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

February 1, 2024

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

RE: **Notice of Exempt Modification for T-Mobile: CTNL226a**
Crown Site ID# 876406
189 Boston Post Road, Old Lyme, CT 06371
Latitude: 41° 20′ 56.37″ / Longitude: -72° 17′ 43.65″

Dear Ms. Bachman:

T-Mobile currently maintains three (3) antennas at the 110-foot mount on the existing 135-foot monopole tower located at 189 Boston Post Road, Old Lyme, CT. The property is owned by the Town of Old Lyme, and the tower is owned by Crown Castle. T-Mobile now intends to add three (3) new antennas, three (3) new remote radios and ancillary equipment at the 110ft 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:

Install New:
(3) Ericsson – Air 6419 B41Antennas
(3) Ericsson – 4460 B25+B66 Radios
(3) RF Cellwave – HB158-21U6S24-XXM - Hybrid Cables

Remove:
(1) Hybrid Cable (1-3/8")
(6) Coaxial Cables (7/8")

Ground:

Install New:
(1) 6160 AC V1 Cabinet
(1.) B160 Battery Cabinet

Remove:

(1) RBS 6102 MU AC Cabinet
(1.) Battery Cabinet
(1) Equipment Cabinet
(6) Diplexers

The facility was approved by the Town of Old Lyme on May 24th, 2001. The approval was given without conditions.

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 Martha Sheomaker, First Selectwoman, Town of Old Lyme, Craig Bonatti, Land Use Technician, Town of Old Lyme. Town of Old Lyme is the property owner and Crown Castle is the 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, T-Mobile 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
Permitting Specialist
1800 W. Park Drive
Westborough, MA 01581
(781) 970-0053
Jeff.Barbadora@crowncastle.com

Attachments
cc:

Martha Sheomaker, First Selectwoman
Town of Old Lyme
52 Lyme Street
Old Lyme, CT 06371
(860) 434-1605

Craig Bonatti, Land Use Technician (Zoning, ZBA)
Town of Old Lyme
52 Lyme Street
Old Lyme, CT 06371
(860) 434-1605 Ext. 236

Crown Castle - Tower Owner

Application Fee: $10

Please see directions on reverse.

TOWN OF OLD LYME
Zoning Compliance Permit Application

Permit No. 01-161 Fee Paid: $10 ck # 3 5/24/01

Property Owner of Record: Town of Old Lyme Phone 860 434 1605

Property Address: 189 Boston Post Road map: 63 lot: 123 zone:

Mailing Address: 52 Lyme Street (number street) Old Lyme (town) CT (state) 06371 (zip)

Builder: Sprint PCS - Contractor TBD

Mailing Address: 1 International Blvd Suite 800 (number street) Mahwah (town) NJ. (state) 07495 (zip)

Existing Status: 90' Wooden communications pole

seasonal __/year round __ dimensions: _____ height: 90' ft. lot size: appx 1½ acres sq.ft./acres road width: ____

total footprint area: ~~225~~ sq. ft. 1st floor area: _____ sq. ft. 2nd floor area: _____ sq. ft. number of bedrooms: ____

Proposal: 110' monopole replacement

seasonal __/year round X dimensions: _____ total footprint area: 1125 sq. ft. height: 110' ft.

1st floor area: _____ sq. ft. 2nd floor area: _____ sq. ft. number of bedrooms: _____

Plot Plan ___/Modified Plot Plan ___ (as described in Section 51.2 of the Old Lyme Zoning Regulations) is attached.

By signing this application, the applicant acknowledges that he understands that it is the applicant's responsibility to conform to the Town of Old Lyme's Zoning Regulations and that if the information here provided proves to be false, incomplete, and/or inaccurate, the permit will be revoked. Further, by signing this application, the applicant consents to access to the premises, at reasonable times, by appropriate officials of the Town of Old Lyme for the purpose of evaluating this application prior to its approval; inspections to monitor compliance of any work performed pursuant to any approval of this application; and continuing compliance inspections and monitoring following completion of any work authorized by such approval. This consent shall include the interior of any buildings existing or proposed on the premises, where access to such buildings is reasonably required in order to monitor compliance with applicable regulations of the Town of Old Lyme, any permit issued thereunder, or any conditions of such permit. This consent shall be deemed to run with the land and be binding upon future assignees of the subject permit, and use of such permit by the applicant or its successor(s) shall constitute acceptance of this consent.

Signature of Owner/Applicant: Richard D. For Sprint PCS Date: 5/24/01

Name/Address: 345 Buckland Hills Drive Apt. 1-114 Manchester CT 06040 Phone: 860-644-9449

Office Use Only

1. Flood Hazard Permit: panel 06 zone C req'd: ___ not req'd: ✓ exempt: ___ comment: _____
2. Coastal Site Plan Review: req'd: ___ not req'd: ✓ exempt: ___ comment: _____
3. Water Resource District: n/a: ___ complies: ✓ Conservation Zone: n/a: ✓ complies: _____
4. Historic District: n/a: ✓ complies: _____ Driveway Permit: req'd: ___ not req'd: ___ approval: _____
5. Site Development Plan: req'd: ___ not req'd: ✓ approval: _____
6. Special Exception: req'd: ___ not req'd: ✓ agency: _____ approval: _____
7. Health Review: well permit: _____ well complete: _____ septic permit: _____ number bedrooms: _____

Comment: _____

Approved/Denied: John V. Flowers Date: 5-25-01 Approved/Denied _____ Date: _____

Zoning Review: (foundation/structure): _____

approved/denied _____ date: _____

Variance Application Number: _____ Effective Date: _____

Zoning Review: (foundation/structure): Repair of existing tower w/ new equipment

approved/denied [signature] date: 5/29/01

Zoning Review: (foundation/structure): _____

approved/denied _____ date: _____

Certificate of Zoning Compliance: _____

approved: _____ date: _____

v 5/1/00

189 BOSTON POST RD

Location	189 BOSTON POST RD	**Mblu**	63/ / 123/ /
Acct#	00308400	**Owner**	TOWN OF OLD LYME
Assessment	$515,800	**Appraisal**	$736,700
PID	3249	**Building Count**	1

Map Links

All locations identified on Google, Yahoo, and Bing maps are approximate and may not be exact

Go To Google Maps (http://maps.google.com/?q=189 BOSTON POST RD ,)

Go To Yahoo Maps (http://maps.yahoo.com/#q=189%20BOS

Go To Microsoft Bing Maps (http://www.bing.com/maps/?q=189 BOSTON POST RD ,)

Current Value

Appraisal

Valuation Year	Improvements	Land	Total
2022	$593,400	$143,300	$736,700

Assessment

Valuation Year	Improvements	Land	Total
2022	$415,400	$100,400	$515,800

Owner of Record

Owner	TOWN OF OLD LYME	**Sale Price**	$0
Co-Owner	FIRE HOUSE -BOUGHTON RD	**Certificate**	
Address	189 BOSTON POST RD OLD LYME, CT 06371	**Book & Page**	0012/0627
		Sale Date	03/24/1924

Ownership History

Ownership History

Owner	Sale Price	Certificate	Book & Page	Sale Date
TOWN OF OLD LYME	$0		0012/0627	03/24/1924
TOWN OF OLD LYME	$0		/0	

Building Information

Building 1 : Section 1

Year Built:	1992
Living Area:	3,874
Replacement Cost:	$574,362
Building Percent Good:	90
Replacement Cost Less Depreciation:	$516,900

Building Attributes

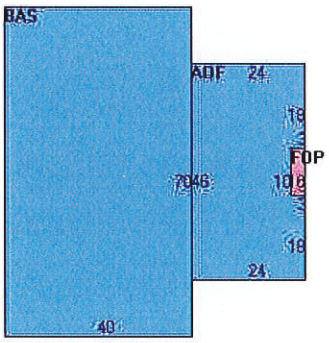
Field	Description
Style:	Fire Station
Model	Ind/Comm
Grade	Average
Stories:	1

Occupancy	1.00
Exterior Wall 1	Brick/Masonry
Exterior Wall 2	
Roof Structure	Gable/Hip
Roof Cover	Asph/F Gls/Cmp
Interior Wall 1	Drywall/Sheet
Interior Wall 2	
Interior Floor 1	Concr-Finished
Interior Floor 2	
Heating Fuel	Gas
Heating Type	Forced Air-Duc
AC Type	06
Struct Class	
Bldg Use	MUNICIPAL MDL-96
Total Rooms	
Total Bedrms	00
Total Baths	0
1st Floor Use:	903I
Heat/AC	HEAT/AC SPLIT
Frame Type	MASONRY
Baths/Plumbing	AVERAGE
Ceiling/Wall	SUS-CEIL & WL
Rooms/Prtns	AVERAGE
Wall Height	14.00
% Comn Wall	0.00

Building Photo

(https://images.vgsi.com/photos/OldLymeCTPhotos/\00\00\93\92.jpg)

Building Layout



(https://images.vgsi.com/photos/OldLymeCTPhotos//Sketches/3249_3249.

Building Sub-Areas (sq ft)			Legend
Code	Description	Gross Area	Living Area
BAS	First Floor	2,800	2,800
AOF	Office, (Average)	1,074	1,074
FOP	Porch, Open, Finished	30	0
		3,904	3,874

Extra Features

Extra Features				Legend
Code	Description	Size	Value	Bldg #
A/C	AIR COND	1074.00 UNITS	$2,400	1
GEN	GENERATOR	1.00 UNITS	$0	1

Land

Land Use

Use Code	903I
Description	MUNICIPAL MDL-96
Zone	R-20
Neighborhood	0050
Alt Land Appr	No
Category	

Land Line Valuation

Size (Acres)	1.03
Frontage	0
Depth	0
Assessed Value	$100,400
Appraised Value	$143,300

Outbuildings

Outbuildings — Legend

Code	Description	Sub Code	Sub Description	Size	Value	Bldg #
PAV1	PAVING-ASPHALT			16850.00 S.F.	$25,300	1
SHD2	W/LIGHTS ETC			360.00 S.F.	$3,800	1
MSC19	TOWER			1.00 UNIT	$45,000	1

Valuation History

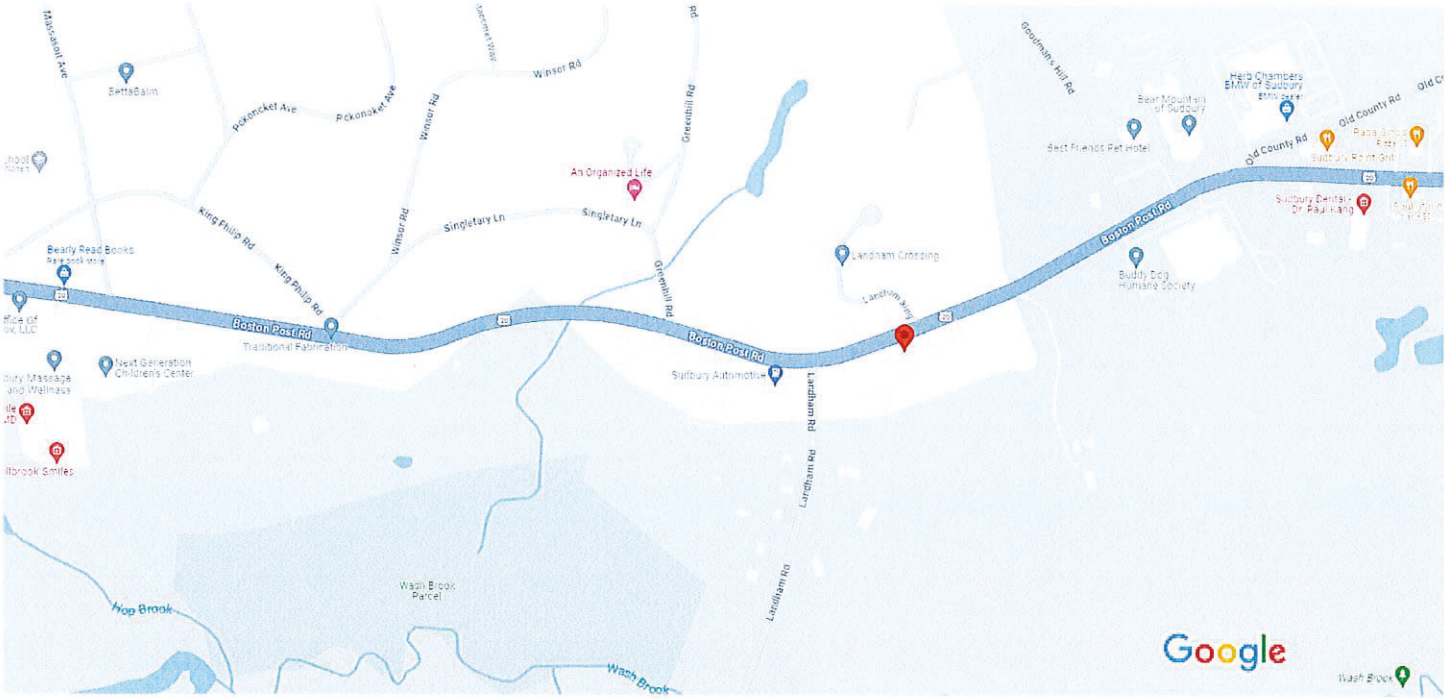
Appraisal

Valuation Year	Improvements	Land	Total
2022	$593,400	$143,300	$736,700
2021	$593,400	$143,300	$736,700
2020	$593,400	$143,300	$736,700

Assessment

Valuation Year	Improvements	Land	Total
2022	$415,400	$100,400	$515,800
2021	$415,400	$100,400	$515,800
2020	$415,400	$100,400	$515,800

189 Boston Post Rd



Map data ©2024 Google 200 ft

189 Boston Post Rd

Building

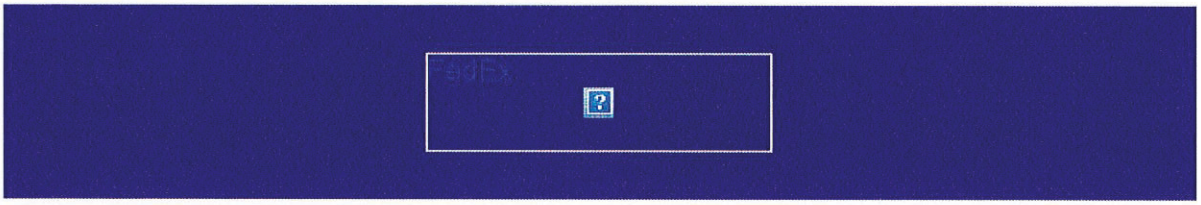
Collapse side panel

Directions Save Nearby Send to phone Share

189 Boston Post Rd, Sudbury, MA 01776

Photos

From: TrackingUpdates@fedex.com
To: Barbadora, Jeff
Subject: FedEx Shipment 775035739218: Your package has been delivered
Date: Friday, February 2, 2024 9:44:46 AM



Hi. Your package was delivered Fri, 02/02/2024 at 9:38am.

Delivered to 5 ELIZABETH LN, OLD LYME, CT 06371
Received by M.MICHELLE

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	775035739218
FROM	Crown Castle 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Old Lyme Martha Shoemaker, First Selectwoman 52 Lyme Street OLD LYME, CT, US, 06371
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 2/01/2024 05:27 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	OLD LYME, CT, US, 06371
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	SOS

From: TrackingUpdates@fedex.com
To: Barbadora, Jeff
Subject: FedEx Shipment 775035811023: Your package has been delivered
Date: Friday, February 2, 2024 9:44:54 AM

Hi. Your package was delivered Fri, 02/02/2024 at 9:38am.

Delivered to 5 ELIZABETH LN, OLD LYME, CT 06371
Received by M.MICHELLE

OBTAIN PROOF OF DELIVERY

How was your delivery ?

TRACKING NUMBER	775035811023
FROM	Crown Castle 1800 W. Park Drive WESTBOROUGH, MA, US, 01581
TO	Town of Old Lyme Craig Bonatti, Land Use Technician 52 Lyme Street OLD LYME, CT, US, 06371
REFERENCE	799001.7680
SHIPPER REFERENCE	799001.7680
SHIP DATE	Thu 2/01/2024 05:27 PM
DELIVERED TO	Receptionist/Front Desk
PACKAGING TYPE	FedEx Envelope
ORIGIN	WESTBOROUGH, MA, US, 01581
DESTINATION	OLD LYME, CT, US, 06371
SPECIAL HANDLING	Deliver Weekday
NUMBER OF PIECES	1
TOTAL SHIPMENT WEIGHT	0.50 LB
SERVICE TYPE	SOS

Date: **October 06, 2023**

MORRISON HERSHFIELD

Morrison Hershfield
1455 Lincoln Parkway, Suite 500
Atlanta, GA 30346
(770) 379-8500

Subject:	**Structural Analysis Report**	
Carrier Designation:	***Metro PCS* Co-Locate**	
	Site Number:	CTNL226A
	Site Name:	Crown Old Lyme Monopole
Crown Castle Designation:	**BU Number:**	876406
	Site Name:	NE Old Lyme-Old Lyme Firehouse
	JDE Job Number:	2100793
	Work Order Number:	2259737
	Order Number:	656057 Rev. 1
Engineering Firm Designation:	**Morrison Hershfield Project Number:** CN8-847R2 / 2300001	
Site Data:	**189 Boston Post Road, Old Lyme, New London County, CT 06371** **Latitude *41° 20' 56.37"*, Longitude *-72° 17' 43.65"*** **135 Foot – EEI Monopole Tower**	

Morrison Hershfield 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 - 82.2%**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Respectfully submitted by:

G. Lance Cooke, P.E. (CT License No. PEN.0028133)
Senior Engineer

EXP 1/31/2024

TABLE OF CONTENTS

1) INTRODUCTION

This tower is a 135 ft monopole tower designed by Engineered Endeavors, Inc.

The tower was modified multiple times in the past to accommodate additional loading. All the modifications were considered in this analysis per their respective post modification inspection reports.

2) ANALYSIS CRITERIA

TIA-222 Revision:	TIA-222-H
Risk Category:	II
Wind Speed:	125 mph
Exposure Category:	C
Topographic Factor:	1
Ice Thickness:	1 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)
110.0	110.0	3	ericsson	AIR 6419 B41_TMO_CCIV2 w/ Mount Pipe	3	1-5/8
		3	rfs/celwave	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe		
		3	ericsson	RADIO 4449 B71 B85A_T-MOBILE		
		3	ericsson	RADIO 4460 B2/B25 B66_TMO		
		1	site pro 1	Handrail Kit [#HRK12]		
		1	-	Side Arm Mount [SO 701-3]		
		1	-	Platform Mount [LP 714-1]		

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)
133.0	142.0	1	scala	SL11-840/UT4	4 3	7/8 1/2
	140.0	1	decibel	DB408		
	139.0	1	decibel	DB222		
		1	sinclair	SRL-101A		
	137.0	1	decibel	DB404		
	133.0	1	-	T-Arm Mount [TA 602-3]		
124.0	127.0	3	ericsson	RRUS 4449 B5/B12	5 2	7/8 3/8
		3	ericsson	RRUS 4478 B14		
		3	ericsson	RRUS 8843 B2/B66A		
	126.0	6	kmw communications	EPBQ-654L8H8-L2 w/ Mount Pipe		
	124.0	2	raycap	DC6-48-60-18-8F		
		1	-	Side Arm Mount [SO 201-3]		

Mounting Level (ft)	Center Line Elevation (ft)	Number of Antennas	Antenna Manufacturer	Antenna Model	Number of Feed Lines	Feed Line Size (in)
124.0	124.0	1	-	Sector Mount [SM 502-3]	-	-
100.0	101.0	3	nokia	FZHN	3 1	1-1/4 7/8
	100.0	3	commscope	NNVV-65B-R4 w/ Mount Pipe		
		6	alcatel lucent	RRH2X50-800		
		3	alcatel lucent	PCS 1900MHZ 4X45W-65MHZ		
		1	-	Side Arm Mount [SO 701-3]		
		1	-	Platform Mount [LP 602-1]		
	99.0	3	rfs/celwave	APXVTM14-ALU-I20 w/ Mount Pipe		
87.0	90.0	6	antel	LPA-80080/4CF w/ Mount Pipe	14	1-5/8
		6	jma wireless	MX06FRO660-03 w/ Mount Pipe		
		3	samsung telecommunications	MT6407-77A w/ Mount Pipe		
		3	samsung telecommunications	RF4439D-25A		
		3	samsung telecommunications	RF4440D-13A		
	88.0	2	rfs/celwave	DB-T1-6Z-8AB-0Z		
	87.0	1	-	Platform Mount [LP 303-1]		
77.0	78.0	1	lucent	KS24019-L112A	1	1/2
	77.0	1	-	Side Arm Mount [SO 701-1]		

3) ANALYSIS PROCEDURE

Table 3 - Documents Provided

Document	Reference	Source
4-GEOTECHNICAL REPORTS	1532996	CCISITES
4-TOWER FOUNDATION DRAWINGS/DESIGN/SPECS	1603991	CCISITES
4-TOWER MANUFACTURER DRAWINGS	2070886	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	2167834	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	5790815	CCISITES
4-POST-MODIFICATION INSPECTION	5961595	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	7713249	CCISITES
4-POST-MODIFICATION INSPECTION	8313254	CCISITES
4-POST-MODIFICATION INSPECTION	8312961	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	8265437	CCISITES
4-TOWER REINFORCEMENT DESIGN/DRAWINGS/DATA	8299430	CCISITES
4-POST-MODIFICATION INSPECTION	9296588	CCISITES

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 (version 8.1.1.0), was used to determine the loads on the modified structure. Additional calculations were performed to determine the stresses in the pole and in the reinforcing elements. These calculations are presented in Appendix C.

3.2) Assumptions

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

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

4) ANALYSIS RESULTS

Table 4 - Section Capacity (Summary)

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L1	135 - 130	Pole	TP16x16x0.5	Pole	3.2	Pass
L2	130 - 125	Pole	TP16x16x0.5	Pole	6.8	Pass
L3	125 - 120	Pole	TP16x16x0.5	Pole	18.4	Pass
L4	120 - 115	Pole	TP16x16x0.5	Pole	29.7	Pass
L5	115 - 110	Pole	TP16x16x0.5	Pole	41.3	Pass
L6	110 - 109.75	Pole + Reinf.	TP16.059x16x0.9	Reinf. 9 Tension Rupture	29.9	Pass
L7	109.75 - 104.75	Pole + Reinf.	TP17.234x16.059x0.8125	Reinf. 9 Tension Rupture	39.3	Pass
L8	104.75 - 99.75	Pole + Reinf.	TP18.41x17.234x0.7625	Reinf. 9 Tension Rupture	48.1	Pass
L9	99.75 - 94.75	Pole + Reinf.	TP19.586x18.41x0.7125	Reinf. 9 Tension Rupture	58.5	Pass
L10	94.75 - 90.92	Pole + Reinf.	TP20.486x19.586x0.675	Reinf. 9 Tension Rupture	65.7	Pass
L11	90.92 - 90.67	Pole + Reinf.	TP20.545x20.486x0.8625	Reinf. 8 Compression	50.8	Pass
L12	90.67 - 83.08	Pole + Reinf.	TP22.33x20.545x0.8125	Reinf. 8 Compression	57.9	Pass
L13	83.08 - 81.41	Pole + Reinf.	TP22.333x21.172x0.85	Reinf. 8 Compression	62.1	Pass
L14	81.41 - 76.41	Pole + Reinf.	TP23.494x22.333x0.8125	Reinf. 8 Compression	68.8	Pass
L15	76.41 - 74.5	Pole + Reinf.	TP23.938x23.494x0.8	Reinf. 8 Compression	71.1	Pass
L16	74.5 - 74.25	Pole + Reinf.	TP23.996x23.938x1.275	Reinf. 10 Tension Rupture	50.2	Pass
L17	74.25 - 70.58	Pole + Reinf.	TP24.848x23.996x1.2	Reinf. 10 Tension Rupture	53.5	Pass
L18	70.58 - 70.33	Pole + Reinf.	TP24.906x24.848x1.2	Reinf. 10 Tension Rupture	53.7	Pass
L19	70.33 - 66.33	Pole + Reinf.	TP25.835x24.906x1.15	Reinf. 10 Tension Rupture	57.1	Pass
L20	66.33 - 66.08	Pole + Reinf.	TP25.893x25.835x1.3	Reinf. 7 Compression	49.1	Pass
L21	66.08 - 61.08	Pole + Reinf.	TP27.055x25.893x1.225	Reinf. 7 Compression	52.5	Pass
L22	61.08 - 60	Pole + Reinf.	TP27.305x27.055x1.225	Reinf. 7 Compression	53.3	Pass
L23	60 - 59.75	Pole + Reinf.	TP27.363x27.305x1.225	Reinf. 7 Compression	53.4	Pass
L24	59.75 - 54.75	Pole + Reinf.	TP28.525x27.363x1.15	Reinf. 7 Compression	56.6	Pass
L25	54.75 - 49.75	Pole + Reinf.	TP29.686x28.525x1.1	Reinf. 7 Compression	59.5	Pass

Section No.	Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
L26	49.75 - 44.78	Pole + Reinf.	TP30.84x29.686x1.1	Reinf. 7 Compression	59.8	Pass
L27	44.78 - 43.78	Pole + Reinf.	TP30.573x29.314x1.1375	Reinf. 7 Compression	60.4	Pass
L28	43.78 - 38.78	Pole + Reinf.	TP31.736x30.573x1.1125	Reinf. 7 Compression	62.8	Pass
L29	38.78 - 35.5	Pole + Reinf.	TP32.498x31.736x1.0875	Reinf. 7 Compression	64.2	Pass
L30	35.5 - 35.25	Pole + Reinf.	TP32.556x32.498x1.0875	Reinf. 3 Compression	64.3	Pass
L31	35.25 - 30.25	Pole + Reinf.	TP33.718x32.556x1.0375	Reinf. 3 Compression	66.5	Pass
L32	30.25 - 25.25	Pole + Reinf.	TP34.881x33.718x1.0125	Reinf. 3 Compression	68.4	Pass
L33	25.25 - 20.25	Pole + Reinf.	TP36.043x34.881x0.9875	Reinf. 3 Compression	70.3	Pass
L34	20.25 - 15.75	Pole + Reinf.	TP37.089x36.043x0.9625	Reinf. 3 Compression	71.8	Pass
L35	15.75 - 15.5	Pole + Reinf.	TP37.147x37.089x1.0125	Reinf. 14 Tension Yield	71.3	Pass
L36	15.5 - 10.5	Pole + Reinf.	TP38.309x37.147x0.9875	Reinf. 14 Tension Yield	72.9	Pass
L37	10.5 - 7.25	Pole + Reinf.	TP39.065x38.309x0.9625	Reinf. 14 Tension Yield	73.8	Pass
L38	7.25 - 7	Pole + Reinf.	TP39.123x39.065x0.9625	Reinf. 14 Tension Yield	73.5	Pass
L39	7 - 5.83	Pole + Reinf.	TP39.395x39.123x0.9625	Reinf. 14 Tension Yield	73.8	Pass
L40	5.83 - 5.58	Pole + Reinf.	TP39.453x39.395x1.1125	Reinf. 11 Tension Yield	65.3	Pass
L41	5.58 - 4.08	Pole + Reinf.	TP39.802x39.453x1.1125	Reinf. 11 Tension Yield	65.8	Pass
L42	4.08 - 3.83	Pole + Reinf.	TP39.86x39.802x1.1125	Reinf. 11 Tension Yield	66.3	Pass
L43	3.83 - 0	Pole + Reinf.	TP40.75x39.86x1.0875	Reinf. 11 Tension Yield	67.4	Pass
					Summary	
				Pole	53.2	Pass
				Reinforcement	73.8	Pass
				Overall	73.8	Pass

Table 5 - Tower Component Stresses vs. Capacity – LC7

Notes	Component	Elevation (ft)	% Capacity	Pass / Fail
1	Tube Bypass	110	32.7	Pass
1	Anchor Rods	0	82.2	Pass
1	Base Plate		28.8	Pass
1	Base Foundation (Structure)	0	63.5	Pass
1	Base Foundation (Soil Interaction)		80.9	Pass

Structure Rating (max from all components) =	82.2%*

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.

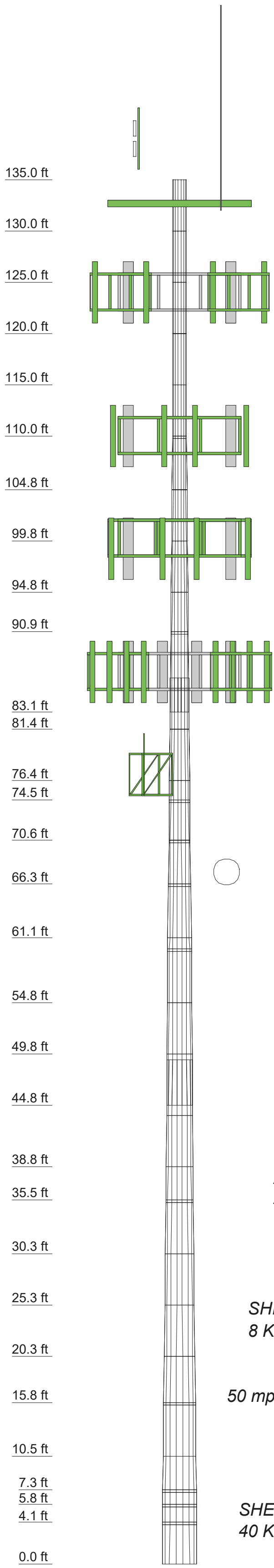
4.1) Recommendations

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	5.00	0	0.5000		16.0000	16.0000	A500-46	0.4
2	5.00	0	0.5000		16.0000	16.0000		0.4
3	5.00	0	0.5000		16.0000	16.0000		0.4
4	5.00	0	0.5000		16.0000	16.0000		0.4
5	5.00	0	[illegible]		[illegible]	[illegible]		0.4
6	0.25	18	[illegible]		[illegible]	[illegible]		0.0
7	5.00	18	[illegible]		[illegible]	17.2345	A572-65	0.6
8	5.00	18	0.7625		17.2345	18.4102		0.6
9	5.00	18	0.7125		18.4102	19.5859		0.6
10	5.83	18	[illegible]		[illegible]	[illegible]		0.5
11	0.25	18	[illegible]		[illegible]	[illegible]		0.0
12	7.59	18	0.8125	3.33	20.5452	22.3300		1.1
13	5.00	18	0.8500		[illegible]	[illegible]		0.8
14	5.00	18	0.8125		[illegible]	[illegible]		0.8
15	[illegible]	18	[illegible]		[illegible]	[illegible]		0.3
16	[illegible]	18	[illegible]		[illegible]	[illegible]		[illegible]
17	[illegible]	18	[illegible]		[illegible]	[illegible]		0.9
18	[illegible]	18	[illegible]		[illegible]	[illegible]		0.1
19	[illegible]	18	[illegible]		[illegible]	[illegible]		1.0
20	[illegible]	18	[illegible]		[illegible]	[illegible]		0.1
21	5.00	18	[illegible]		[illegible]	[illegible]		1.4
22	[illegible]	18	[illegible]		[illegible]	[illegible]		[illegible]
23	[illegible]	18	[illegible]		[illegible]	[illegible]		[illegible]
24	5.00	18	1.1500		27.3[illegible]	28.52[illegible]		1.4
25	5.00	18	1.1000		28.5246	29.6858		1.5
26	[illegible]	18	1.1000	4.42	[illegible]	[illegible]		1.5
27	[illegible]	18	[illegible]		[illegible]	[illegible]		1.7
28	5.00	18	1.1125		[illegible]	[illegible]		1.6
29	[illegible]	18	[illegible]		[illegible]	[illegible]		1.1
30	[illegible]	18	[illegible]		[illegible]	[illegible]		0.1
31	5.00	18	[illegible]		32.55[illegible]	33.7[illegible]		1.6
32	5.00	18	1.0125		33.7184	34.8807		1.6
33	5.00	18	0.9875		34.8807	36.0429		1.7
34	4.50	18	[illegible]		[illegible]	[illegible]		1.5
35	0.25	18	[illegible]		[illegible]	[illegible]		0.1
36	5.00	18	[illegible]		[illegible]	[illegible]		1.9
37	5.25	18	[illegible]		[illegible]	[illegible]		1.2
38–42	[illegible]	18	[illegible]		[illegible]	[illegible]		[illegible]
43	3.83	18	1.0875		39.[illegible]	40.7[illegible]		1.5
								32.7



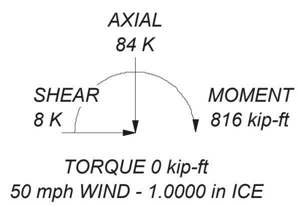
MATERIAL STRENGTH

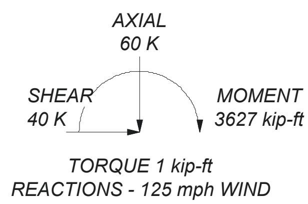
GRADE	Fy	Fu	GRADE	Fy	Fu
A500-46	46 ksi	62 ksi	A572-65	65 ksi	80 ksi

TOWER DESIGN NOTES

1. Tower is located in New London County, Connecticut.
2. Tower designed for Exposure C to the TIA-222-H Standard.
3. Tower designed for a 125 mph basic wind in accordance with the TIA-222-H Standard.
4. Tower is also designed for a 50 mph basic wind with 1.00 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 0.00 ft
8. CCIPOLE RATING: 73.8%

ALL REACTIONS ARE FACTORED





Morrison Hershfield 1455 Lincoln Parkway, Suite 500 Atlanta, GA 30346 Phone: (770) 379-8500 FAX: (770) 379-8500 Consulting Engineers	Job: CN8-847R2 / 2300001		
	Project: 876406 / NE Old Lyme-Old Lyme Firehouse		
	Client: Crown Castle USA	Drawn by: RBA	App'd:
	Code: TIA-222-H	Date: 10/06/23	Scale: NTS
	Path:		Dwg No. E-1

Tower Input Data

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

Tower is located in New London County, Connecticut.
Tower base elevation above sea level: 51.00 ft.
Basic wind speed of 125 mph.
Risk Category II.
Exposure Category C.
Simplified Topographic Factor Procedure for wind speed-up calculations is used.
Topographic Category: 1.
Crest Height: 0.00 ft.
Nominal ice thickness of 1.0000 in.
Ice thickness is considered to increase with height.
Ice density of 56 pcf.
A wind speed of 50 mph is used in combination with ice.
Temperature drop of 50 °F.
Deflections calculated using a wind speed of 60 mph.
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	135.00-130.00	5.00	0.00	Round	16.0000	16.0000	0.5000		A500-46 (46 ksi)
L2	130.00-125.00	5.00	0.00	Round	16.0000	16.0000	0.5000		A500-46 (46 ksi)
L3	125.00-120.00	5.00	0.00	Round	16.0000	16.0000	0.5000		A500-46 (46 ksi)
L4	120.00-115.00	5.00	0.00	Round	16.0000	16.0000	0.5000		A500-46

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L5	115.00-110.00	5.00	0.00	Round	16.0000	16.0000	0.5000		(46 ksi) A500-46 (46 ksi)
L6	110.00-109.75	0.25	0.00	18	16.0000	16.0588	0.9000	3.6000	A572-65 (65 ksi)
L7	109.75-104.75	5.00	0.00	18	16.0588	17.2345	0.8125	3.2500	A572-65 (65 ksi)
L8	104.75-99.75	5.00	0.00	18	17.2345	18.4102	0.7625	3.0500	A572-65 (65 ksi)
L9	99.75-94.75	5.00	0.00	18	18.4102	19.5859	0.7125	2.8500	A572-65 (65 ksi)
L10	94.75-90.92	3.83	0.00	18	19.5859	20.4865	0.6750	2.7000	A572-65 (65 ksi)
L11	90.92-90.67	0.25	0.00	18	20.4865	20.5453	0.8625	3.4500	A572-65 (65 ksi)
L12	90.67-83.08	7.59	3.33	18	20.5453	22.3300	0.8125	3.2500	A572-65 (65 ksi)
L13	83.08-81.41	5.00	0.00	18	21.1720	22.3332	0.8500	3.4000	A572-65 (65 ksi)
L14	81.41-76.41	5.00	0.00	18	22.3332	23.4943	0.8125	3.2500	A572-65 (65 ksi)
L15	76.41-74.50	1.91	0.00	18	23.4943	23.9379	0.8000	3.2000	A572-65 (65 ksi)
L16	74.50-74.25	0.25	0.00	18	23.9379	23.9960	1.2750	5.1000	A572-65 (65 ksi)
L17	74.25-70.58	3.67	0.00	18	23.9960	24.8483	1.2000	4.8000	A572-65 (65 ksi)
L18	70.58-70.33	0.25	0.00	18	24.8483	24.9063	1.2000	4.8000	A572-65 (65 ksi)
L19	70.33-66.33	4.00	0.00	18	24.9063	25.8353	1.1500	4.6000	A572-65 (65 ksi)
L20	66.33-66.08	0.25	0.00	18	25.8353	25.8934	1.3000	5.2000	A572-65 (65 ksi)
L21	66.08-61.08	5.00	0.00	18	25.8934	27.0545	1.2250	4.9000	A572-65 (65 ksi)
L22	61.08-60.00	1.08	0.00	18	27.0545	27.3054	1.2250	4.9000	A572-65 (65 ksi)
L23	60.00-59.75	0.25	0.00	18	27.3054	27.3634	1.2250	4.9000	A572-65 (65 ksi)
L24	59.75-54.75	5.00	0.00	18	27.3634	28.5246	1.1500	4.6000	A572-65 (65 ksi)
L25	54.75-49.75	5.00	0.00	18	28.5246	29.6858	1.1000	4.4000	A572-65 (65 ksi)
L26	49.75-44.78	4.97	4.42	18	29.6858	30.8400	1.1000	4.4000	A572-65 (65 ksi)
L27	44.78-43.78	5.42	0.00	18	29.3135	30.5734	1.1375	4.5500	A572-65 (65 ksi)
L28	43.78-38.78	5.00	0.00	18	30.5734	31.7356	1.1125	4.4500	A572-65 (65 ksi)
L29	38.78-35.50	3.28	0.00	18	31.7356	32.4981	1.0875	4.3500	A572-65 (65 ksi)
L30	35.50-35.25	0.25	0.00	18	32.4981	32.5562	1.0875	4.3500	A572-65 (65 ksi)
L31	35.25-30.25	5.00	0.00	18	32.5562	33.7184	1.0375	4.1500	A572-65 (65 ksi)
L32	30.25-25.25	5.00	0.00	18	33.7184	34.8807	1.0125	4.0500	A572-65 (65 ksi)
L33	25.25-20.25	5.00	0.00	18	34.8807	36.0429	0.9875	3.9500	A572-65 (65 ksi)
L34	20.25-15.75	4.50	0.00	18	36.0429	37.0889	0.9625	3.8500	A572-65 (65 ksi)
L35	15.75-15.50	0.25	0.00	18	37.0889	37.1470	1.0125	4.0500	A572-65 (65 ksi)
L36	15.50-10.50	5.00	0.00	18	37.1470	38.3093	0.9875	3.9500	A572-65 (65 ksi)
L37	10.50-7.25	3.25	0.00	18	38.3093	39.0647	0.9625	3.8500	A572-65 (65 ksi)
L38	7.25-7.00	0.25	0.00	18	39.0647	39.1229	0.9625	3.8500	A572-65 (65 ksi)

Section	Elevation ft	Section Length ft	Splice Length ft	Number of Sides	Top Diameter in	Bottom Diameter in	Wall Thickness in	Bend Radius in	Pole Grade
L39	7.00-5.83	1.17	0.00	18	39.1229	39.3948	0.9625	3.8500	A572-65 (65 ksi)
L40	5.83-5.58	0.25	0.00	18	39.3948	39.4529	1.1125	4.4500	A572-65 (65 ksi)
L41	5.58-4.08	1.50	0.00	18	39.4529	39.8016	1.1125	4.4500	A572-65 (65 ksi)
L42	4.08-3.83	0.25	0.00	18	39.8016	39.8597	1.1125	4.4500	A572-65 (65 ksi)
L43	3.83-0.00	3.83		18	39.8597	40.7500	1.0875	4.3500	A572-65 (65 ksi)

Tapered Pole Properties

Section	Tip Dia. in	Area in^2	I in^4	r in	C in	I/C in^3	J in^4	It/Q in^2	w in	w/t
L1	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
L2	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
L3	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
L4	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
L5	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
	16.0000	24.3473	731.9420	5.4829	8.0000	91.4928	1463.8840	12.1664	0.0000	0
L6	16.1080	43.1347	1242.5610	5.3605	8.1280	152.8741	2486.7570	21.5714	1.2320	1.369
	16.1677	43.3026	1257.1296	5.3814	8.1579	154.1004	2515.9134	21.6554	1.2423	1.38
L7	16.1812	39.3183	1154.6752	5.4124	8.1579	141.5414	2310.8698	19.6629	1.3963	1.719
	17.3750	42.3503	1442.9297	5.8298	8.7551	164.8098	2887.7580	21.1792	1.6033	1.973
L8	17.3827	39.8651	1366.5405	5.8476	8.7551	156.0847	2734.8791	19.9363	1.6913	2.218
	18.5766	42.7105	1680.5380	6.2649	9.3524	179.6909	3363.2873	21.3593	1.8982	2.489
L9	18.5843	40.0229	1583.7240	6.2827	9.3524	169.3391	3169.5320	20.0153	1.9862	2.788
	19.7781	42.6817	1920.7900	6.7001	9.9496	193.0512	3844.1074	21.3449	2.1931	3.078
L10	19.7839	40.5157	1830.5641	6.7134	9.9496	183.9830	3663.5369	20.2617	2.2591	3.347
	20.6984	42.4451	2104.7463	7.0331	10.4071	202.2406	4212.2621	21.2266	2.4176	3.582
L11	20.6695	53.7222	2613.7595	6.9665	10.4071	251.1506	5230.9582	26.8662	2.0876	2.42
	20.7292	53.8831	2637.3194	6.9874	10.4370	252.6894	5278.1090	26.9467	2.0980	2.432
L12	20.7369	50.8884	2503.4130	7.0051	10.4370	239.8594	5010.1200	25.4490	2.1860	2.69
	22.5491	55.4909	3245.9601	7.6387	11.3436	286.1480	6496.1913	27.7507	2.5001	3.077
L13	22.1527	54.8267	2860.6278	7.2143	10.7554	265.9722	5725.0197	27.4185	2.2303	2.624
	22.5466	57.9594	3379.5434	7.6265	11.3452	297.8819	6763.5337	28.9852	2.4346	2.864
L14	22.5523	55.4991	3247.3922	7.6398	11.3452	286.2337	6499.0574	27.7548	2.5006	3.078
	23.7314	58.4937	3801.9207	8.0521	11.9351	318.5488	7608.8440	29.2524	2.7050	3.329
L15	23.7334	57.6255	3749.6220	8.0565	11.9351	314.1669	7504.1779	28.8182	2.7270	3.409
	24.1838	58.7518	3973.8124	8.2140	12.1605	326.7813	7952.8537	29.3815	2.8051	3.506
L16	24.1105	91.7134	5951.1680	8.0453	12.1605	489.3866	11910.1667	45.8654	1.9691	1.544
	24.1695	91.9484	5997.0233	8.0659	12.1900	491.9642	12001.9376	45.9829	1.9793	1.552
L17	24.1810	86.8253	5700.3355	8.0926	12.1900	467.6255	11408.1717	43.4209	2.1113	1.759
	25.0465	90.0716	6363.9212	8.3951	12.6229	504.1556	12736.2161	45.0444	2.2613	1.884
L18	25.0465	90.0716	6363.9212	8.3951	12.6229	504.1556	12736.2161	45.0444	2.2613	1.884
	25.1054	90.2927	6410.9086	8.4158	12.6524	506.6941	12830.2528	45.1549	2.2715	1.893
L19	25.1132	86.7130	6182.7438	8.4335	12.6524	488.6608	12373.6230	43.3648	2.3595	2.052
	26.0564	90.1038	6936.7690	8.7633	13.1243	528.5427	13882.6655	45.0605	2.5230	2.194
L20	26.0333	101.2375	7699.4842	8.7100	13.1243	586.6573	15409.0995	50.6284	2.2590	1.738
	26.0923	101.4771	7754.2725	8.7306	13.1538	589.5071	15518.7484	50.7482	2.2692	1.746

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
L21	26.1038	95.9143	7373.9643	8.7573	13.1538	560.5947	14757.6314	47.9662	2.4012	1.96
	27.2829	100.4291	8465.0675	9.1695	13.7437	615.9232	16941.2736	50.2241	2.6056	2.127
L22	27.2829	100.4291	8465.0675	9.1695	13.7437	615.9232	16941.2736	50.2241	2.6056	2.127
	27.5376	101.4043	8714.0683	9.2585	13.8711	628.2166	17439.6027	50.7118	2.6497	2.163
L23	27.5376	101.4043	8714.0683	9.2585	13.8711	628.2166	17439.6027	50.7118	2.6497	2.163
	27.5966	101.6301	8772.3946	9.2791	13.9006	631.0796	17556.3321	50.8247	2.6600	2.171
L24	27.6081	95.6816	8306.4025	9.3058	13.9006	597.5565	16623.7348	47.8499	2.7920	2.428
	28.7872	99.9200	9459.8775	9.7180	14.4905	652.8332	18932.2025	49.9695	2.9963	2.606
L25	28.7949	95.7502	9098.2510	9.7357	14.4905	627.8771	18208.4738	47.8842	3.0843	2.804
	29.9740	99.8044	10303.5607	10.1480	15.0804	683.2429	20620.6792	49.9117	3.2887	2.99
L26	29.9740	99.8044	10303.5607	10.1480	15.0804	683.2429	20620.6792	49.9117	3.2887	2.99
	31.1461	103.8342	11602.7237	10.5577	15.6667	740.5969	23220.7146	51.9270	3.4918	3.174
L27	30.6335	101.7274	10203.1529	10.0025	14.8913	685.1771	20419.7314	50.8734	3.1572	2.776
	30.8696	106.2761	11633.9479	10.4497	15.5313	749.0656	23283.2041	53.1481	3.3789	2.97
L28	30.8734	104.0286	11407.2722	10.4586	15.5313	734.4708	22829.5543	52.0242	3.4229	3.077
	32.0536	108.1326	12811.2990	10.8712	16.1217	794.6618	25639.4555	54.0766	3.6275	3.261
L29	32.0574	105.7889	12554.1012	10.8801	16.1217	778.7082	25124.7213	52.9045	3.6715	3.376
	32.8316	108.4206	13514.5254	11.1507	16.5090	818.6148	27046.8337	54.2206	3.8057	3.499
L30	32.8316	108.4206	13514.5254	11.1507	16.5090	818.6148	27046.8337	54.2206	3.8057	3.499
	32.8906	108.6212	13589.6744	11.1714	16.5385	821.6975	27197.2304	54.3209	3.8159	3.509
L31	32.8984	103.7918	13026.7589	11.1891	16.5385	787.6609	26070.6588	51.9058	3.9039	3.763
	34.0785	107.6191	14521.6277	11.6017	17.1290	847.7824	29062.3634	53.8198	4.1084	3.96
L32	34.0824	105.1062	14204.2568	11.6106	17.1290	829.2540	28427.2039	52.5631	4.1524	4.101
	35.2626	108.8413	15773.0037	12.0232	17.7194	890.1556	31566.7619	54.4310	4.3570	4.303
L33	35.2664	106.2322	15417.6384	12.0321	17.7194	870.1004	30855.5636	53.1262	4.4010	4.457
	36.4466	109.8750	17058.7260	12.4447	18.3098	931.6720	34139.8982	54.9480	4.6056	4.664
L34	36.4504	107.1698	16662.4575	12.4535	18.3098	910.0296	33346.8399	53.5951	4.6496	4.831
	37.5126	110.3653	18197.8571	12.8249	18.8412	965.8557	36419.6595	55.1932	4.8337	5.022
L35	37.5049	115.9379	19063.8261	12.8071	18.8412	1011.8172	38152.7370	57.9800	4.7457	4.687
	37.5639	116.1247	19156.0988	12.8278	18.8707	1015.1241	38337.4037	58.0734	4.7559	4.697
L36	37.5678	113.3358	18721.9137	12.8366	18.8707	992.1156	37468.4623	56.6786	4.7999	4.861
	38.7479	116.9786	20585.8466	13.2492	19.4611	1057.7937	41198.7806	58.5004	5.0044	5.068
L37	38.7518	114.0935	20105.0339	13.2581	19.4611	1033.0873	40236.5226	57.0576	5.0484	5.245
	39.5189	116.4014	21349.9473	13.5263	19.8449	1075.8410	42727.9873	58.2118	5.1814	5.383
L38	39.5189	116.4014	21349.9473	13.5263	19.8449	1075.8410	42727.9873	58.2118	5.1814	5.383

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
	39.5779	116.5789	21447.7842	13.5469	19.8744	1079.1657	42923.7900	58.3005	5.1916	5.394
L39	39.5779	116.5789	21447.7842	13.5469	19.8744	1079.1657	42923.7900	58.3005	5.1916	5.394
	39.8541	117.4098	21909.6287	13.6435	20.0126	1094.7934	43848.0867	58.7160	5.2395	5.444
L40	39.8309	135.1778	25028.7547	13.5902	20.0126	1250.6517	50090.4429	67.6017	4.9755	4.472
	39.8899	135.3830	25142.9076	13.6109	20.0421	1254.5052	50318.8990	67.7043	4.9857	4.482
L41	39.8899	135.3830	25142.9076	13.6109	20.0421	1254.5052	50318.8990	67.7043	4.9857	4.482
	40.2440	136.6141	25835.1236	13.7346	20.2192	1277.7510	51704.2417	68.3201	5.0471	4.537
L42	40.2440	136.6141	25835.1236	13.7346	20.2192	1277.7510	51704.2417	68.3201	5.0471	4.537
	40.3030	136.8193	25951.7155	13.7553	20.2487	1281.6461	51937.5790	68.4227	5.0573	4.546
L43	40.3069	133.8310	25417.6665	13.7641	20.2487	1255.2716	50868.7782	66.9282	5.1013	4.691
	41.2109	136.9040	27209.0823	14.0802	20.7010	1314.3849	54453.9669	68.4650	5.2580	4.835

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 135.00-130.00				1	1	1			
L2 130.00-125.00				1	1	1			
L3 125.00-120.00				1	1	1			
L4 120.00-115.00				1	1	1			
L5 115.00-110.00				1	1	1			
L6 110.00-109.75				1	1	0.781045			
L7 109.75-104.75				1	1	0.81513			
L8 104.75-99.75				1	1	0.824637			
L9 99.75-94.75				1	1	0.841586			
L10 94.75-90.92				1	1	0.858905			
L11 90.92-90.67				1	1	0.816426			
L12 90.67-83.08				1	1	0.833857			
L13 83.08-81.41				1	1	0.852305			
L14 81.41-76.41				1	1	0.860274			
L15 76.41-74.50				1	1	0.862484			
L16 74.50-74.25				1	1	0.816702			
L17 74.25-70.58				1	1	0.841228			
L18 70.58-70.33				1	1	0.839678			
L19 70.33-66.33				1	1	0.84962			
L20 66.33-66.08				1	1	0.828761			

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
L21 66.08-61.08				1	1	0.846584			
L22 61.08-60.00				1	1	0.840405			
L23 60.00-59.75				1	1	0.838992			
L24 59.75-54.75				1	1	0.862572			
L25 54.75-49.75				1	1	0.872803			
L26 49.75-44.78				1	1	0.869931			
L27 44.78-43.78				1	1	0.882299			
L28 43.78-38.78				1	1	0.877812			
L29 38.78-35.50				1	1	0.882455			
L30 35.50-35.25				1	1	0.881356			
L31 35.25-30.25				1	1	0.900275			
L32 30.25-25.25				1	1	0.900758			
L33 25.25-20.25				1	1	0.902775			
L34 20.25-15.75				1	1	0.908165			
L35 15.75-15.50				1	1	0.949737			
L36 15.50-10.50				1	1	0.952659			
L37 10.50-7.25				1	1	0.96382			
L38 7.25-7.00				1	1	0.946763			
L39 7.00-5.83				1	1	0.942361			
L40 5.83-5.58				1	1	0.891548			
L41 5.58-4.08				1	1	0.886044			
L42 4.08-3.83				1	1	0.871432			
L43 3.83-0.00				1	1	0.877343			

Feed Line/Linear Appurtenances - Entered As Round Or Flat

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
***										
Safety Line 3/8"	C	No	Surface Ar (CaAa)	135.00 - 10.00	1	1	0.000 0.000	0.3750		0.22
Step Pegs	C	No	Surface Ar (CaAa)	135.00 - 10.00	1	1	-0.050 0.050	0.7050		1.80
******										
FB-L98B-034-XXX(3/8)	C	No	Surface Ar (CaAa)	124.00 - 6.00	2	2	-0.290 -0.250	0.3937		0.06
WR-VG86ST-BRDA(7/8)	C	No	Surface Ar (CaAa)	124.00 - 6.00	5	5	-0.250 -0.050	0.8800		0.68
******										
******										
HB158-21U6S24-xxM_TMO(1-5/8)	B	No	Surface Ar (CaAa)	110.00 - 6.00	3	1	-0.350 -0.160	1.9960		2.50
******										
CCI-085125	B	No	Surface Af (CaAa)	70.58 - 0.00	1	1	0.167 0.167	8.5000	19.5000	0.00

Description	Sector	Exclude From Torque Calculation	Component Type	Placement ft	Total Number	Number Per Row	Start/End Position	Width or Diameter in	Perimeter in	Weight plf
CCI-085125	A	No	Surface Af (CaAa)	70.58 - 0.00	1	1	0.167 0.167	8.5000	19.5000	0.00
CCI-085125	C	No	Surface Af (CaAa)	70.58 - 0.00	1	1	0.167 0.167	8.5000	19.5000	0.00
CCI-085125	C	No	Surface Af (CaAa)	95.56 - 0.00	1	1	-0.167 -0.167	8.5000	19.5000	0.00
CCI-085125	B	No	Surface Af (CaAa)	95.56 - 0.00	1	1	-0.167 -0.167	8.5000	19.5000	0.00
CCI-085125	A	No	Surface Af (CaAa)	95.56 - 0.00	1	1	-0.167 -0.167	8.5000	19.5000	0.00
CCI-065125	B	No	Surface Af (CaAa)	77.25 - 70.58	1	1	0.167 0.167	6.5000	15.5000	0.00
CCI-065125	A	No	Surface Af (CaAa)	77.25 - 70.58	1	1	0.167 0.167	6.5000	15.5000	0.00
CCI-065125	C	No	Surface Af (CaAa)	77.25 - 70.58	1	1	0.167 0.167	6.5000	15.5000	0.00
CCI-065125	C	No	Surface Af (CaAa)	109.75 - 95.75	1	1	-0.167 -0.167	6.5000	15.5000	0.00
CCI-065125	B	No	Surface Af (CaAa)	109.75 - 95.75	1	1	-0.167 -0.167	6.5000	15.5000	0.00
CCI-065125	A	No	Surface Af (CaAa)	109.75 - 95.75	1	1	-0.167 -0.167	6.5000	15.5000	0.00
**										
CCI-045100	C	No	Surface Af (CaAa)	61.50 - 46.50	1	1	0.167 0.167	4.5000	11.0000	0.00
CCI-045100	B	No	Surface Af (CaAa)	61.50 - 46.50	1	1	0.167 0.167	4.5000	11.0000	0.00
CCI-045100	A	No	Surface Af (CaAa)	61.50 - 46.50	1	1	0.167 0.167	4.5000	11.0000	0.00
***										

Feed Line/Linear Appurtenances - Entered As Area

Description	Face or Leg	Allow Shield	Exclude From Torque Calculation	Component Type	Placement ft	Total Number		C_AA_A ft^2/ft	Weight plf
******									
LDF4-50A(1/2)	A	No	No	Inside Pole	133.00 - 3.00	3	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.15 0.15 0.15
LDF5-50A(7/8)	A	No	No	Inside Pole	133.00 - 3.00	4	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.33 0.33 0.33
******									
HB114-08U3M12-XXXF(7/8)	C	No	No	Inside Pole	100.00 - 6.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.68 0.68 0.68
HB114-1-08U4-M5F(1-1/4)	C	No	No	Inside Pole	100.00 - 6.00	3	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.30 1.30 1.30
******									
FLC 158-50J(1-5/8)	A	No	No	Inside Pole	87.00 - 6.00	12	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.92 0.92 0.92
HB158-1-08U8-S8J18(1-5/8)	A	No	No	Inside Pole	87.00 - 6.00	2	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	1.30 1.30 1.30
******									
FLC 12-50J(1/2)	C	No	No	Inside Pole	77.00 - 6.00	1	No Ice 1/2" Ice 1" Ice	0.00 0.00 0.00	0.16 0.16 0.16
***									

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	135.00-130.00	A	0.000	0.000	0.000	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.540	0.000	0.01
L2	130.00-125.00	A	0.000	0.000	0.000	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	0.540	0.000	0.01
L3	125.00-120.00	A	0.000	0.000	0.000	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	2.615	0.000	0.02
L4	120.00-115.00	A	0.000	0.000	0.000	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	3.134	0.000	0.03
L5	115.00-110.00	A	0.000	0.000	0.000	0.000	0.01
		B	0.000	0.000	0.000	0.000	0.00
		C	0.000	0.000	3.134	0.000	0.03
L6	110.00-109.75	A	0.000	0.000	0.000	0.000	0.00
		B	0.000	0.000	0.050	0.000	0.00
		C	0.000	0.000	0.157	0.000	0.00
L7	109.75-104.75	A	0.000	0.000	5.417	0.000	0.01
		B	0.000	0.000	6.415	0.000	0.04
		C	0.000	0.000	8.550	0.000	0.03
L8	104.75-99.75	A	0.000	0.000	5.417	0.000	0.01
		B	0.000	0.000	6.415	0.000	0.04
		C	0.000	0.000	8.550	0.000	0.03
L9	99.75-94.75	A	0.000	0.000	5.481	0.000	0.01
		B	0.000	0.000	6.479	0.000	0.04
		C	0.000	0.000	8.615	0.000	0.05
L10	94.75-90.92	A	0.000	0.000	5.426	0.000	0.01
		B	0.000	0.000	6.190	0.000	0.03
		C	0.000	0.000	7.826	0.000	0.04
L11	90.92-90.67	A	0.000	0.000	0.354	0.000	0.00
		B	0.000	0.000	0.404	0.000	0.00
		C	0.000	0.000	0.511	0.000	0.00
L12	90.67-83.08	A	0.000	0.000	10.753	0.000	0.07
		B	0.000	0.000	12.267	0.000	0.06
		C	0.000	0.000	15.509	0.000	0.08
L13	83.08-81.41	A	0.000	0.000	2.366	0.000	0.03
		B	0.000	0.000	2.699	0.000	0.01
		C	0.000	0.000	3.412	0.000	0.02
L14	81.41-76.41	A	0.000	0.000	7.797	0.000	0.08
		B	0.000	0.000	8.795	0.000	0.04
		C	0.000	0.000	10.931	0.000	0.05
L15	76.41-74.50	A	0.000	0.000	4.330	0.000	0.03
		B	0.000	0.000	4.711	0.000	0.01
		C	0.000	0.000	5.527	0.000	0.02
L16	74.50-74.25	A	0.000	0.000	0.567	0.000	0.00
		B	0.000	0.000	0.617	0.000	0.00
		C	0.000	0.000	0.723	0.000	0.00
L17	74.25-70.58	A	0.000	0.000	8.321	0.000	0.06
		B	0.000	0.000	9.054	0.000	0.03
		C	0.000	0.000	10.621	0.000	0.04
L18	70.58-70.33	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.758	0.000	0.00
		C	0.000	0.000	0.865	0.000	0.00
L19	70.33-66.33	A	0.000	0.000	11.333	0.000	0.06
		B	0.000	0.000	12.132	0.000	0.03
		C	0.000	0.000	13.840	0.000	0.04
L20	66.33-66.08	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.758	0.000	0.00
		C	0.000	0.000	0.865	0.000	0.00
L21	66.08-61.08	A	0.000	0.000	14.482	0.000	0.08
		B	0.000	0.000	15.480	0.000	0.04
		C	0.000	0.000	17.615	0.000	0.05
L22	61.08-60.00	A	0.000	0.000	3.870	0.000	0.02
		B	0.000	0.000	4.086	0.000	0.01
		C	0.000	0.000	4.547	0.000	0.01

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
L23	60.00-59.75	A	0.000	0.000	0.896	0.000	0.00
		B	0.000	0.000	0.946	0.000	0.00
		C	0.000	0.000	1.053	0.000	0.00
L24	59.75-54.75	A	0.000	0.000	17.917	0.000	0.08
		B	0.000	0.000	18.915	0.000	0.04
		C	0.000	0.000	21.050	0.000	0.05
L25	54.75-49.75	A	0.000	0.000	17.917	0.000	0.08
		B	0.000	0.000	18.915	0.000	0.04
		C	0.000	0.000	21.050	0.000	0.05
L26	49.75-44.78	A	0.000	0.000	16.519	0.000	0.08
		B	0.000	0.000	17.511	0.000	0.04
		C	0.000	0.000	19.634	0.000	0.05
L27	44.78-43.78	A	0.000	0.000	2.833	0.000	0.02
		B	0.000	0.000	3.033	0.000	0.01
		C	0.000	0.000	3.460	0.000	0.01
L28	43.78-38.78	A	0.000	0.000	14.167	0.000	0.08
		B	0.000	0.000	15.165	0.000	0.04
		C	0.000	0.000	17.300	0.000	0.05
L29	38.78-35.50	A	0.000	0.000	9.293	0.000	0.05
		B	0.000	0.000	9.948	0.000	0.02
		C	0.000	0.000	11.349	0.000	0.03
L30	35.50-35.25	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.758	0.000	0.00
		C	0.000	0.000	0.865	0.000	0.00
L31	35.25-30.25	A	0.000	0.000	14.167	0.000	0.08
		B	0.000	0.000	15.165	0.000	0.04
		C	0.000	0.000	17.300	0.000	0.05
L32	30.25-25.25	A	0.000	0.000	14.167	0.000	0.08
		B	0.000	0.000	15.165	0.000	0.04
		C	0.000	0.000	17.300	0.000	0.05
L33	25.25-20.25	A	0.000	0.000	14.167	0.000	0.08
		B	0.000	0.000	15.165	0.000	0.04
		C	0.000	0.000	17.300	0.000	0.05
L34	20.25-15.75	A	0.000	0.000	12.750	0.000	0.07
		B	0.000	0.000	13.648	0.000	0.03
		C	0.000	0.000	15.570	0.000	0.05
L35	15.75-15.50	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.758	0.000	0.00
		C	0.000	0.000	0.865	0.000	0.00
L36	15.50-10.50	A	0.000	0.000	14.167	0.000	0.08
		B	0.000	0.000	15.165	0.000	0.04
		C	0.000	0.000	17.300	0.000	0.05
L37	10.50-7.25	A	0.000	0.000	9.208	0.000	0.05
		B	0.000	0.000	9.857	0.000	0.02
		C	0.000	0.000	10.948	0.000	0.03
L38	7.25-7.00	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.758	0.000	0.00
		C	0.000	0.000	0.838	0.000	0.00
L39	7.00-5.83	A	0.000	0.000	3.315	0.000	0.02
		B	0.000	0.000	3.515	0.000	0.01
		C	0.000	0.000	3.834	0.000	0.01
L40	5.83-5.58	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.708	0.000	0.00
		C	0.000	0.000	0.708	0.000	0.00
L41	5.58-4.08	A	0.000	0.000	4.250	0.000	0.00
		B	0.000	0.000	4.250	0.000	0.00
		C	0.000	0.000	4.250	0.000	0.00
L42	4.08-3.83	A	0.000	0.000	0.708	0.000	0.00
		B	0.000	0.000	0.708	0.000	0.00
		C	0.000	0.000	0.708	0.000	0.00
L43	3.83-0.00	A	0.000	0.000	10.852	0.000	0.00
		B	0.000	0.000	10.852	0.000	0.00
		C	0.000	0.000	10.852	0.000	0.00

