. Vx	2	-41.721	4.924	3861.090
			Max. Torque	23			-3.815
L65	18.75 - 14.083	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-110.343	-12.133	12.635
			Max. Mx	10	-76.951	-3785.984	-2180.769
			Max. My	2	-77.012	5.072	4057.488
			Max. Vy	10	39.206	-3785.984	-2180.769
			Max. Vx	2	-42.380	5.072	4057.488
			Max. Torque	23			-3.886
L66	14.083 - 13.817	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-110.546	-12.153	12.656
			Max. Mx	10	-77.130	-3796.419	-2186.777
			Max. My	2	-77.188	5.080	4068.774
			Max. Vy	10	39.220	-3796.419	-2186.777
			Max. Vx	2	-42.398	5.080	4068.774
			Max. Torque	23			-3.888
L67	13.817 - 13.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-110.659	-12.165	12.668
			Max. Mx	10	-77.225	-3802.307	-2190.167
			Max. My	2	-77.283	5.085	4075.143
			Max. Vy	10	39.236	-3802.307	-2190.167
			Max. Vx	2	-42.417	5.085	4075.143
			Max. Torque	23			-3.890
L68	13.667 - 10.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-113.052	-12.409	12.908
			Max. Mx	10	-79.189	-3927.277	-2262.118
			Max. My	2	-79.237	5.183	4210.370
			Max. Vy	10	39.646	-3927.277	-2262.118

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Vx	2	-42.895	5.183	4210.370
			Max. Torque	23			-3.915
L69	10.5 - 10.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-113.235	-12.430	12.925
			Max. Mx	10	-79.354	-3937.194	-2267.828
			Max. My	2	-79.399	5.191	4221.106
			Max. Vy	10	39.658	-3937.194	-2267.828
			Max. Vx	2	-42.911	5.191	4221.106
			Max. Torque	23			-3.917
L70	10.25 - 5.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-116.874	-12.832	13.277
			Max. Mx	10	-82.400	-4137.098	-2382.921
			Max. My	2	-82.426	5.341	4437.667
			Max. Vy	10	40.269	-4137.098	-2382.921
			Max. Vx	2	-43.631	5.341	4437.667
			Max. Torque	23			-3.947
L71	5.25 - 2.9	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-118.409	-13.016	13.444
			Max. Mx	10	-83.692	-4232.048	-2437.589
			Max. My	2	-83.708	5.411	4540.633
			Max. Vy	10	40.534	-4232.048	-2437.589
			Max. Vx	2	-43.946	5.411	4540.633
			Max. Torque	23			-3.962
L72	2.9 - 2.65	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-118.571	-13.035	13.462
			Max. Mx	10	-83.848	-4242.185	-2443.425
			Max. My	2	-83.861	5.418	4551.629
			Max. Vy	10	40.533	-4242.185	-2443.425
			Max. Vx	2	-43.949	5.418	4551.629
			Max. Torque	23			-3.963
L73	2.65 - 2.5	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-118.669	-13.047	13.473
			Max. Mx	10	-83.934	-4248.270	-2446.929
			Max. My	2	-83.945	5.423	4558.231
			Max. Vy	10	40.546	-4248.270	-2446.929
			Max. Vx	2	-43.965	5.423	4558.231
			Max. Torque	23			-3.964
L74	2.5 - 2.25	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-118.839	-13.066	13.490
			Max. Mx	10	-84.078	-4258.417	-2452.771
			Max. My	2	-84.088	5.430	4569.240
			Max. Vy	10	40.578	-4258.417	-2452.771
			Max. Vx	2	-44.002	5.430	4569.240
			Max. Torque	23			-3.966
L75	2.25 - 1.917	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-119.064	-13.091	13.514
			Max. Mx	10	-84.270	-4271.945	-2460.560
			Max. My	2	-84.279	5.440	4583.918
			Max. Vy	10	40.619	-4271.945	-2460.560
			Max. Vx	2	-44.050	5.440	4583.918
			Max. Torque	23			-3.968
L76	1.917 - 1.667	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-119.225	-13.110	13.532
			Max. Mx	10	-84.408	-4282.110	-2466.412
			Max. My	2	-84.416	5.447	4594.947
			Max. Vy	10	40.645	-4282.110	-2466.412
			Max. Vx	2	-44.082	5.447	4594.947
			Max. Torque	23			-3.970
L77	1.667 - 0	Pole	Max Tension	1	0.000	0.000	0.000
			Max. Compression	26	-120.280	-13.229	13.650
			Max. Mx	10	-85.302	-4350.065	-2505.536

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. My	2	-85.306	5.495	4668.704
			Max. Vy	10	40.871	-4350.065	-2505.536
			Max. Vx	2	-44.347	5.495	4668.704
			Max. Torque	23			-3.980

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	36	120.280	9.460	0.011
	Max. H_x	23	63.999	40.824	23.583
	Max. H_z	3	63.999	0.063	44.296
	Max. M_x	2	4668.704	0.063	44.296
	Max. M_z	10	4350.065	-40.824	-23.583
	Max. Torsion	11	3.979	-40.824	-23.583
	Min. Vert	19	63.999	31.105	-17.900
	Min. H_x	11	63.999	-40.824	-23.583
	Min. H_z	15	63.999	-0.063	-44.296
	Min. M_x	14	-4654.128	-0.063	-44.296
	Min. M_z	22	-4340.011	40.824	23.583
	Min. Torsion	23	-3.980	40.824	23.583

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	71.110	0.000	-0.000	-5.901	-4.072	-0.000
1.2 Dead+1.0 Wind 0 deg - No Ice	85.332	-0.063	-44.296	-4668.704	5.495	2.219
0.9 Dead+1.0 Wind 0 deg - No Ice	63.999	-0.063	-44.296	-4608.577	6.650	2.226
1.2 Dead+1.0 Wind 30 deg - No Ice	85.332	19.213	-33.301	-3624.884	-2089.437	1.220
0.9 Dead+1.0 Wind 30 deg - No Ice	63.999	19.213	-33.301	-3576.451	-2061.338	1.224
1.2 Dead+1.0 Wind 60 deg - No Ice	85.332	31.105	-17.900	-2046.382	-3550.584	0.533
0.9 Dead+1.0 Wind 60 deg - No Ice	63.999	31.105	-17.900	-2017.988	-3503.196	0.534
1.2 Dead+1.0 Wind 90 deg - No Ice	85.332	38.541	0.063	3.221	-4176.109	-0.594
0.9 Dead+1.0 Wind 90 deg - No Ice	63.999	38.541	0.063	4.956	-4121.044	-0.597
1.2 Dead+1.0 Wind 120 deg - No Ice	85.332	40.824	23.583	2505.537	-4350.065	-3.971
0.9 Dead+1.0 Wind 120 deg - No Ice	63.999	40.824	23.583	2475.876	-4294.245	-3.979
1.2 Dead+1.0 Wind 150 deg - No Ice	85.332	23.547	40.682	4288.692	-2493.248	-3.851
0.9 Dead+1.0 Wind 150 deg - No Ice	63.999	23.547	40.682	4236.772	-2460.759	-3.860

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
1.2 Dead+1.0 Wind 180 deg - No Ice	85.332	0.063	44.296	4654.128	-15.556	-2.219
0.9 Dead+1.0 Wind 180 deg - No Ice	63.999	0.063	44.296	4597.791	-14.072	-2.225
1.2 Dead+1.0 Wind 210 deg - No Ice	85.332	-19.213	33.301	3610.291	2079.377	-1.221
0.9 Dead+1.0 Wind 210 deg - No Ice	63.999	-19.213	33.301	3565.652	2053.915	-1.225
1.2 Dead+1.0 Wind 240 deg - No Ice	85.332	-31.105	17.900	2031.772	3540.520	-0.535
0.9 Dead+1.0 Wind 240 deg - No Ice	63.999	-31.105	17.900	2007.177	3495.770	-0.536
1.2 Dead+1.0 Wind 270 deg - No Ice	85.332	-38.541	-0.063	-17.835	4166.030	0.594
0.9 Dead+1.0 Wind 270 deg - No Ice	63.999	-38.541	-0.063	-15.769	4113.608	0.596
1.2 Dead+1.0 Wind 300 deg - No Ice	85.332	-40.824	-23.583	-2520.089	4340.011	3.973
0.9 Dead+1.0 Wind 300 deg - No Ice	63.999	-40.824	-23.583	-2486.644	4286.827	3.980
1.2 Dead+1.0 Wind 330 deg - No Ice	85.332	-23.547	-40.682	-4303.249	2483.203	3.854
0.9 Dead+1.0 Wind 330 deg - No Ice	63.999	-23.547	-40.682	-4247.544	2453.347	3.862
1.2 Dead+1.0 Ice+1.0 Temp	120.280	0.000	-0.000	-13.650	-13.229	-0.000
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	120.280	-0.011	-10.377	-1186.532	-11.387	0.590
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	120.280	4.662	-8.074	-955.506	-556.636	0.281
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	120.280	7.818	-4.499	-553.934	-952.138	0.106
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	120.280	9.460	0.011	-11.817	-1105.240	-0.185
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	120.280	9.777	5.644	623.273	-1116.085	-1.148
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	120.280	5.557	9.601	1062.504	-636.657	-1.052
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	120.280	0.011	10.377	1158.915	-15.374	-0.590
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	120.280	-4.662	8.074	927.889	529.876	-0.281
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	120.280	-7.818	4.499	526.315	925.379	-0.106
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	120.280	-9.460	-0.011	-15.804	1078.479	0.185
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	120.280	-9.777	-5.644	-650.888	1089.327	1.147
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	120.280	-5.557	-9.601	-1090.120	609.898	1.052
Dead+Wind 0 deg - Service	71.110	-0.015	-10.974	-1152.584	-1.590	0.565
Dead+Wind 30 deg - Service	71.110	4.760	-8.250	-895.570	-516.713	0.317
Dead+Wind 60 deg - Service	71.110	7.706	-4.435	-507.390	-875.918	0.143
Dead+Wind 90 deg - Service	71.110	9.548	0.015	-3.458	-1029.793	-0.143
Dead+Wind 120 deg - Service	71.110	10.113	5.842	612.108	-1073.056	-0.994
Dead+Wind 150 deg - Service	71.110	5.833	10.078	1050.749	-616.265	-0.970
Dead+Wind 180 deg - Service	71.110	0.015	10.974	1140.501	-6.758	-0.565
Dead+Wind 210 deg - Service	71.110	-4.760	8.250	883.486	508.365	-0.317
Dead+Wind 240 deg - Service	71.110	-7.706	4.435	495.305	867.569	-0.143
Dead+Wind 270 deg - Service	71.110	-9.548	-0.015	-8.627	1021.443	0.143
Dead+Wind 300 deg - Service	71.110	-10.113	-5.842	-624.190	1064.707	0.994
Dead+Wind 330 deg - Service	71.110	-5.833	-10.078	-1062.831	607.917	0.970

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	0.000	-71.110	0.000	-0.000	71.110	0.000	0.000%
2	-0.063	-85.332	-44.296	0.063	85.332	44.296	0.000%
3	-0.063	-63.999	-44.296	0.063	63.999	44.296	0.000%
4	19.213	-85.332	-33.301	-19.213	85.332	33.301	0.000%
5	19.213	-63.999	-33.301	-19.213	63.999	33.301	0.000%
6	31.105	-85.332	-17.900	-31.105	85.332	17.900	0.000%
7	31.105	-63.999	-17.900	-31.105	63.999	17.900	0.000%
8	38.541	-85.332	0.063	-38.541	85.332	-0.063	0.000%
9	38.541	-63.999	0.063	-38.541	63.999	-0.063	0.000%
10	40.824	-85.332	23.583	-40.824	85.332	-23.583	0.000%
11	40.824	-63.999	23.583	-40.824	63.999	-23.583	0.000%
12	23.547	-85.332	40.682	-23.547	85.332	-40.682	0.000%
13	23.547	-63.999	40.682	-23.547	63.999	-40.682	0.000%
14	0.063	-85.332	44.296	-0.063	85.332	-44.296	0.000%
15	0.063	-63.999	44.296	-0.063	63.999	-44.296	0.000%
16	-19.213	-85.332	33.301	19.213	85.332	-33.301	0.000%
17	-19.213	-63.999	33.301	19.213	63.999	-33.301	0.000%
18	-31.105	-85.332	17.900	31.105	85.332	-17.900	0.000%
19	-31.105	-63.999	17.900	31.105	63.999	-17.900	0.000%
20	-38.541	-85.332	-0.063	38.541	85.332	0.063	0.000%
21	-38.541	-63.999	-0.063	38.541	63.999	0.063	0.000%
22	-40.824	-85.332	-23.583	40.824	85.332	23.583	0.000%
23	-40.824	-63.999	-23.583	40.824	63.999	23.583	0.000%
24	-23.547	-85.332	-40.682	23.547	85.332	40.682	0.000%
25	-23.547	-63.999	-40.682	23.547	63.999	40.682	0.000%
26	0.000	-120.280	0.000	-0.000	120.280	0.000	0.000%
27	-0.011	-120.280	-10.377	0.011	120.280	10.377	0.000%
28	4.662	-120.280	-8.074	-4.662	120.280	8.074	0.000%
29	7.818	-120.280	-4.499	-7.818	120.280	4.499	0.000%
30	9.460	-120.280	0.011	-9.460	120.280	-0.011	0.000%
31	9.777	-120.280	5.644	-9.777	120.280	-5.644	0.000%
32	5.557	-120.280	9.601	-5.557	120.280	-9.601	0.000%
33	0.011	-120.280	10.377	-0.011	120.280	-10.377	0.000%
34	-4.662	-120.280	8.074	4.662	120.280	-8.074	0.000%
35	-7.818	-120.280	4.499	7.818	120.280	-4.499	0.000%
36	-9.460	-120.280	-0.011	9.460	120.280	0.011	0.000%
37	-9.777	-120.280	-5.644	9.777	120.280	5.644	0.000%
38	-5.557	-120.280	-9.601	5.557	120.280	9.601	0.000%
39	-0.015	-71.110	-10.974	0.015	71.110	10.974	0.000%
40	4.760	-71.110	-8.250	-4.760	71.110	8.250	0.000%
41	7.706	-71.110	-4.435	-7.706	71.110	4.435	0.000%
42	9.548	-71.110	0.015	-9.548	71.110	-0.015	0.000%
43	10.113	-71.110	5.842	-10.113	71.110	-5.842	0.000%
44	5.833	-71.110	10.078	-5.833	71.110	-10.078	0.000%
45	0.015	-71.110	10.974	-0.015	71.110	-10.974	0.000%
46	-4.760	-71.110	8.250	4.760	71.110	-8.250	0.000%
47	-7.706	-71.110	4.435	7.706	71.110	-4.435	0.000%
48	-9.548	-71.110	-0.015	9.548	71.110	0.015	0.000%
49	-10.113	-71.110	-5.842	10.113	71.110	5.842	0.000%
50	-5.833	-71.110	-10.078	5.833	71.110	10.078	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00001018
2	Yes	6	0.00000001	0.00007869
3	Yes	5	0.00000001	0.00061536
4	Yes	7	0.00000001	0.00008661
5	Yes	6	0.00000001	0.00050696
6	Yes	7	0.00000001	0.00008277
7	Yes	6	0.00000001	0.00048531
8	Yes	5	0.00000001	0.00048826
9	Yes	5	0.00000001	0.00018757
10	Yes	7	0.00000001	0.00011020
11	Yes	6	0.00000001	0.00062959
12	Yes	7	0.00000001	0.00011656
13	Yes	6	0.00000001	0.00066879
14	Yes	6	0.00000001	0.00009847
15	Yes	5	0.00000001	0.00077483
16	Yes	7	0.00000001	0.00008245
17	Yes	6	0.00000001	0.00048308
18	Yes	7	0.00000001	0.00008333
19	Yes	6	0.00000001	0.00049029
20	Yes	5	0.00000001	0.00065299
21	Yes	5	0.00000001	0.00027845
22	Yes	7	0.00000001	0.00011939
23	Yes	6	0.00000001	0.00068385
24	Yes	7	0.00000001	0.00010782
25	Yes	6	0.00000001	0.00061652
26	Yes	5	0.00000001	0.00019791
27	Yes	7	0.00000001	0.00011224
28	Yes	7	0.00000001	0.00012142
29	Yes	7	0.00000001	0.00012125
30	Yes	7	0.00000001	0.00010786
31	Yes	7	0.00000001	0.00013828
32	Yes	7	0.00000001	0.00013493
33	Yes	7	0.00000001	0.00010940
34	Yes	7	0.00000001	0.00011499
35	Yes	7	0.00000001	0.00011501
36	Yes	6	0.00000001	0.00097718
37	Yes	7	0.00000001	0.00013850
38	Yes	7	0.00000001	0.00013363
39	Yes	5	0.00000001	0.00012074
40	Yes	5	0.00000001	0.00041269
41	Yes	5	0.00000001	0.00037461
42	Yes	5	0.00000001	0.00008779
43	Yes	5	0.00000001	0.00053386
44	Yes	5	0.00000001	0.00062721
45	Yes	5	0.00000001	0.00012251
46	Yes	5	0.00000001	0.00035811
47	Yes	5	0.00000001	0.00037453
48	Yes	5	0.00000001	0.00008758
49	Yes	5	0.00000001	0.00064956
50	Yes	5	0.00000001	0.00051721

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160.333 - 155.333	26.684	43	1.585	0.007
L2	155.333 - 150.333	25.025	43	1.584	0.007
L3	150.333 - 146.833	23.375	43	1.564	0.006
L4	146.833 - 146.333	22.239	43	1.534	0.005
L5	146.333 - 141.333	22.079	43	1.532	0.005
L6	141.333 - 136.333	20.493	43	1.494	0.005
L7	136.333 - 131.333	18.956	43	1.441	0.004
L8	131.333 - 126.333	17.481	43	1.374	0.004
L9	126.333 - 121.333	16.083	43	1.293	0.003
L10	121.333 - 120.083	14.777	43	1.199	0.003
L11	120.083 - 119.833	14.466	43	1.174	0.002
L12	119.833 - 117.5	14.405	43	1.171	0.002
L13	117.5 - 117.25	13.839	43	1.146	0.002
L14	117.25 - 115.5	13.779	43	1.143	0.002
L15	115.5 - 115.25	13.364	43	1.123	0.002
L16	115.25 - 110.25	13.305	43	1.121	0.002
L17	110.25 - 104.083	12.155	43	1.075	0.002
L18	107.82 - 102.82	11.614	43	1.050	0.002
L19	102.82 - 100.5	10.529	43	1.018	0.002
L20	100.5 - 100.25	10.040	43	0.993	0.002
L21	100.25 - 98.5	9.988	43	0.990	0.002
L22	98.5 - 98.25	9.629	43	0.970	0.002
L23	98.25 - 93.25	9.578	43	0.967	0.002
L24	93.25 - 90.5	8.597	43	0.908	0.001
L25	90.5 - 90.25	8.083	43	0.874	0.001
L26	90.25 - 85.25	8.038	43	0.871	0.001
L27	85.25 - 83.5	7.156	43	0.812	0.001
L28	83.5 - 83.25	6.863	43	0.791	0.001
L29	83.25 - 80.75	6.821	43	0.789	0.001
L30	80.75 - 80.5	6.415	43	0.765	0.001
L31	80.5 - 80.25	6.375	43	0.763	0.001
L32	80.25 - 77.5	6.335	43	0.761	0.001
L33	77.5 - 77.25	5.903	43	0.737	0.001
L34	77.25 - 68.82	5.865	43	0.734	0.001
L35	73.291 - 68.291	5.276	43	0.686	0.001
L36	68.291 - 64.25	4.574	43	0.653	0.001
L37	64.25 - 64	4.042	43	0.604	0.001
L38	64 - 60.5	4.011	43	0.601	0.001
L39	60.5 - 60.25	3.583	43	0.565	0.001
L40	60.25 - 60.083	3.554	43	0.562	0.001
L41	60.083 - 59.833	3.534	43	0.561	0.001
L42	59.833 - 59.083	3.505	43	0.558	0.001
L43	59.083 - 58.833	3.418	43	0.551	0.001
L44	58.833 - 55.4167	3.389	43	0.549	0.001
L45	55.4167 - 55.1667	3.007	43	0.519	0.001
L46	55.1667 - 54.75	2.979	43	0.517	0.001
L47	54.75 - 54.5	2.935	43	0.513	0.001
L48	54.5 - 49.5	2.908	43	0.510	0.001
L49	49.5 - 44.5	2.402	43	0.455	0.001
L50	44.5 - 41.25	1.955	43	0.400	0.000
L51	41.25 - 41	1.695	43	0.363	0.000
L52	41 - 34.291	1.676	43	0.361	0.000
L53	39 - 33.291	1.529	43	0.340	0.000
L54	33.291 - 31.5	1.138	43	0.311	0.000
L55	31.5 - 31.25	1.024	43	0.297	0.000
L56	31.25 - 30.5	1.009	43	0.295	0.000
L57	30.5 - 30.25	0.963	43	0.289	0.000
L58	30.25 - 25.75	0.948	43	0.287	0.000
L59	25.75 - 25.5	0.696	43	0.248	0.000
L60	25.5 - 24.6667	0.683	43	0.246	0.000
L61	24.6667 - 24.4167	0.641	43	0.239	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L62	24.4167 - 24	0.628	43	0.236	0.000
L63	24 - 23.75	0.608	43	0.232	0.000
L64	23.75 - 18.75	0.596	43	0.230	0.000
L65	18.75 - 14.083	0.379	43	0.185	0.000
L66	14.083 - 13.817	0.218	43	0.143	0.000
L67	13.817 - 13.667	0.211	43	0.140	0.000
L68	13.667 - 10.5	0.206	43	0.139	0.000
L69	10.5 - 10.25	0.124	43	0.110	0.000
L70	10.25 - 5.25	0.118	43	0.107	0.000
L71	5.25 - 2.9	0.031	43	0.058	0.000
L72	2.9 - 2.65	0.009	43	0.031	0.000
L73	2.65 - 2.5	0.008	43	0.028	0.000
L74	2.5 - 2.25	0.007	43	0.026	0.000
L75	2.25 - 1.917	0.006	43	0.024	0.000
L76	1.917 - 1.667	0.004	43	0.021	0.000
L77	1.667 - 0	0.003	43	0.018	0.000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.000	RRUS-32 B30	43	25.246	1.585	0.007	31967
146.000	AIR6449 B41_T-MOBILE w/ Mount Pipe	43	21.972	1.531	0.005	7750
139.000	APXV18-206517S-C	43	19.769	1.470	0.005	5429
132.000	BXA-80080-6CF-EDIN-X w/ Mount Pipe	43	17.673	1.384	0.004	4002
114.000	MX08FRO665-21 w/ Mount Pipe	43	13.013	1.110	0.002	5858
101.000	58532A	43	10.145	0.999	0.002	5474

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	160.333 - 155.333	108.312	10	6.432	0.029
L2	155.333 - 150.333	101.602	10	6.428	0.029
L3	150.333 - 146.833	94.927	10	6.350	0.024
L4	146.833 - 146.333	90.328	10	6.232	0.021
L5	146.333 - 141.333	89.678	10	6.224	0.021
L6	141.333 - 136.333	83.255	10	6.072	0.019
L7	136.333 - 131.333	77.023	10	5.858	0.017
L8	131.333 - 126.333	71.043	10	5.589	0.014
L9	126.333 - 121.333	65.371	10	5.261	0.012
L10	121.333 - 120.083	60.070	10	4.879	0.010
L11	120.083 - 119.833	58.808	10	4.777	0.010
L12	119.833 - 117.5	58.559	10	4.766	0.010
L13	117.5 - 117.25	56.260	10	4.661	0.009
L14	117.25 - 115.5	56.017	10	4.650	0.009
L15	115.5 - 115.25	54.330	10	4.572	0.009
L16	115.25 - 110.25	54.091	10	4.563	0.009

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L17	110.25 - 104.083	49.419	10	4.373	0.008
L18	107.82 - 102.82	47.222	10	4.274	0.008
L19	102.82 - 100.5	42.811	10	4.143	0.007
L20	100.5 - 100.25	40.825	10	4.042	0.007
L21	100.25 - 98.5	40.614	10	4.030	0.007
L22	98.5 - 98.25	39.154	10	3.947	0.007
L23	98.25 - 93.25	38.948	10	3.935	0.007
L24	93.25 - 90.5	34.957	10	3.695	0.006
L25	90.5 - 90.25	32.871	10	3.558	0.006
L26	90.25 - 85.25	32.685	10	3.546	0.005
L27	85.25 - 83.5	29.101	10	3.304	0.005
L28	83.5 - 83.25	27.907	10	3.218	0.005
L29	83.25 - 80.75	27.739	10	3.209	0.005
L30	80.75 - 80.5	26.085	10	3.114	0.005
L31	80.5 - 80.25	25.922	10	3.105	0.004
L32	80.25 - 77.5	25.760	10	3.097	0.004
L33	77.5 - 77.25	24.006	10	2.998	0.004
L34	77.25 - 68.82	23.850	10	2.986	0.004
L35	73.291 - 68.291	21.456	10	2.791	0.004
L36	68.291 - 64.25	18.600	10	2.656	0.004
L37	64.25 - 64	16.437	10	2.457	0.003
L38	64 - 60.5	16.309	10	2.447	0.003
L39	60.5 - 60.25	14.570	10	2.298	0.003
L40	60.25 - 60.083	14.450	10	2.288	0.003
L41	60.083 - 59.833	14.371	10	2.281	0.003
L42	59.833 - 59.083	14.251	10	2.272	0.003
L43	59.083 - 58.833	13.897	10	2.244	0.003
L44	58.833 - 55.4167	13.780	10	2.235	0.003
L45	55.4167 - 55.1667	12.226	10	2.111	0.003
L46	55.1667 - 54.75	12.115	10	2.102	0.003
L47	54.75 - 54.5	11.933	10	2.087	0.003
L48	54.5 - 49.5	11.824	10	2.076	0.003
L49	49.5 - 44.5	9.768	10	1.852	0.002
L50	44.5 - 41.25	7.948	10	1.625	0.002
L51	41.25 - 41	6.892	10	1.477	0.002
L52	41 - 34.291	6.815	10	1.466	0.002
L53	39 - 33.291	6.218	10	1.384	0.002
L54	33.291 - 31.5	4.628	10	1.265	0.001
L55	31.5 - 31.25	4.164	10	1.206	0.001
L56	31.25 - 30.5	4.101	10	1.198	0.001
L57	30.5 - 30.25	3.915	10	1.174	0.001
L58	30.25 - 25.75	3.854	10	1.165	0.001
L59	25.75 - 25.5	2.829	10	1.010	0.001
L60	25.5 - 24.6667	2.777	10	1.001	0.001
L61	24.6667 - 24.4167	2.605	10	0.970	0.001
L62	24.4167 - 24	2.554	10	0.960	0.001
L63	24 - 23.75	2.471	10	0.944	0.001
L64	23.75 - 18.75	2.422	10	0.934	0.001
L65	18.75 - 14.083	1.539	10	0.752	0.001
L66	14.083 - 13.817	0.888	10	0.580	0.001
L67	13.817 - 13.667	0.856	10	0.570	0.001
L68	13.667 - 10.5	0.838	10	0.565	0.001
L69	10.5 - 10.25	0.503	10	0.446	0.000
L70	10.25 - 5.25	0.480	10	0.436	0.000
L71	5.25 - 2.9	0.128	10	0.237	0.000
L72	2.9 - 2.65	0.038	10	0.126	0.000
L73	2.65 - 2.5	0.032	10	0.114	0.000
L74	2.5 - 2.25	0.029	10	0.107	0.000
L75	2.25 - 1.917	0.023	10	0.098	0.000
L76	1.917 - 1.667	0.017	10	0.084	0.000
L77	1.667 - 0	0.013	10	0.073	0.000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
156.000	RRUS-32 B30	10	102.496	6.431	0.029	8667
146.000	AIR6449 B41_T-MOBILE w/ Mount Pipe	10	89.246	6.219	0.021	1994
139.000	APXV18-206517S-C	10	80.320	5.977	0.018	1380
132.000	BXA-80080-6CF-EDIN-X w/ Mount Pipe	10	71.824	5.629	0.015	1011
114.000	MX08FRO665-21 w/ Mount Pipe	10	52.905	4.519	0.008	1462
101.000	58532A	10	41.249	4.066	0.007	1360

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	160.333 - 155.333 (1)	TP16x16x0.375	5.000	0.000	0.0	18.408	-4.980	579.845	0.009
L2	155.333 - 150.333 (2)	TP16x16x0.375	5.000	0.000	0.0	18.408	-5.419	579.845	0.009
L3	150.333 - 146.833 (3)	TP16x16x0.375	3.500	0.000	0.0	18.408	-5.737	579.845	0.010
L4	146.833 - 146.333 (4)	TP22x22x0.375	0.500	0.000	0.0	25.476	-5.797	802.505	0.007
L5	146.333 - 141.333 (5)	TP22.924x22x0.25	5.000	0.000	0.0	18.253	-10.799	985.640	0.011
L6	141.333 - 136.333 (6)	TP23.848x22.924x0.25	5.000	0.000	0.0	18.996	-11.625	1025.810	0.011
L7	136.333 - 131.333 (7)	TP24.772x23.848x0.25	5.000	0.000	0.0	19.740	-16.746	1065.970	0.016
L8	131.333 - 126.333 (8)	TP25.696x24.772x0.25	5.000	0.000	0.0	20.484	-17.569	1106.140	0.016
L9	126.333 - 121.333 (9)	TP26.62x25.696x0.25	5.000	0.000	0.0	21.228	-18.438	1146.310	0.016
L10	121.333 - 120.083 (10)	TP26.851x26.62x0.25	1.250	0.000	0.0	21.414	-18.657	1156.350	0.016
L11	120.083 - 119.833 (11)	TP26.897x26.851x0.488	0.250	0.000	0.0	41.457	-18.735	2238.670	0.008
L12	119.833 - 117.5 (12)	TP27.328x26.897x0.488	2.333	0.000	0.0	42.134	-19.282	2275.220	0.008
L13	117.5 - 117.25 (13)	TP27.375x27.328x0.5	0.250	0.000	0.0	43.268	-19.356	2336.480	0.008
L14	117.25 - 115.5 (14)	TP27.698x27.375x0.5	1.750	0.000	0.0	43.789	-19.794	2364.600	0.008

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L15	115.5 - 115.25 (15)	TP27.744x27.698x0.663	0.250	0.000	0.0	57.772	-19.882	3119.700	0.006
L16	115.25 - 110.25 (16)	TP28.668x27.744x0.65	5.000	0.000	0.0	58.642	-24.342	3166.690	0.008
L17	110.25 - 104.083 (17)	TP29.808x28.668x0.638	6.167	0.000	0.0	58.462	-25.079	3156.950	0.008
L18	104.083 - 102.82 (18)	TP29.541x28.617x0.7	5.000	0.000	0.0	65.007	-27.526	3510.370	0.008
L19	102.82 - 100.5 (19)	TP29.969x29.541x0.688	2.320	0.000	0.0	64.822	-28.376	3500.390	0.008
L20	100.5 - 100.25 (20)	TP30.015x29.969x0.638	0.250	0.000	0.0	60.305	-28.469	3256.480	0.009
L21	100.25 - 98.5 (21)	TP30.338x30.015x0.625	1.750	0.000	0.0	59.798	-29.027	3229.100	0.009
L22	98.5 - 98.25 (22)	TP30.385x30.338x0.663	0.250	0.000	0.0	63.405	-29.132	3423.850	0.009
L23	98.25 - 93.25 (23)	TP31.308x30.385x0.65	5.000	0.000	0.0	64.167	-30.848	3465.010	0.009
L24	93.25 - 90.5 (24)	TP31.816x31.308x0.638	2.750	0.000	0.0	64.001	-31.808	3456.050	0.009
L25	90.5 - 90.25 (25)	TP31.862x31.816x0.688	0.250	0.000	0.0	69.012	-31.921	3726.650	0.009
L26	90.25 - 85.25 (26)	TP32.785x31.862x0.675	5.000	0.000	0.0	69.791	-33.866	3768.730	0.009
L27	85.25 - 83.5 (27)	TP33.108x32.785x0.663	1.750	0.000	0.0	69.215	-34.548	3737.600	0.009
L28	83.5 - 83.25 (28)	TP33.154x33.108x0.913	0.250	0.000	0.0	94.735	-34.687	5115.680	0.007
L29	83.25 - 80.75 (29)	TP33.616x33.154x0.888	2.500	0.000	0.0	93.530	-35.838	5050.620	0.007
L30	80.75 - 80.5 (30)	TP33.662x33.616x1.063	0.250	0.000	0.0	111.532	-35.977	6022.710	0.006
L31	80.5 - 80.25 (31)	TP33.708x33.662x0.975	0.250	0.000	0.0	102.766	-36.102	5549.390	0.007
L32	80.25 - 77.5 (32)	TP34.216x33.708x0.963	2.750	0.000	0.0	103.061	-37.467	5565.320	0.007
L33	77.5 - 77.25 (33)	TP34.262x34.216x0.688	0.250	0.000	0.0	74.326	-37.588	4013.620	0.009
L34	77.25 - 68.82 (34)	TP35.819x34.262x0.688	8.430	0.000	0.0	75.945	-39.312	4101.010	0.010
L35	68.82 - 68.291 (35)	TP35.291x34.368x0.75	5.000	0.000	0.0	83.418	-43.165	4504.550	0.010
L36	68.291 - 64.25 (36)	TP36.037x35.291x0.738	4.041	0.000	0.0	83.828	-45.077	4526.740	0.010
L37	64.25 - 64 (37)	TP36.084x36.037x0.875	0.250	0.000	0.0	99.200	-45.216	5356.810	0.008
L38	64 - 60.5 (38)	TP36.73x36.084x0.863	3.500	0.000	0.0	99.612	-46.974	5379.060	0.009
L39	60.5 - 60.25 (39)	TP36.776x36.73x0.925	0.250	0.000	0.0	106.782	-47.121	5766.210	0.008
L40	60.25 - 60.083 (40)	TP36.807x36.776x0.925	0.167	0.000	0.0	106.874	-47.211	5771.170	0.008
L41	60.083 - 59.833 (41)	TP36.853x36.807x0.975	0.250	0.000	0.0	112.638	-47.348	6082.470	0.008
L42	59.833 - 59.083 (42)	TP36.991x36.853x0.975	0.750	0.000	0.0	113.073	-47.755	6105.950	0.008
L43	59.083 - 58.833 (43)	TP37.037x36.991x1.05	0.250	0.000	0.0	121.673	-47.907	6570.370	0.007
L44	58.833 - 55.4167 (44)	TP37.668x37.037x1.025	3.416	0.000	0.0	120.941	-49.892	6530.790	0.008
L45	55.4167 - 55.1667 (45)	TP37.714x37.668x1.025	0.250	0.000	0.0	121.093	-50.050	6539.010	0.008

Section No.	Elevation ft	Size	L ft	L_u ft	Kl/r	A in^2	P_u K	ϕP_n K	Ratio $\frac{P_u}{\phi P_n}$
L46	55.1667 - 54.75 (46)	TP37.791x37.714x1.025	0.417	0.000	0.0	121.347	-50.293	6552.720	0.008
L47	54.75 - 54.5 (47)	TP37.837x37.791x0.825	0.250	0.000	0.0	98.323	-50.425	5309.450	0.009
L48	54.5 - 49.5 (48)	TP38.76x37.837x0.813	5.000	0.000	0.0	99.281	-53.024	5361.180	0.010
L49	49.5 - 44.5 (49)	TP39.683x38.76x0.8	5.000	0.000	0.0	100.164	-55.666	5408.830	0.010
L50	44.5 - 41.25 (50)	TP40.283x39.683x0.788	3.250	0.000	0.0	100.152	-57.403	5408.180	0.011
L51	41.25 - 41 (51)	TP40.329x40.283x0.875	0.250	0.000	0.0	111.163	-57.561	6002.800	0.010
L52	41 - 34.291 (52)	TP41.568x40.329x0.875	6.709	0.000	0.0	112.203	-58.708	6058.980	0.010
L53	34.291 - 33.291 (53)	TP40.996x39.949x1.175	5.709	0.000	0.0	150.661	-64.765	8135.690	0.008
L54	33.291 - 31.5 (54)	TP41.324x40.996x1.175	1.791	0.000	0.0	151.904	-65.968	8202.790	0.008
L55	31.5 - 31.25 (55)	TP41.37x41.324x1.175	0.250	0.000	0.0	152.077	-66.158	8212.160	0.008
L56	31.25 - 30.5 (56)	TP41.507x41.37x1.175	0.750	0.000	0.0	152.597	-66.666	8240.250	0.008
L57	30.5 - 30.25 (57)	TP41.553x41.507x1.125	0.250	0.000	0.0	146.451	-66.841	7908.350	0.008
L58	30.25 - 25.75 (58)	TP42.378x41.553x1.1	4.500	0.000	0.0	146.208	-69.860	7895.220	0.009
L59	25.75 - 25.5 (59)	TP42.424x42.378x1.05	0.250	0.000	0.0	139.886	-70.036	7553.840	0.009
L60	25.5 - 24.6667 (60)	TP42.577x42.424x1.038	0.833	0.000	0.0	138.773	-70.578	7493.740	0.009
L61	24.6667 - 24.4167 (61)	TP42.623x42.577x0.925	0.250	0.000	0.0	124.197	-70.730	6706.630	0.011
L62	24.4167 - 24 (62)	TP42.699x42.623x0.925	0.417	0.000	0.0	124.424	-70.968	6718.920	0.011
L63	24 - 23.75 (63)	TP42.745x42.699x1.025	0.250	0.000	0.0	137.697	-71.121	7435.640	0.010
L64	23.75 - 18.75 (64)	TP43.662x42.745x1.025	5.000	0.000	0.0	140.723	-74.118	7599.040	0.010
L65	18.75 - 14.083 (65)	TP44.518x43.662x1	4.667	0.000	0.0	140.127	-76.951	7566.850	0.010
L66	14.083 - 13.817 (66)	TP44.566x44.518x0.975	0.266	0.000	0.0	136.855	-77.130	7390.180	0.010
L67	13.817 - 13.667 (67)	TP44.594x44.566x0.975	0.150	0.000	0.0	136.942	-77.225	7394.850	0.010
L68	13.667 - 10.5 (68)	TP45.175x44.594x0.975	3.167	0.000	0.0	138.765	-79.189	7493.300	0.011
L69	10.5 - 10.25 (69)	TP45.22x45.175x0.9	0.250	0.000	0.0	128.441	-79.354	6935.800	0.011
L70	10.25 - 5.25 (70)	TP46.137x45.22x0.9	5.000	0.000	0.0	131.098	-82.400	7079.280	0.012
L71	5.25 - 2.9 (71)	TP46.568x46.137x0.75	2.350	0.000	0.0	110.651	-83.692	5975.160	0.014
L72	2.9 - 2.65 (72)	TP46.614x46.568x0.75	0.250	0.000	0.0	110.762	-83.848	5981.130	0.014
L73	2.65 - 2.5 (73)	TP46.642x46.614x0.75	0.150	0.000	0.0	110.828	-83.934	5984.720	0.014
L74	2.5 - 2.25 (74)	TP46.687x46.642x0.9	0.250	0.000	0.0	132.692	-84.078	7165.370	0.012
L75	2.25 - 1.917 (75)	TP46.748x46.687x0.9	0.333	0.000	0.0	132.869	-84.270	7174.920	0.012
L76	1.917 - 1.667 (76)	TP46.794x46.748x0.8	0.250	0.000	0.0	118.481	-84.408	6398.000	0.013
L77	1.667 - 0 (77)	TP47.1x46.794x0.788	1.667	0.000	0.0	117.437	-85.302	6341.590	0.013

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	160.333 - 155.333 (1)	TP16x16x0.375	11.396	240.372	0.047	0.000	240.372	0.000
L2	155.333 - 150.333 (2)	TP16x16x0.375	51.345	240.372	0.214	0.000	240.372	0.000
L3	150.333 - 146.833 (3)	TP16x16x0.375	81.178	240.372	0.338	0.000	240.372	0.000
L4	146.833 - 146.333 (4)	TP22x22x0.375	85.570	460.380	0.186	0.000	460.380	0.000
L5	146.333 - 141.333 (5)	TP22.924x22x0.25	156.032	561.217	0.278	0.000	561.217	0.000
L6	141.333 - 136.333 (6)	TP23.848x22.924x0.25	230.536	600.296	0.384	0.000	600.296	0.000
L7	136.333 - 131.333 (7)	TP24.772x23.848x0.25	316.466	639.998	0.494	0.000	639.998	0.000
L8	131.333 - 126.333 (8)	TP25.696x24.772x0.25	424.979	680.253	0.625	0.000	680.253	0.000
L9	126.333 - 121.333 (9)	TP26.62x25.696x0.25	537.341	720.983	0.745	0.000	720.983	0.000
L10	121.333 - 120.083 (10)	TP26.851x26.62x0.25	566.035	731.232	0.774	0.000	731.232	0.000
L11	120.083 - 119.833 (11)	TP26.897x26.851x0.488	571.803	1501.958	0.381	0.000	1501.958	0.000
L12	119.833 - 117.5 (12)	TP27.328x26.897x0.488	626.173	1551.850	0.404	0.000	1551.850	0.000
L13	117.5 - 117.25 (13)	TP27.375x27.328x0.5	632.058	1594.942	0.396	0.000	1594.942	0.000
L14	117.25 - 115.5 (14)	TP27.698x27.375x0.5	673.565	1633.917	0.412	0.000	1633.917	0.000
L15	115.5 - 115.25 (15)	TP27.744x27.698x0.663	679.541	2133.733	0.318	0.000	2133.733	0.000
L16	115.25 - 110.25 (16)	TP28.668x27.744x0.65	813.508	2243.533	0.363	0.000	2243.533	0.000
L17	110.25 - 104.083 (17)	TP29.808x28.668x0.638	882.283	2275.292	0.388	0.000	2275.292	0.000
L18	104.083 - 102.82 (18)	TP29.541x28.617x0.7	1027.583	2557.342	0.402	0.000	2557.342	0.000
L19	102.82 - 100.5 (19)	TP29.969x29.541x0.688	1096.608	2591.058	0.423	0.000	2591.058	0.000
L20	100.5 - 100.25 (20)	TP30.015x29.969x0.638	1104.125	2422.642	0.456	0.000	2422.642	0.000
L21	100.25 - 98.5 (21)	TP30.338x30.015x0.625	1157.100	2431.300	0.476	0.000	2431.300	0.000
L22	98.5 - 98.25 (22)	TP30.385x30.338x0.663	1164.717	2575.517	0.452	0.000	2575.517	0.000
L23	98.25 - 93.25 (23)	TP31.308x30.385x0.65	1319.283	2691.408	0.490	0.000	2691.408	0.000
L24	93.25 - 90.5 (24)	TP31.816x31.308x0.638	1406.175	2732.025	0.515	0.000	2732.025	0.000
L25	90.5 - 90.25 (25)	TP31.862x31.816x0.688	1414.142	2940.950	0.481	0.000	2940.950	0.000
L26	90.25 - 85.25 (26)	TP32.785x31.862x0.675	1575.783	3066.525	0.514	0.000	3066.525	0.000
L27	85.25 - 83.5 (27)	TP33.108x32.785x0.663	1633.425	3074.808	0.531	0.000	3074.808	0.000
L28	83.5 - 83.25 (28)	TP33.154x33.108x0.913	1641.700	4150.008	0.396	0.000	4150.008	0.000
L29	83.25 - 80.75 (29)	TP33.616x33.154x0.888	1725.175	4163.867	0.414	0.000	4163.867	0.000
L30	80.75 - 80.5	TP33.662x33.616x1.063	1733.583	4919.517	0.352	0.000	4919.517	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 $\frac{M_{uy}}{\phi M_{ny}}$
	(30)							
L31	80.5 - 80.25 (31)	TP33.708x33.662x0.975	1742.008	4563.883	0.382	0.000	4563.883	0.000
L32	80.25 - 77.5 (32)	TP34.216x33.708x0.963	1835.508	4653.542	0.394	0.000	4653.542	0.000
L33	77.5 - 77.25 (33)	TP34.262x34.216x0.688	1844.083	3416.592	0.540	0.000	3416.592	0.000
L34	77.25 - 68.82 (34)	TP35.819x34.262x0.688	1981.350	3568.517	0.555	0.000	3568.517	0.000
L35	68.82 - 68.291 (35)	TP35.291x34.368x0.75	2159.225	3940.108	0.548	0.000	3940.108	0.000
L36	68.291 - 64.25 (36)	TP36.037x35.291x0.738	2306.533	4049.717	0.570	0.000	4049.717	0.000
L37	64.25 - 64 (37)	TP36.084x36.037x0.875	2315.742	4761.442	0.486	0.000	4761.442	0.000
L38	64 - 60.5 (38)	TP36.73x36.084x0.863	2445.842	4874.483	0.502	0.000	4874.483	0.000
L39	60.5 - 60.25 (39)	TP36.776x36.73x0.925	2455.217	5214.017	0.471	0.000	5214.017	0.000
L40	60.25 - 60.083 (40)	TP36.807x36.776x0.925	2461.483	5223.100	0.471	0.000	5223.100	0.000
L41	60.083 - 59.833 (41)	TP36.853x36.807x0.975	2470.883	5496.767	0.450	0.000	5496.767	0.000
L42	59.833 - 59.083 (42)	TP36.991x36.853x0.975	2499.133	5539.833	0.451	0.000	5539.833	0.000
L43	59.083 - 58.833 (43)	TP37.037x36.991x1.05	2508.575	5944.233	0.422	0.000	5944.233	0.000
L44	58.833 - 55.4167 (44)	TP37.668x37.037x1.025	2638.700	6023.125	0.438	0.000	6023.125	0.000
L45	55.4167 - 55.1667 (45)	TP37.714x37.668x1.025	2648.308	6038.508	0.439	0.000	6038.508	0.000
L46	55.1667 - 54.75 (46)	TP37.791x37.714x1.025	2664.333	6064.200	0.439	0.000	6064.200	0.000
L47	54.75 - 54.5 (47)	TP37.837x37.791x0.825	2673.967	4973.558	0.538	0.000	4973.558	0.000
L48	54.5 - 49.5 (48)	TP38.76x37.837x0.813	2868.800	5153.375	0.557	0.000	5153.375	0.000
L49	49.5 - 44.5 (49)	TP39.683x38.76x0.8	3067.717	5331.733	0.575	0.000	5331.733	0.000
L50	44.5 - 41.25 (50)	TP40.283x39.683x0.788	3199.175	5418.442	0.590	0.000	5418.442	0.000
L51	41.25 - 41 (51)	TP40.329x40.283x0.875	3209.358	5994.733	0.535	0.000	5994.733	0.000
L52	41 - 34.291 (52)	TP41.568x40.329x0.875	3291.192	6108.683	0.539	0.000	6108.683	0.000
L53	34.291 - 33.291 (53)	TP40.996x39.949x1.175	3528.925	8141.750	0.433	0.000	8141.750	0.000
L54	33.291 - 31.5 (54)	TP41.324x40.996x1.175	3604.725	8278.541	0.435	0.000	8278.541	0.000
L55	31.5 - 31.25 (55)	TP41.37x41.324x1.175	3615.342	8297.725	0.436	0.000	8297.725	0.000
L56	31.25 - 30.5 (56)	TP41.507x41.37x1.175	3647.275	8355.417	0.437	0.000	8355.417	0.000
L57	30.5 - 30.25 (57)	TP41.553x41.507x1.125	3657.933	8048.133	0.455	0.000	8048.133	0.000
L58	30.25 - 25.75 (58)	TP42.378x41.553x1.1	3851.617	8213.150	0.469	0.000	8213.150	0.000
L59	25.75 - 25.5 (59)	TP42.424x42.378x1.05	3862.483	7886.033	0.490	0.000	7886.033	0.000
L60	25.5 - 24.6667 (60)	TP42.577x42.424x1.038	3898.750	7857.617	0.496	0.000	7857.617	0.000
L61	24.6667 - 24.4167 (61)	TP42.623x42.577x0.925	3909.658	7078.383	0.552	0.000	7078.383	0.000
L62	24.4167 - 24 (62)	TP42.699x42.623x0.925	3927.858	7104.633	0.553	0.000	7104.633	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 $\frac{M_{uy}}{\phi M_{ny}}$
L63	24 - 23.75 (63)	TP42.745x42.699x1.025	3938.792	7833.708	0.503	0.000	7833.708	0.000
L64	23.75 - 18.75 (64)	TP43.662x42.745x1.025	4159.575	8186.017	0.508	0.000	8186.017	0.000
L65	18.75 - 14.083 (65)	TP44.518x43.662x1	4369.142	8328.350	0.525	0.000	8328.350	0.000
L66	14.083 - 13.817 (66)	TP44.566x44.518x0.975	4381.183	8152.583	0.537	0.000	8152.583	0.000
L67	13.817 - 13.667 (67)	TP44.594x44.566x0.975	4387.983	8162.983	0.538	0.000	8162.983	0.000
L68	13.667 - 10.5 (68)	TP45.175x44.594x0.975	4532.183	8384.167	0.541	0.000	8384.167	0.000
L69	10.5 - 10.25 (69)	TP45.22x45.175x0.9	4543.625	7795.000	0.583	0.000	7795.000	0.000
L70	10.25 - 5.25 (70)	TP46.137x45.22x0.9	4774.292	8124.117	0.588	0.000	8124.117	0.000
L71	5.25 - 2.9 (71)	TP46.568x46.137x0.75	4883.858	6969.183	0.701	0.000	6969.183	0.000
L72	2.9 - 2.65 (72)	TP46.614x46.568x0.75	4895.558	6983.241	0.701	0.000	6983.241	0.000
L73	2.65 - 2.5 (73)	TP46.642x46.614x0.75	4902.575	6991.691	0.701	0.000	6991.691	0.000
L74	2.5 - 2.25 (74)	TP46.687x46.642x0.9	4914.283	8324.850	0.590	0.000	8324.850	0.000
L75	2.25 - 1.917 (75)	TP46.748x46.687x0.9	4929.892	8347.250	0.591	0.000	8347.250	0.000
L76	1.917 - 1.667 (76)	TP46.794x46.748x0.8	4941.625	7483.500	0.660	0.000	7483.500	0.000
L77	1.667 - 0 (77)	TP47.1x46.794x0.788	5020.042	7471.700	0.672	0.000	7471.700	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	160.333 - 155.333 (1)	TP16x16x0.375	7.663	173.953	0.044	0.655	238.964	0.003
L2	155.333 - 150.333 (2)	TP16x16x0.375	8.298	173.953	0.048	0.804	238.964	0.003
L3	150.333 - 146.833 (3)	TP16x16x0.375	8.734	173.953	0.050	0.908	238.964	0.004
L4	146.833 - 146.333 (4)	TP22x22x0.375	8.810	240.752	0.037	0.928	457.725	0.002
L5	146.333 - 141.333 (5)	TP22.924x22x0.25	14.232	295.692	0.048	1.118	589.750	0.002
L6	141.333 - 136.333 (6)	TP23.848x22.924x0.25	15.510	307.742	0.050	1.312	638.797	0.002
L7	136.333 - 131.333 (7)	TP24.772x23.848x0.25	21.329	319.792	0.067	1.500	689.803	0.002
L8	131.333 - 126.333 (8)	TP25.696x24.772x0.25	22.102	331.843	0.067	1.641	742.768	0.002
L9	126.333 - 121.333 (9)	TP26.62x25.696x0.25	22.872	343.893	0.067	1.768	797.692	0.002
L10	121.333 - 120.083 (10)	TP26.851x26.62x0.25	23.072	346.905	0.067	1.793	811.728	0.002
L11	120.083 - 119.833 (11)	TP26.897x26.851x0.488	23.102	671.601	0.034	1.798	1560.183	0.001
L12	119.833 - 117.5 (12)	TP27.328x26.897x0.488	23.525	682.565	0.034	1.838	1611.542	0.001
L13	117.5 - 117.25 (13)	TP27.375x27.328x0.5	23.564	700.945	0.034	1.842	1657.017	0.001

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 $\frac{T_u}{\phi T_n}$
L14	117.25 - 115.5 (14)	TP27.698x27.375x0.5	23.895	709.380	0.034	1.873	1697.142	0.001
L15	115.5 - 115.25 (15)	TP27.744x27.698x0.663	23.931	935.910	0.026	1.877	2229.517	0.001
L16	115.25 - 110.25 (16)	TP28.668x27.744x0.65	28.089	950.006	0.030	2.154	2341.358	0.001
L17	110.25 - 104.083 (17)	TP29.808x28.668x0.638	28.541	947.086	0.030	2.199	2372.617	0.001
L18	104.083 - 102.82 (18)	TP29.541x28.617x0.7	29.577	1053.110	0.028	2.294	2671.650	0.001
L19	102.82 - 100.5 (19)	TP29.969x29.541x0.688	30.082	1050.120	0.029	2.535	2704.783	0.001
L20	100.5 - 100.25 (20)	TP30.015x29.969x0.638	30.119	976.943	0.031	2.540	2524.575	0.001
L21	100.25 - 98.5 (21)	TP30.338x30.015x0.625	30.451	968.731	0.031	2.577	2531.950	0.001
L22	98.5 - 98.25 (22)	TP30.385x30.338x0.663	30.478	1027.150	0.030	2.583	2685.433	0.001
L23	98.25 - 93.25 (23)	TP31.308x30.385x0.65	31.370	1039.500	0.030	2.697	2803.283	0.001
L24	93.25 - 90.5 (24)	TP31.816x31.308x0.638	31.857	1036.820	0.031	2.760	2843.492	0.001
L25	90.5 - 90.25 (25)	TP31.862x31.816x0.688	31.887	1118.000	0.029	2.766	3065.750	0.001
L26	90.25 - 85.25 (26)	TP32.785x31.862x0.675	32.791	1130.620	0.029	2.875	3193.433	0.001
L27	85.25 - 83.5 (27)	TP33.108x32.785x0.663	33.124	1121.280	0.030	2.898	3200.158	0.001
L28	83.5 - 83.25 (28)	TP33.154x33.108x0.913	33.150	1534.700	0.022	2.901	4352.558	0.001
L29	83.25 - 80.75 (29)	TP33.616x33.154x0.888	33.646	1515.190	0.022	2.932	4362.067	0.001
L30	80.75 - 80.5 (30)	TP33.662x33.616x1.063	33.685	1806.810	0.019	2.934	5181.158	0.001
L31	80.5 - 80.25 (31)	TP33.708x33.662x0.975	33.734	1664.820	0.020	2.938	4793.542	0.001
L32	80.25 - 77.5 (32)	TP34.216x33.708x0.963	34.286	1669.600	0.021	2.971	4883.725	0.001
L33	77.5 - 77.25 (33)	TP34.262x34.216x0.688	34.321	1204.090	0.029	2.974	3556.075	0.001
L34	77.25 - 68.82 (34)	TP35.819x34.262x0.688	35.054	1230.300	0.028	3.027	3712.625	0.001
L35	68.82 - 68.291 (35)	TP35.291x34.368x0.75	36.109	1351.360	0.027	3.095	4105.942	0.001
L36	68.291 - 64.25 (36)	TP36.037x35.291x0.738	36.830	1358.020	0.027	3.148	4216.775	0.001
L37	64.25 - 64 (37)	TP36.084x36.037x0.875	36.861	1607.040	0.023	3.151	4977.092	0.001
L38	64 - 60.5 (38)	TP36.73x36.084x0.863	37.506	1613.720	0.023	3.192	5091.250	0.001
L39	60.5 - 60.25 (39)	TP36.776x36.73x0.925	37.536	1729.860	0.022	3.195	5455.208	0.001
L40	60.25 - 60.083 (40)	TP36.807x36.776x0.925	37.565	1731.350	0.022	3.197	5464.592	0.001
L41	60.083 - 59.833 (41)	TP36.853x36.807x0.975	37.611	1824.740	0.021	3.200	5758.741	0.001
L42	59.833 - 59.083 (42)	TP36.991x36.853x0.975	37.752	1831.780	0.021	3.212	5803.267	0.001
L43	59.083 - 58.833 (43)	TP37.037x36.991x1.05	37.789	1971.110	0.019	3.216	6239.667	0.001
L44	58.833 - 55.4167 (44)	TP37.668x37.037x1.025	38.413	1959.240	0.020	3.271	6315.083	0.001