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	135.00-130.00	A	0.977	0.000	0.000	0.000	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	2.494	0.000	0.03
L2	130.00-125.00	A	0.973	0.000	0.000	0.000	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	2.486	0.000	0.03
L3	125.00-120.00	A	0.969	0.000	0.000	0.000	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	7.010	0.000	0.07
L4	120.00-115.00	A	0.965	0.000	0.000	0.000	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	8.125	0.000	0.08
L5	115.00-110.00	A	0.961	0.000	0.000	0.000	0.000	0.01
		B		0.000	0.000	0.000	0.000	0.00
		C		0.000	0.000	8.106	0.000	0.08
L6	110.00-109.75	A	0.959	0.000	0.000	0.000	0.000	0.00
		B		0.000	0.000	0.098	0.000	0.00
		C		0.000	0.000	0.405	0.000	0.00
L7	109.75-104.75	A	0.956	0.000	0.000	5.962	0.000	0.04
		B		0.000	0.000	7.916	0.000	0.12
		C		0.000	0.000	14.047	0.000	0.12
L8	104.75-99.75	A	0.952	0.000	0.000	5.959	0.000	0.04
		B		0.000	0.000	7.909	0.000	0.12
		C		0.000	0.000	14.024	0.000	0.12
L9	99.75-94.75	A	0.947	0.000	0.000	6.067	0.000	0.04
		B		0.000	0.000	8.012	0.000	0.12
		C		0.000	0.000	14.110	0.000	0.14
L10	94.75-90.92	A	0.943	0.000	0.000	6.148	0.000	0.04
		B		0.000	0.000	7.634	0.000	0.10
		C		0.000	0.000	12.294	0.000	0.11
L11	90.92-90.67	A	0.941	0.000	0.000	0.401	0.000	0.00
		B		0.000	0.000	0.498	0.000	0.01
		C		0.000	0.000	0.802	0.000	0.01
L12	90.67-83.08	A	0.936	0.000	0.000	12.174	0.000	0.13
		B		0.000	0.000	15.110	0.000	0.20
		C		0.000	0.000	24.311	0.000	0.22
L13	83.08-81.41	A	0.931	0.000	0.000	2.679	0.000	0.04
		B		0.000	0.000	3.325	0.000	0.04
		C		0.000	0.000	5.349	0.000	0.05
L14	81.41-76.41	A	0.927	0.000	0.000	8.810	0.000	0.12
		B		0.000	0.000	10.735	0.000	0.13
		C		0.000	0.000	16.765	0.000	0.15
L15	76.41-74.50	A	0.923	0.000	0.000	4.875	0.000	0.06
		B		0.000	0.000	5.609	0.000	0.06
		C		0.000	0.000	7.907	0.000	0.07
L16	74.50-74.25	A	0.922	0.000	0.000	0.638	0.000	0.01
		B		0.000	0.000	0.734	0.000	0.01
		C		0.000	0.000	1.035	0.000	0.01
L17	74.25-70.58	A	0.919	0.000	0.000	9.365	0.000	0.11
		B		0.000	0.000	10.772	0.000	0.12
		C		0.000	0.000	15.178	0.000	0.13
L18	70.58-70.33	A	0.917	0.000	0.000	0.800	0.000	0.01
		B		0.000	0.000	0.896	0.000	0.01
		C		0.000	0.000	1.195	0.000	0.01
L19	70.33-66.33	A	0.914	0.000	0.000	12.796	0.000	0.13
		B		0.000	0.000	14.326	0.000	0.13
		C		0.000	0.000	19.113	0.000	0.15
L20	66.33-66.08	A	0.911	0.000	0.000	0.799	0.000	0.01
		B		0.000	0.000	0.895	0.000	0.01
		C		0.000	0.000	1.194	0.000	0.01
L21	66.08-61.08	A	0.908	0.000	0.000	16.373	0.000	0.16
		B		0.000	0.000	18.279	0.000	0.17
		C		0.000	0.000	24.239	0.000	0.18
L22	61.08-60.00	A	0.903	0.000	0.000	4.455	0.000	0.04
		B		0.000	0.000	4.866	0.000	0.04
		C		0.000	0.000	6.150	0.000	0.04

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
L23	60.00-59.75	A	0.902	0.000	0.000	1.031	0.000	0.01
		B		0.000	0.000	1.126	0.000	0.01
		C		0.000	0.000	1.423	0.000	0.01
L24	59.75-54.75	A	0.898	0.000	0.000	20.611	0.000	0.18
		B		0.000	0.000	22.507	0.000	0.19
		C		0.000	0.000	28.435	0.000	0.20
L25	54.75-49.75	A	0.890	0.000	0.000	20.586	0.000	0.18
		B		0.000	0.000	22.474	0.000	0.19
		C		0.000	0.000	28.373	0.000	0.20
L26	49.75-44.78	A	0.881	0.000	0.000	18.843	0.000	0.17
		B		0.000	0.000	20.711	0.000	0.18
		C		0.000	0.000	26.544	0.000	0.19
L27	44.78-43.78	A	0.875	0.000	0.000	3.186	0.000	0.03
		B		0.000	0.000	3.562	0.000	0.03
		C		0.000	0.000	4.735	0.000	0.04
L28	43.78-38.78	A	0.869	0.000	0.000	15.905	0.000	0.15
		B		0.000	0.000	17.772	0.000	0.16
		C		0.000	0.000	23.599	0.000	0.17
L29	38.78-35.50	A	0.860	0.000	0.000	10.422	0.000	0.10
		B		0.000	0.000	11.641	0.000	0.10
		C		0.000	0.000	15.442	0.000	0.11
L30	35.50-35.25	A	0.856	0.000	0.000	0.794	0.000	0.01
		B		0.000	0.000	0.887	0.000	0.01
		C		0.000	0.000	1.176	0.000	0.01
L31	35.25-30.25	A	0.849	0.000	0.000	15.865	0.000	0.15
		B		0.000	0.000	17.713	0.000	0.16
		C		0.000	0.000	23.469	0.000	0.17
L32	30.25-25.25	A	0.835	0.000	0.000	15.837	0.000	0.15
		B		0.000	0.000	17.671	0.000	0.15
		C		0.000	0.000	23.379	0.000	0.17
L33	25.25-20.25	A	0.819	0.000	0.000	15.804	0.000	0.15
		B		0.000	0.000	17.621	0.000	0.15
		C		0.000	0.000	23.272	0.000	0.17
L34	20.25-15.75	A	0.800	0.000	0.000	14.190	0.000	0.13
		B		0.000	0.000	15.808	0.000	0.13
		C		0.000	0.000	20.834	0.000	0.15
L35	15.75-15.50	A	0.789	0.000	0.000	0.787	0.000	0.01
		B		0.000	0.000	0.877	0.000	0.01
		C		0.000	0.000	1.154	0.000	0.01
L36	15.50-10.50	A	0.774	0.000	0.000	15.715	0.000	0.14
		B		0.000	0.000	17.488	0.000	0.14
		C		0.000	0.000	22.982	0.000	0.16
L37	10.50-7.25	A	0.745	0.000	0.000	10.177	0.000	0.09
		B		0.000	0.000	11.310	0.000	0.09
		C		0.000	0.000	13.699	0.000	0.09
L38	7.25-7.00	A	0.729	0.000	0.000	0.781	0.000	0.01
		B		0.000	0.000	0.868	0.000	0.01
		C		0.000	0.000	1.035	0.000	0.01
L39	7.00-5.83	A	0.722	0.000	0.000	3.653	0.000	0.03
		B		0.000	0.000	3.997	0.000	0.03
		C		0.000	0.000	4.662	0.000	0.03
L40	5.83-5.58	A	0.713	0.000	0.000	0.780	0.000	0.00
		B		0.000	0.000	0.780	0.000	0.00
		C		0.000	0.000	0.780	0.000	0.00
L41	5.58-4.08	A	0.701	0.000	0.000	4.671	0.000	0.02
		B		0.000	0.000	4.671	0.000	0.02
		C		0.000	0.000	4.671	0.000	0.02
L42	4.08-3.83	A	0.688	0.000	0.000	0.777	0.000	0.00
		B		0.000	0.000	0.777	0.000	0.00
		C		0.000	0.000	0.777	0.000	0.00
L43	3.83-0.00	A	0.639	0.000	0.000	11.831	0.000	0.04
		B		0.000	0.000	11.831	0.000	0.04
		C		0.000	0.000	11.831	0.000	0.04

Feed Line Center of Pressure

Section	Elevation	CP_X	CP_Z	CP_X Ice	CP_Z Ice
	ft	in	in	in	in
L1	135.00-130.00	0.0000	0.9867	0.0000	1.7990
L2	130.00-125.00	0.0000	0.9867	0.0000	1.7954
L3	125.00-120.00	0.9030	3.1424	0.7681	2.9847
L4	120.00-115.00	1.0467	3.4853	0.8758	3.1506
L5	115.00-110.00	1.0467	3.4853	0.8755	3.1486
L6	110.00-109.75	1.4240	1.6963	1.2718	2.0237
L7	109.75-104.75	0.4581	0.5505	0.7177	1.1496
L8	104.75-99.75	0.4776	0.5825	0.7520	1.2182
L9	99.75-94.75	0.4928	0.6091	0.7787	1.2739
L10	94.75-90.92	0.4366	0.5453	0.7043	1.1612
L11	90.92-90.67	0.4427	0.5554	0.7153	1.1832
L12	90.67-83.08	0.4552	0.5757	0.7373	1.2269
L13	83.08-81.41	0.4644	0.5906	0.7543	1.2607
L14	81.41-76.41	0.4475	0.5725	0.7340	1.2317
L15	76.41-74.50	0.3576	0.4600	0.6080	1.0244
L16	74.50-74.25	0.3587	0.4622	0.6103	1.0296
L17	74.25-70.58	0.3636	0.4700	0.6189	1.0464
L18	70.58-70.33	0.3147	0.4079	0.5437	0.9212
L19	70.33-66.33	0.3194	0.4152	0.5518	0.9368
L20	66.33-66.08	0.3235	0.4218	0.5591	0.9511
L21	66.08-61.08	0.3241	0.4240	0.5601	0.9551
L22	61.08-60.00	0.2824	0.3709	0.4885	0.8352
L23	60.00-59.75	0.2836	0.3728	0.4906	0.8392
L24	59.75-54.75	0.2887	0.3806	0.4990	0.8556
L25	54.75-49.75	0.2979	0.3950	0.5145	0.8854
L26	49.75-44.78	0.3242	0.4320	0.5592	0.9654
L27	44.78-43.78	0.3645	0.4861	0.6288	1.0864
L28	43.78-38.78	0.3706	0.4956	0.6374	1.1026
L29	38.78-35.50	0.3787	0.5084	0.6505	1.1277
L30	35.50-35.25	0.3822	0.5138	0.6559	1.1381
L31	35.25-30.25	0.3874	0.5219	0.6639	1.1534
L32	30.25-25.25	0.3970	0.5370	0.6783	1.1808
L33	25.25-20.25	0.4065	0.5519	0.6917	1.2061
L34	20.25-15.75	0.4153	0.5658	0.7032	1.2274
L35	15.75-15.50	0.4726	0.6448	0.7079	1.2361
L36	15.50-10.50	0.4783	0.6537	0.7123	1.2439
L37	10.50-7.25	0.4910	0.5180	0.7332	0.8419
L38	7.25-7.00	0.4955	0.4952	0.7368	0.7694
L39	7.00-5.83	0.4284	0.4284	0.6407	0.6700
L40	5.83-5.58	0.0000	0.0000	0.0000	0.0000
L41	5.58-4.08	0.0000	0.0000	0.0000	0.0000
L42	4.08-3.83	0.0000	0.0000	0.0000	0.0000
L43	3.83-0.00	0.0000	0.0000	0.0000	0.0000

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

Shielding Factor Ka

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L1	2	Safety Line 3/8"	130.00 - 135.00	1.0000	1.0000
L1	3	Step Pegs	130.00 - 135.00	1.0000	1.0000
L2	2	Safety Line 3/8"	125.00 - 130.00	1.0000	1.0000
L2	3	Step Pegs	125.00 - 130.00	1.0000	1.0000
L3	2	Safety Line 3/8"	120.00 - 125.00	1.0000	1.0000
L3	3	Step Pegs	120.00 - 125.00	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L3	8	FB-L98B-034-XXX(3/8)	120.00 - 124.00	1.0000	1.0000
L3	9	WR-VG86ST-BRDA(7/8)	120.00 - 124.00	1.0000	1.0000
L4	2	Safety Line 3/8"	115.00 - 120.00	1.0000	1.0000
L4	3	Step Pegs	115.00 - 120.00	1.0000	1.0000
L4	8	FB-L98B-034-XXX(3/8)	115.00 - 120.00	1.0000	1.0000
L4	9	WR-VG86ST-BRDA(7/8)	115.00 - 120.00	1.0000	1.0000
L5	2	Safety Line 3/8"	110.00 - 115.00	1.0000	1.0000
L5	3	Step Pegs	110.00 - 115.00	1.0000	1.0000
L5	8	FB-L98B-034-XXX(3/8)	110.00 - 115.00	1.0000	1.0000
L5	9	WR-VG86ST-BRDA(7/8)	110.00 - 115.00	1.0000	1.0000
L6	2	Safety Line 3/8"	109.75 - 110.00	1.0000	1.0000
L6	3	Step Pegs	109.75 - 110.00	1.0000	1.0000
L6	8	FB-L98B-034-XXX(3/8)	109.75 - 110.00	1.0000	1.0000
L6	9	WR-VG86ST-BRDA(7/8)	109.75 - 110.00	1.0000	1.0000
L6	14	HB158-21U6S24-xxM_TMO(1-5/8)	109.75 - 110.00	1.0000	1.0000
L7	2	Safety Line 3/8"	104.75 - 109.75	1.0000	1.0000
L7	3	Step Pegs	104.75 - 109.75	1.0000	1.0000
L7	8	FB-L98B-034-XXX(3/8)	104.75 - 109.75	1.0000	1.0000
L7	9	WR-VG86ST-BRDA(7/8)	104.75 - 109.75	1.0000	1.0000
L7	14	HB158-21U6S24-xxM_TMO(1-5/8)	104.75 - 109.75	1.0000	1.0000
L7	33	CCI-065125	104.75 - 109.75	1.0000	1.0000
L7	34	CCI-065125	104.75 - 109.75	1.0000	1.0000
L7	35	CCI-065125	104.75 - 109.75	1.0000	1.0000
L8	2	Safety Line 3/8"	99.75 - 104.75	1.0000	1.0000
L8	3	Step Pegs	99.75 - 104.75	1.0000	1.0000
L8	8	FB-L98B-034-XXX(3/8)	99.75 - 104.75	1.0000	1.0000
L8	9	WR-VG86ST-BRDA(7/8)	99.75 - 104.75	1.0000	1.0000
L8	14	HB158-21U6S24-xxM_TMO(1-5/8)	99.75 - 104.75	1.0000	1.0000
L8	33	CCI-065125	99.75 - 104.75	1.0000	1.0000
L8	34	CCI-065125	99.75 - 104.75	1.0000	1.0000
L8	35	CCI-065125	99.75 - 104.75	1.0000	1.0000
L9	2	Safety Line 3/8"	94.75 - 99.75	1.0000	1.0000
L9	3	Step Pegs	94.75 - 99.75	1.0000	1.0000
L9	8	FB-L98B-034-XXX(3/8)	94.75 - 99.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L9	9	WR-VG86ST-BRDA(7/8)	94.75 - 99.75	1.0000	1.0000
L9	14	HB158-21U6S24-xxM_TMO(1-5/8)	94.75 - 99.75	1.0000	1.0000
L9	27	CCI-085125	94.75 - 95.56	1.0000	1.0000
L9	28	CCI-085125	94.75 - 95.56	1.0000	1.0000
L9	29	CCI-085125	94.75 - 95.56	1.0000	1.0000
L9	33	CCI-065125	95.75 - 99.75	1.0000	1.0000
L9	34	CCI-065125	95.75 - 99.75	1.0000	1.0000
L9	35	CCI-065125	95.75 - 99.75	1.0000	1.0000
L10	2	Safety Line 3/8"	90.92 - 94.75	1.0000	1.0000
L10	3	Step Pegs	90.92 - 94.75	1.0000	1.0000
L10	8	FB-L98B-034-XXX(3/8)	90.92 - 94.75	1.0000	1.0000
L10	9	WR-VG86ST-BRDA(7/8)	90.92 - 94.75	1.0000	1.0000
L10	14	HB158-21U6S24-xxM_TMO(1-5/8)	90.92 - 94.75	1.0000	1.0000
L10	27	CCI-085125	90.92 - 94.75	1.0000	1.0000
L10	28	CCI-085125	90.92 - 94.75	1.0000	1.0000
L10	29	CCI-085125	90.92 - 94.75	1.0000	1.0000
L11	2	Safety Line 3/8"	90.67 - 90.92	1.0000	1.0000
L11	3	Step Pegs	90.67 - 90.92	1.0000	1.0000
L11	8	FB-L98B-034-XXX(3/8)	90.67 - 90.92	1.0000	1.0000
L11	9	WR-VG86ST-BRDA(7/8)	90.67 - 90.92	1.0000	1.0000
L11	14	HB158-21U6S24-xxM_TMO(1-5/8)	90.67 - 90.92	1.0000	1.0000
L11	27	CCI-085125	90.67 - 90.92	1.0000	1.0000
L11	28	CCI-085125	90.67 - 90.92	1.0000	1.0000
L11	29	CCI-085125	90.67 - 90.92	1.0000	1.0000
L12	2	Safety Line 3/8"	83.08 - 90.67	1.0000	1.0000
L12	3	Step Pegs	83.08 - 90.67	1.0000	1.0000
L12	8	FB-L98B-034-XXX(3/8)	83.08 - 90.67	1.0000	1.0000
L12	9	WR-VG86ST-BRDA(7/8)	83.08 - 90.67	1.0000	1.0000
L12	14	HB158-21U6S24-xxM_TMO(1-5/8)	83.08 - 90.67	1.0000	1.0000
L12	27	CCI-085125	83.08 - 90.67	1.0000	1.0000
L12	28	CCI-085125	83.08 - 90.67	1.0000	1.0000
L12	29	CCI-085125	83.08 - 90.67	1.0000	1.0000
L13	2	Safety Line 3/8"	81.41 - 83.08	1.0000	1.0000
L13	3	Step Pegs	81.41 - 83.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L13	8	FB-L98B-034-XXX(3/8)	81.41 - 83.08	1.0000	1.0000
L13	9	WR-VG86ST-BRDA(7/8)	81.41 - 83.08	1.0000	1.0000
L13	14	HB158-21U6S24-xxM_TMO(1-5/8)	81.41 - 83.08	1.0000	1.0000
L13	27	CCI-085125	81.41 - 83.08	1.0000	1.0000
L13	28	CCI-085125	81.41 - 83.08	1.0000	1.0000
L13	29	CCI-085125	81.41 - 83.08	1.0000	1.0000
L14	2	Safety Line 3/8"	76.41 - 81.41	1.0000	1.0000
L14	3	Step Pegs	76.41 - 81.41	1.0000	1.0000
L14	8	FB-L98B-034-XXX(3/8)	76.41 - 81.41	1.0000	1.0000
L14	9	WR-VG86ST-BRDA(7/8)	76.41 - 81.41	1.0000	1.0000
L14	14	HB158-21U6S24-xxM_TMO(1-5/8)	76.41 - 81.41	1.0000	1.0000
L14	27	CCI-085125	76.41 - 81.41	1.0000	1.0000
L14	28	CCI-085125	76.41 - 81.41	1.0000	1.0000
L14	29	CCI-085125	76.41 - 81.41	1.0000	1.0000
L14	30	CCI-065125	76.41 - 77.25	1.0000	1.0000
L14	31	CCI-065125	76.41 - 77.25	1.0000	1.0000
L14	32	CCI-065125	76.41 - 77.25	1.0000	1.0000
L15	2	Safety Line 3/8"	74.50 - 76.41	1.0000	1.0000
L15	3	Step Pegs	74.50 - 76.41	1.0000	1.0000
L15	8	FB-L98B-034-XXX(3/8)	74.50 - 76.41	1.0000	1.0000
L15	9	WR-VG86ST-BRDA(7/8)	74.50 - 76.41	1.0000	1.0000
L15	14	HB158-21U6S24-xxM_TMO(1-5/8)	74.50 - 76.41	1.0000	1.0000
L15	27	CCI-085125	74.50 - 76.41	1.0000	1.0000
L15	28	CCI-085125	74.50 - 76.41	1.0000	1.0000
L15	29	CCI-085125	74.50 - 76.41	1.0000	1.0000
L15	30	CCI-065125	74.50 - 76.41	1.0000	1.0000
L15	31	CCI-065125	74.50 - 76.41	1.0000	1.0000
L15	32	CCI-065125	74.50 - 76.41	1.0000	1.0000
L16	2	Safety Line 3/8"	74.25 - 74.50	1.0000	1.0000
L16	3	Step Pegs	74.25 - 74.50	1.0000	1.0000
L16	8	FB-L98B-034-XXX(3/8)	74.25 - 74.50	1.0000	1.0000
L16	9	WR-VG86ST-BRDA(7/8)	74.25 - 74.50	1.0000	1.0000
L16	14	HB158-21U6S24-xxM_TMO(1-5/8)	74.25 - 74.50	1.0000	1.0000
L16	27	CCI-085125	74.25 - 74.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L16	28	CCI-085125	74.25 - 74.50	1.0000	1.0000
L16	29	CCI-085125	74.25 - 74.50	1.0000	1.0000
L16	30	CCI-065125	74.25 - 74.50	1.0000	1.0000
L16	31	CCI-065125	74.25 - 74.50	1.0000	1.0000
L16	32	CCI-065125	74.25 - 74.50	1.0000	1.0000
L17	2	Safety Line 3/8"	70.58 - 74.25	1.0000	1.0000
L17	3	Step Pegs	70.58 - 74.25	1.0000	1.0000
L17	8	FB-L98B-034-XXX(3/8)	70.58 - 74.25	1.0000	1.0000
L17	9	WR-VG86ST-BRDA(7/8)	70.58 - 74.25	1.0000	1.0000
L17	14	HB158-21U6S24-xxM_TMO(1-5/8)	70.58 - 74.25	1.0000	1.0000
L17	24	CCI-085125	70.58 - 70.58	1.0000	1.0000
L17	25	CCI-085125	70.58 - 70.58	1.0000	1.0000
L17	26	CCI-085125	70.58 - 70.58	1.0000	1.0000
L17	27	CCI-085125	70.58 - 74.25	1.0000	1.0000
L17	28	CCI-085125	70.58 - 74.25	1.0000	1.0000
L17	29	CCI-085125	70.58 - 74.25	1.0000	1.0000
L17	30	CCI-065125	70.58 - 74.25	1.0000	1.0000
L17	31	CCI-065125	70.58 - 74.25	1.0000	1.0000
L17	32	CCI-065125	70.58 - 74.25	1.0000	1.0000
L18	2	Safety Line 3/8"	70.33 - 70.58	1.0000	1.0000
L18	3	Step Pegs	70.33 - 70.58	1.0000	1.0000
L18	8	FB-L98B-034-XXX(3/8)	70.33 - 70.58	1.0000	1.0000
L18	9	WR-VG86ST-BRDA(7/8)	70.33 - 70.58	1.0000	1.0000
L18	14	HB158-21U6S24-xxM_TMO(1-5/8)	70.33 - 70.58	1.0000	1.0000
L18	24	CCI-085125	70.33 - 70.58	1.0000	1.0000
L18	25	CCI-085125	70.33 - 70.58	1.0000	1.0000
L18	26	CCI-085125	70.33 - 70.58	1.0000	1.0000
L18	27	CCI-085125	70.33 - 70.58	1.0000	1.0000
L18	28	CCI-085125	70.33 - 70.58	1.0000	1.0000
L18	29	CCI-085125	70.33 - 70.58	1.0000	1.0000
L19	2	Safety Line 3/8"	66.33 - 70.33	1.0000	1.0000
L19	3	Step Pegs	66.33 - 70.33	1.0000	1.0000
L19	8	FB-L98B-034-XXX(3/8)	66.33 - 70.33	1.0000	1.0000
L19	9	WR-VG86ST-BRDA(7/8)	66.33 - 70.33	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L19	14	HB158-21U6S24-xxM_TMO(1-5/8)	66.33 - 70.33	1.0000	1.0000
L19	24	CCI-085125	66.33 - 70.33	1.0000	1.0000
L19	25	CCI-085125	66.33 - 70.33	1.0000	1.0000
L19	26	CCI-085125	66.33 - 70.33	1.0000	1.0000
L19	27	CCI-085125	66.33 - 70.33	1.0000	1.0000
L19	28	CCI-085125	66.33 - 70.33	1.0000	1.0000
L19	29	CCI-085125	66.33 - 70.33	1.0000	1.0000
L20	2	Safety Line 3/8"	66.08 - 66.33	1.0000	1.0000
L20	3	Step Pegs	66.08 - 66.33	1.0000	1.0000
L20	8	FB-L98B-034-XXX(3/8)	66.08 - 66.33	1.0000	1.0000
L20	9	WR-VG86ST-BRDA(7/8)	66.08 - 66.33	1.0000	1.0000
L20	14	HB158-21U6S24-xxM_TMO(1-5/8)	66.08 - 66.33	1.0000	1.0000
L20	24	CCI-085125	66.08 - 66.33	1.0000	1.0000
L20	25	CCI-085125	66.08 - 66.33	1.0000	1.0000
L20	26	CCI-085125	66.08 - 66.33	1.0000	1.0000
L20	27	CCI-085125	66.08 - 66.33	1.0000	1.0000
L20	28	CCI-085125	66.08 - 66.33	1.0000	1.0000
L20	29	CCI-085125	66.08 - 66.33	1.0000	1.0000
L21	2	Safety Line 3/8"	61.08 - 66.08	1.0000	1.0000
L21	3	Step Pegs	61.08 - 66.08	1.0000	1.0000
L21	8	FB-L98B-034-XXX(3/8)	61.08 - 66.08	1.0000	1.0000
L21	9	WR-VG86ST-BRDA(7/8)	61.08 - 66.08	1.0000	1.0000
L21	14	HB158-21U6S24-xxM_TMO(1-5/8)	61.08 - 66.08	1.0000	1.0000
L21	24	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	25	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	26	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	27	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	28	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	29	CCI-085125	61.08 - 66.08	1.0000	1.0000
L21	37	CCI-045100	61.08 - 61.50	1.0000	1.0000
L21	38	CCI-045100	61.08 - 61.50	1.0000	1.0000
L21	39	CCI-045100	61.08 - 61.50	1.0000	1.0000
L22	2	Safety Line 3/8"	60.00 - 61.08	1.0000	1.0000
L22	3	Step Pegs	60.00 - 61.08	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L22	8	FB-L98B-034-XXX(3/8)	60.00 - 61.08	1.0000	1.0000
L22	9	WR-VG86ST-BRDA(7/8)	60.00 - 61.08	1.0000	1.0000
L22	14	HB158-21U6S24-xxM_TMO(1-5/8)	60.00 - 61.08	1.0000	1.0000
L22	24	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	25	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	26	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	27	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	28	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	29	CCI-085125	60.00 - 61.08	1.0000	1.0000
L22	37	CCI-045100	60.00 - 61.08	1.0000	1.0000
L22	38	CCI-045100	60.00 - 61.08	1.0000	1.0000
L22	39	CCI-045100	60.00 - 61.08	1.0000	1.0000
L23	2	Safety Line 3/8"	59.75 - 60.00	1.0000	1.0000
L23	3	Step Pegs	59.75 - 60.00	1.0000	1.0000
L23	8	FB-L98B-034-XXX(3/8)	59.75 - 60.00	1.0000	1.0000
L23	9	WR-VG86ST-BRDA(7/8)	59.75 - 60.00	1.0000	1.0000
L23	14	HB158-21U6S24-xxM_TMO(1-5/8)	59.75 - 60.00	1.0000	1.0000
L23	24	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	25	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	26	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	27	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	28	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	29	CCI-085125	59.75 - 60.00	1.0000	1.0000
L23	37	CCI-045100	59.75 - 60.00	1.0000	1.0000
L23	38	CCI-045100	59.75 - 60.00	1.0000	1.0000
L23	39	CCI-045100	59.75 - 60.00	1.0000	1.0000
L24	2	Safety Line 3/8"	54.75 - 59.75	1.0000	1.0000
L24	3	Step Pegs	54.75 - 59.75	1.0000	1.0000
L24	8	FB-L98B-034-XXX(3/8)	54.75 - 59.75	1.0000	1.0000
L24	9	WR-VG86ST-BRDA(7/8)	54.75 - 59.75	1.0000	1.0000
L24	14	HB158-21U6S24-xxM_TMO(1-5/8)	54.75 - 59.75	1.0000	1.0000
L24	24	CCI-085125	54.75 - 59.75	1.0000	1.0000
L24	25	CCI-085125	54.75 - 59.75	1.0000	1.0000
L24	26	CCI-085125	54.75 - 59.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L24	27	CCI-085125	54.75 - 59.75	1.0000	1.0000
L24	28	CCI-085125	54.75 - 59.75	1.0000	1.0000
L24	29	CCI-085125	54.75 - 59.75	1.0000	1.0000
L24	37	CCI-045100	54.75 - 59.75	1.0000	1.0000
L24	38	CCI-045100	54.75 - 59.75	1.0000	1.0000
L24	39	CCI-045100	54.75 - 59.75	1.0000	1.0000
L25	2	Safety Line 3/8"	49.75 - 54.75	1.0000	1.0000
L25	3	Step Pegs	49.75 - 54.75	1.0000	1.0000
L25	8	FB-L98B-034-XXX(3/8)	49.75 - 54.75	1.0000	1.0000
L25	9	WR-VG86ST-BRDA(7/8)	49.75 - 54.75	1.0000	1.0000
L25	14	HB158-21U6S24-xxM_TMO(1-5/8)	49.75 - 54.75	1.0000	1.0000
L25	24	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	25	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	26	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	27	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	28	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	29	CCI-085125	49.75 - 54.75	1.0000	1.0000
L25	37	CCI-045100	49.75 - 54.75	1.0000	1.0000
L25	38	CCI-045100	49.75 - 54.75	1.0000	1.0000
L25	39	CCI-045100	49.75 - 54.75	1.0000	1.0000
L26	2	Safety Line 3/8"	44.78 - 49.75	1.0000	1.0000
L26	3	Step Pegs	44.78 - 49.75	1.0000	1.0000
L26	8	FB-L98B-034-XXX(3/8)	44.78 - 49.75	1.0000	1.0000
L26	9	WR-VG86ST-BRDA(7/8)	44.78 - 49.75	1.0000	1.0000
L26	14	HB158-21U6S24-xxM_TMO(1-5/8)	44.78 - 49.75	1.0000	1.0000
L26	24	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	25	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	26	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	27	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	28	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	29	CCI-085125	44.78 - 49.75	1.0000	1.0000
L26	37	CCI-045100	46.50 - 49.75	1.0000	1.0000
L26	38	CCI-045100	46.50 - 49.75	1.0000	1.0000
L26	39	CCI-045100	46.50 - 49.75	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L27	2	Safety Line 3/8"	43.78 - 44.78	1.0000	1.0000
L27	3	Step Pegs	43.78 - 44.78	1.0000	1.0000
L27	8	FB-L98B-034-XXX(3/8)	43.78 - 44.78	1.0000	1.0000
L27	9	WR-VG86ST-BRDA(7/8)	43.78 - 44.78	1.0000	1.0000
L27	14	HB158-21U6S24-xxM_TMO(1-5/8)	43.78 - 44.78	1.0000	1.0000
L27	24	CCI-085125	43.78 - 44.78	1.0000	1.0000
L27	25	CCI-085125	43.78 - 44.78	1.0000	1.0000
L27	26	CCI-085125	43.78 - 44.78	1.0000	1.0000
L27	27	CCI-085125	43.78 - 44.78	1.0000	1.0000
L27	28	CCI-085125	43.78 - 44.78	1.0000	1.0000
L27	29	CCI-085125	43.78 - 44.78	1.0000	1.0000
L28	2	Safety Line 3/8"	38.78 - 43.78	1.0000	1.0000
L28	3	Step Pegs	38.78 - 43.78	1.0000	1.0000
L28	8	FB-L98B-034-XXX(3/8)	38.78 - 43.78	1.0000	1.0000
L28	9	WR-VG86ST-BRDA(7/8)	38.78 - 43.78	1.0000	1.0000
L28	14	HB158-21U6S24-xxM_TMO(1-5/8)	38.78 - 43.78	1.0000	1.0000
L28	24	CCI-085125	38.78 - 43.78	1.0000	1.0000
L28	25	CCI-085125	38.78 - 43.78	1.0000	1.0000
L28	26	CCI-085125	38.78 - 43.78	1.0000	1.0000
L28	27	CCI-085125	38.78 - 43.78	1.0000	1.0000
L28	28	CCI-085125	38.78 - 43.78	1.0000	1.0000
L28	29	CCI-085125	38.78 - 43.78	1.0000	1.0000
L29	2	Safety Line 3/8"	35.50 - 38.78	1.0000	1.0000
L29	3	Step Pegs	35.50 - 38.78	1.0000	1.0000
L29	8	FB-L98B-034-XXX(3/8)	35.50 - 38.78	1.0000	1.0000
L29	9	WR-VG86ST-BRDA(7/8)	35.50 - 38.78	1.0000	1.0000
L29	14	HB158-21U6S24-xxM_TMO(1-5/8)	35.50 - 38.78	1.0000	1.0000
L29	24	CCI-085125	35.50 - 38.78	1.0000	1.0000
L29	25	CCI-085125	35.50 - 38.78	1.0000	1.0000
L29	26	CCI-085125	35.50 - 38.78	1.0000	1.0000
L29	27	CCI-085125	35.50 - 38.78	1.0000	1.0000
L29	28	CCI-085125	35.50 - 38.78	1.0000	1.0000
L29	29	CCI-085125	35.50 - 38.78	1.0000	1.0000
L30	2	Safety Line 3/8"	35.25 - 35.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L30	3	Step Pegs	35.25 - 35.50	1.0000	1.0000
L30	8	FB-L98B-034-XXX(3/8)	35.25 - 35.50	1.0000	1.0000
L30	9	WR-VG86ST-BRDA(7/8)	35.25 - 35.50	1.0000	1.0000
L30	14	HB158-21U6S24-xxM_TMO(1-5/8)	35.25 - 35.50	1.0000	1.0000
L30	24	CCI-085125	35.25 - 35.50	1.0000	1.0000
L30	25	CCI-085125	35.25 - 35.50	1.0000	1.0000
L30	26	CCI-085125	35.25 - 35.50	1.0000	1.0000
L30	27	CCI-085125	35.25 - 35.50	1.0000	1.0000
L30	28	CCI-085125	35.25 - 35.50	1.0000	1.0000
L30	29	CCI-085125	35.25 - 35.50	1.0000	1.0000
L31	2	Safety Line 3/8"	30.25 - 35.25	1.0000	1.0000
L31	3	Step Pegs	30.25 - 35.25	1.0000	1.0000
L31	8	FB-L98B-034-XXX(3/8)	30.25 - 35.25	1.0000	1.0000
L31	9	WR-VG86ST-BRDA(7/8)	30.25 - 35.25	1.0000	1.0000
L31	14	HB158-21U6S24-xxM_TMO(1-5/8)	30.25 - 35.25	1.0000	1.0000
L31	24	CCI-085125	30.25 - 35.25	1.0000	1.0000
L31	25	CCI-085125	30.25 - 35.25	1.0000	1.0000
L31	26	CCI-085125	30.25 - 35.25	1.0000	1.0000
L31	27	CCI-085125	30.25 - 35.25	1.0000	1.0000
L31	28	CCI-085125	30.25 - 35.25	1.0000	1.0000
L31	29	CCI-085125	30.25 - 35.25	1.0000	1.0000
L32	2	Safety Line 3/8"	25.25 - 30.25	1.0000	1.0000
L32	3	Step Pegs	25.25 - 30.25	1.0000	1.0000
L32	8	FB-L98B-034-XXX(3/8)	25.25 - 30.25	1.0000	1.0000
L32	9	WR-VG86ST-BRDA(7/8)	25.25 - 30.25	1.0000	1.0000
L32	14	HB158-21U6S24-xxM_TMO(1-5/8)	25.25 - 30.25	1.0000	1.0000
L32	24	CCI-085125	25.25 - 30.25	1.0000	1.0000
L32	25	CCI-085125	25.25 - 30.25	1.0000	1.0000
L32	26	CCI-085125	25.25 - 30.25	1.0000	1.0000
L32	27	CCI-085125	25.25 - 30.25	1.0000	1.0000
L32	28	CCI-085125	25.25 - 30.25	1.0000	1.0000
L32	29	CCI-085125	25.25 - 30.25	1.0000	1.0000
L33	2	Safety Line 3/8"	20.25 - 25.25	1.0000	1.0000
L33	3	Step Pegs	20.25 - 25.25	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L33	8	FB-L98B-034-XXX(3/8)	20.25 - 25.25	1.0000	1.0000
L33	9	WR-VG86ST-BRDA(7/8)	20.25 - 25.25	1.0000	1.0000
L33	14	HB158-21U6S24-xxM_TMO(1-5/8)	20.25 - 25.25	1.0000	1.0000
L33	24	CCI-085125	20.25 - 25.25	1.0000	1.0000
L33	25	CCI-085125	20.25 - 25.25	1.0000	1.0000
L33	26	CCI-085125	20.25 - 25.25	1.0000	1.0000
L33	27	CCI-085125	20.25 - 25.25	1.0000	1.0000
L33	28	CCI-085125	20.25 - 25.25	1.0000	1.0000
L33	29	CCI-085125	20.25 - 25.25	1.0000	1.0000
L34	2	Safety Line 3/8"	15.75 - 20.25	1.0000	1.0000
L34	3	Step Pegs	15.75 - 20.25	1.0000	1.0000
L34	8	FB-L98B-034-XXX(3/8)	15.75 - 20.25	1.0000	1.0000
L34	9	WR-VG86ST-BRDA(7/8)	15.75 - 20.25	1.0000	1.0000
L34	14	HB158-21U6S24-xxM_TMO(1-5/8)	15.75 - 20.25	1.0000	1.0000
L34	24	CCI-085125	15.75 - 20.25	1.0000	1.0000
L34	25	CCI-085125	15.75 - 20.25	1.0000	1.0000
L34	26	CCI-085125	15.75 - 20.25	1.0000	1.0000
L34	27	CCI-085125	15.75 - 20.25	1.0000	1.0000
L34	28	CCI-085125	15.75 - 20.25	1.0000	1.0000
L34	29	CCI-085125	15.75 - 20.25	1.0000	1.0000
L35	2	Safety Line 3/8"	15.50 - 15.75	1.0000	1.0000
L35	3	Step Pegs	15.50 - 15.75	1.0000	1.0000
L35	8	FB-L98B-034-XXX(3/8)	15.50 - 15.75	1.0000	1.0000
L35	9	WR-VG86ST-BRDA(7/8)	15.50 - 15.75	1.0000	1.0000
L35	14	HB158-21U6S24-xxM_TMO(1-5/8)	15.50 - 15.75	1.0000	1.0000
L35	24	CCI-085125	15.50 - 15.75	1.0000	1.0000
L35	25	CCI-085125	15.50 - 15.75	1.0000	1.0000
L35	26	CCI-085125	15.50 - 15.75	1.0000	1.0000
L35	27	CCI-085125	15.50 - 15.75	1.0000	1.0000
L35	28	CCI-085125	15.50 - 15.75	1.0000	1.0000
L35	29	CCI-085125	15.50 - 15.75	1.0000	1.0000
L36	2	Safety Line 3/8"	10.50 - 15.50	1.0000	1.0000
L36	3	Step Pegs	10.50 - 15.50	1.0000	1.0000
L36	8	FB-L98B-034-XXX(3/8)	10.50 - 15.50	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L36	9	WR-VG86ST-BRDA(7/8)	10.50 - 15.50	1.0000	1.0000
L36	14	HB158-21U6S24-xxM_TMO(1-5/8)	10.50 - 15.50	1.0000	1.0000
L36	24	CCI-085125	10.50 - 15.50	1.0000	1.0000
L36	25	CCI-085125	10.50 - 15.50	1.0000	1.0000
L36	26	CCI-085125	10.50 - 15.50	1.0000	1.0000
L36	27	CCI-085125	10.50 - 15.50	1.0000	1.0000
L36	28	CCI-085125	10.50 - 15.50	1.0000	1.0000
L36	29	CCI-085125	10.50 - 15.50	1.0000	1.0000
L37	2	Safety Line 3/8"	10.00 - 10.50	1.0000	1.0000
L37	3	Step Pegs	10.00 - 10.50	1.0000	1.0000
L37	8	FB-L98B-034-XXX(3/8)	7.25 - 10.50	1.0000	1.0000
L37	9	WR-VG86ST-BRDA(7/8)	7.25 - 10.50	1.0000	1.0000
L37	14	HB158-21U6S24-xxM_TMO(1-5/8)	7.25 - 10.50	1.0000	1.0000
L37	24	CCI-085125	7.25 - 10.50	1.0000	1.0000
L37	25	CCI-085125	7.25 - 10.50	1.0000	1.0000
L37	26	CCI-085125	7.25 - 10.50	1.0000	1.0000
L37	27	CCI-085125	7.25 - 10.50	1.0000	1.0000
L37	28	CCI-085125	7.25 - 10.50	1.0000	1.0000
L37	29	CCI-085125	7.25 - 10.50	1.0000	1.0000
L38	8	FB-L98B-034-XXX(3/8)	7.00 - 7.25	1.0000	1.0000
L38	9	WR-VG86ST-BRDA(7/8)	7.00 - 7.25	1.0000	1.0000
L38	14	HB158-21U6S24-xxM_TMO(1-5/8)	7.00 - 7.25	1.0000	1.0000
L38	24	CCI-085125	7.00 - 7.25	1.0000	1.0000
L38	25	CCI-085125	7.00 - 7.25	1.0000	1.0000
L38	26	CCI-085125	7.00 - 7.25	1.0000	1.0000
L38	27	CCI-085125	7.00 - 7.25	1.0000	1.0000
L38	28	CCI-085125	7.00 - 7.25	1.0000	1.0000
L38	29	CCI-085125	7.00 - 7.25	1.0000	1.0000
L39	8	FB-L98B-034-XXX(3/8)	6.00 - 7.00	1.0000	1.0000
L39	9	WR-VG86ST-BRDA(7/8)	6.00 - 7.00	1.0000	1.0000
L39	14	HB158-21U6S24-xxM_TMO(1-5/8)	6.00 - 7.00	1.0000	1.0000
L39	24	CCI-085125	5.83 - 7.00	1.0000	1.0000
L39	25	CCI-085125	5.83 - 7.00	1.0000	1.0000
L39	26	CCI-085125	5.83 - 7.00	1.0000	1.0000
L39	27	CCI-085125	5.83 - 7.00	1.0000	1.0000
L39	28	CCI-085125	5.83 - 7.00	1.0000	1.0000
L39	29	CCI-085125	5.83 - 7.00	1.0000	1.0000
L40	24	CCI-085125	5.58 - 5.83	1.0000	1.0000
L40	25	CCI-085125	5.58 - 5.83	1.0000	1.0000
L40	26	CCI-085125	5.58 - 5.83	1.0000	1.0000
L40	27	CCI-085125	5.58 - 5.83	1.0000	1.0000
L40	28	CCI-085125	5.58 - 5.83	1.0000	1.0000
L40	29	CCI-085125	5.58 - 5.83	1.0000	1.0000
L41	24	CCI-085125	4.08 - 5.58	1.0000	1.0000
L41	25	CCI-085125	4.08 - 5.58	1.0000	1.0000
L41	26	CCI-085125	4.08 - 5.58	1.0000	1.0000
L41	27	CCI-085125	4.08 - 5.58	1.0000	1.0000
L41	28	CCI-085125	4.08 - 5.58	1.0000	1.0000
L41	29	CCI-085125	4.08 - 5.58	1.0000	1.0000
L42	24	CCI-085125	3.83 - 4.08	1.0000	1.0000
L42	25	CCI-085125	3.83 - 4.08	1.0000	1.0000
L42	26	CCI-085125	3.83 - 4.08	1.0000	1.0000
L42	27	CCI-085125	3.83 - 4.08	1.0000	1.0000
L42	28	CCI-085125	3.83 - 4.08	1.0000	1.0000
L42	29	CCI-085125	3.83 - 4.08	1.0000	1.0000
L43	24	CCI-085125	0.00 - 3.83	1.0000	1.0000

Tower Section	Feed Line Record No.	Description	Feed Line Segment Elev.	K_a No Ice	K_a Ice
L43	25	CCI-085125	0.00 - 3.83	1.0000	1.0000
L43	26	CCI-085125	0.00 - 3.83	1.0000	1.0000
L43	27	CCI-085125	0.00 - 3.83	1.0000	1.0000
L43	28	CCI-085125	0.00 - 3.83	1.0000	1.0000
L43	29	CCI-085125	0.00 - 3.83	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
L7	33	CCI-065125	104.75 - 109.75	Auto	0.7693
L7	34	CCI-065125	104.75 - 109.75	Auto	0.7693
L7	35	CCI-065125	104.75 - 109.75	Auto	0.7693
L8	33	CCI-065125	99.75 - 104.75	Auto	0.7239
L8	34	CCI-065125	99.75 - 104.75	Auto	0.7239
L8	35	CCI-065125	99.75 - 104.75	Auto	0.7239
L9	27	CCI-085125	94.75 - 95.56	Auto	0.7440
L9	28	CCI-085125	94.75 - 95.56	Auto	0.7440
L9	29	CCI-085125	94.75 - 95.56	Auto	0.7440
L9	33	CCI-065125	95.75 - 99.75	Auto	0.6817
L9	34	CCI-065125	95.75 - 99.75	Auto	0.6817
L9	35	CCI-065125	95.75 - 99.75	Auto	0.6817
L10	27	CCI-085125	90.92 - 94.75	Auto	0.7249
L10	28	CCI-085125	90.92 - 94.75	Auto	0.7249
L10	29	CCI-085125	90.92 - 94.75	Auto	0.7249
L11	27	CCI-085125	90.67 - 90.92	Auto	0.7538
L11	28	CCI-085125	90.67 - 90.92	Auto	0.7538
L11	29	CCI-085125	90.67 - 90.92	Auto	0.7538
L12	27	CCI-085125	83.08 - 90.67	Auto	0.7244
L12	28	CCI-085125	83.08 - 90.67	Auto	0.7244
L12	29	CCI-085125	83.08 - 90.67	Auto	0.7244
L13	27	CCI-085125	81.41 - 83.08	Auto	0.7176
L13	28	CCI-085125	81.41 - 83.08	Auto	0.7176
L13	29	CCI-085125	81.41 - 83.08	Auto	0.7176
L14	27	CCI-085125	76.41 - 81.41	Auto	0.6938
L14	28	CCI-085125	76.41 - 81.41	Auto	0.6938
L14	29	CCI-085125	76.41 - 81.41	Auto	0.6938

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L14	30	CCI-065125	76.41 - 77.25	Auto	0.5865
L14	31	CCI-065125	76.41 - 77.25	Auto	0.5865
L14	32	CCI-065125	76.41 - 77.25	Auto	0.5865
L15	27	CCI-085125	74.50 - 76.41	Auto	0.6746
L15	28	CCI-085125	74.50 - 76.41	Auto	0.6746
L15	29	CCI-085125	74.50 - 76.41	Auto	0.6746
L15	30	CCI-065125	74.50 - 76.41	Auto	0.5745
L15	31	CCI-065125	74.50 - 76.41	Auto	0.5745
L15	32	CCI-065125	74.50 - 76.41	Auto	0.5745
L16	27	CCI-085125	74.25 - 74.50	Auto	0.7677
L16	28	CCI-085125	74.25 - 74.50	Auto	0.7677
L16	29	CCI-085125	74.25 - 74.50	Auto	0.7677
L16	30	CCI-065125	74.25 - 74.50	Auto	0.6963
L16	31	CCI-065125	74.25 - 74.50	Auto	0.6963
L16	32	CCI-065125	74.25 - 74.50	Auto	0.6963
L17	24	CCI-085125	70.58 - 70.58	Auto	0.7340
L17	25	CCI-085125	70.58 - 70.58	Auto	0.7340
L17	26	CCI-085125	70.58 - 70.58	Auto	0.7340
L17	27	CCI-085125	70.58 - 74.25	Auto	0.7428
L17	28	CCI-085125	70.58 - 74.25	Auto	0.7428
L17	29	CCI-085125	70.58 - 74.25	Auto	0.7428
L17	30	CCI-065125	70.58 - 74.25	Auto	0.6637
L17	31	CCI-065125	70.58 - 74.25	Auto	0.6637
L17	32	CCI-065125	70.58 - 74.25	Auto	0.6637
L18	24	CCI-085125	70.33 - 70.58	Auto	0.7334
L18	25	CCI-085125	70.33 - 70.58	Auto	0.7334
L18	26	CCI-085125	70.33 - 70.58	Auto	0.7334
L18	27	CCI-085125	70.33 - 70.58	Auto	0.7334
L18	28	CCI-085125	70.33 - 70.58	Auto	0.7334
L18	29	CCI-085125	70.33 - 70.58	Auto	0.7334
L19	24	CCI-085125	66.33 - 70.33	Auto	0.7128
L19	25	CCI-085125	66.33 - 70.33	Auto	0.7128
L19	26	CCI-085125	66.33 - 70.33	Auto	0.7128
L19	27	CCI-085125	66.33 - 70.33	Auto	0.7128

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L19	28	CCI-085125	66.33 - 70.33	Auto	0.7128
L19	29	CCI-085125	66.33 - 70.33	Auto	0.7128
L20	24	CCI-085125	66.08 - 66.33	Auto	0.7336
L20	25	CCI-085125	66.08 - 66.33	Auto	0.7336
L20	26	CCI-085125	66.08 - 66.33	Auto	0.7336
L20	27	CCI-085125	66.08 - 66.33	Auto	0.7336
L20	28	CCI-085125	66.08 - 66.33	Auto	0.7336
L20	29	CCI-085125	66.08 - 66.33	Auto	0.7336
L21	24	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	25	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	26	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	27	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	28	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	29	CCI-085125	61.08 - 66.08	Auto	0.7055
L21	37	CCI-045100	61.08 - 61.50	Auto	0.4229
L21	38	CCI-045100	61.08 - 61.50	Auto	0.4229
L21	39	CCI-045100	61.08 - 61.50	Auto	0.4229
L22	24	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	25	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	26	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	27	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	28	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	29	CCI-085125	60.00 - 61.08	Auto	0.6909
L22	37	CCI-045100	60.00 - 61.08	Auto	0.4161
L22	38	CCI-045100	60.00 - 61.08	Auto	0.4161
L22	39	CCI-045100	60.00 - 61.08	Auto	0.4161
L23	24	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	25	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	26	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	27	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	28	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	29	CCI-085125	59.75 - 60.00	Auto	0.6877
L23	37	CCI-045100	59.75 - 60.00	Auto	0.4100
L23	38	CCI-045100	59.75 - 60.00	Auto	0.4100

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L23	39	CCI-045100	59.75 - 60.00	Auto	0.4100
L24	24	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	25	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	26	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	27	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	28	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	29	CCI-085125	54.75 - 59.75	Auto	0.6595
L24	37	CCI-045100	54.75 - 59.75	Auto	0.3569
L24	38	CCI-045100	54.75 - 59.75	Auto	0.3569
L24	39	CCI-045100	54.75 - 59.75	Auto	0.3569
L25	24	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	25	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	26	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	27	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	28	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	29	CCI-085125	49.75 - 54.75	Auto	0.6251
L25	37	CCI-045100	49.75 - 54.75	Auto	0.2919
L25	38	CCI-045100	49.75 - 54.75	Auto	0.2919
L25	39	CCI-045100	49.75 - 54.75	Auto	0.2919
L26	24	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	25	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	26	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	27	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	28	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	29	CCI-085125	44.78 - 49.75	Auto	0.6011
L26	37	CCI-045100	46.50 - 49.75	Auto	0.2544
L26	38	CCI-045100	46.50 - 49.75	Auto	0.2544
L26	39	CCI-045100	46.50 - 49.75	Auto	0.2544
L27	24	CCI-085125	43.78 - 44.78	Auto	0.6049
L27	25	CCI-085125	43.78 - 44.78	Auto	0.6049
L27	26	CCI-085125	43.78 - 44.78	Auto	0.6049
L27	27	CCI-085125	43.78 - 44.78	Auto	0.6049
L27	28	CCI-085125	43.78 - 44.78	Auto	0.6049
L27	29	CCI-085125	43.78 - 44.78	Auto	0.6049

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L28	24	CCI-085125	38.78 - 43.78	Auto	0.5853
L28	25	CCI-085125	38.78 - 43.78	Auto	0.5853
L28	26	CCI-085125	38.78 - 43.78	Auto	0.5853
L28	27	CCI-085125	38.78 - 43.78	Auto	0.5853
L28	28	CCI-085125	38.78 - 43.78	Auto	0.5853
L28	29	CCI-085125	38.78 - 43.78	Auto	0.5853
L29	24	CCI-085125	35.50 - 38.78	Auto	0.5602
L29	25	CCI-085125	35.50 - 38.78	Auto	0.5602
L29	26	CCI-085125	35.50 - 38.78	Auto	0.5602
L29	27	CCI-085125	35.50 - 38.78	Auto	0.5602
L29	28	CCI-085125	35.50 - 38.78	Auto	0.5602
L29	29	CCI-085125	35.50 - 38.78	Auto	0.5602
L30	24	CCI-085125	35.25 - 35.50	Auto	0.5517
L30	25	CCI-085125	35.25 - 35.50	Auto	0.5517
L30	26	CCI-085125	35.25 - 35.50	Auto	0.5517
L30	27	CCI-085125	35.25 - 35.50	Auto	0.5517
L30	28	CCI-085125	35.25 - 35.50	Auto	0.5517
L30	29	CCI-085125	35.25 - 35.50	Auto	0.5517
L31	24	CCI-085125	30.25 - 35.25	Auto	0.5287
L31	25	CCI-085125	30.25 - 35.25	Auto	0.5287
L31	26	CCI-085125	30.25 - 35.25	Auto	0.5287
L31	27	CCI-085125	30.25 - 35.25	Auto	0.5287
L31	28	CCI-085125	30.25 - 35.25	Auto	0.5287
L31	29	CCI-085125	30.25 - 35.25	Auto	0.5287
L32	24	CCI-085125	25.25 - 30.25	Auto	0.4994
L32	25	CCI-085125	25.25 - 30.25	Auto	0.4994
L32	26	CCI-085125	25.25 - 30.25	Auto	0.4994
L32	27	CCI-085125	25.25 - 30.25	Auto	0.4994
L32	28	CCI-085125	25.25 - 30.25	Auto	0.4994
L32	29	CCI-085125	25.25 - 30.25	Auto	0.4994
L33	24	CCI-085125	20.25 - 25.25	Auto	0.4702
L33	25	CCI-085125	20.25 - 25.25	Auto	0.4702
L33	26	CCI-085125	20.25 - 25.25	Auto	0.4702
L33	27	CCI-085125	20.25 - 25.25	Auto	0.4702

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L33	28	CCI-085125	20.25 - 25.25	Auto	0.4702
L33	29	CCI-085125	20.25 - 25.25	Auto	0.4702
L34	24	CCI-085125	15.75 - 20.25	Auto	0.4422
L34	25	CCI-085125	15.75 - 20.25	Auto	0.4422
L34	26	CCI-085125	15.75 - 20.25	Auto	0.4422
L34	27	CCI-085125	15.75 - 20.25	Auto	0.4422
L34	28	CCI-085125	15.75 - 20.25	Auto	0.4422
L34	29	CCI-085125	15.75 - 20.25	Auto	0.4422
L35	24	CCI-085125	15.50 - 15.75	Auto	0.4411
L35	25	CCI-085125	15.50 - 15.75	Auto	0.4411
L35	26	CCI-085125	15.50 - 15.75	Auto	0.4411
L35	27	CCI-085125	15.50 - 15.75	Auto	0.4411
L35	28	CCI-085125	15.50 - 15.75	Auto	0.4411
L35	29	CCI-085125	15.50 - 15.75	Auto	0.4411
L36	24	CCI-085125	10.50 - 15.50	Auto	0.4233
L36	25	CCI-085125	10.50 - 15.50	Auto	0.4233
L36	26	CCI-085125	10.50 - 15.50	Auto	0.4233
L36	27	CCI-085125	10.50 - 15.50	Auto	0.4233
L36	28	CCI-085125	10.50 - 15.50	Auto	0.4233
L36	29	CCI-085125	10.50 - 15.50	Auto	0.4233
L37	24	CCI-085125	7.25 - 10.50	Auto	0.3982
L37	25	CCI-085125	7.25 - 10.50	Auto	0.3982
L37	26	CCI-085125	7.25 - 10.50	Auto	0.3982
L37	27	CCI-085125	7.25 - 10.50	Auto	0.3982
L37	28	CCI-085125	7.25 - 10.50	Auto	0.3982
L37	29	CCI-085125	7.25 - 10.50	Auto	0.3982
L38	24	CCI-085125	7.00 - 7.25	Auto	0.3898
L38	25	CCI-085125	7.00 - 7.25	Auto	0.3898
L38	26	CCI-085125	7.00 - 7.25	Auto	0.3898
L38	27	CCI-085125	7.00 - 7.25	Auto	0.3898
L38	28	CCI-085125	7.00 - 7.25	Auto	0.3898
L38	29	CCI-085125	7.00 - 7.25	Auto	0.3898
L39	24	CCI-085125	5.83 - 7.00	Auto	0.3864
L39	25	CCI-085125	5.83 - 7.00	Auto	0.3864
L39	26	CCI-085125	5.83 - 7.00	Auto	0.3864
L39	27	CCI-085125	5.83 - 7.00	Auto	0.3864
L39	28	CCI-085125	5.83 - 7.00	Auto	0.3864
L39	29	CCI-085125	5.83 - 7.00	Auto	0.3864
L40	24	CCI-085125	5.58 - 5.83	Auto	0.4140
L40	25	CCI-085125	5.58 - 5.83	Auto	0.4140
L40	26	CCI-085125	5.58 - 5.83	Auto	0.4140
L40	27	CCI-085125	5.58 - 5.83	Auto	0.4140
L40	28	CCI-085125	5.58 - 5.83	Auto	0.4140
L40	29	CCI-085125	5.58 - 5.83	Auto	0.4140
L41	24	CCI-085125	4.08 - 5.58	Auto	0.4098
L41	25	CCI-085125	4.08 - 5.58	Auto	0.4098
L41	26	CCI-085125	4.08 - 5.58	Auto	0.4098
L41	27	CCI-085125	4.08 - 5.58	Auto	0.4098

Tower Section	Attachment Record No.	Description	Attachment Segment Elev.	Ratio Calculation Method	Effective Width Ratio
L41	28	CCI-085125	4.08 - 5.58	Auto	0.4098
L41	29	CCI-085125	4.08 - 5.58	Auto	0.4098
L42	24	CCI-085125	3.83 - 4.08	Auto	0.4056
L42	25	CCI-085125	3.83 - 4.08	Auto	0.4056
L42	26	CCI-085125	3.83 - 4.08	Auto	0.4056
L42	27	CCI-085125	3.83 - 4.08	Auto	0.4056
L42	28	CCI-085125	3.83 - 4.08	Auto	0.4056
L42	29	CCI-085125	3.83 - 4.08	Auto	0.4056
L43	24	CCI-085125	0.00 - 3.83	Auto	0.3906
L43	25	CCI-085125	0.00 - 3.83	Auto	0.3906
L43	26	CCI-085125	0.00 - 3.83	Auto	0.3906
L43	27	CCI-085125	0.00 - 3.83	Auto	0.3906
L43	28	CCI-085125	0.00 - 3.83	Auto	0.3906
L43	29	CCI-085125	0.00 - 3.83	Auto	0.3906

Discrete Tower Loads

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
******									
DB408	A	From Leg	4.00 0.00 7.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.90 3.42 4.94	1.90 3.42 4.94	0.02 0.02 0.03
SL11-840/UT4	B	From Leg	4.00 0.00 9.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	3.57 5.10 6.64	3.57 5.10 6.64	0.03 0.05 0.09
SRL-101A	B	From Leg	4.00 0.00 6.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	3.43 5.00 6.57	3.43 5.00 6.57	0.01 0.05 0.09
DB222	C	From Leg	4.00 0.00 6.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.60 2.88 4.16	1.60 2.88 4.16	0.02 0.02 0.03
DB404	C	From Leg	4.00 0.00 4.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.14 2.05 2.96	1.14 2.05 2.96	0.01 0.02 0.02
(4) 8' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(4) 8' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(4) 8' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	133.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
T-Arm Mount [TA 602-3]	C	None		0.0000	133.00	No Ice 1/2" Ice 1" Ice	13.40 16.44 19.70	13.40 16.44 19.70	0.77 1.00 1.29
******									
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	A	From Leg	4.00 0.00 2.00	0.0000	124.00	No Ice 1/2" Ice	14.86 15.72 16.59	6.25 7.02 7.80	0.12 0.23 0.35