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 $\frac{T_u}{\phi T_n}$
L45	55.4167 - 55.1667 (45)	TP37.714x37.668x1.025	38.443	1961.700	0.020	3.274	6331.000	0.001
L46	55.1667 - 54.75 (46)	TP37.791x37.714x1.025	38.520	1965.820	0.020	3.281	6357.567	0.001
L47	54.75 - 54.5 (47)	TP37.837x37.791x0.825	38.560	1592.840	0.024	3.285	5185.817	0.001
L48	54.5 - 49.5 (48)	TP38.76x37.837x0.813	39.401	1608.350	0.024	3.372	5368.692	0.001
L49	49.5 - 44.5 (49)	TP39.683x38.76x0.8	40.209	1622.650	0.025	3.461	5549.942	0.001
L50	44.5 - 41.25 (50)	TP40.283x39.683x0.788	40.738	1622.460	0.025	3.503	5636.683	0.001
L51	41.25 - 41 (51)	TP40.329x40.283x0.875	40.760	1800.840	0.023	3.506	6249.875	0.001
L52	41 - 34.291 (52)	TP41.568x40.329x0.875	41.097	1817.690	0.023	3.529	6367.400	0.001
L53	34.291 - 33.291 (53)	TP40.996x39.949x1.175	42.196	2440.710	0.017	3.596	8549.167	0.000
L54	33.291 - 31.5 (54)	TP41.324x40.996x1.175	42.503	2460.840	0.017	3.615	8690.750	0.000
L55	31.5 - 31.25 (55)	TP41.37x41.324x1.175	42.514	2463.650	0.017	3.619	8710.583	0.000
L56	31.25 - 30.5 (56)	TP41.507x41.37x1.175	42.644	2472.080	0.017	3.631	8770.333	0.000
L57	30.5 - 30.25 (57)	TP41.553x41.507x1.125	42.675	2372.510	0.018	3.633	8437.083	0.000
L58	30.25 - 25.75 (58)	TP42.378x41.553x1.1	43.438	2368.570	0.018	3.693	8600.167	0.000
L59	25.75 - 25.5 (59)	TP42.424x42.378x1.05	43.462	2266.150	0.019	3.696	8247.417	0.000
L60	25.5 - 24.6667 (60)	TP42.577x42.424x1.038	43.619	2248.120	0.019	3.709	8214.483	0.000
L61	24.6667 - 24.4167 (61)	TP42.623x42.577x0.925	43.648	2011.990	0.022	3.713	7379.700	0.001
L62	24.4167 - 24 (62)	TP42.699x42.623x0.925	43.721	2015.680	0.022	3.719	7406.767	0.001
L63	24 - 23.75 (63)	TP42.745x42.699x1.025	43.758	2230.690	0.020	3.723	8186.233	0.000
L64	23.75 - 18.75 (64)	TP43.662x42.745x1.025	44.586	2279.710	0.020	3.806	8550.000	0.000
L65	18.75 - 14.083 (65)	TP44.518x43.662x1	45.278	2270.050	0.020	3.877	8689.667	0.000
L66	14.083 - 13.817 (66)	TP44.566x44.518x0.975	45.293	2217.060	0.020	3.880	8501.167	0.000
L67	13.817 - 13.667 (67)	TP44.594x44.566x0.975	45.312	2218.450	0.020	3.881	8511.917	0.000
L68	13.667 - 10.5 (68)	TP45.175x44.594x0.975	45.785	2247.990	0.020	3.907	8740.000	0.000
L69	10.5 - 10.25 (69)	TP45.22x45.175x0.9	45.800	2080.740	0.022	3.908	8111.891	0.000
L70	10.25 - 5.25 (70)	TP46.137x45.22x0.9	46.504	2123.780	0.022	3.939	8451.000	0.000
L71	5.25 - 2.9 (71)	TP46.568x46.137x0.75	46.810	1792.550	0.026	3.953	7224.517	0.001
L72	2.9 - 2.65 (72)	TP46.614x46.568x0.75	46.810	1794.340	0.026	3.955	7238.983	0.001
L73	2.65 - 2.5 (73)	TP46.642x46.614x0.75	46.825	1795.420	0.026	3.956	7247.667	0.001
L74	2.5 - 2.25 (74)	TP46.687x46.642x0.9	46.861	2149.610	0.022	3.957	8657.750	0.000
L75	2.25 - 1.917 (75)	TP46.748x46.687x0.9	46.909	2152.480	0.022	3.959	8680.833	0.000
L76	1.917 - 1.667 (76)	TP46.794x46.748x0.8	46.940	1919.400	0.024	3.961	7765.500	0.001
L77	1.667 - 0 (77)	TP47.1x46.794x0.788	47.201	1902.480	0.025	3.971	7750.283	0.001

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $P_u/\phi P_n$	Ratio $M_{ux}/\phi M_{nx}$	Ratio $M_{uy}/\phi M_{ny}$	Ratio $V_u/\phi V_n$	Ratio $T_u/\phi T_n$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	160.333 - 155.333 (1)	0.009	0.047	0.000	0.044	0.003	0.058 ✔	1.050	4.8.2 ✔
L2	155.333 - 150.333 (2)	0.009	0.214	0.000	0.048	0.003	0.226 ✔	1.050	4.8.2 ✔
L3	150.333 - 146.833 (3)	0.010	0.338	0.000	0.050	0.004	0.351 ✔	1.050	4.8.2 ✔
L4	146.833 - 146.333 (4)	0.007	0.186	0.000	0.037	0.002	0.195 ✔	1.050	4.8.2 ✔
L5	146.333 - 141.333 (5)	0.011	0.278	0.000	0.048	0.002	0.291 ✔	1.050	4.8.2 ✔
L6	141.333 - 136.333 (6)	0.011	0.384	0.000	0.050	0.002	0.398 ✔	1.050	4.8.2 ✔
L7	136.333 - 131.333 (7)	0.016	0.494	0.000	0.067	0.002	0.515 ✔	1.050	4.8.2 ✔
L8	131.333 - 126.333 (8)	0.016	0.625	0.000	0.067	0.002	0.645 ✔	1.050	4.8.2 ✔
L9	126.333 - 121.333 (9)	0.016	0.745	0.000	0.067	0.002	0.766 ✔	1.050	4.8.2 ✔
L10	121.333 - 120.083 (10)	0.016	0.774	0.000	0.067	0.002	0.795 ✔	1.050	4.8.2 ✔
L11	120.083 - 119.833 (11)	0.008	0.381	0.000	0.034	0.001	0.390 ✔	1.050	4.8.2 ✔
L12	119.833 - 117.5 (12)	0.008	0.404	0.000	0.034	0.001	0.413 ✔	1.050	4.8.2 ✔
L13	117.5 - 117.25 (13)	0.008	0.396	0.000	0.034	0.001	0.406 ✔	1.050	4.8.2 ✔
L14	117.25 - 115.5 (14)	0.008	0.412	0.000	0.034	0.001	0.422 ✔	1.050	4.8.2 ✔
L15	115.5 - 115.25 (15)	0.006	0.318	0.000	0.026	0.001	0.326 ✔	1.050	4.8.2 ✔
L16	115.25 - 110.25 (16)	0.008	0.363	0.000	0.030	0.001	0.371 ✔	1.050	4.8.2 ✔
L17	110.25 - 104.083 (17)	0.008	0.388	0.000	0.030	0.001	0.397 ✔	1.050	4.8.2 ✔
L18	104.083 - 102.82 (18)	0.008	0.402	0.000	0.028	0.001	0.410 ✔	1.050	4.8.2 ✔
L19	102.82 - 100.5 (19)	0.008	0.423	0.000	0.029	0.001	0.432 ✔	1.050	4.8.2 ✔
L20	100.5 - 100.25 (20)	0.009	0.456	0.000	0.031	0.001	0.466 ✔	1.050	4.8.2 ✔
L21	100.25 - 98.5 (21)	0.009	0.476	0.000	0.031	0.001	0.486 ✔	1.050	4.8.2 ✔
L22	98.5 - 98.25 (22)	0.009	0.452	0.000	0.030	0.001	0.462 ✔	1.050	4.8.2 ✔
L23	98.25 - 93.25 (23)	0.009	0.490	0.000	0.030	0.001	0.500 ✔	1.050	4.8.2 ✔
L24	93.25 - 90.5 (24)	0.009	0.515	0.000	0.031	0.001	0.525	1.050	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
L25	90.5 - 90.25 (25)	0.009	0.481	0.000	0.029	0.001	0.490	1.050	4.8.2
L26	90.25 - 85.25 (26)	0.009	0.514	0.000	0.029	0.001	0.524	1.050	4.8.2
L27	85.25 - 83.5 (27)	0.009	0.531	0.000	0.030	0.001	0.541	1.050	4.8.2
L28	83.5 - 83.25 (28)	0.007	0.396	0.000	0.022	0.001	0.403	1.050	4.8.2
L29	83.25 - 80.75 (29)	0.007	0.414	0.000	0.022	0.001	0.422	1.050	4.8.2
L30	80.75 - 80.5 (30)	0.006	0.352	0.000	0.019	0.001	0.359	1.050	4.8.2
L31	80.5 - 80.25 (31)	0.007	0.382	0.000	0.020	0.001	0.389	1.050	4.8.2
L32	80.25 - 77.5 (32)	0.007	0.394	0.000	0.021	0.001	0.402	1.050	4.8.2
L33	77.5 - 77.25 (33)	0.009	0.540	0.000	0.029	0.001	0.550	1.050	4.8.2
L34	77.25 - 68.82 (34)	0.010	0.555	0.000	0.028	0.001	0.566	1.050	4.8.2
L35	68.82 - 68.291 (35)	0.010	0.548	0.000	0.027	0.001	0.558	1.050	4.8.2
L36	68.291 - 64.25 (36)	0.010	0.570	0.000	0.027	0.001	0.580	1.050	4.8.2
L37	64.25 - 64 (37)	0.008	0.486	0.000	0.023	0.001	0.495	1.050	4.8.2
L38	64 - 60.5 (38)	0.009	0.502	0.000	0.023	0.001	0.511	1.050	4.8.2
L39	60.5 - 60.25 (39)	0.008	0.471	0.000	0.022	0.001	0.480	1.050	4.8.2
L40	60.25 - 60.083 (40)	0.008	0.471	0.000	0.022	0.001	0.480	1.050	4.8.2
L41	60.083 - 59.833 (41)	0.008	0.450	0.000	0.021	0.001	0.458	1.050	4.8.2
L42	59.833 - 59.083 (42)	0.008	0.451	0.000	0.021	0.001	0.459	1.050	4.8.2
L43	59.083 - 58.833 (43)	0.007	0.422	0.000	0.019	0.001	0.430	1.050	4.8.2
L44	58.833 - 55.4167 (44)	0.008	0.438	0.000	0.020	0.001	0.446	1.050	4.8.2
L45	55.4167 - 55.1667 (45)	0.008	0.439	0.000	0.020	0.001	0.447	1.050	4.8.2
L46	55.1667 - 54.75 (46)	0.008	0.439	0.000	0.020	0.001	0.447	1.050	4.8.2
L47	54.75 - 54.5 (47)	0.009	0.538	0.000	0.024	0.001	0.548	1.050	4.8.2
L48	54.5 - 49.5 (48)	0.010	0.557	0.000	0.024	0.001	0.567	1.050	4.8.2
L49	49.5 - 44.5 (49)	0.010	0.575	0.000	0.025	0.001	0.586	1.050	4.8.2
L50	44.5 - 41.25	0.011	0.590	0.000	0.025	0.001	0.602	1.050	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
	(50)						✔		
L51	41.25 - 41 (51)	0.010	0.535	0.000	0.023	0.001	0.545 ✔	1.050	4.8.2 ✔
L52	41 - 34.291 (52)	0.010	0.539	0.000	0.023	0.001	0.549 ✔	1.050	4.8.2 ✔
L53	34.291 - 33.291 (53)	0.008	0.433	0.000	0.017	0.000	0.442 ✔	1.050	4.8.2 ✔
L54	33.291 - 31.5 (54)	0.008	0.435	0.000	0.017	0.000	0.444 ✔	1.050	4.8.2 ✔
L55	31.5 - 31.25 (55)	0.008	0.436	0.000	0.017	0.000	0.444 ✔	1.050	4.8.2 ✔
L56	31.25 - 30.5 (56)	0.008	0.437	0.000	0.017	0.000	0.445 ✔	1.050	4.8.2 ✔
L57	30.5 - 30.25 (57)	0.008	0.455	0.000	0.018	0.000	0.463 ✔	1.050	4.8.2 ✔
L58	30.25 - 25.75 (58)	0.009	0.469	0.000	0.018	0.000	0.478 ✔	1.050	4.8.2 ✔
L59	25.75 - 25.5 (59)	0.009	0.490	0.000	0.019	0.000	0.499 ✔	1.050	4.8.2 ✔
L60	25.5 - 24.6667 (60)	0.009	0.496	0.000	0.019	0.000	0.506 ✔	1.050	4.8.2 ✔
L61	24.6667 - 24.4167 (61)	0.011	0.552	0.000	0.022	0.001	0.563 ✔	1.050	4.8.2 ✔
L62	24.4167 - 24 (62)	0.011	0.553	0.000	0.022	0.001	0.564 ✔	1.050	4.8.2 ✔
L63	24 - 23.75 (63)	0.010	0.503	0.000	0.020	0.000	0.513 ✔	1.050	4.8.2 ✔
L64	23.75 - 18.75 (64)	0.010	0.508	0.000	0.020	0.000	0.518 ✔	1.050	4.8.2 ✔
L65	18.75 - 14.083 (65)	0.010	0.525	0.000	0.020	0.000	0.535 ✔	1.050	4.8.2 ✔
L66	14.083 - 13.817 (66)	0.010	0.537	0.000	0.020	0.000	0.548 ✔	1.050	4.8.2 ✔
L67	13.817 - 13.667 (67)	0.010	0.538	0.000	0.020	0.000	0.548 ✔	1.050	4.8.2 ✔
L68	13.667 - 10.5 (68)	0.011	0.541	0.000	0.020	0.000	0.552 ✔	1.050	4.8.2 ✔
L69	10.5 - 10.25 (69)	0.011	0.583	0.000	0.022	0.000	0.595 ✔	1.050	4.8.2 ✔
L70	10.25 - 5.25 (70)	0.012	0.588	0.000	0.022	0.000	0.600 ✔	1.050	4.8.2 ✔
L71	5.25 - 2.9 (71)	0.014	0.701	0.000	0.026	0.001	0.715 ✔	1.050	4.8.2 ✔
L72	2.9 - 2.65 (72)	0.014	0.701	0.000	0.026	0.001	0.716 ✔	1.050	4.8.2 ✔
L73	2.65 - 2.5 (73)	0.014	0.701	0.000	0.026	0.001	0.716 ✔	1.050	4.8.2 ✔
L74	2.5 - 2.25 (74)	0.012	0.590	0.000	0.022	0.000	0.603 ✔	1.050	4.8.2 ✔
L75	2.25 - 1.917 (75)	0.012	0.591	0.000	0.022	0.000	0.603 ✔	1.050	4.8.2 ✔
L76	1.917 - 1.667	0.013	0.660	0.000	0.024	0.001	0.674	1.050	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
	(76)						✔		
L77	1.667 - 0 (77)	0.013	0.672	0.000	0.025	0.001	0.686 ✔	1.050	4.8.2 ✔

Section Capacity Table

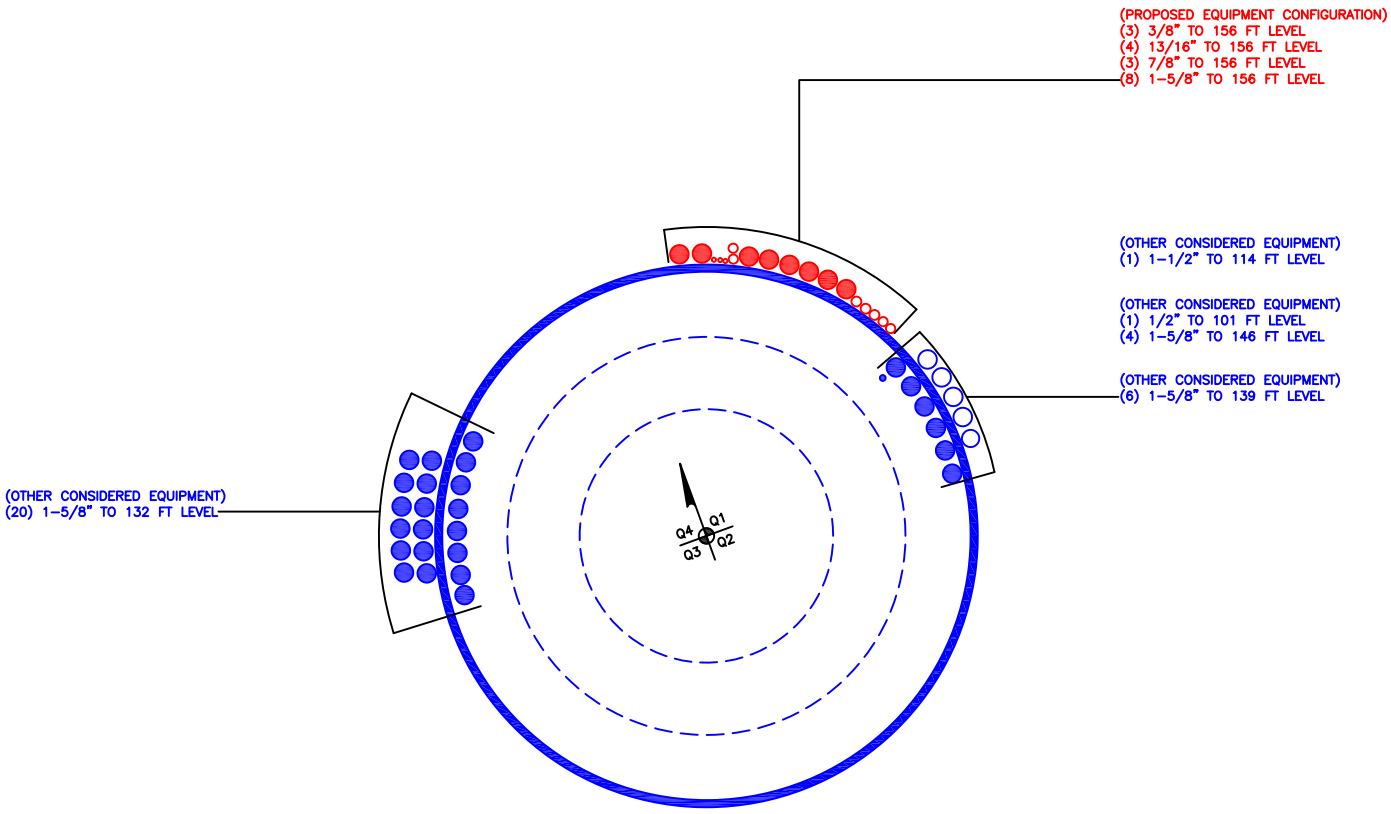
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	160.333 - 155.333	Pole	TP16x16x0.375	1	-4.980	608.837	**	**
L2	155.333 - 150.333	Pole	TP16x16x0.375	2	-5.419	608.837	**	**
L3	150.333 - 146.833	Pole	TP16x16x0.375	3	-5.737	608.837	**	**
L4	146.833 - 146.333	Pole	TP22x22x0.375	4	-5.797	842.630	**	**
L5	146.333 - 141.333	Pole	TP22.924x22x0.25	5	-10.799	1034.922	**	**
L6	141.333 - 136.333	Pole	TP23.848x22.924x0.25	6	-11.625	1077.100	**	**
L7	136.333 - 131.333	Pole	TP24.772x23.848x0.25	7	-16.746	1119.268	**	**
L8	131.333 - 126.333	Pole	TP25.696x24.772x0.25	8	-17.569	1161.447	**	**
L9	126.333 - 121.333	Pole	TP26.62x25.696x0.25	9	-18.438	1203.625	**	**
L10	121.333 - 120.083	Pole	TP26.851x26.62x0.25	10	-18.657	1214.167	**	**
L11	120.083 - 119.833	Pole	TP26.897x26.851x0.488	11	-18.735	2350.603	**	**
L12	119.833 - 117.5	Pole	TP27.328x26.897x0.488	12	-19.282	2388.981	**	**
L13	117.5 - 117.25	Pole	TP27.375x27.328x0.5	13	-19.356	2453.304	**	**
L14	117.25 - 115.5	Pole	TP27.698x27.375x0.5	14	-19.794	2482.830	**	**
L15	115.5 - 115.25	Pole	TP27.744x27.698x0.663	15	-19.882	3275.685	**	**
L16	115.25 - 110.25	Pole	TP28.668x27.744x0.65	16	-24.342	3325.024	**	**
L17	110.25 - 104.083	Pole	TP29.808x28.668x0.638	17	-25.079	3314.797	**	**
L18	104.083 - 102.82	Pole	TP29.541x28.617x0.7	18	-27.526	3685.888	**	**
L19	102.82 - 100.5	Pole	TP29.969x29.541x0.688	19	-28.376	3675.409	**	**
L20	100.5 - 100.25	Pole	TP30.015x29.969x0.638	20	-28.469	3419.304	**	**
L21	100.25 - 98.5	Pole	TP30.338x30.015x0.625	21	-29.027	3390.555	**	**
L22	98.5 - 98.25	Pole	TP30.385x30.338x0.663	22	-29.132	3595.042	**	**
L23	98.25 - 93.25	Pole	TP31.308x30.385x0.65	23	-30.848	3638.260	**	**
L24	93.25 - 90.5	Pole	TP31.816x31.308x0.638	24	-31.808	3628.852	**	**
L25	90.5 - 90.25	Pole	TP31.862x31.816x0.688	25	-31.921	3912.982	**	**
L26	90.25 - 85.25	Pole	TP32.785x31.862x0.675	26	-33.866	3957.166	**	**
L27	85.25 - 83.5	Pole	TP33.108x32.785x0.663	27	-34.548	3924.480	**	**
L28	83.5 - 83.25	Pole	TP33.154x33.108x0.913	28	-34.687	5371.464	**	**
L29	83.25 - 80.75	Pole	TP33.616x33.154x0.888	29	-35.838	5303.151	**	**
L30	80.75 - 80.5	Pole	TP33.662x33.616x1.063	30	-35.977	6323.845	**	**
L31	80.5 - 80.25	Pole	TP33.708x33.662x0.975	31	-36.102	5826.859	**	**
L32	80.25 - 77.5	Pole	TP34.216x33.708x0.963	32	-37.467	5843.586	**	**
L33	77.5 - 77.25	Pole	TP34.262x34.216x0.688	33	-37.588	4214.301	**	**
L34	77.25 - 68.82	Pole	TP35.819x34.262x0.688	34	-39.312	4306.060	**	**
L35	68.82 - 68.291	Pole	TP35.291x34.368x0.75	35	-43.165	4729.777	**	**
L36	68.291 - 64.25	Pole	TP36.037x35.291x0.738	36	-45.077	4753.077	**	**
L37	64.25 - 64	Pole	TP36.084x36.037x0.875	37	-45.216	5624.650	**	**
L38	64 - 60.5	Pole	TP36.73x36.084x0.863	38	-46.974	5648.013	**	**
L39	60.5 - 60.25	Pole	TP36.776x36.73x0.925	39	-47.121	6054.520	**	**
L40	60.25 - 60.083	Pole	TP36.807x36.776x0.925	40	-47.211	6059.728	**	**
L41	60.083 - 59.833	Pole	TP36.853x36.807x0.975	41	-47.348	6386.593	**	**
L42	59.833 - 59.083	Pole	TP36.991x36.853x0.975	42	-47.755	6411.247	**	**
L43	59.083 - 58.833	Pole	TP37.037x36.991x1.05	43	-47.907	6898.888	**	**
L44	58.833 - 55.4167	Pole	TP37.668x37.037x1.025	44	-49.892	6857.329	**	**
L45	55.4167 - 55.1667	Pole	TP37.714x37.668x1.025	45	-50.050	6865.960	**	**

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	øP$_{allow}$ K	% Capacity	Pass Fail
L46	55.1667 - 54.75	Pole	TP37.791x37.714x1.025	46	-50.293	6880.356	**	**
L47	54.75 - 54.5	Pole	TP37.837x37.791x0.825	47	-50.425	5574.922	**	**
L48	54.5 - 49.5	Pole	TP38.76x37.837x0.813	48	-53.024	5629.239	**	**
L49	49.5 - 44.5	Pole	TP39.683x38.76x0.8	49	-55.666	5679.271	**	**
L50	44.5 - 41.25	Pole	TP40.283x39.683x0.788	50	-57.403	5678.589	**	**
L51	41.25 - 41	Pole	TP40.329x40.283x0.875	51	-57.561	6302.940	**	**
L52	41 - 34.291	Pole	TP41.568x40.329x0.875	52	-58.708	6361.929	**	**
L53	34.291 - 33.291	Pole	TP40.996x39.949x1.175	53	-64.765	8542.474	**	**
L54	33.291 - 31.5	Pole	TP41.324x40.996x1.175	54	-65.968	8612.929	**	**
L55	31.5 - 31.25	Pole	TP41.37x41.324x1.175	55	-66.158	8622.768	**	**
L56	31.25 - 30.5	Pole	TP41.507x41.37x1.175	56	-66.666	8652.262	**	**
L57	30.5 - 30.25	Pole	TP41.553x41.507x1.125	57	-66.841	8303.767	**	**
L58	30.25 - 25.75	Pole	TP42.378x41.553x1.1	58	-69.860	8289.981	**	**
L59	25.75 - 25.5	Pole	TP42.424x42.378x1.05	59	-70.036	7931.532	**	**
L60	25.5 - 24.6667	Pole	TP42.577x42.424x1.038	60	-70.578	7868.427	**	**
L61	24.6667 - 24.4167	Pole	TP42.623x42.577x0.925	61	-70.730	7041.961	**	**
L62	24.4167 - 24	Pole	TP42.699x42.623x0.925	62	-70.968	7054.866	**	**
L63	24 - 23.75	Pole	TP42.745x42.699x1.025	63	-71.121	7807.422	**	**
L64	23.75 - 18.75	Pole	TP43.662x42.745x1.025	64	-74.118	7978.992	**	**
L65	18.75 - 14.083	Pole	TP44.518x43.662x1	65	-76.951	7945.192	**	**
L66	14.083 - 13.817	Pole	TP44.566x44.518x0.975	66	-77.130	7759.689	**	**
L67	13.817 - 13.667	Pole	TP44.594x44.566x0.975	67	-77.225	7764.592	**	**
L68	13.667 - 10.5	Pole	TP45.175x44.594x0.975	68	-79.189	7867.965	**	**
L69	10.5 - 10.25	Pole	TP45.22x45.175x0.9	69	-79.354	7282.590	**	**
L70	10.25 - 5.25	Pole	TP46.137x45.22x0.9	70	-82.400	7433.244	**	**
L71	5.25 - 2.9	Pole	TP46.568x46.137x0.75	71	-83.692	6273.918	**	**
L72	2.9 - 2.65	Pole	TP46.614x46.568x0.75	72	-83.848	6280.186	**	**
L73	2.65 - 2.5	Pole	TP46.642x46.614x0.75	73	-83.934	6283.956	**	**
L74	2.5 - 2.25	Pole	TP46.687x46.642x0.9	74	-84.078	7523.638	**	**
L75	2.25 - 1.917	Pole	TP46.748x46.687x0.9	75	-84.270	7533.666	**	**
L76	1.917 - 1.667	Pole	TP46.794x46.748x0.8	76	-84.408	6717.900	**	**
L77	1.667 - 0	Pole	TP47.1x46.794x0.788	77	-85.302	6658.669	**	**
							Summary	
						Pole	**	**
						RATING =	**	**

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

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876334

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876334

Work Order: 2054466

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	160.333	13.5	0	0	16	16	0.375		A53-B-35
2	146.833	0.5	0	0	22.00	22	0.375		A53-B-35
3	146.333	42.25	3.737	12	22.00	29.808	0.25	Auto	A607-60
4	107.82	39	4.471	12	28.62	35.819	0.3125	Auto	A607-60
5	73.291	39	4.709	12	34.37	41.568	0.375	Auto	A607-60
6	39	39	0	12	39.95	47.1	0.375	Auto	A607-60

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12
1	1.917	14.083	channel	MP3-04 (1.1875in)	2						E1		E1				
2	2.917	30.5	channel	MP3-05 (1.1875in)	2			E1								E1	
3	30.5	59.083	channel	MP3-04 (1.1875in)	2			E1								E1	
4	13.917	31.5	channel	MP3-05 (1.1875in)	1							E1					
5	31.5	60.083	channel	MP3-04 (1.1875in)	1							E1					
6	2.5	30.5	plate	MS-600 (1.1875")	3		E2			E2				E2			
7	30.5	60.5	plate	MS-650 (1.1875")	3		E2			E2				E2			
8	60.5	80.5	plate	MS-600 (1.1875")	3		E2			E2				E2			
9	80.5	98.5	plate	MS-600 (1.1875")	2					E2				E2			
10	80.5	100.5	plate	MS-650 (1.1875")	1		E2										
11	100.5	117.5	plate	CCI-SFP-045100	1				E3								
12	98.5	115.5	plate	CCI-SFP-045100	2								E3				E3
13	3	10.5	plate	CCI-AFP-060100	1												E4
14	10.5	41.25	plate	CCI-AFP-085125	1												E4
15	64.25	80.75	plate	CCI-AFP-085125	1												E4
16	24.6667	55.41667	plate	CCI-AFP-085125	2						E5				E5		
17	55.41667	90.5	plate	CCI-AFP-085125	2						E5				E5		
18	90.5	120.083	plate	CCI-AFP-060100	2						E5				E5		
19	100.5	120.083	plate	CCI-AFP-060100	1		E5										
20	25.75	35.25	plate	MS-650 (1.1875")	3	E2			E2				E2				
21	54.75	64.25	plate	MS-600 (1.1875")	3	E2			E2				E2				
22	77.5	83.5	plate	MS-600 (1.1875")	3	E2			E2				E2				
23	0	24	plate	TS-5.875x 1.25	4		-5.5	-5.5			-5.5				-5.5		
24	0	2.5	plate	ARB-5.875X1.25	4	E4			E4			E4			E4		
25	24	25.75	plate	TS-5.875x 1.25	3		-5.5				-5.5				-5.5		
26																	

Reinforcement Details

	B (in)	H (in)	Gross Area (in^2)	Pole Face to Centroid (in)	Bottom Termination Type	Bottom Termination Length (in)	Top Termination Type	Top Termination Length (in)	Lu (in)	Net Area (in2)	Bolt Hole Size (in)	Reinforcement Material
1	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
2	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
3	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
4	5.33	2.09	5.65	0.79	PC 8.8 - M20 (100)	29	PC 8.8 - M20 (100)	29.000	18.000	5.025	1.1875	A572-65
5	4.78	1.61	4.13	0.61	PC 8.8 - M20 (100)	17	PC 8.8 - M20 (100)	17.000	18.000	3.593	1.1875	A572-65
6	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.375	4.750	1.1875	A572-65
7	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.250	6.563	1.1875	A572-65
8	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.375	4.750	1.1875	A572-65
9	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.375	4.750	1.1875	A572-65
10	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.250	6.563	1.1875	A572-65
11	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
12	4.5	1	4.5	0.5	PC 8.8 - M20 (100)	18	PC 8.8 - M20 (100)	18.000	20.000	3.250	1.1875	A572-65
13	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
14	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
15	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
16	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
17	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	51	PC 8.8 - M20 (100)	51.000	17.000	9.063	1.1875	A572-65
18	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
19	6	1	6	0.5	PC 8.8 - M20 (100)	30	PC 8.8 - M20 (100)	30.000	16.000	4.750	1.1875	A572-65
20	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	33	PC 8.8 - M20 (100)	33.000	19.250	6.563	1.1875	A572-65
21	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.375	4.750	1.1875	A572-65
22	6	1	6	0.5	PC 8.8 - M20 (100)	24	PC 8.8 - M20 (100)	24.000	16.375	4.750	1.1875	A572-65
23	1.25	5.125	6.40625	3.3125	Welded	n/a	Welded	n/a	0.750	6.406	0.0000	A572-65
24	1.25	5.125	6.40625	3.3125	Welded	n/a	Welded	n/a	0.750	6.406	0.0000	A572-65
25	1.25	5.125	6.40625	3.3125	Welded	n/a	Welded	n/a	0.750	6.406	0.0000	A572-65

Connection Details for Custom Reinforcements

Reinforcement	End	# Bolts	N or X	Bolt Spacing (in)	Edge Dist (in)	Weld Grade (ksi)	Transverse (Horiz.) Weld Type	Horiz. Weld Length (in)	Horiz. Groove Depth (in)	Horiz. Groove Angle (deg)	Horiz. Fillet Size (in)	Vertical Weld Length (in)	Vertical Fillet Size (in)	Rev H Connection Capacity (kip)
TS-5.875x 1.25	Top	-	-	-	-	70	None	-	-	-	-	342	0.250	-
	Bottom	-	-	-	-	70	CJP Groove	10.25	0.625	45	0.5	-	-	-
ARB-5.875X1.25	Top	-	-	-	-	70	None	-	-	-	-	342	0.250	-
	Bottom	-	-	-	-	70	CJP Groove	10.25	0.625	45	0.5	-	-	-

TNX Geometry Input

Increment (ft): 5 Export to TNX

	Section Height (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Tapered Pole Grade	Weight Multiplier
1	160.333 - 155.333	5		0	16.000	16.000	0.375	A53-B-35	1.000
2	155.333 - 150.333	5		0	16.000	16.000	0.375	A53-B-35	1.000
3	150.333 - 146.833	3.5	0	0	16.000	16.000	0.375	A53-B-35	1.000
4	146.833 - 146.333	0.5	0	0	22.000	22.000	0.375	A53-B-35	1.000
5	146.333 - 141.333	5		12	22.000	22.924	0.25	A607-60	1.000
6	141.333 - 136.333	5		12	22.924	23.848	0.25	A607-60	1.000
7	136.333 - 131.333	5		12	23.848	24.772	0.25	A607-60	1.000
8	131.333 - 126.333	5		12	24.772	25.696	0.25	A607-60	1.000
9	126.333 - 121.333	5		12	25.696	26.620	0.25	A607-60	1.000
10	121.333 - 120.083	1.25		12	26.620	26.851	0.25	A607-60	1.000
11	120.083 - 119.833	0.25		12	26.851	26.897	0.4875	A607-60	0.952
12	119.833 - 117.5	2.333		12	26.897	27.328	0.4875	A607-60	0.945
13	117.5 - 117.25	0.25		12	27.328	27.375	0.5	A607-60	1.025
14	117.25 - 115.5	1.75		12	27.375	27.698	0.5	A607-60	1.019
15	115.5 - 115.25	0.25		12	27.698	27.744	0.6625	A607-60	0.929
16	115.25 - 110.25	5		12	27.744	28.668	0.65	A607-60	0.928
17	110.25 - 107.82	6.167	3.737	12	28.668	29.808	0.6375	A607-60	0.937
18	107.82 - 102.82	5		12	28.617	29.541	0.7	A607-60	0.938
19	102.82 - 100.5	2.32		12	29.541	29.969	0.6875	A607-60	0.947
20	100.5 - 100.25	0.25		12	29.969	30.015	0.6375	A607-60	0.979
21	100.25 - 98.5	1.75		12	30.015	30.338	0.625	A607-60	0.993
22	98.5 - 98.25	0.25		12	30.338	30.385	0.6625	A607-60	0.985
23	98.25 - 93.25	5		12	30.385	31.308	0.65	A607-60	0.987
24	93.25 - 90.5	2.75		12	31.308	31.816	0.6375	A607-60	0.998
25	90.5 - 90.25	0.25		12	31.816	31.862	0.6875	A607-60	1.060
26	90.25 - 85.25	5		12	31.862	32.785	0.675	A607-60	1.062
27	85.25 - 83.5	1.75		12	32.785	33.108	0.6625	A607-60	1.075
28	83.5 - 83.25	0.25		12	33.108	33.154	0.9125	A607-60	0.976
29	83.25 - 80.75	2.5		12	33.154	33.616	0.8875	A607-60	0.994
30	80.75 - 80.5	0.25		12	33.616	33.662	1.0625	A607-60	0.929
31	80.5 - 80.25	0.25		12	33.662	33.708	0.975	A607-60	0.988
32	80.25 - 77.5	2.75		12	33.708	34.216	0.9625	A607-60	0.991
33	77.5 - 77.25	0.25		12	34.216	34.262	0.6875	A607-60	1.132
34	77.25 - 73.291	8.43	4.471	12	34.262	35.819	0.6875	A607-60	1.117
35	73.291 - 68.291	5		12	34.368	35.291	0.75	A607-60	1.104
36	68.291 - 64.25	4.041		12	35.291	36.037	0.7375	A607-60	1.110
37	64.25 - 64	0.25		12	36.037	36.084	0.875	A607-60	1.013
38	64 - 60.5	3.5		12	36.084	36.730	0.8625	A607-60	1.016
39	60.5 - 60.25	0.25		12	36.730	36.776	0.925	A607-60	1.008
40	60.25 - 60.083	0.167		12	36.776	36.807	0.925	A607-60	1.008
41	60.083 - 59.833	0.25		12	36.807	36.853	0.975	A607-60	0.993
42	59.833 - 59.083	0.75		12	36.853	36.991	0.975	A607-60	0.991
43	59.083 - 58.833	0.25		12	36.991	37.037	1.05	A607-60	0.989
44	58.833 - 55.41667	3.41633		12	37.037	37.668	1.025	A607-60	1.002
45	55.41667 - 55.16667	0.25		12	37.668	37.714	1.025	A607-60	1.001
46	55.16667 - 54.75	0.41667		12	37.714	37.791	1.025	A607-60	1.000
47	54.75 - 54.5	0.25		12	37.791	37.837	0.825	A607-60	1.051
48	54.5 - 49.5	5		12	37.837	38.760	0.8125	A607-60	1.052
49	49.5 - 44.5	5		12	38.760	39.683	0.8	A607-60	1.054
50	44.5 - 41.25	3.25		12	39.683	40.283	0.7875	A607-60	1.061
51	41.25 - 41	0.25		12	40.283	40.329	0.875	A607-60	1.052
52	41 - 39	6.709	4.709	12	40.329	41.568	0.875	A607-60	1.047
53	39 - 33.291	5.709		12	39.949	40.996	1.175	A607-60	0.944
54	33.291 - 31.5	1.791		12	40.996	41.324	1.175	A607-60	0.939
55	31.5 - 31.25	0.25		12	41.324	41.370	1.175	A607-60	0.948
56	31.25 - 30.5	0.75		12	41.370	41.507	1.175	A607-60	0.946
57	30.5 - 30.25	0.25		12	41.507	41.553	1.125	A607-60	0.963
58	30.25 - 25.75	4.5		12	41.553	42.378	1.1	A607-60	0.972
59	25.75 - 25.5	0.25		12	42.378	42.424	1.05	A607-60	0.979
60	25.5 - 24.6667	0.8333		12	42.424	42.577	1.0375	A607-60	0.988
61	24.6667 - 24.4167	0.25		12	42.577	42.623	0.925	A607-60	0.933
62	24.4167 - 24	0.4167		12	42.623	42.699	0.925	A607-60	0.932
63	24 - 23.75	0.25		12	42.699	42.745	1.025	A607-60	0.889
64	23.75 - 18.75	5		12	42.745	43.662	1.025	A607-60	0.878
65	18.75 - 14.083	4.667		12	43.662	44.518	1	A607-60	0.889
66	14.083 - 13.817	0.266		12	44.518	44.566	0.975	A607-60	0.930
67	13.817 - 13.667	0.15		12	44.566	44.594	0.975	A607-60	0.930
68	13.667 - 10.5	3.167		12	44.594	45.175	0.975	A607-60	0.923
69	10.5 - 10.25	0.25		12	45.175	45.220	0.9	A607-60	0.961
70	10.25 - 5.25	5		12	45.220	46.137	0.9	A607-60	0.950
71	5.25 - 2.9	2.35		12	46.137	46.568	0.75	A607-60	0.974
72	2.9 - 2.65	0.25		12	46.568	46.614	0.75	A607-60	0.973
73	2.65 - 2.5	0.15		12	46.614	46.642	0.75	A607-60	0.973
74	2.5 - 2.25	0.25		12	46.642	46.687	0.9	A607-60	0.871
75	2.25 - 1.917	0.333		12	46.687	46.748	0.9	A607-60	0.870
76	1.917 - 1.667	0.25		12	46.748	46.794	0.8	A607-60	0.906
77	1.667 - 0	1.667		12	46.794	47.100	0.7875	A607-60	0.917

TNX Section Forces

Increment (ft): 5

	Section Height (ft)	TNX Output P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	160.333 - 155.333	4.98	11.40	7.66
2	155.333 - 150.333	5.42	51.35	8.30
3	150.333 - 146.833	5.74	81.18	8.73
4	146.833 - 146.333	5.80	85.57	8.81
5	146.333 - 141.333	10.80	156.03	14.23
6	141.333 - 136.333	11.63	230.54	15.51
7	136.333 - 131.333	16.75	316.47	21.33
8	131.333 - 126.333	17.57	424.98	22.10
9	126.333 - 121.333	18.44	537.34	22.87
10	121.333 - 120.083	18.66	566.03	23.07
11	120.083 - 119.833	18.73	571.80	23.10
12	119.833 - 117.5	19.28	626.17	23.52
13	117.5 - 117.25	19.36	632.06	23.56
14	117.25 - 115.5	19.79	673.56	23.89
15	115.5 - 115.25	19.88	679.54	23.93
16	115.25 - 110.25	24.34	813.51	28.09
17	110.25 - 107.82	25.08	882.29	28.54
18	107.82 - 102.82	27.53	1027.58	29.58
19	102.82 - 100.5	28.38	1096.61	30.08
20	100.5 - 100.25	28.47	1104.13	30.12
21	100.25 - 98.5	29.03	1157.10	30.45
22	98.5 - 98.25	29.13	1164.72	30.48
23	98.25 - 93.25	30.85	1319.28	31.37
24	93.25 - 90.5	31.81	1406.18	31.86
25	90.5 - 90.25	31.92	1414.14	31.89
26	90.25 - 85.25	33.87	1575.78	32.79
27	85.25 - 83.5	34.55	1633.42	33.12
28	83.5 - 83.25	34.69	1641.70	33.15
29	83.25 - 80.75	35.84	1725.17	33.65
30	80.75 - 80.5	35.98	1733.59	33.68
31	80.5 - 80.25	36.10	1742.01	33.73
32	80.25 - 77.5	37.47	1835.51	34.29
33	77.5 - 77.25	37.59	1844.08	34.32
34	77.25 - 73.291	39.31	1981.35	35.05
35	73.291 - 68.291	43.17	2159.23	36.11
36	68.291 - 64.25	45.08	2306.54	36.83
37	64.25 - 64	45.22	2315.74	36.86
38	64 - 60.5	46.97	2445.84	37.51
39	60.5 - 60.25	47.12	2455.22	37.54
40	60.25 - 60.083	47.21	2461.49	37.57
41	60.083 - 59.833	47.35	2470.88	37.61
42	59.833 - 59.083	47.75	2499.14	37.75
43	59.083 - 58.833	47.91	2508.58	37.79
44	58.833 - 55.41667	49.89	2638.70	38.41
45	55.41667 - 55.16667	50.05	2648.31	38.44
46	55.16667 - 54.75	50.29	2664.34	38.52
47	54.75 - 54.5	50.42	2673.97	38.56
48	54.5 - 49.5	53.02	2868.80	39.40
49	49.5 - 44.5	55.67	3067.72	40.21
50	44.5 - 41.25	57.40	3199.18	40.74
51	41.25 - 41	57.56	3209.36	40.76
52	41 - 39	58.71	3291.19	41.10
53	39 - 33.291	64.76	3528.92	42.20
54	33.291 - 31.5	65.97	3604.72	42.50
55	31.5 - 31.25	66.16	3615.34	42.51
56	31.25 - 30.5	66.67	3647.27	42.64
57	30.5 - 30.25	66.84	3657.93	42.67
58	30.25 - 25.75	69.86	3851.62	43.44
59	25.75 - 25.5	70.04	3862.48	43.46
60	25.5 - 24.6667	70.58	3898.75	43.62
61	24.6667 - 24.4167	70.73	3909.66	43.65
62	24.4167 - 24	70.97	3927.86	43.72
63	24 - 23.75	71.12	3938.79	43.76
64	23.75 - 18.75	74.12	4159.57	44.59
65	18.75 - 14.083	76.95	4369.14	45.28
66	14.083 - 13.817	77.13	4381.19	45.29
67	13.817 - 13.667	77.23	4387.98	45.31
68	13.667 - 10.5	79.19	4532.18	45.79
69	10.5 - 10.25	79.35	4543.63	45.80
70	10.25 - 5.25	82.40	4774.29	46.50
71	5.25 - 2.9	83.69	4883.86	46.81
72	2.9 - 2.65	83.85	4895.55	46.81
73	2.65 - 2.5	83.93	4902.58	46.83
74	2.5 - 2.25	84.08	4914.29	46.86
75	2.25 - 1.917	84.27	4929.90	46.91
76	1.917 - 1.667	84.41	4941.62	46.94
77	1.667 - 0	85.30	5020.04	47.20

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
160.33 - 155.33	Pole	TP16x16x0.375	Pole	5.5%	Pass
155.33 - 150.33	Pole	TP16x16x0.375	Pole	21.5%	Pass
150.33 - 146.83	Pole	TP16x16x0.375	Pole	33.3%	Pass
146.83 - 146.33	Pole	TP22x22x0.375	Pole	18.5%	Pass
146.33 - 141.33	Pole	TP22.924x22x0.25	Pole	27.7%	Pass
141.33 - 136.33	Pole	TP23.848x22.924x0.25	Pole	37.8%	Pass
136.33 - 131.33	Pole	TP24.772x23.848x0.25	Pole	48.9%	Pass
131.33 - 126.33	Pole	TP25.696x24.772x0.25	Pole	61.3%	Pass
126.33 - 121.33	Pole	TP26.62x25.696x0.25	Pole	72.7%	Pass
121.33 - 120.08	Pole	TP26.851x26.62x0.25	Pole	75.5%	Pass
120.08 - 119.83	Pole + Reinf.	TP26.897x26.851x0.4875	Reinf. 18 Tension Rupture	52.5%	Pass
119.83 - 117.5	Pole + Reinf.	TP27.328x26.897x0.4875	Reinf. 18 Tension Rupture	56.0%	Pass
117.5 - 117.25	Pole + Reinf.	TP27.375x27.328x0.5	Reinf. 19 Tension Rupture	52.2%	Pass
117.25 - 115.5	Pole + Reinf.	TP27.698x27.375x0.5	Reinf. 19 Tension Rupture	54.6%	Pass
115.5 - 115.25	Pole + Reinf.	TP27.744x27.698x0.6625	Reinf. 11 Tension Rupture	48.2%	Pass
115.25 - 110.25	Pole + Reinf.	TP28.668x27.744x0.65	Reinf. 11 Tension Rupture	55.2%	Pass
110.25 - 107.82	Pole + Reinf.	TP29.808x28.668x0.6375	Reinf. 11 Tension Rupture	58.5%	Pass
107.82 - 102.82	Pole + Reinf.	TP29.541x28.617x0.7	Reinf. 11 Tension Rupture	60.7%	Pass
102.82 - 100.5	Pole + Reinf.	TP29.969x29.541x0.6875	Reinf. 11 Tension Rupture	63.4%	Pass
100.5 - 100.25	Pole + Reinf.	TP30.015x29.969x0.6375	Reinf. 18 Tension Rupture	64.8%	Pass
100.25 - 98.5	Pole + Reinf.	TP30.338x30.015x0.625	Reinf. 18 Tension Rupture	66.8%	Pass
98.5 - 98.25	Pole + Reinf.	TP30.385x30.338x0.6625	Reinf. 10 Tension Rupture	63.9%	Pass
98.25 - 93.25	Pole + Reinf.	TP31.308x30.385x0.65	Reinf. 10 Tension Rupture	69.2%	Pass
93.25 - 90.5	Pole + Reinf.	TP31.816x31.308x0.6375	Reinf. 10 Tension Rupture	71.9%	Pass
90.5 - 90.25	Pole + Reinf.	TP31.862x31.816x0.6875	Reinf. 10 Tension Rupture	71.0%	Pass
90.25 - 85.25	Pole + Reinf.	TP32.785x31.862x0.675	Reinf. 10 Tension Rupture	75.7%	Pass
85.25 - 83.5	Pole + Reinf.	TP33.108x32.785x0.6625	Reinf. 10 Tension Rupture	77.3%	Pass
83.5 - 83.25	Pole + Reinf.	TP33.154x33.108x0.9125	Reinf. 22 Tension Rupture	58.6%	Pass
83.25 - 80.75	Pole + Reinf.	TP33.616x33.154x0.8875	Reinf. 22 Tension Rupture	60.5%	Pass
80.75 - 80.5	Pole + Reinf.	TP33.662x33.616x1.0625	Reinf. 22 Tension Rupture	49.7%	Pass
80.5 - 80.25	Pole + Reinf.	TP33.708x33.662x0.975	Reinf. 8 Tension Rupture	53.5%	Pass
80.25 - 77.5	Pole + Reinf.	TP34.216x33.708x0.9625	Reinf. 8 Tension Rupture	55.3%	Pass
77.5 - 77.25	Pole + Reinf.	TP34.262x34.216x0.6875	Reinf. 8 Tension Rupture	77.4%	Pass
77.25 - 73.29	Pole + Reinf.	TP35.819x34.262x0.6875	Reinf. 8 Tension Rupture	80.6%	Pass
73.29 - 68.29	Pole + Reinf.	TP35.291x34.368x0.75	Reinf. 8 Tension Rupture	79.0%	Pass
68.29 - 64.25	Pole + Reinf.	TP36.037x35.291x0.7375	Reinf. 8 Tension Rupture	81.8%	Pass
64.25 - 64	Pole + Reinf.	TP36.084x36.037x0.875	Reinf. 21 Tension Rupture	72.1%	Pass
64 - 60.5	Pole + Reinf.	TP36.73x36.084x0.8625	Reinf. 21 Tension Rupture	74.2%	Pass
60.5 - 60.25	Pole + Reinf.	TP36.776x36.73x0.925	Reinf. 21 Tension Rupture	70.0%	Pass
60.25 - 60.08	Pole + Reinf.	TP36.807x36.776x0.925	Reinf. 21 Tension Rupture	70.1%	Pass
60.08 - 59.83	Pole + Reinf.	TP36.853x36.807x0.975	Reinf. 21 Tension Rupture	67.9%	Pass
59.83 - 59.08	Pole + Reinf.	TP36.991x36.853x0.975	Reinf. 21 Tension Rupture	68.3%	Pass
59.08 - 58.83	Pole + Reinf.	TP37.037x36.991x1.05	Reinf. 21 Tension Rupture	62.2%	Pass
58.83 - 55.42	Pole + Reinf.	TP37.668x37.037x1.025	Reinf. 21 Tension Rupture	63.9%	Pass
55.42 - 55.17	Pole + Reinf.	TP37.714x37.668x1.025	Reinf. 21 Tension Rupture	64.0%	Pass
55.17 - 54.75	Pole + Reinf.	TP37.791x37.714x1.025	Reinf. 21 Tension Rupture	64.2%	Pass
54.75 - 54.5	Pole + Reinf.	TP37.837x37.791x0.825	Reinf. 7 Tension Rupture	78.0%	Pass
54.5 - 49.5	Pole + Reinf.	TP38.76x37.837x0.8125	Reinf. 7 Tension Rupture	80.6%	Pass
49.5 - 44.5	Pole + Reinf.	TP39.683x38.76x0.8	Reinf. 7 Tension Rupture	83.2%	Pass
44.5 - 41.25	Pole + Reinf.	TP40.283x39.683x0.7875	Reinf. 7 Tension Rupture	84.8%	Pass
41.25 - 41	Pole + Reinf.	TP40.329x40.283x0.875	Reinf. 7 Tension Rupture	74.4%	Pass
41 - 39	Pole + Reinf.	TP41.568x40.329x0.875	Reinf. 7 Tension Rupture	75.3%	Pass
39 - 33.29	Pole + Reinf.	TP40.996x39.949x1.175	Reinf. 7 Tension Rupture	59.1%	Pass
33.29 - 31.5	Pole + Reinf.	TP41.324x40.996x1.175	Reinf. 7 Tension Rupture	59.7%	Pass
31.5 - 31.25	Pole + Reinf.	TP41.37x41.324x1.175	Reinf. 7 Tension Rupture	59.4%	Pass
31.25 - 30.5	Pole + Reinf.	TP41.507x41.37x1.175	Reinf. 7 Tension Rupture	59.6%	Pass
30.5 - 30.25	Pole + Reinf.	TP41.553x41.507x1.125	Reinf. 6 Tension Rupture	62.6%	Pass
30.25 - 25.75	Pole + Reinf.	TP42.378x41.553x1.1	Reinf. 6 Tension Rupture	64.2%	Pass
25.75 - 25.5	Pole + Reinf.	TP42.424x42.378x1.05	Reinf. 6 Tension Rupture	69.5%	Pass
25.5 - 24.67	Pole + Reinf.	TP42.577x42.424x1.0375	Reinf. 6 Tension Rupture	69.9%	Pass
24.67 - 24.42	Pole + Reinf.	TP42.623x42.577x0.925	Reinf. 6 Tension Rupture	76.8%	Pass
24.42 - 24	Pole + Reinf.	TP42.699x42.623x0.925	Reinf. 6 Tension Rupture	76.9%	Pass
24 - 23.75	Pole + Reinf.	TP42.745x42.699x1.025	Reinf. 6 Tension Rupture	72.5%	Pass
23.75 - 18.75	Pole + Reinf.	TP43.662x42.745x1.025	Reinf. 6 Tension Rupture	74.4%	Pass
18.75 - 14.08	Pole + Reinf.	TP44.518x43.662x1	Reinf. 6 Tension Rupture	76.2%	Pass
14.08 - 13.82	Pole + Reinf.	TP44.566x44.518x0.975	Reinf. 1 Tension Rupture	74.6%	Pass
13.82 - 13.67	Pole + Reinf.	TP44.594x44.566x0.975	Reinf. 1 Tension Rupture	74.7%	Pass
13.67 - 10.5	Pole + Reinf.	TP45.175x44.594x0.975	Reinf. 1 Tension Rupture	75.7%	Pass
10.5 - 10.25	Pole + Reinf.	TP45.22x45.175x0.9	Reinf. 13 Tension Rupture	78.4%	Pass
10.25 - 5.25	Pole + Reinf.	TP46.137x45.22x0.9	Reinf. 13 Tension Rupture	80.2%	Pass
5.25 - 2.9	Pole + Reinf.	TP46.568x46.137x0.75	Reinf. 23 Compression	92.6%	Pass
2.9 - 2.65	Pole + Reinf.	TP46.614x46.568x0.75	Reinf. 23 Compression	92.7%	Pass
2.65 - 2.5	Pole + Reinf.	TP46.642x46.614x0.75	Reinf. 23 Compression	92.8%	Pass
2.5 - 2.25	Pole + Reinf.	TP46.687x46.642x0.9	Reinf. 23 Compression	78.3%	Pass
2.25 - 1.92	Pole + Reinf.	TP46.748x46.687x0.9	Reinf. 23 Compression	78.4%	Pass
1.92 - 1.67	Pole + Reinf.	TP46.794x46.748x0.8	Reinf. 23 Compression	84.4%	Pass
1.67 - 0	Pole + Reinf.	TP47.1x46.794x0.7875	Reinf. 23 Compression	84.9%	Pass
				Summary	
			Pole	83.3%	Pass
			Reinforcement	92.8%	Pass
			Overall	92.8%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity*																							
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16	R17	R18	R19	R20	R21	R22	R23	R24	R25
160.33 - 155.33	562	n/a	562	18.41	n/a	18.41	5.5%																									
155.33 - 150.33	562	n/a	562	18.41	n/a	18.41	21.5%																									
150.33 - 146.83	562	n/a	562	18.41	n/a	18.41	33.3%																									
146.83 - 146.33	1490	n/a	1490	25.48	n/a	25.48	18.5%																									
146.33 - 141.33	1199	n/a	1199	18.23	n/a	18.23	27.7%																									
141.33 - 136.33	1352	n/a	1352	18.97	n/a	18.97	37.8%																									
136.33 - 131.33	1517	n/a	1517	19.71	n/a	19.71	48.9%																									
131.33 - 126.33	1695	n/a	1695	20.45	n/a	20.45	61.3%																									
126.33 - 121.33	1887	n/a	1887	21.20	n/a	21.20	72.7%																									
121.33 - 120.08	1937	n/a	1937	21.38	n/a	21.38	75.5%																									
120.08 - 119.83	1947	1779	3726	21.42	18.00	39.42	38.4%																		52.5%	52.5%						
119.83 - 117.5	2043	1833	3876	21.77	18.00	39.77	41.2%																		56.0%	56.0%						
117.5 - 117.25	2059	1936	3995	21.80	22.50	44.30	43.0%											46.0%							52.2%	52.2%						
117.25 - 115.5	2133	1980	4113	22.06	22.50	44.56	45.3%											48.2%							54.6%	54.6%						
115.5 - 115.25	2138	3293	5431	22.10	31.50	53.60	32.6%											48.2%	48.2%						44.0%	44.0%						
115.25 - 110.25	2361	3506	5867	22.84	31.50	54.34	37.9%											55.2%	55.2%						50.4%	50.4%						
110.25 - 107.82	2475	3611	6086	23.20	31.50	54.70	40.5%											58.5%	58.5%						53.4%	53.4%						
107.82 - 102.82	3211	3712	6924	29.37	31.50	60.87	38.8%											60.7%	60.7%						55.4%	55.4%						
102.82 - 100.5	3355	3816	7171	29.80	31.50	61.30	40.7%											63.4%	63.4%						57.9%	57.9%						
100.5 - 100.25	3399	3242	6642	29.85	29.13	58.97	48.7%										56.9%		62.6%						64.8%							
100.25 - 98.5	3511	3310	6821	30.17	29.13	59.30	50.3%										58.7%		64.5%						66.8%							
98.5 - 98.25	3521	3649	7170	30.22	32.13	62.34	47.8%									56.6%	63.9%								60.2%							
98.25 - 93.25	3854	3863	7718	31.14	32.13	63.27	52.3%									61.3%	69.2%								65.2%							
93.25 - 90.5	4046	3984	8030	31.65	32.13	63.78	54.7%									63.8%	71.9%								67.8%							
90.5 - 90.25	4144	4476	8620	31.70	41.38	73.08	54.0%									53.6%	71.0%							52.2%								
90.25 - 85.25	4516	4725	9241	32.63	41.38	74.00	58.3%									57.4%	75.7%							55.9%								
85.25 - 83.5	4651	4814	9465	32.95	41.38	74.33	59.7%									58.7%	77.3%							57.1%								
83.5 - 83.25	4619	7929	12548	33.00	59.38	92.37	43.8%									48.9%	54.3%							47.3%					58.6%			
83.25 - 80.75	4816	8141	12957	33.46	59.38	92.84	45.5%									50.5%	56.0%							48.8%					60.5%			
80.75 - 80.5	4781	10391	15173	33.51	70.00	103.51	37.4%									49.1%	49.2%					40.7%		43.6%					49.7%			
80.5 - 80.25	4797	9281	14078	33.56	67.88	101.43	40.3%								53.5%							41.9%		44.0%					51.5%			
80.25 - 77.5	5019	9548	14568	34.07	67.88	101.94	41.9%								55.3%							43.3%		45.5%					53.2%			
77.5 - 77.25	5071	5733	10804	34.11	49.88	83.99	58.6%								77.4%							52.5%		53.8%								
77.25 - 73.29	5405	5966	11371	34.85	49.88	84.72	61.6%								80.6%							54.7%		56.1%								
73.29 - 68.29	6612	6069	12681	42.10	49.88	91.98	56.7%								79.0%							54.9%		56.3%								
68.29 - 64.25	7044	6314	13358	43.00	49.88	92.88	59.1%								81.8%							56.9%		58.4%								
64.25 - 64	7153	8681	15835	43.06	57.25	100.31	51.1%								69.0%									55.7%				72.1%				
64 - 60.5	7547	8983	16530	43.84	57.25	101.09	52.9%								71.0%									57.4%				74.2%				
60.5 - 60.25	7570	9940	17510	43.89	63.63	107.52	51.0%							64.8%										54.8%				70.0%				
60.25 - 60.08	7590	9956	17545	43.93	63.63	107.55	51.1%							64.9%										54.9%				70.1%				
60.08 - 59.83	7732	11052	18784	43.98	67.76	111.74	49.5%					50.7%		63.3%										54.5%				67.9%				
59.83 - 59.08	7819	11133	18952	44.15	67.76	111.91	49.8%					51.1%		63.6%										54.8%				68.3%				
59.08 - 58.83	7709	12407	20116	44.21	76.02	120.22	45.4%			55.0%		50.7%		57.9%										49.6%				62.2%				
58.83 - 55.42	8112	12816	20928	44.97	76.02	120.98	47.0%			56.6%		52.1%		59.5%										51.0%				63.9%				
55.42 - 55.17	8142	12846	20988	45.02	76.02	121.04	47.1%			56.7%		52.2%		59.6%									51.1%					64.0%				
55.17 - 54.75	8192	12896	21089	45.12	76.02	121.13	47.3%			56.8%		52.4%		59.8%									51.3%					64.2%				
54.75 - 54.5	8279	9040	17319	45.17	58.02	103.19	59.4%			67.7%		63.5%		78.0%									59.4%									
54.5 - 49.5	8902	9468	18371	46.28	58.02	104.30	62.0%			70.1%		65.8%		80.6%									61.6%									
49.5 - 44.5	9556	9908	19464	47.40	58.02	105.41	64.6%			72.4%		68.0%		83.2%									63.7%									
44.5 - 41.25	9997	10199	20196	48.12	58.02	106.14	66.3%			73.8%		69.4%		84.8%									65.1%									
41.25 - 41	9877	12299	22176	48.18	68.64	116.82	57.0%			71.1%		64.4%		74.4%							57.6%		58.7%									
41 - 39	10153	12515	22668	48.62	68.64	117.26	57.9%			72.0%		65.2%		75.3%							58.3%		59.5%									
39 - 33.29	10346	20123	30469	48.98	93.02	141.99	44.5%			57.5%		55.2%		59.1%							52.4%		53.3%				58.2%					
33.29 - 31.5	10599	20434	31033	49.38	93.02	142.39	45.2%			58.1%		55.8%		59.7%							52.9%		53.9%				58.8%					
31.5 - 31.25	10641	20876	31516	49.43	94.54	143.97	46.0%			58.2%	52.7%			59.4%							52.6%		53.9%				58.9%					
31.25 - 30.5	10748	21009	31757	49.60	94.54	144.13	46.3%			58.5%	53.0%			59.6%							52.8%		54.1%				59.1%					
30.5 - 30.25	10780	19841	30621	49.65	91.20	140.85	47.9%		59.1%		55.3%		62.6%								52.9%		55.1%				61.1%					
30.25 - 25.75	11441	20606	32046	50.65	91.20	141.85	49.5%		60.6%		56.7%		64.2%								54.3%		56.6%				62.6%					
25.75 - 25.5	11507	18884	30391	50.70	86.04	136.75	53.7%		64.5%		58.0%		69.5%								53.1%		54.7%									65.6%
25.5 - 24.67	11633	19009	30642	50.89	86.04	136.93	54.0%		64.8%		58.2%		69.9%								53.4%		55.0%									65.9%
24.67 - 24.42	11653	16048	27701	50.94	64.79	115.73	59.4%		68.8%		71.4%		76.8%								61.1%											70.8%
24.42 - 24	11717	16100	27817	51.03	64.79	115.83	59.6%		68.9%		71.5%		76.9%								61.2%											70.9%
24 - 23.75	11918	19132	31050	51.09	71.20	122.29	57.3%		61.7%		72.0%		72.5%								61.7%									70.8%		
23.75 - 18.75	12688	20129	32816	52.19	71.20	123.39	58.2%		63.4%		73.8%		74.4%								63.4%									72.5%		
18.75 - 14.08	13452	20853	34304	53.23	71.20	124.43	60.1%		64.9%		75.4%		76.2%								64.9%									73.9%		
14.08 - 13.82	13502	20050	33553	53.28	73.81	127.09	61.8%	74.6%	63.8%				73.8%								64.7%									72.4%		
13.82 - 13.67	13527	20073	33601	53.32	73.81	127.13	61.8%	74.7%	63.8%				73.9%								64.8%									72.4%		
13.67 - 10.5	14065	20563	34628	54.02	73.81	127.83	63.1%	75.7%	64.8%				75.0%								65.8%									73.3%		
10.5 - 10.25	13921	18520	32442	54.07	69.19	123.26	62.0%	76.6%	71.0%				75.2%							78.4%										76.1%		
10.25 - 5.25	14793	19210	34002	55.18	69.19	124.36	64.0%	78.3%	72.6%				76.9%							80.2%										77.6%		
5.25 - 2.9	15567	14724	30291	55.70	51.89	107.58	83.2%	86.7%					87.7%																	92.6%		
2.9 - 2.65	15613	14749	30362	55.75	51.89	107.64	83.3%	86.7%					87.8%																	92.7%		
2.65 - 2.5	15641	14765	30405	55.79	51.89	107.67	83.3%	86.8%					87.8%																	92.8%		
2.5 - 2.25	15490	20177	35668	55.84	59.51	115.35	69.9%	74.0%																						78.3%	76.7%	
2.25 - 1.92	15551	20222	35773	55.92	59.51	115.43	70.0%	74.1%																						78.4%	76.8%	
1.92 - 1.67	15437	16355	31792	55.97	51.25	107.22	74.5%																							84.4%	83.0%	
1.67 - 0	15744	16540	32284	56.34	51.25	107.59	75.2%																							84.9%	83.5%	

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

Monopole Flange Plate Connection

Elevation = 146.333 ft.

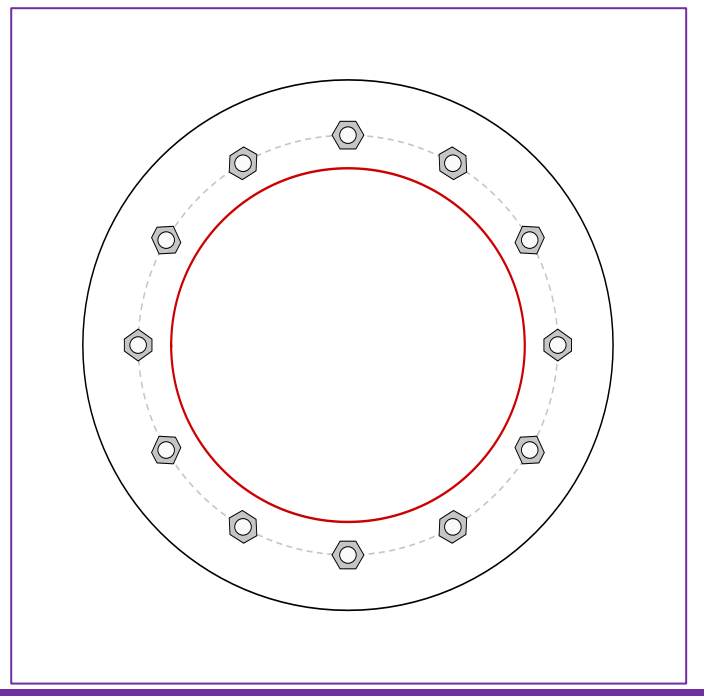
BU #	876334
Site Name	JTHINGTON, SMORON
Order #	586272 Rev#0

TIA-222 Revision	H

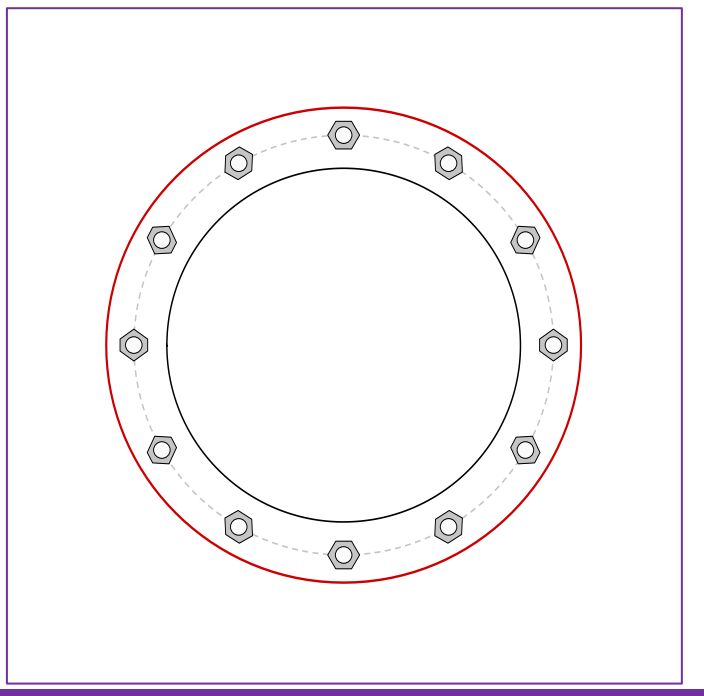
Applied Loads	
Moment (kip-ft)	85.57
Axial Force (kips)	5.80
Shear Force (kips)	8.81

**TIA-222-H Section 15.5 Applied*

Top Plate - External



Bottom Plate - Internal



Connection Properties

Bolt Data

(12) 3/4" ø bolts (A325 N; Fy=92 ksi, Fu=120 ksi) on 19" BC

Top Plate Data

24" OD x 1.5" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Bottom Plate Data

16" ID x 0.75" Plate (A572-50; Fy=50 ksi, Fu=65 ksi)

Top Stiffener Data

N/A

Bottom Stiffener Data

N/A

Top Pole Data

16" x 0.375" round pole (A53-B-35; Fy=35 ksi, Fu=60 ksi)

Bottom Pole Data

22" x 0.25" 12-sided pole (A607-60; Fy=60 ksi, Fu=75 ksi)

Analysis Results

Bolt Capacity

Max Load (kips)	17.52	
Allowable (kips)	30.04	
Stress Rating:	**55.5%**	**Pass**

Top Plate Capacity

Max Stress (ksi):	7.30	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	**15.4%**	**Pass**
Tension Side Stress Rating:	**7.5%**	**Pass**

Bottom Plate Capacity

Max Stress (ksi):	28.58	(Flexural)
Allowable Stress (ksi):	45.00	
Stress Rating:	**60.5%**	**Pass**
Tension Side Stress Rating:	**N/A**	

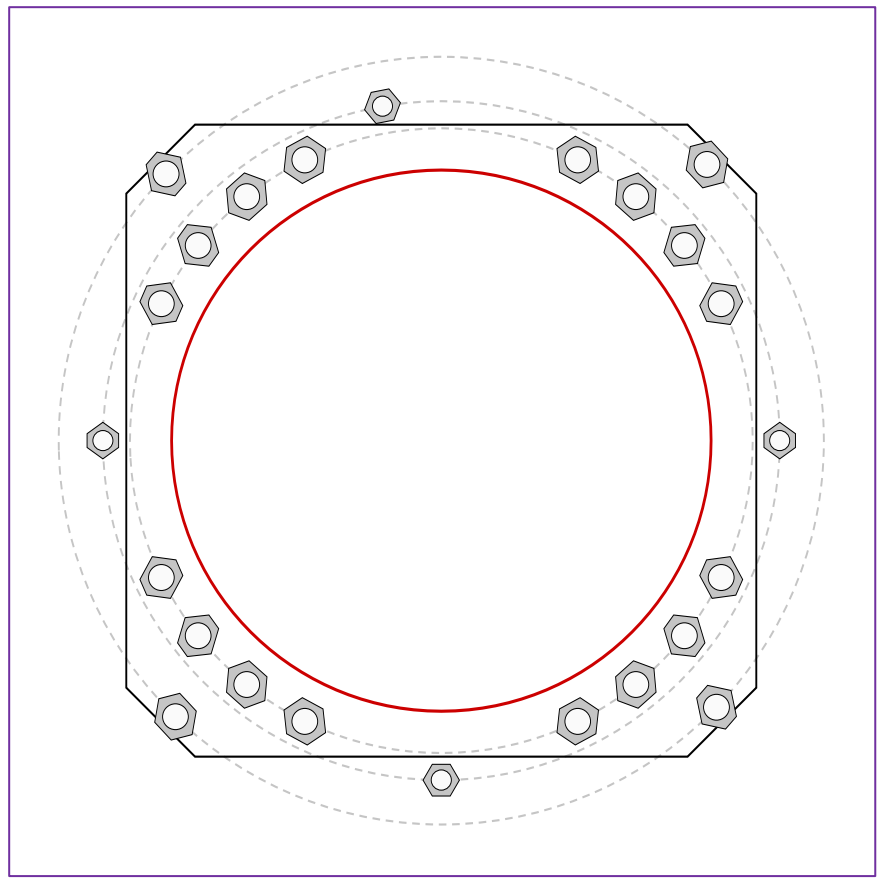
Monopole Base Plate Connection

Site Info	
BU #	876334
Site Name	JTHINGTON, SMORON
Order #	586272 Rev#0

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

Applied Loads	
Moment (kip-ft)	5020.04
Axial Force (kips)	85.30
Shear Force (kips)	47.20

**TIA-222-H Section 15.5 Applied*



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
Anchor Spacing: 6 in
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" W x 3" Plate (A572-50; Fy=50 ksi, Fu=65 ksi); Clip: 6 in

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_t = 175.57	ϕPn_t = 243.75	**Stress Rating**
Vu = 2.95	ϕVn = 149.1	**68.6%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 2:		
Pu_t = 113.8	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**60.8%**
Mu = n/a	ϕMn = n/a	**Pass**
GROUP 3:		
Pu_t = 222.18	ϕPn_t = 304.69	**Stress Rating**
Vu = 0	ϕVn = 186.38	**69.4%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	29.65	(Flexural)
Allowable Stress (ksi):	45	
Stress Rating:	**62.8%**	**Pass**

CCIplate

Elevation (ft)	0	*(Base)*

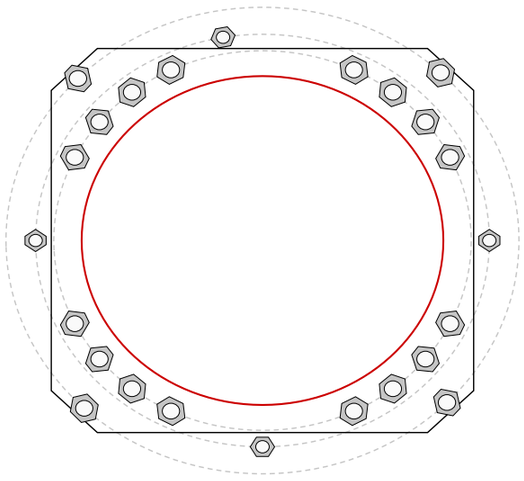
note: Bending interaction not considered when Grout Considered = "Yes"

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

Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, η:	l_{ar} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	25.994419	2.25	A615-75	54.375	0.5	1.875	N-Included		No
2	1	38.664806	2.25	A615-75	54.375	0.5	1.875	N-Included		No
3	1	51.335194	2.25	A615-75	54.375	0.5	1.875	N-Included		No
4	1	64.005581	2.25	A615-75	54.375	0.5	1.875	N-Included		No
5	1	115.99442	2.25	A615-75	54.375	0.5	1.875	N-Included		No
6	1	128.66481	2.25	A615-75	54.375	0.5	1.875	N-Included		No
7	1	141.33519	2.25	A615-75	54.375	0.5	1.875	N-Included		No
8	1	154.00558	2.25	A615-75	54.375	0.5	1.875	N-Included		No
9	1	205.99442	2.25	A615-75	54.375	0.5	1.875	N-Included		No
10	1	218.66481	2.25	A615-75	54.375	0.5	1.875	N-Included		No
11	1	231.33519	2.25	A615-75	54.375	0.5	1.875	N-Included		No
12	1	244.00558	2.25	A615-75	54.375	0.5	1.875	N-Included		No
13	1	295.99442	2.25	A615-75	54.375	0.5	1.875	N-Included		No
14	1	308.66481	2.25	A615-75	54.375	0.5	1.875	N-Included		No
15	1	321.33519	2.25	A615-75	54.375	0.5	1.875	N-Included		No
16	1	334.00558	2.25	A615-75	54.375	0.5	1.875	N-Included		No
17	2	0	1.75	F1554-105	59.1	0.5	0	N-Included		No
18	2	100	1.75	F1554-105	59.1	0.5	0	N-Included		No
19	2	180	1.75	F1554-105	59.1	0.5	0	N-Included		No
20	2	270	1.75	F1554-105	59.1	0.5	0	N-Included		No
21	3	46	2.25	A193 Gr. B7	66.8125	0.5	0	N-Included		No
22	3	136	2.25	A193 Gr. B7	66.8125	0.5	0	N-Included		No
23	3	226	2.25	A193 Gr. B7	66.8125	0.5	0	N-Included		No
24	3	316	2.25	A193 Gr. B7	66.8125	0.5	0	N-Included		No

Plot Graphic



PROJECT	**127834.007.01 - SOUTHINGTON, SMORON, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**12/30/21**
v4.6.1	

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	113.8	kips
AR Capacity	227.3	kips

Tower Type	Monopole	

Manufacturers Tower Prop.		
Pole Thickness	0.375	in
Pole Grade	Custom	
Fy	65	ksi
Fu	80	ksi
Base Plate Gr.	A572-50	
Fy	50	ksi
Fu	65	ksi

Post-Installed Adhesive AR Mod.		
ARB Type	Welded	
Size	1.75	in
Grade	F1554-105	
Fy	105	ksi
Fu	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	29.0%	-
Tube Compression	43.5%	-
Gusset Shear	20.1%	-
Gusset Flexure	N/A	-
Welds: Gusset to Tower and BP	34.7%	-
Welds: Gusset to Tube	48.0%	-
Welds: Geometry	N/A	
Tower Punching	8.2%	-
Tube Punching	34.6%	-
Utilization	**48.0%**	

Bracket Properties

Gusset			Pipe/Tube			Weld - Gusset to Pipe/Tube		
Thickness	1.25	in	Size	HSS4x4x1/2		FEXX	80	ksi
Width at Tube	4	in	Total Length	12	in	Weld Type	PJP - Double Bevel	
Height at Pole	42	in	Length above Gusset	0	in	Fillet Size	3/8	in
Height at Tube	12	in	Length below Gusset	0	in	Bevel Depth	1/4	in
Grade	A572-65		Grade	A500 Grade B (Square)				
Fy	65	ksi	Fy	46	ksi			
Fu	80	ksi	Fu	58	ksi			

Weld - Gusset to Tower			Weld - Gusset to Base Plate		
FEXX	80	ksi	FEXX	80	ksi
Weld Type	Double Fillet		Weld Type	CJP - Double Bevel	
Fillet Size	3/8	in	Fillet Size	5/8	in
			Bevel Depth	1/2	in
			Gap	0	in
			Notch (horiz)	0.75	in
			Notch (vert)	0.75	in
			Pipe/Tube Welded to Base/Footpad?	Yes	
			Fillet Size	3/8	in

PROJECT	**127834.007.01 - SOUTHINGTON, SMORON, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**12/30/21**
v4.6.1	

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	222.18	kips
AR Capacity	375.7	kips

Tower Type	Monopole

Manufacturers Tower Prop.		
Pole Thickness	0.375	in
Pole Grade	Custom	
Fy	65	ksi
Fu	80	ksi
Base Plate Gr.	A572-50	
Fy	50	ksi
Fu	65	ksi

Post-Installed Adhesive AR Mod.		
ARB Type	Welded	
Size	2.25	in
Grade	A193 Gr B7	
Fy	105	ksi
Fu	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	39.8%	-
Tube Compression	59.7%	-
Gusset Shear	15.7%	-
Gusset Flexure	0.2%	-
Welds: Gusset to Tower and BP	47.4%	-
Welds: Gusset to Tube	42.2%	-
Welds: Geometry	N/A	
Tower Punching	0.4%	-
Tube Punching	12.6%	-
Utilization	**59.7%**	

Bracket Properties

Gusset			Pipe/Tube			Weld - Gusset to Pipe/Tube		
Thickness	1.25	in	Size	HSS5x5x1/2		FEXX	70	ksi
Width at Tube	5.875	in	Total Length	33	in	Weld Type	Double Fillet	
Height at Pole	306	in	Length above Gusset	0	in	Fillet Size	3/8	in
Height at Tube	30	in	Length below Gusset	3	in			
Grade	A572-65		Grade	A500 Grade C (Square)				
Fy	65	ksi	Fy	50	ksi			
Fu	80	ksi	Fu	62	ksi			

Weld - Gusset to Tower			Weld - Gusset to Base Plate	
FEXX	70	ksi		
Weld Type	Double Fillet		Weld Type	Floating
Fillet Size	1/4	in		

PROJECT	**127834.007.01 - SOUTHINGTON, SMORON, CT**
SUBJECT	**Anchor Rod Bracket Analysis**
DATE	**12/30/21**
v4.6.1	

TIA-222 Rev.	H
Apply TIA-222-H Section 15.5?	Yes

B+T GRP
1717 S. Boulder, Suite 300
Tulsa, OK 74119
(918) 587-4630

Analysis Criteria		
Design/Analysis	Analysis	
Load Type	Current Load	
Current load	222.18	kips
AR Capacity	375.7	kips

Tower Type	Monopole

Manufacturers Tower Prop.		
Pole Thickness	0.375	in
Pole Grade	Custom	
Fy	65	ksi
Fu	80	ksi
Base Plate Gr.	A572-50	
Fy	50	ksi
Fu	65	ksi

Post-Installed Adhesive AR Mod.		
ARB Type	Welded	
Size	2.25	in
Grade	A193 Gr B7	
Fy	105	ksi
Fu	125	ksi

Anchor Rod Bracket Analysis Checks		
Tube Bearing	39.8%	-
Tube Compression	59.7%	-
Gusset Shear	19.2%	-
Gusset Flexure	17.4%	-
Welds: Gusset to Tower and BP	80.2%	-
Welds: Gusset to Tube	51.7%	-
Welds: Geometry	N/A	
Tower Punching	47.0%	-
Tube Punching	19.0%	-
Utilization	**80.2%**	

Bracket Properties

Gusset			Pipe/Tube			Weld - Gusset to Pipe/Tube		
Thickness	1.25	in	Size	HSS5x5x1/2		FEXX	70	ksi
Width at Tube	6.5	in	Total Length	33.5	in	Weld Type	Double Fillet	
Height at Pole	30	in	Length above Gusset	3	in	Fillet Size	3/8	in
Height at Tube	24.5	in	Length below Gusset	6	in			
Grade	A572-65		Grade	A500 Grade C (Square)				
Fy	65	ksi	Fy	50	ksi			
Fu	80	ksi	Fu	62	ksi			

Weld - Gusset to Tower			Weld - Gusset to Base Plate	
FEXX	70	ksi		
Weld Type	Double Fillet		Weld Type	Floating
Fillet Size	1/4	in		

Drilled Pier Foundation

BU # :	876334
Site Name:	SOUTHINGTON, SMORON
Order Number:	586272 Rev#0
TIA-222 Revison:	H
Tower Type:	Monopole

Applied Loads	Comp.	Uplift
Moment (kip-ft)	5020.04	
Axial Force (kips)	85.3	
Shear Force (kips)	47.2	

Material Properties			Rebar 2, Fy Override (ksi)	Rebar 3, Fy Override (ksi)
Concrete Strength, f'c:	3	ksi		
Rebar Strength, Fy:	60	ksi		
Tie Yield Strength, Fyt:	40	ksi		

Pier Design Data		
Depth	20.5	ft
Ext. Above Grade	1	ft
Pier Section 1		
From 1' above grade to 3' below grade		
Pier Diameter	26.0467524	ft
Rebar Quantity	32	
Rebar Size	11	
Clear Cover to Ties	139	in
Tie Size	5	
Tie Spacing	6	in

Rebar & Pier Options
Embedded Pole Inputs
Belled Pier Inputs

Pier Section 2		
From 3' below grade to 20.5' below grade		
Pier Diameter	7	ft
Rebar Quantity	32	
Rebar Size	11	
Clear Cover to Ties	4	in
Tie Size	5	
Tie Spacing	18	in

Analysis Results		
Soil Lateral Check	*Compression*	*Uplift*
$D_{v=0}$ (ft from TOC)	6.01	-
Soil Safety Factor	1.42	-
Max Moment (kip-ft)	5268.47	-
Rating*	*89.0%*	-
Soil Vertical Check	*Compression*	*Uplift*
Skin Friction (kips)	212.27	-
End Bearing (kips)	1663.01	-
Weight of Concrete (kips)	504.78	-
Total Capacity (kips)	1875.28	-
Axial (kips)	590.08	-
Rating*	*30.0%*	-
Reinforced Concrete Flexure	*Compression*	*Uplift*
Critical Depth (ft from TOC)	5.82	-
Critical Moment (kip-ft)	5267.83	-
Critical Moment Capacity	8109.71	-
Rating*	*61.9%*	-
Reinforced Concrete Shear	*Compression*	*Uplift*
Critical Depth (ft from TOC)	15.60	-
Critical Shear (kip)	674.49	-
Critical Shear Capacity	644.10	-
Rating*	*99.7%*	-

Shear-Friction Methodology is Applied

Structural Foundation Rating*	**99.7%**
Soil Interaction Rating*	**89.0%**

*Rating per TIA-222-H Section 15.5

Check Limitation	
Apply TIA-222-H Section 15.5:	☑
N/A	☐
Additional Longitudinal Rebar	
Input Effective Depths (else Actual):	☐
Shear Design Options	
Check Shear along Depth of Pier:	☑
Utilize Shear-Friction Methodology:	☑
Override Critical Depth:	☐

Go to Soil Calculations

Soil Profile

Groundwater Depth	N/A	# of Layers	9

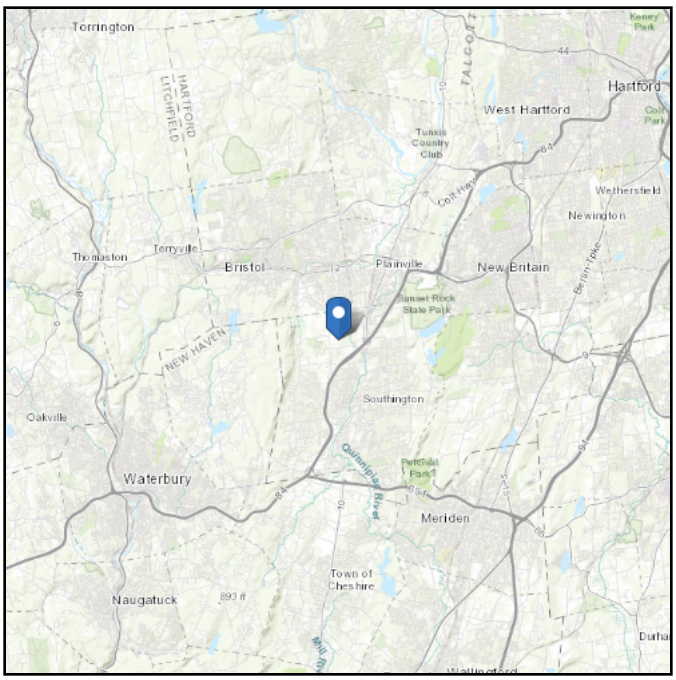
Layer	Top (ft)	Bottom (ft)	Thickness (ft)	γ_{soil} (pcf)	$\gamma_{concrete}$ (pcf)	Cohesion (ksf)	Angle of Friction (degrees)	Calculated Ultimate Skin Friction Comp (ksf)	Calculated Ultimate Skin Friction Uplift (ksf)	Ultimate Skin Friction Comp Override (ksf)	Ultimate Skin Friction Uplift Override (ksf)	Ult. Net Bearing Capacity (ksf)	SPT Blow Count	Soil Type
1	0	1	1	100	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
2	1	2	1	110	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
3	2	3.3	1.3	130	150	0	0	0.000	0.000	0.00	0.00			Cohesionless
4	3.3	5	1.7	130	150	0	36	0.000	0.000	0.00	0.00			Cohesionless
5	5	6	1	130	150	0	36	0.000	0.000	0.65	0.65			Cohesionless
6	6	8	2	120	150	0	30	0.000	0.000	0.90	0.90			Cohesionless
7	8	12.4	4.4	130	150	0	36	0.00	0.00	1.38	1.38			Cohesionless
8	12.4	13.5	1.1	145	150	0	40	0.00	0.00	3.97	3.97			Cohesionless
9	13.5	20.5	7	145	150	0	40	0.00	0.00	0.00	0.00	54.9		Cohesionless

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

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



Wind

Results:

Wind Speed	117 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Thu Dec 30 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

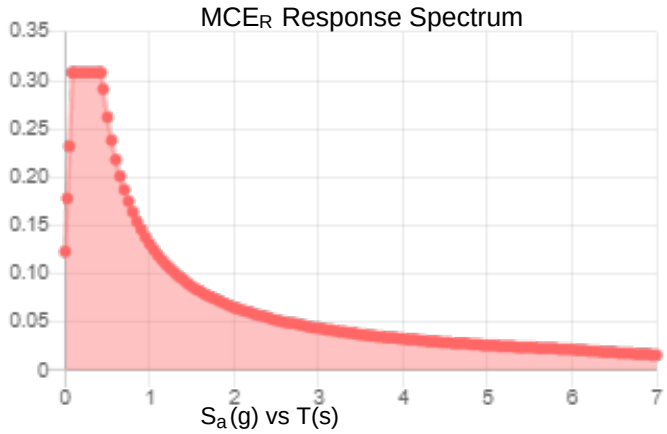
Seismic

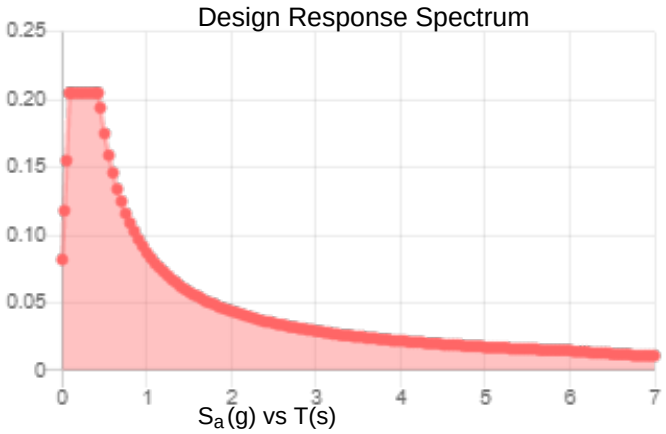
Site Soil Class: D - Default (see Section 11.4.3)

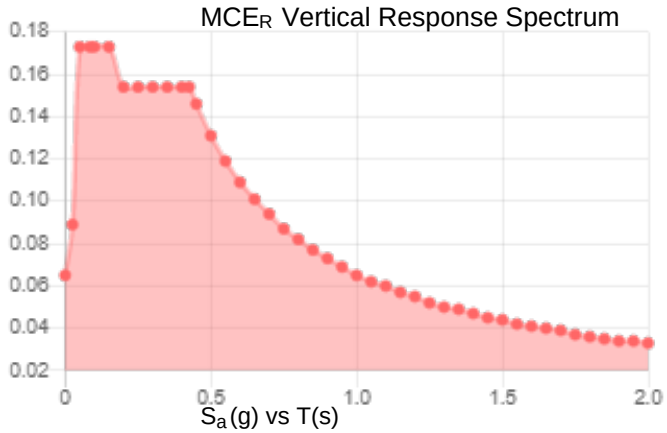
Results:

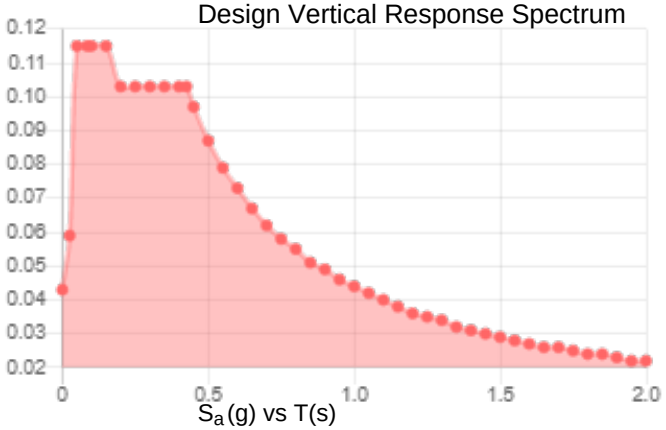
S_S :	0.193	S_{D1} :	0.087
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.105
F_v :	2.4	PGA_M :	0.167
S_{MS} :	0.308	F_{PGA} :	1.589
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.205	C_v :	0.7

Seismic Design Category B









Data Accessed: **Thu Dec 30 2021**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Thu Dec 30 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Date: **December 23, 2021**

Jacob Montoya
Crown Castle
2055 S. Stearman Dr.
Chandler, AZ 85286
480-298-9641

Trylon
1825 W. Walnut Hill Lane,
Suite 302
Irving, TX 75038
214-930-1730

Subject:	**Mount Analysis Report**	
Carrier Designation:	**AT&T Mobility Equipment Change-Out**	
	Carrier Site Number:	CTL05250
	Carrier Site Name:	SOUTHINGTON FLORIANS POND
	Carrier Site FA:	10071248
Crown Castle Designation:	**Crown Castle BU Number:**	876334
	Crown Castle Site Name:	SOUTHINGTON, SMORON
	Crown Castle JDE Job Number:	686297
	Crown Castle Order Number:	586272 Rev.0
Engineering Firm Designation:	**Trylon Report Designation:**	198408
Site Data:	**625 Spring Street, Southington, Hartford County, CT, 06489**	
	Latitude 41°37'56.90" Longitude -72°53'39.30"	
Structure Information:	**Tower Height & Type:**	**160.3 ft Monopole**
	Mount Elevation:	**156.0 ft**
	Mount Type:	**13.0 ft Sector Frame**

Dear Jacob Montoya,

Trylon is pleased to submit this **"Mount Analysis Report"** to determine the structural integrity of AT&T Mobility'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.

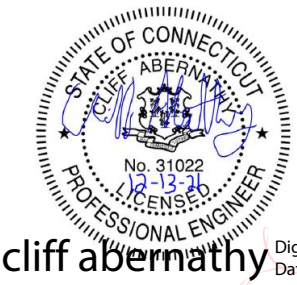
The purpose of the analysis is to determine acceptability of the mount stress level. Based on our analysis we have determined the mount stress level to be:

Sector Frame **Sufficient**

This analysis has been performed in accordance with the 2018 International Building Code based upon an ultimate 3-second gust wind speed of 117 mph. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Alexandru Ciuca

Respectfully Submitted by:
Cliff Abernathy, P.E.



cliff abernathy Digitally signed by cliff abernathy
Date: 2021.12.23 14:52:43 -05'00'

TABLE OF CONTENTS

1) INTRODUCTION

This is an existing (3) sector 13.0 ft Sector Frame**,** designed by Sabre Industries.

2) ANALYSIS CRITERIA

Building Code:	2018 IBC
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	117 mph
Exposure Category:	C
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1.0 in
Wind Speed with Ice:	50 mph
Seismic S_s:	0.193
Seismic S_1:	0.055
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
156.0	159.0	3	ERICSSON	AIR 6419 B77G	13.0 ft Sector Frame
	157.0	1	CCI ANTENNAS	DMP65R-BU6D	
		2	CCI ANTENNAS	DMP65R-BU8D	
		1	QUINTEL TECHNOLOGY	QD6616-7	
		2	QUINTEL TECHNOLOGY	QD8616-7	
		3	ERICSSON	RRUS 32 B2	
		3	ERICSSON	RRUS 32 B66	
		3	ERICSSON	RRUS 4449 B5/B12	
		3	ERICSSON	RRUS 4478 B14	
		3	ERICSSON	RRUS-32 B30	
		2	RAYCAP	DC6-48-60-18-8F	
		1	RAYCAP	DC9-48-60-24-8C-EV_CCIV2	
	155.0	3	ERICSSON	AIR 6449 B77D	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Crown Application	AT&T Mobility Application	586272, Rev.0	CCI Sites
Mount Assembly Drawings	Sabre Industries	C10857001C	Trylon

3.1) Analysis Method

RISA-3D (Version 17.0.4), 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.

A tool internally developed, using Microsoft Excel, by Trylon was used to calculate wind loading on all appurtenances, dishes, and mount members for various load cases. Selected output from the analysis is included in Appendix B.

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) The analysis will be required to be revised if the existing conditions in the field differ from those shown in the above-referenced documents or assumed in this analysis. No allowance was made for any damaged, missing, or rusted members.
5) Prior structural modifications to the tower mounting system are assumed to be installed as shown per available data.
6) Steel grades have been assumed as follows, unless noted otherwise:

Channel, Solid Round, Angle, Plate	ASTM A36 (GR 36)
HSS (Rectangular)	ASTM A500 (GR B-46)
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. Trylon 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 (Sector Frame, Worst Case Sector)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1,2	Mount Pipe(s)	MP2	156.0	47.6	Pass
	Horizontal(s)	M21		37.3	Pass
	Standoff(s)	M7		14.9	Pass
	Bracing(s)	M28		13.0	Pass
	Tieback(s)	M43		12.0	Pass
	Plate(s)	M5		40.0	Pass
	Mount Connection(s)	-		35.0	Pass

Structure Rating (max from all components) =	47.6%

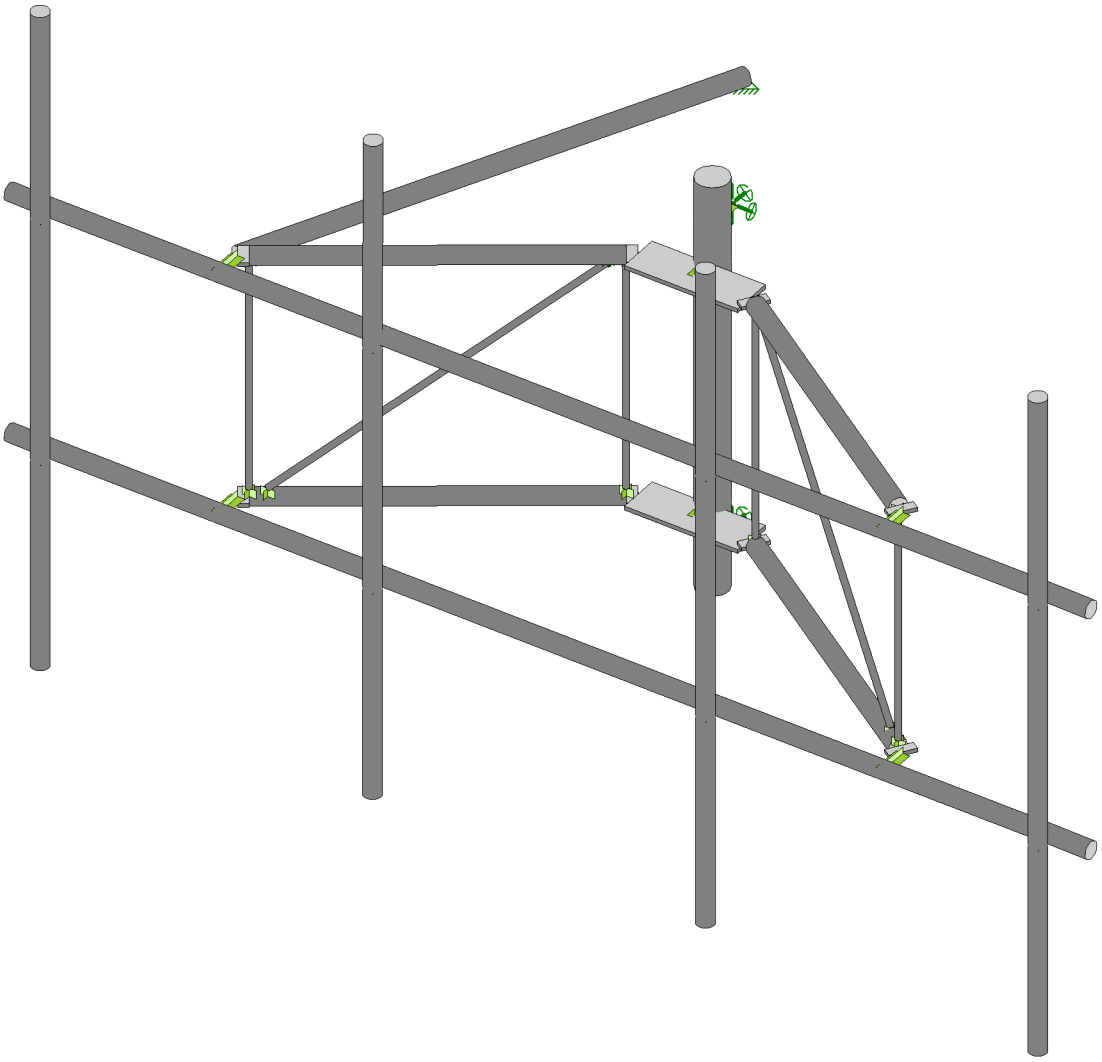
Notes:
1) See additional documentation in "Appendix C - Software Analysis Output" for calculations supporting the % capacity consumed.
2) See additional documentation in “Appendix D – Additional Calculations” for detailed mount connection calculations.

4.1) Recommendations

The mount has sufficient capacity to carry the proposed loading configuration. No modifications are required at this time.

APPENDIX A

WIRE FRAME AND RENDERED MODELS



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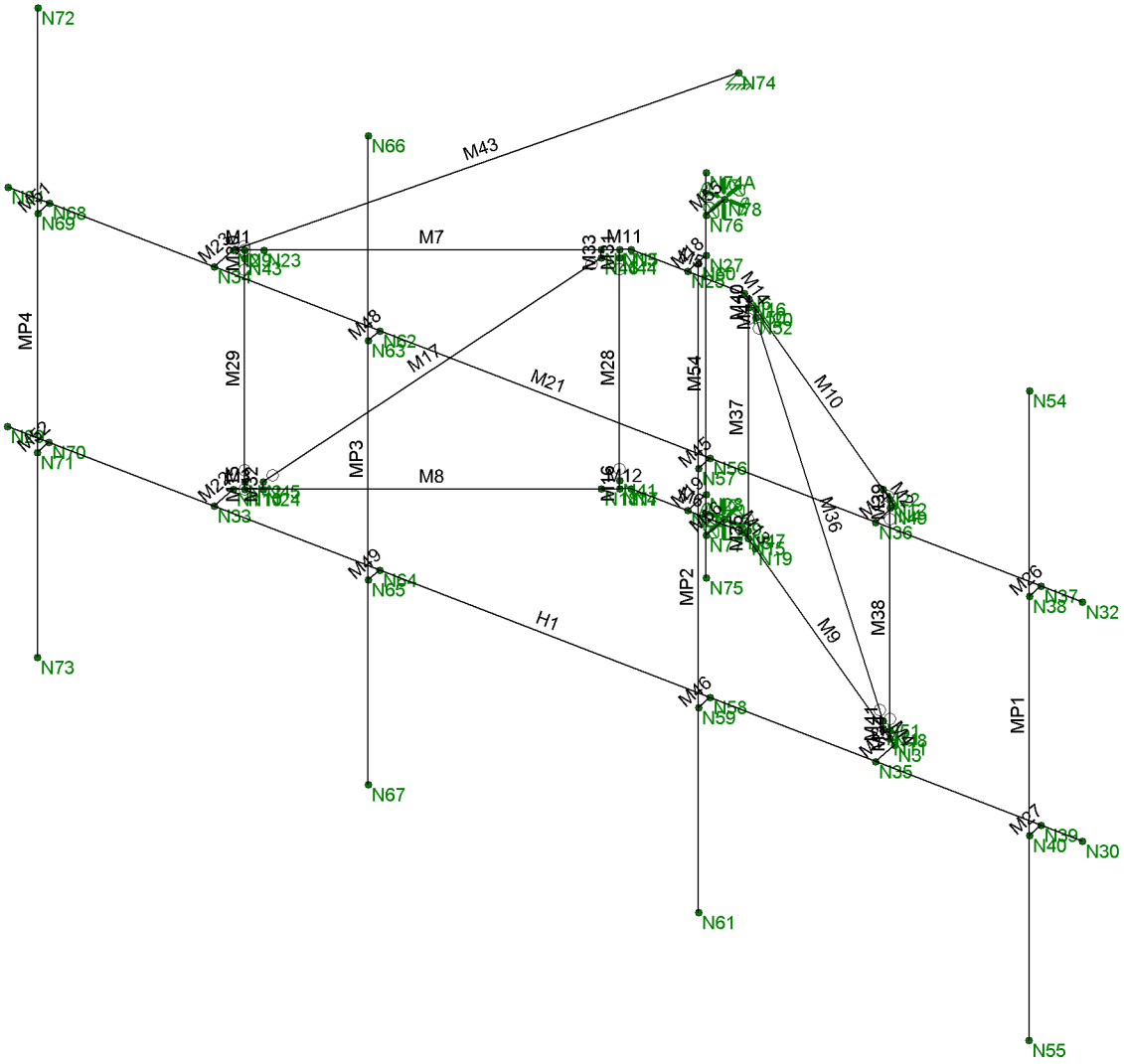

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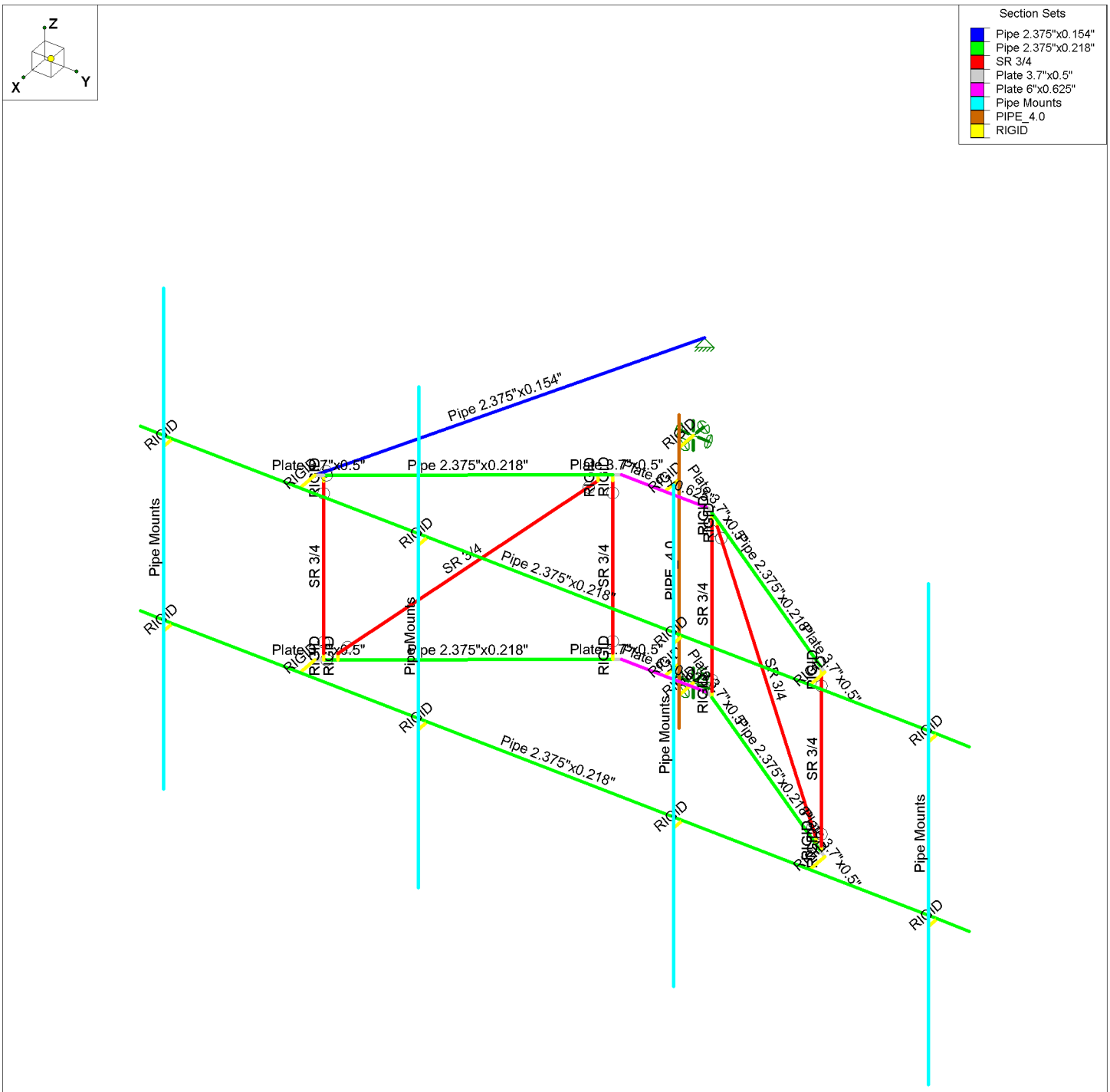

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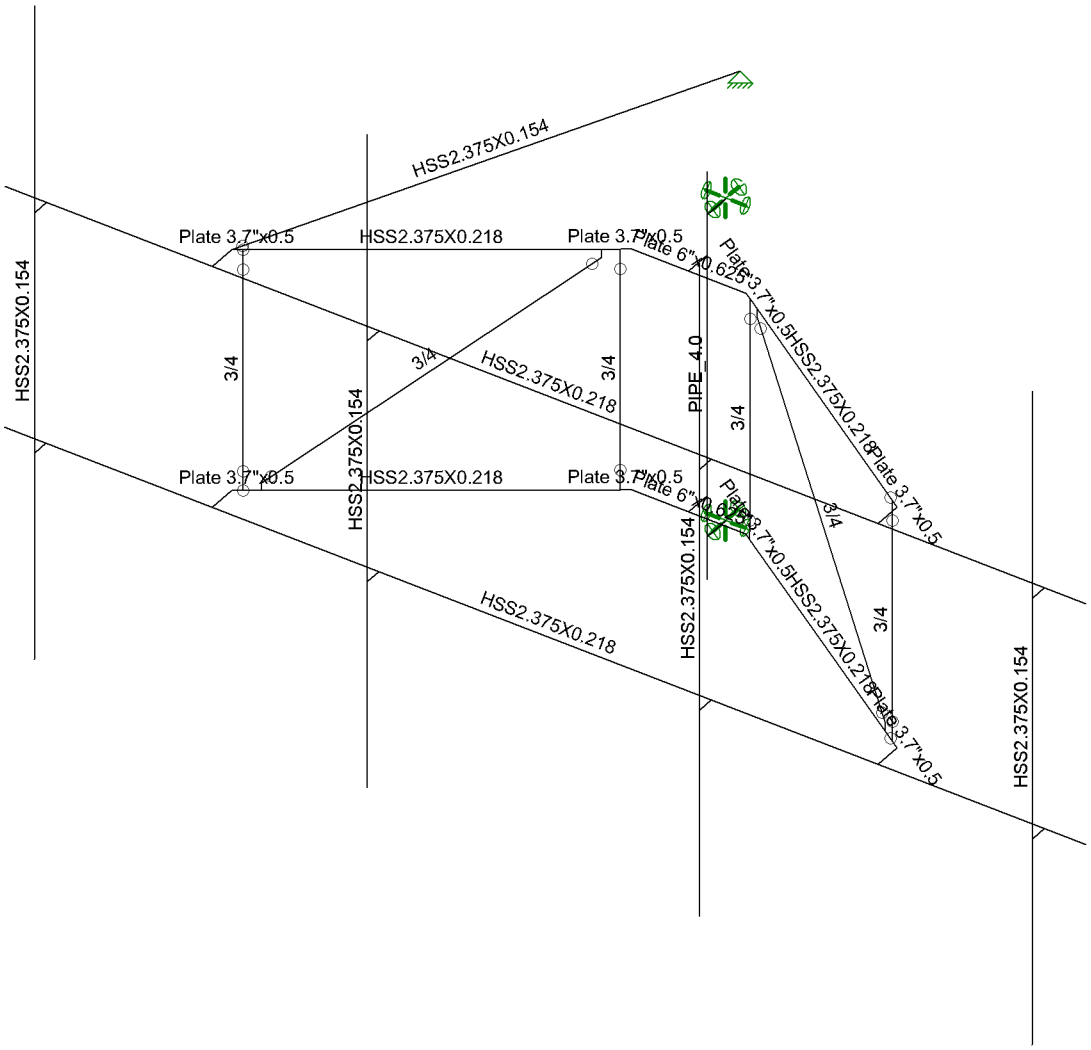