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
						1" Ice			
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	B	From Leg	4.00 0.00 2.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	14.86 15.72 16.59	6.25 7.02 7.80	0.12 0.23 0.35
(2) EPBQ-654L8H8-L2 w/ Mount Pipe	C	From Leg	4.00 0.00 2.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	14.86 15.72 16.59	6.25 7.02 7.80	0.12 0.23 0.35
RRUS 4478 B14	A	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.84 2.01 2.19	1.06 1.20 1.34	0.06 0.08 0.09
RRUS 4478 B14	B	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.84 2.01 2.19	1.06 1.20 1.34	0.06 0.08 0.09
RRUS 4478 B14	C	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.84 2.01 2.19	1.06 1.20 1.34	0.06 0.08 0.09
RRUS 4449 B5/B12	A	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.97 2.14 2.33	1.41 1.56 1.73	0.07 0.09 0.11
RRUS 4449 B5/B12	B	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.97 2.14 2.33	1.41 1.56 1.73	0.07 0.09 0.11
RRUS 4449 B5/B12	C	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.97 2.14 2.33	1.41 1.56 1.73	0.07 0.09 0.11
RRUS 8843 B2/B66A	A	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	1.35 1.50 1.65	0.07 0.09 0.11
RRUS 8843 B2/B66A	B	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	1.35 1.50 1.65	0.07 0.09 0.11
RRUS 8843 B2/B66A	C	From Leg	4.00 0.00 3.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.64 1.80 1.97	1.35 1.50 1.65	0.07 0.09 0.11
DC6-48-60-18-8F	A	From Leg	1.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	0.92 1.46 1.64	0.92 1.46 1.64	0.02 0.04 0.06
DC6-48-60-18-8F	B	From Leg	1.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	0.92 1.46 1.64	0.92 1.46 1.64	0.02 0.04 0.06
4' x 2" Pipe Mount	A	From Leg	1.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	0.79 1.03 1.28	0.79 1.03 1.28	0.03 0.04 0.04
4' x 2" Pipe Mount	B	From Leg	1.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	0.79 1.03 1.28	0.79 1.03 1.28	0.03 0.04 0.04
(2) 8' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06

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
(2) 8' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(2) 8' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	124.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
Side Arm Mount [SO 201-3]	C	None		0.0000	124.00	No Ice 1/2" Ice 1" Ice	5.27 6.47 7.78	5.27 6.47 7.78	0.29 0.35 0.43
Sector Mount [SM 502-3]	C	None		0.0000	124.00	No Ice 1/2" Ice 1" Ice	29.82 42.21 54.43	29.82 42.21 54.43	1.67 2.27 3.05
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APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
(2) 4' x 2" Pipe Mount	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	0.79 1.03 1.28	0.79 1.03 1.28	0.03 0.04 0.04
(2) 4' x 2" Pipe Mount	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	0.79 1.03 1.28	0.79 1.03 1.28	0.03 0.04 0.04
(2) 4' x 2" Pipe Mount	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	0.79 1.03 1.28	0.79 1.03 1.28	0.03 0.04 0.04
Platform Mount [LP 714-1]	C	None		0.0000	110.00	No Ice 1/2" Ice 1" Ice	37.51 41.70 45.89	37.51 41.70 45.89	1.60 2.50 3.46
Side Arm Mount [SO 701-3]	C	None		0.0000	110.00	No Ice 1/2" Ice 1" Ice	3.02 4.18 5.33	3.02 4.18 5.33	0.20 0.24 0.28
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APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	14.69 15.46 16.23	6.87 7.55 8.25	0.18 0.31 0.45
AIR 6419 B41_TMO_CCIV2 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	5.79 6.24 6.71	2.97 3.34 3.73	0.10 0.14 0.19
AIR 6419 B41_TMO_CCIV2 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	5.79 6.24 6.71	2.97 3.34 3.73	0.10 0.14 0.19
AIR 6419 B41_TMO_CCIV2 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	5.79 6.24 6.71	2.97 3.34 3.73	0.10 0.14 0.19
RADIO 4449 B71 B85A_T-MOBILE	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12

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
						1" Ice			
RADIO 4449 B71 B85A_T-MOBILE	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12
RADIO 4449 B71 B85A_T-MOBILE	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	1.97 2.15 2.33	1.59 1.75 1.92	0.07 0.09 0.12
RADIO 4460 B2/B25 B66_TMO	A	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51	1.69 1.85 2.02	0.11 0.13 0.16
RADIO 4460 B2/B25 B66_TMO	B	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51	1.69 1.85 2.02	0.11 0.13 0.16
RADIO 4460 B2/B25 B66_TMO	C	From Leg	4.00 0.00 0.00	0.0000	110.00	No Ice 1/2" Ice 1" Ice	2.14 2.32 2.51	1.69 1.85 2.02	0.11 0.13 0.16
Handrail Kit [#HRK12]	C	None		0.0000	110.00	No Ice 1/2" Ice 1" Ice	4.56 6.39 8.18	4.56 6.39 8.18	0.27 0.35 0.44
******									
APXVTM14-ALU-I20 w/ Mount Pipe	A	From Leg	4.00 0.00 -1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	4.09 4.48 4.88	2.86 3.23 3.61	0.08 0.13 0.19
APXVTM14-ALU-I20 w/ Mount Pipe	B	From Leg	4.00 0.00 -1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	4.09 4.48 4.88	2.86 3.23 3.61	0.08 0.13 0.19
APXVTM14-ALU-I20 w/ Mount Pipe	C	From Leg	4.00 0.00 -1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	4.09 4.48 4.88	2.86 3.23 3.61	0.08 0.13 0.19
NNVV-65B-R4 w/ Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.55 8.04 8.53	4.23 4.67 5.12	0.11 0.20 0.30
NNVV-65B-R4 w/ Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.55 8.04 8.53	4.23 4.67 5.12	0.11 0.20 0.30
NNVV-65B-R4 w/ Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	7.55 8.04 8.53	4.23 4.67 5.12	0.11 0.20 0.30
PCS 1900MHZ 4X45W-65MHZ	A	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	0.06 0.08 0.11
PCS 1900MHZ 4X45W-65MHZ	B	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	0.06 0.08 0.11
PCS 1900MHZ 4X45W-65MHZ	C	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.32 2.53 2.74	2.24 2.44 2.65	0.06 0.08 0.11
(2) RRH2X50-800	A	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice	1.70 1.86 2.03	1.28 1.43 1.58	0.05 0.07 0.09

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft		C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
						1" Ice			
(2) RRH2X50-800	B	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.70 1.86 2.03	1.28 1.43 1.58	0.05 0.07 0.09
(2) RRH2X50-800	C	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.70 1.86 2.03	1.28 1.43 1.58	0.05 0.07 0.09
FZHN	A	From Leg	4.00 0.00 1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.02 2.20 2.38	0.61 0.71 0.83	0.04 0.06 0.07
FZHN	B	From Leg	4.00 0.00 1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.02 2.20 2.38	0.61 0.71 0.83	0.04 0.06 0.07
FZHN	C	From Leg	4.00 0.00 1.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	2.02 2.20 2.38	0.61 0.71 0.83	0.04 0.06 0.07
(2) 8' x 2" Mount Pipe	A	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(2) 8' x 2" Mount Pipe	B	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
(2) 8' x 2" Mount Pipe	C	From Leg	4.00 0.00 0.00	0.0000	100.00	No Ice 1/2" Ice 1" Ice	1.90 2.73 3.40	1.90 2.73 3.40	0.03 0.04 0.06
Platform Mount [LP 602-1]	C	None		0.0000	100.00	No Ice 1/2" Ice 1" Ice	31.07 34.82 38.48	31.07 34.82 38.48	1.34 1.97 2.67
Side Arm Mount [SO 701-3]	C	None		0.0000	100.00	No Ice 1/2" Ice 1" Ice	3.02 4.18 5.33	3.02 4.18 5.33	0.20 0.24 0.28
******									
(2) LPA-80080/4CF w/ Mount Pipe	A	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	2.04 2.42 2.82	5.22 5.67 6.13	0.04 0.08 0.13
(2) LPA-80080/4CF w/ Mount Pipe	B	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	2.04 2.42 2.82	5.22 5.67 6.13	0.04 0.08 0.13
(2) LPA-80080/4CF w/ Mount Pipe	C	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	2.04 2.42 2.82	5.22 5.67 6.13	0.04 0.08 0.13
DB-T1-6Z-8AB-0Z	A	From Leg	4.00 0.00 1.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	4.80 5.07 5.35	2.00 2.19 2.39	0.04 0.08 0.12
DB-T1-6Z-8AB-0Z	B	From Leg	4.00 0.00 1.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	4.80 5.07 5.35	2.00 2.19 2.39	0.04 0.08 0.12
Platform Mount [LP 303-1]	C	None		0.0000	87.00	No Ice 1/2" Ice	14.69 18.01 21.34	14.69 18.01 21.34	1.25 1.57 1.94

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
						1" Ice			
***									
(2) MX06FRO660-03 w/ Mount Pipe	A	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	6.54 7.06 7.60	5.55 6.05 6.57	0.10 0.18 0.28
(2) MX06FRO660-03 w/ Mount Pipe	B	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	6.54 7.06 7.60	5.55 6.05 6.57	0.10 0.18 0.28
(2) MX06FRO660-03 w/ Mount Pipe	C	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	6.54 7.06 7.60	5.55 6.05 6.57	0.10 0.18 0.28
MT6407-77A w/ Mount Pipe	A	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
MT6407-77A w/ Mount Pipe	B	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
MT6407-77A w/ Mount Pipe	C	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	5.94 6.47 7.02	3.10 3.55 4.02	0.10 0.13 0.18
RF4440D-13A	A	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
RF4440D-13A	B	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
RF4440D-13A	C	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.13 1.27 1.41	0.07 0.09 0.11
RF4439D-25A	A	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
RF4439D-25A	B	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
RF4439D-25A	C	From Leg	4.00 0.00 3.00	0.0000	87.00	No Ice 1/2" Ice 1" Ice	1.87 2.03 2.21	1.25 1.39 1.54	0.07 0.09 0.11
******									
KS24019-L112A	C	From Leg	3.00 0.00 1.00	0.0000	77.00	No Ice 1/2" Ice 1" Ice	0.14 0.20 0.26	0.14 0.20 0.26	0.01 0.01 0.01
2' x 2" Pipe Mount	C	From Leg	3.00 0.00 0.00	0.0000	77.00	No Ice 1/2" Ice 1" Ice	0.02 0.05 0.09	0.02 0.05 0.09	0.01 0.01 0.01
Side Arm Mount [SO 701-1]	C	From Leg	1.50 0.00 0.00	0.0000	77.00	No Ice 1/2" Ice 1" Ice	0.85 1.14 1.43	1.67 2.34 3.01	0.07 0.08 0.09
****** **									

Description	Face or Leg	Offset Type	Offsets: Horz Lateral Vert ft ft ft	Azimuth Adjustment °	Placement ft	C_AA_A Front ft^2	C_AA_A Side ft^2	Weight K
**								
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Load Combinations

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

Comb. No.	Description
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	135 - 130	Pole	Max Tension	42	0.00	0.00	0.00
			Max. Compression	26	-3.15	-0.51	-0.43
			Max. Mx	8	-1.68	-13.15	-0.05
			Max. My	14	-1.69	0.02	-13.18
			Max. Vy	8	2.96	-13.15	-0.05
			Max. Vx	14	2.96	0.02	-13.18
			Max. Torque	4			-1.18
L2	130 - 125	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-3.79	-0.52	-0.45
			Max. Mx	8	-2.18	-28.63	-0.06
			Max. My	14	-2.19	0.01	-28.63
			Max. Vy	8	3.23	-28.63	-0.06
			Max. Vx	14	3.22	0.01	-28.63
			Max. Torque	4			-1.18
L3	125 - 120	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.19	-0.69	-0.42
			Max. Mx	8	-6.33	-77.24	-0.05
			Max. My	14	-6.37	-0.08	-77.01
			Max. Vy	20	-9.65	76.92	-0.04
			Max. Vx	14	9.62	-0.08	-77.01
			Max. Torque	4			-1.26
L4	120 - 115	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-12.88	-0.70	-0.48
			Max. Mx	8	-6.88	-126.10	-0.08
			Max. My	14	-6.92	-0.09	-125.72
			Max. Vy	20	-9.90	125.79	-0.07
			Max. Vx	14	9.86	-0.09	-125.72
			Max. Torque	4			-1.26
L5	115 - 110	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-13.58	-0.71	-0.55
			Max. Mx	8	-7.45	-176.17	-0.11
			Max. My	14	-7.49	-0.11	-175.56
			Max. Vy	20	-10.13	175.85	-0.09
			Max. Vx	14	10.08	-0.11	-175.56
			Max. Torque	4			-1.26
L6	110 - 109.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-21.39	-0.72	-0.55
			Max. Mx	8	-11.36	-180.01	-0.11
			Max. My	14	-11.42	-0.11	-179.38
			Max. Vy	20	-15.37	179.69	-0.09
			Max. Vx	14	15.28	-0.11	-179.38
			Max. Torque	4			-1.26
L7	109.75 - 104.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-22.47	-0.81	-0.57
			Max. Mx	8	-12.12	-258.65	-0.13
			Max. My	14	-12.21	-0.16	-256.96
			Max. Vy	20	-16.09	258.28	-0.09
			Max. Vx	14	15.76	-0.16	-256.96
			Max. Torque	4			-1.26
L8	104.75 - 99.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-29.86	-0.91	-0.60
			Max. Mx	8	-16.01	-341.63	-0.14
			Max. My	14	-16.13	-0.22	-337.73
			Max. Vy	20	-21.18	341.28	-0.10
			Max. Vx	14	20.59	-0.22	-337.73
			Max. Torque	4			-1.25
L9	99.75 - 94.75	Pole	Max Tension	1	0.00	0.00	0.00

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Compression	26	-31.01	-1.02	-0.62
			Max. Mx	8	-16.89	-449.14	-0.16
			Max. My	14	-17.03	-0.28	-441.82
			Max. Vy	20	-21.88	448.85	-0.10
			Max. Vx	14	21.06	-0.28	-441.82
			Max. Torque	4			-1.25
L10	94.75 - 90.92	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.92	-1.10	-0.64
			Max. Mx	8	-17.59	-533.83	-0.17
			Max. My	14	-17.73	-0.33	-523.15
			Max. Vy	20	-22.43	533.62	-0.10
			Max. Vx	14	21.43	-0.33	-523.15
			Max. Torque	4			-1.25
L11	90.92 - 90.67	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-31.99	-1.11	-0.64
			Max. Mx	8	-17.66	-539.43	-0.17
			Max. My	14	-17.80	-0.33	-528.51
			Max. Vy	20	-22.45	539.23	-0.10
			Max. Vx	14	21.45	-0.33	-528.51
			Max. Torque	4			-1.25
L12	90.67 - 83.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-39.42	-1.72	-0.37
			Max. Mx	8	-21.78	-648.73	-0.16
			Max. My	14	-21.95	-0.64	-633.05
			Max. Vy	20	-27.45	648.24	0.08
			Max. Vx	14	26.30	-0.64	-633.05
			Max. Torque	4			-1.44
L13	83.08 - 81.41	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-41.64	-1.82	-0.39
			Max. Mx	8	-23.59	-787.82	-0.42
			Max. My	14	-23.76	-0.94	-766.06
			Max. Vy	20	-28.28	787.52	0.32
			Max. Vx	14	26.90	-0.94	-766.06
			Max. Torque	4			-1.44
L14	81.41 - 76.41	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-43.34	-1.62	-0.58
			Max. Mx	20	-25.00	930.82	0.45
			Max. My	14	-25.18	-1.05	-901.91
			Max. Vy	20	-29.06	930.82	0.45
			Max. Vx	14	27.48	-1.05	-901.91
			Max. Torque	4			-1.44
L15	76.41 - 74.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-43.99	-1.66	-0.59
			Max. Mx	20	-25.50	986.56	0.57
			Max. My	14	-25.68	-1.20	-954.57
			Max. Vy	20	-29.36	986.56	0.57
			Max. Vx	14	27.70	-1.20	-954.57
			Max. Torque	4			-1.33
L16	74.5 - 74.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-44.10	-1.67	-0.59
			Max. Mx	20	-25.62	993.89	0.59
			Max. My	14	-25.80	-1.22	-961.50
			Max. Vy	20	-29.38	993.89	0.59
			Max. Vx	14	27.71	-1.22	-961.50
			Max. Torque	4			-1.33
L17	74.25 - 70.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-45.70	-1.74	-0.61
			Max. Mx	20	-26.92	1102.79	0.82
			Max. My	14	-27.11	-1.50	-1064.01
			Max. Vy	20	-30.00	1102.79	0.82
			Max. Vx	14	28.17	-1.50	-1064.01
			Max. Torque	4			-1.33

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
L18	70.58 - 70.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-45.81	-1.75	-0.61
			Max. Mx	20	-27.02	1110.29	0.84
			Max. My	14	-27.21	-1.52	-1071.05
			Max. Vy	20	-30.04	1110.29	0.84
			Max. Vx	14	28.19	-1.52	-1071.05
			Max. Torque	4			-1.33
L19	70.33 - 66.33	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.59	-1.83	-0.64
			Max. Mx	20	-28.47	1231.71	1.10
			Max. My	14	-28.66	-1.83	-1184.82
			Max. Vy	20	-30.71	1231.71	1.10
			Max. Vx	14	28.70	-1.83	-1184.82
			Max. Torque	4			-1.33
L20	66.33 - 66.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-47.71	-1.84	-0.64
			Max. Mx	20	-28.58	1239.39	1.11
			Max. My	14	-28.76	-1.85	-1191.99
			Max. Vy	20	-30.75	1239.39	1.11
			Max. Vx	14	28.73	-1.85	-1191.99
			Max. Torque	4			-1.33
L21	66.08 - 61.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.11	-1.95	-0.67
			Max. Mx	20	-30.55	1395.17	1.44
			Max. My	14	-30.73	-2.24	-1337.22
			Max. Vy	20	-31.61	1395.17	1.44
			Max. Vx	14	29.38	-2.24	-1337.22
			Max. Torque	4			-1.33
L22	61.08 - 60	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.65	-1.97	-0.67
			Max. Mx	20	-30.98	1429.38	1.51
			Max. My	14	-31.17	-2.33	-1369.01
			Max. Vy	20	-31.79	1429.38	1.51
			Max. Vx	14	29.52	-2.33	-1369.01
			Max. Torque	4			-1.33
L23	60 - 59.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-50.77	-1.98	-0.68
			Max. Mx	20	-31.09	1437.33	1.52
			Max. My	14	-31.28	-2.35	-1376.40
			Max. Vy	20	-31.83	1437.33	1.52
			Max. Vx	14	29.55	-2.35	-1376.40
			Max. Torque	4			-1.33
L24	59.75 - 54.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-53.26	-2.09	-0.71
			Max. Mx	20	-33.10	1598.49	1.84
			Max. My	14	-33.28	-2.74	-1525.73
			Max. Vy	20	-32.68	1598.49	1.84
			Max. Vx	14	30.20	-2.74	-1525.73
			Max. Torque	4			-1.33
L25	54.75 - 49.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-55.78	-2.21	-0.74
			Max. Mx	20	-35.14	1763.82	2.16
			Max. My	14	-35.32	-3.13	-1678.25
			Max. Vy	20	-33.51	1763.82	2.16
			Max. Vx	14	30.84	-3.13	-1678.25
			Max. Torque	4			-1.33
L26	49.75 - 44.78	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-56.05	-2.22	-0.74
			Max. Mx	20	-35.38	1782.26	2.20
			Max. My	14	-35.55	-3.18	-1695.22
			Max. Vy	20	-33.59	1782.26	2.20
			Max. Vx	14	30.90	-3.18	-1695.22

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	4			-1.33
L27	44.78 - 43.78	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-60.63	-2.35	-0.78
			Max. Mx	20	-39.28	1967.02	2.55
			Max. My	14	-39.45	-3.61	-1864.87
			Max. Vy	20	-34.61	1967.02	2.55
			Max. Vx	14	31.70	-3.61	-1864.87
			Max. Torque	4			-1.33
L28	43.78 - 38.78	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-63.23	-2.47	-0.81
			Max. Mx	20	-41.49	2141.84	2.87
			Max. My	14	-41.65	-4.00	-2024.77
			Max. Vy	20	-35.38	2141.84	2.87
			Max. Vx	14	32.29	-4.00	-2024.77
			Max. Torque	4			-1.33
L29	38.78 - 35.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-64.95	-2.55	-0.84
			Max. Mx	20	-42.97	2258.62	3.08
			Max. My	14	-43.12	-4.26	-2131.26
			Max. Vy	20	-35.88	2258.62	3.08
			Max. Vx	14	32.68	-4.26	-2131.26
			Max. Torque	4			-1.33
L30	35.5 - 35.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-65.08	-2.56	-0.84
			Max. Mx	20	-43.10	2267.59	3.09
			Max. My	14	-43.24	-4.28	-2139.43
			Max. Vy	20	-35.91	2267.59	3.09
			Max. Vx	14	32.69	-4.28	-2139.43
			Max. Torque	4			-1.33
L31	35.25 - 30.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-67.71	-2.69	-0.88
			Max. Mx	20	-45.36	2448.87	3.41
			Max. My	14	-45.49	-4.68	-2304.27
			Max. Vy	20	-36.66	2448.87	3.41
			Max. Vx	14	33.27	-4.68	-2304.27
			Max. Torque	4			-1.33
L32	30.25 - 25.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-70.37	-2.81	-0.91
			Max. Mx	20	-47.66	2633.75	3.73
			Max. My	14	-47.77	-5.08	-2471.87
			Max. Vy	20	-37.36	2633.75	3.73
			Max. Vx	14	33.81	-5.08	-2471.87
			Max. Torque	4			-1.33
L33	25.25 - 20.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-73.04	-2.95	-0.95
			Max. Mx	20	-49.99	2822.07	4.05
			Max. My	14	-50.09	-5.47	-2642.11
			Max. Vy	20	-38.04	2822.07	4.05
			Max. Vx	14	34.32	-5.47	-2642.11
			Max. Torque	4			-1.33
L34	20.25 - 15.75	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-75.46	-3.06	-0.99
			Max. Mx	20	-52.12	2994.03	4.33
			Max. My	14	-52.19	-5.83	-2797.46
			Max. Vy	20	-38.46	2994.03	4.33
			Max. Vx	14	34.76	-5.83	-2797.46
			Max. Torque	4			-1.32
L35	15.75 - 15.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-75.61	-3.07	-0.99
			Max. Mx	20	-52.26	3003.63	4.34
			Max. My	14	-52.33	-5.85	-2806.15
			Max. Vy	20	-38.47	3003.63	4.34
			Max. Vx	14	34.77	-5.85	-2806.15

Section No.	Elevation ft	Component Type	Condition	Gov. Load Comb.	Axial K	Major Axis Moment kip-ft	Minor Axis Moment kip-ft
			Max. Torque	4			-1.32
L36	15.5 - 10.5	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-78.51	-3.20	-1.03
			Max. Mx	20	-54.84	3197.02	4.66
			Max. My	14	-54.88	-6.25	-2981.16
			Max. Vy	20	-38.94	3197.02	4.66
			Max. Vx	14	35.26	-6.25	-2981.16
			Max. Torque	4			-1.32
L37	10.5 - 7.25	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.40	-3.29	-1.03
			Max. Mx	20	-56.53	3323.75	4.87
			Max. My	14	-56.56	-6.50	-3096.18
			Max. Vy	20	-39.12	3323.75	4.87
			Max. Vx	14	35.57	-6.50	-3096.18
			Max. Torque	4			-1.32
L38	7.25 - 7	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-80.54	-3.30	-1.03
			Max. Mx	20	-56.67	3333.52	4.89
			Max. My	14	-56.70	-6.52	-3105.06
			Max. Vy	20	-39.12	3333.52	4.89
			Max. Vx	14	35.56	-6.52	-3105.06
			Max. Torque	4			-1.32
L39	7 - 5.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81.20	-3.32	-1.03
			Max. Mx	20	-57.26	3379.31	4.96
			Max. My	14	-57.28	-6.61	-3146.69
			Max. Vy	20	-39.20	3379.31	4.96
			Max. Vx	14	35.63	-6.61	-3146.69
			Max. Torque	4			-1.32
L40	5.83 - 5.58	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-81.34	-3.32	-1.03
			Max. Mx	20	-57.40	3389.10	4.98
			Max. My	14	-57.42	-6.63	-3155.59
			Max. Vy	20	-39.19	3389.10	4.98
			Max. Vx	14	35.63	-6.63	-3155.59
			Max. Torque	4			-1.32
L41	5.58 - 4.08	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.19	-3.32	-1.03
			Max. Mx	20	-58.16	3447.92	5.08
			Max. My	14	-58.18	-6.73	-3209.15
			Max. Vy	20	-39.28	3447.92	5.08
			Max. Vx	14	35.81	-6.73	-3209.15
			Max. Torque	4			-1.32
L42	4.08 - 3.83	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-82.33	-3.32	-1.03
			Max. Mx	20	-58.31	3457.74	5.09
			Max. My	14	-58.32	-6.74	-3218.10
			Max. Vy	20	-39.27	3457.74	5.09
			Max. Vx	14	35.81	-6.74	-3218.10
			Max. Torque	4			-1.32
L43	3.83 - 0	Pole	Max Tension	1	0.00	0.00	0.00
			Max. Compression	26	-84.44	-3.32	-1.03
			Max. Mx	20	-60.25	3608.44	5.34
			Max. My	14	-60.26	-6.99	-3355.58
			Max. Vy	20	-39.46	3608.44	5.34
			Max. Vx	14	36.01	-6.99	-3355.58
			Max. Torque	4			-1.32

Maximum Reactions

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
Pole	Max. Vert	26	84.44	-0.00	-0.00
	Max. H_x	20	60.27	39.43	0.06

Location	Condition	Gov. Load Comb.	Vertical K	Horizontal, X K	Horizontal, Z K
	Max. H_z	2	60.27	0.06	35.22
	Max. M_x	2	3335.20	0.06	35.22
	Max. M_z	8	3604.85	-39.37	-0.06
	Max. Torsion	16	1.32	17.71	-30.81
	Min. Vert	19	45.20	30.41	-17.55
	Min. H_x	8	60.27	-39.37	-0.06
	Min. H_z	14	60.27	-0.06	-35.99
	Min. M_x	14	-3355.58	-0.06	-35.99
	Min. M_z	20	-3608.44	39.43	0.06
	Min. Torsion	4	-1.32	-17.74	30.86

Tower Mast Reaction Summary

Load Combination	Vertical K	$Shear_x$ K	$Shear_z$ K	Overturning Moment, M_x kip-ft	Overturning Moment, M_z kip-ft	Torque kip-ft
Dead Only	50.23	0.00	0.00	0.25	-1.07	0.00
1.2 Dead+1.0 Wind 0 deg - No Ice	60.27	-0.06	-35.22	-3335.20	4.32	1.18
0.9 Dead+1.0 Wind 0 deg - No Ice	45.20	-0.06	-35.22	-3299.31	4.62	1.18
1.2 Dead+1.0 Wind 30 deg - No Ice	60.27	17.74	-30.86	-2899.71	-1669.14	1.32
0.9 Dead+1.0 Wind 30 deg - No Ice	45.20	17.74	-30.86	-2868.57	-1650.82	1.32
1.2 Dead+1.0 Wind 60 deg - No Ice	60.27	31.07	-17.94	-1672.43	-2898.61	1.11
0.9 Dead+1.0 Wind 60 deg - No Ice	45.20	31.07	-17.94	-1654.51	-2867.09	1.11
1.2 Dead+1.0 Wind 90 deg - No Ice	60.27	39.37	0.06	5.97	-3604.85	0.82
0.9 Dead+1.0 Wind 90 deg - No Ice	45.20	39.37	0.06	5.84	-3566.41	0.81
1.2 Dead+1.0 Wind 120 deg - No Ice	60.27	34.66	20.08	1811.92	-3127.82	0.05
0.9 Dead+1.0 Wind 120 deg - No Ice	45.20	34.66	20.08	1792.75	-3094.51	0.05
1.2 Dead+1.0 Wind 150 deg - No Ice	60.27	18.67	32.34	3029.23	-1750.08	-0.74
0.9 Dead+1.0 Wind 150 deg - No Ice	45.20	18.67	32.34	2996.75	-1731.02	-0.74
1.2 Dead+1.0 Wind 180 deg - No Ice	60.27	0.06	35.99	3355.58	-6.99	-1.18
0.9 Dead+1.0 Wind 180 deg - No Ice	45.20	0.06	35.99	3319.41	-6.59	-1.17
1.2 Dead+1.0 Wind 210 deg - No Ice	60.27	-17.71	30.81	2894.92	1663.33	-1.32
0.9 Dead+1.0 Wind 210 deg - No Ice	45.20	-17.71	30.81	2863.66	1645.74	-1.32
1.2 Dead+1.0 Wind 240 deg - No Ice	60.27	-30.41	17.55	1663.19	2878.85	-1.11
0.9 Dead+1.0 Wind 240 deg - No Ice	45.20	-30.41	17.55	1645.16	2848.11	-1.11
1.2 Dead+1.0 Wind 270 deg - No Ice	60.27	-39.43	-0.06	-5.34	3608.44	-0.82
0.9 Dead+1.0 Wind 270 deg - No Ice	45.20	-39.43	-0.06	-5.37	3570.63	-0.82
1.2 Dead+1.0 Wind 300 deg - No Ice	60.27	-34.95	-20.25	-1818.66	3137.91	-0.05
0.9 Dead+1.0 Wind 300 deg - No Ice	45.20	-34.95	-20.25	-1799.60	3105.21	-0.05
1.2 Dead+1.0 Wind 330 deg - No Ice	60.27	-18.64	-32.28	-3023.15	1744.27	0.74
0.9 Dead+1.0 Wind 330 deg - No Ice	45.20	-18.64	-32.28	-2990.89	1725.94	0.74

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 Ice+1.0 Temp	84.44	0.00	0.00	1.03	-3.32	0.00
1.2 Dead+1.0 Wind 0 deg+1.0 Ice+1.0 Temp	84.44	-0.01	-7.35	-740.56	-2.36	0.26
1.2 Dead+1.0 Wind 30 deg+1.0 Ice+1.0 Temp	84.44	3.67	-6.38	-642.60	-373.82	0.33
1.2 Dead+1.0 Wind 60 deg+1.0 Ice+1.0 Temp	84.44	6.38	-3.68	-369.99	-646.24	0.30
1.2 Dead+1.0 Wind 90 deg+1.0 Ice+1.0 Temp	84.44	8.36	0.01	2.24	-816.01	0.31
1.2 Dead+1.0 Wind 120 deg+1.0 Ice+1.0 Temp	84.44	7.18	4.16	403.17	-697.63	0.10
1.2 Dead+1.0 Wind 150 deg+1.0 Ice+1.0 Temp	84.44	3.87	6.70	673.36	-391.64	-0.13
1.2 Dead+1.0 Wind 180 deg+1.0 Ice+1.0 Temp	84.44	0.01	7.38	745.25	-4.66	-0.26
1.2 Dead+1.0 Wind 210 deg+1.0 Ice+1.0 Temp	84.44	-3.66	6.37	643.80	366.23	-0.33
1.2 Dead+1.0 Wind 240 deg+1.0 Ice+1.0 Temp	84.44	-6.34	3.66	370.92	637.05	-0.30
1.2 Dead+1.0 Wind 270 deg+1.0 Ice+1.0 Temp	84.44	-8.37	-0.01	-0.06	810.12	-0.31
1.2 Dead+1.0 Wind 300 deg+1.0 Ice+1.0 Temp	84.44	-7.21	-4.18	-402.24	692.78	-0.10
1.2 Dead+1.0 Wind 330 deg+1.0 Ice+1.0 Temp	84.44	-3.86	-6.69	-670.19	384.06	0.13
Dead+Wind 0 deg - Service	50.23	-0.01	-7.65	-719.41	0.11	0.26
Dead+Wind 30 deg - Service	50.23	3.85	-6.70	-625.46	-360.97	0.29
Dead+Wind 60 deg - Service	50.23	6.74	-3.89	-360.65	-626.25	0.24
Dead+Wind 90 deg - Service	50.23	8.55	0.01	1.49	-778.77	0.18
Dead+Wind 120 deg - Service	50.23	7.52	4.36	391.23	-675.83	0.01
Dead+Wind 150 deg - Service	50.23	4.05	7.02	653.86	-378.47	-0.16
Dead+Wind 180 deg - Service	50.23	0.01	7.81	724.22	-2.33	-0.26
Dead+Wind 210 deg - Service	50.23	-3.84	6.69	624.82	358.06	-0.29
Dead+Wind 240 deg - Service	50.23	-6.60	3.81	359.05	620.32	-0.24
Dead+Wind 270 deg - Service	50.23	-8.56	-0.01	-0.95	777.89	-0.18
Dead+Wind 300 deg - Service	50.23	-7.59	-4.40	-392.29	676.37	-0.01
Dead+Wind 330 deg - Service	50.23	-4.05	-7.01	-652.15	375.56	0.16

Solution Summary

Load Comb.	Sum of Applied Forces			Sum of Reactions			% Error
	PX	PY	PZ	PX	PY	PZ	
	K	K	K	K	K	K	
1	0.00	-50.23	0.00	0.00	50.23	0.00	0.000%
2	-0.06	-60.27	-35.22	0.06	60.27	35.22	0.000%
3	-0.06	-45.20	-35.22	0.06	45.20	35.22	0.000%
4	17.74	-60.27	-30.86	-17.74	60.27	30.86	0.000%
5	17.74	-45.20	-30.86	-17.74	45.20	30.86	0.000%
6	31.07	-60.27	-17.94	-31.07	60.27	17.94	0.000%
7	31.07	-45.20	-17.94	-31.07	45.20	17.94	0.000%
8	39.37	-60.27	0.06	-39.37	60.27	-0.06	0.000%
9	39.37	-45.20	0.06	-39.37	45.20	-0.06	0.000%
10	34.66	-60.27	20.08	-34.66	60.27	-20.08	0.000%
11	34.66	-45.20	20.08	-34.66	45.20	-20.08	0.000%
12	18.67	-60.27	32.34	-18.67	60.27	-32.34	0.000%
13	18.67	-45.20	32.34	-18.67	45.20	-32.34	0.000%
14	0.06	-60.27	35.99	-0.06	60.27	-35.99	0.000%
15	0.06	-45.20	35.99	-0.06	45.20	-35.99	0.000%

Load Comb.	Sum of Applied Forces PX K	PY K	PZ K	Sum of Reactions PX K	PY K	PZ K	% Error
16	-17.71	-60.27	30.81	17.71	60.27	-30.81	0.000%
17	-17.71	-45.20	30.81	17.71	45.20	-30.81	0.000%
18	-30.41	-60.27	17.55	30.41	60.27	-17.55	0.000%
19	-30.41	-45.20	17.55	30.41	45.20	-17.55	0.000%
20	-39.43	-60.27	-0.06	39.43	60.27	0.06	0.000%
21	-39.43	-45.20	-0.06	39.43	45.20	0.06	0.000%
22	-34.95	-60.27	-20.25	34.95	60.27	20.25	0.000%
23	-34.95	-45.20	-20.25	34.95	45.20	20.25	0.000%
24	-18.64	-60.27	-32.28	18.64	60.27	32.28	0.000%
25	-18.64	-45.20	-32.28	18.64	45.20	32.28	0.000%
26	0.00	-84.44	0.00	-0.00	84.44	-0.00	0.000%
27	-0.01	-84.44	-7.35	0.01	84.44	7.35	0.000%
28	3.67	-84.44	-6.38	-3.67	84.44	6.38	0.000%
29	6.38	-84.44	-3.68	-6.38	84.44	3.68	0.000%
30	8.36	-84.44	0.01	-8.36	84.44	-0.01	0.000%
31	7.18	-84.44	4.16	-7.18	84.44	-4.16	0.000%
32	3.87	-84.44	6.70	-3.87	84.44	-6.70	0.000%
33	0.01	-84.44	7.38	-0.01	84.44	-7.38	0.000%
34	-3.66	-84.44	6.37	3.66	84.44	-6.37	0.000%
35	-6.34	-84.44	3.66	6.34	84.44	-3.66	0.000%
36	-8.37	-84.44	-0.01	8.37	84.44	0.01	0.000%
37	-7.21	-84.44	-4.18	7.21	84.44	4.18	0.000%
38	-3.86	-84.44	-6.69	3.86	84.44	6.69	0.000%
39	-0.01	-50.23	-7.65	0.01	50.23	7.65	0.000%
40	3.85	-50.23	-6.70	-3.85	50.23	6.70	0.000%
41	6.74	-50.23	-3.89	-6.74	50.23	3.89	0.000%
42	8.55	-50.23	0.01	-8.55	50.23	-0.01	0.000%
43	7.52	-50.23	4.36	-7.52	50.23	-4.36	0.000%
44	4.05	-50.23	7.02	-4.05	50.23	-7.02	0.000%
45	0.01	-50.23	7.81	-0.01	50.23	-7.81	0.000%
46	-3.84	-50.23	6.69	3.84	50.23	-6.69	0.000%
47	-6.60	-50.23	3.81	6.60	50.23	-3.81	0.000%
48	-8.56	-50.23	-0.01	8.56	50.23	0.01	0.000%
49	-7.59	-50.23	-4.40	7.59	50.23	4.40	0.000%
50	-4.05	-50.23	-7.01	4.05	50.23	7.01	0.000%

Non-Linear Convergence Results

Load Combination	Converged?	Number of Cycles	Displacement Tolerance	Force Tolerance
1	Yes	4	0.00000001	0.00000001
2	Yes	5	0.00000001	0.00041280
3	Yes	5	0.00000001	0.00019377
4	Yes	6	0.00000001	0.00054371
5	Yes	6	0.00000001	0.00017899
6	Yes	6	0.00000001	0.00051747
7	Yes	6	0.00000001	0.00016941
8	Yes	5	0.00000001	0.00033129
9	Yes	5	0.00000001	0.00015182
10	Yes	6	0.00000001	0.00058217
11	Yes	6	0.00000001	0.00018688
12	Yes	6	0.00000001	0.00057607
13	Yes	6	0.00000001	0.00018676
14	Yes	5	0.00000001	0.00048560
15	Yes	5	0.00000001	0.00022779
16	Yes	6	0.00000001	0.00051320
17	Yes	6	0.00000001	0.00016811
18	Yes	6	0.00000001	0.00053819
19	Yes	6	0.00000001	0.00017741
20	Yes	5	0.00000001	0.00025709
21	Yes	5	0.00000001	0.00011687
22	Yes	6	0.00000001	0.00058337
23	Yes	6	0.00000001	0.00018717
24	Yes	6	0.00000001	0.00055746
25	Yes	6	0.00000001	0.00018038
26	Yes	4	0.00000001	0.00013738

27	Yes	6	0.00000001	0.00024464
28	Yes	6	0.00000001	0.00028391
29	Yes	6	0.00000001	0.00028242
30	Yes	6	0.00000001	0.00026127
31	Yes	6	0.00000001	0.00030281
32	Yes	6	0.00000001	0.00029710
33	Yes	6	0.00000001	0.00024637
34	Yes	6	0.00000001	0.00027996
35	Yes	6	0.00000001	0.00028085
36	Yes	6	0.00000001	0.00025833
37	Yes	6	0.00000001	0.00029829
38	Yes	6	0.00000001	0.00029121
39	Yes	4	0.00000001	0.00058028
40	Yes	5	0.00000001	0.00013634
41	Yes	5	0.00000001	0.00011712
42	Yes	4	0.00000001	0.00050428
43	Yes	5	0.00000001	0.00014393
44	Yes	5	0.00000001	0.00014430
45	Yes	4	0.00000001	0.00059449
46	Yes	5	0.00000001	0.00011484
47	Yes	5	0.00000001	0.00013260
48	Yes	4	0.00000001	0.00049311
49	Yes	5	0.00000001	0.00014359
50	Yes	5	0.00000001	0.00013052

Maximum Tower Deflections - Service Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	135 - 130	19.564	42	1.3257	0.0055
L2	130 - 125	18.177	42	1.3235	0.0051
L3	125 - 120	16.795	42	1.3146	0.0044
L4	120 - 115	15.428	42	1.2925	0.0038
L5	115 - 110	14.095	42	1.2497	0.0031
L6	110 - 109.75	12.818	42	1.1863	0.0024
L7	109.75 - 104.75	12.756	42	1.1841	0.0024
L8	104.75 - 99.75	11.543	42	1.1323	0.0020
L9	99.75 - 94.75	10.388	42	1.0719	0.0016
L10	94.75 - 90.92	9.302	42	1.0027	0.0014
L11	90.92 - 90.67	8.521	42	0.9440	0.0012
L12	90.67 - 83.08	8.471	42	0.9409	0.0012
L13	86.41 - 81.41	7.658	43	0.8839	0.0010
L14	81.41 - 76.41	6.753	43	0.8368	0.0009
L15	76.41 - 74.5	5.916	49	0.7620	0.0007
L16	74.5 - 74.25	5.617	49	0.7337	0.0007
L17	74.25 - 70.58	5.579	49	0.7312	0.0007
L18	70.58 - 70.33	5.032	49	0.6921	0.0006
L19	70.33 - 66.33	4.996	49	0.6895	0.0006
L20	66.33 - 66.08	4.437	49	0.6457	0.0005
L21	66.08 - 61.08	4.403	49	0.6432	0.0005
L22	61.08 - 60	3.757	49	0.5922	0.0005
L23	60 - 59.75	3.624	49	0.5815	0.0004
L24	59.75 - 54.75	3.594	49	0.5790	0.0004
L25	54.75 - 49.75	3.015	49	0.5266	0.0004
L26	49.75 - 44.78	2.491	49	0.4736	0.0003
L27	49.2 - 43.78	2.437	49	0.4679	0.0003
L28	43.78 - 38.78	1.923	49	0.4344	0.0003
L29	38.78 - 35.5	1.495	49	0.3825	0.0002
L30	35.5 - 35.25	1.244	49	0.3485	0.0002
L31	35.25 - 30.25	1.226	49	0.3460	0.0002
L32	30.25 - 25.25	0.891	49	0.2935	0.0002
L33	25.25 - 20.25	0.611	49	0.2415	0.0001
L34	20.25 - 15.75	0.385	49	0.1899	0.0001
L35	15.75 - 15.5	0.228	49	0.1438	0.0001
L36	15.5 - 10.5	0.221	49	0.1414	0.0001
L37	10.5 - 7.25	0.098	49	0.0929	0.0000
L38	7.25 - 7	0.046	49	0.0614	0.0000
L39	7 - 5.83	0.043	49	0.0591	0.0000

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L40	5.83 - 5.58	0.029	49	0.0480	0.0000
L41	5.58 - 4.08	0.027	49	0.0460	0.0000
L42	4.08 - 3.83	0.014	49	0.0337	0.0000
L43	3.83 - 0	0.013	49	0.0317	0.0000

Critical Deflections and Radius of Curvature - Service Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
133.00	DB408	42	19.009	1.3252	0.0053	50647
124.00	(2) EPBQ-654L8H8-L2 w/ Mount Pipe	42	16.520	1.3114	0.0043	16595
110.00	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	42	12.818	1.1863	0.0024	4916
100.00	APXVTM14-ALU-I20 w/ Mount Pipe	42	10.444	1.0751	0.0017	4462
87.00	(2) LPA-80080/4CF w/ Mount Pipe	43	7.768	0.8910	0.0010	5287
77.00	KS24019-L112A	49	6.011	0.7719	0.0007	4007

Maximum Tower Deflections - Design Wind

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L1	135 - 130	90.633	20	6.1434	0.0248
L2	130 - 125	84.215	20	6.1331	0.0230
L3	125 - 120	77.824	20	6.0927	0.0201
L4	120 - 115	71.500	20	5.9911	0.0170
L5	115 - 110	65.332	20	5.7943	0.0139
L6	110 - 109.75	59.427	22	5.5014	0.0108
L7	109.75 - 104.75	59.140	22	5.4913	0.0107
L8	104.75 - 99.75	53.528	22	5.2518	0.0089
L9	99.75 - 94.75	48.188	22	4.9722	0.0074
L10	94.75 - 90.92	43.158	22	4.6515	0.0061
L11	90.92 - 90.67	39.542	22	4.3794	0.0053
L12	90.67 - 83.08	39.314	22	4.3649	0.0052
L13	86.41 - 81.41	35.542	22	4.1012	0.0045
L14	81.41 - 76.41	31.347	22	3.8836	0.0040
L15	76.41 - 74.5	27.465	22	3.5374	0.0032
L16	74.5 - 74.25	26.078	22	3.4066	0.0030
L17	74.25 - 70.58	25.900	22	3.3948	0.0030
L18	70.58 - 70.33	23.363	22	3.2137	0.0027
L19	70.33 - 66.33	23.195	22	3.2014	0.0027
L20	66.33 - 66.08	20.600	22	2.9985	0.0024
L21	66.08 - 61.08	20.443	22	2.9872	0.0024
L22	61.08 - 60	17.442	22	2.7507	0.0021
L23	60 - 59.75	16.825	22	2.7010	0.0020
L24	59.75 - 54.75	16.684	22	2.6894	0.0020
L25	54.75 - 49.75	13.997	22	2.4464	0.0017
L26	49.75 - 44.78	11.566	22	2.1998	0.0015
L27	49.2 - 43.78	11.314	22	2.1731	0.0014
L28	43.78 - 38.78	8.925	22	2.0178	0.0013
L29	38.78 - 35.5	6.940	22	1.7762	0.0011
L30	35.5 - 35.25	5.774	22	1.6185	0.0010
L31	35.25 - 30.25	5.690	22	1.6067	0.0010
L32	30.25 - 25.25	4.136	22	1.3627	0.0008
L33	25.25 - 20.25	2.836	22	1.1210	0.0006
L34	20.25 - 15.75	1.788	22	0.8815	0.0005
L35	15.75 - 15.5	1.059	22	0.6673	0.0003
L36	15.5 - 10.5	1.024	22	0.6562	0.0003

Section No.	Elevation ft	Horz. Deflection in	Gov. Load Comb.	Tilt °	Twist °
L37	10.5 - 7.25	0.455	22	0.4311	0.0002
L38	7.25 - 7	0.212	22	0.2851	0.0001
L39	7 - 5.83	0.197	22	0.2740	0.0001
L40	5.83 - 5.58	0.136	22	0.2229	0.0001
L41	5.58 - 4.08	0.125	22	0.2132	0.0001
L42	4.08 - 3.83	0.067	22	0.1565	0.0001
L43	3.83 - 0	0.059	22	0.1470	0.0001

Critical Deflections and Radius of Curvature - Design Wind

Elevation ft	Appurtenance	Gov. Load Comb.	Deflection in	Tilt °	Twist °	Radius of Curvature ft
133.00	DB408	20	88.065	6.1408	0.0246	11506
124.00	(2) EPBQ-654L8H8-L2 w/ Mount Pipe	20	76.551	6.0778	0.0198	3698
110.00	APXVAALL24_43-U-NA20_TMO w/ Mount Pipe	22	59.427	5.5014	0.0111	1081
100.00	APXVTM14-ALU-I20 w/ Mount Pipe	22	48.448	4.9868	0.0077	976
87.00	(2) LPA-80080/4CF w/ Mount Pipe	22	36.053	4.1339	0.0047	1152
77.00	KS24019-L112A	22	27.905	3.5833	0.0034	870

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	135 - 130 (1)	TP16x16x0.5	5.00	0.00	0.0	24.3473	-1.68	1007.98	0.002
L2	130 - 125 (2)	TP16x16x0.5	5.00	0.00	0.0	24.3473	-2.18	1007.98	0.002
L3	125 - 120 (3)	TP16x16x0.5	5.00	0.00	0.0	24.3473	-6.33	1007.98	0.006
L4	120 - 115 (4)	TP16x16x0.5	5.00	0.00	0.0	24.3473	-6.88	1007.98	0.007
L5	115 - 110 (5)	TP16x16x0.5	5.00	0.00	0.0	24.3473	-7.45	1007.98	0.007
L6	110 - 109.75 (6)	TP16.0588x16x0.9	0.25	0.00	0.0	43.3026	-11.36	2533.20	0.004
L7	109.75 - 104.75 (7)	TP17.2345x16.0588x0.8125	5.00	0.00	0.0	42.3503	-12.12	2477.49	0.005
L8	104.75 - 99.75 (8)	TP18.4102x17.2345x0.7625	5.00	0.00	0.0	42.7105	-16.01	2498.57	0.006
L9	99.75 - 94.75 (9)	TP19.5859x18.4102x0.7125	5.00	0.00	0.0	42.6817	-16.89	2496.88	0.007
L10	94.75 - 90.92 (10)	TP20.4865x19.5859x0.675	3.83	0.00	0.0	42.4451	-17.59	2483.04	0.007
L11	90.92 - 90.67 (11)	TP20.5453x20.4865x0.8625	0.25	0.00	0.0	53.8831	-17.66	3152.16	0.006
L12	90.67 - 83.08 (12)	TP22.33x20.5453x0.8125	7.59	0.00	0.0	53.4716	-21.78	3128.09	0.007
L13	83.08 - 81.41 (13)	TP22.3332x21.172x0.85	5.00	0.00	0.0	57.9594	-23.59	3390.63	0.007
L14	81.41 - 76.41 (14)	TP23.4943x22.3332x0.8125	5.00	0.00	0.0	58.4937	-25.00	3421.88	0.007

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	76.41 - 74.5 (15)	TP23.9379x23.4943x0.8	1.91	0.00	0.0	58.7518	-25.50	3436.98	0.007
L16	74.5 - 74.25 (16)	TP23.996x23.9379x1.275	0.25	0.00	0.0	91.9484	-25.62	5378.98	0.005
L17	74.25 - 70.58 (17)	TP24.8483x23.996x1.2	3.67	0.00	0.0	90.0716	-26.92	5269.19	0.005
L18	70.58 - 70.33 (18)	TP24.9063x24.8483x1.2	0.25	0.00	0.0	90.2927	-27.02	5282.13	0.005
L19	70.33 - 66.33 (19)	TP25.8353x24.9063x1.15	4.00	0.00	0.0	90.1038	-28.47	5271.07	0.005
L20	66.33 - 66.08 (20)	TP25.8934x25.8353x1.3	0.25	0.00	0.0	101.4770	-28.58	5936.41	0.005
L21	66.08 - 61.08 (21)	TP27.0545x25.8934x1.225	5.00	0.00	0.0	100.4290	-30.55	5875.10	0.005
L22	61.08 - 60 (22)	TP27.3054x27.0545x1.225	1.08	0.00	0.0	101.4040	-30.98	5932.15	0.005
L23	60 - 59.75 (23)	TP27.3634x27.3054x1.225	0.25	0.00	0.0	101.6300	-31.09	5945.36	0.005
L24	59.75 - 54.75 (24)	TP28.5246x27.3634x1.15	5.00	0.00	0.0	99.9200	-33.10	5845.32	0.006
L25	54.75 - 49.75 (25)	TP29.6858x28.5246x1.1	5.00	0.00	0.0	99.8044	-35.14	5838.56	0.006
L26	49.75 - 44.78 (26)	TP30.84x29.6858x1.1	4.97	0.00	0.0	100.2500	-35.38	5864.65	0.006
L27	44.78 - 43.78 (27)	TP30.5734x29.3135x1.1375	5.42	0.00	0.0	106.2760	-39.28	6217.15	0.006
L28	43.78 - 38.78 (28)	TP31.7356x30.5734x1.1125	5.00	0.00	0.0	108.1330	-41.49	6325.76	0.007
L29	38.78 - 35.5 (29)	TP32.4981x31.7356x1.0875	3.28	0.00	0.0	108.4210	-42.96	6342.61	0.007
L30	35.5 - 35.25 (30)	TP32.5562x32.4981x1.0875	0.25	0.00	0.0	108.6210	-43.09	6354.34	0.007
L31	35.25 - 30.25 (31)	TP33.7184x32.5562x1.0375	5.00	0.00	0.0	107.6190	-45.35	6295.72	0.007
L32	30.25 - 25.25 (32)	TP34.8807x33.7184x1.0125	5.00	0.00	0.0	108.8410	-47.65	6367.21	0.007
L33	25.25 - 20.25 (33)	TP36.0429x34.8807x0.9875	5.00	0.00	0.0	109.8750	-49.99	6427.69	0.008
L34	20.25 - 15.75 (34)	TP37.0889x36.0429x0.9625	4.50	0.00	0.0	109.5660	-51.61	6409.64	0.008
L35	15.75 - 15.5 (35)	TP37.147x37.0889x1.0125	0.25	0.00	0.0	115.9380	-52.14	6782.37	0.008
L36	15.5 - 10.5 (36)	TP38.3093x37.147x0.9875	5.00	0.00	0.0	113.3360	-52.28	6630.14	0.008
L37	10.5 - 7.25 (37)	TP39.0647x38.3093x0.9625	3.25	0.00	0.0	114.0930	-54.86	6674.47	0.008
L38	7.25 - 7 (38)	TP39.1229x39.0647x0.9625	0.25	0.00	0.0	116.4010	-56.54	6809.48	0.008
L39	7 - 5.83 (39)	TP39.3948x39.1229x0.9625	1.17	0.00	0.0	116.5790	-56.69	6819.87	0.008
L40	5.83 - 5.58 (40)	TP39.4529x39.3948x1.1125	0.25	0.00	0.0	135.1780	-57.27	7907.90	0.007
L41	5.58 - 4.08 (41)	TP39.8016x39.4529x1.1125	1.50	0.00	0.0	135.3830	-57.42	7919.90	0.007
L42	4.08 - 3.83 (42)	TP39.8597x39.8016x1.1125	0.25	0.00	0.0	136.6140	-58.18	7991.93	0.007
L43	3.83 - 0 (43)	TP40.75x39.8597x1.0875	3.83	0.00	0.0	133.8310	-58.33	7829.12	0.007

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	135 - 130 (1)	TP16x16x0.5	13.21	414.57	0.032	0.00	414.57	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 $\frac{M_{uy}}{\phi M_{ny}}$
L2	130 - 125 (2)	TP16x16x0.5	28.69	414.57	0.069	0.00	414.57	0.000
L3	125 - 120 (3)	TP16x16x0.5	77.24	414.57	0.186	0.00	414.57	0.000
L4	120 - 115 (4)	TP16x16x0.5	126.10	414.57	0.304	0.00	414.57	0.000
L5	115 - 110 (5)	TP16x16x0.5	176.17	414.57	0.425	0.00	414.57	0.000
L6	110 - 109.75 (6)	TP16.0588x16x0.9	180.01	954.08	0.189	0.00	954.08	0.000
L7	109.75 - 104.75 (7)	TP17.2345x16.0588x0.8125	258.64	1020.38	0.253	0.00	1020.38	0.000
L8	104.75 - 99.75 (8)	TP18.4102x17.2345x0.7625	341.63	1112.51	0.307	0.00	1112.51	0.000
L9	99.75 - 94.75 (9)	TP19.5859x18.4102x0.7125	449.14	1195.22	0.376	0.00	1195.22	0.000
L10	94.75 - 90.92 (10)	TP20.4865x19.5859x0.675	533.83	1252.13	0.426	0.00	1252.13	0.000
L11	90.92 - 90.67 (11)	TP20.5453x20.4865x0.8625	539.43	1564.47	0.345	0.00	1564.47	0.000
L12	90.67 - 83.08 (12)	TP22.33x20.5453x0.8125	648.73	1642.77	0.395	0.00	1642.77	0.000
L13	83.08 - 81.41 (13)	TP22.3332x21.172x0.85	787.82	1844.26	0.427	0.00	1844.26	0.000
L14	81.41 - 76.41 (14)	TP23.4943x22.3332x0.8125	930.83	1972.22	0.472	0.00	1972.22	0.000
L15	76.41 - 74.5 (15)	TP23.9379x23.4943x0.8	986.56	2023.18	0.488	0.00	2023.18	0.000
L16	74.5 - 74.25 (16)	TP23.996x23.9379x1.275	993.89	3045.88	0.326	0.00	3045.88	0.000
L17	74.25 - 70.58 (17)	TP24.8483x23.996x1.2	1102.79	3121.35	0.353	0.00	3121.35	0.000
L18	70.58 - 70.33 (18)	TP24.9063x24.8483x1.2	1110.29	3137.07	0.354	0.00	3137.07	0.000
L19	70.33 - 66.33 (19)	TP25.8353x24.9063x1.15	1231.71	3272.34	0.376	0.00	3272.34	0.000
L20	66.33 - 66.08 (20)	TP25.8934x25.8353x1.3	1239.39	3649.78	0.340	0.00	3649.78	0.000
L21	66.08 - 61.08 (21)	TP27.0545x25.8934x1.225	1395.17	3813.33	0.366	0.00	3813.33	0.000
L22	61.08 - 60 (22)	TP27.3054x27.0545x1.225	1429.38	3889.45	0.368	0.00	3889.45	0.000
L23	60 - 59.75 (23)	TP27.3634x27.3054x1.225	1437.33	3907.18	0.368	0.00	3907.18	0.000
L24	59.75 - 54.75 (24)	TP28.5246x27.3634x1.15	1598.48	4041.85	0.395	0.00	4041.85	0.000
L25	54.75 - 49.75 (25)	TP29.6858x28.5246x1.1	1763.83	4230.13	0.417	0.00	4230.13	0.000
L26	49.75 - 44.78 (26)	TP30.84x29.6858x1.1	1782.27	4268.72	0.418	0.00	4268.72	0.000
L27	44.78 - 43.78 (27)	TP30.5734x29.3135x1.1375	1967.03	4637.65	0.424	0.00	4637.65	0.000
L28	43.78 - 38.78 (28)	TP31.7356x30.5734x1.1125	2142.76	4919.95	0.436	0.00	4919.95	0.000
L29	38.78 - 35.5 (29)	TP32.4981x31.7356x1.0875	2260.20	5068.25	0.446	0.00	5068.25	0.000
L30	35.5 - 35.25 (30)	TP32.5562x32.4981x1.0875	2269.22	5087.33	0.446	0.00	5087.33	0.000
L31	35.25 - 30.25 (31)	TP33.7184x32.5562x1.0375	2451.60	5248.83	0.467	0.00	5248.83	0.000
L32	30.25 - 25.25 (32)	TP34.8807x33.7184x1.0125	2637.66	5511.18	0.479	0.00	5511.18	0.000
L33	25.25 - 20.25 (33)	TP36.0429x34.8807x0.9875	2827.25	5768.22	0.490	0.00	5768.22	0.000
L34	20.25 - 15.75 (34)	TP37.0889x36.0429x0.9625	2957.13	5892.48	0.502	0.00	5892.48	0.000
L35	15.75 - 15.5 (35)	TP37.147x37.0889x1.0125	3000.74	6264.42	0.479	0.00	6264.42	0.000
L36	15.5 - 10.5 (36)	TP38.3093x37.147x0.9875	3010.46	6142.43	0.490	0.00	6142.43	0.000
L37	10.5 - 7.25 (37)	TP39.0647x38.3093x0.9625	3206.41	6396.10	0.501	0.00	6396.10	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 $\frac{M_{uy}}{\phi M_{ny}}$
L38	7.25 - 7 (38)	TP39.1229x39.0647x0.9625	3335.46	6660.80	0.501	0.00	6660.80	0.000
L39	7 - 5.83 (39)	TP39.3948x39.1229x0.9625	3345.44	6681.38	0.501	0.00	6681.38	0.000
L40	5.83 - 5.58 (40)	TP39.4529x39.3948x1.1125	3392.22	7743.10	0.438	0.00	7743.10	0.000
L41	5.58 - 4.08 (41)	TP39.8016x39.4529x1.1125	3402.23	7766.96	0.438	0.00	7766.96	0.000
L42	4.08 - 3.83 (42)	TP39.8597x39.8016x1.1125	3462.42	7910.87	0.438	0.00	7910.87	0.000
L43	3.83 - 0 (43)	TP40.75x39.8597x1.0875	3472.47	7771.70	0.447	0.00	7771.70	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	135 - 130 (1)	TP16x16x0.5	2.96	302.39	0.010	0.43	412.08	0.001
L2	130 - 125 (2)	TP16x16x0.5	3.23	302.39	0.011	0.43	412.08	0.001
L3	125 - 120 (3)	TP16x16x0.5	9.65	302.39	0.032	0.68	412.08	0.002
L4	120 - 115 (4)	TP16x16x0.5	9.90	302.39	0.033	0.68	412.08	0.002
L5	115 - 110 (5)	TP16x16x0.5	10.13	302.39	0.034	0.68	412.08	0.002
L6	110 - 109.75 (6)	TP16.0588x16x0.9	15.37	759.96	0.020	0.68	1008.87	0.001
L7	109.75 - 104.75 (7)	TP17.2345x16.0588x0.8125	16.08	743.25	0.022	0.70	1068.91	0.001
L8	104.75 - 99.75 (8)	TP18.4102x17.2345x0.7625	21.16	749.57	0.028	0.71	1158.46	0.001
L9	99.75 - 94.75 (9)	TP19.5859x18.4102x0.7125	21.85	749.06	0.029	0.73	1238.08	0.001
L10	94.75 - 90.92 (10)	TP20.4865x19.5859x0.675	22.39	744.91	0.030	0.74	1292.42	0.001
L11	90.92 - 90.67 (11)	TP20.5453x20.4865x0.8625	22.41	945.65	0.024	0.74	1630.03	0.000
L12	90.67 - 83.08 (12)	TP22.33x20.5453x0.8125	27.40	938.43	0.029	0.75	1704.02	0.000
L13	83.08 - 81.41 (13)	TP22.3332x21.172x0.85	28.22	1017.19	0.028	0.58	1913.72	0.000
L14	81.41 - 76.41 (14)	TP23.4943x22.3332x0.8125	29.06	1026.56	0.028	0.71	2039.13	0.000
L15	76.41 - 74.5 (15)	TP23.9379x23.4943x0.8	29.36	1031.09	0.028	0.71	2089.31	0.000
L16	74.5 - 74.25 (16)	TP23.996x23.9379x1.275	29.38	1613.69	0.018	0.72	3210.91	0.000
L17	74.25 - 70.58 (17)	TP24.8483x23.996x1.2	30.00	1580.76	0.019	0.72	3273.74	0.000
L18	70.58 - 70.33 (18)	TP24.9063x24.8483x1.2	30.04	1584.64	0.019	0.72	3289.84	0.000
L19	70.33 - 66.33 (19)	TP25.8353x24.9063x1.15	30.71	1581.32	0.019	0.73	3418.53	0.000
L20	66.33 - 66.08 (20)	TP25.8934x25.8353x1.3	30.75	1780.92	0.017	0.73	3835.68	0.000
L21	66.08 - 61.08 (21)	TP27.0545x25.8934x1.225	31.61	1762.53	0.018	0.74	3986.88	0.000
L22	61.08 - 60 (22)	TP27.3054x27.0545x1.225	31.79	1779.65	0.018	0.74	4064.68	0.000
L23	60 - 59.75 (23)	TP27.3634x27.3054x1.225	31.83	1783.61	0.018	0.74	4082.81	0.000
L24	59.75 - 54.75 (24)	TP28.5246x27.3634x1.15	32.68	1753.60	0.019	0.75	4203.95	0.000
L25	54.75 - 49.75 (25)	TP29.6858x28.5246x1.1	33.51	1751.57	0.019	0.76	4384.88	0.000
L26	49.75 - 44.78 (26)	TP30.84x29.6858x1.1	33.59	1759.39	0.019	0.76	4424.14	0.000