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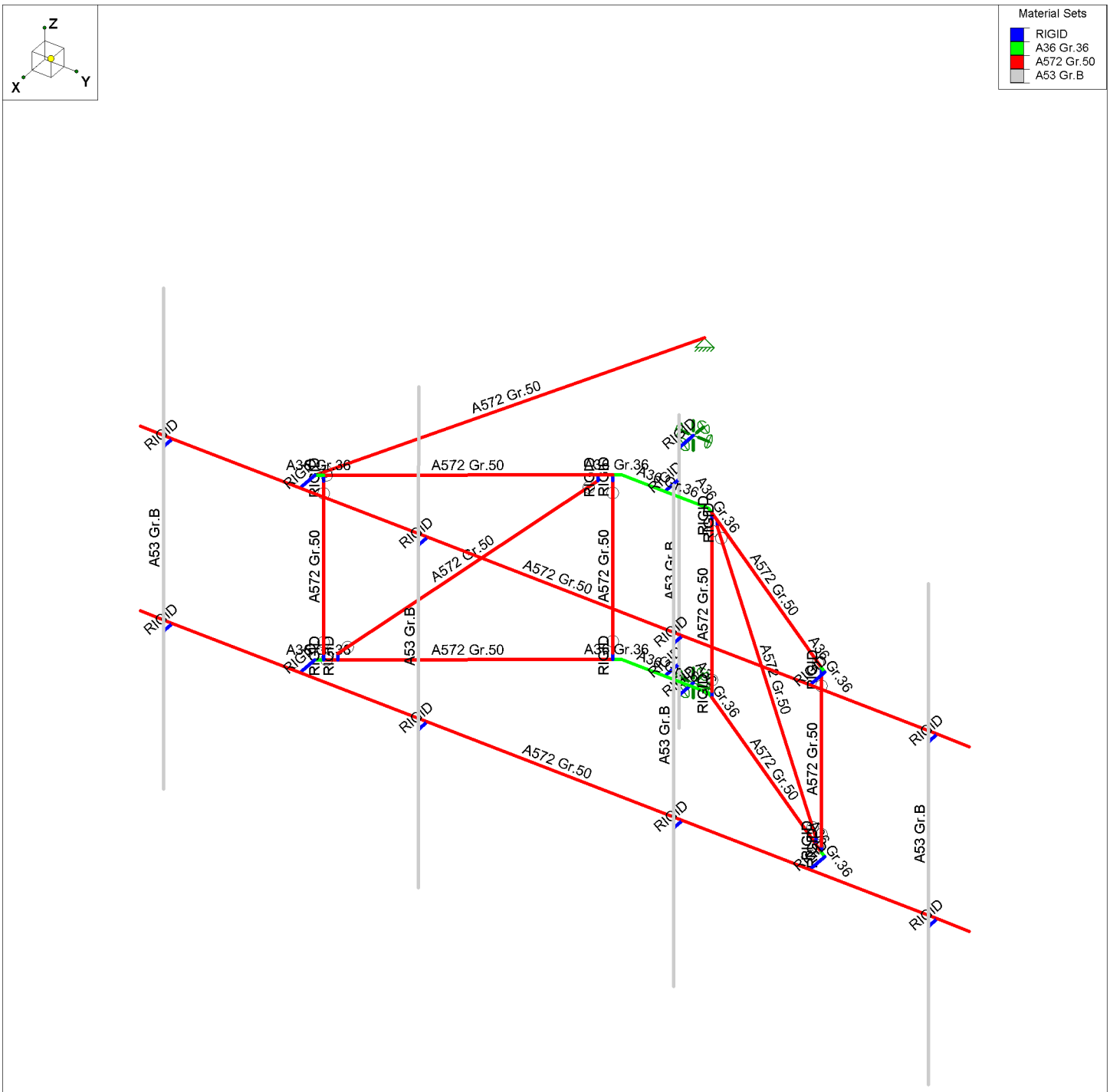

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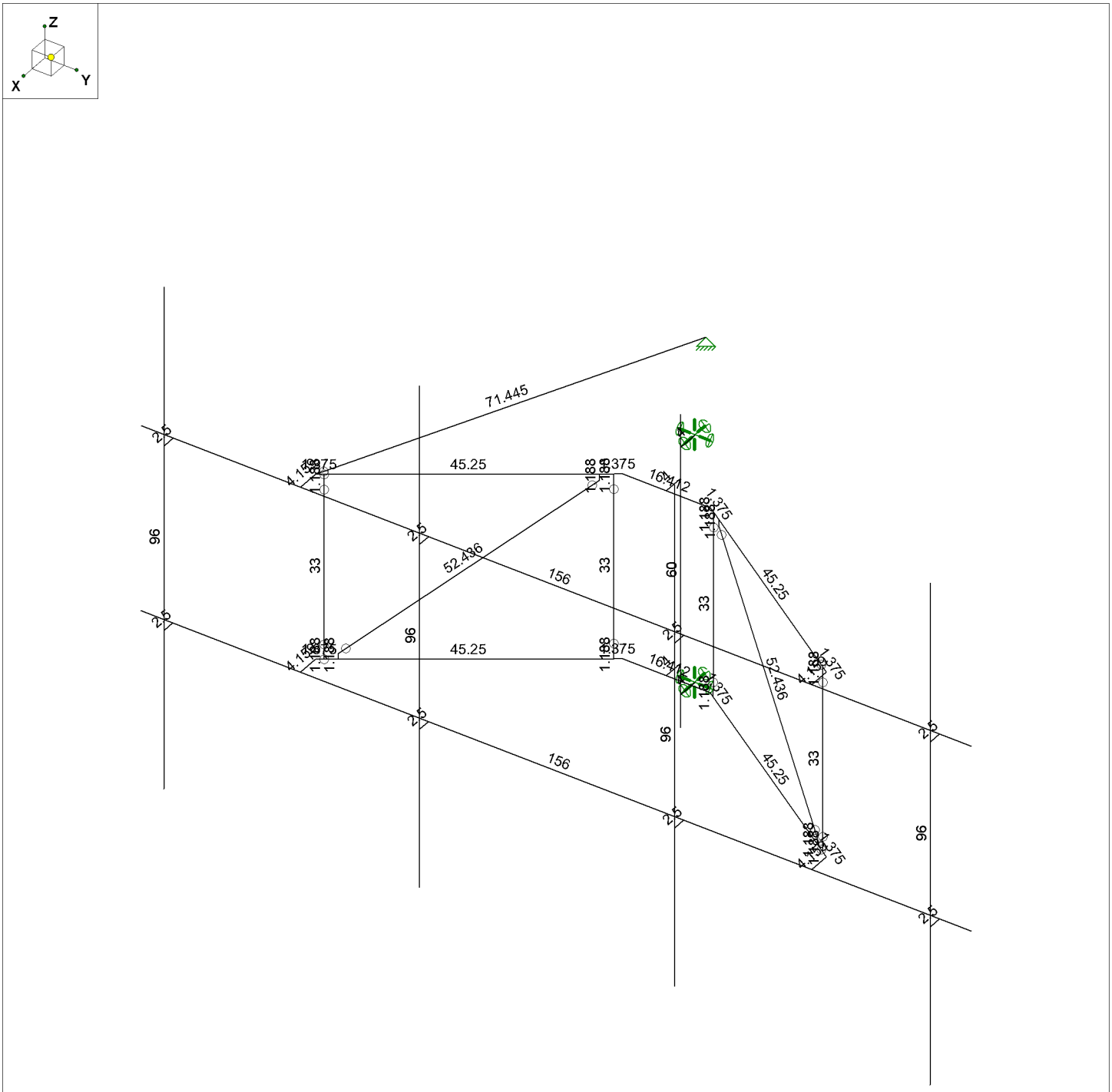

Member Length (in) Displayed
Envelope Only Solution

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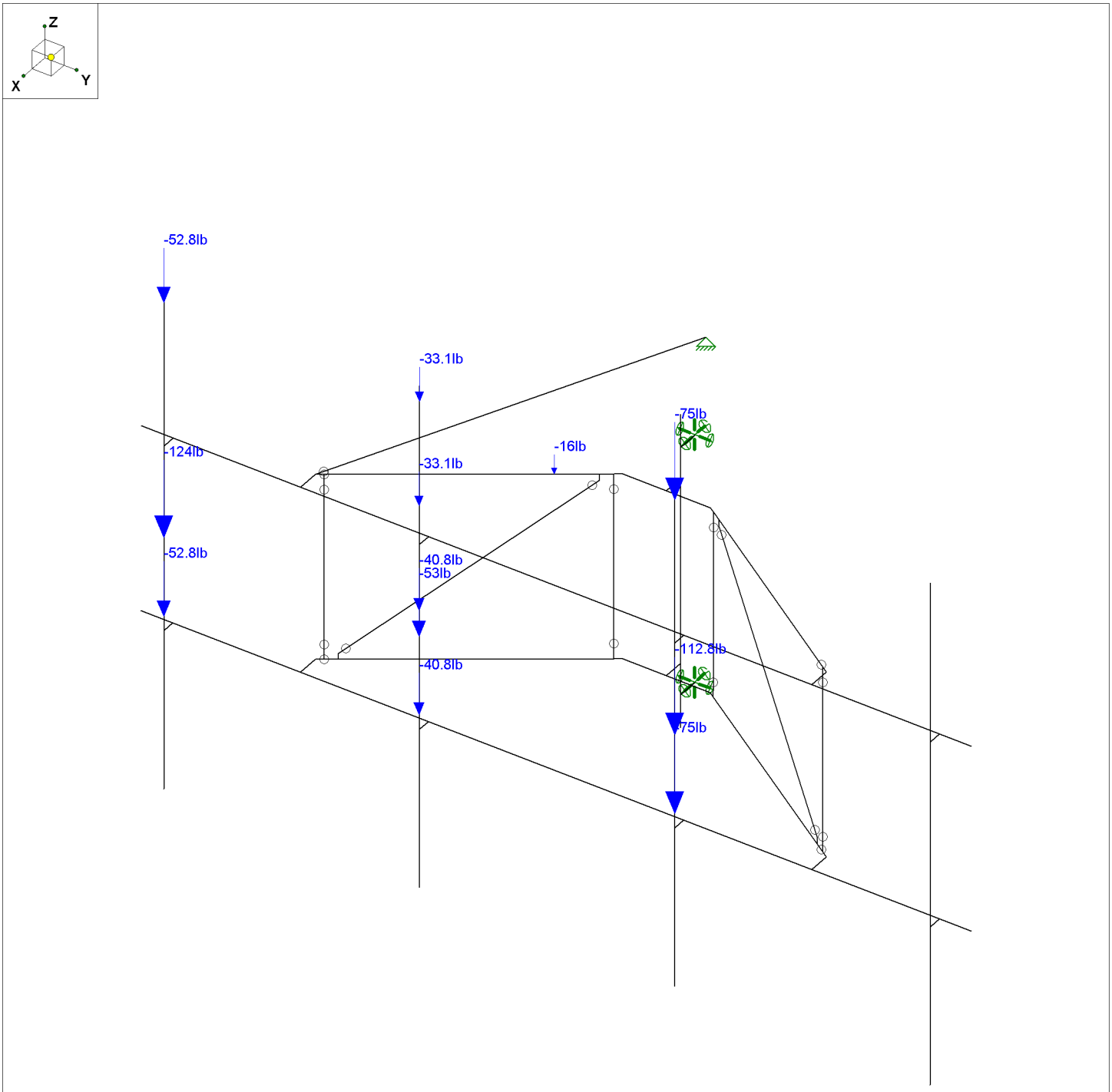

Loads: BLC 1, Self Weight
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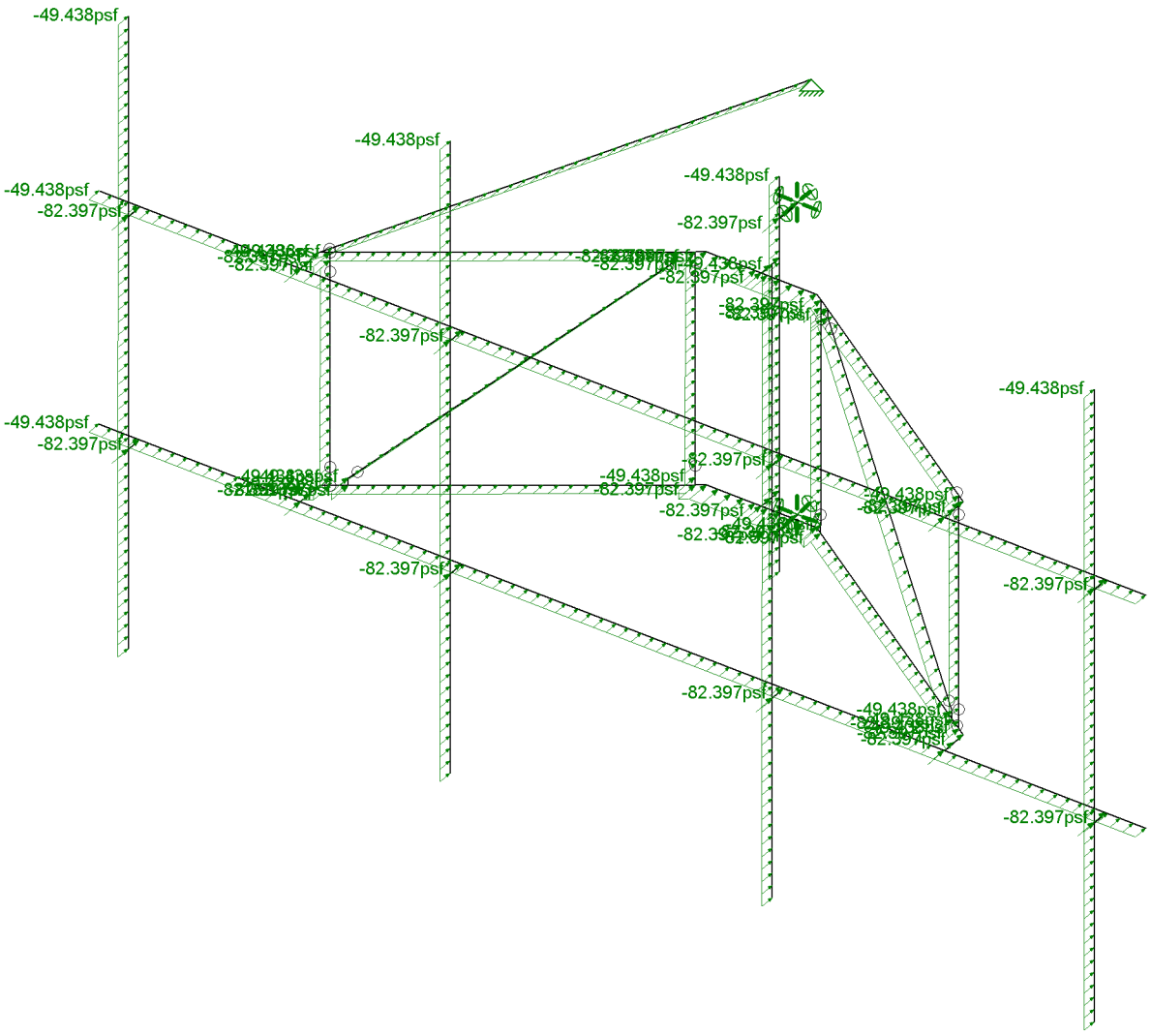

Loads: BLC 2, Structure Wind X
Envelope Only Solution

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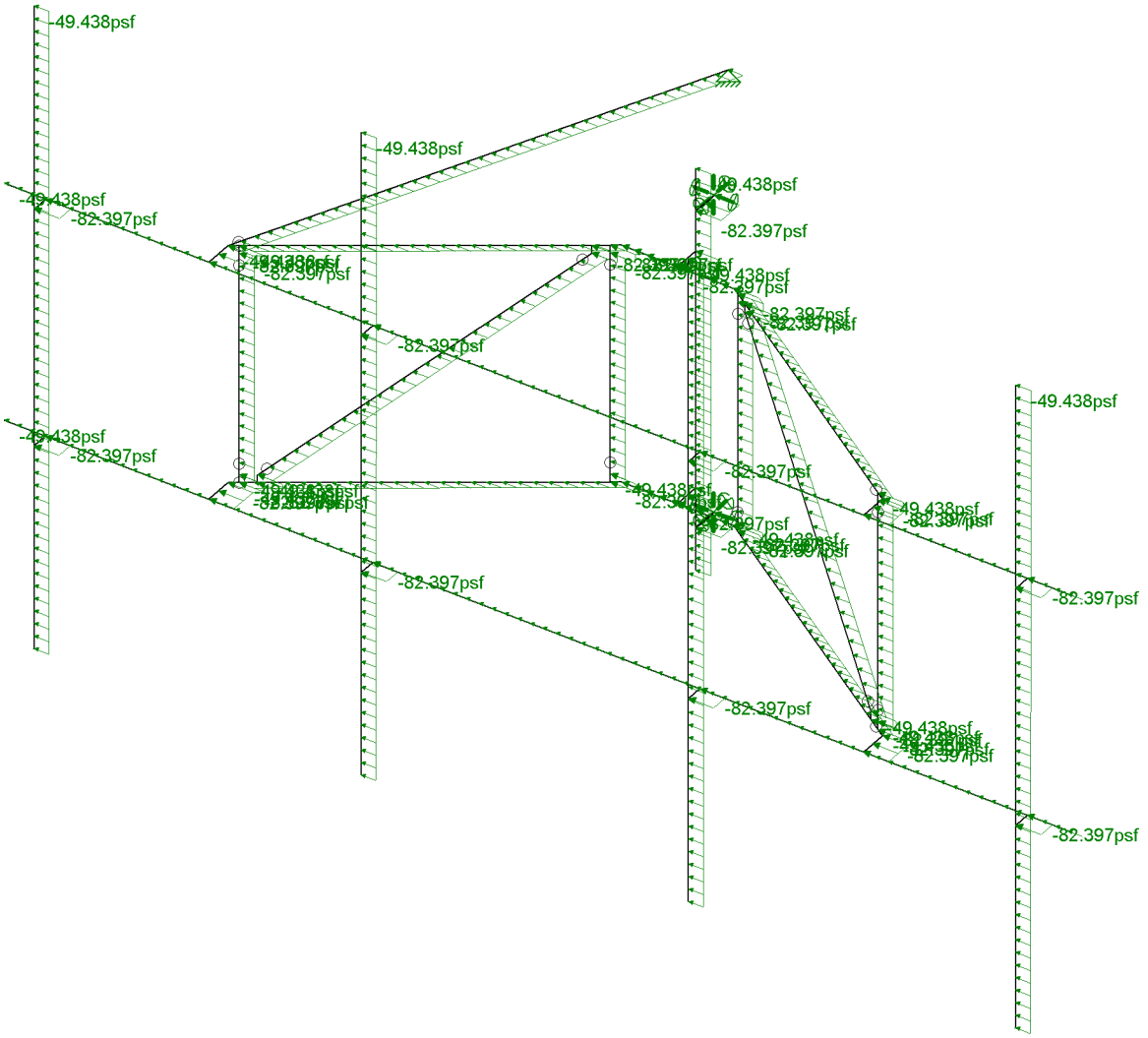

Loads: BLC 3, Structure Wind Y
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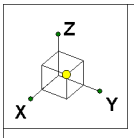

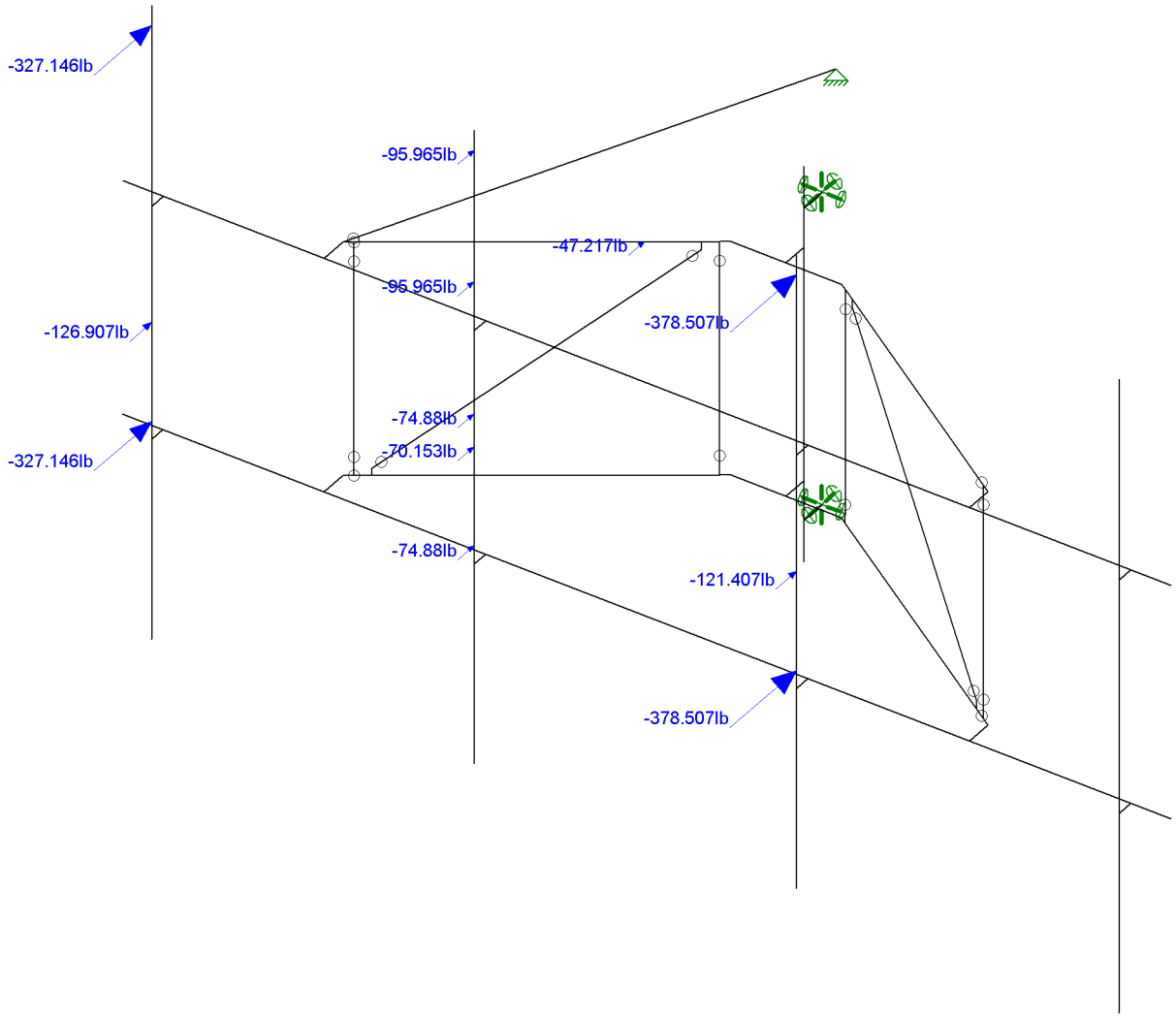

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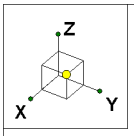

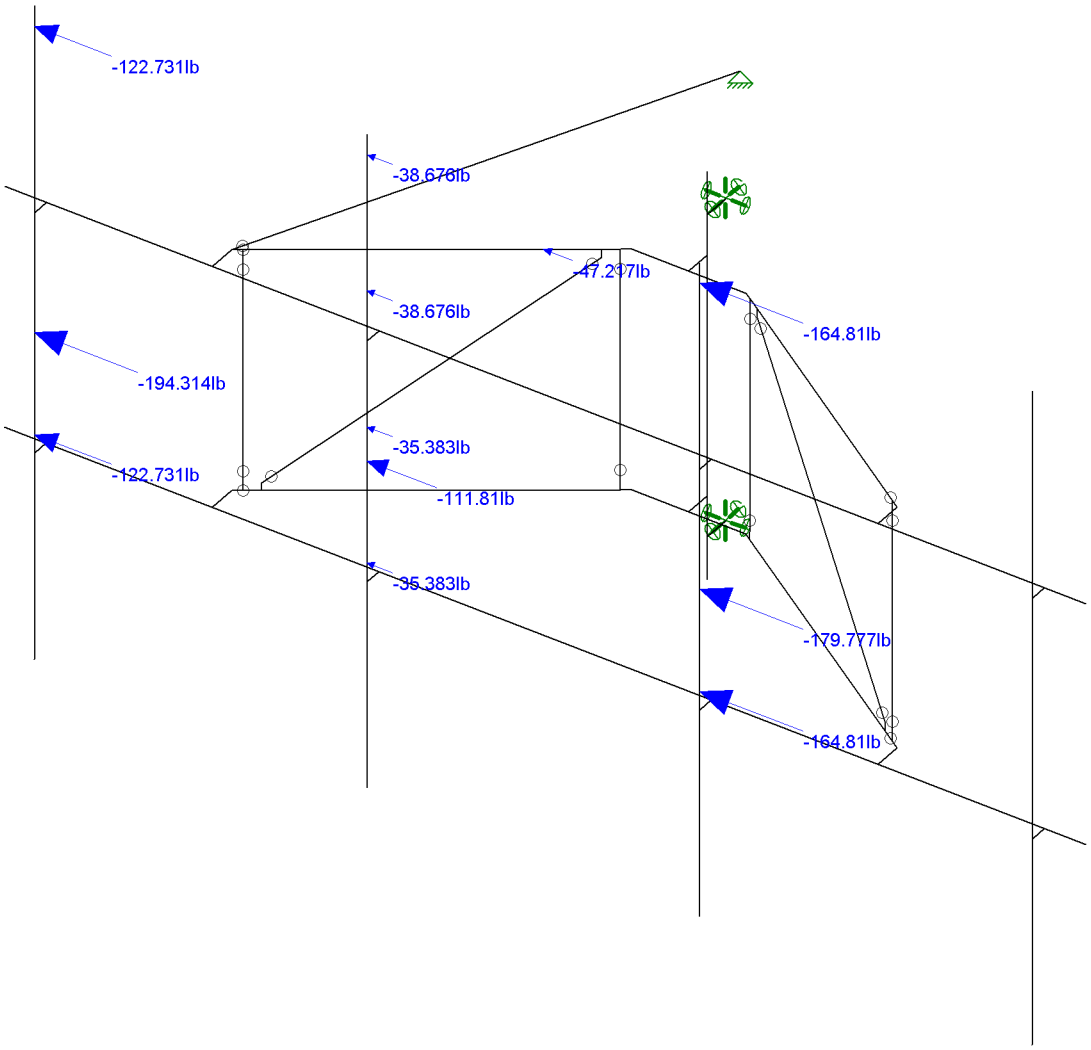

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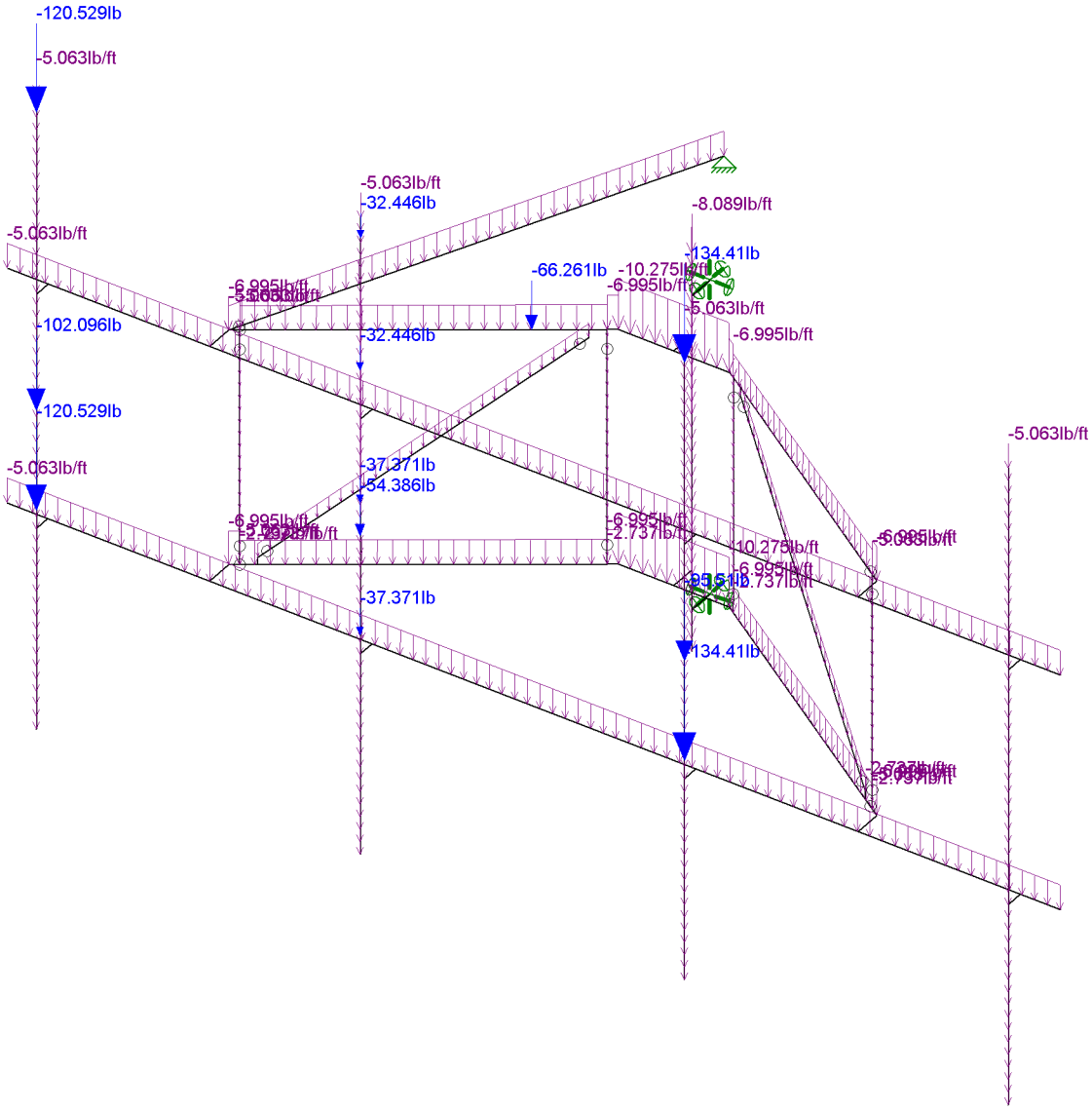

Loads: BLC 12, Ice Weight
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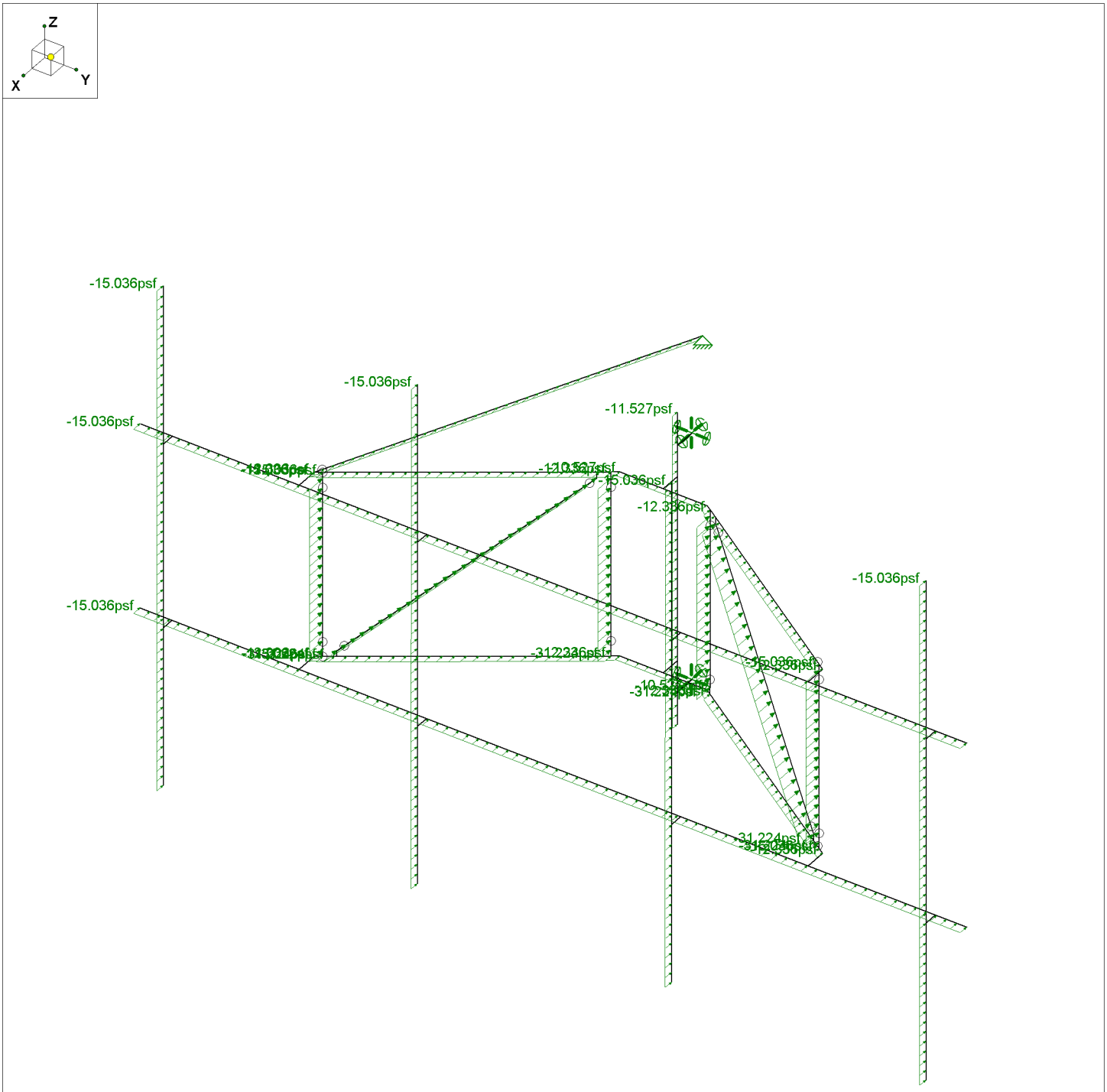
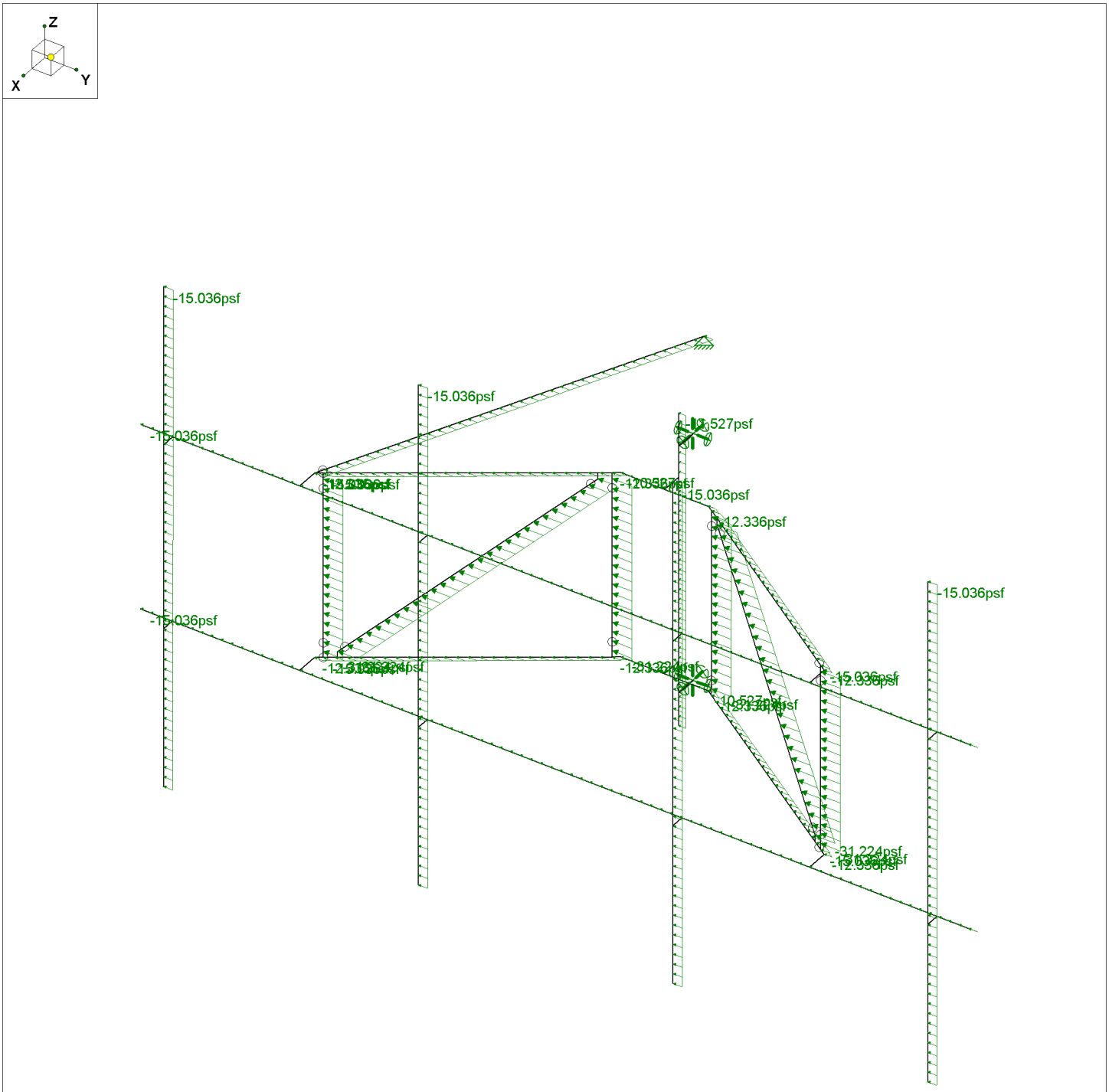
Trylon	876334	SK - 12
AC		Dec 23, 2021 at 11:19 AM
198408		198408 - 876334_loaded.r3d



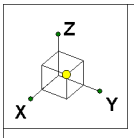
Loads: BLC 13, Ice Structure Wind X
Envelope Only Solution

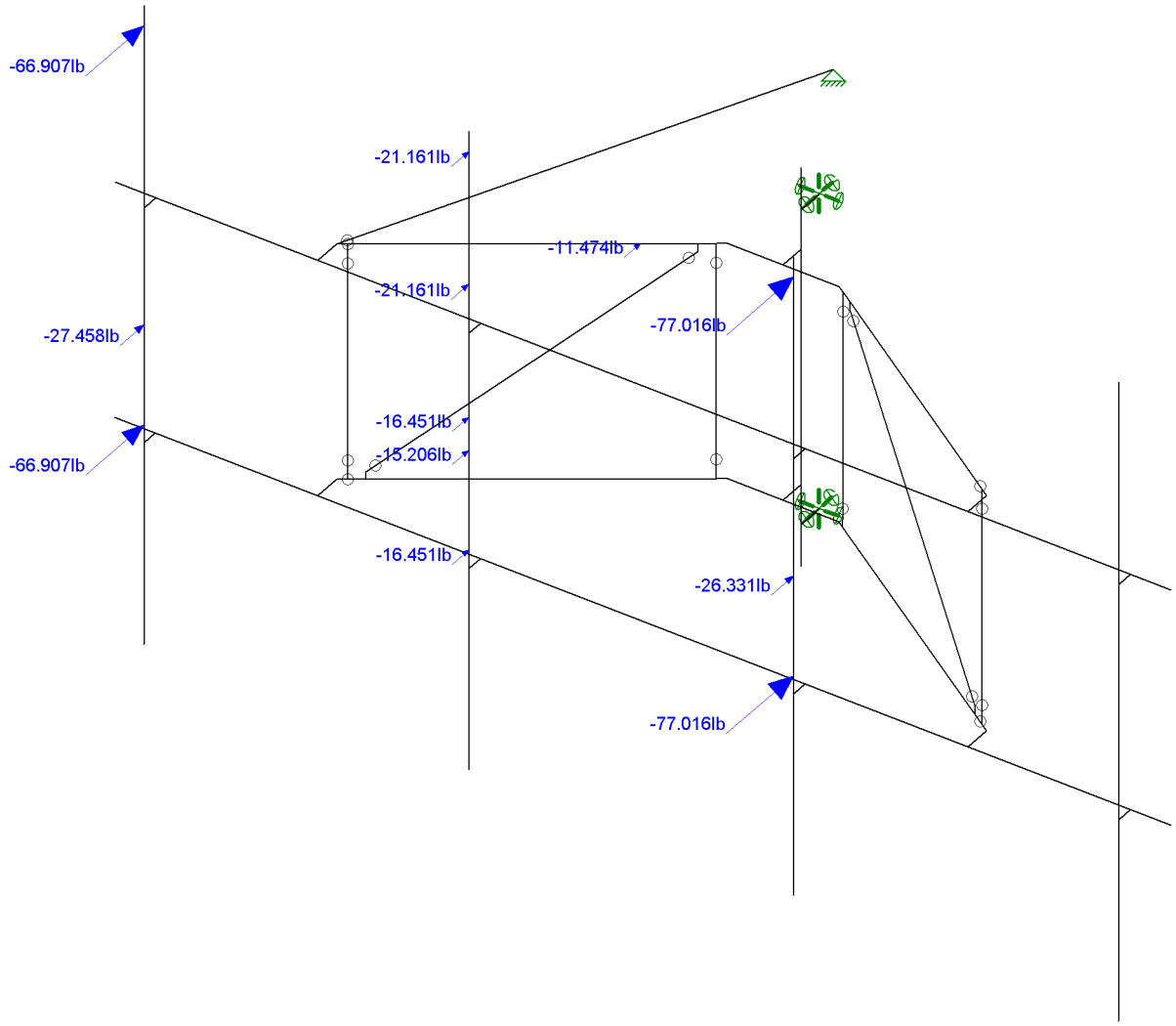
Trylon	876334	SK - 13
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d



Loads: BLC 14, Ice Structure Wind Y
Envelope Only Solution

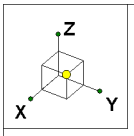
Trylon	876334	SK - 14
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d

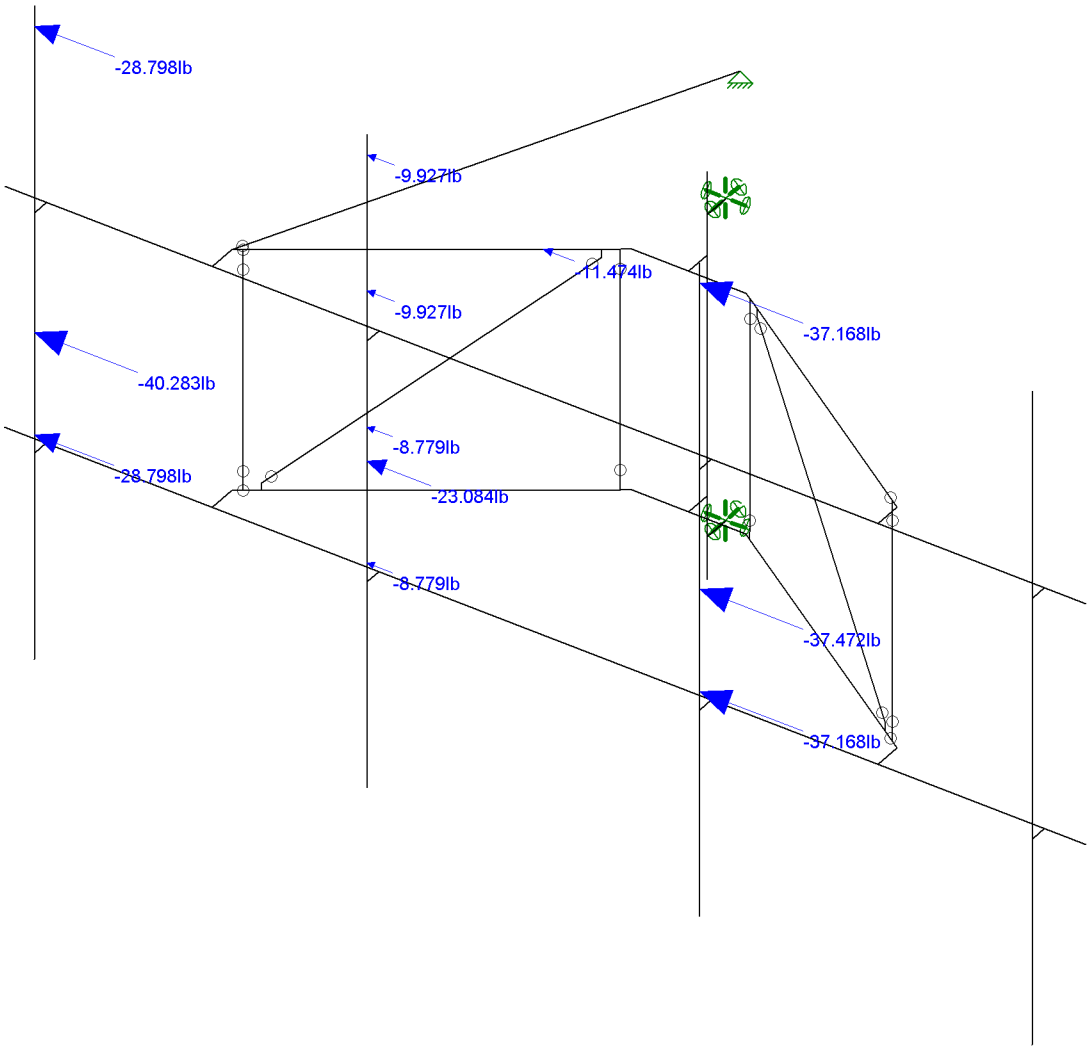




Loads: BLC 15, Ice Wind Load 0 AZI
Envelope Only Solution

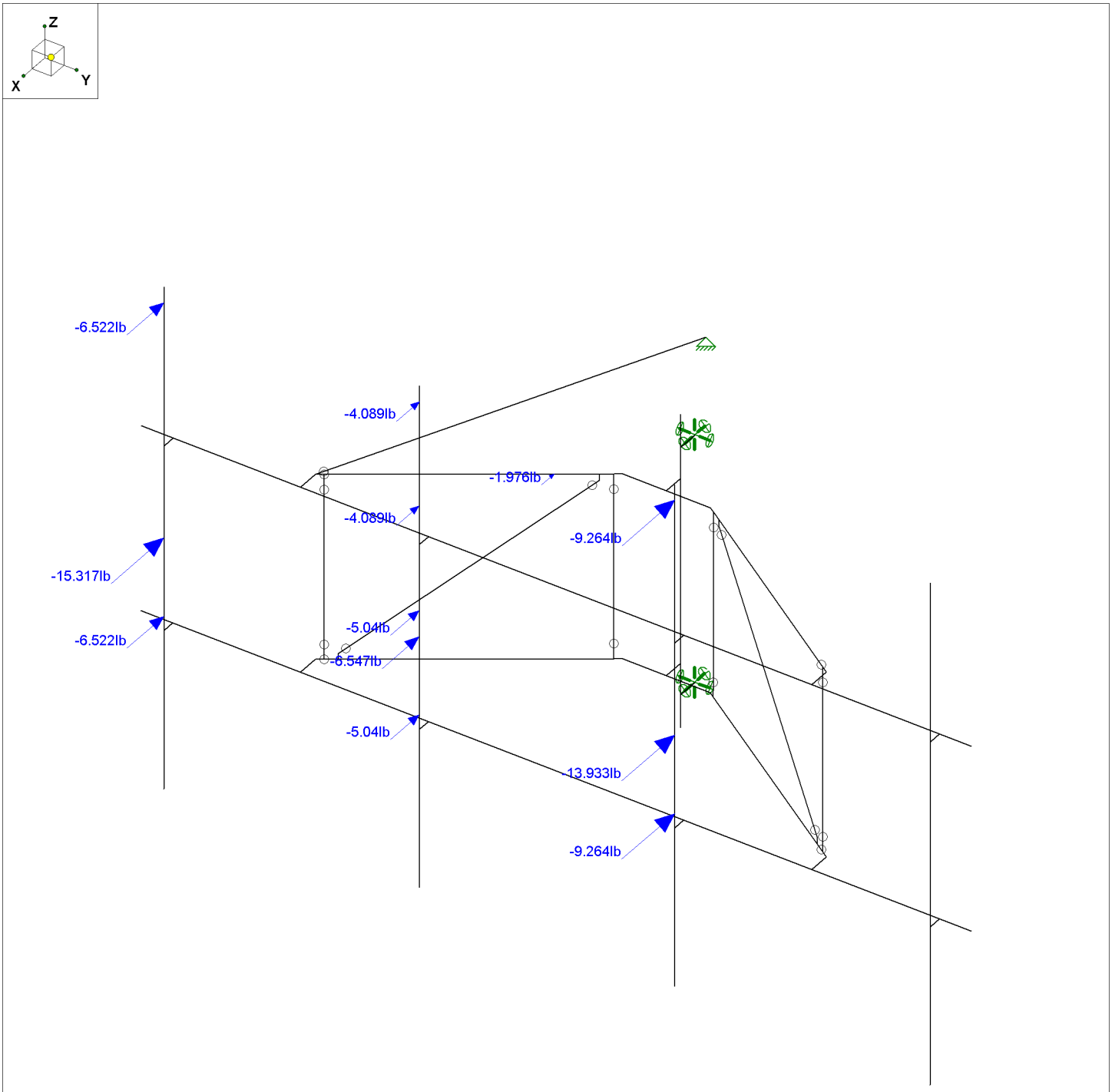
Trylon	876334	SK - 15
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d





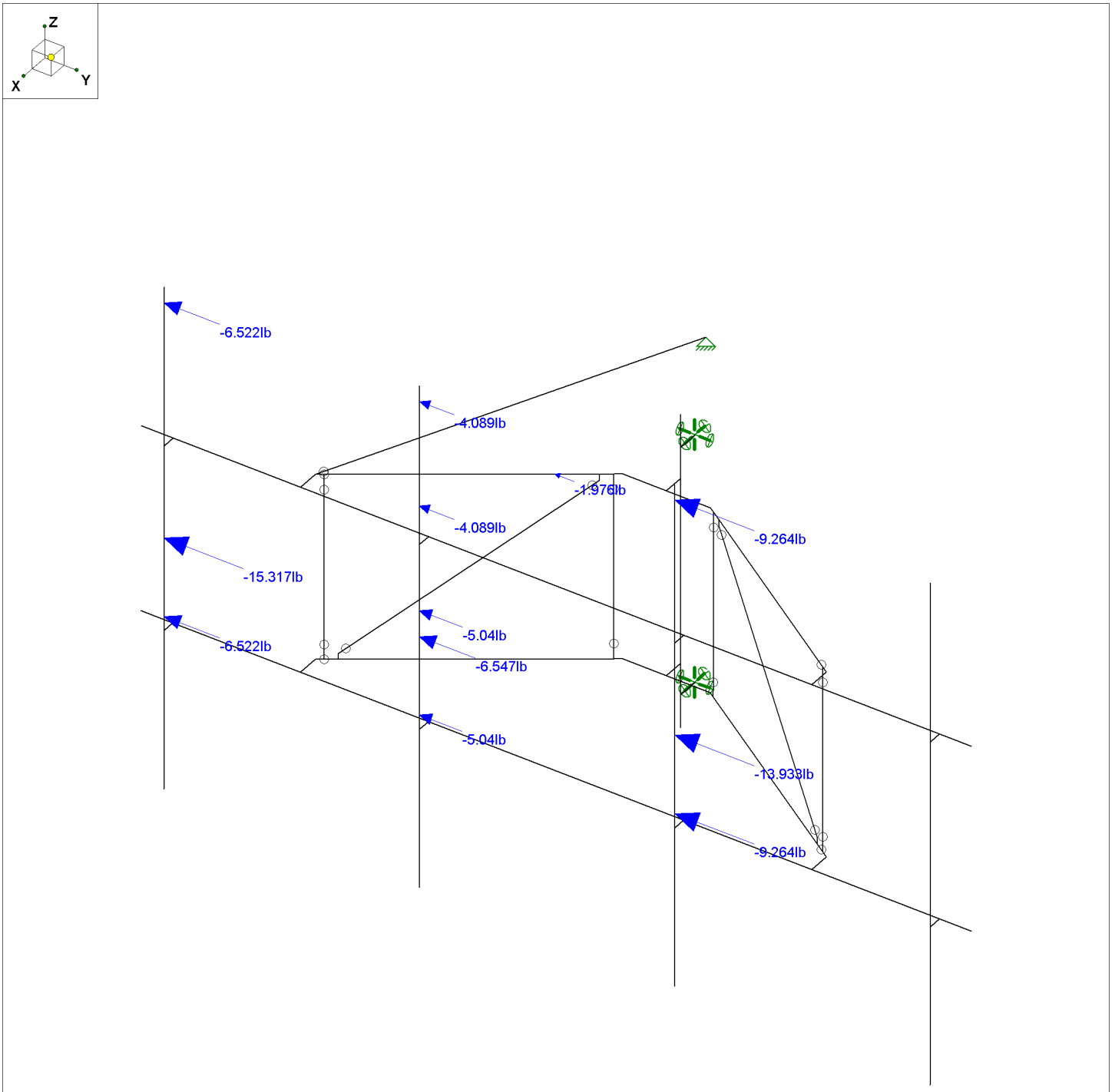
Loads: BLC 19, Ice Wind Load 90 AZI
Envelope Only Solution