Section No.	Elevation ft	Size	Actual V_u K	ϕV_n K	Ratio $\frac{V_u}{\phi V_n}$	Actual T_u kip-ft	ϕT_n kip-ft	Ratio $\frac{T_u}{\phi T_n}$
L27	44.78 - 43.78 (27)	TP30.5734x29.3135x1.1375	34.61	1865.14	0.019	0.77	4808.06	0.000
L28	43.78 - 38.78 (28)	TP31.7356x30.5734x1.1125	35.58	1897.73	0.019	0.02	5089.36	0.000
L29	38.78 - 35.5 (29)	TP32.4981x31.7356x1.0875	36.09	1902.78	0.019	0.02	5234.13	0.000
L30	35.5 - 35.25 (30)	TP32.5562x32.4981x1.0875	36.12	1906.30	0.019	0.02	5253.52	0.000
L31	35.25 - 30.25 (31)	TP33.7184x32.5562x1.0375	36.88	1888.72	0.020	0.03	5405.56	0.000
L32	30.25 - 25.25 (32)	TP34.8807x33.7184x1.0125	37.61	1910.16	0.020	0.03	5665.56	0.000
L33	25.25 - 20.25 (33)	TP36.0429x34.8807x0.9875	38.30	1928.31	0.020	0.04	5919.86	0.000
L34	20.25 - 15.75 (34)	TP37.0889x36.0429x0.9625	38.88	1936.91	0.020	0.04	6039.55	0.000
L35	15.75 - 15.5 (35)	TP37.147x37.0889x1.0125	38.90	2037.99	0.019	0.04	6428.45	0.000
L36	15.5 - 10.5 (36)	TP38.3093x37.147x0.9875	39.04	2001.83	0.020	0.05	6298.64	0.000
L37	10.5 - 7.25 (37)	TP39.0647x38.3093x0.9625	39.68	2015.84	0.020	0.05	6548.94	0.000
L38	7.25 - 7 (38)	TP39.1229x39.0647x0.9625	39.96	2045.96	0.020	0.05	6816.57	0.000
L39	7 - 5.83 (39)	TP39.3948x39.1229x0.9625	40.05	2060.54	0.019	0.05	6837.38	0.000
L40	5.83 - 5.58 (40)	TP39.4529x39.3948x1.1125	40.05	2375.97	0.017	0.05	7953.54	0.000
L41	5.58 - 4.08 (41)	TP39.8016x39.4529x1.1125	40.23	2397.58	0.017	0.05	7977.71	0.000
L42	4.08 - 3.83 (42)	TP39.8597x39.8016x1.1125	40.23	2401.18	0.017	0.05	8123.47	0.000
L43	3.83 - 0 (43)	TP40.75x39.8597x1.0875	40.30	2366.71	0.017	0.05	7975.07	0.000

Pole Interaction Design Data

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L1	135 - 130 (1)	0.002	0.032	0.000	0.010	0.001	0.034	1.050	4.8.2
L2	130 - 125 (2)	0.002	0.069	0.000	0.011	0.001	0.072	1.050	4.8.2
L3	125 - 120 (3)	0.006	0.186	0.000	0.032	0.002	0.194	1.050	4.8.2
L4	120 - 115 (4)	0.007	0.304	0.000	0.033	0.002	0.312	1.050	4.8.2
L5	115 - 110 (5)	0.007	0.425	0.000	0.034	0.002	0.434	1.050	4.8.2
L6	110 - 109.75 (6)	0.004	0.189	0.000	0.020	0.001	0.194	1.050	4.8.2
L7	109.75 - 104.75 (7)	0.005	0.253	0.000	0.022	0.001	0.259	1.050	4.8.2
L8	104.75 - 99.75 (8)	0.006	0.307	0.000	0.028	0.001	0.314	1.050	4.8.2
L9	99.75 - 94.75 (9)	0.007	0.376	0.000	0.029	0.001	0.383	1.050	4.8.2
L10	94.75 - 90.92 (10)	0.007	0.426	0.000	0.030	0.001	0.434	1.050	4.8.2
L11	90.92 - 90.67 (11)	0.006	0.345	0.000	0.024	0.000	0.351	1.050	4.8.2
L12	90.67 - 83.08 (12)	0.007	0.395	0.000	0.029	0.000	0.403	1.050	4.8.2
L13	83.08 - 81.41 (13)	0.007	0.427	0.000	0.028	0.000	0.435	1.050	4.8.2
L14	81.41 - 76.41 (14)	0.007	0.472	0.000	0.028	0.000	0.480	1.050	4.8.2
L15	76.41 - 74.5 (15)	0.007	0.488	0.000	0.028	0.000	0.496	1.050	4.8.2

Section No.	Elevation ft	Ratio $\frac{P_u}{\phi P_n}$	Ratio $\frac{M_{ux}}{\phi M_{nx}}$	Ratio $\frac{M_{uy}}{\phi M_{ny}}$	Ratio $\frac{V_u}{\phi V_n}$	Ratio $\frac{T_u}{\phi T_n}$	Comb. Stress Ratio	Allow. Stress Ratio	Criteria
L16	74.5 - 74.25 (16)	0.005	0.326	0.000	0.018	0.000	0.331	1.050	4.8.2
L17	74.25 - 70.58 (17)	0.005	0.353	0.000	0.019	0.000	0.359	1.050	4.8.2
L18	70.58 - 70.33 (18)	0.005	0.354	0.000	0.019	0.000	0.359	1.050	4.8.2
L19	70.33 - 66.33 (19)	0.005	0.376	0.000	0.019	0.000	0.382	1.050	4.8.2
L20	66.33 - 66.08 (20)	0.005	0.340	0.000	0.017	0.000	0.345	1.050	4.8.2
L21	66.08 - 61.08 (21)	0.005	0.366	0.000	0.018	0.000	0.371	1.050	4.8.2
L22	61.08 - 60 (22)	0.005	0.368	0.000	0.018	0.000	0.373	1.050	4.8.2
L23	60 - 59.75 (23)	0.005	0.368	0.000	0.018	0.000	0.373	1.050	4.8.2
L24	59.75 - 54.75 (24)	0.006	0.395	0.000	0.019	0.000	0.401	1.050	4.8.2
L25	54.75 - 49.75 (25)	0.006	0.417	0.000	0.019	0.000	0.423	1.050	4.8.2
L26	49.75 - 44.78 (26)	0.006	0.418	0.000	0.019	0.000	0.424	1.050	4.8.2
L27	44.78 - 43.78 (27)	0.006	0.424	0.000	0.019	0.000	0.431	1.050	4.8.2
L28	43.78 - 38.78 (28)	0.007	0.436	0.000	0.019	0.000	0.442	1.050	4.8.2
L29	38.78 - 35.5 (29)	0.007	0.446	0.000	0.019	0.000	0.453	1.050	4.8.2
L30	35.5 - 35.25 (30)	0.007	0.446	0.000	0.019	0.000	0.453	1.050	4.8.2
L31	35.25 - 30.25 (31)	0.007	0.467	0.000	0.020	0.000	0.475	1.050	4.8.2
L32	30.25 - 25.25 (32)	0.007	0.479	0.000	0.020	0.000	0.486	1.050	4.8.2
L33	25.25 - 20.25 (33)	0.008	0.490	0.000	0.020	0.000	0.498	1.050	4.8.2
L34	20.25 - 15.75 (34)	0.008	0.502	0.000	0.020	0.000	0.510	1.050	4.8.2
L35	15.75 - 15.5 (35)	0.008	0.479	0.000	0.019	0.000	0.487	1.050	4.8.2
L36	15.5 - 10.5 (36)	0.008	0.490	0.000	0.020	0.000	0.498	1.050	4.8.2
L37	10.5 - 7.25 (37)	0.008	0.501	0.000	0.020	0.000	0.510	1.050	4.8.2
L38	7.25 - 7 (38)	0.008	0.501	0.000	0.020	0.000	0.509	1.050	4.8.2
L39	7 - 5.83 (39)	0.008	0.501	0.000	0.019	0.000	0.509	1.050	4.8.2
L40	5.83 - 5.58 (40)	0.007	0.438	0.000	0.017	0.000	0.446	1.050	4.8.2
L41	5.58 - 4.08 (41)	0.007	0.438	0.000	0.017	0.000	0.446	1.050	4.8.2
L42	4.08 - 3.83 (42)	0.007	0.438	0.000	0.017	0.000	0.445	1.050	4.8.2
L43	3.83 - 0 (43)	0.007	0.447	0.000	0.017	0.000	0.455	1.050	4.8.2

Section Capacity Table

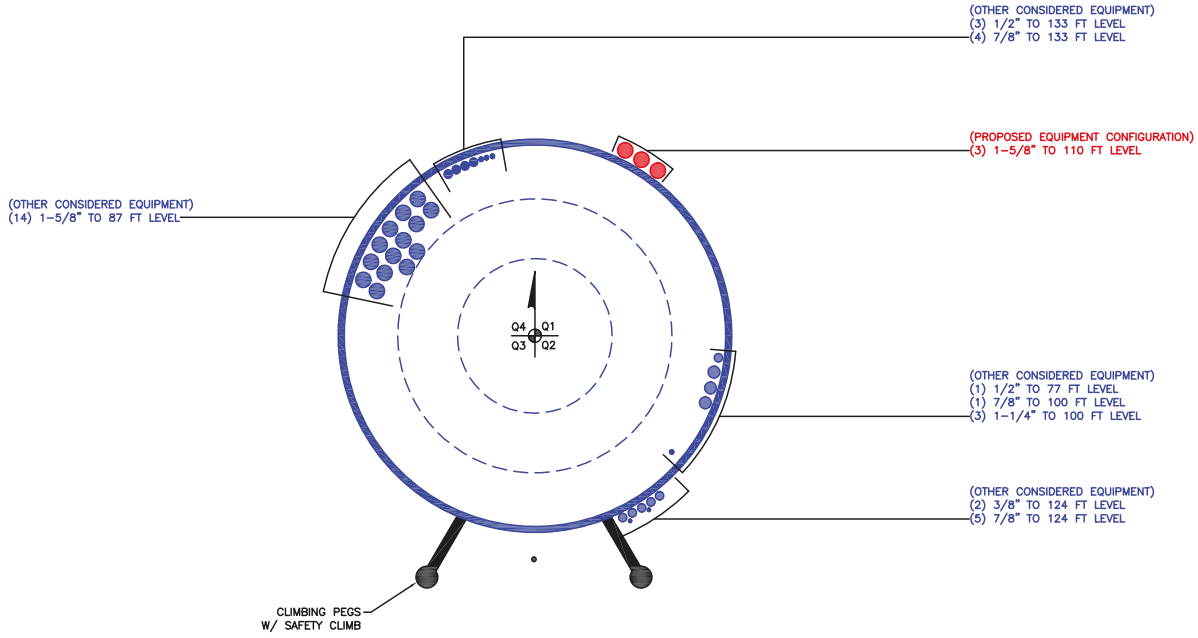
Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L1	135 - 130	Pole	TP16x16x0.5	1	-1.68	1058.38	3.2	Pass
L2	130 - 125	Pole	TP16x16x0.5	2	-2.18	1058.38	6.8	Pass
L3	125 - 120	Pole	TP16x16x0.5	3	-6.33	1058.38	18.5	Pass
L4	120 - 115	Pole	TP16x16x0.5	4	-6.88	1058.38	29.7	Pass
L5	115 - 110	Pole	TP16x16x0.5	5	-7.45	1058.38	41.3	Pass
L6	110 - 109.75	Pole	TP16.0588x16x0.9	6	-11.36	2659.86	18.4	Pass
L7	109.75 - 104.75	Pole	TP17.2345x16.0588x0.8125	7	-12.12	2601.36	24.7	Pass

Section No.	Elevation ft	Component Type	Size	Critical Element	P K	ϕP_{allow} K	% Capacity	Pass Fail
L8	104.75 - 99.75	Pole	TP18.4102x17.2345x0.7625	8	-16.01	2623.50	29.9	Pass
L9	99.75 - 94.75	Pole	TP19.5859x18.4102x0.7125	9	-16.89	2621.72	36.5	Pass
L10	94.75 - 90.92	Pole	TP20.4865x19.5859x0.675	10	-17.59	2607.19	41.4	Pass
L11	90.92 - 90.67	Pole	TP20.5453x20.4865x0.8625	11	-17.66	3309.77	33.4	Pass
L12	90.67 - 83.08	Pole	TP22.33x20.5453x0.8125	12	-21.78	3284.49	38.4	Pass
L13	83.08 - 81.41	Pole	TP22.3332x21.172x0.85	13	-23.59	3560.16	41.4	Pass
L14	81.41 - 76.41	Pole	TP23.4943x22.3332x0.8125	14	-25.00	3592.97	45.7	Pass
L15	76.41 - 74.5	Pole	TP23.9379x23.4943x0.8	15	-25.50	3608.83	47.2	Pass
L16	74.5 - 74.25	Pole	TP23.996x23.9379x1.275	16	-25.62	5647.93	31.6	Pass
L17	74.25 - 70.58	Pole	TP24.8483x23.996x1.2	17	-26.92	5532.65	34.2	Pass
L18	70.58 - 70.33	Pole	TP24.9063x24.8483x1.2	18	-27.02	5546.24	34.2	Pass
L19	70.33 - 66.33	Pole	TP25.8353x24.9063x1.15	19	-28.47	5534.62	36.4	Pass
L20	66.33 - 66.08	Pole	TP25.8934x25.8353x1.3	20	-28.58	6233.23	32.8	Pass
L21	66.08 - 61.08	Pole	TP27.0545x25.8934x1.225	21	-30.55	6168.85	35.4	Pass
L22	61.08 - 60	Pole	TP27.3054x27.0545x1.225	22	-30.98	6228.76	35.5	Pass
L23	60 - 59.75	Pole	TP27.3634x27.3054x1.225	23	-31.09	6242.63	35.6	Pass
L24	59.75 - 54.75	Pole	TP28.5246x27.3634x1.15	24	-33.10	6137.59	38.2	Pass
L25	54.75 - 49.75	Pole	TP29.6858x28.5246x1.1	25	-35.14	6130.49	40.3	Pass
L26	49.75 - 44.78	Pole	TP30.84x29.6858x1.1	26	-35.38	6157.88	40.4	Pass
L27	44.78 - 43.78	Pole	TP30.5734x29.3135x1.1375	27	-39.28	6528.01	41.0	Pass
L28	43.78 - 38.78	Pole	TP31.7356x30.5734x1.1125	28	-41.49	6642.05	42.1	Pass
L29	38.78 - 35.5	Pole	TP32.4981x31.7356x1.0875	29	-42.96	6659.74	43.2	Pass
L30	35.5 - 35.25	Pole	TP32.5562x32.4981x1.0875	30	-43.09	6672.06	43.2	Pass
L31	35.25 - 30.25	Pole	TP33.7184x32.5562x1.0375	31	-45.35	6610.51	45.2	Pass
L32	30.25 - 25.25	Pole	TP34.8807x33.7184x1.0125	32	-47.65	6685.57	46.3	Pass
L33	25.25 - 20.25	Pole	TP36.0429x34.8807x0.9875	33	-49.99	6749.07	47.5	Pass
L34	20.25 - 15.75	Pole	TP37.0889x36.0429x0.9625	34	-51.61	6730.12	48.6	Pass
L35	15.75 - 15.5	Pole	TP37.147x37.0889x1.0125	35	-52.14	7121.49	46.4	Pass
L36	15.5 - 10.5	Pole	TP38.3093x37.147x0.9875	36	-52.28	6961.65	47.5	Pass
L37	10.5 - 7.25	Pole	TP39.0647x38.3093x0.9625	37	-54.86	7008.19	48.6	Pass
L38	7.25 - 7	Pole	TP39.1229x39.0647x0.9625	38	-56.54	7149.95	48.5	Pass
L39	7 - 5.83	Pole	TP39.3948x39.1229x0.9625	39	-56.69	7160.86	48.5	Pass
L40	5.83 - 5.58	Pole	TP39.4529x39.3948x1.1125	40	-57.27	8303.29	42.4	Pass
L41	5.58 - 4.08	Pole	TP39.8016x39.4529x1.1125	41	-57.42	8315.89	42.4	Pass
L42	4.08 - 3.83	Pole	TP39.8597x39.8016x1.1125	42	-58.18	8391.53	42.4	Pass
L43	3.83 - 0	Pole	TP40.75x39.8597x1.0875	43	-58.33	8220.58	43.3	Pass
							Summary	
						Pole (L34)	48.6	Pass
						RATING =	**48.6**	**Pass**

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

APPENDIX B

BASE LEVEL DRAWING



BUSINESS UNIT: 876406 TOWER ID:C_BASELEVEL

APPENDIX C

ADDITIONAL CALCULATIONS

CCIpole

per TIA-222- H

Site BU: 876406

Work Order: 2259737

CROWN CASTLE

Pole Geometry

	Pole Height Above Base (ft)	Section Length (ft)	Lap Splice Length (ft)	Number of Sides	Top Diameter (in)	Bottom Diameter (in)	Wall Thickness (in)	Bend Radius (in)	Pole Material
1	135	25	0	0	16	16	0.5		A500-46
2	110	26.92	3.33	18	16.00	22.33	0.1875	Auto	A572-65
3	86.41	41.63	4.42	18	21.17	30.84	0.25	Auto	A572-65
4	49.2	49.2	0	18	29.31	40.75	0.3125	Auto	A572-65

Reinforcement Configuration

	Bottom Effective Elevation (ft)	Top Effective Elevation (ft)	Type	Model	Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	48	60	plate	CCI-SFP-045100	3				M3						M3						M3		
2	5.83	35.5	plate	CCI-AFP-085125	2						M4												M4
3	15.75	35.5	plate	CCI-AFP-085125	2												M4		M4				
4	4.08	35.5	plate	CCI-AFP-085125	1		M4																
5	7.25	35.5	plate	CCI-AFP-085125	1								M4										
6	35.5	66.33	plate	CCI-AFP-085125	3						M4						M4						M4
7	35.5	70.58	plate	CCI-AFP-085125	3		M4						M4						M4				
8	70.58	90.92	plate	CCI-085125_1	3		M4						M4						M4				
9	90.92	110	plate	CCI-AFP-065125	3		M4						M4						M4				
10	66.33	74.5	plate	CCI-AFP-065125	3						M4						M4						M4
11	0	5.83	plate	FP 1.25 x 9	2	M4				M4													
12	0	4.08	plate	FP 1.25x7	1		M4																
13	0	7.25	plate	FP 1.25x7	1								M4										
14	0	15.75	plate	FP 1.25 x 9	2										M4					M4			
15	0	15.75	plate	FP 1.25x7	1											M4							
16	0	5.83	plate	FP 1.25x7	1																	M4	
17																							

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	4.5	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
2	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
3	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
4	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
5	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
6	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
7	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
8	8.5	1.25	10.625	0.625	PC 8.8 - M20 (100)	57	PC 8.8 - M20 (100)	57.000	17.000	9.063	1.1875	A572-65
9	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	42	PC 8.8 - M20 (100)	42.000	19.000	6.563	1.1875	A572-65
10	6.5	1.25	8.125	0.625	PC 8.8 - M20 (100)	42	PC 8.8 - M20 (100)	42.000	19.000	6.563	1.1875	A572-65
11	1.25	9	11.25	4.5	None	n/a	None	n/a	0.000	11.250	0.0000	A572-65
12	1.25	7	8.75	3.5	None	n/a	None	n/a	0.000	8.750	0.0000	A572-65
13	1.25	7	8.75	3.5	None	n/a	None	n/a	0.000	8.750	0.0000	A572-65
14	1.25	9	11.25	4.5	None	n/a	None	n/a	0.000	11.250	0.0000	A572-65
15	1.25	7	8.75	3.5	None	n/a	None	n/a	0.000	8.750	0.0000	A572-65
16	1.25	7	8.75	3.5	None	n/a	None	n/a	0.000	8.750	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)
CCI-085125_1	Top	19	N	3	3	-	-	-	-	-	-	-	-	-
	Bottom	19	N	3	3	-	-	-	-	-	-	-	-	-
FP 1.25 x 9	Top	-	-	-	-	70	None	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-
FP 1.25x7	Top	-	-	-	-	70	None	-	-	-	-	-	-	-
	Bottom	-	-	-	-	70	None	-	-	-	-	-	-	-

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	135 - 130	5		0	16.000	16.000	0.5	A500-46	1.000
2	130 - 125	5		0	16.000	16.000	0.5	A500-46	1.000
3	125 - 120	5		0	16.000	16.000	0.5	A500-46	1.000
4	120 - 115	5		0	16.000	16.000	0.5	A500-46	1.000
5	115 - 110	5	0	0	16.000	16.000	0.5	A500-46	1.000
6	110 - 109.75	0.25		18	16.000	16.059	0.9	A572-65	0.781
7	109.75 - 104.75	5		18	16.059	17.234	0.8125	A572-65	0.815
8	104.75 - 99.75	5		18	17.234	18.410	0.7625	A572-65	0.825
9	99.75 - 94.75	5		18	18.410	19.586	0.7125	A572-65	0.842
10	94.75 - 90.92	3.83		18	19.586	20.486	0.675	A572-65	0.859
11	90.92 - 90.67	0.25		18	20.486	20.545	0.8625	A572-65	0.816
12	90.67 - 86.41	7.59	3.33	18	20.545	22.330	0.8125	A572-65	0.834
13	86.41 - 81.41	5		18	21.172	22.333	0.85	A572-65	0.852
14	81.41 - 76.41	5		18	22.333	23.494	0.8125	A572-65	0.860
15	76.41 - 74.5	1.91		18	23.494	23.938	0.8	A572-65	0.862
16	74.5 - 74.25	0.25		18	23.938	23.996	1.275	A572-65	0.817
17	74.25 - 70.58	3.67		18	23.996	24.848	1.2	A572-65	0.841
18	70.58 - 70.33	0.25		18	24.848	24.906	1.2	A572-65	0.840
19	70.33 - 66.33	4		18	24.906	25.835	1.15	A572-65	0.850
20	66.33 - 66.08	0.25		18	25.835	25.893	1.3	A572-65	0.829
21	66.08 - 61.08	5		18	25.893	27.055	1.225	A572-65	0.847
22	61.08 - 60	1.08		18	27.055	27.305	1.225	A572-65	0.840
23	60 - 59.75	0.25		18	27.305	27.363	1.225	A572-65	0.839
24	59.75 - 54.75	5		18	27.363	28.525	1.15	A572-65	0.863
25	54.75 - 49.75	5		18	28.525	29.686	1.1	A572-65	0.873
26	49.75 - 49.2	4.97	4.42	18	29.686	30.840	1.1	A572-65	0.870
27	49.2 - 43.78	5.42		18	29.314	30.573	1.1375	A572-65	0.882
28	43.78 - 38.78	5		18	30.573	31.736	1.1125	A572-65	0.878
29	38.78 - 35.5	3.28		18	31.736	32.498	1.0875	A572-65	0.882
30	35.5 - 35.25	0.25		18	32.498	32.556	1.0875	A572-65	0.881
31	35.25 - 30.25	5		18	32.556	33.718	1.0375	A572-65	0.900
32	30.25 - 25.25	5		18	33.718	34.881	1.0125	A572-65	0.901
33	25.25 - 20.25	5		18	34.881	36.043	0.9875	A572-65	0.903
34	20.25 - 15.75	4.5		18	36.043	37.089	0.9625	A572-65	0.908
35	15.75 - 15.5	0.25		18	37.089	37.147	1.0125	A572-65	0.950
36	15.5 - 10.5	5		18	37.147	38.309	0.9875	A572-65	0.953
37	10.5 - 7.25	3.25		18	38.309	39.065	0.9625	A572-65	0.964
38	7.25 - 7	0.25		18	39.065	39.123	0.9625	A572-65	0.947
39	7 - 5.83	1.17		18	39.123	39.395	0.9625	A572-65	0.942
40	5.83 - 5.58	0.25		18	39.395	39.453	1.1125	A572-65	0.892
41	5.58 - 4.08	1.5		18	39.453	39.802	1.1125	A572-65	0.886
42	4.08 - 3.83	0.25		18	39.802	39.860	1.1125	A572-65	0.871
43	3.83 - 0	3.83		18	39.860	40.750	1.0875	A572-65	0.877

TNX Section Forces

Increment (ft):	5	TNX Output		
	Section Height (ft)	P_u (K)	M_{ux} (kip-ft)	V_u (K)
1	135 - 130	1.68	13.21	2.96
2	130 - 125	2.18	28.69	3.23
3	125 - 120	6.34	77.26	9.64
4	120 - 115	6.88	126.10	9.90
5	115 - 110	7.45	176.17	10.13
6	110 - 109.75	11.36	180.01	15.37
7	109.75 - 104.75	12.12	258.65	16.08
8	104.75 - 99.75	16.01	341.63	21.16
9	99.75 - 94.75	16.89	449.14	21.85
10	94.75 - 90.92	17.59	533.83	22.39
11	90.92 - 90.67	17.66	539.43	22.41
12	90.67 - 86.41	21.78	648.73	27.40
13	86.41 - 81.41	23.59	787.82	28.22
14	81.41 - 76.41	25.00	930.82	29.06
15	76.41 - 74.5	25.50	986.56	29.36
16	74.5 - 74.25	25.62	993.89	29.38
17	74.25 - 70.58	26.92	1102.79	30.00
18	70.58 - 70.33	27.02	1110.29	30.04
19	70.33 - 66.33	28.47	1231.71	30.71
20	66.33 - 66.08	28.58	1239.39	30.75
21	66.08 - 61.08	30.55	1395.17	31.61
22	61.08 - 60	30.98	1429.38	31.79
23	60 - 59.75	31.09	1437.33	31.83
24	59.75 - 54.75	33.10	1598.49	32.68
25	54.75 - 49.75	35.14	1763.83	33.51
26	49.75 - 49.2	35.38	1782.27	33.59
27	49.2 - 43.78	39.28	1967.02	34.61
28	43.78 - 38.78	41.49	2142.76	35.58
29	38.78 - 35.5	42.96	2260.20	36.09
30	35.5 - 35.25	43.09	2269.22	36.12
31	35.25 - 30.25	45.35	2451.60	36.88
32	30.25 - 25.25	47.65	2637.66	37.61
33	25.25 - 20.25	49.99	2827.25	38.30
34	20.25 - 15.75	52.11	3000.74	38.88
35	15.75 - 15.5	52.26	3010.46	38.90
36	15.5 - 10.5	54.83	3206.41	39.54
37	10.5 - 7.25	56.52	3335.46	39.95
38	7.25 - 7	56.67	3345.44	39.96
39	7 - 5.83	57.25	3392.22	40.05
40	5.83 - 5.58	57.40	3402.23	40.05
41	5.58 - 4.08	58.16	3462.42	40.23
42	4.08 - 3.83	58.31	3472.47	40.23
43	3.83 - 0	60.25	3626.85	40.42

Analysis Results

Elevation (ft)	Component Type	Size	Critical Element	% Capacity	Pass / Fail
135 - 130	Pole	TP16x16x0.5	Pole	3.2%	Pass
130 - 125	Pole	TP16x16x0.5	Pole	6.8%	Pass
125 - 120	Pole	TP16x16x0.5	Pole	18.4%	Pass
120 - 115	Pole	TP16x16x0.5	Pole	29.7%	Pass
115 - 110	Pole	TP16x16x0.5	Pole	41.3%	Pass
110 - 109.75	Pole + Reinf.	TP16.059x16x0.9	Reinf. 9 Tension Rupture	29.9%	Pass
109.75 - 104.75	Pole + Reinf.	TP17.234x16.059x0.8125	Reinf. 9 Tension Rupture	39.3%	Pass
104.75 - 99.75	Pole + Reinf.	TP18.41x17.234x0.7625	Reinf. 9 Tension Rupture	48.1%	Pass
99.75 - 94.75	Pole + Reinf.	TP19.586x18.41x0.7125	Reinf. 9 Tension Rupture	58.5%	Pass
94.75 - 90.92	Pole + Reinf.	TP20.486x19.586x0.675	Reinf. 9 Tension Rupture	65.7%	Pass
90.92 - 90.67	Pole + Reinf.	TP20.545x20.486x0.8625	Reinf. 8 Compression	50.8%	Pass
90.67 - 86.41	Pole + Reinf.	TP22.33x20.545x0.8125	Reinf. 8 Compression	57.9%	Pass
86.41 - 81.41	Pole + Reinf.	TP22.333x21.172x0.85	Reinf. 8 Compression	62.1%	Pass
81.41 - 76.41	Pole + Reinf.	TP23.494x22.333x0.8125	Reinf. 8 Compression	68.8%	Pass
76.41 - 74.5	Pole + Reinf.	TP23.938x23.494x0.8	Reinf. 8 Compression	71.1%	Pass
74.5 - 74.25	Pole + Reinf.	TP23.996x23.938x1.275	Reinf. 10 Tension Rupture	50.2%	Pass
74.25 - 70.58	Pole + Reinf.	TP24.848x23.996x1.2	Reinf. 10 Tension Rupture	53.5%	Pass
70.58 - 70.33	Pole + Reinf.	TP24.906x24.848x1.2	Reinf. 10 Tension Rupture	53.7%	Pass
70.33 - 66.33	Pole + Reinf.	TP25.835x24.906x1.15	Reinf. 10 Tension Rupture	57.1%	Pass
66.33 - 66.08	Pole + Reinf.	TP25.893x25.835x1.3	Reinf. 7 Compression	49.1%	Pass
66.08 - 61.08	Pole + Reinf.	TP27.055x25.893x1.225	Reinf. 7 Compression	52.5%	Pass
61.08 - 60	Pole + Reinf.	TP27.305x27.055x1.225	Reinf. 7 Compression	53.3%	Pass
60 - 59.75	Pole + Reinf.	TP27.363x27.305x1.225	Reinf. 7 Compression	53.4%	Pass
59.75 - 54.75	Pole + Reinf.	TP28.525x27.363x1.15	Reinf. 7 Compression	56.6%	Pass
54.75 - 49.75	Pole + Reinf.	TP29.686x28.525x1.1	Reinf. 7 Compression	59.5%	Pass
49.75 - 49.2	Pole + Reinf.	TP30.84x29.686x1.1	Reinf. 7 Compression	59.8%	Pass
49.2 - 43.78	Pole + Reinf.	TP30.573x29.314x1.1375	Reinf. 7 Compression	60.4%	Pass
43.78 - 38.78	Pole + Reinf.	TP31.736x30.573x1.1125	Reinf. 7 Compression	62.8%	Pass
38.78 - 35.5	Pole + Reinf.	TP32.498x31.736x1.0875	Reinf. 7 Compression	64.2%	Pass
35.5 - 35.25	Pole + Reinf.	TP32.556x32.498x1.0875	Reinf. 3 Compression	64.3%	Pass
35.25 - 30.25	Pole + Reinf.	TP33.718x32.556x1.0375	Reinf. 3 Compression	66.5%	Pass
30.25 - 25.25	Pole + Reinf.	TP34.881x33.718x1.0125	Reinf. 3 Compression	68.4%	Pass
25.25 - 20.25	Pole + Reinf.	TP36.043x34.881x0.9875	Reinf. 3 Compression	70.3%	Pass
20.25 - 15.75	Pole + Reinf.	TP37.089x36.043x0.9625	Reinf. 3 Compression	71.8%	Pass
15.75 - 15.5	Pole + Reinf.	TP37.147x37.089x1.0125	Reinf. 14 Tension Yield	71.3%	Pass
15.5 - 10.5	Pole + Reinf.	TP38.309x37.147x0.9875	Reinf. 14 Tension Yield	72.9%	Pass
10.5 - 7.25	Pole + Reinf.	TP39.065x38.309x0.9625	Reinf. 14 Tension Yield	73.8%	Pass
7.25 - 7	Pole + Reinf.	TP39.123x39.065x0.9625	Reinf. 14 Tension Yield	73.5%	Pass
7 - 5.83	Pole + Reinf.	TP39.395x39.123x0.9625	Reinf. 14 Tension Yield	73.8%	Pass
5.83 - 5.58	Pole + Reinf.	TP39.453x39.395x1.1125	Reinf. 11 Tension Yield	65.3%	Pass
5.58 - 4.08	Pole + Reinf.	TP39.802x39.453x1.1125	Reinf. 11 Tension Yield	65.8%	Pass
4.08 - 3.83	Pole + Reinf.	TP39.86x39.802x1.1125	Reinf. 11 Tension Yield	66.3%	Pass
3.83 - 0	Pole + Reinf.	TP40.75x39.86x1.0875	Reinf. 11 Tension Yield	67.4%	Pass
				Summary	
			Pole	53.2%	Pass
			Reinforcement	73.8%	Pass
			Overall	73.8%	Pass

Additional Calculations

Section Elevation (ft)	Moment of Inertia (in^4)			Area (in^2)			% Capacity* (100% Max. Allowable)															
	Pole	Reinf.	Total	Pole	Reinf.	Total	Pole	R1	R2	R3	R4	R5	R6	R7	R8	R9	R10	R11	R12	R13	R14	R15	R16
135 - 130	732	n/a	732	24.35	n/a	24.35	3.2%																
130 - 125	732	n/a	732	24.35	n/a	24.35	6.8%																
125 - 120	732	n/a	732	24.35	n/a	24.35	18.4%																
120 - 115	732	n/a	732	24.35	n/a	24.35	29.7%																
115 - 110	732	n/a	732	24.35	n/a	24.35	41.3%																
110 - 109.75	300	957	1258	9.45	24.38	33.82	18.3%									29.9%							
109.75 - 104.75	372	1086	1458	10.14	24.38	34.52	24.2%									39.3%							
104.75 - 99.75	455	1222	1677	10.84	24.38	35.22	29.9%									48.1%							
99.75 - 94.75	549	1367	1916	11.54	24.38	35.92	37.0%									58.5%							
94.75 - 90.92	629	1484	2113	12.08	24.38	36.46	42.1%									65.7%							
90.92 - 90.67	634	1991	2625	12.11	31.88	43.99	34.4%								50.8%								
90.67 - 86.41	732	2169	2901	12.71	31.88	44.59	39.8%								57.9%								
86.41 - 81.41	1079	2314	3393	17.52	31.88	49.40	40.8%								62.1%								
81.41 - 76.41	1259	2538	3796	18.44	31.88	50.32	45.2%								68.8%								
76.41 - 74.5	1332	2626	3958	18.80	31.88	50.67	46.8%								71.1%								
74.5 - 74.25	1342	4624	5966	18.84	56.25	75.09	31.4%								47.7%		50.2%						
74.25 - 70.58	1492	4932	6423	19.52	56.25	75.77	33.8%								50.8%		53.5%						
70.58 - 70.33	1502	4953	6455	19.56	56.25	75.81	33.9%							51.0%			53.7%						
70.33 - 66.33	1678	5301	6979	20.30	56.25	76.55	36.4%							54.1%			57.1%						
66.33 - 66.08	1690	6067	7757	20.35	63.75	84.10	33.1%						49.1%	49.1%									
66.08 - 61.08	1930	6580	8510	21.27	63.75	85.02	35.9%						52.5%	52.5%									
61.08 - 60	1985	6694	8679	21.47	63.75	85.22	36.5%						53.3%	53.3%									
60 - 59.75	1997	6720	8718	21.51	63.75	85.26	36.6%						53.4%	53.4%									
59.75 - 54.75	2265	7261	9526	22.44	63.75	86.19	39.3%						56.6%	56.6%									
54.75 - 49.75	2556	7822	10378	23.36	63.75	87.11	41.9%						59.5%	59.5%									
49.75 - 49.2	2589	7885	10475	23.46	63.75	87.21	42.2%						59.8%	59.8%									
49.2 - 43.78	3471	8266	11738	30.01	63.75	93.76	40.4%						60.4%	60.4%									
43.78 - 38.78	3887	8866	12753	31.17	63.75	94.92	42.4%						62.8%	62.8%									
38.78 - 35.5	4177	9272	13449	31.92	63.75	95.67	43.7%						64.2%	64.2%									
35.5 - 35.25	4199	9303	13503	31.98	63.75	95.73	43.8%		64.3%	64.3%	64.3%	64.3%											
35.25 - 30.25	4670	9940	14610	33.13	63.75	96.88	45.7%		66.5%	66.5%	66.5%	66.5%											
30.25 - 25.25	5175	10599	15773	34.29	63.75	98.04	47.6%		68.4%	68.4%	68.4%	68.4%											
25.25 - 20.25	5714	11279	16993	35.44	63.75	99.19	49.4%		70.3%	70.3%	70.3%	70.3%											
20.25 - 15.75	6231	11909	18140	36.48	63.75	100.23	51.0%		71.8%	71.8%	71.8%	71.8%											
15.75 - 15.5	6261	12874	19134	36.53	73.75	110.28	49.8%		67.8%		64.5%	51.9%									71.3%	56.4%	
15.5 - 10.5	6872	13585	20458	37.69	73.75	111.44	51.7%		69.5%		66.2%	53.4%									72.9%	57.8%	
10.5 - 7.25	7291	14058	21349	38.44	73.75	112.19	53.0%		70.6%		67.2%	54.3%									73.8%	58.7%	
7.25 - 7	7323	14208	21531	38.49	71.88	110.37	52.8%		70.9%		67.6%									54.4%	73.5%	59.1%	
7 - 5.83	7478	14379	21857	38.76	71.88	110.64	53.2%		71.2%		67.9%									54.7%	73.8%	59.4%	
5.83 - 5.58	7513	17694	25207	38.82	81.88	120.70	46.7%				49.8%							65.3%		52.3%	64.2%	53.1%	50.4%
5.58 - 4.08	7715	17952	25667	39.17	81.88	121.04	47.2%				50.3%							65.8%		52.7%	64.6%	53.5%	50.8%
4.08 - 3.83	7749	18038	25787	39.22	80.00	119.22	47.6%											66.3%	50.5%	53.2%	65.1%	53.3%	51.4%
3.83 - 0	8284	18702	26986	40.11	80.00	120.11	48.9%											67.4%	51.4%	54.2%	66.1%	54.2%	52.3%

Note: Section capacity checked using 5 degree increments.

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

TUBE BYPASS ANALYSIS

MORRISON HERSHFIELD

Project No.	:	CN8-847R2 / 2300001
BU#:	:	876406
Site Name:	:	Ne Old Lyme-Old Lyme Firehouse
Date:	:	10/6/2023
Code	:	H

REACTIONS AT CONNECTION			
Moment	:	176.17	K-ft
Axial	:	7.45	kips
Shear	:	10.13	Kips

EXTENSION PROPERTIES			
Diameter	:	16	in
Thickness	:	0.5	in
Height	:	25	ft
Ultimate Strength, (Fu)	:	62	ksi
Gap Height	:	6	in

POLE PROPERTIES			
Diameter	:	16	in
Thickness	:	0.1875	in
Ultimate Strength, (Fu)	:	80	ksi

TUBE BYPASS PROPERTIES			
Number of Legs	:	3	
Unbraced Length	:	19	in
Tube Circle	:	37	in
K	:	1	
Member Type	:	HSS 5x5x1/2	
Width	:	5	in
Thickness	:	0.5	in
Gross Area (A_g)	:	7.88	
Net Area (A_n)	:	6.51	in^2
Radius of Gyration	:	1.81	in
Section Modulus, (Z)	:	13.11	in^3
Yield Strength, (F_y)	:	46	ksi
Ultimate Strength, (F_u)	:	62	ksi
Youngs Modulus, (E)	:	29000	ksi

CONNECTION		TOP	BOTTOM
Bolt Type	:	M20 AJAX	M20 AJAX
Bolt Quantity	:	19	19
Spacing (in)	:	3	3
End Distance (in)	:	3	3
Bolt Grade (ksi)	:	120	120
Bolt Size (in)	:	1.1875	1.1875

Load Distribution		Member Forces	
Moment of Inertia (in^4)	Force due to Moment (kips)	Compression Load (kips)	Tension Load (kips)
3342.07	76.18	78.66	73.70

Tensile Strength			
Tensile Yielding Capacity, $ØP_{nt}$ (kips)	Tensile Rupture Capacity, $ØP_{nt}$ (kips)	Capacity*	
326.2	266.4	26.3%	PASS

Compression Strength			
Critical Compreesion Stress, F_{cr} (kips)	Compressive Strngth, $Ø_cP_n$ (kips)	Capacity*	
45.7	267.5	28.0%	PASS

Bending Capacity		
Flexure Strength, $ØM_n$ (kips-in)	Capacity*	
542.8	3.6%	PASS

Combined Interaction		
Capacity*	32.7%	PASS

Bolt Shear Capacity			
Shear Force on single Bolt, V_n (kips)	Design Shear Strength, $ØR_{nv}$ (kips)	Capacity*	
4.14	49.8	8.3%	PASS

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

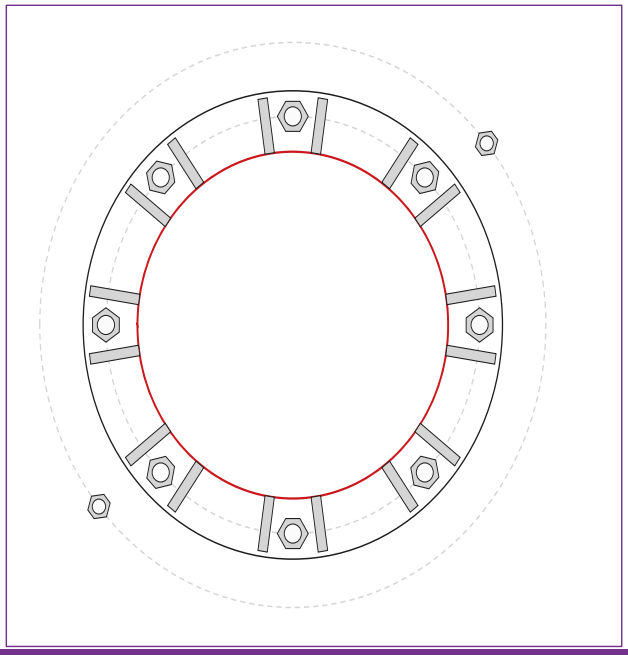
Monopole Base Plate Connection

Site Info	
BU #	876406
Site Name	d Lyme-Old Lyme Fire
Order #	656057 Rev. 1

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

Applied Loads	
Moment (kip-ft)	1693.73
Axial Force (kips)	60.25
Shear Force (kips)	40.42

**TIA-222-H Section 15.5 Applied*



Connection Properties

Anchor Rod Data

GROUP 1: (8) 2-1/4" ø bolts (A615-75 N; Fy=75 ksi, Fu=100 ksi) on 49" BC

GROUP 2: (2) 1-3/4" ø bolts (A193 Gr. B7 N; Fy=105 ksi, Fu=125 ksi) on 66.375" BC

pos. (deg): 40, 220

Base Plate Data

55" OD x 2" Plate (A871-60; Fy=60 ksi, Fu=75 ksi)

Stiffener Data

(16) 18"H x 6.5"W x 1.25"T, Notch: 0.5"

plate: Fy= 65 ksi ; weld: Fy= 80 ksi

horiz. weld: 0.625" groove, 45° dbl bevel, 0.625" fillet

vert. weld: 0.375" fillet

Pole Data

40.75" x 0.3125" 18-sided pole (A572-65; Fy=65 ksi, Fu=80 ksi)

Analysis Results

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

GROUP 1:		
Pu_c = 213.94	ϕPn_c = 268.39	**Stress Rating**
Vu = 5.05	ϕVn = 120.77	**82.2%**
Mu = 8.21	ϕMn = 128.14	**Pass**

GROUP 2:		
Pu_t = 106.84	ϕPn_t = 178.13	**Stress Rating**
Vu = 0	ϕVn = 112.75	**57.1%**
Mu = n/a	ϕMn = n/a	**Pass**

Base Plate Summary

Max Stress (ksi):	8.23	(Shear)
Allowable Stress (ksi):	33.75	
Stress Rating:	**23.2%**	**Pass**

Stiffener Summary

Horizontal Weld:	**19.9%**	**Pass**
Vertical Weld:	**28.8%**	**Pass**
Plate Flexure+Shear:	**4.7%**	**Pass**
Plate Tension+Shear:	**19.8%**	**Pass**
Plate Compression:	**23.5%**	**Pass**

Pole Summary

Punching Shear:	**11.1%**	**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	

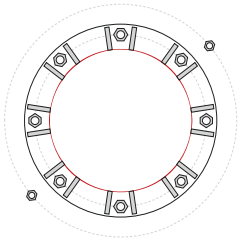
Custom Bolt Connection

Bolt	Bolt Group ID	Location (deg.)	Diameter (in)	Material	Bolt Circle (in)	Eta Factor, n:	l_{br} (in):	Thread Type	Area Override, in^2	Tension Only
1	1	0	2.25	A615-75	49	0.5	2.5	N-Included		No
2	1	45	2.25	A615-75	49	0.5	2.5	N-Included		No
3	1	90	2.25	A615-75	49	0.5	2.5	N-Included		No
4	1	135	2.25	A615-75	49	0.5	2.5	N-Included		No
5	1	180	2.25	A615-75	49	0.5	2.5	N-Included		No
6	1	225	2.25	A615-75	49	0.5	2.5	N-Included		No
7	1	270	2.25	A615-75	49	0.5	2.5	N-Included		No
8	1	315	2.25	A615-75	49	0.5	2.5	N-Included		No
9	2	40	1.75	A193 Gr. B7	66.375	0.5	0	N-Included		No
10	2	220	1.75	A193 Gr. B7	66.375	0.5	0	N-Included		No

Custom Stiffener Connection

Stiffener	Stiffener Group ID	Location (deg.)	Width (in)	Height (in)	Thickness (in)	H. Notch (in)	V. Notch (in)	Grade (ksi)	Weld Type	Groove Depth (in)	Groove Angle (deg.)	H. Fillet Weld Size (in)	V. Fillet Weld Size (in)	Weld Strength (ksi)
1	1	8.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
2	1	36.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
3	1	53.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
4	1	81.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
5	1	98.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
6	1	126.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
7	1	143.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
8	1	171.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
9	1	188.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
10	1	216.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
11	1	233.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
12	1	261.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
13	1	278.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
14	1	306.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
15	1	323.4952	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80
16	1	351.5047	6.5	18	1.25	0.5	0.5	65	Both	0.625	45	0.625	0.375	80

Plot Graphic



Pier and Pad Foundation

BU # :	876406
Site Name:	NE Old Lyme-Old L
App. Number:	656057 Rev. 1

TIA-222 Revision:	H
Tower Type:	Monopole

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

Superstructure Analysis Reactions		
Compression, P_{comp}:	60.25	kips
Base Shear, Vu_comp:	40.42	kips
Moment, M_u:	1693.73	ft-kips
Tower Height, **H**:	135	ft
BP Dist. Above Fdn, bp_{dist}:	4.75	in

Pier Properties		
Pier Shape:	Square	
Pier Diameter, **dpier**:	10	ft
Ext. Above Grade, **E**:	1	ft
Pier Rebar Size, **Sc**:	8	
Pier Rebar Quantity, **mc**:	30	
Pier Tie/Spiral Size, **St**:	4	
Pier Tie/Spiral Quantity, **mt**:	8	
Pier Reinforcement Type:	Tie	
Pier Clear Cover, cc_{pier}:	3	in

Pad Properties		
Depth, **D**:	7	ft
Pad Width, W_1:	20	ft
Pad Thickness, **T**:	3	ft
Pad Rebar Size (Bottom dir. 2), Sp_2:	8	
Pad Rebar Quantity (Bottom dir. 2), mp_2:	9	
Pad Clear Cover, cc_{pad}:	3	in

Material Properties		
Rebar Grade, **Fy**:	60	ksi
Concrete Compressive Strength, **F'c**:	4	ksi
Dry Concrete Density, **δc**:	150	pcf

Soil Properties		
Total Soil Unit Weight, **γ**:	135	pcf
Ultimate Gross Bearing, Qult:	30.000	ksf
Cohesion, **Cu**:	0.000	ksf
Friction Angle, **ϕ**:	42	degrees
SPT Blow Count, N_{blows}:	2	
Base Friction, **μ**:	0.45	
Neglected Depth, **N**:	3.50	ft
Foundation Bearing on Rock?	No	
Groundwater Depth, **gw**:	2	ft

<--Toggle between Gross and Net

Foundation Analysis Checks	Capacity	Demand	Rating*	Check
Lateral (Sliding) (kips)	230.49	40.42	**16.7%**	**Pass**
Bearing Pressure (ksf)	22.50	2.15	**9.6%**	**Pass**
*Overturning (kip*ft)*	3580.33	2033.09	**56.8%**	**Pass**
*Pier Flexure (Comp.) (kip*ft)*	6086.64	1895.83	**29.7%**	**Pass**
Pier Compression (kip)	63648.00	135.27	**0.2%**	**Pass**
*Pad Flexure (kip*ft)*	999.48	478.95	**45.6%**	**Pass**
Pad Shear - 1-way (kips)	717.20	97.73	**13.0%**	**Pass**
Pad Shear - 2-way (Comp) (ksi)	0.190	0.000	**0.0%**	**Pass**
*Flexural 2-way (Comp) (kip*ft)*	1739.95	1137.50	**62.3%**	**Pass**

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

Structural Rating*:	**62.3%**
Soil Rating*:	**56.8%**

Pile Foundation

Checks the capacity of pile foundation configurations for monopoles or self-support towers with individual foundations in Rev. F, G, and H.

BU #:	876406
Site Name:	NE Old Lyme-Old Lyme Fireh
Order:	656057 Rev. 1

Tower Type:	Monopole
TIA Revision:	H

Top & Bot. Pad Rein. Different?: ☐

Factored Design Reactions At Base		
Moment, M:	1,933.12	ft-kips
Axial, Pu:	0	kips
Shear, Sc:	0	kips
Load Eccentricity, Ecc:	0	in

Pile Properties		
Pile Shape:	Round	
Pile Material:	Steel	
Length of Pile, Lpile:	20	ft
Pile Diameter:	12.8	in
Pile (Soil) Capacity Given?	Yes	
Steel Grade, Fy:	35	ksi
Pile Reduction Factor		

Pile Group		
Group Configuration:	Rectangular	
Number of Columns, Nx:	2	
Number of Rows, Ny:	2	
Column Spacing, Dx:	84	in
Row Spacing, Dy:	156	in
Orientation of Neutral Axis, θ:	0	deg
Group Efficiency Given in Geotech?	No	

Program Calculated Group Efficiency, Eg: 1.00

Pile Cap		
Cap Type:	Pier and Pad	
Depth to Bottom of Pad, D:	7.00	ft
Thickness of Pad, T:	3.00	ft
Pad Width, Wx:	20.00	ft
Pad Length, Wy:	20.00	ft
Pad Rebar Size (Bot.), Spad:	8	
Pad Rebar Quantity (X-direction) (Bot.), Mpad:	9	
Pad Rebar Quantity (Y-direction) (Bot.), Mpad $_y$:	9	
Extension of Pier Above Grade, E:	1.00	ft
Pier Shape:	Square	
Pier Width, di:	10.00	ft
Pier Rebar Size, Rs:	8	
Pier Rebar Quantity, mc:	30	
Pier Tie Size, St:	4	

Material Properties		
Rebar Grade, Fy:	60	ksi
Concrete Strength, Fc:	4	ksi
Clear Cover, cc:	3	in

Soil Properties		
Groundwater Depth, GW:	2.00	ft
Soil Unit Weight:	73	pcf
Cohesion, Co:	0	ksf
Friction Angle, ϕ:	42	deg
Neglected Depth, ND:	3.5	ft
Negative Friction Force (per pile), Sw:		kips
SPT Blow Count, N_{blows}:	41	

Design Checks	*Capacity*	*Demand*	*Rating**	*Check*
PILE CHECKS				
Soil Compression (kips per pile):	224.48	190.75	**80.9%**	**Pass**
Soil Uplift (kips per pile):	118.50	75.17	**60.4%**	**Pass**
Pile Tensile Strength (kips):	3603.03	75.17	**2.0%**	**Pass**
PAD CHECKS				
One-Way Shear (kips):	717.20	24.51	**3.3%**	**Pass**
Pad Shear - Comp Two-Way (ksi):	0.164	0.013	**7.6%**	**Pass**
*Flexural Two-Way (Comp) (kip*ft):*	1739.95	1159.87	**63.5%**	**Pass**
*Pad Flexure (kip*ft):*	999.48	290.07	**27.6%**	**Pass**
PIER CHECKS				
Pier Compression (kips):	63648.00	75.02	**0.1%**	**Pass**
Pier Flexure (Comp.) (ft-kips):	5852.43	1933.12	**31.5%**	**Pass**

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

Structural Rating:	**63.5%**
Soil Rating:	**80.9%**

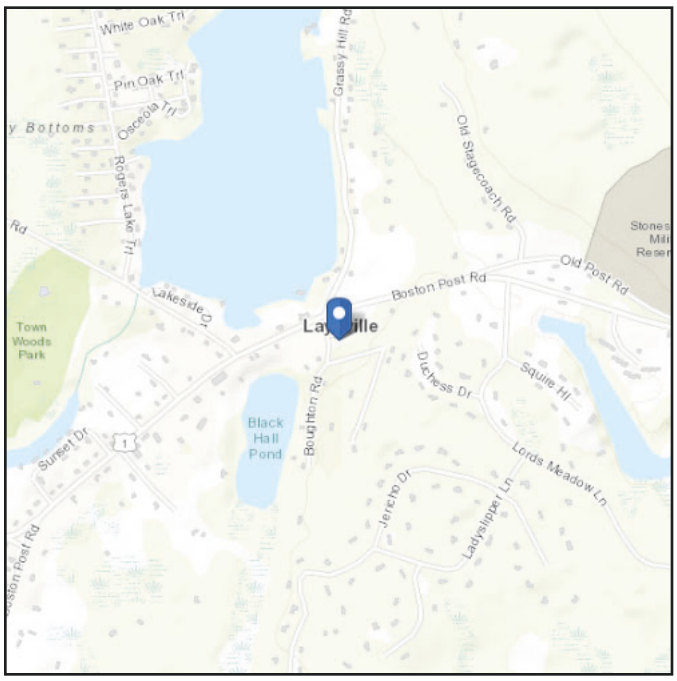
Ultimate Pile Capacities		
Ultimate Compression, Cn:	299.3	kips
Ultimate Tension, Tn:	146.8	kips

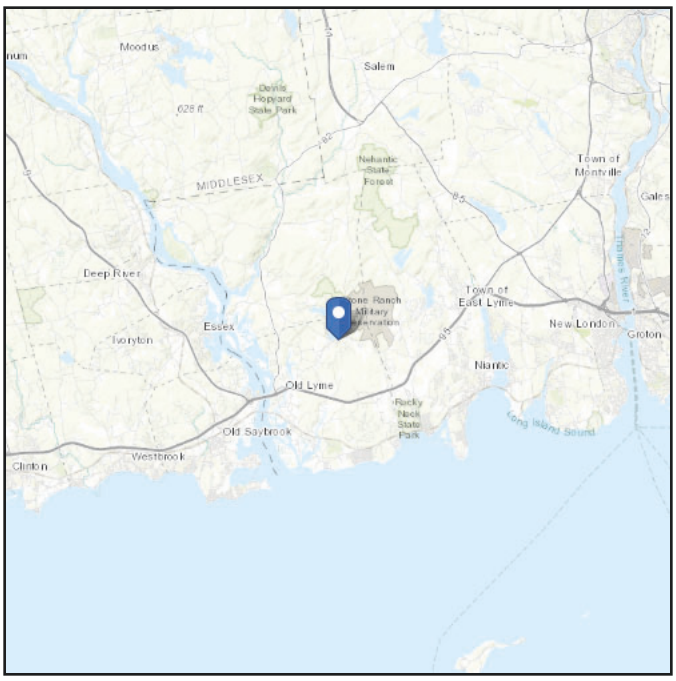
Per CCIsites Doc. # 8730421

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.348992
Risk Category:	II	**Longitude:**	-72.295458
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	51.46 ft (NAVD 88)





Wind

Results:

Wind Speed	125 Vmph
10-year MRI	76 Vmph
25-year MRI	85 Vmph
50-year MRI	97 Vmph
100-year MRI	102 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: Fri Oct 06 2023

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

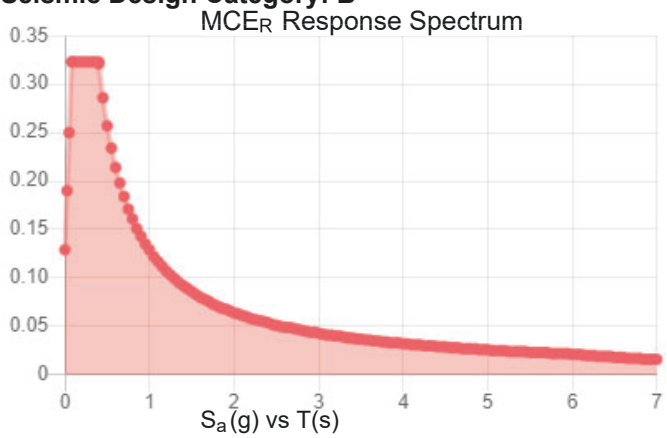
D - Default (see Section 11.4.3)

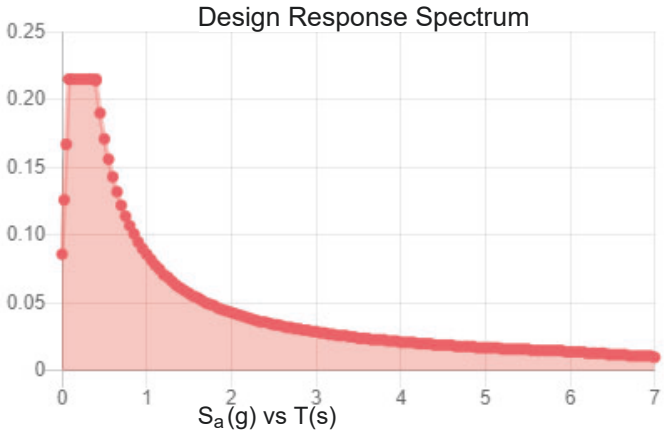
Site Soil Class:

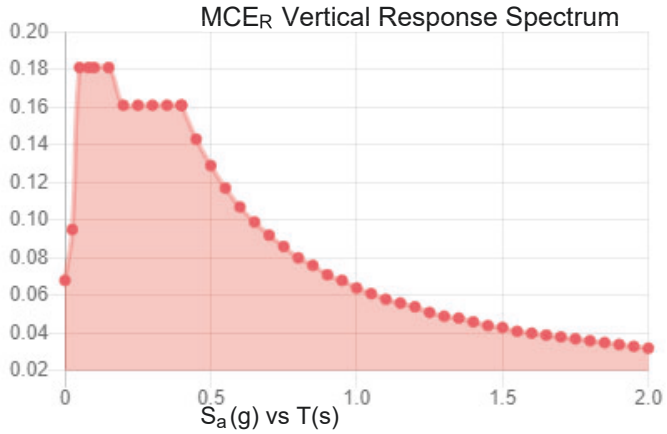
Results:

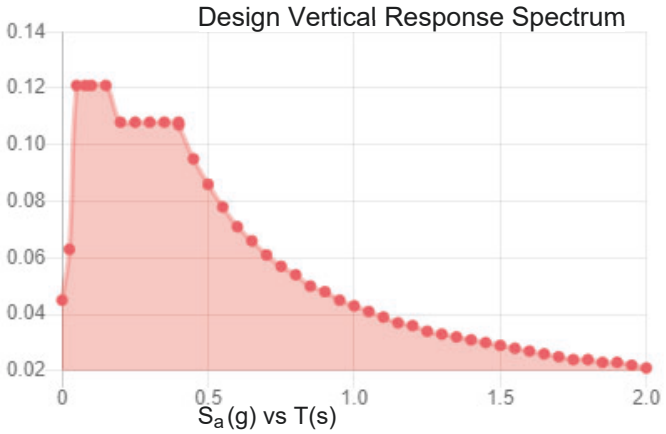
S_S :	0.202	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.112
F_v :	2.4	PGA_M :	0.177
S_{MS} :	0.323	F_{PGA} :	1.576
S_{M1} :	0.129	I_e :	1
S_{DS} :	0.215	C_v :	0.703

Seismic Design Category: B









Data Accessed: **Fri Oct 06 2023**

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:	Fri Oct 06 2023

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: **September 26, 2023**

Tower Engineering Professionals
326 Tryon Road
Raleigh, NC 27603
(919) 661-6351
CrownMA@tepgroup.net

Subject:	**Mount Analysis - Conditional Pass**	
Carrier Designation:	***T-Mobile* Reconfiguration**	
	Client Site Number:	CTNL226A
	Client Site Name:	Crown Old Lyme Monopole
Crown Castle Designation:	**Crown Castle BU Number:**	876406
	Crown Castle Site Name:	NE Old Lyme-Old Lyme Firehouse
	Crown Castle JDE Job Number:	2100793
	Crown Castle Order Number:	656057 Rev. 0
Engineering Firm Designation:	**TEP Project Number:**	144549.884567
Site Data:	**189 Boston Post Road, Old Lyme, New London County, CT 06371** **Latitude *41° 20' 56.37"*, Longitude -*72° 17' 43.65"***	
Structure Information:	**Tower Height & Type:**	135.0±ft Monopole
	Mount Elevation:	110.0 ft
	Mount Width & Type:	13.2 ft Platform w/ Support Rail

Tower Engineering Professionals is pleased to submit this **"Mount Analysis – Conditional Pass"** to determine the structural integrity of T-Mobile's antenna mounting system with the proposed appurtenance and equipment addition on the above-mentioned supporting tower structure. Analysis of the existing supporting tower structure is to be completed by others and therefore is not part of this analysis. Analysis of the antenna mounting system as a tie-off point for fall protection or rigging is not part of this document.

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

Platform w/ Support Rail Mount **Sufficient Capacity**
***Sufficient upon completion of the changes listed in the 'Recommendations' section of this report.**

This analysis utilizes an ultimate 3-second gust wind speed of 125 mph as required by the 2022 Connecticut State Building Code. Applicable Standard references and design criteria are listed in Section 2 - Analysis Criteria.

Mount analysis prepared by: Gautam Sopal, E.I. / MMW

Respectfully submitted by:

Electronic Copy

09/26/2023

Aaron T. Rucker, P.E.
Division Manager
(919) 661-6351
arucker@tepgroup.net

TABLE OF CONTENTS

1) INTRODUCTION

The mount is an existing 13.2-ft 3-sector Platform w/ Support Rail mount, mapped by Paul J. Ford & Company. The mount is installed at the 110.0 ft elevation on the 135.0± ft Monopole.