Trylon	876334	SK - 16
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d



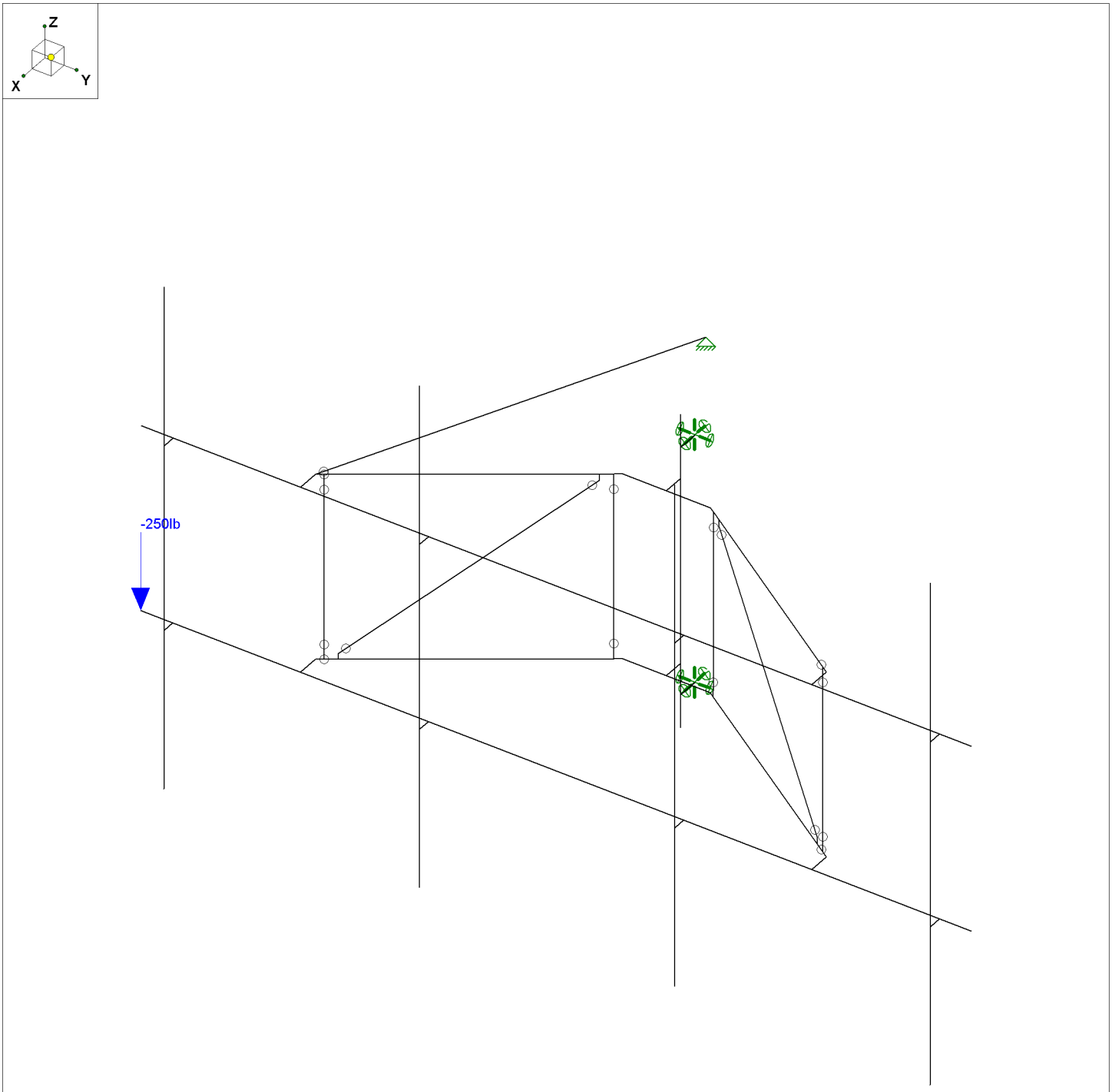
Loads: BLC 23, Seismic Load X
Envelope Only Solution

Trylon	876334	SK - 17
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d



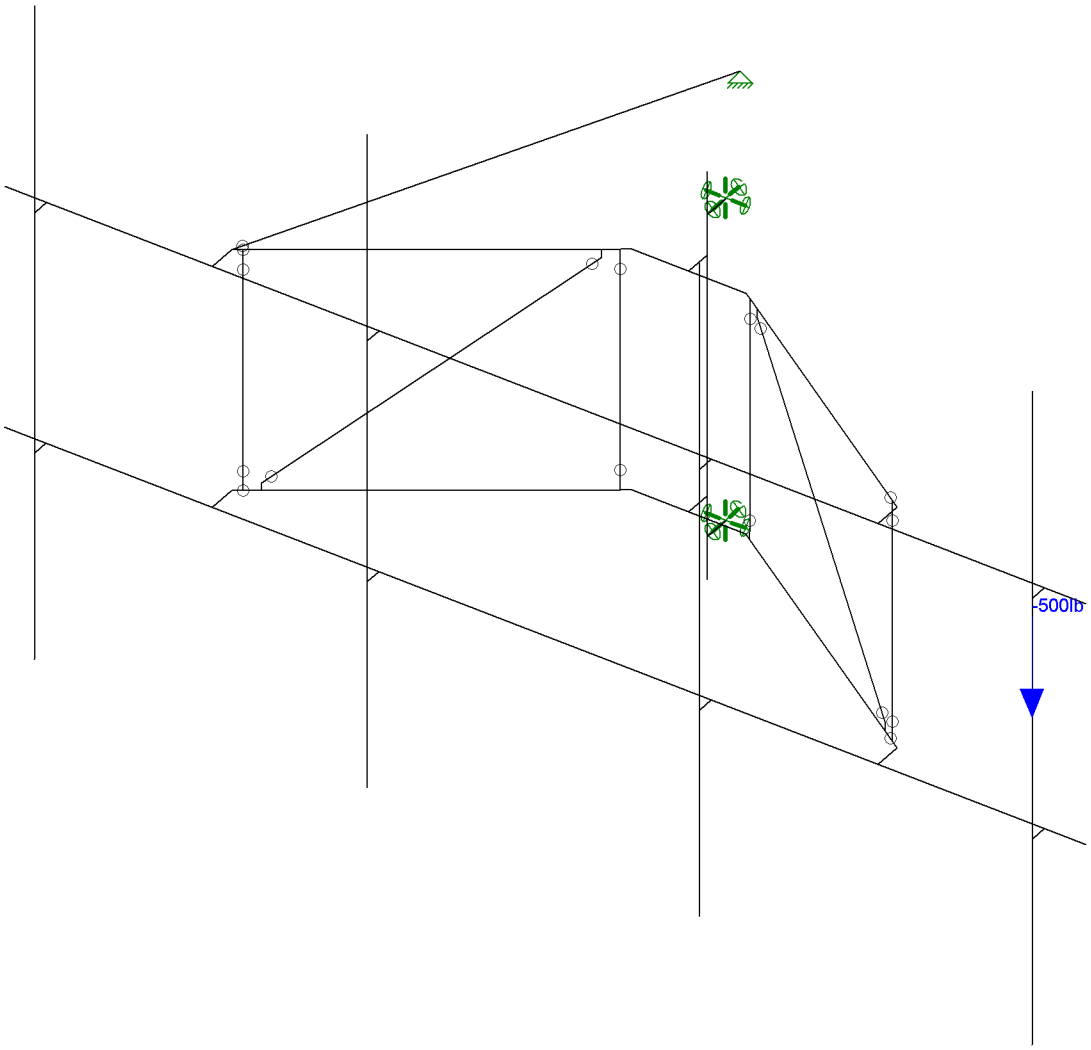
Loads: BLC 24, Seismic Load Y
Envelope Only Solution

Trylon	876334	SK - 18
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d



Loads: BLC 25, Live Load 1 (Lv)
Envelope Only Solution

Trylon	876334	SK - 19
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d



Loads: BLC 28, Maintenance Load 1 (Lm)
Envelope Only Solution

Trylon	876334	SK - 20
AC		Dec 23, 2021 at 11:20 AM
198408		198408 - 876334_loaded.r3d

APPENDIX B

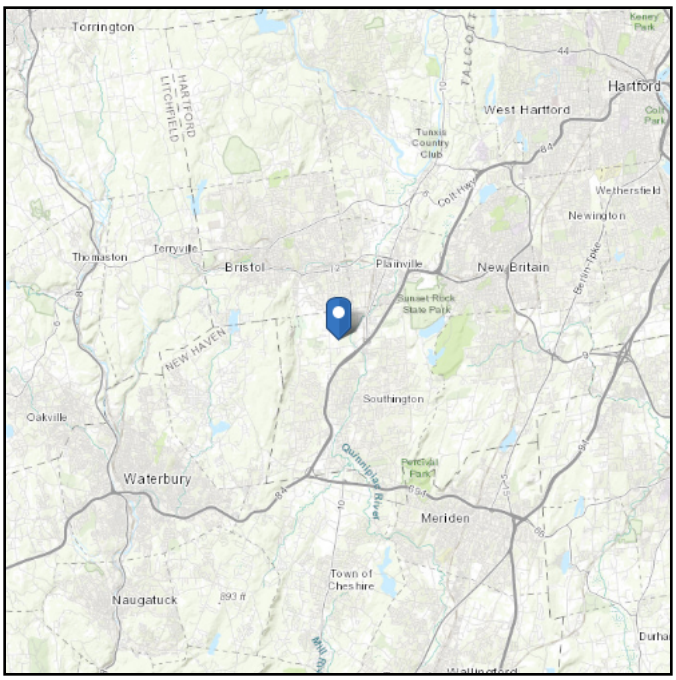
SOFTWARE INPUT CALCULATIONS

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard: ASCE/SEI 7-16
Risk Category: II
Soil Class: D - Default (see Section 11.4.3)

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



Wind

Results:

Wind Speed	117 Vmph
10-year MRI	75 Vmph
25-year MRI	84 Vmph
50-year MRI	90 Vmph
100-year MRI	97 Vmph

Data Source:	ASCE/SEI 7-16, Fig. 26.5-1B and Figs. CC.2-1–CC.2-4, and Section 26.5.2
Date Accessed:	Mon Dec 20 2021

Value provided is 3-second gust wind speeds at 33 ft above ground for Exposure C Category, based on linear interpolation between contours. Wind speeds are interpolated in accordance with the 7-16 Standard. Wind speeds correspond to approximately a 7% probability of exceedance in 50 years (annual exceedance probability = 0.00143, MRI = 700 years).

Site is in a hurricane-prone region as defined in ASCE/SEI 7-16 Section 26.2. Glazed openings need not be protected against wind-borne debris.

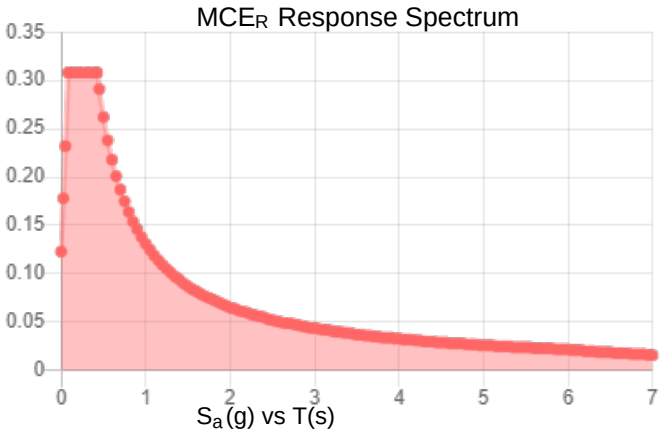
Seismic

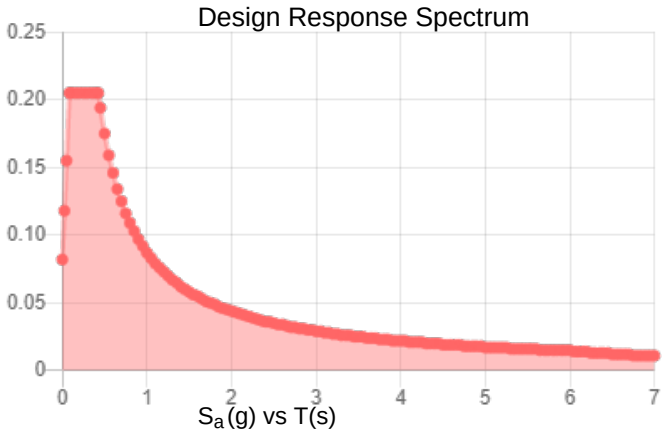
Site Soil Class: D - Default (see Section 11.4.3)

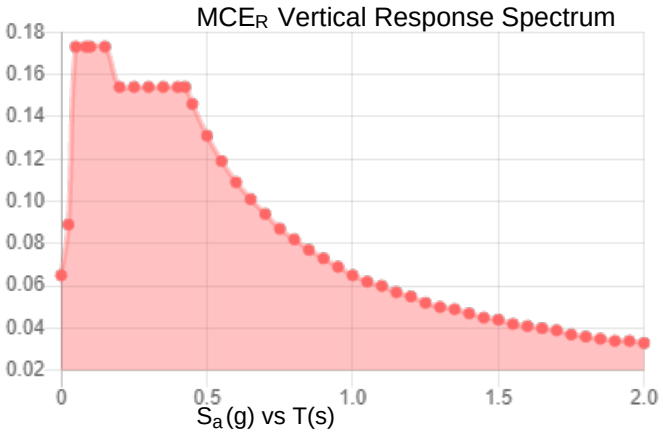
Results:

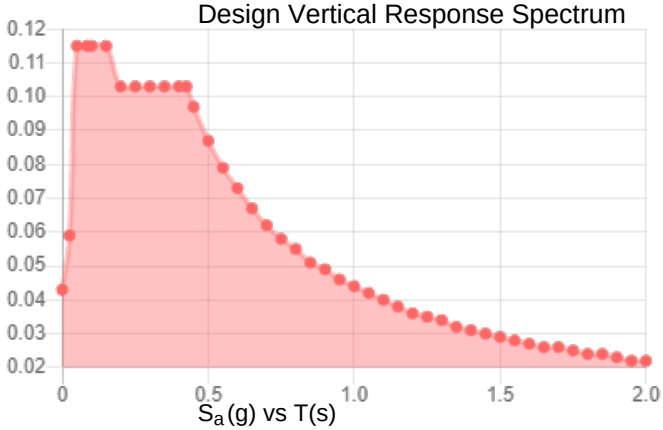
S_S :	0.193	S_{D1} :	0.087
S_1 :	0.055	T_L :	6
F_a :	1.6	PGA :	0.105
F_v :	2.4	PGA_M :	0.167
S_{MS} :	0.308	F_{PGA} :	1.589
S_{M1} :	0.131	I_e :	1
S_{DS} :	0.205	C_v :	0.7

Seismic Design Category B









Data Accessed: **Mon Dec 20 2021**

Date Source:

USGS Seismic Design Maps based on ASCE/SEI 7-16 and ASCE/SEI 7-16 Table 1.5-2. Additional data for site-specific ground motion procedures in accordance with ASCE/SEI 7-16 Ch. 21 are available from USGS.

Ice

Results:

Ice Thickness:	1.00 in.
Concurrent Temperature:	15 F
Gust Speed	50 mph
Data Source:	Standard ASCE/SEI 7-16, Figs. 10-2 through 10-8
Date Accessed:	Mon Dec 20 2021

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

Values provided are equivalent radial ice thicknesses due to freezing rain with concurrent 3-second gust speeds, for a 500-year mean recurrence interval, and temperatures concurrent with ice thicknesses due to freezing rain. Thicknesses for ice accretions caused by other sources shall be obtained from local meteorological studies. Ice thicknesses in exposed locations at elevations higher than the surrounding terrain and in valleys and gorges may exceed the mapped values.

Trylon
1825 W. Walnut Hill Lane Suite 120
Irving, TX 75038

TIA LOAD CALCULATOR 2.2

PROJECT DATA	
Job Code:	198408
Carrier Site ID:	876334
Carrier Site Name:	SOUTHINGTON, SMORON

CODES AND STANDARDS	
Building Code:	2018 IBC
Local Building Code:	-
Design Standard:	TIA-222-H

STRUCTURE DETAILS		
Mount Type:	Sector Frame	--
Mount Elevation:	156.0	ft.
Number of Sectors:	3	--
Structure Type:	Monopole	--
Structure Height:	160.3	ft.

ANALYSIS CRITERIA		
Structure Risk Category:	II	--
Exposure Category:	C	--
Site Class:	D - Default	--
Ground Elevation:	296.07	ft.

TOPOGRAPHIC DATA		
Topographic Category:	1.00	--
Topographic Feature:	N/A	--
Crest Point Elevation:	0.00	ft.
Base Point Elevation:	0.00	ft.
Crest to Mid-Height (L/2):	0.00	ft.
Distance from Crest (x):	0.00	ft.
Base Topo Factor (K_{zt}):	1.00	--
Mount Topo Factor (K_{zt}):	1.00	--

WIND PARAMETERS		
Design Wind Speed:	117	mph
Wind Escalation Factor (K_s):	1.00	--
Velocity Coefficient (K_z):	1.39	--
Directionality Factor (K_d):	0.95	--
Gust Effect Factor (Gh):	1.00	--
Shielding Factor (K_a):	0.90	--
Velocity Pressure (q_z):	45.78	psf
Ground Elevation Factor (K_e):	0.99	--

ICE PARAMETERS		
Design Ice Wind Speed:	50	mph
Design Ice Thickness (t_i):	1.00	in
Importance Factor (I_i):	1.00	--
Ice Velocity Pressure (q_{zi}):	45.78	psf
Mount Ice Thickness (t_{iz}):	1.17	in

WIND STRUCTURE CALCULATIONS		
Flat Member Pressure:	82.40	psf
Round Member Pressure:	49.44	psf
Ice Wind Pressure:	7.59	psf

SEISMIC PARAMETERS		
Importance Factor (I_e):	1.00	--
Short Period Accel .(S_s):	0.19	g
1 Second Accel (S_1):	0.06	g
Short Period Des. (S_{DS}):	0.21	g
1 Second Des. (S_{D1}):	0.09	g
Short Period Coeff. (F_a):	1.60	--
1 Second Coeff. (F_v):	2.40	--
Response Coefficient (Cs):	0.10	--
Amplification Factor (A_S):	1.20	--

LOAD COMBINATIONS [LRFD]

#	Description
1	1.4DL
2	1.2DL + 1WL 0 AZI
3	1.2DL + 1WL 30 AZI
4	1.2DL + 1WL 45 AZI
5	1.2DL + 1WL 60 AZI
6	1.2DL + 1WL 90 AZI
7	1.2DL + 1WL 120 AZI
8	1.2DL + 1WL 135 AZI
9	1.2DL + 1WL 150 AZI
10	1.2DL + 1WL 180 AZI
11	1.2DL + 1WL 210 AZI
12	1.2DL + 1WL 225 AZI
13	1.2DL + 1WL 240 AZI
14	1.2DL + 1WL 270 AZI
15	1.2DL + 1WL 300 AZI
16	1.2DL + 1WL 315 AZI
17	1.2DL + 1WL 330 AZI
18	0.9DL + 1WL 0 AZI
19	0.9DL + 1WL 30 AZI
20	0.9DL + 1WL 45 AZI
21	0.9DL + 1WL 60 AZI
22	0.9DL + 1WL 90 AZI
23	0.9DL + 1WL 120 AZI
24	0.9DL + 1WL 135 AZI
25	0.9DL + 1WL 150 AZI
26	0.9DL + 1WL 180 AZI
27	0.9DL + 1WL 210 AZI
28	0.9DL + 1WL 225 AZI
29	0.9DL + 1WL 240 AZI
30	0.9DL + 1WL 270 AZI
31	0.9DL + 1WL 300 AZI
32	0.9DL + 1WL 315 AZI
33	0.9DL + 1WL 330 AZI
34	1.2DL + 1DLi + 1WLi 0 AZI
35	1.2DL + 1DLi + 1WLi 30 AZI
36	1.2DL + 1DLi + 1WLi 45 AZI
37	1.2DL + 1DLi + 1WLi 60 AZI
38	1.2DL + 1DLi + 1WLi 90 AZI
39	1.2DL + 1DLi + 1WLi 120 AZI
40	1.2DL + 1DLi + 1WLi 135 AZI
41	1.2DL + 1DLi + 1WLi 150 AZI
42	1.2DL + 1DLi + 1WLi 180 AZI
43	1.2DL + 1DLi + 1WLi 210 AZI
44	1.2DL + 1DLi + 1WLi 225 AZI
45	1.2DL + 1DLi + 1WLi 240 AZI
46	1.2DL + 1DLi + 1WLi 270 AZI
47	1.2DL + 1DLi + 1WLi 300 AZI
48	1.2DL + 1DLi + 1WLi 315 AZI
49	1.2DL + 1DLi + 1WLi 330 AZI
50	(1.2+0.2Sds) + 1.0E 0 AZI
51	(1.2+0.2Sds) + 1.0E 30 AZI
52	(1.2+0.2Sds) + 1.0E 45 AZI
53	(1.2+0.2Sds) + 1.0E 60 AZI
54	(1.2+0.2Sds) + 1.0E 90 AZI
55	(1.2+0.2Sds) + 1.0E 120 AZI
56	(1.2+0.2Sds) + 1.0E 135 AZI
57	(1.2+0.2Sds) + 1.0E 150 AZI
58	(1.2+0.2Sds) + 1.0E 180 AZI
59	(1.2+0.2Sds) + 1.0E 210 AZI
60	(1.2+0.2Sds) + 1.0E 225 AZI
61	(1.2+0.2Sds) + 1.0E 240 AZI
62	(1.2+0.2Sds) + 1.0E 270 AZI
63	(1.2+0.2Sds) + 1.0E 300 AZI
64	(1.2+0.2Sds) + 1.0E 315 AZI
65	(1.2+0.2Sds) + 1.0E 330 AZI
66	(0.9-0.2Sds) + 1.0E 0 AZI
67	(0.9-0.2Sds) + 1.0E 30 AZI
68	(0.9-0.2Sds) + 1.0E 45 AZI
69	(0.9-0.2Sds) + 1.0E 60 AZI
70	(0.9-0.2Sds) + 1.0E 90 AZI
71	(0.9-0.2Sds) + 1.0E 120 AZI
72	(0.9-0.2Sds) + 1.0E 135 AZI
73	(0.9-0.2Sds) + 1.0E 150 AZI
74	(0.9-0.2Sds) + 1.0E 180 AZI
75	(0.9-0.2Sds) + 1.0E 210 AZI
76	(0.9-0.2Sds) + 1.0E 225 AZI
77	(0.9-0.2Sds) + 1.0E 240 AZI
78	(0.9-0.2Sds) + 1.0E 270 AZI
79	(0.9-0.2Sds) + 1.0E 300 AZI
80	(0.9-0.2Sds) + 1.0E 315 AZI
81	(0.9-0.2Sds) + 1.0E 330 AZI

#	Description
89	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP1
90	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP1
91	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP1
92	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP1
93	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP1
94	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP1
95	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP1
96	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP1
97	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP1
98	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP1
99	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP1
100	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP1
101	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP1
102	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP1
103	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP1
104	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP1
105	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP2
106	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP2
107	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP2
108	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP2
109	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP2
110	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP2
111	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP2
112	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP2
113	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP2
114	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP2
115	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP2
116	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP2
117	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP2
118	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP2
119	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP2
120	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP2

#	Description
121	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP3
122	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP3
123	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP3
124	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP3
125	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP3
126	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP3
127	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP3
128	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP3
129	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP3
130	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP3
131	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP3
132	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP3
133	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP3
134	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP3
135	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP3
136	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP3
137	1.2D + 1.5Lm + 1.0Wm 0 AZI - MP4
138	1.2D + 1.5Lm + 1.0Wm 30 AZI - MP4
139	1.2D + 1.5Lm + 1.0Wm 45 AZI - MP4
140	1.2D + 1.5Lm + 1.0Wm 60 AZI - MP4
141	1.2D + 1.5Lm + 1.0Wm 90 AZI - MP4
142	1.2D + 1.5Lm + 1.0Wm 120 AZI - MP4
143	1.2D + 1.5Lm + 1.0Wm 135 AZI - MP4
144	1.2D + 1.5Lm + 1.0Wm 150 AZI - MP4
145	1.2D + 1.5Lm + 1.0Wm 180 AZI - MP4
146	1.2D + 1.5Lm + 1.0Wm 210 AZI - MP4
147	1.2D + 1.5Lm + 1.0Wm 225 AZI - MP4
148	1.2D + 1.5Lm + 1.0Wm 240 AZI - MP4
149	1.2D + 1.5Lm + 1.0Wm 270 AZI - MP4
150	1.2D + 1.5Lm + 1.0Wm 300 AZI - MP4
151	1.2D + 1.5Lm + 1.0Wm 315 AZI - MP4
152	1.2D + 1.5Lm + 1.0Wm 330 AZI - MP4

*This page shows an example of maintenance loads for (4) pipes, the number of mount pipe LCs may vary per site

EQUIPMENT LOADING

Appurtenance Name	Qty.	Elevation [ft]	--	EPA_N (ft2)	EPA_T (ft2)	Weight (lbs)
QD8616-7	1	157	No Ice	18.35	7.99	150.00
--	--	--	w/ Ice	20.44	9.87	268.82
AIR 6419 B77G	1	159	No Ice	4.64	1.87	66.20
--	--	--	w/ Ice	5.60	2.63	64.89
AIR 6449 B77D	1	155	No Ice	3.64	1.72	81.60
--	--	--	w/ Ice	4.38	2.34	74.74
DMP65R-BU8D	1	157	No Ice	15.86	5.95	105.60
--	--	--	w/ Ice	17.76	7.64	241.06
RRUS 32 B2	1	157	No Ice	2.73	1.67	52.90
--	--	--	w/ Ice	3.09	1.98	54.25
RRUS 32 B66	1	157	No Ice	2.74	1.67	53.00
--	--	--	w/ Ice	3.10	1.98	54.39
RRUS 4449 B5/B12	1	157	No Ice	1.97	1.41	71.00
--	--	--	w/ Ice	2.25	1.66	47.71
RRUS 4478 B14	1	157	No Ice	1.84	1.06	59.90
--	--	--	w/ Ice	2.11	1.28	41.26
RRUS 32 B30	1	157	No Ice	2.74	1.67	53.00
--	--	--	w/ Ice	3.10	1.98	54.39
DC9-48-60-24-8C-EV_CCIV2	1	157	No Ice	1.14	1.14	16.00
--	--	--	w/ Ice	1.52	1.52	66.26
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
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			No Ice			
--	--	--	w/ Ice			
			No Ice			
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			No Ice			
--	--	--	w/ Ice			
--	--					
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EQUIPMENT LOADING [CONT.]

Appurtenance Name	Qty.	Elevation [ft]	--	EPA $_N$ (ft2)	EPA $_T$ (ft2)	Weight (lbs)
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			
			No Ice			
--	--	--	w/ Ice			

EQUIPMENT WIND CALCULATIONS

Appurtenance Name	Qty.	Elevation [ft]	K_{zt}	K_z	K_d	t_d	q_z [psf]	q_{zi} [psf]
QD8616-7	1	157	1.00	1.39	0.95	1.17	45.84	8.37
AIR 6419 B77G	1	159	1.00	1.40	0.95	1.17	45.96	8.39
AIR 6449 B77D	1	155	1.00	1.39	0.95	1.17	45.71	8.35
DMP65R-BU8D	1	157	1.00	1.39	0.95	1.17	45.84	8.37
RRUS 32 B2	1	157	1.00	1.39	0.95	1.17	45.84	8.37
RRUS 32 B66	1	157	1.00	1.39	0.95	1.17	45.84	8.37
RRUS 4449 B5/B12	1	157	1.00	1.39	0.95	1.17	45.84	8.37
RRUS 4478 B14	1	157	1.00	1.39	0.95	1.17	45.84	8.37
RRUS 32 B30	1	157	1.00	1.39	0.95	1.17	45.84	8.37
C9-48-60-24-8C-EV_CCIV	1	157	1.00	1.39	0.95	1.17	45.84	8.37

EQUIPMENT LATERAL WIND FORCE CALCULATIONS

Appurtenance Name	***Qty.***	***--***	***0° 180°***	***30° 210°***	***60° 240°***	***90° 270°***	***120° 300°***	***150° 330°***
QD8616-7	1	No Ice	757.01	436.47	650.17	329.62	650.17	436.47
--	--	w/ Ice	154.03	94.26	134.11	74.34	134.11	94.26
AIR 6419 B77G	1	No Ice	191.93	106.00	163.29	77.35	163.29	106.00
--	--	w/ Ice	42.32	25.47	36.71	19.85	36.71	25.47
AIR 6449 B77D	1	No Ice	149.76	90.51	130.01	70.77	130.01	90.51
--	--	w/ Ice	32.90	21.39	29.07	17.56	29.07	21.39
DMP65R-BU8D	1	No Ice	654.29	347.67	552.08	245.46	552.08	347.67
--	--	w/ Ice	133.81	76.65	114.76	57.60	114.76	76.65
RRUS 32 B2	1	No Ice	112.68	79.78	101.71	68.82	101.71	79.78
--	--	w/ Ice	23.25	17.03	21.17	14.95	21.17	17.03
RRUS 32 B66	1	No Ice	113.15	79.90	102.06	68.82	102.06	79.90
--	--	w/ Ice	23.34	17.05	21.24	14.95	21.24	17.05
RRUS 4449 B5/B12	1	No Ice	81.17	63.86	75.40	58.09	75.40	63.86
--	--	w/ Ice	16.95	13.62	15.84	12.51	15.84	13.62
RRUS 4478 B14	1	No Ice	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
--	--	w/ Ice	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
RRUS 32 B30	1	No Ice	113.15	79.90	102.06	68.82	102.06	79.90
--	--	w/ Ice	23.34	17.05	21.24	14.95	21.24	17.05
DC9-48-60-24-8C-EV_CCIV2	1	No Ice	47.22	47.22	47.22	47.22	47.22	47.22
--	--	w/ Ice	11.47	11.47	11.47	11.47	11.47	11.47
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No						
--	--	w/						
		No						
--	--	w/						

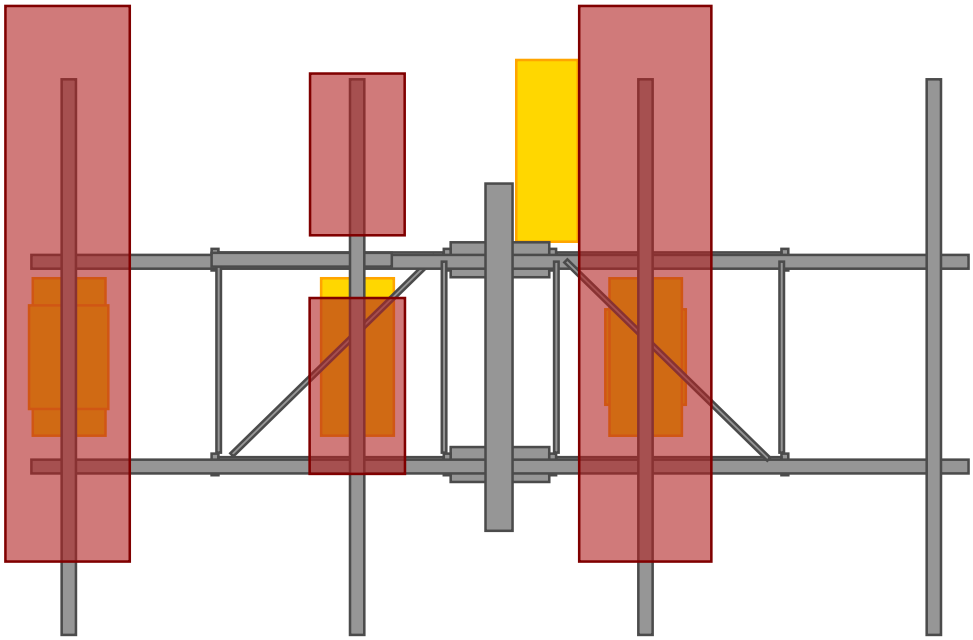
EQUIPMENT LATERAL WIND FORCE CALCULATIONS [CONT.]

Appurtenance Name	Qty.	--	0° 180°	30° 210°	60° 240°	90° 270°	120° 300°	150° 330°
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						
		No Ice						
--	--	w/ Ice						

EQUIPMENT SEISMIC FORCE CALCULATIONS

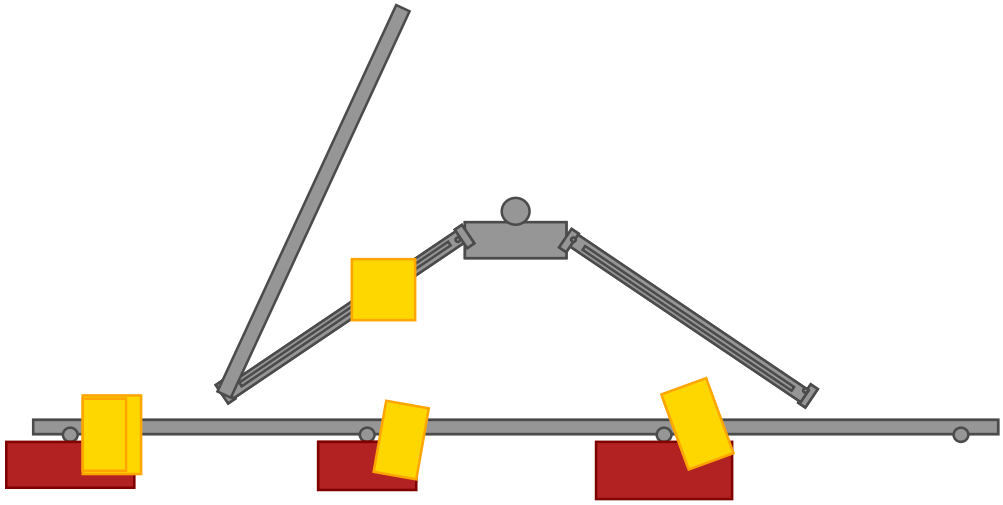
Appurtenance Name	*Qty.*	*Elevation [ft]*	*Weight [lbs]*	F_p [lbs]
QD8616-7	1	157	150	18.53
AIR 6419 B77G	1	159	66.2	8.18
AIR 6449 B77D	1	155	81.6	10.08
DMP65R-BU8D	1	157	105.6	13.04
RRUS 32 B2	1	157	52.9	6.53
RRUS 32 B66	1	157	53	6.55
RRUS 4449 B5/B12	1	157	71	8.77
RRUS 4478 B14	1	157	59.9	7.40
RRUS 32 B30	1	157	53	6.55
DC9-48-60-24-8C-EV_CCIV2	1	157	16	1.98

ELEVATION VIEW



*Elevation View Shows Alpha Sector Only

PLAN VIEW



1825 W. Walnut Hill Lane, Suite 120
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Equipment Name	Total Quantity	Antenna Centerline	Mount Pipe Positions	Equipment Azimuths
QD8616-7	1	157	MP2	0
AIR 6419 B77G	1	159	MP3	0
AIR 6449 B77D	1	155	MP3	0
DMP65R-BU8D	1	157	MP4	0
RRUS 32 B2	1	157	MP2	70
RRUS 32 B66	1	157	MP3	100
RRUS 4449 B5/B12	1	157	MP4	90
RRUS 4478 B14	1	157	MP2	70
RRUS 32 B30	1	157	MP4	90
DC9-48-60-24-8C-EV_CCIV2	1	157	M7	0

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APPENDIX C

SOFTWARE ANALYSIS OUTPUT

(Global) Model Settings

Display Sections for Member Calcs	5
Max Internal Sections for Member Calcs	97
Include Shear Deformation?	Yes
Increase Nailing Capacity for Wind?	Yes
Include Warping?	Yes
Trans Load Btwn Intersecting Wood Wall?	Yes
Area Load Mesh (in^2)	144
Merge Tolerance (in)	.12
P-Delta Analysis Tolerance	0.50%
Include P-Delta for Walls?	Yes
Automatically Iterate Stiffness for Walls?	Yes
Max Iterations for Wall Stiffness	3
Gravity Acceleration (in/sec^2)	386.4
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Z
Global Member Orientation Plane	XY
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	Yes(Iterative)
RISAConnection Code	AISC 15th(360-16): LRFD
Cold Formed Steel Code	AISI S100-16: LRFD
Wood Code	None
Wood Temperature	< 100F
Concrete Code	None
Masonry Code	None
Aluminum Code	None - Building
Stainless Steel Code	None

Number of Shear Regions	4
Region Spacing Increment (in)	4
Biaxial Column Method	Exact Integration
Parme Beta Factor (PCA)	.65
Concrete Stress Block	Rectangular
Use Cracked Sections?	Yes
Use Cracked Sections Slab?	No
Bad Framing Warnings?	No
Unused Force Warnings?	Yes
Min 1 Bar Diam. Spacing?	No
Concrete Rebar Set	REBAR_SET_ASTMA615
Min % Steel for Column	1
Max % Steel for Column	8

(Global) Model Settings, Continued

Seismic Code	ASCE 7-16
Seismic Base Elevation (in)	Not Entered
Add Base Weight?	Yes
Ct X	.02
Ct Z	.02
T X (sec)	Not Entered
T Z (sec)	Not Entered
R X	3
R Z	3
Ct Exp. X	.75
Ct Exp. Z	.75
SD1	1
SDS	1
S1	1
TL (sec)	5
Risk Cat	I or II
Drift Cat	Other
Om Z	1
Om X	1
Cd Z	1
Cd X	1
Rho Z	1
Rho X	1

Hot Rolled Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E..	Density[k/ft...	Yield[ksi]	Ry	Fu[ksi]	Rt
1	A992	29000	11154	.3	.65	.49	50	1.1	65	1.1
2	A36 Gr.36	29000	11154	.3	.65	.49	36	1.5	58	1.2
3	A572 Gr.50	29000	11154	.3	.65	.49	50	1.1	65	1.1
4	A500 Gr.B RND	29000	11154	.3	.65	.527	42	1.4	58	1.3
5	A500 Gr.B Rect	29000	11154	.3	.65	.527	46	1.4	58	1.3
6	A53 Gr.B	29000	11154	.3	.65	.49	35	1.6	60	1.2
7	A1085	29000	11154	.3	.65	.49	50	1.4	65	1.3

Cold Formed Steel Properties

	Label	E [ksi]	G [ksi]	Nu	Therm (/1E5 F)	Density[k/ft^3]	Yield[ksi]	Fu[ksi]
1	A653 SS Gr33	29500	11346	.3	.65	.49	33	45
2	A653 SS Gr50/1	29500	11346	.3	.65	.49	50	65

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Pipe 2.375"x0.154"	HSS2.375X0.154	Beam	HSS Pipe	A572 Gr.50	Typical	1	.627	.627	1.25
2	Pipe 2.375"x0.218"	HSS2.375X0.218	Beam	HSS Pipe	A572 Gr.50	Typical	1.39	.824	.824	1.65
3	SR 3/4	3/4	Beam	BAR	A572 Gr.50	Typical	.442	.016	.016	.031
4	Plate 3.7"x0.5"	Plate 3.7"x0.5	Beam	RECT	A36 Gr.36	Typical	1.85	.039	2.111	.141
5	Plate 6"x0.625"	Plate 6"x0.625"	Beam	RECT	A36 Gr.36	Typical	3.75	.122	11.25	.456
6	Pipe Mounts	HSS2.375X0.154	Beam	Pipe	A53 Gr.B	Typical	1	.627	.627	1.25
7	PIPE_4.0	PIPE_4.0	Beam	Pipe	A53 Gr.B	Typical	2.96	6.82	6.82	13.6

Cold Formed Steel Section Sets

	Label	Shape	Type	Design List	Material	Design Rules	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	CF1	162T125-18	Beam	None	A653 SS Gr33	Typical	.078	.013	.042	9e-6

Joint Boundary Conditions

	Joint Label	X [k/in]	Y [k/in]	Z [k/in]	X Rot.[k-ft/rad]	Y Rot.[k-ft/rad]	Z Rot.[k-ft/rad]
1	N27						
2	N28						
3	N74	Reaction	Reaction	Reaction			
4	N74A						
5	N75						
6	N76						
7	N77						
8	N78	Reaction	Reaction	Reaction	Reaction	Reaction	
9	N79	Reaction	Reaction	Reaction	Reaction	Reaction	

Member Primary Data

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
1	M1	N2	N9		90	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
2	M2	N4	N12		270	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
3	M3	N1	N10		90	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
4	M4	N3	N11		270	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
5	M5	N5	N6		90	Plate 6"x0.625"	Beam	RECT	A36 Gr.36	Typical
6	M6	N8	N7		90	Plate 6"x0.625"	Beam	RECT	A36 Gr.36	Typical
7	M7	N9	N13			Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
8	M8	N10	N14			Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
9	M9	N11	N15		270	Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
10	M10	N12	N16		270	Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
11	M11	N13	N5		90	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
12	M12	N14	N7		90	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
13	M13	N15	N8		270	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
14	M14	N16	N6		270	Plate 3.7"x0.5"	Beam	RECT	A36 Gr.36	Typical
15	M15	N10	N42			RIGID	None	None	RIGID	Typical
16	M16	N14	N41			RIGID	None	None	RIGID	Typical
17	M17	N45	N46			SR 3/4	Beam	BAR	A572 Gr.50	Typical
18	M18	N25	N27			RIGID	None	None	RIGID	Typical
19	M19	N26	N28			RIGID	None	None	RIGID	Typical
20	H1	N29	N30		180	Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
21	M21	N31	N32		270	Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
22	M22	N1	N33			RIGID	None	None	RIGID	Typical
23	M23	N2	N34			RIGID	None	None	RIGID	Typical
24	M24	N4	N36			RIGID	None	None	RIGID	Typical
25	M25	N3	N35			RIGID	None	None	RIGID	Typical
26	M26	N37	N38			RIGID	None	None	RIGID	Typical
27	M27	N39	N40			RIGID	None	None	RIGID	Typical
28	M28	N41	N44			SR 3/4	Beam	BAR	A572 Gr.50	Typical
29	M29	N42	N43			SR 3/4	Beam	BAR	A572 Gr.50	Typical
30	M30	N43	N9			RIGID	None	None	RIGID	Typical
31	M31	N44	N13			RIGID	None	None	RIGID	Typical
32	M32	N24	N45			RIGID	None	None	RIGID	Typical

Member Primary Data (Continued)

	Label	I Joint	J Joint	K Joint	Rotate(deg)	Section/Shape	Type	Design List	Material	Design Rules
33	M33	N17	N46			RIGID	None	None	RIGID	Typical
34	M34	N11	N48			RIGID	None	None	RIGID	Typical
35	M35	N15	N47			RIGID	None	None	RIGID	Typical
36	M36	N51	N52			SR 3/4	Beam	BAR	A572 Gr.50	Typical
37	M37	N47	N50			SR 3/4	Beam	BAR	A572 Gr.50	Typical
38	M38	N48	N49			SR 3/4	Beam	BAR	A572 Gr.50	Typical
39	M39	N49	N12			RIGID	None	None	RIGID	Typical
40	M40	N50	N16			RIGID	None	None	RIGID	Typical
41	M41	N21	N51			RIGID	None	None	RIGID	Typical
42	M42	N20	N52			RIGID	None	None	RIGID	Typical
43	M43	N2	N74			Pipe 2.375"x0....	Beam	HSS Pipe	A572 Gr.50	Typical
44	MP1	N54	N55			Pipe Mounts	Beam	Pipe	A53 Gr.B	Typical
45	M45	N56	N57			RIGID	None	None	RIGID	Typical
46	M46	N58	N59			RIGID	None	None	RIGID	Typical
47	MP2	N60	N61			Pipe Mounts	Beam	Pipe	A53 Gr.B	Typical
48	M48	N62	N63			RIGID	None	None	RIGID	Typical
49	M49	N64	N65			RIGID	None	None	RIGID	Typical
50	MP3	N66	N67			Pipe Mounts	Beam	Pipe	A53 Gr.B	Typical
51	M51	N68	N69			RIGID	None	None	RIGID	Typical
52	M52	N70	N71			RIGID	None	None	RIGID	Typical
53	MP4	N72	N73			Pipe Mounts	Beam	Pipe	A53 Gr.B	Typical
54	M54	N74A	N75			PIPE 4.0	Beam	Pipe	A53 Gr.B	Typical
55	M55	N76	N78			RIGID	None	None	RIGID	Typical
56	M56	N77	N79			RIGID	None	None	RIGID	Typical

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
1	M1	BenPIN					Yes				None
2	M2	BenPIN					Yes	Default			None
3	M3	BenPIN					Yes				None
4	M4	BenPIN					Yes				None
5	M5						Yes	Default			None
6	M6						Yes				None
7	M7						Yes				None
8	M8						Yes				None
9	M9						Yes				None
10	M10						Yes				None
11	M11						Yes				None
12	M12						Yes				None
13	M13						Yes				None
14	M14						Yes				None
15	M15						Yes	** NA **			None
16	M16						Yes	** NA **			None
17	M17	BenPIN	BenPIN				Yes	Default			None
18	M18						Yes	** NA **			None
19	M19						Yes	** NA **			None
20	H1						Yes				None
21	M21						Yes				None
22	M22						Yes	** NA **			None
23	M23						Yes	** NA **			None

Member Advanced Data (Continued)

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Rat...	Analysis ...	Inactive	Seismic...
24	M24						Yes	** NA **			None
25	M25						Yes	** NA **			None
26	M26						Yes	** NA **			None
27	M27						Yes	** NA **			None
28	M28	BenPIN	BenPIN				Yes	Default			None
29	M29	BenPIN	BenPIN				Yes	Default			None
30	M30						Yes	** NA **			None
31	M31						Yes	** NA **			None
32	M32						Yes	** NA **			None
33	M33						Yes	** NA **			None
34	M34						Yes	** NA **			None
35	M35						Yes	** NA **			None
36	M36	BenPIN	BenPIN				Yes	Default			None
37	M37	BenPIN	BenPIN				Yes	Default			None
38	M38	BenPIN	BenPIN				Yes	Default			None
39	M39						Yes	** NA **			None
40	M40						Yes	** NA **			None
41	M41						Yes	** NA **			None
42	M42						Yes	** NA **			None
43	M43	BenPIN					Yes	Default			None
44	MP1						Yes				None
45	M45						Yes	** NA **			None
46	M46						Yes	** NA **			None
47	MP2						Yes				None
48	M48						Yes	** NA **			None
49	M49						Yes	** NA **			None
50	MP3						Yes				None
51	M51						Yes	** NA **			None
52	M52						Yes	** NA **			None
53	MP4						Yes				None
54	M54						Yes				None
55	M55						Yes	** NA **			None
56	M56						Yes	** NA **			None

Hot Rolled Steel Design Parameters

	Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp to...	Lcomp bo...	L-tor...	Kyy	Kzz	Cb	Funct...
1	M1	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	1	1		Lateral
2	M2	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	1	1		Lateral
3	M3	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	1	1		Lateral
4	M4	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	1	1		Lateral
5	M5	Plate 6"x0.625"	16.412	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
6	M6	Plate 6"x0.625"	16.412	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
7	M7	Pipe 2.375"x0.218"	45.25	45.25	45.25	Lbyy		45.25	1	1		Lateral
8	M8	Pipe 2.375"x0.218"	45.25	45.25	45.25	Lbyy		45.25	1	1		Lateral
9	M9	Pipe 2.375"x0.218"	45.25	45.25	45.25	Lbyy		45.25	1	1		Lateral
10	M10	Pipe 2.375"x0.218"	45.25	45.25	45.25	Lbyy		45.25	1	1		Lateral
11	M11	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
12	M12	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
13	M13	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
14	M14	Plate 3.7"x0.5"	1.375	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp to...	Lcomp bo...	L-tor...	Kyy	Kzz	Cb	Funct...
15	M17	SR 3/4	52.436	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
16	H1	Pipe 2.375"x0.218"	156	96	96	Lbyy		96	1	1		Lateral
17	M21	Pipe 2.375"x0.218"	156	96	96	Lbyy		96	1	1		Lateral
18	M28	SR 3/4	33	33	33	Lbyy		33	.65	.65		Lateral
19	M29	SR 3/4	33	33	33	Lbyy		33	.65	.65		Lateral
20	M36	SR 3/4	52.436	Segment	Segment	Lbyy		Seg...	.65	.65		Lateral
21	M37	SR 3/4	33	33	33	Lbyy		33	.65	.65		Lateral
22	M38	SR 3/4	33	33	33	Lbyy		33	.65	.65		Lateral
23	M43	Pipe 2.375"x0.154"	71.445	71.445	71.445	Lbyy		71.445	1	1		Lateral
24	MP1	Pipe Mounts	96	96	96	Lbyy		96	1	1		Lateral
25	MP2	Pipe Mounts	96	96	96	Lbyy		96	1	1		Lateral
26	MP3	Pipe Mounts	96	96	96	Lbyy		96	1	1		Lateral
27	MP4	Pipe Mounts	96	96	96	Lbyy		96	1	1		Lateral
28	M54	PIPE_4.0	60	60	60	Lbyy		60	1	1		Lateral

Cold Formed Steel Design Parameters

Label	Shape	Length...	Lbyy[in]	Lbzz[in]	Lcomp to...	Lcomp bo...	L-torque[in]	Kyy	Kzz	Cb	R	a[in]	Funct...
No Data to Print ...													

Joint Loads and Enforced Displacements

Joint Label	L,D,M	Direction	Magnitude[(lb,lb-ft), (in,rad), (lb*s^...
No Data to Print ...			