2) ANALYSIS CRITERIA

Building Code:	2022 Connecticut State Building Code
TIA-222 Revision:	TIA-222-H
Risk Category:	II
Ultimate Wind Speed:	125 mph
Exposure Category:	C
Topographic Factor at Base:	1.0
Topographic Factor at Mount:	1.0
Ice Thickness:	1 in
Wind Speed with Ice:	50 mph
Seismic Design Category:	B
Seismic S_s:	0.202
Seismic S_1:	0.054
Live Loading Wind Speed:	30 mph
Live Loading at Mid/End-Points:	250 lb
Man Live Loading 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
110.0	110.0	3	Ericsson	AIR 6419 B41_TMO_CCIV2	Platform w/ Support Rail Mount
		3	RFS/Celwave	APXVAALL24_43-U-NA20_TMO	
		3	Ericsson	RADIO 4449 B71 B85A_T-MOBILE	
		3	Ericsson	RADIO 4460 B2/B25 B66_TMO	

3) ANALYSIS PROCEDURE

Table 2 - Documents Provided

Document	Remarks	Reference	Source
Previous Mount Analysis	Tower Engineering Professionals	9865084	CCIsites
Mount Mapping Report	Paul J. Ford & Company	8359340	CCIsites
Previous Mount Modification Drawings	Tower Engineering Professionals	8446204	CCIsites
Loading Application	T-Mobile	Order 656057 Rev. 0	CCIsites
RFDS	T-Mobile	Site ID: CTNL226A	CCIsites

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 mount and calculate member stresses for various loading cases. Selected output from the analysis is included in Appendix A and Appendix C.

TEP Mount Analysis Tool, a tool internally developed by TEP using Microsoft Excel, was used to calculate member loading 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 E)*.

3.2) Assumptions

1) The mount was built in accordance with the manufacturer's specifications.
2) The mount has been maintained in accordance with the manufacturer's specification.
3) The configuration of antennas, mounts and other appurtenances are as specified in Table 1. All mount components have been assumed to be in sufficient condition to carry their full design capacity for this analysis. Refer to the issued mapping for any structural and/or maintenance issues found during our site visit if applicable.
4) All mount components are in sufficient condition to carry their full design capacity.
5) TEP did not analyze the collar mount connection to the pole and assumes it to have sufficient structural capacity to transfer the applied forces from the mount to the tower.
6) All material grades used for this analysis, unless verified by mount manufacturer design, were assumed per AISC Table 2-4, 15th Edition. See RISA-3D output for confirmation on grades used in this analysis.

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

4) ANALYSIS RESULTS

Table 3 - Mount Component Stresses vs. Capacity (Platform w/ Support Rail Mount)

Notes	Component	Critical Member	Centerline (ft)	% Capacity	Pass / Fail
1	Face Horizontals	FFTH	110.0	24.0	Pass
1	Support Rails	SF1-HR	110.0	58.2	Pass
1	Support Arm	SA-2	110.0	54.8	Pass
1	Mount Pipes	MP-1	110.0	58.3	Pass

Structure Rating (max from all components) =	58.3%

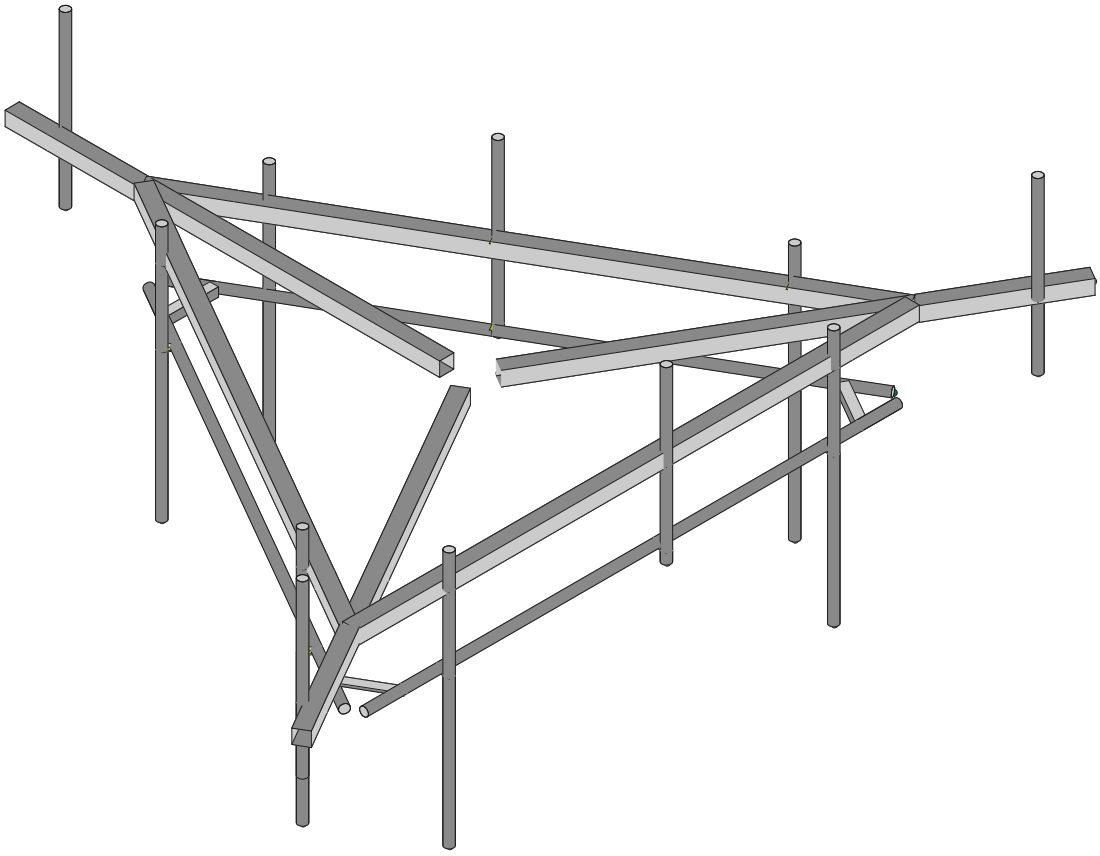
Notes:
1) See additional documentation in “Appendix C - Software Analysis Output” for calculations supporting the % capacity consumed.

4.1) Recommendations

1) If the load differs from that described in Table 1 of this report or the provisions of this analysis are found to be invalid, another structural analysis should be performed.
2) The mount and its connection have sufficient capacity to carry the proposed loading configuration. In order for the results of this analysis to be valid, the mount modifications listed below must be completed:
   a) Install mount modifications designed by Tower Engineering Professionals on June 1, 2019 (CCIsites Doc ID: 8446204)
   b) Remove the STD 2.5 x 8.5-ft Mount Pipe, STD 1.5 x 5-ft Mount Pipe and STD 1.5 x 2-ft Mount Pipe from Beta Sector.

APPENDIX A

WIRE FRAME AND RENDERED MODELS



Envelope Only Solution

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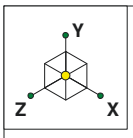
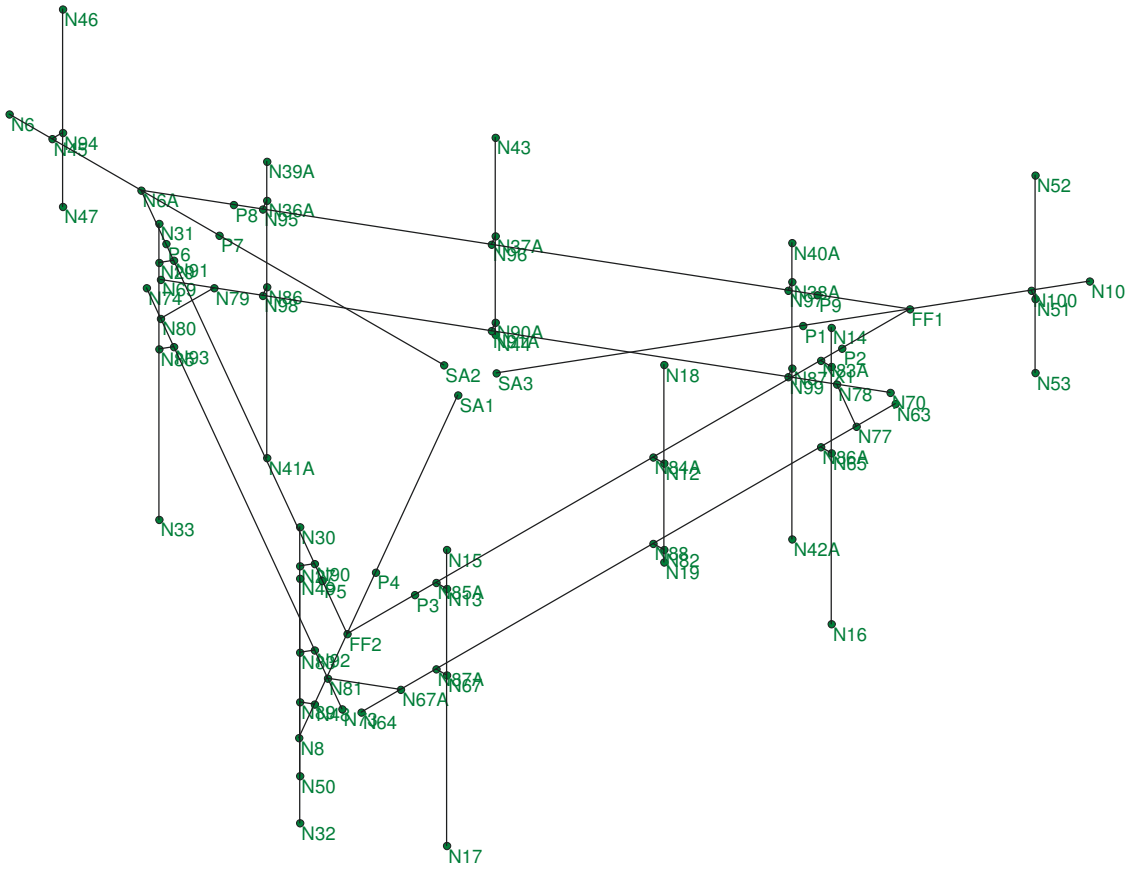
GJS		Sept 26, 2023 at 8:17 AM
TEP No. 144549.884567		Mount Rev H.r3d





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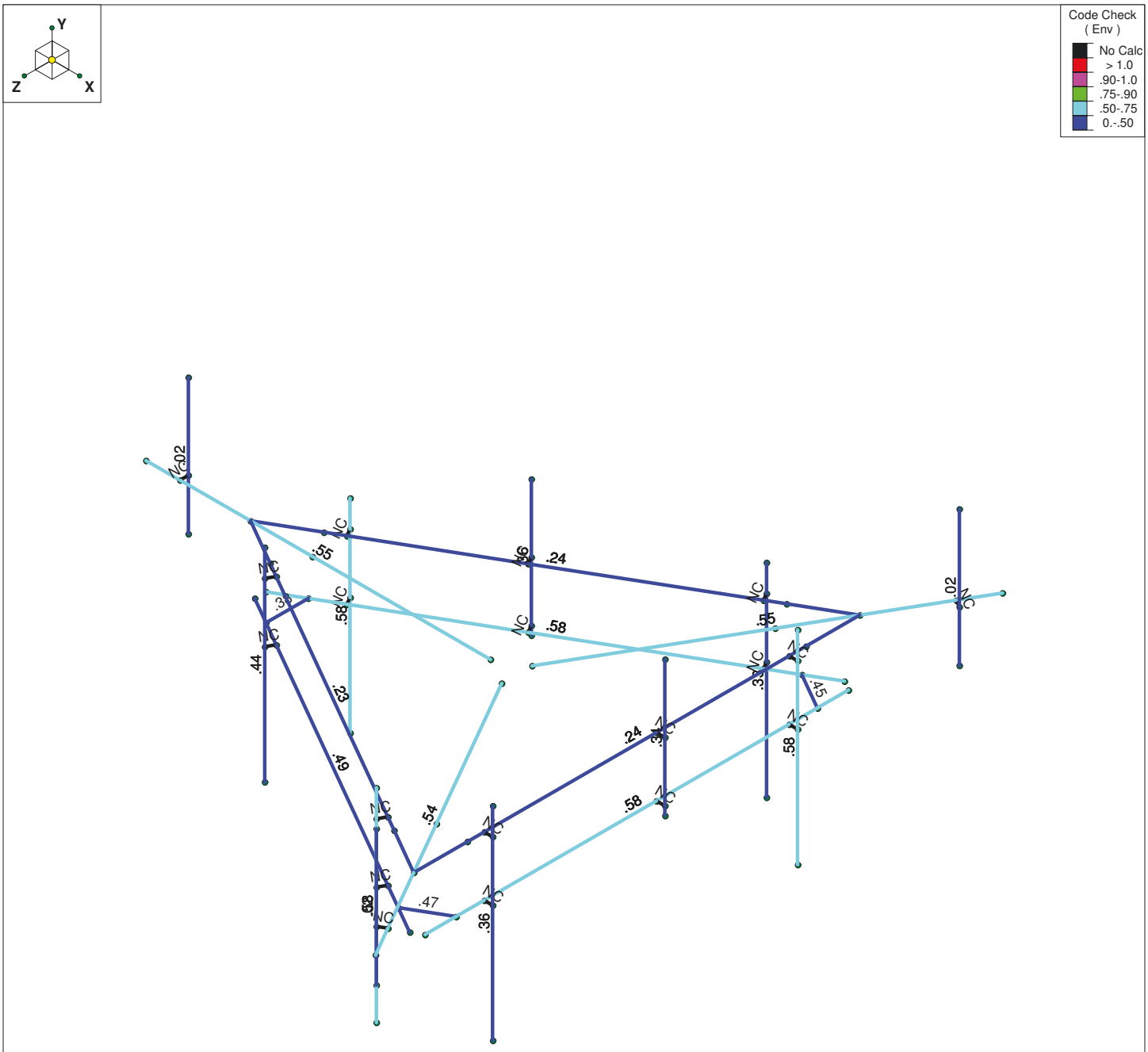

Member Code Checks Displayed (Enveloped)
Envelope Only Solution

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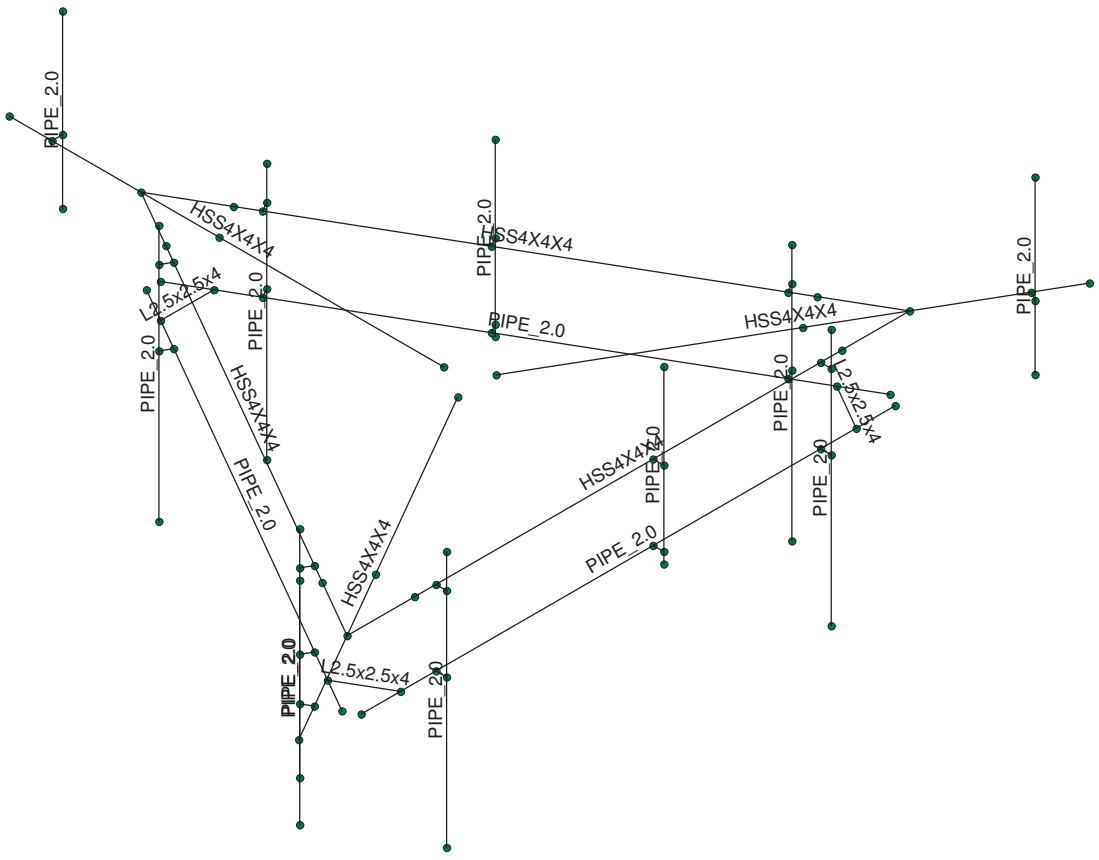
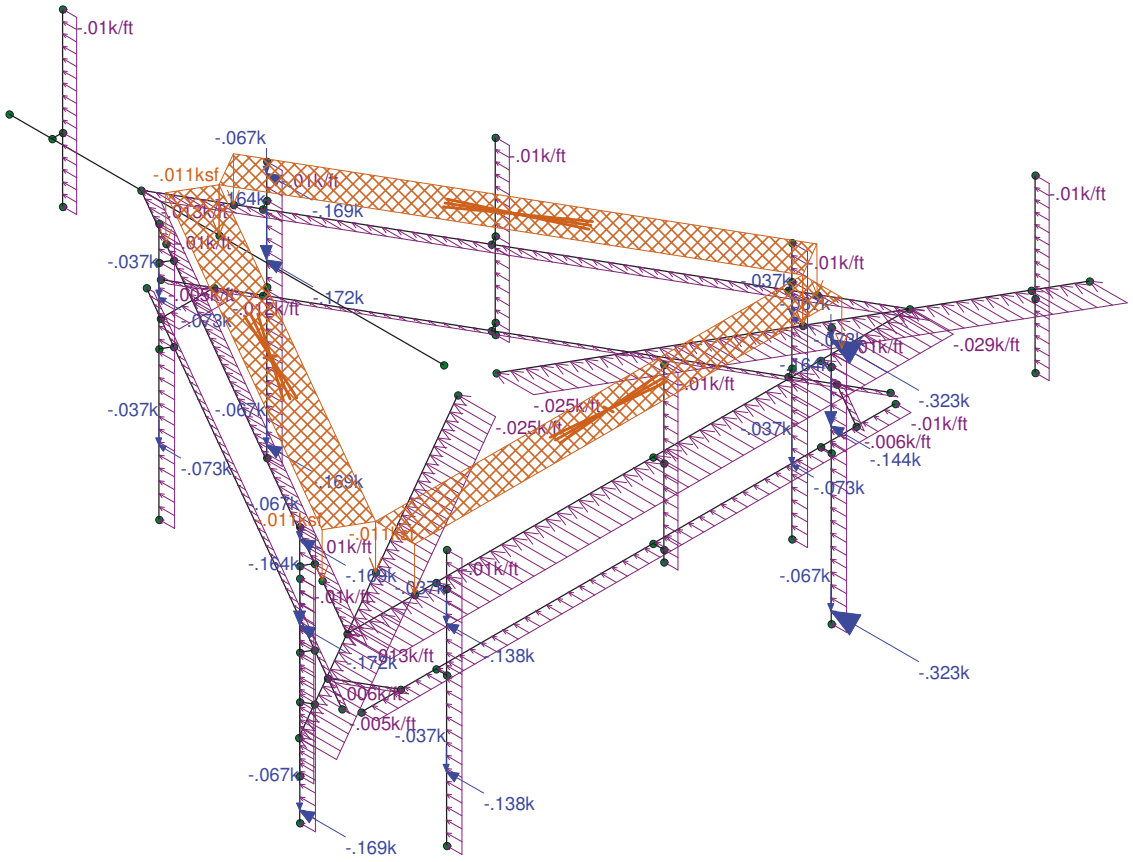
TEP No. 144549.884567		Mount Rev H.r3d



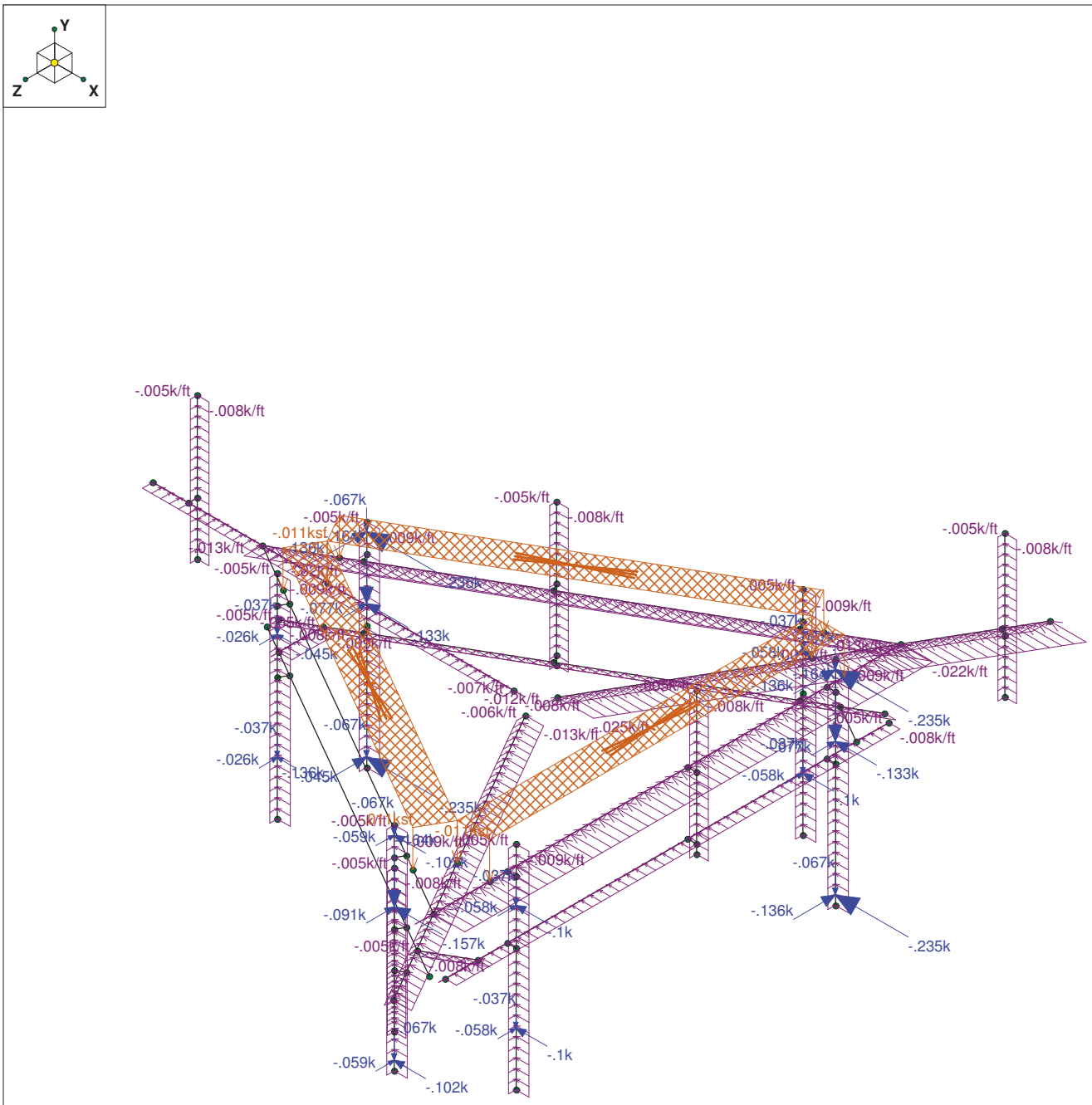
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 876406	SK - 4
GJS		Sept 26, 2023 at 8:18 AM
TEP No. 144549.884567		Mount Rev H.r3d



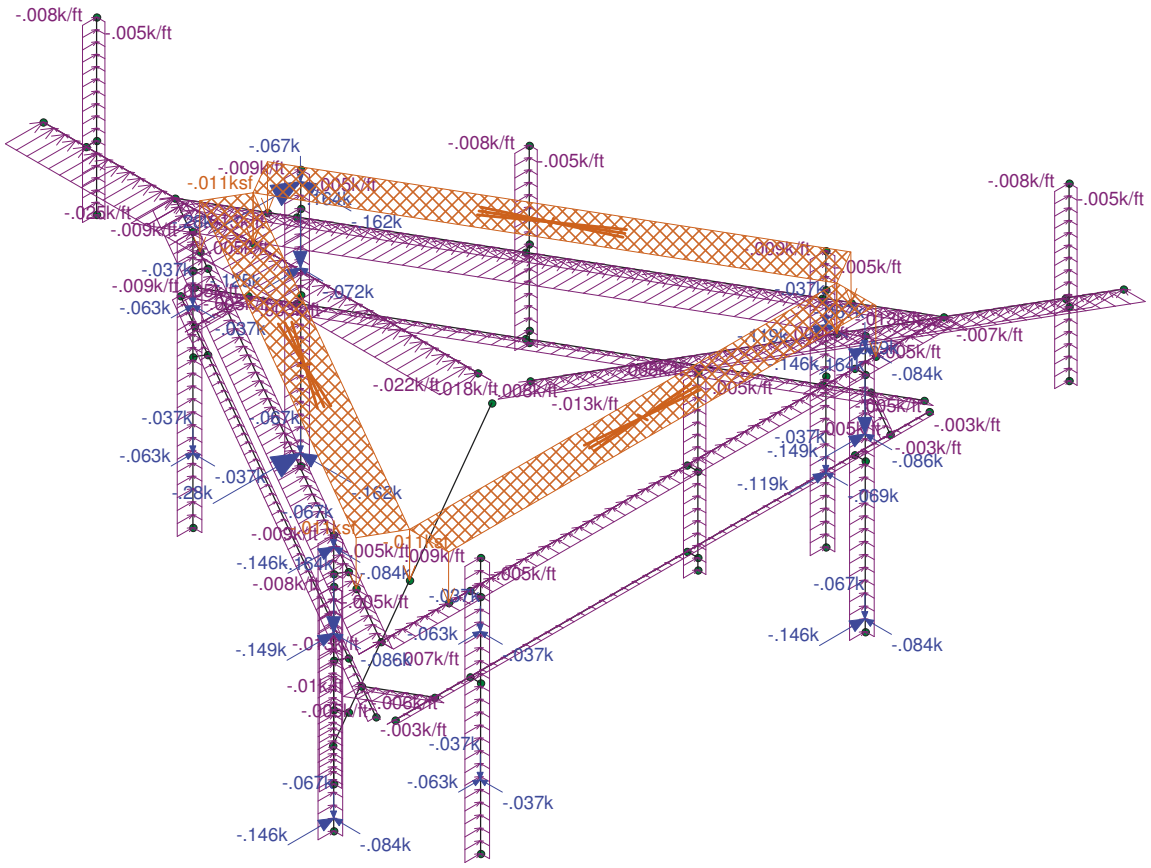
Loads: LC 2, 0.9D+1.0 0-Wind
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 876406	SK - 5
GJS		Sept 26, 2023 at 8:19 AM
TEP No. 144549.884567		Mount Rev H.r3d



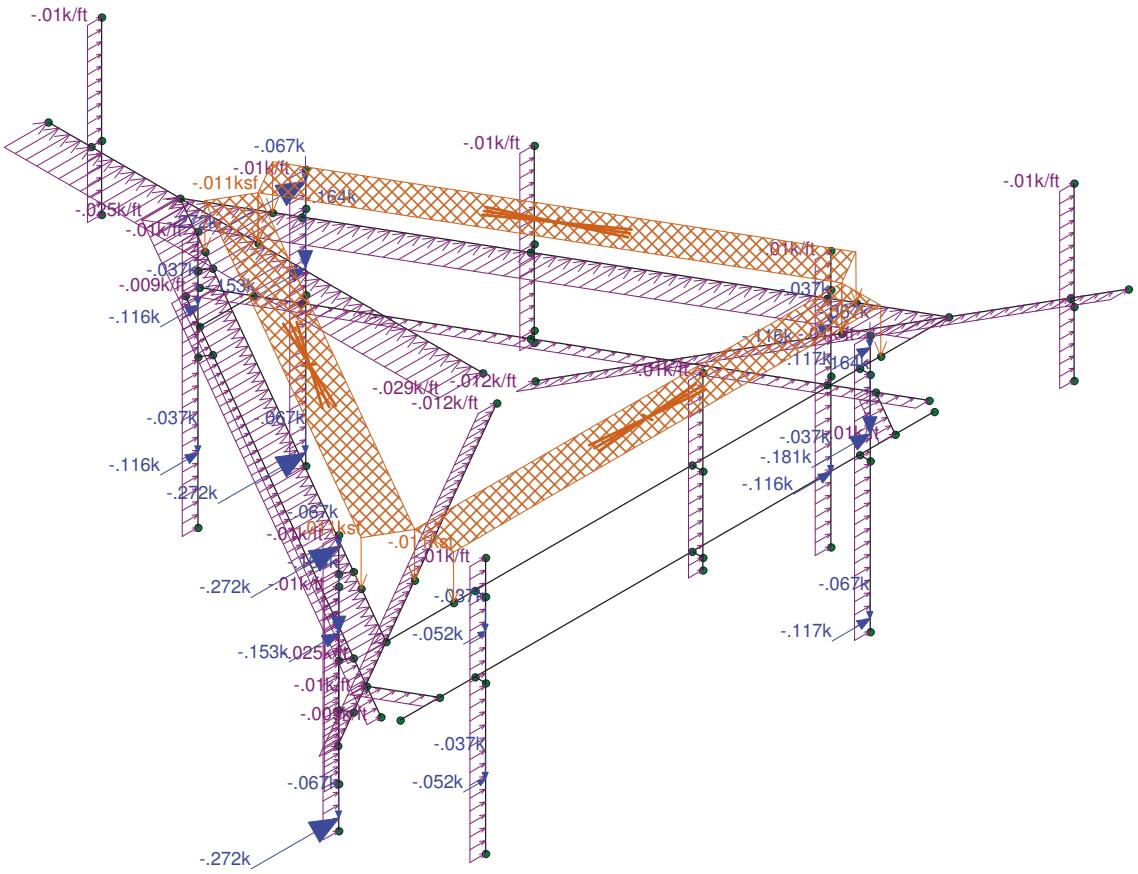
Loads: LC 3, 0.9D+1.0 30-Wind
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 876406	SK - 6
GJS		Sept 26, 2023 at 8:19 AM
TEP No. 144549.884567		Mount Rev H.r3d



Loads: LC 5, 0.9D+1.0 60-Wind
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 876406	SK - 7
GJS		Sept 26, 2023 at 8:19 AM
TEP No. 144549.884567		Mount Rev H.r3d



Loads: LC 6, 0.9D+1.0 90-Wind
Envelope Only Solution

Tower Engineering Profes...	CCI BU No. 876406	SK - 8
GJS		Sept 26, 2023 at 8:19 AM
TEP No. 144549.884567		Mount Rev H.r3d

APPENDIX B

SOFTWARE INPUT CALCULATIONS

TOWER ENGINEERING PROFESSIONALS

CCI BU No. 876406

TEP No.	144549.884567	
Analysis By:	GJS	9/26/2023
Checked By:	MMW	9/26/2023

Code Revisions:	TIA-222-H	IBC 2021
Tower Type:	Monopole	

Wind Inputs:

Ult. Wind Velocity:	125	mph
Live Load Velocity:	30	mph
Ice Wind Velocity:	50	mph
Base Ice Thickness:	1.00	inches
Mount Centerline:	110.0	ft
Antenna Centerline:	110.0	ft
Exposure Category:	C	
Topo Category:	1	
Risk Category:	II	
Ground Elevation:	50	ft

Wind Calculations:

K_{zt}:	1.000	Section 2.6.6
K_d:	0.950	
$K_{z\text{-}Mount}$:	1.291	Section 2.6.5.2
$K_{z\text{-}Antenna}$:	1.291	Section 2.6.5.2
K_{iz}:	1.128	Section 2.6.10
Ice Thickness:	1.128	inches - Section 2.6.10
K_e:	0.998	Table 2-6

Without Ice - (psf)		With Ice - (psf)	
$(q_zG_h)_{Mount}$:	48.98	**$(q_zG_h)_{Mount}$:**	7.84
$(q_zG_h)_{Antenna}$:	48.98	**$(q_zG_h)_{Antenna}$:**	7.84

Seismic Code Revisions:	TIA-222-H
Seismic Risk Category:	II

Seismic Input

S_{DS}:	0.215	Design Short Period Spectral Accel.
I_p:	1.0	Importance Factor
R_p:	2.0	Response Modification Factor
ρ:	1.0	
A_s:	0.1	Application Factor - TIA-222-H Section 2.7.8.1
S_1:	0.054	Spectral Acceleration at a Period of 1 Second

Seismic Design Force — TIA-H Sec 2.7.7.1.1

Cs:	0.108	kips/kip	TIA-H Sec 2.7.7.1.1
Cs-min:	0.030	kips/kip	

TOWER ENGINEERING PROFESSIONALS

CCI BU No. 876406

TEP No.	144549.884567	
Analysis By:	GJS	9/26/2023
Checked By:	MMW	9/26/2023

Antenna Loads are Calculated in Accordance with TIA-222-H

Azimuth is the absolute angle measured clockwise from RISA-3D global X-axis.

										Distance from start node of the member		
MFR	Model	Height (in)	Width (in)	Depth (in)	Wt. (lbs)	Azimuth°	Qty	Shape	Member Label	Location #1 (ft,%)	Location #2 (ft,%)	Location #3 (ft,%)
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	95.90	24.00	8.50	149.90	0.00	1	Flat	MP-1	0.25	5.75	
ERICSSON	AIR 6419 B41_TMO_CCIV2	34.49	19.92	7.99	81.84	0.00	1	Flat	MP-3	1.50	4.50	
ERICSSON	RADIO 4449 B71 B85A_T-MOBILE	17.91	13.20	10.63	73.21	90.00	1	Flat	MP-1	2.00		
ERICSSON	RADIO 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	90.00	1	Flat	MP-1	2.00		
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	95.90	24.00	8.50	149.90	120.00	1	Flat	MP-5	0.25	5.75	
ERICSSON	AIR 6419 B41_TMO_CCIV2	34.49	19.92	7.99	81.84	120.00	1	Flat	MP-7	1.50	4.50	
ERICSSON	RADIO 4449 B71 B85A_T-MOBILE	17.91	13.20	10.63	73.21	210.00	1	Flat	MP-5	2.00		
ERICSSON	RADIO 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	210.00	1	Flat	MP-5	2.00		
RFS/CELWAVE	APXVAALL24_43-U-NA20_TMO	95.90	24.00	8.50	149.90	240.00	1	Flat	MP-9	0.25	5.75	
ERICSSON	AIR 6419 B41_TMO_CCIV2	34.49	19.92	7.99	81.84	240.00	1	Flat	MP-11	1.50	4.50	
ERICSSON	RADIO 4449 B71 B85A_T-MOBILE	17.91	13.20	10.63	73.21	330.00	1	Flat	MP-9	2.00		
ERICSSON	RADIO 4460 B2/B25 B66_TMO	17.00	15.10	11.90	109.00	330.00	1	Flat	MP-9	2.00		

TOWER ENGINEERING PROFESSIONALS

CCI BU No. 876406

TEP No.	144549.884567	
Analysis By:	GJS	9/26/2023
Checked By:	MMW	9/26/2023

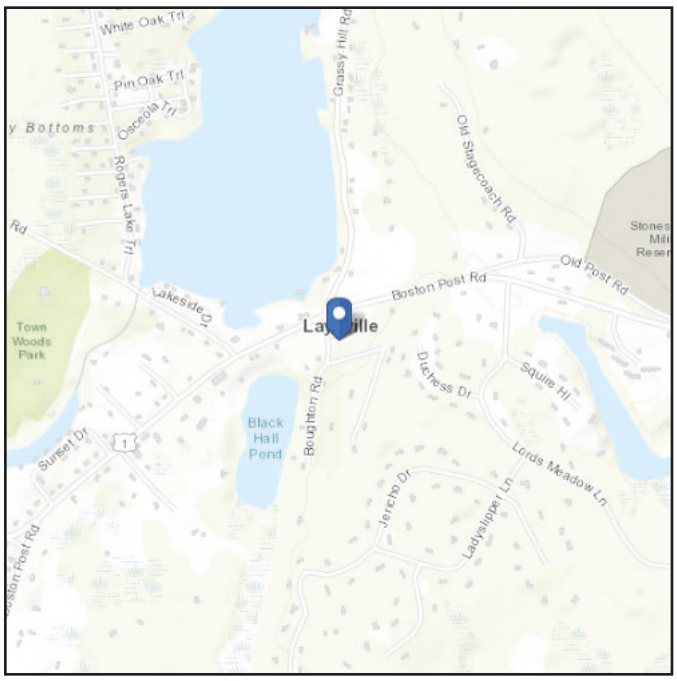
Member Forces are Calculated in Accordance with TIA-222-H

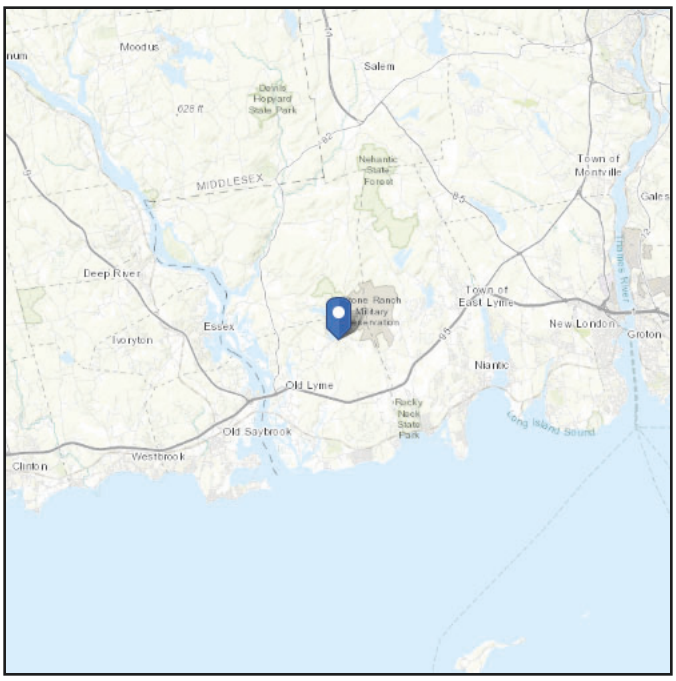
Member Name	Wind Proj. (in)	Length (in)	Shape	θ (°)	Perimeter (in)
FFTH	4.000	157.96	Flat	90.00	16.00
SF2-TH	4.000	157.96	Flat	-30.00	16.00
SF3-TH	4.000	157.96	Flat	30.00	16.00
HRC-1	2.500	15.00	Flat	30.00	10.00
HRC-2	2.500	15.00	Flat	-30.00	10.00
HRC-3	2.500	15.00	Flat	90.00	10.00
FF-HR	2.375	150.00	Round	90.00	7.46
SF1-HR	2.375	150.00	Round	30.00	7.46
SF2-HR	2.375	150.00	Round	-30.00	7.46
MP-1	2.375	72.00	Round		7.46
MP-2	2.375	48.00	Round		7.46
MP-3	2.375	72.00	Round		7.46
MP-4	2.375	48.00	Round		7.46
MP-5	2.375	72.00	Round		7.46
MP-7	2.375	72.00	Round		7.46
MP-8	2.375	48.00	Round		7.46
MP-9	2.375	72.00	Round		7.46
MP-10	2.375	48.00	Round		7.46
MP-11	2.375	72.00	Round		7.46
MP-12	2.375	48.00	Round		7.46
SA-1	4.000	122.00	Flat	-60.00	16.00
SA-2	4.000	122.00	Flat	0.00	16.00
SA-3	4.000	122.00	Flat	60.00	16.00

ASCE 7 Hazards Report

Address:
No Address at This Location

Standard:	ASCE/SEI 7-16	**Latitude:**	41.348992
Risk Category:	II	**Longitude:**	-72.295458
Soil Class:	D - Default (see Section 11.4.3)	**Elevation:**	49.50864579687504 ft (NAVD 88)





Wind

Results:

Wind Speed	125 Vmph
10-year MRI	76 Vmph
25-year MRI	85 Vmph
50-year MRI	97 Vmph
100-year MRI	102 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 Sep 21 2023

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

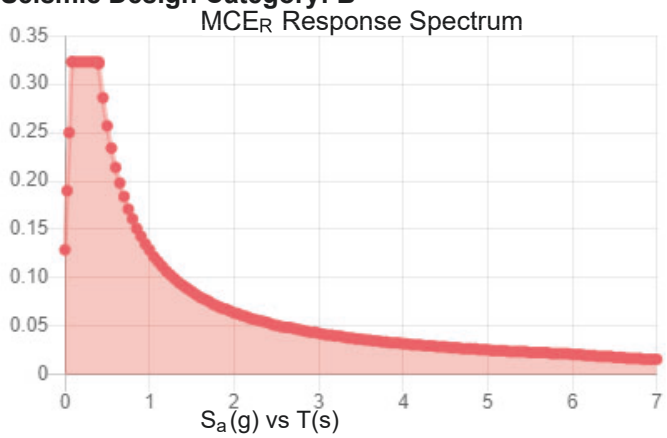
D - Default (see Section 11.4.3)

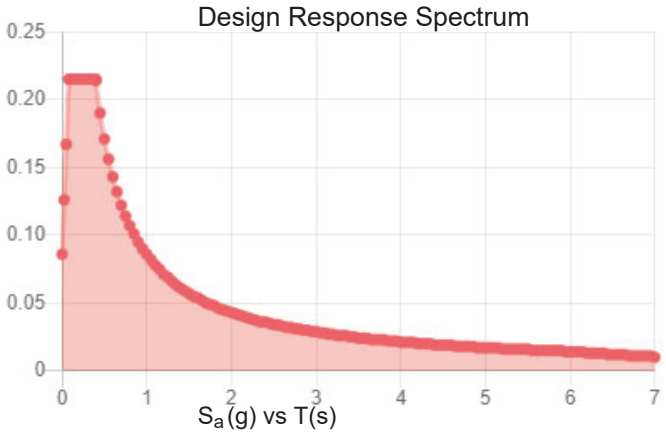
Site Soil Class:

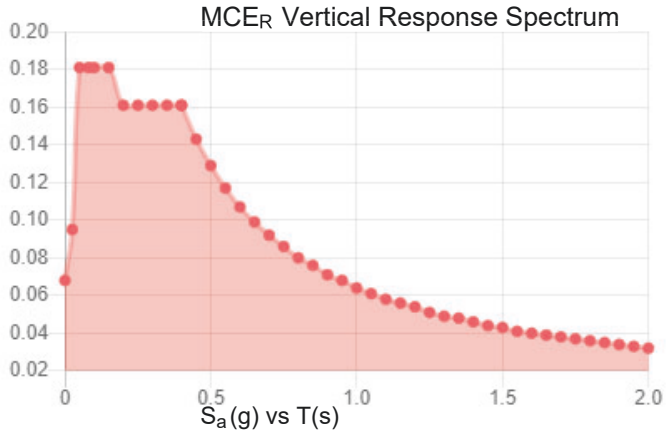
Results:

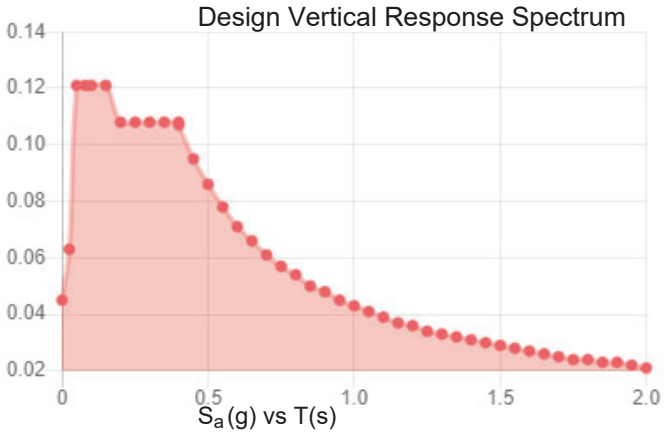
S_S :	0.202	S_{D1} :	0.086
S_1 :	0.054	T_L :	6
F_a :	1.6	PGA :	0.112
F_v :	2.4	PGA_M :	0.177
S_{MS} :	0.323	F_{PGA} :	1.576
S_{M1} :	0.129	I_e :	1
S_{DS} :	0.215	C_v :	0.703

Seismic Design Category: B









Data Accessed: **Thu Sep 21 2023**

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 Sep 21 2023

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.

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 (ft/sec^2)	32.2
Wall Mesh Size (in)	24
Eigensolution Convergence Tol. (1.E-)	4
Vertical Axis	Y
Global Member Orientation Plane	XZ
Static Solver	Sparse Accelerated
Dynamic Solver	Accelerated Solver

Hot Rolled Steel Code	AISC 15th(360-16): LRFD
Adjust Stiffness?	No
RISAConnection Code	None
Cold Formed Steel Code	None
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?	Yes
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

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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(Global) Model Settings, Continued

Seismic Code	ASCE 7-16
Seismic Base Elevation (ft)	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

Hot Rolled Steel Section Sets

	Label	Shape	Type	Design List	Material	Design ...	A [in2]	Iyy [in4]	Izz [in4]	J [in4]
1	Face Horiz.	HSS4X4X4	Beam	None	A500 Gr.B R...	Typical	3.37	7.8	7.8	12.8
2	Mount Pipe	PIPE_2.0	Column	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
3	Support Arm	HSS4X4X4	Beam	None	A500 Gr.B R...	Typical	3.37	7.8	7.8	12.8
4	HRK	PIPE_2.0	Beam	None	A53 Gr.B	Typical	1.02	.627	.627	1.25
5	HRC	L2.5x2.5x4	Beam	None	A36 Gr.36	Typical	1.19	.692	.692	.026

Material Takeoff

	Material	Size	Pieces	Length[ft]	Weight[K]
1	General				
2	RIGID		19	4.7	0
3	Total General		19	4.7	0
4					
5	Hot Rolled Steel				
6	A36 Gr.36	L2.5x2.5x4	3	3.7	.015
7	A500 Gr.B Rect	HSS4X4X4	6	70	.863
8	A53 Gr.B	PIPE_2.0	14	93.5	.325
9	Total HR Steel		23	167.2	1.203

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	SA1	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
2	SA2	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction
3	SA3	Reaction	Reaction	Reaction	Reaction	Reaction	Reaction

Member Primary Data

	Label	I Joint	J Joint	K J...	Rotate(d...	Section/Shape	Type	Design List	Material	Design Rul...
1	FFTH	FF1	FF2			Face Horiz.	Beam	None	A500 Gr.B Rect	Typical
2	SF2-TH	FF2	N6A			Face Horiz.	Beam	None	A500 Gr.B Rect	Typical
3	SF3-TH	N6A	FF1			Face Horiz.	Beam	None	A500 Gr.B Rect	Typical
4	HRC-1	N81	N67A		90	HRC	Beam	None	A36 Gr.36	Typical
5	HRC-2	N77	N78		90	HRC	Beam	None	A36 Gr.36	Typical
6	HRC-3	N79	N80		90	HRC	Beam	None	A36 Gr.36	Typical
7	FF-HR	N63	N64			HRK	Beam	None	A53 Gr.B	Typical
8	SF1-HR	N69	N70			HRK	Beam	None	A53 Gr.B	Typical
9	SF2-HR	N73	N74			HRK	Beam	None	A53 Gr.B	Typical
10	MP-1	N14	N16			Mount Pipe	Column	None	A53 Gr.B	Typical
11	MP-2	N18	N19			Mount Pipe	Column	None	A53 Gr.B	Typical
12	MP-3	N15	N17			Mount Pipe	Column	None	A53 Gr.B	Typical
13	MP-4	N49	N50			Mount Pipe	Column	None	A53 Gr.B	Typical
14	MP-5	N30	N32			Mount Pipe	Column	None	A53 Gr.B	Typical
15	MP-7	N31	N33			Mount Pipe	Column	None	A53 Gr.B	Typical
16	MP-8	N46	N47			Mount Pipe	Column	None	A53 Gr.B	Typical
17	MP-9	N39A	N41A			Mount Pipe	Column	None	A53 Gr.B	Typical
18	MP-10	N43	N44			Mount Pipe	Column	None	A53 Gr.B	Typical
19	MP-11	N40A	N42A			Mount Pipe	Column	None	A53 Gr.B	Typical
20	MP-12	N52	N53			Mount Pipe	Column	None	A53 Gr.B	Typical
21	M29	X1	N83A			RIGID	None	None	RIGID	Typical
22	M30	N65	N86A			RIGID	None	None	RIGID	Typical
23	M31	N12	N84A			RIGID	None	None	RIGID	Typical
24	M32	N82	N88			RIGID	None	None	RIGID	Typical
25	M33	N13	N85A			RIGID	None	None	RIGID	Typical
26	M34	N67	N87A			RIGID	None	None	RIGID	Typical
27	M35	N89	N48			RIGID	None	None	RIGID	Typical
28	M36	N27	N90			RIGID	None	None	RIGID	Typical
29	M37	N83	N92			RIGID	None	None	RIGID	Typical
30	M38	N29	N91			RIGID	None	None	RIGID	Typical
31	M39	N85	N93			RIGID	None	None	RIGID	Typical
32	M40	N94	N45			RIGID	None	None	RIGID	Typical
33	M41	N36A	N95			RIGID	None	None	RIGID	Typical
34	M42	N86	N98			RIGID	None	None	RIGID	Typical
35	M42A	N90A	N91A			RIGID	None	None	RIGID	Typical
36	M43	N37A	N96			RIGID	None	None	RIGID	Typical
37	M44	N38A	N97			RIGID	None	None	RIGID	Typical
38	M45	N87	N99			RIGID	None	None	RIGID	Typical
39	M46	N51	N100			RIGID	None	None	RIGID	Typical
40	SA-1	SA1	N8			Support Arm	Beam	None	A500 Gr.B Rect	Typical
41	SA-2	SA2	N6			Support Arm	Beam	None	A500 Gr.B Rect	Typical
42	SA-3	SA3	N10			Support Arm	Beam	None	A500 Gr.B Rect	Typical

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

Sept 26, 2023
8:20 AM
Checked By: MMW

Member Advanced Data

	Label	I Release	J Release	I Offset[in]	J Offset[in]	T/C Only	Physical	Defl Ra...	Analysis ...	Inactive	Seismi...
1	FFTH						Yes				None
2	SF2-TH						Yes				None
3	SF3-TH						Yes				None
4	HRC-1						Yes				None
5	HRC-2						Yes				None
6	HRC-3						Yes				None
7	FF-HR						Yes				None
8	SF1-HR						Yes				None
9	SF2-HR						Yes				None
10	MP-1						Yes	** NA **			None
11	MP-2						Yes	** NA **			None
12	MP-3						Yes	** NA **			None
13	MP-4						Yes	** NA **			None
14	MP-5						Yes	** NA **			None
15	MP-7						Yes	** NA **			None
16	MP-8						Yes	** NA **			None
17	MP-9						Yes	** NA **			None
18	MP-10						Yes	** NA **			None
19	MP-11						Yes	** NA **			None
20	MP-12						Yes	** NA **			None
21	M29						Yes	** NA **			None
22	M30						Yes	** NA **			None
23	M31						Yes	** NA **			None
24	M32						Yes	** NA **			None
25	M33						Yes	** NA **			None
26	M34						Yes	** NA **			None
27	M35						Yes	** NA **			None
28	M36						Yes	** NA **			None
29	M37						Yes	** NA **			None
30	M38						Yes	** NA **			None
31	M39						Yes	** NA **			None
32	M40						Yes	** NA **			None
33	M41						Yes	** NA **			None
34	M42						Yes	** NA **			None
35	M42A						Yes	** NA **			None
36	M43						Yes	** NA **			None
37	M44						Yes	** NA **			None
38	M45						Yes	** NA **			None
39	M46						Yes	** NA **			None
40	SA-1						Yes				None
41	SA-2						Yes				None
42	SA-3						Yes				None

Hot Rolled Steel Design Parameters

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top...	Lcomp bot...	L-torq...	Kyy	Kzz	Cb	Funct...
1	FFTH	Face Horiz.	13.164						2.1	2.1		Lateral
2	SF2-TH	Face Horiz.	13.164						2.1	2.1		Lateral
3	SF3-TH	Face Horiz.	13.164						2.1	2.1		Lateral
4	HRC-1	HRC	1.25						1	1		Lateral
5	HRC-2	HRC	1.25						1	1		Lateral
6	HRC-3	HRC	1.25						1	1		Lateral
7	FF-HR	HRK	12.5						2.1	2.1		Lateral
8	SF1-HR	HRK	12.5						2.1	2.1		Lateral
9	SF2-HR	HRK	12.5						2.1	2.1		Lateral
10	MP-1	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral

Hot Rolled Steel Design Parameters (Continued)

	Label	Shape	Length[ft]	Lbyy[ft]	Lbzz[ft]	Lcomp top...	Lcomp bot...	L-torq...	Kyy	Kzz	Cb	Funct...
11	MP-2	Mount Pipe	4	Segment	Segment				2.1	2.1		Lateral
12	MP-3	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
13	MP-4	Mount Pipe	4	Segment	Segment				2.1	2.1		Lateral
14	MP-5	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
15	MP-7	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
16	MP-8	Mount Pipe	4	Segment	Segment				2.1	2.1		Lateral
17	MP-9	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
18	MP-10	Mount Pipe	4	Segment	Segment				2.1	2.1		Lateral
19	MP-11	Mount Pipe	6	Segment	Segment				2.1	2.1		Lateral
20	MP-12	Mount Pipe	4	Segment	Segment				2.1	2.1		Lateral
21	SA-1	Support Arm	10.167						2.1	2.1		Lateral
22	SA-2	Support Arm	10.167						2.1	2.1		Lateral
23	SA-3	Support Arm	10.167						2.1	2.1		Lateral

Basic Load Cases

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
1	Dead	None		-1			18		3	
2	0 Wind - No Ice	None					18	23		
3	30 Wind - No Ice	None					36	46		
4	45 Wind - No Ice	None					36	46		
5	60 Wind - No Ice	None					36	46		
6	90 Wind - No Ice	None					18	23		
7	120 Wind - No Ice	None					36	46		
8	135 Wind - No Ice	None					36	46		
9	150 Wind - No Ice	None					36	46		
10	180 Wind - No Ice	None					18	23		
11	210 Wind - No Ice	None					36	46		
12	225 Wind - No Ice	None					36	46		
13	240 Wind - No Ice	None					36	46		
14	270 Wind - No Ice	None					18	23		
15	300 Wind - No Ice	None					36	46		
16	315 Wind - No Ice	None					36	46		
17	330 Wind - No Ice	None					36	46		
18	Ice Weight	None					18	23	3	
19	0 Wind - Ice	None					18	23		
20	30 Wind - Ice	None					36	46		
21	45 Wind - Ice	None					36	46		
22	60 Wind - Ice	None					36	46		
23	90 Wind - Ice	None					18	23		
24	120 Wind - Ice	None					36	46		
25	135 Wind - Ice	None					36	46		
26	150 Wind - Ice	None					36	46		
27	180 Wind - Ice	None					18	23		
28	210 Wind - Ice	None					36	46		
29	225 Wind - Ice	None					36	46		
30	240 Wind - Ice	None					36	46		
31	270 Wind - Ice	None					18	23		
32	300 Wind - Ice	None					36	46		
33	315 Wind - Ice	None					36	46		
34	330 Wind - Ice	None					36	46		
35	Lm	None				1				
36	Lv	None				1				
37	Seismic Load X	ELX	-1				18			
38	Seismic Load Z	ELZ			-1		18			
39	BLC 1 Transient Area Loads	None						69		

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Basic Load Cases (Continued)

	BLC Description	Category	X Gravity	Y Gravity	Z Gravity	Joint	Point	Distribut...	Area(Me...	Surface(...
40	BLC 18 Transient Area Loads	None						69		

Load Combinations

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
1	1.4D	Yes	Y		1	1.4																		
2	0.9D+1.0 0-Wind	Yes	Y		1	.9	2	1																
3	0.9D+1.0 30-Wind	Yes	Y		1	.9	3	1																
4	0.9D+1.0 45-Wind	Yes	Y		1	.9	4	1																
5	0.9D+1.0 60-Wind	Yes	Y		1	.9	5	1																
6	0.9D+1.0 90-Wind	Yes	Y		1	.9	6	1																
7	0.9D+1.0 120-Wind	Yes	Y		1	.9	7	1																
8	0.9D+1.0 135-Wind	Yes	Y		1	.9	8	1																
9	0.9D+1.0 150-Wind	Yes	Y		1	.9	9	1																
10	0.9D+1.0 180-Wind	Yes	Y		1	.9	10	1																
11	0.9D+1.0 210-Wind	Yes	Y		1	.9	11	1																
12	0.9D+1.0 225-Wind	Yes	Y		1	.9	12	1																
13	0.9D+1.0 240-Wind	Yes	Y		1	.9	13	1																
14	0.9D+1.0 270-Wind	Yes	Y		1	.9	14	1																
15	0.9D+1.0 300-Wind	Yes	Y		1	.9	15	1																
16	0.9D+1.0 315-Wind	Yes	Y		1	.9	16	1																
17	0.9D+1.0 330-Wind	Yes	Y		1	.9	17	1																
18	1.2D+1.0 0-Wind	Yes	Y		1	1.2	2	1																
19	1.2D+1.0 30-Wind	Yes	Y		1	1.2	3	1																
20	1.2D+1.0 45-Wind	Yes	Y		1	1.2	4	1																
21	1.2D+1.0 60-Wind	Yes	Y		1	1.2	5	1																
22	1.2D+1.0 90-Wind	Yes	Y		1	1.2	6	1																
23	1.2D+1.0 120-Wind	Yes	Y		1	1.2	7	1																
24	1.2D+1.0 135-Wind	Yes	Y		1	1.2	8	1																
25	1.2D+1.0 150-Wind	Yes	Y		1	1.2	9	1																
26	1.2D+1.0 180-Wind	Yes	Y		1	1.2	10	1																
27	1.2D+1.0 210-Wind	Yes	Y		1	1.2	11	1																
28	1.2D+1.0 225-Wind	Yes	Y		1	1.2	12	1																
29	1.2D+1.0 240-Wind	Yes	Y		1	1.2	13	1																
30	1.2D+1.0 270-Wind	Yes	Y		1	1.2	14	1																
31	1.2D+1.0 300-Wind	Yes	Y		1	1.2	15	1																
32	1.2D+1.0 315-Wind	Yes	Y		1	1.2	16	1																
33	1.2D+1.0 330-Wind	Yes	Y		1	1.2	17	1																
34	1.2D+1.0Di+1.0 0-Wind Ice	Yes	Y		1	1.2	18	1	19	1														
35	1.2D+1.0Di+1.0 30-Wind I...	Yes	Y		1	1.2	18	1	20	1														
36	1.2D+1.0Di+1.0 45-Wind I...	Yes	Y		1	1.2	18	1	21	1														
37	1.2D+1.0Di+1.0 60-Wind I...	Yes	Y		1	1.2	18	1	22	1														
38	1.2D+1.0Di+1.0 90-Wind I...	Yes	Y		1	1.2	18	1	23	1														
39	1.2D+1.0Di+1.0 120-Wind...	Yes	Y		1	1.2	18	1	24	1														
40	1.2D+1.0Di+1.0 135-Wind...	Yes	Y		1	1.2	18	1	25	1														
41	1.2D+1.0Di+1.0 150-Wind...	Yes	Y		1	1.2	18	1	26	1														
42	1.2D+1.0Di+1.0 180-Wind...	Yes	Y		1	1.2	18	1	27	1														
43	1.2D+1.0Di+1.0 210-Wind...	Yes	Y		1	1.2	18	1	28	1														
44	1.2D+1.0Di+1.0 225-Wind...	Yes	Y		1	1.2	18	1	29	1														
45	1.2D+1.0Di+1.0 240-Wind...	Yes	Y		1	1.2	18	1	30	1														
46	1.2D+1.0Di+1.0 270-Wind...	Yes	Y		1	1.2	18	1	31	1														
47	1.2D+1.0Di+1.0 300-Wind...	Yes	Y		1	1.2	18	1	32	1														
48	1.2D+1.0Di+1.0 315-Wind...	Yes	Y		1	1.2	18	1	33	1														
49	1.2D+1.0Di+1.0 330-Wind...	Yes	Y		1	1.2	18	1	34	1														
50	1.2D+1.5Lv	Yes	Y		36	1.5	1	1.2																
51	1.2D+1.5Lm+1.0 0-Wind	Yes	Y		1	1.2	2	.058	35	1.5														

Load Combinations (Continued)

	Description	S...	PDelta	S...	B...	Fa...	B...	Fa...	BLC	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...	B...	Fa...
52	1.2D+1.5Lm+1.0 30-Wind	Yes	Y		1	1.2	3	.058	35	1.5														
53	1.2D+1.5Lm+1.0 45-Wind	Yes	Y		1	1.2	4	.058	35	1.5														
54	1.2D+1.5Lm+1.0 60-Wind	Yes	Y		1	1.2	5	.058	35	1.5														
55	1.2D+1.5Lm+1.0 90-Wind	Yes	Y		1	1.2	6	.058	35	1.5														
56	1.2D+1.5Lm+1.0 120-Wind	Yes	Y		1	1.2	7	.058	35	1.5														
57	1.2D+1.5Lm+1.0 135-Wind	Yes	Y		1	1.2	8	.058	35	1.5														
58	1.2D+1.5Lm+1.0 150-Wind	Yes	Y		1	1.2	9	.058	35	1.5														
59	1.2D+1.5Lm+1.0 180-Wind	Yes	Y		1	1.2	10	.058	35	1.5														
60	1.2D+1.5Lm+1.0 210-Wind	Yes	Y		1	1.2	11	.058	35	1.5														
61	1.2D+1.5Lm+1.0 225-Wind	Yes	Y		1	1.2	12	.058	35	1.5														
62	1.2D+1.5Lm+1.0 240-Wind	Yes	Y		1	1.2	13	.058	35	1.5														
63	1.2D+1.5Lm+1.0 270-Wind	Yes	Y		1	1.2	14	.058	35	1.5														
64	1.2D+1.5Lm+1.0 300-Wind	Yes	Y		1	1.2	15	.058	35	1.5														
65	1.2D+1.5Lm+1.0 315-Wind	Yes	Y		1	1.2	16	.058	35	1.5														
66	1.2D+1.5Lm+1.0 330-Wind	Yes	Y		1	1.2	17	.058	35	1.5														
67	(1.2+0.2Sds)D+1.0 0 Seis...	Yes	Y		1	1.2	E...	.107	0															
68	(1.2+0.2Sds)D+1.0 30 Sei...	Yes	Y		1	1.2	E...	.093	ELZ	.054														
69	(1.2+0.2Sds)D+1.0 45 Sei...	Yes	Y		1	1.2	E...	.076	ELZ	.076														
70	(1.2+0.2Sds)D+1.0 60 Sei...	Yes	Y		1	1.2	E...	.054	ELZ	.093														
71	(1.2+0.2Sds)D+1.0 90 Sei...	Yes	Y		1	1.2	0		ELZ	.107														
72	(1.2+0.2Sds)D+1.0 120 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	.093														
73	(1.2+0.2Sds)D+1.0 135 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	.076														
74	(1.2+0.2Sds)D+1.0 150 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	.054														
75	(1.2+0.2Sds)D+1.0 180 S...	Yes	Y		1	1.2	E...	-.1...	0															
76	(1.2+0.2Sds)D+1.0 210 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	-.0...														
77	(1.2+0.2Sds)D+1.0 225 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	-.0...														
78	(1.2+0.2Sds)D+1.0 240 S...	Yes	Y		1	1.2	E...	-.0...	ELZ	-.0...														
79	(1.2+0.2Sds)D+1.0 270 S...	Yes	Y		1	1.2	0		ELZ	-.1...														
80	(1.2+0.2Sds)D+1.0 300 S...	Yes	Y		1	1.2	E...	.054	ELZ	-.0...														
81	(1.2+0.2Sds)D+1.0 315 S...	Yes	Y		1	1.2	E...	.076	ELZ	-.0...														
82	(1.2+0.2Sds)D+1.0 330 S...	Yes	Y		1	1.2	E...	.093	ELZ	-.0...														
83	(0.9-0.2Sds)*DL+1.0 0 Sei...	Yes	Y		1	.857	E...	.107	0															
84	(0.9-0.2Sds)*DL+1.0 30 S...	Yes	Y		1	.857	E...	.093	ELZ	.054														
85	(0.9-0.2Sds)*DL+1.0 Seis...	Yes	Y		1	.857	E...	.076	ELZ	.076														
86	(0.9-0.2Sds)*DL+1.0 60 S...	Yes	Y		1	.857	E...	.054	ELZ	.093														
87	(0.9-0.2Sds)*DL+1.0 90 S...	Yes	Y		1	.857	0		ELZ	.107														
88	(0.9-0.2Sds)*DL+1.0 120 ...	Yes	Y		1	.857	E...	-.0...	ELZ	.093														
89	(0.9-0.2Sds)*DL+1.0 135 ...	Yes	Y		1	.857	E...	-.0...	ELZ	.076														
90	(0.9-0.2Sds)*DL+1.0 150 ...	Yes	Y		1	.857	E...	-.0...	ELZ	.054														
91	(0.9-0.2Sds)*DL+1.0 180 ...	Yes	Y		1	.857	E...	-.1...	0															
92	(0.9-0.2Sds)*DL+1.0 210 ...	Yes	Y		1	.857	E...	-.0...	ELZ	-.0...														
93	(0.9-0.2Sds)*DL+1.0 225 ...	Yes	Y		1	.857	E...	-.0...	ELZ	-.0...														
94	(0.9-0.2Sds)*DL+1.0 240 ...	Yes	Y		1	.857	E...	-.0...	ELZ	-.0...														
95	(0.9-0.2Sds)*DL+1.0 270 ...	Yes	Y		1	.857	0		ELZ	-.1...														
96	(0.9-0.2Sds)*DL+1.0 300 ...	Yes	Y		1	.857	E...	.054	ELZ	-.0...														
97	(0.9-0.2Sds)*DL+1.0 315 ...	Yes	Y		1	.857	E...	.076	ELZ	-.0...														
98	(0.9-0.2Sds)*DL+1.0 330 ...	Yes	Y		1	.857	E...	.093	ELZ	-.0...														