Member Point Loads (BLC 1 : Self Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Z	-75	3
2	MP2	Z	-75	63
3	MP3	Z	-33.1	3
4	MP3	Z	-33.1	23
5	MP3	Z	-40.8	43
6	MP3	Z	-40.8	63
7	MP4	Z	-52.8	3
8	MP4	Z	-52.8	63
9	MP2	Z	-52.9	48
10	MP3	Z	-53	48
11	MP4	Z	-71	48
12	MP2	Z	-59.9	48
13	MP4	Z	-53	48
14	M7	Z	-16	36

Member Point Loads (BLC 4 : Wind Load 0 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-378.507	3
2	MP2	X	-378.507	63
3	MP3	X	-95.965	3
4	MP3	X	-95.965	23
5	MP3	X	-74.88	43

Member Point Loads (BLC 4 : Wind Load 0 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
6	MP3	X	-74.88	63
7	MP4	X	-327.146	3
8	MP4	X	-327.146	63
9	MP2	X	-73.947	48
10	MP3	X	-70.153	48
11	MP4	X	-58.091	48
12	MP2	X	-47.46	48
13	MP4	X	-68.816	48
14	M7	X	-47.217	36
15	MP2	Y	0	3
16	MP2	Y	0	63
17	MP3	Y	0	3
18	MP3	Y	0	23
19	MP3	Y	0	43
20	MP3	Y	0	63
21	MP4	Y	0	3
22	MP4	Y	0	63
23	MP2	Y	0	48
24	MP3	Y	0	48
25	MP4	Y	0	48
26	MP2	Y	0	48
27	MP4	Y	0	48
28	M7	Y	0	36

Member Point Loads (BLC 5 : Wind Load 30 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-281.53	3
2	MP2	X	-281.53	63
3	MP3	X	-70.705	3
4	MP3	X	-70.705	23
5	MP3	X	-56.297	43
6	MP3	X	-56.297	63
7	MP4	X	-239.059	3
8	MP4	X	-239.059	63
9	MP2	X	-60.742	48
10	MP3	X	-75.459	48
11	MP4	X	-55.305	48
12	MP2	X	-38.67	48
13	MP4	X	-69.194	48
14	M7	X	-40.892	36
15	MP2	Y	-162.542	3
16	MP2	Y	-162.542	63
17	MP3	Y	-40.821	3
18	MP3	Y	-40.821	23
19	MP3	Y	-32.503	43
20	MP3	Y	-32.503	63
21	MP4	Y	-138.021	3
22	MP4	Y	-138.021	63
23	MP2	Y	-35.069	48
24	MP3	Y	-43.566	48
25	MP4	Y	-31.93	48

Member Point Loads (BLC 5 : Wind Load 30 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
26	MP2	Y	-22.326	48
27	MP4	Y	-39.949	48
28	M7	Y	-23.609	36

Member Point Loads (BLC 6 : Wind Load 45 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-192.092	3
2	MP2	X	-192.092	63
3	MP3	X	-47.603	3
4	MP3	X	-47.603	23
5	MP3	X	-38.984	43
6	MP3	X	-38.984	63
7	MP4	X	-159.056	3
8	MP4	X	-159.056	63
9	MP2	X	-54.2	48
10	MP3	X	-69.694	48
11	MP4	X	-49.236	48
12	MP2	X	-34.968	48
13	MP4	X	-64.333	48
14	M7	X	-33.388	36
15	MP2	Y	-192.092	3
16	MP2	Y	-192.092	63
17	MP3	Y	-47.603	3
18	MP3	Y	-47.603	23
19	MP3	Y	-38.984	43
20	MP3	Y	-38.984	63
21	MP4	Y	-159.056	3
22	MP4	Y	-159.056	63
23	MP2	Y	-54.2	48
24	MP3	Y	-69.694	48
25	MP4	Y	-49.236	48
26	MP2	Y	-34.968	48
27	MP4	Y	-64.333	48
28	M7	Y	-33.388	36

Member Point Loads (BLC 7 : Wind Load 60 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-109.117	3
2	MP2	X	-109.117	63
3	MP3	X	-26.499	3
4	MP3	X	-26.499	23
5	MP3	X	-22.629	43
6	MP3	X	-22.629	63
7	MP4	X	-86.917	3
8	MP4	X	-86.917	63
9	MP2	X	-43.47	48
10	MP3	X	-53.98	48
11	MP4	X	-37.699	48
12	MP2	X	-28.519	48
13	MP4	X	-51.032	48
14	M7	X	-23.609	36

Member Point Loads (BLC 7 : Wind Load 60 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
15	MP2	Y	-188.997	3
16	MP2	Y	-188.997	63
17	MP3	Y	-45.898	3
18	MP3	Y	-45.898	23
19	MP3	Y	-39.194	43
20	MP3	Y	-39.194	63
21	MP4	Y	-150.545	3
22	MP4	Y	-150.545	63
23	MP2	Y	-75.292	48
24	MP3	Y	-93.497	48
25	MP4	Y	-65.297	48
26	MP2	Y	-49.396	48
27	MP4	Y	-88.39	48
28	M7	Y	-40.892	36

Member Point Loads (BLC 8 : Wind Load 90 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	3
2	MP2	X	0	63
3	MP3	X	0	3
4	MP3	X	0	23
5	MP3	X	0	43
6	MP3	X	0	63
7	MP4	X	0	3
8	MP4	X	0	63
9	MP2	X	0	48
10	MP3	X	0	48
11	MP4	X	0	48
12	MP2	X	0	48
13	MP4	X	0	48
14	M7	X	0	36
15	MP2	Y	-164.81	3
16	MP2	Y	-164.81	63
17	MP3	Y	-38.676	3
18	MP3	Y	-38.676	23
19	MP3	Y	-35.383	43
20	MP3	Y	-35.383	63
21	MP4	Y	-122.731	3
22	MP4	Y	-122.731	63
23	MP2	Y	-107.548	48
24	MP3	Y	-111.81	48
25	MP4	Y	-81.168	48
26	MP2	Y	-72.229	48
27	MP4	Y	-113.146	48
28	M7	Y	-47.217	36

Member Point Loads (BLC 9 : Wind Load 120 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	109.117	3
2	MP2	X	109.117	63
3	MP3	X	26.499	3

Member Point Loads (BLC 9 : Wind Load 120 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
4	MP3	X	26.499	23
5	MP3	X	22.629	43
6	MP3	X	22.629	63
7	MP4	X	86.917	3
8	MP4	X	86.917	63
9	MP2	X	55.678	48
10	MP3	X	47.415	48
11	MP4	X	37.699	48
12	MP2	X	37.518	48
13	MP4	X	51.032	48
14	M7	X	23.609	36
15	MP2	Y	-188.997	3
16	MP2	Y	-188.997	63
17	MP3	Y	-45.898	3
18	MP3	Y	-45.898	23
19	MP3	Y	-39.194	43
20	MP3	Y	-39.194	63
21	MP4	Y	-150.545	3
22	MP4	Y	-150.545	63
23	MP2	Y	-96.437	48
24	MP3	Y	-82.125	48
25	MP4	Y	-65.297	48
26	MP2	Y	-64.983	48
27	MP4	Y	-88.39	48
28	M7	Y	-40.892	36

Member Point Loads (BLC 10 : Wind Load 135 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	192.092	3
2	MP2	X	192.092	63
3	MP3	X	47.603	3
4	MP3	X	47.603	23
5	MP3	X	38.984	43
6	MP3	X	38.984	63
7	MP4	X	159.056	3
8	MP4	X	159.056	63
9	MP2	X	74.136	48
10	MP3	X	58.973	48
11	MP4	X	49.236	48
12	MP2	X	49.664	48
13	MP4	X	64.333	48
14	M7	X	33.388	36
15	MP2	Y	-192.092	3
16	MP2	Y	-192.092	63
17	MP3	Y	-47.603	3
18	MP3	Y	-47.603	23
19	MP3	Y	-38.984	43
20	MP3	Y	-38.984	63
21	MP4	Y	-159.056	3
22	MP4	Y	-159.056	63
23	MP2	Y	-74.136	48

Member Point Loads (BLC 10 : Wind Load 135 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
24	MP3	Y	-58.973	48
25	MP4	Y	-49.236	48
26	MP2	Y	-49.664	48
27	MP4	Y	-64.333	48
28	M7	Y	-33.388	36

Member Point Loads (BLC 11 : Wind Load 150 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	281.53	3
2	MP2	X	281.53	63
3	MP3	X	70.705	3
4	MP3	X	70.705	23
5	MP3	X	56.297	43
6	MP3	X	56.297	63
7	MP4	X	239.059	3
8	MP4	X	239.059	63
9	MP2	X	81.888	48
10	MP3	X	64.087	48
11	MP4	X	55.305	48
12	MP2	X	54.258	48
13	MP4	X	69.194	48
14	M7	X	40.892	36
15	MP2	Y	-162.542	3
16	MP2	Y	-162.542	63
17	MP3	Y	-40.821	3
18	MP3	Y	-40.821	23
19	MP3	Y	-32.503	43
20	MP3	Y	-32.503	63
21	MP4	Y	-138.021	3
22	MP4	Y	-138.021	63
23	MP2	Y	-47.278	48
24	MP3	Y	-37.001	48
25	MP4	Y	-31.93	48
26	MP2	Y	-31.326	48
27	MP4	Y	-39.949	48
28	M7	Y	-23.609	36

Member Point Loads (BLC 12 : Ice Weight)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Z	-134.41	3
2	MP2	Z	-134.41	63
3	MP3	Z	-32.446	3
4	MP3	Z	-32.446	23
5	MP3	Z	-37.371	43
6	MP3	Z	-37.371	63
7	MP4	Z	-120.529	3
8	MP4	Z	-120.529	63
9	MP2	Z	-54.247	48
10	MP3	Z	-54.386	48
11	MP4	Z	-47.71	48
12	MP2	Z	-41.263	48

Member Point Loads (BLC 12 : Ice Weight) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
13	MP4	Z	-54.386	48
14	M7	Z	-66.261	36

Member Point Loads (BLC 15 : Ice Wind Load 0 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-77.016	3
2	MP2	X	-77.016	63
3	MP3	X	-21.161	3
4	MP3	X	-21.161	23
5	MP3	X	-16.451	43
6	MP3	X	-16.451	63
7	MP4	X	-66.907	3
8	MP4	X	-66.907	63
9	MP2	X	-15.924	48
10	MP3	X	-15.206	48
11	MP4	X	-12.505	48
12	MP2	X	-10.407	48
13	MP4	X	-14.953	48
14	M7	X	-11.474	36
15	MP2	Y	0	3
16	MP2	Y	0	63
17	MP3	Y	0	3
18	MP3	Y	0	23
19	MP3	Y	0	43
20	MP3	Y	0	63
21	MP4	Y	0	3
22	MP4	Y	0	63
23	MP2	Y	0	48
24	MP3	Y	0	48
25	MP4	Y	0	48
26	MP2	Y	0	48
27	MP4	Y	0	48
28	M7	Y	0	36

Member Point Loads (BLC 16 : Ice Wind Load 30 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-58.07	3
2	MP2	X	-58.07	63
3	MP3	X	-15.894	3
4	MP3	X	-15.894	23
5	MP3	X	-12.586	43
6	MP3	X	-12.586	63
7	MP4	X	-49.692	3
8	MP4	X	-49.692	63
9	MP2	X	-13.167	48
10	MP3	X	-15.95	48
11	MP4	X	-11.791	48
12	MP2	X	-8.543	48
13	MP4	X	-14.765	48
14	M7	X	-9.937	36
15	MP2	Y	-33.527	3

Member Point Loads (BLC 16 : Ice Wind Load 30 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
16	MP2	Y	-33.527	63
17	MP3	Y	-9.176	3
18	MP3	Y	-9.176	23
19	MP3	Y	-7.267	43
20	MP3	Y	-7.267	63
21	MP4	Y	-28.69	3
22	MP4	Y	-28.69	63
23	MP2	Y	-7.602	48
24	MP3	Y	-9.209	48
25	MP4	Y	-6.808	48
26	MP2	Y	-4.932	48
27	MP4	Y	-8.525	48
28	M7	Y	-5.737	36

Member Point Loads (BLC 17 : Ice Wind Load 45 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-40.37	3
2	MP2	X	-40.37	63
3	MP3	X	-10.991	3
4	MP3	X	-10.991	23
5	MP3	X	-8.92	43
6	MP3	X	-8.92	63
7	MP4	X	-33.837	3
8	MP4	X	-33.837	63
9	MP2	X	-11.621	48
10	MP3	X	-14.552	48
11	MP4	X	-10.412	48
12	MP2	X	-7.631	48
13	MP4	X	-13.538	48
14	M7	X	-8.113	36
15	MP2	Y	-40.37	3
16	MP2	Y	-40.37	63
17	MP3	Y	-10.991	3
18	MP3	Y	-10.991	23
19	MP3	Y	-8.92	43
20	MP3	Y	-8.92	63
21	MP4	Y	-33.837	3
22	MP4	Y	-33.837	63
23	MP2	Y	-11.621	48
24	MP3	Y	-14.552	48
25	MP4	Y	-10.412	48
26	MP2	Y	-7.631	48
27	MP4	Y	-13.538	48
28	M7	Y	-8.113	36

Member Point Loads (BLC 18 : Ice Wind Load 60 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-23.565	3
2	MP2	X	-23.565	63
3	MP3	X	-6.368	3
4	MP3	X	-6.368	23

Member Point Loads (BLC 18 : Ice Wind Load 60 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
5	MP3	X	-5.349	43
6	MP3	X	-5.349	63
7	MP4	X	-19.163	3
8	MP4	X	-19.163	63
9	MP2	X	-9.19	48
10	MP3	X	-11.178	48
11	MP4	X	-7.918	48
12	MP2	X	-6.129	48
13	MP4	X	-10.621	48
14	M7	X	-5.737	36
15	MP2	Y	-40.816	3
16	MP2	Y	-40.816	63
17	MP3	Y	-11.03	3
18	MP3	Y	-11.03	23
19	MP3	Y	-9.264	43
20	MP3	Y	-9.264	63
21	MP4	Y	-33.191	3
22	MP4	Y	-33.191	63
23	MP2	Y	-15.918	48
24	MP3	Y	-19.361	48
25	MP4	Y	-13.714	48
26	MP2	Y	-10.616	48
27	MP4	Y	-18.395	48
28	M7	Y	-9.937	36

Member Point Loads (BLC 19 : Ice Wind Load 90 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	0	3
2	MP2	X	0	63
3	MP3	X	0	3
4	MP3	X	0	23
5	MP3	X	0	43
6	MP3	X	0	63
7	MP4	X	0	3
8	MP4	X	0	63
9	MP2	X	0	48
10	MP3	X	0	48
11	MP4	X	0	48
12	MP2	X	0	48
13	MP4	X	0	48
14	M7	X	0	36
15	MP2	Y	-37.168	3
16	MP2	Y	-37.168	63
17	MP3	Y	-9.927	3
18	MP3	Y	-9.927	23
19	MP3	Y	-8.779	43
20	MP3	Y	-8.779	63
21	MP4	Y	-28.798	3
22	MP4	Y	-28.798	63
23	MP2	Y	-22.278	48
24	MP3	Y	-23.084	48

Member Point Loads (BLC 19 : Ice Wind Load 90 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
25	MP4	Y	-16.946	48
26	MP2	Y	-15.194	48
27	MP4	Y	-23.337	48
28	M7	Y	-11.474	36

Member Point Loads (BLC 20 : Ice Wind Load 120 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	23.565	3
2	MP2	X	23.565	63
3	MP3	X	6.368	3
4	MP3	X	6.368	23
5	MP3	X	5.349	43
6	MP3	X	5.349	63
7	MP4	X	19.163	3
8	MP4	X	19.163	63
9	MP2	X	11.499	48
10	MP3	X	9.937	48
11	MP4	X	7.918	48
12	MP2	X	7.868	48
13	MP4	X	10.621	48
14	M7	X	5.737	36
15	MP2	Y	-40.816	3
16	MP2	Y	-40.816	63
17	MP3	Y	-11.03	3
18	MP3	Y	-11.03	23
19	MP3	Y	-9.264	43
20	MP3	Y	-9.264	63
21	MP4	Y	-33.191	3
22	MP4	Y	-33.191	63
23	MP2	Y	-19.917	48
24	MP3	Y	-17.211	48
25	MP4	Y	-13.714	48
26	MP2	Y	-13.628	48
27	MP4	Y	-18.395	48
28	M7	Y	-9.937	36

Member Point Loads (BLC 21 : Ice Wind Load 135 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	40.37	3
2	MP2	X	40.37	63
3	MP3	X	10.991	3
4	MP3	X	10.991	23
5	MP3	X	8.92	43
6	MP3	X	8.92	63
7	MP4	X	33.837	3
8	MP4	X	33.837	63
9	MP2	X	15.392	48
10	MP3	X	12.524	48
11	MP4	X	10.412	48
12	MP2	X	10.472	48
13	MP4	X	13.538	48

Member Point Loads (BLC 21 : Ice Wind Load 135 AZI) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
14	M7	X	8.113	36
15	MP2	Y	-40.37	3
16	MP2	Y	-40.37	63
17	MP3	Y	-10.991	3
18	MP3	Y	-10.991	23
19	MP3	Y	-8.92	43
20	MP3	Y	-8.92	63
21	MP4	Y	-33.837	3
22	MP4	Y	-33.837	63
23	MP2	Y	-15.392	48
24	MP3	Y	-12.524	48
25	MP4	Y	-10.412	48
26	MP2	Y	-10.472	48
27	MP4	Y	-13.538	48
28	M7	Y	-8.113	36

Member Point Loads (BLC 22 : Ice Wind Load 150 AZI)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	58.07	3
2	MP2	X	58.07	63
3	MP3	X	15.894	3
4	MP3	X	15.894	23
5	MP3	X	12.586	43
6	MP3	X	12.586	63
7	MP4	X	49.692	3
8	MP4	X	49.692	63
9	MP2	X	17.166	48
10	MP3	X	13.799	48
11	MP4	X	11.791	48
12	MP2	X	11.556	48
13	MP4	X	14.765	48
14	M7	X	9.937	36
15	MP2	Y	-33.527	3
16	MP2	Y	-33.527	63
17	MP3	Y	-9.176	3
18	MP3	Y	-9.176	23
19	MP3	Y	-7.267	43
20	MP3	Y	-7.267	63
21	MP4	Y	-28.69	3
22	MP4	Y	-28.69	63
23	MP2	Y	-9.911	48
24	MP3	Y	-7.967	48
25	MP4	Y	-6.808	48
26	MP2	Y	-6.672	48
27	MP4	Y	-8.525	48
28	M7	Y	-5.737	36

Member Point Loads (BLC 23 : Seismic Load X)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	X	-9.264	3
2	MP2	X	-9.264	63

Member Point Loads (BLC 23 : Seismic Load X) (Continued)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
3	MP3	X	-4.089	3
4	MP3	X	-4.089	23
5	MP3	X	-5.04	43
6	MP3	X	-5.04	63
7	MP4	X	-6.522	3
8	MP4	X	-6.522	63
9	MP2	X	-6.534	48
10	MP3	X	-6.547	48
11	MP4	X	-8.77	48
12	MP2	X	-7.399	48
13	MP4	X	-6.547	48
14	M7	X	-1.976	36

Member Point Loads (BLC 24 : Seismic Load Y)

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Y	-9.264	3
2	MP2	Y	-9.264	63
3	MP3	Y	-4.089	3
4	MP3	Y	-4.089	23
5	MP3	Y	-5.04	43
6	MP3	Y	-5.04	63
7	MP4	Y	-6.522	3
8	MP4	Y	-6.522	63
9	MP2	Y	-6.534	48
10	MP3	Y	-6.547	48
11	MP4	Y	-8.77	48
12	MP2	Y	-7.399	48
13	MP4	Y	-6.547	48
14	M7	Y	-1.976	36

Member Point Loads (BLC 25 : Live Load 1 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Z	-250	0

Member Point Loads (BLC 26 : Live Load 2 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Z	-250	%50

Member Point Loads (BLC 27 : Live Load 3 (Lv))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	H1	Z	-250	%100

Member Point Loads (BLC 28 : Maintenance Load 1 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP1	Z	-500	%50

Member Point Loads (BLC 29 : Maintenance Load 2 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP2	Z	-500	%50

Member Point Loads (BLC 30 : Maintenance Load 3 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP3	Z	-500	%50

Member Point Loads (BLC 31 : Maintenance Load 4 (Lm))

	Member Label	Direction	Magnitude[lb,lb-ft]	Location[in,%]
1	MP4	Z	-500	%50

Member Distributed Loads (BLC 2 : Structure Wind X)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
1	M1	SX	-82.397	-82.397	0	%100
2	M2	SX	-82.397	-82.397	0	%100
3	M3	SX	-82.397	-82.397	0	%100
4	M4	SX	-82.397	-82.397	0	%100
5	M5	SX	-82.397	-82.397	0	%100
6	M6	SX	-82.397	-82.397	0	%100
7	M7	SX	-49.438	-49.438	0	%100
8	M8	SX	-49.438	-49.438	0	%100
9	M9	SX	-49.438	-49.438	0	%100
10	M10	SX	-49.438	-49.438	0	%100
11	M11	SX	-82.397	-82.397	0	%100
12	M12	SX	-82.397	-82.397	0	%100
13	M13	SX	-82.397	-82.397	0	%100
14	M14	SX	-82.397	-82.397	0	%100
15	M15	SX	-82.397	-82.397	0	%100
16	M16	SX	-82.397	-82.397	0	%100
17	M17	SX	-49.438	-49.438	0	%100
18	M18	SX	-82.397	-82.397	0	%100
19	M19	SX	-82.397	-82.397	0	%100
20	H1	SX	-49.438	-49.438	0	%100
21	M21	SX	-49.438	-49.438	0	%100
22	M22	SX	-82.397	-82.397	0	%100
23	M23	SX	-82.397	-82.397	0	%100
24	M24	SX	-82.397	-82.397	0	%100
25	M25	SX	-82.397	-82.397	0	%100
26	M26	SX	-82.397	-82.397	0	%100
27	M27	SX	-82.397	-82.397	0	%100
28	M28	SX	-49.438	-49.438	0	%100
29	M29	SX	-49.438	-49.438	0	%100
30	M30	SX	-82.397	-82.397	0	%100
31	M31	SX	-82.397	-82.397	0	%100
32	M32	SX	-82.397	-82.397	0	%100
33	M33	SX	-82.397	-82.397	0	%100
34	M34	SX	-82.397	-82.397	0	%100
35	M35	SX	-82.397	-82.397	0	%100
36	M36	SX	-49.438	-49.438	0	%100
37	M37	SX	-49.438	-49.438	0	%100
38	M38	SX	-49.438	-49.438	0	%100
39	M39	SX	-82.397	-82.397	0	%100
40	M40	SX	-82.397	-82.397	0	%100
41	M41	SX	-82.397	-82.397	0	%100
42	M42	SX	-82.397	-82.397	0	%100

Member Distributed Loads (BLC 2 : Structure Wind X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
43	M43	SX	-49.438	-49.438	0	%100
44	MP1	SX	-49.438	-49.438	0	%100
45	M45	SX	-82.397	-82.397	0	%100
46	M46	SX	-82.397	-82.397	0	%100
47	MP2	SX	-49.438	-49.438	0	%100
48	M48	SX	-82.397	-82.397	0	%100
49	M49	SX	-82.397	-82.397	0	%100
50	MP3	SX	-49.438	-49.438	0	%100
51	M51	SX	-82.397	-82.397	0	%100
52	M52	SX	-82.397	-82.397	0	%100
53	MP4	SX	-49.438	-49.438	0	%100
54	M54	SX	-49.438	-49.438	0	%100
55	M55	SX	-82.397	-82.397	0	%100
56	M56	SX	-82.397	-82.397	0	%100

Member Distributed Loads (BLC 3 : Structure Wind Y)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
1	M1	SY	-82.397	-82.397	0	%100
2	M2	SY	-82.397	-82.397	0	%100
3	M3	SY	-82.397	-82.397	0	%100
4	M4	SY	-82.397	-82.397	0	%100
5	M5	SY	-82.397	-82.397	0	%100
6	M6	SY	-82.397	-82.397	0	%100
7	M7	SY	-49.438	-49.438	0	%100
8	M8	SY	-49.438	-49.438	0	%100
9	M9	SY	-49.438	-49.438	0	%100
10	M10	SY	-49.438	-49.438	0	%100
11	M11	SY	-82.397	-82.397	0	%100
12	M12	SY	-82.397	-82.397	0	%100
13	M13	SY	-82.397	-82.397	0	%100
14	M14	SY	-82.397	-82.397	0	%100
15	M15	SY	-82.397	-82.397	0	%100
16	M16	SY	-82.397	-82.397	0	%100
17	M17	SY	-49.438	-49.438	0	%100
18	M18	SY	-82.397	-82.397	0	%100
19	M19	SY	-82.397	-82.397	0	%100
20	H1	SY	-49.438	-49.438	0	%100
21	M21	SY	-49.438	-49.438	0	%100
22	M22	SY	-82.397	-82.397	0	%100
23	M23	SY	-82.397	-82.397	0	%100
24	M24	SY	-82.397	-82.397	0	%100
25	M25	SY	-82.397	-82.397	0	%100
26	M26	SY	-82.397	-82.397	0	%100
27	M27	SY	-82.397	-82.397	0	%100
28	M28	SY	-49.438	-49.438	0	%100
29	M29	SY	-49.438	-49.438	0	%100
30	M30	SY	-82.397	-82.397	0	%100
31	M31	SY	-82.397	-82.397	0	%100
32	M32	SY	-82.397	-82.397	0	%100
33	M33	SY	-82.397	-82.397	0	%100
34	M34	SY	-82.397	-82.397	0	%100

Member Distributed Loads (BLC 3 : Structure Wind Y) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
35	M35	SY	-82.397	-82.397	0	%100
36	M36	SY	-49.438	-49.438	0	%100
37	M37	SY	-49.438	-49.438	0	%100
38	M38	SY	-49.438	-49.438	0	%100
39	M39	SY	-82.397	-82.397	0	%100
40	M40	SY	-82.397	-82.397	0	%100
41	M41	SY	-82.397	-82.397	0	%100
42	M42	SY	-82.397	-82.397	0	%100
43	M43	SY	-49.438	-49.438	0	%100
44	MP1	SY	-49.438	-49.438	0	%100
45	M45	SY	-82.397	-82.397	0	%100
46	M46	SY	-82.397	-82.397	0	%100
47	MP2	SY	-49.438	-49.438	0	%100
48	M48	SY	-82.397	-82.397	0	%100
49	M49	SY	-82.397	-82.397	0	%100
50	MP3	SY	-49.438	-49.438	0	%100
51	M51	SY	-82.397	-82.397	0	%100
52	M52	SY	-82.397	-82.397	0	%100
53	MP4	SY	-49.438	-49.438	0	%100
54	M54	SY	-49.438	-49.438	0	%100
55	M55	SY	-82.397	-82.397	0	%100
56	M56	SY	-82.397	-82.397	0	%100

Member Distributed Loads (BLC 12 : Ice Weight)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
1	M1	Z	-6.995	-6.995	0	%100
2	M2	Z	-6.995	-6.995	0	%100
3	M3	Z	-6.995	-6.995	0	%100
4	M4	Z	-6.995	-6.995	0	%100
5	M5	Z	-10.275	-10.275	0	%100
6	M6	Z	-10.275	-10.275	0	%100
7	M7	Z	-5.063	-5.063	0	%100
8	M8	Z	-5.063	-5.063	0	%100
9	M9	Z	-5.063	-5.063	0	%100
10	M10	Z	-5.063	-5.063	0	%100
11	M11	Z	-6.995	-6.995	0	%100
12	M12	Z	-6.995	-6.995	0	%100
13	M13	Z	-6.995	-6.995	0	%100
14	M14	Z	-6.995	-6.995	0	%100
15	M15	Z	0	0	0	%100
16	M16	Z	0	0	0	%100
17	M17	Z	-2.737	-2.737	0	%100
18	M18	Z	0	0	0	%100
19	M19	Z	0	0	0	%100
20	H1	Z	-5.063	-5.063	0	%100
21	M21	Z	-5.063	-5.063	0	%100
22	M22	Z	0	0	0	%100
23	M23	Z	0	0	0	%100
24	M24	Z	0	0	0	%100
25	M25	Z	0	0	0	%100
26	M26	Z	0	0	0	%100

Member Distributed Loads (BLC 12 : Ice Weight) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
27	M27	Z	0	0	0	%100
28	M28	Z	-2.737	-2.737	0	%100
29	M29	Z	-2.737	-2.737	0	%100
30	M30	Z	0	0	0	%100
31	M31	Z	0	0	0	%100
32	M32	Z	0	0	0	%100
33	M33	Z	0	0	0	%100
34	M34	Z	0	0	0	%100
35	M35	Z	0	0	0	%100
36	M36	Z	-2.737	-2.737	0	%100
37	M37	Z	-2.737	-2.737	0	%100
38	M38	Z	-2.737	-2.737	0	%100
39	M39	Z	0	0	0	%100
40	M40	Z	0	0	0	%100
41	M41	Z	0	0	0	%100
42	M42	Z	0	0	0	%100
43	M43	Z	-5.063	-5.063	0	%100
44	MP1	Z	-5.063	-5.063	0	%100
45	M45	Z	0	0	0	%100
46	M46	Z	0	0	0	%100
47	MP2	Z	-5.063	-5.063	0	%100
48	M48	Z	0	0	0	%100
49	M49	Z	0	0	0	%100
50	MP3	Z	-5.063	-5.063	0	%100
51	M51	Z	0	0	0	%100
52	M52	Z	0	0	0	%100
53	MP4	Z	-5.063	-5.063	0	%100
54	M54	Z	-8.089	-8.089	0	%100
55	M55	Z	0	0	0	%100
56	M56	Z	0	0	0	%100

Member Distributed Loads (BLC 13 : Ice Structure Wind X)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
1	M1	SX	-12.336	-12.336	0	%100
2	M2	SX	-12.336	-12.336	0	%100
3	M3	SX	-12.336	-12.336	0	%100
4	M4	SX	-12.336	-12.336	0	%100
5	M5	SX	-10.527	-10.527	0	%100
6	M6	SX	-10.527	-10.527	0	%100
7	M7	SX	-15.036	-15.036	0	%100
8	M8	SX	-15.036	-15.036	0	%100
9	M9	SX	-15.036	-15.036	0	%100
10	M10	SX	-15.036	-15.036	0	%100
11	M11	SX	-12.336	-12.336	0	%100
12	M12	SX	-12.336	-12.336	0	%100
13	M13	SX	-12.336	-12.336	0	%100
14	M14	SX	-12.336	-12.336	0	%100
15	M15	SX	0	0	0	%100
16	M16	SX	0	0	0	%100
17	M17	SX	-31.224	-31.224	0	%100
18	M18	SX	0	0	0	%100

Member Distributed Loads (BLC 13 : Ice Structure Wind X) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
19	M19	SX	0	0	0	%100
20	H1	SX	-15.036	-15.036	0	%100
21	M21	SX	-15.036	-15.036	0	%100
22	M22	SX	0	0	0	%100
23	M23	SX	0	0	0	%100
24	M24	SX	0	0	0	%100
25	M25	SX	0	0	0	%100
26	M26	SX	0	0	0	%100
27	M27	SX	0	0	0	%100
28	M28	SX	-31.224	-31.224	0	%100
29	M29	SX	-31.224	-31.224	0	%100
30	M30	SX	0	0	0	%100
31	M31	SX	0	0	0	%100
32	M32	SX	0	0	0	%100
33	M33	SX	0	0	0	%100
34	M34	SX	0	0	0	%100
35	M35	SX	0	0	0	%100
36	M36	SX	-31.224	-31.224	0	%100
37	M37	SX	-31.224	-31.224	0	%100
38	M38	SX	-31.224	-31.224	0	%100
39	M39	SX	0	0	0	%100
40	M40	SX	0	0	0	%100
41	M41	SX	0	0	0	%100
42	M42	SX	0	0	0	%100
43	M43	SX	-15.036	-15.036	0	%100
44	MP1	SX	-15.036	-15.036	0	%100
45	M45	SX	0	0	0	%100
46	M46	SX	0	0	0	%100
47	MP2	SX	-15.036	-15.036	0	%100
48	M48	SX	0	0	0	%100
49	M49	SX	0	0	0	%100
50	MP3	SX	-15.036	-15.036	0	%100
51	M51	SX	0	0	0	%100
52	M52	SX	0	0	0	%100
53	MP4	SX	-15.036	-15.036	0	%100
54	M54	SX	-11.527	-11.527	0	%100
55	M55	SX	0	0	0	%100
56	M56	SX	0	0	0	%100

Member Distributed Loads (BLC 14 : Ice Structure Wind Y)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
1	M1	SY	-12.336	-12.336	0	%100
2	M2	SY	-12.336	-12.336	0	%100
3	M3	SY	-12.336	-12.336	0	%100
4	M4	SY	-12.336	-12.336	0	%100
5	M5	SY	-10.527	-10.527	0	%100
6	M6	SY	-10.527	-10.527	0	%100
7	M7	SY	-15.036	-15.036	0	%100
8	M8	SY	-15.036	-15.036	0	%100
9	M9	SY	-15.036	-15.036	0	%100
10	M10	SY	-15.036	-15.036	0	%100

Member Distributed Loads (BLC 14 : Ice Structure Wind Y) (Continued)

	Member Label	Direction	Start Magnitude[lb/ft,F,psf]	End Magnitude[lb/ft,F,psf]	Start Location[in,...	End Location[i...
11	M11	SY	-12.336	-12.336	0	%100
12	M12	SY	-12.336	-12.336	0	%100
13	M13	SY	-12.336	-12.336	0	%100
14	M14	SY	-12.336	-12.336	0	%100
15	M15	SY	0	0	0	%100
16	M16	SY	0	0	0	%100
17	M17	SY	-31.224	-31.224	0	%100
18	M18	SY	0	0	0	%100
19	M19	SY	0	0	0	%100
20	H1	SY	-15.036	-15.036	0	%100
21	M21	SY	-15.036	-15.036	0	%100
22	M22	SY	0	0	0	%100
23	M23	SY	0	0	0	%100
24	M24	SY	0	0	0	%100
25	M25	SY	0	0	0	%100
26	M26	SY	0	0	0	%100
27	M27	SY	0	0	0	%100
28	M28	SY	-31.224	-31.224	0	%100
29	M29	SY	-31.224	-31.224	0	%100
30	M30	SY	0	0	0	%100
31	M31	SY	0	0	0	%100
32	M32	SY	0	0	0	%100
33	M33	SY	0	0	0	%100
34	M34	SY	0	0	0	%100
35	M35	SY	0	0	0	%100
36	M36	SY	-31.224	-31.224	0	%100
37	M37	SY	-31.224	-31.224	0	%100
38	M38	SY	-31.224	-31.224	0	%100
39	M39	SY	0	0	0	%100
40	M40	SY	0	0	0	%100
41	M41	SY	0	0	0	%100
42	M42	SY	0	0	0	%100
43	M43	SY	-15.036	-15.036	0	%100
44	MP1	SY	-15.036	-15.036	0	%100
45	M45	SY	0	0	0	%100
46	M46	SY	0	0	0	%100
47	MP2	SY	-15.036	-15.036	0	%100
48	M48	SY	0	0	0	%100
49	M49	SY	0	0	0	%100
50	MP3	SY	-15.036	-15.036	0	%100
51	M51	SY	0	0	0	%100
52	M52	SY	0	0	0	%100
53	MP4	SY	-15.036	-15.036	0	%100
54	M54	SY	-11.527	-11.527	0	%100
55	M55	SY	0	0	0	%100
56	M56	SY	0	0	0	%100

Member Area Loads

Joint A	Joint B	Joint C	Joint D	Direction	Dis...	Magnitude[psf]
No Data to Print ...						

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distributed	Area(M...	Surface(...
1	Self Weight	DL			-1		14			
2	Structure Wind X	WLX						56		
3	Structure Wind Y	WLY						56		
4	Wind Load 0 AZI	WLX					28			
5	Wind Load 30 AZI	None					28			
6	Wind Load 45 AZI	None					28			
7	Wind Load 60 AZI	None					28			
8	Wind Load 90 AZI	WLY					28			
9	Wind Load 120 AZI	None					28			
10	Wind Load 135 AZI	None					28			
11	Wind Load 150 AZI	None					28			
12	Ice Weight	OL1					14	56		
13	Ice Structure Wind X	OL2						56		
14	Ice Structure Wind Y	OL3						56		
15	Ice Wind Load 0 AZI	OL2					28			
16	Ice Wind Load 30 AZI	None					28			
17	Ice Wind Load 45 AZI	None					28			
18	Ice Wind Load 60 AZI	None					28			
19	Ice Wind Load 90 AZI	OL3					28			
20	Ice Wind Load 120 AZI	None					28			
21	Ice Wind Load 135 AZI	None					28			
22	Ice Wind Load 150 AZI	None					28			
23	Seismic Load X	ELX	-.124				14			
24	Seismic Load Y	ELY		-.124			14			
25	Live Load 1 (Lv)	None					1			
26	Live Load 2 (Lv)	None					1			
27	Live Load 3 (Lv)	None					1			
28	Maintenance Load 1 (Lm)	None					1			
29	Maintenance Load 2 (Lm)	None					1			
30	Maintenance Load 3 (Lm)	None					1			
31	Maintenance Load 4 (Lm)	None					1			

Load Combinations

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
1	1.4DL	Yes	Y		DL	1.4																				
2	1.2DL + 1WL 0 AZI	Yes	Y		DL	1.2	2	1	3		4	1														
3	1.2DL + 1WL 30 AZI	Yes	Y		DL	1.2	2	.866	3	.5	5	1														
4	1.2DL + 1WL 45 AZI	Yes	Y		DL	1.2	2	.707	3	.707	6	1														
5	1.2DL + 1WL 60 AZI	Yes	Y		DL	1.2	2	.5	3	.866	7	1														
6	1.2DL + 1WL 90 AZI	Yes	Y		DL	1.2	2		3	1	8	1														
7	1.2DL + 1WL 120 AZI	Yes	Y		DL	1.2	2	-.5	3	.866	9	1														
8	1.2DL + 1WL 135 AZI	Yes	Y		DL	1.2	2	-.707	3	.707	10	1														
9	1.2DL + 1WL 150 AZI	Yes	Y		DL	1.2	2	-.866	3	.5	11	1														
10	1.2DL + 1WL 180 AZI	Yes	Y		DL	1.2	2	-1	3		4	-1														
11	1.2DL + 1WL 210 AZI	Yes	Y		DL	1.2	2	-.866	3	-.5	5	-1														
12	1.2DL + 1WL 225 AZI	Yes	Y		DL	1.2	2	-.707	3	-.707	6	-1														
13	1.2DL + 1WL 240 AZI	Yes	Y		DL	1.2	2	-.5	3	-.866	7	-1														
14	1.2DL + 1WL 270 AZI	Yes	Y		DL	1.2	2		3	-1	8	-1														
15	1.2DL + 1WL 300 AZI	Yes	Y		DL	1.2	2	.5	3	-.866	9	-1														

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
16	1.2DL + 1WL 315 AZI	Yes	Y		DL	1.2	2	.707	3	-.707	10	-1														
17	1.2DL + 1WL 330 AZI	Yes	Y		DL	1.2	2	.866	3	-.5	11	-1														
18	0.9DL + 1WL 0 AZI	Yes	Y		DL	.9	2	1	3		4	1														
19	0.9DL + 1WL 30 AZI	Yes	Y		DL	.9	2	.866	3	.5	5	1														
20	0.9DL + 1WL 45 AZI	Yes	Y		DL	.9	2	.707	3	.707	6	1														
21	0.9DL + 1WL 60 AZI	Yes	Y		DL	.9	2	.5	3	.866	7	1														
22	0.9DL + 1WL 90 AZI	Yes	Y		DL	.9	2		3	1	8	1														
23	0.9DL + 1WL 120 AZI	Yes	Y		DL	.9	2	-.5	3	.866	9	1														
24	0.9DL + 1WL 135 AZI	Yes	Y		DL	.9	2	-.707	3	.707	10	1														
25	0.9DL + 1WL 150 AZI	Yes	Y		DL	.9	2	-.866	3	.5	11	1														
26	0.9DL + 1WL 180 AZI	Yes	Y		DL	.9	2	-1	3		4	-1														
27	0.9DL + 1WL 210 AZI	Yes	Y		DL	.9	2	-.866	3	-.5	5	-1														
28	0.9DL + 1WL 225 AZI	Yes	Y		DL	.9	2	-.707	3	-.707	6	-1														
29	0.9DL + 1WL 240 AZI	Yes	Y		DL	.9	2	-.5	3	-.866	7	-1														
30	0.9DL + 1WL 270 AZI	Yes	Y		DL	.9	2		3	-1	8	-1														
31	0.9DL + 1WL 300 AZI	Yes	Y		DL	.9	2	.5	3	-.866	9	-1														
32	0.9DL + 1WL 315 AZI	Yes	Y		DL	.9	2	.707	3	-.707	10	-1														
33	0.9DL + 1WL 330 AZI	Yes	Y		DL	.9	2	.866	3	-.5	11	-1														
34	1.2DL + 1DLi + 1WLi 0 AZI	Yes	Y		DL	1.2	O...	1	13	1	14		15	1												
35	1.2DL + 1DLi + 1WLi 30 AZI	Yes	Y		DL	1.2	O...	1	13	.866	14	.5	16	1												
36	1.2DL + 1DLi + 1WLi 45 AZI	Yes	Y		DL	1.2	O...	1	13	.707	14	.707	17	1												
37	1.2DL + 1DLi + 1WLi 60 AZI	Yes	Y		DL	1.2	O...	1	13	.5	14	.866	18	1												
38	1.2DL + 1DLi + 1WLi 90 AZI	Yes	Y		DL	1.2	O...	1	13		14	1	19	1												
39	1.2DL + 1DLi + 1WLi 120 A...	Yes	Y		DL	1.2	O...	1	13	-.5	14	.866	20	1												
40	1.2DL + 1DLi + 1WLi 135 A...	Yes	Y		DL	1.2	O...	1	13	-.707	14	.707	21	1												
41	1.2DL + 1DLi + 1WLi 150 A...	Yes	Y		DL	1.2	O...	1	13	-.866	14	.5	22	1												
42	1.2DL + 1DLi + 1WLi 180 A...	Yes	Y		DL	1.2	O...	1	13	-1	14		15	-1												
43	1.2DL + 1DLi + 1WLi 210 A...	Yes	Y		DL	1.2	O...	1	13	-.866	14	-.5	16	-1												
44	1.2DL + 1DLi + 1WLi 225 A...	Yes	Y		DL	1.2	O...	1	13	-.707	14	-.707	17	-1												
45	1.2DL + 1DLi + 1WLi 240 A...	Yes	Y		DL	1.2	O...	1	13	-.5	14	-.866	18	-1												
46	1.2DL + 1DLi + 1WLi 270 A...	Yes	Y		DL	1.2	O...	1	13		14	-1	19	-1												
47	1.2DL + 1DLi + 1WLi 300 A...	Yes	Y		DL	1.2	O...	1	13	.5	14	-.866	20	-1												
48	1.2DL + 1DLi + 1WLi 315 A...	Yes	Y		DL	1.2	O...	1	13	.707	14	-.707	21	-1												
49	1.2DL + 1DLi + 1WLi 330 A...	Yes	Y		DL	1.2	O...	1	13	.866	14	-.5	22	-1												
50	(1.2+0.2Sds)DL + 1E 0 AZI	Yes	Y		DL	1.2...	23	1	24																	
51	(1.2+0.2Sds)DL + 1E 30 AZI	Yes	Y		DL	1.2...	23	.866	24	.5																
52	(1.2+0.2Sds)DL + 1E 45 AZI	Yes	Y		DL	1.2...	23	.707	24	.707																
53	(1.2+0.2Sds)DL + 1E 60 AZI	Yes	Y		DL	1.2...	23	.5	24	.866																
54	(1.2+0.2Sds)DL + 1E 90 AZI	Yes	Y		DL	1.2...	23		24	1																
55	(1.2+0.2Sds)DL + 1E 120 A...	Yes	Y		DL	1.2...	23	-.5	24	.866																
56	(1.2+0.2Sds)DL + 1E 135 A...	Yes	Y		DL	1.2...	23	-.707	24	.707																
57	(1.2+0.2Sds)DL + 1E 150 A...	Yes	Y		DL	1.2...	23	-.866	24	.5																
58	(1.2+0.2Sds)DL + 1E 180 A...	Yes	Y		DL	1.2...	23	-1	24																	
59	(1.2+0.2Sds)DL + 1E 210 A...	Yes	Y		DL	1.2...	23	-.866	24	-.5																
60	(1.2+0.2Sds)DL + 1E 225 A...	Yes	Y		DL	1.2...	23	-.707	24	-.707																
61	(1.2+0.2Sds)DL + 1E 240 A...	Yes	Y		DL	1.2...	23	-.5	24	-.866																
62	(1.2+0.2Sds)DL + 1E 270 A...	Yes	Y		DL	1.2...	23		24	-1																
63	(1.2+0.2Sds)DL + 1E 300 A...	Yes	Y		DL	1.2...	23	.5	24	-.866																
64	(1.2+0.2Sds)DL + 1E 315 A...	Yes	Y		DL	1.2...	23	.707	24	-.707																
65	(1.2+0.2Sds)DL + 1E 330 A...	Yes	Y		DL	1.2...	23	.866	24	-.5																
66	(0.9-0.2Sds)DL + 1E 0 AZI	Yes	Y		DL	.859	23	1	24																	
67	(0.9-0.2Sds)DL + 1E 30 AZI	Yes	Y		DL	.859	23	.866	24	.5																

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac..	B...	Fac...
68	(0.9-0.2Sds)DL + 1E 45 AZI	Yes	Y		DL	.859	23	.707	24	.707																
69	(0.9-0.2Sds)DL + 1E 60 AZI	Yes	Y		DL	.859	23	.5	24	.866																
70	(0.9-0.2Sds)DL + 1E 90 AZI	Yes	Y		DL	.859	23		24	1																
71	(0.9-0.2Sds)DL + 1E 120 AZI	Yes	Y		DL	.859	23	-.5	24	.866																
72	(0.9-0.2Sds)DL + 1E 135 AZI	Yes	Y		DL	.859	23	-.707	24	.707																
73	(0.9-0.2Sds)DL + 1E 150 AZI	Yes	Y		DL	.859	23	-.866	24	.5																
74	(0.9-0.2Sds)DL + 1E 180 AZI	Yes	Y		DL	.859	23	-1	24																	
75	(0.9-0.2Sds)DL + 1E 210 AZI	Yes	Y		DL	.859	23	-.866	24	-.5																
76	(0.9-0.2Sds)DL + 1E 225 AZI	Yes	Y		DL	.859	23	-.707	24	-.707																
77	(0.9-0.2Sds)DL + 1E 240 AZI	Yes	Y		DL	.859	23	-.5	24	-.866																
78	(0.9-0.2Sds)DL + 1E 270 AZI	Yes	Y		DL	.859	23		24	-1																
79	(0.9-0.2Sds)DL + 1E 300 AZI	Yes	Y		DL	.859	23	.5	24	-.866																
80	(0.9-0.2Sds)DL + 1E 315 AZI	Yes	Y		DL	.859	23	.707	24	-.707																
81	(0.9-0.2Sds)DL + 1E 330 AZI	Yes	Y		DL	.859	23	.866	24	-.5																
82	1.2DL + 1Lv1	Yes	Y		DL	1.2	25	1.5																		
83	1.2DL + 1Lv2	Yes	Y		DL	1.2	26	1.5																		
84	1.2DL + 1Lv3	Yes	Y		DL	1.2	27	1.5																		
85	1.2DL + 1.5Lm + 1Wm 0 A...	Yes	Y		DL	1.2	28	1.5	2	.066	3		4	.066												
86	1.2DL + 1.5Lm + 1Wm 30 ...	Yes	Y		DL	1.2	28	1.5	2	.057	3	.033	5	.066												
87	1.2DL + 1.5Lm + 1Wm 45 ...	Yes	Y		DL	1.2	28	1.5	2	.046	3	.046	6	.066												
88	1.2DL + 1.5Lm + 1Wm 60 ...	Yes	Y		DL	1.2	28	1.5	2	.033	3	.057	7	.066												
89	1.2DL + 1.5Lm + 1Wm 90 ...	Yes	Y		DL	1.2	28	1.5	2		3	.066	8	.066												
90	1.2DL + 1.5Lm + 1Wm 120...	Yes	Y		DL	1.2	28	1.5	2	-.033	3	.057	9	.066												
91	1.2DL + 1.5Lm + 1Wm 135...	Yes	Y		DL	1.2	28	1.5	2	-.046	3	.046	10	.066												
92	1.2DL + 1.5Lm + 1Wm 150...	Yes	Y		DL	1.2	28	1.5	2	-.057	3	.033	11	.066												
93	1.2DL + 1.5Lm + 1Wm 180...	Yes	Y		DL	1.2	28	1.5	2	-.066	3		4	-.066												
94	1.2DL + 1.5Lm + 1Wm 210...	Yes	Y		DL	1.2	28	1.5	2	-.057	3	-.033	5	-.066												
95	1.2DL + 1.5Lm + 1Wm 225...	Yes	Y		DL	1.2	28	1.5	2	-.046	3	-.046	6	-.066												
96	1.2DL + 1.5Lm + 1Wm 240...	Yes	Y		DL	1.2	28	1.5	2	-.033	3	-.057	7	-.066												
97	1.2DL + 1.5Lm + 1Wm 270...	Yes	Y		DL	1.2	28	1.5	2		3	-.066	8	-.066												
98	1.2DL + 1.5Lm + 1Wm 300...	Yes	Y		DL	1.2	28	1.5	2	.033	3	-.057	9	-.066												
99	1.2DL + 1.5Lm + 1Wm 315...	Yes	Y		DL	1.2	28	1.5	2	.046	3	-.046	10	-.066												
100	1.2DL + 1.5Lm + 1Wm 330...	Yes	Y		DL	1.2	28	1.5	2	.057	3	-.033	11	-.066												
101	1.2DL + 1.5Lm + 1Wm 0 A...	Yes	Y		DL	1.2	29	1.5	2	.066	3		4	.066												
102	1.2DL + 1.5Lm + 1Wm 30 ...	Yes	Y		DL	1.2	29	1.5	2	.057	3	.033	5	.066												
103	1.2DL + 1.5Lm + 1Wm 45 ...	Yes	Y		DL	1.2	29	1.5	2	.046	3	.046	6	.066												
104	1.2DL + 1.5Lm + 1Wm 60 ...	Yes	Y		DL	1.2	29	1.5	2	.033	3	.057	7	.066												
105	1.2DL + 1.5Lm + 1Wm 90 ...	Yes	Y		DL	1.2	29	1.5	2		3	.066	8	.066												
106	1.2DL + 1.5Lm + 1Wm 120...	Yes	Y		DL	1.2	29	1.5	2	-.033	3	.057	9	.066												
107	1.2DL + 1.5Lm + 1Wm 135...	Yes	Y		DL	1.2	29	1.5	2	-.046	3	.046	10	.066												
108	1.2DL + 1.5Lm + 1Wm 150...	Yes	Y		DL	1.2	29	1.5	2	-.057	3	.033	11	.066												
109	1.2DL + 1.5Lm + 1Wm 180...	Yes	Y		DL	1.2	29	1.5	2	-.066	3		4	-.066												
110	1.2DL + 1.5Lm + 1Wm 210...	Yes	Y		DL	1.2	29	1.5	2	-.057	3	-.033	5	-.066												
111	1.2DL + 1.5Lm + 1Wm 225...	Yes	Y		DL	1.2	29	1.5	2	-.046	3	-.046	6	-.066												
112	1.2DL + 1.5Lm + 1Wm 240...	Yes	Y		DL	1.2	29	1.5	2	-.033	3	-.057	7	-.066												
113	1.2DL + 1.5Lm + 1Wm 270...	Yes	Y		DL	1.2	29	1.5	2		3	-.066	8	-.066												
114	1.2DL + 1.5Lm + 1Wm 300...	Yes	Y		DL	1.2	29	1.5	2	.033	3	-.057	9	-.066												
115	1.2DL + 1.5Lm + 1Wm 315...	Yes	Y		DL	1.2	29	1.5	2	.046	3	-.046	10	-.066												
116	1.2DL + 1.5Lm + 1Wm 330...	Yes	Y		DL	1.2	29	1.5	2	.057	3	-.033	11	-.066												
117	1.2DL + 1.5Lm + 1Wm 0 A...	Yes	Y		DL	1.2	30	1.5	2	.066	3		4	.066												
118	1.2DL + 1.5Lm + 1Wm 30 ...	Yes	Y		DL	1.2	30	1.5	2	.057	3	.033	5	.066												
119	1.2DL + 1.5Lm + 1Wm 45 ...	Yes	Y		DL	1.2	30	1.5	2	.046	3	.046	6	.066												

Load Combinations (Continued)

	Description	S...	P...	S...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...	B...	Fac...
120	1.2DL + 1.5Lm + 1Wm 60 ...	Yes	Y		DL	1.2	30	1.5	2	.033	3	.057	7	.066												
121	1.2DL + 1.5Lm + 1Wm 90 ...	Yes	Y		DL	1.2	30	1.5	2		3	.066	8	.066												
122	1.2DL + 1.5Lm + 1Wm 120...	Yes	Y		DL	1.2	30	1.5	2	-.033	3	.057	9	.066												
123	1.2DL + 1.5Lm + 1Wm 135...	Yes	Y		DL	1.2	30	1.5	2	-.046	3	.046	10	.066												
124	1.2DL + 1.5Lm + 1Wm 150...	Yes	Y		DL	1.2	30	1.5	2	-.057	3	.033	11	.066												
125	1.2DL + 1.5Lm + 1Wm 180...	Yes	Y		DL	1.2	30	1.5	2	-.066	3		4	-.066												
126	1.2DL + 1.5Lm + 1Wm 210...	Yes	Y		DL	1.2	30	1.5	2	-.057	3	-.033	5	-.066												
127	1.2DL + 1.5Lm + 1Wm 225...	Yes	Y		DL	1.2	30	1.5	2	-.046	3	-.046	6	-.066												
128	1.2DL + 1.5Lm + 1Wm 240...	Yes	Y		DL	1.2	30	1.5	2	-.033	3	-.057	7	-.066												
129	1.2DL + 1.5Lm + 1Wm 270...	Yes	Y		DL	1.2	30	1.5	2		3	-.066	8	-.066												
130	1.2DL + 1.5Lm + 1Wm 300...	Yes	Y		DL	1.2	30	1.5	2	.033	3	-.057	9	-.066												
131	1.2DL + 1.5Lm + 1Wm 315...	Yes	Y		DL	1.2	30	1.5	2	.046	3	-.046	10	-.066												
132	1.2DL + 1.5Lm + 1Wm 330...	Yes	Y		DL	1.2	30	1.5	2	.057	3	-.033	11	-.066												
133	1.2DL + 1.5Lm + 1Wm 0 A...	Yes	Y		DL	1.2	31	1.5	2	.066	3		4	.066												
134	1.2DL + 1.5Lm + 1Wm 30 ...	Yes	Y		DL	1.2	31	1.5	2	.057	3	.033	5	.066												
135	1.2DL + 1.5Lm + 1Wm 45 ...	Yes	Y		DL	1.2	31	1.5	2	.046	3	.046	6	.066												
136	1.2DL + 1.5Lm + 1Wm 60 ...	Yes	Y		DL	1.2	31	1.5	2	.033	3	.057	7	.066												
137	1.2DL + 1.5Lm + 1Wm 90 ...	Yes	Y		DL	1.2	31	1.5	2		3	.066	8	.066												
138	1.2DL + 1.5Lm + 1Wm 120...	Yes	Y		DL	1.2	31	1.5	2	-.033	3	.057	9	.066												
139	1.2DL + 1.5Lm + 1Wm 135...	Yes	Y		DL	1.2	31	1.5	2	-.046	3	.046	10	.066												
140	1.2DL + 1.5Lm + 1Wm 150...	Yes	Y		DL	1.2	31	1.5	2	-.057	3	.033	11	.066												
141	1.2DL + 1.5Lm + 1Wm 180...	Yes	Y		DL	1.2	31	1.5	2	-.066	3		4	-.066												
142	1.2DL + 1.5Lm + 1Wm 210...	Yes	Y		DL	1.2	31	1.5	2	-.057	3	-.033	5	-.066												
143	1.2DL + 1.5Lm + 1Wm 225...	Yes	Y		DL	1.2	31	1.5	2	-.046	3	-.046	6	-.066												
144	1.2DL + 1.5Lm + 1Wm 240...	Yes	Y		DL	1.2	31	1.5	2	-.033	3	-.057	7	-.066												
145	1.2DL + 1.5Lm + 1Wm 270...	Yes	Y		DL	1.2	31	1.5	2		3	-.066	8	-.066												
146	1.2DL + 1.5Lm + 1Wm 300...	Yes	Y		DL	1.2	31	1.5	2	.033	3	-.057	9	-.066												
147	1.2DL + 1.5Lm + 1Wm 315...	Yes	Y		DL	1.2	31	1.5	2	.046	3	-.046	10	-.066												
148	1.2DL + 1.5Lm + 1Wm 330...	Yes	Y		DL	1.2	31	1.5	2	.057	3	-.033	11	-.066												

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	N74	max	2712.742	4	1232.558	12	28.109	44	0	148	0	148	0	148
2		min	-2717.247	12	-1234.517	4	7.806	19	0	1	0	1	0	1
3	N78	max	1526.976	32	2805.383	5	1412.861	42	1031.838	5	907.11	7	0	148
4		min	-3371.177	8	-2050.058	29	473.985	18	-926.693	29	-886.526	31	0	1
5	N79	max	2398.56	34	838.465	89	1454.838	34	346.173	14	368.918	17	0	148
6		min	73.378	26	-1697.572	145	490.233	26	-244.309	22	-352.631	25	0	1
7	Totals:	max	2997.94	2	1815.345	22	2880.974	45						
8		min	-2997.94	26	-1815.347	14	990.545	69						

Envelope AISC 15th(360-16): LRFD Steel Code Checks

	Member	Shape	Code Che...	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc [...	phi*Pnt [l...	phi*Mn y...	phi*Mn z...	Cb	Eqn
1	MP2	HSS2.375X...	.476	30	10	.095	31		7	14845.315	31500	1871.625	1871.625	1	H1-1b
2	MP4	HSS2.375X...	.413	30	10	.123	31		10	14845.315	31500	1871.625	1871.625	1	H1-1b
3	M5	Plate 6"x0.6...	.400	8.206	39	.101	8.206	y	8	116036....	121500	1582.033	15187.5	1....	H1-1b
4	M6	Plate 6"x0.6...	.392	8.206	47	.071	8.206	y	46	116036....	121500	1582.033	15187.5	1....	H1-1b
5	M21	HSS2.375X...	.373	29.25	10	.110	125....		2	20198.755	62550	3600	3600	1....	H1-1b
6	M12	Plate 3.7"x0.5	.373	0	47	.227	0	y	1...	59819.135	59940	624.375	4620.375	1....	H1-1b

Envelope AISC 15th(360-16): LRFD Steel Code Checks (Continued)

	Member	Shape	Code Che...	Loc[in]	LC	Shear ...	Loc[in]	Dir	LC	phi*Pnc [..	phi*Pnt [l..	phi*Mn y...	phi*Mn z...	Cb	Eqn
7	MP3	HSS2.375X...	.331	31	11	.133	31		11	14845.315	31500	1871.625	1871.625	3....	H1-1b
8	M11	Plate 3.7"x0.5	.292	0	40	.232	1.375	y	1...	59819.135	59940	624.375	4620.375	1....	H1-1b
9	M13	Plate 3.7"x0.5	.277	0	86	.221	0	y	1...	59819.135	59940	624.375	4620.375	1....	H1-1b
10	MP1	HSS2.375X...	.255	65	93	.041	31		1...	14845.315	31500	1871.625	1871.625	1	H1-1b
11	M14	Plate 3.7"x0.5	.227	0	86	.226	1.375	y	1...	59819.135	59940	624.375	4620.375	1....	H1-1b
12	H1	HSS2.375X...	.185	100.75	26	.072	29.25		1...	20198.755	62550	3600	3600	2....	H1-1b
13	M1	Plate 3.7"x0.5	.151	1.375	133	.230	1.375	y	1...	59654.323	59940	624.375	4620.375	1....	H1-1b
14	M3	Plate 3.7"x0.5	.150	1.375	141	.230	0	y	1...	59654.323	59940	624.375	4620.375	1....	H1-1b
15	M7	HSS2.375X...	.149	43.365	39	.129	45.25		42	48590.001	62550	3600	3600	1	H1-1b
16	M28	3/4	.130	0	46	.004	0		13	7626.278	19880.37	248.512	248.512	1	H1-1b*
17	M29	3/4	.125	0	49	.022	0		13	7626.278	19880.37	248.512	248.512	1	H1-1b*
18	M43	HSS2.375X...	.120	0	4	.002	71.445		46	24814.223	45000	2673.75	2673.75	1	H1-1b*
19	M4	Plate 3.7"x0.5	.120	1.375	92	.223	0	y	1...	59654.323	59940	624.375	4620.375	1....	H1-1b
20	M54	PIPE_4.0	.119	6.875	7	.237	6.875		5	86073.938	93240	10631.25	10631.25	1	H1-1b
21	M2	Plate 3.7"x0.5	.119	1.375	85	.225	1.375	y	1...	59654.323	59940	624.375	4620.375	1....	H1-1b
22	M17	3/4	.114	26.218	48	.007	52.436		40	3020.487	19880.37	248.512	248.512	1....	H1-1b
23	M10	HSS2.375X...	.113	43.365	89	.093	45.25		93	48590.001	62550	3600	3600	1....	H1-1b
24	M8	HSS2.375X...	.104	1.885	145	.119	1.885		41	48590.001	62550	3600	3600	2....	H1-1b
25	M37	3/4	.098	0	87	.005	0		1...	7626.278	19880.37	248.512	248.512	1	H1-1b*
26	M38	3/4	.096	0	85	.018	0		12	7626.278	19880.37	248.512	248.512	1	H1-1b*
27	M36	3/4	.083	26.218	35	.005	0		39	3020.487	19880.37	248.512	248.512	1....	H1-1b
28	M9	HSS2.375X...	.083	1.885	88	.091	1.885		89	48590.001	62550	3600	3600	1....	H1-1b

Envelope AISI S100-16: LRFD Cold Formed Steel Code Checks

Member	Shape	Code Che...	Loc[in]	LC	Shear..	Loc[in]	Dir	LC	phi*Pn[lb]	phi*Tn[lb]	phi*Mn...	phi*Mn...	phi*...	phi*...	Cb	Eqn
No Data to Print ...																