Joint Loads and Enforced Displacements (BLC 35 : Lm)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft,...
1	N83A	L	Y	-.5

Joint Loads and Enforced Displacements (BLC 36 : Lv)

	Joint Label	L,D,M	Direction	Magnitude[(k,k-ft), (in,rad), (k*s^2/ft,...
1	FF1	L	Y	-.25

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 1 : Dead)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.075	.25
2	MP-3	Y	-.041	1.5
3	MP-1	Y	-.073	2
4	MP-1	Y	-.109	2
5	MP-5	Y	-.075	.25
6	MP-7	Y	-.041	1.5
7	MP-5	Y	-.073	2
8	MP-5	Y	-.109	2
9	MP-9	Y	-.075	.25
10	MP-11	Y	-.041	1.5
11	MP-9	Y	-.073	2
12	MP-9	Y	-.109	2
13	MP-1	Y	-.075	5.75
14	MP-3	Y	-.041	4.5
15	MP-5	Y	-.075	5.75
16	MP-7	Y	-.041	4.5
17	MP-9	Y	-.075	5.75
18	MP-11	Y	-.041	4.5

Member Point Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.323	.25
2	MP-3	X	-.138	1.5
3	MP-1	X	-.07	2
4	MP-1	X	-.074	2
5	MP-5	X	-.169	.25
6	MP-7	X	-.073	1.5
7	MP-5	X	-.083	2
8	MP-5	X	-.089	2
9	MP-9	X	-.169	.25
10	MP-11	X	-.073	1.5
11	MP-9	X	-.083	2
12	MP-9	X	-.089	2
13	MP-1	X	-.323	5.75
14	MP-3	X	-.138	4.5
15	MP-5	X	-.169	5.75
16	MP-7	X	-.073	4.5
17	MP-9	X	-.169	5.75
18	MP-11	X	-.073	4.5

Member Point Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.235	.25
2	MP-3	X	-.1	1.5
3	MP-1	X	-.064	2
4	MP-1	X	-.069	2
5	MP-5	X	-.102	.25
6	MP-7	X	-.045	1.5
7	MP-5	X	-.075	2
8	MP-5	X	-.082	2
9	MP-9	X	-.235	.25
10	MP-11	X	-.1	1.5
11	MP-9	X	-.064	2
12	MP-9	X	-.069	2
13	MP-1	X	-.235	5.75

Member Point Loads (BLC 3 : 30 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP-3	X	-.1	4.5
15	MP-5	X	-.102	5.75
16	MP-7	X	-.045	4.5
17	MP-9	X	-.235	5.75
18	MP-11	X	-.1	4.5
19	MP-1	Z	-.136	.25
20	MP-3	Z	-.058	1.5
21	MP-1	Z	-.037	2
22	MP-1	Z	-.04	2
23	MP-5	Z	-.059	.25
24	MP-7	Z	-.026	1.5
25	MP-5	Z	-.043	2
26	MP-5	Z	-.047	2
27	MP-9	Z	-.136	.25
28	MP-11	Z	-.058	1.5
29	MP-9	Z	-.037	2
30	MP-9	Z	-.04	2
31	MP-1	Z	-.136	5.75
32	MP-3	Z	-.058	4.5
33	MP-5	Z	-.059	5.75
34	MP-7	Z	-.026	4.5
35	MP-9	Z	-.136	5.75
36	MP-11	Z	-.058	4.5

Member Point Loads (BLC 4 : 45 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.156	.25
2	MP-3	X	-.067	1.5
3	MP-1	X	-.055	2
4	MP-1	X	-.06	2
5	MP-5	X	-.093	.25
6	MP-7	X	-.041	1.5
7	MP-5	X	-.061	2
8	MP-5	X	-.066	2
9	MP-9	X	-.219	.25
10	MP-11	X	-.093	1.5
11	MP-9	X	-.05	2
12	MP-9	X	-.053	2
13	MP-1	X	-.156	5.75
14	MP-3	X	-.067	4.5
15	MP-5	X	-.093	5.75
16	MP-7	X	-.041	4.5
17	MP-9	X	-.219	5.75
18	MP-11	X	-.093	4.5
19	MP-1	Z	-.156	.25
20	MP-3	Z	-.067	1.5
21	MP-1	Z	-.055	2
22	MP-1	Z	-.06	2
23	MP-5	Z	-.093	.25
24	MP-7	Z	-.041	1.5
25	MP-5	Z	-.061	2
26	MP-5	Z	-.066	2
27	MP-9	Z	-.219	.25
28	MP-11	Z	-.093	1.5
29	MP-9	Z	-.05	2
30	MP-9	Z	-.053	2

Member Point Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
31	MP-1	Z	-.156	5.75
32	MP-3	Z	-.067	4.5
33	MP-5	Z	-.093	5.75
34	MP-7	Z	-.041	4.5
35	MP-9	Z	-.219	5.75
36	MP-11	Z	-.093	4.5

Member Point Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.084	.25
2	MP-3	X	-.037	1.5
3	MP-1	X	-.041	2
4	MP-1	X	-.045	2
5	MP-5	X	-.084	.25
6	MP-7	X	-.037	1.5
7	MP-5	X	-.041	2
8	MP-5	X	-.045	2
9	MP-9	X	-.162	.25
10	MP-11	X	-.069	1.5
11	MP-9	X	-.035	2
12	MP-9	X	-.037	2
13	MP-1	X	-.084	5.75
14	MP-3	X	-.037	4.5
15	MP-5	X	-.084	5.75
16	MP-7	X	-.037	4.5
17	MP-9	X	-.162	5.75
18	MP-11	X	-.069	4.5
19	MP-1	Z	-.146	.25
20	MP-3	Z	-.063	1.5
21	MP-1	Z	-.072	2
22	MP-1	Z	-.077	2
23	MP-5	Z	-.146	.25
24	MP-7	Z	-.063	1.5
25	MP-5	Z	-.072	2
26	MP-5	Z	-.077	2
27	MP-9	Z	-.28	.25
28	MP-11	Z	-.119	1.5
29	MP-9	Z	-.061	2
30	MP-9	Z	-.064	2
31	MP-1	Z	-.146	5.75
32	MP-3	Z	-.063	4.5
33	MP-5	Z	-.146	5.75
34	MP-7	Z	-.063	4.5
35	MP-9	Z	-.28	5.75
36	MP-11	Z	-.119	4.5

Member Point Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.117	.25
2	MP-3	Z	-.052	1.5
3	MP-1	Z	-.087	2
4	MP-1	Z	-.094	2
5	MP-5	Z	-.272	.25
6	MP-7	Z	-.116	1.5
7	MP-5	Z	-.074	2
8	MP-5	Z	-.079	2

Member Point Loads (BLC 6 : 90 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
9	MP-9	Z	-.272	.25
10	MP-11	Z	-.116	1.5
11	MP-9	Z	-.074	2
12	MP-9	Z	-.079	2
13	MP-1	Z	-.117	5.75
14	MP-3	Z	-.052	4.5
15	MP-5	Z	-.272	5.75
16	MP-7	Z	-.116	4.5
17	MP-9	Z	-.272	5.75
18	MP-11	Z	-.116	4.5

Member Point Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.084	.25
2	MP-3	X	.037	1.5
3	MP-1	X	.041	2
4	MP-1	X	.045	2
5	MP-5	X	.162	.25
6	MP-7	X	.069	1.5
7	MP-5	X	.035	2
8	MP-5	X	.037	2
9	MP-9	X	.084	.25
10	MP-11	X	.037	1.5
11	MP-9	X	.041	2
12	MP-9	X	.045	2
13	MP-1	X	.084	5.75
14	MP-3	X	.037	4.5
15	MP-5	X	.162	5.75
16	MP-7	X	.069	4.5
17	MP-9	X	.084	5.75
18	MP-11	X	.037	4.5
19	MP-1	Z	-.146	.25
20	MP-3	Z	-.063	1.5
21	MP-1	Z	-.072	2
22	MP-1	Z	-.077	2
23	MP-5	Z	-.28	.25
24	MP-7	Z	-.119	1.5
25	MP-5	Z	-.061	2
26	MP-5	Z	-.064	2
27	MP-9	Z	-.146	.25
28	MP-11	Z	-.063	1.5
29	MP-9	Z	-.072	2
30	MP-9	Z	-.077	2
31	MP-1	Z	-.146	5.75
32	MP-3	Z	-.063	4.5
33	MP-5	Z	-.28	5.75
34	MP-7	Z	-.119	4.5
35	MP-9	Z	-.146	5.75
36	MP-11	Z	-.063	4.5

Member Point Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.156	.25
2	MP-3	X	.067	1.5
3	MP-1	X	.055	2
4	MP-1	X	.06	2

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 8 : 135 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP-5	X	.219	.25
6	MP-7	X	.093	1.5
7	MP-5	X	.05	2
8	MP-5	X	.053	2
9	MP-9	X	.093	.25
10	MP-11	X	.041	1.5
11	MP-9	X	.061	2
12	MP-9	X	.066	2
13	MP-1	X	.156	5.75
14	MP-3	X	.067	4.5
15	MP-5	X	.219	5.75
16	MP-7	X	.093	4.5
17	MP-9	X	.093	5.75
18	MP-11	X	.041	4.5
19	MP-1	Z	-.156	.25
20	MP-3	Z	-.067	1.5
21	MP-1	Z	-.055	2
22	MP-1	Z	-.06	2
23	MP-5	Z	-.219	.25
24	MP-7	Z	-.093	1.5
25	MP-5	Z	-.05	2
26	MP-5	Z	-.053	2
27	MP-9	Z	-.093	.25
28	MP-11	Z	-.041	1.5
29	MP-9	Z	-.061	2
30	MP-9	Z	-.066	2
31	MP-1	Z	-.156	5.75
32	MP-3	Z	-.067	4.5
33	MP-5	Z	-.219	5.75
34	MP-7	Z	-.093	4.5
35	MP-9	Z	-.093	5.75
36	MP-11	Z	-.041	4.5

Member Point Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.235	.25
2	MP-3	X	.1	1.5
3	MP-1	X	.064	2
4	MP-1	X	.069	2
5	MP-5	X	.235	.25
6	MP-7	X	.1	1.5
7	MP-5	X	.064	2
8	MP-5	X	.069	2
9	MP-9	X	.102	.25
10	MP-11	X	.045	1.5
11	MP-9	X	.075	2
12	MP-9	X	.082	2
13	MP-1	X	.235	5.75
14	MP-3	X	.1	4.5
15	MP-5	X	.235	5.75
16	MP-7	X	.1	4.5
17	MP-9	X	.102	5.75
18	MP-11	X	.045	4.5
19	MP-1	Z	-.136	.25
20	MP-3	Z	-.058	1.5
21	MP-1	Z	-.037	2

Member Point Loads (BLC 9 : 150 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
22	MP-1	Z	-.04	2
23	MP-5	Z	-.136	.25
24	MP-7	Z	-.058	1.5
25	MP-5	Z	-.037	2
26	MP-5	Z	-.04	2
27	MP-9	Z	-.059	.25
28	MP-11	Z	-.026	1.5
29	MP-9	Z	-.043	2
30	MP-9	Z	-.047	2
31	MP-1	Z	-.136	5.75
32	MP-3	Z	-.058	4.5
33	MP-5	Z	-.136	5.75
34	MP-7	Z	-.058	4.5
35	MP-9	Z	-.059	5.75
36	MP-11	Z	-.026	4.5

Member Point Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.323	.25
2	MP-3	X	.138	1.5
3	MP-1	X	.07	2
4	MP-1	X	.074	2
5	MP-5	X	.169	.25
6	MP-7	X	.073	1.5
7	MP-5	X	.083	2
8	MP-5	X	.089	2
9	MP-9	X	.169	.25
10	MP-11	X	.073	1.5
11	MP-9	X	.083	2
12	MP-9	X	.089	2
13	MP-1	X	.323	5.75
14	MP-3	X	.138	4.5
15	MP-5	X	.169	5.75
16	MP-7	X	.073	4.5
17	MP-9	X	.169	5.75
18	MP-11	X	.073	4.5

Member Point Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.235	.25
2	MP-3	X	.1	1.5
3	MP-1	X	.064	2
4	MP-1	X	.069	2
5	MP-5	X	.102	.25
6	MP-7	X	.045	1.5
7	MP-5	X	.075	2
8	MP-5	X	.082	2
9	MP-9	X	.235	.25
10	MP-11	X	.1	1.5
11	MP-9	X	.064	2
12	MP-9	X	.069	2
13	MP-1	X	.235	5.75
14	MP-3	X	.1	4.5
15	MP-5	X	.102	5.75
16	MP-7	X	.045	4.5
17	MP-9	X	.235	5.75

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 11 : 210 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
18	MP-11	X	.1	4.5
19	MP-1	Z	.136	.25
20	MP-3	Z	.058	1.5
21	MP-1	Z	.037	2
22	MP-1	Z	.04	2
23	MP-5	Z	.059	.25
24	MP-7	Z	.026	1.5
25	MP-5	Z	.043	2
26	MP-5	Z	.047	2
27	MP-9	Z	.136	.25
28	MP-11	Z	.058	1.5
29	MP-9	Z	.037	2
30	MP-9	Z	.04	2
31	MP-1	Z	.136	5.75
32	MP-3	Z	.058	4.5
33	MP-5	Z	.059	5.75
34	MP-7	Z	.026	4.5
35	MP-9	Z	.136	5.75
36	MP-11	Z	.058	4.5

Member Point Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.156	.25
2	MP-3	X	.067	1.5
3	MP-1	X	.055	2
4	MP-1	X	.06	2
5	MP-5	X	.093	.25
6	MP-7	X	.041	1.5
7	MP-5	X	.061	2
8	MP-5	X	.066	2
9	MP-9	X	.219	.25
10	MP-11	X	.093	1.5
11	MP-9	X	.05	2
12	MP-9	X	.053	2
13	MP-1	X	.156	5.75
14	MP-3	X	.067	4.5
15	MP-5	X	.093	5.75
16	MP-7	X	.041	4.5
17	MP-9	X	.219	5.75
18	MP-11	X	.093	4.5
19	MP-1	Z	.156	.25
20	MP-3	Z	.067	1.5
21	MP-1	Z	.055	2
22	MP-1	Z	.06	2
23	MP-5	Z	.093	.25
24	MP-7	Z	.041	1.5
25	MP-5	Z	.061	2
26	MP-5	Z	.066	2
27	MP-9	Z	.219	.25
28	MP-11	Z	.093	1.5
29	MP-9	Z	.05	2
30	MP-9	Z	.053	2
31	MP-1	Z	.156	5.75
32	MP-3	Z	.067	4.5
33	MP-5	Z	.093	5.75
34	MP-7	Z	.041	4.5

Member Point Loads (BLC 12 : 225 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
35	MP-9	Z	.219	5.75
36	MP-11	Z	.093	4.5

Member Point Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.084	.25
2	MP-3	X	.037	1.5
3	MP-1	X	.041	2
4	MP-1	X	.045	2
5	MP-5	X	.084	.25
6	MP-7	X	.037	1.5
7	MP-5	X	.041	2
8	MP-5	X	.045	2
9	MP-9	X	.162	.25
10	MP-11	X	.069	1.5
11	MP-9	X	.035	2
12	MP-9	X	.037	2
13	MP-1	X	.084	5.75
14	MP-3	X	.037	4.5
15	MP-5	X	.084	5.75
16	MP-7	X	.037	4.5
17	MP-9	X	.162	5.75
18	MP-11	X	.069	4.5
19	MP-1	Z	.146	.25
20	MP-3	Z	.063	1.5
21	MP-1	Z	.072	2
22	MP-1	Z	.077	2
23	MP-5	Z	.146	.25
24	MP-7	Z	.063	1.5
25	MP-5	Z	.072	2
26	MP-5	Z	.077	2
27	MP-9	Z	.28	.25
28	MP-11	Z	.119	1.5
29	MP-9	Z	.061	2
30	MP-9	Z	.064	2
31	MP-1	Z	.146	5.75
32	MP-3	Z	.063	4.5
33	MP-5	Z	.146	5.75
34	MP-7	Z	.063	4.5
35	MP-9	Z	.28	5.75
36	MP-11	Z	.119	4.5

Member Point Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.117	.25
2	MP-3	Z	.052	1.5
3	MP-1	Z	.087	2
4	MP-1	Z	.094	2
5	MP-5	Z	.272	.25
6	MP-7	Z	.116	1.5
7	MP-5	Z	.074	2
8	MP-5	Z	.079	2
9	MP-9	Z	.272	.25
10	MP-11	Z	.116	1.5
11	MP-9	Z	.074	2
12	MP-9	Z	.079	2

Member Point Loads (BLC 14 : 270 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
13	MP-1	Z	.117	5.75
14	MP-3	Z	.052	4.5
15	MP-5	Z	.272	5.75
16	MP-7	Z	.116	4.5
17	MP-9	Z	.272	5.75
18	MP-11	Z	.116	4.5

Member Point Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.084	.25
2	MP-3	X	-.037	1.5
3	MP-1	X	-.041	2
4	MP-1	X	-.045	2
5	MP-5	X	-.162	.25
6	MP-7	X	-.069	1.5
7	MP-5	X	-.035	2
8	MP-5	X	-.037	2
9	MP-9	X	-.084	.25
10	MP-11	X	-.037	1.5
11	MP-9	X	-.041	2
12	MP-9	X	-.045	2
13	MP-1	X	-.084	5.75
14	MP-3	X	-.037	4.5
15	MP-5	X	-.162	5.75
16	MP-7	X	-.069	4.5
17	MP-9	X	-.084	5.75
18	MP-11	X	-.037	4.5
19	MP-1	Z	.146	.25
20	MP-3	Z	.063	1.5
21	MP-1	Z	.072	2
22	MP-1	Z	.077	2
23	MP-5	Z	.28	.25
24	MP-7	Z	.119	1.5
25	MP-5	Z	.061	2
26	MP-5	Z	.064	2
27	MP-9	Z	.146	.25
28	MP-11	Z	.063	1.5
29	MP-9	Z	.072	2
30	MP-9	Z	.077	2
31	MP-1	Z	.146	5.75
32	MP-3	Z	.063	4.5
33	MP-5	Z	.28	5.75
34	MP-7	Z	.119	4.5
35	MP-9	Z	.146	5.75
36	MP-11	Z	.063	4.5

Member Point Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.156	.25
2	MP-3	X	-.067	1.5
3	MP-1	X	-.055	2
4	MP-1	X	-.06	2
5	MP-5	X	-.219	.25
6	MP-7	X	-.093	1.5
7	MP-5	X	-.05	2
8	MP-5	X	-.053	2

Member Point Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
9	MP-9	X	-.093	.25
10	MP-11	X	-.041	1.5
11	MP-9	X	-.061	2
12	MP-9	X	-.066	2
13	MP-1	X	-.156	5.75
14	MP-3	X	-.067	4.5
15	MP-5	X	-.219	5.75
16	MP-7	X	-.093	4.5
17	MP-9	X	-.093	5.75
18	MP-11	X	-.041	4.5
19	MP-1	Z	.156	.25
20	MP-3	Z	.067	1.5
21	MP-1	Z	.055	2
22	MP-1	Z	.06	2
23	MP-5	Z	.219	.25
24	MP-7	Z	.093	1.5
25	MP-5	Z	.05	2
26	MP-5	Z	.053	2
27	MP-9	Z	.093	.25
28	MP-11	Z	.041	1.5
29	MP-9	Z	.061	2
30	MP-9	Z	.066	2
31	MP-1	Z	.156	5.75
32	MP-3	Z	.067	4.5
33	MP-5	Z	.219	5.75
34	MP-7	Z	.093	4.5
35	MP-9	Z	.093	5.75
36	MP-11	Z	.041	4.5

Member Point Loads (BLC 17 : 330 Wind - No Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.235	.25
2	MP-3	X	-.1	1.5
3	MP-1	X	-.064	2
4	MP-1	X	-.069	2
5	MP-5	X	-.235	.25
6	MP-7	X	-.1	1.5
7	MP-5	X	-.064	2
8	MP-5	X	-.069	2
9	MP-9	X	-.102	.25
10	MP-11	X	-.045	1.5
11	MP-9	X	-.075	2
12	MP-9	X	-.082	2
13	MP-1	X	-.235	5.75
14	MP-3	X	-.1	4.5
15	MP-5	X	-.235	5.75
16	MP-7	X	-.1	4.5
17	MP-9	X	-.102	5.75
18	MP-11	X	-.045	4.5
19	MP-1	Z	.136	.25
20	MP-3	Z	.058	1.5
21	MP-1	Z	.037	2
22	MP-1	Z	.04	2
23	MP-5	Z	.136	.25
24	MP-7	Z	.058	1.5
25	MP-5	Z	.037	2

Member Point Loads (BLC 17 : 330 Wind - No Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
26	MP-5	Z	.04	2
27	MP-9	Z	.059	.25
28	MP-11	Z	.026	1.5
29	MP-9	Z	.043	2
30	MP-9	Z	.047	2
31	MP-1	Z	.136	5.75
32	MP-3	Z	.058	4.5
33	MP-5	Z	.136	5.75
34	MP-7	Z	.058	4.5
35	MP-9	Z	.059	5.75
36	MP-11	Z	.026	4.5

Member Point Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Y	-.132	.25
2	MP-3	Y	-.046	1.5
3	MP-1	Y	-.049	2
4	MP-1	Y	-.054	2
5	MP-5	Y	-.132	.25
6	MP-7	Y	-.046	1.5
7	MP-5	Y	-.049	2
8	MP-5	Y	-.054	2
9	MP-9	Y	-.132	.25
10	MP-11	Y	-.046	1.5
11	MP-9	Y	-.049	2
12	MP-9	Y	-.054	2
13	MP-1	Y	-.132	5.75
14	MP-3	Y	-.046	4.5
15	MP-5	Y	-.132	5.75
16	MP-7	Y	-.046	4.5
17	MP-9	Y	-.132	5.75
18	MP-11	Y	-.046	4.5

Member Point Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.057	.25
2	MP-3	X	-.026	1.5
3	MP-1	X	-.018	2
4	MP-1	X	-.02	2
5	MP-5	X	-.057	.25
6	MP-7	X	-.026	1.5
7	MP-5	X	-.018	2
8	MP-5	X	-.02	2
9	MP-9	X	-.057	.25
10	MP-11	X	-.026	1.5
11	MP-9	X	-.018	2
12	MP-9	X	-.02	2
13	MP-1	X	-.057	5.75
14	MP-3	X	-.026	4.5
15	MP-5	X	-.057	5.75
16	MP-7	X	-.026	4.5
17	MP-9	X	-.057	5.75
18	MP-11	X	-.026	4.5

Member Point Loads (BLC 20 : 30 Wind - Ice)

Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]

Member Point Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.042	.25
2	MP-3	X	-.019	1.5
3	MP-1	X	-.014	2
4	MP-1	X	-.015	2
5	MP-5	X	-.02	.25
6	MP-7	X	-.01	1.5
7	MP-5	X	-.016	2
8	MP-5	X	-.017	2
9	MP-9	X	-.042	.25
10	MP-11	X	-.019	1.5
11	MP-9	X	-.014	2
12	MP-9	X	-.015	2
13	MP-1	X	-.042	5.75
14	MP-3	X	-.019	4.5
15	MP-5	X	-.02	5.75
16	MP-7	X	-.01	4.5
17	MP-9	X	-.042	5.75
18	MP-11	X	-.019	4.5
19	MP-1	Z	-.024	.25
20	MP-3	Z	-.011	1.5
21	MP-1	Z	-.008	2
22	MP-1	Z	-.008	2
23	MP-5	Z	-.012	.25
24	MP-7	Z	-.006	1.5
25	MP-5	Z	-.009	2
26	MP-5	Z	-.01	2
27	MP-9	Z	-.024	.25
28	MP-11	Z	-.011	1.5
29	MP-9	Z	-.008	2
30	MP-9	Z	-.008	2
31	MP-1	Z	-.024	5.75
32	MP-3	Z	-.011	4.5
33	MP-5	Z	-.012	5.75
34	MP-7	Z	-.006	4.5
35	MP-9	Z	-.024	5.75
36	MP-11	Z	-.011	4.5

Member Point Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.029	.25
2	MP-3	X	-.013	1.5
3	MP-1	X	-.012	2
4	MP-1	X	-.013	2
5	MP-5	X	-.018	.25
6	MP-7	X	-.009	1.5
7	MP-5	X	-.013	2
8	MP-5	X	-.014	2
9	MP-9	X	-.039	.25
10	MP-11	X	-.017	1.5
11	MP-9	X	-.011	2
12	MP-9	X	-.011	2
13	MP-1	X	-.029	5.75
14	MP-3	X	-.013	4.5
15	MP-5	X	-.018	5.75
16	MP-7	X	-.009	4.5
17	MP-9	X	-.039	5.75

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 21 : 45 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
18	MP-11	X	-.017	4.5
19	MP-1	Z	-.029	.25
20	MP-3	Z	-.013	1.5
21	MP-1	Z	-.012	2
22	MP-1	Z	-.013	2
23	MP-5	Z	-.018	.25
24	MP-7	Z	-.009	1.5
25	MP-5	Z	-.013	2
26	MP-5	Z	-.014	2
27	MP-9	Z	-.039	.25
28	MP-11	Z	-.017	1.5
29	MP-9	Z	-.011	2
30	MP-9	Z	-.011	2
31	MP-1	Z	-.029	5.75
32	MP-3	Z	-.013	4.5
33	MP-5	Z	-.018	5.75
34	MP-7	Z	-.009	4.5
35	MP-9	Z	-.039	5.75
36	MP-11	Z	-.017	4.5

Member Point Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.016	.25
2	MP-3	X	-.007	1.5
3	MP-1	X	-.009	2
4	MP-1	X	-.009	2
5	MP-5	X	-.016	.25
6	MP-7	X	-.007	1.5
7	MP-5	X	-.009	2
8	MP-5	X	-.009	2
9	MP-9	X	-.029	.25
10	MP-11	X	-.013	1.5
11	MP-9	X	-.008	2
12	MP-9	X	-.008	2
13	MP-1	X	-.016	5.75
14	MP-3	X	-.007	4.5
15	MP-5	X	-.016	5.75
16	MP-7	X	-.007	4.5
17	MP-9	X	-.029	5.75
18	MP-11	X	-.013	4.5
19	MP-1	Z	-.028	.25
20	MP-3	Z	-.013	1.5
21	MP-1	Z	-.015	2
22	MP-1	Z	-.016	2
23	MP-5	Z	-.028	.25
24	MP-7	Z	-.013	1.5
25	MP-5	Z	-.015	2
26	MP-5	Z	-.016	2
27	MP-9	Z	-.05	.25
28	MP-11	Z	-.022	1.5
29	MP-9	Z	-.013	2
30	MP-9	Z	-.014	2
31	MP-1	Z	-.028	5.75
32	MP-3	Z	-.013	4.5
33	MP-5	Z	-.028	5.75
34	MP-7	Z	-.013	4.5

Member Point Loads (BLC 22 : 60 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
35	MP-9	Z	-.05	5.75
36	MP-11	Z	-.022	4.5

Member Point Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.024	.25
2	MP-3	Z	-.011	1.5
3	MP-1	Z	-.015	2
4	MP-1	Z	-.016	2
5	MP-5	Z	-.024	.25
6	MP-7	Z	-.011	1.5
7	MP-5	Z	-.015	2
8	MP-5	Z	-.016	2
9	MP-9	Z	-.024	.25
10	MP-11	Z	-.011	1.5
11	MP-9	Z	-.015	2
12	MP-9	Z	-.016	2
13	MP-1	Z	-.024	5.75
14	MP-3	Z	-.011	4.5
15	MP-5	Z	-.024	5.75
16	MP-7	Z	-.011	4.5
17	MP-9	Z	-.024	5.75
18	MP-11	Z	-.011	4.5

Member Point Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.016	.25
2	MP-3	X	.007	1.5
3	MP-1	X	.009	2
4	MP-1	X	.009	2
5	MP-5	X	.029	.25
6	MP-7	X	.013	1.5
7	MP-5	X	.008	2
8	MP-5	X	.008	2
9	MP-9	X	.016	.25
10	MP-11	X	.007	1.5
11	MP-9	X	.009	2
12	MP-9	X	.009	2
13	MP-1	X	.016	5.75
14	MP-3	X	.007	4.5
15	MP-5	X	.029	5.75
16	MP-7	X	.013	4.5
17	MP-9	X	.016	5.75
18	MP-11	X	.007	4.5
19	MP-1	Z	-.028	.25
20	MP-3	Z	-.013	1.5
21	MP-1	Z	-.015	2
22	MP-1	Z	-.016	2
23	MP-5	Z	-.05	.25
24	MP-7	Z	-.022	1.5
25	MP-5	Z	-.013	2
26	MP-5	Z	-.014	2
27	MP-9	Z	-.028	.25
28	MP-11	Z	-.013	1.5
29	MP-9	Z	-.015	2
30	MP-9	Z	-.016	2

Member Point Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
31	MP-1	Z	-.028	5.75
32	MP-3	Z	-.013	4.5
33	MP-5	Z	-.05	5.75
34	MP-7	Z	-.022	4.5
35	MP-9	Z	-.028	5.75
36	MP-11	Z	-.013	4.5

Member Point Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.029	.25
2	MP-3	X	.013	1.5
3	MP-1	X	.012	2
4	MP-1	X	.013	2
5	MP-5	X	.039	.25
6	MP-7	X	.017	1.5
7	MP-5	X	.011	2
8	MP-5	X	.011	2
9	MP-9	X	.018	.25
10	MP-11	X	.009	1.5
11	MP-9	X	.013	2
12	MP-9	X	.014	2
13	MP-1	X	.029	5.75
14	MP-3	X	.013	4.5
15	MP-5	X	.039	5.75
16	MP-7	X	.017	4.5
17	MP-9	X	.018	5.75
18	MP-11	X	.009	4.5
19	MP-1	Z	-.029	.25
20	MP-3	Z	-.013	1.5
21	MP-1	Z	-.012	2
22	MP-1	Z	-.013	2
23	MP-5	Z	-.039	.25
24	MP-7	Z	-.017	1.5
25	MP-5	Z	-.011	2
26	MP-5	Z	-.011	2
27	MP-9	Z	-.018	.25
28	MP-11	Z	-.009	1.5
29	MP-9	Z	-.013	2
30	MP-9	Z	-.014	2
31	MP-1	Z	-.029	5.75
32	MP-3	Z	-.013	4.5
33	MP-5	Z	-.039	5.75
34	MP-7	Z	-.017	4.5
35	MP-9	Z	-.018	5.75
36	MP-11	Z	-.009	4.5

Member Point Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.042	.25
2	MP-3	X	.019	1.5
3	MP-1	X	.014	2
4	MP-1	X	.015	2
5	MP-5	X	.042	.25
6	MP-7	X	.019	1.5
7	MP-5	X	.014	2
8	MP-5	X	.015	2

Member Point Loads (BLC 26 : 150 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
9	MP-9	X	.02	.25
10	MP-11	X	.01	1.5
11	MP-9	X	.016	2
12	MP-9	X	.017	2
13	MP-1	X	.042	5.75
14	MP-3	X	.019	4.5
15	MP-5	X	.042	5.75
16	MP-7	X	.019	4.5
17	MP-9	X	.02	5.75
18	MP-11	X	.01	4.5
19	MP-1	Z	-.024	.25
20	MP-3	Z	-.011	1.5
21	MP-1	Z	-.008	2
22	MP-1	Z	-.008	2
23	MP-5	Z	-.024	.25
24	MP-7	Z	-.011	1.5
25	MP-5	Z	-.008	2
26	MP-5	Z	-.008	2
27	MP-9	Z	-.012	.25
28	MP-11	Z	-.006	1.5
29	MP-9	Z	-.009	2
30	MP-9	Z	-.01	2
31	MP-1	Z	-.024	5.75
32	MP-3	Z	-.011	4.5
33	MP-5	Z	-.024	5.75
34	MP-7	Z	-.011	4.5
35	MP-9	Z	-.012	5.75
36	MP-11	Z	-.006	4.5

Member Point Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.057	.25
2	MP-3	X	.026	1.5
3	MP-1	X	.018	2
4	MP-1	X	.02	2
5	MP-5	X	.057	.25
6	MP-7	X	.026	1.5
7	MP-5	X	.018	2
8	MP-5	X	.02	2
9	MP-9	X	.057	.25
10	MP-11	X	.026	1.5
11	MP-9	X	.018	2
12	MP-9	X	.02	2
13	MP-1	X	.057	5.75
14	MP-3	X	.026	4.5
15	MP-5	X	.057	5.75
16	MP-7	X	.026	4.5
17	MP-9	X	.057	5.75
18	MP-11	X	.026	4.5

Member Point Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.042	.25
2	MP-3	X	.019	1.5
3	MP-1	X	.014	2
4	MP-1	X	.015	2

Member Point Loads (BLC 28 : 210 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
5	MP-5	X	.02	.25
6	MP-7	X	.01	1.5
7	MP-5	X	.016	2
8	MP-5	X	.017	2
9	MP-9	X	.042	.25
10	MP-11	X	.019	1.5
11	MP-9	X	.014	2
12	MP-9	X	.015	2
13	MP-1	X	.042	5.75
14	MP-3	X	.019	4.5
15	MP-5	X	.02	5.75
16	MP-7	X	.01	4.5
17	MP-9	X	.042	5.75
18	MP-11	X	.019	4.5
19	MP-1	Z	.024	.25
20	MP-3	Z	.011	1.5
21	MP-1	Z	.008	2
22	MP-1	Z	.008	2
23	MP-5	Z	.012	.25
24	MP-7	Z	.006	1.5
25	MP-5	Z	.009	2
26	MP-5	Z	.01	2
27	MP-9	Z	.024	.25
28	MP-11	Z	.011	1.5
29	MP-9	Z	.008	2
30	MP-9	Z	.008	2
31	MP-1	Z	.024	5.75
32	MP-3	Z	.011	4.5
33	MP-5	Z	.012	5.75
34	MP-7	Z	.006	4.5
35	MP-9	Z	.024	5.75
36	MP-11	Z	.011	4.5

Member Point Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.029	.25
2	MP-3	X	.013	1.5
3	MP-1	X	.012	2
4	MP-1	X	.013	2
5	MP-5	X	.018	.25
6	MP-7	X	.009	1.5
7	MP-5	X	.013	2
8	MP-5	X	.014	2
9	MP-9	X	.039	.25
10	MP-11	X	.017	1.5
11	MP-9	X	.011	2
12	MP-9	X	.011	2
13	MP-1	X	.029	5.75
14	MP-3	X	.013	4.5
15	MP-5	X	.018	5.75
16	MP-7	X	.009	4.5
17	MP-9	X	.039	5.75
18	MP-11	X	.017	4.5
19	MP-1	Z	.029	.25
20	MP-3	Z	.013	1.5
21	MP-1	Z	.012	2

Member Point Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
22	MP-1	Z	.013	2
23	MP-5	Z	.018	.25
24	MP-7	Z	.009	1.5
25	MP-5	Z	.013	2
26	MP-5	Z	.014	2
27	MP-9	Z	.039	.25
28	MP-11	Z	.017	1.5
29	MP-9	Z	.011	2
30	MP-9	Z	.011	2
31	MP-1	Z	.029	5.75
32	MP-3	Z	.013	4.5
33	MP-5	Z	.018	5.75
34	MP-7	Z	.009	4.5
35	MP-9	Z	.039	5.75
36	MP-11	Z	.017	4.5

Member Point Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	.016	.25
2	MP-3	X	.007	1.5
3	MP-1	X	.009	2
4	MP-1	X	.009	2
5	MP-5	X	.016	.25
6	MP-7	X	.007	1.5
7	MP-5	X	.009	2
8	MP-5	X	.009	2
9	MP-9	X	.029	.25
10	MP-11	X	.013	1.5
11	MP-9	X	.008	2
12	MP-9	X	.008	2
13	MP-1	X	.016	5.75
14	MP-3	X	.007	4.5
15	MP-5	X	.016	5.75
16	MP-7	X	.007	4.5
17	MP-9	X	.029	5.75
18	MP-11	X	.013	4.5
19	MP-1	Z	.028	.25
20	MP-3	Z	.013	1.5
21	MP-1	Z	.015	2
22	MP-1	Z	.016	2
23	MP-5	Z	.028	.25
24	MP-7	Z	.013	1.5
25	MP-5	Z	.015	2
26	MP-5	Z	.016	2
27	MP-9	Z	.05	.25
28	MP-11	Z	.022	1.5
29	MP-9	Z	.013	2
30	MP-9	Z	.014	2
31	MP-1	Z	.028	5.75
32	MP-3	Z	.013	4.5
33	MP-5	Z	.028	5.75
34	MP-7	Z	.013	4.5
35	MP-9	Z	.05	5.75
36	MP-11	Z	.022	4.5

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	.024	.25
2	MP-3	Z	.011	1.5
3	MP-1	Z	.015	2
4	MP-1	Z	.016	2
5	MP-5	Z	.024	.25
6	MP-7	Z	.011	1.5
7	MP-5	Z	.015	2
8	MP-5	Z	.016	2
9	MP-9	Z	.024	.25
10	MP-11	Z	.011	1.5
11	MP-9	Z	.015	2
12	MP-9	Z	.016	2
13	MP-1	Z	.024	5.75
14	MP-3	Z	.011	4.5
15	MP-5	Z	.024	5.75
16	MP-7	Z	.011	4.5
17	MP-9	Z	.024	5.75
18	MP-11	Z	.011	4.5

Member Point Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.016	.25
2	MP-3	X	-.007	1.5
3	MP-1	X	-.009	2
4	MP-1	X	-.009	2
5	MP-5	X	-.029	.25
6	MP-7	X	-.013	1.5
7	MP-5	X	-.008	2
8	MP-5	X	-.008	2
9	MP-9	X	-.016	.25
10	MP-11	X	-.007	1.5
11	MP-9	X	-.009	2
12	MP-9	X	-.009	2
13	MP-1	X	-.016	5.75
14	MP-3	X	-.007	4.5
15	MP-5	X	-.029	5.75
16	MP-7	X	-.013	4.5
17	MP-9	X	-.016	5.75
18	MP-11	X	-.007	4.5
19	MP-1	Z	.028	.25
20	MP-3	Z	.013	1.5
21	MP-1	Z	.015	2
22	MP-1	Z	.016	2
23	MP-5	Z	.05	.25
24	MP-7	Z	.022	1.5
25	MP-5	Z	.013	2
26	MP-5	Z	.014	2
27	MP-9	Z	.028	.25
28	MP-11	Z	.013	1.5
29	MP-9	Z	.015	2
30	MP-9	Z	.016	2
31	MP-1	Z	.028	5.75
32	MP-3	Z	.013	4.5
33	MP-5	Z	.05	5.75
34	MP-7	Z	.022	4.5
35	MP-9	Z	.028	5.75

Member Point Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
36	MP-11	Z	.013	4.5

Member Point Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.029	.25
2	MP-3	X	-.013	1.5
3	MP-1	X	-.012	2
4	MP-1	X	-.013	2
5	MP-5	X	-.039	.25
6	MP-7	X	-.017	1.5
7	MP-5	X	-.011	2
8	MP-5	X	-.011	2
9	MP-9	X	-.018	.25
10	MP-11	X	-.009	1.5
11	MP-9	X	-.013	2
12	MP-9	X	-.014	2
13	MP-1	X	-.029	5.75
14	MP-3	X	-.013	4.5
15	MP-5	X	-.039	5.75
16	MP-7	X	-.017	4.5
17	MP-9	X	-.018	5.75
18	MP-11	X	-.009	4.5
19	MP-1	Z	.029	.25
20	MP-3	Z	.013	1.5
21	MP-1	Z	.012	2
22	MP-1	Z	.013	2
23	MP-5	Z	.039	.25
24	MP-7	Z	.017	1.5
25	MP-5	Z	.011	2
26	MP-5	Z	.011	2
27	MP-9	Z	.018	.25
28	MP-11	Z	.009	1.5
29	MP-9	Z	.013	2
30	MP-9	Z	.014	2
31	MP-1	Z	.029	5.75
32	MP-3	Z	.013	4.5
33	MP-5	Z	.039	5.75
34	MP-7	Z	.017	4.5
35	MP-9	Z	.018	5.75
36	MP-11	Z	.009	4.5

Member Point Loads (BLC 34 : 330 Wind - Ice)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.042	.25
2	MP-3	X	-.019	1.5
3	MP-1	X	-.014	2
4	MP-1	X	-.015	2
5	MP-5	X	-.042	.25
6	MP-7	X	-.019	1.5
7	MP-5	X	-.014	2
8	MP-5	X	-.015	2
9	MP-9	X	-.02	.25
10	MP-11	X	-.01	1.5
11	MP-9	X	-.016	2
12	MP-9	X	-.017	2
13	MP-1	X	-.042	5.75

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Point Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
14	MP-3	X	-.019	4.5
15	MP-5	X	-.042	5.75
16	MP-7	X	-.019	4.5
17	MP-9	X	-.02	5.75
18	MP-11	X	-.01	4.5
19	MP-1	Z	.024	.25
20	MP-3	Z	.011	1.5
21	MP-1	Z	.008	2
22	MP-1	Z	.008	2
23	MP-5	Z	.024	.25
24	MP-7	Z	.011	1.5
25	MP-5	Z	.008	2
26	MP-5	Z	.008	2
27	MP-9	Z	.012	.25
28	MP-11	Z	.006	1.5
29	MP-9	Z	.009	2
30	MP-9	Z	.01	2
31	MP-1	Z	.024	5.75
32	MP-3	Z	.011	4.5
33	MP-5	Z	.024	5.75
34	MP-7	Z	.011	4.5
35	MP-9	Z	.012	5.75
36	MP-11	Z	.006	4.5

Member Point Loads (BLC 37 : Seismic Load X)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	X	-.075	.25
2	MP-3	X	-.041	1.5
3	MP-1	X	-.073	2
4	MP-1	X	-.109	2
5	MP-5	X	-.075	.25
6	MP-7	X	-.041	1.5
7	MP-5	X	-.073	2
8	MP-5	X	-.109	2
9	MP-9	X	-.075	.25
10	MP-11	X	-.041	1.5
11	MP-9	X	-.073	2
12	MP-9	X	-.109	2
13	MP-1	X	-.075	5.75
14	MP-3	X	-.041	4.5
15	MP-5	X	-.075	5.75
16	MP-7	X	-.041	4.5
17	MP-9	X	-.075	5.75
18	MP-11	X	-.041	4.5

Member Point Loads (BLC 38 : Seismic Load Z)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
1	MP-1	Z	-.075	.25
2	MP-3	Z	-.041	1.5
3	MP-1	Z	-.073	2
4	MP-1	Z	-.109	2
5	MP-5	Z	-.075	.25
6	MP-7	Z	-.041	1.5
7	MP-5	Z	-.073	2
8	MP-5	Z	-.109	2
9	MP-9	Z	-.075	.25

Member Point Loads (BLC 38 : Seismic Load Z) (Continued)

	Member Label	Direction	Magnitude[k,k-ft]	Location[ft,%]
10	MP-11	Z	-.041	1.5
11	MP-9	Z	-.073	2
12	MP-9	Z	-.109	2
13	MP-1	Z	-.075	5.75
14	MP-3	Z	-.041	4.5
15	MP-5	Z	-.075	5.75
16	MP-7	Z	-.041	4.5
17	MP-9	Z	-.075	5.75
18	MP-11	Z	-.041	4.5

Member Distributed Loads (BLC 2 : 0 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.029	-.029	0	%100
2	SF2-TH	X	-.013	-.013	0	%100
3	SF3-TH	X	-.013	-.013	0	%100
4	HRC-1	X	-.006	-.006	0	%100
5	HRC-2	X	-.006	-.006	0	%100
6	HRC-3	X	-.012	-.012	0	%100
7	FF-HR	X	-.01	-.01	0	%100
8	SF1-HR	X	-.005	-.005	0	%100
9	SF2-HR	X	-.005	-.005	0	%100
10	MP-1	X	-.01	-.01	0	%100
11	MP-2	X	-.01	-.01	0	%100
12	MP-3	X	-.01	-.01	0	%100
13	MP-4	X	-.01	-.01	0	%100
14	MP-5	X	-.01	-.01	0	%100
15	MP-7	X	-.01	-.01	0	%100
16	MP-8	X	-.01	-.01	0	%100
17	MP-9	X	-.01	-.01	0	%100
18	MP-10	X	-.01	-.01	0	%100
19	MP-11	X	-.01	-.01	0	%100
20	MP-12	X	-.01	-.01	0	%100
21	SA-1	X	-.025	-.025	0	%100
22	SA-2	X	0	0	0	%100
23	SA-3	X	-.025	-.025	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.022	-.022	0	%100
2	SF2-TH	X	0	0	0	%100
3	SF3-TH	X	-.02	-.02	0	%100
4	HRC-1	X	-.008	-.008	0	%100
5	HRC-2	X	0	0	0	%100
6	HRC-3	X	-.009	-.009	0	%100
7	FF-HR	X	-.008	-.008	0	%100
8	SF1-HR	X	-.008	-.008	0	%100
9	SF2-HR	X	0	0	0	%100
10	MP-1	X	-.009	-.009	0	%100
11	MP-2	X	-.008	-.008	0	%100
12	MP-3	X	-.009	-.009	0	%100
13	MP-4	X	-.008	-.008	0	%100
14	MP-5	X	-.009	-.009	0	%100
15	MP-7	X	-.009	-.009	0	%100
16	MP-8	X	-.008	-.008	0	%100
17	MP-9	X	-.009	-.009	0	%100

Member Distributed Loads (BLC 3 : 30 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
18	MP-10	X	-.008	-.008	0	%100
19	MP-11	X	-.009	-.009	0	%100
20	MP-12	X	-.008	-.008	0	%100
21	SA-1	X	-.013	-.013	0	%100
22	SA-2	X	-.008	-.008	0	%100
23	SA-3	X	-.025	-.025	0	%100
24	FFTH	Z	-.013	-.013	0	%100
25	SF2-TH	Z	0	0	0	%100
26	SF3-TH	Z	-.013	-.013	0	%100
27	HRC-1	Z	-.005	-.005	0	%100
28	HRC-2	Z	0	0	0	%100
29	HRC-3	Z	-.005	-.005	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.005	-.005	0	%100
32	SF2-HR	Z	0	0	0	%100
33	MP-1	Z	-.005	-.005	0	%100
34	MP-2	Z	-.005	-.005	0	%100
35	MP-3	Z	-.005	-.005	0	%100
36	MP-4	Z	-.005	-.005	0	%100
37	MP-5	Z	-.005	-.005	0	%100
38	MP-7	Z	-.005	-.005	0	%100
39	MP-8	Z	-.005	-.005	0	%100
40	MP-9	Z	-.005	-.005	0	%100
41	MP-10	Z	-.005	-.005	0	%100
42	MP-11	Z	-.005	-.005	0	%100
43	MP-12	Z	-.005	-.005	0	%100
44	SA-1	Z	-.006	-.006	0	%100
45	SA-2	Z	-.007	-.007	0	%100
46	SA-3	Z	-.012	-.012	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.015	-.015	0	%100
2	SF2-TH	X	-.005	-.005	0	%100
3	SF3-TH	X	-.018	-.018	0	%100
4	HRC-1	X	-.008	-.008	0	%100
5	HRC-2	X	-.002	-.002	0	%100
6	HRC-3	X	-.006	-.006	0	%100
7	FF-HR	X	-.005	-.005	0	%100
8	SF1-HR	X	-.007	-.007	0	%100
9	SF2-HR	X	-.002	-.002	0	%100
10	MP-1	X	-.007	-.007	0	%100
11	MP-2	X	-.007	-.007	0	%100
12	MP-3	X	-.007	-.007	0	%100
13	MP-4	X	-.007	-.007	0	%100
14	MP-5	X	-.007	-.007	0	%100
15	MP-7	X	-.007	-.007	0	%100
16	MP-8	X	-.007	-.007	0	%100
17	MP-9	X	-.007	-.007	0	%100
18	MP-10	X	-.007	-.007	0	%100
19	MP-11	X	-.007	-.007	0	%100
20	MP-12	X	-.007	-.007	0	%100
21	SA-1	X	-.005	-.005	0	%100
22	SA-2	X	-.009	-.009	0	%100
23	SA-3	X	-.02	-.02	0	%100
24	FFTH	Z	-.015	-.015	0	%100

Member Distributed Loads (BLC 4 : 45 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
25	SF2-TH	Z	-.005	-.005	0	%100
26	SF3-TH	Z	-.02	-.02	0	%100
27	HRC-1	Z	-.008	-.008	0	%100
28	HRC-2	Z	-.002	-.002	0	%100
29	HRC-3	Z	-.006	-.006	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.007	-.007	0	%100
32	SF2-HR	Z	-.002	-.002	0	%100
33	MP-1	Z	-.007	-.007	0	%100
34	MP-2	Z	-.007	-.007	0	%100
35	MP-3	Z	-.007	-.007	0	%100
36	MP-4	Z	-.007	-.007	0	%100
37	MP-5	Z	-.007	-.007	0	%100
38	MP-7	Z	-.007	-.007	0	%100
39	MP-8	Z	-.007	-.007	0	%100
40	MP-9	Z	-.007	-.007	0	%100
41	MP-10	Z	-.007	-.007	0	%100
42	MP-11	Z	-.007	-.007	0	%100
43	MP-12	Z	-.007	-.007	0	%100
44	SA-1	Z	-.005	-.005	0	%100
45	SA-2	Z	-.015	-.015	0	%100
46	SA-3	Z	-.017	-.017	0	%100

Member Distributed Loads (BLC 5 : 60 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.007	-.007	0	%100
2	SF2-TH	X	-.007	-.007	0	%100
3	SF3-TH	X	-.013	-.013	0	%100
4	HRC-1	X	-.006	-.006	0	%100
5	HRC-2	X	-.003	-.003	0	%100
6	HRC-3	X	-.003	-.003	0	%100
7	FF-HR	X	-.003	-.003	0	%100
8	SF1-HR	X	-.005	-.005	0	%100
9	SF2-HR	X	-.003	-.003	0	%100
10	MP-1	X	-.005	-.005	0	%100
11	MP-2	X	-.005	-.005	0	%100
12	MP-3	X	-.005	-.005	0	%100
13	MP-4	X	-.005	-.005	0	%100
14	MP-5	X	-.005	-.005	0	%100
15	MP-7	X	-.005	-.005	0	%100
16	MP-8	X	-.005	-.005	0	%100
17	MP-9	X	-.005	-.005	0	%100
18	MP-10	X	-.005	-.005	0	%100
19	MP-11	X	-.005	-.005	0	%100
20	MP-12	X	-.005	-.005	0	%100
21	SA-1	X	0	0	0	%100
22	SA-2	X	-.008	-.008	0	%100
23	SA-3	X	-.013	-.013	0	%100
24	FFTH	Z	-.013	-.013	0	%100
25	SF2-TH	Z	-.013	-.013	0	%100
26	SF3-TH	Z	-.025	-.025	0	%100
27	HRC-1	Z	-.01	-.01	0	%100
28	HRC-2	Z	-.005	-.005	0	%100
29	HRC-3	Z	-.005	-.005	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.009	-.009	0	%100

Member Distributed Loads (BLC 5 : 60 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
32	SF2-HR	Z	-.005	-.005	0	%100
33	MP-1	Z	-.009	-.009	0	%100
34	MP-2	Z	-.008	-.008	0	%100
35	MP-3	Z	-.009	-.009	0	%100
36	MP-4	Z	-.008	-.008	0	%100
37	MP-5	Z	-.009	-.009	0	%100
38	MP-7	Z	-.009	-.009	0	%100
39	MP-8	Z	-.008	-.008	0	%100
40	MP-9	Z	-.009	-.009	0	%100
41	MP-10	Z	-.008	-.008	0	%100
42	MP-11	Z	-.009	-.009	0	%100
43	MP-12	Z	-.008	-.008	0	%100
44	SA-1	Z	0	0	0	%100
45	SA-2	Z	-.022	-.022	0	%100
46	SA-3	Z	-.018	-.018	0	%100

Member Distributed Loads (BLC 6 : 90 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	SF2-TH	Z	-.025	-.025	0	%100
3	SF3-TH	Z	-.025	-.025	0	%100
4	HRC-1	Z	-.01	-.01	0	%100
5	HRC-2	Z	-.01	-.01	0	%100
6	HRC-3	Z	0	0	0	%100
7	FF-HR	Z	0	0	0	%100
8	SF1-HR	Z	-.009	-.009	0	%100
9	SF2-HR	Z	-.009	-.009	0	%100
10	MP-1	Z	-.01	-.01	0	%100
11	MP-2	Z	-.01	-.01	0	%100
12	MP-3	Z	-.01	-.01	0	%100
13	MP-4	Z	-.01	-.01	0	%100
14	MP-5	Z	-.01	-.01	0	%100
15	MP-7	Z	-.01	-.01	0	%100
16	MP-8	Z	-.01	-.01	0	%100
17	MP-9	Z	-.01	-.01	0	%100
18	MP-10	Z	-.01	-.01	0	%100
19	MP-11	Z	-.01	-.01	0	%100
20	MP-12	Z	-.01	-.01	0	%100
21	SA-1	Z	-.012	-.012	0	%100
22	SA-2	Z	-.029	-.029	0	%100
23	SA-3	Z	-.012	-.012	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.007	.007	0	%100
2	SF2-TH	X	.013	.013	0	%100
3	SF3-TH	X	.007	.007	0	%100
4	HRC-1	X	.003	.003	0	%100
5	HRC-2	X	.006	.006	0	%100
6	HRC-3	X	.003	.003	0	%100
7	FF-HR	X	.003	.003	0	%100
8	SF1-HR	X	.003	.003	0	%100
9	SF2-HR	X	.005	.005	0	%100
10	MP-1	X	.005	.005	0	%100
11	MP-2	X	.005	.005	0	%100
12	MP-3	X	.005	.005	0	%100

Member Distributed Loads (BLC 7 : 120 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
13	MP-4	X	.005	.005	0	%100
14	MP-5	X	.005	.005	0	%100
15	MP-7	X	.005	.005	0	%100
16	MP-8	X	.005	.005	0	%100
17	MP-9	X	.005	.005	0	%100
18	MP-10	X	.005	.005	0	%100
19	MP-11	X	.005	.005	0	%100
20	MP-12	X	.005	.005	0	%100
21	SA-1	X	.013	.013	0	%100
22	SA-2	X	.008	.008	0	%100
23	SA-3	X	0	0	0	%100
24	FFTH	Z	-.013	-.013	0	%100
25	SF2-TH	Z	-.025	-.025	0	%100
26	SF3-TH	Z	-.013	-.013	0	%100
27	HRC-1	Z	-.005	-.005	0	%100
28	HRC-2	Z	-.01	-.01	0	%100
29	HRC-3	Z	-.005	-.005	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.005	-.005	0	%100
32	SF2-HR	Z	-.009	-.009	0	%100
33	MP-1	Z	-.009	-.009	0	%100
34	MP-2	Z	-.008	-.008	0	%100
35	MP-3	Z	-.009	-.009	0	%100
36	MP-4	Z	-.008	-.008	0	%100
37	MP-5	Z	-.009	-.009	0	%100
38	MP-7	Z	-.009	-.009	0	%100
39	MP-8	Z	-.008	-.008	0	%100
40	MP-9	Z	-.009	-.009	0	%100
41	MP-10	Z	-.008	-.008	0	%100
42	MP-11	Z	-.009	-.009	0	%100
43	MP-12	Z	-.008	-.008	0	%100
44	SA-1	Z	-.018	-.018	0	%100
45	SA-2	Z	-.022	-.022	0	%100
46	SA-3	Z	0	0	0	%100

Member Distributed Loads (BLC 8 : 135 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.015	.015	0	%100
2	SF2-TH	X	.018	.018	0	%100
3	SF3-TH	X	.005	.005	0	%100
4	HRC-1	X	.002	.002	0	%100
5	HRC-2	X	.008	.008	0	%100
6	HRC-3	X	.006	.006	0	%100
7	FF-HR	X	.005	.005	0	%100
8	SF1-HR	X	.002	.002	0	%100
9	SF2-HR	X	.007	.007	0	%100
10	MP-1	X	.007	.007	0	%100
11	MP-2	X	.007	.007	0	%100
12	MP-3	X	.007	.007	0	%100
13	MP-4	X	.007	.007	0	%100
14	MP-5	X	.007	.007	0	%100
15	MP-7	X	.007	.007	0	%100
16	MP-8	X	.007	.007	0	%100
17	MP-9	X	.007	.007	0	%100
18	MP-10	X	.007	.007	0	%100
19	MP-11	X	.007	.007	0	%100

Member Distributed Loads (BLC 8 : 135 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
20	MP-12	X	.007	.007	0	%100
21	SA-1	X	.02	.02	0	%100
22	SA-2	X	.009	.009	0	%100
23	SA-3	X	.005	.005	0	%100
24	FFTH	Z	-.015	-.015	0	%100
25	SF2-TH	Z	-.02	-.02	0	%100
26	SF3-TH	Z	-.005	-.005	0	%100
27	HRC-1	Z	-.002	-.002	0	%100
28	HRC-2	Z	-.008	-.008	0	%100
29	HRC-3	Z	-.006	-.006	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	-.002	-.002	0	%100
32	SF2-HR	Z	-.007	-.007	0	%100
33	MP-1	Z	-.007	-.007	0	%100
34	MP-2	Z	-.007	-.007	0	%100
35	MP-3	Z	-.007	-.007	0	%100
36	MP-4	Z	-.007	-.007	0	%100
37	MP-5	Z	-.007	-.007	0	%100
38	MP-7	Z	-.007	-.007	0	%100
39	MP-8	Z	-.007	-.007	0	%100
40	MP-9	Z	-.007	-.007	0	%100
41	MP-10	Z	-.007	-.007	0	%100
42	MP-11	Z	-.007	-.007	0	%100
43	MP-12	Z	-.007	-.007	0	%100
44	SA-1	Z	-.017	-.017	0	%100
45	SA-2	Z	-.015	-.015	0	%100
46	SA-3	Z	-.005	-.005	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.022	.022	0	%100
2	SF2-TH	X	.02	.02	0	%100
3	SF3-TH	X	0	0	0	%100
4	HRC-1	X	0	0	0	%100
5	HRC-2	X	.008	.008	0	%100
6	HRC-3	X	.009	.009	0	%100
7	FF-HR	X	.008	.008	0	%100
8	SF1-HR	X	0	0	0	%100
9	SF2-HR	X	.008	.008	0	%100
10	MP-1	X	.009	.009	0	%100
11	MP-2	X	.008	.008	0	%100
12	MP-3	X	.009	.009	0	%100
13	MP-4	X	.008	.008	0	%100
14	MP-5	X	.009	.009	0	%100
15	MP-7	X	.009	.009	0	%100
16	MP-8	X	.008	.008	0	%100
17	MP-9	X	.009	.009	0	%100
18	MP-10	X	.008	.008	0	%100
19	MP-11	X	.009	.009	0	%100
20	MP-12	X	.008	.008	0	%100
21	SA-1	X	.025	.025	0	%100
22	SA-2	X	.008	.008	0	%100
23	SA-3	X	.013	.013	0	%100
24	FFTH	Z	-.013	-.013	0	%100
25	SF2-TH	Z	-.013	-.013	0	%100
26	SF3-TH	Z	0	0	0	%100

Member Distributed Loads (BLC 9 : 150 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
27	HRC-1	Z	0	0	0	%100
28	HRC-2	Z	-.005	-.005	0	%100
29	HRC-3	Z	-.005	-.005	0	%100
30	FF-HR	Z	-.005	-.005	0	%100
31	SF1-HR	Z	0	0	0	%100
32	SF2-HR	Z	-.005	-.005	0	%100
33	MP-1	Z	-.005	-.005	0	%100
34	MP-2	Z	-.005	-.005	0	%100
35	MP-3	Z	-.005	-.005	0	%100
36	MP-4	Z	-.005	-.005	0	%100
37	MP-5	Z	-.005	-.005	0	%100
38	MP-7	Z	-.005	-.005	0	%100
39	MP-8	Z	-.005	-.005	0	%100
40	MP-9	Z	-.005	-.005	0	%100
41	MP-10	Z	-.005	-.005	0	%100
42	MP-11	Z	-.005	-.005	0	%100
43	MP-12	Z	-.005	-.005	0	%100
44	SA-1	Z	-.012	-.012	0	%100
45	SA-2	Z	-.007	-.007	0	%100
46	SA-3	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 10 : 180 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.029	.029	0	%100
2	SF2-TH	X	.013	.013	0	%100
3	SF3-TH	X	.013	.013	0	%100
4	HRC-1	X	.006	.006	0	%100
5	HRC-2	X	.006	.006	0	%100
6	HRC-3	X	.012	.012	0	%100
7	FF-HR	X	.01	.01	0	%100
8	SF1-HR	X	.005	.005	0	%100
9	SF2-HR	X	.005	.005	0	%100
10	MP-1	X	.01	.01	0	%100
11	MP-2	X	.01	.01	0	%100
12	MP-3	X	.01	.01	0	%100
13	MP-4	X	.01	.01	0	%100
14	MP-5	X	.01	.01	0	%100
15	MP-7	X	.01	.01	0	%100
16	MP-8	X	.01	.01	0	%100
17	MP-9	X	.01	.01	0	%100
18	MP-10	X	.01	.01	0	%100
19	MP-11	X	.01	.01	0	%100
20	MP-12	X	.01	.01	0	%100
21	SA-1	X	.025	.025	0	%100
22	SA-2	X	0	0	0	%100
23	SA-3	X	.025	.025	0	%100

Member Distributed Loads (BLC 11 : 210 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.022	.022	0	%100
2	SF2-TH	X	0	0	0	%100
3	SF3-TH	X	.02	.02	0	%100
4	HRC-1	X	.008	.008	0	%100
5	HRC-2	X	0	0	0	%100
6	HRC-3	X	.009	.009	0	%100
7	FF-HR	X	.008	.008	0	%100

Member Distributed Loads (BLC 11 : 210 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
8	SF1-HR	X	.008	.008	0	%100
9	SF2-HR	X	0	0	0	%100
10	MP-1	X	.009	.009	0	%100
11	MP-2	X	.008	.008	0	%100
12	MP-3	X	.009	.009	0	%100
13	MP-4	X	.008	.008	0	%100
14	MP-5	X	.009	.009	0	%100
15	MP-7	X	.009	.009	0	%100
16	MP-8	X	.008	.008	0	%100
17	MP-9	X	.009	.009	0	%100
18	MP-10	X	.008	.008	0	%100
19	MP-11	X	.009	.009	0	%100
20	MP-12	X	.008	.008	0	%100
21	SA-1	X	.013	.013	0	%100
22	SA-2	X	.008	.008	0	%100
23	SA-3	X	.025	.025	0	%100
24	FFTH	Z	.013	.013	0	%100
25	SF2-TH	Z	0	0	0	%100
26	SF3-TH	Z	.013	.013	0	%100
27	HRC-1	Z	.005	.005	0	%100
28	HRC-2	Z	0	0	0	%100
29	HRC-3	Z	.005	.005	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	.005	.005	0	%100
32	SF2-HR	Z	0	0	0	%100
33	MP-1	Z	.005	.005	0	%100
34	MP-2	Z	.005	.005	0	%100
35	MP-3	Z	.005	.005	0	%100
36	MP-4	Z	.005	.005	0	%100
37	MP-5	Z	.005	.005	0	%100
38	MP-7	Z	.005	.005	0	%100
39	MP-8	Z	.005	.005	0	%100
40	MP-9	Z	.005	.005	0	%100
41	MP-10	Z	.005	.005	0	%100
42	MP-11	Z	.005	.005	0	%100
43	MP-12	Z	.005	.005	0	%100
44	SA-1	Z	.006	.006	0	%100
45	SA-2	Z	.007	.007	0	%100
46	SA-3	Z	.012	.012	0	%100

Member Distributed Loads (BLC 12 : 225 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.015	.015	0	%100
2	SF2-TH	X	.005	.005	0	%100
3	SF3-TH	X	.018	.018	0	%100
4	HRC-1	X	.008	.008	0	%100
5	HRC-2	X	.002	.002	0	%100
6	HRC-3	X	.006	.006	0	%100
7	FF-HR	X	.005	.005	0	%100
8	SF1-HR	X	.007	.007	0	%100
9	SF2-HR	X	.002	.002	0	%100
10	MP-1	X	.007	.007	0	%100
11	MP-2	X	.007	.007	0	%100
12	MP-3	X	.007	.007	0	%100
13	MP-4	X	.007	.007	0	%100
14	MP-5	X	.007	.007	0	%100

Member Distributed Loads (BLC 12 : 225 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
15	MP-7	X	.007	.007	0	%100
16	MP-8	X	.007	.007	0	%100
17	MP-9	X	.007	.007	0	%100
18	MP-10	X	.007	.007	0	%100
19	MP-11	X	.007	.007	0	%100
20	MP-12	X	.007	.007	0	%100
21	SA-1	X	.005	.005	0	%100
22	SA-2	X	.009	.009	0	%100
23	SA-3	X	.02	.02	0	%100
24	FFTH	Z	.015	.015	0	%100
25	SF2-TH	Z	.005	.005	0	%100
26	SF3-TH	Z	.02	.02	0	%100
27	HRC-1	Z	.008	.008	0	%100
28	HRC-2	Z	.002	.002	0	%100
29	HRC-3	Z	.006	.006	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	.007	.007	0	%100
32	SF2-HR	Z	.002	.002	0	%100
33	MP-1	Z	.007	.007	0	%100
34	MP-2	Z	.007	.007	0	%100
35	MP-3	Z	.007	.007	0	%100
36	MP-4	Z	.007	.007	0	%100
37	MP-5	Z	.007	.007	0	%100
38	MP-7	Z	.007	.007	0	%100
39	MP-8	Z	.007	.007	0	%100
40	MP-9	Z	.007	.007	0	%100
41	MP-10	Z	.007	.007	0	%100
42	MP-11	Z	.007	.007	0	%100
43	MP-12	Z	.007	.007	0	%100
44	SA-1	Z	.005	.005	0	%100
45	SA-2	Z	.015	.015	0	%100
46	SA-3	Z	.017	.017	0	%100

Member Distributed Loads (BLC 13 : 240 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.007	.007	0	%100
2	SF2-TH	X	.007	.007	0	%100
3	SF3-TH	X	.013	.013	0	%100
4	HRC-1	X	.006	.006	0	%100
5	HRC-2	X	.003	.003	0	%100
6	HRC-3	X	.003	.003	0	%100
7	FF-HR	X	.003	.003	0	%100
8	SF1-HR	X	.005	.005	0	%100
9	SF2-HR	X	.003	.003	0	%100
10	MP-1	X	.005	.005	0	%100
11	MP-2	X	.005	.005	0	%100
12	MP-3	X	.005	.005	0	%100
13	MP-4	X	.005	.005	0	%100
14	MP-5	X	.005	.005	0	%100
15	MP-7	X	.005	.005	0	%100
16	MP-8	X	.005	.005	0	%100
17	MP-9	X	.005	.005	0	%100
18	MP-10	X	.005	.005	0	%100
19	MP-11	X	.005	.005	0	%100
20	MP-12	X	.005	.005	0	%100
21	SA-1	X	0	0	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

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Member Distributed Loads (BLC 13 : 240 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
22	SA-2	X	.008	.008	0	%100
23	SA-3	X	.013	.013	0	%100
24	FFTH	Z	.013	.013	0	%100
25	SF2-TH	Z	.013	.013	0	%100
26	SF3-TH	Z	.025	.025	0	%100
27	HRC-1	Z	.01	.01	0	%100
28	HRC-2	Z	.005	.005	0	%100
29	HRC-3	Z	.005	.005	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	.009	.009	0	%100
32	SF2-HR	Z	.005	.005	0	%100
33	MP-1	Z	.009	.009	0	%100
34	MP-2	Z	.008	.008	0	%100
35	MP-3	Z	.009	.009	0	%100
36	MP-4	Z	.008	.008	0	%100
37	MP-5	Z	.009	.009	0	%100
38	MP-7	Z	.009	.009	0	%100
39	MP-8	Z	.008	.008	0	%100
40	MP-9	Z	.009	.009	0	%100
41	MP-10	Z	.008	.008	0	%100
42	MP-11	Z	.009	.009	0	%100
43	MP-12	Z	.008	.008	0	%100
44	SA-1	Z	0	0	0	%100
45	SA-2	Z	.022	.022	0	%100
46	SA-3	Z	.018	.018	0	%100

Member Distributed Loads (BLC 14 : 270 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	SF2-TH	Z	.025	.025	0	%100
3	SF3-TH	Z	.025	.025	0	%100
4	HRC-1	Z	.01	.01	0	%100
5	HRC-2	Z	.01	.01	0	%100
6	HRC-3	Z	0	0	0	%100
7	FF-HR	Z	0	0	0	%100
8	SF1-HR	Z	.009	.009	0	%100
9	SF2-HR	Z	.009	.009	0	%100
10	MP-1	Z	.01	.01	0	%100
11	MP-2	Z	.01	.01	0	%100
12	MP-3	Z	.01	.01	0	%100
13	MP-4	Z	.01	.01	0	%100
14	MP-5	Z	.01	.01	0	%100
15	MP-7	Z	.01	.01	0	%100
16	MP-8	Z	.01	.01	0	%100
17	MP-9	Z	.01	.01	0	%100
18	MP-10	Z	.01	.01	0	%100
19	MP-11	Z	.01	.01	0	%100
20	MP-12	Z	.01	.01	0	%100
21	SA-1	Z	.012	.012	0	%100
22	SA-2	Z	.029	.029	0	%100
23	SA-3	Z	.012	.012	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.007	-.007	0	%100
2	SF2-TH	X	-.013	-.013	0	%100

Member Distributed Loads (BLC 15 : 300 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
3	SF3-TH	X	-.007	-.007	0	%100
4	HRC-1	X	-.003	-.003	0	%100
5	HRC-2	X	-.006	-.006	0	%100
6	HRC-3	X	-.003	-.003	0	%100
7	FF-HR	X	-.003	-.003	0	%100
8	SF1-HR	X	-.003	-.003	0	%100
9	SF2-HR	X	-.005	-.005	0	%100
10	MP-1	X	-.005	-.005	0	%100
11	MP-2	X	-.005	-.005	0	%100
12	MP-3	X	-.005	-.005	0	%100
13	MP-4	X	-.005	-.005	0	%100
14	MP-5	X	-.005	-.005	0	%100
15	MP-7	X	-.005	-.005	0	%100
16	MP-8	X	-.005	-.005	0	%100
17	MP-9	X	-.005	-.005	0	%100
18	MP-10	X	-.005	-.005	0	%100
19	MP-11	X	-.005	-.005	0	%100
20	MP-12	X	-.005	-.005	0	%100
21	SA-1	X	-.013	-.013	0	%100
22	SA-2	X	-.008	-.008	0	%100
23	SA-3	X	0	0	0	%100
24	FFTH	Z	.013	.013	0	%100
25	SF2-TH	Z	.025	.025	0	%100
26	SF3-TH	Z	.013	.013	0	%100
27	HRC-1	Z	.005	.005	0	%100
28	HRC-2	Z	.01	.01	0	%100
29	HRC-3	Z	.005	.005	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	.005	.005	0	%100
32	SF2-HR	Z	.009	.009	0	%100
33	MP-1	Z	.009	.009	0	%100
34	MP-2	Z	.008	.008	0	%100
35	MP-3	Z	.009	.009	0	%100
36	MP-4	Z	.008	.008	0	%100
37	MP-5	Z	.009	.009	0	%100
38	MP-7	Z	.009	.009	0	%100
39	MP-8	Z	.008	.008	0	%100
40	MP-9	Z	.009	.009	0	%100
41	MP-10	Z	.008	.008	0	%100
42	MP-11	Z	.009	.009	0	%100
43	MP-12	Z	.008	.008	0	%100
44	SA-1	Z	.018	.018	0	%100
45	SA-2	Z	.022	.022	0	%100
46	SA-3	Z	0	0	0	%100

Member Distributed Loads (BLC 16 : 315 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.015	-.015	0	%100
2	SF2-TH	X	-.018	-.018	0	%100
3	SF3-TH	X	-.005	-.005	0	%100
4	HRC-1	X	-.002	-.002	0	%100
5	HRC-2	X	-.008	-.008	0	%100
6	HRC-3	X	-.006	-.006	0	%100
7	FF-HR	X	-.005	-.005	0	%100
8	SF1-HR	X	-.002	-.002	0	%100
9	SF2-HR	X	-.007	-.007	0	%100

Member Distributed Loads (BLC 16 : 315 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
10	MP-1	X	-.007	-.007	0	%100
11	MP-2	X	-.007	-.007	0	%100
12	MP-3	X	-.007	-.007	0	%100
13	MP-4	X	-.007	-.007	0	%100
14	MP-5	X	-.007	-.007	0	%100
15	MP-7	X	-.007	-.007	0	%100
16	MP-8	X	-.007	-.007	0	%100
17	MP-9	X	-.007	-.007	0	%100
18	MP-10	X	-.007	-.007	0	%100
19	MP-11	X	-.007	-.007	0	%100
20	MP-12	X	-.007	-.007	0	%100
21	SA-1	X	-.02	-.02	0	%100
22	SA-2	X	-.009	-.009	0	%100
23	SA-3	X	-.005	-.005	0	%100
24	FFTH	Z	.015	.015	0	%100
25	SF2-TH	Z	.02	.02	0	%100
26	SF3-TH	Z	.005	.005	0	%100
27	HRC-1	Z	.002	.002	0	%100
28	HRC-2	Z	.008	.008	0	%100
29	HRC-3	Z	.006	.006	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	.002	.002	0	%100
32	SF2-HR	Z	.007	.007	0	%100
33	MP-1	Z	.007	.007	0	%100
34	MP-2	Z	.007	.007	0	%100
35	MP-3	Z	.007	.007	0	%100
36	MP-4	Z	.007	.007	0	%100
37	MP-5	Z	.007	.007	0	%100
38	MP-7	Z	.007	.007	0	%100
39	MP-8	Z	.007	.007	0	%100
40	MP-9	Z	.007	.007	0	%100
41	MP-10	Z	.007	.007	0	%100
42	MP-11	Z	.007	.007	0	%100
43	MP-12	Z	.007	.007	0	%100
44	SA-1	Z	.017	.017	0	%100
45	SA-2	Z	.015	.015	0	%100
46	SA-3	Z	.005	.005	0	%100

Member Distributed Loads (BLC 17 : 330 Wind - No Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.022	-.022	0	%100
2	SF2-TH	X	-.02	-.02	0	%100
3	SF3-TH	X	0	0	0	%100
4	HRC-1	X	0	0	0	%100
5	HRC-2	X	-.008	-.008	0	%100
6	HRC-3	X	-.009	-.009	0	%100
7	FF-HR	X	-.008	-.008	0	%100
8	SF1-HR	X	0	0	0	%100
9	SF2-HR	X	-.008	-.008	0	%100
10	MP-1	X	-.009	-.009	0	%100
11	MP-2	X	-.008	-.008	0	%100
12	MP-3	X	-.009	-.009	0	%100
13	MP-4	X	-.008	-.008	0	%100
14	MP-5	X	-.009	-.009	0	%100
15	MP-7	X	-.009	-.009	0	%100
16	MP-8	X	-.008	-.008	0	%100

Member Distributed Loads (BLC 17 : 330 Wind - No Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
17	MP-9	X	-.009	-.009	0	%100
18	MP-10	X	-.008	-.008	0	%100
19	MP-11	X	-.009	-.009	0	%100
20	MP-12	X	-.008	-.008	0	%100
21	SA-1	X	-.025	-.025	0	%100
22	SA-2	X	-.008	-.008	0	%100
23	SA-3	X	-.013	-.013	0	%100
24	FFTH	Z	.013	.013	0	%100
25	SF2-TH	Z	.013	.013	0	%100
26	SF3-TH	Z	0	0	0	%100
27	HRC-1	Z	0	0	0	%100
28	HRC-2	Z	.005	.005	0	%100
29	HRC-3	Z	.005	.005	0	%100
30	FF-HR	Z	.005	.005	0	%100
31	SF1-HR	Z	0	0	0	%100
32	SF2-HR	Z	.005	.005	0	%100
33	MP-1	Z	.005	.005	0	%100
34	MP-2	Z	.005	.005	0	%100
35	MP-3	Z	.005	.005	0	%100
36	MP-4	Z	.005	.005	0	%100
37	MP-5	Z	.005	.005	0	%100
38	MP-7	Z	.005	.005	0	%100
39	MP-8	Z	.005	.005	0	%100
40	MP-9	Z	.005	.005	0	%100
41	MP-10	Z	.005	.005	0	%100
42	MP-11	Z	.005	.005	0	%100
43	MP-12	Z	.005	.005	0	%100
44	SA-1	Z	.012	.012	0	%100
45	SA-2	Z	.007	.007	0	%100
46	SA-3	Z	.006	.006	0	%100

Member Distributed Loads (BLC 18 : Ice Weight)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Y	-.007	-.007	0	%100
2	SF2-TH	Y	-.007	-.007	0	%100
3	SF3-TH	Y	-.007	-.007	0	%100
4	HRC-1	Y	-.005	-.005	0	%100
5	HRC-2	Y	-.005	-.005	0	%100
6	HRC-3	Y	-.005	-.005	0	%100
7	FF-HR	Y	-.005	-.005	0	%100
8	SF1-HR	Y	-.005	-.005	0	%100
9	SF2-HR	Y	-.005	-.005	0	%100
10	MP-1	Y	-.005	-.005	0	%100
11	MP-2	Y	-.005	-.005	0	%100
12	MP-3	Y	-.005	-.005	0	%100
13	MP-4	Y	-.005	-.005	0	%100
14	MP-5	Y	-.005	-.005	0	%100
15	MP-7	Y	-.005	-.005	0	%100
16	MP-8	Y	-.005	-.005	0	%100
17	MP-9	Y	-.005	-.005	0	%100
18	MP-10	Y	-.005	-.005	0	%100
19	MP-11	Y	-.005	-.005	0	%100
20	MP-12	Y	-.005	-.005	0	%100
21	SA-1	Y	-.007	-.007	0	%100
22	SA-2	Y	-.007	-.007	0	%100
23	SA-3	Y	-.007	-.007	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

Sept 26, 2023
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Member Distributed Loads (BLC 19 : 0 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.007	-.007	0	%100
2	SF2-TH	X	-.006	-.006	0	%100
3	SF3-TH	X	-.006	-.006	0	%100
4	HRC-1	X	-.004	-.004	0	%100
5	HRC-2	X	-.004	-.004	0	%100
6	HRC-3	X	-.004	-.004	0	%100
7	FF-HR	X	-.003	-.003	0	%100
8	SF1-HR	X	-.003	-.003	0	%100
9	SF2-HR	X	-.003	-.003	0	%100
10	MP-1	X	-.003	-.003	0	%100
11	MP-2	X	-.002	-.002	0	%100
12	MP-3	X	-.003	-.003	0	%100
13	MP-4	X	-.002	-.002	0	%100
14	MP-5	X	-.003	-.003	0	%100
15	MP-7	X	-.003	-.003	0	%100
16	MP-8	X	-.002	-.002	0	%100
17	MP-9	X	-.003	-.003	0	%100
18	MP-10	X	-.002	-.002	0	%100
19	MP-11	X	-.003	-.003	0	%100
20	MP-12	X	-.002	-.002	0	%100
21	SA-1	X	-.007	-.007	0	%100
22	SA-2	X	-.004	-.004	0	%100
23	SA-3	X	-.007	-.007	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.006	-.006	0	%100
2	SF2-TH	X	0	0	0	%100
3	SF3-TH	X	-.004	-.004	0	%100
4	HRC-1	X	-.003	-.003	0	%100
5	HRC-2	X	0	0	0	%100
6	HRC-3	X	-.003	-.003	0	%100
7	FF-HR	X	-.002	-.002	0	%100
8	SF1-HR	X	-.002	-.002	0	%100
9	SF2-HR	X	0	0	0	%100
10	MP-1	X	-.002	-.002	0	%100
11	MP-2	X	-.002	-.002	0	%100
12	MP-3	X	-.002	-.002	0	%100
13	MP-4	X	-.002	-.002	0	%100
14	MP-5	X	-.002	-.002	0	%100
15	MP-7	X	-.002	-.002	0	%100
16	MP-8	X	-.002	-.002	0	%100
17	MP-9	X	-.002	-.002	0	%100
18	MP-10	X	-.002	-.002	0	%100
19	MP-11	X	-.002	-.002	0	%100
20	MP-12	X	-.002	-.002	0	%100
21	SA-1	X	-.003	-.003	0	%100
22	SA-2	X	-.002	-.002	0	%100
23	SA-3	X	-.006	-.006	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	0	0	0	%100
26	SF3-TH	Z	-.003	-.003	0	%100
27	HRC-1	Z	-.002	-.002	0	%100
28	HRC-2	Z	0	0	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 20 : 30 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
31	SF1-HR	Z	-.001	-.001	0	%100
32	SF2-HR	Z	0	0	0	%100
33	MP-1	Z	-.001	-.001	0	%100
34	MP-2	Z	-.001	-.001	0	%100
35	MP-3	Z	-.001	-.001	0	%100
36	MP-4	Z	-.001	-.001	0	%100
37	MP-5	Z	-.001	-.001	0	%100
38	MP-7	Z	-.001	-.001	0	%100
39	MP-8	Z	-.001	-.001	0	%100
40	MP-9	Z	-.001	-.001	0	%100
41	MP-10	Z	-.001	-.001	0	%100
42	MP-11	Z	-.001	-.001	0	%100
43	MP-12	Z	-.001	-.001	0	%100
44	SA-1	Z	-.001	-.001	0	%100
45	SA-2	Z	-.002	-.002	0	%100
46	SA-3	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 21 : 45 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.004	-.004	0	%100
2	SF2-TH	X	-.001	-.001	0	%100
3	SF3-TH	X	-.004	-.004	0	%100
4	HRC-1	X	-.003	-.003	0	%100
5	HRC-2	X	-.000706	-.000706	0	%100
6	HRC-3	X	-.002	-.002	0	%100
7	FF-HR	X	-.002	-.002	0	%100
8	SF1-HR	X	-.002	-.002	0	%100
9	SF2-HR	X	-.000513	-.000513	0	%100
10	MP-1	X	-.002	-.002	0	%100
11	MP-2	X	-.002	-.002	0	%100
12	MP-3	X	-.002	-.002	0	%100
13	MP-4	X	-.002	-.002	0	%100
14	MP-5	X	-.002	-.002	0	%100
15	MP-7	X	-.002	-.002	0	%100
16	MP-8	X	-.002	-.002	0	%100
17	MP-9	X	-.002	-.002	0	%100
18	MP-10	X	-.002	-.002	0	%100
19	MP-11	X	-.002	-.002	0	%100
20	MP-12	X	-.002	-.002	0	%100
21	SA-1	X	-.001	-.001	0	%100
22	SA-2	X	-.002	-.002	0	%100
23	SA-3	X	-.004	-.004	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	-.001	-.001	0	%100
26	SF3-TH	Z	-.005	-.005	0	%100
27	HRC-1	Z	-.003	-.003	0	%100
28	HRC-2	Z	-.000725	-.000725	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100
31	SF1-HR	Z	-.002	-.002	0	%100
32	SF2-HR	Z	-.000607	-.000607	0	%100
33	MP-1	Z	-.002	-.002	0	%100
34	MP-2	Z	-.002	-.002	0	%100
35	MP-3	Z	-.002	-.002	0	%100
36	MP-4	Z	-.002	-.002	0	%100
37	MP-5	Z	-.002	-.002	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

Sept 26, 2023
8:20 AM
Checked By: MMW

Member Distributed Loads (BLC 21 : 45 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
38	MP-7	Z	-.002	-.002	0	%100
39	MP-8	Z	-.002	-.002	0	%100
40	MP-9	Z	-.002	-.002	0	%100
41	MP-10	Z	-.002	-.002	0	%100
42	MP-11	Z	-.002	-.002	0	%100
43	MP-12	Z	-.002	-.002	0	%100
44	SA-1	Z	-.001	-.001	0	%100
45	SA-2	Z	-.003	-.003	0	%100
46	SA-3	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 22 : 60 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.002	-.002	0	%100
2	SF2-TH	X	-.001	-.001	0	%100
3	SF3-TH	X	-.003	-.003	0	%100
4	HRC-1	X	-.002	-.002	0	%100
5	HRC-2	X	-.000965	-.000965	0	%100
6	HRC-3	X	-.001	-.001	0	%100
7	FF-HR	X	-.000829	-.000829	0	%100
8	SF1-HR	X	-.001	-.001	0	%100
9	SF2-HR	X	-.000701	-.000701	0	%100
10	MP-1	X	-.001	-.001	0	%100
11	MP-2	X	-.001	-.001	0	%100
12	MP-3	X	-.001	-.001	0	%100
13	MP-4	X	-.001	-.001	0	%100
14	MP-5	X	-.001	-.001	0	%100
15	MP-7	X	-.001	-.001	0	%100
16	MP-8	X	-.001	-.001	0	%100
17	MP-9	X	-.001	-.001	0	%100
18	MP-10	X	-.001	-.001	0	%100
19	MP-11	X	-.001	-.001	0	%100
20	MP-12	X	-.001	-.001	0	%100
21	SA-1	X	0	0	0	%100
22	SA-2	X	-.002	-.002	0	%100
23	SA-3	X	-.003	-.003	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	-.003	-.003	0	%100
26	SF3-TH	Z	-.006	-.006	0	%100
27	HRC-1	Z	-.003	-.003	0	%100
28	HRC-2	Z	-.002	-.002	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100
31	SF1-HR	Z	-.003	-.003	0	%100
32	SF2-HR	Z	-.001	-.001	0	%100
33	MP-1	Z	-.002	-.002	0	%100
34	MP-2	Z	-.002	-.002	0	%100
35	MP-3	Z	-.002	-.002	0	%100
36	MP-4	Z	-.002	-.002	0	%100
37	MP-5	Z	-.002	-.002	0	%100
38	MP-7	Z	-.002	-.002	0	%100
39	MP-8	Z	-.002	-.002	0	%100
40	MP-9	Z	-.002	-.002	0	%100
41	MP-10	Z	-.002	-.002	0	%100
42	MP-11	Z	-.002	-.002	0	%100
43	MP-12	Z	-.002	-.002	0	%100
44	SA-1	Z	0	0	0	%100

Member Distributed Loads (BLC 22 : 60 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
45	SA-2	Z	-.005	-.005	0	%100
46	SA-3	Z	-.004	-.004	0	%100

Member Distributed Loads (BLC 23 : 90 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	SF2-TH	Z	-.006	-.006	0	%100
3	SF3-TH	Z	-.006	-.006	0	%100
4	HRC-1	Z	-.003	-.003	0	%100
5	HRC-2	Z	-.003	-.003	0	%100
6	HRC-3	Z	0	0	0	%100
7	FF-HR	Z	0	0	0	%100
8	SF1-HR	Z	-.003	-.003	0	%100
9	SF2-HR	Z	-.003	-.003	0	%100
10	MP-1	Z	-.003	-.003	0	%100
11	MP-2	Z	-.003	-.003	0	%100
12	MP-3	Z	-.003	-.003	0	%100
13	MP-4	Z	-.003	-.003	0	%100
14	MP-5	Z	-.003	-.003	0	%100
15	MP-7	Z	-.003	-.003	0	%100
16	MP-8	Z	-.003	-.003	0	%100
17	MP-9	Z	-.003	-.003	0	%100
18	MP-10	Z	-.003	-.003	0	%100
19	MP-11	Z	-.003	-.003	0	%100
20	MP-12	Z	-.003	-.003	0	%100
21	SA-1	Z	-.003	-.003	0	%100
22	SA-2	Z	-.007	-.007	0	%100
23	SA-3	Z	-.003	-.003	0	%100

Member Distributed Loads (BLC 24 : 120 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.002	.002	0	%100
2	SF2-TH	X	.003	.003	0	%100
3	SF3-TH	X	.001	.001	0	%100
4	HRC-1	X	.000965	.000965	0	%100
5	HRC-2	X	.002	.002	0	%100
6	HRC-3	X	.001	.001	0	%100
7	FF-HR	X	.000829	.000829	0	%100
8	SF1-HR	X	.000701	.000701	0	%100
9	SF2-HR	X	.001	.001	0	%100
10	MP-1	X	.001	.001	0	%100
11	MP-2	X	.001	.001	0	%100
12	MP-3	X	.001	.001	0	%100
13	MP-4	X	.001	.001	0	%100
14	MP-5	X	.001	.001	0	%100
15	MP-7	X	.001	.001	0	%100
16	MP-8	X	.001	.001	0	%100
17	MP-9	X	.001	.001	0	%100
18	MP-10	X	.001	.001	0	%100
19	MP-11	X	.001	.001	0	%100
20	MP-12	X	.001	.001	0	%100
21	SA-1	X	.003	.003	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	0	0	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	-.006	-.006	0	%100

Member Distributed Loads (BLC 24 : 120 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
26	SF3-TH	Z	-.003	-.003	0	%100
27	HRC-1	Z	-.002	-.002	0	%100
28	HRC-2	Z	-.003	-.003	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100
31	SF1-HR	Z	-.001	-.001	0	%100
32	SF2-HR	Z	-.003	-.003	0	%100
33	MP-1	Z	-.002	-.002	0	%100
34	MP-2	Z	-.002	-.002	0	%100
35	MP-3	Z	-.002	-.002	0	%100
36	MP-4	Z	-.002	-.002	0	%100
37	MP-5	Z	-.002	-.002	0	%100
38	MP-7	Z	-.002	-.002	0	%100
39	MP-8	Z	-.002	-.002	0	%100
40	MP-9	Z	-.002	-.002	0	%100
41	MP-10	Z	-.002	-.002	0	%100
42	MP-11	Z	-.002	-.002	0	%100
43	MP-12	Z	-.002	-.002	0	%100
44	SA-1	Z	-.004	-.004	0	%100
45	SA-2	Z	-.005	-.005	0	%100
46	SA-3	Z	0	0	0	%100

Member Distributed Loads (BLC 25 : 135 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.004	.004	0	%100
2	SF2-TH	X	.004	.004	0	%100
3	SF3-TH	X	.001	.001	0	%100
4	HRC-1	X	.000706	.000706	0	%100
5	HRC-2	X	.003	.003	0	%100
6	HRC-3	X	.002	.002	0	%100
7	FF-HR	X	.002	.002	0	%100
8	SF1-HR	X	.000513	.000513	0	%100
9	SF2-HR	X	.002	.002	0	%100
10	MP-1	X	.002	.002	0	%100
11	MP-2	X	.002	.002	0	%100
12	MP-3	X	.002	.002	0	%100
13	MP-4	X	.002	.002	0	%100
14	MP-5	X	.002	.002	0	%100
15	MP-7	X	.002	.002	0	%100
16	MP-8	X	.002	.002	0	%100
17	MP-9	X	.002	.002	0	%100
18	MP-10	X	.002	.002	0	%100
19	MP-11	X	.002	.002	0	%100
20	MP-12	X	.002	.002	0	%100
21	SA-1	X	.004	.004	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	.001	.001	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	-.005	-.005	0	%100
26	SF3-TH	Z	-.001	-.001	0	%100
27	HRC-1	Z	-.000725	-.000725	0	%100
28	HRC-2	Z	-.003	-.003	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100
31	SF1-HR	Z	-.000607	-.000607	0	%100
32	SF2-HR	Z	-.002	-.002	0	%100

Member Distributed Loads (BLC 25 : 135 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
33	MP-1	Z	-.002	-.002	0	%100
34	MP-2	Z	-.002	-.002	0	%100
35	MP-3	Z	-.002	-.002	0	%100
36	MP-4	Z	-.002	-.002	0	%100
37	MP-5	Z	-.002	-.002	0	%100
38	MP-7	Z	-.002	-.002	0	%100
39	MP-8	Z	-.002	-.002	0	%100
40	MP-9	Z	-.002	-.002	0	%100
41	MP-10	Z	-.002	-.002	0	%100
42	MP-11	Z	-.002	-.002	0	%100
43	MP-12	Z	-.002	-.002	0	%100
44	SA-1	Z	-.004	-.004	0	%100
45	SA-2	Z	-.003	-.003	0	%100
46	SA-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.006	.006	0	%100
2	SF2-TH	X	.004	.004	0	%100
3	SF3-TH	X	0	0	0	%100
4	HRC-1	X	0	0	0	%100
5	HRC-2	X	.003	.003	0	%100
6	HRC-3	X	.003	.003	0	%100
7	FF-HR	X	.002	.002	0	%100
8	SF1-HR	X	0	0	0	%100
9	SF2-HR	X	.002	.002	0	%100
10	MP-1	X	.002	.002	0	%100
11	MP-2	X	.002	.002	0	%100
12	MP-3	X	.002	.002	0	%100
13	MP-4	X	.002	.002	0	%100
14	MP-5	X	.002	.002	0	%100
15	MP-7	X	.002	.002	0	%100
16	MP-8	X	.002	.002	0	%100
17	MP-9	X	.002	.002	0	%100
18	MP-10	X	.002	.002	0	%100
19	MP-11	X	.002	.002	0	%100
20	MP-12	X	.002	.002	0	%100
21	SA-1	X	.006	.006	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	.003	.003	0	%100
24	FFTH	Z	-.003	-.003	0	%100
25	SF2-TH	Z	-.003	-.003	0	%100
26	SF3-TH	Z	0	0	0	%100
27	HRC-1	Z	0	0	0	%100
28	HRC-2	Z	-.002	-.002	0	%100
29	HRC-3	Z	-.002	-.002	0	%100
30	FF-HR	Z	-.001	-.001	0	%100
31	SF1-HR	Z	0	0	0	%100
32	SF2-HR	Z	-.001	-.001	0	%100
33	MP-1	Z	-.001	-.001	0	%100
34	MP-2	Z	-.001	-.001	0	%100
35	MP-3	Z	-.001	-.001	0	%100
36	MP-4	Z	-.001	-.001	0	%100
37	MP-5	Z	-.001	-.001	0	%100
38	MP-7	Z	-.001	-.001	0	%100
39	MP-8	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 26 : 150 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
40	MP-9	Z	-.001	-.001	0	%100
41	MP-10	Z	-.001	-.001	0	%100
42	MP-11	Z	-.001	-.001	0	%100
43	MP-12	Z	-.001	-.001	0	%100
44	SA-1	Z	-.003	-.003	0	%100
45	SA-2	Z	-.002	-.002	0	%100
46	SA-3	Z	-.001	-.001	0	%100

Member Distributed Loads (BLC 27 : 180 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.007	.007	0	%100
2	SF2-TH	X	.006	.006	0	%100
3	SF3-TH	X	.006	.006	0	%100
4	HRC-1	X	.004	.004	0	%100
5	HRC-2	X	.004	.004	0	%100
6	HRC-3	X	.004	.004	0	%100
7	FF-HR	X	.003	.003	0	%100
8	SF1-HR	X	.003	.003	0	%100
9	SF2-HR	X	.003	.003	0	%100
10	MP-1	X	.003	.003	0	%100
11	MP-2	X	.002	.002	0	%100
12	MP-3	X	.003	.003	0	%100
13	MP-4	X	.002	.002	0	%100
14	MP-5	X	.003	.003	0	%100
15	MP-7	X	.003	.003	0	%100
16	MP-8	X	.002	.002	0	%100
17	MP-9	X	.003	.003	0	%100
18	MP-10	X	.002	.002	0	%100
19	MP-11	X	.003	.003	0	%100
20	MP-12	X	.002	.002	0	%100
21	SA-1	X	.007	.007	0	%100
22	SA-2	X	.004	.004	0	%100
23	SA-3	X	.007	.007	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.006	.006	0	%100
2	SF2-TH	X	0	0	0	%100
3	SF3-TH	X	.004	.004	0	%100
4	HRC-1	X	.003	.003	0	%100
5	HRC-2	X	0	0	0	%100
6	HRC-3	X	.003	.003	0	%100
7	FF-HR	X	.002	.002	0	%100
8	SF1-HR	X	.002	.002	0	%100
9	SF2-HR	X	0	0	0	%100
10	MP-1	X	.002	.002	0	%100
11	MP-2	X	.002	.002	0	%100
12	MP-3	X	.002	.002	0	%100
13	MP-4	X	.002	.002	0	%100
14	MP-5	X	.002	.002	0	%100
15	MP-7	X	.002	.002	0	%100
16	MP-8	X	.002	.002	0	%100
17	MP-9	X	.002	.002	0	%100
18	MP-10	X	.002	.002	0	%100
19	MP-11	X	.002	.002	0	%100
20	MP-12	X	.002	.002	0	%100

Member Distributed Loads (BLC 28 : 210 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
21	SA-1	X	.003	.003	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	.006	.006	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	0	0	0	%100
26	SF3-TH	Z	.003	.003	0	%100
27	HRC-1	Z	.002	.002	0	%100
28	HRC-2	Z	0	0	0	%100
29	HRC-3	Z	.002	.002	0	%100
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	.001	.001	0	%100
32	SF2-HR	Z	0	0	0	%100
33	MP-1	Z	.001	.001	0	%100
34	MP-2	Z	.001	.001	0	%100
35	MP-3	Z	.001	.001	0	%100
36	MP-4	Z	.001	.001	0	%100
37	MP-5	Z	.001	.001	0	%100
38	MP-7	Z	.001	.001	0	%100
39	MP-8	Z	.001	.001	0	%100
40	MP-9	Z	.001	.001	0	%100
41	MP-10	Z	.001	.001	0	%100
42	MP-11	Z	.001	.001	0	%100
43	MP-12	Z	.001	.001	0	%100
44	SA-1	Z	.001	.001	0	%100
45	SA-2	Z	.002	.002	0	%100
46	SA-3	Z	.003	.003	0	%100

Member Distributed Loads (BLC 29 : 225 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.004	.004	0	%100
2	SF2-TH	X	.001	.001	0	%100
3	SF3-TH	X	.004	.004	0	%100
4	HRC-1	X	.003	.003	0	%100
5	HRC-2	X	.000706	.000706	0	%100
6	HRC-3	X	.002	.002	0	%100
7	FF-HR	X	.002	.002	0	%100
8	SF1-HR	X	.002	.002	0	%100
9	SF2-HR	X	.000513	.000513	0	%100
10	MP-1	X	.002	.002	0	%100
11	MP-2	X	.002	.002	0	%100
12	MP-3	X	.002	.002	0	%100
13	MP-4	X	.002	.002	0	%100
14	MP-5	X	.002	.002	0	%100
15	MP-7	X	.002	.002	0	%100
16	MP-8	X	.002	.002	0	%100
17	MP-9	X	.002	.002	0	%100
18	MP-10	X	.002	.002	0	%100
19	MP-11	X	.002	.002	0	%100
20	MP-12	X	.002	.002	0	%100
21	SA-1	X	.001	.001	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	.004	.004	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	.001	.001	0	%100
26	SF3-TH	Z	.005	.005	0	%100
27	HRC-1	Z	.003	.003	0	%100

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

Sept 26, 2023
8:20 AM
Checked By: MMW

Member Distributed Loads (BLC 29 : 225 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
28	HRC-2	Z	.000725	.000725	0	%100
29	HRC-3	Z	.002	.002	0	%100
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	.002	.002	0	%100
32	SF2-HR	Z	.000607	.000607	0	%100
33	MP-1	Z	.002	.002	0	%100
34	MP-2	Z	.002	.002	0	%100
35	MP-3	Z	.002	.002	0	%100
36	MP-4	Z	.002	.002	0	%100
37	MP-5	Z	.002	.002	0	%100
38	MP-7	Z	.002	.002	0	%100
39	MP-8	Z	.002	.002	0	%100
40	MP-9	Z	.002	.002	0	%100
41	MP-10	Z	.002	.002	0	%100
42	MP-11	Z	.002	.002	0	%100
43	MP-12	Z	.002	.002	0	%100
44	SA-1	Z	.001	.001	0	%100
45	SA-2	Z	.003	.003	0	%100
46	SA-3	Z	.004	.004	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	.002	.002	0	%100
2	SF2-TH	X	.001	.001	0	%100
3	SF3-TH	X	.003	.003	0	%100
4	HRC-1	X	.002	.002	0	%100
5	HRC-2	X	.000965	.000965	0	%100
6	HRC-3	X	.001	.001	0	%100
7	FF-HR	X	.000829	.000829	0	%100
8	SF1-HR	X	.001	.001	0	%100
9	SF2-HR	X	.000701	.000701	0	%100
10	MP-1	X	.001	.001	0	%100
11	MP-2	X	.001	.001	0	%100
12	MP-3	X	.001	.001	0	%100
13	MP-4	X	.001	.001	0	%100
14	MP-5	X	.001	.001	0	%100
15	MP-7	X	.001	.001	0	%100
16	MP-8	X	.001	.001	0	%100
17	MP-9	X	.001	.001	0	%100
18	MP-10	X	.001	.001	0	%100
19	MP-11	X	.001	.001	0	%100
20	MP-12	X	.001	.001	0	%100
21	SA-1	X	0	0	0	%100
22	SA-2	X	.002	.002	0	%100
23	SA-3	X	.003	.003	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	.003	.003	0	%100
26	SF3-TH	Z	.006	.006	0	%100
27	HRC-1	Z	.003	.003	0	%100
28	HRC-2	Z	.002	.002	0	%100
29	HRC-3	Z	.002	.002	0	%100
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	.003	.003	0	%100
32	SF2-HR	Z	.001	.001	0	%100
33	MP-1	Z	.002	.002	0	%100
34	MP-2	Z	.002	.002	0	%100

Member Distributed Loads (BLC 30 : 240 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
35	MP-3	Z	.002	.002	0	%100
36	MP-4	Z	.002	.002	0	%100
37	MP-5	Z	.002	.002	0	%100
38	MP-7	Z	.002	.002	0	%100
39	MP-8	Z	.002	.002	0	%100
40	MP-9	Z	.002	.002	0	%100
41	MP-10	Z	.002	.002	0	%100
42	MP-11	Z	.002	.002	0	%100
43	MP-12	Z	.002	.002	0	%100
44	SA-1	Z	0	0	0	%100
45	SA-2	Z	.005	.005	0	%100
46	SA-3	Z	.004	.004	0	%100

Member Distributed Loads (BLC 31 : 270 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Z	0	0	0	%100
2	SF2-TH	Z	.006	.006	0	%100
3	SF3-TH	Z	.006	.006	0	%100
4	HRC-1	Z	.003	.003	0	%100
5	HRC-2	Z	.003	.003	0	%100
6	HRC-3	Z	0	0	0	%100
7	FF-HR	Z	0	0	0	%100
8	SF1-HR	Z	.003	.003	0	%100
9	SF2-HR	Z	.003	.003	0	%100
10	MP-1	Z	.003	.003	0	%100
11	MP-2	Z	.003	.003	0	%100
12	MP-3	Z	.003	.003	0	%100
13	MP-4	Z	.003	.003	0	%100
14	MP-5	Z	.003	.003	0	%100
15	MP-7	Z	.003	.003	0	%100
16	MP-8	Z	.003	.003	0	%100
17	MP-9	Z	.003	.003	0	%100
18	MP-10	Z	.003	.003	0	%100
19	MP-11	Z	.003	.003	0	%100
20	MP-12	Z	.003	.003	0	%100
21	SA-1	Z	.003	.003	0	%100
22	SA-2	Z	.007	.007	0	%100
23	SA-3	Z	.003	.003	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.002	-.002	0	%100
2	SF2-TH	X	-.003	-.003	0	%100
3	SF3-TH	X	-.001	-.001	0	%100
4	HRC-1	X	-.000965	-.000965	0	%100
5	HRC-2	X	-.002	-.002	0	%100
6	HRC-3	X	-.001	-.001	0	%100
7	FF-HR	X	-.000829	-.000829	0	%100
8	SF1-HR	X	-.000701	-.000701	0	%100
9	SF2-HR	X	-.001	-.001	0	%100
10	MP-1	X	-.001	-.001	0	%100
11	MP-2	X	-.001	-.001	0	%100
12	MP-3	X	-.001	-.001	0	%100
13	MP-4	X	-.001	-.001	0	%100
14	MP-5	X	-.001	-.001	0	%100
15	MP-7	X	-.001	-.001	0	%100

Member Distributed Loads (BLC 32 : 300 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
16	MP-8	X	-.001	-.001	0	%100
17	MP-9	X	-.001	-.001	0	%100
18	MP-10	X	-.001	-.001	0	%100
19	MP-11	X	-.001	-.001	0	%100
20	MP-12	X	-.001	-.001	0	%100
21	SA-1	X	-.003	-.003	0	%100
22	SA-2	X	-.002	-.002	0	%100
23	SA-3	X	0	0	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	.006	.006	0	%100
26	SF3-TH	Z	.003	.003	0	%100
27	HRC-1	Z	.002	.002	0	%100
28	HRC-2	Z	.003	.003	0	%100
29	HRC-3	Z	.002	.002	0	%100
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	.001	.001	0	%100
32	SF2-HR	Z	.003	.003	0	%100
33	MP-1	Z	.002	.002	0	%100
34	MP-2	Z	.002	.002	0	%100
35	MP-3	Z	.002	.002	0	%100
36	MP-4	Z	.002	.002	0	%100
37	MP-5	Z	.002	.002	0	%100
38	MP-7	Z	.002	.002	0	%100
39	MP-8	Z	.002	.002	0	%100
40	MP-9	Z	.002	.002	0	%100
41	MP-10	Z	.002	.002	0	%100
42	MP-11	Z	.002	.002	0	%100
43	MP-12	Z	.002	.002	0	%100
44	SA-1	Z	.004	.004	0	%100
45	SA-2	Z	.005	.005	0	%100
46	SA-3	Z	0	0	0	%100

Member Distributed Loads (BLC 33 : 315 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.004	-.004	0	%100
2	SF2-TH	X	-.004	-.004	0	%100
3	SF3-TH	X	-.001	-.001	0	%100
4	HRC-1	X	-.000706	-.000706	0	%100
5	HRC-2	X	-.003	-.003	0	%100
6	HRC-3	X	-.002	-.002	0	%100
7	FF-HR	X	-.002	-.002	0	%100
8	SF1-HR	X	-.000513	-.000513	0	%100
9	SF2-HR	X	-.002	-.002	0	%100
10	MP-1	X	-.002	-.002	0	%100
11	MP-2	X	-.002	-.002	0	%100
12	MP-3	X	-.002	-.002	0	%100
13	MP-4	X	-.002	-.002	0	%100
14	MP-5	X	-.002	-.002	0	%100
15	MP-7	X	-.002	-.002	0	%100
16	MP-8	X	-.002	-.002	0	%100
17	MP-9	X	-.002	-.002	0	%100
18	MP-10	X	-.002	-.002	0	%100
19	MP-11	X	-.002	-.002	0	%100
20	MP-12	X	-.002	-.002	0	%100
21	SA-1	X	-.004	-.004	0	%100
22	SA-2	X	-.002	-.002	0	%100

Member Distributed Loads (BLC 33 : 315 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
23	SA-3	X	-.001	-.001	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	.005	.005	0	%100
26	SF3-TH	Z	.001	.001	0	%100
27	HRC-1	Z	.000725	.000725	0	%100
28	HRC-2	Z	.003	.003	0	%100
29	HRC-3	Z	.002	.002	0	%100
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	.000607	.000607	0	%100
32	SF2-HR	Z	.002	.002	0	%100
33	MP-1	Z	.002	.002	0	%100
34	MP-2	Z	.002	.002	0	%100
35	MP-3	Z	.002	.002	0	%100
36	MP-4	Z	.002	.002	0	%100
37	MP-5	Z	.002	.002	0	%100
38	MP-7	Z	.002	.002	0	%100
39	MP-8	Z	.002	.002	0	%100
40	MP-9	Z	.002	.002	0	%100
41	MP-10	Z	.002	.002	0	%100
42	MP-11	Z	.002	.002	0	%100
43	MP-12	Z	.002	.002	0	%100
44	SA-1	Z	.004	.004	0	%100
45	SA-2	Z	.003	.003	0	%100
46	SA-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 34 : 330 Wind - Ice)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	X	-.006	-.006	0	%100
2	SF2-TH	X	-.004	-.004	0	%100
3	SF3-TH	X	0	0	0	%100
4	HRC-1	X	0	0	0	%100
5	HRC-2	X	-.003	-.003	0	%100
6	HRC-3	X	-.003	-.003	0	%100
7	FF-HR	X	-.002	-.002	0	%100
8	SF1-HR	X	0	0	0	%100
9	SF2-HR	X	-.002	-.002	0	%100
10	MP-1	X	-.002	-.002	0	%100
11	MP-2	X	-.002	-.002	0	%100
12	MP-3	X	-.002	-.002	0	%100
13	MP-4	X	-.002	-.002	0	%100
14	MP-5	X	-.002	-.002	0	%100
15	MP-7	X	-.002	-.002	0	%100
16	MP-8	X	-.002	-.002	0	%100
17	MP-9	X	-.002	-.002	0	%100
18	MP-10	X	-.002	-.002	0	%100
19	MP-11	X	-.002	-.002	0	%100
20	MP-12	X	-.002	-.002	0	%100
21	SA-1	X	-.006	-.006	0	%100
22	SA-2	X	-.002	-.002	0	%100
23	SA-3	X	-.003	-.003	0	%100
24	FFTH	Z	.003	.003	0	%100
25	SF2-TH	Z	.003	.003	0	%100
26	SF3-TH	Z	0	0	0	%100
27	HRC-1	Z	0	0	0	%100
28	HRC-2	Z	.002	.002	0	%100
29	HRC-3	Z	.002	.002	0	%100

Member Distributed Loads (BLC 34 : 330 Wind - Ice) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
30	FF-HR	Z	.001	.001	0	%100
31	SF1-HR	Z	0	0	0	%100
32	SF2-HR	Z	.001	.001	0	%100
33	MP-1	Z	.001	.001	0	%100
34	MP-2	Z	.001	.001	0	%100
35	MP-3	Z	.001	.001	0	%100
36	MP-4	Z	.001	.001	0	%100
37	MP-5	Z	.001	.001	0	%100
38	MP-7	Z	.001	.001	0	%100
39	MP-8	Z	.001	.001	0	%100
40	MP-9	Z	.001	.001	0	%100
41	MP-10	Z	.001	.001	0	%100
42	MP-11	Z	.001	.001	0	%100
43	MP-12	Z	.001	.001	0	%100
44	SA-1	Z	.003	.003	0	%100
45	SA-2	Z	.002	.002	0	%100
46	SA-3	Z	.001	.001	0	%100

Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Y	-.005	-.005	1.583	2.038
2	FFTH	Y	-.005	-.008	2.038	2.492
3	FFTH	Y	-.008	-.011	2.492	2.947
4	FFTH	Y	-.011	-.011	2.947	3.401
5	FFTH	Y	-.011	-.011	3.401	3.855
6	FFTH	Y	-.011	-.011	3.855	4.31
7	FFTH	Y	-.011	-.011	4.31	4.764
8	FFTH	Y	-.011	-.011	4.764	5.219
9	FFTH	Y	-.011	-.011	5.219	5.673
10	FFTH	Y	-.011	-.011	5.673	6.127
11	FFTH	Y	-.011	-.011	6.127	6.582
12	FFTH	Y	-.011	-.011	6.582	7.036
13	FFTH	Y	-.011	-.011	7.036	7.491
14	FFTH	Y	-.011	-.011	7.491	7.945
15	FFTH	Y	-.011	-.011	7.945	8.399
16	FFTH	Y	-.011	-.011	8.399	8.854
17	FFTH	Y	-.011	-.011	8.854	9.308
18	FFTH	Y	-.011	-.011	9.308	9.763
19	FFTH	Y	-.011	-.011	9.763	10.217
20	FFTH	Y	-.011	-.008	10.217	10.671
21	FFTH	Y	-.008	-.005	10.671	11.126
22	FFTH	Y	-.005	-.005	11.126	11.58
23	SA-1	Y	-.013	-.013	4.582	5.369
24	SA-3	Y	-.013	-.013	4.582	5.369
25	SF2-TH	Y	-.005	-.005	1.583	2.038
26	SF2-TH	Y	-.005	-.008	2.038	2.492
27	SF2-TH	Y	-.008	-.011	2.492	2.947
28	SF2-TH	Y	-.011	-.011	2.947	3.401
29	SF2-TH	Y	-.011	-.011	3.401	3.855
30	SF2-TH	Y	-.011	-.011	3.855	4.31
31	SF2-TH	Y	-.011	-.011	4.31	4.764
32	SF2-TH	Y	-.011	-.011	4.764	5.219
33	SF2-TH	Y	-.011	-.011	5.219	5.673
34	SF2-TH	Y	-.011	-.011	5.673	6.127
35	SF2-TH	Y	-.011	-.011	6.127	6.582
36	SF2-TH	Y	-.011	-.011	6.582	7.036

Member Distributed Loads (BLC 39 : BLC 1 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
37	SF2-TH	Y	-.011	-.011	7.036	7.491
38	SF2-TH	Y	-.011	-.011	7.491	7.945
39	SF2-TH	Y	-.011	-.011	7.945	8.399
40	SF2-TH	Y	-.011	-.011	8.399	8.854
41	SF2-TH	Y	-.011	-.011	8.854	9.308
42	SF2-TH	Y	-.011	-.011	9.308	9.763
43	SF2-TH	Y	-.011	-.011	9.763	10.217
44	SF2-TH	Y	-.011	-.008	10.217	10.671
45	SF2-TH	Y	-.008	-.005	10.671	11.126
46	SF2-TH	Y	-.005	-.005	11.126	11.58
47	SA-2	Y	-.013	-.013	4.582	5.369
48	SF3-TH	Y	-.005	-.005	1.583	2.038
49	SF3-TH	Y	-.005	-.008	2.038	2.492
50	SF3-TH	Y	-.008	-.011	2.492	2.947
51	SF3-TH	Y	-.011	-.011	2.947	3.401
52	SF3-TH	Y	-.011	-.011	3.401	3.855
53	SF3-TH	Y	-.011	-.011	3.855	4.31
54	SF3-TH	Y	-.011	-.011	4.31	4.764
55	SF3-TH	Y	-.011	-.011	4.764	5.219
56	SF3-TH	Y	-.011	-.011	5.219	5.673
57	SF3-TH	Y	-.011	-.011	5.673	6.127
58	SF3-TH	Y	-.011	-.011	6.127	6.582
59	SF3-TH	Y	-.011	-.011	6.582	7.036
60	SF3-TH	Y	-.011	-.011	7.036	7.491
61	SF3-TH	Y	-.011	-.011	7.491	7.945
62	SF3-TH	Y	-.011	-.011	7.945	8.399
63	SF3-TH	Y	-.011	-.011	8.399	8.854
64	SF3-TH	Y	-.011	-.011	8.854	9.308
65	SF3-TH	Y	-.011	-.011	9.308	9.763
66	SF3-TH	Y	-.011	-.011	9.763	10.217
67	SF3-TH	Y	-.011	-.008	10.217	10.671
68	SF3-TH	Y	-.008	-.005	10.671	11.126
69	SF3-TH	Y	-.005	-.005	11.126	11.58

Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
1	FFTH	Y	-.002	-.002	1.583	2.038
2	FFTH	Y	-.002	-.003	2.038	2.492
3	FFTH	Y	-.003	-.005	2.492	2.947
4	FFTH	Y	-.005	-.005	2.947	3.401
5	FFTH	Y	-.005	-.005	3.401	3.855
6	FFTH	Y	-.005	-.005	3.855	4.31
7	FFTH	Y	-.005	-.005	4.31	4.764
8	FFTH	Y	-.005	-.005	4.764	5.219
9	FFTH	Y	-.005	-.005	5.219	5.673
10	FFTH	Y	-.005	-.005	5.673	6.127
11	FFTH	Y	-.005	-.005	6.127	6.582
12	FFTH	Y	-.005	-.005	6.582	7.036
13	FFTH	Y	-.005	-.005	7.036	7.491
14	FFTH	Y	-.005	-.005	7.491	7.945
15	FFTH	Y	-.005	-.005	7.945	8.399
16	FFTH	Y	-.005	-.005	8.399	8.854
17	FFTH	Y	-.005	-.005	8.854	9.308
18	FFTH	Y	-.005	-.005	9.308	9.763
19	FFTH	Y	-.005	-.005	9.763	10.217
20	FFTH	Y	-.005	-.003	10.217	10.671

Company : Tower Engineering Professionals, Inc.
Designer : GJS
Job Number : TEP No. 144549.884567
Model Name : CCI BU No. 876406

Sept 26, 2023
8:20 AM
Checked By: MMW

Member Distributed Loads (BLC 40 : BLC 18 Transient Area Loads) (Continued)

	Member Label	Direction	Start Magnitude[k/ft,...	End Magnitude[k/ft,F,...	Start Location[ft,%]	End Location[ft,%]
21	FFTH	Y	-.003	-.002	10.671	11.126
22	FFTH	Y	-.002	-.002	11.126	11.58
23	SA-1	Y	-.005	-.005	4.582	5.369
24	SA-3	Y	-.005	-.005	4.582	5.369
25	SF2-TH	Y	-.002	-.002	1.583	2.038
26	SF2-TH	Y	-.002	-.003	2.038	2.492
27	SF2-TH	Y	-.003	-.005	2.492	2.947
28	SF2-TH	Y	-.005	-.005	2.947	3.401
29	SF2-TH	Y	-.005	-.005	3.401	3.855
30	SF2-TH	Y	-.005	-.005	3.855	4.31
31	SF2-TH	Y	-.005	-.005	4.31	4.764
32	SF2-TH	Y	-.005	-.005	4.764	5.219
33	SF2-TH	Y	-.005	-.005	5.219	5.673
34	SF2-TH	Y	-.005	-.005	5.673	6.127
35	SF2-TH	Y	-.005	-.005	6.127	6.582
36	SF2-TH	Y	-.005	-.005	6.582	7.036
37	SF2-TH	Y	-.005	-.005	7.036	7.491
38	SF2-TH	Y	-.005	-.005	7.491	7.945
39	SF2-TH	Y	-.005	-.005	7.945	8.399
40	SF2-TH	Y	-.005	-.005	8.399	8.854
41	SF2-TH	Y	-.005	-.005	8.854	9.308
42	SF2-TH	Y	-.005	-.005	9.308	9.763
43	SF2-TH	Y	-.005	-.005	9.763	10.217
44	SF2-TH	Y	-.005	-.003	10.217	10.671
45	SF2-TH	Y	-.003	-.002	10.671	11.126
46	SF2-TH	Y	-.002	-.002	11.126	11.58
47	SA-2	Y	-.005	-.005	4.582	5.369
48	SF3-TH	Y	-.002	-.002	1.583	2.038
49	SF3-TH	Y	-.002	-.003	2.038	2.492
50	SF3-TH	Y	-.003	-.005	2.492	2.947
51	SF3-TH	Y	-.005	-.005	2.947	3.401
52	SF3-TH	Y	-.005	-.005	3.401	3.855
53	SF3-TH	Y	-.005	-.005	3.855	4.31
54	SF3-TH	Y	-.005	-.005	4.31	4.764
55	SF3-TH	Y	-.005	-.005	4.764	5.219
56	SF3-TH	Y	-.005	-.005	5.219	5.673
57	SF3-TH	Y	-.005	-.005	5.673	6.127
58	SF3-TH	Y	-.005	-.005	6.127	6.582
59	SF3-TH	Y	-.005	-.005	6.582	7.036
60	SF3-TH	Y	-.005	-.005	7.036	7.491
61	SF3-TH	Y	-.005	-.005	7.491	7.945
62	SF3-TH	Y	-.005	-.005	7.945	8.399
63	SF3-TH	Y	-.005	-.005	8.399	8.854
64	SF3-TH	Y	-.005	-.005	8.854	9.308
65	SF3-TH	Y	-.005	-.005	9.308	9.763
66	SF3-TH	Y	-.005	-.005	9.763	10.217
67	SF3-TH	Y	-.005	-.003	10.217	10.671
68	SF3-TH	Y	-.003	-.002	10.671	11.126
69	SF3-TH	Y	-.002	-.002	11.126	11.58

Member Area Loads (BLC 1 : Dead)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	P3	P4	P1	P2	Y	Two Way	-.012
2	P5	P4	P7	P6	Y	Two Way	-.012
3	P7	P8	P9	P1	Y	Two Way	-.012

Member Area Loads (BLC 18 : Ice Weight)

	Joint A	Joint B	Joint C	Joint D	Direction	Distribution	Magnitude[ksf]
1	P3	P4	P1	P2	Y	Two Way	-.005
2	P5	P4	P7	P6	Y	Two Way	-.005
3	P7	P8	P9	P1	Y	Two Way	-.005

Envelope Joint Reactions

	Joint		X [k]	LC	Y [k]	LC	Z [k]	LC	MX [k-ft]	LC	MY [k-ft]	LC	MZ [k-ft]	LC
1	SA1	max	1.263	5	2.052	37	2.159	5	-.346	13	1.851	17	4.224	34
2		min	-1.356	29	.254	13	-2.317	29	-7.358	37	-1.854	25	.074	12
3	SA2	max	2.703	18	2.089	42	.595	22	.846	30	1.963	22	-.348	2
4		min	-2.519	10	.253	2	-.591	14	-.758	6	-1.958	30	-8.684	42
5	SA3	max	1.271	15	2.083	47	2.356	23	7.398	47	1.958	27	4.385	34
6		min	-1.362	23	.247	7	-2.201	15	.312	7	-1.954	19	.034	8
7	Totals:	max	4.494	18	5.828	44	4.417	6						
8		min	-4.494	10	2.377	85	-4.417	30						

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

	Member	Shape	Code Check	Loc[ft]	LC	Shear C...	Loc[ft]	Dir	LC	phi*Pnc [k]	phi*Pnt...	phi*Mn ...	phi*Mn ...	Cb	Eqn
1	MP-1	PIPE_2.0	.583	2.563	10	.141	2.5		33	17.071	32.13	1.872	1.872	1..	H1-1b
2	MP-9	PIPE_2.0	.583	2.563	5	.124	2.5		28	17.071	32.13	1.872	1.872	1..	H1-1b
3	MP-5	PIPE_2.0	.583	2.563	7	.179	2.5		23	17.071	32.13	1.872	1.872	1..	H1-1b
4	SF1-HR	PIPE_2.0	.582	11.458	18	.267	1.042		29	1.428	32.13	1.872	1.872	2..	H1-1a
5	FF-HR	PIPE_2.0	.577	11.458	23	.270	1.042		18	1.428	32.13	1.872	1.872	2..	H1-1a
6	SA-2	HSS4X4X4	.548	0	42	.095	0	y	29	26.846	139.518	16.181	16.181	2..	H1-1b
7	SA-3	HSS4X4X4	.546	0	32	.090	0	y	18	26.846	139.518	16.181	16.181	2..	H1-1b
8	SA-1	HSS4X4X4	.535	0	36	.091	0	y	24	26.846	139.518	16.181	16.181	2..	H1-1b
9	SF2-HR	PIPE_2.0	.493	11.458	28	.292	1.042		24	1.428	32.13	1.872	1.872	1..	H1-1a
10	HRC-1	L2.5x2.5x4	.469	1.25	23	.117	1.25	z	31	36.64	38.556	1.114	2.537	1..	H2-1
11	HRC-2	L2.5x2.5x4	.447	1.25	18	.100	1.25	z	26	36.64	38.556	1.114	2.537	1..	H2-1
12	MP-7	PIPE_2.0	.439	.813	21	.165	.813		22	27.327	32.13	1.872	1.872	3..	H1-1b
13	HRC-3	L2.5x2.5x4	.377	1.25	28	.107	0	z	29	36.64	38.556	1.114	2.537	1..	H2-1
14	MP-3	PIPE_2.0	.364	.813	24	.112	.813		31	27.327	32.13	1.872	1.872	2..	H1-1b
15	MP-10	PIPE_2.0	.357	2	18	.073	2		18	26.005	32.13	1.872	1.872	1..	H1-1b
16	MP-2	PIPE_2.0	.344	2	23	.072	2		22	26.005	32.13	1.872	1.872	1..	H1-1b
17	MP-11	PIPE_2.0	.332	.813	18	.113	.813		27	27.327	32.13	1.872	1.872	2..	H1-1b
18	FFTH	HSS4X4X4	.240	0	42	.071	13.1..	z	25	16.013	139.518	16.181	16.181	2..	H1-1b
19	SF3-TH	HSS4X4X4	.237	0	37	.068	13.1..	z	20	16.013	139.518	16.181	16.181	2..	H1-1b
20	SF2-TH	HSS4X4X4	.229	0	47	.064	13.1..	z	30	16.013	139.518	16.181	16.181	2..	H1-1b
21	MP-4	PIPE_2.0	.016	2.5	29	.002	2.5		29	23.088	32.13	1.872	1.872	2..	H1-1b
22	MP-12	PIPE_2.0	.016	2.5	23	.002	2.5		23	23.088	32.13	1.872	1.872	2..	H1-1b
23	MP-8	PIPE_2.0	.016	2.5	18	.002	2.5		18	23.088	32.13	1.872	1.872	2..	H1-1b

FOX HILL TELECOM

Radio Frequency Emissions Analysis Report

T-Mobile

Site ID: CTNL226A

Crown Old Lyme Monopole
189 Boston Post Road
Old Lyme, CT 06371

December 19, 2023

Fox Hill Telecom Project Number: 231083

Site Compliance Summary	
Compliance Status:	COMPLIANT
Site total MPE% of FCC general population allowable limit:	24.40 %

FOX HILL TELECOM

December 19, 2023

T-MOBILE
Attn: RF Manager
35 Griffin Road South
Bloomfield, CT 06009

Emissions Analysis for Site: **CTNL226A – Crown Old Lyme Monopole**

Fox Hill Telecom, Inc ("Fox Hill") was directed to analyze the proposed upgrades to the T-MOBILE facility located at **189 Boston Post Road, Old Lyme, CT**, for the purpose of determining whether the emissions from the Proposed T-MOBILE 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 (μW/cm2). 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.