APPENDIX D

ADDITIONAL CALCUATIONS

Trylon

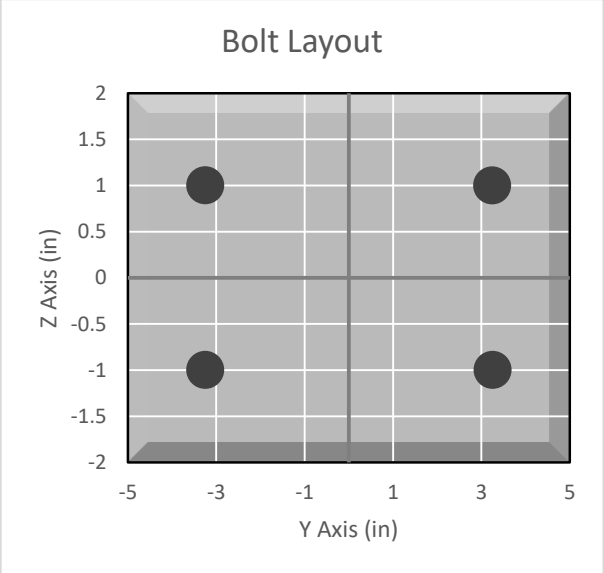
Analysis date: 12/23/2021

BOLT TOOL 1.5.2

Project Data	
Job Code:	198408
Carrier Site ID:	876334
Carrier Site Name:	SOUTHINGTON, SMORON

Code	
Design Standard:	TIA-222-H
Slip Check:	No
Pretension Standard:	TIA-222-H

Bolt Properties		
Connection Type:	Bolt	
Diameter:	0.625	in
Grade:	A307	--
Yield Strength (Fy):	36	ksi
Ultimate Strength (Fu):	60	ksi
Number of Bolts:	4	--
Threads Included:	Yes	--
Double Shear:	No	--
Connection Pipe Size:	-	in



Connection Description
Standoff to pipe support

Bolt Check		
Tensile Capacity (ϕT_n):	10170.1	lbs
Shear Capacity (ϕV_n):	6902.9	lbs
Tension Force (T_u):	3561.9	lbs
Shear Force (V_u):	1202.8	lbs
Tension Usage:	35.0%	--
Shear Usage:	17.4%	--
Interaction:	35.0%	Pass
Controlling Member:	M55	--
Controlling LC:	7	--

Trylon

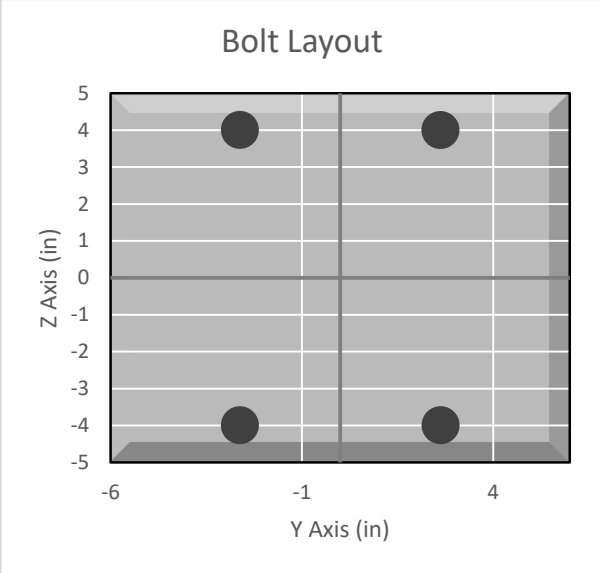
Analysis date: 12/23/2021

BOLT TOOL 1.5.2

Project Data	
Job Code:	198408
Carrier Site ID:	876334
Carrier Site Name:	SOUTHINGTON, SMORON

Code	
Design Standard:	TIA-222-H
Slip Check:	Yes
Pretension Standard:	TIA-222-H

Bolt Properties		
Connection Type:	U-Bolt	
Diameter:	0.625	in
Grade:	A307	--
Yield Strength (Fy):	36	ksi
Ultimate Strength (Fu):	60	ksi
Number of Bolts:	2	--
Threads Included:	Yes	--
Double Shear:	No	--
Connection Pipe Size:	4.5	in



Connection Description
Support pipe to tower

Bolt Check		
Tensile Capacity (ϕT_n):	10170.1	lbs
Shear Capacity (ϕV_n):	6902.9	lbs
Tension Force (T_u):	1170.4	lbs
Shear Force (V_u):	1345.4	lbs
Tension Usage:	11.5%	--
Shear Usage:	19.5%	--
Interaction:	19.5%	Pass
Controlling Member:	M55	--
Controlling LC:	5	--

Slip Check		
Sliding Capacity (ϕR_{ns}):	13069.2	lbs
Torsion Capacity (ϕR_{nr}):	2450.5	lb-ft
Sliding Force (V_{us}):	1411.7	lbs
Torsional Force (T_{ur}):	0.0	lb-ft
Sliding Usage:	10.8%	--
Torsion Usage:	0.0%	--
Interaction:	10.8%	Pass
Controlling Member:	M55	--
Controlling LC:	40	--

EBI Consulting

environmental | engineering | due diligence

RADIO FREQUENCY EMISSIONS ANALYSIS REPORT
EVALUATION OF HUMAN EXPOSURE POTENTIAL TO NON-IONIZING EMISSIONS

AT&T Existing Facility

Site ID: CTL05250

876334
625 Spring Street
Southington, Connecticut 06489

February 21, 2022

EBI Project Number: 6222000326

Site Compliance Summary	
Compliance Status:	**COMPLIANT**
Site total MPE% of FCC general population allowable limit:	**35.53%**

February 21, 2022

AT&T

Emissions Analysis for Site: CTL05250 - 876334

EBI Consulting was directed to analyze the proposed AT&T facility located at **625 Spring Street** in **Southington, Connecticut** for the purpose of determining whether the emissions from the Proposed AT&T Antenna Installation located on this property are within specified federal limits.

All information used in this report was analyzed as a percentage of current Maximum Permissible Exposure (% MPE) as listed in the FCC OET Bulletin 65 Edition 97-01and ANSI/IEEE Std C95.1. The FCC regulates Maximum Permissible Exposure in units of microwatts per square centimeter ($\mu W/cm^2$). The number of $\mu W/cm^2$ calculated at each sample point is called the power density. The exposure limit for power density varies depending upon the frequencies being utilized. Wireless Carriers and Paging Services use different frequency bands each with different exposure limits; therefore, it is necessary to report results and limits in terms of percent MPE rather than power density.

All results were compared to the FCC (Federal Communications Commission) radio frequency exposure rules, 47 CFR 1.1307(b)(1) – (b)(3), to determine compliance with the Maximum Permissible Exposure (MPE) limits for General Population/Uncontrolled environments as defined below.

General population/uncontrolled exposure limits apply to situations in which the general population may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Therefore, members of the general population would always be considered under this category when exposure is not employment related, for example, in the case of a telecommunications tower that exposes persons in a nearby residential area.

Public exposure to radio frequencies is regulated and enforced in units of microwatts per square centimeter ($\mu W/cm^2$). The general population exposure limits for the 600 MHz and 700 MHz frequency bands are approximately 400 $\mu W/cm^2$ and 467 $\mu W/cm^2$, respectively. The general population exposure limit for the 1900 MHz (PCS), 2100 MHz (AWS) and 11 GHz frequency bands is 1000 $\mu W/cm^2$. Because each carrier will be using different frequency bands, and each frequency band has different exposure limits, it is necessary to report percent of MPE rather than power density.

Occupational/controlled exposure limits apply to situations in which persons are exposed as a consequence of their employment and in which those persons who are exposed have been made fully aware of the potential for exposure and can exercise control over their exposure.

Occupational/controlled exposure limits also apply where exposure is of a transient nature as a result of incidental passage through a location where exposure levels may be above general population/uncontrolled limits (see below), as long as the exposed person has been made fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Additional details can be found in FCC OET 65.

CALCULATIONS

Calculations were done for the proposed AT&T Wireless antenna facility located at 625 Spring Street in Southington, Connecticut using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65. Since AT&T is proposing highly focused directional panel antennas, which project most of the emitted energy out toward the horizon, all calculations were performed assuming a lobe representing the maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was focused at the base of the tower. For this report, the sample point is the top of a 6-foot person standing at the base of the tower. For power density calculations, the broadcast footprint of the AIR6449 antenna has been considered. Due to the beamforming nature of this antenna, the actual beam locations vary depending on demand and are narrow in nature. Using the broadcast footprint accounts for the potential location of beams at any given time.

For all calculations, all equipment was calculated using the following assumptions:

1) 4 LTE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

2) 2 LTE DE channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

3) 4 LTE FN channels (700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

4) 4 5G channels (850 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

5) 4 LTE / 5G channels (PCS Band - 1900 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

6) 4 LTE / 5G channels (AWS Band – 2100 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 40 Watts per Channel.

7) 4 LTE channels (WCS Band – 2300 MHz) were considered for each sector of the proposed installation. These Channels have a transmit power of 25 Watts per Channel.

8) 2 C-Band Channels (3700 MHz Band) were considered for each sector of the proposed installation. These Channels have a transmit power of 144.58 Watts per Channel.

9) All radios at the proposed installation were considered to be running at full power and were uncombined in their RF transmissions paths per carrier prescribed configuration. Per FCC OET Bulletin No. 65 - Edition 97-01 recommendations to achieve the maximum anticipated value at each sample point, all power levels emitting from the proposed antenna installation are increased by a factor of 2.56 to account for possible in-phase reflections from the surrounding environment. This is rarely the case, and if so, is never continuous.

10) For the following calculations, the sample point was the top of a 6-foot person standing at the base of the tower. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used in this direction. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

11) The antennas used in this modeling are the Quintel QD8616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU8DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector A, the Quintel QD6616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU8DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector B, the Quintel QD8616-7 for the 700 MHz / 700 MHz / 1900 MHz / 2100 MHz channel(s), the Ericsson AIR 6419 for the 3700 MHz channel(s), the Ericsson AIR 6449 for the 3700 MHz channel(s), the CCI DMP65R-BU8DA for the 700 MHz / 850 MHz / 2300 MHz channel(s) in Sector C. This is based on feedback from the carrier with regard to anticipated antenna selection. All Antenna gain values and associated transmit power levels are shown in the Site Inventory and Power Data table below. The maximum gain of the antenna per the antenna manufacturer's supplied specifications, minus 10 dB for directional panel antennas and 20 dB for highly focused parabolic microwave dishes, was used for all calculations. This value is a very conservative estimate as gain reductions for these particular antennas are typically much higher in this direction.

12) The antenna mounting height centerlines of the proposed antennas are 155, 157, and 159 feet above ground level (AGL).

13) Emissions values for additional carriers were taken from the Connecticut Siting Council active database. Values in this database are provided by the individual carriers themselves.

14) All calculations were done with respect to uncontrolled / general population threshold limits.

AT&T Site Inventory and Power Data

Sector:	A	Sector:	B	Sector:	C
Antenna #:	1	Antenna #:	1	Antenna #:	1
Make / Model:	Quintel QD8616-7	Make / Model:	Quintel QD6616-7	Make / Model:	Quintel QD8616-7
Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz	Frequency Bands:	700 MHz / 700 MHz / 1900 MHz / 2100 MHz
Gain:	12.994 dBd / 12.994 dBd / 15.0806 dBd / 15.1672 dBd	Gain:	11.97 dBd / 11.97 dBd / 15.11 dBd / 15.33 dBd	Gain:	12.994 dBd / 12.994 dBd / 15.0806 dBd / 15.1672 dBd
Height (AGL):	157 feet	Height (AGL):	157 feet	Height (AGL):	157 feet
Channel Count:	14	Channel Count:	14	Channel Count:	14
Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts	Total TX Power (W):	560.00 Watts
ERP (W):	15,194.68	ERP (W):	14,426.08	ERP (W):	15,194.68
Antenna A1 MPE %:	**3.26%**	Antenna B1 MPE %:	**2.95%**	Antenna C1 MPE %:	**3.26%**
Antenna #:	**2**	Antenna #:	**2**	Antenna #:	**2**
Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419	Make / Model:	Ericsson AIR 6419
Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	159 feet	Height (AGL):	159 feet	Height (AGL):	159 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A2 MPE %:	**4.91%**	Antenna B2 MPE %:	**4.91%**	Antenna C2 MPE %:	**4.91%**
Antenna #:	**3**	Antenna #:	**3**	Antenna #:	**3**
Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449	Make / Model:	Ericsson AIR 6449
Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz	Frequency Bands:	3700 MHz
Gain:	23.45 dBd	Gain:	23.45 dBd	Gain:	23.45 dBd
Height (AGL):	155 feet	Height (AGL):	155 feet	Height (AGL):	155 feet
Channel Count:	1	Channel Count:	1	Channel Count:	1
Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts	Total TX Power (W):	144.58 Watts
ERP (W):	31,996.92	ERP (W):	31,996.92	ERP (W):	31,996.92
Antenna A3 MPE %:	**5.18%**	Antenna B3 MPE %:	**5.18%**	Antenna C3 MPE %:	**5.18%**
Antenna #:	**4**	Antenna #:	**4**	Antenna #:	**4**
Make / Model:	CCI DMP65R-BU8DA	Make / Model:	CCI DMP65R-BU8DA	Make / Model:	CCI DMP65R-BU8DA
Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz	Frequency Bands:	700 MHz / 850 MHz / 2300 MHz
Gain:	11.85 dBd / 12.45 dBd / 15.95 dBd	Gain:	11.85 dBd / 12.45 dBd / 16.25 dBd	Gain:	11.85 dBd / 12.45 dBd / 15.95 dBd
Height (AGL):	157 feet	Height (AGL):	157 feet	Height (AGL):	157 feet
Channel Count:	12	Channel Count:	12	Channel Count:	12
Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts	Total TX Power (W):	420.00 Watts
ERP (W):	9,197.92	ERP (W):	9,479.38	ERP (W):	9,197.92
Antenna A4 MPE %:	**2.23%**	Antenna B4 MPE %:	**2.27%**	Antenna C4 MPE %:	**2.23%**

• An adjusted power reduction factor of 0.32 was applied to the AIR 6449 antennas per guidance from AT&T.

• Specifications were not available for the Ericsson AIR 6419 antenna. Per AT&T, specifications for the AIR 6449 antenna were used to model the 6419 due to its similarity.

Site Composite MPE %	
Carrier	**MPE %**
AT&T (Max at Sector A):	15.58%
Sprint	0.94%
T-Mobile	6.49%
Metro PCS	0.69%
Verizon	11.35%
Nextel	0.48%
Site Total MPE % :	35.53%

AT&T MPE % Per Sector	
AT&T Sector A Total:	15.58%
AT&T Sector B Total:	15.32%
AT&T Sector C Total:	15.58%
Site Total MPE % :	35.53%

AT&T Maximum MPE Power Values (Sector A)

AT&T Frequency Band / Technology (Sector A)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density (μW/cm²)	Frequency (MHz)	Allowable MPE (μW/cm²)	Calculated % MPE
AT&T 700 MHz LTE FN	4	797.00	157.0	5.03	700 MHz LTE FN	467	1.08%
AT&T 700 MHz LTE DE	2	797.00	157.0	2.51	700 MHz LTE DE	467	0.54%
AT&T 1900 MHz LTE/5G	4	1288.61	157.0	8.13	1900 MHz LTE/5G	1000	0.81%
AT&T 2100 MHz LTE/5G	4	1314.56	157.0	8.29	2100 MHz LTE/5G	1000	0.83%
AT&T 3700 MHz C-Band	1	31996.92	159.0	49.14	3700 MHz C-Band	1000	4.91%
AT&T 3700 MHz C-Band	1	31996.92	155.0	51.81	3700 MHz C-Band	1000	5.18%
AT&T 700 MHz LTE	4	612.43	157.0	3.86	700 MHz LTE	467	0.83%
AT&T 850 MHz 5G	4	703.17	157.0	4.43	850 MHz 5G	567	0.78%
AT&T 2300 MHz LTE	4	983.88	157.0	6.21	2300 MHz LTE	1000	0.62%
						Total:	**15.58%**

• NOTE: Totals may vary by approximately 0.01% due to summation of remainders in calculations.

Summary

All calculations performed for this analysis yielded results that were **within** the allowable limits for general population exposure to RF Emissions.

The anticipated maximum composite contributions from the AT&T facility as well as the site composite emissions value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

AT&T Sector	Power Density Value (%)
Sector A:	15.58%
Sector B:	15.32%
Sector C:	15.58%
AT&T Maximum MPE % (Sector A):	15.58%
Site Total:	35.53%
Site Compliance Status:	**COMPLIANT**

The anticipated composite MPE value for this site assuming all carriers present is **35.53%** of the allowable FCC established general population limit sampled at the ground level. This is based upon values listed in the Connecticut Siting Council database for existing carrier emissions.

FCC guidelines state that if a site is found to be out of compliance (over allowable thresholds), that carriers over a 5% contribution to the composite value will require measures to bring the site into compliance. For this facility, the composite values calculated were well within the allowable 100% threshold standard per the federal government.

AT&T SITE NUMBER: CTL05250
AT&T SITE NAME: GSM-SOUTHINGTON FLORIANS POND
AT&T FA CODE: 10071248
AT&T PACE NUMBER: MRCTB054707, MRCTB055962, MRCTB054702, MRCTB055091, MRCTB053294, MRCTB054918, MRCTB055757

BUSINESS UNIT #: 876334
SITE ADDRESS: 625 SPRING STREET SOUTHINGTON, CT 06489
COUNTY: HARTFORD
SITE TYPE: MONOPOLE
TOWER HEIGHT: 160'-3"

AT&T PROJECT: 5G NR RADIO/5G NR 1SR CBAND, ANTENNA MODIFICATIONS/4TX4RX SOFTWARE RETROFIT, CELL SITE RF MODIFICATIONS/BBU ADD, 5G NR SOFTWARE RADIO/5G NR ACTIVATION, 5G NR 1SR/5G NR 1DR-1

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	SOUTHINGTON, SMORON
SITE ADDRESS:	625 SPRING STREET SOUTHINGTON, CT 06489
COUNTY:	HARTFORD
MAP/PARCEL #:	168020
AREA OF CONSTRUCTION:	EXISTING
LATITUDE:	41.632481
LONGITUDE:	-72.894227
LAT/LONG TYPE:	NAD83
GROUND ELEVATION:	295'
CURRENT ZONING:	R-40 RESIDENTIAL
JURISDICTION:	CONNECTICUT SITING COUNCIL
OCCUPANCY CLASSIFICATION:	U
TYPE OF CONSTRUCTION:	IIB
A.D.A. COMPLIANCE:	FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	GLOBAL SIGNAL ACQUISITIONS II LLC 4017 WASHINGTON RD PMB 331 CANONSBURG, PA 15317
TOWER OWNER:	CROWN CASTLE USA INC 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	AT&T TOWER ASSET GROUP 575 MOROSGO DRIVE ATLANTA, GA 30324-3300
ELECTRIC PROVIDER:	CONNECTICUT LIGHT AND POWER (CL&P) (800) 286-2000
TELCO PROVIDER:	FRONTIER COMMUNICATIONS (800) 239-4430

DRAWING INDEX

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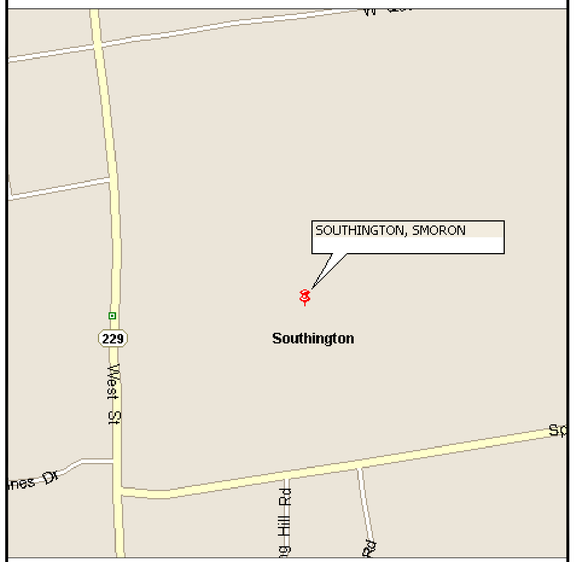
ALL DRAWINGS CONTAINED HEREIN ARE FORMATTED FOR FULL SIZE. CONTRACTOR SHALL VERIFY ALL PLANS AND EXISTING DIMENSIONS AND CONDITIONS ON THE JOB SITE AND SHALL IMMEDIATELY NOTIFY THE ENGINEER IN WRITING OF ANY DISCREPANCIES BEFORE PROCEEDING WITH THE WORK OR BE RESPONSIBLE FOR SAME.

CALL CONNECTICUT ONE CALL
(800) 922-4455 CBYD.COM
CALL 2 WORKING DAYS
BEFORE YOU DIG!
811

LOCATION MAP



NO SCALE

SITE PHOTO

PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 MARVIN PHILLIPS MARVIN.PHILLIPS@BTGRP.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	3530 TORINGDON WAY, SUITE 300 CHARLOTTE, NC 28277
	PAUL PEDICONE - PROJECT MANAGER PAUL.PEDICONE@CROWNCASTLE.COM
	JASON D'AMICO - CONSTRUCTION MANAGER JASON.D'AMICO@CROWNCASTLE.COM

NOTE:
PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN NOC AT (800) 788-7011 & CROWN CONSTRUCTION MANAGER.

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.
TOWER SCOPE OF WORK:
- RELOCATE (9) RRHs
- REMOVE (10) ANTENNAS
- REMOVE (3) TMAs
- REMOVE (6) RRHs
- REMOVE (1) SQUID DOME
- REMOVE (2) DC TRUNKS
- RELOCATE (6) MOUNT PIPES W/ ASSOCIATED HARDWARE
- INSTALL (1) CCI - DMP65R-BU6DA, (2) CCI - DMP65R-BU8DA, (3) ERICSSON - AIR6449 B77D, (3) ERICSSON - AIR6419 B77G, (2) QUINTEL - QD8616-7, & (1) QUINTEL - QD6616-7 ANTENNAS
- INSTALL (3) ERICSSON - 4449 B5/B12 RRHs
- INSTALL (1) SQUID DOME
- INSTALL (3) DC CABLES
- INSTALL (1) FIBER CABLE
- INSTALL (3) Y CABLES

GROUND SCOPE OF WORK:
- REMOVE (6) CCI TRIPLEXER - TPX-070821
- REMOVE (3) COMMSCOPE - ATSBT-BOTTOM-FF-4G BIAS-T
- REMOVE EXISTING BATTERIES
- REMOVE (1) 5216 FROM LTE RACK
- INSTALL (2) RECTIFIERS TO EXISTING POWER PLANT
- REPLACE EXISTING BATTERIES WITH (12) 170AH BATTERIES
- INSTALL NEW -48V BATTERY RACK NEXT TO POWER PLANT AND ADDITIONAL (8) 170AH BATTERIES IN BATTERY RACK
- INSTALL (1) 6648 IN LTE RACK
- INSTALL (1) 6630 IN LTE RACK
- INSTALL (1) XCEDE CABLE
- INSTALL (1) IDLE CABLE

NOTE:
THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. AT&T IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

APPLICABLE CODES/REFERENCE DOCUMENTS

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	2015 IBC
MECHANICAL	2015 IMC
ELECTRICAL	2017 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	BY OTHERS
DATED:	
MOUNT ANALYSIS:	TRYLON
DATED:	12/23/2021
AC ELECTRICAL POWER DESIGN:	BY OTHERS
DATED:	
RFDS REVISION:	FINAL
DATED:	2/14/22
ORDER ID:	586272
REVISION:	0

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER: **CTL05250**

BU #: **876334**
SOUTHINGTON, SMORON

625 SPRING STREET
SOUTHINGTON, CT 06489

EXISTING
160'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/4/22	KT	PRELIMINARY REVIEW	KT
B	2/18/22	TDG	PRELIMINARY REVIEW	KT
0	3/1/22	TDG	CONSTRUCTION	KT

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: T-1
REVISION: 0

CROWN CASTLE USA INC. SITE ACTIVITY REQUIREMENTS:

1. NOTICE TO PROCEED– NO WORK SHALL COMMENCE PRIOR TO CROWN CASTLE USA INC. WRITTEN NOTICE TO PROCEED (NTP) AND THE ISSUANCE OF A PURCHASE ORDER. PRIOR TO ACCESSING/ENTERING THE SITE YOU MUST CONTACT THE CROWN CASTLE USA INC. NOC AT 800–788–7011 & THE CROWN CASTLE USA INC. CONSTRUCTION MANAGER.
2. "LOOK UP" – CROWN CASTLE USA INC. SAFETY CLIMB REQUIREMENT:
   THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.
3. PRIOR TO THE START OF CONSTRUCTION, ALL REQUIRED JURISDICTIONAL PERMITS SHALL BE OBTAINED. THIS INCLUDES, BUT IS NOT LIMITED TO, BUILDING, ELECTRICAL, MECHANICAL, FIRE, FLOOD ZONE, ENVIRONMENTAL, AND ZONING. AFTER ONSITE ACTIVITIES AND CONSTRUCTION ARE COMPLETED, ALL REQUIRED PERMITS SHALL BE SATISFIED AND CLOSED OUT ACCORDING TO LOCAL JURISDICTIONAL REQUIREMENTS.
4. ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN, AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN CASTLE USA INC. STANDARD CED–STD–10253, INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION, TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH ANSI/TIA–322 (LATEST EDITION).
5. ALL SITE WORK TO COMPLY WITH QAS–STD–10068 "INSTALLATION STANDARDS FOR CONSTRUCTION ACTIVITIES ON CROWN CASTLE USA INC. TOWER SITE," CED–STD–10294 "STANDARD FOR INSTALLATION OF MOUNTS AND APPURTENANCES," AND LATEST VERSION OF ANSI/TIA–1019–A–2012 "STANDARD FOR INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS."
6. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY CROWN CASTLE USA INC. PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
9. THE CONTRACTOR SHALL CONTACT UTILITY LOCATING SERVICES PRIOR TO THE START OF CONSTRUCTION.
10. ALL EXISTING ACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES WHERE ENCOUNTERED IN THE WORK, SHALL BE PROTECTED AT ALL TIMES AND WHERE REQUIRED FOR THE PROPER EXECUTION OF THE WORK, SHALL BE RELOCATED AS DIRECTED BY CONTRACTOR. EXTREME CAUTION SHOULD BE USED BY THE CONTRACTOR WHEN EXCAVATING OR DRILLING PIERS AROUND OR NEAR UTILITIES. CONTRACTOR SHALL PROVIDE SAFETY TRAINING FOR THE WORKING CREW. THIS WILL INCLUDE BUT NOT BE LIMITED TO A) FALL PROTECTION B) CONFINED SPACE C) ELECTRICAL SAFETY D) TRENCHING AND EXCAVATION E) CONSTRUCTION SAFETY PROCEDURES.
11. ALL SITE WORK SHALL BE AS INDICATED ON THE STAMPED CONSTRUCTION DRAWINGS AND PROJECT SPECIFICATIONS, LATEST APPROVED REVISION.
12. CONTRACTOR SHALL KEEP THE SITE FREE FROM ACCUMULATING WASTE MATERIAL, DEBRIS, AND TRASH AT THE COMPLETION OF THE WORK. IF NECESSARY, RUBBISH, STUMPS, DEBRIS, STICKS, STONES AND OTHER REFUSE SHALL BE REMOVED FROM THE SITE AND DISPOSED OF LEGALLY.
13. ALL EXISTING INACTIVE SEWER, WATER, GAS, ELECTRIC AND OTHER UTILITIES, WHICH INTERFERE WITH THE EXECUTION OF THE WORK, SHALL BE REMOVED AND/OR CAPPED, PLUGGED OR OTHERWISE DISCONTINUED AT POINTS WHICH WILL NOT INTERFERE WITH THE EXECUTION OF THE WORK, SUBJECT TO THE APPROVAL OF CONTRACTOR, TOWER OWNER, CROWN CASTLE USA INC., AND/OR LOCAL UTILITIES.
14. THE CONTRACTOR SHALL PROVIDE SITE SIGNAGE IN ACCORDANCE WITH THE TECHNICAL SPECIFICATION FOR SITE SIGNAGE REQUIRED BY LOCAL JURISDICTION AND SIGNAGE REQUIRED ON INDIVIDUAL PIECES OF EQUIPMENT, ROOMS, AND SHELTERS.
15. THE SITE SHALL BE GRADED TO CAUSE SURFACE WATER TO FLOW AWAY FROM THE CARRIER'S EQUIPMENT AND TOWER AREAS.
16. THE SUB GRADE SHALL BE COMPACTED AND BROUGHT TO A SMOOTH UNIFORM GRADE PRIOR TO FINISHED SURFACE APPLICATION.
17. THE AREAS OF THE OWNERS PROPERTY DISTURBED BY THE WORK AND NOT COVERED BY THE TOWER, EQUIPMENT OR DRIVEWAY, SHALL BE GRADED TO A UNIFORM SLOPE, AND STABILIZED TO PREVENT EROSION AS SPECIFIED ON THE CONSTRUCTION DRAWINGS AND/OR PROJECT SPECIFICATIONS.
18. CONTRACTOR SHALL MINIMIZE DISTURBANCE TO EXISTING SITE DURING CONSTRUCTION. EROSION CONTROL MEASURES, IF REQUIRED DURING CONSTRUCTION, SHALL BE IN CONFORMANCE WITH THE LOCAL GUIDELINES FOR EROSION AND SEDIMENT CONTROL.
19. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF OWNER.
20. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
21. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.
22. NO FILL OR EMBANKMENT MATERIAL SHALL BE PLACED ON FROZEN GROUND. FROZEN MATERIALS, SNOW OR ICE SHALL NOT BE PLACED IN ANY FILL OR EMBANKMENT.

GENERAL NOTES:

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
   CONTRACTOR: GENERAL CONTRACTOR RESPONSIBLE FOR CONSTRUCTION
   CARRIER: AT&T
   TOWER OWNER: CROWN CASTLE USA INC.
2. THESE DRAWINGS HAVE BEEN PREPARED USING STANDARDS OF PROFESSIONAL CARE AND COMPLETENESS NORMALLY EXERCISED UNDER SIMILAR CIRCUMSTANCES BY REPUTABLE ENGINEERS IN THIS OR SIMILAR LOCALITIES. IT IS ASSUMED THAT THE WORK DEPICTED WILL BE PERFORMED BY AN EXPERIENCED CONTRACTOR AND/OR WORKPEOPLE WHO HAVE A WORKING KNOWLEDGE OF THE APPLICABLE CODE STANDARDS AND REQUIREMENTS AND OF INDUSTRY ACCEPTED STANDARD GOOD PRACTICE. AS NOT EVERY CONDITION OR ELEMENT IS (OR CAN BE) EXPLICITLY SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL USE INDUSTRY ACCEPTED STANDARD GOOD PRACTICE FOR MISCELLANEOUS WORK NOT EXPLICITLY SHOWN.
3. THESE DRAWINGS REPRESENT THE FINISHED STRUCTURE. THEY DO NOT INDICATE THE MEANS OR METHODS OF CONSTRUCTION. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR THE CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, AND PROCEDURES. THE CONTRACTOR SHALL PROVIDE ALL MEASURES NECESSARY FOR PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION. SUCH MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO, BRACING, FORMWORK, SHORING, ETC. SITE VISITS BY THE ENGINEER OR HIS REPRESENTATIVE WILL NOT INCLUDE INSPECTION OF THESE ITEMS AND IS FOR STRUCTURAL OBSERVATION OF THE FINISHED STRUCTURE ONLY.
4. NOTES AND DETAILS IN THE CONSTRUCTION DRAWINGS SHALL TAKE PRECEDENCE OVER GENERAL NOTES AND TYPICAL DETAILS. WHERE NO DETAILS ARE SHOWN, CONSTRUCTION SHALL CONFORM TO SIMILAR WORK ON THE PROJECT, AND/OR AS PROVIDED FOR IN THE CONTRACT DOCUMENTS. WHERE DISCREPANCIES OCCUR BETWEEN PLANS, DETAILS, GENERAL NOTES, AND SPECIFICATIONS, THE GREATER, MORE STRICT REQUIREMENTS, SHALL GOVERN. IF FURTHER CLARIFICATION IS REQUIRED CONTACT THE ENGINEER OF RECORD.
5. SUBSTANTIAL EFFORT HAS BEEN MADE TO PROVIDE ACCURATE DIMENSIONS AND MEASUREMENTS ON THE DRAWINGS TO ASSIST IN THE FABRICATION AND/OR PLACEMENT OF CONSTRUCTION ELEMENTS BUT IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE DIMENSIONS, MEASUREMENTS, AND/OR CLEARANCES SHOWN IN THE CONSTRUCTION DRAWINGS PRIOR TO FABRICATION OR CUTTING OF ANY NEW OR EXISTING CONSTRUCTION ELEMENTS. IF IT IS DETERMINED THAT THERE ARE DISCREPANCIES AND/OR CONFLICTS WITH THE CONSTRUCTION DRAWINGS THE ENGINEER OF RECORD IS TO BE NOTIFIED AS SOON AS POSSIBLE.
6. PRIOR TO THE SUBMISSION OF BIDS, THE BIDDING CONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF CROWN CASTLE.
7. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS AND ORDINANCES. CONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
8. UNLESS NOTED OTHERWISE, THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
9. THE CONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
10. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS, THE CONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION FOR APPROVAL BY THE CARRIER AND CROWN CASTLE PRIOR TO PROCEEDING WITH ANY SUCH CHANGE OF INSTALLATION.
11. CONTRACTOR IS TO PERFORM A SITE INVESTIGATION AND IS TO DETERMINE THE BEST ROUTING OF ALL CONDUITS FOR POWER, AND TELCO AND FOR GROUNDING CABLES AS SHOWN IN THE POWER, TELCO, AND GROUNDING PLAN DRAWINGS.
12. THE CONTRACTOR SHALL PROTECT EXISTING IMPROVEMENTS, PAVEMENTS, CURBS, LANDSCAPING AND STRUCTURES. ANY DAMAGED PART SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF CROWN CASTLE USA INC.
13. CONTRACTOR SHALL LEGALLY AND PROPERLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNER'S DESIGNATED LOCATION.
14. CONTRACTOR SHALL LEAVE PREMISES IN CLEAN CONDITION. TRASH AND DEBRIS SHOULD BE REMOVED FROM SITE ON A DAILY BASIS.

CONCRETE, FOUNDATIONS, AND REINFORCING STEEL:

1. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI 301, ACI 318, ACI 336, ASTM A184, ASTM A185 AND THE DESIGN AND CONSTRUCTION SPECIFICATION FOR CAST–IN–PLACE CONCRETE.
2. UNLESS NOTED OTHERWISE, SOIL BEARING PRESSURE USED FOR DESIGN OF SLABS AND FOUNDATIONS IS ASSUMED TO BE 1000 psf.
3. ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (f'c) OF 3000 psi AT 28 DAYS, UNLESS NOTED OTHERWISE. NO MORE THAN 90 MINUTES SHALL ELAPSE FROM BATCH TIME TO TIME OF PLACEMENT UNLESS APPROVED BY THE ENGINEER OF RECORD. TEMPERATURE OF CONCRETE SHALL NOT EXCEED 90°f AT TIME OF PLACEMENT.
4. CONCRETE EXPOSED TO FREEZE–THAW CYCLES SHALL CONTAIN AIR ENTRAINING ADMIXTURES. AMOUNT OF AIR ENTRAINMENT TO BE BASED ON SIZE OF AGGREGATE AND F3 CLASS EXPOSURE (VERY SEVERE). CEMENT USED TO BE TYPE II PORTLAND CEMENT WITH A MAXIMUM WATER–TO–CEMENT RATIO (W/C) OF 0.45.
5. ALL STEEL REINFORCING SHALL CONFORM TO ASTM A615. ALL WELDED WIRE FABRIC (WWF) SHALL CONFORM TO ASTM A185. ALL SPLICES SHALL BE CLASS "B" TENSION SPLICES, UNLESS NOTED OTHERWISE. ALL HOOKS SHALL BE STANDARD 90 DEGREE HOOKS, UNLESS NOTED OTHERWISE. YIELD STRENGTH (Fy) OF STANDARD DEFORMED BARS ARE AS FOLLOWS:
   #4 BARS AND SMALLER.......................................40 ksi
   #5 BARS AND LARGER.......................................60 ksi
6. THE FOLLOWING MINIMUM CONCRETE COVER SHALL BE PROVIDED FOR REINFORCING STEEL UNLESS SHOWN OTHERWISE ON DRAWINGS:
   CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH......................3"
   CONCRETE EXPOSED TO EARTH OR WEATHER:
   #6 BARS AND LARGER.......................................2"
   #5 BARS AND SMALLER.......................................1–1/2"
   CONCRETE NOT EXPOSED TO EARTH OR WEATHER:
   SLAB AND WALLS.......................................3/4"
   BEAMS AND COLUMNS.......................................1–1/2"
7. A TOOLED EDGE OR A 3/4" CHAMFER SHALL BE PROVIDED AT ALL EXPOSED EDGES OF CONCRETE, UNLESS NOTED OTHERWISE, IN ACCORDANCE WITH ACI 301 SECTION 4.2.4.

GREENFIELD GROUNDING NOTES:

1. ALL GROUND ELECTRODE SYSTEMS (INCLUDING TELECOMMUNICATION, RADIO, LIGHTNING PROTECTION AND AC POWER GES'S) SHALL BE BONDED TOGETHER AT OR BELOW GRADE, BY TWO OR MORE COPPER BONDING CONDUCTORS IN ACCORDANCE WITH THE NEC.
2. THE CONTRACTOR SHALL PERFORM IEEE FALL–OF–POTENTAL RESISTANCE TO EARTH TESTING (PER IEEE 1100 AND 81) FOR GROUND ELECTRODE SYSTEMS, THE CONTRACTOR SHALL FURNISH AND INSTALL SUPPLEMENTAL GROUND ELECTRODES AS NEEDED TO ACHIEVE A TEST RESULT OF 5 OHMS OR LESS.
3. THE CONTRACTOR IS RESPONSIBLE FOR PROPERLY SEQUENCING GROUNDING AND UNDERGROUND CONDUIT INSTALLATION AS TO PREVENT ANY LOSS OF CONTINUITY IN THE GROUNDING SYSTEM OR DAMAGE TO THE CONDUIT AND PROVIDE TESTING RESULTS.
4. METAL CONDUIT AND TRAY SHALL BE GROUNDED AND MADE ELECTRICALLY CONTINUOUS WITH LISTED BONDING FITTINGS OR BY BONDING ACROSS THE DISCONTINUITY WITH #6 COPPER WIRE UL APPROVED GROUNDING TYPE CONDUIT CLAMPS.
5. METAL RACEWAY SHALL NOT BE USED AS THE NEC REQUIRED EQUIPMENT GROUND CONDUCTOR. STRANDED COPPER CONDUCTORS WITH GREEN INSULATION, SIZED IN ACCORDANCE WITH THE NEC, SHALL BE FURNISHED AND INSTALLED WITH THE POWER CIRCUITS TO BTS EQUIPMENT.
6. EACH CABINET FRAME SHALL BE DIRECTLY CONNECTED TO THE MASTER GROUND BAR WITH GREEN INSULATED SUPPLEMENTAL EQUIPMENT GROUND WIRES, #6 STRANDED COPPER OR LARGER FOR INDOOR BTS; #2 BARE SOLID TINNED COPPER FOR OUTDOOR BTS.
7. CONNECTIONS TO THE GROUND BUS SHALL NOT BE DOUBLED UP OR STACKED BACK TO BACK CONNECTIONS ON OPPOSITE SIDE OF THE GROUND BUS ARE PERMITTED.
8. ALL EXTERIOR GROUND CONDUCTORS BETWEEN EQUIPMENT/GROUND BARS AND THE GROUND RING SHALL BE #2 SOLID TINNED COPPER UNLESS OTHERWISE INDICATED.
9. ALUMINUM CONDUCTOR OR COPPER CLAD STEEL CONDUCTOR SHALL NOT BE USED FOR GROUNDING CONNECTIONS.
10. USE OF 90° BENDS IN THE PROTECTION GROUNDING CONDUCTORS SHALL BE AVOIDED WHEN 45° BENDS CAN BE ADEQUATELY SUPPORTED.
11. EXOTHERMIC WELDS SHALL BE USED FOR ALL GROUNDING CONNECTIONS BELOW GRADE.
12. ALL GROUND CONNECTIONS ABOVE GRADE (INTERIOR AND EXTERIOR) SHALL BE FORMED USING HIGH PRESS CRIMPS.
13. COMPRESSION GROUND CONNECTIONS MAY BE REPLACED BY EXOTHERMIC WELD CONNECTIONS.
14. ICE BRIDGE BONDING CONDUCTORS SHALL BE EXOTHERMICALLY BONDED OR BOLTED TO THE BRIDGE AND THE TOWER GROUND BAR.
15. APPROVED ANTIOXIDANT COATINGS (i.e. CONDUCTIVE GEL OR PASTE) SHALL BE USED ON ALL COMPRESSION AND BOLTED GROUND CONNECTIONS.
16. ALL EXTERIOR GROUND CONNECTIONS SHALL BE COATED WITH A CORROSION RESISTANT MATERIAL.
17. MISCELLANEOUS ELECTRICAL AND NON–ELECTRICAL METAL BOXES, FRAMES AND SUPPORTS SHALL BE BONDED TO THE GROUND RING, IN ACCORDANCE WITH THE NEC.
18. BOND ALL METALLIC OBJECTS WITHIN 6 ft OF MAIN GROUND RING WITH (1) #2 BARE SOLID TINNED COPPER GROUND CONDUCTOR.
19. GROUND CONDUCTORS USED FOR THE FACILITY GROUNDING AND LIGHTNING PROTECTION SYSTEMS SHALL NOT BE ROUTED THROUGH METALLIC OBJECTS THAT FORM A RING AROUND THE CONDUCTOR, SUCH AS METALLIC CONDUITS, METAL SUPPORT CLIPS OR SLEEVES THROUGH WALLS OR FLOORS. WHEN IT IS REQUIRED TO BE HOUSED IN CONDUIT TO MEET CODE REQUIREMENTS OR LOCAL CONDITIONS, NON–METALLIC MATERIAL SUCH AS PVC CONDUIT SHALL BE USED. WHERE USE OF METAL CONDUIT IS UNAVOIDABLE (i.e., NONMETALLIC CONDUIT PROHIBITED BY LOCAL CODE) THE GROUND CONDUCTOR SHALL BE BONDED TO EACH END OF THE METAL CONDUIT.
20. ALL GROUNDS THAT TRANSITION FROM BELOW GRADE TO ABOVE GRADE MUST BE #2 BARE SOLID TINNED COPPER IN 3/4" NON–METALLIC, FLEXIBLE CONDUIT FROM 24" BELOW GRADE TO WITHIN 3" TO 6" OF CAD–WELD TERMINATION POINT. THE EXPOSED END OF THE CONDUIT MUST BE SEALED WITH SILICONE CAULK. (ADD TRANSITIONING GROUND STANDARD DETAIL AS WELL).
21. BUILDINGS WHERE THE MAIN GROUNDING CONDUCTORS ARE REQUIRED TO BE ROUTED TO GRADE, THE CONTRACTOR SHALL ROUTE TWO GROUNDING CONDUCTORS FROM THE ROOFTOP, TOWERS, AND WATER TOWERS GROUNDING RING, TO THE EXISTING GROUNDING SYSTEM, THE GROUNDING CONDUCTORS SHALL NOT BE SMALLER THAN 2/0 COPPER. ROOFTOP GROUNDING RING SHALL BE BONDED TO THE EXISTING GROUNDING SYSTEM, THE BUILDING STEEL COLUMNS, LIGHTNING PROTECTION SYSTEM, AND BUILDING MAIN WATER LINE (FERROUS OR NONFERROUS METAL PIPING ONLY).

ELECTRICAL INSTALLATION NOTES:

1. ALL ELECTRICAL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS, NEC AND ALL APPLICABLE FEDERAL, STATE, AND LOCAL CODES/ORDINANCES.
2. CONDUIT ROUTINGS ARE SCHEMATIC. CONTRACTOR SHALL INSTALL CONDUITS SO THAT ACCESS TO EQUIPMENT IS NOT BLOCKED AND TRIP HAZARDS ARE ELIMINATED.
3. WIRING, RACEWAY AND SUPPORT METHODS AND MATERIALS SHALL COMPLY WITH THE REQUIREMENTS OF THE NEC.
4. ALL CIRCUITS SHALL BE SEGREGATED AND MAINTAIN MINIMUM CABLE SEPARATION AS REQUIRED BY THE NEC.
   4.1. ALL EQUIPMENT SHALL BEAR THE UNDERWRITERS LABORATORIES LABEL OF APPROVAL, AND SHALL CONFORM TO REQUIREMENT OF THE NATIONAL ELECTRICAL CODE.
   4.2. ALL OVERCURRENT DEVICES SHALL HAVE AN INTERRUPTING CURRENT RATING THAT SHALL BE GREATER THAN THE SHORT CIRCUIT CURRENT TO WHICH THEY ARE SUBJECTED, 22,000 AIC MINIMUM. VERYIFY AVAILABLE SHORT CIRCUIT CURRENT DOES NOT EXCEED THE RATING OF ELECTRICAL EQUIPMENT IN ACCORDANCE WITH ARTICLE 110.24 NEC OR THE MOST CURRENT ADOPTED CODE PRE THE GOVERNING JURISDICTION.
5. EACH END OF EVERY POWER PHASE CONDUCTOR, GROUNDING CONDUCTOR, AND TELCO CONDUCTOR OR CABLE SHALL BE LABELED WITH COLOR–CODED INSULATION OR ELECTRICAL TAPE (3M BRAND, 1/2" PLASTIC ELECTRICAL TAPE WITH UV PROTECTION, OR EQUAL). THE IDENTIFICATION METHOD SHALL CONFORM WITH NEC AND OSHA.
6. ALL ELECTRICAL COMPONENTS SHALL BE CLEARLY LABELED WITH LAMICOID TAGS SHOWING THEIR RATED VOLTAGE, PHASE CONFIGURATION, WIRE CONFIGURATION, POWER OR AMPACITY RATING AND BRANCH CIRCUIT ID NUMBERS (i.e. PANEL BOARD AND CIRCUIT ID'S).
7. PANEL BOARDS (ID NUMBERS) SHALL BE CLEARLY LABELED WITH PLASTIC LABELS.
8. ALL TIE WRAPS SHALL BE CUT FLUSH WITH APPROVED CUTTING TOOL TO REMOVE SHARP EDGES.
9. ALL POWER AND EQUIPMENT GROUND WIRING IN TUBING OR CONDUIT SHALL BE SINGLE COPPER CONDUCTOR (#14 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
10. SUPPLEMENTAL EQUIPMENT GROUND WIRING LOCATED INDOORS SHALL BE SINGLE COPPER CONDUCTOR (#6 OR LARGER) WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
11. POWER AND CONTROL WIRING IN FLEXIBLE CORD SHALL BE MULTI–CONDUCTOR, TYPE SOOW CORD (#14 OR LARGER) UNLESS OTHERWISE SPECIFIED.
12. POWER AND CONTROL WIRING FOR USE IN CABLE TRAY SHALL BE MULTI–CONDUCTOR, TYPE TC CABLE (#14 OR LARGER), WITH TYPE THHW, THWN, THWN–2, XHHW, XHHW–2, THW, THW–2, RHW, OR RHW–2 INSULATION UNLESS OTHERWISE SPECIFIED.
13. ALL POWER AND GROUNDING CONNECTIONS SHALL BE CRIMP–STYLE, COMPRESSION WIRE LUGS AND WIRE NUTS BY THOMAS AND BETTS (OR EQUAL). LUGS AND WIRE NUTS SHALL BE RATED FOR OPERATION NOT LESS THAN 75° C (90° C IF AVAILABLE).
14. RACEWAY AND CABLE TRAY SHALL BE LISTED OR LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND NEC.
15. ELECTRICAL METALLIC TUBING (EMT), INTERMEDIATE METAL CONDUIT (IMC), OR RIGID METAL CONDUIT (RMC) SHALL BE USED FOR EXPOSED INDOOR LOCATIONS.
16. ELECTRICAL METALLIC TUBING (EMT) OR METAL–CLAD CABLE (MC) SHALL BE USED FOR CONCEALED INDOOR LOCATIONS.
17. SCHEDULE 40 PVC UNDERGROUND ON STRAIGHTS AND SCHEDULE 80 PVC FOR ALL ELBOWS/90s AND ALL APPROVED ABOVE GRADE PVC CONDUIT.
18. LIQUID–TIGHT FLEXIBLE METALLIC CONDUIT (LIQUID–TITE FLEX) SHALL BE USED INDOORS AND OUTDOORS, WHERE VIBRATION OCCURS OR FLEXIBILITY IS NEEDED.
19. CONDUIT AND TUBING FITTINGS SHALL BE THREADED OR COMPRESSION–TYPE AND APPROVED FOR THE LOCATION USED. SET SCREW FITTINGS ARE NOT ACCEPTABLE.
20. CABINETS, BOXES AND WIRE WAYS SHALL BE LABELED FOR ELECTRICAL USE IN ACCORDANCE WITH NEMA, UL, ANSI/IEEE AND THE NEC.
21. WIREWAYS SHALL BE METAL WITH AN ENAMEL FINISH AND INCLUDE A HINGED COVER, DESIGNED TO SWING OPEN DOWNWARDS (WIREMOLD SPECMATE WIREWAY).
22. SLOTTED WIRING DUCT SHALL BE PVC AND INCLUDE COVER (PANDUIT TYPE E OR EQUAL).
23. CONDUITS SHALL BE FASTENED SECURELY IN PLACE WITH APPROVED NON–PERFORATED STRAPS AND HANGERS. EXPLOSIVE DEVICES (i.e. POWDER–ACTUATED) FOR ATTACHING HANGERS TO STRUCTURE WILL NOT BE PERMITTED. CLOSELY FOLLOW THE LINES OF THE STRUCTURE, MAINTAIN CLOSE PROXIMITY TO THE STRUCTURE AND KEEP CONDUITS IN TIGHT ENVELOPES. CHANGES IN DIRECTION TO ROUTE AROUND OBSTACLES SHALL BE MADE WITH CONDUIT OUTLET BODIES. CONDUIT SHALL BE INSTALLED IN A NEAT AND WORKMANLIKE MANNER. PARALLEL AND PERPENDICULAR TO STRUCTURE WALL AND CEILING LINES. ALL CONDUIT SHALL BE FISHED TO CLEAR OBSTRUCTIONS. ENDS OF CONDUITS SHALL BE TEMPORARILY CAPPED FLUSH TO FINISH GRADE TO PREVENT CONCRETE, PLASTER OR DIRT FROM ENTERING. CONDUITS SHALL BE RIGIDLY CLAMPED TO BOXES BY GALVANIZED MALLEABLE IRON BUSHING ON INSIDE AND GALVANIZED MALLEABLE IRON LOCKNUT ON OUTSIDE AND INSIDE.
24. EQUIPMENT CABINETS, TERMINAL BOXES, JUNCTION BOXES AND PULL BOXES SHALL BE GALVANIZED OR EPOXY–COATED SHEET STEEL. SHALL MEET OR EXCEED UL 50 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND NEMA 3R (OR BETTER) FOR EXTERIOR LOCATIONS.
25. METAL RECEPTACLE, SWITCH AND DEVICE BOXES SHALL BE GALVANIZED, EPOXY–COATED OR NON–CORRODING; SHALL MEET OR EXCEED UL 514A AND NEMA OS 1 AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
26. NONMETALLIC RECEPTACLE, SWITCH AND DEVICE BOXES SHALL MEET OR EXCEED NEMA OS 2 (NEWEST REVISION) AND BE RATED NEMA 1 (OR BETTER) FOR INTERIOR LOCATIONS AND WEATHER PROTECTED (WP OR BETTER) FOR EXTERIOR LOCATIONS.
27. THE CONTRACTOR SHALL NOTIFY AND OBTAIN NECESSARY AUTHORIZATION FROM THE CARRIER AND/OR CROWN CASTLE USA INC. BEFORE COMMENCING WORK ON THE AC POWER DISTRIBUTION PANELS.
28. THE CONTRACTOR SHALL PROVIDE NECESSARY TAGGING ON THE BREAKERS, CABLES AND DISTRIBUTION PANELS IN ACCORDANCE WITH THE APPLICABLE CODES AND STANDARDS TO SAFEGUARD LIFE AND PROPERTY.
29. INSTALL LAMICOID LABEL ON THE METER CENTER TO SHOW "AT&T".
30. ALL EMPTY/SPARE CONDUITS THAT ARE INSTALLED ARE TO HAVE A METERED MULE TAPE PULL CORD INSTALLED.