General population 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 & 700 MHz 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 2500 MHz (BRS) 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 the percentage 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 performed for the proposed upgrades to the T-MOBILE antenna facility located at **189 Boston Post Road, Old Lyme, CT**, using the equipment information listed below. All calculations were performed per the specifications under FCC OET 65 for far field modeling calculations.

In OET-65, plane wave power densities in the Far Field of an antenna are calculated by considering antenna gain and reflective waves that would contribute to exposure.

Since the radiation pattern of an antenna has developed in the **Far Field** region the power gain in specific directions needs to be considered in exposure predictions to yield an Effective Radiated Power (ERP) in each specific direction from the antenna. Also, since the vertical radiation pattern of the antenna is considered, the exposure calculations would most likely be reduced significantly at ground level, resulting in a more realistic estimate of the actual exposure levels. To determine a worst-case scenario at each point along the calculation radials, each point was calculated using the antenna gain value at each angle of incident and compared against the result using an isotropic radiator at the antenna height with the greater of the two used to yield the more pessimistic far field value for each point along the calculation radial.

Additionally, to model a truly "worst case" prediction of exposure levels at or near a surface, such as at ground-level or on a rooftop, reflection off the surface of antenna radiation power can be assumed, resulting in a potential 1.6 times increase in power density in calculating far field power density values.

With these factors Considered, the worst case **Far Field prediction model** utilized in this analysis is determined by the following equation:

Equation 9 per FCC OET65 for Far Field Modeling

$$S = \frac{33.4\ ERP}{R^2}$$

S = Power Density (in µw/cm^2)
ERP = Effective Radiated Power from antenna (watts)
R = Distance from the antenna (meters)

Predicted far field power density values for all carriers identified in this report were calculated 6 feet above the ground level and are displayed as a percentage of the applicable FCC standards. All emissions values for other carriers were calculated using the same Far Field model outlined above, using industry standard radio configurations and frequency band selection based upon available licenses in this geographic area for emissions contribution estimates.

For each T-Mobile sector the following channel counts, frequency bands and power levels were utilized as shown in *Table 1*:

Technology	Frequency Band	Channel Count	Transmit Power per Channel (W)
LTE / 5G NR	600 MHz	4	40
LTE	700 MHz	2	20
LTE	1900 MHz (PCS)	4	35
5G NR	1900 MHz (PCS)	4	40
LTE	2100 MHz (AWS)	4	60
LTE / 5G NR	2500 MHz (BRS)	8	30

Table 1: Channel Data Table

The following T-Mobile antennas listed in *Table 2* were used in the modeling for transmission in the 600 MHz, 700 MHz, 1900 MHz (PCS), 2100 MHz (AWS) and 2500 MHz (BRS) frequency bands. This is based on feedback from the carrier with regards to anticipated antenna selection. Maximum gain values for all antennas are listed in the Inventory and Power Data table below.

Sector	Antenna Number	Antenna Make / Model	Antenna Centerline (ft)
A	1	RFS APXVAALL24_43-U-NA20	130
A	2	Ericsson AIR6419 B41	110
B	1	RFS APXVAALL24_43-U-NA20	110
B	2	Ericsson AIR6419 B41	110
C	1	RFS APXVAALL24_43-U-NA20	110
C	2	Ericsson AIR6419 B41	110

Table 2: Antenna Data

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

RESULTS

Per the calculations completed for the proposed T-MOBILE configurations *Table 3* shows resulting emissions power levels and percentages of the FCC's allowable general population limit.

Antenna ID	Antenna Make / Model	Frequency Bands	Antenna Gain (dBd)	Channel Count	Total TX Power (W)	ERP (W)	MPE %
Antenna A1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS)	13.65 / 13.85 / 16.65 / 16.95	18	740	30,969.82	3.14
Antenna A2	Ericsson AIR6419 B41	2500 MHz (BRS)	21.5	8	240	33,900.90	3.17
						Sector A Composite MPE%	**6.31**
Antenna B1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS)	13.65 / 13.85 / 16.65 / 16.95	18	740	30,969.82	3.14
Antenna B2	Ericsson AIR6419 B41	2500 MHz (BRS)	21.5	8	240	33,900.90	3.17
						Sector B Composite MPE%	**6.31**
Antenna C1	RFS APXVAALL24_43-U-NA20	600 MHz / 700 MHz / 1900 MHz (PCS) / 2100 MHz (AWS)	13.65 / 13.85 / 16.65 / 16.95	18	740	30,969.82	3.14
Antenna C2	Ericsson AIR6419 B41	2500 MHz (BRS)	21.5	8	240	33,900.90	3.17
						Sector C Composite MPE%	**6.31**

Table 3: T-MOBILE Emissions Levels

The Following table (*table 4*) shows all additional identified carriers on site and their emissions contribution estimates, along with the newly calculated maximum T-MOBILE MPE contributions per this report. FCC OET 65 specifies that for carriers utilizing directional antennas that the highest recorded sector value be used for composite site MPE values due to their greatly reduced emissions contributions in the directions of the adjacent sectors. For this site, all three T-Mobile sectors have the same configuration yielding the same results for all three sectors. *Table 5* below shows a summary for each T-MOBILE Sector as well as the composite estimated MPE value for the site.

Site Composite MPE%	
Carrier	**MPE%**
T-MOBILE – Max Per Sector Value	**6.31 %**
Verizon Wireless	9.68 %
Sprint	1.92 %
AT&T	6.49 %
Site Total MPE %:	**24.40 %**

Table 4: All Carrier MPE Contributions

T-MOBILE Sector A Total:	6.31 %
T-MOBILE Sector B Total:	6.31 %
T-MOBILE Sector C Total:	6.31 %
Site Total:	24.40 %

Table 5: Site MPE Summary

Table 6 below details a breakdown by frequency band and technology for the MPE power values for the maximum calculated T-MOBILE sector(s). For this site, all three T-Mobile sectors have the same configuration yielding the same results for all three sectors.

T-MOBILE _ Frequency Band / Technology Max Power Values (Per Sector)	# Channels	Watts ERP (Per Channel)	Height (feet)	Total Power Density ($\mu W/cm^2$)	Frequency (MHz)	Allowable MPE ($\mu W/cm^2$)	Calculated % MPE
T-Mobile 600 MHz LTE / 5G NR	4	926.96	130	5.32	600 MHz	400	1.33%
T-Mobile 700 MHz LTE	2	485.32	130	1.31	700 MHz	467	0.28%
T-Mobile 1900 MHz (PCS) LTE	4	1,618.33	130	4.70	1900 MHz (PCS)	1000	0.47%
T-Mobile 2100 MHz (AWS) 5G NR	4	1,981.80	130	5.30	2100 MHz (AWS)	1000	0.53%
T-Mobile 2100 MHz (AWS) LTE	4	2,972.70	130	5.30	2100 MHz (AWS)	1000	0.53%
T-Mobile 2500 MHz (BRS) LTE / 5G NR	8	4,237.61	110	31.70	2500 MHz (BRS)	1000	3.17%
						Total:	**6.31 %**

Table 6: T-MOBILE Maximum Sector MPE Power Values

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 T-MOBILE facility as well as the site composite emissions estimates value with regards to compliance with FCC's allowable limits for general population exposure to RF Emissions are shown here:

T-MOBILE Sector	Power Density Value (%)
Sector A:	6.31 %
Sector B:	6.31 %
Sector C:	6.31 %
T-MOBILE Maximum Total (per sector):	6.31 %
Site Total:	24.40 %
Site Compliance Status:	**COMPLIANT**

The estimated composite MPE value for this site assuming all carriers present is **24.40 %** of the allowable FCC established general population limit sampled at the ground level. This is based upon the far field calculations performed for all carriers identified in this report.

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 estimated values calculated were well within the allowable 100% threshold standard per the federal government.

Scott Heffernan
Principal RF Engineer
Fox Hill Telecom, Inc
Worcester, MA 01609
(978)660-3998

THE COMPOUND AUDIT WAS COMPLETED ON 09/25/2023. THE CONSTRUCTION DRAWING REFLECT CONDITIONS AT TIME OF AUDIT.

T-Mobile

T-MOBILE SITE NUMBER: CTNL226A
T-MOBILE SITE NAME: CROWN OLD LYME MONOPOLE
T-MOBILE PROJECT: ANCHOR 67D5D998E 6160

BUSINESS UNIT #: 876406
SITE ADDRESS: 189 BOSTON POST ROAD
OLD LYME, CT 06371
COUNTY: NEW LONDON
SITE TYPE: MONOPOLE
TOWER HEIGHT: 135'-0"

SITE INFORMATION

CROWN CASTLE USA INC. SITE NAME:	NE OLD LYME-OLD LYME FIREHOUSE
BU NUMBER:	876406
TOWER OWNER:	CROWN CASTLE 2000 CORPORATE DRIVE CANONSBURG, PA 15317
CARRIER/APPLICANT:	T-MOBILE 35 GRIFFIN ROAD BLOOMFIELD, CT 06002
SITE ADDRESS:	189 BOSTON POST ROAD OLD LYME, CT 06371
COUNTY:	NEW LONDON
LATITUDE: LONGITUDE: LAT/LONG TYPE: GROUND ELEVATION:	41° 20' 56.37" / 41.349° -72° 17' 43.65" / -72.2955° NAD83 49'+/- AMSL
AREA OF CONSTRUCTION: CURRENT ZONING: MAP/PARCEL #:	EXISTING R-20 63-123
OCCUPANCY CLASSIFICATION: TYPE OF CONSTRUCTION: A.D.A. COMPLIANCE:	U IIB FACILITY IS UNMANNED AND NOT FOR HUMAN HABITATION
PROPERTY OWNER:	TOWN OF OLD LYME 189 BOSTON POST RD OLD LYME, CT 06371
JURISDICTION:	NEW LONDON COUNTY 70 HUNTINGTON STREET NEW LONDON, CT 06320
ELECTRIC PROVIDER:	NORTHEAST UTILITIES 800-286-2000
TELCO PROVIDER:	AT&T 866-620-6900

PROJECT TEAM

A&E FIRM:	B+T GROUP 1717 S. BOULDER AVE. TULSA, OK 74119 WALTER SMITH WSMITH@BTGRP.COM
CROWN CASTLE USA INC. DISTRICT CONTACTS:	8020 KATY FREEWAY HOUSTON, TX 77024 TRICIA PELON - PROJECT MANAGER TRICIA.PELON@CROWNCASTLE.COM JACOB KARABASZ - CONSTRUCTION MANAGER JACOB.KARABASZ@CROWNCASTLE.COM JENNIFER MERSING - AES JENNIFER.MERSING@CROWNCASTLE.COM

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

DRAWING INDEX

SHEET #	SHEET DESCRIPTION
T-1	TITLE SHEET
T-2	GENERAL NOTES
C-1.1	COMPOUND PLAN
C-1.2	EXISTING EQUIPMENT PLAN
C-1.3	FINAL EQUIPMENT PLAN
C-2	TOWER ELEVATIONS
C-3	ANTENNA PLANS
C-4	FINAL EQUIPMENT SCHEDULE
C-5	TOWER EQUIPMENT DETAILS & SPECIFICATIONS
C-6.1	ENCLOSURE CLEARANCES
C-6.2	SITE SUPPORT CABINET SPECIFICATIONS
C-6.3	BATTERY CABINET SPECIFICATIONS
E-1	PANEL SCHEDULES & ONE-LINE DIAGRAM
G-1	TYPICAL GROUNDING SCHEMATIC
G-2	GROUNDING DETAILS
G-3	GROUNDING DETAILS

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

PROJECT DESCRIPTION

THE PURPOSE OF THIS PROJECT IS TO ENHANCE BROADBAND CONNECTIVITY AND CAPACITY TO THE EXISTING ELIGIBLE WIRELESS FACILITY.

TOWER SCOPE OF WORK:
- REMOVE (3) RFS - APXVAALL24_43-U-NA20 (OCTO) ANTENNAS
- REMOVE (6) COAX CABLES (7/8")
- REMOVE (1) HYBRID CABLE (1-3/8")
- INSTALL (3) ERICSSON - AIR 6419 B41 (ACTIVE ANTENNA - MASSIVE MIMO) ANTENNAS
- INSTALL (3) ERICSSON - 4460 B25+B 66 RADIOS
- INSTALL (3) RFS/CELWAVE - HB158-21U6S24- XXM HYBRID CABLES

GROUND SCOPE OF WORK:
- REMOVE (1) RBS 6102 MU AC CABINET
- REMOVE (1) BATTERY CABINET
- REMOVE (1) EQUIPMENT CABINET
- REMOVE (6) DIPLEXERS
- INSTALL (1) 6160 AC V1 CABINET
- INSTALL (1) B160 BATTERY CABINET

EXISTING T-MOBILE ELECTRIC SERVICE:
METER: 200A 120/480V~ 3W
PPC SQUARE D 200A 120/240V~1PH, 30A GENERATOR PLUG, 200A MAXIMUM BRANCH CIRCUIT SIZE & 24 AC BREAKER POSITIONS.

LOCATION MAP

NO SCALE

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	2022 CONNECTICUT SBC/2021 IBC
MECHANICAL	2022 CONNECTICUT SBC/2021 IMC
ELECTRICAL	2022 CONNECTICUT SBC/2020 NEC

REFERENCE DOCUMENTS:

STRUCTURAL ANALYSIS:	MORRISON HERSHFIELD
DATED:	10/6/23
CONDITIONAL MOUNT ANALYSIS:	TOWER ENGINEERING PROFESSIONALS
DATED:	9/26/23
RFDS REVISION:	4
DATED:	08/03/2023
ORDER ID:	656057
REVISION:	1

T-Mobile

CROWN CASTLE

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

T-MOBILE SITE NUMBER:
CTNL226A

BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	QES/QA
A	9/29/23	TDG	PRELIMINARY	CV
0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

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-1
REVISION: 0

T-MOBILE_NATIONAL_ANCHOR

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: T–MOBILE
   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. UNDERGROUND CONDUIT SHALL BE SCHEDULE 40 PVC ON STRAIGHTS AND SCHEDULE 80 PVC UNDER ALL TRAFFIC EASEMENTS AND ALL ELBOWS/90s. ABOVE GRADE CONDUIT TO BE SCH 80 PVC OR IMC/RMC CONDUIT. EMT IS ALLOWED AT STUB UP LOCATIONS AND INDOORS ONLY.
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 "T–MOBILE".
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

B+T GRP
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T-MOBILE SITE NUMBER:
CTNL226A

BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	9/29/23	TDG	PRELIMINARY	CV
0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

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BER:2386985
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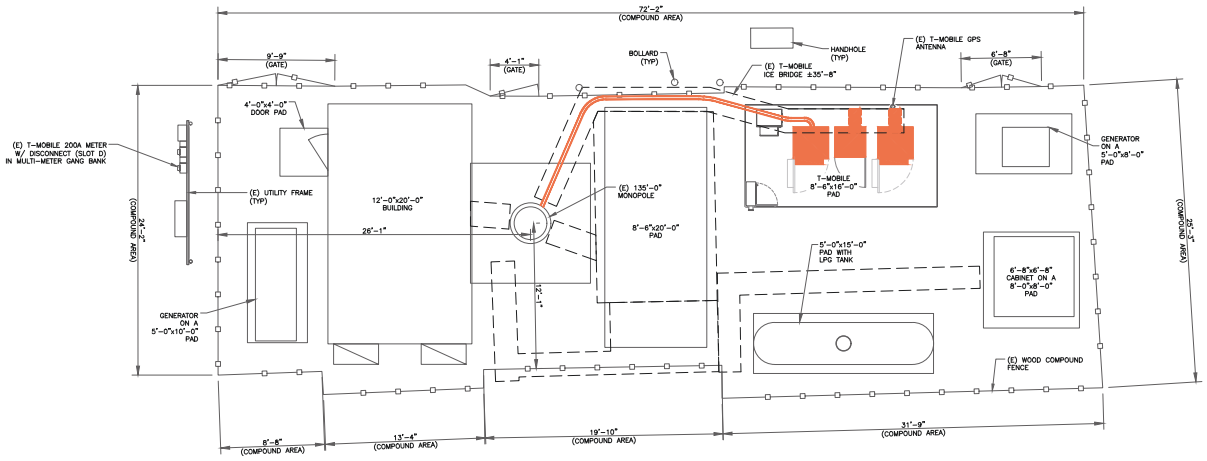
SHEET NUMBER:	REVISION:
T-2	0



1 COMPOUND PLAN
SCALE: 1/4"=1'-0" (FULL SIZE)
1/8"=1'-0" (11x17)

N

EQUIPMENT LEGEND:
- EXISTING
- TO BE RELOCATED/REMOVED
- NEW/RELOCATED

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EXISTING 135'-0" MONOPOLE

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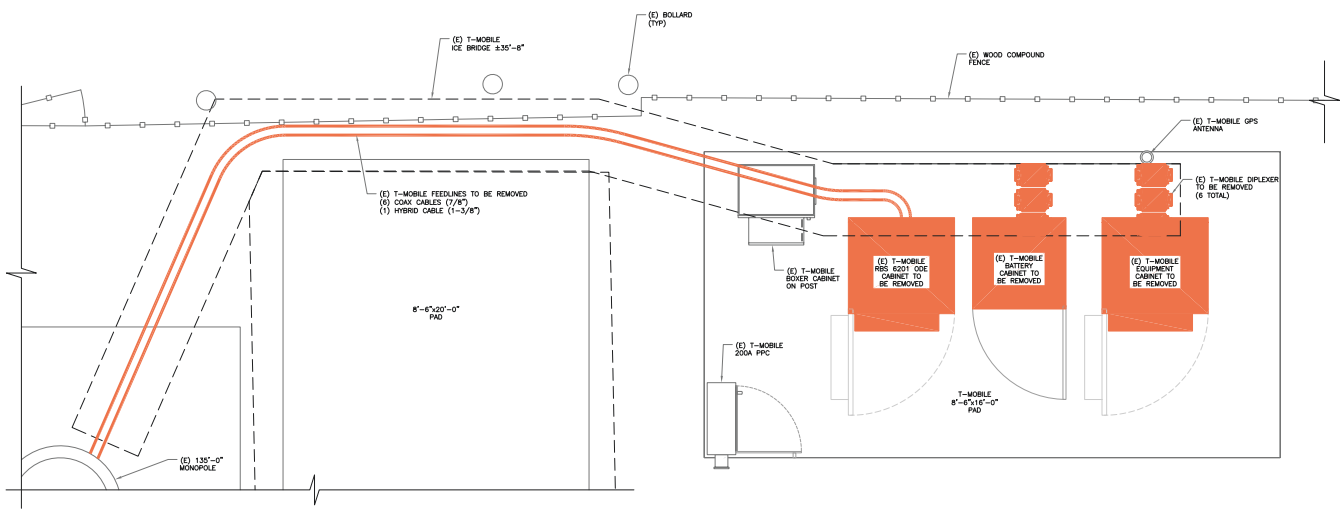
SHEET NUMBER: C-1.1
REVISION: 0



1 EXISTING EQUIPMENT PLAN
SCALE: 1" 0 1" 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

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OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

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A	9/29/23	YSG	PRELIMINARY	CV
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SHEET NUMBER: C-1.2

REVISION: 0

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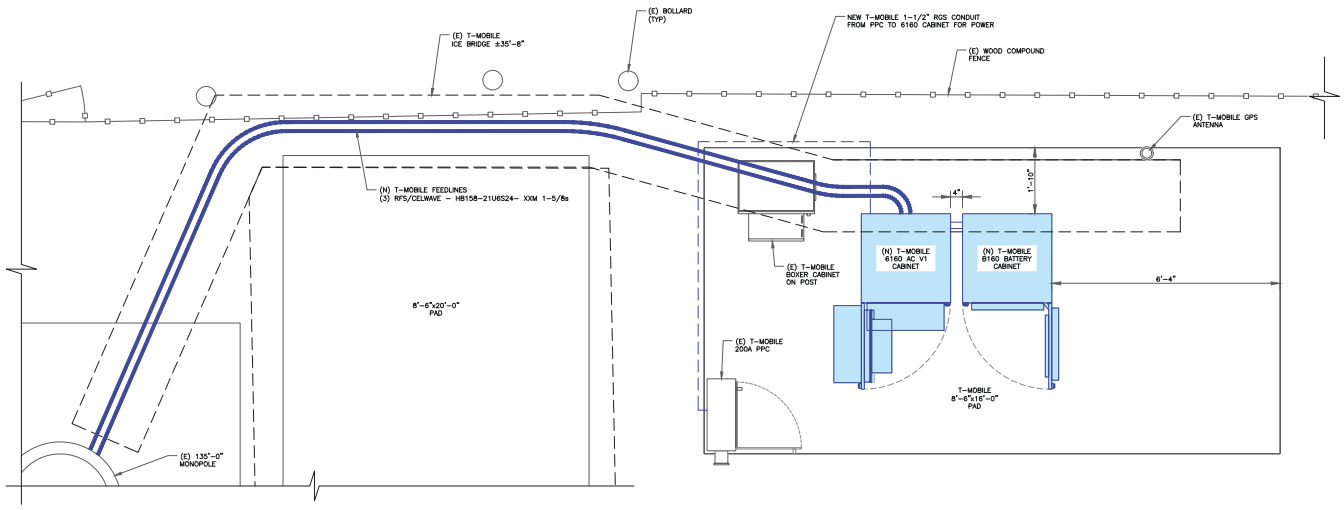

1 FINAL EQUIPMENT PLAN
SCALE: 3/4"=1'-0" (FULL SIZE) 3/8"=1'-0" (11x17)

N

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BU #: **876406**
CROWN CASTLE SITE NAME:
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189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	CHKD/QA
A	9/20/23	TDG	PRELIMINARY	CV
0	1/4/24	RMC	CONSTRUCTION	LR

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BER:2386985
Expires 3/31/24

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SHEET NUMBER:	REVISION:
C-1.3	0

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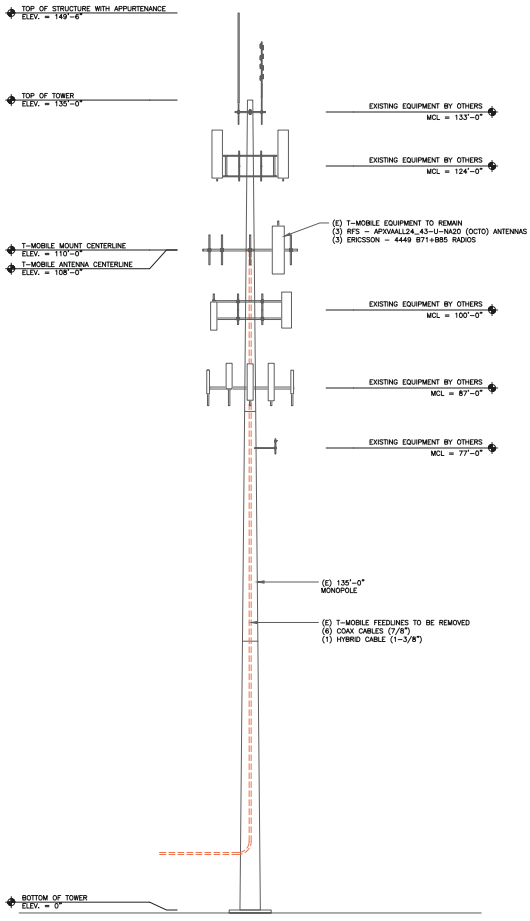
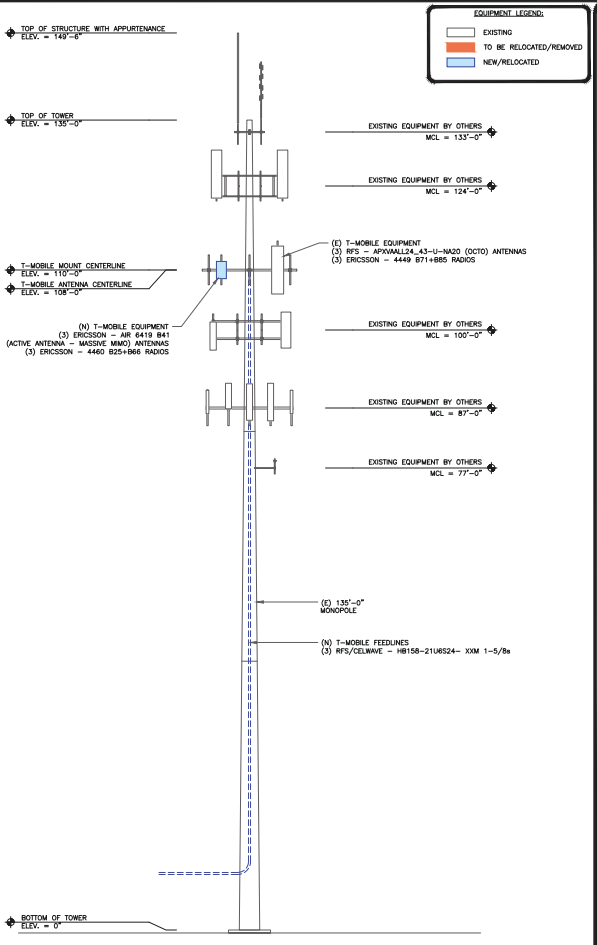


1 EXISTING TOWER ELEVATION
SCALE: 8' 6' 4' 2' 0 8' 1/8"=1'-0" (FULL SIZE) 1/16"=1'-0" (11x17)



2 FINAL TOWER ELEVATION
SCALE: 8' 6' 4' 2' 0 8' 1/8"=1'-0" (FULL SIZE) 1/16"=1'-0" (11x17)

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EXISTING 135'-0" MONOPOLE

ISSUED FOR:

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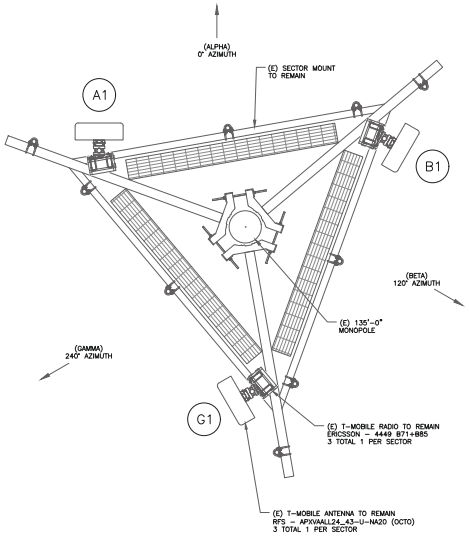
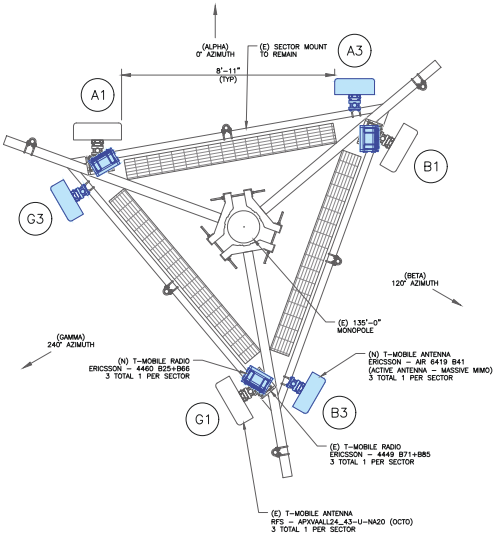
C-2	0



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



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

EQUIPMENT LEGEND:
- EXISTING
- TO BE RELOCATED/REMOVED
- NEW/RELOCATED

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BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

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EXISTING 135'-0" MONOPOLE

ISSUED FOR:

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C-3	0

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FINAL EQUIPMENT SCHEDULE
(VERIFY WITH CURRENT RFDS)

POSITION	ANTENNA				RADIO			DIPLEXER			TMA		SURGE PROTECTION		CABLES			
	TECH	STATUS/MANUFACTURER MODEL	AZIMUTH	RAD CENTER	QTY.	STATUS/MODEL	LOCATION	QTY.	STATUS	LOCATION	QTY.	STATUS	QTY.	STATUS/MODEL	QTY.	STATUS/TYPE	SIZE	LENGTH
ALPHA																		
A1	N600 L700 L600 N1900 L1900 L2100	(E) RFS – APXVAALL24_43-U-NA20	0°	110'-0"	1	(N) ERICSSON – RADIO 4460 B25+B66	TOWER	–	–	–	–	–	–	–	1	(N) HYBRID	1-5/8"	160'-0"
					1	(E) ERICSSON – 4449 B71+B85	TOWER											
A2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
A3	L2500 N2500	(N) ERICSSON – AIR 6419 B41 (ACTIVE ANTENNA – MASSIVE MIMO)	0°	110'-0"	–	–	–	–	–	–	–	–	–	–	–	–	–	–
BETA																		
B1	N600 L700 L600 N1900 L1900 L2100	(E) RFS – APXVAALL24_43-U-NA20	120°	110'-0"	1	(N) ERICSSON – RADIO 4460 B25+B66	TOWER	–	–	–	–	–		–	1	(N) HYBRID	1-5/8"	160'-0"
					1	(E) ERICSSON – 4449 B71+B85	TOWER											
B2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
B3	L2500 N2500	(N) ERICSSON – AIR 6419 B41 (ACTIVE ANTENNA – MASSIVE MIMO)	120°	110'-0"	–	–	–	–	–	–	–	–		–	–	–	–	–
GAMMA																		
G1	N600 L700 L600 N1900 L1900 L2100	(E) RFS – APXVAALL24_43-U-NA20	240°	110'-0"	1	(N) ERICSSON – RADIO 4460 B25+B66	TOWER	–	–	–	–	–		–	1	(N) HYBRID	1-5/8"	160'-0"
					1	(E) ERICSSON – 4449 B71+B85	TOWER											
G2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
G3	L2500 N2500	(N) ERICSSON – AIR 6419 B41 (ACTIVE ANTENNA – MASSIVE MIMO)	240°	110'-0"	–	–	–	–	–	–	–	–		–	–	–	–	–
														UNUSED FEEDLINES	–	–	–	–
															–	–	–	–

1 FINAL EQUIPMENT SCHEDULE
SCALE: NOT TO SCALE

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CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

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EXISTING 135'-0" MONOPOLE

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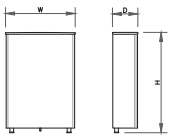
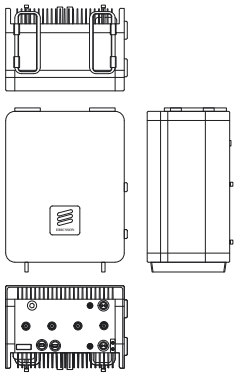
REVISION: 0



ANTENNA SPECS	
MANUFACTURER	ERICSSON
MODEL #	AIR6419 B41
WIDTH	20.91"
DEPTH	9.02"
HEIGHT	36.25"
WEIGHT	96.50 LBS

1 ANTENNA SPECS
SCALE: NOT TO SCALE



ERICSSON – RADIO 4460
WEIGHT: 109 LBS
SIZE (HxWxD): 17.0x15.1x11.9 IN.

2 ERICSSON – RADIO 4460
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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T-MOBILE SITE NUMBER:
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BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	CHKD/QA
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0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
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SHEET NUMBER:	REVISION:
C-5	0

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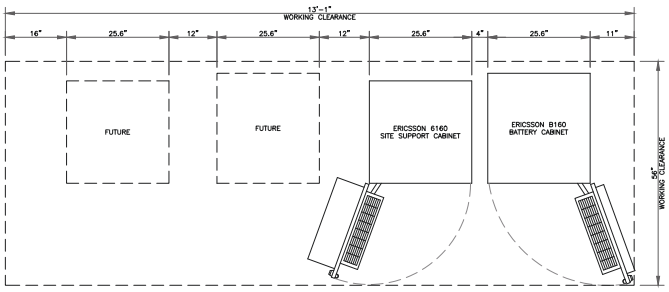
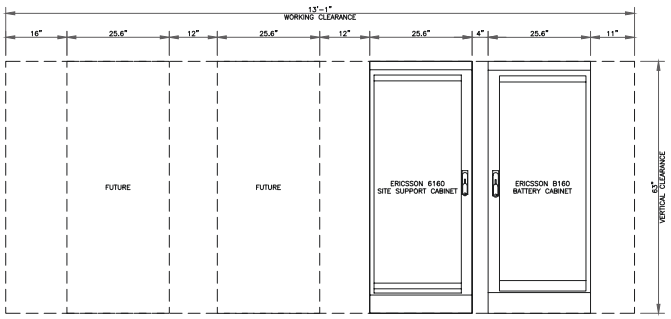
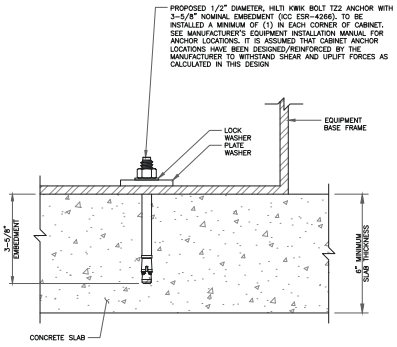


1 PLAN VIEW WORKING CLEARANCE 6160 & B160 LAYOUT
SCALE: NOT TO SCALE

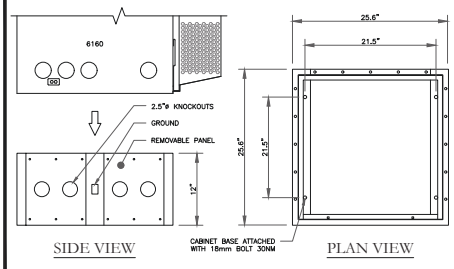


2 ELEVATION VIEW WORKING CLEARANCE 6160 & B160 LAYOUT
SCALE: NOT TO SCALE



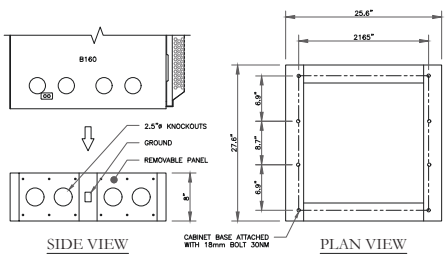
3 TYPICAL ANCHOR BOLT DETAIL
SCALE: NOT TO SCALE

MANUFACTURER:	ERICSSON
MODEL:	6160 12" BASE FRAME (SKK 125 5009/1)
DIMENSIONS (HxWxD):	12"x25.6"x25.6"
T-MOBILE SKU#	T.B.D.



4 ERICSSON 6160 PLINTH DETAIL
SCALE: NOT TO SCALE

MANUFACTURER:	ERICSSON
MODEL:	B160 BASE FRAME (SKU 125 5010/1)
DIMENSIONS (HxWxD):	8"x27.5"x25.6"
T-MOBILE SKU#	T.B.D.



5 ERICSSON B160 PLINTH DETAIL
SCALE: NOT TO SCALE

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189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	DES./QA
A	9/20/23	TDG	PRELIMINARY	CV
0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER:	REVISION:
C-6.1	0

MANUFACTURER:	ERICSSON
MODEL:	(UT6160_ENCL_AC) V1 CABINET
DIMENSIONS (HxWxD):	63"x25.6"x33.6"
WEIGHT:	373 LBS
SKU #:	T.B.D.

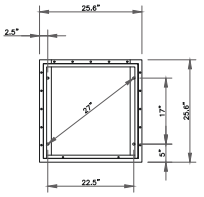
NOTE:

CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS

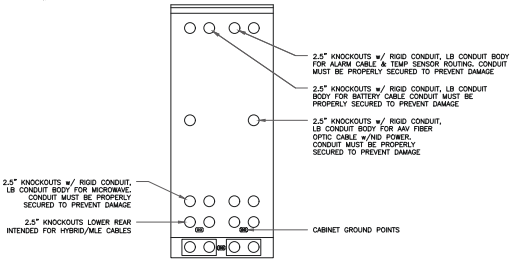
CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

GROUNDING NOTE:

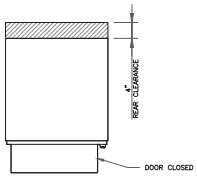
CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED.



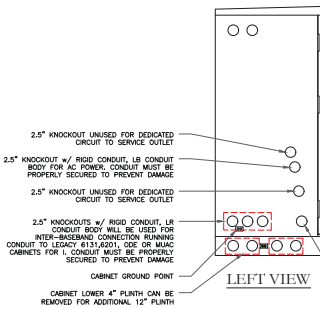
BOLT DOWN PATTERN



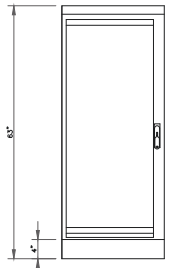
REAR VIEW



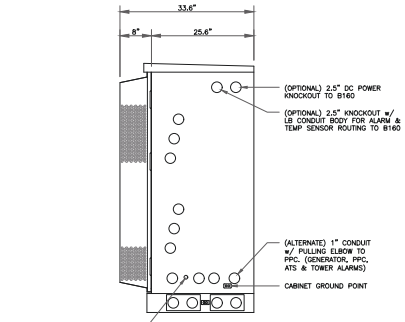
PLAN VIEW



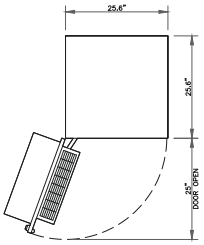
LEFT VIEW



FRONT VIEW



RIGHT VIEW



DOOR SWING

1 6160 ERICSSON SITE SUPPORT CABINET
SCALE: 4" 3" 2" 1" 0 4" 1/4"=1'-0" (FULL SIZE) 1/8"=1'-0" (11x17)

T-MOBILE_NATIONAL_ANCHOR

T-Mobile

CROWN CASTLE

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

T-MOBILE SITE NUMBER:
CTNL226A

BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

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0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER:	REVISION:
C-6.2	0

MANUFACTURER:	ERICSSON
MODEL:	B160 BATTERY CABINET
DIMENSIONS (HxWxD):	63"x25.6"x29.5"
WEIGHT:	295 LBS
SKU #:	T.B.D.

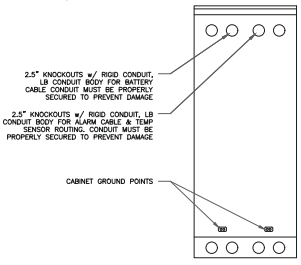
NOTE:

CORRECT KNOCKOUT TOOL REQUIRED FOR PUNCHING KNOCKOUTS. DO NOT DRILL THROUGH KNOCKOUTS

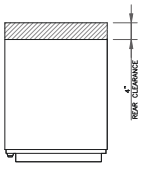
CONDUIT MUST BE PROPERLY SECURED TO PREVENT DAMAGE TO CABINETS AND OR CABLING

GROUNDING NOTE:

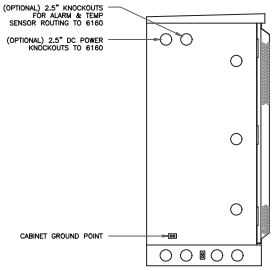
CABINET GROUNDING TO USE A SINGLE, #2 BTCW CONDUCTOR, W/ 2-HOLE, 1" C-C, LONG BARREL, WINDOW LUG, IN 3/4" LFNC TO GROUND RING. PLINTH GROUNDING IS NOT REQUIRED.



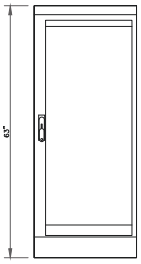
REAR VIEW



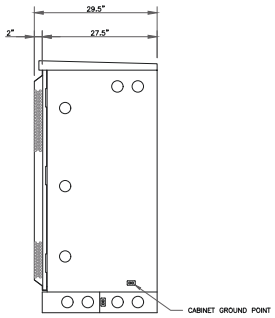
PLAN VIEW



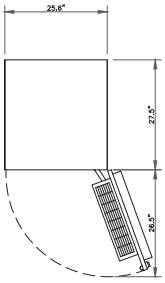
LEFT VIEW



FRONT VIEW



RIGHT VIEW



DOOR SWING

1 ERICSSON B160 BATTERY CABINET
SCALE: 4" 3" 2" 1" 0 4" 1/4"=1'-0" (FULL SIZE) 1/8"=1'-0" (11x17)

T-MOBILE SITE NUMBER:
CTNL226A

BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

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0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

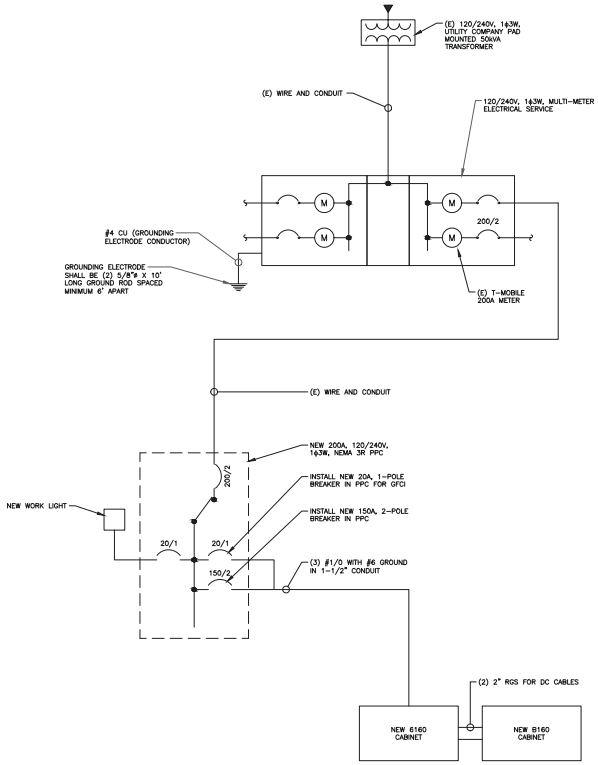
IT IS A VIOLATION OF LAW FOR ANY PERSON, UNLESS THEY ARE ACTING UNDER THE DIRECTION OF A LICENSED PROFESSIONAL ENGINEER, TO ALTER THIS DOCUMENT.

SHEET NUMBER: C-6.3
REVISION: 0

T-MOBILE_NOTIONAL_ANCHOR

NOTES:

1. ALL NEW CONDUCTORS TO BE INSTALLED SHALL BE COPPER. ALL CONDUCTORS SHALL BE THHW, THWN, THWN-2, XHHW, OR XHHW-2 UNLESS NOTED OTHERWISE.
2. CONTRACTOR IS TO FIELD VERIFY ALL EXISTING ITEMS SHOWN ON THE ELECTRICAL ONE-LINE DIAGRAM AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
3. ALL GROUNDING AND BONDING PER THE NEC.



1 ONE-LINE DIAGRAM
SCALE: NOT TO SCALE

FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS L1	BUS L2	AMPS	POLES	LOAD
BTS	2	100A	1	2	60A	2	LTE
			3	4			
			5	6			
			7	8			
			9	10			
			11	12			
			13	14			
			15	16			
FIBER	1	20A	17	18			
GFI	1	15A	19	20			
			21	22			
SURGE SUPP	1	20A	23	24			

RATED VOLTAGE: ■120/240 □_____, 1 PHASE, 3 WIRE	BRANCH POLES: □12 ■24 □30 □42	APPROVED MFRS
RATED AMPS: □100 ■200 □400 □_____	CABINET: ■SURFACE □FLUSH	NEMA □1 ■3R □4X
□MAIN LUGS ONLY ■MAIN 200 AMPS ■BREAKER □FUSED SWITCH	■HINGED DOOR	■KEYED DOOR LATCH
□FUSED ■CIRCUIT BREAKER BRANCH DEVICES	□_____ TO BE GFCI BREAKERS	FULL NEUTRAL BUS GROUND BAR
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL		

2 EXISTING PANEL SCHEDULE
SCALE: NOT TO SCALE

NOTES:

1. PANEL SCHEDULE PENDING FIELD VERIFICATION.

FINAL PANEL SCHEDULE							
LOAD	POLES	AMPS	BUS L1	BUS L2	AMPS	POLES	LOAD
BTS	2	100A	1	2	60A	2	LTE
			3	4			
GFCI	1	20A	5	6	150A	2	6160
			7	8			
			9	10			
			11	12			
			13	14			
			15	16			
FIBER	1	20A	17	18			
GFI	1	15A	19	20			
			21	22			
SURGE SUPP	1	20A	23	24			

RATED VOLTAGE: ■120/240 □_____, 1 PHASE, 3 WIRE	BRANCH POLES: □12 ■24 □30 □42	APPROVED MFRS
RATED AMPS: □100 ■200 □400 □_____	CABINET: ■SURFACE □FLUSH	NEMA □1 ■3R □4X
□MAIN LUGS ONLY ■MAIN 200 AMPS ■BREAKER □FUSED SWITCH	■HINGED DOOR	■KEYED DOOR LATCH
□FUSED ■CIRCUIT BREAKER BRANCH DEVICES	□_____ TO BE GFCI BREAKERS	FULL NEUTRAL BUS GROUND BAR
ALL BREAKERS MUST BE RATED TO INTERRUPT A SHORT CIRCUIT ISC OF 10,000 AMPS SYMMETRICAL		

INSTALL NEW 2P 150A BREAKER IN POSITIONS 6 AND 8
INSTALL NEW 1P 20A BREAKER IN POSITION 5
IF 150A BREAKER WILL NOT PROPERLY FIT IN EXISTING PANEL, REPLACE (E) PANEL WITH SQUARE D PANEL QO12040M200RB (OR APPROVED EQUAL).
UPGRADE FEEDER WIRES TO MEET AMPACITY IF NEW PANEL IS REQUIRED.
FINAL PANEL DESIGN AND CALCULATIONS FOR WIRE SIZE WERE BASED OFF OF EXISTING DOCUMENTS AND PHOTOS

3 FINAL PANEL SCHEDULE
SCALE: NOT TO SCALE

T-Mobile

CROWN CASTLE

B+T GRP
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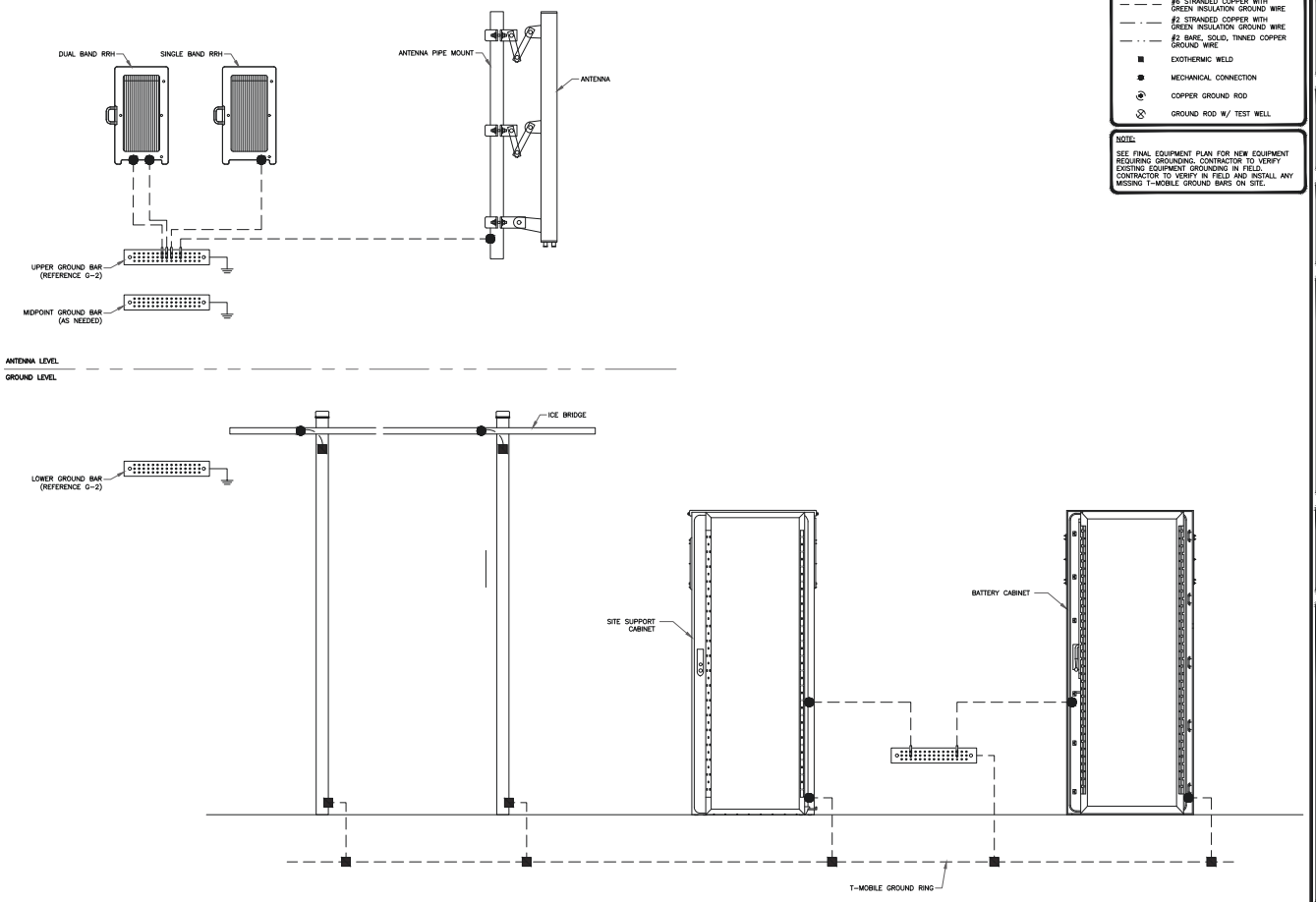
SHEET NUMBER: E-1
REVISION: 0



1 TYPICAL FINAL GROUNDING SCHEMATIC
SCALE: NOT TO SCALE

GROUNDING PLAN LEGEND:

- #6 STRANDED COPPER WITH GREEN INSULATION GROUND WIRE
- #2 STRANDED COPPER WITH GREEN INSULATION GROUND WIRE
- #2 BARE, SOLID, TINNED COPPER GROUND WIRE
- EXOTHERMIC WELD
- MECHANICAL CONNECTION
- COPPER GROUND ROD
- GROUND ROD W/ TEST WELL

NOTE:

SEE FINAL EQUIPMENT PLAN FOR NEW EQUIPMENT REQUIRING GROUNDING. CONTRACTOR TO VERIFY EXISTING EQUIPMENT GROUNDING IN FIELD. CONTRACTOR TO VERIFY IN FIELD AND INSTALL ANY MISSING T-MOBILE GROUND BARS ON SITE.

T-Mobile

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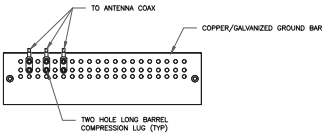
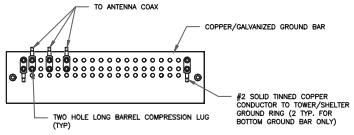
G-1	0



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.

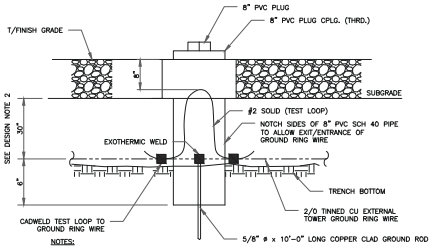
1 ANTENNA SECTOR GROUND BAR DETAIL
SCALE: NOT TO SCALE



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.

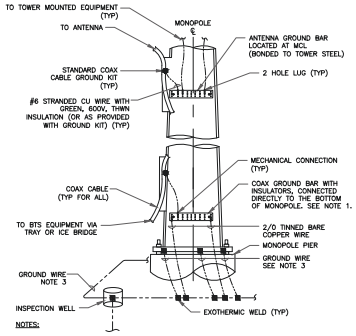
2 TOWER/SHELTER GROUND BAR DETAIL
SCALE: NOT TO SCALE



NOTES:

1. GROUND ROD SHALL BE DRIVEN VERTICALLY, NOT TO EXCEED 45 DEGREES FROM THE VERTICAL.
2. GROUND WIRE SHALL BE MIN. 30" BELOW GRADE OR 6" BELOW FROST LINE. (WHICH EVER IS GREATER) AS PER N.E.C. ARTICLE 250-50(D)

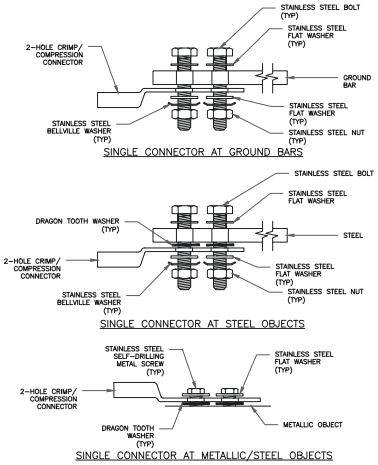
3 INSPECTION WELL DETAIL
SCALE: NOT TO SCALE



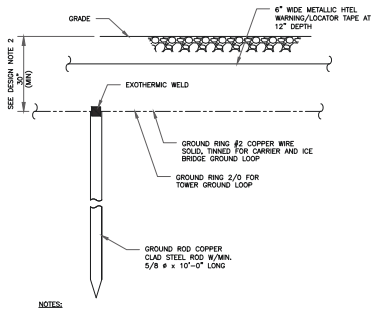
NOTES:

1. NUMBER OF GROUNDING BARS MAY VARY DEPENDING ON THE TYPE OF TOWER, ANTENNA LOCATIONS AND CONNECTION ORIENTATION. COAXIAL CABLES EXCEEDING 200 FEET ON THE TOWER SHALL HAVE GROUND KITS AT THE MIDPOINT. PROVIDE AS REQUIRED.
2. ONLY MECHANICAL CONNECTIONS ARE ALLOWED TO BE MADE TO CROWN CASTLE USA INC. TOWERS. ALL MECHANICAL CONNECTIONS SHALL BE TREATED WITH AN ANTI-OXIDANT COATING.
3. ALL TOWER GROUNDING SYSTEMS SHALL COMPLY WITH THE REQUIREMENTS OF THE RECOGNIZED EDITION OF ANSI/TIA 222 AND NFPA 780.

4 TYPICAL ANTENNA CABLE GROUNDING
SCALE: NOT TO SCALE



5 HARDWARE DETAIL FOR EXTERIOR CONNECTIONS
SCALE: NOT TO SCALE



NOTES:

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6 GROUND ROD DETAIL
SCALE: NOT TO SCALE

T-MOBILE_NOTIONAL_ANCHOR

T-Mobile

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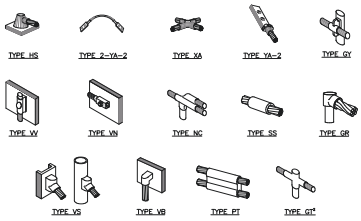
G-2	0

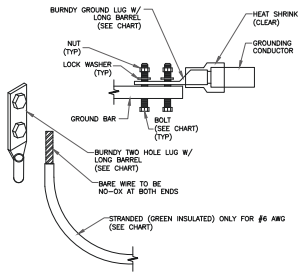


NOTE:

1. ERICO EXOTHERMIC "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.
2. MOLD TYPE ONLY TO BE USED BELOW GRADE WHEN CONNECTING GROUND RING TO GROUND ROD.

1 CADWELD GROUNDING CONNECTIONS
SCALE: NOT TO SCALE

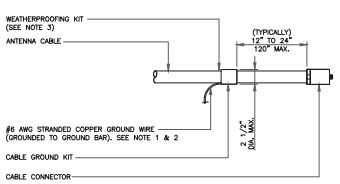
WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG GREEN INSULATED	YA6C-2TC38	3/8" – 16 NC S 2 BOLT
#2 AWG SOLID TINNED	YA3C-2TC38	3/8" – 16 NC S 2 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" – 16 NC S 2 BOLT
#2/0 AWG STRANDED	YA26-2TC38	3/8" – 16 NC S 2 BOLT
#4/0 AWG STRANDED	YA28-2N	1/2" – 16 NC S 2 BOLT



NOTES:

1. 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.

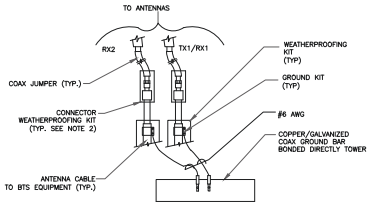
2 MECHANICAL LUG CONNECTION
SCALE: NOT TO SCALE



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.

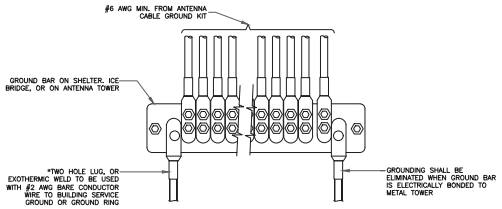
3 CABLE GROUND KIT CONNECTION
SCALE: NOT TO SCALE



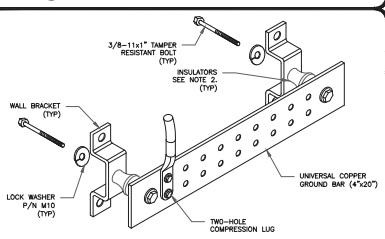
NOTES:

1. DO NOT INSTALL CABLE GROUND KIT AT A BEND AND ALWAYS DIRECT GROUND WIRE DOWN TO ANTENNA GROUND BAR.
2. WEATHER PROOFING SHALL BE TWO-PART TAPE KIT. COLD SHRINK SHALL NOT BE USED.

4 GROUND CABLE CONNECTION
SCALE: NOT TO SCALE



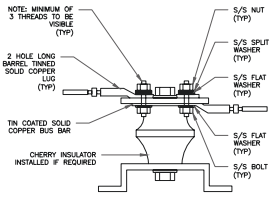
5 GROUNDWIRE INSTALLATION
SCALE: NOT TO SCALE



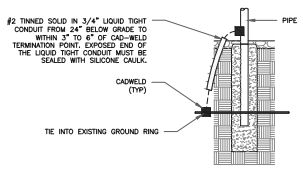
NOTES:

1. DOWN LEAD (HOME RUN) CONDUCTORS ARE NOT TO BE INSTALLED ON CROWN CASTLE USA INC. TOWER, PER THE GROUNDING DOWN CONDUCTOR POLICY GAS-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.

6 GROUND BAR DETAIL
SCALE: NOT TO SCALE



7 LUG DETAIL
SCALE: NOT TO SCALE



8 TRANSITIONING GROUND DETAIL
SCALE: NOT TO SCALE

T-Mobile

CROWN CASTLE

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

T-MOBILE SITE NUMBER:
CTNL226A

BU #: **876406**
CROWN CASTLE SITE NAME:
NE OLD LYME-OLD LYME FIREHOUSE

189 BOSTON POST ROAD
OLD LYME, CT 06371

EXISTING 135'-0" MONOPOLE

ISSUED FOR:

REV	DATE	DRWN	DESCRIPTION	CHKD/QA
A	9/20/23	TDG	PRELIMINARY	CV
0	1/4/24	RMC	CONSTRUCTION	LR

1/4/24

MTS ENGINEERING P.L.L.C.
BER:2386985
Expires 3/31/24

SHEET NUMBER:	REVISION:
G-3	0