CONDUCTOR COLOR CODE		
SYSTEM	CONDUCTOR	COLOR
120/240V, 1Ø	A PHASE	BLACK
	B PHASE	RED
	NEUTRAL	WHITE
	GROUND	GREEN
120/208V, 3Ø	A PHASE	BLACK
	B PHASE	RED
	C PHASE	BLUE
	NEUTRAL	WHITE
	GROUND	GREEN
277/480V, 3Ø	A PHASE	BROWN
	B PHASE	ORANGE OR PURPLE
	C PHASE	YELLOW
	NEUTRAL	GREY
	GROUND	GREEN
DC VOLTAGE	POS (+)	RED**
	NEG (–)	BLACK**

* SEE NEC 210.5(C)(1) AND (2)
** POLARITY MARKED AT TERMINATION

APWA UNIFORM COLOR CODE:

WHITE	PROPOSED EXCAVATION
PINK	TEMPORARY SURVEY MARKINGS
RED	ELECTRIC POWER LINES, CABLES, CONDUIT, AND LIGHTING CABLES
YELLOW	GAS, OIL, STEAM, PETROLEUM, OR GASEOUS MATERIALS
ORANGE	COMMUNICATION, ALARM OR SIGNAL LINES, CABLES, OR CONDUIT AND TRAFFIC LOOPS
BLUE	POTABLE WATER
PURPLE	RECLAIMED WATER, IRRIGATION, AND SLURRY LINES
GREEN	SEWERS AND DRAIN LINES

ABBREVIATIONS:

ANT	ANTENNA
(E)	EXISTING
FIF	FACILITY INTERFACE FRAME
GEN	GENERATOR
GPS	GLOBAL POSITIONING SYSTEM
GSM	GLOBAL SYSTEM FOR MOBILE
LTE	LONG TERM EVOLUTION
MGB	MASTER GROUND BAR
MW	MICROWAVE
(N)	NEW
NEC	NATIONAL ELECTRIC CODE
(P)	PROPOSED
PP	POWER PLANT
QTY	QUANTITY
RECT	RECTIFIER
RBS	RADIO BASE STATION
RET	REMOTE ELECTRIC TILT
RFDS	RADIO FREQUENCY DATA SHEET
RRH	REMOTE RADIO HEAD
RRU	REMOTE RADIO UNIT
SIAD	SMART INTEGRATED DEVICE
TMA	TOWER MOUNTED AMPLIFIER
TYP	TYPICAL
UMTS	UNIVERSAL MOBILE TELECOMMUNICATIONS SYSTEM
W.P.	WORK POINT

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AT&T SITE NUMBER: **CTL05250**

BU #: **876334**
SOUTHINGTON, SMORON

625 SPRING STREET
SOUTHINGTON, CT 06489

EXISTING
160'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/4/22	KT	PRELIMINARY REVIEW	KT
B	2/18/22	TDG	PRELIMINARY REVIEW	KT
0	3/1/22	TDG	CONSTRUCTION	KT

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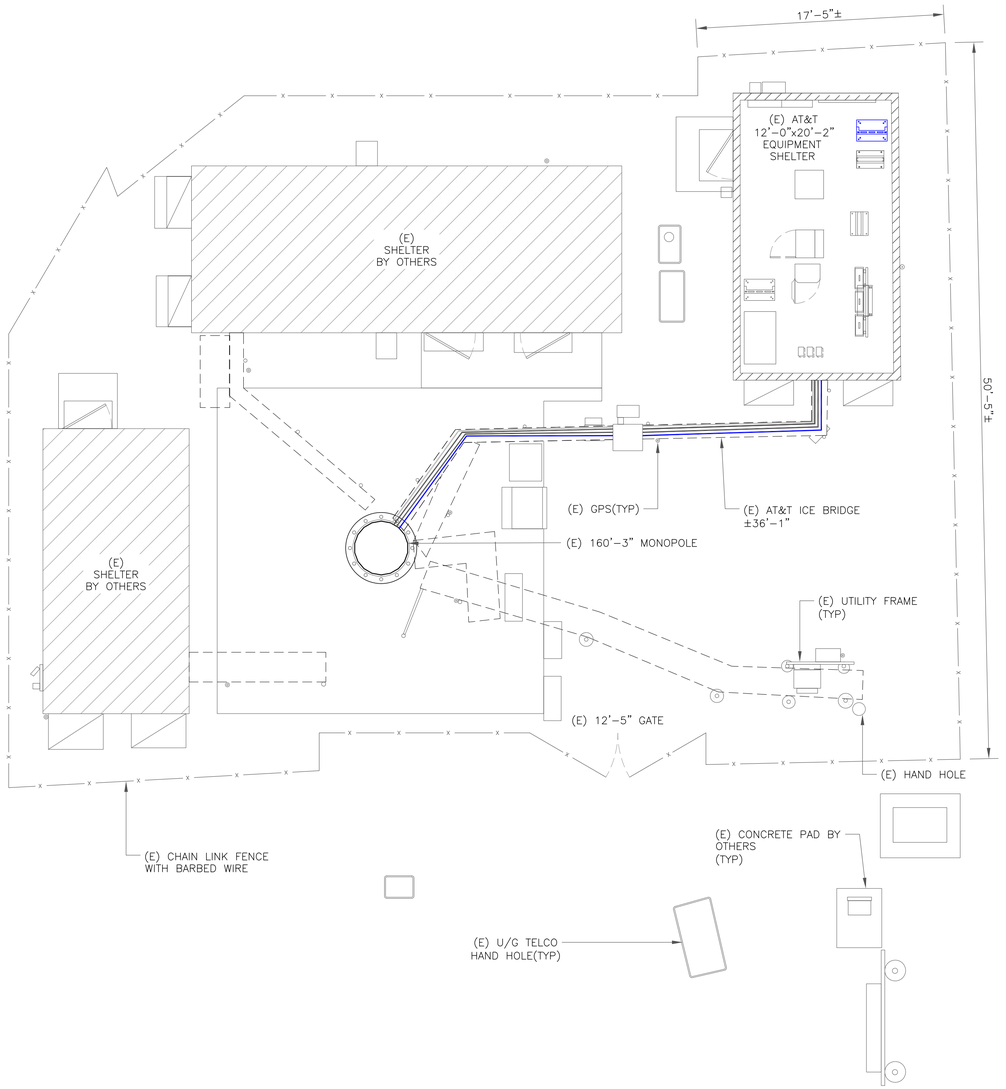
PEC.0001564
Expires 2/10/23

IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: T-2

REVISION: 0



1 SITE PLAN

SCALE: 4' 2' 0 4' 3/16"=1'-0" (FULL SIZE) 3/32"=1'-0" (11x17)

N

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STATE OF CONNECTICUT
CHRISTOPHER J. LOUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/1/22

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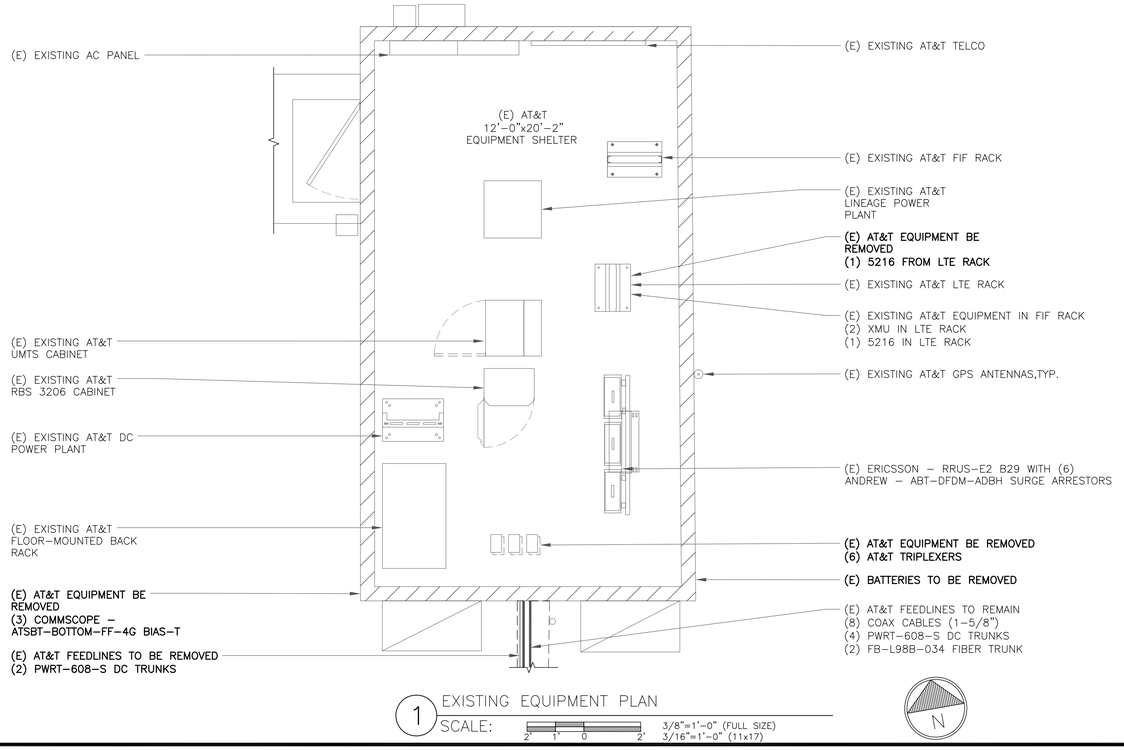
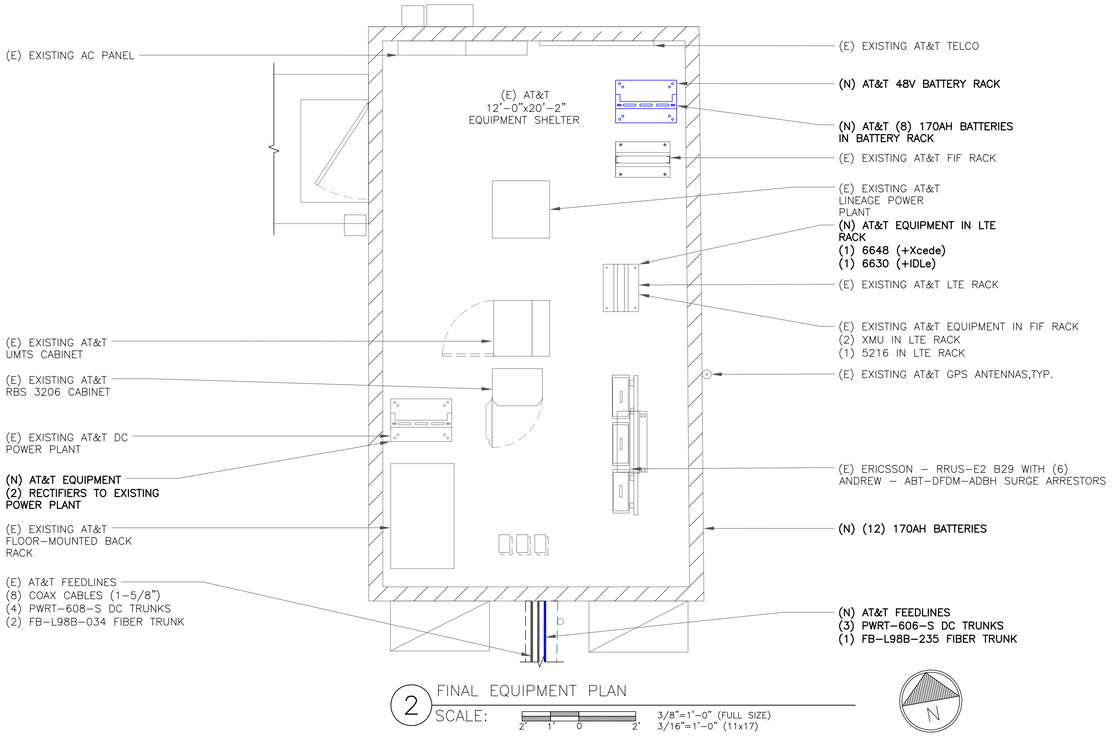
SHEET NUMBER: C-1.1

REVISION: 0



1 EXISTING EQUIPMENT PLAN
SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)



2 FINAL EQUIPMENT PLAN
SCALE: 2' 1' 0 2' 3/8"=1'-0" (FULL SIZE) 3/16"=1'-0" (11x17)

GROUND SCOPE OF WORK:

- REMOVE (6) CCI TRIPLEXER - TPX-070821
- REMOVE (3) COMMSCOPE - ATSBT-BOTTOM-FF-4G BIAS-T
- REMOVE EXISTING BATTERIES
- REMOVE (1) 5216 FROM LTE RACK
- INSTALL (2) RECTIFIERS TO EXISTING POWER PLANT
- REPLACE EXISTING BATTERIES WITH (12) 170AH BATTERIES
- INSTALL NEW -48V BATTERY RACK NEXT TO POWER PLANT AND ADDITIONAL (8) 170AH BATTERIES IN BATTERY RACK
- INSTALL (1) 6648 IN LTE RACK
- INSTALL (1) 6630 IN LTE RACK
- INSTALL (1) XCEDE CABLE
- INSTALL (1) IDLE CABLE

NOTE:

THE POWER DESIGN FOR ANY AC ELECTRICAL POWER CHANGES IS TO BE PERFORMED BY OTHERS AND IS SHOWN HERE FOR REFERENCE PURPOSES ONLY. AT&T IS SOLELY RESPONSIBLE FOR THE ELECTRICAL POWER DESIGN.

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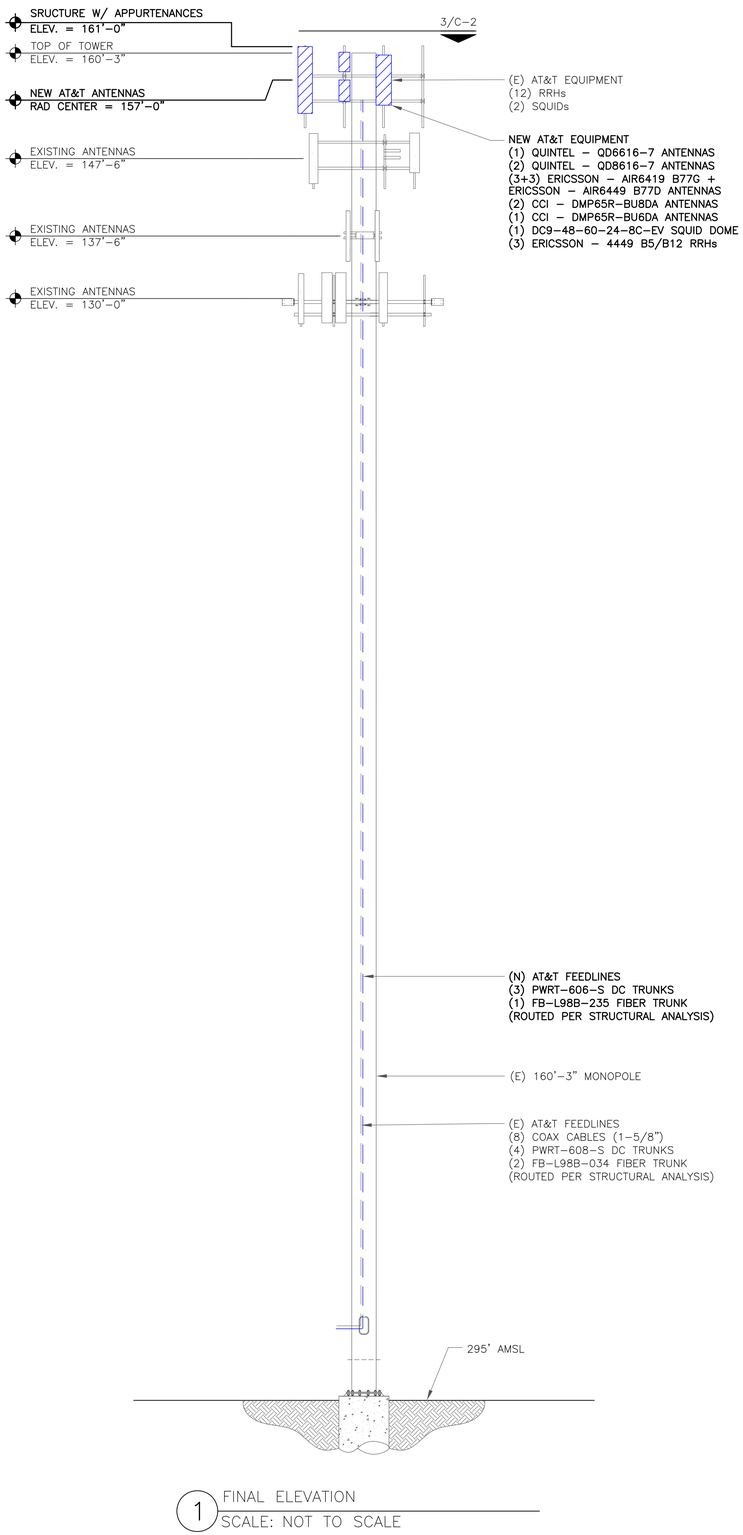
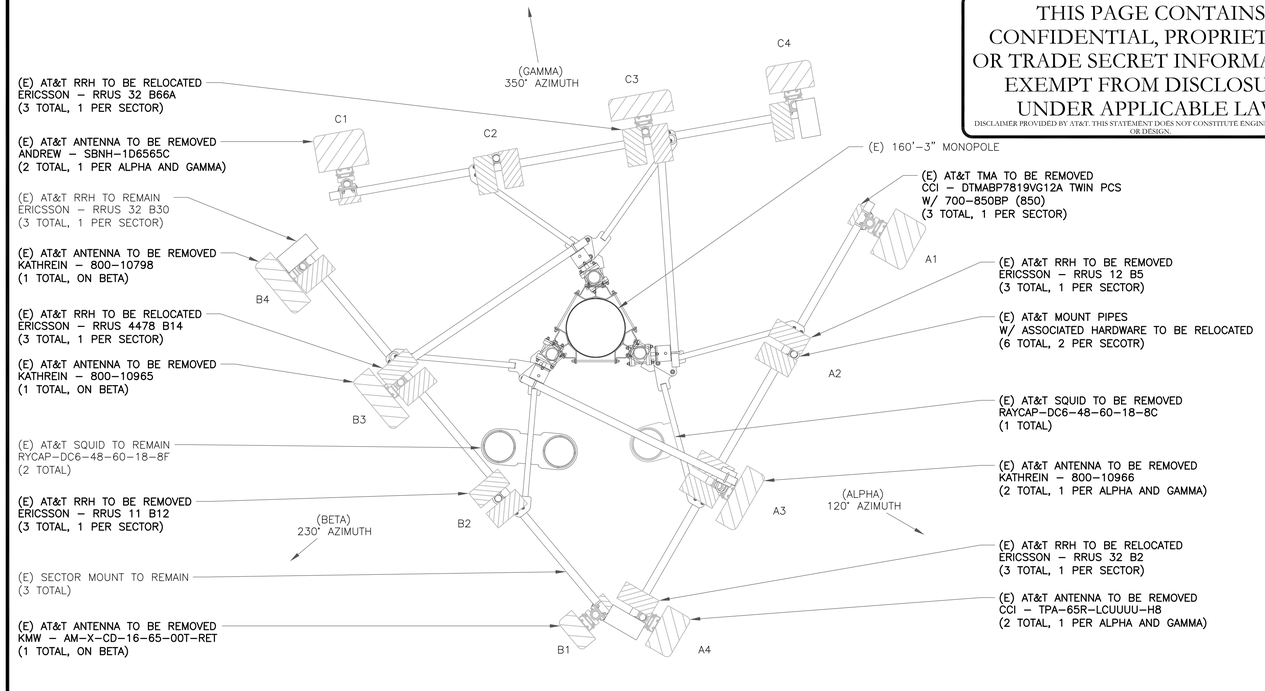
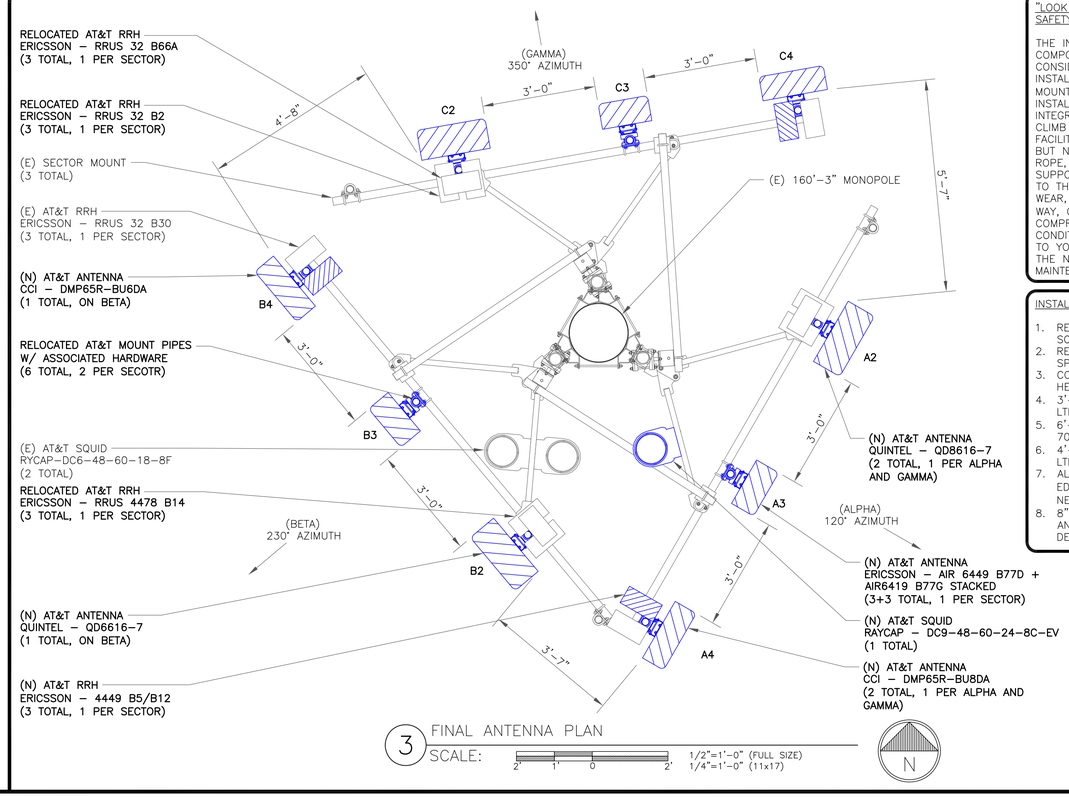
SHEET NUMBER: C-1.2
REVISION: 0



1 FINAL ELEVATION
SCALE: NOT TO SCALE



2 EXISTING ANTENNA PLAN
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)



3 FINAL ANTENNA PLAN
SCALE: 2' 1' 0 2' 1/2"=1'-0" (FULL SIZE) 1/4"=1'-0" (11x17)

"LOOK UP" - CROWN CASTLE USA INC.
SAFETY CLIMB REQUIREMENT:

THE INTEGRITY OF THE SAFETY CLIMB AND ALL COMPONENTS OF THE CLIMBING FACILITY SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER MODIFICATION, MOUNT REINFORCEMENTS, AND/OR EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF THE SAFETY CLIMB OR ANY COMPONENTS OF THE CLIMBING FACILITY ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, IMPACT TO THE ANCHORAGE POINTS IN ANY WAY, OR TO IMPEDE/BLOCK ITS INTENDED USE. ANY COMPROMISED SAFETY CLIMB, INCLUDING EXISTING CONDITIONS MUST BE TAGGED OUT AND REPORTED TO YOUR CROWN CASTLE USA INC. POC OR CALL THE NOC TO GENERATE A SAFETY CLIMB MAINTENANCE AND CONTRACTOR NOTICE TICKET.

INSTALLER NOTES:

1. REFERENCE C-3 FOR FINAL EQUIPMENT SCHEDULE.
2. REFERENCE C-4 FOR NEW EQUIPMENT SPECIFICATIONS.
3. CONTRACTOR TO VERIFY ALL ANTENNA TIP HEIGHTS DO NOT EXCEED BEACON BASE HEIGHT.
4. 3'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE ANTENNAS ON SAME SECTOR.
5. 6'-0" MINIMUM DISTANCE REQUIRED BETWEEN 700BC & 700DE ANTENNAS ON SAME SECTOR.
6. 4'-0" MINIMUM DISTANCE REQUIRED BETWEEN LTE 700 ANTENNAS ON OPPOSING SECTORS.
7. ALL ANTENNA MEASUREMENT DISTANCES MUST BE EDGE TO EDGE (RELOCATE ANTENNAS AS NEEDED).
8. 8" MINIMUM DISTANCE REQUIRED BETWEEN ANTENNA & RADIO. SEE GENERIC EXAMPLE DETAIL ON SHEET C-4.

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SOUTHINGTON, SMORON

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EXISTING
160'-3" MONOPOLE

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B	2/18/22	TDG	PRELIMINARY REVIEW	KT
0	3/1/22	TDG	CONSTRUCTION	KT

STATE OF CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/1/22

B&T ENGINEERING, INC.
PEC.0001564
Expires 2/10/23

SHEET NUMBER: C-2
REVISION: 0

FINAL ANTENNA AND FEEDLINE SCHEDULE

POS.	TECH	STATUS	AZIMUTH	ANTENNA TYPE	ANTENNA RAD CENTER	MECHANICAL DOWNTILT	ELECTRICAL DOWNTILT	MAIN COAX SIZE	MAIN COAX LENGTH	COAX QTY	TMA QTY AND MODEL	SURGE PROTECTION	DC/FIBER CABLES	RRHs QTY & MODEL ON TOWER	LOCATION	DIPLEXER ON TOWER	DIPLEXER ON GROUND	RET CABLE
ALPHA SECTOR																		
A1	–	–	–	–	–	–	–	–	–	–	–	(1) DC9-48-60-24-8C-EV SQUID DOME	(3) PWRT-606-S DC TRUNKS (1) FB-L98B-235 FIBER TRUNK	–	–	–	–	–
A2	LTE/5G	NEW	120°	QUINTEL – QD8616-7	157'-0"	0°	3° / 3° / 6° / 6° / 6° / 6° / 6°	1-5/8"	207'-0"	2	–			(1) ERICSSON – RRUS 4478 B14 (1) ERICSSON – RRUS 32 B2 (1) ERICSSON – RRUS 32 B66A (1) ERICSSON – RRUS-E2 B29	TOWER TOWER TOWER GROUND	N	N	N
A3	5G CBAND	NEW	120°	ERICSSON – AIR6419 B77G + ERICSSON – AIR6449 B77D STACKED	157'-0"	0°	0°	1-5/8"	207'-0"	2	–			–	TOWER	N	N	N
A4	LTE/5G	NEW	120°	CCI – DMP65R-BU8DA	157'-0"	0°	3° / 3° / 3°	–	–	–	–			(1) ERICSSON – 4449 B5/B12 (1) ERICSSON – RRUS 32 B30	TOWER	N	N	N
–																		
B1	–	–	–	–	–	–	–	1-5/8"	207'-0"	2	–	(1) DC6-48-60-18-8F SQUID DOME	(2) PWRT-608-S DC TRUNKS (1) FB-L98B-034 FIBER TRUNK	–	–	–	–	–
B2	LTE/5G	NEW	230°	QUINTEL – QD6616-7	157'-0"	0°	9° / 9° / 5° / 2° / 2° / 2° / 5°	–	–	–	–			(1) ERICSSON – RRUS 4478 B14 (1) ERICSSON – RRUS 32 B2 (1) ERICSSON – RRUS 32 B66A (1) ERICSSON – RRUS-E2 B29	TOWER TOWER TOWER GROUND	N	N	N
B3	5G CBAND	NEW	230°	ERICSSON – AIR6419 B77G + ERICSSON – AIR6449 B77D STACKED	157'-0"	0°	0°	–	–	–	–			–	TOWER	N	N	N
B4	LTE/5G	NEW	230°	CCI – DMP65R-BU6DA	157'-0"	0°	9° / 9° / 6°	–	–	–	–			(1) ERICSSON – 4449 B5/B12 (1) ERICSSON – RRUS 32 B30	TOWER	N	N	N
GAMMA SECTOR																		
C1	–	–	–	–	–	–	–	1-5/8"	207'-0"	2	–	(1) DC6-48-60-18-8F SQUID DOME	(2) PWRT-608-S DC TRUNKS (1) FB-L98B-034 FIBER TRUNK	–	–	–	–	–
C2	LTE/5G	NEW	350°	QUINTEL – QD8616-7	157'-0"	0°	4° / 4° / 5° / 5° / 5° / 5° / 5°	–	–	–	–			(1) ERICSSON – RRUS 4478 B14 (1) ERICSSON – RRUS 32 B2 (1) ERICSSON – RRUS 32 B66A (1) ERICSSON – RRUS-E2 B29	TOWER TOWER TOWER GROUND	N	N	N
C3	5G CBAND	NEW	350°	ERICSSON – AIR6419 B77G + ERICSSON – AIR6449 B77D STACKED	157'-0"	0°	0°	–	–	–	–			–	TOWER	N	N	N
C4	LTE/5G	NEW	350°	CCI – DMP65R-BU8DA	157'-0"	0°	4° / 4° / 3°	–	–	–	–			(1) ERICSSON – 4449 B5/B12 (1) ERICSSON – RRUS 32 B30	TOWER	N	N	N

NOTE: BOLD DENOTES NEW EQUIPMENT

1 FINAL ANTENNA AND FEEDLINE SCHEDULE
SCALE: NOT TO SCALE

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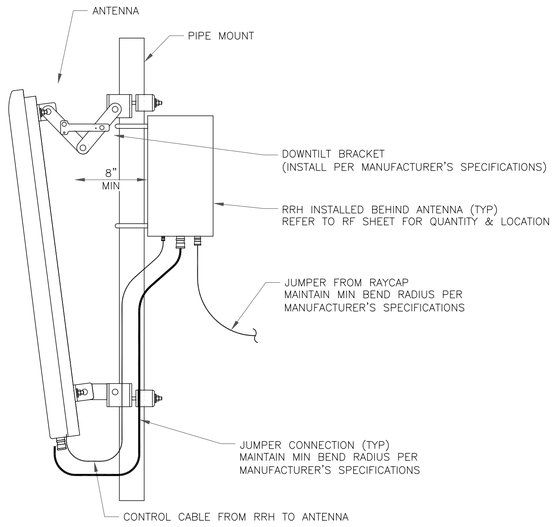
SHEET NUMBER: C-3

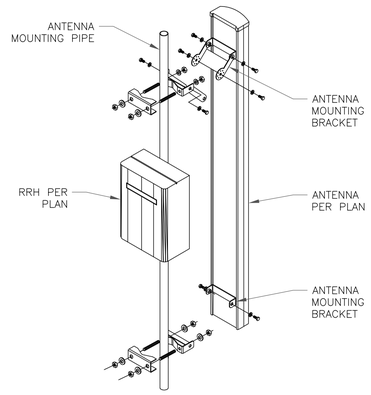
REVISION: 0



1 GENERIC ANTENNA MOUNTING ELEVATION
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



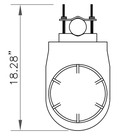
2 ANTENNA WITH RRH MOUNTING DETAIL
SCALE: NOT TO SCALE

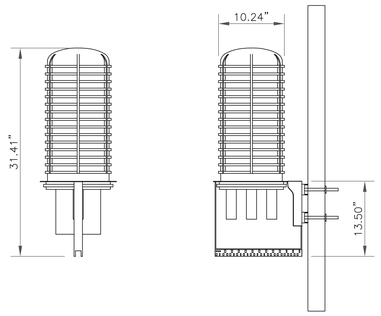
3 NOT USED
SCALE: NOT TO SCALE

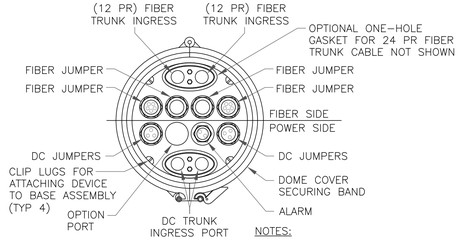
RAYCAP
DC9-48-60-24-8C-EV

RAYCAP - DC9-48-60-24-8C-EV
SIZE: 10.24x31.40 IN.
WEIGHT: 26.2 LBS
NOMINAL OPERATING VOLTAGE: 48 VDC
VOLTAGE PROTECTION RATING: 330 V
WIND LOADING: 150 MPH SUSTAINED (105.7 LBS)
WIND LOADING: 195 MPH GUST (213.6 LBS)

CONTRACTOR TO USE "THREAD LUBRICANT" ON MOUNTING BOLTS DURING INSTALLATION







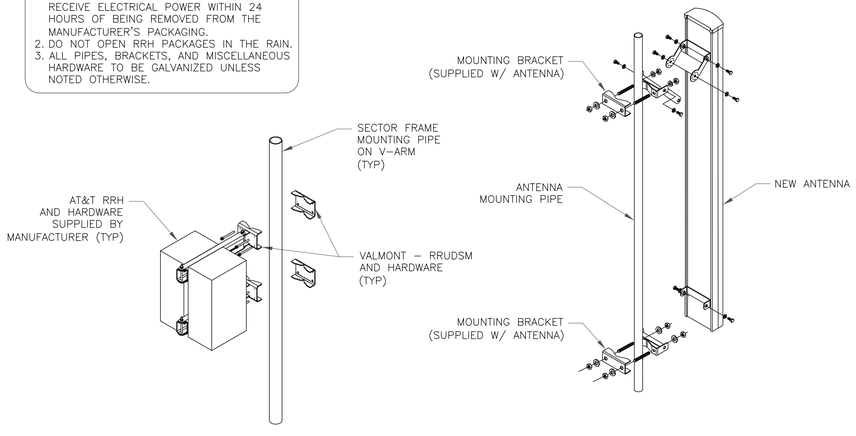
NOTES:

1. REMOVE CABLE SEALING GLAND AND INSTALL M32x1.5 METRIC-TO-1" NPT ADAPTER (COOPER CROUSE-HINES P/N CAP 740 994 OR EQUIVALENT MFR) WHEN CONNECTING CONDUIT TO OVP.

5 SQUID MOUNTING DETAIL
SCALE: NOT TO SCALE

INSTALLER NOTES:

1. COMPLY WITH MANUFACTURERS INSTRUCTIONS TO ENSURE THAT ALL RRHs RECEIVE ELECTRICAL POWER WITHIN 24 HOURS OF BEING REMOVED FROM THE MANUFACTURER'S PACKAGING.
2. DO NOT OPEN RRH PACKAGES IN THE RAIN.
3. ALL PIPES, BRACKETS, AND MISCELLANEOUS HARDWARE TO BE GALVANIZED UNLESS NOTED OTHERWISE.



4 ANTENNA WITH RRHs MOUNTING DETAIL
SCALE: NOT TO SCALE

AT&T
575 MOROSGO DRIVE
ATLANTA, GA 30324-3300

CROWN CASTLE
3530 TORINGDON WAY, SUITE 300
CHARLOTTE, NC 28277

B+T GRP
1717 S. BOULDER
SUITE 300
TULSA, OK 74119
PH: (918) 587-4630
www.btgrp.com

AT&T SITE NUMBER: **CTL05250**

BU #: **876334**
SOUTHINGTON, SMORON

625 SPRING STREET
SOUTHINGTON, CT 06489

EXISTING
160'-3" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	1/4/22	KT	PRELIMINARY REVIEW	KT
B	2/18/22	TDG	PRELIMINARY REVIEW	KT
0	3/1/22	TDG	CONSTRUCTION	KT

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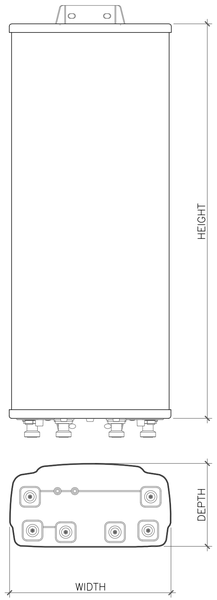
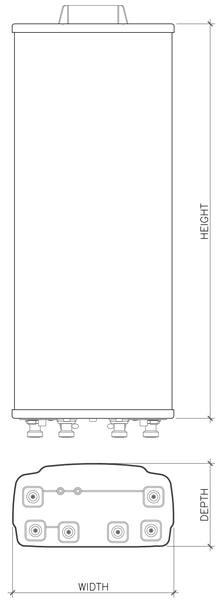
Expires 2/10/23

SHEET NUMBER: C-4
REVISION: 0



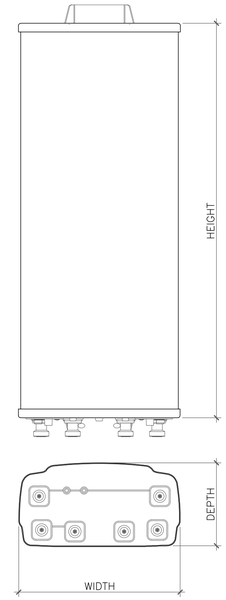
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU6D	71.20"	20.70"	7.70"	89.30lbs

1 ANTENNA DETAIL
SCALE: NOT TO SCALE



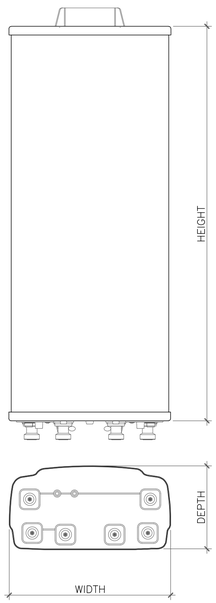
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
DMP65R-BU8D	96"	20.70"	7.70"	105.60lbs

2 ANTENNA DETAIL
SCALE: NOT TO SCALE



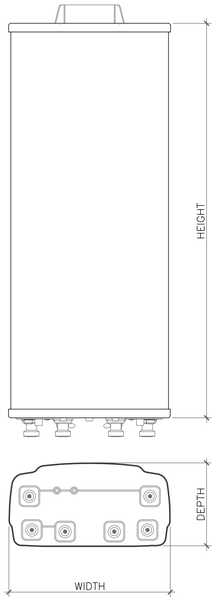
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR 6419 B77G	27.95"	15.75"	6.68"	66.20lbs

3 ANTENNA DETAIL
SCALE: NOT TO SCALE



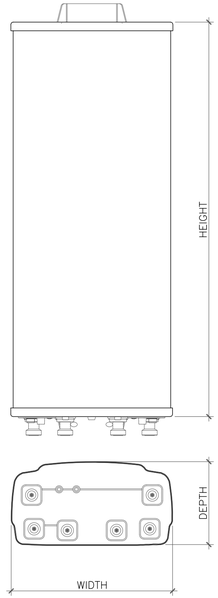
ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
AIR 6449 B77D	30.39"	15.87"	8.07"	81.60lbs

4 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
QD6616-7	72.00"	22.00"	9.60"	130.00lbs

5 ANTENNA DETAIL
SCALE: NOT TO SCALE



ANTENNA DIMENSIONS (INCHES)				
MODEL	HEIGHT	WIDTH	DEPTH	WEIGHT
QD8616-7	96.00"	22.00"	9.60"	150.00lbs

6 ANTENNA DETAIL
SCALE: NOT TO SCALE

AT&T
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AT&T SITE NUMBER: **CTL05250**

BU #: **876334**
SOUTHINGTON, SMORON

625 SPRING STREET
SOUTHINGTON, CT 06489

EXISTING
160'-3" MONOPOLE

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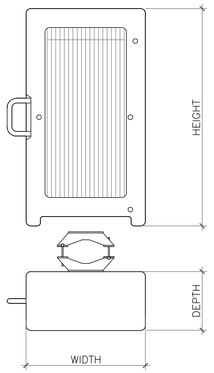
Expires 2/10/23

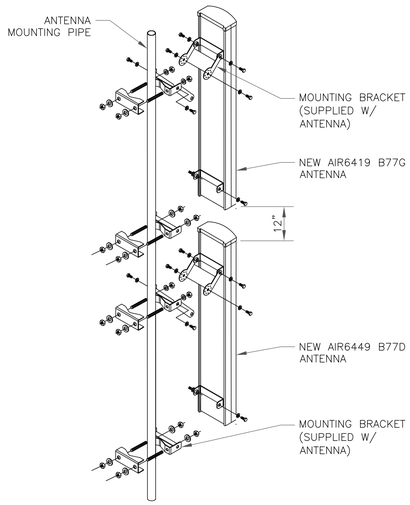
SHEET NUMBER: C-5

REVISION: 0



ERICSSON – RRUS 4449 B5/B12
WEIGHT (FULLY EQUIPPED): 71.00 LBS
SIZE (HxWxD): 17.90x13.19x9.44 IN.
CONNECTOR TYPE: 4.3–10 FEMALE (4 TOTAL PORTS)

1 RRH DETAIL
SCALE: NOT TO SCALE



2 STACKED ANTENNA MOUNTING DETAIL
SCALE: NOT TO SCALE

3 NOT USED
SCALE: NOT TO SCALE

4 NOT USED
SCALE: NOT TO SCALE

5 NOT USED
SCALE: NOT TO SCALE

6 NOT USED
SCALE: NOT TO SCALE

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STATE OF CONNECTICUT
No. 23924
LICENSED
PROFESSIONAL ENGINEER
3/1/22

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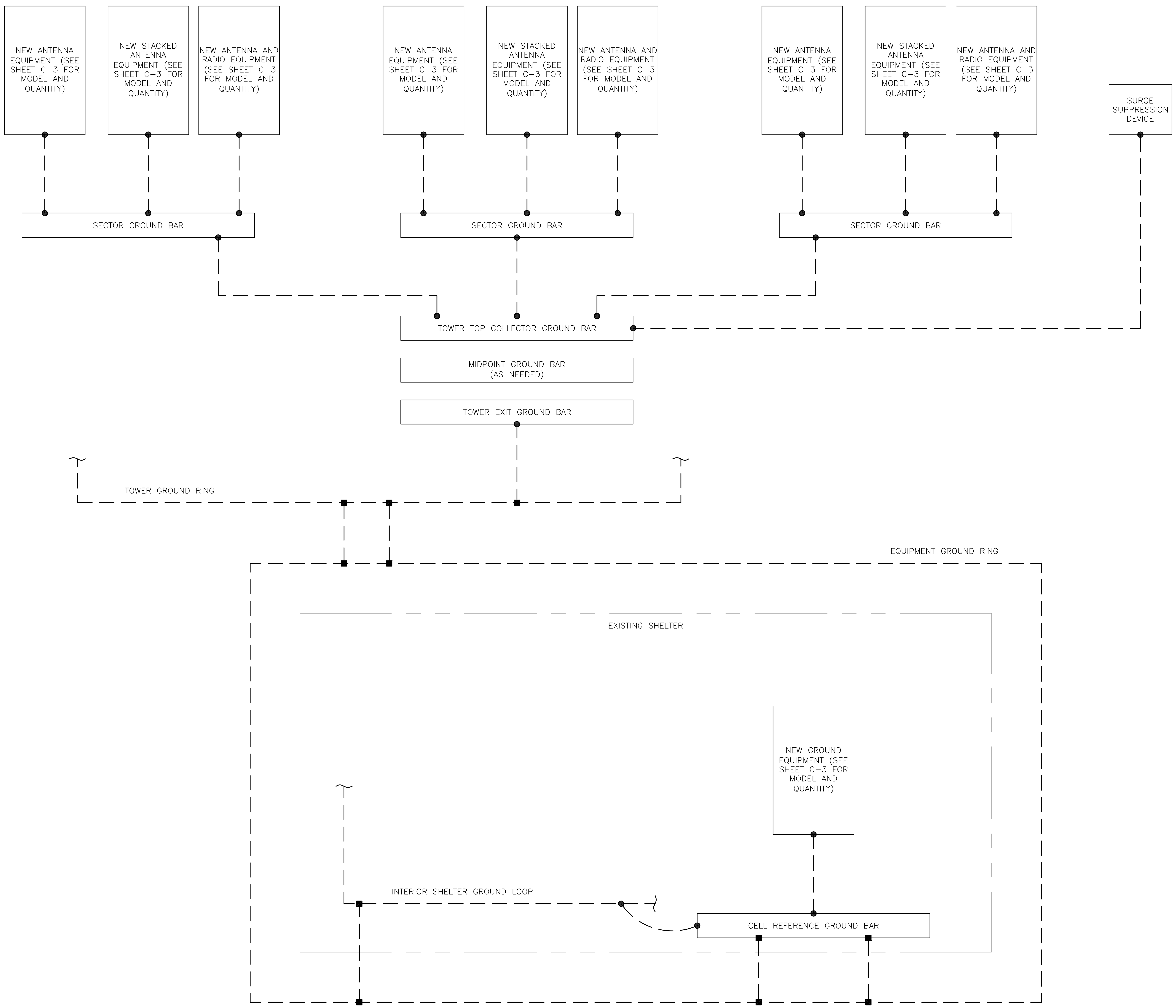
SHEET NUMBER: C-5.1
REVISION: 0



1 GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

- – – – GROUND WIRE
- ■ EXOTHERMIC WELD
- ● MECHANICAL CONNECTION
- COPPER GROUND ROD
- GROUND ROD W/ TEST WELL

CELL REFERENCE GROUND BAR: POINT OF GROUND REFERENCE FOR ALL COMMUNICATIONS EQUIPMENT FRAMES. ALL BONDS ARE MADE WITH #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. BOND TO GROUND RING WITH (2) #2 SOLID TINNED COPPER CONDUITS (ATT–TP–76416 7.6.7).

HATCH PLATE GROUND BAR: BOND TO THE INTERIOR GROUND RING WITH (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS. WHEN A HATCH–PLATE AND A CELL REFERENCE GROUND BAR ARE BOTH PRESENT, THE CELL SITE REFERENCE GROUND BAR MUST BE CONNECTED TO THE HATCH–PLATE AND TO THE INTERIOR GROUND RING USING (2) #2 STRANDED GREEN INSULATED COPPER CONDUCTORS.

EXTERIOR CABLE ENTRY PORT GROUND BARS: LOCATED AT THE ENTRANCE TO THE CELL SITE BUILDING. BOND TO GROUND RING WITH A #2 SOLID TINNED COPPER CONDUCTORS WITH AN EXOTHERMIC WELD AND INSPECTION SLEEVE (ATT–TP–76416 7.6.7.2).

DURING ALL DC POWER SYSTEM CHANGES INCLUDING DC SYSTEM CHANGE OUTS, RECTIFIER REPLACEMENTS OR ADDITIONS, BREAKER DISTRIBUTION CHANGES, BATTERY ADDITIONS, BATTERY REPLACEMENTS AND INSTALLATIONS OR CHANGES TO DC CONVERTER SYSTEMS IT SHALL BE REQUIRED THAT SERVICES CONTRACTORS VERIFY ALL DC POWER SYSTEMS ARE EQUIPPED WITH MASTER DC SYSTEM RETURN GROUND CONDUCTOR FROM THE DC POWER SYSTEM COMMON RETURN BUS DIRECTLY CONNECTED TO THE CELL SITE REFERENCE GROUND BAR PER TP76300 SECTION H 6 AND TP76416 FIGURE 7–11 REQUIREMENTS.

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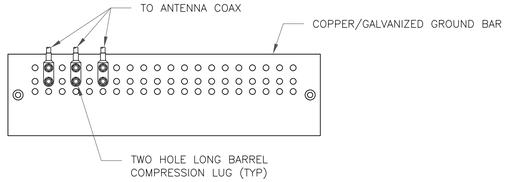
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: G-1

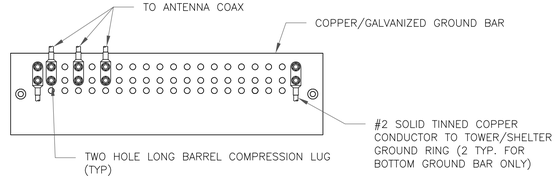
REVISION: 0



NOTES:

1. DOUBLING UP "OR STACKING" OF CONNECTIONS IS NOT PERMITTED.
2. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
3. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO ANTENNA MOUNT STEEL.

1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE

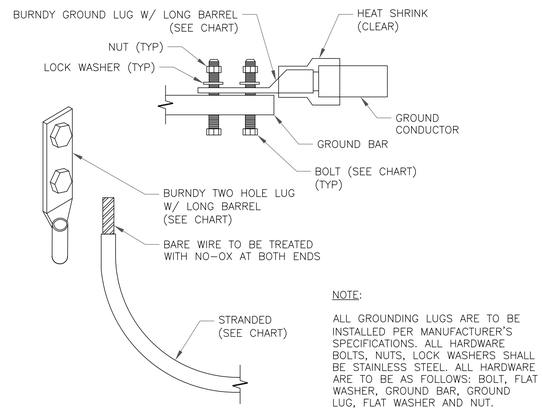


NOTES:

1. EXTERIOR ANTIOXIDANT JOINT COMPOUND TO BE USED ON ALL EXTERIOR CONNECTIONS.
2. GROUND BAR SHALL NOT BE ISOLATED FROM TOWER. MOUNT DIRECTLY TO TOWER STEEL (TOWER ONLY).
3. GROUND BAR SHALL BE ISOLATED FROM BUILDING OR SHELTER.

2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE

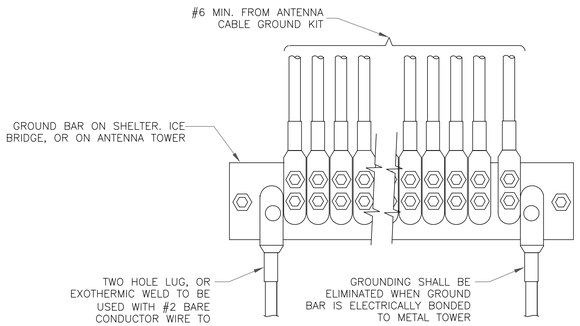
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 GREEN INSULATED	YA6C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 SOLID TINNED	YA3C-2TC38	3/8" - 16 NC SS 2 BOLT
#2 STRANDED	YA2C-2TC38	3/8" - 16 NC SS 2 BOLT
#2/0 STRANDED	YA26-2TC38	3/8" - 16 NC SS 2 BOLT
#4/0 STRANDED	YA28-2N	1/2" - 16 NC SS 2 BOLT



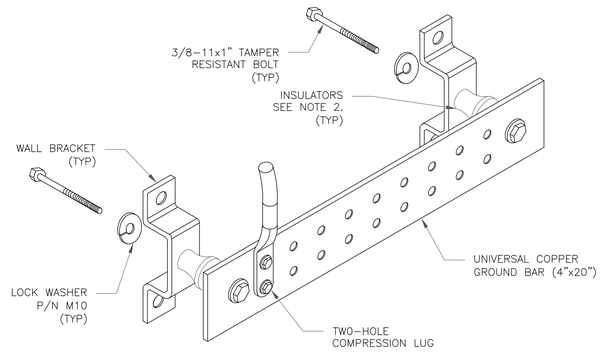
NOTE:

ALL GROUNDING LUGS ARE TO BE INSTALLED PER MANUFACTURER'S SPECIFICATIONS. ALL HARDWARE BOLTS, NUTS, LOCK WASHERS SHALL BE STAINLESS STEEL. ALL HARDWARE ARE TO BE AS FOLLOWS: BOLT, FLAT WASHER, GROUND BAR, GROUND LUG, FLAT WASHER AND NUT.

3 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



4 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE

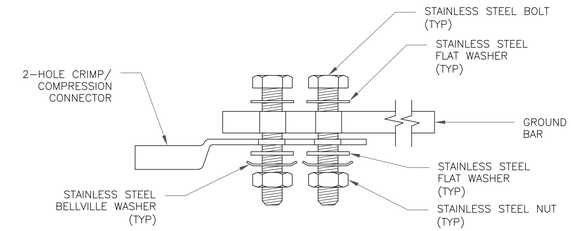


NOTES:

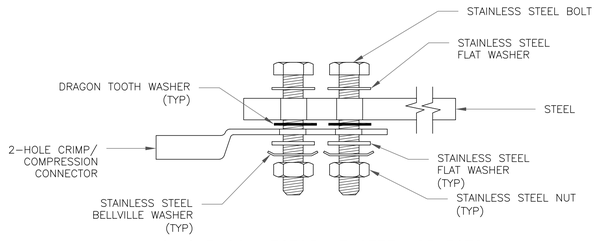
1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY QAS-STD-10091. NO MODIFICATION OR DRILLING TO TOWER STEEL IS ALLOWED IN ANY FORM OR FASHION, CAD-WELDING ON THE TOWER AND/OR IN THE AIR ARE NOT PERMITTED.

2. OMIT INSULATOR WHEN MOUNTING TO TOWER STEEL OR PLATFORM STEEL USE INSULATORS WHEN ATTACHING TO BUILDING OR SHELTERS.

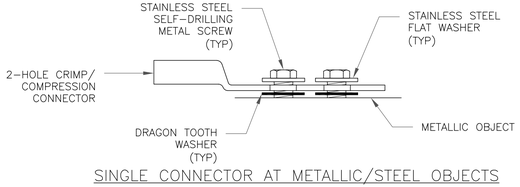
5 GROUND BAR DETAIL
SCALE: NOT TO SCALE



SINGLE CONNECTOR AT GROUND BARS

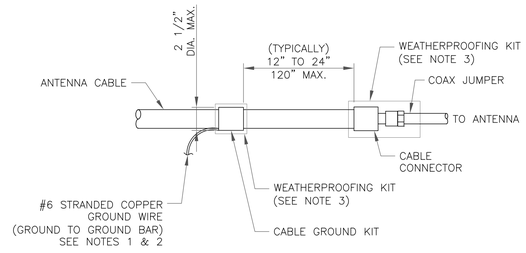


SINGLE CONNECTOR AT STEEL OBJECTS



SINGLE CONNECTOR AT METALLIC/STEEL OBJECTS

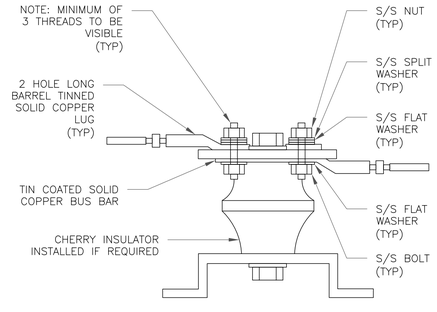
8 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO GROUND BAR.
2. GROUNDING KIT SHALL BE TYPE AND PART NUMBER AS SUPPLIED OR RECOMMENDED BY CABLE MANUFACTURER.
3. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT, COLD SHRINK SHALL NOT BE USED.

6 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE

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SHEET NUMBER: G-2

REVISION: 0

Antenna 1
Empty

Antenna 2
LTE 700(DE) / 700(B14) / PCS /AWS

16 Port Antenna

Broadband Low 700 DE +45/-45 - +
Broadband Low 700 B14 +45/-45 - +
Broadband Low 700 B14 +45/-45 - +
Broadband Low 850 +45/-45 - +
Broadband Hi 4Tx/4Rx +45/-45 - +
Broadband Hi 4Tx/4Rx +45/-45 - +
Broadband Hi 4Tx/4Rx +45/-45 - +
Broadband Hi Tx/4Rx +45/-45 - +
RET RET RET RET RET RET RET RET

Antenna 3
DoD + C band

AIR DoD +45/-45 - +
AIR C-BAND +45/-45 - +

Antenna 4
LTE 700(BC) / WCS/ 5G 850

Broadband Octo Low 700/850 +45/-45 - +
Broadband Octo Low 700/850 +45/-45 - +
Broadband Octo High 4Tx/4Rx +45/-45 - +
Broadband Octo High 4Tx/4Rx +45/-45 - +
RET RET RET RET

LTE RRUS-E2 700 (D/E)
LTE RRUS-M49 850/700 BC
LTE WCS RRH

Fiber/DC Demarcation Box (Squid)
Fiber/DC Demarcation Box (Squid)
Fiber/DC-9 Demarcation Box (Squid)
(Y- Cable)

DC Plant

- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antennas.
- Use "Y Cable" for Dual band RRHs

6648
5216
XMU
XMU
6630

IDLe
Xcede

RU RU RU RU
UMTS 1ST NodeB

Antenna 1
Empty

Antenna 2
LTE 700(DE) / 700(B14) / PCS /AWS

16 Port Antenna

Broadband	Broadband	Broadband	Broadband	Broadband	Broadband	Broadband	Broadband
Low 700 DE +45/-45	Low 700 B14 +45/-45	Low 700 B14 +45/-45	Low 850 +45/-45	Hi 4Tx/4Rx +45/-45	Hi 4Tx/4Rx +45/-45	Hi 4Tx/4Rx +45/-45	Hi Tx/4Rx +45/-45
- +	- +	- +	- +	- +	- +	- +	- +
RET	RET	RET	RET	RET	RET	RET	RET

Antenna 3
DoD + C band

AIR
DoD
+45/-45
- +

AIR
C-BAND
+45/-45
- +

Antenna 4
LTE 700(BC) / WCS/ 5G 850

Broadband Octo Low 700/850 +45/-45	Broadband Octo Low 700/850 +45/-45	Broadband Octo High 4Tx/4Rx +45/-45	Broadband Octo High 4Tx/4Rx +45/-45
- +	- +	- +	- +
RET	RET	RET	RET

LTE RRUS-44-B3 B5/B13 B C
LTE WCS RRH

Fiber/DC
Demarcation Box (Squid)

Fiber/DC
Demarcation Box (Squid)

Fiber/DC-9
Demarcation Box (Squid)

(Y- Cable)

LTE RRUS-E2 700 (DE)

DC Plant

- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antenna.
- Use "Y Cable" for Dual band RRHs

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FU FU RU RU

UMTS 1st NodeB

Antenna 1
Empty

Antenna 2
LTE 700(DE) / 700(B14) / PCS /AWS

16 Port Antenna

Broadband Low 700 DE +45/-45	Broadband Low 700 B14 +45/-45	Broadband Low 700 B14 +45/-45	Broadband Low 850 +45/-45	Broadband Hi 4Tx/4Rx +45/-45	Broadband Hi 4Tx/4Rx +45/-45	Broadband Hi 4Tx/4Rx +45/-45	Broadband Hi Tx/4Rx +45/-45
- +	- +	- +	- +	- +	- +	- +	- +
RET	RET	RET	RET	RET	RET	RET	RET

Antenna 3
DoD + C band

AIR
DoD
+45/-45
- +

AIR
C-BAND
+45/-45
- +

Antenna 4
LTE 700(BC) / WCS/ 5G 850

Broadband Octo Low 700/850 +45/-45	Broadband Octo Low 700/850 +45/-45	Broadband Octo High 4Tx/4Rx +45/-45	Broadband Octo High 4Tx/4Rx +45/-45
- +	- +	- +	- +
RET	RET	RET	RET

LTE RRUS-4449 B5Q/700 BC

LTE WCS RRH

(Y- Cable)

Fiber/DC Demarcation Box (Squid)

Fiber/DC Demarcation Box (Squid)

Fiber/DC-9 Demarcation Box (Squid)

LTE RRUS-E2 700 (D/E)

DC Plant

- 3 Feet Minimum Separation between ALL Antennas
- 6 Feet Minimum Separation between 700BC & 700 DE
- 12" Vertical Separation between DoD and C Band Antenna.
- Use "Y Cable" For Dual band RRHs

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UMTS 1ST NodeB